LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 2

2022

Bate Stamp Numbers
01073091 – 01075083

Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976–2022

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

VOLUME 2

2022

A. Title: (Cont.) Report – Appendix C Level II to Draft Final Fourth Annual Remedial Action Operation Report, LHAAP-35B (37) (Chemical Laboratory), Longhorn Army Ammunition Plant, Karnack, Texas, January 2022
Author(s): Department of the Army
Recipient: U.S. Environmental Protection Agency and Texas Commission on Environmental Quality
Date: January 25, 2022
Bate Stamp: 01073091 – 01073207

B. Title: (Cont.) Report – Appendix C Level IV DOD to Draft Final Fourth Annual Remedial Action Operation Report, LHAAP-35B (37) (Chemical Laboratory), Longhorn Army Ammunition Plant, Karnack, Texas, January 2022
Author(s): Department of the Army
Recipient: U.S. Environmental Protection Agency and Texas Commission on Environmental Quality
Date: January 25, 2022
Bate Stamp: 01073208 – 01075083

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS21050697-03MSD** Units: **ug/L** Analysis Date: **19-May-2021 15:48**
Client ID: **35BWW08_210513** Run ID: **VOA6_384028** SeqNo: **6101740** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Bromomethane	20.15	1.0	20	0	101	53 - 141	21.02	4.23	20	
Carbon disulfide	36.06	2.0	40	0	90.1	64 - 133	38.22	5.83	20	
Carbon tetrachloride	18.76	1.0	20	0	93.8	72 - 136	20.23	7.58	20	
Chlorobenzene	18.96	1.0	20	0	94.8	82 - 118	19.58	3.2	20	
Chloroethane	16.55	1.0	20	0	82.8	60 - 138	20.69	22.2	20	R
Chloroform	17.29	1.0	20	0	86.4	79 - 124	17.66	2.11	20	
Chloromethane	18.72	1.0	20	0	93.6	50 - 139	18.62	0.547	20	
cis-1,2-Dichloroethene	17.76	1.0	20	0	88.8	78 - 123	18.16	2.22	20	
cis-1,3-Dichloropropene	18.45	1.0	20	0	92.2	75 - 124	19.14	3.66	20	
Dibromochloromethane	18.45	1.0	20	0	92.3	74 - 126	18.98	2.84	20	
Dibromomethane	18.19	1.0	20	0	90.9	79 - 123	18.76	3.07	20	
Dichlorodifluoromethane	17.19	1.0	20	0	86.0	32 - 152	17.1	0.574	20	
Ethylbenzene	19.84	1.0	20	0	99.2	79 - 121	21.01	5.72	20	
Hexachlorobutadiene	17.77	1.0	20	0	88.9	66 - 134	16.88	5.19	20	
Isopropylbenzene	19.84	1.0	20	0	99.2	72 - 131	20.99	5.65	20	
m,p-Xylene	39.02	2.0	40	0	97.6	80 - 121	40.81	4.49	20	
Methylene chloride	16.88	2.0	20	0	84.4	74 - 124	17.48	3.54	20	
Naphthalene	14.9	1.0	20	0	74.5	61 - 128	14.46	2.96	20	
n-Butylbenzene	18.65	1.0	20	0	93.2	75 - 128	19	1.86	20	
n-Propylbenzene	20.06	1.0	20	0	100	76 - 126	21.58	7.33	20	
o-Xylene	18.76	1.0	20	0	93.8	78 - 122	20.08	6.81	20	
sec-Butylbenzene	19.03	1.0	20	0	95.2	77 - 126	20.09	5.39	20	
Styrene	18.1	1.0	20	0	90.5	78 - 123	18.63	2.92	20	
tert-Butylbenzene	18.9	1.0	20	0	94.5	78 - 124	19.52	3.22	20	
Tetrachloroethene	21.69	1.0	20	0	108	74 - 129	23.08	6.2	20	
Toluene	20.14	1.0	20	0	101	80 - 121	20.9	3.67	20	
trans-1,2-Dichloroethene	18.07	1.0	20	0	90.3	75 - 124	18.5	2.39	20	
trans-1,3-Dichloropropene	19.29	1.0	20	0	96.4	73 - 127	19.2	0.464	20	
Trichloroethene	19.56	1.0	20	0	97.8	79 - 123	20.49	4.66	20	
Trichlorofluoromethane	18.48	1.0	20	0	92.4	65 - 141	19.54	5.58	20	
Vinyl chloride	16.97	1.0	20	0	84.8	58 - 137	18.16	6.79	20	
Surr: 1,2-Dichloroethane-d4	*49.48*	*1.0*	*50*	*0*	*99.0*	*81 - 118*	*49.09*	*0.787*	*20*	
Surr: 4-Bromofluorobenzene	*48.92*	*1.0*	*50*	*0*	*97.8*	*85 - 114*	*48.87*	*0.0908*	*20*	
Surr: Dibromofluoromethane	*47.64*	*1.0*	*50*	*0*	*95.3*	*80 - 119*	*47.9*	*0.548*	*20*	

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS21050697-03MSD** Units: **ug/L** Analysis Date: **19-May-2021 15:48**
Client ID: **35BWW08_210513** Run ID: **VOA6_384028** SeqNo: **6101740** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*52.56*	*1.0*	*50*	*0*	*105*	*89 - 112*	*53.03*	*0.897*	*20*	

The following samples were analyzed in this batch: HS21050697-01 HS21050697-02 HS21050697-03 HS21050697-04 HS21050697-05 HS21050697-06

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R383778 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **14-May-2021 10:18**
Client ID: Run ID: **ICS-Integrion_383778** SeqNo: **6095616** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								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: **14-May-2021 10:26**
Client ID: Run ID: **ICS-Integrion_383778** SeqNo: **6095617** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.88	0.500	20	0	99.4	80 - 120				
Nitrogen, Nitrate (As N)	3.808	0.100	4	0	95.2	80 - 120				
Sulfate	20.14	0.500	20	0	101	80 - 120				

MS Sample ID: **HS21050697-03MS** Units: **mg/L** Analysis Date: **14-May-2021 14:53**
Client ID: **35BWW08_210513** Run ID: **ICS-Integrion_383778** SeqNo: **6095625** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	11.23	0.500	10	1.25	99.8	80 - 120				
Nitrogen, Nitrate (As N)	2.092	0.100	2	0.0796	101	80 - 120				
Sulfate	22.09	0.500	10	12.56	95.2	80 - 120				

MSD Sample ID: **HS21050697-03MSD** Units: **mg/L** Analysis Date: **14-May-2021 15:00**
Client ID: **35BWW08_210513** Run ID: **ICS-Integrion_383778** SeqNo: **6095626** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	11.41	0.500	10	1.25	102	80 - 120	11.23	1.59	20	
Nitrogen, Nitrate (As N)	2.129	0.100	2	0.0796	102	80 - 120	2.092	1.76	20	
Sulfate	22.63	0.500	10	12.56	101	80 - 120	22.09	2.44	20	

The following samples were analyzed in this batch: HS21050697-01 HS21050697-03

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R383987 (0) **Instrument: TOC_04** **Method: TOTAL ORGANIC CARBON - SM5310B**

MBLK Sample ID: **MBLK-05192021** Units: **mg/L** Analysis Date: **19-May-2021 23:57**
Client ID: Run ID: **TOC_04_383987** SeqNo: **6100940** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-05192021** Units: **mg/L** Analysis Date: **20-May-2021 00:09**
Client ID: Run ID: **TOC_04_383987** SeqNo: **6100941** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.21	1.00	10	0	102	85 - 115				

LCSD Sample ID: **LCSD-05192021** Units: **mg/L** Analysis Date: **20-May-2021 00:20**
Client ID: Run ID: **TOC_04_383987** SeqNo: **6100942** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.09	1.00	10	0	101	85 - 115	10.21	1.18	20	

MS Sample ID: **HS21050697-03MS** Units: **mg/L** Analysis Date: **20-May-2021 01:15**
Client ID: **35BWW08_210513** Run ID: **TOC_04_383987** SeqNo: **6100946** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	12.37	1.00	10	0.9276	114	80 - 120				

The following samples were analyzed in this batch: HS21050697-01 HS21050697-03

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: **HS21050697**

QUALIFIERS, ACRONYMS, UNITS

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

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

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

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Work Order: HS21050697

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS21050697-01	35BWW26_210513	Login	5/14/2021 12:34:31 PM	JRM	WET037
HS21050697-01	35BWW26_210513	Login	5/14/2021 12:34:31 PM	JRM	VOA042
HS21050697-01	35BWW26_210513	Login	5/14/2021 12:34:31 PM	JRM	WET037
HS21050697-01	35BWW26_210513	Login	5/14/2021 12:34:31 PM	JRM	Sub
HS21050697-02	35BWW01_210513	Login	5/14/2021 12:34:31 PM	JRM	VOA042

ALS Houston, US Date: 28-May-21

Sample Receipt Checklist

Work Order ID: HS21050697 **Date/Time Received:** **14-May-2021 09:25**

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

Completed By: */S/ Jared R. Makan* (eSignature) 14-May-2021 12:18 (Date/Time) **Reviewed by:** */S/ Ragen Giga* (eSignature) 17-May-2021 08:58 (Date/Time)

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.8°C UC/C	IR31
Cooler(s)/Kit(s):	46963	
Date/Time sample(s) sent to storage:	05/14/2021 12:55	

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: R.J Modashia

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

Project No. 501032

Job: LHAAP 37 May 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 (chloride sulfate, nitrate) by SW9056	CO2 by RSK 175	Perchlorate by SW6850					Remarks (Preservatives, etc.)	Lab I.D.#
35Bww26-210513	wG	5/13/21/0710		12	X	X	X	X	X							
35Bww01-210513	wG	5/13/21/0800		3	X											
35Bww08-210513	wG	5/13/21/0845		12	X	X	X	X	X							
35Bww08-210513-ms	wG	5/13/21/0845		12	X	X	X	X	X							
35Bww08-210513-msD	wG	5/13/21/0845		12	X	X	X	X	X							
35Bww10-210513	wG	5/13/21/0940		3	X											
35Bww05-210513	wG	5/13/21/1025		3	X											
LHSmw58-210513	wG	5/13/21/1105		3	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	5/13/21	1430	Patti Mac	5/14/21	9:25						

For Lab Use Only

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

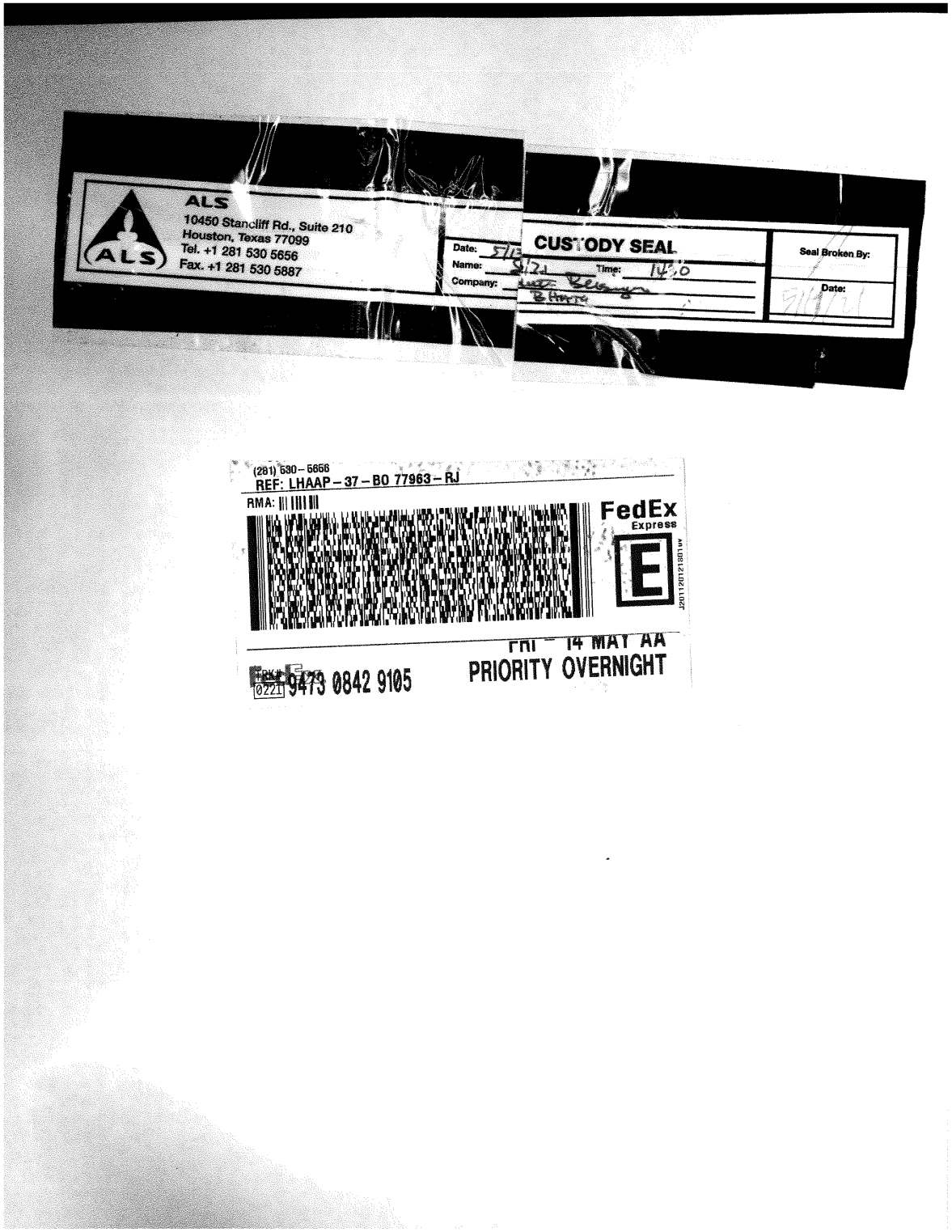
Remarks:

96463 O.EC (R3) CPO

HS21050697

Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
Date:
Name:
Company:
CUSTODY SEAL
Time:
Seal Broken By:
Date:
(281) 530-5656
REF: LHAAP-37-BO 77963-RJ
RMA:
FedEx
Express
FRI - 14 MAY AA
PRIORITY OVERNIGHT
9473 0842 9105

LABORATORY REPORT

May 27, 2021

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

RE: HS21050697

Dear RJ:

Enclosed are the results of the samples submitted to our laboratory on May 18, 2021. For your reference, these analyses have been assigned our service request number P2102701.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Hayden Akers at 6:06 pm, May 27, 2021

Hayden Akers
Project Manager

Client: ALS Laboratory Group Service Request No: P2102701
Project: HS21050697

CASE NARRATIVE

The samples were received intact under chain of custody on May 18, 2021 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175 as described in laboratory SOP VOA-DISGAS. This analyte is included on the laboratory's NELAP and DoD-ELAP scope of accreditation.

Methane, Ethene and Ethane Analysis

The samples were analyzed for methane, ethene, and ethane using a gas chromatograph equipped with a flame ionization detector (FID). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least two hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (methane, ethene and ethane) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP accreditation.

Client: ALS Laboratory Group Service Request No: P2102701
Project: HS21050697

Manual integrations were performed on the following samples and analyte. Refer to the raw data for additional information.

Sample Identification(s)	Analyte(s)
P2102701-002msd	methane

The recovery for ethane for the matrix spike was below the DoD specified limit. However all criteria were met with the laboratory control spike and laboratory control spike duplicate.

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

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

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-008
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Laboratory Group
Service Request: P2102701
Project ID: HS21050697

Date Received: 5/18/2021
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
35BWW26_210513	P2102701-001	Water	5/13/2021	07:10	X	X
35BWW08_210513	P2102701-002	Water	5/13/2021	08:45	X	X

R407701

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:** **16124**

SUBCONTRACT TO:

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065

Phone: +1 805 526 7161

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21050697
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21050697-01**	**35BWW26_210513**	**Groundwater**	**13 May 2021 07:10**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	28 May 2021
2.	**HS21050697-03**	**35BWW08_210513**	**Groundwater**	**13 May 2021 08:45**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	28 May 2021

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

HS21050697-03 MS/MSD

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 5/17/2021 1800.

Received By: _____ Date/Time: 5-18-21 0930

Cooler ID(s): _____ Temperature(s): 4.8 WS

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2102701

Project: HS21050697

Sample(s) received on: 5/18/2021 Date opened: 5/18/2021 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: ° C Blank Temperature: 4.8° C	Wet Ice		
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? Cooler lid. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2102701-001.01	40mL VOA NP		5		A	CB 5/26/21
P2102701-001.02	40mL VOA NP				A	
P2102701-001.03	40mL VOA NP				A	
P2102701-001.04	40ml VOA HCL		1		A	CB 5/25/21
P2102701-001.05	40ml VOA HCL				A	
P2102701-001.06	40ml VOA HCL				A	
P2102701-002.01	40mL VOA NP				A	
P2102701-002.02	40mL VOA NP				A	
P2102701-002.03	40mL VOA NP				A	
P2102701-002.04	40ml VOA HCL		1		A	CB 5/25/21
P2102701-002.05	40ml VOA HCL		1		A	CB 5/25/21
P2102701-002.06	40ml VOA HCL		1		A	CB 5/25/21
P2102701-002.07	40mL VOA NP				A	
P2102701-002.08	40mL VOA NP				A	
P2102701-002.09	40mL VOA NP				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2102701

Project: HS21050697

Sample(s) received on: 5/18/2021 Date opened: 5/18/2021 by: ADAVID

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2102701-002.10	40mL VOA NP		5		A	CB 5/26/21
P2102701-002.11	40mL VOA NP		5		A	CB 5/26/21
P2102701-002.12	40mL VOA NP		5		A	CB 5/26/21
P2102701-002.13	40ml VOA HCL				A	
P2102701-002.14	40ml VOA HCL				A	
P2102701-002.15	40ml VOA HCL				A	
P2102701-002.16	40ml VOA HCL				A	
P2102701-002.17	40ml VOA HCL				A	
P2102701-002.18	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW26_210513**
Client Project ID: **HS21050697**

ALS Project ID: P2102701
ALS Sample ID: P2102701-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: 05/13/21
Date Received: 05/18/21
Date Analyzed: 05/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW08_210513**
Client Project ID: **HS21050697**

ALS Project ID: P2102701
ALS Sample ID: P2102701-002

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: 05/13/21
Date Received: 05/18/21
Date Analyzed: 05/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **Method Control Sample** ALS Project ID: P2102701
Client Project ID: **HS21050697** ALS Sample ID: P210525-MB

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/FID Date Received: NA
Analyst: Connor Barrett Date Analyzed: 5/25/21
Matrix: Water Volume(s) Analyzed: 0.10 ml(s)
Test Notes:

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

MATRIX SPIKE / DUPLICATE MATRIX SPIKE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW08_210513**
Client Project ID: **HS21050697**

ALS Project ID: P2102701
ALS Sample ID: P2102701-002MS
P2102701-002DMS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: 5/13/21
Date Received: 5/18/21
Date Analyzed: 5/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount MS / DMS µg/L	Sample Amount µg/L	Result MS µg/L	Result DMS µg/L	% Recovery MS	% Recovery DMS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.53	0.447	2.02	1.93	**62**	**59**	73-125	5	30	**N**
74-85-1	Ethene	4.40	ND	3.48	3.84	**79**	**87**	72-133	10	30	
74-84-0	Ethane	4.75	ND	3.42	3.64	**72**	**77**	74-131	7	30	**N**

N = The matrix spike recovery is not within control limits. See case narrative.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS21050697**

ALS Project ID: P2102701
ALS Sample ID: P210525-LCS
P210525-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result$_1$ LCS µg/L	Result$_1$ DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	2.52	2.38	**100**	**94**	73-125	6	26	
74-85-1	Ethene	4.40	5.15	5.10	**117**	**116**	72-133	0.9	11	
74-84-0	Ethane	4.72	5.01	4.92	**106**	**104**	74-131	2	10	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Project ID: **HS21050697** ALS Project ID: P2102701

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Connor Barrett
Matrix: Liquid
Test Notes:

Date(s) Collected: 5/13/21
Date Received: 5/18/21
Date Analyzed: 5/26/21

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
35BWW26_210513	P2102701-001	0.10	**330,000**	1,000	860	370	
35BWW08_210513	P2102701-002	0.050	**680,000**	2,000	1,700	740	
Method Control Sample	P210526-MB	0.10	860	1,000	860	370	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

MATRIX SPIKE / DUPLICATE MATRIX SPIKE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW08_210513**
Client Project ID: **HS21050697**

ALS Project ID: P2102701
ALS Sample ID: P2102701-002MS
P2102701-002DMS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Connor Barrett
Matrix: Liquid
Test Notes:

Date Collected: ######
Date Received: ######
Date Analyzed: ######
Volume(s) Analyzed: 0.050 ml(s)

CAS #	Compound	Spike Amount MS / DMS ug/L	Sample Amount ug/L	Result MS ug/L	Result DMS ug/L	% Recovery MS	% Recovery DMS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	4,580	684,000	628,000	729,000	**0**	**983**	80-122	200	30	**N, R**

N = The matrix spike sample recovery is not within control limits. See case narrative.
R = Duplicate precision not met.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2102701
Client Project ID: **HS21050697** ALS Sample ID: P210526-DLCS

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/TCD Date Received: NA
Analyst: Connor Barrett Date Analyzed: 5/26/21
Matrix: Liquid Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result$_1$ LCS ug/L	Result$_1$ DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	19,200	19,200	**84**	**84**	80-122	0	12	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

10450 Stancliff Rd. Suite 210
Houston, TX 77099
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June 08, 2021

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

Work Order: **HS21050972**

Laboratory Results for: **LHAAP 37 May 2021**

Dear Vicki Graves ,

ALS Environmental received 18 sample(s) on May 20, 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: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Work Order: HS21050972

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21050972-01	35BWW09_210517	Groundwater		17-May-2021 07:40	20-May-2021 09:50	☐
HS21050972-02	35BWW11_210517	Groundwater		17-May-2021 08:20	20-May-2021 09:50	☐
HS21050972-03	35BWW25_210517	Groundwater		17-May-2021 09:05	20-May-2021 09:50	☐
HS21050972-04	35BWW24_210517	Groundwater		17-May-2021 09:50	20-May-2021 09:50	☐
HS21050972-05	35BWW24_210517-FD	Groundwater		17-May-2021 09:50	20-May-2021 09:50	☐
HS21050972-06	35BWW07_210517	Groundwater		17-May-2021 10:30	20-May-2021 09:50	☐
HS21050972-07	35BWW13_210517	Groundwater		17-May-2021 11:55	20-May-2021 09:50	☐
HS21050972-08	35BWW12_210518	Groundwater		18-May-2021 07:40	20-May-2021 09:50	☐
HS21050972-09	35BWW12_210518-FD	Groundwater		18-May-2021 07:40	20-May-2021 09:50	☐
HS21050972-10	35BWW23_210518	Groundwater		18-May-2021 08:30	20-May-2021 09:50	☐
HS21050972-11	35BWW14_210518	Groundwater		18-May-2021 09:20	20-May-2021 09:50	☐
HS21050972-12	35BWW15_210518	Groundwater		18-May-2021 10:05	20-May-2021 09:50	☐
HS21050972-13	35BWW17_210518	Groundwater		18-May-2021 10:45	20-May-2021 09:50	☐
HS21050972-14	35BWW17_210518-FD	Groundwater		18-May-2021 10:45	20-May-2021 09:50	☐
HS21050972-15	35BWW16_210518	Groundwater		18-May-2021 11:30	20-May-2021 09:50	☐
HS21050972-16	35BWW19_210518	Groundwater		18-May-2021 12:15	20-May-2021 09:50	☐
HS21050972-17	35BWW18_210518	Groundwater		18-May-2021 13:00	20-May-2021 09:50	☐
HS21050972-18	Trip Blank-210518	Water	CG-121520-1022	18-May-2021 00:00	20-May-2021 09:50	☐

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: LHAAP 37 May 2021
Work Order: HS21050972

Work Order Comments

- FEDEX Tracking # 9473 0842 9090
  Tuesday, May 18, 2021 4:27 PM LONGVIEW, TX Picked up
  Thursday, May 20, 20219:48 AM HOUSTON, TX Delivered

- Sample ID does not match, logged per Sample Label
  COC = 35BWW12-210518 Label = 35BWW12-210518-FD
  Nitrates received out of hold

Work Order Comments

- The analyses for RSK-175 CO2 was subcontracted to ALS Environmental in Simi Valley, CA. Final Report attached.

GCMS Volatiles by Method SW8260

Batch ID: R384157

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

Batch ID: R384184

Sample ID: CCV

- Acetone exceeded %D limits for CCV. Samples are ND for this compound.

Sample ID: VLCSW-210523

- Acetone is also high for LCS.

Sample ID: HS21050892-06MSD

- MS/MSD RPD was performed on unrelated sample.

WetChemistry by Method SW9056

Batch ID: R384108

Sample ID: 35BWW12_210518 (HS21050972-08)

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

Sample ID: 35BWW12_210518-FD (HS21050972-09)

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

Sample ID: 35BWW14_210518 (HS21050972-11)

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

Sample ID: 35BWW23_210518 (HS21050972-10)

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

WetChemistry by Method SM5310B

Batch ID: R384067

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Work Order: HS21050972

CASE NARRATIVE

WetChemistry by Method SM5310B

Batch ID: R384067

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW09_210517
Collection Date: 17-May-2021 07:40

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:10
1,1,2-Trichlor-1,2,2-trifluoroethane	**2.7**		**0.50**	**1.0**	**1.0**	**ug/L**	1	21-May-2021 16:10
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:10
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:10
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:10
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:10
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:10
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:10
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:10
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 16:10
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-May-2021 16:10
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:10
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-May-2021 16:10
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 16:10
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:10
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:10
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:10
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	21-May-2021 16:10
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:10
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW09_210517
Collection Date: 17-May-2021 07:40

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-May-2021 16:10
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-May-2021 16:10
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 16:10
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 16:10
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:10
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
Trichloroethene	**13**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-May-2021 16:10
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:10
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:10
Surr: 1,2-Dichloroethane-d4	*88.8*			**0**	*81-118*	*%REC*	*1*	*21-May-2021 16:10*
Surr: 4-Bromofluorobenzene	*86.4*			**0**	*85-114*	*%REC*	*1*	*21-May-2021 16:10*
Surr: Dibromofluoromethane	*90.7*			**0**	*80-119*	*%REC*	*1*	*21-May-2021 16:10*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*21-May-2021 16:10*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW11_210517
Collection Date: 17-May-2021 08:20

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:31
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:31
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:31
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:31
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:31
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:31
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:31
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:31
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:31
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 16:31
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-May-2021 16:31
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:31
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-May-2021 16:31
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 16:31
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:31
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:31
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:31
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	21-May-2021 16:31
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:31
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW11_210517
Collection Date: 17-May-2021 08:20

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-May-2021 16:31
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-May-2021 16:31
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 16:31
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 16:31
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:31
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:31
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:31
Surr: 1,2-Dichloroethane-d4	*90.4*			**0**	*81-118*	*%REC*	*1*	*21-May-2021 16:31*
Surr: 4-Bromofluorobenzene	*89.7*			**0**	*85-114*	*%REC*	*1*	*21-May-2021 16:31*
Surr: Dibromofluoromethane	*90.4*			**0**	*80-119*	*%REC*	*1*	*21-May-2021 16:31*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*21-May-2021 16:31*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW25_210517 Lab ID:HS21050972-03
Collection Date: 17-May-2021 09:05 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 13:43
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 13:43
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 13:43
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 13:43
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 13:43
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 13:43
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 13:43
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 13:43
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 13:43
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 13:43
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-May-2021 13:43
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 13:43
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-May-2021 13:43
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 13:43
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 13:43
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 13:43
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 13:43
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	21-May-2021 13:43
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 13:43
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW25_210517 Lab ID:HS21050972-03
Collection Date: 17-May-2021 09:05 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-May-2021 13:43
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-May-2021 13:43
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 13:43
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 13:43
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 13:43
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
Trichloroethene	**8.5**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-May-2021 13:43
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 13:43
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 13:43
Surr: 1,2-Dichloroethane-d4	*94.4*			**0**	*81-118*	*%REC*	*1*	*21-May-2021 13:43*
Surr: 4-Bromofluorobenzene	*89.8*			**0**	*85-114*	*%REC*	*1*	*21-May-2021 13:43*
Surr: Dibromofluoromethane	*93.0*			**0**	*80-119*	*%REC*	*1*	*21-May-2021 13:43*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*21-May-2021 13:43*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW24_210517 Lab ID:HS21050972-04
Collection Date: 17-May-2021 09:50 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:52
1,1,2-Trichlor-1,2,2-trifluoroethane	**2.7**		**0.50**	**1.0**	**1.0**	**ug/L**	1	21-May-2021 16:52
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:52
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:52
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:52
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:52
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:52
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:52
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:52
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 16:52
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-May-2021 16:52
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:52
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-May-2021 16:52
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 16:52
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:52
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:52
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:52
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	21-May-2021 16:52
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 16:52
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW24_210517
Collection Date: 17-May-2021 09:50

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-May-2021 16:52
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-May-2021 16:52
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 16:52
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 16:52
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 16:52
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
Trichloroethene	**2.4**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-May-2021 16:52
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 16:52
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 16:52
Surr: 1,2-Dichloroethane-d4	*91.8*			**0**	*81-118*	*%REC*	*1*	*21-May-2021 16:52*
Surr: 4-Bromofluorobenzene	*85.6*			**0**	*85-114*	*%REC*	*1*	*21-May-2021 16:52*
Surr: Dibromofluoromethane	*92.6*			**0**	*80-119*	*%REC*	*1*	*21-May-2021 16:52*
Surr: Toluene-d8	*111*			**0**	*89-112*	*%REC*	*1*	*21-May-2021 16:52*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW24_210517-FD Lab ID:HS21050972-05
Collection Date: 17-May-2021 09:50 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:13
1,1,2-Trichlor-1,2,2-trifluoroethane	**2.3**		**0.50**	**1.0**	**1.0**	**ug/L**	1	21-May-2021 17:13
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:13
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:13
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:13
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:13
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:13
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:13
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:13
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 17:13
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-May-2021 17:13
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:13
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-May-2021 17:13
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 17:13
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:13
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:13
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:13
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	21-May-2021 17:13
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:13
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW24_210517-FD Lab ID:HS21050972-05
Collection Date: 17-May-2021 09:50 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-May-2021 17:13
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-May-2021 17:13
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 17:13
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 17:13
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:13
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
Trichloroethene	**2.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	21-May-2021 17:13
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:13
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:13
Surr: 1,2-Dichloroethane-d4	*91.0*			**0**	*81-118*	*%REC*	*1*	*21-May-2021 17:13*
Surr: 4-Bromofluorobenzene	*88.2*			**0**	*85-114*	*%REC*	*1*	*21-May-2021 17:13*
Surr: Dibromofluoromethane	*90.6*			**0**	*80-119*	*%REC*	*1*	*21-May-2021 17:13*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*21-May-2021 17:13*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW07_210517 Lab ID:HS21050972-06
Collection Date: 17-May-2021 10:30 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:34
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:34
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:34
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:34
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:34
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:34
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:34
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:34
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:34
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 17:34
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-May-2021 17:34
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:34
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-May-2021 17:34
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 17:34
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:34
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:34
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:34
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	21-May-2021 17:34
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:34
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW07_210517
Collection Date: 17-May-2021 10:30

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-May-2021 17:34
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-May-2021 17:34
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 17:34
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 17:34
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:34
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:34
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:34
Surr: 1,2-Dichloroethane-d4	*88.6*			**0**	*81-118*	*%REC*	*1*	*21-May-2021 17:34*
Surr: 4-Bromofluorobenzene	*86.5*			**0**	*85-114*	*%REC*	*1*	*21-May-2021 17:34*
Surr: Dibromofluoromethane	*87.8*			**0**	*80-119*	*%REC*	*1*	*21-May-2021 17:34*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*21-May-2021 17:34*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW13_210517 Lab ID:HS21050972-07
Collection Date: 17-May-2021 11:55 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:55
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:55
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:55
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:55
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:55
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:55
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:55
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:55
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:55
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 17:55
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	21-May-2021 17:55
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:55
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	21-May-2021 17:55
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 17:55
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:55
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:55
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:55
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	21-May-2021 17:55
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	21-May-2021 17:55
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW13_210517
Collection Date: 17-May-2021 11:55

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	21-May-2021 17:55
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	21-May-2021 17:55
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	21-May-2021 17:55
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	21-May-2021 17:55
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	21-May-2021 17:55
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	21-May-2021 17:55
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	21-May-2021 17:55
Surr: 1,2-Dichloroethane-d4	*90.8*			**0**	*81-118*	*%REC*	*1*	*21-May-2021 17:55*
Surr: 4-Bromofluorobenzene	*87.3*			**0**	*85-114*	*%REC*	*1*	*21-May-2021 17:55*
Surr: Dibromofluoromethane	*89.4*			**0**	*80-119*	*%REC*	*1*	*21-May-2021 17:55*
Surr: Toluene-d8	*110*			**0**	*89-112*	*%REC*	*1*	*21-May-2021 17:55*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW12_210518
Collection Date: 18-May-2021 07:40

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:07
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:07
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:07
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:07
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:07
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:07
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:07
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:07
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:07
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 18:07
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	23-May-2021 18:07
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:07
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	23-May-2021 18:07
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 18:07
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:07
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:07
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:07
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	23-May-2021 18:07
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:07
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW12_210518
Collection Date: 18-May-2021 07:40

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	23-May-2021 18:07
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	23-May-2021 18:07
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 18:07
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 18:07
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:07
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
Tetrachloroethene	**3.4**		**0.30**	**1.0**	**1.0**	**ug/L**	1	23-May-2021 18:07
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:07
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:07
Surr: 1,2-Dichloroethane-d4	*91.4*			**0**	*81-118*	*%REC*	*1*	*23-May-2021 18:07*
Surr: 4-Bromofluorobenzene	*90.6*			**0**	*85-114*	*%REC*	*1*	*23-May-2021 18:07*
Surr: Dibromofluoromethane	*91.8*			**0**	*80-119*	*%REC*	*1*	*23-May-2021 18:07*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*23-May-2021 18:07*
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**0.981**	J	**0.500**	**0.500**	**1.00**	**mg/L**	1	20-May-2021 23:18
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**6.69**		**0.200**	**0.500**	**0.500**	**mg/L**	1	20-May-2021 14:08
Nitrogen, Nitrate (As N)	0.100	HU	0.0300	0.100	0.100	mg/L	1	20-May-2021 14:08
Sulfate	**34.2**		**0.200**	**0.500**	**0.500**	**mg/L**	1	20-May-2021 14:08
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	08-Jun-2021 09:42

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW12_210518-FD
Collection Date: 18-May-2021 07:40

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:28
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:28
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:28
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:28
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:28
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:28
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:28
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:28
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:28
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 18:28
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	23-May-2021 18:28
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:28
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	23-May-2021 18:28
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 18:28
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:28
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:28
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:28
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	23-May-2021 18:28
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:28
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW12_210518-FD Lab ID:HS21050972-09
Collection Date: 18-May-2021 07:40 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	23-May-2021 18:28
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	23-May-2021 18:28
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 18:28
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 18:28
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:28
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
Tetrachloroethene	**3.6**		**0.30**	**1.0**	**1.0**	**ug/L**	1	23-May-2021 18:28
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:28
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:28
Surr: 1,2-Dichloroethane-d4	*90.3*			**0**	*81-118*	*%REC*	*1*	*23-May-2021 18:28*
Surr: 4-Bromofluorobenzene	*90.6*			**0**	*85-114*	*%REC*	*1*	*23-May-2021 18:28*
Surr: Dibromofluoromethane	*89.7*			**0**	*80-119*	*%REC*	*1*	*23-May-2021 18:28*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*23-May-2021 18:28*
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**1.15**		**0.500**	**0.500**	**1.00**	**mg/L**	1	20-May-2021 23:33
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**6.61**		**0.200**	**0.500**	**0.500**	**mg/L**	1	20-May-2021 14:30
Nitrogen, Nitrate (As N)	0.100	HU	0.0300	0.100	0.100	mg/L	1	20-May-2021 14:30
Sulfate	**33.8**		**0.200**	**0.500**	**0.500**	**mg/L**	1	20-May-2021 14:30
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	08-Jun-2021 09:42

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW23_210518
Collection Date: 18-May-2021 08:30

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-10
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:49
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:49
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:49
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:49
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:49
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:49
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:49
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:49
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:49
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 18:49
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	23-May-2021 18:49
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:49
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	23-May-2021 18:49
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 18:49
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:49
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:49
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:49
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	23-May-2021 18:49
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 18:49
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW23_210518 Lab ID:HS21050972-10
Collection Date: 18-May-2021 08:30 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	23-May-2021 18:49
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	23-May-2021 18:49
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 18:49
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 18:49
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 18:49
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 18:49
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 18:49
Surr: 1,2-Dichloroethane-d4	*90.1*			**0**	*81-118*	*%REC*	*1*	*23-May-2021 18:49*
Surr: 4-Bromofluorobenzene	*88.4*			**0**	*85-114*	*%REC*	*1*	*23-May-2021 18:49*
Surr: Dibromofluoromethane	*89.7*			**0**	*80-119*	*%REC*	*1*	*23-May-2021 18:49*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*23-May-2021 18:49*
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**1.37**		**0.500**	**0.500**	**1.00**	**mg/L**	1	20-May-2021 23:47
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**18.0**		**0.200**	**0.500**	**0.500**	**mg/L**	1	20-May-2021 14:37
Nitrogen, Nitrate (As N)	**0.0303**	JH	**0.0300**	**0.100**	**0.100**	**mg/L**	1	20-May-2021 14:37
Sulfate	**80.7**		**0.200**	**0.500**	**0.500**	**mg/L**	1	20-May-2021 14:37
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	08-Jun-2021 09:42

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW14_210518 Lab ID:HS21050972-11
Collection Date: 18-May-2021 09:20 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:10
1,1,2-Trichlor-1,2,2-trifluoroethane	**9.8**		**0.50**	**1.0**	**1.0**	**ug/L**	1	23-May-2021 19:10
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
1,1-Dichloroethene	**1.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-May-2021 19:10
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:10
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:10
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:10
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:10
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:10
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:10
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:10
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 19:10
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	23-May-2021 19:10
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:10
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	23-May-2021 19:10
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 19:10
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:10
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:10
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:10
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	23-May-2021 19:10
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:10
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW14_210518 Lab ID:HS21050972-11
Collection Date: 18-May-2021 09:20 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	23-May-2021 19:10
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	23-May-2021 19:10
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 19:10
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 19:10
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:10
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
Tetrachloroethene	**27**		**0.30**	**1.0**	**1.0**	**ug/L**	1	23-May-2021 19:10
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
Trichloroethene	**6.9**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-May-2021 19:10
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:10
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:10
Surr: 1,2-Dichloroethane-d4	*91.8*			**0**	*81-118*	*%REC*	*1*	*23-May-2021 19:10*
Surr: 4-Bromofluorobenzene	*90.0*			**0**	*85-114*	*%REC*	*1*	*23-May-2021 19:10*
Surr: Dibromofluoromethane	*92.8*			**0**	*80-119*	*%REC*	*1*	*23-May-2021 19:10*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*23-May-2021 19:10*
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**1.49**		**0.500**	**0.500**	**1.00**	**mg/L**	1	21-May-2021 00:01
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**17.3**		**0.200**	**0.500**	**0.500**	**mg/L**	1	20-May-2021 14:45
Nitrogen, Nitrate (As N)	**0.0589**	JH	**0.0300**	**0.100**	**0.100**	**mg/L**	1	20-May-2021 14:45
Sulfate	**73.3**		**0.200**	**0.500**	**0.500**	**mg/L**	1	20-May-2021 14:45
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	08-Jun-2021 09:42

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW15_210518 Lab ID:HS21050972-12
Collection Date: 18-May-2021 10:05 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:31
1,1,2-Trichlor-1,2,2-trifluoroethane	**2.0**		**0.50**	**1.0**	**1.0**	**ug/L**	1	23-May-2021 19:31
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
1,1-Dichloroethene	**0.63**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	23-May-2021 19:31
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:31
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:31
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:31
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:31
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:31
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:31
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:31
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 19:31
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	23-May-2021 19:31
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:31
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	23-May-2021 19:31
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 19:31
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:31
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:31
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:31
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	23-May-2021 19:31
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:31
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW15_210518
Collection Date: 18-May-2021 10:05

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-12
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	23-May-2021 19:31
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	23-May-2021 19:31
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 19:31
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 19:31
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:31
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
Tetrachloroethene	**14**		**0.30**	**1.0**	**1.0**	**ug/L**	1	23-May-2021 19:31
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
Trichloroethene	**6.2**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-May-2021 19:31
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:31
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:31
Surr: 1,2-Dichloroethane-d4	*90.0*			**0**	*81-118*	*%REC*	*1*	*23-May-2021 19:31*
Surr: 4-Bromofluorobenzene	*93.0*			**0**	*85-114*	*%REC*	*1*	*23-May-2021 19:31*
Surr: Dibromofluoromethane	*91.2*			**0**	*80-119*	*%REC*	*1*	*23-May-2021 19:31*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*23-May-2021 19:31*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW17_210518 Lab ID:HS21050972-13
Collection Date: 18-May-2021 10:45 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:52
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:52
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:52
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:52
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:52
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:52
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:52
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:52
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:52
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 19:52
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	23-May-2021 19:52
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:52
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	23-May-2021 19:52
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 19:52
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:52
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:52
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:52
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	23-May-2021 19:52
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 19:52
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW17_210518 Lab ID:HS21050972-13
Collection Date: 18-May-2021 10:45 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	23-May-2021 19:52
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	23-May-2021 19:52
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 19:52
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 19:52
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 19:52
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 19:52
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 19:52
Surr: 1,2-Dichloroethane-d4	*92.7*			**0**	*81-118*	*%REC*	*1*	*23-May-2021 19:52*
Surr: 4-Bromofluorobenzene	*91.3*			**0**	*85-114*	*%REC*	*1*	*23-May-2021 19:52*
Surr: Dibromofluoromethane	*92.4*			**0**	*80-119*	*%REC*	*1*	*23-May-2021 19:52*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*23-May-2021 19:52*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW17_210518-FD Lab ID:HS21050972-14
Collection Date: 18-May-2021 10:45 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:13
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:13
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:13
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:13
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:13
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:13
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:13
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:13
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:13
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 20:13
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	23-May-2021 20:13
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:13
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	23-May-2021 20:13
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 20:13
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:13
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:13
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:13
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	23-May-2021 20:13
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:13
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW17_210518-FD Lab ID:HS21050972-14
Collection Date: 18-May-2021 10:45 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	23-May-2021 20:13
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	23-May-2021 20:13
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 20:13
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 20:13
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:13
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:13
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:13
Surr: 1,2-Dichloroethane-d4	*94.4*			**0**	*81-118*	*%REC*	*1*	*23-May-2021 20:13*
Surr: 4-Bromofluorobenzene	*88.4*			**0**	*85-114*	*%REC*	*1*	*23-May-2021 20:13*
Surr: Dibromofluoromethane	*91.2*			**0**	*80-119*	*%REC*	*1*	*23-May-2021 20:13*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*23-May-2021 20:13*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW16_210518 Lab ID:HS21050972-15
Collection Date: 18-May-2021 11:30 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:34
1,1,2-Trichlor-1,2,2-trifluoroethane	**3.8**		**0.50**	**1.0**	**1.0**	**ug/L**	1	23-May-2021 20:34
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:34
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:34
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:34
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:34
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:34
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:34
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:34
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 20:34
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	23-May-2021 20:34
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:34
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	23-May-2021 20:34
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 20:34
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:34
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:34
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:34
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	23-May-2021 20:34
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:34
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW16_210518 Lab ID:HS21050972-15
Collection Date: 18-May-2021 11:30 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	23-May-2021 20:34
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	23-May-2021 20:34
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 20:34
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 20:34
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:34
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
Tetrachloroethene	**6.0**		**0.30**	**1.0**	**1.0**	**ug/L**	1	23-May-2021 20:34
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
Trichloroethene	**2.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	23-May-2021 20:34
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:34
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:34
Surr: 1,2-Dichloroethane-d4	*92.3*			**0**	*81-118*	*%REC*	*1*	*23-May-2021 20:34*
Surr: 4-Bromofluorobenzene	*90.3*			**0**	*85-114*	*%REC*	*1*	*23-May-2021 20:34*
Surr: Dibromofluoromethane	*94.0*			**0**	*80-119*	*%REC*	*1*	*23-May-2021 20:34*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*23-May-2021 20:34*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW19_210518 Lab ID:HS21050972-16
Collection Date: 18-May-2021 12:15 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:55
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:55
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:55
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:55
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:55
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:55
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:55
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:55
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:55
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 20:55
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	23-May-2021 20:55
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:55
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	23-May-2021 20:55
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 20:55
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:55
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:55
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:55
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	23-May-2021 20:55
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 20:55
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: 35BWW19_210518 Lab ID:HS21050972-16
Collection Date: 18-May-2021 12:15 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	23-May-2021 20:55
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	23-May-2021 20:55
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 20:55
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 20:55
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 20:55
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 20:55
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 20:55
Surr: 1,2-Dichloroethane-d4	*90.8*			**0**	*81-118*	*%REC*	*1*	*23-May-2021 20:55*
Surr: 4-Bromofluorobenzene	*90.7*			**0**	*85-114*	*%REC*	*1*	*23-May-2021 20:55*
Surr: Dibromofluoromethane	*91.0*			**0**	*80-119*	*%REC*	*1*	*23-May-2021 20:55*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*23-May-2021 20:55*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW18_210518
Collection Date: 18-May-2021 13:00

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-17
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 21:16
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 21:16
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 21:16
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 21:16
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 21:16
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 21:16
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 21:16
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 21:16
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 21:16
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 21:16
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	23-May-2021 21:16
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 21:16
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	23-May-2021 21:16
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 21:16
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 21:16
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 21:16
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 21:16
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	23-May-2021 21:16
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 21:16
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW18_210518
Collection Date: 18-May-2021 13:00

ANALYTICAL REPORT
WorkOrder:HS21050972
Lab ID:HS21050972-17
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	23-May-2021 21:16
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	23-May-2021 21:16
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 21:16
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 21:16
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 21:16
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 21:16
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 21:16
Surr: 1,2-Dichloroethane-d4	*91.3*			**0**	*81-118*	*%REC*	*1*	*23-May-2021 21:16*
Surr: 4-Bromofluorobenzene	*92.2*			**0**	*85-114*	*%REC*	*1*	*23-May-2021 21:16*
Surr: Dibromofluoromethane	*92.1*			**0**	*80-119*	*%REC*	*1*	*23-May-2021 21:16*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*23-May-2021 21:16*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: Trip Blank-210518 Lab ID:HS21050972-18
Collection Date: 18-May-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
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 14:57
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 14:57
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 14:57
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 14:57
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 14:57
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 14:57
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 14:57
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 14:57
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 14:57
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 14:57
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	23-May-2021 14:57
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 14:57
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	23-May-2021 14:57
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 14:57
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 14:57
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 14:57
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 14:57
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	23-May-2021 14:57
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	23-May-2021 14:57
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: LHAAP 37 May 2021 WorkOrder:HS21050972
Sample ID: Trip Blank-210518 Lab ID:HS21050972-18
Collection Date: 18-May-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
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	23-May-2021 14:57
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	23-May-2021 14:57
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	23-May-2021 14:57
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	23-May-2021 14:57
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	23-May-2021 14:57
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	23-May-2021 14:57
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	23-May-2021 14:57
Surr: 1,2-Dichloroethane-d4	*89.9*			**0**	*81-118*	*%REC*	*1*	*23-May-2021 14:57*
Surr: 4-Bromofluorobenzene	*89.5*			**0**	*85-114*	*%REC*	*1*	*23-May-2021 14:57*
Surr: Dibromofluoromethane	*90.5*			**0**	*80-119*	*%REC*	*1*	*23-May-2021 14:57*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*23-May-2021 14:57*

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

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R384067 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B				**Matrix:** Groundwater	
HS21050972-08	35BWW12_210518	18 May 2021 07:40			20 May 2021 23:18	1
HS21050972-09	35BWW12_210518-FD	18 May 2021 07:40			20 May 2021 23:33	1
HS21050972-10	35BWW23_210518	18 May 2021 08:30			20 May 2021 23:47	1
HS21050972-11	35BWW14_210518	18 May 2021 09:20			21 May 2021 00:01	1
Batch ID: R384108 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS21050972-08	35BWW12_210518	18 May 2021 07:40			20 May 2021 14:08	1
HS21050972-09	35BWW12_210518-FD	18 May 2021 07:40			20 May 2021 14:30	1
HS21050972-10	35BWW23_210518	18 May 2021 08:30			20 May 2021 14:37	1
HS21050972-11	35BWW14_210518	18 May 2021 09:20			20 May 2021 14:45	1
Batch ID: R384157 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS21050972-01	35BWW09_210517	17 May 2021 07:40			21 May 2021 16:10	1
HS21050972-02	35BWW11_210517	17 May 2021 08:20			21 May 2021 16:31	1
HS21050972-03	35BWW25_210517	17 May 2021 09:05			21 May 2021 13:43	1
HS21050972-04	35BWW24_210517	17 May 2021 09:50			21 May 2021 16:52	1
HS21050972-05	35BWW24_210517-FD	17 May 2021 09:50			21 May 2021 17:13	1
HS21050972-06	35BWW07_210517	17 May 2021 10:30			21 May 2021 17:34	1
HS21050972-07	35BWW13_210517	17 May 2021 11:55			21 May 2021 17:55	1
Batch ID: R384184 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS21050972-18	Trip Blank-210518	18 May 2021 00:00			23 May 2021 14:57	1
Batch ID: R384184 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS21050972-08	35BWW12_210518	18 May 2021 07:40			23 May 2021 18:07	1
HS21050972-09	35BWW12_210518-FD	18 May 2021 07:40			23 May 2021 18:28	1
HS21050972-10	35BWW23_210518	18 May 2021 08:30			23 May 2021 18:49	1
HS21050972-11	35BWW14_210518	18 May 2021 09:20			23 May 2021 19:10	1
HS21050972-12	35BWW15_210518	18 May 2021 10:05			23 May 2021 19:31	1
HS21050972-13	35BWW17_210518	18 May 2021 10:45			23 May 2021 19:52	1
HS21050972-14	35BWW17_210518-FD	18 May 2021 10:45			23 May 2021 20:13	1
HS21050972-15	35BWW16_210518	18 May 2021 11:30			23 May 2021 20:34	1
HS21050972-16	35BWW19_210518	18 May 2021 12:15			23 May 2021 20:55	1
HS21050972-17	35BWW18_210518	18 May 2021 13:00			23 May 2021 21:16	1
Batch ID: R385113 (0)	**Test Name :** SUBCONTRACT ANALYSIS - RSK				**Matrix:** Groundwater	
HS21050972-08	35BWW12_210518	18 May 2021 07:40			08 Jun 2021 09:42	1
HS21050972-09	35BWW12_210518-FD	18 May 2021 07:40			08 Jun 2021 09:42	1
HS21050972-10	35BWW23_210518	18 May 2021 08:30			08 Jun 2021 09:42	1
HS21050972-11	35BWW14_210518	18 May 2021 09:20			08 Jun 2021 09:42	1

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384157 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-210521** Units: **ug/L** Analysis Date: **21-May-2021 12:18**
Client ID: Run ID: **VOA6_384157** SeqNo: **6104959** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	1.0	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	2.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384157 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-210521** Units: **ug/L** Analysis Date: **21-May-2021 12:18**
Client ID: Run ID: **VOA6_384157** SeqNo: **6104959** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	1.0	1.0								U
Carbon disulfide	2.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	2.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*46.42*	*1.0*	*50*	*0*	*92.8*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*45.45*	*1.0*	*50*	*0*	*90.9*	*85 - 114*				
Surr: Dibromofluoromethane	*45.52*	*1.0*	*50*	*0*	*91.0*	*80 - 119*				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384157 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210521** Units: **ug/L** Analysis Date: **21-May-2021 12:18**
Client ID: Run ID: **VOA6_384157** SeqNo: **6104959** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*54.86*	*1.0*	*50*	*0*	*110*	*89 - 112*				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384157 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-210521** Units: **ug/L** Analysis Date: **21-May-2021 11:36**
Client ID: Run ID: **VOA6_384157** SeqNo: **6104958** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.82	1.0	20	0	99.1	78 - 124				
1,1,1-Trichloroethane	19.32	1.0	20	0	96.6	74 - 131				
1,1,2,2-Tetrachloroethane	19.55	1.0	20	0	97.7	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	18.48	1.0	20	0	92.4	70 - 136				
1,1,2-Trichloroethane	19.43	1.0	20	0	97.1	80 - 119				
1,1-Dichloroethane	18.87	1.0	20	0	94.4	77 - 125				
1,1-Dichloroethene	20.04	1.0	20	0	100	71 - 131				
1,1-Dichloropropene	19.3	1.0	20	0	96.5	78 - 125				
1,2,3-Trichlorobenzene	20.02	1.0	20	0	100	69 - 129				
1,2,3-Trichloropropane	19.19	1.0	20	0	95.9	73 - 122				
1,2,4-Trichlorobenzene	20.12	1.0	20	0	101	69 - 130				
1,2,4-Trimethylbenzene	17.9	1.0	20	0	89.5	76 - 124				
1,2-Dibromo-3-chloropropane	20.26	1.0	20	0	101	62 - 128				
1,2-Dibromoethane	19.66	1.0	20	0	98.3	77 - 121				
1,2-Dichlorobenzene	18.21	1.0	20	0	91.0	80 - 119				
1,2-Dichloroethane	20.32	1.0	20	0	102	73 - 128				
1,2-Dichloropropane	18.99	1.0	20	0	94.9	78 - 122				
1,3,5-Trimethylbenzene	17.9	1.0	20	0	89.5	75 - 124				
1,3-Dichlorobenzene	18.63	1.0	20	0	93.2	80 - 119				
1,3-Dichloropropane	19.72	1.0	20	0	98.6	80 - 119				
1,4-Dichlorobenzene	19.19	1.0	20	0	96.0	79 - 118				
2,2-Dichloropropane	19.55	1.0	20	0	97.8	60 - 139				
2-Butanone	38.32	2.0	40	0	95.8	56 - 143				
2-Chlorotoluene	18.06	1.0	20	0	90.3	79 - 122				
2-Hexanone	39.83	2.0	40	0	99.6	57 - 139				
4-Chlorotoluene	18.1	1.0	20	0	90.5	78 - 122				
4-Isopropyltoluene	17.44	1.0	20	0	87.2	77 - 127				
4-Methyl-2-pentanone	38.7	2.0	40	0	96.7	67 - 130				
Acetone	49.44	2.0	40	0	124	39 - 160				
Benzene	19.83	1.0	20	0	99.1	79 - 120				
Bromobenzene	19.46	1.0	20	0	97.3	80 - 120				
Bromochloromethane	19.63	1.0	20	0	98.1	78 - 123				
Bromodichloromethane	19.28	1.0	20	0	96.4	79 - 125				
Bromoform	19.62	1.0	20	0	98.1	66 - 130				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384157 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-210521** Units: **ug/L** Analysis Date: **21-May-2021 11:36**
Client ID: Run ID: **VOA6_384157** SeqNo: **6104958** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Bromomethane	24.38	1.0	20	0	122	53 - 141				
Carbon disulfide	39.99	2.0	40	0	100.0	64 - 133				
Carbon tetrachloride	18	1.0	20	0	90.0	72 - 136				
Chlorobenzene	19.56	1.0	20	0	97.8	82 - 118				
Chloroethane	23.77	1.0	20	0	119	60 - 138				
Chloroform	18.24	1.0	20	0	91.2	79 - 124				
Chloromethane	20.21	1.0	20	0	101	50 - 139				
cis-1,2-Dichloroethene	18.93	1.0	20	0	94.6	78 - 123				
cis-1,3-Dichloropropene	19.44	1.0	20	0	97.2	75 - 124				
Dibromochloromethane	19.93	1.0	20	0	99.7	74 - 126				
Dibromomethane	19.36	1.0	20	0	96.8	79 - 123				
Dichlorodifluoromethane	19.88	1.0	20	0	99.4	32 - 152				
Ethylbenzene	19.68	1.0	20	0	98.4	79 - 121				
Hexachlorobutadiene	21.28	1.0	20	0	106	66 - 134				
Isopropylbenzene	18.54	1.0	20	0	92.7	72 - 131				
m,p-Xylene	38.51	2.0	40	0	96.3	80 - 121				
Methylene chloride	18.86	2.0	20	0	94.3	74 - 124				
Naphthalene	20.47	1.0	20	0	102	61 - 128				
n-Butylbenzene	18.05	1.0	20	0	90.2	75 - 128				
n-Propylbenzene	18.35	1.0	20	0	91.8	76 - 126				
o-Xylene	19.37	1.0	20	0	96.9	78 - 122				
sec-Butylbenzene	16.82	1.0	20	0	84.1	77 - 126				
Styrene	18.93	1.0	20	0	94.6	78 - 123				
tert-Butylbenzene	16.94	1.0	20	0	84.7	78 - 124				
Tetrachloroethene	19.51	1.0	20	0	97.5	74 - 129				
Toluene	20.32	1.0	20	0	102	80 - 121				
trans-1,2-Dichloroethene	19.07	1.0	20	0	95.4	75 - 124				
trans-1,3-Dichloropropene	20.79	1.0	20	0	104	73 - 127				
Trichloroethene	19.37	1.0	20	0	96.8	79 - 123				
Trichlorofluoromethane	19.88	1.0	20	0	99.4	65 - 141				
Vinyl chloride	19.85	1.0	20	0	99.3	58 - 137				
Surr: 1,2-Dichloroethane-d4	*49.49*	*1.0*	*50*	*0*	*99.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.65*	*1.0*	*50*	*0*	*97.3*	*85 - 114*				
Surr: Dibromofluoromethane	*48.13*	*1.0*	*50*	*0*	*96.3*	*80 - 119*				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384157 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-210521** Units: **ug/L** Analysis Date: **21-May-2021 11:36**
Client ID: Run ID: **VOA6_384157** SeqNo: **6104958** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*49.29*	*1.0*	*50*	*0*	*98.6*	*89 - 112*				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384157 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21050972-03MS** Units: **ug/L** Analysis Date: **21-May-2021 14:04**
Client ID: **35BWW25_210517** Run ID: **VOA6_384157** SeqNo: **6104964** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.19	1.0	20	0	95.9	78 - 124				
1,1,1-Trichloroethane	18.78	1.0	20	0	93.9	74 - 131				
1,1,2,2-Tetrachloroethane	19.81	1.0	20	0	99.1	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	21.82	1.0	20	0	109	70 - 136				
1,1,2-Trichloroethane	18.44	1.0	20	0	92.2	80 - 119				
1,1-Dichloroethane	16.82	1.0	20	0	84.1	77 - 125				
1,1-Dichloroethene	19.9	1.0	20	0	99.5	71 - 131				
1,1-Dichloropropene	19.92	1.0	20	0	99.6	78 - 125				
1,2,3-Trichlorobenzene	20.34	1.0	20	0	102	69 - 129				
1,2,3-Trichloropropane	19.25	1.0	20	0	96.3	73 - 122				
1,2,4-Trichlorobenzene	19.96	1.0	20	0	99.8	69 - 130				
1,2,4-Trimethylbenzene	20.69	1.0	20	0	103	76 - 124				
1,2-Dibromo-3-chloropropane	21.3	1.0	20	0	106	62 - 128				
1,2-Dibromoethane	19.68	1.0	20	0	98.4	77 - 121				
1,2-Dichlorobenzene	19.24	1.0	20	0	96.2	80 - 119				
1,2-Dichloroethane	18.82	1.0	20	0	94.1	73 - 128				
1,2-Dichloropropane	17.89	1.0	20	0	89.4	78 - 122				
1,3,5-Trimethylbenzene	20.78	1.0	20	0	104	75 - 124				
1,3-Dichlorobenzene	20.18	1.0	20	0	101	80 - 119				
1,3-Dichloropropane	18.65	1.0	20	0	93.3	80 - 119				
1,4-Dichlorobenzene	20.43	1.0	20	0	102	79 - 118				
2,2-Dichloropropane	17.47	1.0	20	0	87.4	60 - 139				
2-Butanone	33.33	2.0	40	0	83.3	56 - 143				
2-Chlorotoluene	19.94	1.0	20	0	99.7	79 - 122				
2-Hexanone	36.36	2.0	40	0	90.9	57 - 139				
4-Chlorotoluene	19.94	1.0	20	0	99.7	78 - 122				
4-Isopropyltoluene	21.84	1.0	20	0	109	77 - 127				
4-Methyl-2-pentanone	36.61	2.0	40	0	91.5	67 - 130				
Acetone	39.21	2.0	40	0	98.0	39 - 160				
Benzene	18.61	1.0	20	0	93.1	79 - 120				
Bromobenzene	19.48	1.0	20	0	97.4	80 - 120				
Bromochloromethane	17.25	1.0	20	0	86.3	78 - 123				
Bromodichloromethane	17.8	1.0	20	0	89.0	79 - 125				
Bromoform	18.84	1.0	20	0	94.2	66 - 130				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384157 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21050972-03MS** Units: **ug/L** Analysis Date: **21-May-2021 14:04**
Client ID: **35BWW25_210517** Run ID: **VOA6_384157** SeqNo: **6104964** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	24.68	1.0	20	0	123	53 - 141				
Carbon disulfide	38.14	2.0	40	0	95.3	64 - 133				
Carbon tetrachloride	19.22	1.0	20	0	96.1	72 - 136				
Chlorobenzene	19.32	1.0	20	0	96.6	82 - 118				
Chloroethane	23.29	1.0	20	0	116	60 - 138				
Chloroform	17.46	1.0	20	0	87.3	79 - 124				
Chloromethane	18.03	1.0	20	0	90.1	50 - 139				
cis-1,2-Dichloroethene	17.38	1.0	20	0	86.9	78 - 123				
cis-1,3-Dichloropropene	17.83	1.0	20	0	89.2	75 - 124				
Dibromochloromethane	18.33	1.0	20	0	91.6	74 - 126				
Dibromomethane	17.69	1.0	20	0	88.5	79 - 123				
Dichlorodifluoromethane	18.04	1.0	20	0	90.2	32 - 152				
Ethylbenzene	21.18	1.0	20	0	106	79 - 121				
Hexachlorobutadiene	22.37	1.0	20	0	112	66 - 134				
Isopropylbenzene	21	1.0	20	0	105	72 - 131				
m,p-Xylene	40.95	2.0	40	0	102	80 - 121				
Methylene chloride	17.18	2.0	20	0	85.9	74 - 124				
Naphthalene	18.54	1.0	20	0	92.7	61 - 128				
n-Butylbenzene	21.78	1.0	20	0	109	75 - 128				
n-Propylbenzene	21.78	1.0	20	0	109	76 - 126				
o-Xylene	19.31	1.0	20	0	96.6	78 - 122				
sec-Butylbenzene	21.74	1.0	20	0	109	77 - 126				
Styrene	19.09	1.0	20	0	95.5	78 - 123				
tert-Butylbenzene	21.33	1.0	20	0	107	78 - 124				
Tetrachloroethene	22.34	1.0	20	0	112	74 - 129				
Toluene	20.49	1.0	20	0	102	80 - 121				
trans-1,2-Dichloroethene	17.83	1.0	20	0	89.1	75 - 124				
trans-1,3-Dichloropropene	18.98	1.0	20	0	94.9	73 - 127				
Trichloroethene	28.19	1.0	20	8.49	98.5	79 - 123				
Trichlorofluoromethane	20.57	1.0	20	0	103	65 - 141				
Vinyl chloride	18.08	1.0	20	0	90.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44.79*	*1.0*	*50*	*0*	*89.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.42*	*1.0*	*50*	*0*	*96.8*	*85 - 114*				
Surr: Dibromofluoromethane	*45.24*	*1.0*	*50*	*0*	*90.5*	*80 - 119*				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384157 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21050972-03MS** Units: **ug/L** Analysis Date: **21-May-2021 14:04**
Client ID: **35BWW25_210517** Run ID: **VOA6_384157** SeqNo: **6104964** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*51.76*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384157 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS21050972-03MSD** Units: **ug/L** Analysis Date: **21-May-2021 14:25**
Client ID: **35BWW25_210517** Run ID: **VOA6_384157** SeqNo: **6104965** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.16	1.0	20	0	95.8	78 - 124	19.19	0.156	20	
1,1,1-Trichloroethane	18.68	1.0	20	0	93.4	74 - 131	18.78	0.537	20	
1,1,2,2-Tetrachloroethane	20.31	1.0	20	0	102	71 - 121	19.81	2.46	20	
1,1,2-Trichlor-1,2,2-trifluoroethane	21.5	1.0	20	0	108	70 - 136	21.82	1.45	20	
1,1,2-Trichloroethane	18.93	1.0	20	0	94.7	80 - 119	18.44	2.62	20	
1,1-Dichloroethane	16.82	1.0	20	0	84.1	77 - 125	16.82	0.0163	20	
1,1-Dichloroethene	19.56	1.0	20	0	97.8	71 - 131	19.9	1.71	20	
1,1-Dichloropropene	18.91	1.0	20	0	94.5	78 - 125	19.92	5.22	20	
1,2,3-Trichlorobenzene	23.45	1.0	20	0	117	69 - 129	20.34	14.2	20	
1,2,3-Trichloropropane	20.03	1.0	20	0	100	73 - 122	19.25	3.94	20	
1,2,4-Trichlorobenzene	22.45	1.0	20	0	112	69 - 130	19.96	11.8	20	
1,2,4-Trimethylbenzene	19.97	1.0	20	0	99.9	76 - 124	20.69	3.51	20	
1,2-Dibromo-3-chloropropane	21.91	1.0	20	0	110	62 - 128	21.3	2.86	20	
1,2-Dibromoethane	19.82	1.0	20	0	99.1	77 - 121	19.68	0.732	20	
1,2-Dichlorobenzene	19.17	1.0	20	0	95.8	80 - 119	19.24	0.398	20	
1,2-Dichloroethane	18.72	1.0	20	0	93.6	73 - 128	18.82	0.561	20	
1,2-Dichloropropane	18.16	1.0	20	0	90.8	78 - 122	17.89	1.5	20	
1,3,5-Trimethylbenzene	20.47	1.0	20	0	102	75 - 124	20.78	1.52	20	
1,3-Dichlorobenzene	19.22	1.0	20	0	96.1	80 - 119	20.18	4.84	20	
1,3-Dichloropropane	18.98	1.0	20	0	94.9	80 - 119	18.65	1.72	20	
1,4-Dichlorobenzene	20.32	1.0	20	0	102	79 - 118	20.43	0.525	20	
2,2-Dichloropropane	17.09	1.0	20	0	85.4	60 - 139	17.47	2.22	20	
2-Butanone	33	2.0	40	0	82.5	56 - 143	33.33	1	20	
2-Chlorotoluene	19.34	1.0	20	0	96.7	79 - 122	19.94	3.01	20	
2-Hexanone	38.01	2.0	40	0	95.0	57 - 139	36.36	4.43	20	
4-Chlorotoluene	19.9	1.0	20	0	99.5	78 - 122	19.94	0.197	20	
4-Isopropyltoluene	20.95	1.0	20	0	105	77 - 127	21.84	4.16	20	
4-Methyl-2-pentanone	38.52	2.0	40	0	96.3	67 - 130	36.61	5.08	20	
Acetone	36.26	2.0	40	0	90.6	39 - 160	39.21	7.83	20	
Benzene	18.89	1.0	20	0	94.4	79 - 120	18.61	1.48	20	
Bromobenzene	19.64	1.0	20	0	98.2	80 - 120	19.48	0.818	20	
Bromochloromethane	16.69	1.0	20	0	83.4	78 - 123	17.25	3.33	20	
Bromodichloromethane	17.75	1.0	20	0	88.7	79 - 125	17.8	0.263	20	
Bromoform	19.86	1.0	20	0	99.3	66 - 130	18.84	5.27	20	

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384157 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS21050972-03MSD** Units: **ug/L** Analysis Date: **21-May-2021 14:25**
Client ID: **35BWW25_210517** Run ID: **VOA6_384157** SeqNo: **6104965** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Bromomethane	22.57	1.0	20	0	113	53 - 141	24.68	8.95	20	
Carbon disulfide	37.42	2.0	40	0	93.6	64 - 133	38.14	1.9	20	
Carbon tetrachloride	18.94	1.0	20	0	94.7	72 - 136	19.22	1.42	20	
Chlorobenzene	19.19	1.0	20	0	95.9	82 - 118	19.32	0.662	20	
Chloroethane	21.61	1.0	20	0	108	60 - 138	23.29	7.45	20	
Chloroform	16.71	1.0	20	0	83.5	79 - 124	17.46	4.44	20	
Chloromethane	17.85	1.0	20	0	89.3	50 - 139	18.03	0.977	20	
cis-1,2-Dichloroethene	17.19	1.0	20	0	85.9	78 - 123	17.38	1.11	20	
cis-1,3-Dichloropropene	18.04	1.0	20	0	90.2	75 - 124	17.83	1.17	20	
Dibromochloromethane	19.45	1.0	20	0	97.3	74 - 126	18.33	5.93	20	
Dibromomethane	18.67	1.0	20	0	93.4	79 - 123	17.69	5.39	20	
Dichlorodifluoromethane	17.4	1.0	20	0	87.0	32 - 152	18.04	3.63	20	
Ethylbenzene	20.27	1.0	20	0	101	79 - 121	21.18	4.39	20	
Hexachlorobutadiene	22.39	1.0	20	0	112	66 - 134	22.37	0.108	20	
Isopropylbenzene	20.83	1.0	20	0	104	72 - 131	21	0.808	20	
m,p-Xylene	40.53	2.0	40	0	101	80 - 121	40.95	1.04	20	
Methylene chloride	17.18	2.0	20	0	85.9	74 - 124	17.18	0.0154	20	
Naphthalene	22	1.0	20	0	110	61 - 128	18.54	17.1	20	
n-Butylbenzene	21.19	1.0	20	0	106	75 - 128	21.78	2.78	20	
n-Propylbenzene	21.44	1.0	20	0	107	76 - 126	21.78	1.61	20	
o-Xylene	19.32	1.0	20	0	96.6	78 - 122	19.31	0.028	20	
sec-Butylbenzene	21.45	1.0	20	0	107	77 - 126	21.74	1.36	20	
Styrene	18.64	1.0	20	0	93.2	78 - 123	19.09	2.38	20	
tert-Butylbenzene	20.69	1.0	20	0	103	78 - 124	21.33	3.08	20	
Tetrachloroethene	21.48	1.0	20	0	107	74 - 129	22.34	3.92	20	
Toluene	20.18	1.0	20	0	101	80 - 121	20.49	1.52	20	
trans-1,2-Dichloroethene	18.23	1.0	20	0	91.2	75 - 124	17.83	2.23	20	
trans-1,3-Dichloropropene	19.54	1.0	20	0	97.7	73 - 127	18.98	2.9	20	
Trichloroethene	28.31	1.0	20	8.49	99.1	79 - 123	28.19	0.42	20	
Trichlorofluoromethane	20.38	1.0	20	0	102	65 - 141	20.57	0.927	20	
Vinyl chloride	18.25	1.0	20	0	91.2	58 - 137	18.08	0.96	20	
Surr: 1,2-Dichloroethane-d4	*47.94*	*1.0*	*50*	*0*	*95.9*	*81 - 118*	*44.79*	*6.79*	*20*	
Surr: 4-Bromofluorobenzene	*49.55*	*1.0*	*50*	*0*	*99.1*	*85 - 114*	*48.42*	*2.3*	*20*	
Surr: Dibromofluoromethane	*45.99*	*1.0*	*50*	*0*	*92.0*	*80 - 119*	*45.24*	*1.64*	*20*	

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384157 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS21050972-03MSD** Units: **ug/L** Analysis Date: **21-May-2021 14:25**
Client ID: **35BWW25_210517** Run ID: **VOA6_384157** SeqNo: **6104965** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*51.67*	*1.0*	*50*	*0*	*103*	*89 - 112*	*51.76*	*0.174*	*20*	

The following samples were analyzed in this batch: HS21050972-01, HS21050972-02, HS21050972-03, HS21050972-04, HS21050972-05, HS21050972-06, HS21050972-07

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384184 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-210523** Units: **ug/L** Analysis Date: **23-May-2021 13:54**
Client ID: Run ID: **VOA6_384184** SeqNo: **6105583** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	1.0	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	2.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384184 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MBLK Sample ID: **VBLKW-210523** Units: **ug/L** Analysis Date: **23-May-2021 13:54**
Client ID: Run ID: **VOA6_384184** SeqNo: **6105583** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	1.0	1.0								U
Carbon disulfide	2.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	2.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*46.06*	*1.0*	*50*	*0*	*92.1*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*44.16*	*1.0*	*50*	*0*	*88.3*	*85 - 114*				
Surr: Dibromofluoromethane	*43.82*	*1.0*	*50*	*0*	*87.6*	*80 - 119*				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384184 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210523** Units: **ug/L** Analysis Date: **23-May-2021 13:54**
Client ID: Run ID: **VOA6_384184** SeqNo: **6105583** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*55.85*	*1.0*	*50*	*0*	*112*	*89 - 112*				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384184 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-210523** Units: **ug/L** Analysis Date: **23-May-2021 13:12**
Client ID: Run ID: **VOA6_384184** SeqNo: **6105582** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.28	1.0	20	0	101	78 - 124				
1,1,1-Trichloroethane	20.18	1.0	20	0	101	74 - 131				
1,1,2,2-Tetrachloroethane	20.46	1.0	20	0	102	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	16.49	1.0	20	0	82.5	70 - 136				
1,1,2-Trichloroethane	20.82	1.0	20	0	104	80 - 119				
1,1-Dichloroethane	20.21	1.0	20	0	101	77 - 125				
1,1-Dichloroethene	18.67	1.0	20	0	93.3	71 - 131				
1,1-Dichloropropene	18.79	1.0	20	0	93.9	78 - 125				
1,2,3-Trichlorobenzene	16.69	1.0	20	0	83.4	69 - 129				
1,2,3-Trichloropropane	20.18	1.0	20	0	101	73 - 122				
1,2,4-Trichlorobenzene	18.09	1.0	20	0	90.4	69 - 130				
1,2,4-Trimethylbenzene	18.95	1.0	20	0	94.8	76 - 124				
1,2-Dibromo-3-chloropropane	18.53	1.0	20	0	92.6	62 - 128				
1,2-Dibromoethane	21.4	1.0	20	0	107	77 - 121				
1,2-Dichlorobenzene	19.49	1.0	20	0	97.4	80 - 119				
1,2-Dichloroethane	22.73	1.0	20	0	114	73 - 128				
1,2-Dichloropropane	20.89	1.0	20	0	104	78 - 122				
1,3,5-Trimethylbenzene	18.57	1.0	20	0	92.8	75 - 124				
1,3-Dichlorobenzene	20.03	1.0	20	0	100	80 - 119				
1,3-Dichloropropane	21.19	1.0	20	0	106	80 - 119				
1,4-Dichlorobenzene	21.11	1.0	20	0	106	79 - 118				
2,2-Dichloropropane	20.65	1.0	20	0	103	60 - 139				
2-Butanone	40.27	2.0	40	0	101	56 - 143				
2-Chlorotoluene	18.8	1.0	20	0	94.0	79 - 122				
2-Hexanone	39.38	2.0	40	0	98.5	57 - 139				
4-Chlorotoluene	19.79	1.0	20	0	99.0	78 - 122				
4-Isopropyltoluene	18.27	1.0	20	0	91.3	77 - 127				
4-Methyl-2-pentanone	40.69	2.0	40	0	102	67 - 130				
Acetone	76.07	2.0	40	0	190	39 - 160				S
Benzene	20.99	1.0	20	0	105	79 - 120				
Bromobenzene	21	1.0	20	0	105	80 - 120				
Bromochloromethane	20.28	1.0	20	0	101	78 - 123				
Bromodichloromethane	21.28	1.0	20	0	106	79 - 125				
Bromoform	19.65	1.0	20	0	98.2	66 - 130				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384184 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

LCS Sample ID: **VLCSW-210523** Units: **ug/L** Analysis Date: **23-May-2021 13:12**
Client ID: Run ID: **VOA6_384184** SeqNo: **6105582** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	24.93	1.0	20	0	125	53 - 141				
Carbon disulfide	38.86	2.0	40	0	97.2	64 - 133				
Carbon tetrachloride	18.76	1.0	20	0	93.8	72 - 136				
Chlorobenzene	20.15	1.0	20	0	101	82 - 118				
Chloroethane	21.51	1.0	20	0	108	60 - 138				
Chloroform	19.98	1.0	20	0	99.9	79 - 124				
Chloromethane	22.01	1.0	20	0	110	50 - 139				
cis-1,2-Dichloroethene	20.01	1.0	20	0	100	78 - 123				
cis-1,3-Dichloropropene	21.89	1.0	20	0	109	75 - 124				
Dibromochloromethane	21.23	1.0	20	0	106	74 - 126				
Dibromomethane	21.67	1.0	20	0	108	79 - 123				
Dichlorodifluoromethane	19.88	1.0	20	0	99.4	32 - 152				
Ethylbenzene	20.41	1.0	20	0	102	79 - 121				
Hexachlorobutadiene	20.87	1.0	20	0	104	66 - 134				
Isopropylbenzene	18.54	1.0	20	0	92.7	72 - 131				
m,p-Xylene	39.22	2.0	40	0	98.0	80 - 121				
Methylene chloride	20.58	2.0	20	0	103	74 - 124				
Naphthalene	17.72	1.0	20	0	88.6	61 - 128				
n-Butylbenzene	17.77	1.0	20	0	88.8	75 - 128				
n-Propylbenzene	18.73	1.0	20	0	93.7	76 - 126				
o-Xylene	19.57	1.0	20	0	97.9	78 - 122				
sec-Butylbenzene	17.39	1.0	20	0	86.9	77 - 126				
Styrene	19.56	1.0	20	0	97.8	78 - 123				
tert-Butylbenzene	16.94	1.0	20	0	84.7	78 - 124				
Tetrachloroethene	19.11	1.0	20	0	95.6	74 - 129				
Toluene	21.37	1.0	20	0	107	80 - 121				
trans-1,2-Dichloroethene	20.21	1.0	20	0	101	75 - 124				
trans-1,3-Dichloropropene	22.09	1.0	20	0	110	73 - 127				
Trichloroethene	21.01	1.0	20	0	105	79 - 123				
Trichlorofluoromethane	19.48	1.0	20	0	97.4	65 - 141				
Vinyl chloride	19.52	1.0	20	0	97.6	58 - 137				
Surr: 1,2-Dichloroethane-d4	*52.53*	*1.0*	*50*	*0*	*105*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.55*	*1.0*	*50*	*0*	*97.1*	*85 - 114*				
Surr: Dibromofluoromethane	*49.68*	*1.0*	*50*	*0*	*99.4*	*80 - 119*				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384184 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-210523** Units: **ug/L** Analysis Date: **23-May-2021 13:12**
Client ID: Run ID: **VOA6_384184** SeqNo: **6105582** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*49.08*	*1.0*	*50*	*0*	*98.2*	*89 - 112*				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384184 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS21050892-06MS** Units: **ug/L** Analysis Date: **23-May-2021 15:18**
Client ID: Run ID: **VOA6_384184** SeqNo: **6105586** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	411.1	20	400	0	103	78 - 124				
1,1,1-Trichloroethane	401	20	400	0	100	74 - 131				
1,1,2,2-Tetrachloroethane	373.3	20	400	0	93.3	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	421.4	20	400	0	105	70 - 136				
1,1,2-Trichloroethane	384.9	20	400	0	96.2	80 - 119				
1,1-Dichloroethane	337.7	20	400	0	84.4	77 - 125				
1,1-Dichloroethene	383.6	20	400	0	95.9	71 - 131				
1,1-Dichloropropene	419.5	20	400	0	105	78 - 125				
1,2,3-Trichlorobenzene	279	20	400	0	69.7	69 - 129				
1,2,3-Trichloropropane	363.6	20	400	0	90.9	73 - 122				
1,2,4-Trichlorobenzene	347.8	20	400	0	86.9	69 - 130				
1,2,4-Trimethylbenzene	401.7	20	400	0	100	76 - 124				
1,2-Dibromo-3-chloropropane	359.9	20	400	0	90.0	62 - 128				
1,2-Dibromoethane	411.4	20	400	0	103	77 - 121				
1,2-Dichlorobenzene	369.6	20	400	0	92.4	80 - 119				
1,2-Dichloroethane	401.8	20	400	0	100	73 - 128				
1,2-Dichloropropane	390.2	20	400	0	97.6	78 - 122				
1,3,5-Trimethylbenzene	408.8	20	400	0	102	75 - 124				
1,3-Dichlorobenzene	387	20	400	0	96.8	80 - 119				
1,3-Dichloropropane	382.8	20	400	0	95.7	80 - 119				
1,4-Dichlorobenzene	403.2	20	400	0	101	79 - 118				
2,2-Dichloropropane	381.3	20	400	0	95.3	60 - 139				
2-Butanone	615.5	40	800	0	76.9	56 - 143				
2-Chlorotoluene	388.7	20	400	0	97.2	79 - 122				
2-Hexanone	751.6	40	800	0	93.9	57 - 139				
4-Chlorotoluene	394	20	400	0	98.5	78 - 122				
4-Isopropyltoluene	423.3	20	400	0	106	77 - 127				
4-Methyl-2-pentanone	719.3	40	800	0	89.9	67 - 130				
Acetone	1200	40	800	471.9	91.0	39 - 160				
Benzene	406.7	20	400	0	102	79 - 120				
Bromobenzene	395.3	20	400	0	98.8	80 - 120				
Bromochloromethane	345.9	20	400	0	86.5	78 - 123				
Bromodichloromethane	403.2	20	400	0	101	79 - 125				
Bromoform	383.1	20	400	0	95.8	66 - 130				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384184 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MS Sample ID: **HS21050892-06MS** Units: **ug/L** Analysis Date: **23-May-2021 15:18**
Client ID: Run ID: **VOA6_384184** SeqNo: **6105586** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	440.7	20	400	0	110	53 - 141				
Carbon disulfide	749.2	40	800	0	93.7	64 - 133				
Carbon tetrachloride	422.1	20	400	0	106	72 - 136				
Chlorobenzene	398.1	20	400	0	99.5	82 - 118				
Chloroethane	402.6	20	400	0	101	60 - 138				
Chloroform	362	20	400	0	90.5	79 - 124				
Chloromethane	378.3	20	400	0	94.6	50 - 139				
cis-1,2-Dichloroethene	357.8	20	400	0	89.5	78 - 123				
cis-1,3-Dichloropropene	402.5	20	400	0	101	75 - 124				
Dibromochloromethane	394.3	20	400	0	98.6	74 - 126				
Dibromomethane	375.7	20	400	0	93.9	79 - 123				
Dichlorodifluoromethane	342.4	20	400	0	85.6	32 - 152				
Ethylbenzene	428.1	20	400	0	107	79 - 121				
Hexachlorobutadiene	445.4	20	400	0	111	66 - 134				
Isopropylbenzene	430.7	20	400	0	108	72 - 131				
m,p-Xylene	829.6	40	800	0	104	80 - 121				
Methylene chloride	346.2	40	400	0	86.6	74 - 124				
Naphthalene	279.2	20	400	0	69.8	61 - 128				
n-Butylbenzene	418.9	20	400	0	105	75 - 128				
n-Propylbenzene	425.5	20	400	0	106	76 - 126				
o-Xylene	394.4	20	400	0	98.6	78 - 122				
sec-Butylbenzene	421.9	20	400	0	105	77 - 126				
Styrene	383.1	20	400	0	95.8	78 - 123				
tert-Butylbenzene	406.5	20	400	0	102	78 - 124				
Tetrachloroethene	472	20	400	0	118	74 - 129				
Toluene	421.4	20	400	0	105	80 - 121				
trans-1,2-Dichloroethene	375	20	400	0	93.7	75 - 124				
trans-1,3-Dichloropropene	409.8	20	400	0	102	73 - 127				
Trichloroethene	431.3	20	400	0	108	79 - 123				
Trichlorofluoromethane	401.8	20	400	0	100	65 - 141				
Vinyl chloride	364	20	400	0	91.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*946.9*	*20*	*1000*	*0*	*94.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*965.2*	*20*	*1000*	*0*	*96.5*	*85 - 114*				
Surr: Dibromofluoromethane	*957.5*	*20*	*1000*	*0*	*95.8*	*80 - 119*				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384184 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21050892-06MS** Units: **ug/L** Analysis Date: **23-May-2021 15:18**
Client ID: Run ID: **VOA6_384184** SeqNo: **6105586** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*1056*	*20*	*1000*	*0*	*106*	*89 - 112*				

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384184 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS21050892-06MSD** Units: **ug/L** Analysis Date: **23-May-2021 15:39**
Client ID: Run ID: **VOA6_384184** SeqNo: **6105587** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	387.3	20	400	0	96.8	78 - 124	411.1	5.95	20	
1,1,1-Trichloroethane	387	20	400	0	96.8	74 - 131	401	3.55	20	
1,1,2,2-Tetrachloroethane	374.8	20	400	0	93.7	71 - 121	373.3	0.421	20	
1,1,2-Trichlor-1,2,2-trifluoroethane	400.1	20	400	0	100	70 - 136	421.4	5.19	20	
1,1,2-Trichloroethane	386.9	20	400	0	96.7	80 - 119	384.9	0.522	20	
1,1-Dichloroethane	324.9	20	400	0	81.2	77 - 125	337.7	3.87	20	
1,1-Dichloroethene	363.2	20	400	0	90.8	71 - 131	383.6	5.45	20	
1,1-Dichloropropene	419.9	20	400	0	105	78 - 125	419.5	0.101	20	
1,2,3-Trichlorobenzene	337.9	20	400	0	84.5	69 - 129	279	19.1	20	
1,2,3-Trichloropropane	372.2	20	400	0	93.0	73 - 122	363.6	2.32	20	
1,2,4-Trichlorobenzene	350.7	20	400	0	87.7	69 - 130	347.8	0.847	20	
1,2,4-Trimethylbenzene	391	20	400	0	97.7	76 - 124	401.7	2.71	20	
1,2-Dibromo-3-chloropropane	357.4	20	400	0	89.3	62 - 128	359.9	0.713	20	
1,2-Dibromoethane	408.4	20	400	0	102	77 - 121	411.4	0.716	20	
1,2-Dichlorobenzene	370.2	20	400	0	92.5	80 - 119	369.6	0.169	20	
1,2-Dichloroethane	392.4	20	400	0	98.1	73 - 128	401.8	2.38	20	
1,2-Dichloropropane	381.1	20	400	0	95.3	78 - 122	390.2	2.37	20	
1,3,5-Trimethylbenzene	403.5	20	400	0	101	75 - 124	408.8	1.3	20	
1,3-Dichlorobenzene	397.5	20	400	0	99.4	80 - 119	387	2.67	20	
1,3-Dichloropropane	383.9	20	400	0	96.0	80 - 119	382.8	0.305	20	
1,4-Dichlorobenzene	408.8	20	400	0	102	79 - 118	403.2	1.39	20	
2,2-Dichloropropane	378.3	20	400	0	94.6	60 - 139	381.3	0.78	20	
2-Butanone	693.4	40	800	0	86.7	56 - 143	615.5	11.9	20	
2-Chlorotoluene	381	20	400	0	95.2	79 - 122	388.7	1.99	20	
2-Hexanone	726.9	40	800	0	90.9	57 - 139	751.6	3.33	20	
4-Chlorotoluene	388.1	20	400	0	97.0	78 - 122	394	1.52	20	
4-Isopropyltoluene	426.9	20	400	0	107	77 - 127	423.3	0.845	20	
4-Methyl-2-pentanone	705.3	40	800	0	88.2	67 - 130	719.3	1.97	20	
Acetone	1144	40	800	471.9	84.0	39 - 160	1200	4.81	20	
Benzene	388.1	20	400	0	97.0	79 - 120	406.7	4.66	20	
Bromobenzene	393.7	20	400	0	98.4	80 - 120	395.3	0.402	20	
Bromochloromethane	344.7	20	400	0	86.2	78 - 123	345.9	0.342	20	
Bromodichloromethane	378.5	20	400	0	94.6	79 - 125	403.2	6.31	20	
Bromoform	368.8	20	400	0	92.2	66 - 130	383.1	3.82	20	

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384184 (0) **Instrument: VOA6** **Method: VOLATILES ORGANICS BY METHOD 8260C**

MSD Sample ID: **HS21050892-06MSD** Units: **ug/L** Analysis Date: **23-May-2021 15:39**
Client ID: Run ID: **VOA6_384184** SeqNo: **6105587** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Bromomethane	393.1	20	400	0	98.3	53 - 141	440.7	11.4	20	
Carbon disulfide	705.1	40	800	0	88.1	64 - 133	749.2	6.07	20	
Carbon tetrachloride	405.7	20	400	0	101	72 - 136	422.1	3.96	20	
Chlorobenzene	384.6	20	400	0	96.2	82 - 118	398.1	3.43	20	
Chloroethane	376.2	20	400	0	94.1	60 - 138	402.6	6.78	20	
Chloroform	348.3	20	400	0	87.1	79 - 124	362	3.86	20	
Chloromethane	365.9	20	400	0	91.5	50 - 139	378.3	3.35	20	
cis-1,2-Dichloroethene	362	20	400	0	90.5	78 - 123	357.8	1.15	20	
cis-1,3-Dichloropropene	388.3	20	400	0	97.1	75 - 124	402.5	3.59	20	
Dibromochloromethane	389	20	400	0	97.3	74 - 126	394.3	1.34	20	
Dibromomethane	380.9	20	400	0	95.2	79 - 123	375.7	1.37	20	
Dichlorodifluoromethane	350.6	20	400	0	87.7	32 - 152	342.4	2.39	20	
Ethylbenzene	412	20	400	0	103	79 - 121	428.1	3.83	20	
Hexachlorobutadiene	436.7	20	400	0	109	66 - 134	445.4	1.97	20	
Isopropylbenzene	415.6	20	400	0	104	72 - 131	430.7	3.57	20	
m,p-Xylene	826.5	40	800	0	103	80 - 121	829.6	0.374	20	
Methylene chloride	340.3	40	400	0	85.1	74 - 124	346.2	1.73	20	
Naphthalene	344.5	20	400	0	86.1	61 - 128	279.2	20.9	20	R
n-Butylbenzene	421.6	20	400	0	105	75 - 128	418.9	0.661	20	
n-Propylbenzene	421.9	20	400	0	105	76 - 126	425.5	0.841	20	
o-Xylene	387.2	20	400	0	96.8	78 - 122	394.4	1.85	20	
sec-Butylbenzene	407.8	20	400	0	102	77 - 126	421.9	3.4	20	
Styrene	380.7	20	400	0	95.2	78 - 123	383.1	0.622	20	
tert-Butylbenzene	398.6	20	400	0	99.6	78 - 124	406.5	1.98	20	
Tetrachloroethene	447	20	400	0	112	74 - 129	472	5.44	20	
Toluene	407.9	20	400	0	102	80 - 121	421.4	3.25	20	
trans-1,2-Dichloroethene	357.1	20	400	0	89.3	75 - 124	375	4.89	20	
trans-1,3-Dichloropropene	399.2	20	400	0	99.8	73 - 127	409.8	2.62	20	
Trichloroethene	408	20	400	0	102	79 - 123	431.3	5.55	20	
Trichlorofluoromethane	377.7	20	400	0	94.4	65 - 141	401.8	6.16	20	
Vinyl chloride	352.6	20	400	0	88.1	58 - 137	364	3.2	20	
Surr: 1,2-Dichloroethane-d4	*950.1*	*20*	*1000*	*0*	*95.0*	*81 - 118*	*946.9*	*0.336*	*20*	
Surr: 4-Bromofluorobenzene	*977.3*	*20*	*1000*	*0*	*97.7*	*85 - 114*	*965.2*	*1.24*	*20*	
Surr: Dibromofluoromethane	*937.4*	*20*	*1000*	*0*	*93.7*	*80 - 119*	*957.5*	*2.13*	*20*	

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384184 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS21050892-06MSD** Units: **ug/L** Analysis Date: **23-May-2021 15:39**
Client ID: Run ID: **VOA6_384184** SeqNo: **6105587** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*1049*	*20*	*1000*	*0*	*105*	*89 - 112*	*1056*	*0.637*	*20*	

The following samples were analyzed in this batch:

HS21050972-08	HS21050972-09	HS21050972-10	HS21050972-11
HS21050972-12	HS21050972-13	HS21050972-14	HS21050972-15
HS21050972-16	HS21050972-17	HS21050972-18	

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384067 (0) **Instrument: TOC_04** **Method: TOTAL ORGANIC CARBON - SM5310B**

MBLK Sample ID: **MBLK2-05202021** Units: **mg/L** Analysis Date: **20-May-2021 22:03**
Client ID: Run ID: **TOC_04_384067** SeqNo: **6102754** PrepDate: DF: **1**

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

LCS Sample ID: **LCS2-05202021** Units: **mg/L** Analysis Date: **20-May-2021 22:15**
Client ID: Run ID: **TOC_04_384067** SeqNo: **6102755** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.2	1.00	10	0	102	85 - 115				

LCSD Sample ID: **LCSD2-05202021** Units: **mg/L** Analysis Date: **20-May-2021 22:27**
Client ID: Run ID: **TOC_04_384067** SeqNo: **6102756** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.29	1.00	10	0	103	85 - 115	10.2	0.878	20	

MS Sample ID: **HS21050905-02MS** Units: **mg/L** Analysis Date: **20-May-2021 22:52**
Client ID: Run ID: **TOC_04_384067** SeqNo: **6102758** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	11.11	1.00	10	0.559	106	80 - 120				

The following samples were analyzed in this batch: HS21050972-08 HS21050972-09 HS21050972-10 HS21050972-11

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050972

QC BATCH REPORT

Batch ID: R384108 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK** Units: **mg/L** Analysis Date: **20-May-2021 09:40**
Client ID: Run ID: **ICS-Integrion_384108** SeqNo: **6103777** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								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: **20-May-2021 09:48**
Client ID: Run ID: **ICS-Integrion_384108** SeqNo: **6103778** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.96	0.500	20	0	99.8	80 - 120				
Nitrogen, Nitrate (As N)	3.812	0.100	4	0	95.3	80 - 120				
Sulfate	20.32	0.500	20	0	102	80 - 120				

MS Sample ID: **HS21050972-08MS** Units: **mg/L** Analysis Date: **20-May-2021 14:15**
Client ID: **35BWW12_210518** Run ID: **ICS-Integrion_384108** SeqNo: **6103782** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	16.53	0.500	10	6.692	98.4	80 - 120				
Nitrogen, Nitrate (As N)	2.005	0.100	2	0.0118	99.7	80 - 120				
Sulfate	42.69	0.500	10	34.17	85.2	80 - 120				

MSD Sample ID: **HS21050972-08MSD** Units: **mg/L** Analysis Date: **20-May-2021 14:22**
Client ID: **35BWW12_210518** Run ID: **ICS-Integrion_384108** SeqNo: **6103783** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	16.71	0.500	10	6.692	100	80 - 120	16.53	1.09	20	
Nitrogen, Nitrate (As N)	2.027	0.100	2	0.0118	101	80 - 120	2.005	1.08	20	
Sulfate	43.49	0.500	10	34.17	93.2	80 - 120	42.69	1.86	20	

The following samples were analyzed in this batch: HS21050972-08 HS21050972-09 HS21050972-10 HS21050972-11

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: **HS21050972**

QUALIFIERS, ACRONYMS, UNITS

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

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322021-7	09-May-2022
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022
Utah	TX026932021-10	31-Jul-2021

ALS Houston, US Date: 08-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Work Order: HS21050972

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS21050972-01	35BWW09_210517	Login	5/20/2021 11:35:47 AM	PJM	WET037
HS21050972-01	35BWW09_210517	Login	5/20/2021 11:35:47 AM	PJM	VOA042
HS21050972-01	35BWW09_210517	Login	5/20/2021 11:35:47 AM	PJM	WET037
HS21050972-01	35BWW09_210517	Login	5/20/2021 11:35:47 AM	PJM	Sub
HS21050972-02	35BWW11_210517	Login	5/20/2021 11:35:47 AM	PJM	VOA042
HS21050972-03	35BWW25_210517	Login	5/20/2021 11:35:47 AM	PJM	WET037
HS21050972-03	35BWW25_210517	Login	5/20/2021 11:35:47 AM	PJM	VOA042
HS21050972-03	35BWW25_210517	Login	5/20/2021 11:35:47 AM	PJM	WET037
HS21050972-03	35BWW25_210517	Login	5/20/2021 11:35:47 AM	PJM	Sub
HS21050972-04	35BWW24_210517	Login	5/20/2021 11:35:47 AM	PJM	VOA042
HS21050972-05	35BWW24_210517-FD	Login	5/20/2021 11:35:47 AM	PJM	VOA042
HS21050972-06	35BWW07_210517	Login	5/20/2021 11:35:47 AM	PJM	VOA042

ALS Houston, US Date: 08-Jun-21

Sample Receipt Checklist

Work Order ID: HS21050972 **Date/Time Received:** 20-May-2021 09:50

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

Completed By: /S/ Pablo Marinez (eSignature) 20-May-2021 11:38 (Date/Time) **Reviewed by:** /S/ Ragen Giga (eSignature) 22-May-2021 09:46 (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 ☐	3 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):	0.8°C UC/C	IR 31
Cooler(s)/Kit(s):	44650	
Date/Time sample(s) sent to storage:	5/20/21 12:00	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: ID does not match, logged per Sample Label
COC = 35BWW12-210518 Label = 35BWW12-210518-FD
Nitrates received out of hold

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

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

Project No. 501032

Job: LHAAP 37 May 2021

Prepared By: Scott Beesinger

P.O. Number

HS21050972

Aptim Environmental & Infrastucture, Inc.
LHAAP 37 May 2021

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 (chloride sulfate, nitrate) by SW9056	CO2 by RSK 175	Perchlorate by SW6850	Remarks (Preservatives, etc.)	Lab I.D.#
35Bww09-210517	wG	5/17/21/0740		3	X							
35Bww11-210517	wG	5/17/21/0820		3	X							
35Bww25-210517	wG	5/17/21/0905		3	X							
35Bww25-210517-ms	wG	5/17/21/0905		3	X							
35Bww25-210517-msD	wG	5/17/21/0905		3	X							
35Bww24-210517	wG	5/17/21/0950		3	X							
35Bww24-210517-FD	wG	5/17/21/0950		3	X							
35Bww07-210517	wG	5/17/21/1030		3	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	5/18/21	1430	FM	5/20/2021	09:50						

For Lab Use Only

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

Remarks:

4465 0.8° #31 <1°C

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

CHAIN OF CUSTODY

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

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

Project No. 501032

Job: LHAAP 37 May 2021

Prepared By: Scott Beesinger

P.O. Number

HS21050972

Aptim Environmental & Infrastucture, Inc.
LHAAP 37 May 2021

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 (chloride sulfate, nitrate) by SW9056	CO2 by RSK 175	Perchlorate by SW6850	Remarks (Preservatives, etc.)	Lab I.D.#
35BWW13-210517	WG	5/17/21/1155		3	X							
35BWW12-210518	WG	5/18/21/0740		12	X	X	X	X	X			
35BWW12-210518	WG	5/18/21/0740		12	X	X	X	X	X			
35BWW23-210518	WG	5/18/21/0830		12	X	X	X	X	X			
35BWW14-210518	WG	5/18/21/0920		12	X	X	X	X	X			
35BWW15-210518	WG	5/18/21/1005		3	X							
35BWW17-210518	WG	5/18/21/1045		3	X							
35BWW17-210518-FD	WG	5/18/21/1045		3	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	5/18/21	1430	SM	5/20/2021	0950						

For Lab Use Only

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

Remarks:

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

CHAIN OF CUSTODY

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

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

Project No. 501032

Job: LHAAP 37 May 2021

Prepared By: Scott Beesinger

P.O. Number

HS21050972

Aptim Environmental & Infrastucture, Inc.
LHAAP 37 May 2021

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 (chloride sulfate, nitrate) by SW9056	CO2 by RSK 175	Perchlorate by SW6850	Remarks (Preservatives, etc.)	Lab I.D.#
35BWW16-210518	WG	5/18/21/1130		3	X							
35BWW19-210518	WG	5/18/21/1215		3	X							
35BWW18-210518	WG	5/18/21/1300		3	X							
TRIPBLANK-210518	W	5/18/21		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	5/18/21	1430	Jim	5/20/2021	09:50						

For Lab Use Only

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

Remarks:

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

01073191

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

44650

CUSTODY SEAL

Date: 5/18/21 Time: 1432

Name: Sean Belanger

Company: RHDHV

Seal Broken By: PM

Date: 5/20/21

FedEx TRK# 0221 9473 0842 9090

WED - 19 MAY AA
PRIORITY OVERNIGHT

AB SGRA44650

77099
TX-US
IAH

FID: 3923207 18May2021 GGGA 56DG3/71DC/1B23

LABORATORY REPORT

June 7, 2021

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

RE: HS21050972

Dear Ragen:

Enclosed are the results of the samples submitted to our laboratory on May 21, 2021. For your reference, these analyses have been assigned our service request number P2102781.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Hayden Akers at 8:07 pm, Jun 07, 2021

Hayden Akers
Project Manager

Client: ALS Environmental - US Service Request No: P2102781
Project: HS21050972

CASE NARRATIVE

The samples were received intact under chain of custody on May 21, 2021 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175 as described in laboratory SOP VOA-DISGAS. This analyte is included on the laboratory's NELAP and DoD-ELAP scope of accreditation.

Methane, Ethene and Ethane Analysis

The samples were analyzed for methane, ethene, and ethane using a gas chromatograph equipped with a flame ionization detector (FID). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least two hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (methane, ethene and ethane) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP accreditation.

Manual integrations were performed on the following sample(s) and analyte(s). Refer to the raw data for additional information.

Sample Identification(s)	Analyte(s)
P2102781-001 & -003	Methane

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

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

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-008
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Environmental - US
Service Request: P2102781
Project ID: HS21050972

Date Received: 5/21/2021
Time Received: 16:49

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
35BWW12_210518	P2102781-001	Water	5/18/2021	07:40	X	X
35BWW12_210518-FD	P2102781-002	Water	5/18/2021	07:40	X	X
35BWW23_210518	P2102781-003	Water	5/18/2021	08:30	X	X
35BWW14_210518	P2102781-004	Water	5/18/2021	09:20	X	X

P2102781

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:** **16159**

SUBCONTRACT TO:

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065

Phone: +1 805 526 7161

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	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:	HS21050972
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21050972-08**	**35BWW12_210518**	**Groundwater**	**18 May 2021 07:40**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	03 Jun 2021
2.	**HS21050972-09**	**35BWW12_210518-FD**	**Groundwater**	**18 May 2021 07:40**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	03 Jun 2021
3.	**HS21050972-10**	**35BWW23_210518**	**Groundwater**	**18 May 2021 08:30**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	03 Jun 2021
4.	**HS21050972-11**	**35BWW14_210518**	**Groundwater**	**18 May 2021 09:20**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	03 Jun 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.
VOANeat for CO2 & VOAHCL for MEE

QC Level: DOD IV (DoD Data Package)

PJ102781

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense**

COC ID: **16159**

Relinquished By: _____ Date/Time: 5/20/2021 1800.

Received By: _____ Date/Time: 5-21-21 0845

Cooler ID(s): _____ Temperature(s): 2° WET

ALS Environmental
Sample Acceptance Check Form

Client: ALS Environmental - US Work order: P2102781

Project: HS21050972

Sample(s) received on: 5/21/21 Date opened: 5/21/21 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: 2° C Blank Temperature: ° C	Wet Ic		
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? Cooler lid. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2102781-001.01	40mL VOA NP		7		A	wh 5/29/21
P2102781-001.02	40mL VOA NP				A	
P2102781-001.03	40mL VOA NP				A	
P2102781-001.04	40ml VOA HCL		1		A	CB 6/1/21
P2102781-001.05	40ml VOA HCL				A	
P2102781-001.06	40ml VOA HCL				A	
P2102781-002.01	40mL VOA NP		7		A	wh 5/29/21
P2102781-002.02	40mL VOA NP				A	
P2102781-002.03	40mL VOA NP				A	
P2102781-002.04	40ml VOA HCL		1		A	CB 6/1/21
P2102781-002.05	40ml VOA HCL				A	
P2102781-002.06	40ml VOA HCL				A	
P2102781-003.01	40mL VOA NP		7		A	wh 5/29/21
P2102781-003.02	40mL VOA NP				A	
P2102781-003.03	40mL VOA NP				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: ALS Environmental - US Work order: P2102781

Project: HS21050972

Sample(s) received on: 5/21/21 Date opened: 5/21/21 by: ADAVID

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2102781-003.04	40ml VOA HCL		1		A	CB 6/1/21
P2102781-003.05	40ml VOA HCL				A	
P2102781-003.06	40ml VOA HCL				A	
P2102781-004.01	40mL VOA NP		7		A	wh 5/29/21
P2102781-004.02	40mL VOA NP				A	
P2102781-004.03	40mL VOA NP				A	
P2102781-004.04	40ml VOA HCL		1		A	CB 6/1/21
P2102781-004.05	40ml VOA HCL				A	
P2102781-004.06	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Environmental - US**
Client Project ID: **HS21050972** ALS Project ID: P2102781

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD Date(s) Collected: 5/18/21
Analyst: Connor Barrett Date Received: 5/21/21
Matrix: Water Date Analyzed: 5/29/21
Test Notes:

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
35BWW12_210518	P2102781-001	0.10	**480,000**	1,000	860	370	
35BWW12_210518-FD	P2102781-002	0.050	**500,000**	2,000	1,700	740	
35BWW23_210518	P2102781-003	0.050	**660,000**	2,000	1,700	740	
35BWW14_210518	P2102781-004	0.050	**320,000**	2,000	1,700	740	
Method Control Sample	P210529-MB	0.10	860	1,000	860	370	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Environmental - US**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2102781
Client Project ID: **HS21050972** ALS Sample ID: P210529-DLCS

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/TCD Date Received: NA
Analyst: Connor Barrett Date Analyzed: 5/29/21
Matrix: Water Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result[1] LCS ug/L	Result[1] DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	19,400	19,500	**85**	**85**	80-122	0	12	

[1] = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Environmental - US**
Client Sample ID: **35BWW12_210518**
Client Project ID: **HS21050972**

ALS Project ID: P2102781
ALS Sample ID: P2102781-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: 5/18/21
Date Received: 5/21/21
Date Analyzed: 6/1/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Environmental - US**
Client Sample ID: **35BWW12_210518-FD**
Client Project ID: **HS21050972**

ALS Project ID: P2102781
ALS Sample ID: P2102781-002

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: 5/18/21
Date Received: 5/21/21
Date Analyzed: 6/1/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Environmental - US**
Client Sample ID: **35BWW23_210518**
Client Project ID: **HS21050972**

ALS Project ID: P2102781
ALS Sample ID: P2102781-003

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: 5/18/21
Date Received: 5/21/21
Date Analyzed: 6/1/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Environmental - US**
Client Sample ID: **35BWW14_210518**
Client Project ID: **HS21050972**

ALS Project ID: P2102781
ALS Sample ID: P2102781-004

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: 5/18/21
Date Received: 5/21/21
Date Analyzed: 6/1/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Environmental - US**
Client Sample ID: **Method Control Sample** ALS Project ID: P2102781
Client Project ID: **HS21050972** ALS Sample ID: P210601-MB

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/FID Date Received: NA
Analyst: Connor Barrett Date Analyzed: 6/01/21
Matrix: Water Volume(s) Analyzed: 0.10 ml(s)
Test Notes:

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Environmental - US**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS21050972**

ALS Project ID: P2102781
ALS Sample ID: P210601-LCS
P210601-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 6/01/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result[1] LCS µg/L	Result[1] DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	2.41	2.29	**96**	**91**	73-125	5	26	
74-85-1	Ethene	4.40	4.82	4.82	**110**	**110**	72-133	0	11	
74-84-0	Ethane	4.72	4.83	4.86	**102**	**103**	74-131	1	10	

[1] = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

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WorkOrder: HS20110527

Longhorn Army Ammunition Plant 37

Aptim Environmental & Infrastucture, Inc.

Susan Huang
2500 City West Blvd., Suite 1700
Houston TX 77042

19-Dec-2020

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ALS Group USA, Corp
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www.alsglobal.com

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HS20110527 ALS Simi Valley P2006450 Tier II

HS20110527 8260_W_DOD Raw Data

HS20110527 Wet Chem Raw Data (9056_anions_W)

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Case Narrative

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LABORATORY REPORT

CASE NARRATIVE

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

DETAIL SUMMARY

CHAIN OF CUSTODY

SAMPLE ACCEPTANCE CHECK FORM

RSK 175 TCD

RSK 175 FID

RAW DATA RSK 175 TCD

RAW DATA RSK 175 FID

HS20110527 Longhorn Army Ammunition Plant 37 Final

ALS WO# HS20110527

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F: +1 281 530 5887

January 7, 2020

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

Work Order: **HS20110527**

Laboratory Results for: **Longhorn Army Ammunition Plant 37**

Dear Susan Huang,

ALS Environmental received 18 sample(s) on Nov 11, 2020 for the analysis presented in the following report.

Revision I - This report was revised to correct to sample ID's; 35WW19-201109 updated to 35BWW19-201109 & 35WW18-201109 updated to 35BWW18-201109 .

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Work Order: HS20110527

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20110527-01	35BWW01-201109	Groundwater		09-Nov-2020 07:25	11-Nov-2020 10:20	☐
HS20110527-02	35BWW10-201109	Groundwater		09-Nov-2020 08:10	11-Nov-2020 10:20	☐
HS20110527-03	35BWW05-201109	Groundwater		09-Nov-2020 08:55	11-Nov-2020 10:20	☐
HS20110527-04	LHSMW58-201109	Groundwater		09-Nov-2020 09:40	11-Nov-2020 10:20	☐
HS20110527-05	35BWW11-201109	Groundwater		09-Nov-2020 10:25	11-Nov-2020 10:20	☐
HS20110527-06	35BWW20-201109	Groundwater		09-Nov-2020 11:10	11-Nov-2020 10:20	☐
HS20110527-07	35BWW20-201109-FD	Groundwater		09-Nov-2020 11:10	11-Nov-2020 10:20	☐
HS20110527-08	35BWW09-201109	Groundwater		09-Nov-2020 11:55	11-Nov-2020 10:20	☐
HS20110527-09	35BWW19-201109	Groundwater		09-Nov-2020 12:40	11-Nov-2020 10:20	☐
HS20110527-10	35BWW18-201109	Groundwater		09-Nov-2020 13:25	11-Nov-2020 10:20	☐
HS20110527-11	35BWW26-201110	Groundwater		10-Nov-2020 07:20	11-Nov-2020 10:20	☐
HS20110527-12	35BWW04-201110	Groundwater		10-Nov-2020 08:05	11-Nov-2020 10:20	☐
HS20110527-13	35BWW14-201110	Groundwater		10-Nov-2020 09:00	11-Nov-2020 10:20	☐
HS20110527-14	35BWW15-201110	Groundwater		10-Nov-2020 09:50	11-Nov-2020 10:20	☐
HS20110527-15	35BWW23-201110	Groundwater		10-Nov-2020 10:30	11-Nov-2020 10:20	☐
HS20110527-16	35BWW24-201110	Groundwater		10-Nov-2020 11:20	11-Nov-2020 10:20	☐
HS20110527-17	35BWW25-201110	Groundwater		10-Nov-2020 12:15	11-Nov-2020 10:20	☐
HS20110527-18	Trip Blank-201110	Groundwater	CG-100620-211	10-Nov-2020 00:00	11-Nov-2020 10:20	☐

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Work Order: HS20110527

CASE NARRATIVE

Work Order Comments

- The analysis for Methane, Methene, Ethane and CO2 by RSK175 was subcontracted to ALS Simi Valley, CA. Final report attached.
- The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

GCMS Volatiles by Method SW8260

Batch ID: R373216

Sample ID: LHSMW58-201109 (HS20110527-04MSD)

- MSD/RPD fauled QC limits for some few compounds

Batch ID: R373272

Sample ID: HS20110985-26MS

- MS and MSD are for an unrelated sample

WetChemistry by Method SW9056

Batch ID: R372517

Sample ID: HS20101419-01MS

- MS and MSD are for an unrelated sample (Chloride,Sulfate)

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW01-201109
Collection Date: 09-Nov-2020 07:25

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:21
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:21
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:21
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:21
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:21
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:21
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:21
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:21
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:21
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	22-Nov-2020 22:21
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	22-Nov-2020 22:21
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:21
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	22-Nov-2020 22:21
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	22-Nov-2020 22:21
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:21
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:21
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:21
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	22-Nov-2020 22:21
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:21
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW01-201109
Collection Date: 09-Nov-2020 07:25

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	22-Nov-2020 22:21
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	22-Nov-2020 22:21
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	22-Nov-2020 22:21
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:21
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:21
Surr: 1,2-Dichloroethane-d4	*86.5*			**0**	*81-118*	*%REC*	*1*	*22-Nov-2020 22:21*
Surr: 4-Bromofluorobenzene	*90.0*			**0**	*85-114*	*%REC*	*1*	*22-Nov-2020 22:21*
Surr: Dibromofluoromethane	*91.8*			**0**	*80-119*	*%REC*	*1*	*22-Nov-2020 22:21*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*22-Nov-2020 22:21*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW10-201109
Collection Date: 09-Nov-2020 08:10

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:42
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:42
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:42
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:42
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:42
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:42
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:42
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:42
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:42
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	22-Nov-2020 22:42
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	22-Nov-2020 22:42
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:42
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	22-Nov-2020 22:42
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	22-Nov-2020 22:42
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:42
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:42
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:42
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	22-Nov-2020 22:42
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:42
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW10-201109
Collection Date: 09-Nov-2020 08:10

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	22-Nov-2020 22:42
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	22-Nov-2020 22:42
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	22-Nov-2020 22:42
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:42
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:42
Surr: 1,2-Dichloroethane-d4	*86.1*			**0**	*81-118*	*%REC*	*1*	*22-Nov-2020 22:42*
Surr: 4-Bromofluorobenzene	*87.6*			**0**	*85-114*	*%REC*	*1*	*22-Nov-2020 22:42*
Surr: Dibromofluoromethane	*91.1*			**0**	*80-119*	*%REC*	*1*	*22-Nov-2020 22:42*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*22-Nov-2020 22:42*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW05-201109
Collection Date: 09-Nov-2020 08:55

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:04
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:04
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:04
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:04
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:04
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:04
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:04
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:04
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:04
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	22-Nov-2020 23:04
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	22-Nov-2020 23:04
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:04
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	22-Nov-2020 23:04
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	22-Nov-2020 23:04
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:04
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:04
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:04
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	22-Nov-2020 23:04
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:04
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW05-201109
Collection Date: 09-Nov-2020 08:55

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	22-Nov-2020 23:04
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	22-Nov-2020 23:04
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	22-Nov-2020 23:04
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:04
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Tetrachloroethene	**2.1**		**0.30**	**0.50**	**1.0**	**UG/L**	1	22-Nov-2020 23:04
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Trichloroethene	**5.5**		**0.20**	**0.50**	**1.0**	**UG/L**	1	22-Nov-2020 23:04
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:04
Surr: 1,2-Dichloroethane-d4	*85.1*			**0**	*81-118*	*%REC*	*1*	*22-Nov-2020 23:04*
Surr: 4-Bromofluorobenzene	*93.0*			**0**	*85-114*	*%REC*	*1*	*22-Nov-2020 23:04*
Surr: Dibromofluoromethane	*90.7*			**0**	*80-119*	*%REC*	*1*	*22-Nov-2020 23:04*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*22-Nov-2020 23:04*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: LHSMW58-201109
Collection Date: 09-Nov-2020 09:40

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:00
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:00
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:00
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:00
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:00
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:00
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:00
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:00
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:00
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	22-Nov-2020 22:00
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	22-Nov-2020 22:00
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:00
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	22-Nov-2020 22:00
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	22-Nov-2020 22:00
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:00
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:00
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:00
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	22-Nov-2020 22:00
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 22:00
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: LHSMW58-201109
Collection Date: 09-Nov-2020 09:40

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	22-Nov-2020 22:00
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	22-Nov-2020 22:00
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	22-Nov-2020 22:00
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 22:00
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Tetrachloroethene	**9.5**		**0.30**	**0.50**	**1.0**	**UG/L**	1	22-Nov-2020 22:00
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Trichloroethene	**0.81**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	22-Nov-2020 22:00
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 22:00
Surr: 1,2-Dichloroethane-d4	*86.8*			**0**	*81-118*	*%REC*	*1*	*22-Nov-2020 22:00*
Surr: 4-Bromofluorobenzene	*89.2*			**0**	*85-114*	*%REC*	*1*	*22-Nov-2020 22:00*
Surr: Dibromofluoromethane	*90.0*			**0**	*80-119*	*%REC*	*1*	*22-Nov-2020 22:00*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*22-Nov-2020 22:00*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW11-201109
Collection Date: 09-Nov-2020 10:25

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:25
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:25
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:25
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:25
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:25
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:25
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:25
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:25
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:25
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	22-Nov-2020 23:25
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	22-Nov-2020 23:25
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:25
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	22-Nov-2020 23:25
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	22-Nov-2020 23:25
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:25
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:25
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:25
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	22-Nov-2020 23:25
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:25
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW11-201109
Collection Date: 09-Nov-2020 10:25

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	22-Nov-2020 23:25
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	22-Nov-2020 23:25
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	22-Nov-2020 23:25
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:25
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:25
Surr: 1,2-Dichloroethane-d4	*86.7*			**0**	*81-118*	*%REC*	*1*	*22-Nov-2020 23:25*
Surr: 4-Bromofluorobenzene	*86.8*			**0**	*85-114*	*%REC*	*1*	*22-Nov-2020 23:25*
Surr: Dibromofluoromethane	*88.0*			**0**	*80-119*	*%REC*	*1*	*22-Nov-2020 23:25*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*22-Nov-2020 23:25*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW20-201109
Collection Date: 09-Nov-2020 11:10

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:46
1,1,2-Trichlor-1,2,2-trifluoroethane	**1.8**		**0.50**	**1.0**	**1.0**	**UG/L**	1	22-Nov-2020 23:46
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:46
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:46
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:46
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:46
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:46
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:46
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:46
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	22-Nov-2020 23:46
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	22-Nov-2020 23:46
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:46
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	22-Nov-2020 23:46
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	22-Nov-2020 23:46
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:46
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:46
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:46
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	22-Nov-2020 23:46
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	22-Nov-2020 23:46
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW20-201109
Collection Date: 09-Nov-2020 11:10

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	22-Nov-2020 23:46
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	22-Nov-2020 23:46
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	22-Nov-2020 23:46
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	22-Nov-2020 23:46
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Tetrachloroethene	**12**		**0.30**	**0.50**	**1.0**	**UG/L**	1	22-Nov-2020 23:46
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Trichloroethene	**2.2**		**0.20**	**0.50**	**1.0**	**UG/L**	1	22-Nov-2020 23:46
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	22-Nov-2020 23:46
Surr: 1,2-Dichloroethane-d4	*85.7*			**0**	*81-118*	*%REC*	*1*	*22-Nov-2020 23:46*
Surr: 4-Bromofluorobenzene	*87.4*			**0**	*85-114*	*%REC*	*1*	*22-Nov-2020 23:46*
Surr: Dibromofluoromethane	*88.4*			**0**	*80-119*	*%REC*	*1*	*22-Nov-2020 23:46*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*22-Nov-2020 23:46*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW20-201109-FD
Collection Date: 09-Nov-2020 11:10

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:07
1,1,2-Trichlor-1,2,2-trifluoroethane	**2.0**		**0.50**	**1.0**	**1.0**	**UG/L**	1	23-Nov-2020 00:07
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:07
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:07
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:07
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:07
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:07
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:07
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:07
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 00:07
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 00:07
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:07
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 00:07
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 00:07
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:07
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:07
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:07
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 00:07
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:07
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW20-201109-FD
Collection Date: 09-Nov-2020 11:10

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 00:07
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 00:07
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 00:07
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:07
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Tetrachloroethene	**13**		**0.30**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 00:07
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Trichloroethene	**2.3**		**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 00:07
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:07
Surr: 1,2-Dichloroethane-d4	*86.9*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 00:07*
Surr: 4-Bromofluorobenzene	*88.3*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 00:07*
Surr: Dibromofluoromethane	*90.4*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 00:07*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 00:07*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW09-201109
Collection Date: 09-Nov-2020 11:55

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:28
1,1,2-Trichlor-1,2,2-trifluoroethane	**2.3**		**0.50**	**1.0**	**1.0**	**UG/L**	1	23-Nov-2020 00:28
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:28
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:28
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:28
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:28
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:28
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:28
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:28
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 00:28
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 00:28
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:28
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 00:28
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 00:28
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:28
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:28
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:28
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 00:28
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:28
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW09-201109
Collection Date: 09-Nov-2020 11:55

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 00:28
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 00:28
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 00:28
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:28
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Trichloroethene	**23**		**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 00:28
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:28
Surr: 1,2-Dichloroethane-d4	*86.0*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 00:28*
Surr: 4-Bromofluorobenzene	*88.6*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 00:28*
Surr: Dibromofluoromethane	*90.5*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 00:28*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 00:28*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW19-201109
Collection Date: 09-Nov-2020 12:40

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:49
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:49
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:49
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:49
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:49
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:49
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:49
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:49
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:49
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 00:49
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 00:49
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:49
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 00:49
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 00:49
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:49
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:49
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:49
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 00:49
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 00:49
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW19-201109
Collection Date: 09-Nov-2020 12:40

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-09
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 00:49
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 00:49
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 00:49
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 00:49
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 00:49
Surr: 1,2-Dichloroethane-d4	*84.2*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 00:49*
Surr: 4-Bromofluorobenzene	*89.6*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 00:49*
Surr: Dibromofluoromethane	*88.3*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 00:49*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 00:49*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW18-201109
Collection Date: 09-Nov-2020 13:25

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-10
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 01:10
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 01:10
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 01:10
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 01:10
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 01:10
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 01:10
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 01:10
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 01:10
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 01:10
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 01:10
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 01:10
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 01:10
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 01:10
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 01:10
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 01:10
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 01:10
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 01:10
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 01:10
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 01:10
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW18-201109
Collection Date: 09-Nov-2020 13:25

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-10
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 01:10
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 01:10
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 01:10
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 01:10
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 01:10
Surr: 1,2-Dichloroethane-d4	*84.9*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 01:10*
Surr: 4-Bromofluorobenzene	*89.9*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 01:10*
Surr: Dibromofluoromethane	*88.6*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 01:10*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 01:10*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW26-201110
Collection Date: 10-Nov-2020 07:20

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-11
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 12:58
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 12:58
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 12:58
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 12:58
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 12:58
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 12:58
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 12:58
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 12:58
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 12:58
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 12:58
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 12:58
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 12:58
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 12:58
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 12:58
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 12:58
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 12:58
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 12:58
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 12:58
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 12:58
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW26-201110
Collection Date: 10-Nov-2020 07:20

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-11
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 12:58
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 12:58
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 12:58
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 12:58
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 12:58
Surr: 1,2-Dichloroethane-d4	*87.1*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 12:58*
Surr: 4-Bromofluorobenzene	*89.5*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 12:58*
Surr: Dibromofluoromethane	*92.0*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 12:58*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 12:58*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**32.6**		**0.200**	**0.500**	**0.500**	**mg/L**	1	11-Nov-2020 21:24
Nitrogen, Nitrate (As N)	**0.192**		**0.0300**	**0.100**	**0.100**	**mg/L**	1	11-Nov-2020 21:24
Sulfate	**23.7**		**0.200**	**0.500**	**0.500**	**mg/L**	1	11-Nov-2020 21:24
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	24-Nov-2020 16:51
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	25-Nov-2020 10:35

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW04-201110
Collection Date: 10-Nov-2020 08:05

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-12
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:40
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:40
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:40
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:40
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:40
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:40
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:40
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:40
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:40
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 13:40
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 13:40
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:40
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 13:40
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 13:40
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:40
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:40
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:40
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 13:40
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:40
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW04-201110
Collection Date: 10-Nov-2020 08:05

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-12
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 13:40
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 13:40
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 13:40
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:40
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Tetrachloroethene	**5.2**		**0.30**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 13:40
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Trichloroethene	**0.72**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 13:40
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:40
Surr: 1,2-Dichloroethane-d4	*86.4*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 13:40*
Surr: 4-Bromofluorobenzene	*89.7*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 13:40*
Surr: Dibromofluoromethane	*91.0*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 13:40*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 13:40*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**4.01**		**0.200**	**0.500**	**0.500**	**mg/L**	1	11-Nov-2020 21:42
Nitrogen, Nitrate (As N)	**0.206**		**0.0300**	**0.100**	**0.100**	**mg/L**	1	11-Nov-2020 21:42
Sulfate	**26.1**		**0.200**	**0.500**	**0.500**	**mg/L**	1	11-Nov-2020 21:42
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	24-Nov-2020 16:51
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	25-Nov-2020 10:35

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW14-201110
Collection Date: 10-Nov-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-13
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:01
1,1,2-Trichlor-1,2,2-trifluoroethane	**13**		**0.50**	**1.0**	**1.0**	**UG/L**	1	23-Nov-2020 14:01
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
1,1-Dichloroethene	**2.1**		**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 14:01
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:01
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:01
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:01
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:01
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:01
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:01
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:01
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 14:01
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 14:01
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:01
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 14:01
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 14:01
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:01
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:01
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:01
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 14:01
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:01
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW14-201110
Collection Date: 10-Nov-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-13
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
cis-1,2-Dichloroethene	**0.64**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 14:01
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 14:01
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 14:01
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 14:01
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:01
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Tetrachloroethene	**23**		**0.30**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 14:01
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Trichloroethene	**7.7**		**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 14:01
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:01
Surr: 1,2-Dichloroethane-d4	*86.8*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 14:01*
Surr: 4-Bromofluorobenzene	*87.9*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 14:01*
Surr: Dibromofluoromethane	*90.9*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 14:01*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 14:01*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**16.8**		**0.200**	**0.500**	**0.500**	**mg/L**	1	11-Nov-2020 22:00
Nitrogen, Nitrate (As N)	**0.228**		**0.0300**	**0.100**	**0.100**	**mg/L**	1	11-Nov-2020 22:00
Sulfate	**73.2**		**0.200**	**0.500**	**0.500**	**mg/L**	1	11-Nov-2020 22:00
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	24-Nov-2020 16:51

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW14-201110
Collection Date: 10-Nov-2020 09:00

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-13
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	25-Nov-2020 10:35

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW15-201110
Collection Date: 10-Nov-2020 09:50

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-14
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:22
1,1,2-Trichlor-1,2,2-trifluoroethane	**1.9**		**0.50**	**1.0**	**1.0**	**UG/L**	1	23-Nov-2020 14:22
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
1,1-Dichloroethene	**0.74**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 14:22
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:22
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:22
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:22
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:22
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:22
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:22
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:22
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 14:22
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 14:22
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:22
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 14:22
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 14:22
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:22
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:22
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:22
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 14:22
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:22
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW15-201110
Collection Date: 10-Nov-2020 09:50

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-14
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 14:22
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 14:22
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 14:22
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:22
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Tetrachloroethene	**11**		**0.30**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 14:22
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Trichloroethene	**5.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 14:22
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:22
Surr: 1,2-Dichloroethane-d4	*86.5*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 14:22*
Surr: 4-Bromofluorobenzene	*89.4*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 14:22*
Surr: Dibromofluoromethane	*90.3*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 14:22*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 14:22*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW23-201110
Collection Date: 10-Nov-2020 10:30

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-15
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:43
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:43
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:43
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:43
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:43
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:43
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:43
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:43
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:43
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 14:43
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 14:43
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:43
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 14:43
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 14:43
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:43
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:43
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:43
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 14:43
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 14:43
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW23-201110
Collection Date: 10-Nov-2020 10:30

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-15
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 14:43
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 14:43
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 14:43
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 14:43
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 14:43
Surr: 1,2-Dichloroethane-d4	*88.1*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 14:43*
Surr: 4-Bromofluorobenzene	*89.6*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 14:43*
Surr: Dibromofluoromethane	*92.3*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 14:43*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 14:43*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**22.8**		**0.200**	**0.500**	**0.500**	**mg/L**	1	11-Nov-2020 22:18
Nitrogen, Nitrate (As N)	**0.0485**	J	**0.0300**	**0.100**	**0.100**	**mg/L**	1	11-Nov-2020 22:18
Sulfate	**86.1**		**0.200**	**0.500**	**0.500**	**mg/L**	1	11-Nov-2020 22:18
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	24-Nov-2020 16:51
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	25-Nov-2020 10:35

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW24-201110
Collection Date: 10-Nov-2020 11:20

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-16
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:04
1,1,2-Trichlor-1,2,2-trifluoroethane	**7.3**		**0.50**	**1.0**	**1.0**	**UG/L**	1	23-Nov-2020 15:04
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:04
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:04
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:04
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:04
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:04
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:04
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:04
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 15:04
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 15:04
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:04
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 15:04
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 15:04
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:04
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:04
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:04
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 15:04
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:04
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW24-201110
Collection Date: 10-Nov-2020 11:20

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-16
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 15:04
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 15:04
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 15:04
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:04
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Trichloroethene	**1.7**		**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 15:04
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:04
Surr: 1,2-Dichloroethane-d4	*84.6*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 15:04*
Surr: 4-Bromofluorobenzene	*88.9*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 15:04*
Surr: Dibromofluoromethane	*88.2*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 15:04*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 15:04*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW25-201110
Collection Date: 10-Nov-2020 12:15

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-17
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:25
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:25
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:25
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:25
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:25
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:25
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:25
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:25
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:25
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 15:25
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 15:25
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:25
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 15:25
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 15:25
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:25
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:25
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:25
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 15:25
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:25
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW25-201110
Collection Date: 10-Nov-2020 12:15

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-17
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 15:25
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 15:25
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 15:25
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:25
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Trichloroethene	**10**		**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 15:25
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:25
Surr: 1,2-Dichloroethane-d4	*85.7*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 15:25*
Surr: 4-Bromofluorobenzene	*87.2*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 15:25*
Surr: Dibromofluoromethane	*88.6*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 15:25*
Surr: Toluene-d8	*102*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 15:25*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: Trip Blank-201110
Collection Date: 10-Nov-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-18
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:19
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:19
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:19
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:19
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:19
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:19
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:19
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:19
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:19
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 13:19
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 13:19
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:19
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 13:19
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 13:19
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:19
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:19
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:19
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 13:19
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 13:19
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: Trip Blank-201110
Collection Date: 10-Nov-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20110527
Lab ID:HS20110527-18
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 13:19
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 13:19
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 13:19
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 13:19
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 13:19
Surr: 1,2-Dichloroethane-d4	*86.4*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 13:19*
Surr: 4-Bromofluorobenzene	*90.7*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 13:19*
Surr: Dibromofluoromethane	*92.0*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 13:19*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 13:19*

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

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R372517 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS20110527-11	35BWW26-201110	10 Nov 2020 07:20			11 Nov 2020 21:24	1
HS20110527-12	35BWW04-201110	10 Nov 2020 08:05			11 Nov 2020 21:42	1
HS20110527-13	35BWW14-201110	10 Nov 2020 09:00			11 Nov 2020 22:00	1
HS20110527-15	35BWW23-201110	10 Nov 2020 10:30			11 Nov 2020 22:18	1
Batch ID: R373216 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20110527-01	35BWW01-201109	09 Nov 2020 07:25			22 Nov 2020 22:21	1
HS20110527-02	35BWW10-201109	09 Nov 2020 08:10			22 Nov 2020 22:42	1
HS20110527-03	35BWW05-201109	09 Nov 2020 08:55			22 Nov 2020 23:04	1
HS20110527-04	LHSMW58-201109	09 Nov 2020 09:40			22 Nov 2020 22:00	1
HS20110527-05	35BWW11-201109	09 Nov 2020 10:25			22 Nov 2020 23:25	1
HS20110527-06	35BWW20-201109	09 Nov 2020 11:10			22 Nov 2020 23:46	1
HS20110527-07	35BWW20-201109-FD	09 Nov 2020 11:10			23 Nov 2020 00:07	1
HS20110527-08	35BWW09-201109	09 Nov 2020 11:55			23 Nov 2020 00:28	1
HS20110527-09	35BWW19-201109	09 Nov 2020 12:40			23 Nov 2020 00:49	1
HS20110527-10	35BWW18-201109	09 Nov 2020 13:25			23 Nov 2020 01:10	1
Batch ID: R373272 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20110527-11	35BWW26-201110	10 Nov 2020 07:20			23 Nov 2020 12:58	1
HS20110527-12	35BWW04-201110	10 Nov 2020 08:05			23 Nov 2020 13:40	1
HS20110527-13	35BWW14-201110	10 Nov 2020 09:00			23 Nov 2020 14:01	1
HS20110527-14	35BWW15-201110	10 Nov 2020 09:50			23 Nov 2020 14:22	1
HS20110527-15	35BWW23-201110	10 Nov 2020 10:30			23 Nov 2020 14:43	1
HS20110527-16	35BWW24-201110	10 Nov 2020 11:20			23 Nov 2020 15:04	1
HS20110527-17	35BWW25-201110	10 Nov 2020 12:15			23 Nov 2020 15:25	1
HS20110527-18	Trip Blank-201110	10 Nov 2020 00:00			23 Nov 2020 13:19	1
Batch ID: R373337 (0)	**Test Name :** SUBCONTRACT ANALYSIS - RSK				**Matrix:** Groundwater	
HS20110527-11	35BWW26-201110	10 Nov 2020 07:20			24 Nov 2020 16:51	1
HS20110527-12	35BWW04-201110	10 Nov 2020 08:05			24 Nov 2020 16:51	1
HS20110527-13	35BWW14-201110	10 Nov 2020 09:00			24 Nov 2020 16:51	1
HS20110527-15	35BWW23-201110	10 Nov 2020 10:30			24 Nov 2020 16:51	1
Batch ID: R373378 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Groundwater	
HS20110527-11	35BWW26-201110	10 Nov 2020 07:20			25 Nov 2020 10:35	1
HS20110527-12	35BWW04-201110	10 Nov 2020 08:05			25 Nov 2020 10:35	1
HS20110527-13	35BWW14-201110	10 Nov 2020 09:00			25 Nov 2020 10:35	1
HS20110527-15	35BWW23-201110	10 Nov 2020 10:30			25 Nov 2020 10:35	1

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373216 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201122** Units: **UG/L** Analysis Date: **22-Nov-2020 21:39**
Client ID: Run ID: **VOA6_373216** SeqNo: **5846645** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	0.50	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	0.50	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	0.50	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	0.50	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373216 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201122** Units: **UG/L** Analysis Date: **22-Nov-2020 21:39**
Client ID: Run ID: **VOA6_373216** SeqNo: **5846645** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	1.0	1.0								U
Carbon disulfide	2.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	0.50	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*43.18*	*1.0*	*50*	*0*	*86.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*44.98*	*1.0*	*50*	*0*	*90.0*	*85 - 114*				
Surr: Dibromofluoromethane	*44.59*	*1.0*	*50*	*0*	*89.2*	*80 - 119*				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373216 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201122** Units: **UG/L** Analysis Date: **22-Nov-2020 21:39**
Client ID: Run ID: **VOA6_373216** SeqNo: **5846645** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*51.59*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373216 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201122** Units: **UG/L** Analysis Date: **22-Nov-2020 20:57**
Client ID: Run ID: **VOA6_373216** SeqNo: **5846644** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.83	1.0	20	0	94.1	78 - 124				
1,1,1-Trichloroethane	21.95	1.0	20	0	110	74 - 131				
1,1,2,2-Tetrachloroethane	22.4	1.0	20	0	112	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	20.64	1.0	20	0	103	70 - 136				
1,1,2-Trichloroethane	19.87	1.0	20	0	99.3	80 - 119				
1,1-Dichloroethane	20.16	1.0	20	0	101	77 - 125				
1,1-Dichloroethene	20.6	1.0	20	0	103	71 - 131				
1,1-Dichloropropene	20.02	1.0	20	0	100	78 - 125				
1,2,3-Trichlorobenzene	25.29	1.0	20	0	126	69 - 129				
1,2,3-Trichloropropane	20.96	1.0	20	0	105	73 - 122				
1,2,4-Trichlorobenzene	22.85	1.0	20	0	114	69 - 130				
1,2,4-Trimethylbenzene	20.93	1.0	20	0	105	76 - 124				
1,2-Dibromo-3-chloropropane	23.76	1.0	20	0	119	62 - 128				
1,2-Dibromoethane	20.02	1.0	20	0	100	77 - 121				
1,2-Dichlorobenzene	20.25	1.0	20	0	101	80 - 119				
1,2-Dichloroethane	20.27	1.0	20	0	101	73 - 128				
1,2-Dichloropropane	19.38	1.0	20	0	96.9	78 - 122				
1,3,5-Trimethylbenzene	19.8	1.0	20	0	99.0	75 - 124				
1,3-Dichlorobenzene	21.07	1.0	20	0	105	80 - 119				
1,3-Dichloropropane	20.29	1.0	20	0	101	80 - 119				
1,4-Dichlorobenzene	21.39	1.0	20	0	107	79 - 118				
2,2-Dichloropropane	19.9	1.0	20	0	99.5	60 - 139				
2-Butanone	41.5	2.0	40	0	104	56 - 143				
2-Chlorotoluene	20.86	1.0	20	0	104	79 - 122				
2-Hexanone	38.35	2.0	40	0	95.9	57 - 139				
4-Chlorotoluene	19.85	1.0	20	0	99.3	78 - 122				
4-Isopropyltoluene	21.15	1.0	20	0	106	77 - 127				
4-Methyl-2-pentanone	39.72	2.0	40	0	99.3	67 - 130				
Acetone	37.86	2.0	40	0	94.7	39 - 160				
Benzene	20.33	1.0	20	0	102	79 - 120				
Bromobenzene	21.07	1.0	20	0	105	80 - 120				
Bromochloromethane	21.63	1.0	20	0	108	78 - 123				
Bromodichloromethane	20.22	1.0	20	0	101	79 - 125				
Bromoform	19.34	1.0	20	0	96.7	66 - 130				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373216 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201122** Units: **UG/L** Analysis Date: **22-Nov-2020 20:57**
Client ID: Run ID: **VOA6_373216** SeqNo: **5846644** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	22.78	1.0	20	0	114	53 - 141				
Carbon disulfide	42.27	2.0	40	0	106	64 - 133				
Carbon tetrachloride	19.88	1.0	20	0	99.4	72 - 136				
Chlorobenzene	19.21	1.0	20	0	96.0	82 - 118				
Chloroethane	19.19	1.0	20	0	95.9	60 - 138				
Chloroform	19.96	1.0	20	0	99.8	79 - 124				
Chloromethane	20.49	1.0	20	0	102	50 - 139				
cis-1,2-Dichloroethene	20.7	1.0	20	0	103	78 - 123				
cis-1,3-Dichloropropene	19.82	1.0	20	0	99.1	75 - 124				
Dibromochloromethane	19.92	1.0	20	0	99.6	74 - 126				
Dibromomethane	19.69	1.0	20	0	98.5	79 - 123				
Dichlorodifluoromethane	20.89	1.0	20	0	104	32 - 152				
Ethylbenzene	19.84	1.0	20	0	99.2	79 - 121				
Hexachlorobutadiene	24.3	1.0	20	0	122	66 - 134				
Isopropylbenzene	20.16	1.0	20	0	101	72 - 131				
m,p-Xylene	38.43	2.0	40	0	96.1	80 - 121				
Methylene chloride	20.16	2.0	20	0	101	74 - 124				
Naphthalene	23.77	1.0	20	0	119	61 - 128				
n-Butylbenzene	20.97	1.0	20	0	105	75 - 128				
n-Propylbenzene	20.56	1.0	20	0	103	76 - 126				
o-Xylene	19.32	1.0	20	0	96.6	78 - 122				
sec-Butylbenzene	21.95	1.0	20	0	110	77 - 126				
Styrene	19.27	1.0	20	0	96.4	78 - 123				
tert-Butylbenzene	21.65	1.0	20	0	108	78 - 124				
Tetrachloroethene	20.33	1.0	20	0	102	74 - 129				
Toluene	19.95	1.0	20	0	99.7	80 - 121				
trans-1,2-Dichloroethene	21.1	1.0	20	0	106	75 - 124				
trans-1,3-Dichloropropene	20.45	1.0	20	0	102	73 - 127				
Trichloroethene	20.24	1.0	20	0	101	79 - 123				
Trichlorofluoromethane	19.76	1.0	20	0	98.8	65 - 141				
Vinyl chloride	20.79	1.0	20	0	104	58 - 137				
Surr: 1,2-Dichloroethane-d4	*53.22*	*1.0*	*50*	*0*	*106*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.53*	*1.0*	*50*	*0*	*97.1*	*85 - 114*				
Surr: Dibromofluoromethane	*54.56*	*1.0*	*50*	*0*	*109*	*80 - 119*				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373216 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201122** Units: **UG/L** Analysis Date: **22-Nov-2020 20:57**
Client ID: Run ID: **VOA6_373216** SeqNo: **5846644** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*49.9*	*1.0*	*50*	*0*	*99.8*	*89 - 112*				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373216 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20110527-04MS** Units: **UG/L** Analysis Date: **23-Nov-2020 01:31**
Client ID: **LHSMW58-201109** Run ID: **VOA6_373216** SeqNo: **5846656** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	17.1	1.0	20	0	85.5	78 - 124				
1,1,1-Trichloroethane	18	1.0	20	0	90.0	74 - 131				
1,1,2,2-Tetrachloroethane	19.55	1.0	20	0	97.7	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	17.21	1.0	20	0	86.1	70 - 136				
1,1,2-Trichloroethane	17.39	1.0	20	0	86.9	80 - 119				
1,1-Dichloroethane	16.18	1.0	20	0	80.9	77 - 125				
1,1-Dichloroethene	17.18	1.0	20	0	85.9	71 - 131				
1,1-Dichloropropene	17.01	1.0	20	0	85.1	78 - 125				
1,2,3-Trichlorobenzene	20.86	1.0	20	0	104	69 - 129				
1,2,3-Trichloropropane	19.37	1.0	20	0	96.8	73 - 122				
1,2,4-Trichlorobenzene	18.39	1.0	20	0	91.9	69 - 130				
1,2,4-Trimethylbenzene	19.93	1.0	20	0	99.7	76 - 124				
1,2-Dibromo-3-chloropropane	17.27	1.0	20	0	86.4	62 - 128				
1,2-Dibromoethane	17.06	1.0	20	0	85.3	77 - 121				
1,2-Dichlorobenzene	18.22	1.0	20	0	91.1	80 - 119				
1,2-Dichloroethane	17.03	1.0	20	0	85.1	73 - 128				
1,2-Dichloropropane	16.59	1.0	20	0	82.9	78 - 122				
1,3,5-Trimethylbenzene	18.63	1.0	20	0	93.1	75 - 124				
1,3-Dichlorobenzene	19.17	1.0	20	0	95.9	80 - 119				
1,3-Dichloropropane	18.34	1.0	20	0	91.7	80 - 119				
1,4-Dichlorobenzene	19.29	1.0	20	0	96.4	79 - 118				
2,2-Dichloropropane	14.79	1.0	20	0	73.9	60 - 139				
2-Butanone	29.41	2.0	40	0	73.5	56 - 143				
2-Chlorotoluene	18.14	1.0	20	0	90.7	79 - 122				
2-Hexanone	34.59	2.0	40	0	86.5	57 - 139				
4-Chlorotoluene	18.34	1.0	20	0	91.7	78 - 122				
4-Isopropyltoluene	19.5	1.0	20	0	97.5	77 - 127				
4-Methyl-2-pentanone	34.9	2.0	40	0	87.2	67 - 130				
Acetone	31.42	2.0	40	0	78.5	39 - 160				
Benzene	17.43	1.0	20	0	87.1	79 - 120				
Bromobenzene	19.54	1.0	20	0	97.7	80 - 120				
Bromochloromethane	15.74	1.0	20	0	78.7	78 - 123				
Bromodichloromethane	17.28	1.0	20	0	86.4	79 - 125				
Bromoform	18.07	1.0	20	0	90.3	66 - 130				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373216 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20110527-04MS** Units: **UG/L** Analysis Date: **23-Nov-2020 01:31**
Client ID: **LHSMW58-201109** Run ID: **VOA6_373216** SeqNo: **5846656** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	19.19	1.0	20	0	96.0	53 - 141				
Carbon disulfide	30.4	2.0	40	0	76.0	64 - 133				
Carbon tetrachloride	17.29	1.0	20	0	86.5	72 - 136				
Chlorobenzene	17.74	1.0	20	0	88.7	82 - 118				
Chloroethane	16.37	1.0	20	0	81.9	60 - 138				
Chloroform	15.81	1.0	20	0	79.1	79 - 124				
Chloromethane	14.47	1.0	20	0	72.4	50 - 139				
cis-1,2-Dichloroethene	15.75	1.0	20	0	78.7	78 - 123				
cis-1,3-Dichloropropene	15.87	1.0	20	0	79.3	75 - 124				
Dibromochloromethane	17.46	1.0	20	0	87.3	74 - 126				
Dibromomethane	16.79	1.0	20	0	84.0	79 - 123				
Dichlorodifluoromethane	13.26	1.0	20	0	66.3	32 - 152				
Ethylbenzene	17.74	1.0	20	0	88.7	79 - 121				
Hexachlorobutadiene	19.58	1.0	20	0	97.9	66 - 134				
Isopropylbenzene	17.76	1.0	20	0	88.8	72 - 131				
m,p-Xylene	34.64	2.0	40	0	86.6	80 - 121				
Methylene chloride	15.15	2.0	20	0	75.7	74 - 124				
Naphthalene	19.31	1.0	20	0	96.6	61 - 128				
n-Butylbenzene	19.75	1.0	20	0	98.7	75 - 128				
n-Propylbenzene	19.35	1.0	20	0	96.7	76 - 126				
o-Xylene	17.64	1.0	20	0	88.2	78 - 122				
sec-Butylbenzene	20.58	1.0	20	0	103	77 - 126				
Styrene	17.13	1.0	20	0	85.7	78 - 123				
tert-Butylbenzene	19.32	1.0	20	0	96.6	78 - 124				
Tetrachloroethene	26.45	1.0	20	9.524	84.6	74 - 129				
Toluene	17.92	1.0	20	0	89.6	80 - 121				
trans-1,2-Dichloroethene	15.93	1.0	20	0	79.6	75 - 124				
trans-1,3-Dichloropropene	16.25	1.0	20	0	81.3	73 - 127				
Trichloroethene	17.91	1.0	20	0.8124	85.5	79 - 123				
Trichlorofluoromethane	16.78	1.0	20	0	83.9	65 - 141				
Vinyl chloride	15.94	1.0	20	0	79.7	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.47*	*1.0*	*50*	*0*	*90.9*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.09*	*1.0*	*50*	*0*	*94.2*	*85 - 114*				
Surr: Dibromofluoromethane	*46.63*	*1.0*	*50*	*0*	*93.3*	*80 - 119*				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373216 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20110527-04MS** Units: **UG/L** Analysis Date: **23-Nov-2020 01:31**
Client ID: **LHSMW58-201109** Run ID: **VOA6_373216** SeqNo: **5846656** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*50.6*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373216 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20110527-04MSD** Units: **UG/L** Analysis Date: **23-Nov-2020 01:52**
Client ID: **LHSMW58-201109** Run ID: **VOA6_373216** SeqNo: **5846657** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	16.89	1.0	20	0	84.4	78 - 124	17.1	1.23	20	
1,1,1-Trichloroethane	16.99	1.0	20	0	84.9	74 - 131	18	5.77	20	
1,1,2,2-Tetrachloroethane	21.5	1.0	20	0	107	71 - 121	19.55	9.49	20	
1,1,2-Trichlor-1,2,2-trifluoroethane	16.42	1.0	20	0	82.1	70 - 136	17.21	4.71	20	
1,1,2-Trichloroethane	17.29	1.0	20	0	86.5	80 - 119	17.39	0.527	20	
1,1-Dichloroethane	16.33	1.0	20	0	81.6	77 - 125	16.18	0.906	20	
1,1-Dichloroethene	16.13	1.0	20	0	80.6	71 - 131	17.18	6.3	20	
1,1-Dichloropropene	16.11	1.0	20	0	80.6	78 - 125	17.01	5.44	20	
1,2,3-Trichlorobenzene	25.91	1.0	20	0	130	69 - 129	20.86	21.6	20	SR
1,2,3-Trichloropropane	21.03	1.0	20	0	105	73 - 122	19.37	8.22	20	
1,2,4-Trichlorobenzene	22.6	1.0	20	0	113	69 - 130	18.39	20.5	20	R
1,2,4-Trimethylbenzene	20.43	1.0	20	0	102	76 - 124	19.93	2.45	20	
1,2-Dibromo-3-chloropropane	21.19	1.0	20	0	106	62 - 128	17.27	20.4	20	R
1,2-Dibromoethane	17.57	1.0	20	0	87.8	77 - 121	17.06	2.92	20	
1,2-Dichlorobenzene	19.47	1.0	20	0	97.4	80 - 119	18.22	6.67	20	
1,2-Dichloroethane	17.1	1.0	20	0	85.5	73 - 128	17.03	0.408	20	
1,2-Dichloropropane	15.96	1.0	20	0	79.8	78 - 122	16.59	3.84	20	
1,3,5-Trimethylbenzene	19.55	1.0	20	0	97.7	75 - 124	18.63	4.82	20	
1,3-Dichlorobenzene	20.08	1.0	20	0	100	80 - 119	19.17	4.62	20	
1,3-Dichloropropane	18.75	1.0	20	0	93.8	80 - 119	18.34	2.23	20	
1,4-Dichlorobenzene	19.84	1.0	20	0	99.2	79 - 118	19.29	2.83	20	
2,2-Dichloropropane	14.43	1.0	20	0	72.1	60 - 139	14.79	2.45	20	
2-Butanone	30.24	2.0	40	0	75.6	56 - 143	29.41	2.8	20	
2-Chlorotoluene	19.33	1.0	20	0	96.6	79 - 122	18.14	6.35	20	
2-Hexanone	34.97	2.0	40	0	87.4	57 - 139	34.59	1.1	20	
4-Chlorotoluene	19.37	1.0	20	0	96.8	78 - 122	18.34	5.46	20	
4-Isopropyltoluene	20.34	1.0	20	0	102	77 - 127	19.5	4.23	20	
4-Methyl-2-pentanone	35.36	2.0	40	0	88.4	67 - 130	34.9	1.32	20	
Acetone	28.81	2.0	40	0	72.0	39 - 160	31.42	8.65	20	
Benzene	17.4	1.0	20	0	87.0	79 - 120	17.43	0.159	20	
Bromobenzene	20.39	1.0	20	0	102	80 - 120	19.54	4.29	20	
Bromochloromethane	15.22	1.0	20	0	76.1	78 - 123	15.74	3.35	20	S
Bromodichloromethane	17.59	1.0	20	0	87.9	79 - 125	17.28	1.77	20	
Bromoform	18.25	1.0	20	0	91.2	66 - 130	18.07	0.978	20	

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373216 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20110527-04MSD** Units: **UG/L** Analysis Date: **23-Nov-2020 01:52**
Client ID: **LHSMW58-201109** Run ID: **VOA6_373216** SeqNo: **5846657** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Bromomethane	18.39	1.0	20	0	91.9	53 - 141	19.19	4.27	20	
Carbon disulfide	29.01	2.0	40	0	72.5	64 - 133	30.4	4.7	20	
Carbon tetrachloride	16.74	1.0	20	0	83.7	72 - 136	17.29	3.24	20	
Chlorobenzene	16.96	1.0	20	0	84.8	82 - 118	17.74	4.53	20	
Chloroethane	16.01	1.0	20	0	80.1	60 - 138	16.37	2.22	20	
Chloroform	15.84	1.0	20	0	79.2	79 - 124	15.81	0.179	20	
Chloromethane	13.97	1.0	20	0	69.8	50 - 139	14.47	3.58	20	
cis-1,2-Dichloroethene	15.63	1.0	20	0	78.2	78 - 123	15.75	0.721	20	
cis-1,3-Dichloropropene	15.62	1.0	20	0	78.1	75 - 124	15.87	1.59	20	
Dibromochloromethane	18.48	1.0	20	0	92.4	74 - 126	17.46	5.66	20	
Dibromomethane	17.37	1.0	20	0	86.8	79 - 123	16.79	3.36	20	
Dichlorodifluoromethane	12.27	1.0	20	0	61.4	32 - 152	13.26	7.75	20	
Ethylbenzene	17.93	1.0	20	0	89.6	79 - 121	17.74	1.05	20	
Hexachlorobutadiene	21.65	1.0	20	0	108	66 - 134	19.58	10	20	
Isopropylbenzene	17.6	1.0	20	0	88.0	72 - 131	17.76	0.942	20	
m,p-Xylene	34.55	2.0	40	0	86.4	80 - 121	34.64	0.258	20	
Methylene chloride	15.08	2.0	20	0	75.4	74 - 124	15.15	0.436	20	
Naphthalene	23.18	1.0	20	0	116	61 - 128	19.31	18.2	20	
n-Butylbenzene	20.26	1.0	20	0	101	75 - 128	19.75	2.59	20	
n-Propylbenzene	20.12	1.0	20	0	101	76 - 126	19.35	3.93	20	
o-Xylene	17.51	1.0	20	0	87.5	78 - 122	17.64	0.774	20	
sec-Butylbenzene	21.2	1.0	20	0	106	77 - 126	20.58	2.97	20	
Styrene	16.68	1.0	20	0	83.4	78 - 123	17.13	2.71	20	
tert-Butylbenzene	20.71	1.0	20	0	104	78 - 124	19.32	6.94	20	
Tetrachloroethene	27.16	1.0	20	9.524	88.2	74 - 129	26.45	2.65	20	
Toluene	17.86	1.0	20	0	89.3	80 - 121	17.92	0.353	20	
trans-1,2-Dichloroethene	15.58	1.0	20	0	77.9	75 - 124	15.93	2.2	20	
trans-1,3-Dichloropropene	16.89	1.0	20	0	84.5	73 - 127	16.25	3.87	20	
Trichloroethene	17.71	1.0	20	0.8124	84.5	79 - 123	17.91	1.1	20	
Trichlorofluoromethane	16.11	1.0	20	0	80.5	65 - 141	16.78	4.07	20	
Vinyl chloride	14.88	1.0	20	0	74.4	58 - 137	15.94	6.86	20	
Surr: 1,2-Dichloroethane-d4	*43.34*	*1.0*	*50*	*0*	*86.7*	*81 - 118*	*45.47*	*4.8*	*20*	
Surr: 4-Bromofluorobenzene	*46.29*	*1.0*	*50*	*0*	*92.6*	*85 - 114*	*47.09*	*1.72*	*20*	
Surr: Dibromofluoromethane	*45.67*	*1.0*	*50*	*0*	*91.3*	*80 - 119*	*46.63*	*2.08*	*20*	

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373216 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20110527-04MSD** Units: **UG/L** Analysis Date: **23-Nov-2020 01:52**
Client ID: **LHSMW58-201109** Run ID: **VOA6_373216** SeqNo: **5846657** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*50.35*	*1.0*	*50*	*0*	*101*	*89 - 112*	*50.6*	*0.487*	*20*	

The following samples were analyzed in this batch:

HS20110527-01	HS20110527-02	HS20110527-03	HS20110527-04
HS20110527-05	HS20110527-06	HS20110527-07	HS20110527-08
HS20110527-09	HS20110527-10		

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLK-201123** Units: **UG/L** Analysis Date: **23-Nov-2020 12:37**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848312** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	1.0								U
1,1,2-Trichloroethane	0.50	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	0.50	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	0.50	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	0.50	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	0.50	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	0.50	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLK-201123** Units: **UG/L** Analysis Date: **23-Nov-2020 12:37**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848312** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	1.0	1.0								U
Carbon disulfide	2.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	0.50	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	0.50	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	0.50	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	0.50	1.0								U
o-Xylene	0.50	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	0.50	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	0.50	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*42.87*	*1.0*	*50*	*0*	*85.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*44.97*	*1.0*	*50*	*0*	*89.9*	*85 - 114*				
Surr: Dibromofluoromethane	*44.14*	*1.0*	*50*	*0*	*88.3*	*80 - 119*				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLK-201123** Units: **UG/L** Analysis Date: **23-Nov-2020 12:37**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848312** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*51.72*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201123** Units: **UG/L** Analysis Date: **23-Nov-2020 11:55**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848311** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	17.82	1.0	20	0	89.1	78 - 124				
1,1,1-Trichloroethane	18.13	1.0	20	0	90.7	74 - 131				
1,1,2,2-Tetrachloroethane	21.56	1.0	20	0	108	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	14.76	1.0	20	0	73.8	70 - 136				
1,1,2-Trichloroethane	18.74	1.0	20	0	93.7	80 - 119				
1,1-Dichloroethane	18.26	1.0	20	0	91.3	77 - 125				
1,1-Dichloroethene	18.12	1.0	20	0	90.6	71 - 131				
1,1-Dichloropropene	17.16	1.0	20	0	85.8	78 - 125				
1,2,3-Trichlorobenzene	24.95	1.0	20	0	125	69 - 129				
1,2,3-Trichloropropane	21.14	1.0	20	0	106	73 - 122				
1,2,4-Trichlorobenzene	22.78	1.0	20	0	114	69 - 130				
1,2,4-Trimethylbenzene	16.92	1.0	20	0	84.6	76 - 124				
1,2-Dibromo-3-chloropropane	19.81	1.0	20	0	99.0	62 - 128				
1,2-Dibromoethane	19.61	1.0	20	0	98.1	77 - 121				
1,2-Dichlorobenzene	18.71	1.0	20	0	93.5	80 - 119				
1,2-Dichloroethane	19.65	1.0	20	0	98.3	73 - 128				
1,2-Dichloropropane	18.82	1.0	20	0	94.1	78 - 122				
1,3,5-Trimethylbenzene	15.18	1.0	20	0	75.9	75 - 124				
1,3-Dichlorobenzene	18.78	1.0	20	0	93.9	80 - 119				
1,3-Dichloropropane	19.59	1.0	20	0	97.9	80 - 119				
1,4-Dichlorobenzene	18.83	1.0	20	0	94.1	79 - 118				
2,2-Dichloropropane	17.55	1.0	20	0	87.8	60 - 139				
2-Butanone	41.98	2.0	40	0	105	56 - 143				
2-Chlorotoluene	17.56	1.0	20	0	87.8	79 - 122				
2-Hexanone	39.91	2.0	40	0	99.8	57 - 139				
4-Chlorotoluene	17.12	1.0	20	0	85.6	78 - 122				
4-Isopropyltoluene	15.65	1.0	20	0	78.2	77 - 127				
4-Methyl-2-pentanone	38.82	2.0	40	0	97.0	67 - 130				
Acetone	44.13	2.0	40	0	110	39 - 160				
Benzene	18.56	1.0	20	0	92.8	79 - 120				
Bromobenzene	20.16	1.0	20	0	101	80 - 120				
Bromochloromethane	19.37	1.0	20	0	96.8	78 - 123				
Bromodichloromethane	19.14	1.0	20	0	95.7	79 - 125				
Bromoform	19.18	1.0	20	0	95.9	66 - 130				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201123** Units: **UG/L** Analysis Date: **23-Nov-2020 11:55**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848311** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	20.55	1.0	20	0	103	53 - 141				
Carbon disulfide	35.25	2.0	40	0	88.1	64 - 133				
Carbon tetrachloride	16.47	1.0	20	0	82.4	72 - 136				
Chlorobenzene	17.68	1.0	20	0	88.4	82 - 118				
Chloroethane	16.92	1.0	20	0	84.6	60 - 138				
Chloroform	18.11	1.0	20	0	90.5	79 - 124				
Chloromethane	16.97	1.0	20	0	84.9	50 - 139				
cis-1,2-Dichloroethene	17.86	1.0	20	0	89.3	78 - 123				
cis-1,3-Dichloropropene	19.23	1.0	20	0	96.1	75 - 124				
Dibromochloromethane	20	1.0	20	0	100.0	74 - 126				
Dibromomethane	19.13	1.0	20	0	95.7	79 - 123				
Dichlorodifluoromethane	16.98	1.0	20	0	84.9	32 - 152				
Ethylbenzene	16.91	1.0	20	0	84.5	79 - 121				
Hexachlorobutadiene	17.29	1.0	20	0	86.5	66 - 134				
Isopropylbenzene	14.95	1.0	20	0	74.7	72 - 131				
m,p-Xylene	33.28	2.0	40	0	83.2	80 - 121				
Methylene chloride	18.17	2.0	20	0	90.8	74 - 124				
Naphthalene	25.57	1.0	20	0	128	61 - 128				
n-Butylbenzene	15.78	1.0	20	0	78.9	75 - 128				
n-Propylbenzene	15.86	1.0	20	0	79.3	76 - 126				
o-Xylene	17.69	1.0	20	0	88.4	78 - 122				
sec-Butylbenzene	15.72	1.0	20	0	78.6	77 - 126				
Styrene	17.1	1.0	20	0	85.5	78 - 123				
tert-Butylbenzene	15.69	1.0	20	0	78.5	78 - 124				
Tetrachloroethene	15.63	1.0	20	0	78.2	74 - 129				
Toluene	17.55	1.0	20	0	87.7	80 - 121				
trans-1,2-Dichloroethene	17.15	1.0	20	0	85.8	75 - 124				
trans-1,3-Dichloropropene	19.55	1.0	20	0	97.7	73 - 127				
Trichloroethene	17.74	1.0	20	0	88.7	79 - 123				
Trichlorofluoromethane	16.27	1.0	20	0	81.4	65 - 141				
Vinyl chloride	17.08	1.0	20	0	85.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*48.39*	*1.0*	*50*	*0*	*96.8*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.18*	*1.0*	*50*	*0*	*94.4*	*85 - 114*				
Surr: Dibromofluoromethane	*50.74*	*1.0*	*50*	*0*	*101*	*80 - 119*				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201123** Units: **UG/L** Analysis Date: **23-Nov-2020 11:55**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848311** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*49.17*	*1.0*	*50*	*0*	*98.3*	*89 - 112*				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20110985-28MS** Units: **UG/L** Analysis Date: **23-Nov-2020 17:31**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848326** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	22.54	1.0	20	2.818	98.6	78 - 124				
1,1,1-Trichloroethane	18.66	1.0	20	0	93.3	74 - 131				
1,1,2,2-Tetrachloroethane	22.31	1.0	20	0	112	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	19.38	1.0	20	0	96.9	70 - 136				
1,1,2-Trichloroethane	29.52	1.0	20	10.65	94.4	80 - 119				
1,1-Dichloroethane	16.99	1.0	20	0	84.9	77 - 125				
1,1-Dichloroethene	18.15	1.0	20	0	90.7	71 - 131				
1,1-Dichloropropene	18.51	1.0	20	0	92.6	78 - 125				
1,2,3-Trichlorobenzene	26.82	1.0	20	0	134	69 - 129				S
1,2,3-Trichloropropane	22.18	1.0	20	0	111	73 - 122				
1,2,4-Trichlorobenzene	23.56	1.0	20	0	118	69 - 130				
1,2,4-Trimethylbenzene	23.4	1.0	20	0	117	76 - 124				
1,2-Dibromo-3-chloropropane	24.4	1.0	20	0	122	62 - 128				
1,2-Dibromoethane	18.44	1.0	20	0	92.2	77 - 121				
1,2-Dichlorobenzene	21.59	1.0	20	0	108	80 - 119				
1,2-Dichloroethane	17.79	1.0	20	0	88.9	73 - 128				
1,2-Dichloropropane	17.39	1.0	20	0	87.0	78 - 122				
1,3,5-Trimethylbenzene	21.02	1.0	20	0	105	75 - 124				
1,3-Dichlorobenzene	22.07	1.0	20	0	110	80 - 119				
1,3-Dichloropropane	19.42	1.0	20	0	97.1	80 - 119				
1,4-Dichlorobenzene	22.85	1.0	20	0	114	79 - 118				
2,2-Dichloropropane	17.02	1.0	20	0	85.1	60 - 139				
2-Butanone	34.9	2.0	40	0	87.2	56 - 143				
2-Chlorotoluene	21.64	1.0	20	0	108	79 - 122				
2-Hexanone	39.81	2.0	40	0	99.5	57 - 139				
4-Chlorotoluene	21.2	1.0	20	0	106	78 - 122				
4-Isopropyltoluene	22.43	1.0	20	0	112	77 - 127				
4-Methyl-2-pentanone	36.49	2.0	40	0	91.2	67 - 130				
Acetone	40.08	2.0	40	0	100	39 - 160				
Benzene	18.4	1.0	20	0	92.0	79 - 120				
Bromobenzene	22.69	1.0	20	0	113	80 - 120				
Bromochloromethane	16.07	1.0	20	0	80.3	78 - 123				
Bromodichloromethane	17.83	1.0	20	0	89.2	79 - 125				
Bromoform	19.13	1.0	20	0	95.6	66 - 130				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20110985-28MS** Units: **UG/L** Analysis Date: **23-Nov-2020 17:31**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848326** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	19.39	1.0	20	0	97.0	53 - 141				
Carbon disulfide	32.34	2.0	40	0	80.8	64 - 133				
Carbon tetrachloride	19.1	1.0	20	0	95.5	72 - 136				
Chlorobenzene	19.73	1.0	20	0	98.7	82 - 118				
Chloroethane	16.65	1.0	20	0	83.2	60 - 138				
Chloroform	18.54	1.0	20	1.714	84.1	79 - 124				
Chloromethane	14.3	1.0	20	0	71.5	50 - 139				
cis-1,2-Dichloroethene	16.81	1.0	20	0	84.0	78 - 123				
cis-1,3-Dichloropropene	16.71	1.0	20	0	83.5	75 - 124				
Dibromochloromethane	18.57	1.0	20	0	92.8	74 - 126				
Dibromomethane	17.78	1.0	20	0	88.9	79 - 123				
Dichlorodifluoromethane	14.47	1.0	20	0	72.4	32 - 152				
Ethylbenzene	19.88	1.0	20	0	99.4	79 - 121				
Hexachlorobutadiene	25.08	1.0	20	0	125	66 - 134				
Isopropylbenzene	20.35	1.0	20	0	102	72 - 131				
m,p-Xylene	38.57	2.0	40	0	96.4	80 - 121				
Methylene chloride	16.17	2.0	20	0	80.9	74 - 124				
Naphthalene	22.45	1.0	20	0	112	61 - 128				
n-Butylbenzene	22.46	1.0	20	0	112	75 - 128				
n-Propylbenzene	22.67	1.0	20	0	113	76 - 126				
o-Xylene	19.27	1.0	20	0	96.3	78 - 122				
sec-Butylbenzene	24.26	1.0	20	0	121	77 - 126				
Styrene	5.633	1.0	20	0	28.2	78 - 123				S
tert-Butylbenzene	22.59	1.0	20	0	113	78 - 124				
Tetrachloroethene	37.42	1.0	20	15.34	110	74 - 129				
Toluene	20.14	1.0	20	0	101	80 - 121				
trans-1,2-Dichloroethene	16.32	1.0	20	0	81.6	75 - 124				
trans-1,3-Dichloropropene	17.13	1.0	20	0	85.7	73 - 127				
Trichloroethene	175.8	1.0	20	150.6	126	79 - 123				SO
Trichlorofluoromethane	18.91	1.0	20	0	94.5	65 - 141				
Vinyl chloride	16.8	1.0	20	0	84.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*44*	*1.0*	*50*	*0*	*88.0*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*45.22*	*1.0*	*50*	*0*	*90.4*	*85 - 114*				
Surr: Dibromofluoromethane	*46.57*	*1.0*	*50*	*0*	*93.1*	*80 - 119*				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20110985-28MS** Units: **UG/L** Analysis Date: **23-Nov-2020 17:31**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848326** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*51.46*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20110985-28MSD** Units: **UG/L** Analysis Date: **23-Nov-2020 17:52**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848327** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.64	1.0	20	2.818	89.1	78 - 124	22.54	8.84	20	
1,1,1-Trichloroethane	17.85	1.0	20	0	89.3	74 - 131	18.66	4.39	20	
1,1,2,2-Tetrachloroethane	20.87	1.0	20	0	104	71 - 121	22.31	6.66	20	
1,1,2-Trichlor-1,2,2-trifluoroethane	17.8	1.0	20	0	89.0	70 - 136	19.38	8.53	20	
1,1,2-Trichloroethane	28.54	1.0	20	10.65	89.5	80 - 119	29.52	3.38	20	
1,1-Dichloroethane	16.68	1.0	20	0	83.4	77 - 125	16.99	1.83	20	
1,1-Dichloroethene	16.32	1.0	20	0	81.6	71 - 131	18.15	10.6	20	
1,1-Dichloropropene	17.27	1.0	20	0	86.3	78 - 125	18.51	6.94	20	
1,2,3-Trichlorobenzene	27.06	1.0	20	0	135	69 - 129	26.82	0.873	20	S
1,2,3-Trichloropropane	18.84	1.0	20	0	94.2	73 - 122	22.18	16.3	20	
1,2,4-Trichlorobenzene	22.93	1.0	20	0	115	69 - 130	23.56	2.7	20	
1,2,4-Trimethylbenzene	20.3	1.0	20	0	101	76 - 124	23.4	14.2	20	
1,2-Dibromo-3-chloropropane	23.19	1.0	20	0	116	62 - 128	24.4	5.05	20	
1,2-Dibromoethane	17.56	1.0	20	0	87.8	77 - 121	18.44	4.9	20	
1,2-Dichlorobenzene	19.38	1.0	20	0	96.9	80 - 119	21.59	10.8	20	
1,2-Dichloroethane	17.47	1.0	20	0	87.4	73 - 128	17.79	1.78	20	
1,2-Dichloropropane	17.08	1.0	20	0	85.4	78 - 122	17.39	1.81	20	
1,3,5-Trimethylbenzene	18.92	1.0	20	0	94.6	75 - 124	21.02	10.5	20	
1,3-Dichlorobenzene	20.13	1.0	20	0	101	80 - 119	22.07	9.21	20	
1,3-Dichloropropane	18.59	1.0	20	0	92.9	80 - 119	19.42	4.38	20	
1,4-Dichlorobenzene	19.68	1.0	20	0	98.4	79 - 118	22.85	14.9	20	
2,2-Dichloropropane	16.21	1.0	20	0	81.1	60 - 139	17.02	4.87	20	
2-Butanone	35.35	2.0	40	0	88.4	56 - 143	34.9	1.3	20	
2-Chlorotoluene	19.08	1.0	20	0	95.4	79 - 122	21.64	12.5	20	
2-Hexanone	36.97	2.0	40	0	92.4	57 - 139	39.81	7.41	20	
4-Chlorotoluene	18.45	1.0	20	0	92.3	78 - 122	21.2	13.9	20	
4-Isopropyltoluene	20.29	1.0	20	0	101	77 - 127	22.43	10.1	20	
4-Methyl-2-pentanone	36.48	2.0	40	0	91.2	67 - 130	36.49	0.0236	20	
Acetone	36.65	2.0	40	0	91.6	39 - 160	40.08	8.94	20	
Benzene	17.84	1.0	20	0	89.2	79 - 120	18.4	3.07	20	
Bromobenzene	19.79	1.0	20	0	99.0	80 - 120	22.69	13.6	20	
Bromochloromethane	16.22	1.0	20	0	81.1	78 - 123	16.07	0.94	20	
Bromodichloromethane	17.89	1.0	20	0	89.5	79 - 125	17.83	0.343	20	
Bromoform	18.39	1.0	20	0	91.9	66 - 130	19.13	3.94	20	

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20110985-28MSD** Units: **UG/L** Analysis Date: **23-Nov-2020 17:52**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848327** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Bromomethane	17.82	1.0	20	0	89.1	53 - 141	19.39	8.47	20	
Carbon disulfide	30.34	2.0	40	0	75.9	64 - 133	32.34	6.36	20	
Carbon tetrachloride	18.14	1.0	20	0	90.7	72 - 136	19.1	5.16	20	
Chlorobenzene	17.8	1.0	20	0	89.0	82 - 118	19.73	10.3	20	
Chloroethane	15.56	1.0	20	0	77.8	60 - 138	16.65	6.76	20	
Chloroform	17.51	1.0	20	1.714	79.0	79 - 124	18.54	5.71	20	S
Chloromethane	13.94	1.0	20	0	69.7	50 - 139	14.3	2.54	20	
cis-1,2-Dichloroethene	15.95	1.0	20	0	79.8	78 - 123	16.81	5.23	20	
cis-1,3-Dichloropropene	16.37	1.0	20	0	81.8	75 - 124	16.71	2.04	20	
Dibromochloromethane	18.17	1.0	20	0	90.9	74 - 126	18.57	2.15	20	
Dibromomethane	18.25	1.0	20	0	91.3	79 - 123	17.78	2.59	20	
Dichlorodifluoromethane	13.47	1.0	20	0	67.4	32 - 152	14.47	7.16	20	
Ethylbenzene	18.68	1.0	20	0	93.4	79 - 121	19.88	6.23	20	
Hexachlorobutadiene	23.52	1.0	20	0	118	66 - 134	25.08	6.39	20	
Isopropylbenzene	18.83	1.0	20	0	94.2	72 - 131	20.35	7.76	20	
m,p-Xylene	35.84	2.0	40	0	89.6	80 - 121	38.57	7.33	20	
Methylene chloride	15.8	2.0	20	0	79.0	74 - 124	16.17	2.36	20	
Naphthalene	23.92	1.0	20	0	120	61 - 128	22.45	6.37	20	
n-Butylbenzene	20.53	1.0	20	0	103	75 - 128	22.46	8.99	20	
n-Propylbenzene	20.38	1.0	20	0	102	76 - 126	22.67	10.7	20	
o-Xylene	17.8	1.0	20	0	89.0	78 - 122	19.27	7.92	20	
sec-Butylbenzene	21.28	1.0	20	0	106	77 - 126	24.26	13.1	20	
Styrene	5.242	1.0	20	0	26.2	78 - 123	5.633	7.19	20	S
tert-Butylbenzene	20.43	1.0	20	0	102	78 - 124	22.59	10	20	
Tetrachloroethene	34.95	1.0	20	15.34	98.0	74 - 129	37.42	6.81	20	
Toluene	18.66	1.0	20	0	93.3	80 - 121	20.14	7.64	20	
trans-1,2-Dichloroethene	15.18	1.0	20	0	75.9	75 - 124	16.32	7.24	20	
trans-1,3-Dichloropropene	17.13	1.0	20	0	85.6	73 - 127	17.13	0.0315	20	
Trichloroethene	168	1.0	20	150.6	87.1	79 - 123	175.8	4.51	20	O
Trichlorofluoromethane	17.33	1.0	20	0	86.6	65 - 141	18.91	8.74	20	
Vinyl chloride	14.05	1.0	20	0	70.2	58 - 137	16.8	17.9	20	
Surr: 1,2-Dichloroethane-d4	*44.77*	*1.0*	*50*	*0*	*89.5*	*81 - 118*	*44*	*1.75*	*20*	
Surr: 4-Bromofluorobenzene	*46.47*	*1.0*	*50*	*0*	*92.9*	*85 - 114*	*45.22*	*2.71*	*20*	
Surr: Dibromofluoromethane	*46.06*	*1.0*	*50*	*0*	*92.1*	*80 - 119*	*46.57*	*1.1*	*20*	

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R373272 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20110985-28MSD** Units: **UG/L** Analysis Date: **23-Nov-2020 17:52**
Client ID: Run ID: **VOA6_373272** SeqNo: **5848327** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*50.43*	*1.0*	*50*	*0*	*101*	*89 - 112*	*51.46*	*2.02*	*20*	

The following samples were analyzed in this batch:

HS20110527-11	HS20110527-12	HS20110527-13	HS20110527-14
HS20110527-15	HS20110527-16	HS20110527-17	HS20110527-18

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110527

QC BATCH REPORT

Batch ID: R372517 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-111120** Units: **mg/L** Analysis Date: **11-Nov-2020 18:24**
Client ID: Run ID: **ICS-Integrion_372517** SeqNo: **5829719** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-111120** Units: **mg/L** Analysis Date: **11-Nov-2020 18:42**
Client ID: Run ID: **ICS-Integrion_372517** SeqNo: **5829720** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.42	0.500	20	0	102	80 - 120				
Nitrogen, Nitrate (As N)	4.058	0.100	4	0	101	80 - 120				
Sulfate	20.77	0.500	20	0	104	80 - 120				

MS Sample ID: **HS20101419-01MS** Units: **mg/L** Analysis Date: **12-Nov-2020 00:24**
Client ID: Run ID: **ICS-Integrion_372517** SeqNo: **5829733** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1034	0.500	10	1053	-192	80 - 120				SEO
Nitrogen, Nitrate (As N)	2.06	0.100	2	0.0627	99.9	80 - 120				
Sulfate	204.1	0.500	10	201.2	29.4	80 - 120				SEO

MSD Sample ID: **HS20101419-01MSD** Units: **mg/L** Analysis Date: **12-Nov-2020 00:42**
Client ID: Run ID: **ICS-Integrion_372517** SeqNo: **5829734** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1039	0.500	10	1053	-141	80 - 120	1034	0.49	20	SEO
Nitrogen, Nitrate (As N)	2.059	0.100	2	0.0627	99.8	80 - 120	2.06	0.034	20	
Sulfate	206.3	0.500	10	201.2	51.7	80 - 120	204.1	1.09	20	SEO

The following samples were analyzed in this batch: HS20110527-11 HS20110527-12 HS20110527-13 HS20110527-15

ALS Houston, US Date: 29-Nov-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: **HS20110527**

QUALIFIERS, ACRONYMS, UNITS

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

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 29-Nov-20

Sample Receipt Checklist

Work Order ID: HS20110527 **Date/Time Received:** 11-Nov-2020 10:20

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

Completed By:	/S/ Paresh M. Giga	11-Nov-2020 16:29	**Reviewed by:**	/S/ RJ Modashia	12-Nov-2020 15:30
	eSignature	Date/Time		eSignature	Date/Time

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

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	3 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.2C U/c	IR31	
Cooler(s)/Kit(s):	43790		
Date/Time sample(s) sent to storage:	11/11/2020 16:50		
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:

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

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

Project No. 501032

Job: **LHAAP 37 November 2020**

Prepared By: Scott Beesinger

P.O. Number

HS20110527
Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant 37

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	Carbon Dioxide by RSK 175	Anions (Chloride, Sulfate, and Nitrate) by SW9056					Remarks (Preservatives, etc.)	Lab I.D.#
35BwW01-201109	WG	11/9/20/0725		3	X										
35BwW10-201109	WG	11/9/20/0810		3	X										
35BwW05-201109	WG	11/9/20/0855		3	X										
LHSmw58-201109	WG	11/9/20/0940		3	X										
LHSmw58-201109-MS	WG	11/9/20/0940		3	X										
LHSmw58-201109-MSD	WG	11/9/20/0940		3	X										
35BwW11-201109	WG	11/9/20/1025		3	X										
35BwW20-201109	WG	11/9/20/1110		3	X										

Additional Remarks: Standard TAT on all parameters. Please email results to Susan.Huang@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	11/10/20	1430	JM	11/11/2020	12:20						

For Lab Use Only

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

Remarks:

43790 1.20 721 C1.00

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

CHAIN OF CUSTODY

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

Page 1 of 1

Project: APTIM LONGHORN ARMY AMMN. PLANT (LHAAP) GROUNDWATER TREATMENT PLANT (GWTP) KARNACK, TEXAS	Project No. 501032
Job: **LHAAP 37 November 2020**	
Prepared By: Scott Beesinger	P.O. Number

HS20110527

Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant 37

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	Carbon Dioxide by RSK 175	Anions (Chloride, Sulfate, and Nitrate) by SW9056					Remarks (Preservatives, etc.)	Lab I.D.#
35BWW20-201109-FD	WG	11/9/20/1110		3	X										
35BWW09-201109	WG	11/9/20/1155		3	X										
35WW19-201109	WG	11/9/20/1240		3	X										
35WW18-201109	WG	11/9/20/1325		3	X										
35BWW26-201110	WG	11/10/20/0720		12	X	X	X	X	X						
35BWW04-201110	WG	11/10/20/0805		12	X	X	X	X	X						
35BWW14-201110	WG	11/10/20/0900		12	X	X	X	X	X						
35BWW15-201110	WG	11/10/20/0950		3	X										

Additional Remarks: Standard TAT on all parameters. Please email results to Susan.Huang@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	11/10/20	1430	[signature]	11/11/2020	10:25						

For Lab Use Only

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

Remarks:

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

CHAIN OF CUSTODY

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

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

Project No. 501032

Job: **LHAAP 37 November 2020**

Prepared By: Scott Beesinger

P.O. Number

HS20110527
Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant 37

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	Carbon Dioxide by RSK 175	Anions (Chloride, Sulfate, and Nitrate) by SW9056	Remarks (Preservatives, etc.)	Lab I.D.#
35BWW23-201110	WG	11/10/20/1030		12	X	X	X	X	X		
35BWW24-201110	WG	11/10/20/1120		3	X						
35BWW25-201110	WG	11/10/20/1215		3	X						
TRIP BLANK-201110	WG	11/10/20		2	X						

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

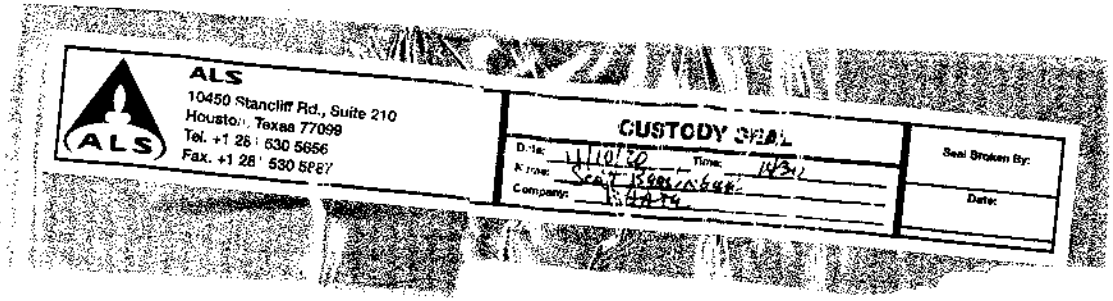
Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	11/10/20	1430	[signature]	11/11/20	10:20						

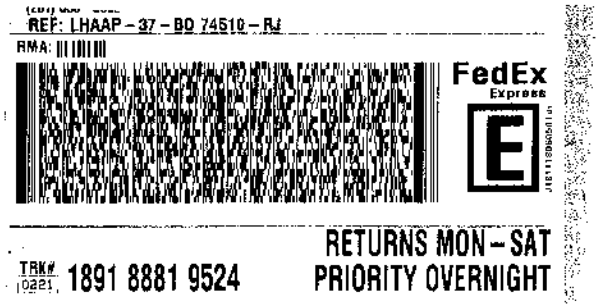
For Lab Use Only

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

Remarks:

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


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5987
CUSTODY SEAL
Date:
Time:
Name:
Company:
Seal Broken By:
Date:


REF: LHAAP – 37 – BD 74510 – RJ
RMA:
FedEx
Express
TRK# 0221 1891 8881 9524
RETURNS MON – SAT
PRIORITY OVERNIGHT

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
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F : +1 360 636 1068
www.alsglobal.com

November 25, 2020

Analytical Report for Service Request No: K2010530

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

RE: HS20110527

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 13, 2020
For your reference, these analyses have been assigned our service request number **K2010530.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20110527
Sample Matrix: Ground Water

Service Request: K2010530
Date Received: 11/13/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

Four ground water samples were received for analysis at ALS Environmental on 11/13/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 11/25/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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K20110530

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:** **15143**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110527
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110527-11**	**35BWW26-201110**	**Groundwater**	**10 Nov 2020 07:20**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			25 Nov 2020
2.	**HS20110527-12**	**35BWW04-201110**	**Groundwater**	**10 Nov 2020 08:05**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			25 Nov 2020
3.	**HS20110527-13**	**35BWW14-201110**	**Groundwater**	**10 Nov 2020 09:00**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			25 Nov 2020
4.	**HS20110527-15**	**35BWW23-201110**	**Groundwater**	**10 Nov 2020 10:30**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			25 Nov 2020

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: 11/12/2020 1800

Received By: [signature] Date/Time: 11/13/20 1030

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

PM VL

Cooler Receipt and Preservation Form

Client ALS Houston Service Request K20 10530

Received: 11/13/20 Opened: 11/13/20 By: NP Unloaded: 11/13/20 By: NP

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed
0.5	—	IR01	15143	—	—	1891 8882 7783	

6. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2010530
Project:	HS20110527	**Date Collected:**	11/10/20
Sample Matrix:	Ground Water	**Date Received:**	11/13/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
35BWW26-201110	K2010530-001	**0.51**	0.50	0.20	0.07	1	11/19/20 17:48	
35BWW04-201110	K2010530-002	**0.76**	0.50	0.20	0.07	1	11/19/20 17:48	
35BWW14-201110	K2010530-003	**0.52**	0.50	0.20	0.07	1	11/19/20 17:48	
35BWW23-201110	K2010530-004	**1.13**	0.50	0.20	0.07	1	11/19/20 17:48	
Method Blank	K2010530-MB	ND U	0.50	0.20	0.07	1	11/19/20 17:48	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010530
Project:	HS20110527	**Date Analyzed:**	11/19/20
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	704227

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2010530-LCS	24.3	25.0	97	83-117

LABORATORY REPORT

November 24, 2020

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

RE: HS20110527

Dear RJ:

Enclosed are the results of the samples submitted to our laboratory on November 12, 2020. For your reference, these analyses have been assigned our service request number P2006450.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental



By Hayden Akers at 2:24 pm, Nov 24, 2020

Hayden Akers
Project Manager

Client: ALS Laboratory Group Service Request No: P2006450
Project: HS20110527

CASE NARRATIVE

The samples were received intact under chain of custody on November 12, 2020 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175 as described in laboratory SOP VOA-DISGAS. This analyte is included on the laboratory's NELAP and DoD-ELAP scope of accreditation.

The samples labeled P2006450-001 and P2006450-004 had a pH of 5. This may give a high bias for carbon dioxide.

Manual integrations were performed on the following sample(s) and analyte(s). Refer to the raw data for additional information.

Sample Identification(s)	Analyte(s)
P2006450-LCS	Carbon dioxide
P2006450-LCSD	Carbon dioxide
P2006450-003	Carbon dioxide

Methane, Ethene and Ethane Analysis

The samples were also analyzed for methane, ethene, and ethane using a gas chromatograph equipped with a flame ionization detector (FID). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least two hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (methane, ethene and ethane) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP accreditation.

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

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

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-007
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Laboratory Group
Service Request: P2006450
Project ID: HS20110527

Date Received: 11/12/2020
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
35BWW26-201110	P2006450-001	Water	11/10/2020	07:20	X	X
35BWW04-201110	P2006450-002	Water	11/10/2020	08:05	X	X
35BWW14-201110	P2006450-003	Water	11/10/2020	09:00	X	X
35BWW23-201110	P2006450-004	Water	11/10/2020	10:30	X	X

PJ006450

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:** **15144**

SUBCONTRACT TO:

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065

Phone: +1 805 526 7161

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110527
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110527-11**	**35BWW26-201110**	**Groundwater**	**10 Nov 2020 07:20**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	25 Nov 2020
2.	**HS20110527-12**	**35BWW04-201110**	**Groundwater**	**10 Nov 2020 08:05**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	25 Nov 2020
3.	**HS20110527-13**	**35BWW14-201110**	**Groundwater**	**10 Nov 2020 09:00**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	25 Nov 2020
4.	**HS20110527-15**	**35BWW23-201110**	**Groundwater**	**10 Nov 2020 10:30**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	25 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.
3 Vials neat & 3 Vials HCL

QC Level: DOD IV (DoD Data Package)

R1006450

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 15144**

Relinquished By: _____ Date/Time: 11/11/2020 1800

Received By: _____ Date/Time: 11-12-20 0930 2° WET

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

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2006450

Project: HS20110527

Sample(s) received on: 11/12/2020 Date opened: 11/12/2020 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: ° C Blank Temperature: 2° C	Wet Ice		
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? Cooler lid. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2006450-001.01	40mL VOA NP		5		A	wh 11/20/20
P2006450-001.02	40mL VOA NP				A	
P2006450-001.03	40mL VOA NP				A	
P2006450-001.04	40ml VOA HCL		1		A	wh 11/20/20
P2006450-001.05	40ml VOA HCL				A	
P2006450-001.06	40ml VOA HCL				A	
P2006450-002.01	40mL VOA NP		6		A	wh 11/20/20
P2006450-002.02	40mL VOA NP				A	
P2006450-002.03	40mL VOA NP				A	
P2006450-002.04	40ml VOA HCL		1		A	wh 11/20/20
P2006450-002.05	40ml VOA HCL				A	
P2006450-002.06	40ml VOA HCL				A	
P2006450-003.01	40mL VOA NP		6		A	wh 11/20/20
P2006450-003.02	40mL VOA NP				A	
P2006450-003.03	40mL VOA NP				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2006450

Project: HS20110527

Sample(s) received on: 11/12/2020 Date opened: 11/12/2020 by: ADAVID

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2006450-003.04	40ml VOA HCL		1		A	wh 11/20/20
P2006450-003.05	40ml VOA HCL				A	
P2006450-003.06	40ml VOA HCL				A	
P2006450-004.01	40mL VOA NP		5		A	wh 11/20/20
P2006450-004.02	40mL VOA NP				A	
P2006450-004.03	40mL VOA NP				A	
P2006450-004.04	40ml VOA HCL		1		A	wh 11/20/20
P2006450-004.05	40ml VOA HCL				A	
P2006450-004.06	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW26-201110**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P2006450-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/10/20
Date Received: 11/12/20
Date Analyzed: 11/19/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW04-201110**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P2006450-002

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/10/20
Date Received: 11/12/20
Date Analyzed: 11/19/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW14-201110**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P2006450-003

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/10/20
Date Received: 11/12/20
Date Analyzed: 11/19/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW23-201110**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P2006450-004

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/10/20
Date Received: 11/12/20
Date Analyzed: 11/19/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **Method Control Sample**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P201119-MB

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 11/19/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P201119-LCS
P201119-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 11/19/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result$_1$ LCS µg/L	Result$_1$ DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	2.35	2.55	**93**	**101**	73-125	8	26	
74-85-1	Ethene	4.40	4.94	4.96	**112**	**113**	72-133	0.9	11	
74-84-0	Ethane	4.72	4.83	4.80	**102**	**102**	74-131	0	10	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Project ID: **HS20110527** ALS Project ID: P2006450

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Wade Henton
Matrix: Liquid
Test Notes:

Date(s) Collected: 11/10/20
Date Received: 11/12/20
Date Analyzed: 11/20/20

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
35BWW26-201110	P2006450-001	0.10	**330,000**	1,000	860	370	
35BWW04-201110	P2006450-002	0.10	**94,000**	1,000	860	370	
35BWW14-201110	P2006450-003	0.10	**42,000**	1,000	860	370	
35BWW23-201110	P2006450-004	0.050	**630,000**	2,000	1,700	740	
Method Control Sample	P201120-MB	0.10	860	1,000	860	370	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2006450
Client Project ID: **HS20110527** ALS Sample ID: P201120-DLCS

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/TCD Date Received: NA
Analyst: Wade Henton Date Analyzed: 11/20/20
Matrix: Liquid Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result$_1$ LCS ug/L	Result$_1$ DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	18,700	19,200	**82**	**84**	80-122	2	12	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

HS20110527 8260_W_DOD Raw Data

ALS WO# HS20110527

MSVOA06 -Logbook

Batch: 42731 **Analyst:** Devak Giga

Date: 11-22-2020 **Reviewer:**

Method: 8260_W **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	11-22-2020 03:22 pm	1.00	0.00 mL	0.00 mL	Y112201.D	Liquid	Y	NA
2	VSTD000.25	ICAL1	11-22-2020 03:43 pm	1.00	5.00 mL	0.00 mL	Y112202.D	Liquid	Y	NA
3	VSTD000.5	ICAL2	11-22-2020 04:25 pm	1.00	5.00 mL	0.00 mL	Y112203.D	Liquid	Y	NA
4	VSTD001	ICAL3	11-22-2020 04:46 pm	1.00	5.00 mL	0.00 mL	Y112204.D	Liquid	Y	NA
5	VSTD002	ICAL4	11-22-2020 05:07 pm	1.00	5.00 mL	0.00 mL	Y112205.D	Liquid	Y	NA
6	VSTD005	ICAL5	11-22-2020 05:28 pm	1.00	5.00 mL	0.00 mL	Y112206.D	Liquid	Y	NA
7	VSTD020	ICAL6	11-22-2020 05:48 pm	1.00	5.00 mL	0.00 mL	Y112207.D	Liquid	Y	NA
8	VSTD050	ICAL7	11-22-2020 06:09 pm	1.00	5.00 mL	0.00 mL	Y112208.D	Liquid	Y	NA
9	VSTD100	ICAL8	11-22-2020 06:30 pm	1.00	5.00 mL	0.00 mL	Y112209.D	Liquid	Y	NA
10	VSTD150	ICAL9	11-22-2020 06:51 pm	1.00	5.00 mL	0.00 mL	Y112210.D	Liquid	Y	NA
11	VSTD200	ICAL	11-22-2020 07:12 pm	1.00	5.00 mL	0.00 mL	Y112211.D	Liquid	Y	NA
12	BLANK	SAMP	11-22-2020 07:33 pm	1.00	5.00 mL	0.00 mL	Y112212.D	Liquid	Y	NA
13	ICV	ICV	11-22-2020 07:54 pm	1.00	5.00 mL	0.00 mL	Y112213.D	Liquid	Y	NA
14	BLANK	SAMP	11-22-2020 08:15 pm	1.00	5.00 mL	0.00 mL	Y112214.D	Liquid	Y	NA
15	BLANK	SAMP	11-22-2020 08:36 pm	1.00	5.00 mL	0.00 mL	Y112215.D	Liquid	Y	NA
16	VLCSW-201122	LCS	11-22-2020 08:57 pm	1.00	5.00 mL	0.00 mL	Y112216.D	Liquid	Y	NA
17	BLANK	SAMP	11-22-2020 09:18 pm	1.00	5.00 mL	0.00 mL	Y112217.D	Liquid	Y	NA
18	VBLKW-201122	MBLK	11-22-2020 09:39 pm	1.00	5.00 mL	0.00 mL	Y112218.D	Liquid	Y	NA
19	HS20110527-04	SAMP	11-22-2020 10:00 pm	1.00	5.00 mL	0.00 mL	Y112219.D	Liquid	Y	NA
20	HS20110527-01	SAMP	11-22-2020 10:21 pm	1.00	5.00 mL	0.00 mL	Y112220.D	Liquid	Y	NA
21	HS20110527-02	SAMP	11-22-2020 10:42 pm	1.00	5.00 mL	0.00 mL	Y112221.D	Liquid	Y	NA
22	HS20110527-03	SAMP	11-22-2020 11:04 pm	1.00	5.00 mL	0.00 mL	Y112222.D	Liquid	Y	NA
23	HS20110527-05	SAMP	11-22-2020 11:25 pm	1.00	5.00 mL	0.00 mL	Y112223.D	Liquid	Y	NA
24	HS20110527-06	SAMP	11-22-2020 11:46 pm	1.00	5.00 mL	0.00 mL	Y112224.D	Liquid	Y	NA
25	HS20110527-07	SAMP	11-23-2020 12:07 am	1.00	5.00 mL	0.00 mL	Y112225.D	Liquid	Y	NA
26	HS20110527-08	SAMP	11-23-2020 12:28 am	1.00	5.00 mL	0.00 mL	Y112226.D	Liquid	Y	NA
27	HS20110527-09	SAMP	11-23-2020 12:49 am	1.00	5.00 mL	0.00 mL	Y112227.D	Liquid	Y	NA
28	HS20110527-10	SAMP	11-23-2020 01:10 am	1.00	5.00 mL	0.00 mL	Y112228.D	Liquid	Y	NA
29	HS20110527-04MS	MS	11-23-2020 01:31 am	1.00	5.00 mL	0.00 mL	Y112229.D	Liquid	Y	NA
30	HS20110527-04MSD	MSD	11-23-2020 01:52 am	1.00	5.00 mL	0.00 mL	Y112230.D	Liquid	Y	NA
31	CCV-END	CCV	11-23-2020 02:13 am	1.00	5.00 mL	0.00 mL	Y112231.D	Liquid	Y	NA
32	BLNK	SAMP	11-23-2020 02:34 am	1.00	5.00 mL	0.00 mL	Y112232.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-55-06
IS ID	31106-55-06
CAL STD ID	31106-55-01/02
BFB ID	31106-*55-06
pH Paper	634-64-10

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

	CLIENT SAMPLE NO.	SMC1 #	SMC2 #	SMC3 (TOL) #	OTHER (DCE) #	TOT OUT
01	VLCSW-201122	97	109	100	106	0
02	VBLKW-201122	90	89	103	86	0
03	HS20110527-04	89	90	104	87	0
04	HS20110527-01	90	92	104	86	0
05	HS20110527-02	88	91	103	86	0
06	HS20110527-03	93	91	104	85	0
07	HS20110527-05	87	88	104	87	0
08	HS20110527-06	87	88	104	86	0
09	HS20110527-07	88	90	104	87	0
10	HS20110527-08	88	90	104	86	0
11	HS20110527-09	90	88	102	84	0
12	HS20110527-10	90	89	105	85	0
13	HS20110527-04	94	93	101	91	0
14	HS20110527-04	92	91	101	87	0
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

		QC LIMITS
SMC1	= 4-Bromofluorobenzene	(70-130)
SMC2	= Dibromofluoromethane	(70-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER(DCE)	= 1,2-Dichloroethane-d4	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	49.61	99	80-120
trans-1,3-Dichloroprope	50.00	49.96	100	80-120
1,3-Dichlorobenzene	50.00	45.98	92	80-120
2,2-Dichloropropane	50.00	44.82	90	80-120
1,1-Dichloropropene	50.00	46.92	94	80-120
Dibromomethane	50.00	49.46	99	80-120
1,2-Dibromoethane	50.00	47.14	94	80-120
trans-1,2-Dichloroethen	50.00	46.15	92	80-120
1,1,1,2-Tetrachloroetha	50.00	44.49	89	80-120
1,1,1-Trichloroethane	50.00	47.13	94	80-120
1,1,2,2-Tetrachloroetha	50.00	51.73	103	80-120
Toluene	50.00	45.59	91	80-120
1,1,2-Trichloroethane	50.00	47.69	95	80-120
1,1-Dichloroethane	50.00	46.82	94	80-120
1,1-Dichloroethene	50.00	43.78	88	80-120
Trichlorofluoromethane	50.00	42.95	86	80-120
1,2,3-Trichlorobenzene	50.00	59.80	120	80-120
Tetrachloroethene	50.00	43.54	87	80-120
1,2,4-Trichlorobenzene	50.00	55.38	111	80-120
1,2,4-Trimethylbenzene	50.00	45.30	91	80-120
tert-Butylbenzene	50.00	44.82	90	80-120
Trichloroethene	50.00	47.98	96	80-120
1,2-Dichlorobenzene	50.00	47.33	95	80-120
1,2-Dichloroethane	50.00	51.23	102	80-120
1,2-Dichloropropane	50.00	46.38	93	80-120
1,3,5-Trimethylbenzene	50.00	44.86	90	80-120
1,3-Dichloropropane	50.00	49.97	100	80-120
1,4-Dichlorobenzene	50.00	46.20	92	80-120

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

* Values outside of QC limits

COMMENTS: _____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Butanone	100.00	92.29	92	80-120
2-Chlorotoluene	50.00	45.05	90	80-120
2-Hexanone	100.00	92.58	92	80-120
4-Chlorotoluene	50.00	45.83	92	80-120
Styrene	50.00	46.71	93	80-120
4-Methyl-2-Pentanone	100.00	94.57	94	80-120
Acetone	100.00	90.56	90	80-120
Benzene	50.00	48.22	96	80-120
Bromobenzene	50.00	48.16	96	80-120
Bromochloromethane	50.00	45.36	91	80-120
Bromodichloromethane	50.00	48.34	97	80-120
Bromoform	50.00	46.18	92	80-120
Bromomethane	50.00	45.34	91	80-120
Carbon Disulfide	100.00	86.79	87	80-120
Carbon Tetrachloride	50.00	47.21	94	80-120
Chlorobenzene	50.00	44.98	90	80-120
Chloroethane	50.00	43.37	87	80-120
Chloroform	50.00	45.54	91	80-120
Chloromethane	50.00	43.35	87	80-120
cis-1,2-Dichloroethene	50.00	44.93	90	80-120
Dibromochloromethane	50.00	51.45	103	80-120
Dichlorodifluoromethane	50.00	41.33	83	80-120
Ethylbenzene	50.00	44.50	89	80-120
Hexachlorobutadiene	50.00	49.41	99	80-120
Isopropylbenzene	50.00	44.05	88	80-120
m,p-Xylenes	100.00	82.01	82	80-120
Methylene Chloride	50.00	46.25	92	80-120
n-Butylbenzene	50.00	41.91	84	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
n-Propylbenzene	50.00	45.43	91	80-120
Naphthalene	50.00	59.57	119	80-120
o-Xylene	50.00	41.96	84	80-120
sec-Butylbenzene	50.00	45.05	90	80-120
Vinyl Chloride	50.00	43.06	86	80-120
1,2,3-Trichloropropane	50.00	49.25	98	80-120
p-Isopropyltoluene	50.00	43.93	88	80-120
1,2-Dibromo-3-Chloropro	50.00	49.75	100	80-120
Freon TF	50.00	43.27	86	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 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-201122

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Lab File ID: Y112218 Lab Sample ID: VBLKW-201122

Date Analyzed: 11/22/20 Time Analyzed: 2139

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-201122	VLCSW-201122	Y112216	2057
02	HS20110527-0	HS20110527-04	Y112219	2200
03	HS20110527-0	HS20110527-01	Y112220	2221
04	HS20110527-0	HS20110527-02	Y112221	2242
05	HS20110527-0	HS20110527-03	Y112222	2304
06	HS20110527-0	HS20110527-05	Y112223	2325
07	HS20110527-0	HS20110527-06	Y112224	2346
08	HS20110527-0	HS20110527-07	Y112225	0007
09	HS20110527-0	HS20110527-08	Y112226	0028
10	HS20110527-0	HS20110527-09	Y112227	0049
11	HS20110527-1	HS20110527-10	Y112228	0110
12	HS20110527-0	HS20110527-04M	Y112229	0131
13	HS20110527-0	HS20110527-04M	Y112230	0152
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Lab File ID: Y112201 BFB Injection Date: 11/22/20

Instrument ID: VOA6 BFB Injection Time: 1522

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	28.3
75	30.0 - 60.0% of mass 95	58.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	1.2 (1.5)1
174	Greater than 50.0% of mass 95	79.6
175	5.0 - 9.0% of mass 174	6.1 (7.6)1
176	95.0 - 101.0% of mass 174	76.8 (96.4)1
177	5.0 - 9.0% of mass 176	4.6 (5.9)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	Y112202	11/22/20	1543
02	VSTD000.5	VSTD000.5	Y112203	11/22/20	1625
03	VSTD001	VSTD001	Y112204	11/22/20	1646
04	VSTD002	VSTD002	Y112205	11/22/20	1707
05	VSTD005	VSTD005	Y112206	11/22/20	1728
06	VSTD020	VSTD020	Y112207	11/22/20	1748
07	VSTD050	VSTD050	Y112208	11/22/20	1809
08	VSTD100	VSTD100	Y112209	11/22/20	1830
09	VSTD150	VSTD150	Y112210	11/22/20	1851
10	VSTD200	VSTD200	Y112211	11/22/20	1912
11	ICV	ICV	Y112213	11/22/20	1954
12	VLCSW-201122	VLCSW-201122	Y112216	11/22/20	2057
13	VBLKW-201122	VBLKW-201122	Y112218	11/22/20	2139
14	HS20110527-0	HS20110527-04	Y112219	11/22/20	2200
15	HS20110527-0	HS20110527-01	Y112220	11/22/20	2221
16	HS20110527-0	HS20110527-02	Y112221	11/22/20	2242
17	HS20110527-0	HS20110527-03	Y112222	11/22/20	2304
18	HS20110527-0	HS20110527-05	Y112223	11/22/20	2325
19	HS20110527-0	HS20110527-06	Y112224	11/22/20	2346
20	HS20110527-0	HS20110527-07	Y112225	11/23/20	0007
21	HS20110527-0	HS20110527-08	Y112226	11/23/20	0028
22	HS20110527-0	HS20110527-09	Y112227	11/23/20	0049

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Lab File ID: Y112201 BFB Injection Date: 11/22/20

Instrument ID: VOA6 BFB Injection Time: 1522

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	28.3
75	30.0 - 60.0% of mass 95	58.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	1.2 (1.5)1
174	Greater than 50.0% of mass 95	79.6
175	5.0 - 9.0% of mass 174	6.1 (7.6)1
176	95.0 - 101.0% of mass 174	76.8 (96.4)1
177	5.0 - 9.0% of mass 176	4.6 (5.9)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	HS20110527-1	HS20110527-10	Y112228	11/23/20	0110
02	HS20110527-0	HS20110527-04M	Y112229	11/23/20	0131
03	HS20110527-0	HS20110527-04M	Y112230	11/23/20	0152
04	CCV-END	CCV-END	Y112231	11/23/20	0213
05					
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FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1912

LAB FILE ID: RF0.25: Y112202 RF0.5: Y112203 RF1: Y112204
RF2: Y112205 RF5: Y112206 RF20: Y112207

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.763	0.546	0.570	0.603	0.626
trans-1,3-Dichloropropene		0.606	0.472	0.486	0.551	0.529
1,3-Dichlorobenzene		1.528	1.810	1.458	1.399	1.450
2,2-Dichloropropane		1.131	1.107	1.044	1.037	0.968
1,1-Dichloropropene		0.529	0.485	0.541	0.487	0.485
Dibromomethane		0.294	0.240	0.259	0.264	0.256
1,2-Dibromoethane		0.431	0.322	0.377	0.362	0.386
trans-1,2-Dichloroethene		0.604	0.584	0.550	0.542	0.564
1,1,1,2-Tetrachloroethane		0.462	0.362	0.350	0.362	0.339
1,1,1-Trichloroethane		0.719	0.933	0.992	1.029	0.993
1,1,2,2-Tetrachloroethane		2074	2422	4021	13385	49795
Toluene		1.570	1.581	1.501	1.512	1.517
1,1,2-Trichloroethane		0.379	0.344	0.334	0.314	0.320
1,1-Dichloroethane		1.393	0.933	1.186	1.183	1.133
1,1-Dichloroethene		1.143	0.944	0.881	0.968	0.920
Trichlorofluoromethane		2.158	2.046	1.863	1.765	1.693
1,2,3-Trichlorobenzene		196	456	837	2811	9456
Tetrachloroethene		0.368	0.306	0.266	0.297	0.287
1,2,4-Trichlorobenzene		0.427	0.476	0.325	0.328	0.368
1,2,4-Trimethylbenzene		3.234	2.677	2.681	2.644	2.789
tert-Butylbenzene		2.520	2.430	2.105	2.163	2.252
Trichloroethene		0.378	0.372	0.302	0.351	0.338
1,2-Dichlorobenzene		1.463	1.304	1.405	1.382	1.361
1,2-Dichloroethane		0.532	0.538	0.526	0.586	0.552
1,2-Dichloropropane		0.482	0.423	0.403	0.378	0.380
1,3,5-Trimethylbenzene		3.673	2.636	2.748	2.642	2.794
1,3-Dichloropropane		0.668	0.550	0.619	0.632	0.609
1,4-Dichlorobenzene		1819	5321	7531	17906	75689
2-Butanone		0.265	0.238	0.184	0.240	0.234
2-Chlorotoluene		3.084	2.470	2.398	2.333	2.356
2-Hexanone		4116	2772	4326	13798	55536
4-Chlorotoluene		3.720	2.590	2.704	2.709	2.849
Styrene		1.320	0.991	0.968	0.989	1.060
4-Methyl-2-Pentanone		6158	3914	7417	22685	82310
Acetone		3440	4436	5270	13349	38625
Benzene		1.485	1.377	1.272	1.364	1.324
Bromobenzene		0.919	0.748	0.794	0.895	0.870
Bromochloromethane		0.340	0.314	0.333	0.384	0.331
Bromodichloromethane		0.649	0.453	0.521	0.512	0.512
Bromoform		838	847	1868	5740	23645
Bromomethane		1988	3745	7308	17502	64649
Carbon Disulfide		2.026	1.780	1.799	1.832	1.756
Carbon Tetrachloride		0.457	0.432	0.399	0.382	0.392
Chlorobenzene		1.164	1.085	0.976	0.994	0.990

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011052

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1912

LAB FILE ID: RF0.25: Y112202 RF0.5: Y112203 RF1: Y112204
RF2: Y112205 RF5: Y112206 RF20: Y112207

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroethane		0.857	0.653	0.794	0.848	0.740
Chloroform		1.512	1.262	1.284	1.215	1.244
Chloromethane		0.950	1.108	0.954	0.945	0.874
cis-1,2-Dichloroethene		0.779	0.737	0.727	0.681	0.682
Dibromochloromethane		0.343	0.328	0.390	0.379	0.396
Dichlorodifluoromethane		1188	2576	5142	11080	46575
Ethylbenzene		0.603	0.560	0.477	0.502	0.506
Hexachlorobutadiene		275	832	1496	3007	14061
Isopropylbenzene		1.883	1.441	1.473	1.469	1.546
m,p-Xylenes		2934	6329	12685	33759	144807
Methylene Chloride		0.846	0.668	0.705	0.587	0.627
n-Butylbenzene		4479	8864	12843	30916	139828
n-Propylbenzene		4.655	4.103	4.027	3.928	4.068
Naphthalene		738	1209	2518	6815	28651
o-Xylene		2162	3459	6359	16651	68365
sec-Butylbenzene		4853	8872	15802	37742	169406
Vinyl Chloride		1.220	1.307	1.222	1.223	1.140
1,2,3-Trichloropropane		0.873	0.795	0.661	0.828	0.794
p-Isopropyltoluene		5121	8283	13477	31739	143079
1,2-Dibromo-3-Chloropropane			0.064	0.066	0.051	0.067
Freon TF		0.987	1.037	0.845	0.874	0.895
4-Bromofluorobenzene		1745	2833	5029	10135	49820
Dibromofluoromethane		1088	2622	3765	9677	44529
Toluene-d8		1.548	1.378	1.293	1.084	1.307
1,2-Dichloroethane-d4		1561	2846	5030	10956	51848

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011052

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1912

LAB FILE ID: RF50: Y112208 RF100: Y112209 RF150: Y112210
RF200: Y112211

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.633	0.651	0.654	0.662
trans-1,3-Dichloropropene	0.539	0.565	0.587	0.579
1,3-Dichlorobenzene	1.399	1.442	1.518	1.530
2,2-Dichloropropane	0.956	1.092	1.074	1.132
1,1-Dichloropropene	0.455	0.495	0.496	0.502
Dibromomethane	0.254	0.262	0.258	0.264
1,2-Dibromoethane	0.377	0.395	0.388	0.402
trans-1,2-Dichloroethene	0.588	0.667	0.686	0.762
1,1,1,2-Tetrachloroethane	0.353	0.387	0.378	0.388
1,1,1-Trichloroethane	1.002	1.126	1.142	1.210
1,1,2,2-Tetrachloroethane	134845	274263	416268	599923
Toluene	1.548	1.734	1.780	1.781
1,1,2-Trichloroethane	0.314	0.316	0.320	0.314
1,1-Dichloroethane	1.153	1.294	1.251	1.328
1,1-Dichloroethene	0.892	0.993	0.949	1.036
Trichlorofluoromethane	1.663	1.933	1.889	1.899
1,2,3-Trichlorobenzene	25528	52660	86282	133285
Tetrachloroethene	0.274	0.322	0.320	0.333
1,2,4-Trichlorobenzene	0.367	0.343	0.376	0.381
1,2,4-Trimethylbenzene	2.600	2.893	2.921	2.966
tert-Butylbenzene	2.134	2.391	2.408	2.454
Trichloroethene	0.332	0.346	0.354	0.358
1,2-Dichlorobenzene	1.339	1.396	1.511	1.573
1,2-Dichloroethane	0.544	0.560	0.565	0.541
1,2-Dichloropropane	0.378	0.383	0.383	0.379
1,3,5-Trimethylbenzene	2.676	2.960	3.194	3.366
1,3-Dichloropropane	0.608	0.624	0.631	0.606
1,4-Dichlorobenzene	204187	485254	753555	1081362
2-Butanone	0.233	0.253	0.256	0.250
2-Chlorotoluene	2.235	2.322	2.439	2.381
2-Hexanone	147583	322138	512600	706390
4-Chlorotoluene	2.754	2.983	3.220	3.410
Styrene	1.083	1.282	1.343	1.397
4-Methyl-2-Pentanone	217806	481706	770447	1057100
Acetone	97000	190183	318811	376097
Benzene	1.315	1.393	1.368	1.392
Bromobenzene	0.835	0.827	0.875	0.839
Bromochloromethane	0.342	0.373	0.365	0.397
Bromodichloromethane	0.522	0.538	0.519	0.539
Bromoform	65866	149375	240352	347273
Bromomethane	151605	329972	546087	
Carbon Disulfide	1.699	1.864	1.948	2.073
Carbon Tetrachloride	0.410	0.466	0.461	0.479
Chlorobenzene	0.967	1.116	1.143	1.184

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011052

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1912

LAB FILE ID: RF50: Y112208 RF100: Y112209 RF150: Y112210
RF200: Y112211

COMPOUND	RF50	RF100	RF150	RF200
Chloroethane	0.736	0.772	0.751	0.820
Chloroform	1.236	1.334	1.295	1.384
Chloromethane	0.828	0.838	0.858	0.905
cis-1,2-Dichloroethene	0.687	0.741	0.756	0.794
Dibromochloromethane	0.403	0.411	0.421	0.418
Dichlorodifluoromethane	121103	288930	448171	619478
Ethylbenzene	0.506	0.565	0.571	0.561
Hexachlorobutadiene	31828	77817	129006	187663
Isopropylbenzene	1.477	1.750	1.771	1.828
m,p-Xylenes	385580	984046	1602438	2341187
Methylene Chloride	0.624	0.675	0.708	0.740
n-Butylbenzene	364568	941862	1548790	2327830
n-Propylbenzene	3.864	4.227	4.412	4.359
Naphthalene	79104	162905	261811	402230
o-Xylene	183424	464311	741860	1073818
sec-Butylbenzene	430230	1137305	1736245	2518787
Vinyl Chloride	1.108	1.208	1.186	1.213
1,2,3-Trichloropropane	0.781	0.688	0.701	0.665
p-Isopropyltoluene	360596	963171	1468165	2148410
1,2-Dibromo-3-Chloropropane	0.063	0.057	0.056	0.062
Freon TF	0.840	0.979	0.943	0.993
4-Bromofluorobenzene	135731	300964	486561	656990
Dibromofluoromethane	113804	241210	376878	532354
Toluene-d8	1.300	1.397	1.380	1.457
1,2-Dichloroethane-d4	142247	308941	451276	632979

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011052

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1912

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.63426981		9.788	15.000
trans-1,3-Dichloropropene	AVRG		0.54593500		8.208	15.000
1,3-Dichlorobenzene	AVRG		1.50389382		8.339	15.000
2,2-Dichloropropane	AVRG		1.06012927		6.136	15.000
1,1-Dichloropropene	AVRG		0.49719123		5.089	15.000
Dibromomethane	AVRG		0.26131887		5.477	15.000
1,2-Dibromoethane	AVRG		0.38225220		7.765	15.000
trans-1,2-Dichloroethene	AVRG		0.61635688		11.956	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.37571580		9.698	15.000
1,1,1-Trichloroethane	AVRG		1.01619587		14.019	15.000
1,1,2,2-Tetrachloroethane	LINR	-3.03e-002	1.17732598		0.9991314	0.9900000
Toluene	AVRG		1.61391693		7.274	15.000
1,1,2-Trichloroethane	AVRG		0.32853452		6.621	15.000
1,1-Dichloroethane	AVRG		1.20603287		11.092	15.000
1,1-Dichloroethene	AVRG		0.96960591		8.343	15.000
Trichlorofluoromethane	AVRG		1.87898218		8.495	15.000
1,2,3-Trichlorobenzene	LINR	2.411e-002	5.42659259		0.9953344	0.9900000
Tetrachloroethene	AVRG		0.30827486		10.246	15.000
1,2,4-Trichlorobenzene	AVRG		0.37672776		12.849	15.000
1,2,4-Trimethylbenzene	AVRG		2.82277561		7.173	15.000
tert-Butylbenzene	AVRG		2.31758314		6.698	15.000
Trichloroethene	AVRG		0.34781060		6.501	15.000
1,2-Dichlorobenzene	AVRG		1.41492314		6.075	15.000
1,2-Dichloroethane	AVRG		0.54937658		3.369	15.000
1,2-Dichloropropane	AVRG		0.39889177		8.730	15.000
1,3,5-Trimethylbenzene	AVRG		2.96564624		12.426	15.000
1,3-Dichloropropane	AVRG		0.61639649		5.058	15.000
1,4-Dichlorobenzene	LINR	1.176e-002	0.64917938		0.9997754	0.9900000
2-Butanone	AVRG		0.23912782		9.709	15.000
2-Chlorotoluene	AVRG		2.44639650		10.165	15.000
2-Hexanone	LINR	1.788e-002	3.85935698		0.9998284	0.9900000
4-Chlorotoluene	AVRG		2.99338049		12.708	15.000
Styrene	AVRG		1.15946429		14.955	15.000
4-Methyl-2-Pentanone	LINR	1.833e-002	2.57659190		0.9997038	0.9900000
Acetone	LINR	-6.38e-002	3.64155334		0.9962917	0.9900000
Benzene	AVRG		1.36560754		4.406	15.000
Bromobenzene	AVRG		0.84468750		6.214	15.000
Bromochloromethane	AVRG		0.35327683		7.857	15.000
Bromodichloromethane	AVRG		0.52952736		9.722	15.000
Bromoform	LINR	4.286e-002	3.97501569		0.9985814	0.9900000
Bromomethane	LINR	1.837e-002	1.00484910		0.9969905	0.9900000
Carbon Disulfide	AVRG		1.86424846		6.790	15.000
Carbon Tetrachloride	AVRG		0.43110146		8.387	15.000
Chlorobenzene	AVRG		1.06885365		8.166	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011052

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1912

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroethane	AVRG		0.77482377		8.238	15.000
Chloroform	AVRG		1.30752005		7.081	15.000
Chloromethane	AVRG		0.91798239		9.381	15.000
cis-1,2-Dichloroethene	AVRG		0.73163069		5.701	15.000
Dibromochloromethane	AVRG		0.38766103		8.425	15.000
Dichlorodifluoromethane	LINR	5.204e-002	1.15073605		0.9973516	0.9900000
Ethylbenzene	AVRG		0.53901151		7.775	15.000
Hexachlorobutadiene	LINR	3.047e-002	3.77438560		0.9974581	0.9900000
Isopropylbenzene	AVRG		1.62650005		10.962	15.000
m,p-Xylenes	LINR	0.13870147	1.17896330		0.9963998	0.9900000
Methylene Chloride	AVRG		0.68678566		11.172	15.000
n-Butylbenzene	LINR	6.129e-002	0.30554446		0.9958588	0.9900000
n-Propylbenzene	AVRG		4.18264463		6.086	15.000
Naphthalene	LINR	2.14e-002	1.79146413		0.9964702	0.9900000
o-Xylene	LINR	5.772e-002	1.28180608		0.9974120	0.9900000
sec-Butylbenzene	2ORDR	9.947e-003	0.29999072	-1.64e-003	0.9994495	0.9900000
Vinyl Chloride	AVRG		1.20297979		4.666	15.000
1,2,3-Trichloropropane	AVRG		0.75417826		10.203	15.000
p-Isopropyltoluene	LINR	3.157e-002	0.32744508		0.9987184	0.9900000
1,2-Dibromo-3-Chloropropane	AVRG		6.093e-002		8.981	15.000
Freon TF	AVRG		0.93255246		7.679	15.000
4-Bromofluorobenzene	2ORDR	1.573e-002	2.07098745	-8.9e-003	0.9994872	0.9900000
Dibromofluoromethane	2ORDR	-6.03e-003	1.59518464	-8.79e-002	0.9998175	0.9900000
Toluene-d8	AVRG		1.34932510		9.547	15.000
1,2-Dichloroethane-d4	2ORDR	2.46e-003	1.23660632	-3.28e-002	0.9990605	0.9900000

FORM VI VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Instrument ID: VOA6 Calibration Date: 11/23/20 Time: 0213

Lab File ID: Y112231 Init. Calib. Date(s): 11/22/20 11/22/20

Init. Calib. Times: 1543 1912

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
cis-1,3-Dichloropropene	0.6340000	0.6297983	0.6297983	0.2	0.66	50.00	AVRG
trans-1,3-Dichloropropene	0.5460000	0.5492771	0.5492771	0.1	-0.60	50.00	AVRG
1,3-Dichlorobenzene	1.5040000	1.4100794	1.4100794	0.6	6.24	50.00	AVRG
2,2-Dichloropropane	1.0600000	0.9199808	0.9199808	0.1	13.21	50.00	AVRG
1,1-Dichloropropene	0.4970000	0.4740133	0.4740133	0.1	4.62	50.00	AVRG
Dibromomethane	0.2610000	0.2614753	0.2614753	0.1	-0.18	50.00	AVRG
1,2-Dibromoethane	0.3820000	0.3750134	0.3750134	0.1	1.83	50.00	AVRG
trans-1,2-Dichloroethene	0.6160000	0.6151133	0.6151133	0.1	0.14	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3760000	0.3638118	0.3638118	0.1	3.24	50.00	AVRG
1,1,1-Trichloroethane	1.0160000	1.0705929	1.0705929	0.1	-5.37	50.00	AVRG
1,1,2,2-Tetrachloroethane	55.199029	50.000000	0.9634157	0.3	-10.40	50.00	LINR
Toluene	1.6140000	1.5560913	1.5560913	0.4	3.59	50.00	AVRG
1,1,2-Trichloroethane	0.3280000	0.3173946	0.3173946	0.1	3.23	50.00	AVRG
1,1-Dichloroethane	1.2060000	1.2026590	1.2026590	0.2	0.28	50.00	AVRG
1,1-Dichloroethene	0.9700000	0.9417364	0.9417364	0.1	2.91	50.00	AVRG
Trichlorofluoromethane	1.8790000	1.8276091	1.8276091	0.1	2.74	50.00	AVRG
1,2,3-Trichlorobenzene	53.118806	50.000000	0.1913301	0.01	-6.24	50.00	LINR
Tetrachloroethene	0.3080000	0.2916825	0.2916825	0.2	5.30	50.00	AVRG
1,2,4-Trichlorobenzene	0.3770000	0.3906494	0.3906494	0.1	-3.62	50.00	AVRG
1,2,4-Trimethylbenzene	2.8230000	2.7092303	2.7092303	0.1	4.03	50.00	AVRG
tert-Butylbenzene	2.3170000	2.2139572	2.2139572	0.1	4.45	50.00	AVRG
Trichloroethene	0.3480000	0.3452430	0.3452430	0.2	0.79	50.00	AVRG
1,2-Dichlorobenzene	1.4150000	1.3780536	1.3780536	0.4	2.61	50.00	AVRG
1,2-Dichloroethane	0.5490000	0.5560766	0.5560766	0.1	-1.29	50.00	AVRG
1,2-Dichloropropane	0.3990000	0.3835663	0.3835663	0.1	3.87	50.00	AVRG
1,3,5-Trimethylbenzene	2.9650000	2.7987830	2.7987830	0.1	5.60	50.00	AVRG
1,3-Dichloropropane	0.6160000	0.6346917	0.6346917	0.1	-3.03	50.00	AVRG
1,4-Dichlorobenzene	48.119962	50.000000	1.4643680	0.4	3.76	50.00	LINR
2-Butanone	0.2390000	0.2404161	0.2404161	0.1	-0.59	50.00	AVRG
2-Chlorotoluene	2.4460000	2.2821754	2.2821754	0.1	6.70	50.00	AVRG
2-Hexanone	99.830891	100.00000	0.2563564	0.1	0.17	50.00	LINR
4-Chlorotoluene	2.9930000	2.9044587	2.9044587	0.1	2.96	50.00	AVRG
Styrene	1.1590000	1.1274804	1.1274804	0.3	2.72	50.00	AVRG
4-Methyl-2-Pentanone	99.837421	100.00000	0.3839214	0.1	0.16	50.00	LINR
Acetone	99.199849	100.00000	0.2811746	0.1	0.80	50.00	LINR
Benzene	1.3660000	1.3465957	1.3465957	0.5	1.42	50.00	AVRG
Bromobenzene	0.8450000	0.8382206	0.8382206	0.1	0.80	50.00	AVRG
Bromochloromethane	0.3530000	0.3628420	0.3628420	0.1	-2.79	50.00	AVRG
Bromodichloromethane	0.5290000	0.5264286	0.5264286	0.2	0.49	50.00	AVRG
Bromoform	48.990362	50.000000	0.2357100	0.1	2.02	50.00	LINR
Bromomethane	48.338664	50.000000	0.9438298	0.1	3.32	50.00	LINR
Carbon Disulfide	1.8640000	1.7641004	1.7641004	0.1	5.36	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011052

Instrument ID: VOA6 Calibration Date: 11/23/20 Time: 0213

Lab File ID: Y112231 Init. Calib. Date(s): 11/22/20 11/22/20

Init. Calib. Times: 1543 1912

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
Carbon Tetrachloride	0.4310000	0.4255959	0.4255959	0.1	1.25	50.00	AVRG
Chlorobenzene	1.0690000	1.0165113	1.0165113	0.5	4.91	50.00	AVRG
Chloroethane	0.7740000	0.7446175	0.7446175	0.1	3.80	50.00	AVRG
Chloroform	1.3070000	1.2945160	1.2945160	0.2	0.96	50.00	AVRG
Chloromethane	0.9180000	0.8447326	0.8447326	0.1	7.98	50.00	AVRG
cis-1,2-Dichloroethene	0.7320000	0.7214046	0.7214046	0.1	1.45	50.00	AVRG
Dibromochloromethane	0.3880000	0.4044768	0.4044768	0.1	-4.25	50.00	AVRG
Dichlorodifluoromethane	44.891783	50.000000	0.7350004	0.1	10.22	50.00	LINR
Ethylbenzene	0.5390000	0.5213053	0.5213053	0.1	3.28	50.00	AVRG
Hexachlorobutadiene	46.572266	50.000000	0.2387088	0.1	6.86	50.00	LINR
Isopropylbenzene	1.6260000	1.5427781	1.5427781	0.1	5.12	50.00	AVRG
m,p-Xylenes	87.862246	100.00000	0.6864266	0.1	12.14	50.00	LINR
Methylene Chloride	0.6870000	0.6671486	0.6671486	0.1	2.89	50.00	AVRG
n-Butylbenzene	44.206164	50.000000	2.6930042	0.5	11.59	50.00	LINR
n-Propylbenzene	4.1820000	3.9385816	3.9385816	0.1	5.82	50.00	AVRG
Naphthalene	54.807766	50.000000	0.5999312	0.2	-9.62	50.00	LINR
o-Xylene	44.116495	50.000000	0.6433198	0.3	11.77	50.00	LINR
sec-Butylbenzene	47.259898	50.000000	3.1727388	0.1	5.48	50.00	2RDR
Vinyl Chloride	1.2030000	1.1573724	1.1573724	0.1	3.79	50.00	AVRG
1,2,3-Trichloropropane	0.7540000	0.7742721	0.7742721	0.1	-2.69	50.00	AVRG
p-Isopropyltoluene	46.979297	50.000000	2.7730276	0.1	6.04	50.00	LINR
1,2-Dibromo-3-Chloropropane	6.1e-002	6.47e-002	6.47e-002	0.05	-6.06	50.00	AVRG
Freon TF	0.9320000	0.8840974	0.8840974	0.1	5.14	50.00	AVRG
4-Bromofluorobenzene	49.799906	50.000000	0.4743025	0.1	0.40	50.00	2RDR
Dibromofluoromethane	53.947011	50.000000	0.7077625	0.1	-7.89	50.00	2RDR
Toluene-d8	1.3490000	1.3616287	1.3616287	0.1	-0.94	50.00	AVRG
1,2-Dichloroethane-d4	52.595461	50.000000	0.8686510	0.1	-5.19	50.00	2RDR

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Lab File ID (Standard): Y112208 Date Analyzed: 11/22/20

Instrument ID: VOA6 Time Analyzed: 1809

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

		IS1(DCB) AREA #	RT #	IS2(CBZ) AREA #	RT #	IS3(DFB) AREA #	RT #
	12 HOUR STD	139821	9.66	297896	7.67	325305	4.97
	UPPER LIMIT	279642	10.16	595792	8.17	650610	5.47
	LOWER LIMIT	69911	9.16	148948	7.17	162653	4.47
	CLIENT SAMPLE NO.						
01	VLCSW-201122	139658	9.66	312094	7.67	336432	4.97
02	VBLKW-201122	141476	9.66	348869	7.67	402214	4.97
03	HS20110527-04	145678	9.66	349143	7.67	393549	4.97
04	HS20110527-01	144405	9.66	341959	7.67	391471	4.97
05	HS20110527-02	143223	9.66	343421	7.67	387921	4.97
06	HS20110527-03	144623	9.66	341776	7.67	390778	4.97
07	HS20110527-05	136902	9.66	332980	7.67	375383	4.97
08	HS20110527-06	142441	9.66	339582	7.67	380833	4.97
09	HS20110527-07	135094	9.66	332997	7.67	369962	4.97
10	HS20110527-08	136892	9.66	326941	7.67	372370	4.97
11	HS20110527-09	138695	9.66	337485	7.67	376566	4.97
12	HS20110527-10	135540	9.66	327639	7.67	379594	4.97
13	HS20110527-04	153334	9.66	345736	7.67	385778	4.97
14	HS20110527-04	142055	9.66	339641	7.67	379130	4.97
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DFB) = 1,4-Difluorobenzene

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

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

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Lab File ID (Standard): Y112208 Date Analyzed: 11/22/20

Instrument ID: VOA6 Time Analyzed: 1809

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	173100	4.18				
	UPPER LIMIT	346200	4.68				
	LOWER LIMIT	86550	3.68				
	CLIENT SAMPLE NO.						
01	VLCSW-201122	173392	4.18				
02	VBLKW-201122	231123	4.18				
03	HS20110527-04	228585	4.18				
04	HS20110527-01	227322	4.18				
05	HS20110527-02	225780	4.18				
06	HS20110527-03	226299	4.18				
07	HS20110527-05	223300	4.18				
08	HS20110527-06	222068	4.18				
09	HS20110527-07	220094	4.18				
10	HS20110527-08	217847	4.18				
11	HS20110527-09	221087	4.18				
12	HS20110527-10	216122	4.18				
13	HS20110527-04	218714	4.18				
14	HS20110527-04	217923	4.18				
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

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

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112201.D Page 1

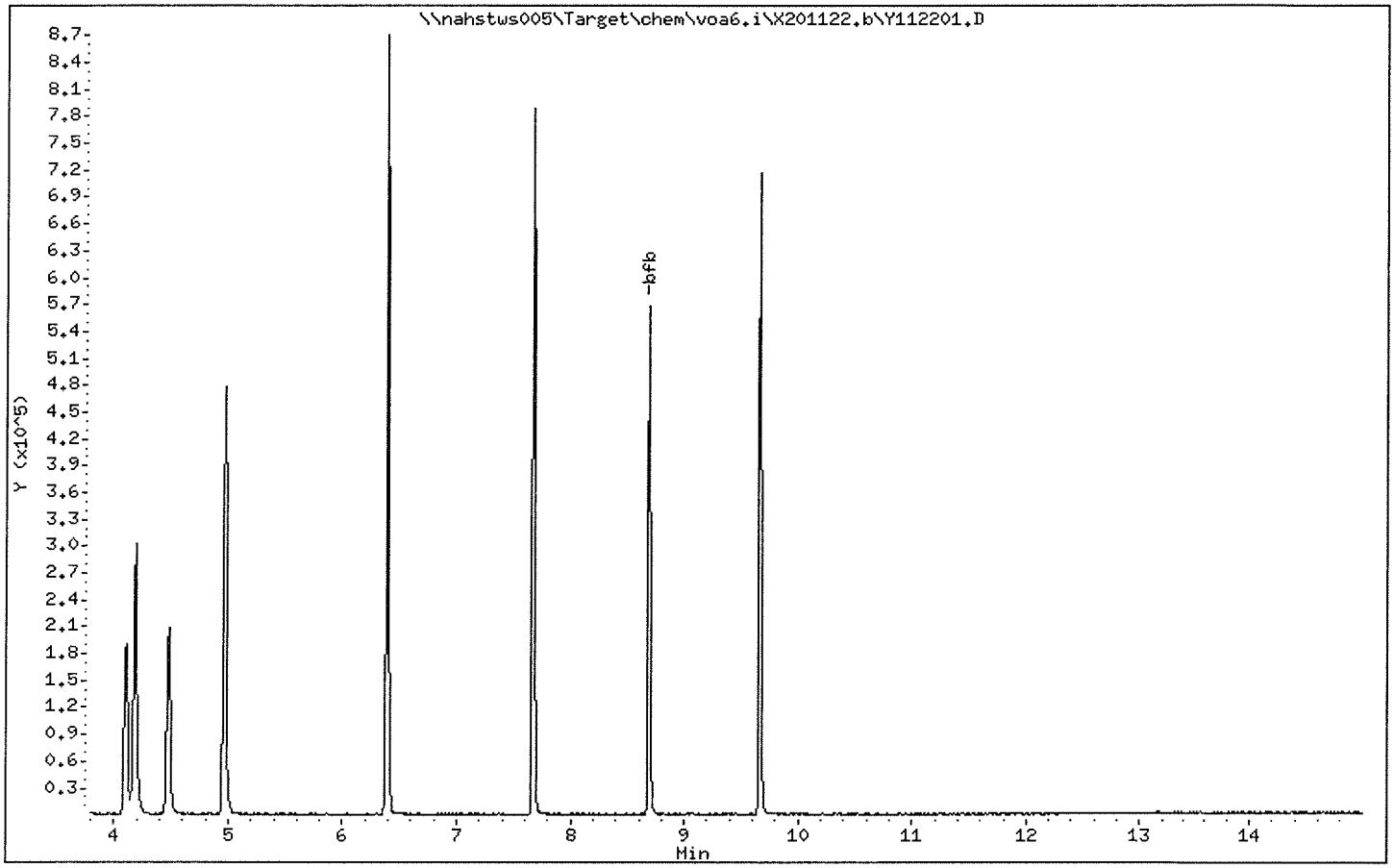
Date : 22-NOV-2020 15:22

Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112201.D

Date : 22-NOV-2020 15:22

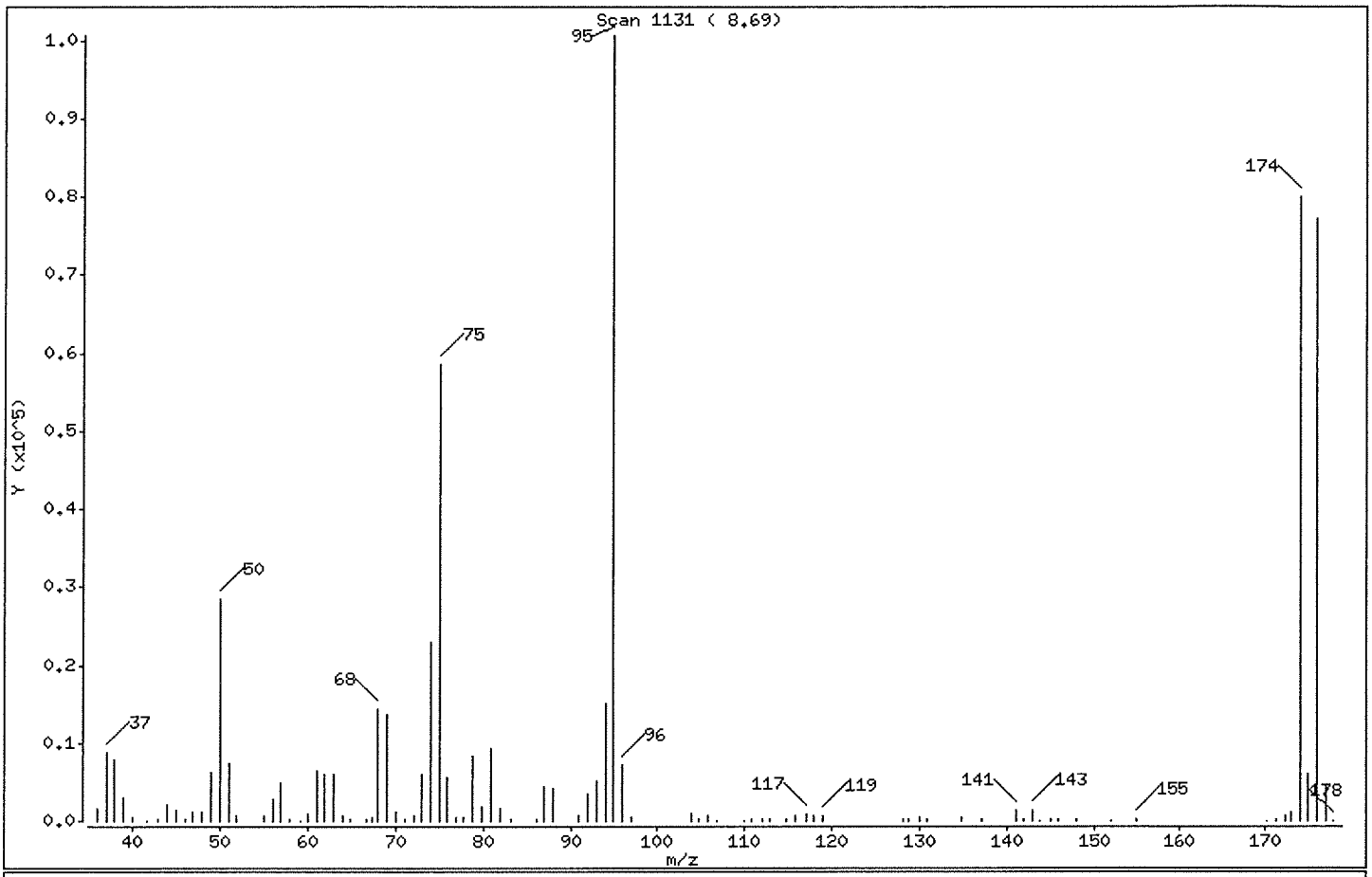
Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	28.32
75	30.00 - 60.00% of mass 95	58.07
96	5.00 - 9.00% of mass 95	7.19
173	Less than 2.00% of mass 174	1.18 (1.49)
174	Greater than 50.00% of mass 95	79.62
175	5.00 - 9.00% of mass 174	6.06 (7.61)
176	95.00 - 101.00% of mass 174	76.76 (96.42)
177	5.00 - 9.00% of mass 176	4.55 (5.93)

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112201.D

Date : 22-NOV-2020 15:22

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: Y112201.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 92

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1708	63.00	5933	91.00	731	134.80	380
37.00	8777	64.10	597	92.00	3407	137.10	209
38.00	7920	64.80	143	93.00	5204	141.00	1417
39.00	3029	66.80	154	94.00	14944	141.90	126
40.00	488	67.30	388	95.00	100632	142.90	1327
41.70	52	68.00	14372	96.00	7231	143.80	55
42.90	158	69.00	13751	97.00	356	144.90	128
44.00	2019	70.10	1045	103.90	985	145.90	216
45.00	1305	71.10	199	104.70	197	147.90	121
46.00	186	72.10	768	105.80	724	151.90	91
47.00	1048	73.00	5903	106.80	69	154.90	265
48.00	1210	74.00	22856	110.00	75	170.30	94
49.00	6173	75.00	58432	110.80	126	171.30	167
50.00	28504	76.00	5478	112.00	120	172.30	781
51.00	7345	76.90	412	112.80	133	173.00	1192
52.00	633	77.80	472	114.80	122	173.90	80120
55.00	799	78.90	8219	115.80	606	174.90	6100
56.10	2854	79.90	1803	117.00	835	175.90	77248
57.00	4757	80.90	9308	117.80	637	176.90	4580
58.00	180	81.90	1639	118.90	613	177.80	99
59.20	105	83.20	184	128.10	314		
60.00	915	86.10	310	128.80	139		
61.00	6578	86.90	4414	129.90	365		
62.00	6041	88.00	4276	130.70	261		

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112202.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112202.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 22-NOV-2020 15:43
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 17:48 Cal File: Y112207.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	158135	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	300295	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	277858	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	115702	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	1555	0.25000	0.73(Ta)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	2866	0.25000	1.85(a)
$ 30 Dibromofluoromethane	113	4.089	4.089	(0.978)	796	0.25000	0.09(a)
$ 48 Toluene-d8	98	6.396	6.396	(0.834)	3339	0.25000	0.44(Ta)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	618	0.25000	0.29(aM)
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	1009	0.25000	0.31(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	874	0.25000	(aM)
138 Freon TF	101	1.919	1.919	(0.459)	1113	0.25000	0.37(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	548	0.25000	0.30(aM)
22 1,1-Dichloroethane	63	2.936	2.936	(0.702)	1487	0.25000	0.38(aM)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	1263	0.25000	0.41(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	1046	0.25000	0.35(aM)
71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	597	0.25000	0.34(aM)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	258	0.25000	0.29(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	1898	0.25000	0.29(a)
57 1,2-Dibromoethane	107	7.277	7.277	(0.949)	518	0.25000	0.24(aM)
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	1014	0.25000	0.30(a)
33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	924	0.25000	0.28(aM)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	543	0.25000	0.22(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	1981	0.25000	0.28(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	1042	0.25000	0.29(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	939	0.25000	0.27(aM)
84	1,4-Dichlorobenzene	146	9.691	9.691	(1.003)	1392	0.25000	0.97(a)
26	2,2-Dichloropropane	77	3.495	3.495	(0.836)	752	0.25000	0.22(aM)
24	2-Butanone	43	3.595	3.595	(0.860)	544	0.50000	0.71(aM)
76	2-Chlorotoluene	91	8.967	8.967	(0.928)	1769	0.25000	0.31(a)
52	2-Hexanone	43	7.098	7.098	(0.925)	745	0.50000	1.41(Ta)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1993	0.25000	0.28(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2087	0.25000	1.87(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	740	0.50000	1.25(aM)
10	Acetone	43	1.976	1.976	(0.473)	717	0.50000	(aM)
37	Benzene	78	4.512	4.512	(0.908)	2787	0.25000	0.33(Ta)
74	Bromobenzene	156	8.809	8.809	(0.912)	565	0.25000	0.28(aM)
29	Bromochloromethane	128	3.817	3.817	(0.913)	182	0.25000	0.16(aM)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	801	0.25000	0.25(aM)
66	Bromoform	173	8.416	8.416	(1.097)	77	0.25000	2.19(aM)
6	Bromomethane	94	1.338	1.338	(0.320)	1552	0.25000	1.41(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	3897	0.50000	0.66(aM)
34	Carbon Tetrachloride	117	4.254	4.254	(0.856)	789	0.25000	0.30(aH)
59	Chlorobenzene	112	7.692	7.692	(1.003)	1529	0.25000	0.25(a)
7	Chloroethane	64	1.403	1.403	(0.336)	1130	0.25000	0.46(a)
28	Chloroform	83	3.903	3.903	(0.933)	1255	0.25000	0.30(a)
3	Chloromethane	50	1.081	1.081	(0.258)	1078	0.25000	0.37(aM)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	456	0.25000	0.19(aM)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	921	0.25000	0.24(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	679	0.25000	0.31(aM)
44	Dibromomethane	93	5.550	5.550	(1.117)	585	0.25000	0.37(aM)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	525	0.25000	2.79(aM)
61	Ethylbenzene	106	7.799	7.799	(1.017)	747	0.25000	0.24(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2624	0.25000	0.29(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	2064	0.50000	7.37
17	Methylene Chloride	84	2.298	2.298	(0.550)	932	0.25000	0.42(aM)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	1666	0.25000	3.28(a)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	3165	0.25000	0.32(a)
92	Naphthalene	128	11.553	11.553	(1.196)	443	0.25000	1.41(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	1039	0.25000	3.12(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	1973	0.25000	0.75(a)
64	Styrene	104	8.265	8.265	(1.078)	1876	0.25000	0.29(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	1693	0.25000	0.31(a)
56	Tetrachloroethene	164	6.926	6.926	(0.903)	707	0.25000	0.41(aM)
50	Toluene	91	6.453	6.453	(0.841)	2775	0.25000	0.30(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	566	0.25000	0.29(aM)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	936	0.25000	0.28(aM)
38	Trichloroethene	130	5.199	5.199	(1.046)	684	0.25000	0.32(aM)
8	Trichlorofluoromethane	101	1.553	1.553	(0.371)	1834	0.25000	0.30(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	1172	0.25000	0.30(aM)

QC Flag Legend

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

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112203.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112203.D
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Inj Date : 22-NOV-2020 16:25
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 15:43 Cal File: Y112202.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	157934	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	297661	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	279271	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	116515	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	1561	0.50000	0.73(TaM)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	1745	0.50000	1.43(aM)
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	1088	0.50000	0.24(a)
$	48 Toluene-d8	98	6.388	6.388	(0.833)	4323	0.50000	0.57(Ta)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1290	0.50000	0.61(aM)
	31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	1136	0.50000	0.35(aM)
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	2074	0.50000	(aM)
	138 Freon TF	101	1.926	1.926	(0.461)	1559	0.50000	0.52(aM)
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	1059	0.50000	0.57(aM)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	2200	0.50000	0.57(Ta)
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	1805	0.50000	0.58(aM)
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	1574	0.50000	0.53(aM)
	93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	196	0.50000	1.66(aM)
	71 1,2,3-Trichloropropane	75	8.860	8.860	(0.917)	1017	0.50000	0.57(aMH)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	498	0.50000	0.56(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	3768	0.50000	0.57(aM)
	89 1,2-Dibromo-3-Chloropropane	155	10.650	10.650	(1.102)	125	0.50000	0.88(aM)
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	1204	0.50000	0.56(aM)

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112203.D Page 2
Report Date: 18-Dec-2020 11:14

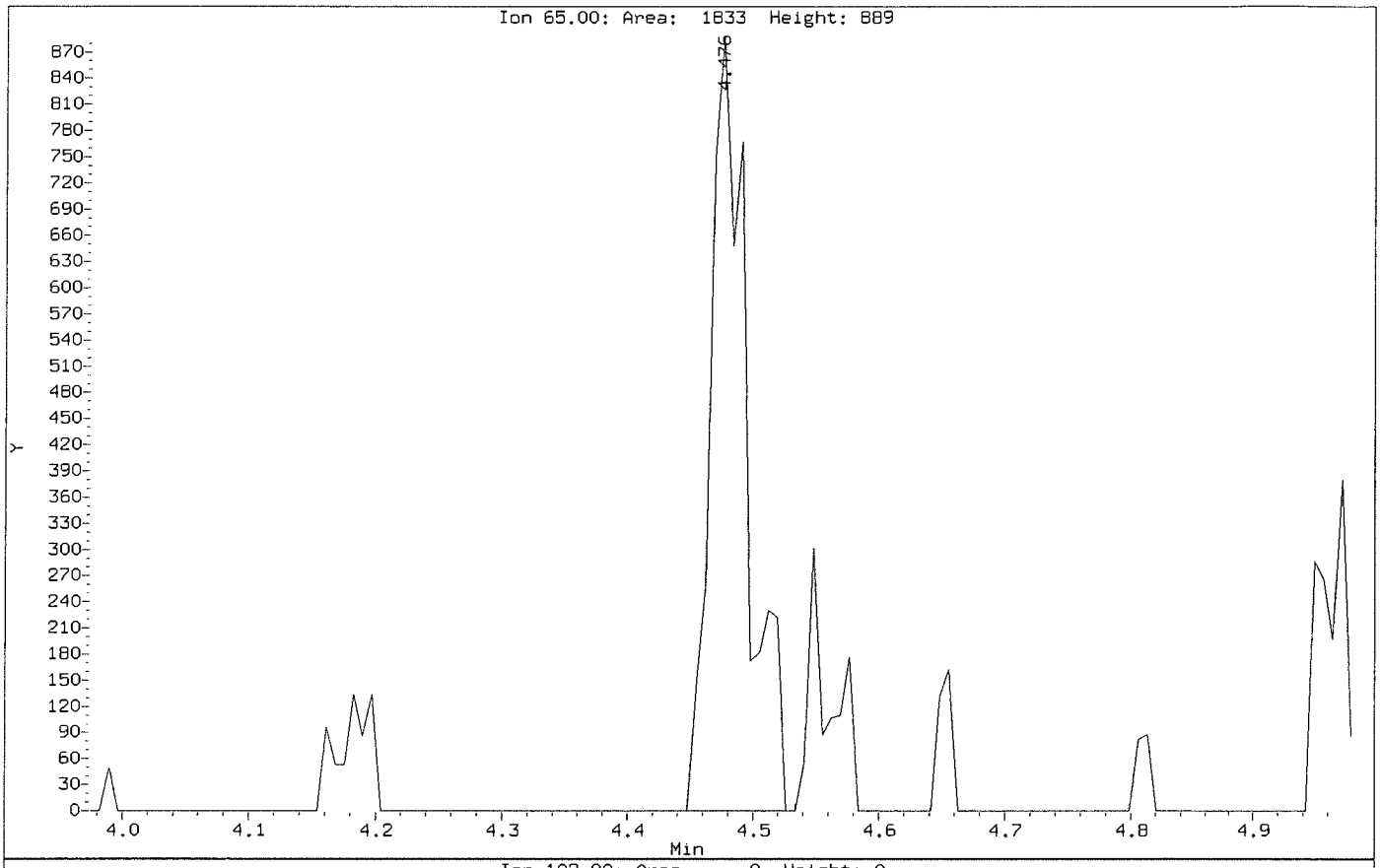
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	1705	0.50000	0.51(aM)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	1584	0.50000	0.48(aM)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	1436	0.50000	0.60(aM)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	4280	0.50000	0.61(aM)
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	1781	0.50000	0.50(aM)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	1866	0.50000	0.54(aM)
84	1,4-Dichlorobenzene	146	9.676	9.676	(1.001)	1819	0.50000	1.09(aM)
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	1787	0.50000	0.53(aM)
24	2-Butanone	43	3.602	3.602	(0.861)	837	1.00000	1.10(aM)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	3593	0.50000	0.63(aM)
52	2-Hexanone	43	7.090	7.090	(0.924)	4116	1.00000	3.73(aM)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	4334	0.50000	0.62(aM)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	5121	0.50000	2.29(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	6158	1.00000	3.75(a)
10	Acetone	43	1.969	1.969	(0.471)	3440	1.00000	0.77(aM)
37	Benzene	78	4.519	4.519	(0.909)	4421	0.50000	0.54(a)
74	Bromobenzene	156	8.802	8.802	(0.911)	1071	0.50000	0.54(aM)
29	Bromochloromethane	128	3.795	3.795	(0.908)	537	0.50000	0.48(aM)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	1933	0.50000	0.61(aM)
66	Bromoform	173	8.408	8.408	(1.096)	838	0.50000	2.73(aM)
6	Bromomethane	94	1.339	1.339	(0.320)	1988	0.50000	1.55(aM)
19	Carbon Disulfide	76	2.076	2.076	(0.497)	6400	1.00000	1.08(aM)
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	1361	0.50000	0.53(aH)
59	Chlorobenzene	112	7.692	7.692	(1.003)	3250	0.50000	0.54(aM)
7	Chloroethane	64	1.410	1.410	(0.337)	1354	0.50000	0.55(aM)
28	Chloroform	83	3.910	3.910	(0.935)	2388	0.50000	0.57(a)
3	Chloromethane	50	1.081	1.081	(0.258)	1501	0.50000	0.51(aM)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	1231	0.50000	0.53(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	2270	0.50000	0.60(aM)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	958	0.50000	0.44(aM)
44	Dibromomethane	93	5.565	5.565	(1.120)	876	0.50000	0.56(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	1188	0.50000	3.03(aM)
61	Ethylbenzene	106	7.800	7.800	(1.017)	1683	0.50000	0.55(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	275	0.50000	1.96(aM)
67	Isopropylbenzene	105	8.559	8.559	(1.116)	5260	0.50000	0.57(aM)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	2934	1.00000	7.55(M)
17	Methylene Chloride	84	2.298	2.298	(0.550)	1337	0.50000	0.61(a)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	4479	0.50000	3.65(aM)
73	n-Propylbenzene	91	8.910	8.910	(0.922)	5424	0.50000	0.55(aM)
92	Naphthalene	128	11.539	11.539	(1.194)	738	0.50000	1.63(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	2162	0.50000	3.38(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	4853	0.50000	1.12(aM)
64	Styrene	104	8.265	8.265	(1.078)	3686	0.50000	0.56(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	2936	0.50000	0.54(aM)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	1028	0.50000	0.59(a)
50	Toluene	91	6.446	6.446	(0.840)	4384	0.50000	0.48(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	954	0.50000	0.49(aM)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	1803	0.50000	0.55(aM)
38	Trichloroethene	130	5.214	5.214	(1.049)	1126	0.50000	0.54(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	3409	0.50000	0.57(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	1927	0.50000	0.50(a)

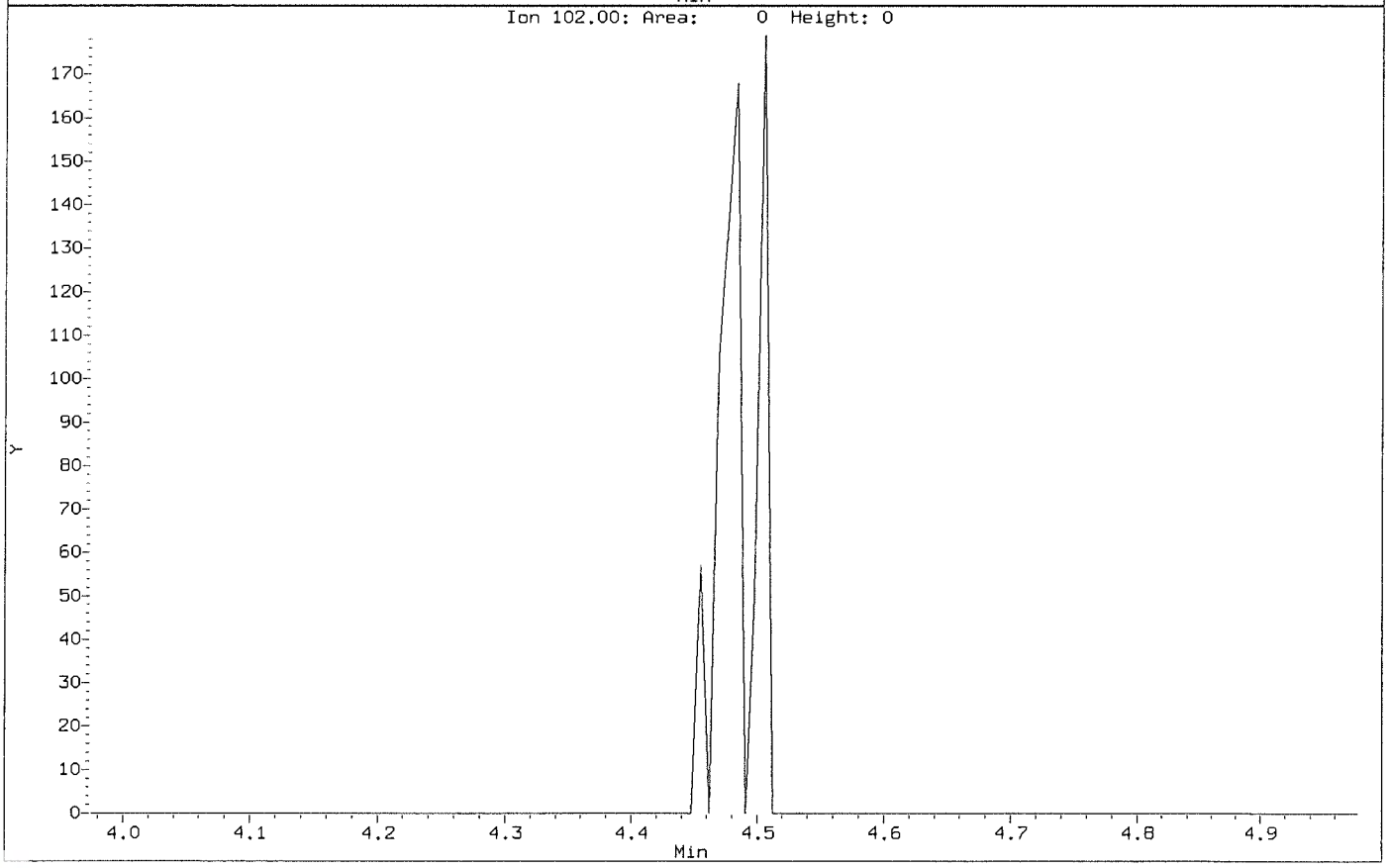
QC Flag Legend

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

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

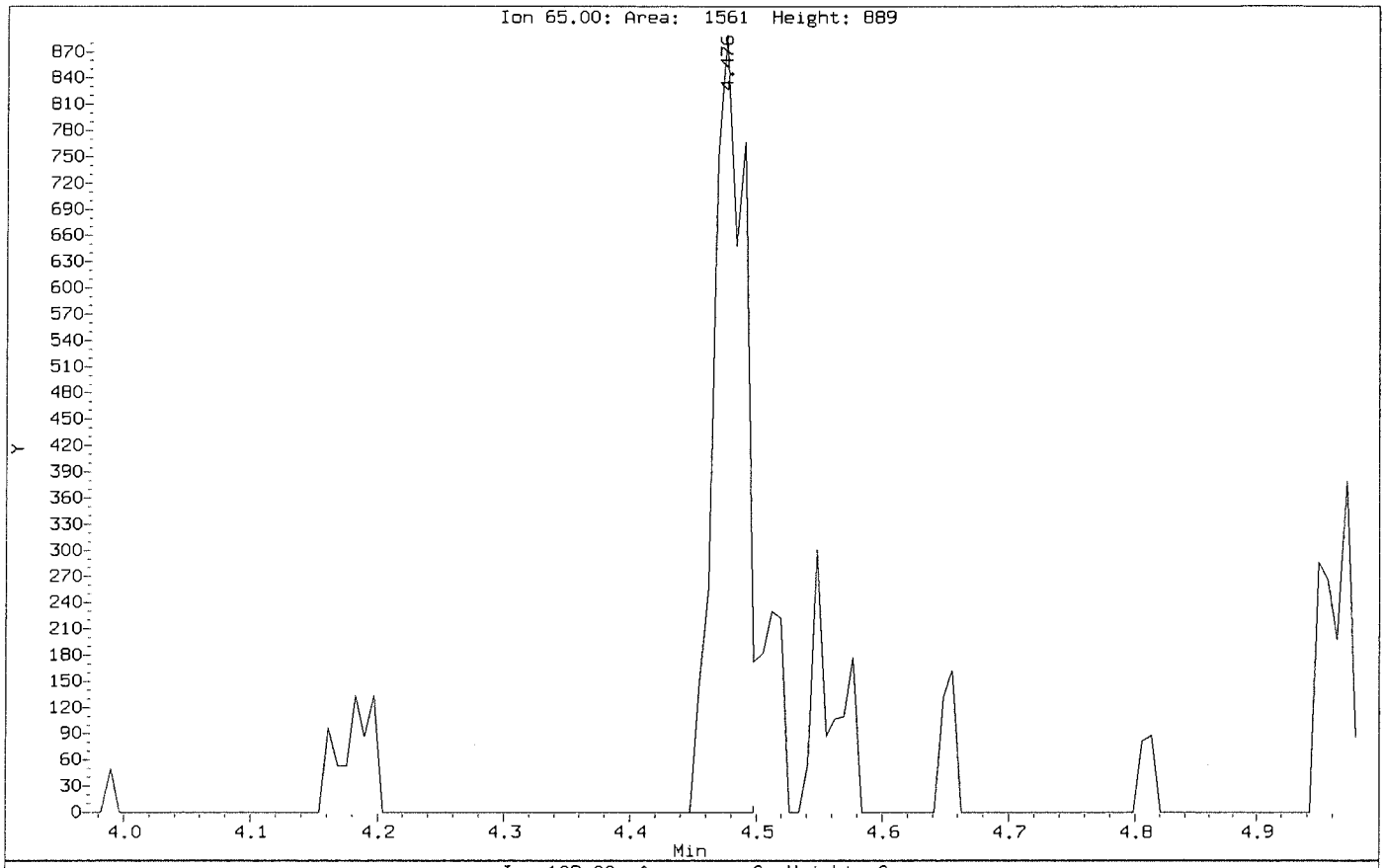
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CAS Number: 17060-07-0

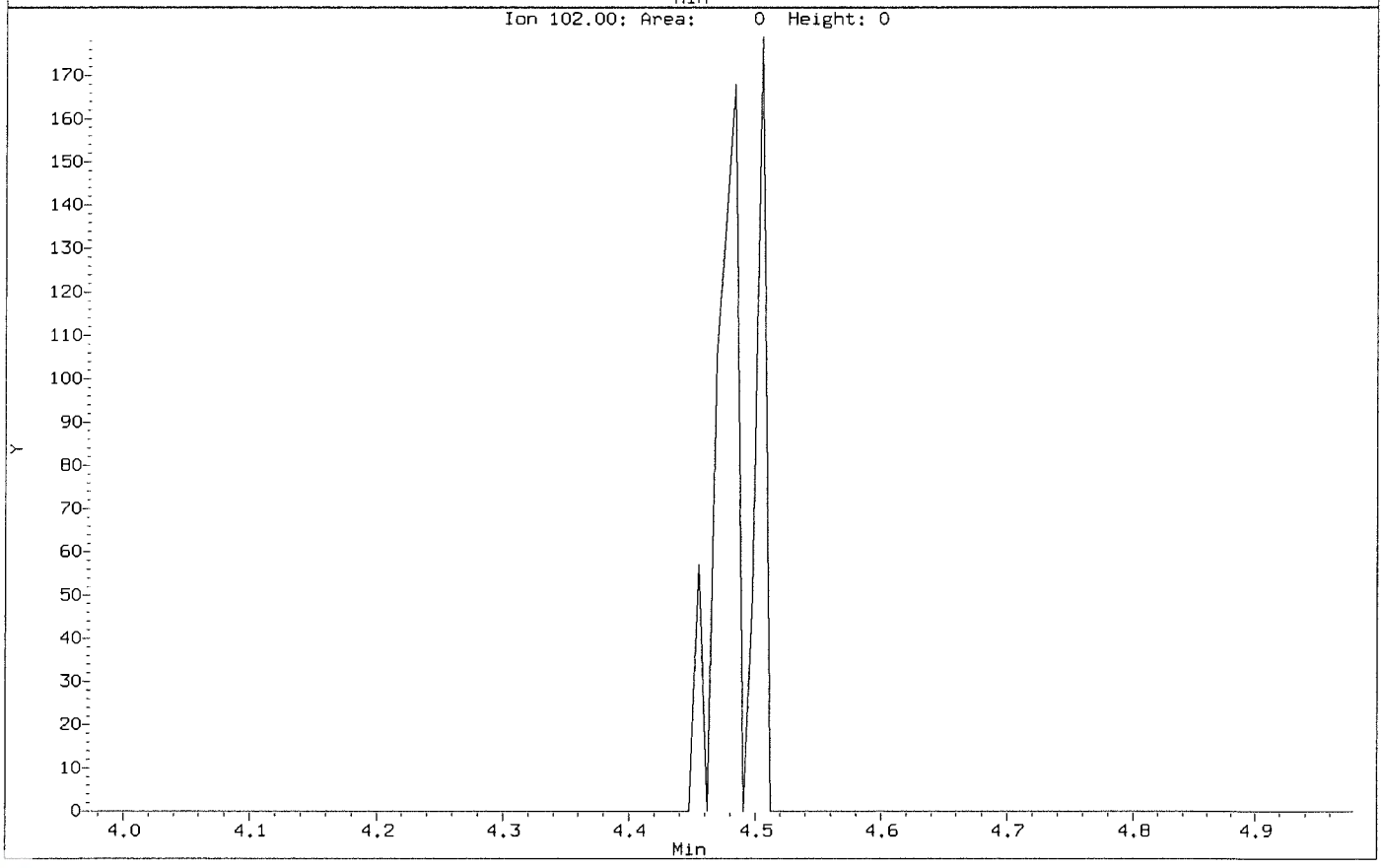




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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

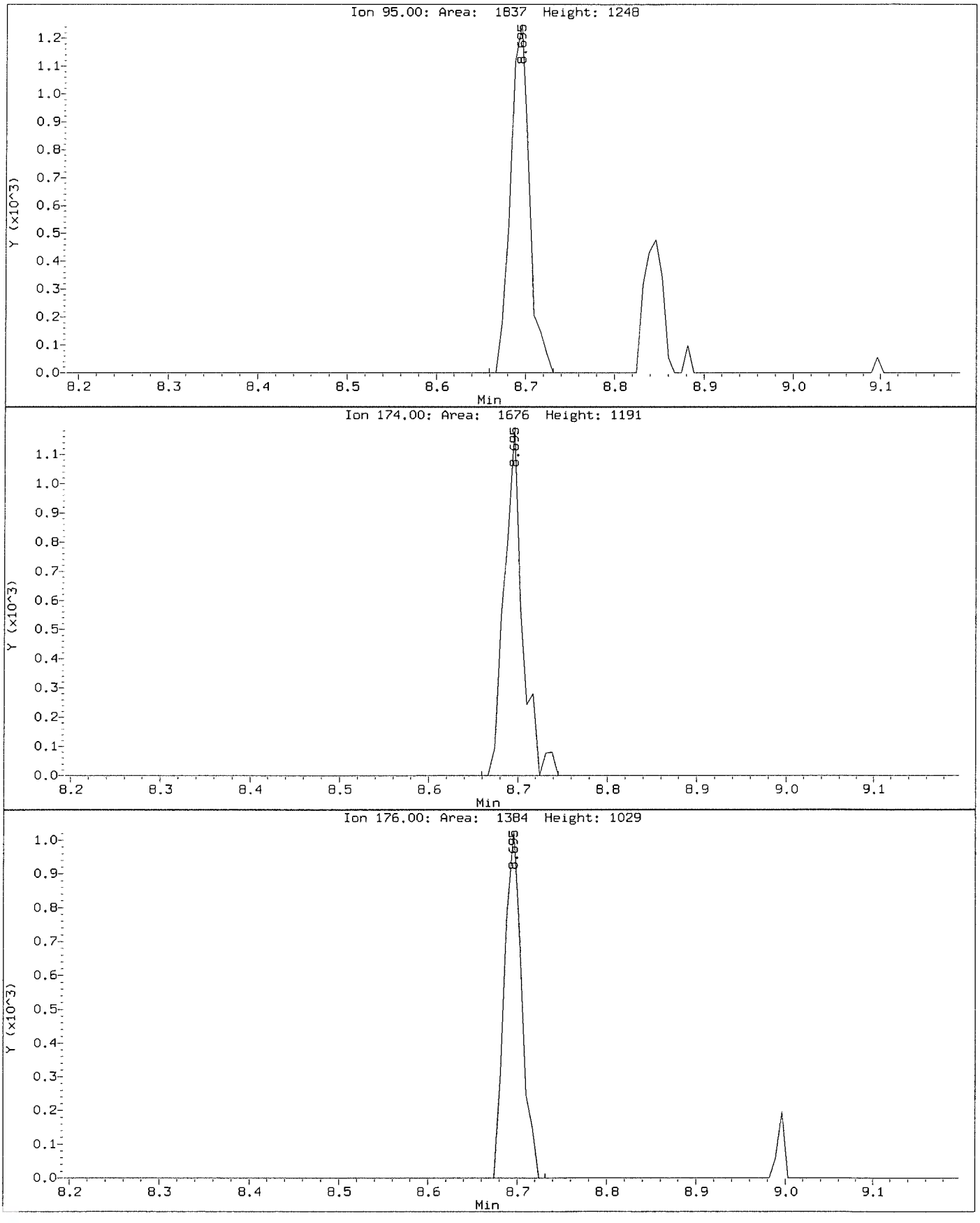
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0





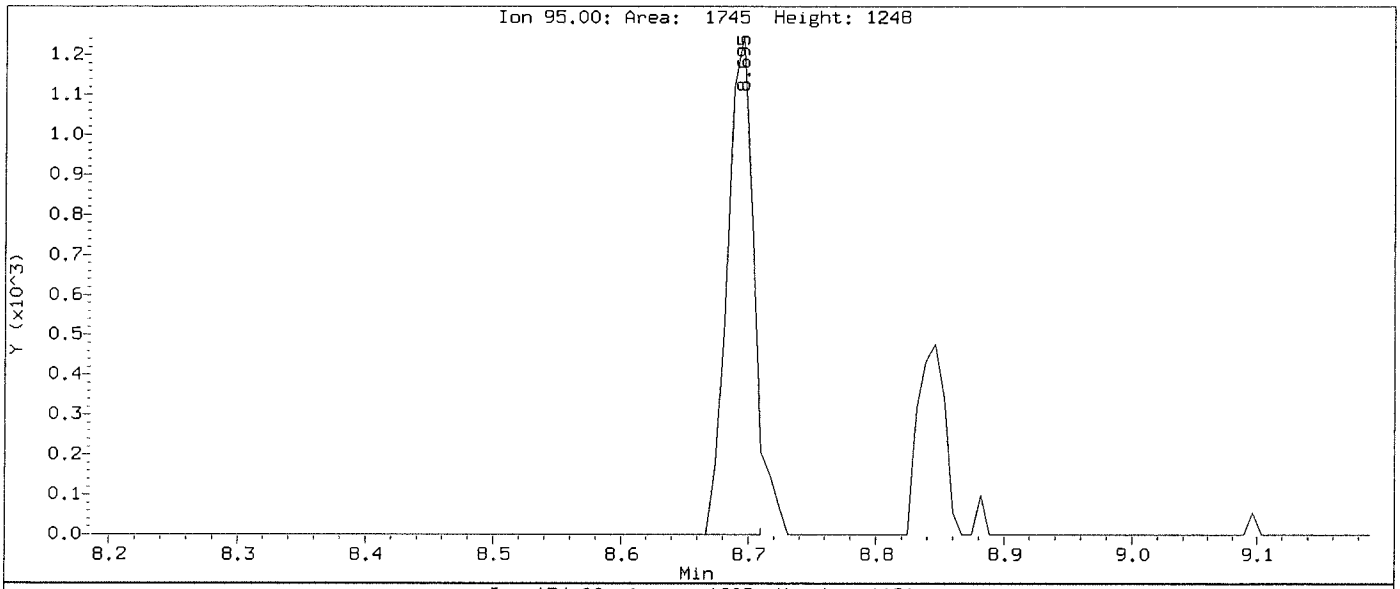
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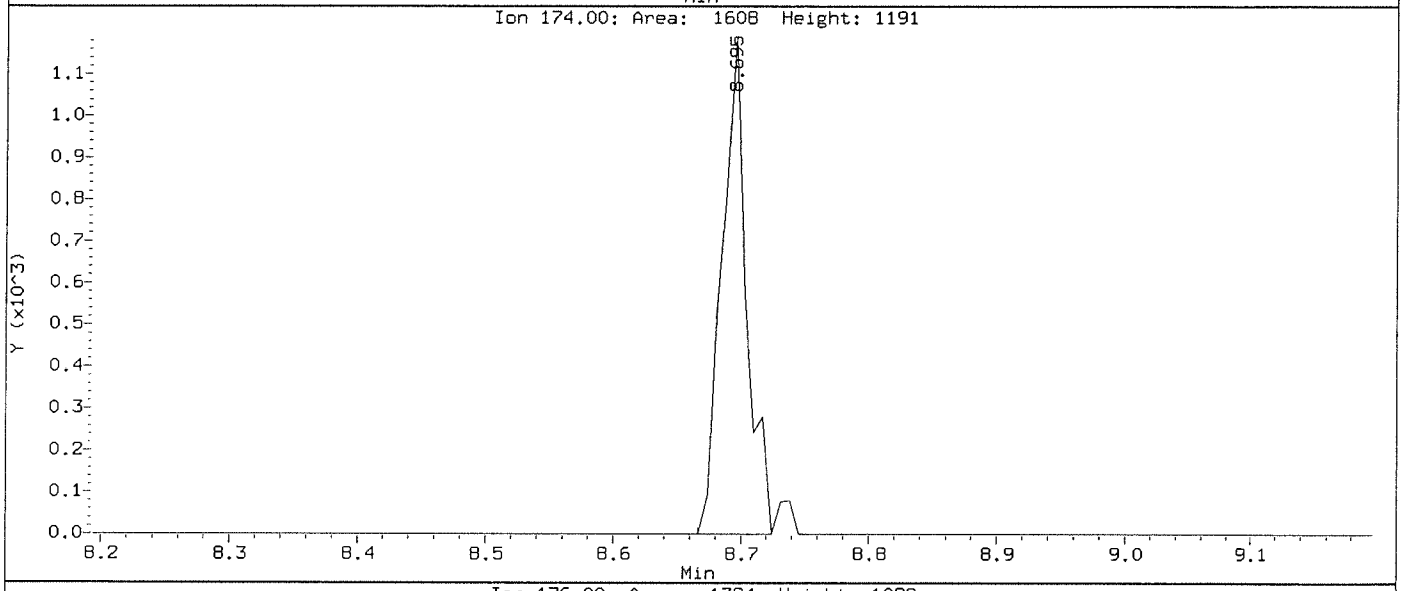
Compound: 4-Bromofluorobenzene
CAS Number: 460-00-4

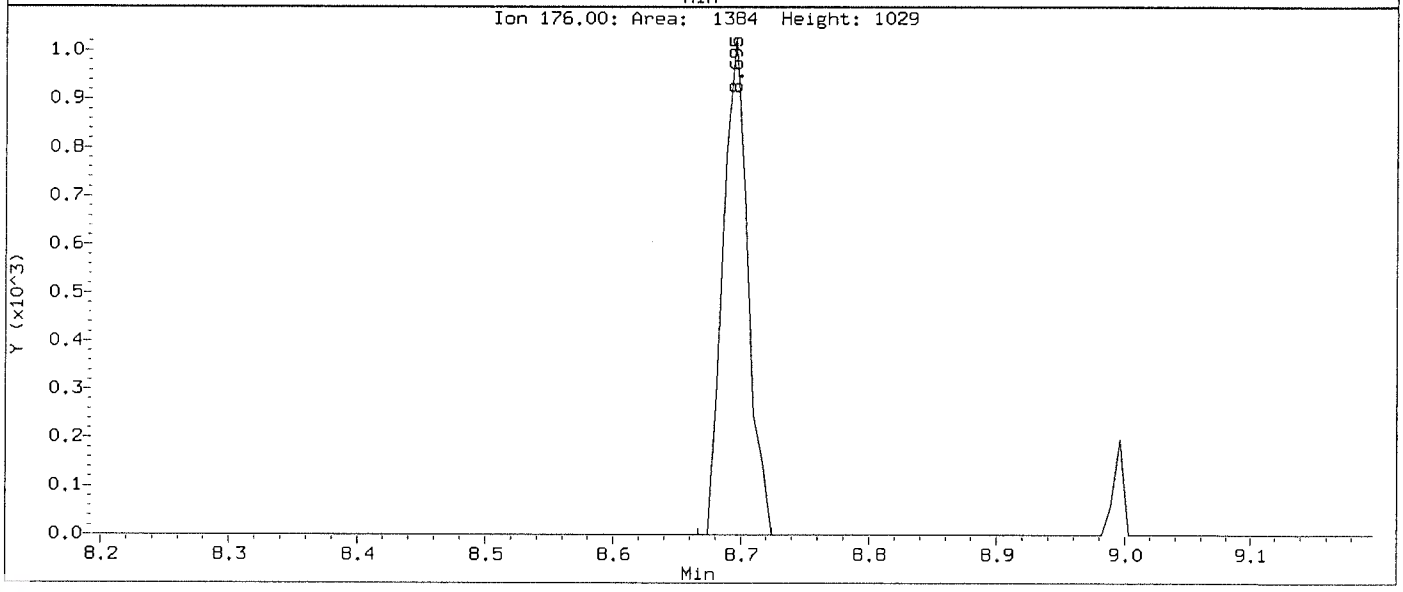


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Instrument: voa6.i
Client Sample ID: VSTD000.5

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

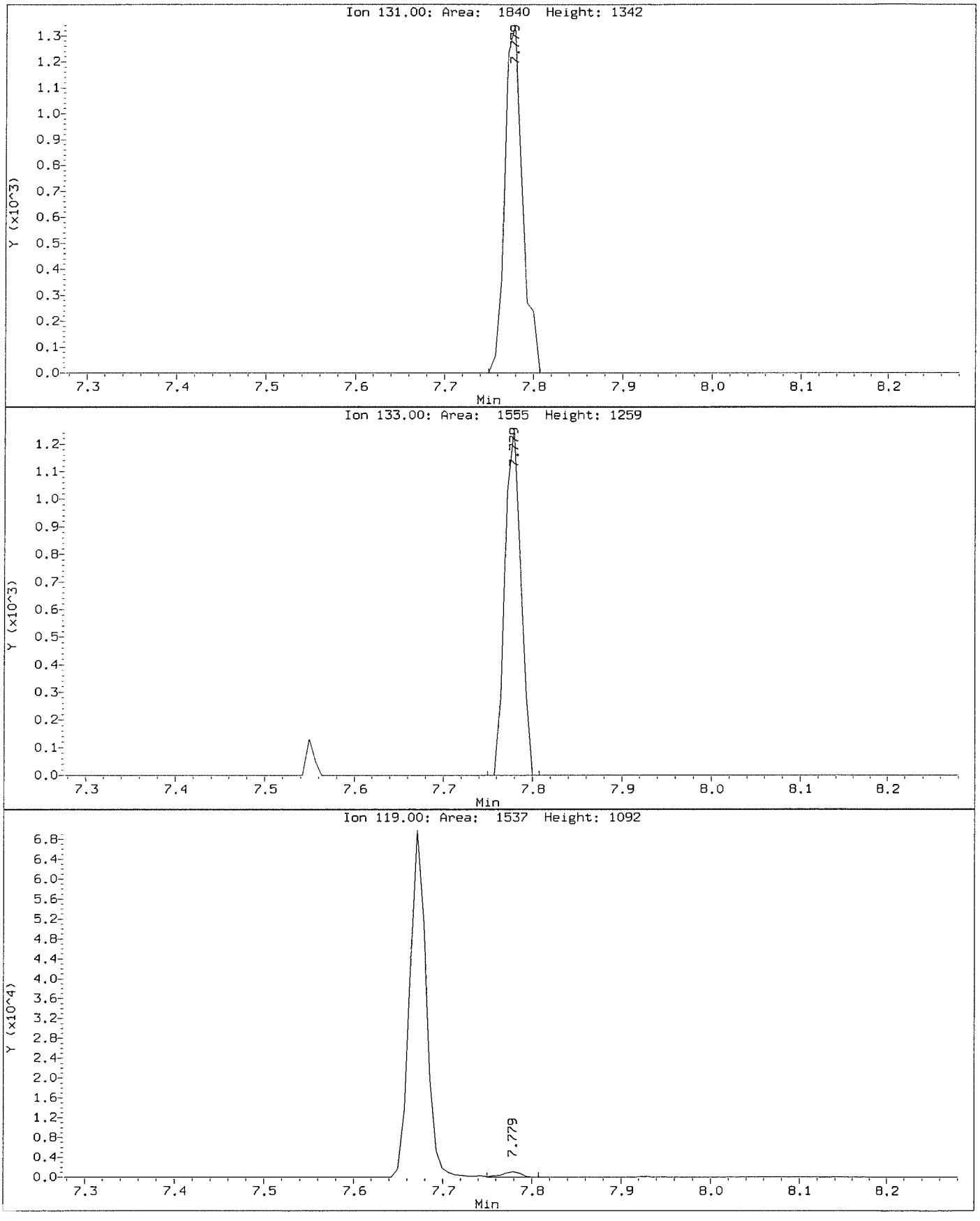






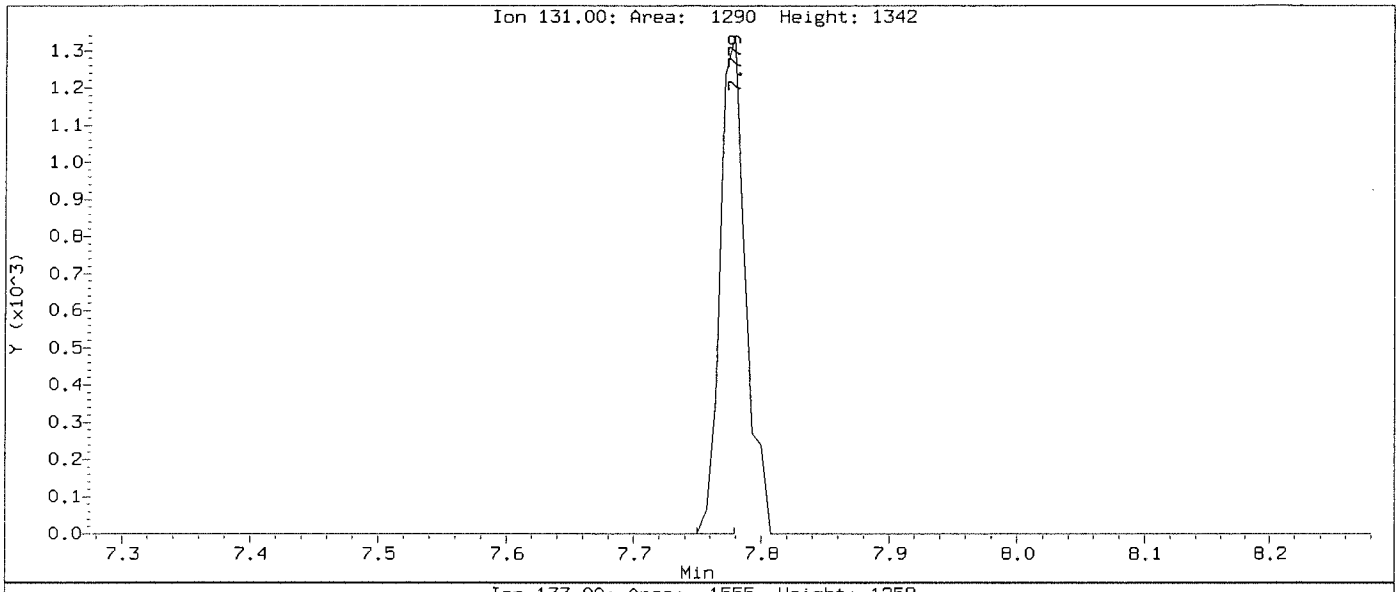
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Client Sample ID: VSTD000.5

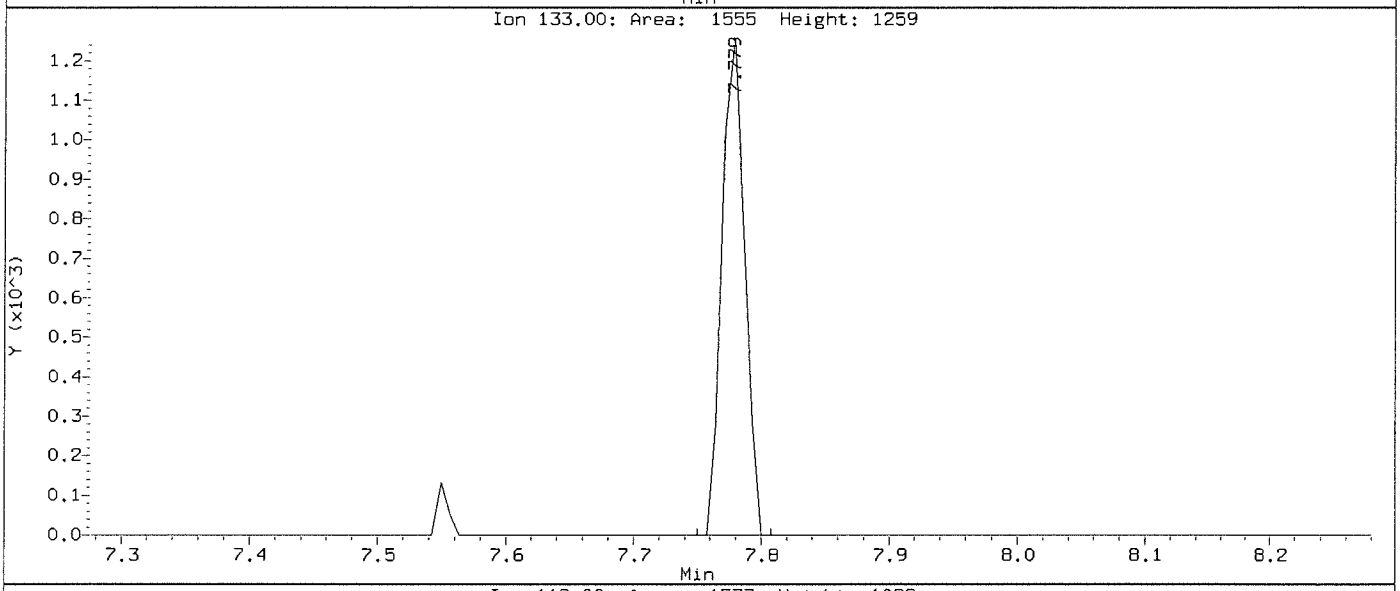
Compound: 1,1,1,2-Tetrachloroethane
CAS Number: 630-20-6

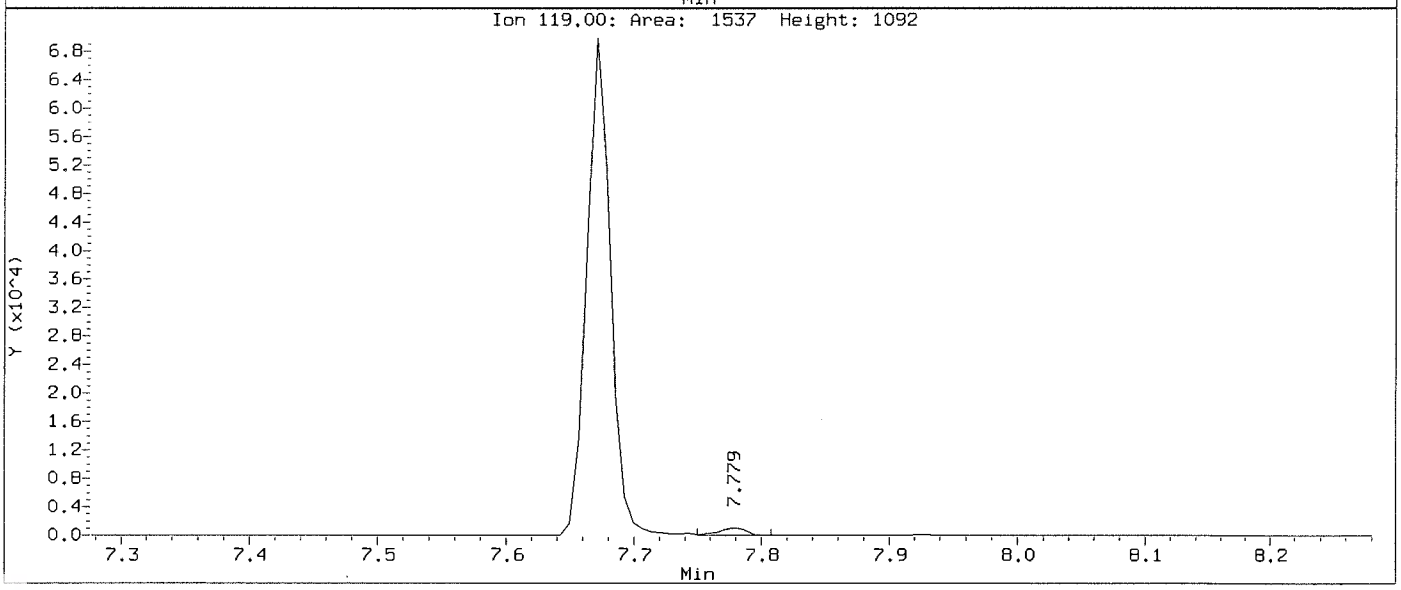


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,1,2-Tetrachloroethane
CAS Number: 630-20-6

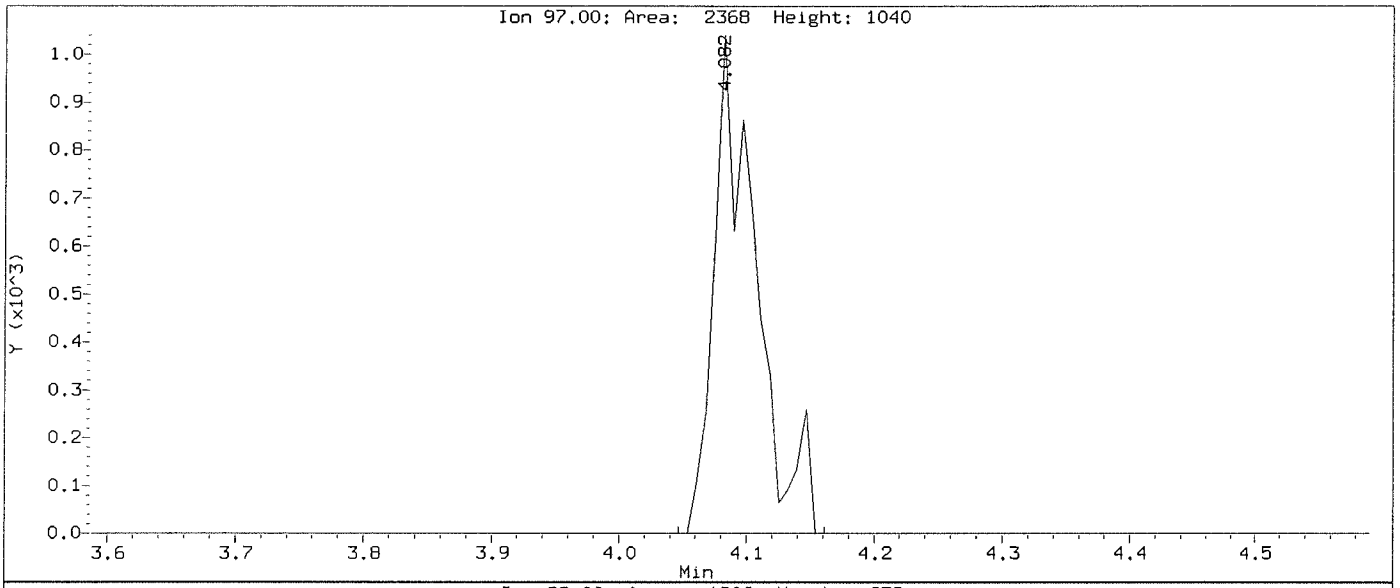


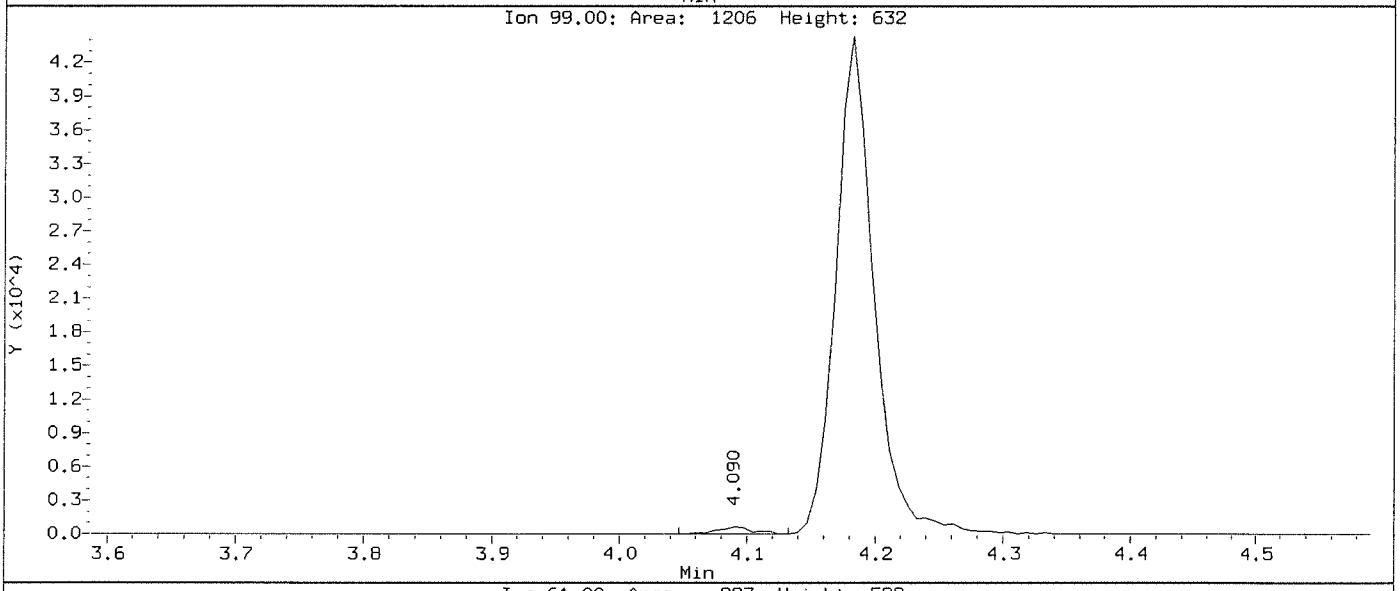


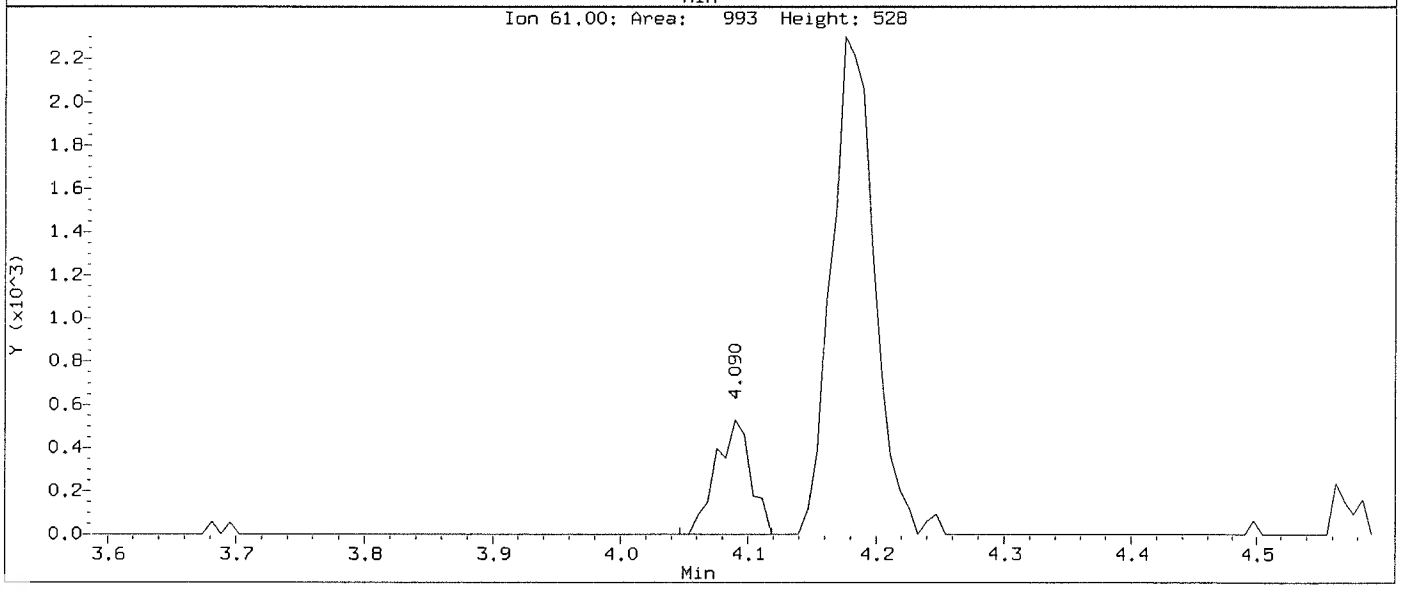


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6

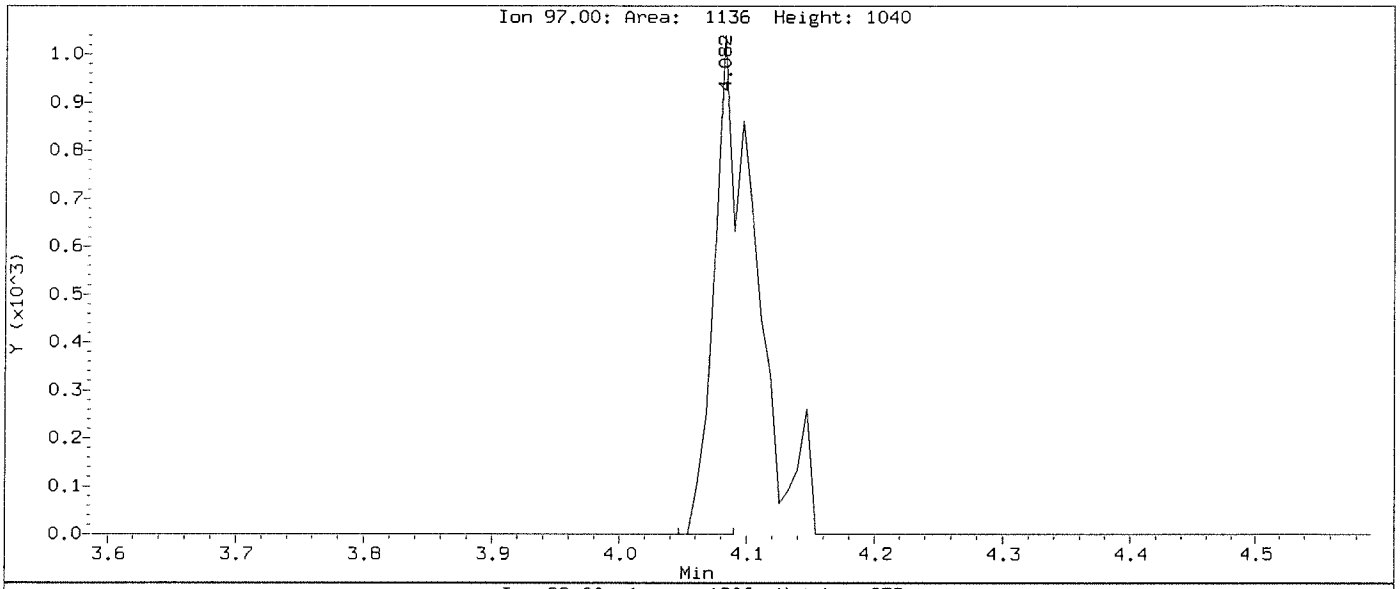


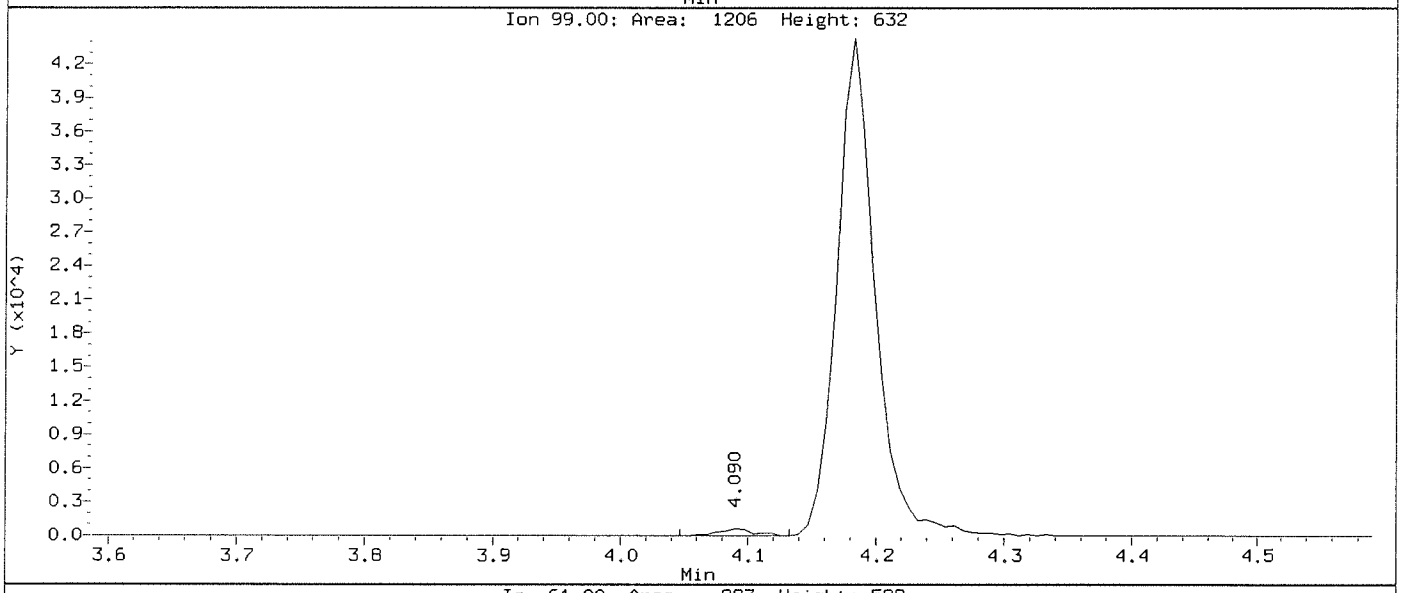


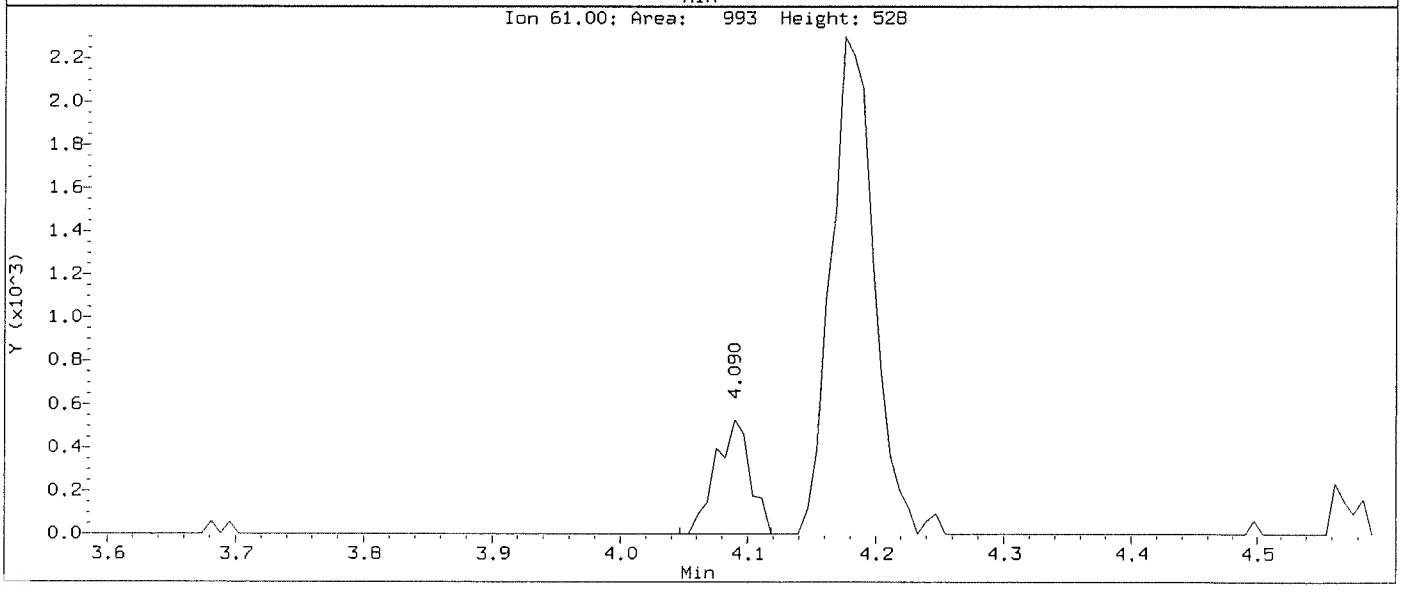


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6

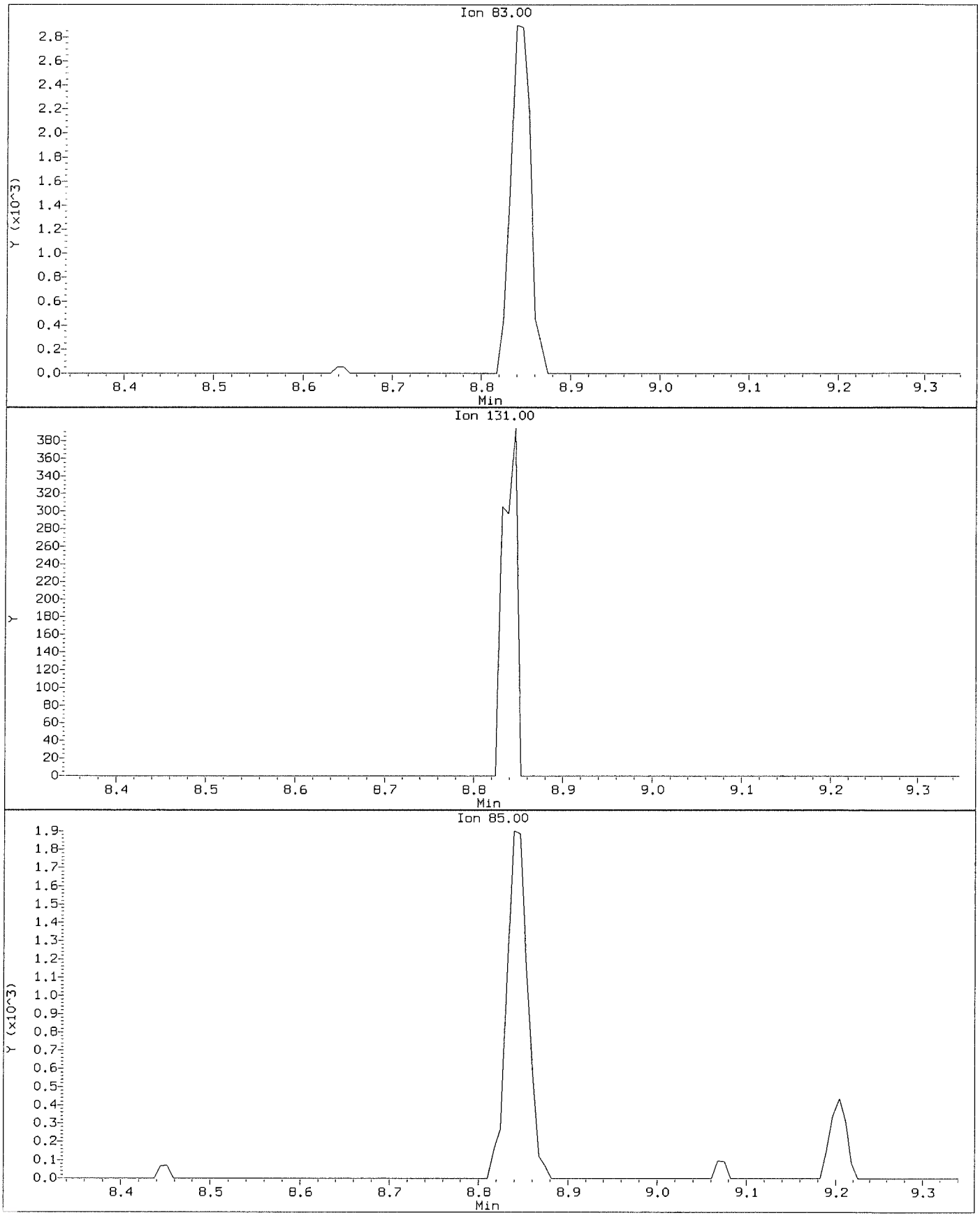






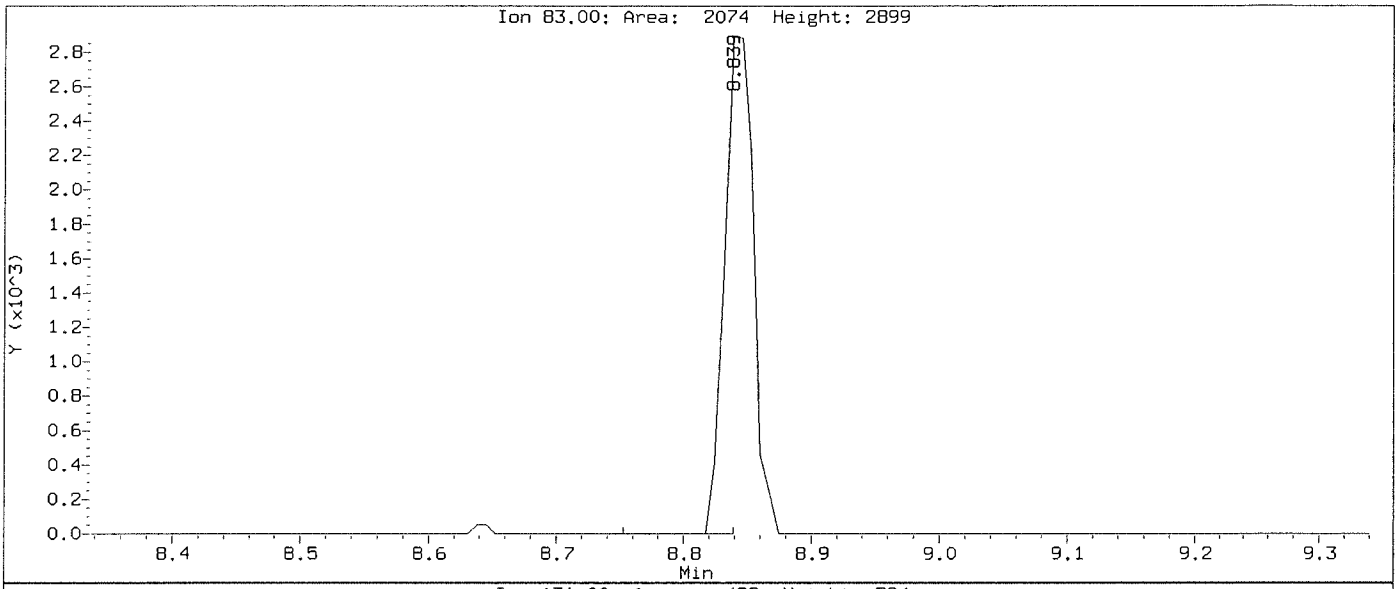
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Client Sample ID: VSTD000.5

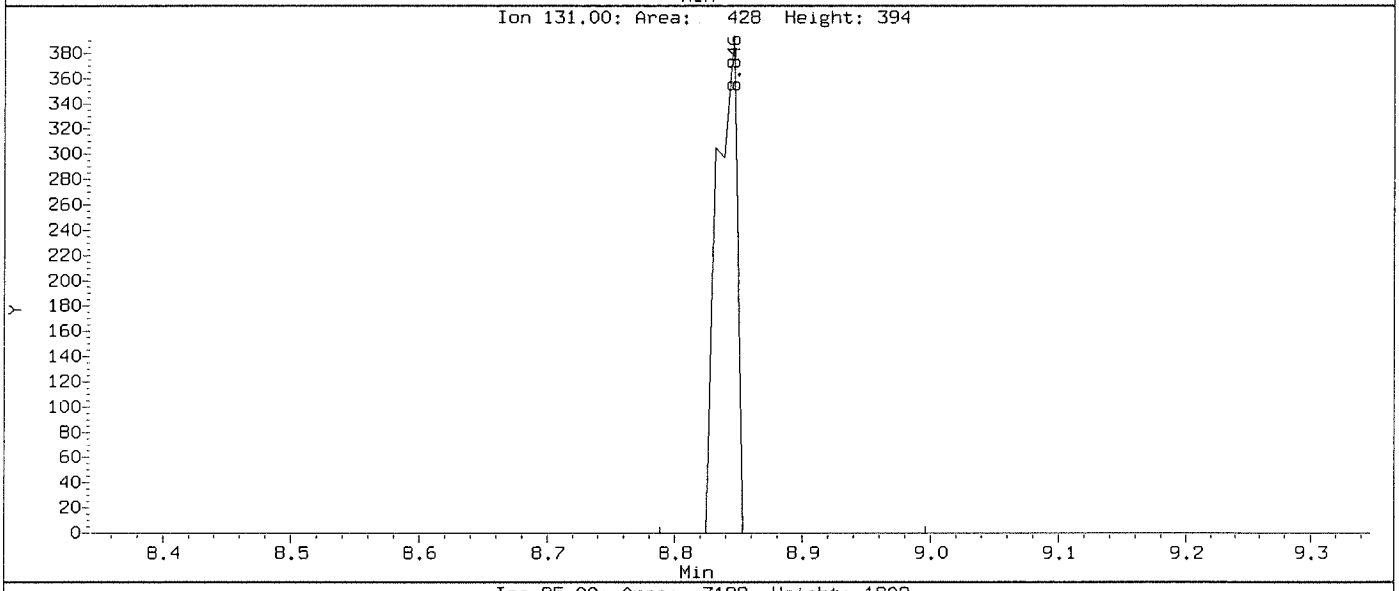
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

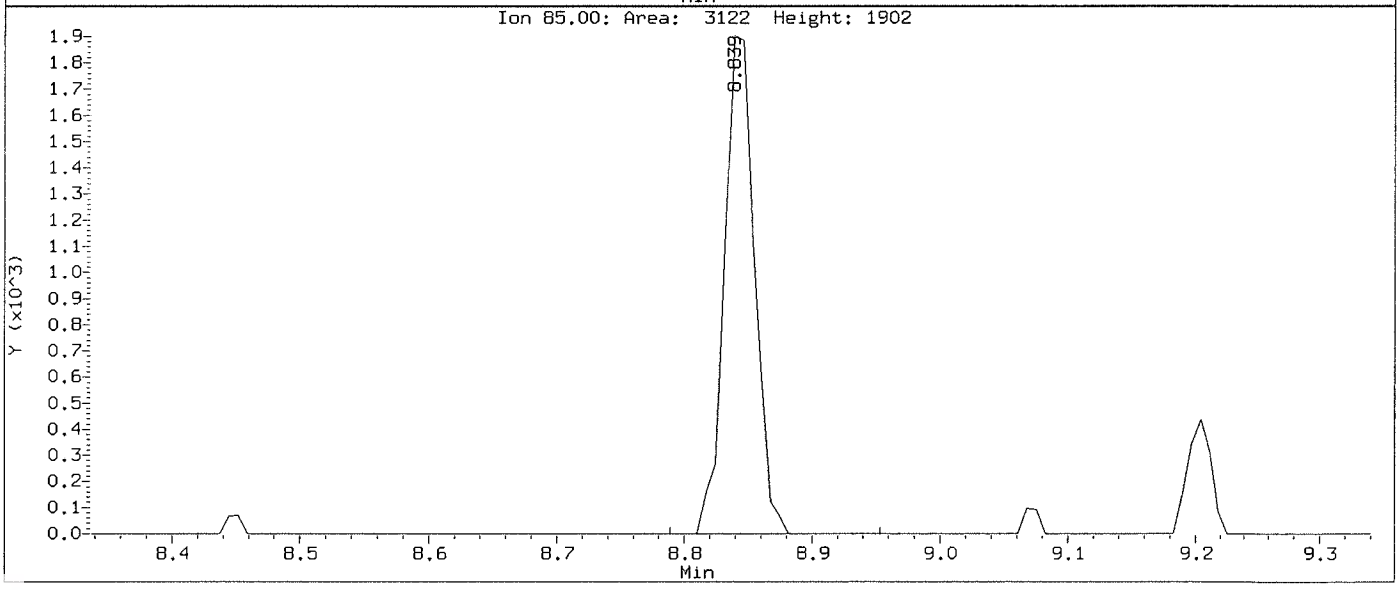


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

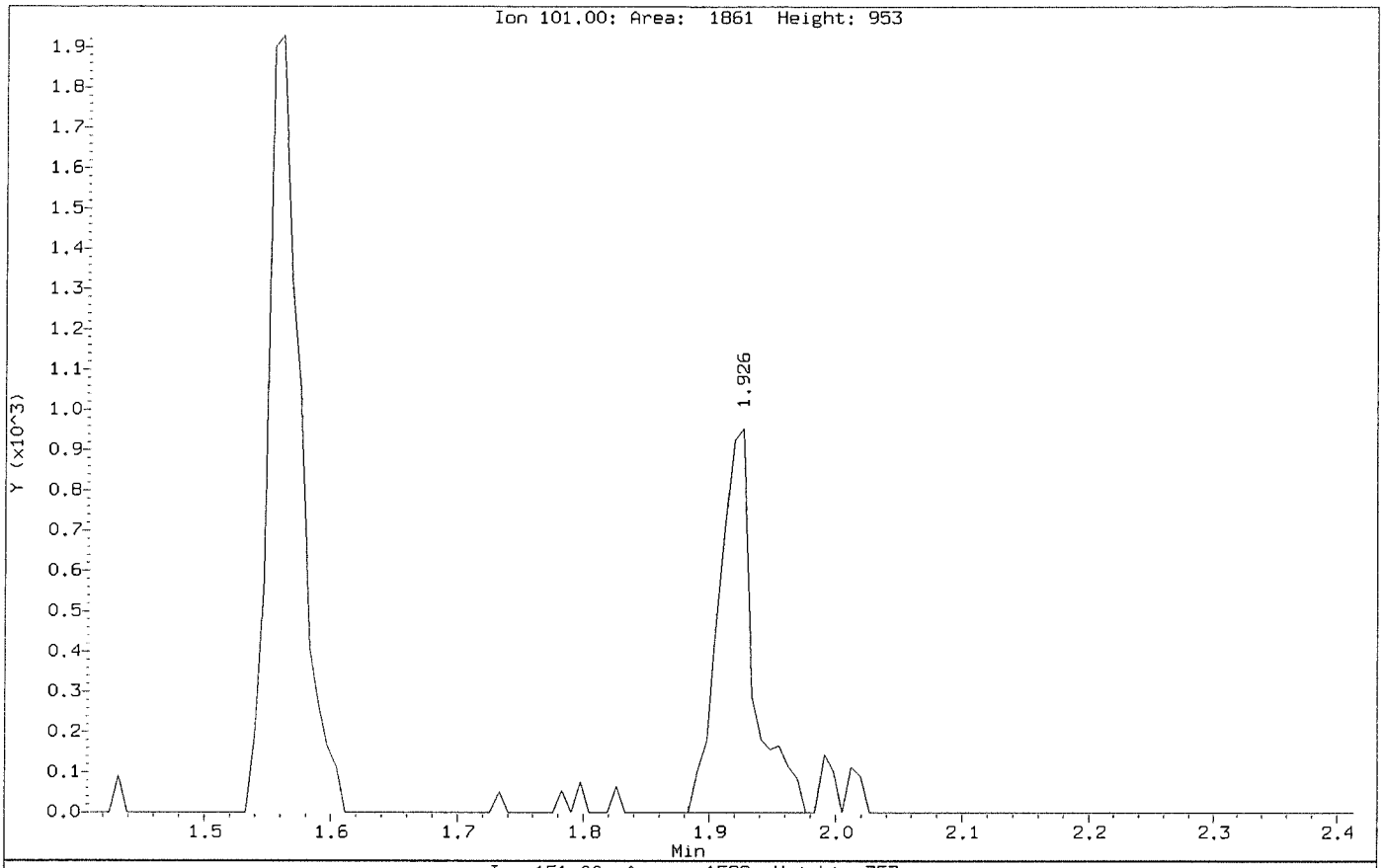


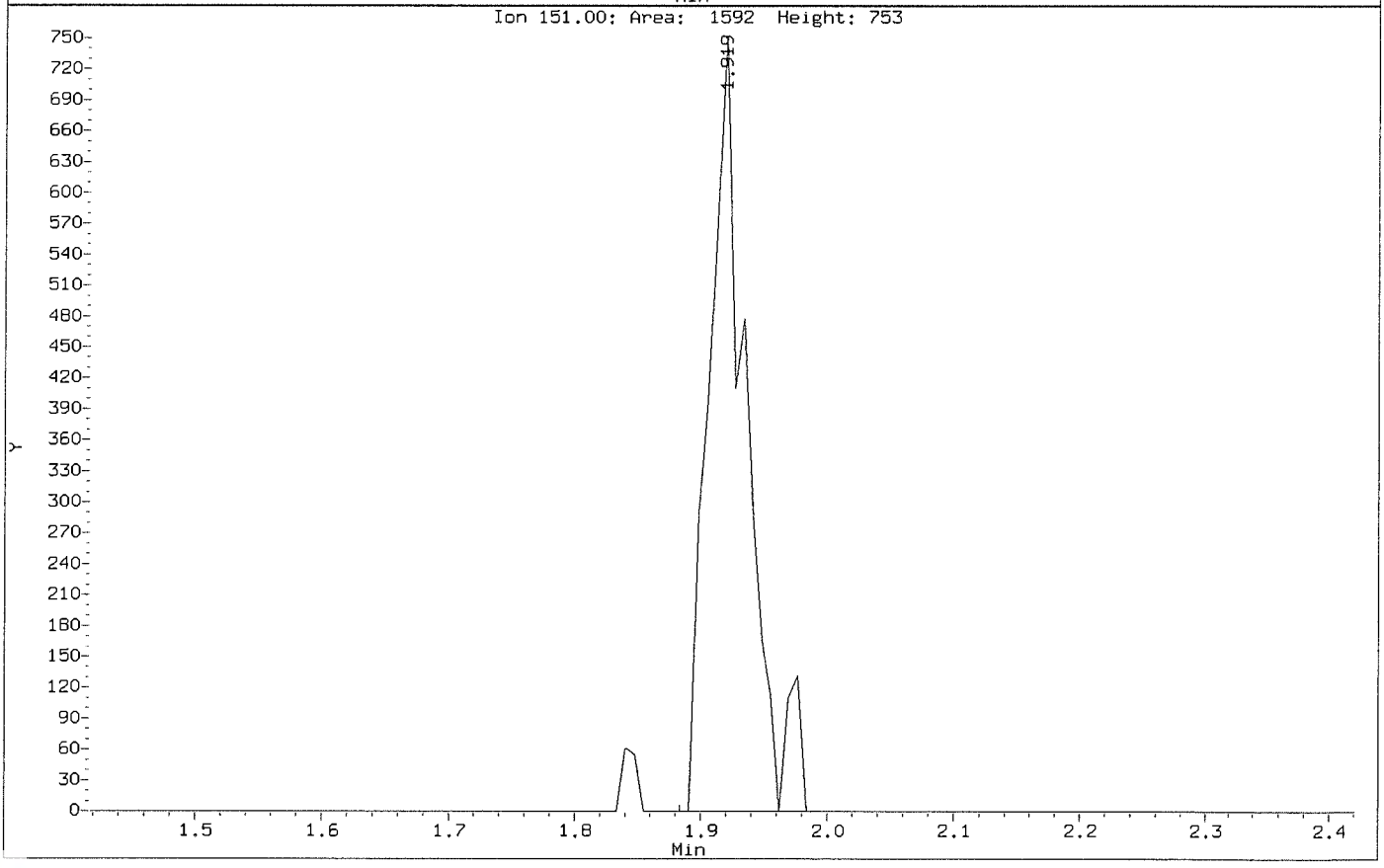




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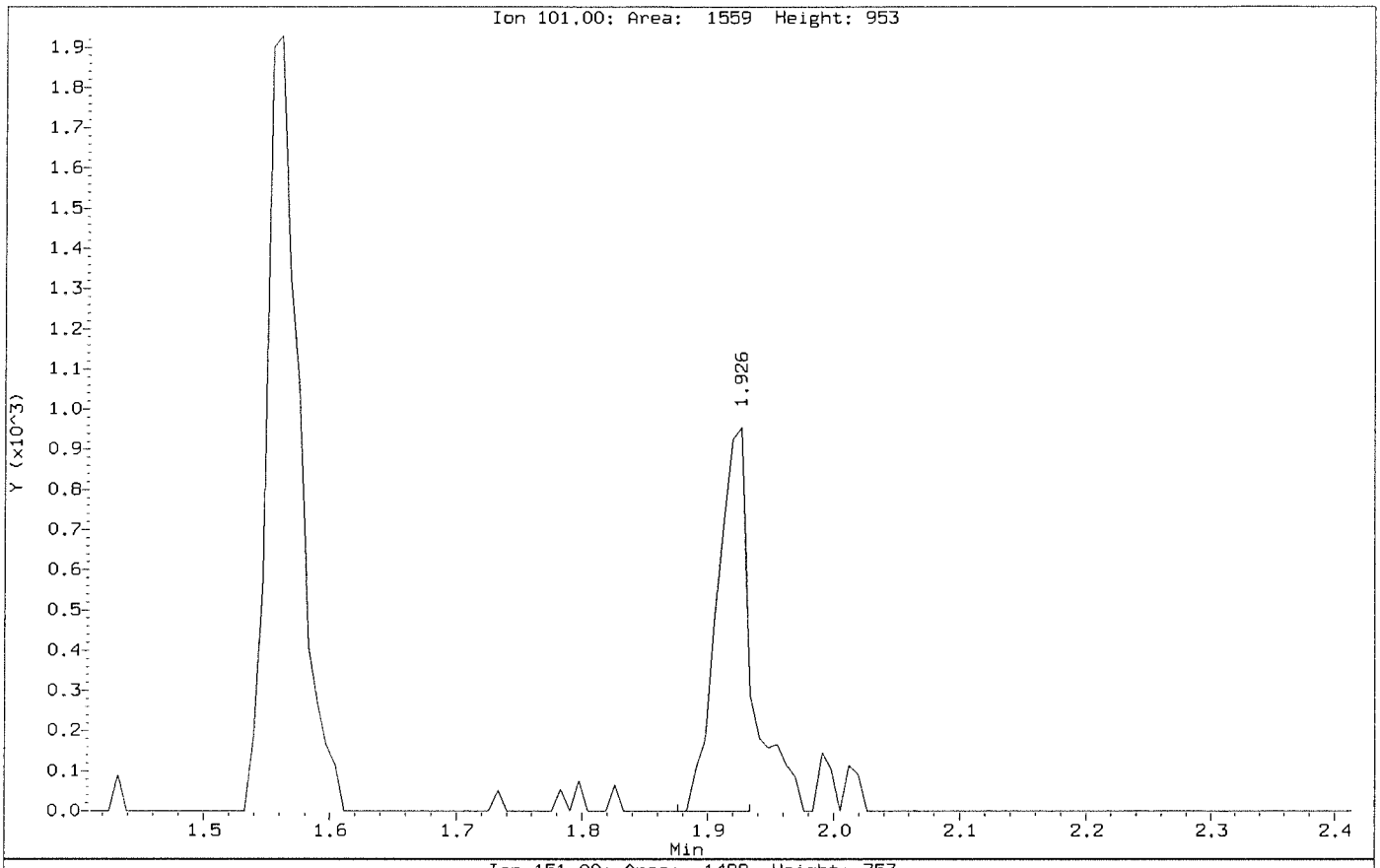
Compound: Freon TF
CAS Number: 76-13-1

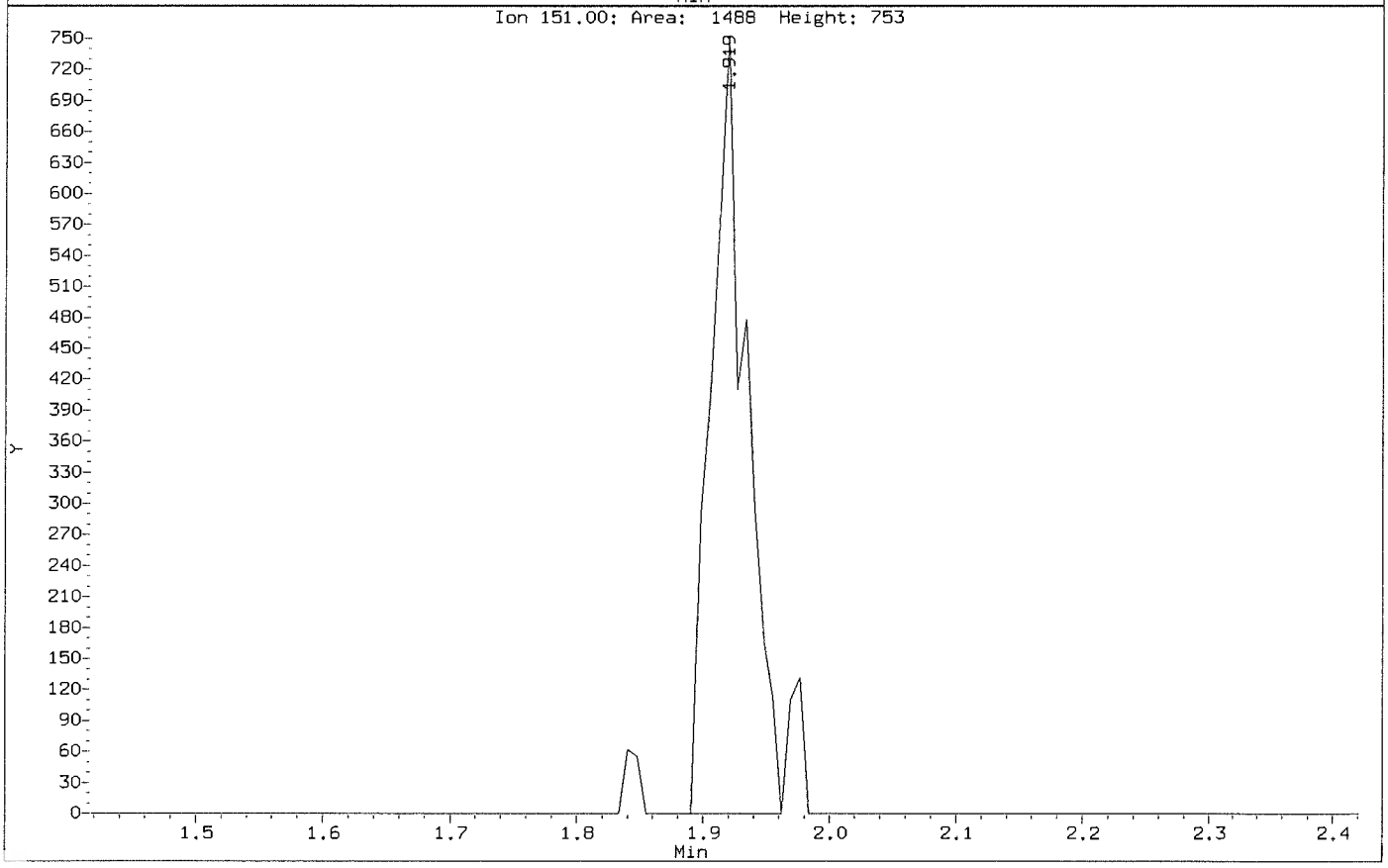




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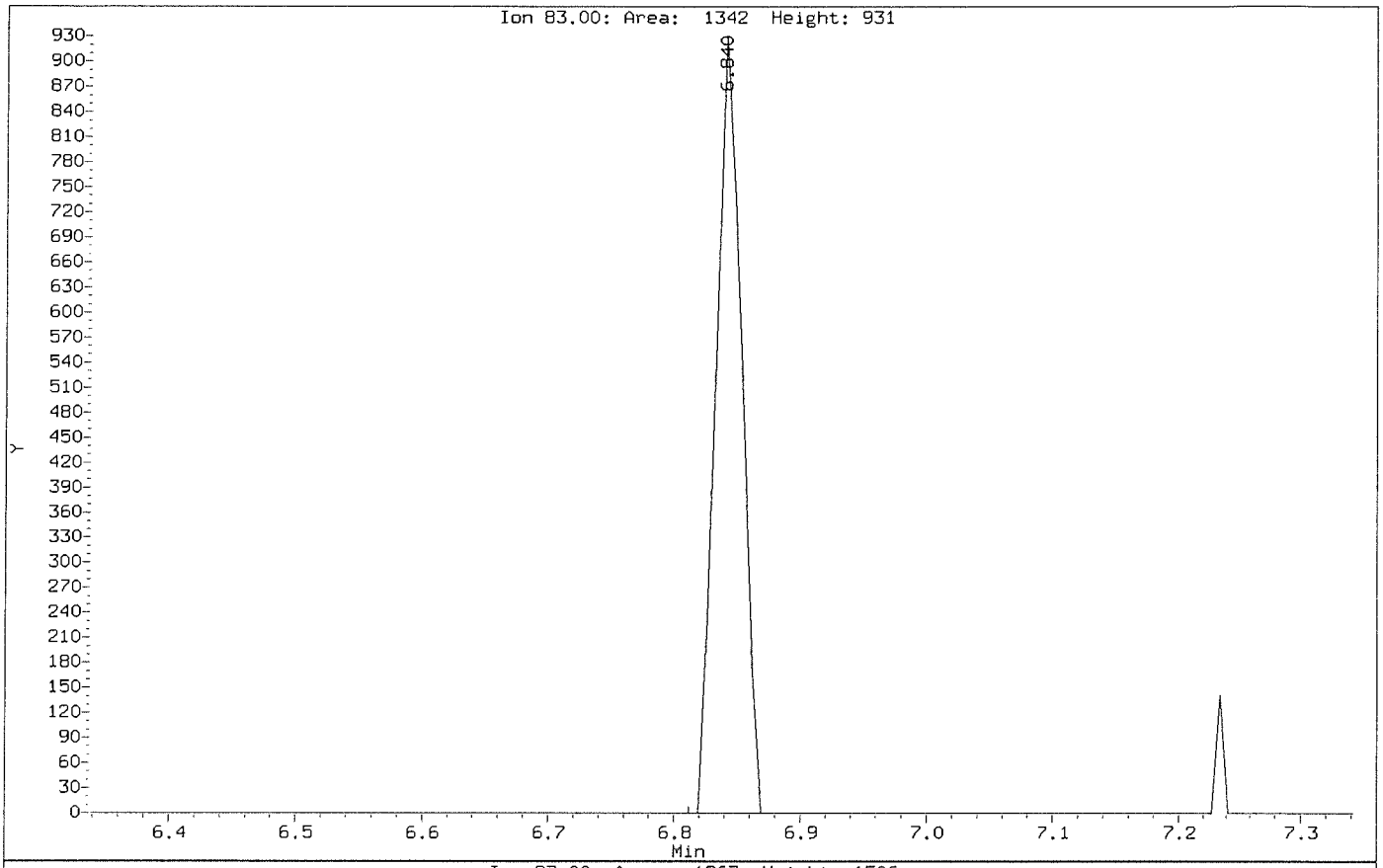
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CAS Number: 76-13-1

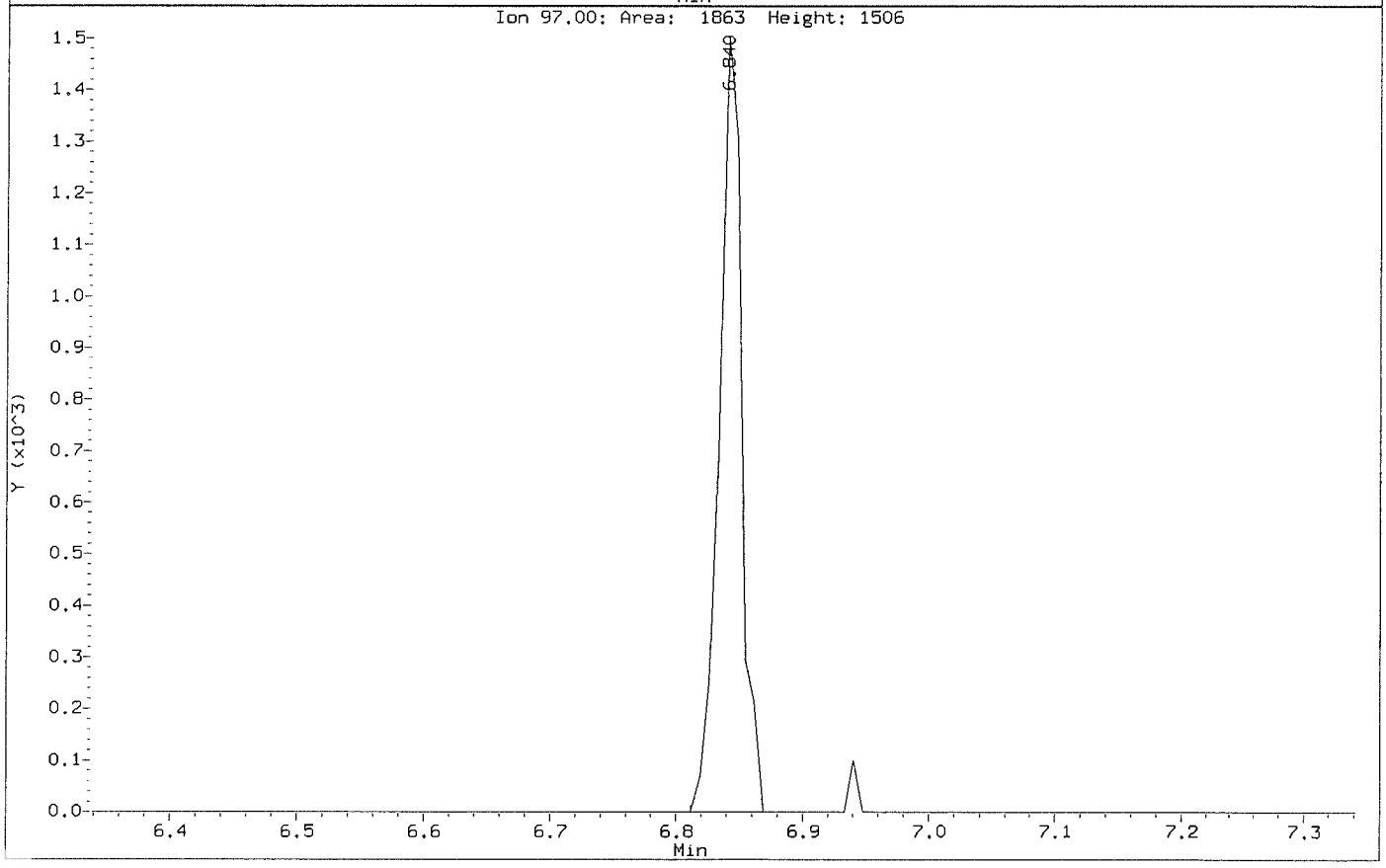




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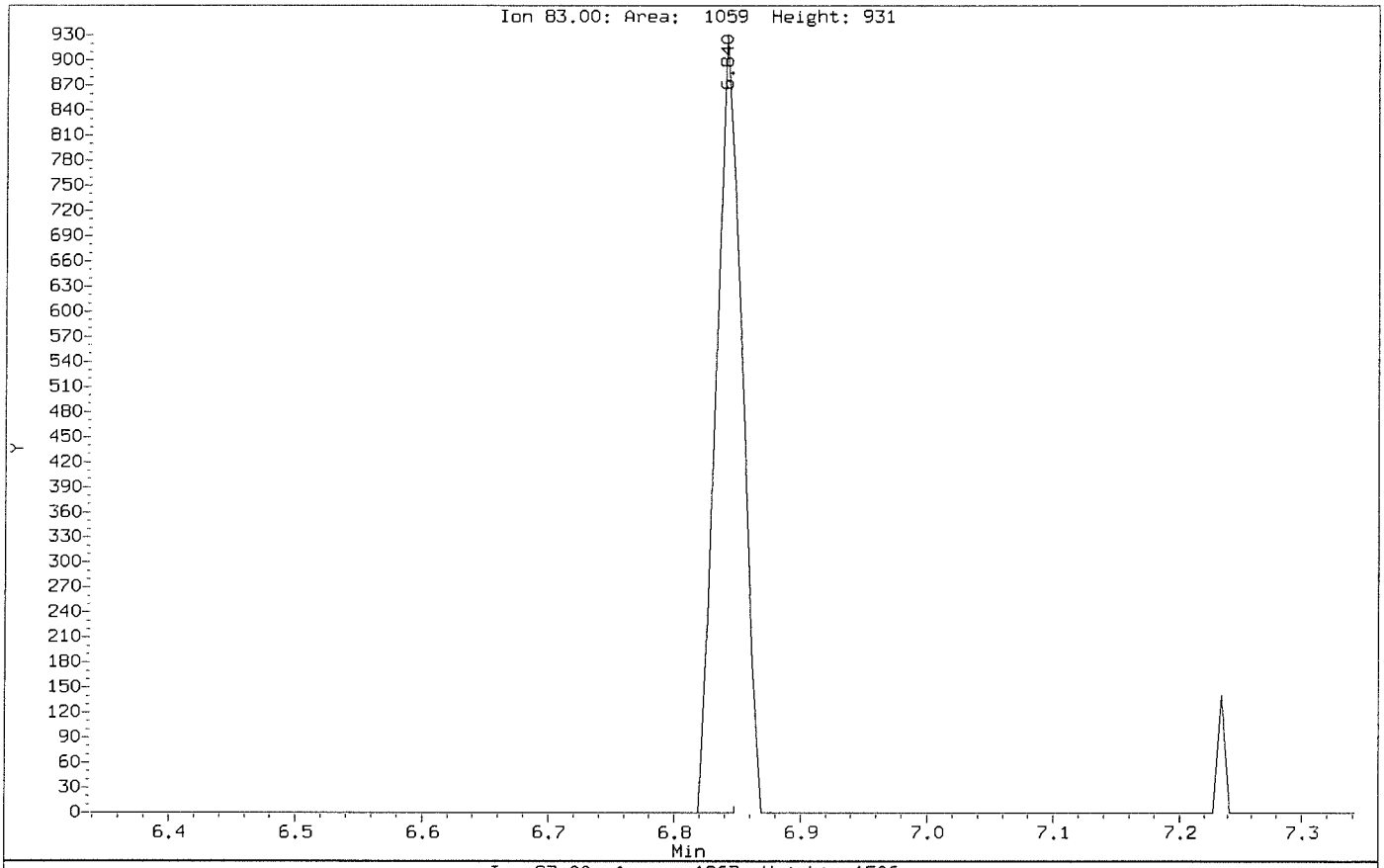
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5

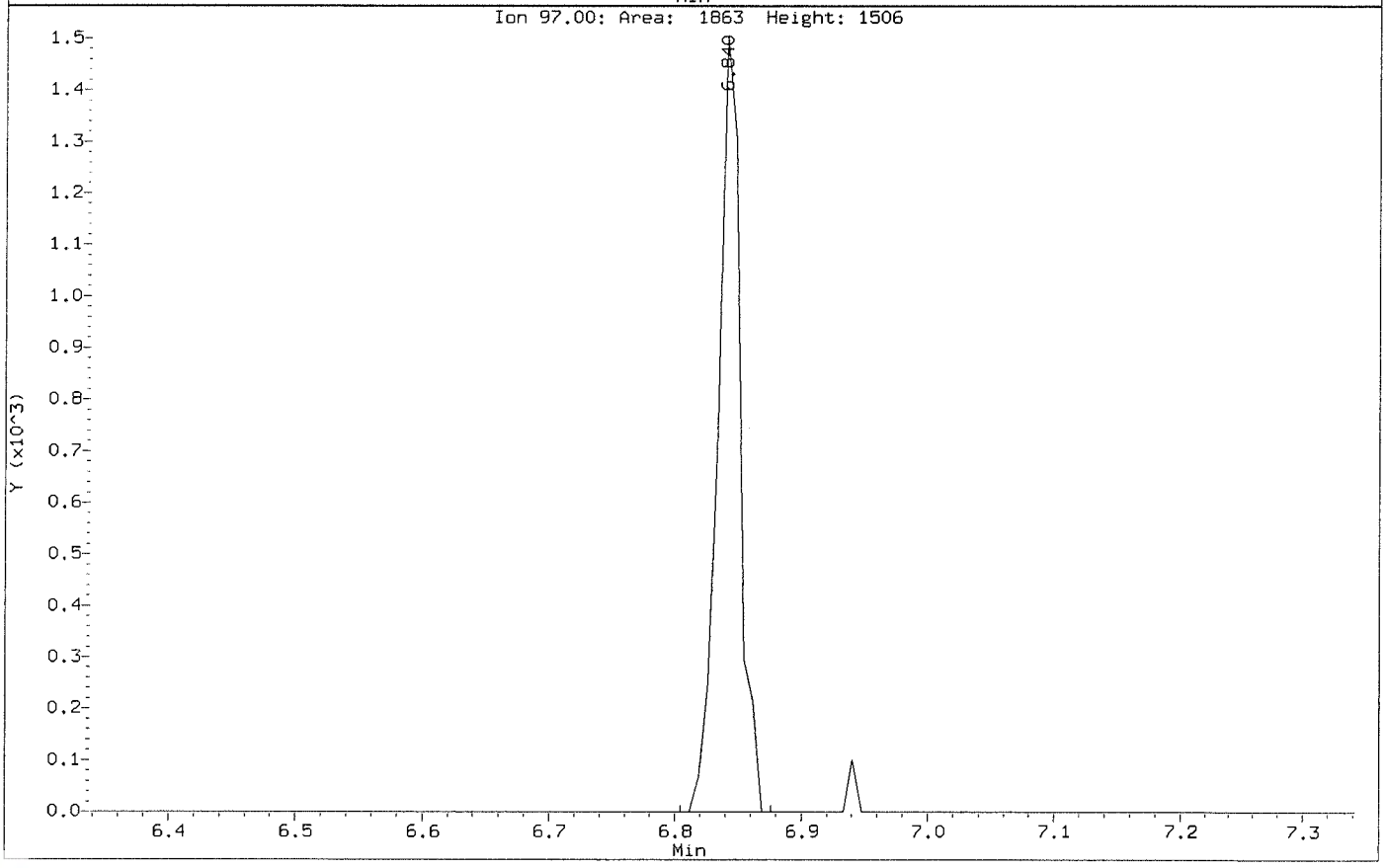




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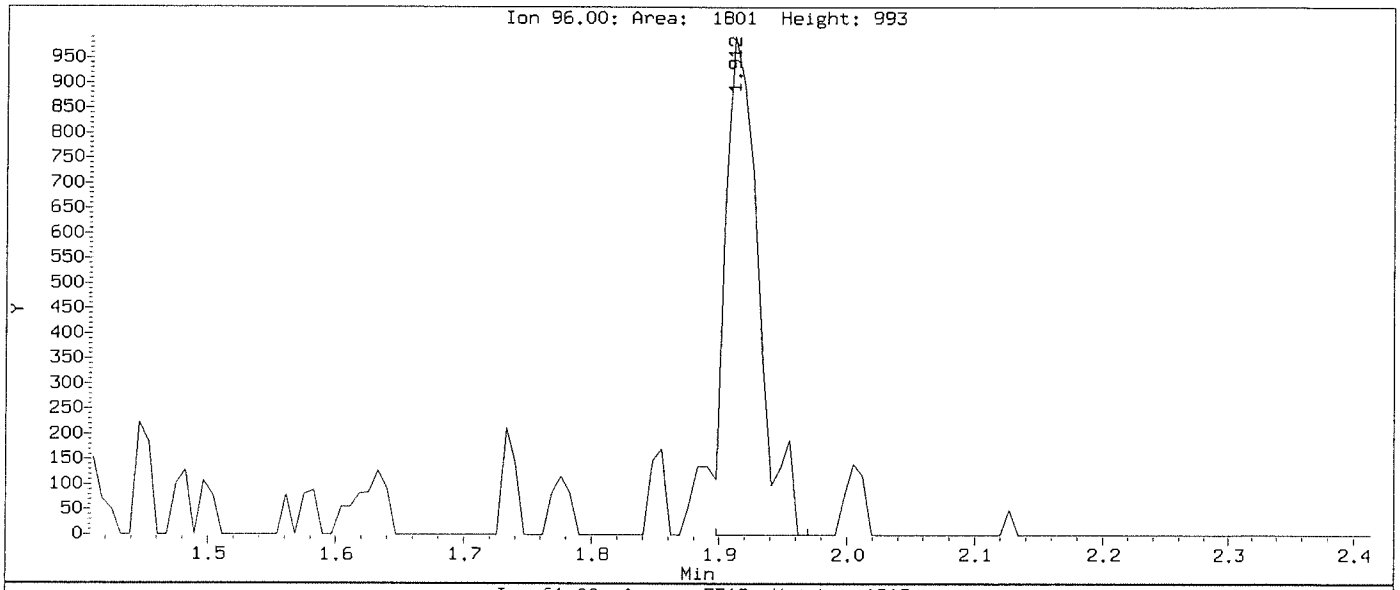
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5

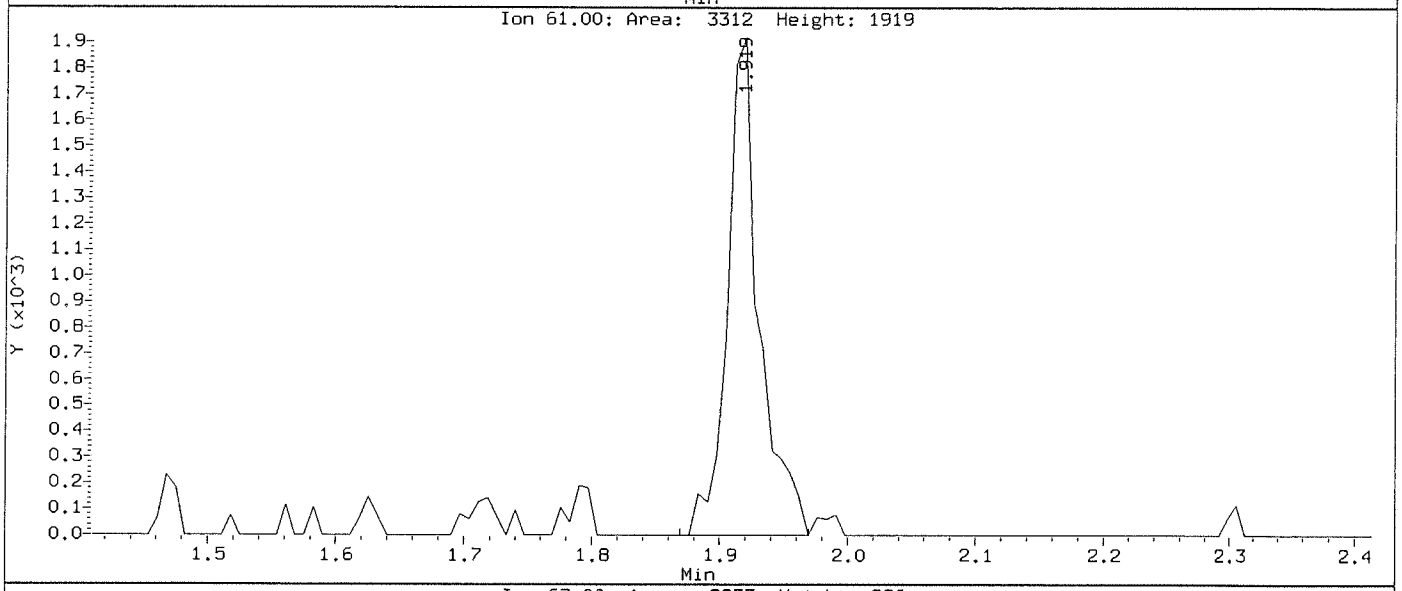


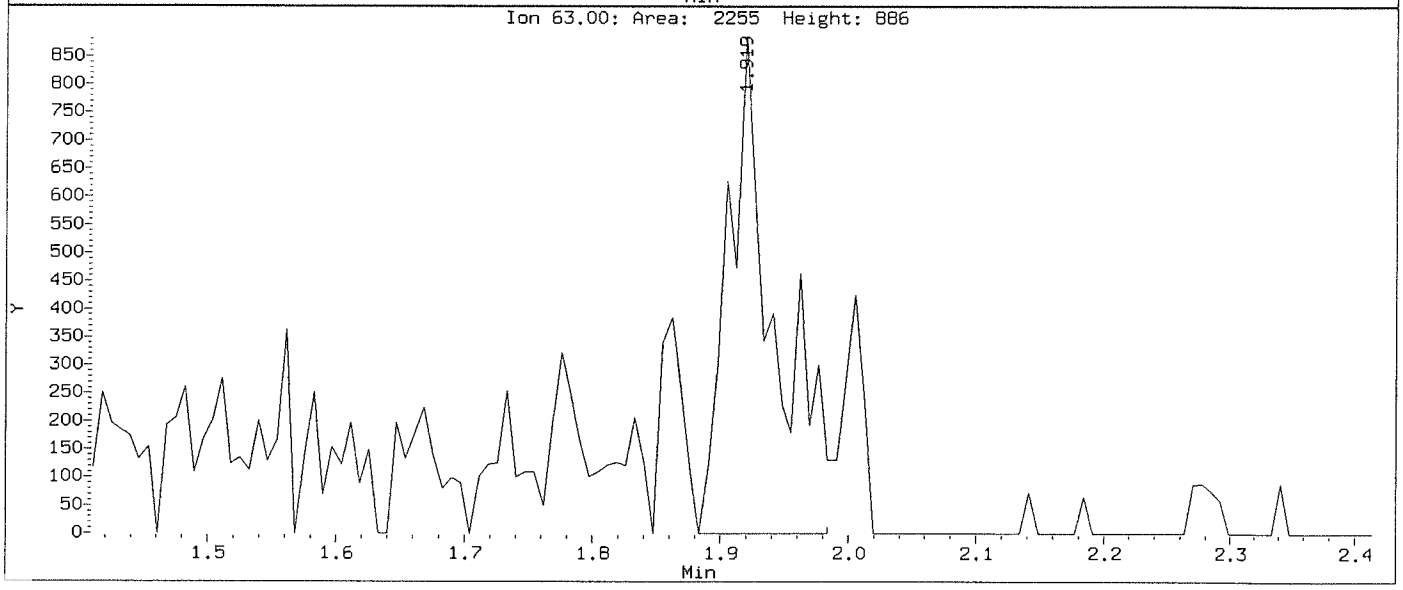


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

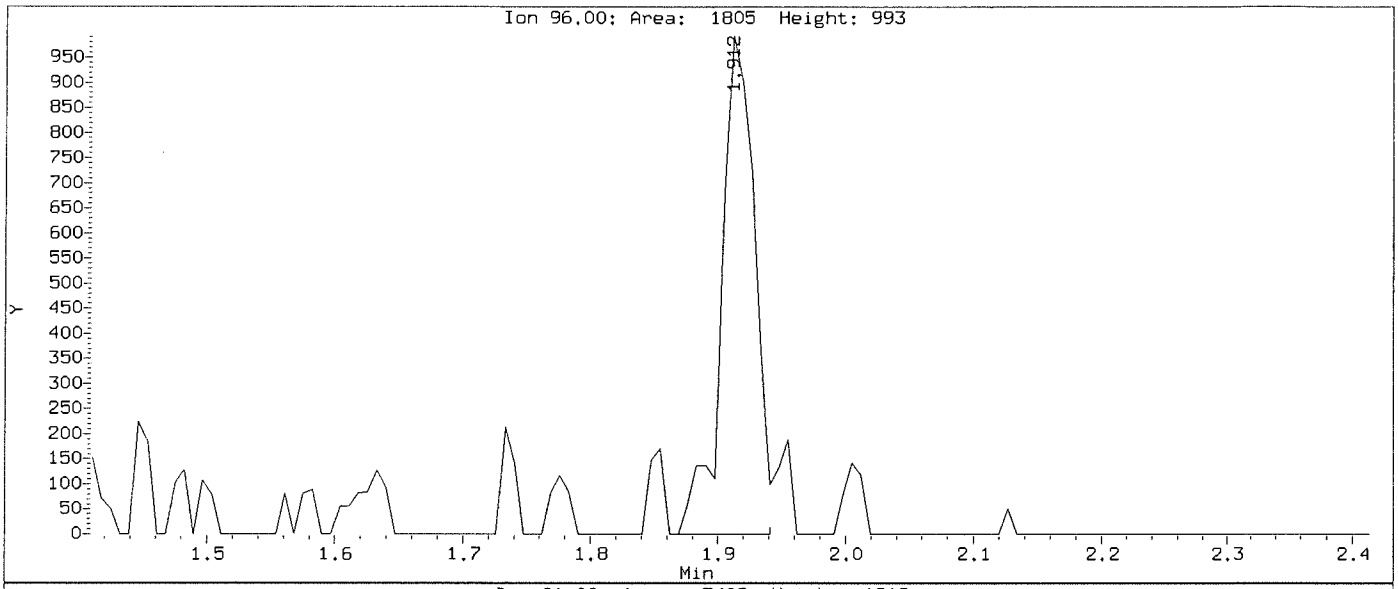


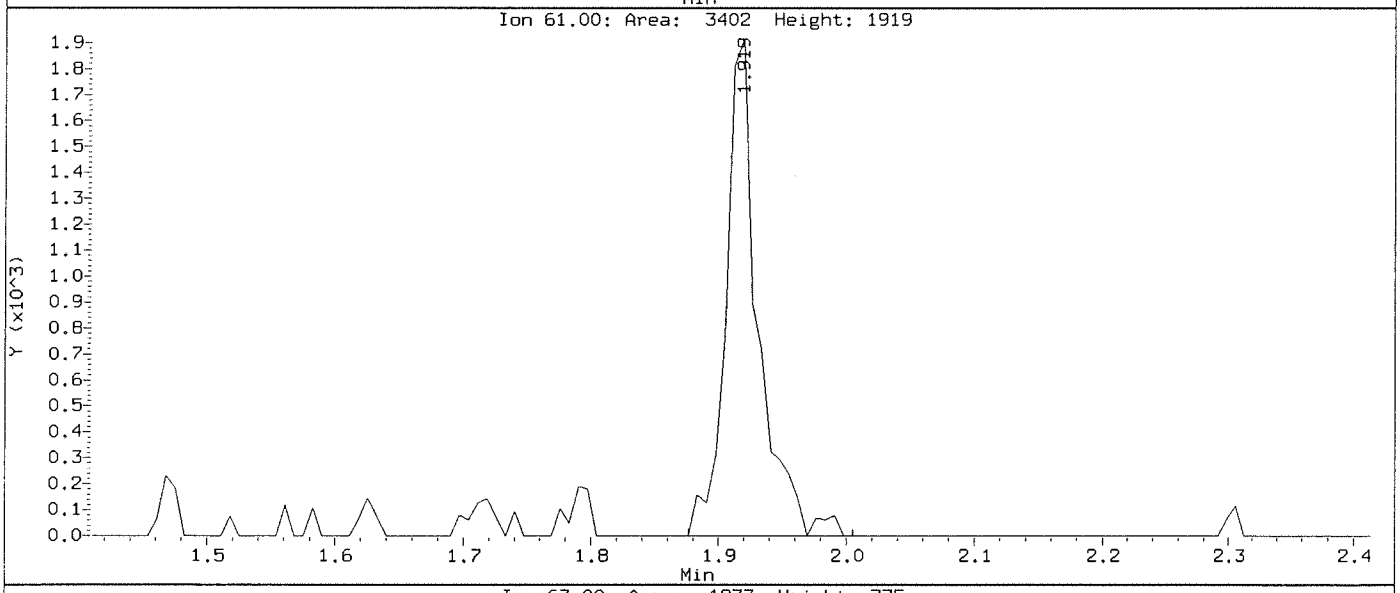


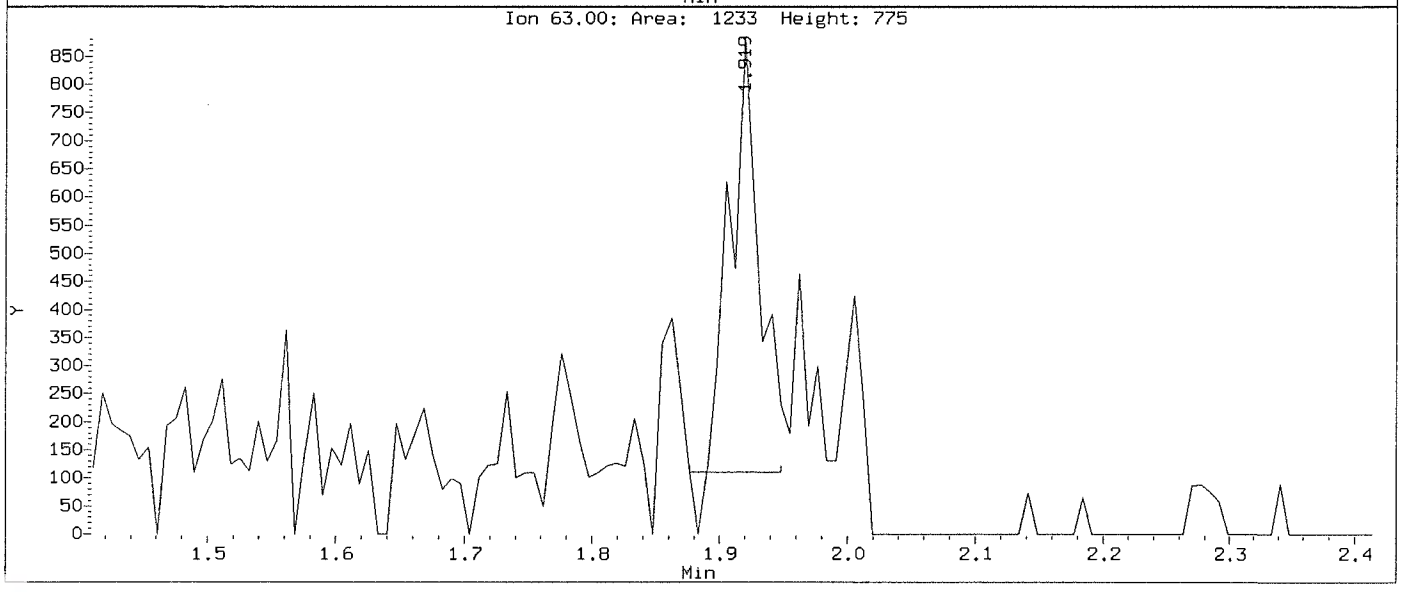


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Instrument: voa6.i
Client Sample ID: VSTD000.5

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

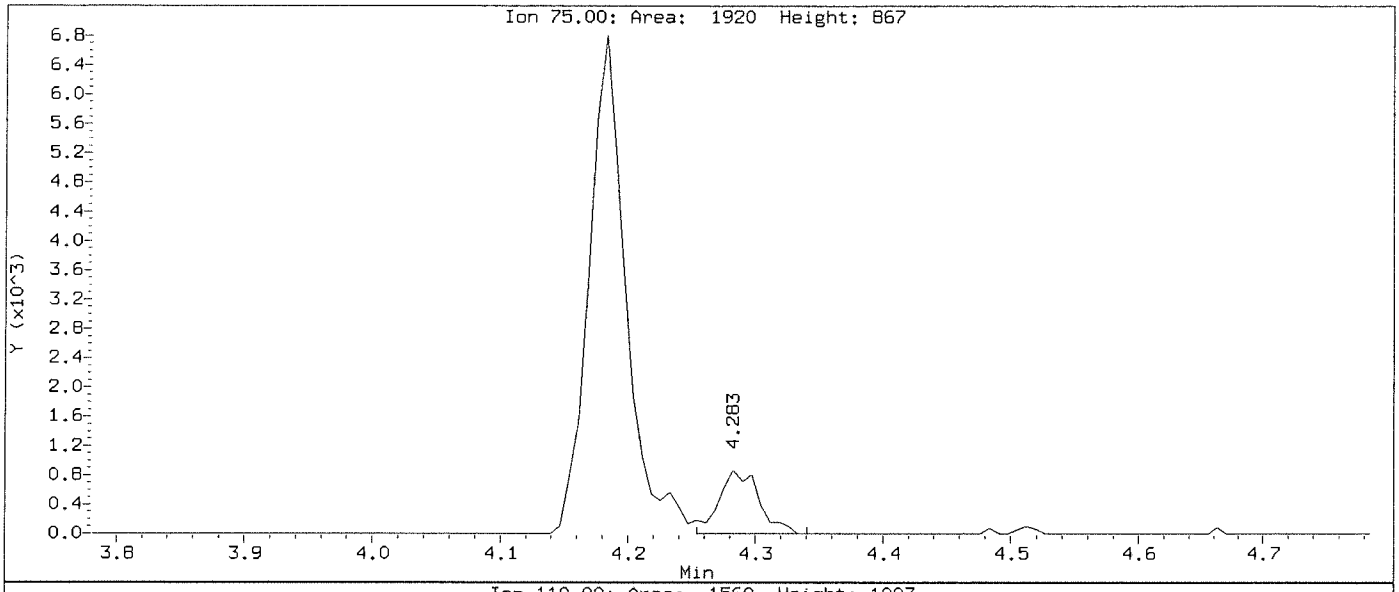


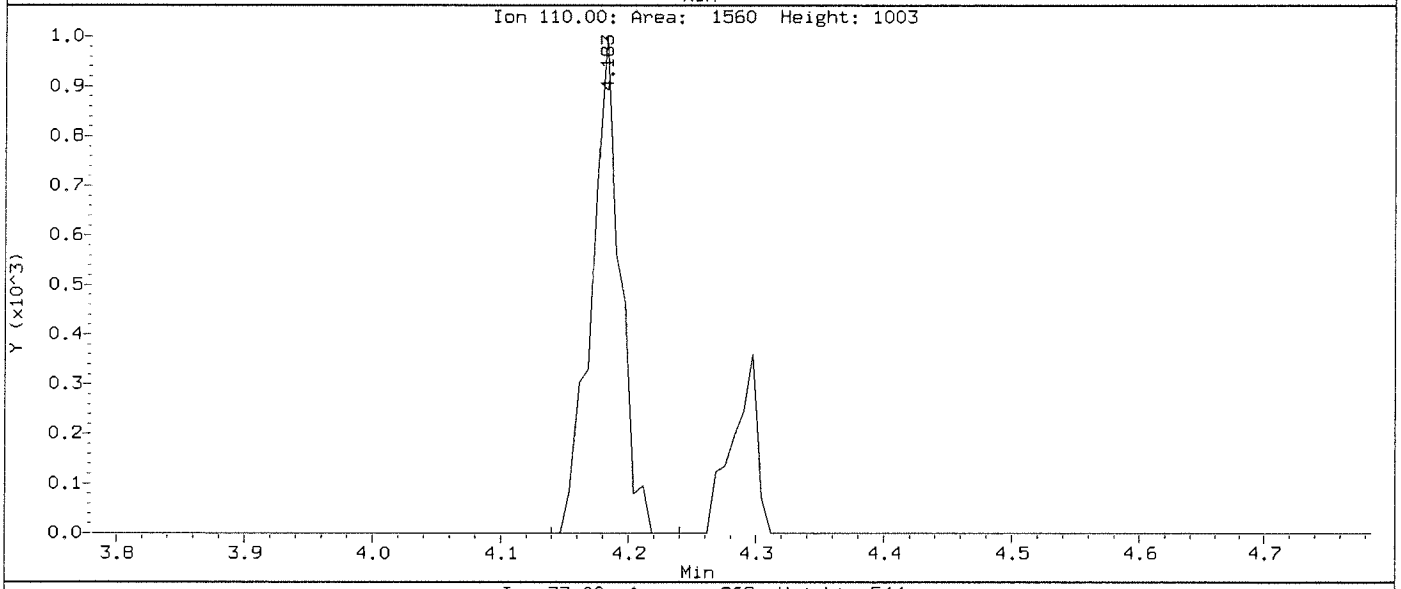


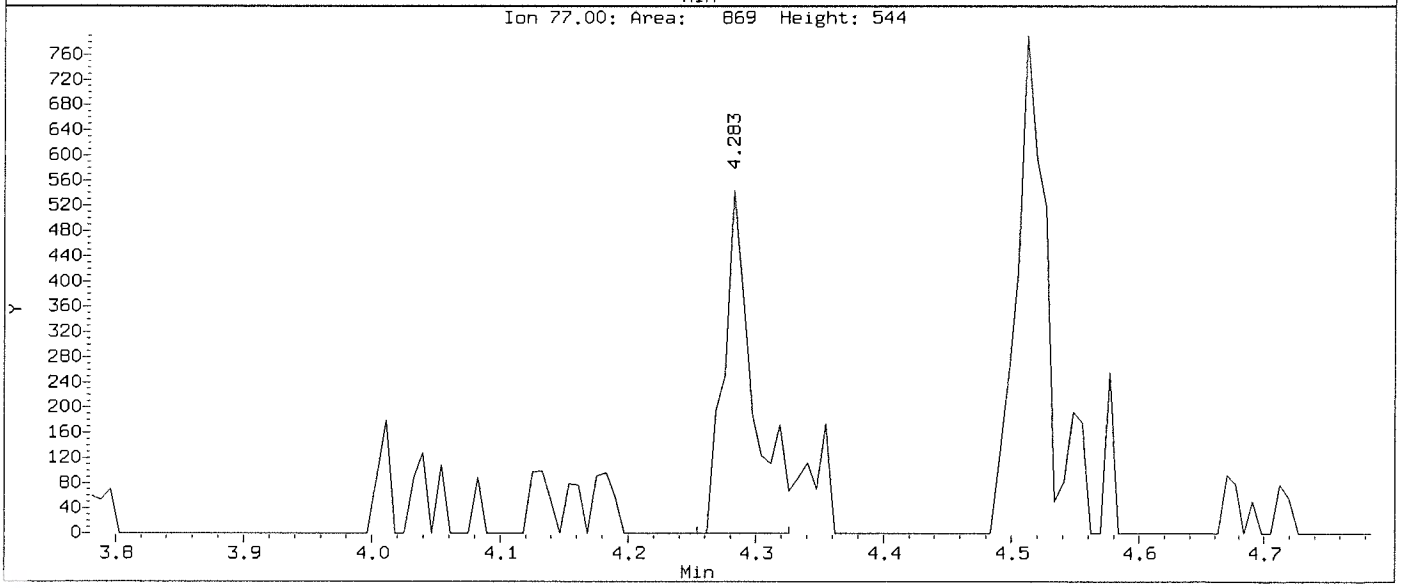


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6

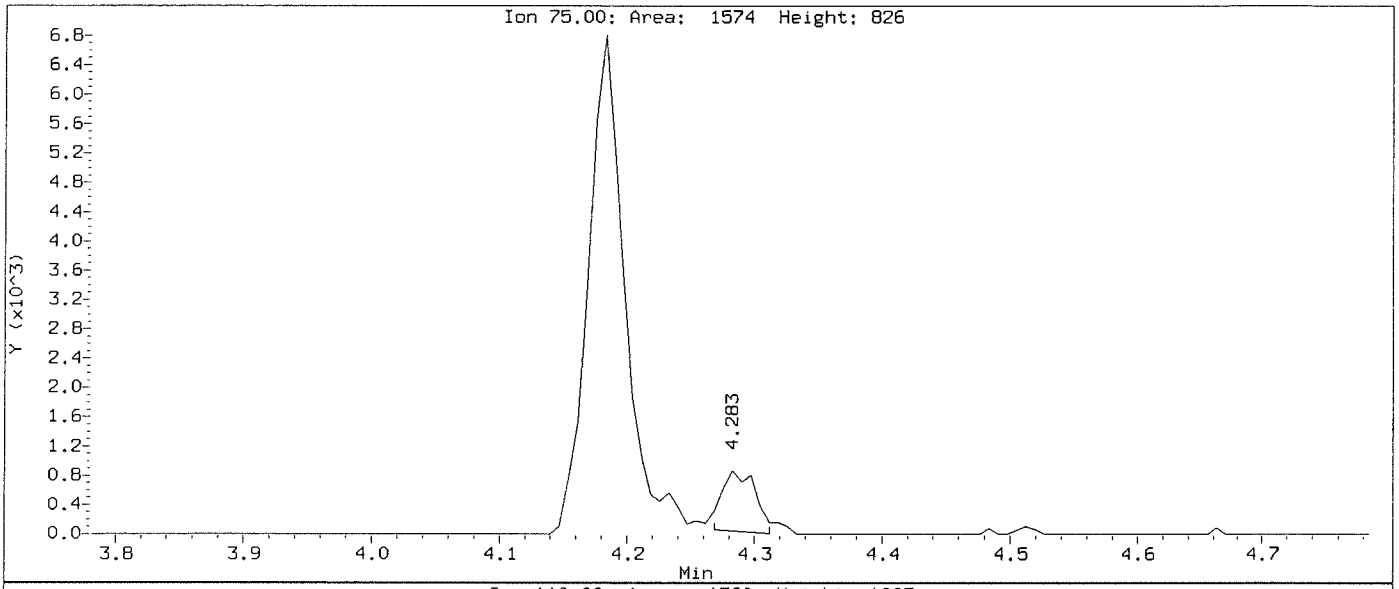


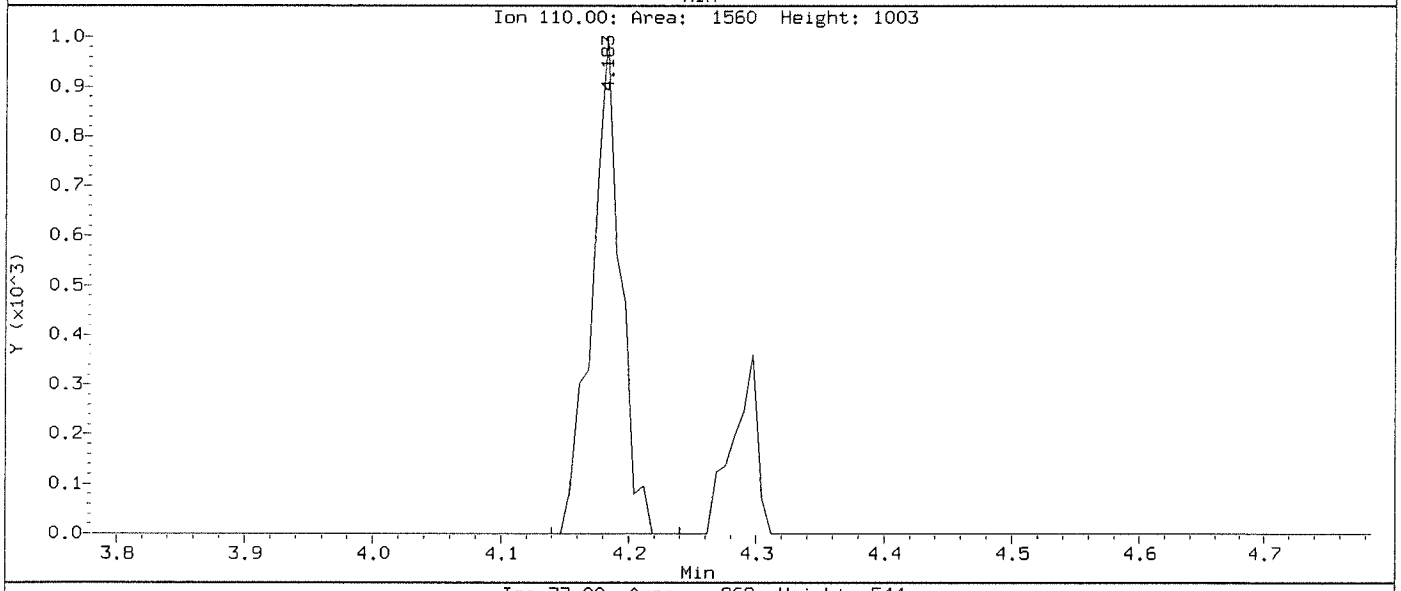


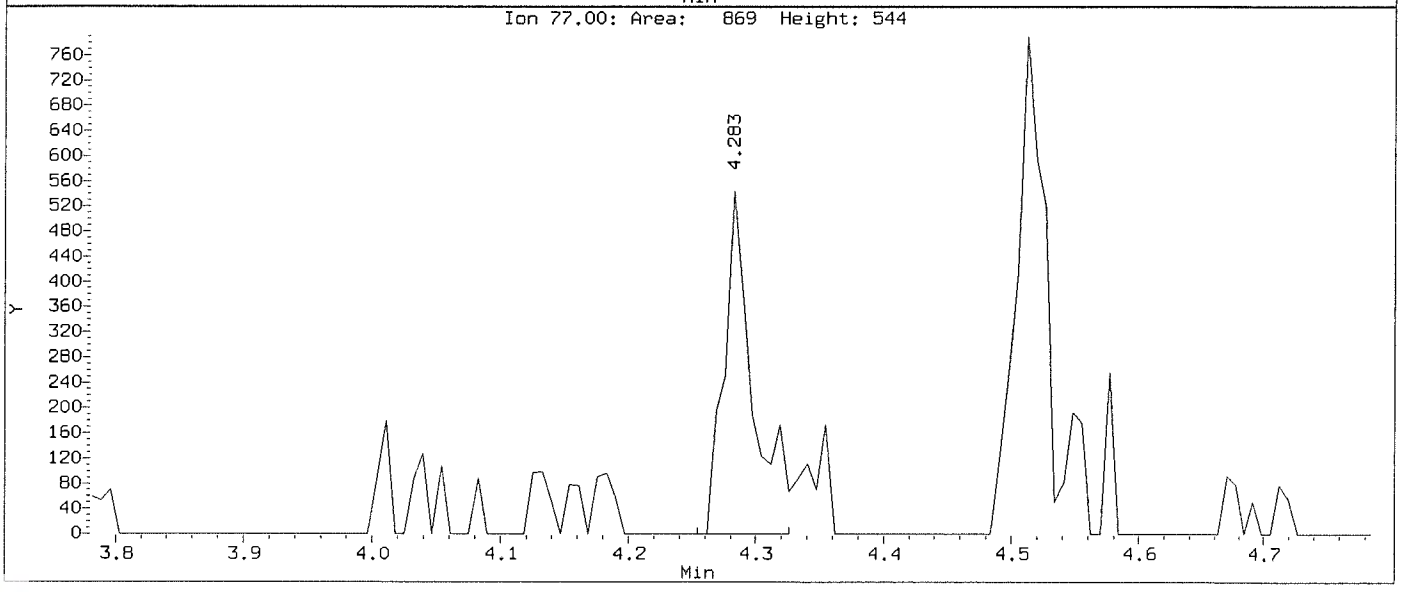


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6

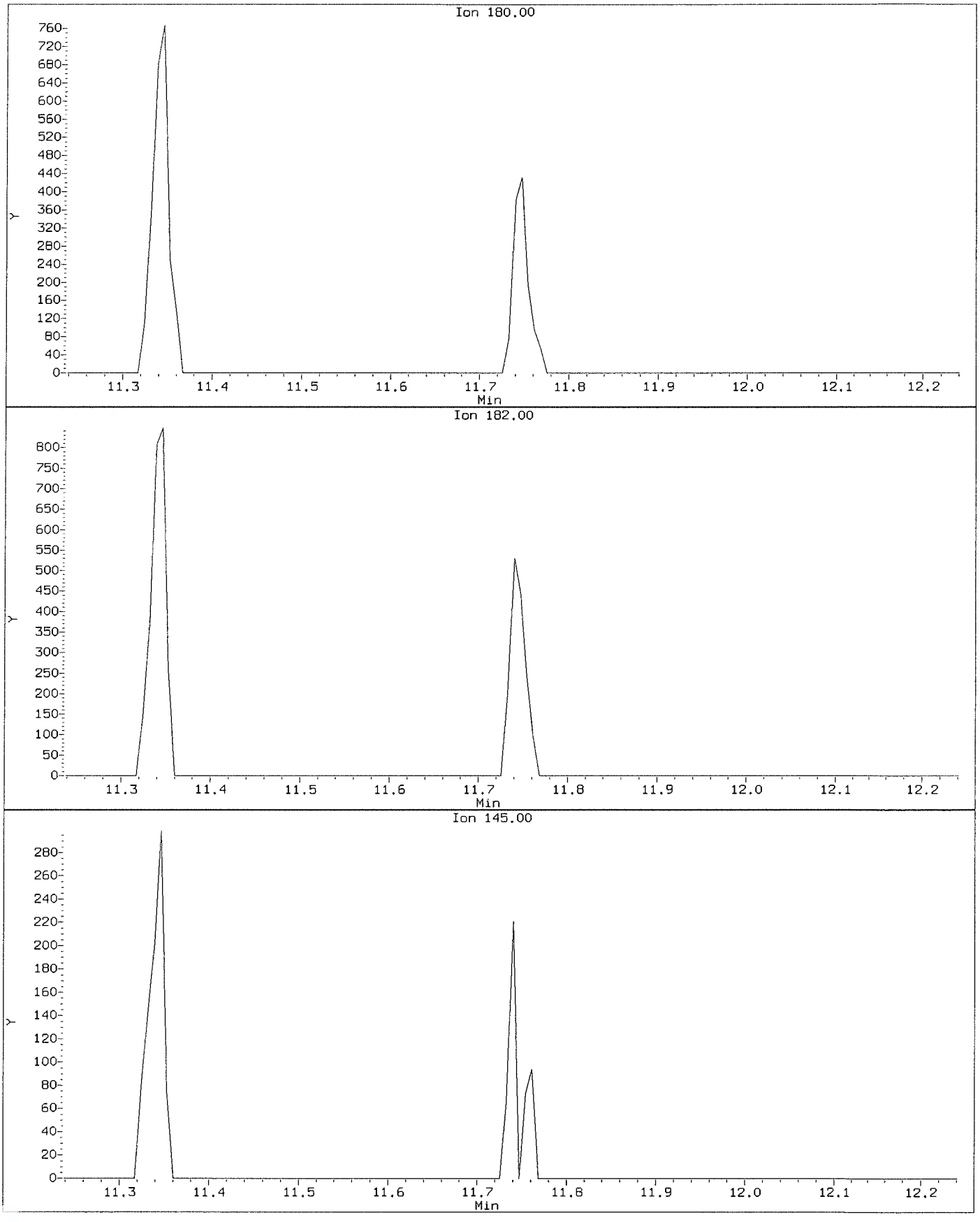






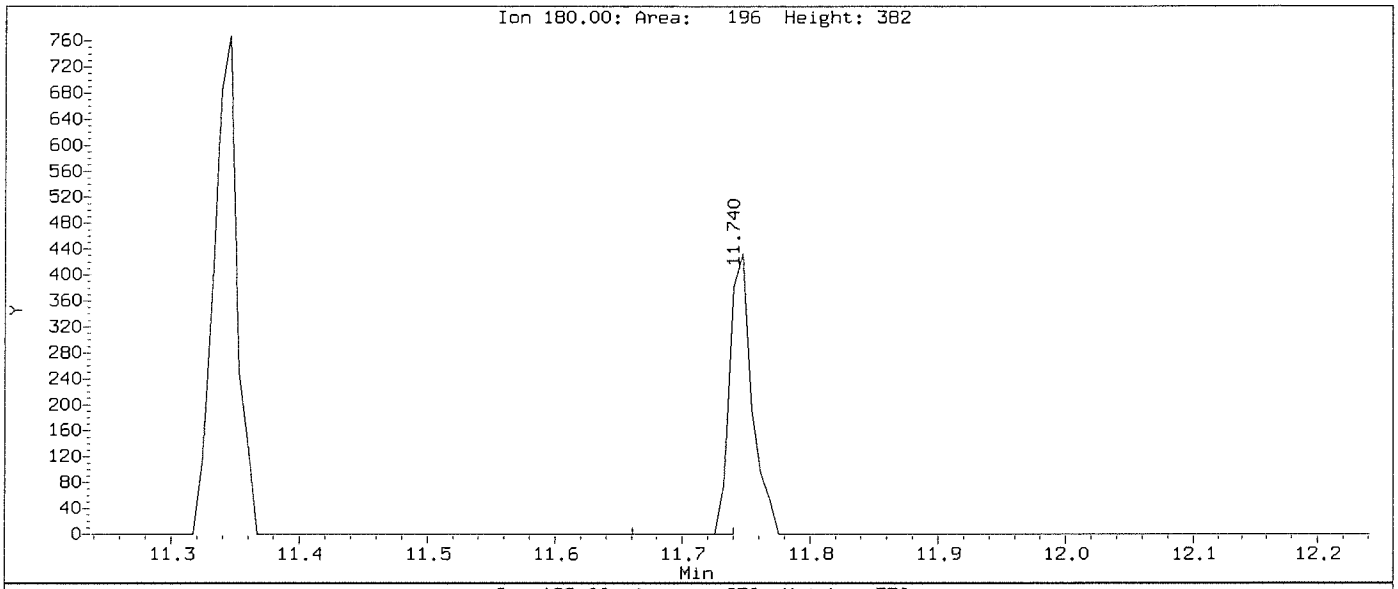
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Client Sample ID: VSTD000.5

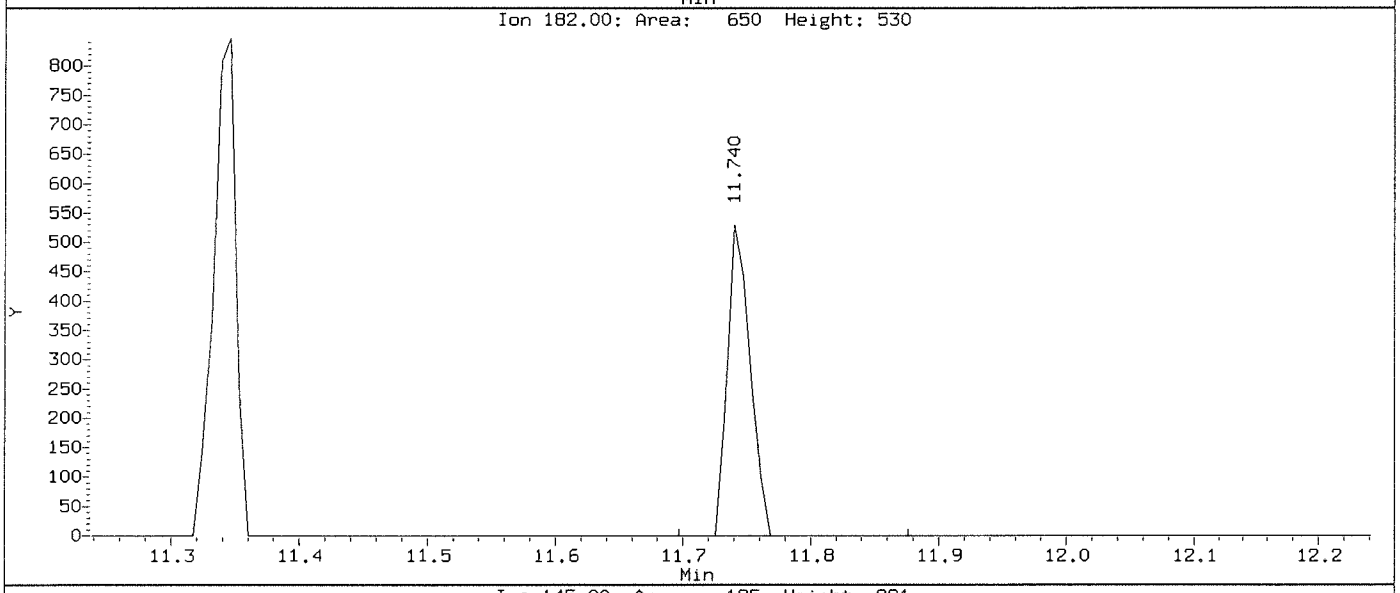
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

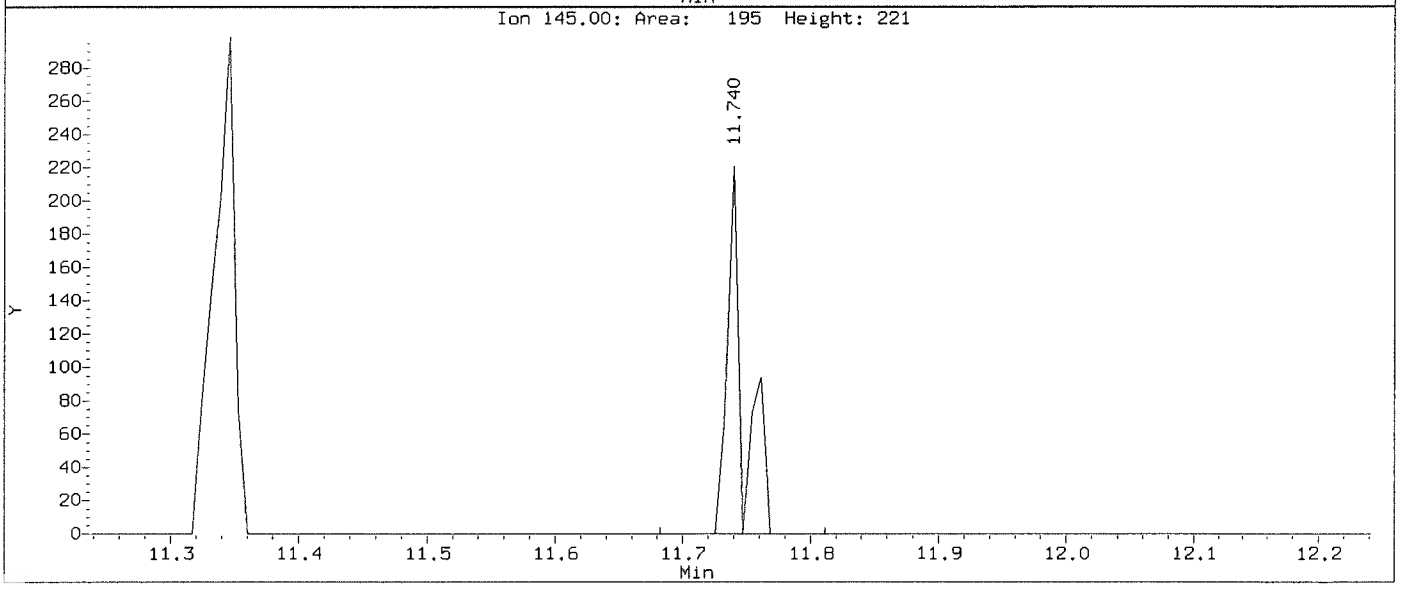


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

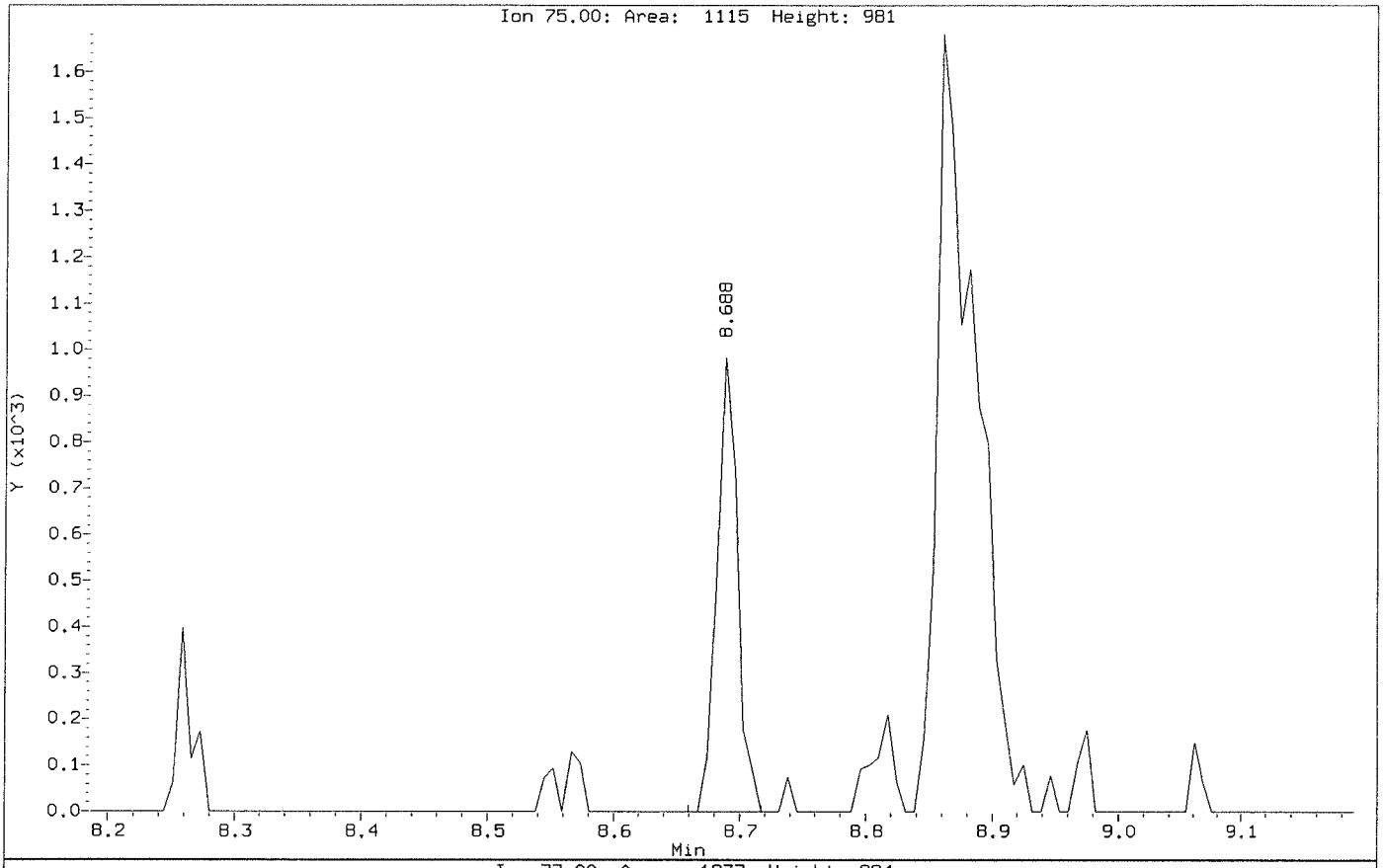


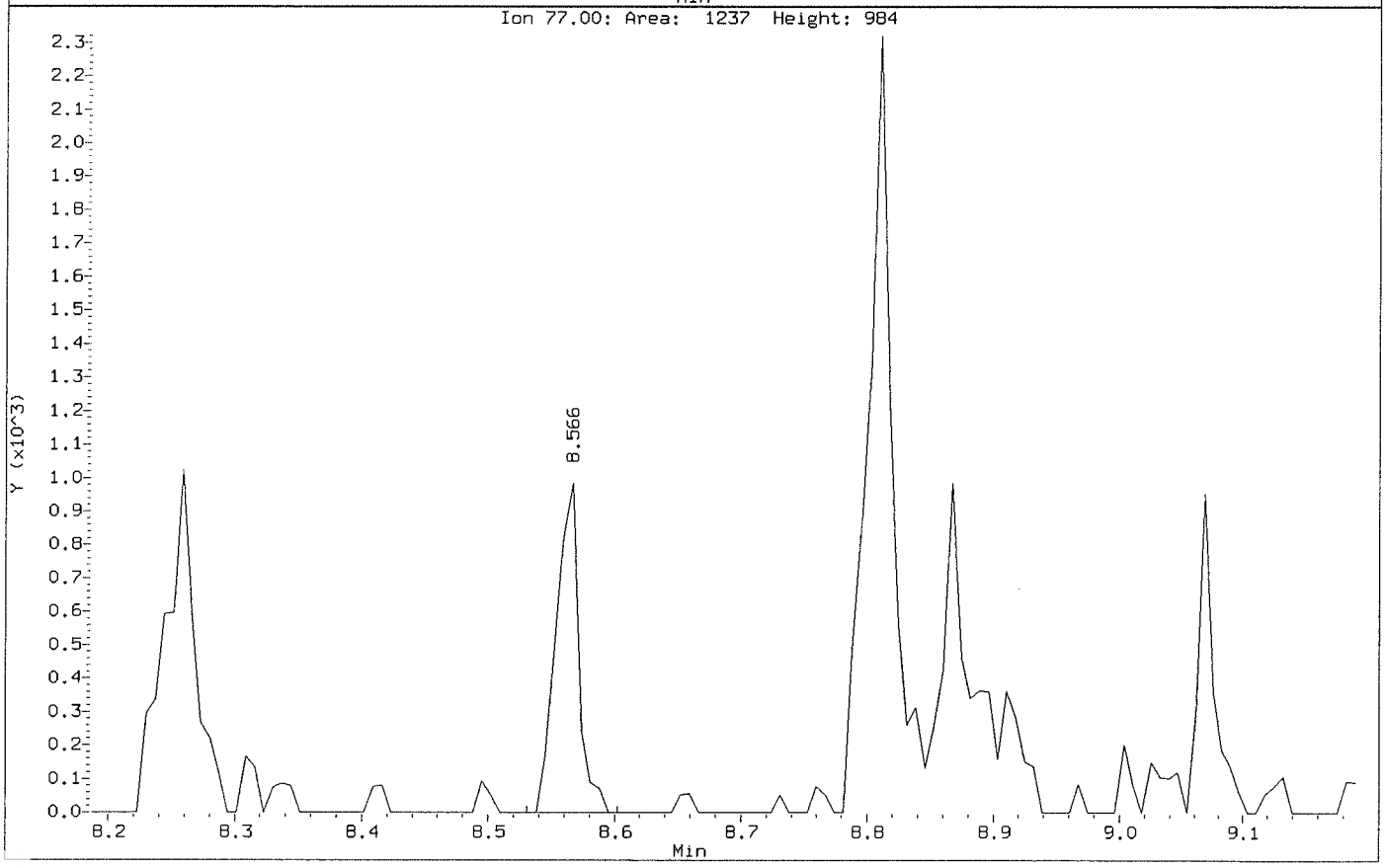




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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

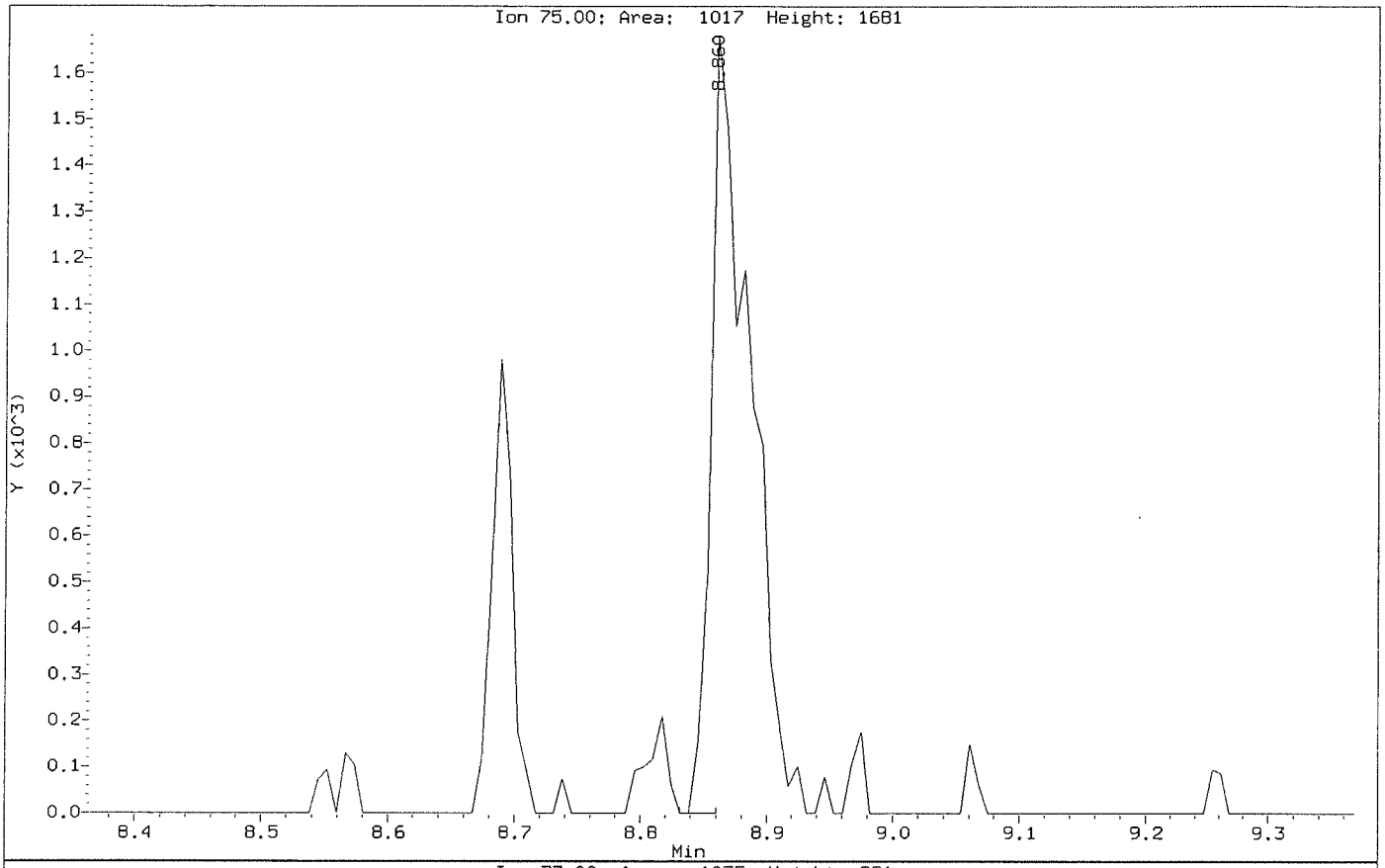
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

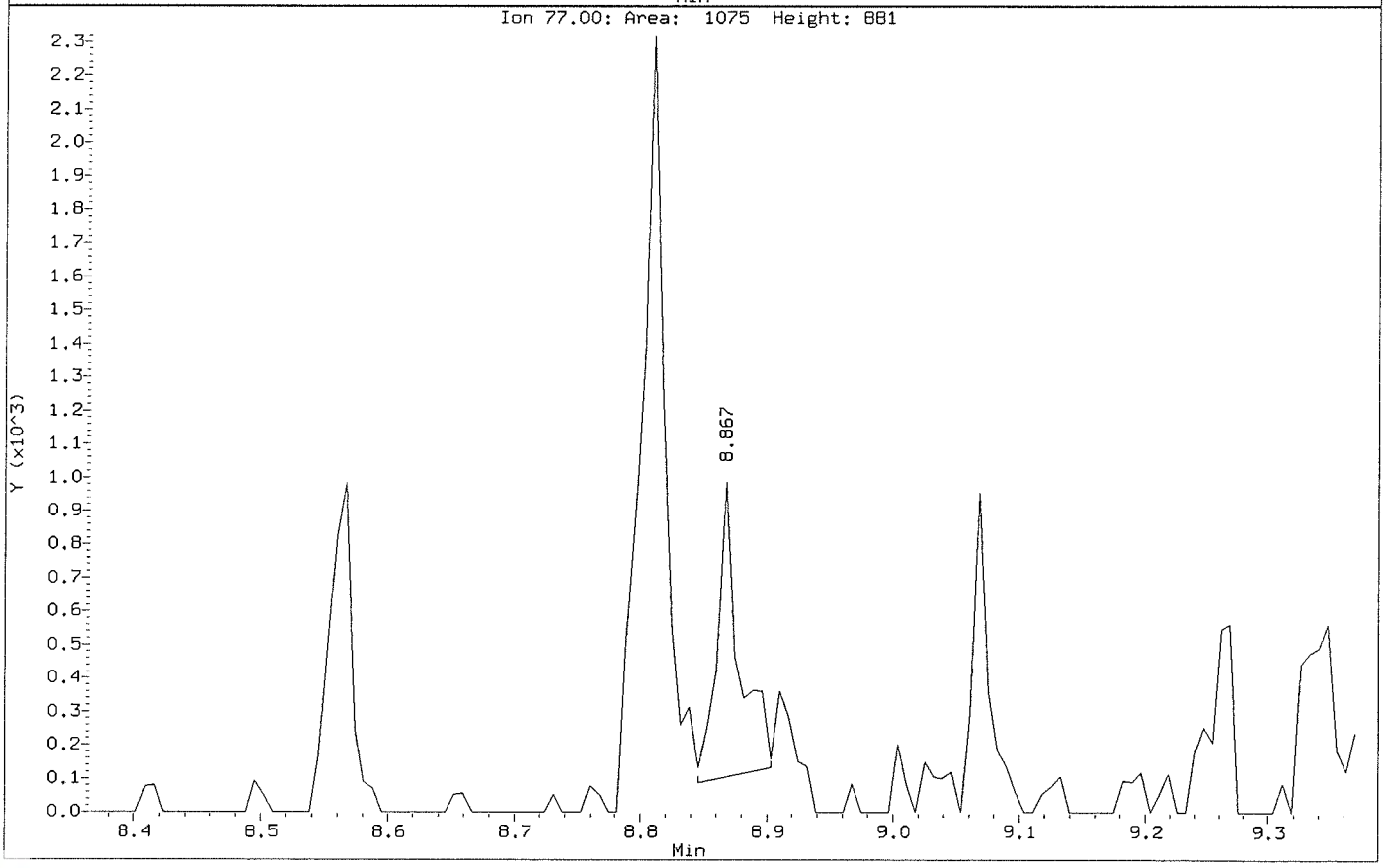




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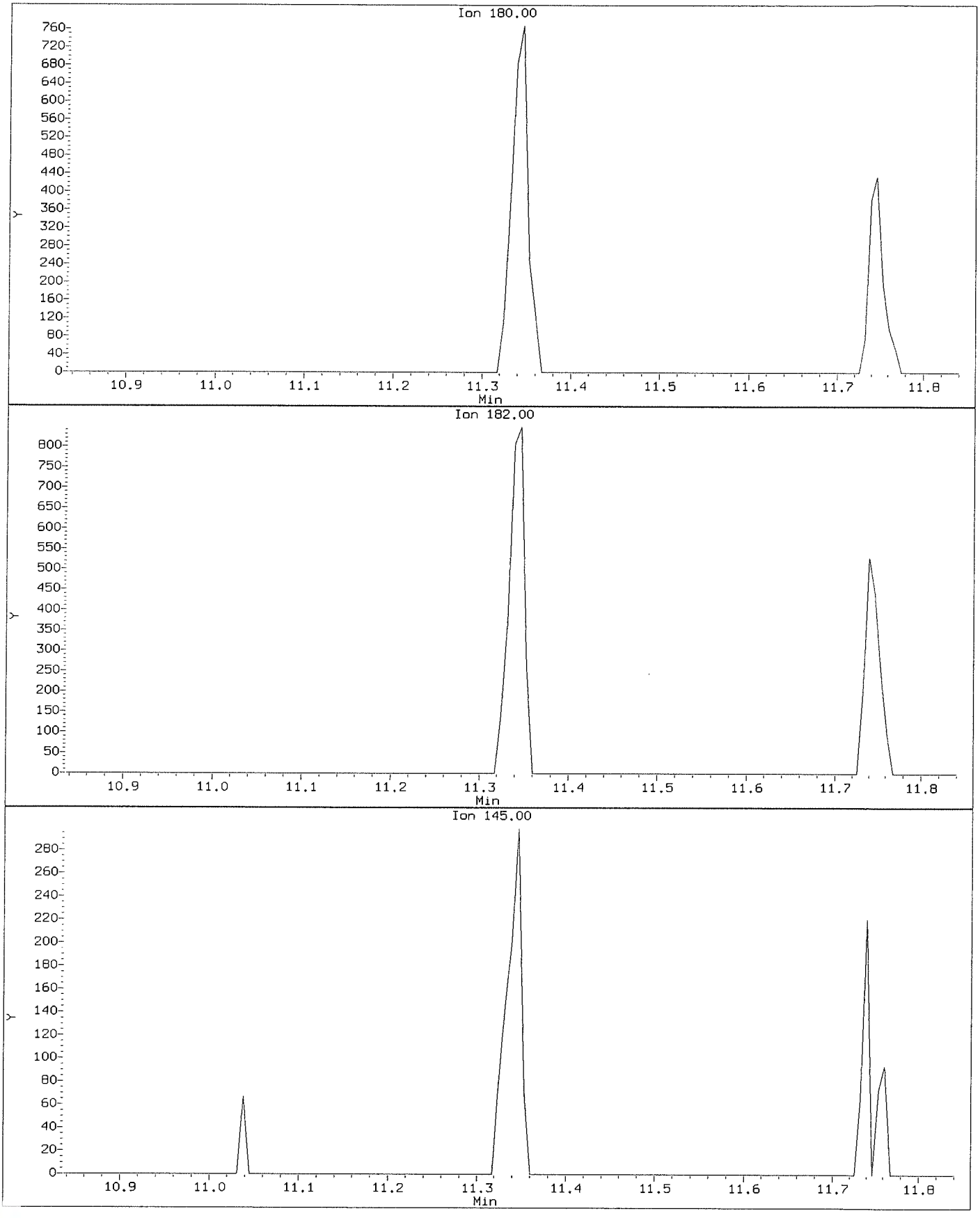
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





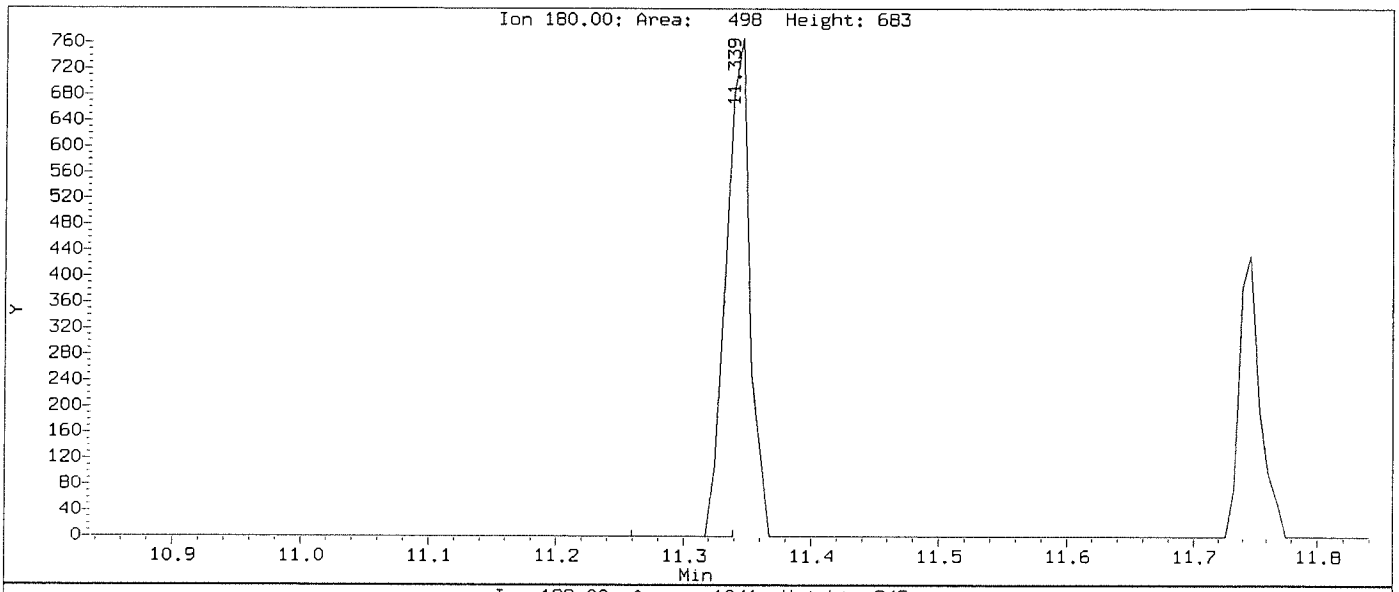
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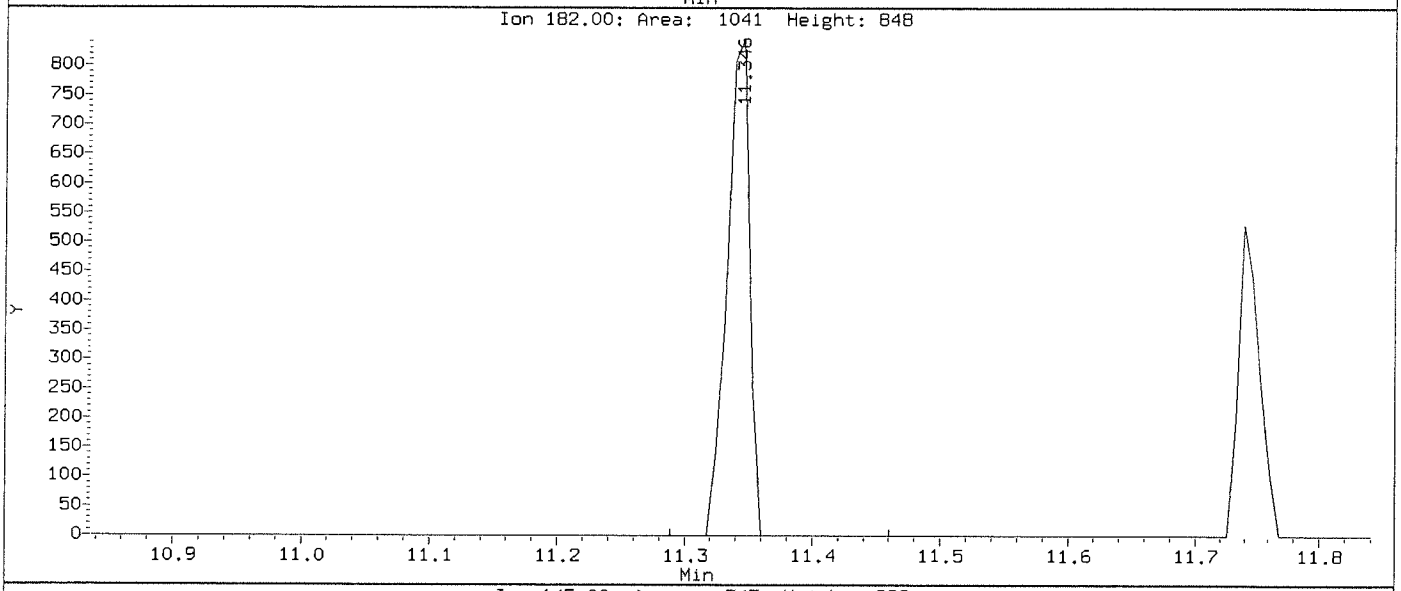
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1

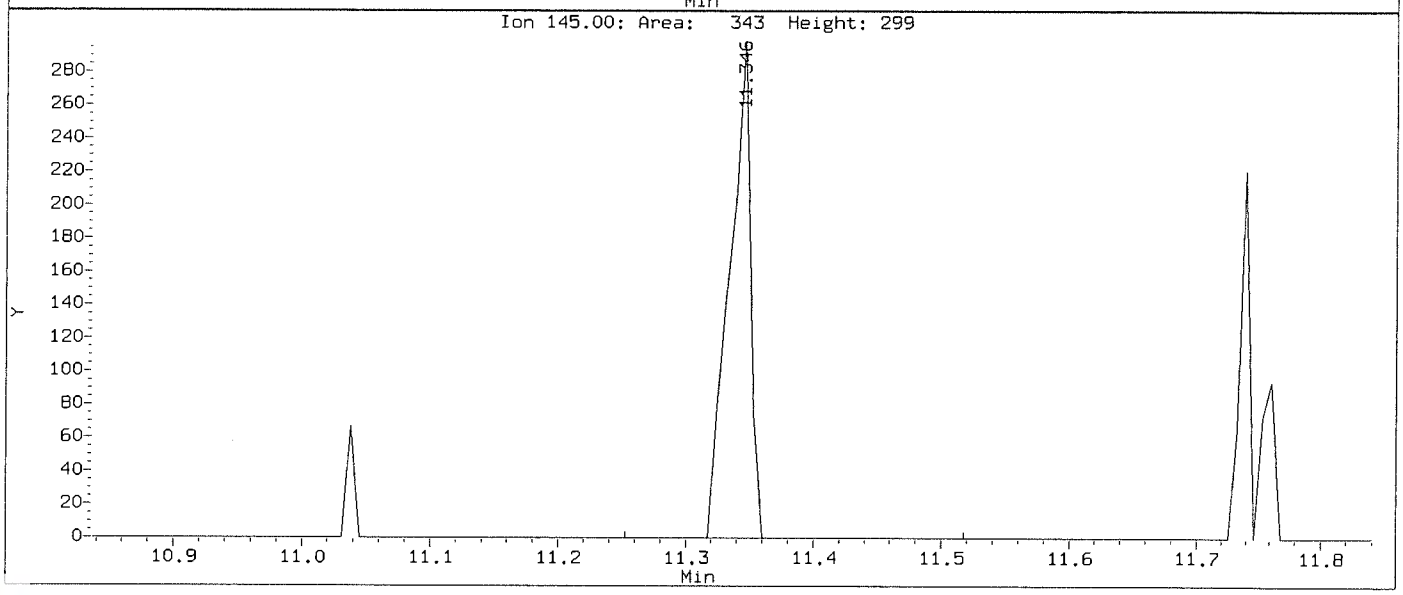


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Client Sample ID: VSTD000.5

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

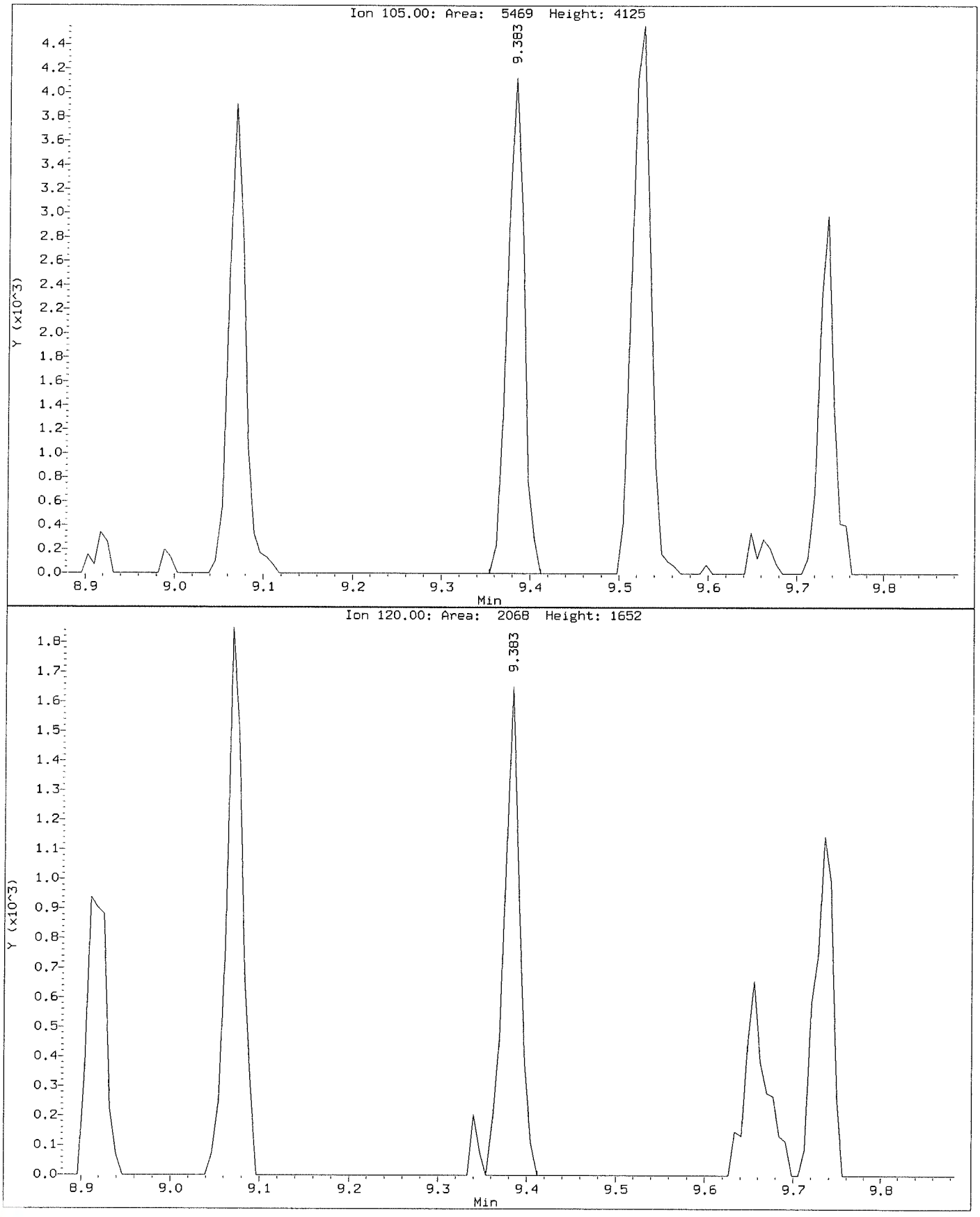






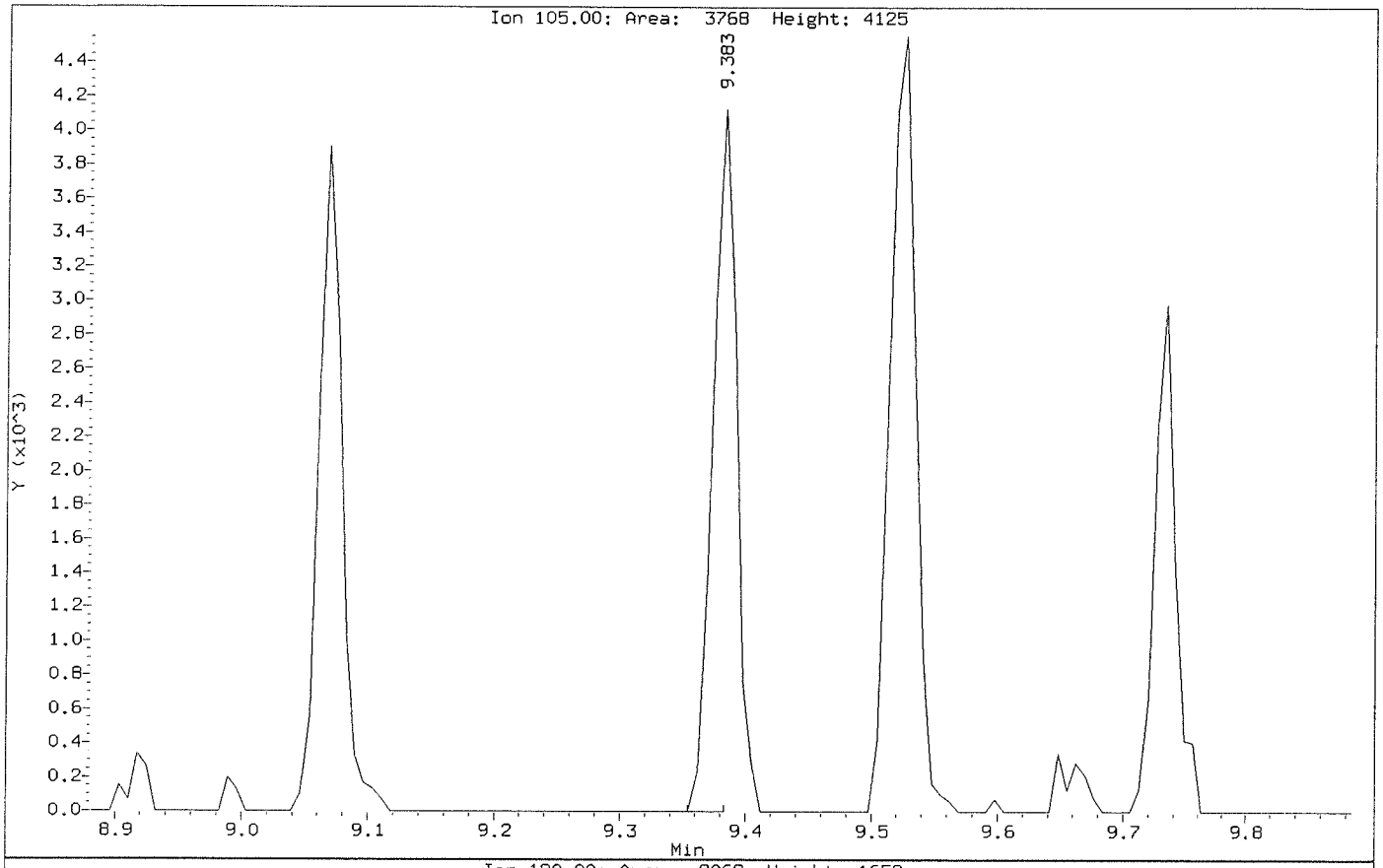
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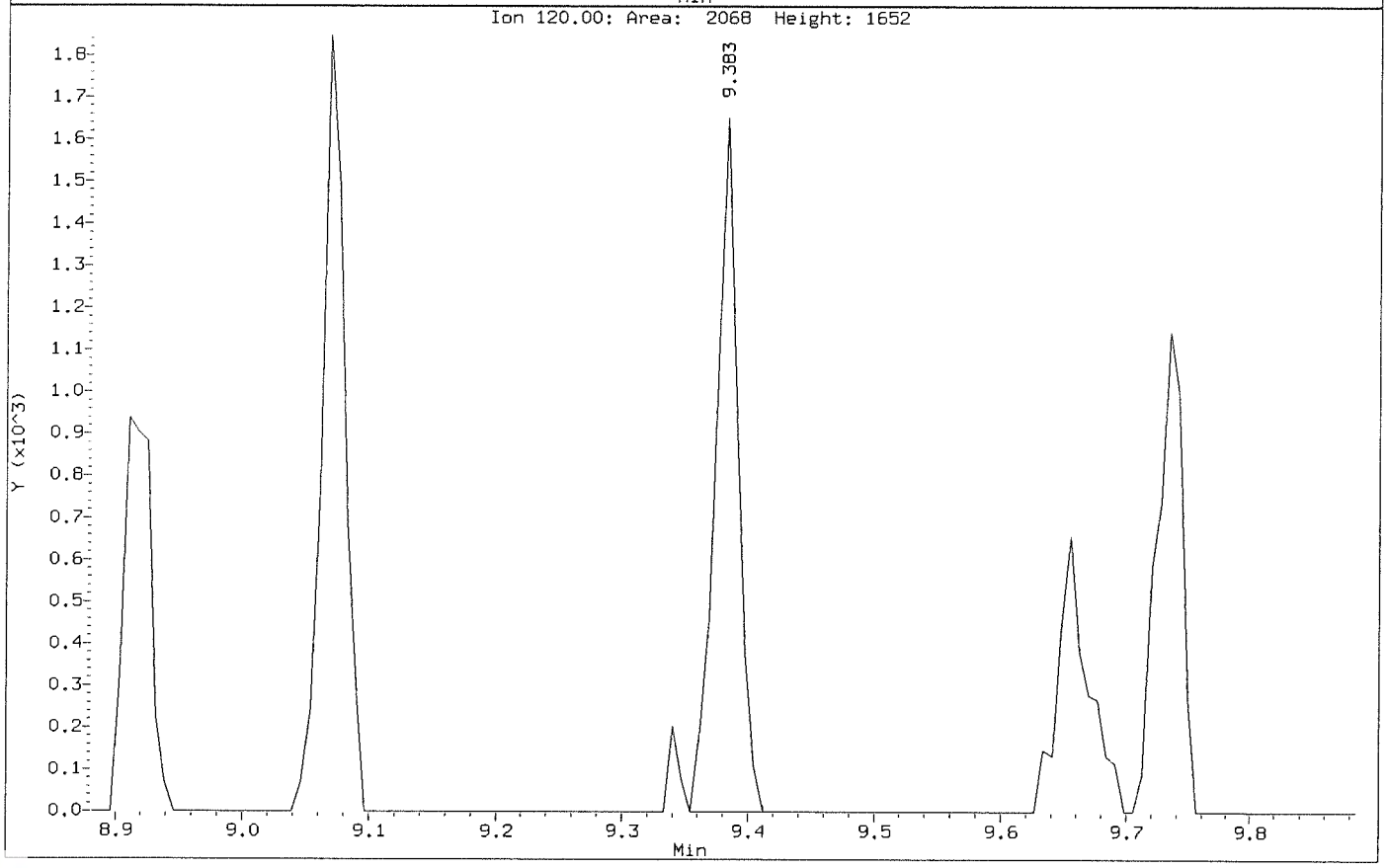
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6



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Instrument: voa6.i
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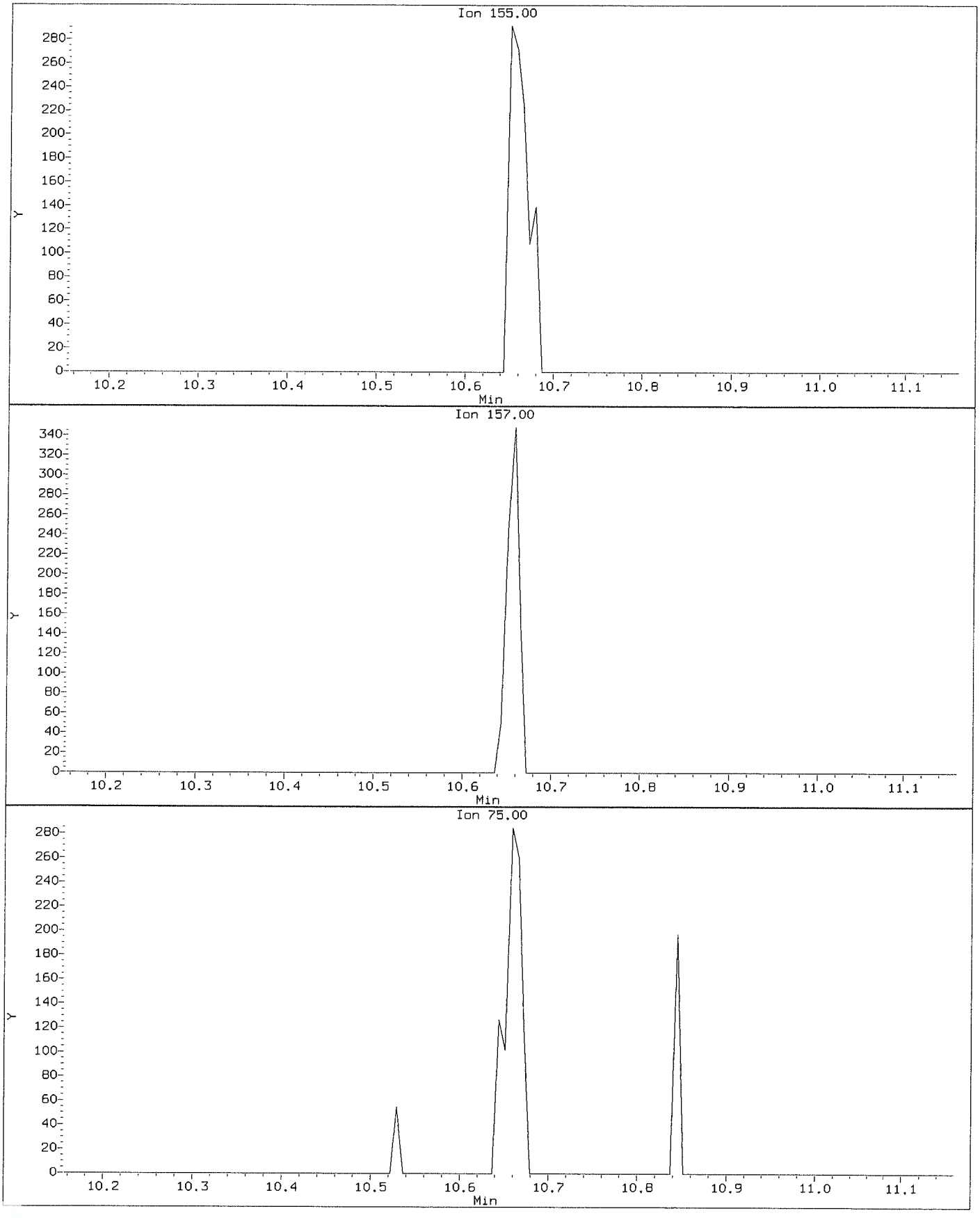
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6





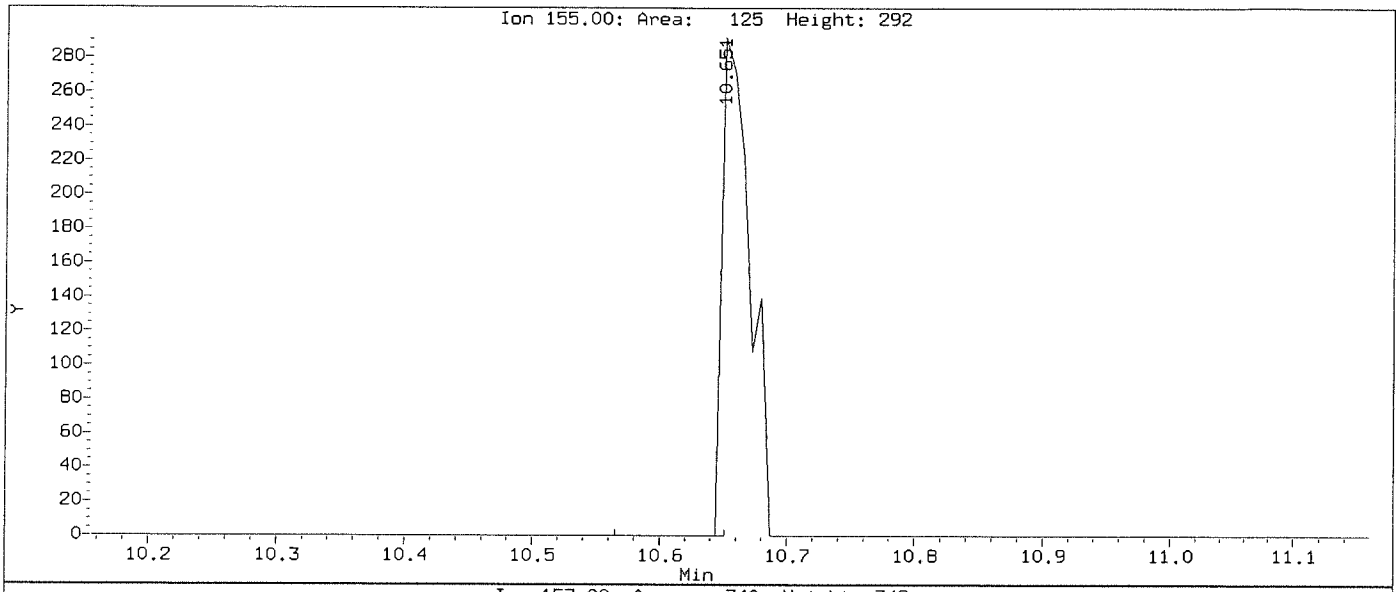
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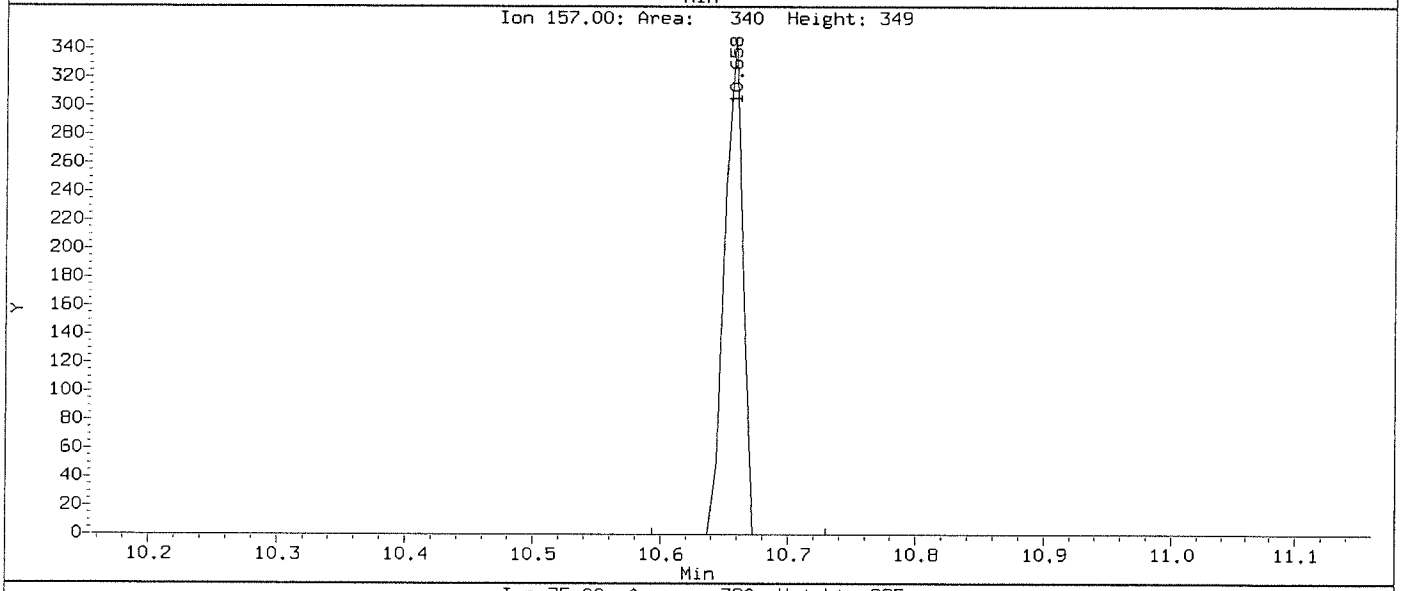
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

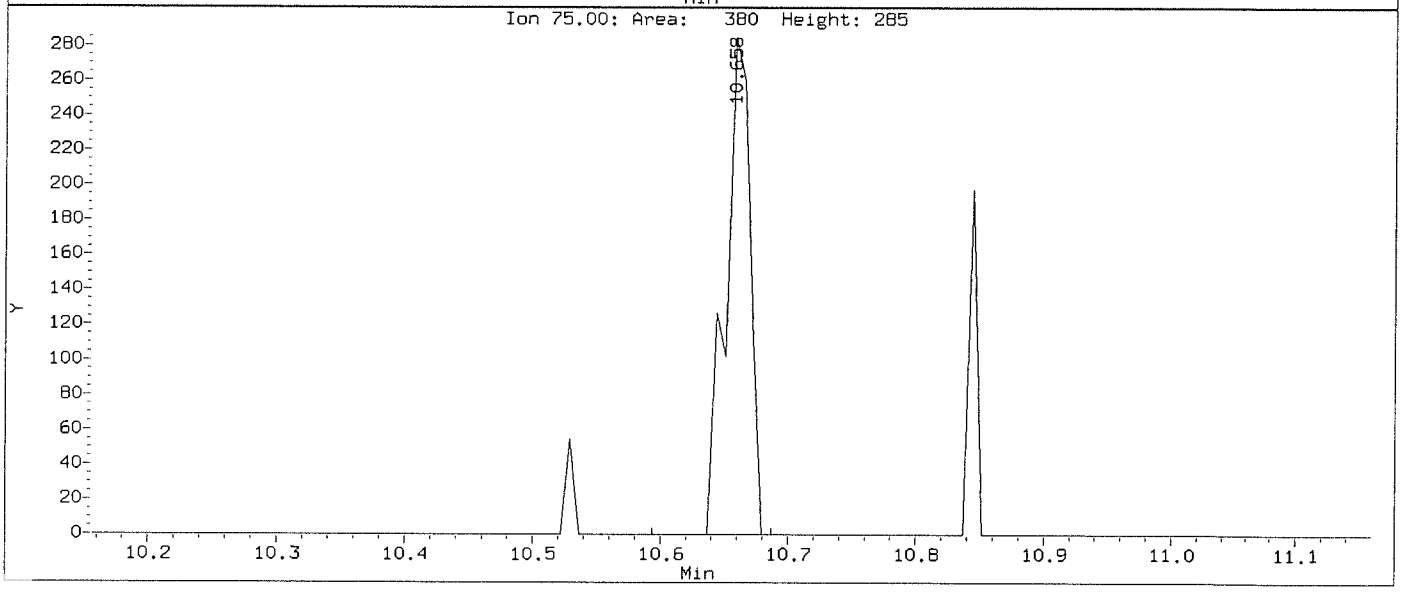


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Client Sample ID: VSTD000.5

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

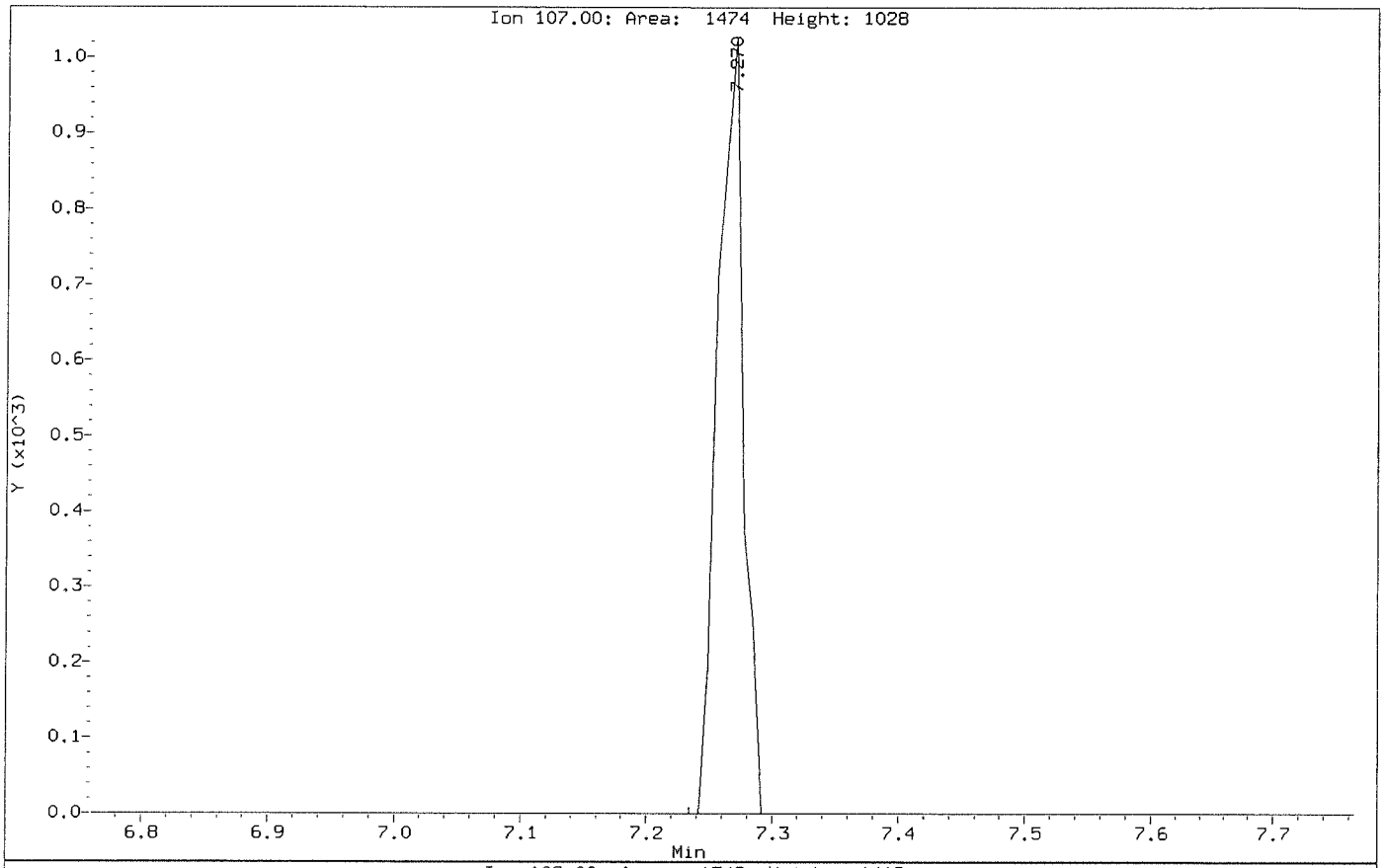


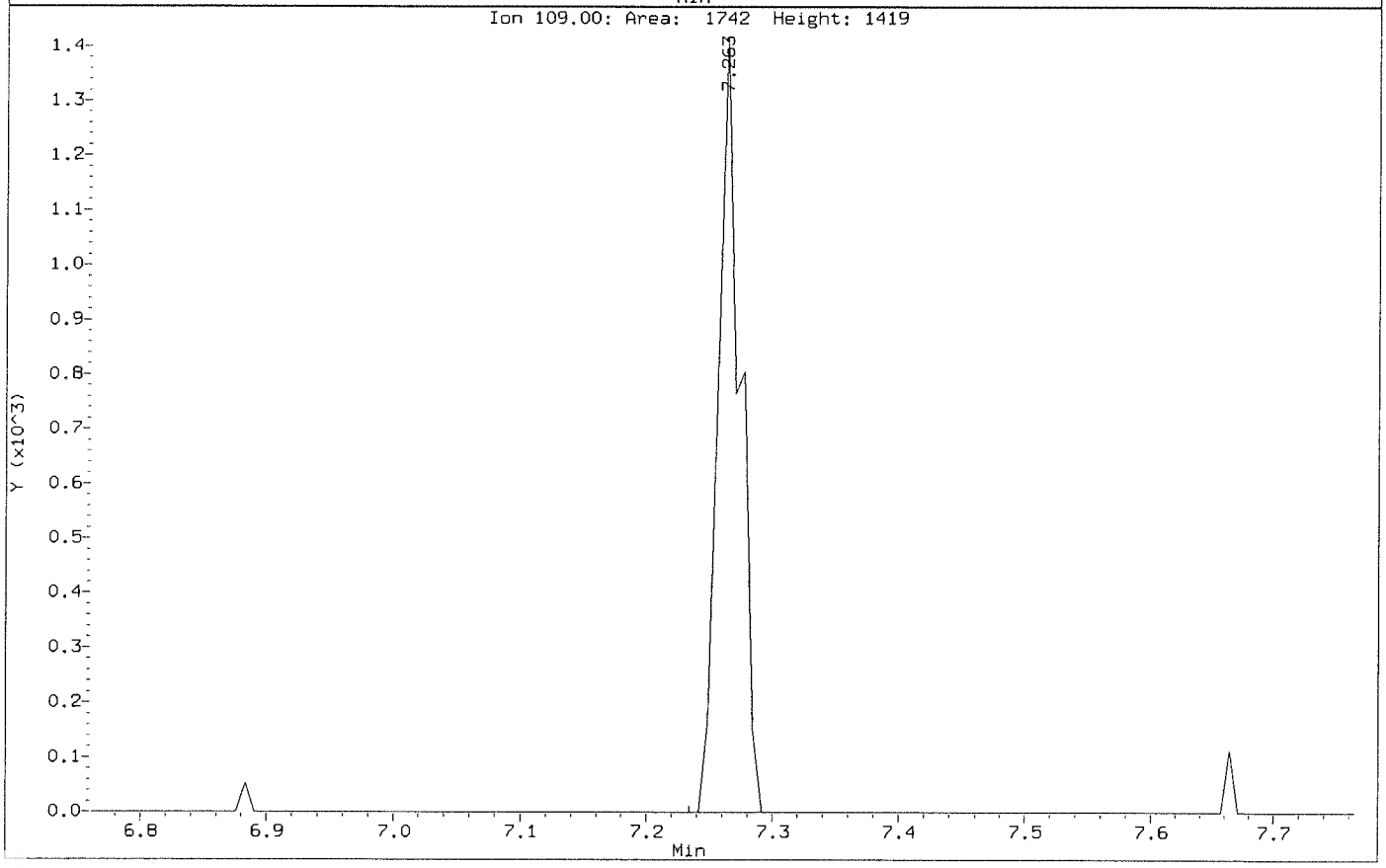




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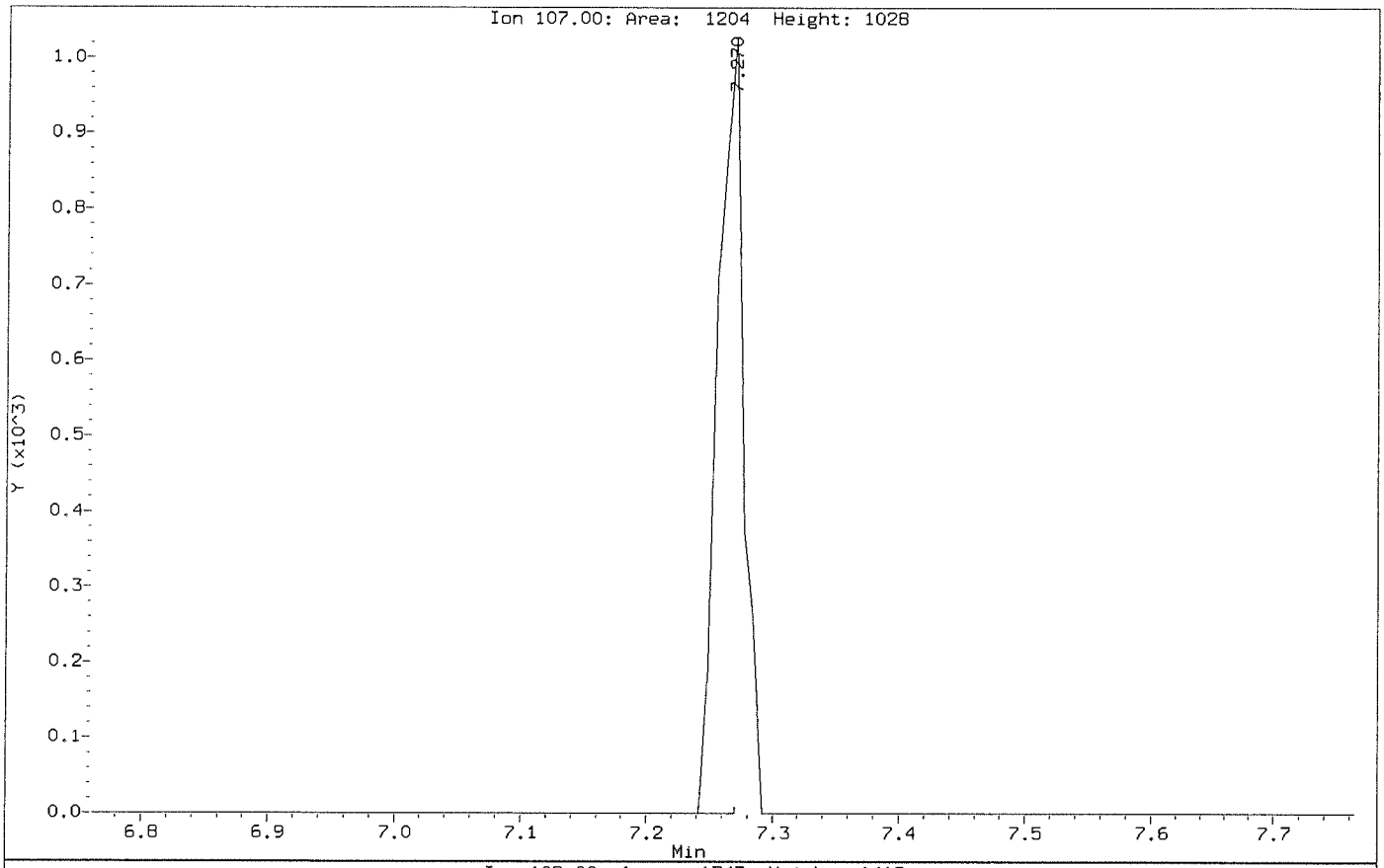
Compound: 1,2-Dibromoethane
CAS Number: 106-93-4

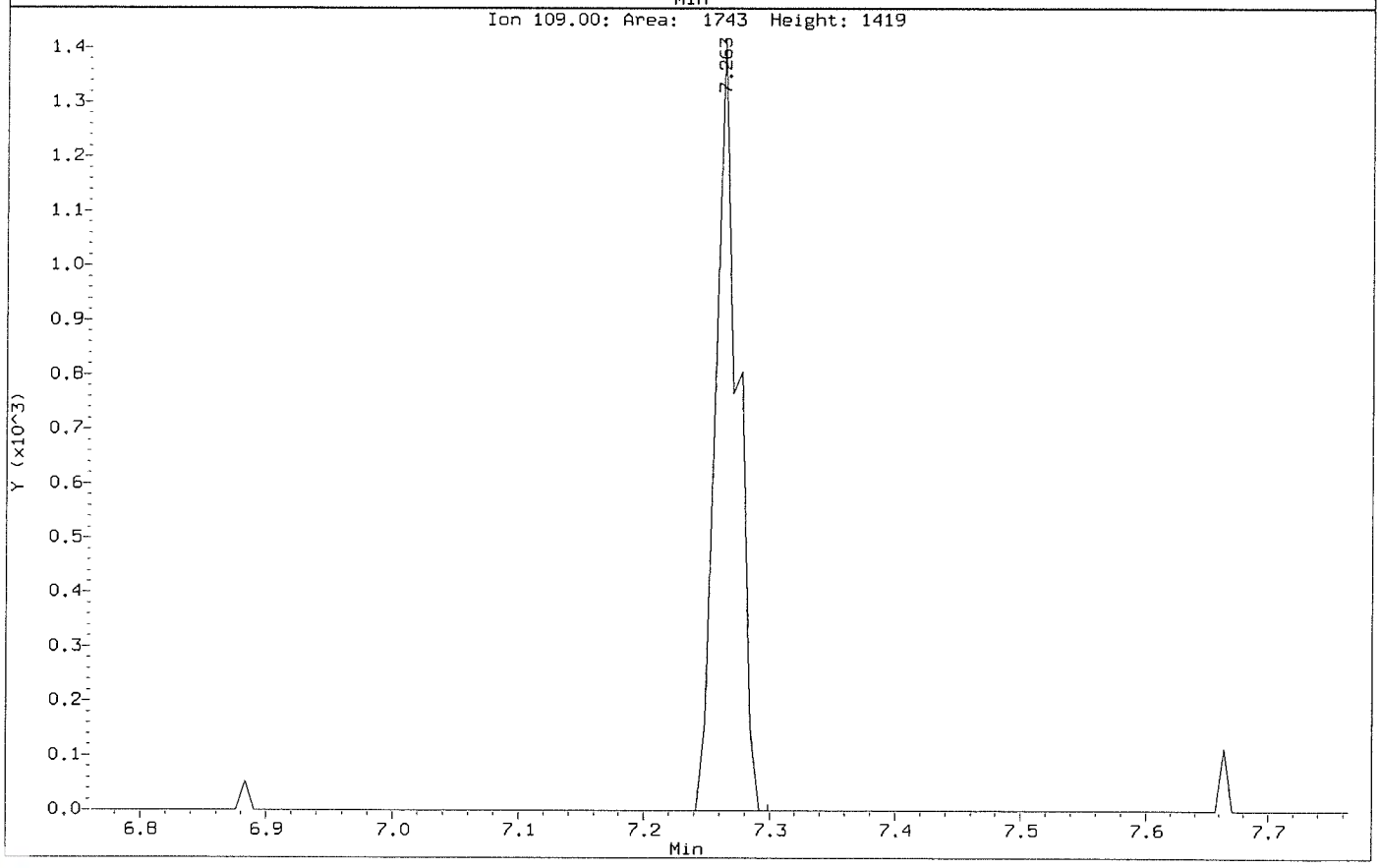




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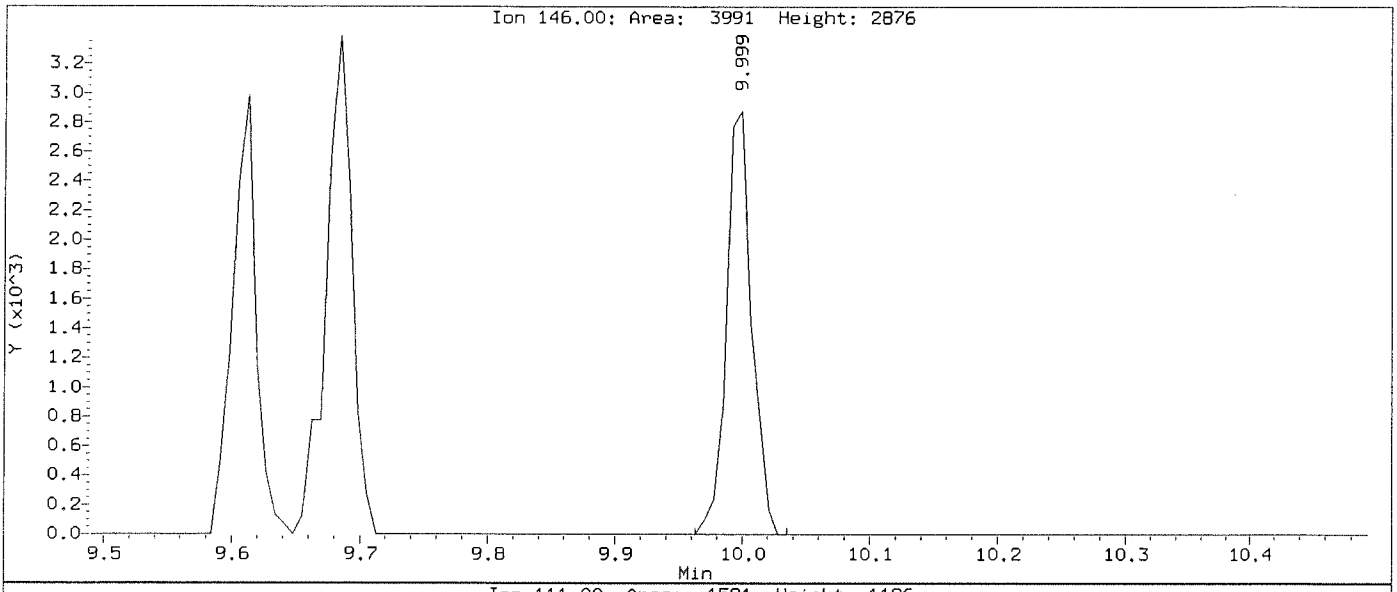
Compound: 1,2-Dibromoethane
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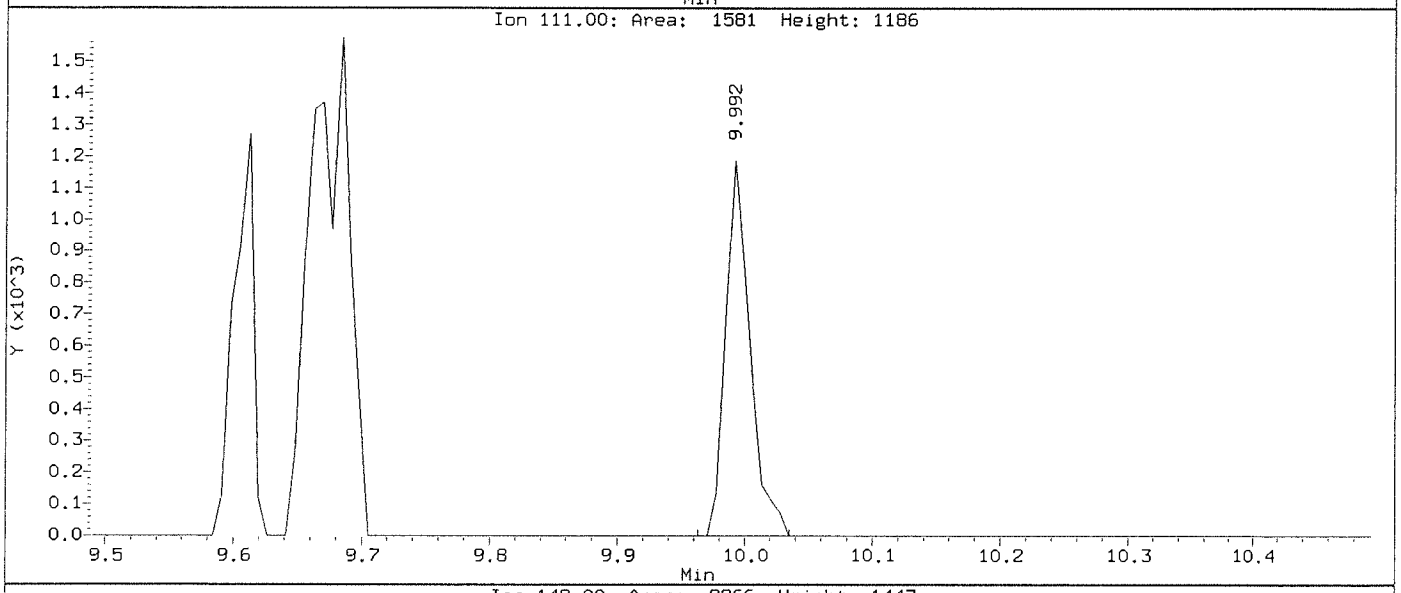


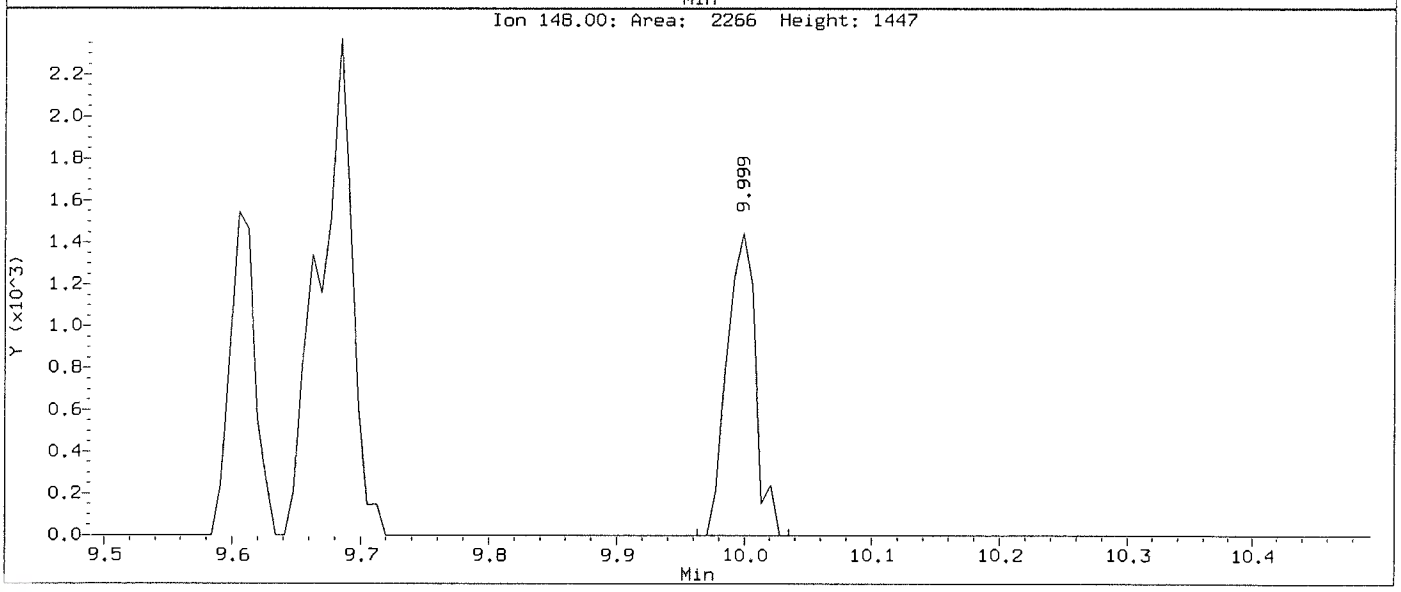


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dichlorobenzene
CAS Number: 95-50-1

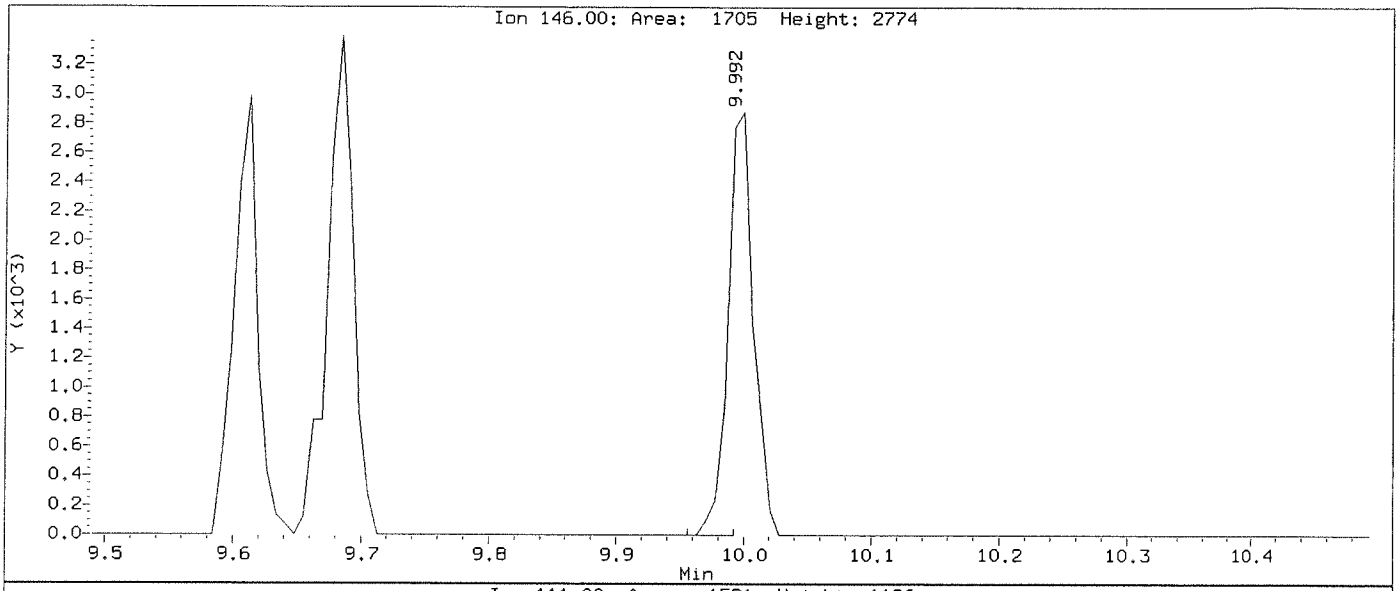


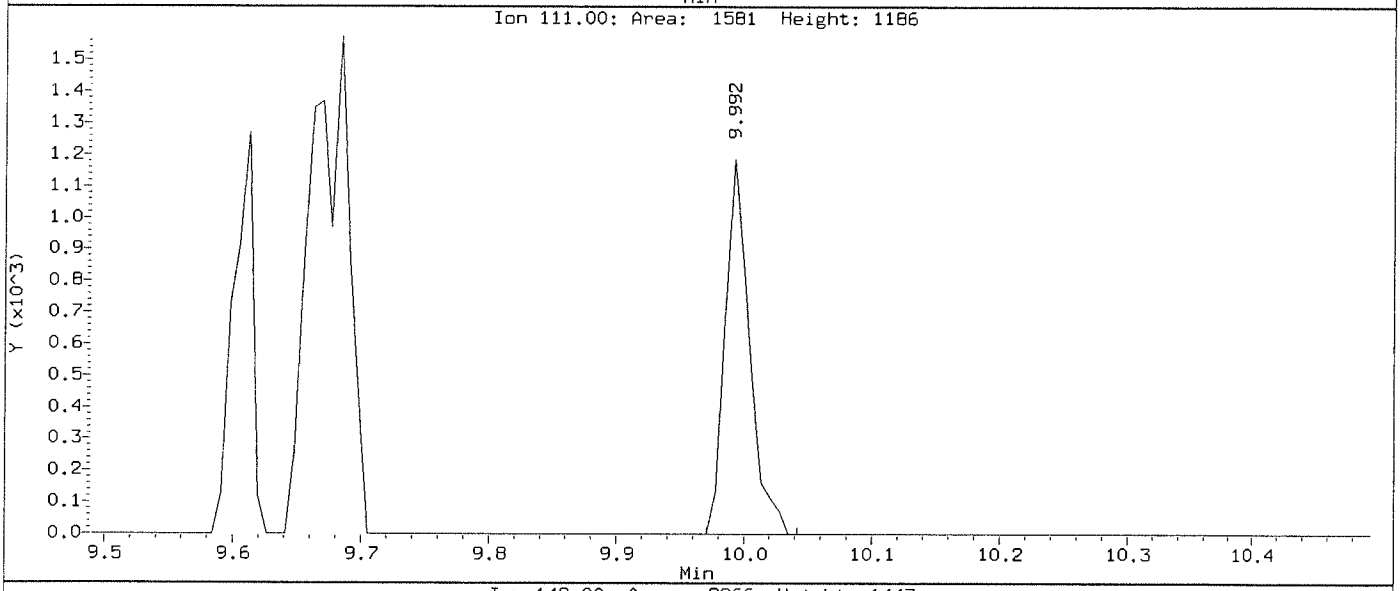


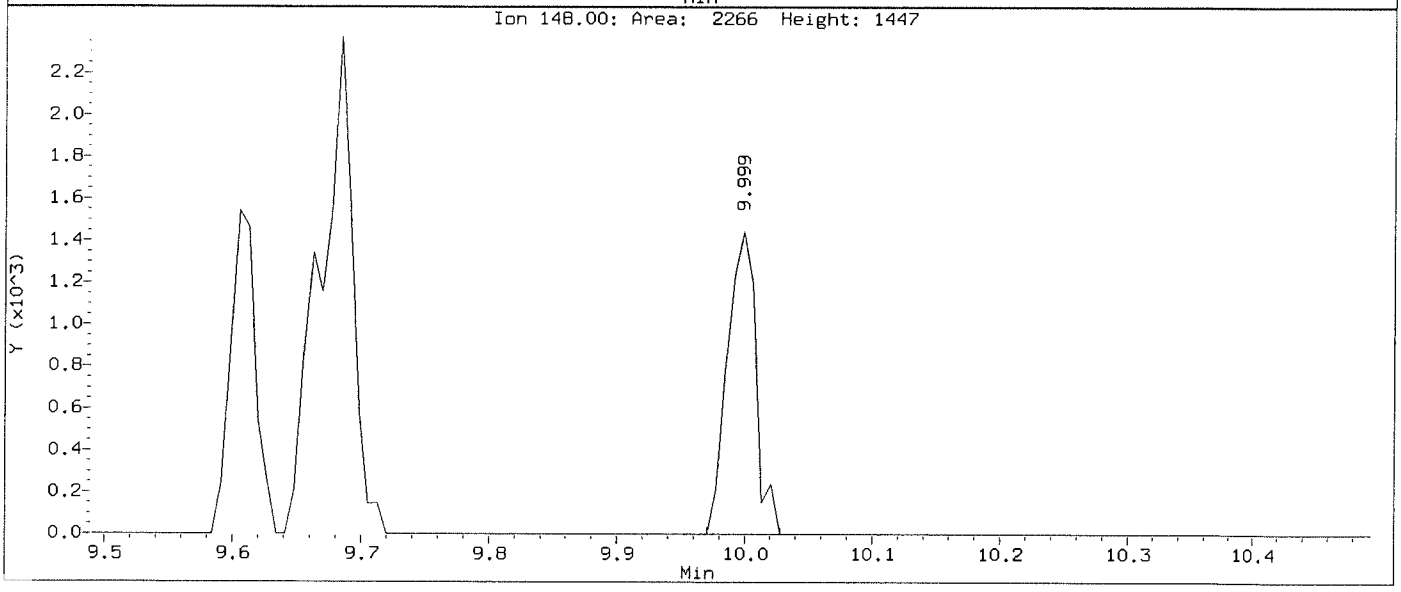


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Client Sample ID: VSTD000.5

Compound: 1,2-Dichlorobenzene
CAS Number: 95-50-1

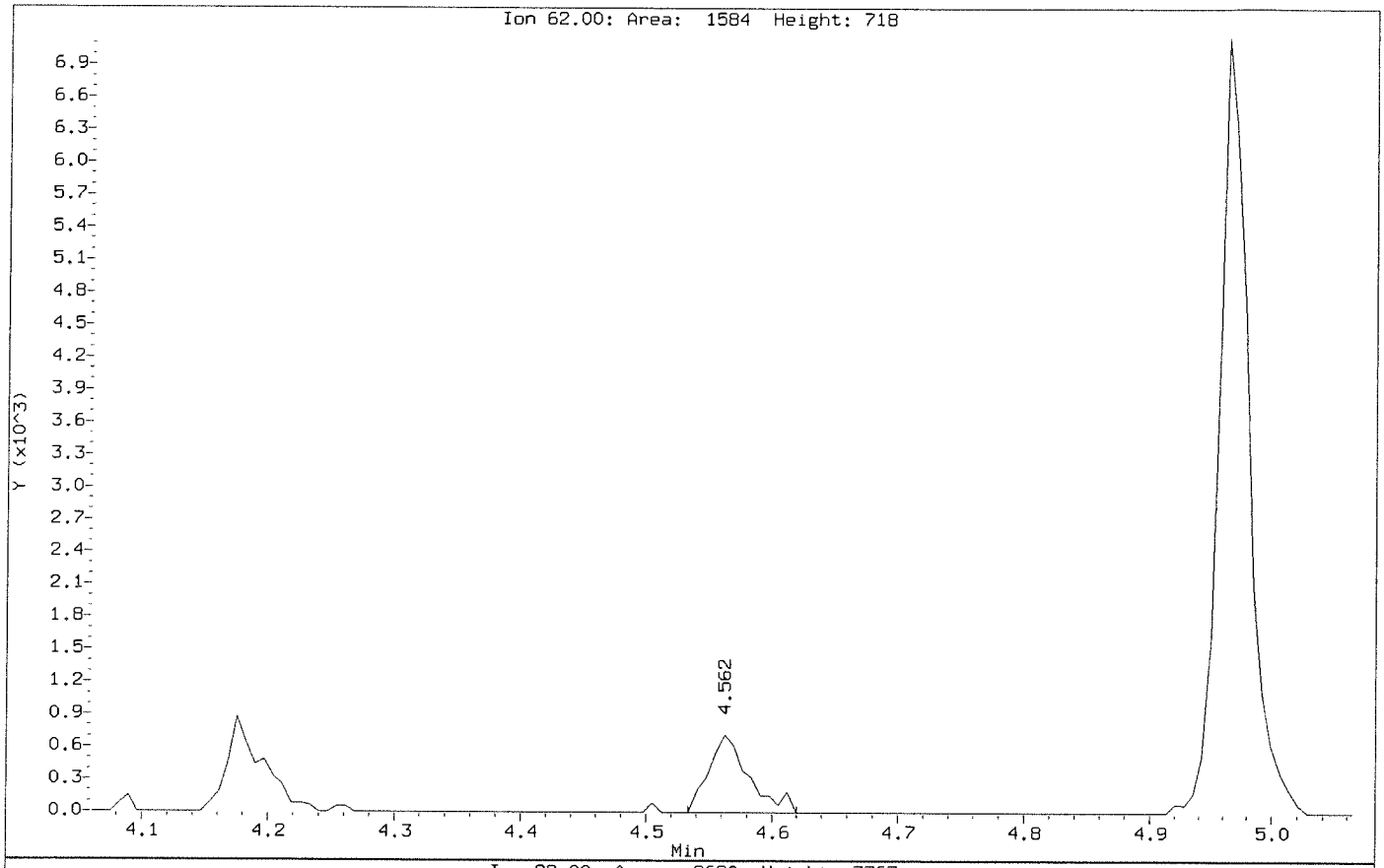


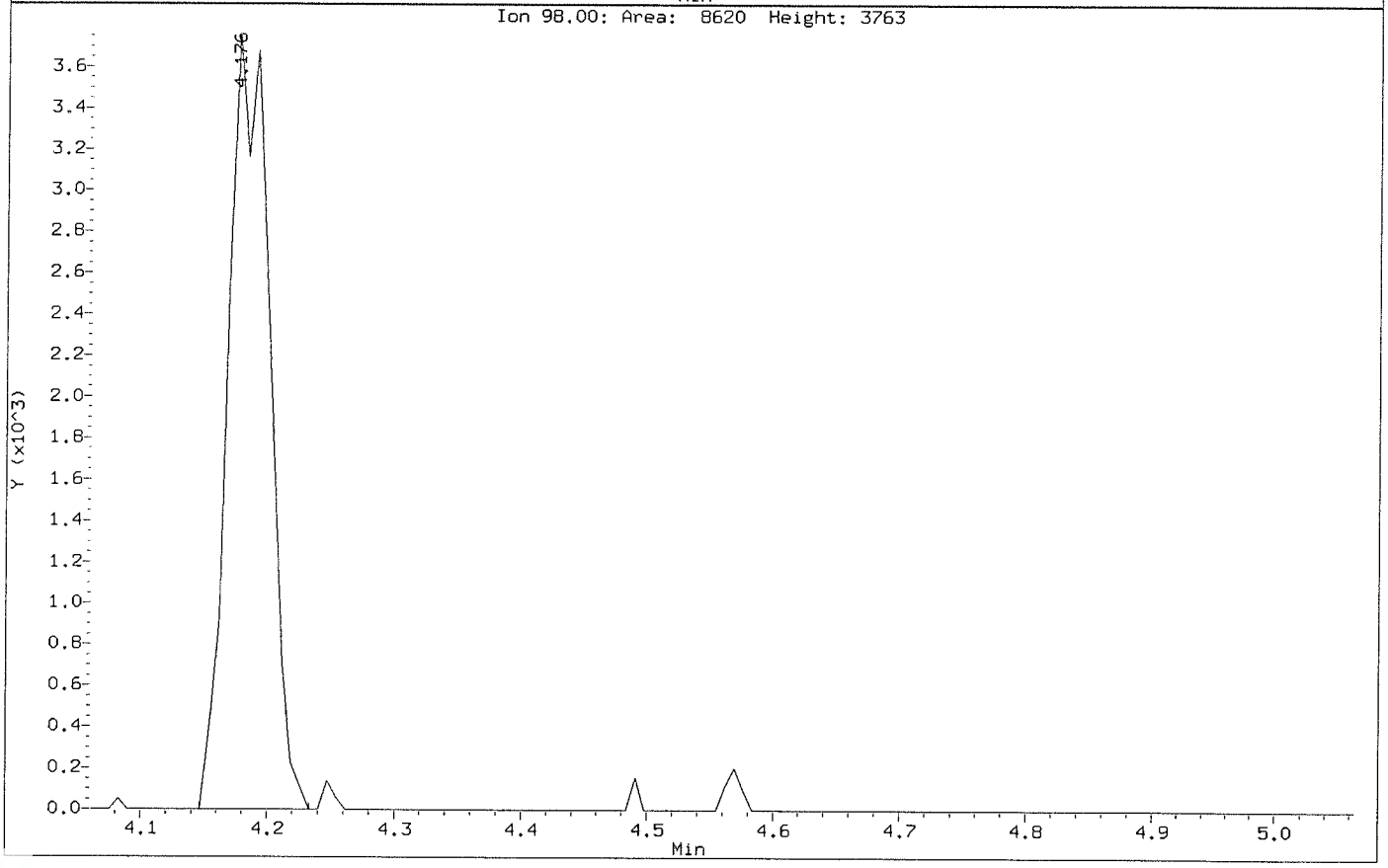




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Client Sample ID: VSTD000.5

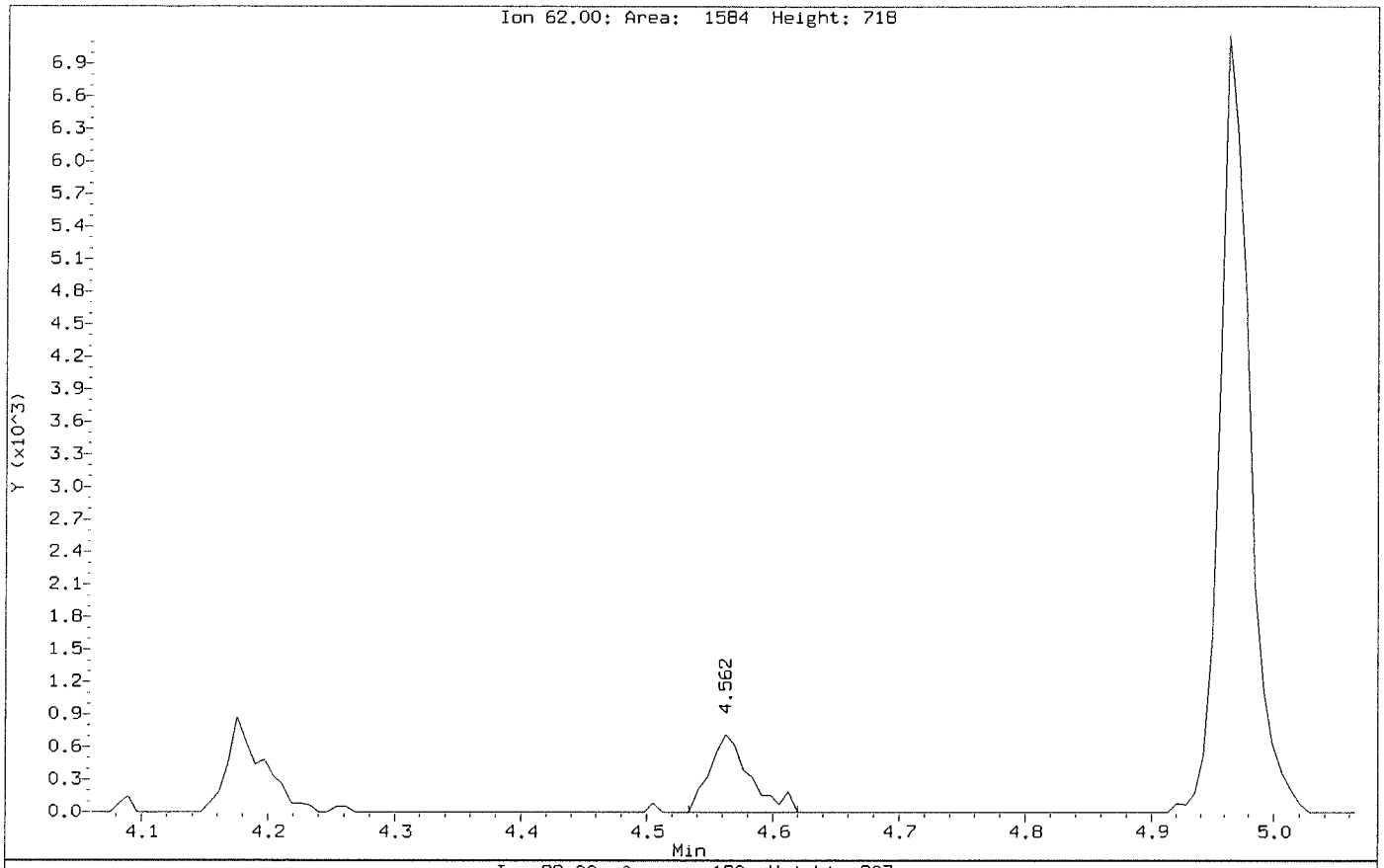
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

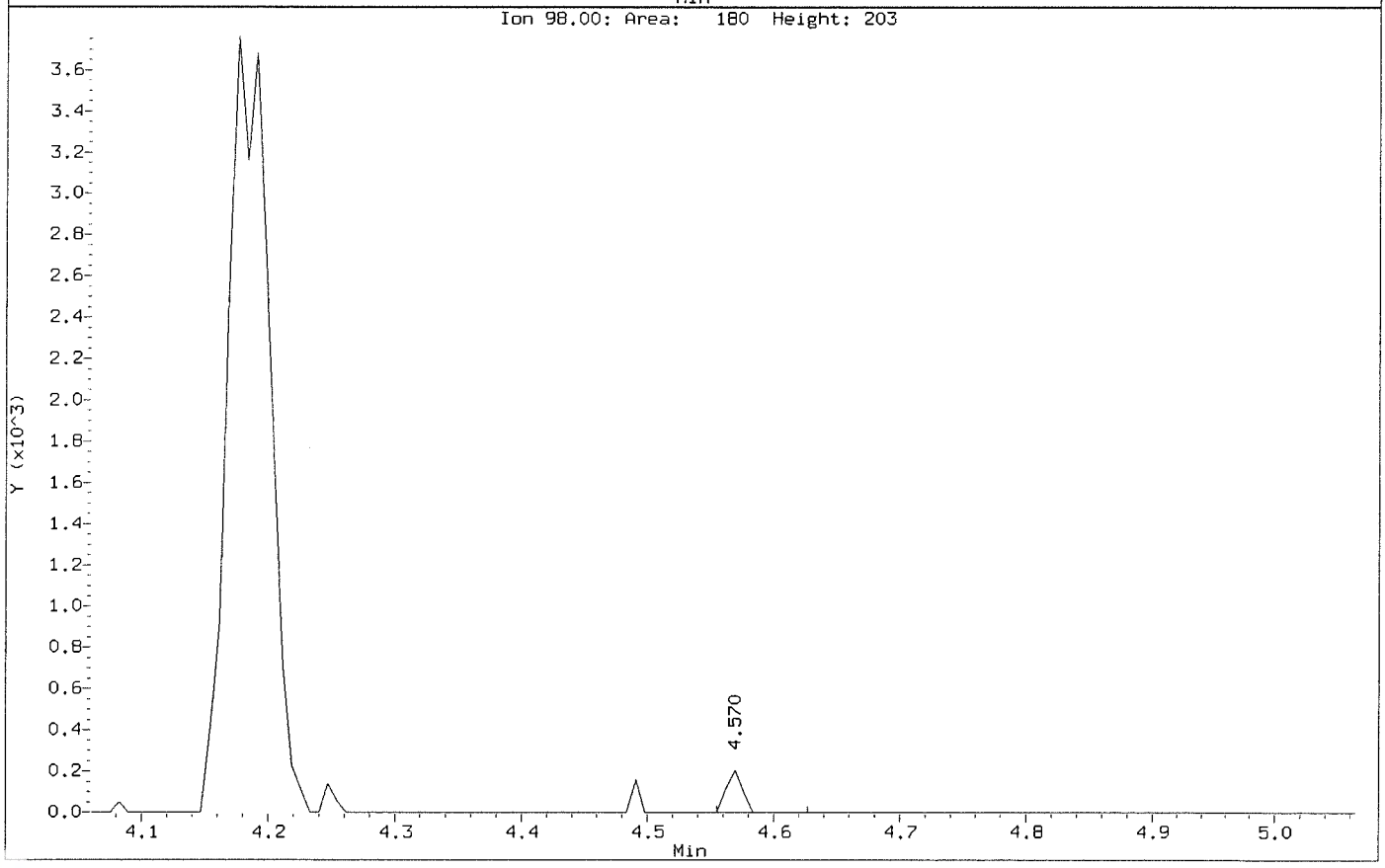




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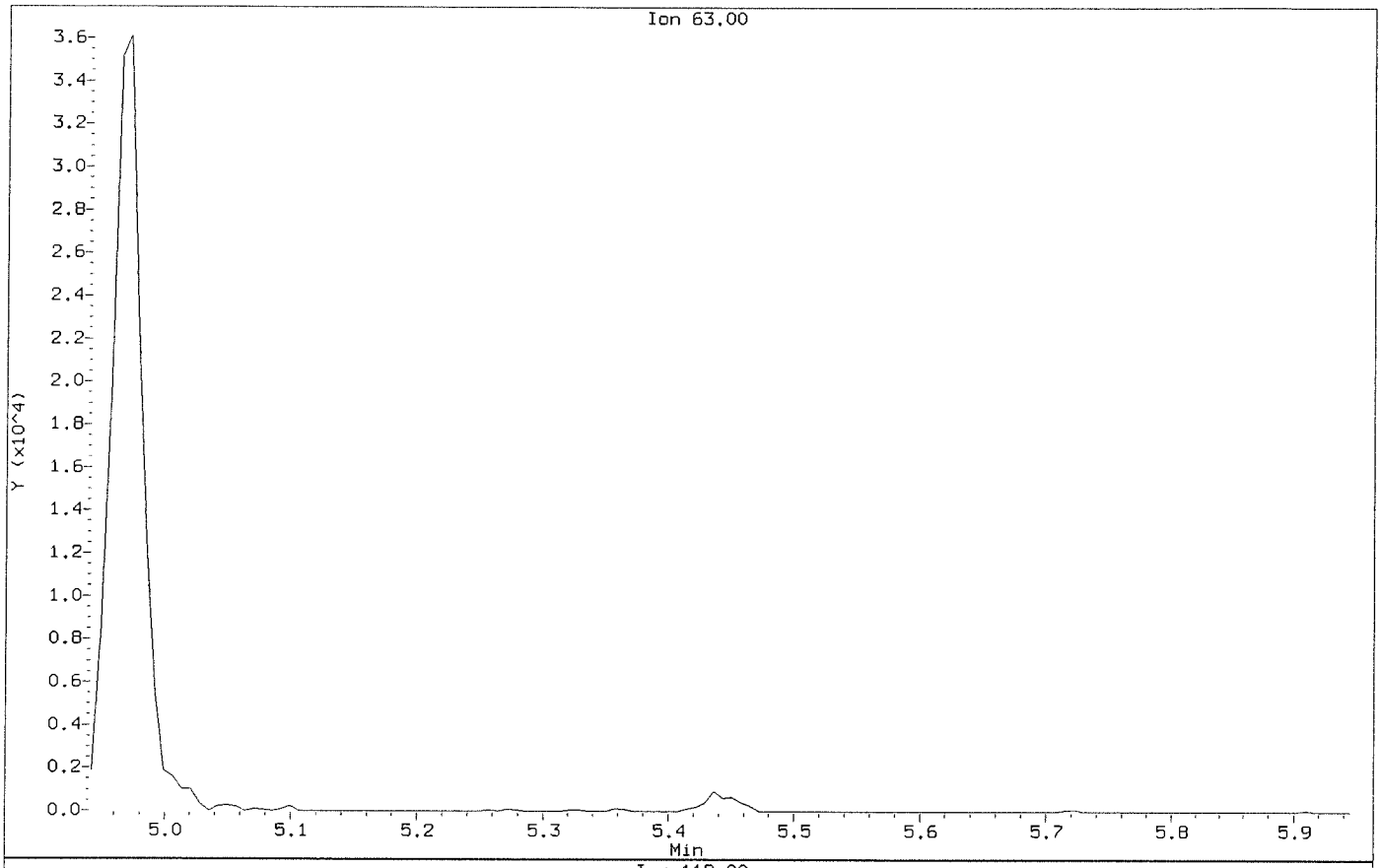
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

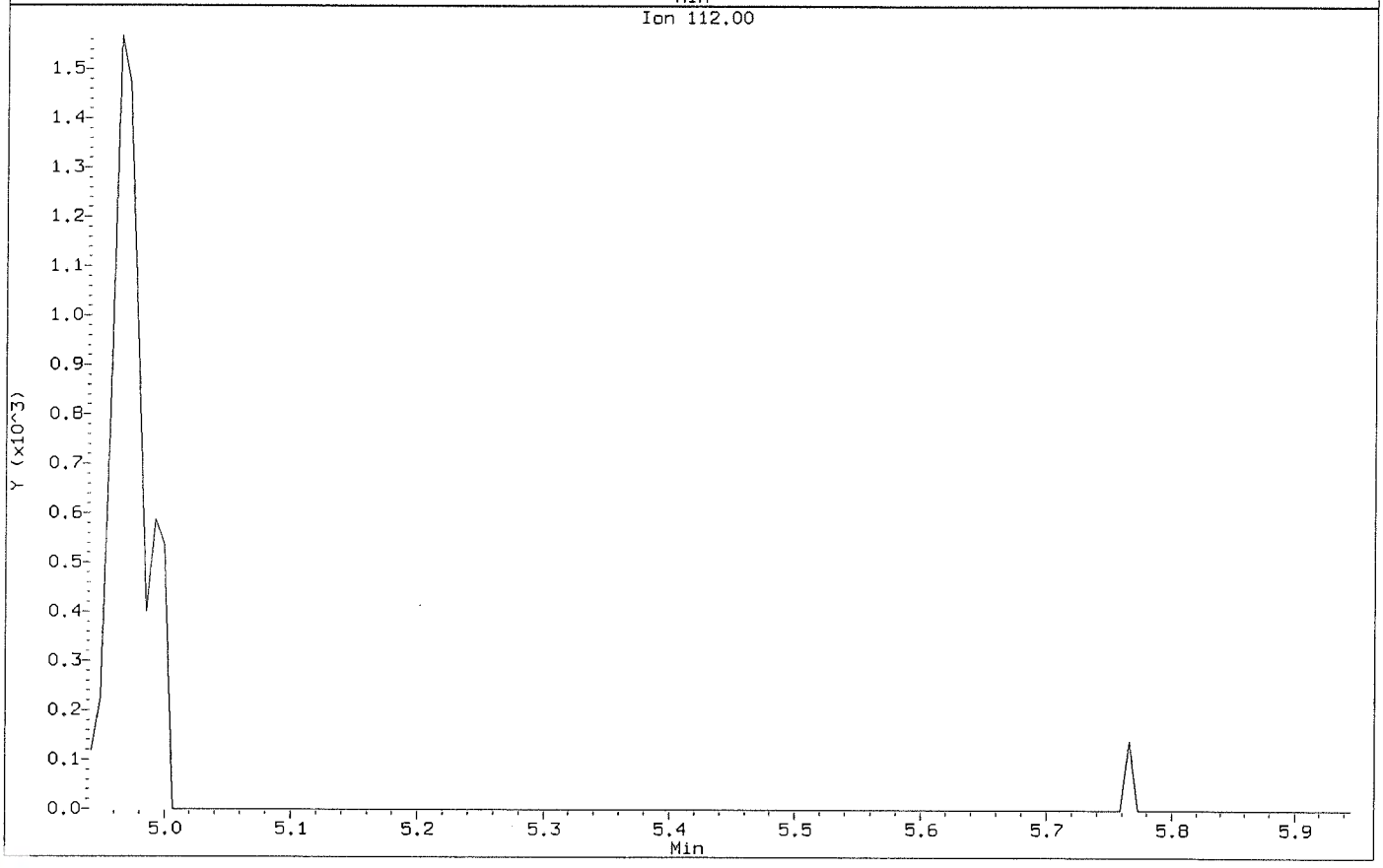




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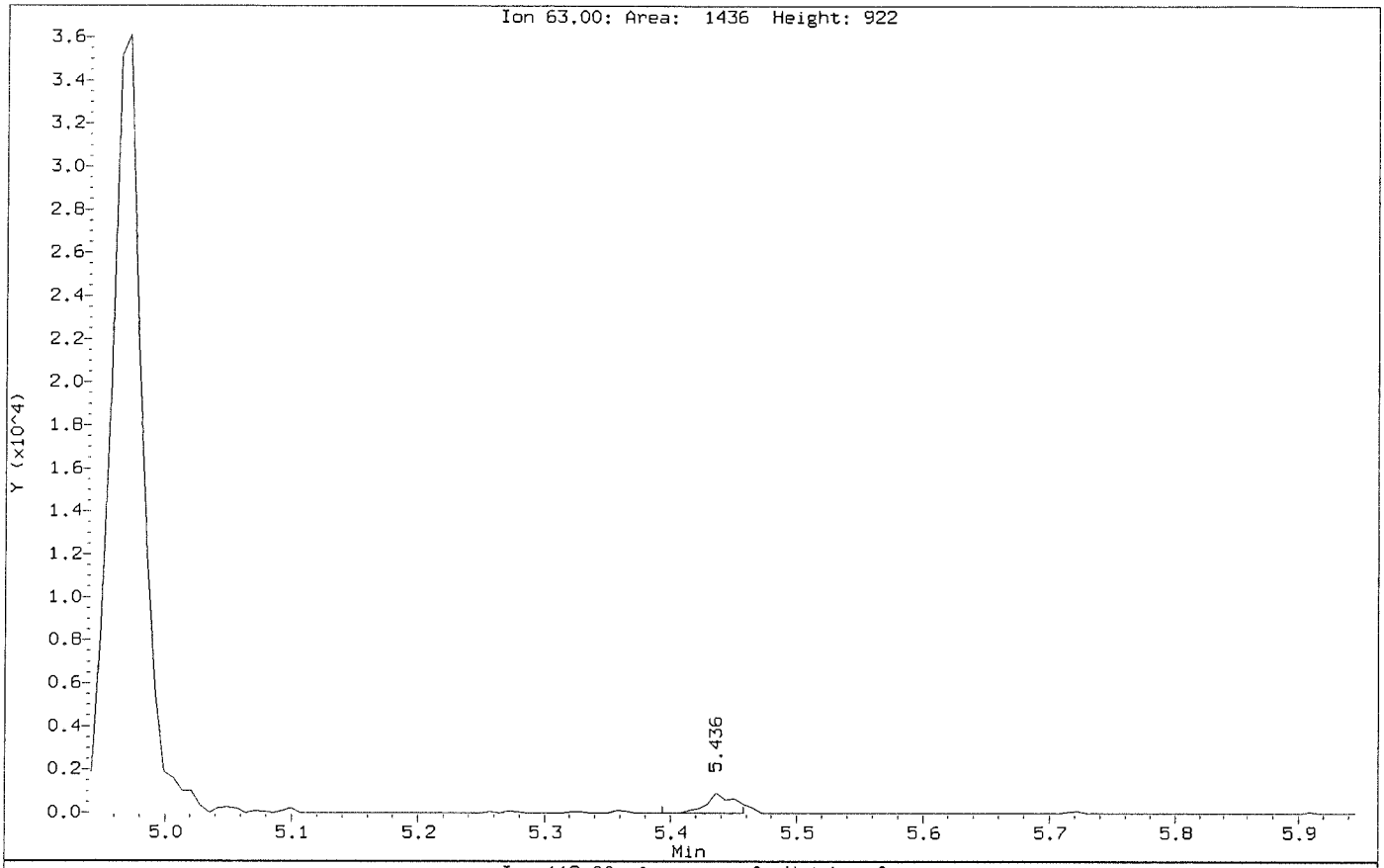
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

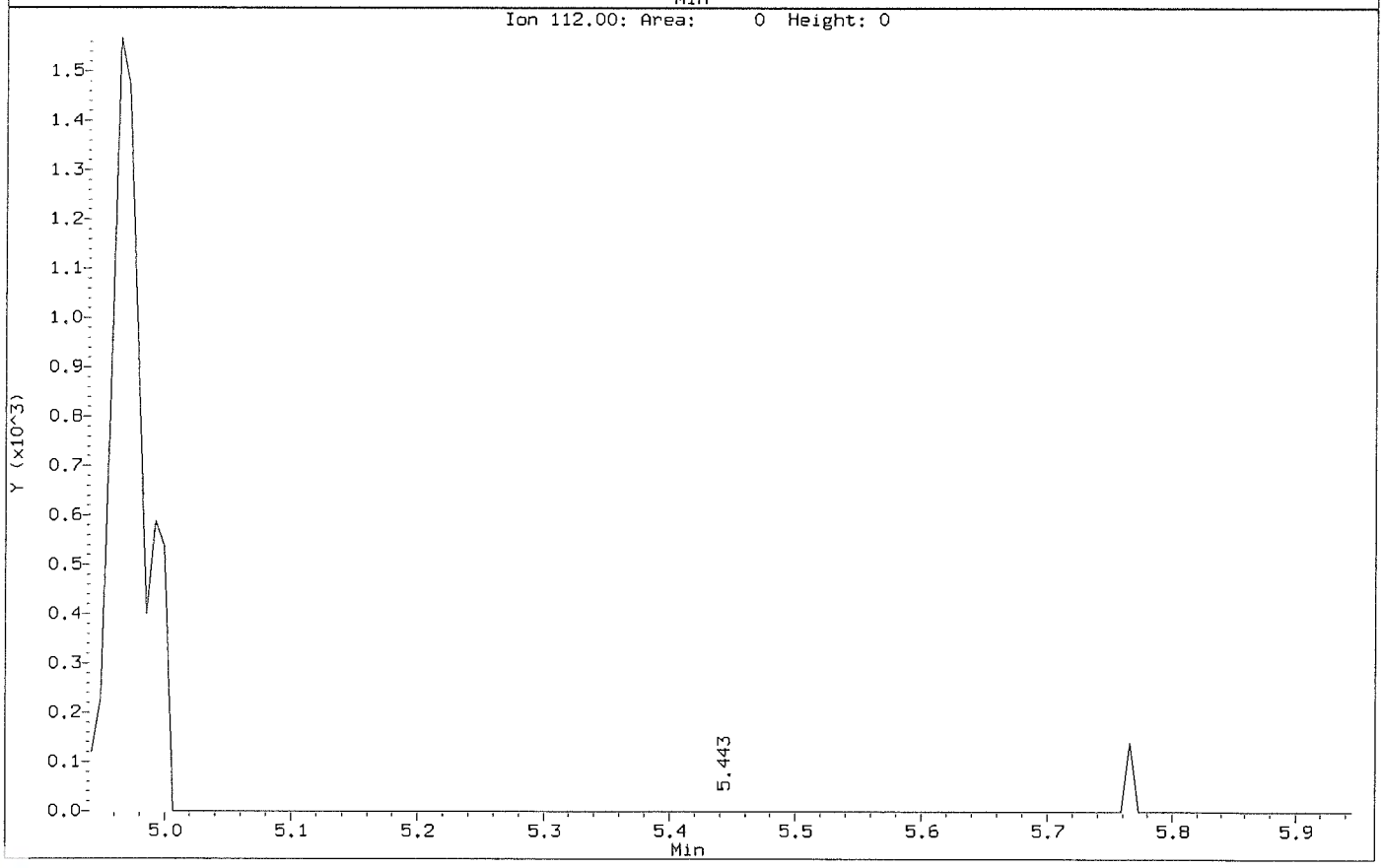




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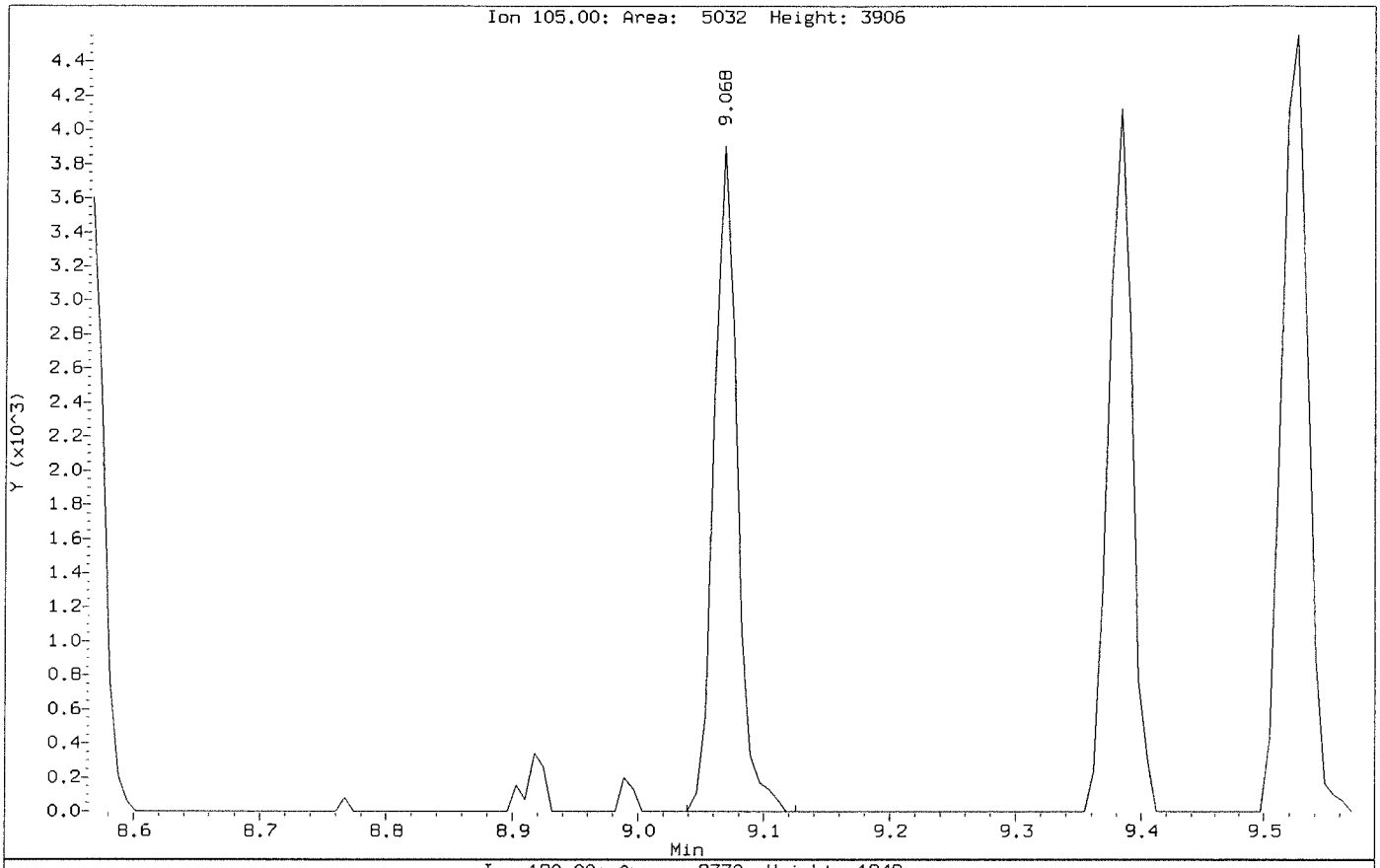
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

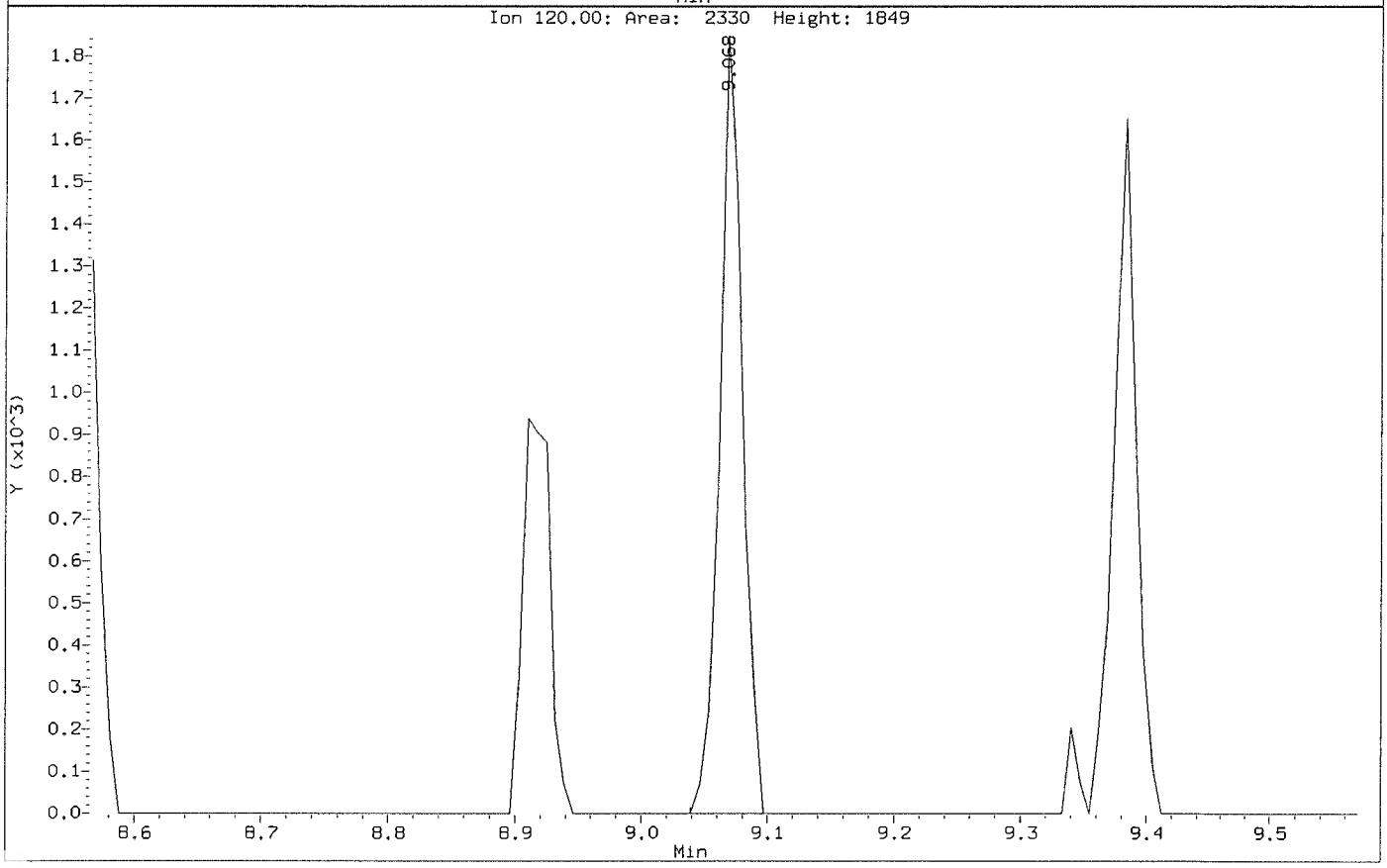




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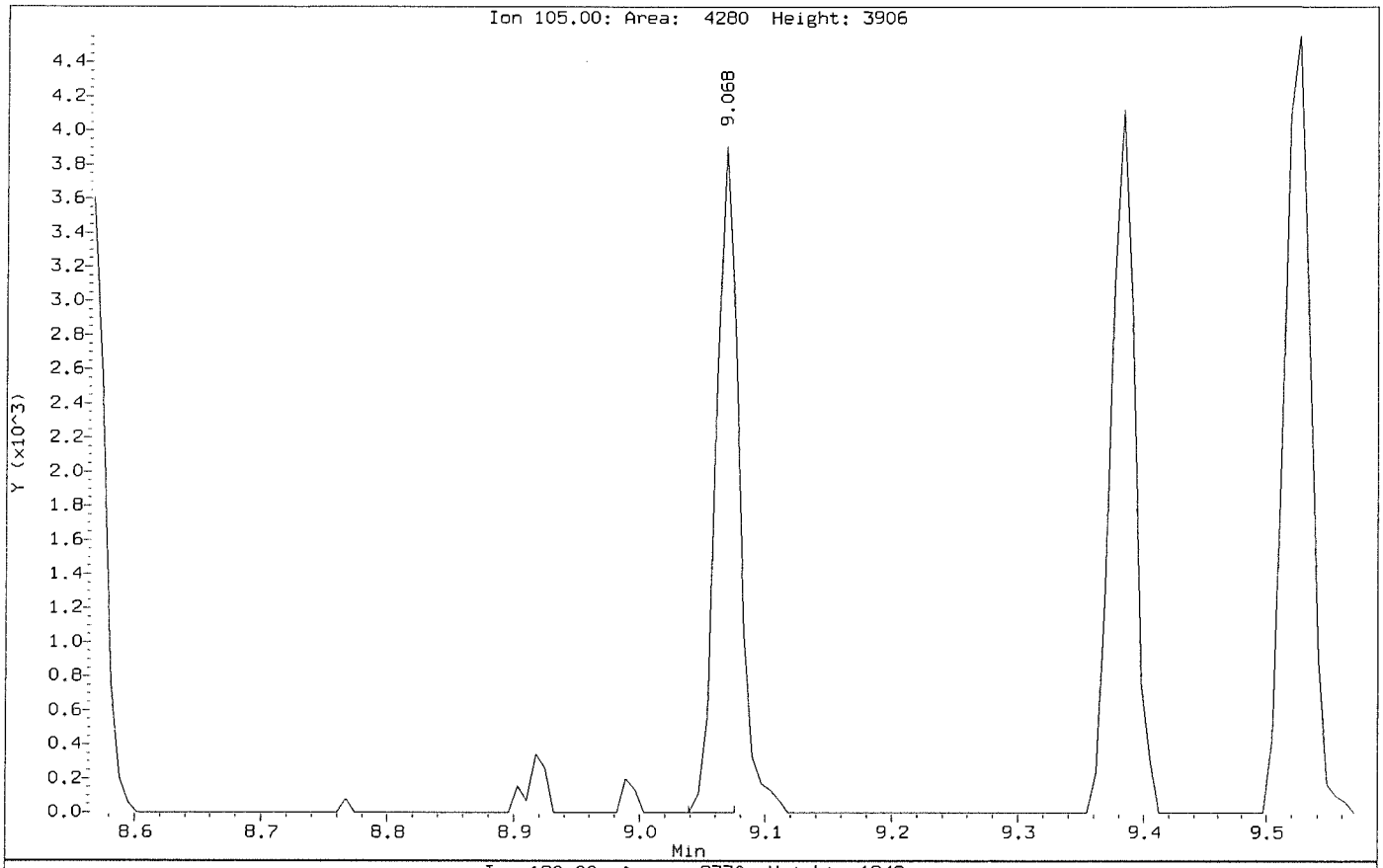
Compound: 1,3,5-Trimethylbenzene
CAS Number: 108-67-8

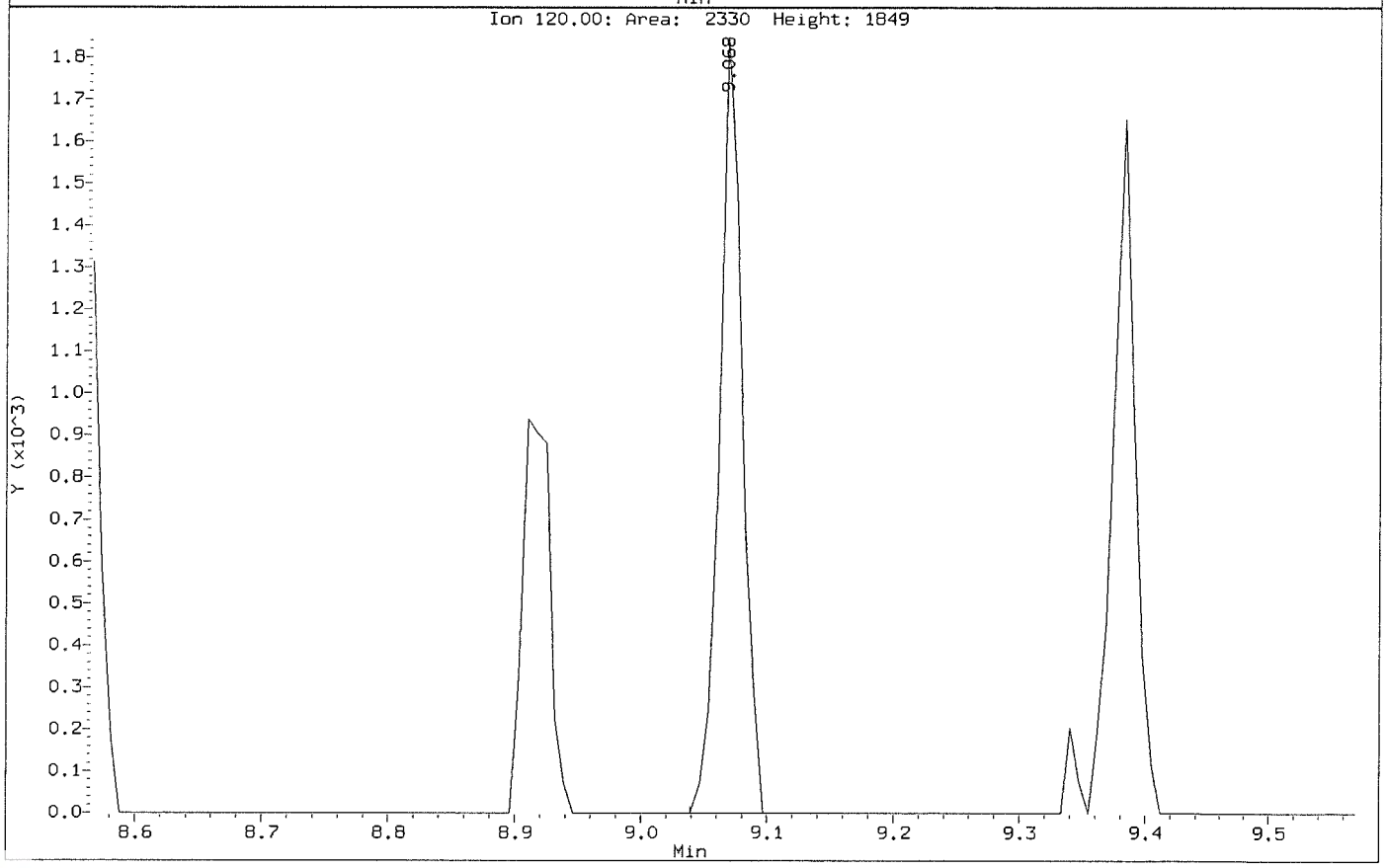




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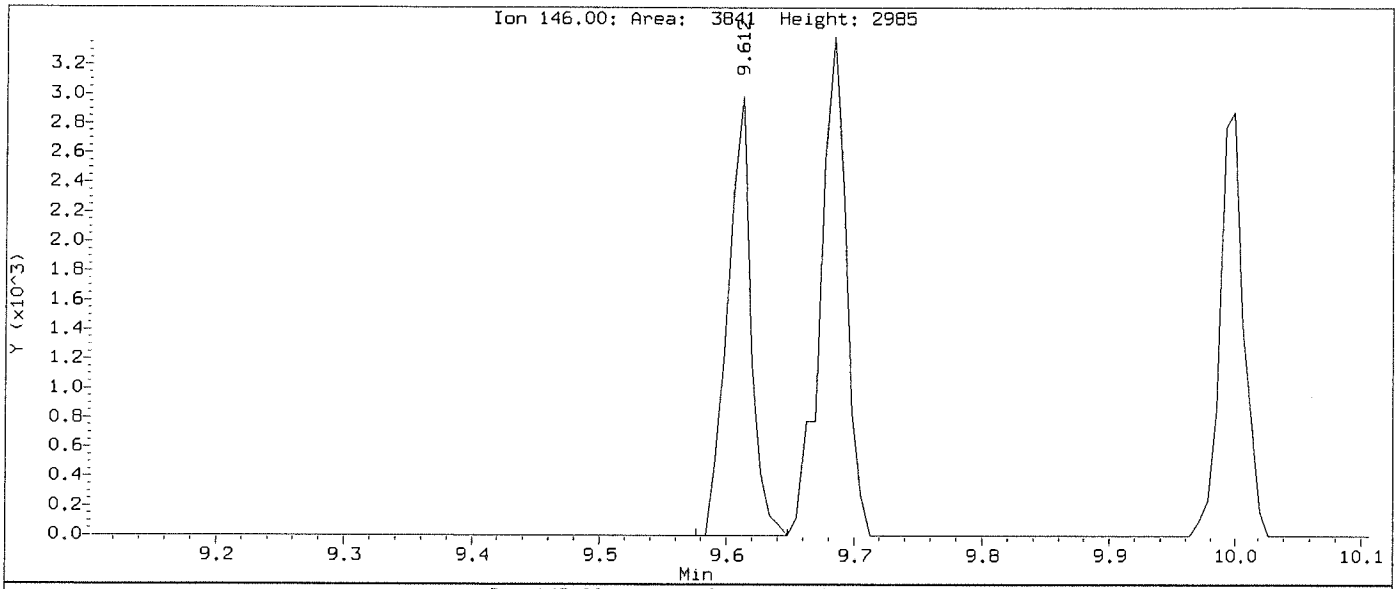
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CAS Number: 108-67-8

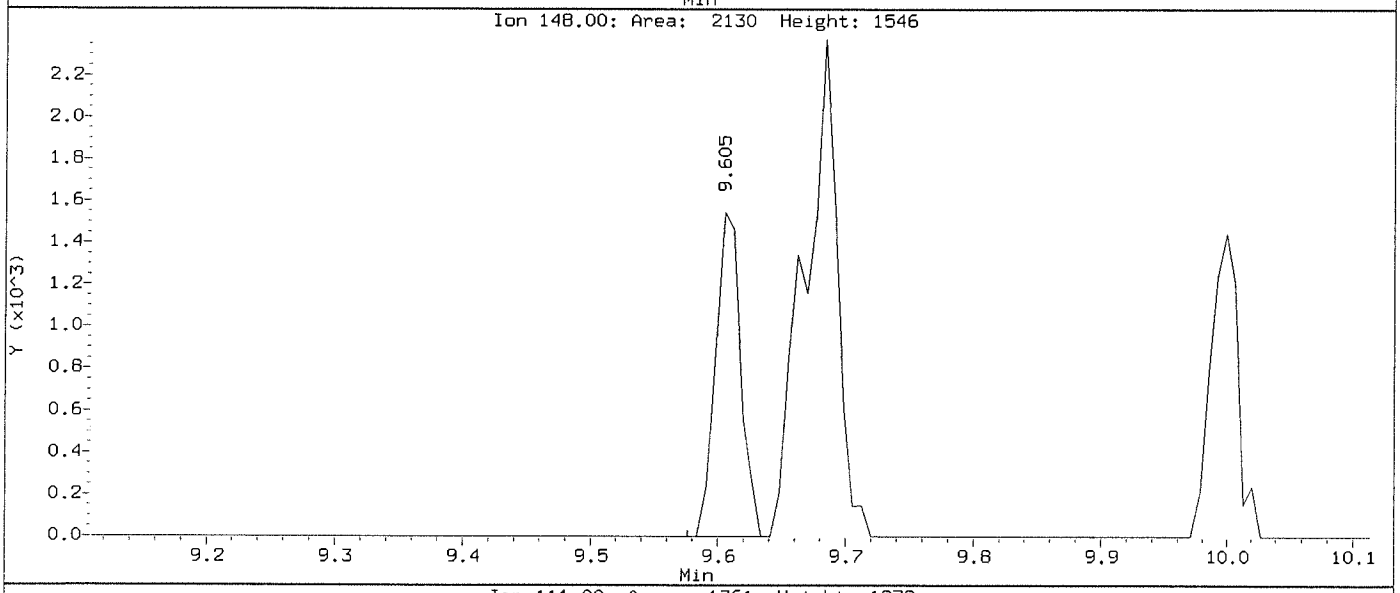


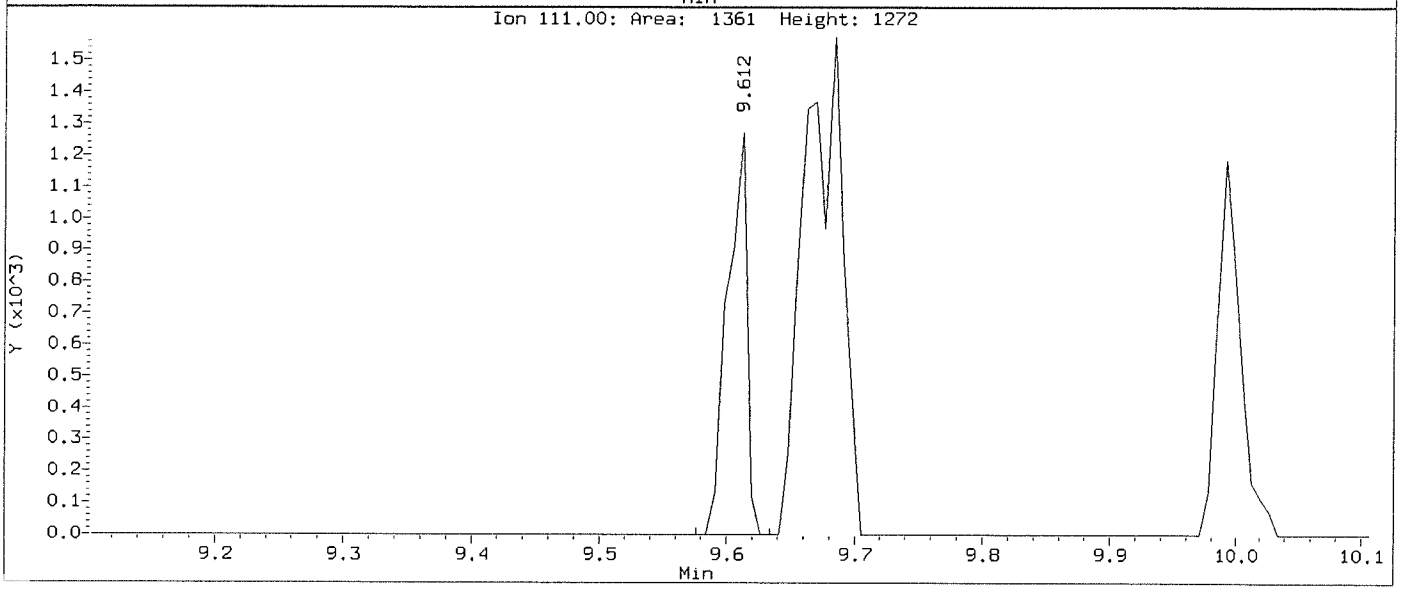


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1

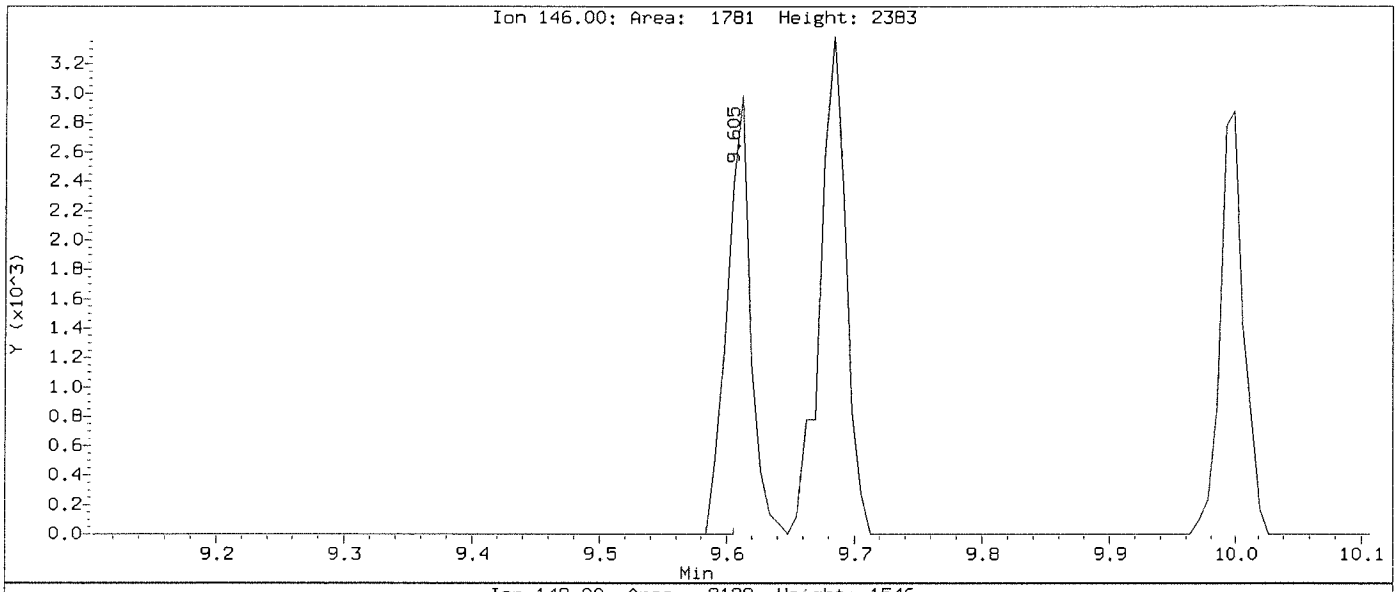


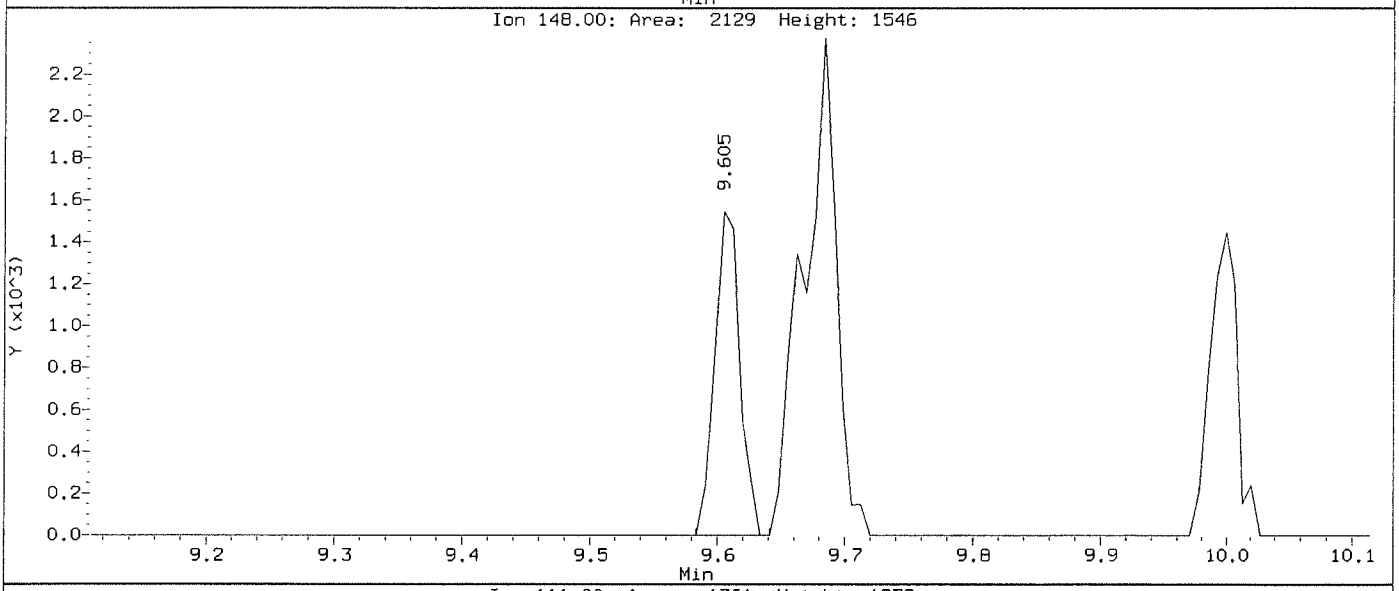


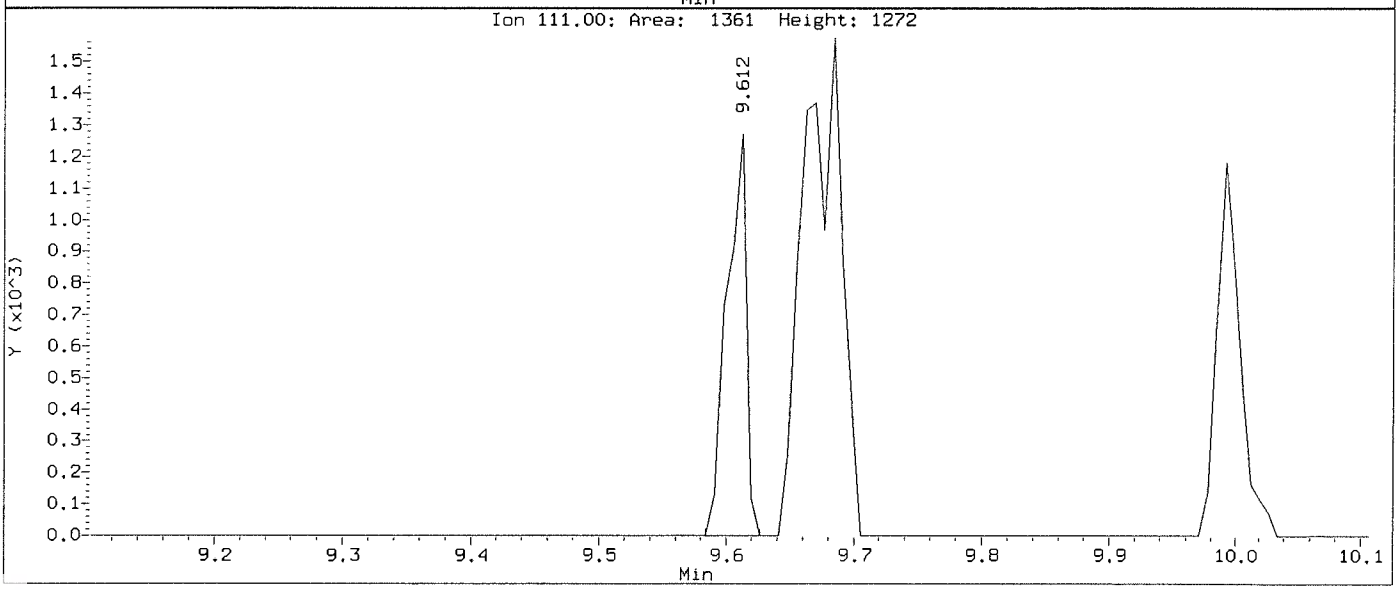


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1

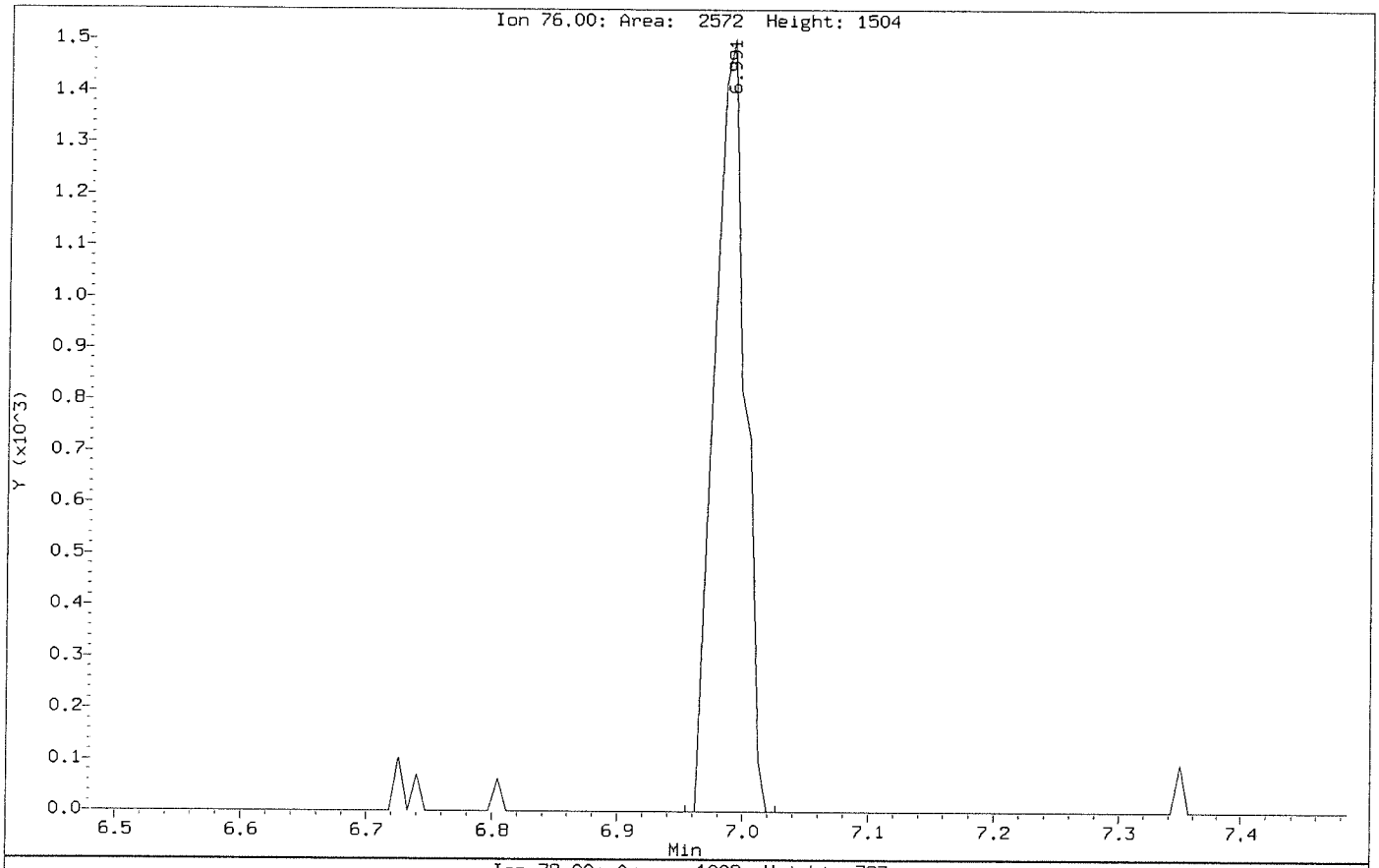


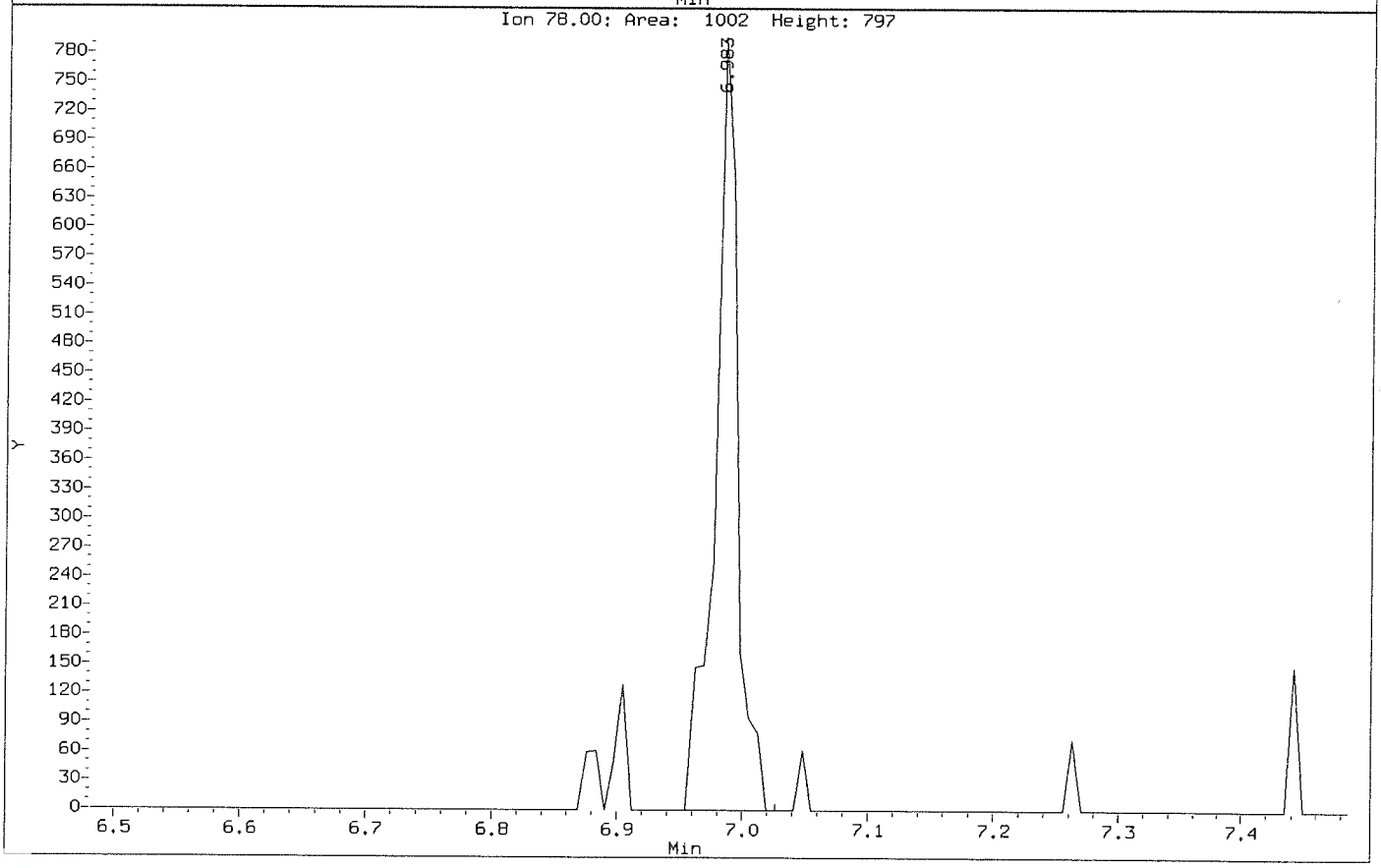




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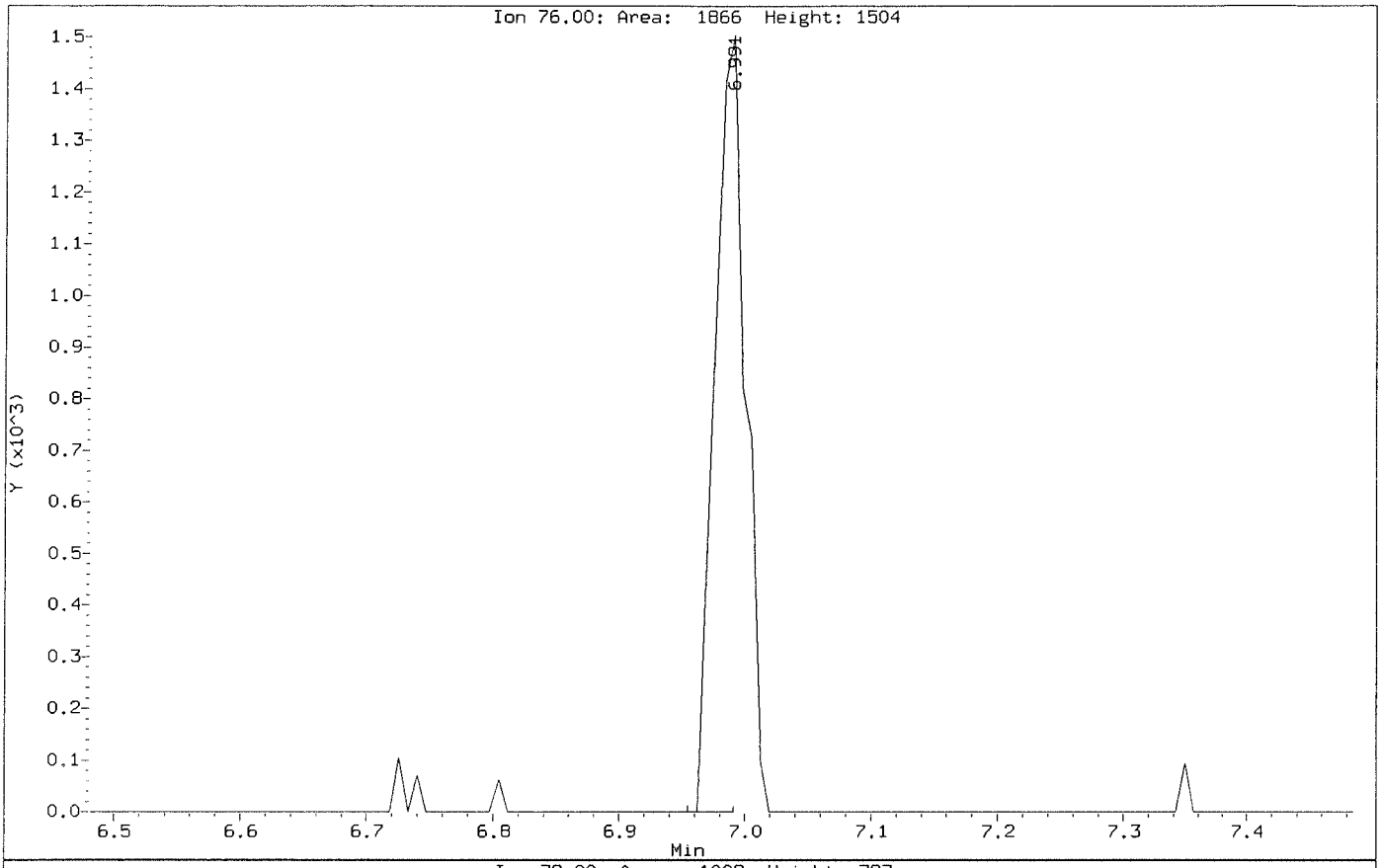
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

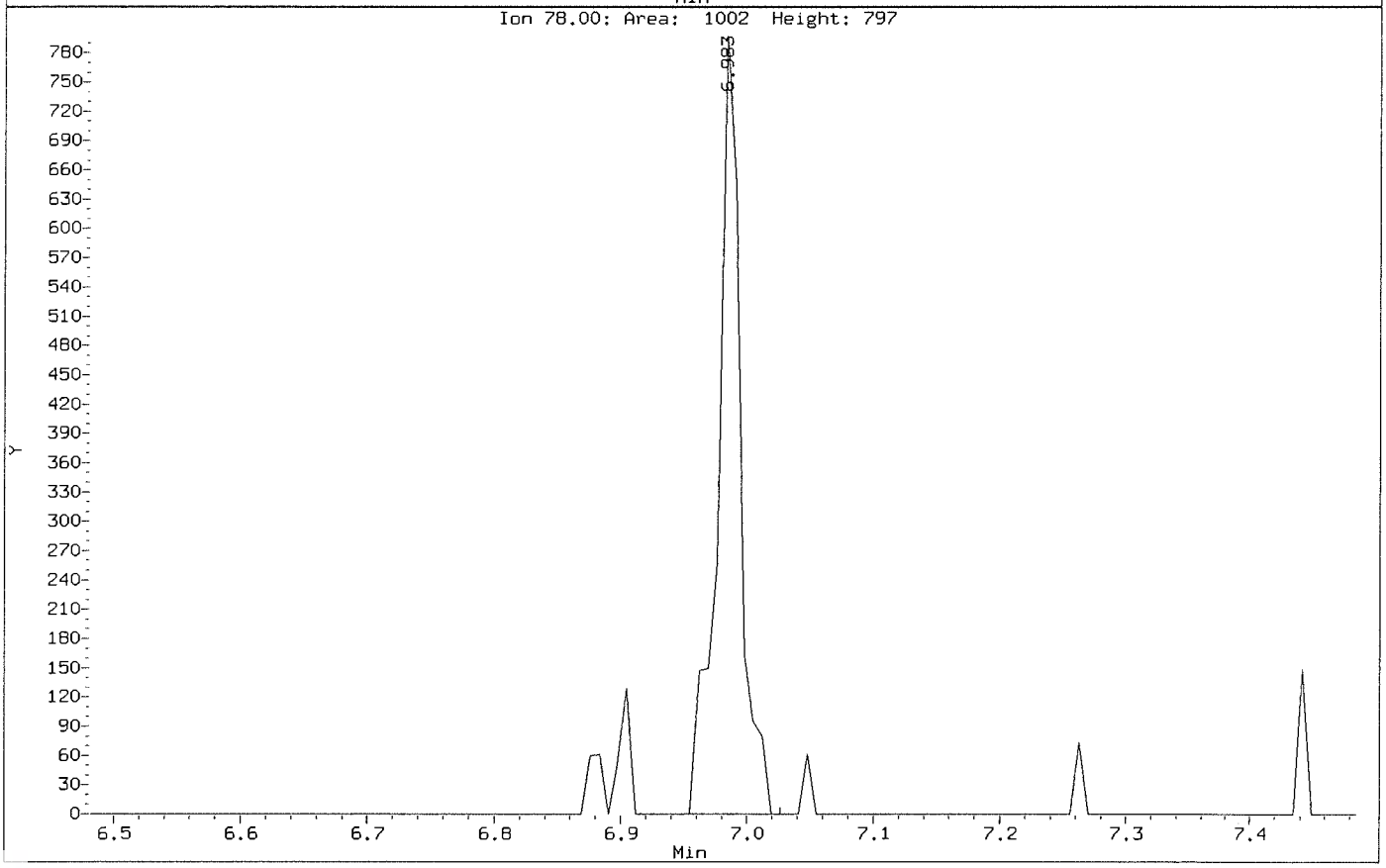




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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

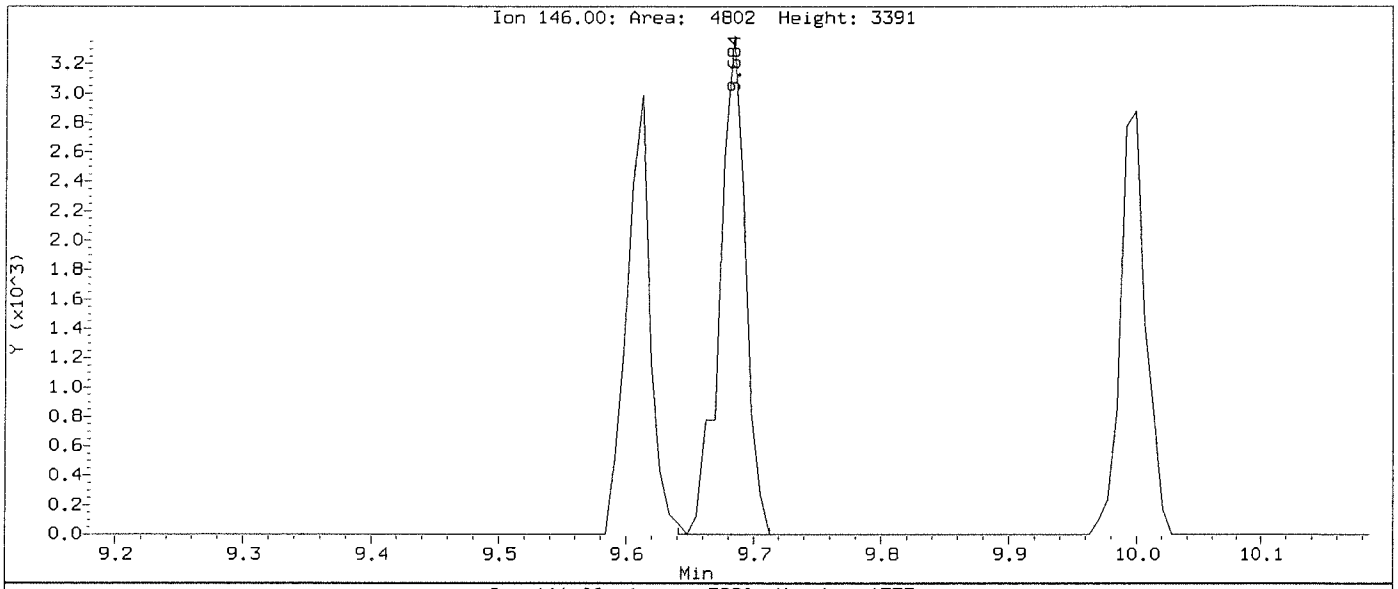
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

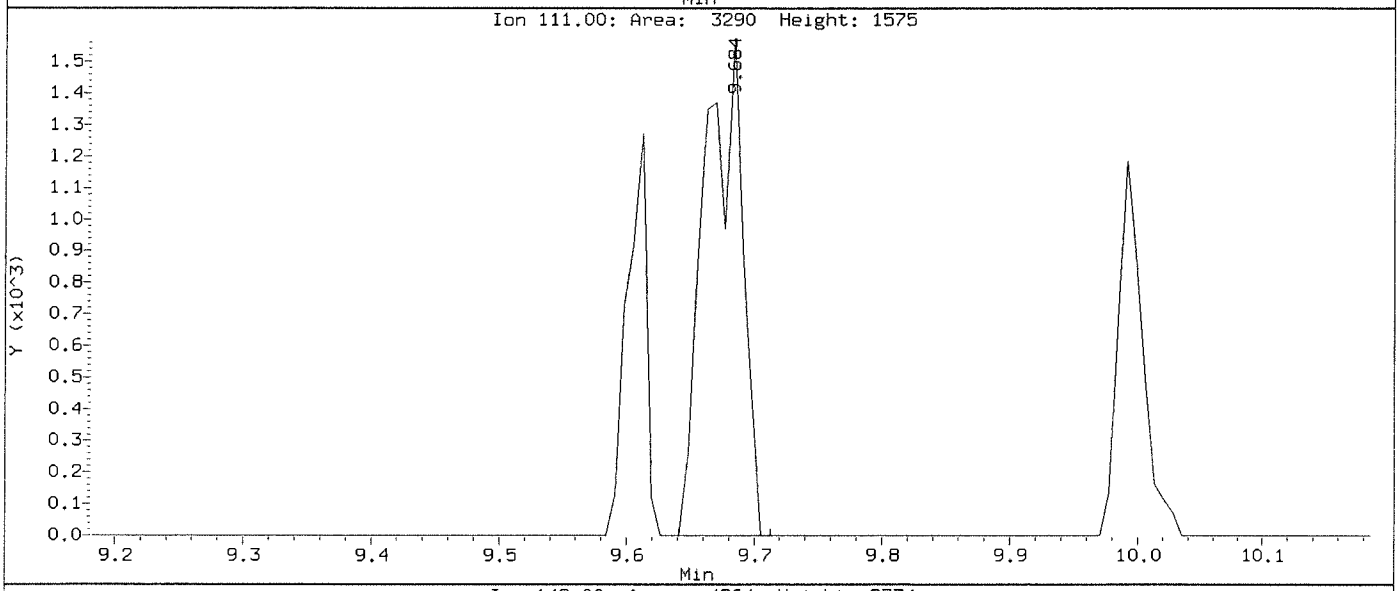


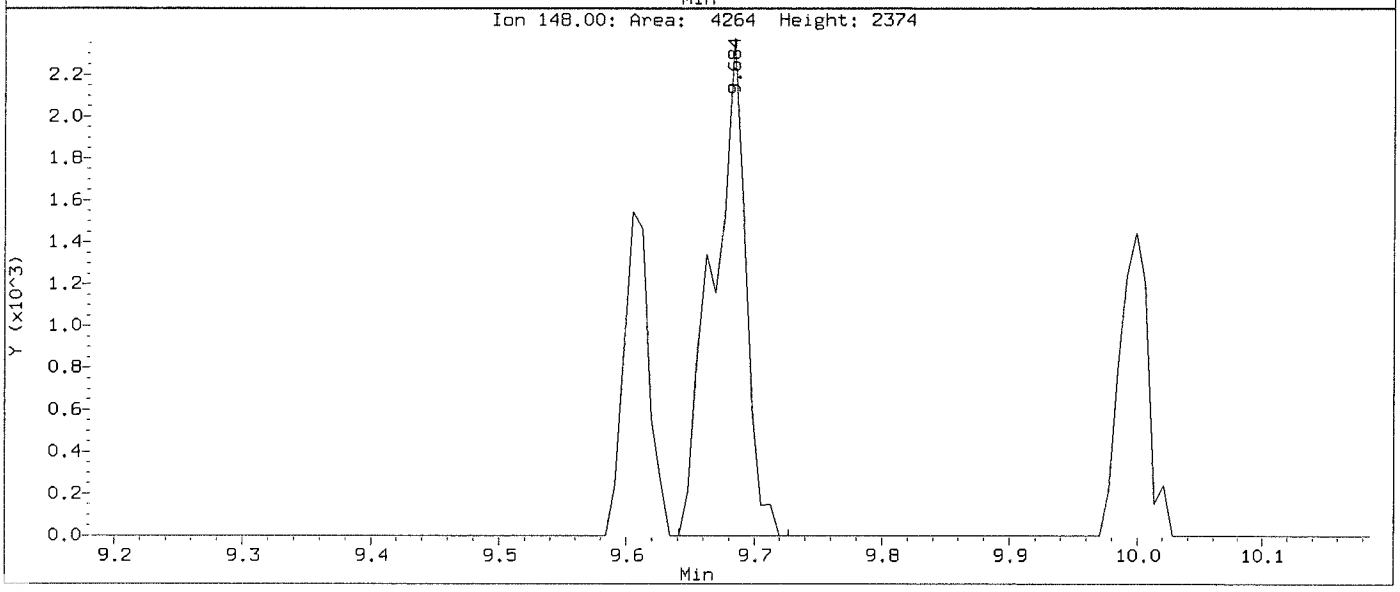


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

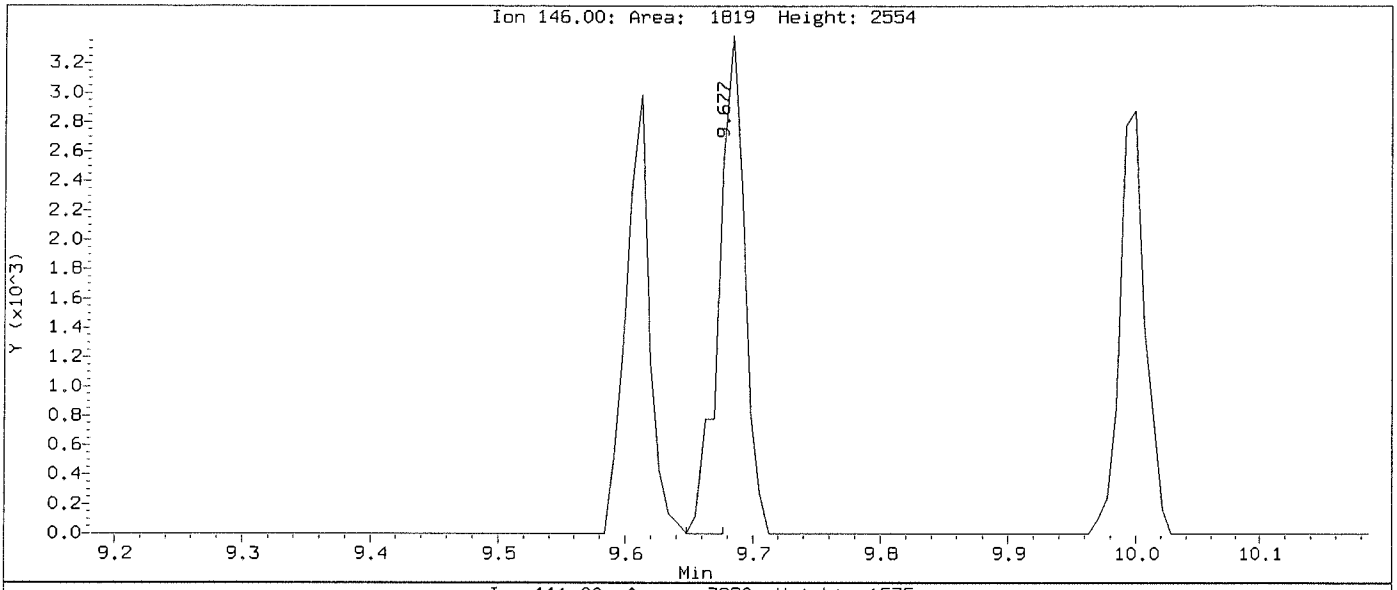


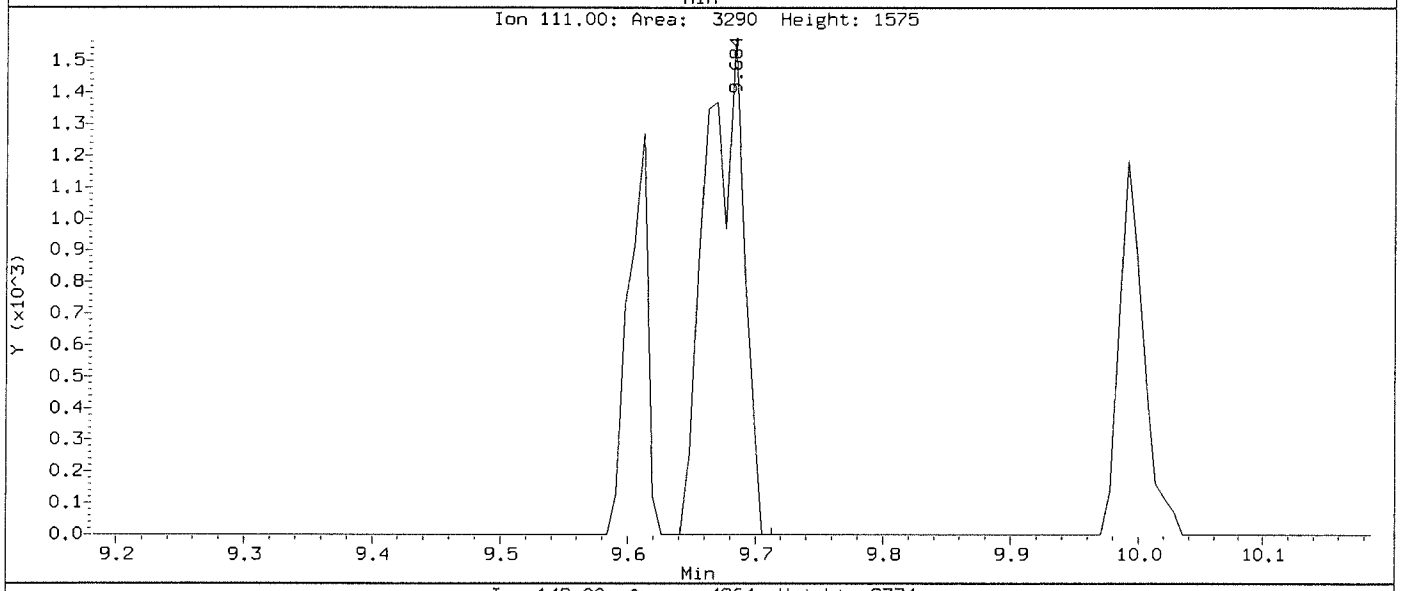


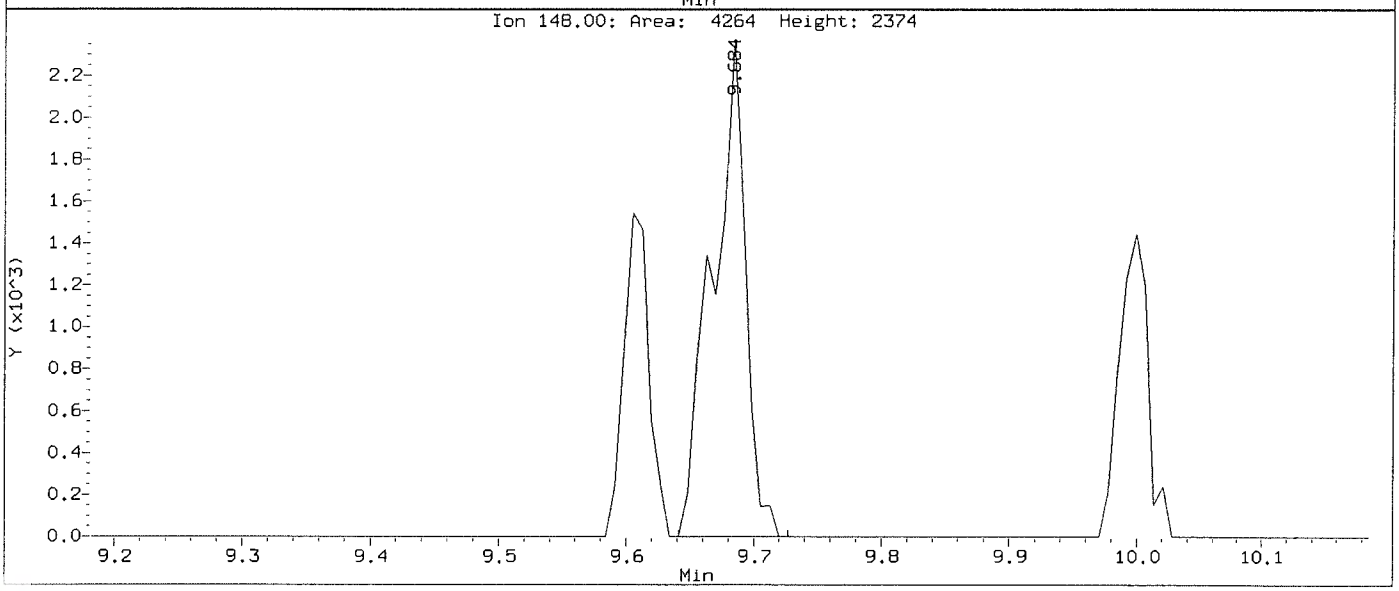


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

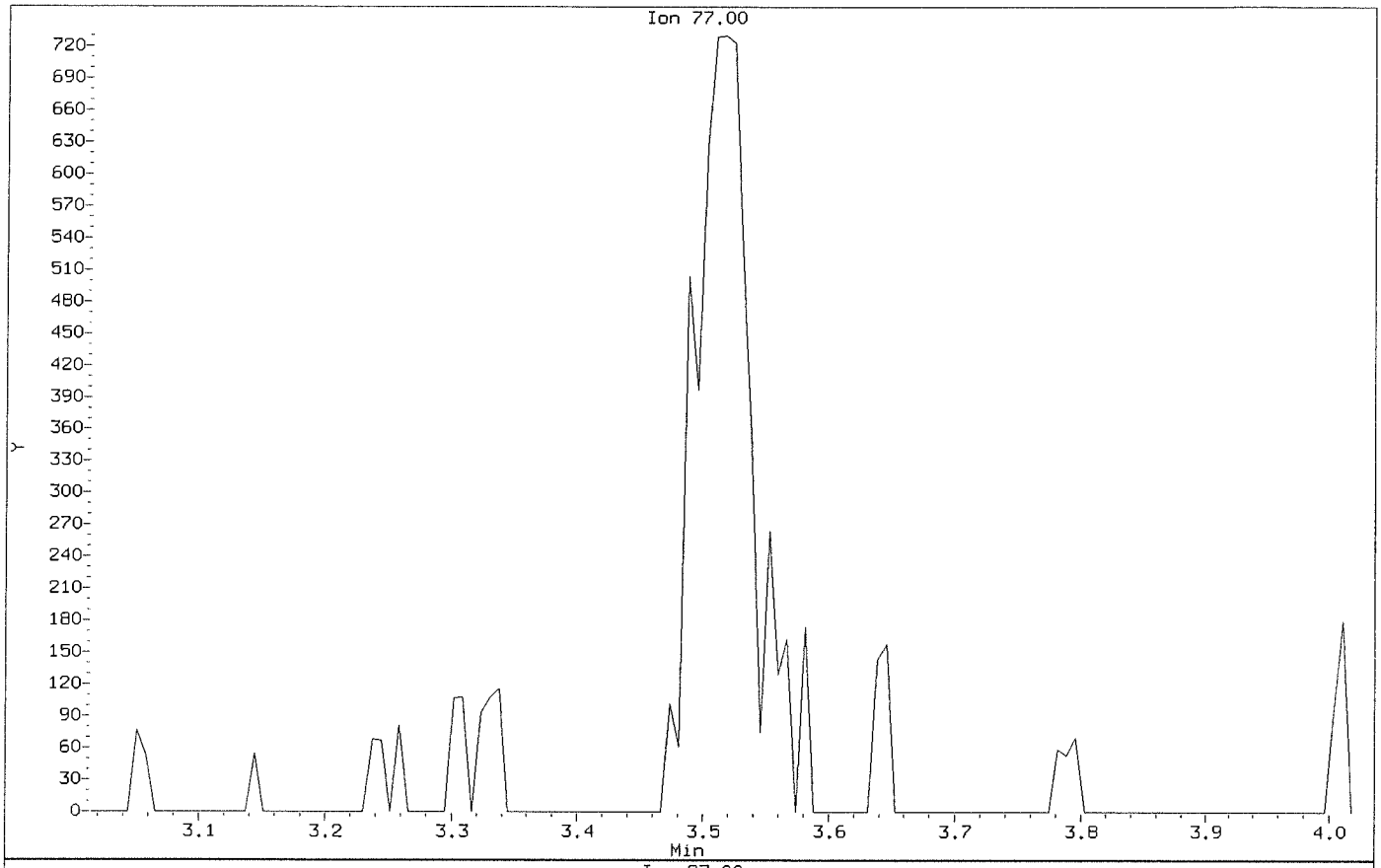


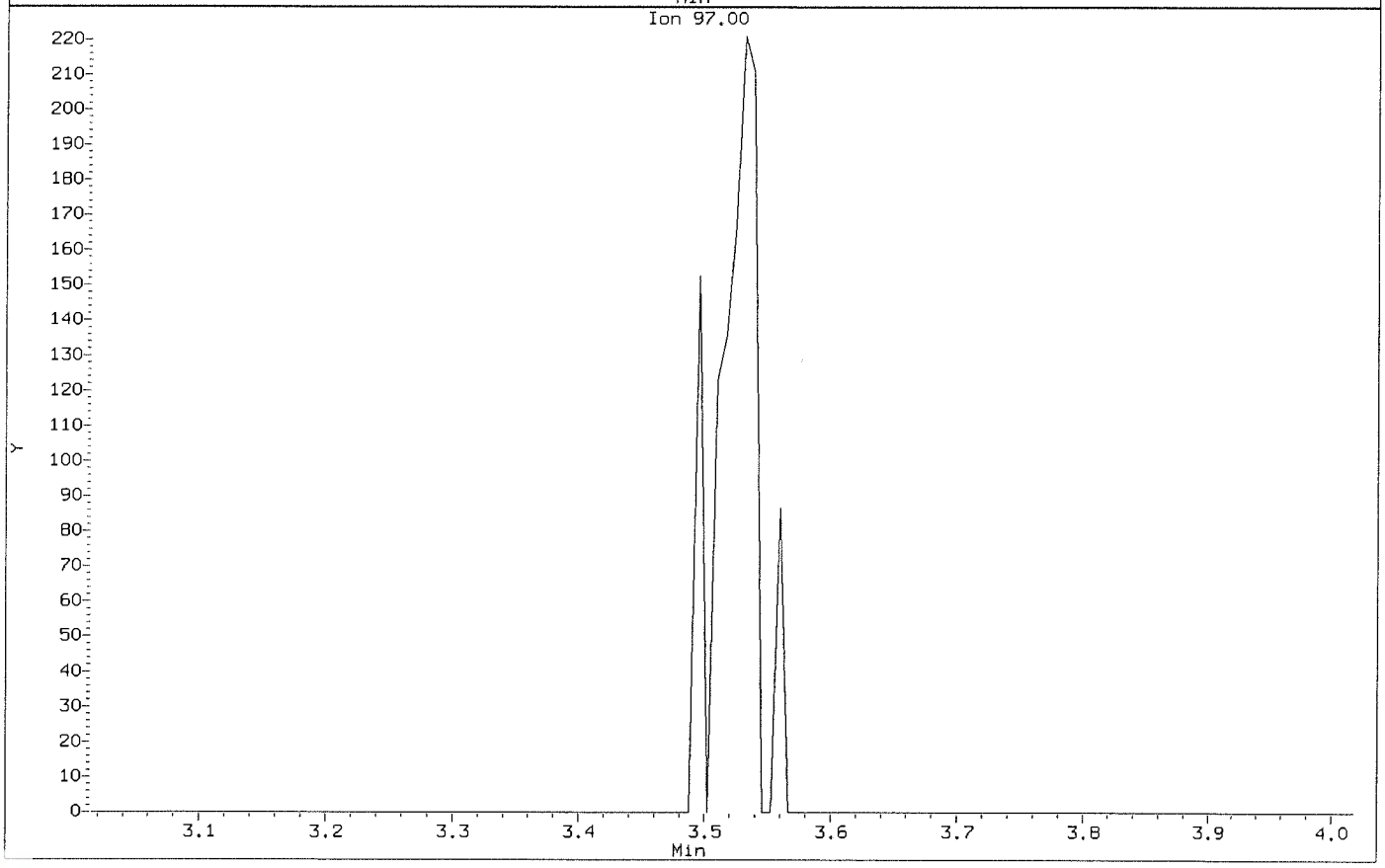




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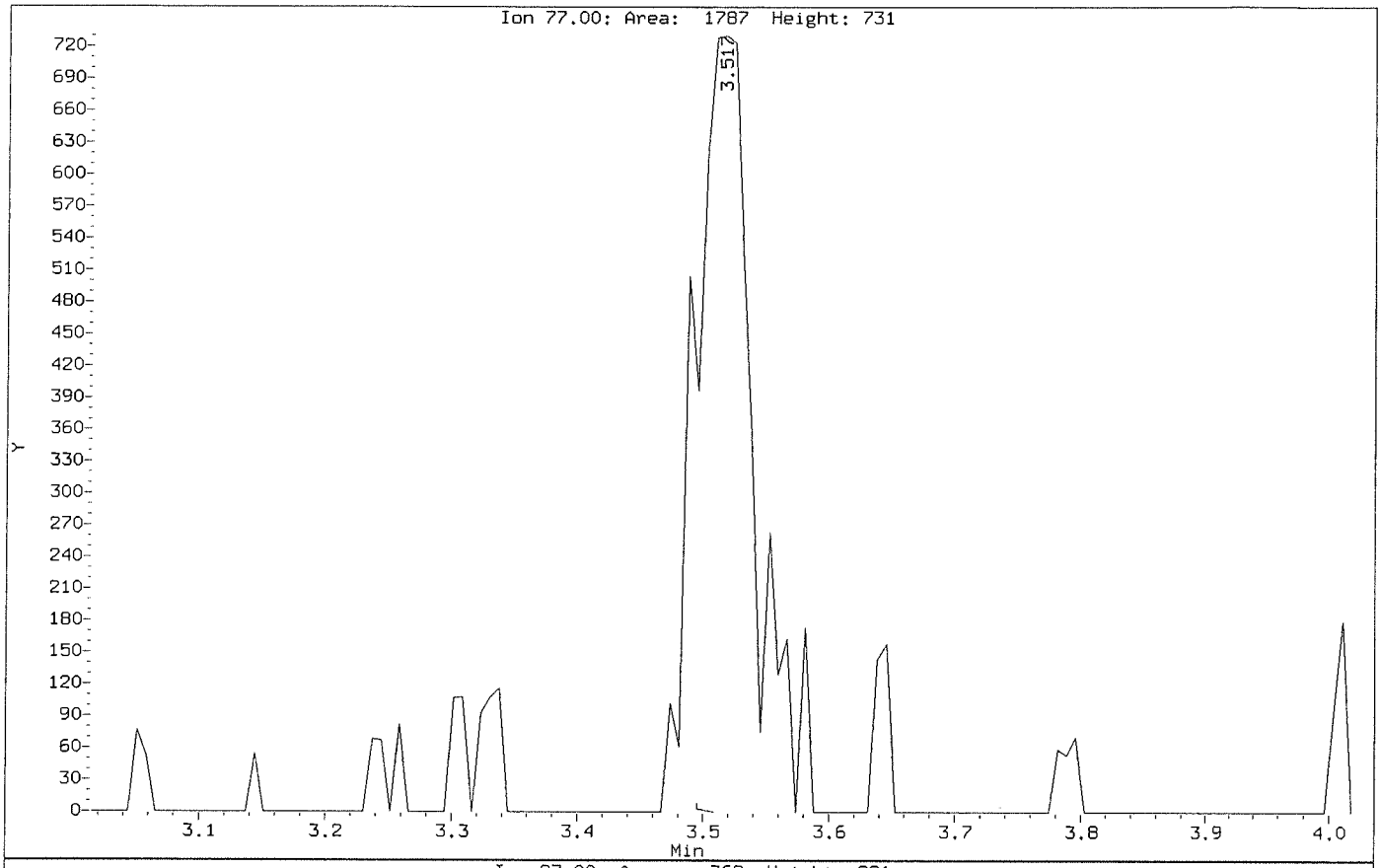
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

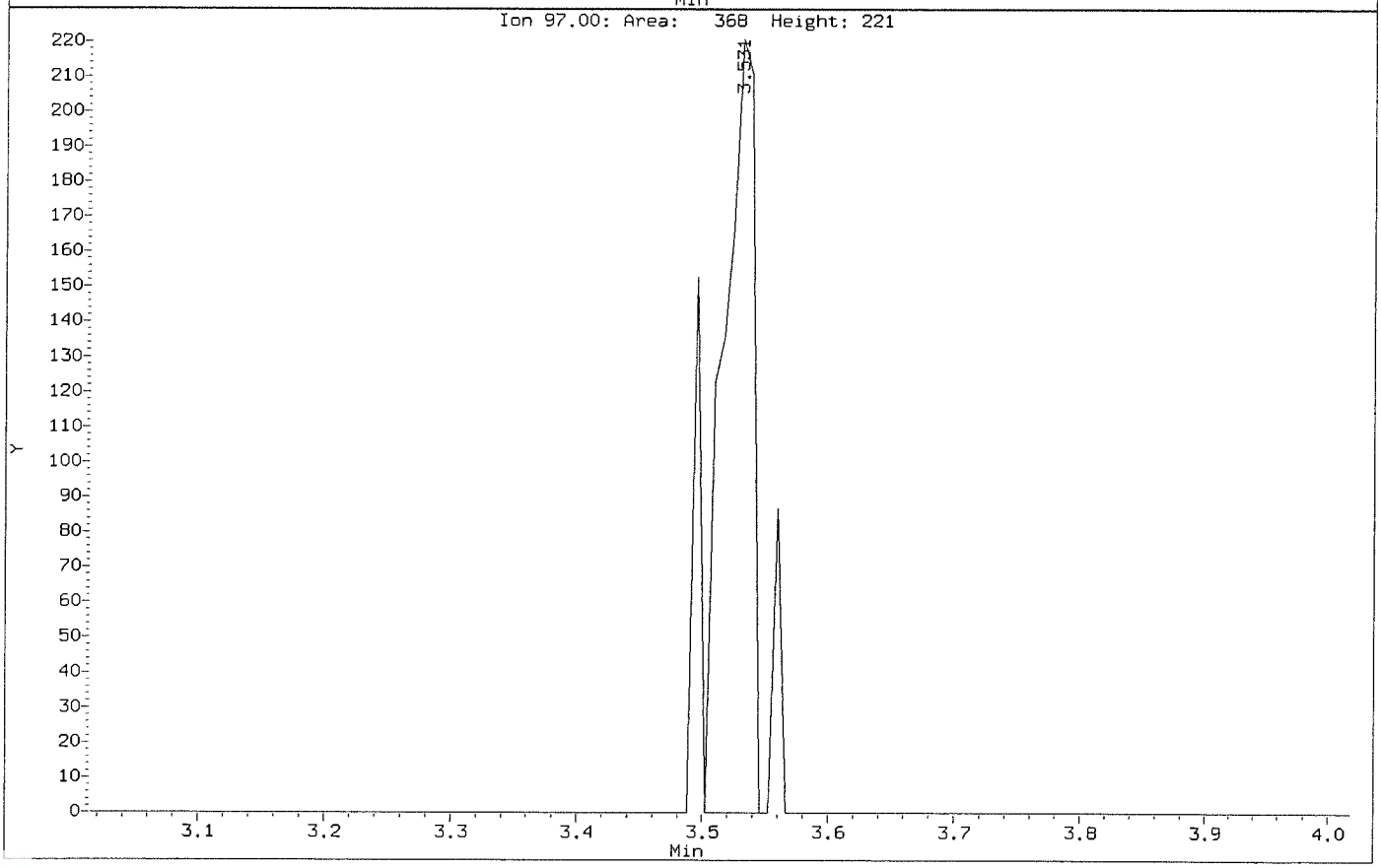




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Client Sample ID: VSTD000.5

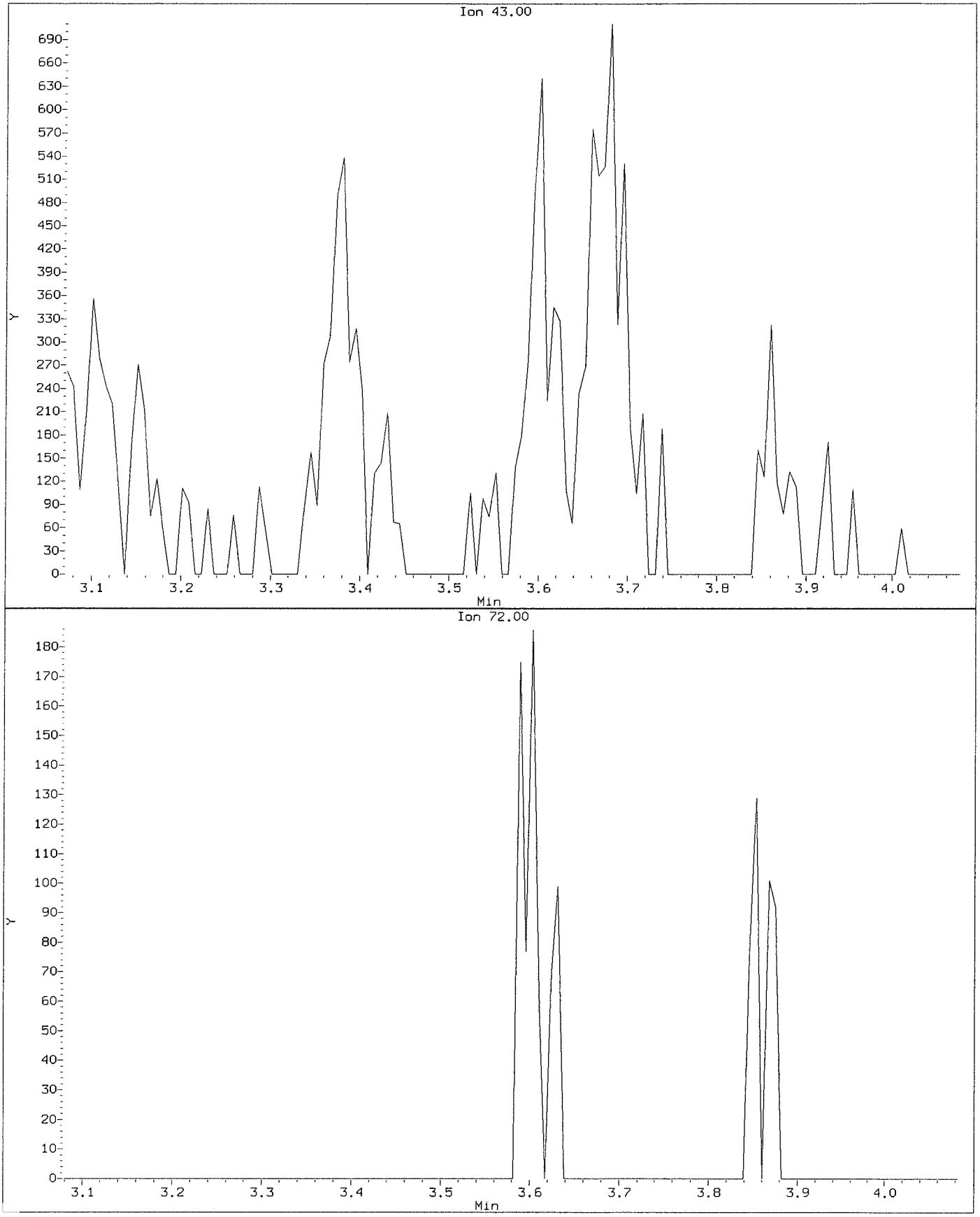
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7





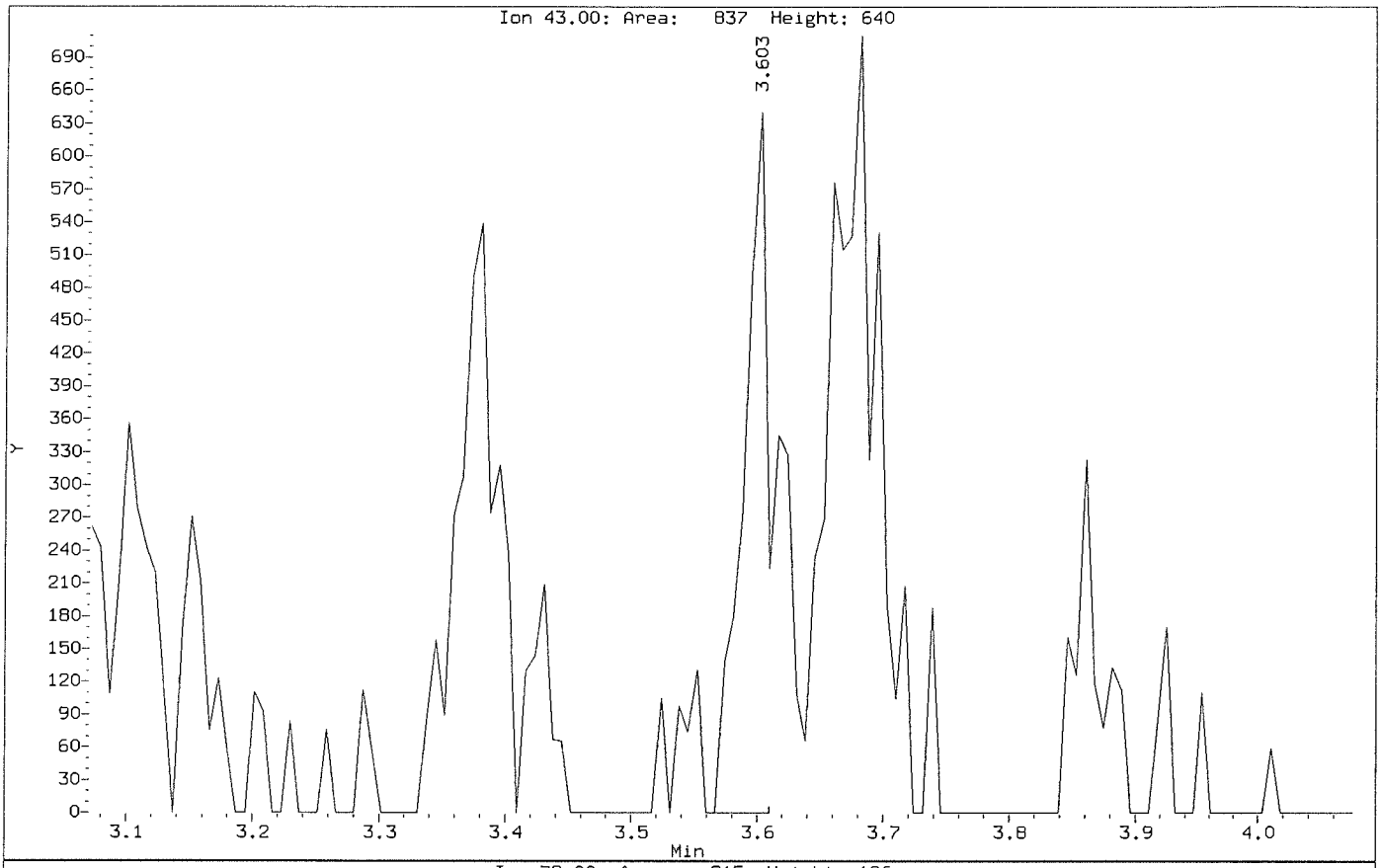
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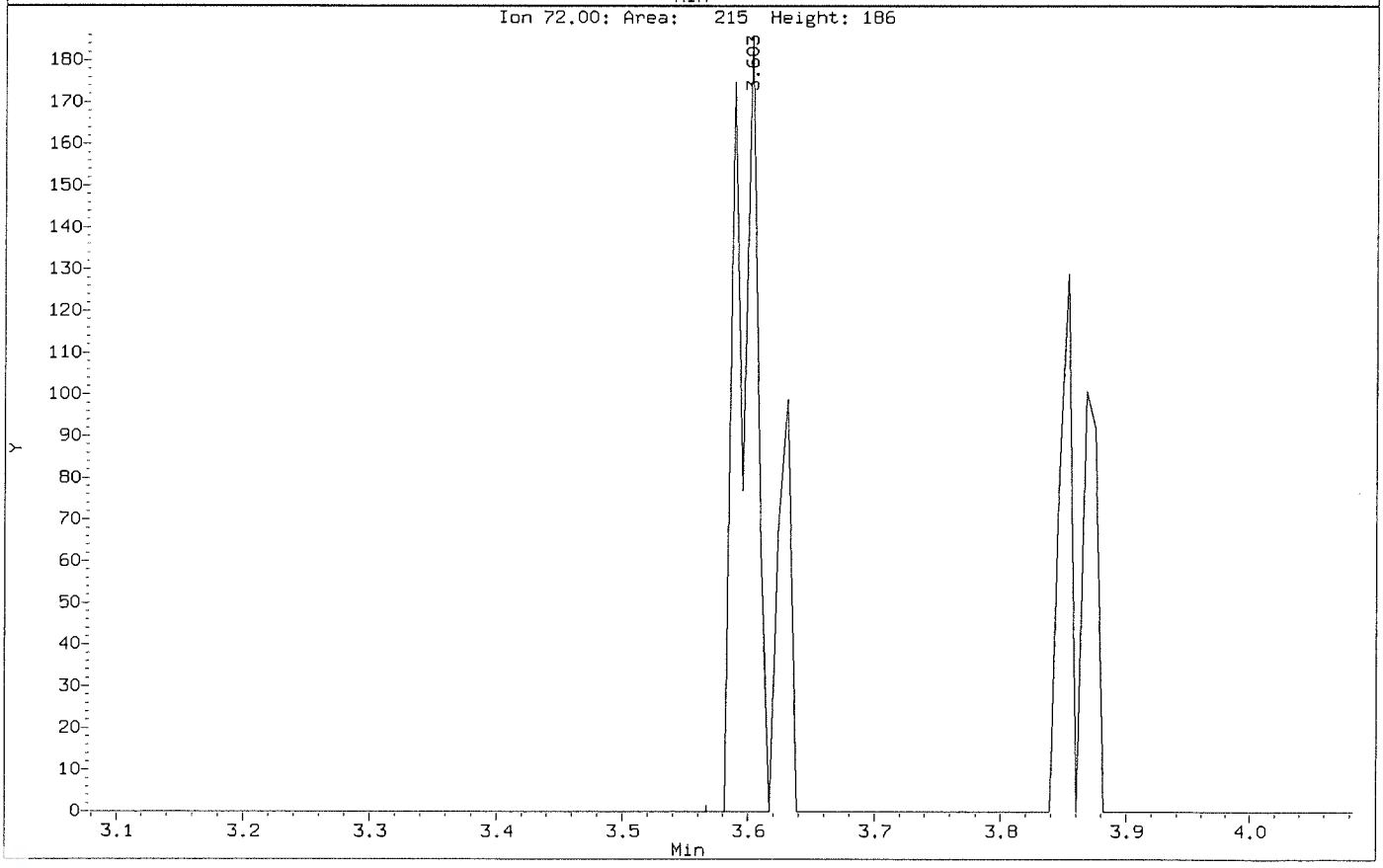
Compound: 2-Butanone
CAS Number: 78-93-3



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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

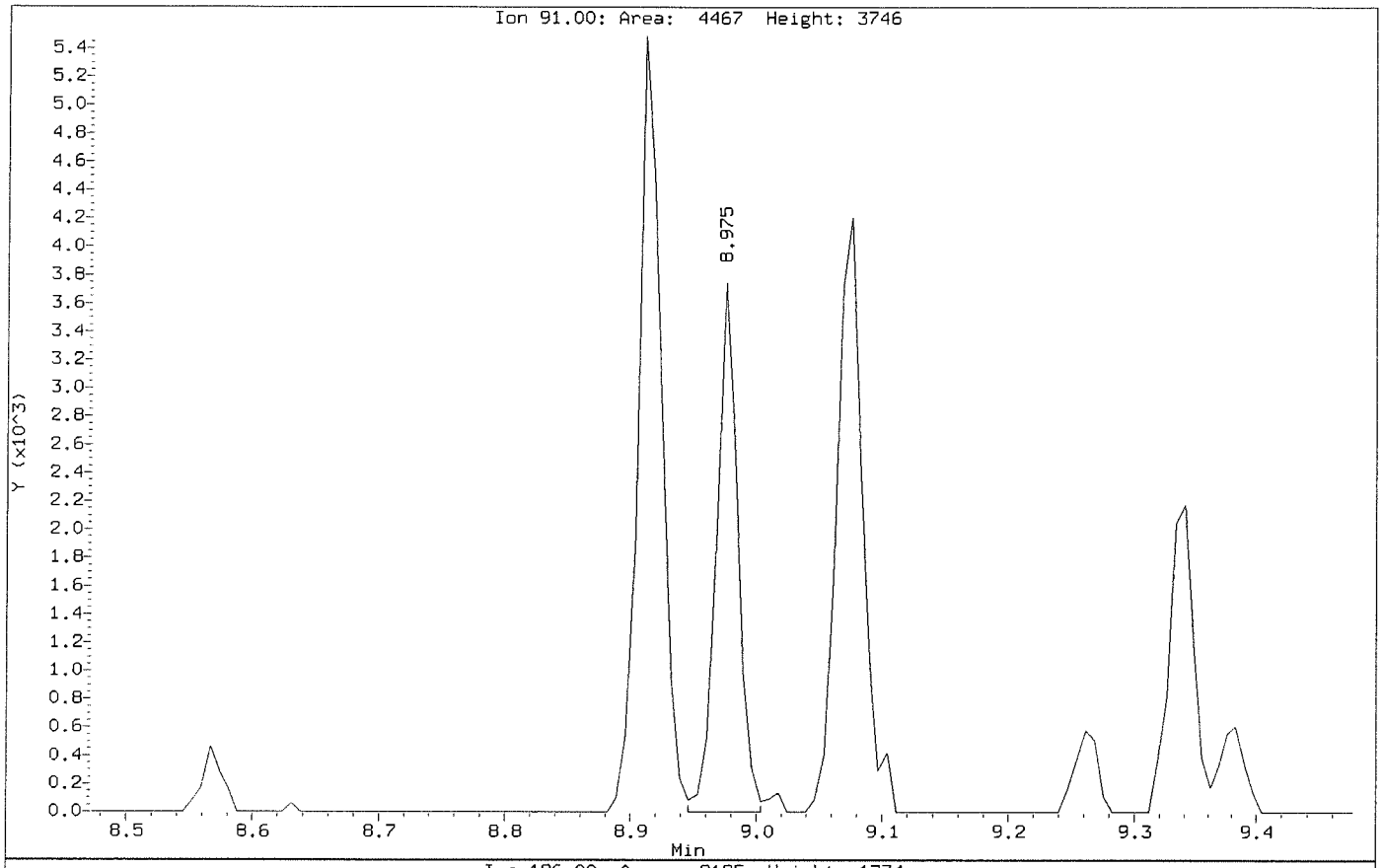
Compound: 2-Butanone
CAS Number: 78-93-3

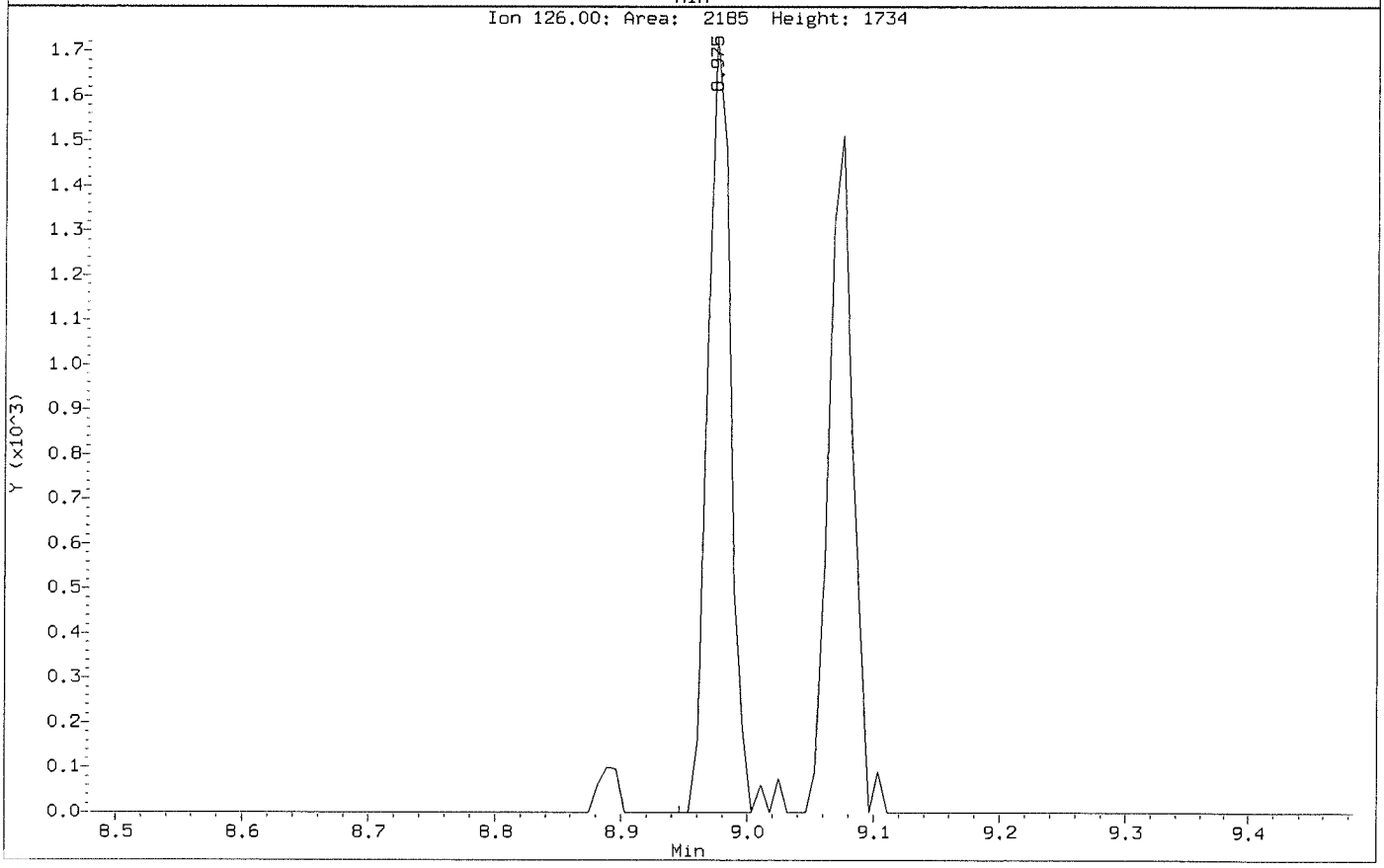




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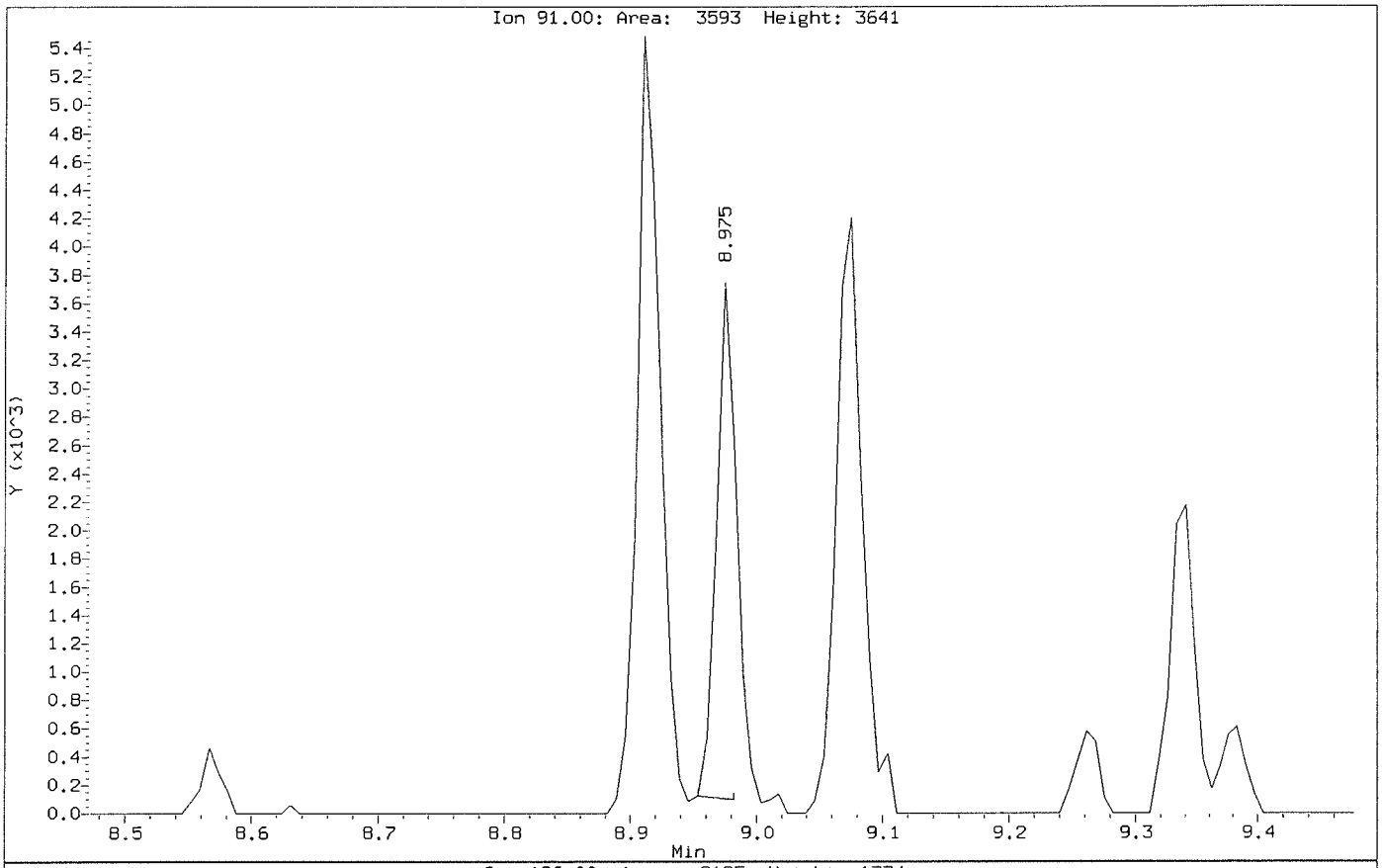
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

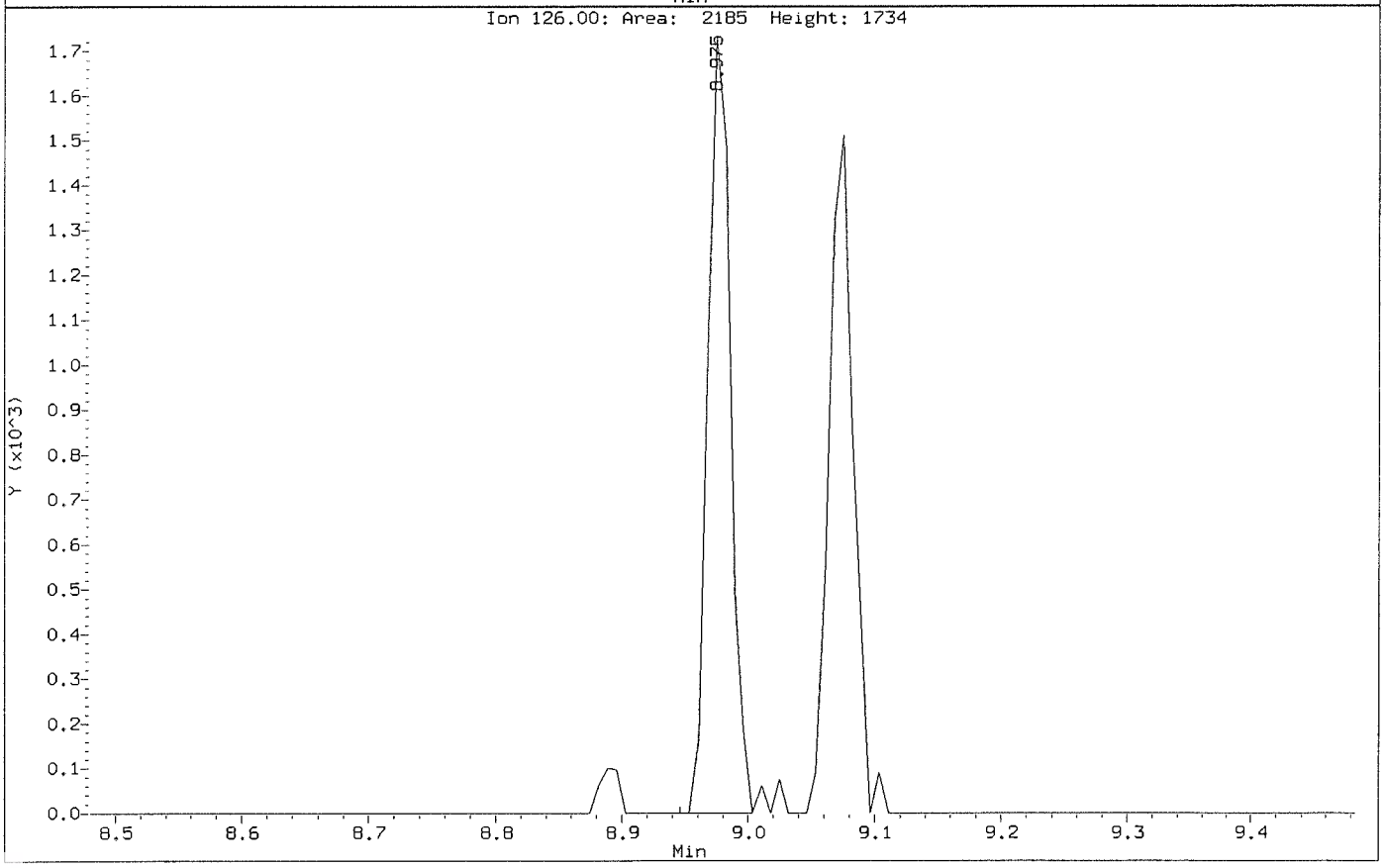




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Client Sample ID: VSTD000.5

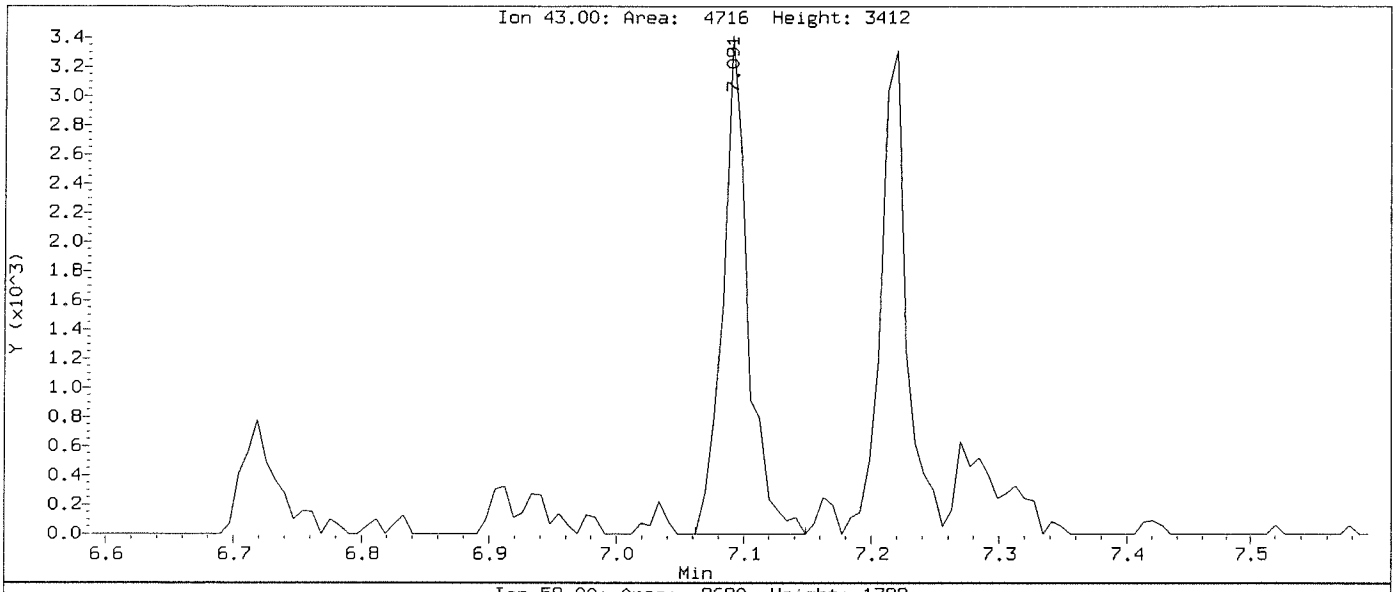
Compound: 2-Chlorotoluene
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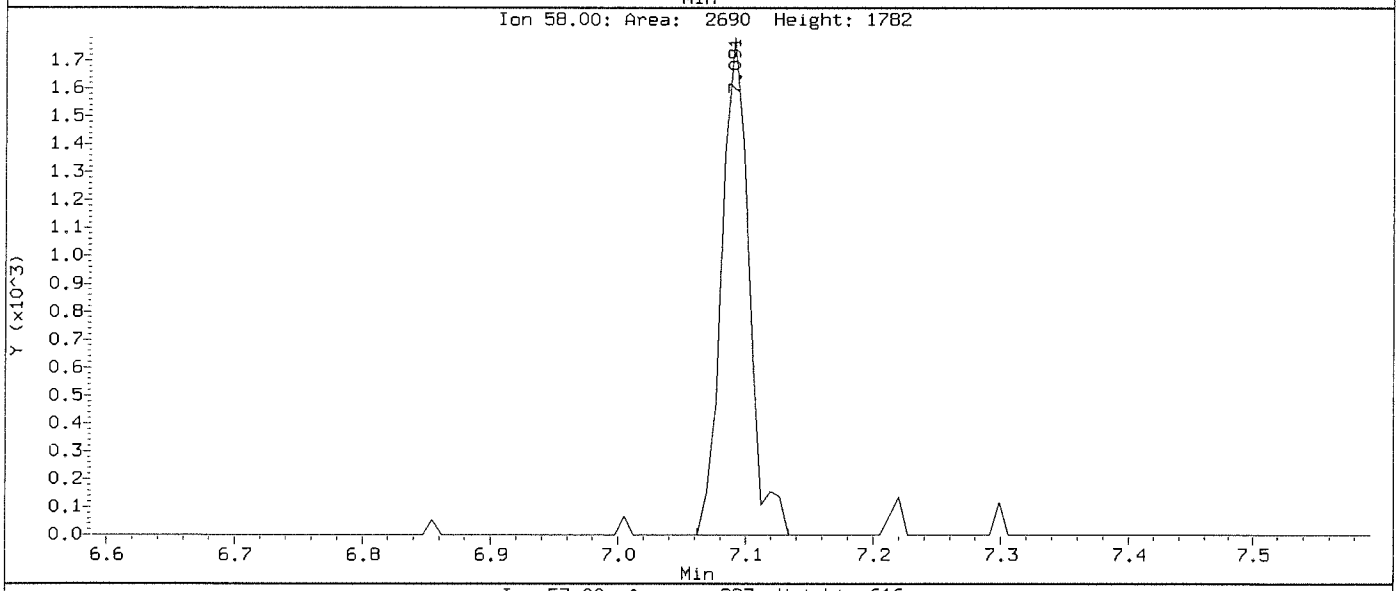


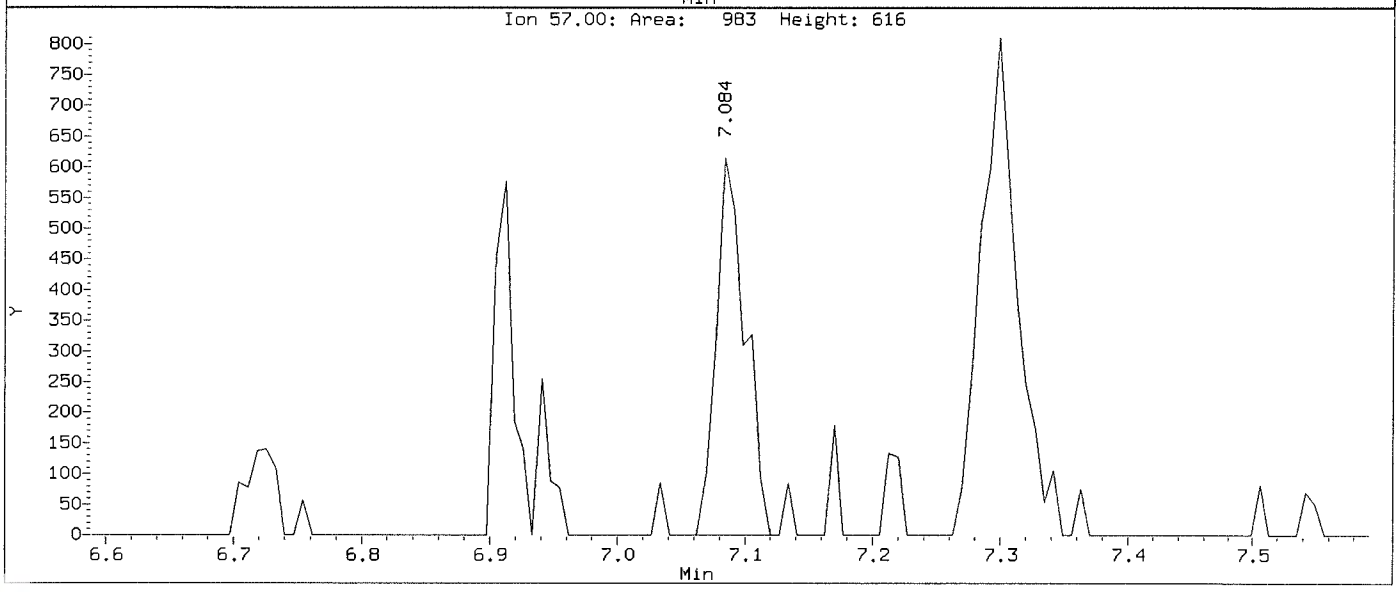


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6

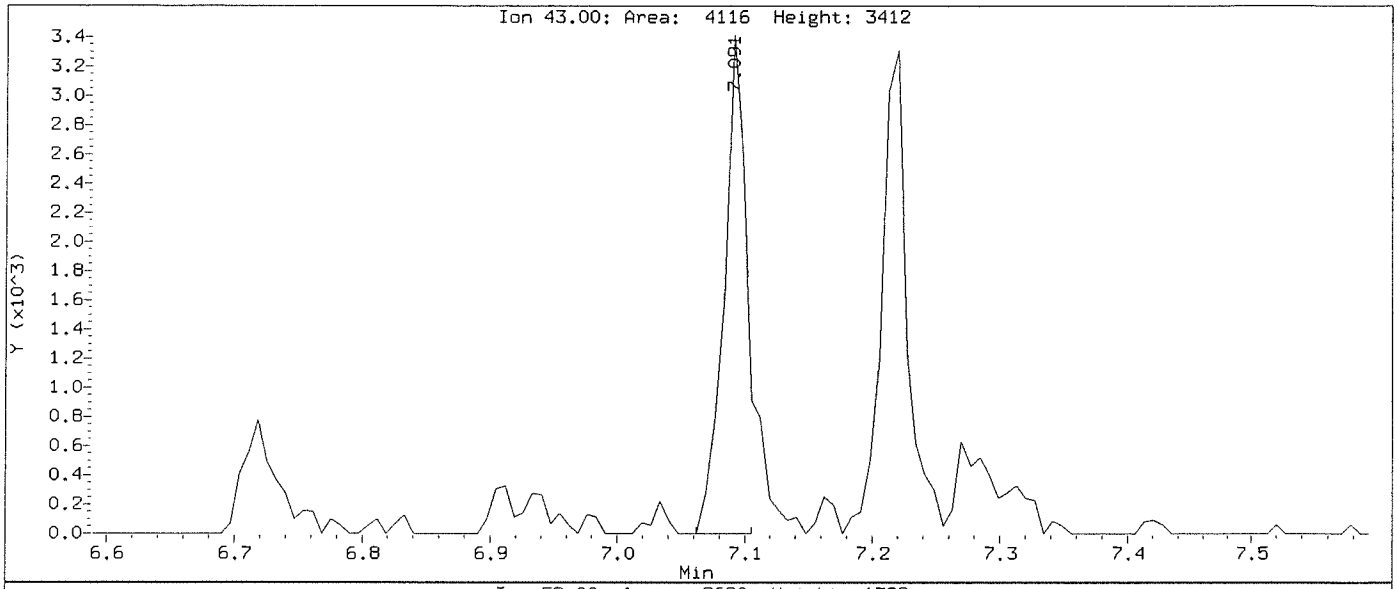


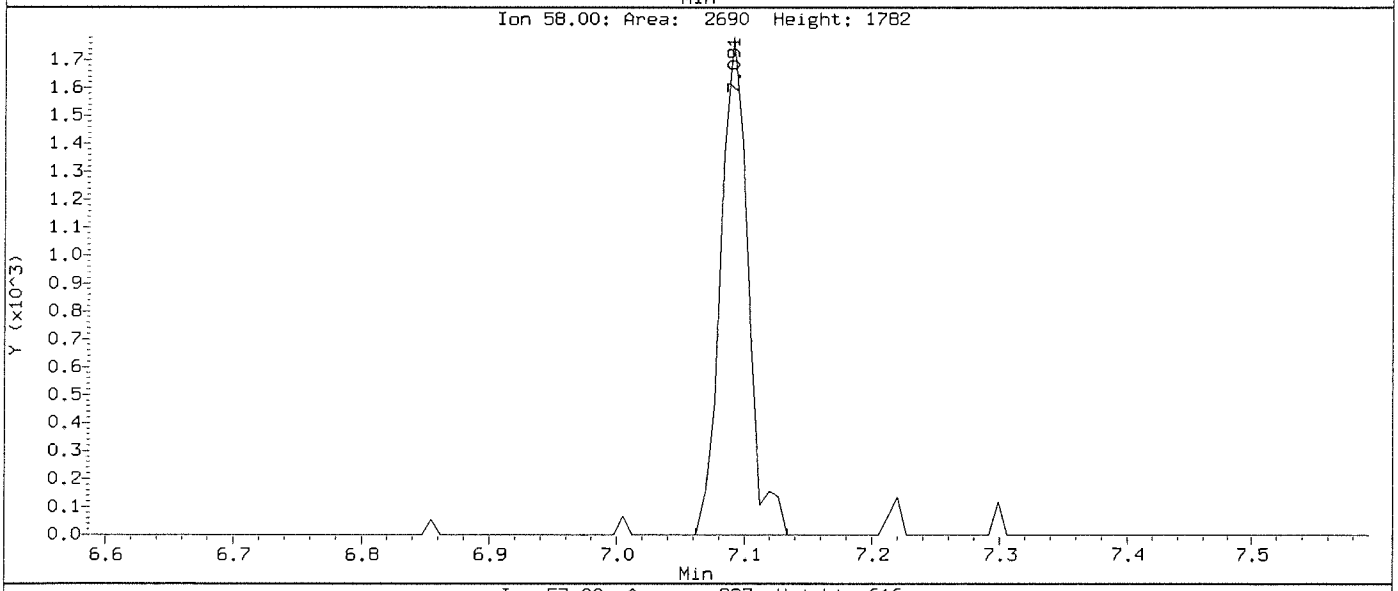


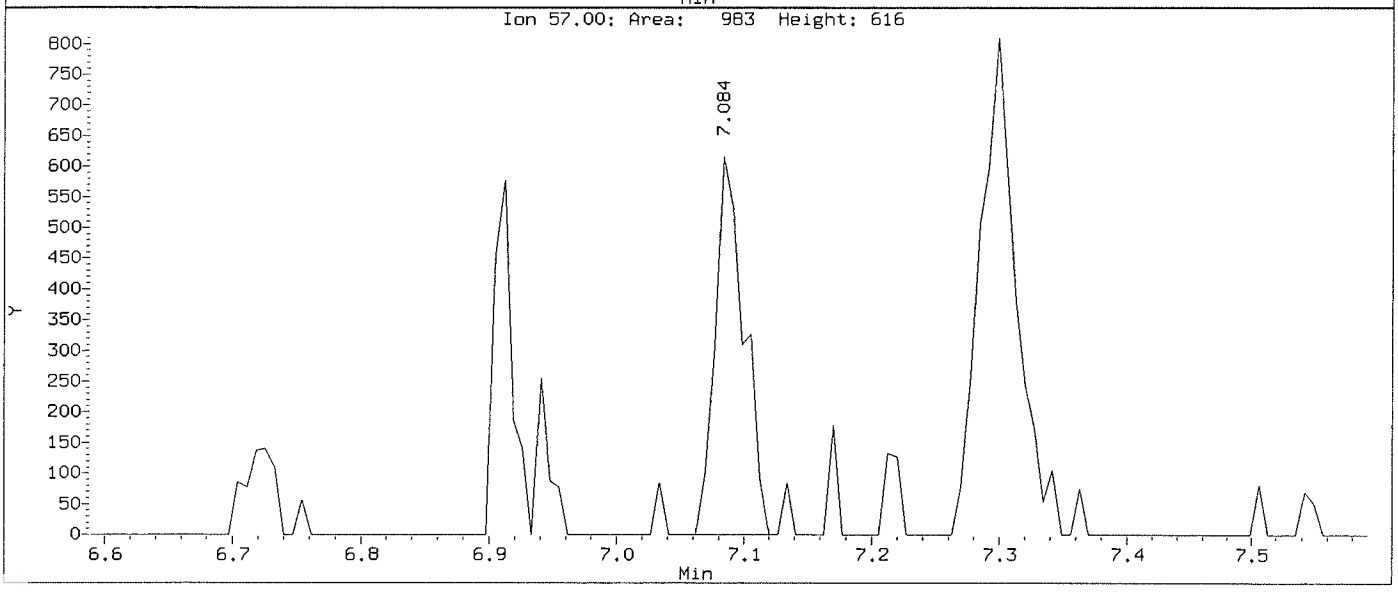


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6

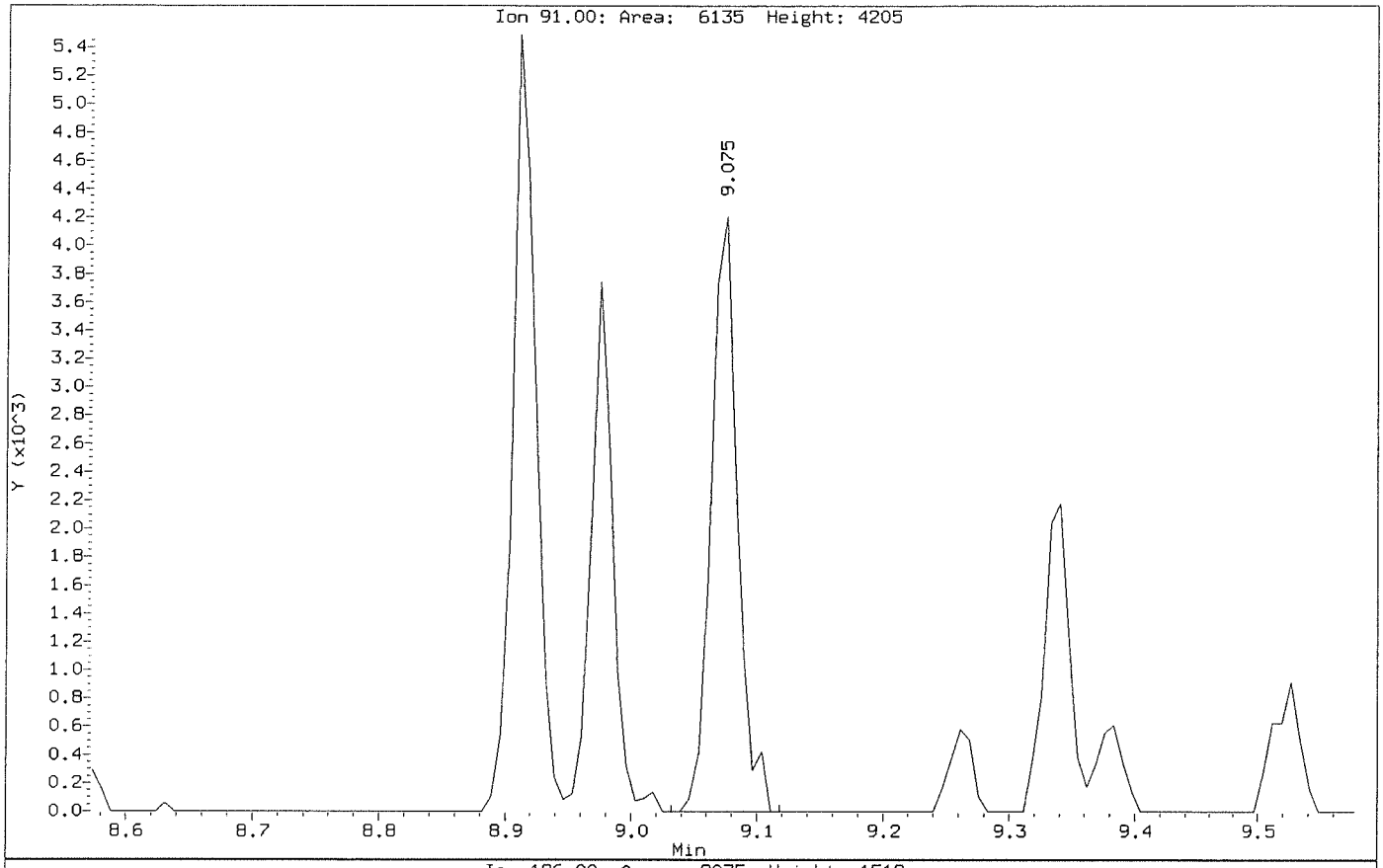


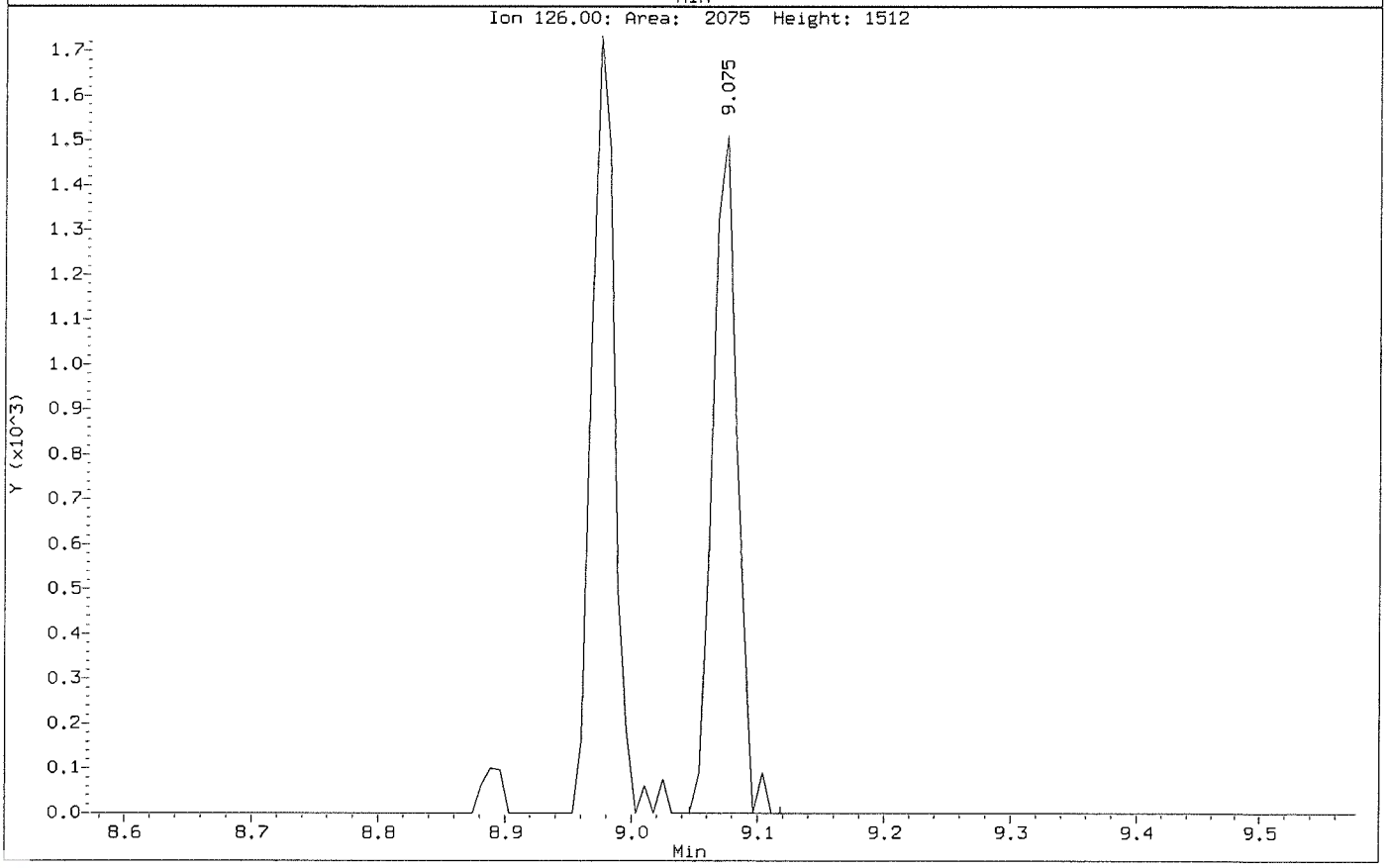




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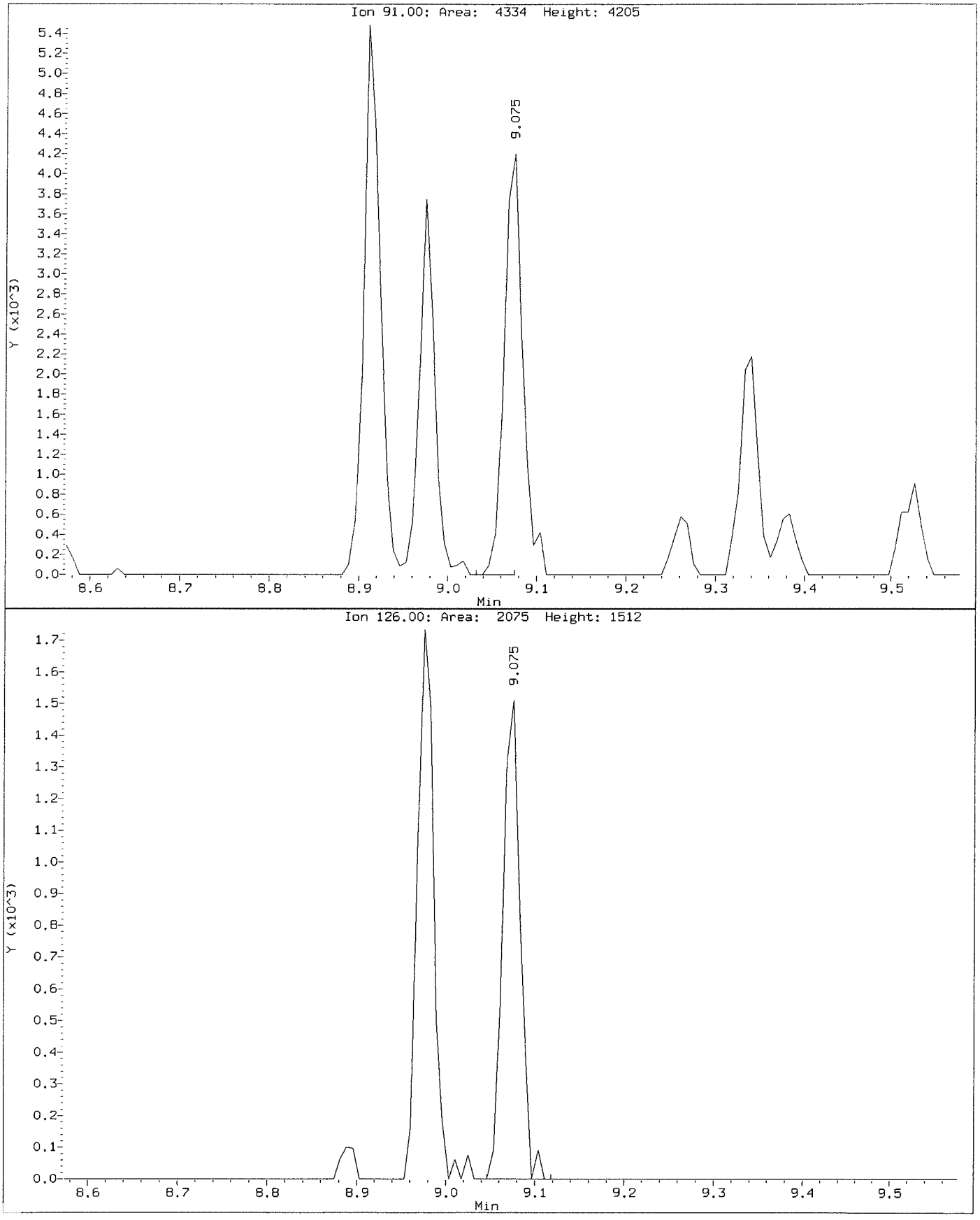
Compound: 4-Chlorotoluene
CAS Number: 106-43-4





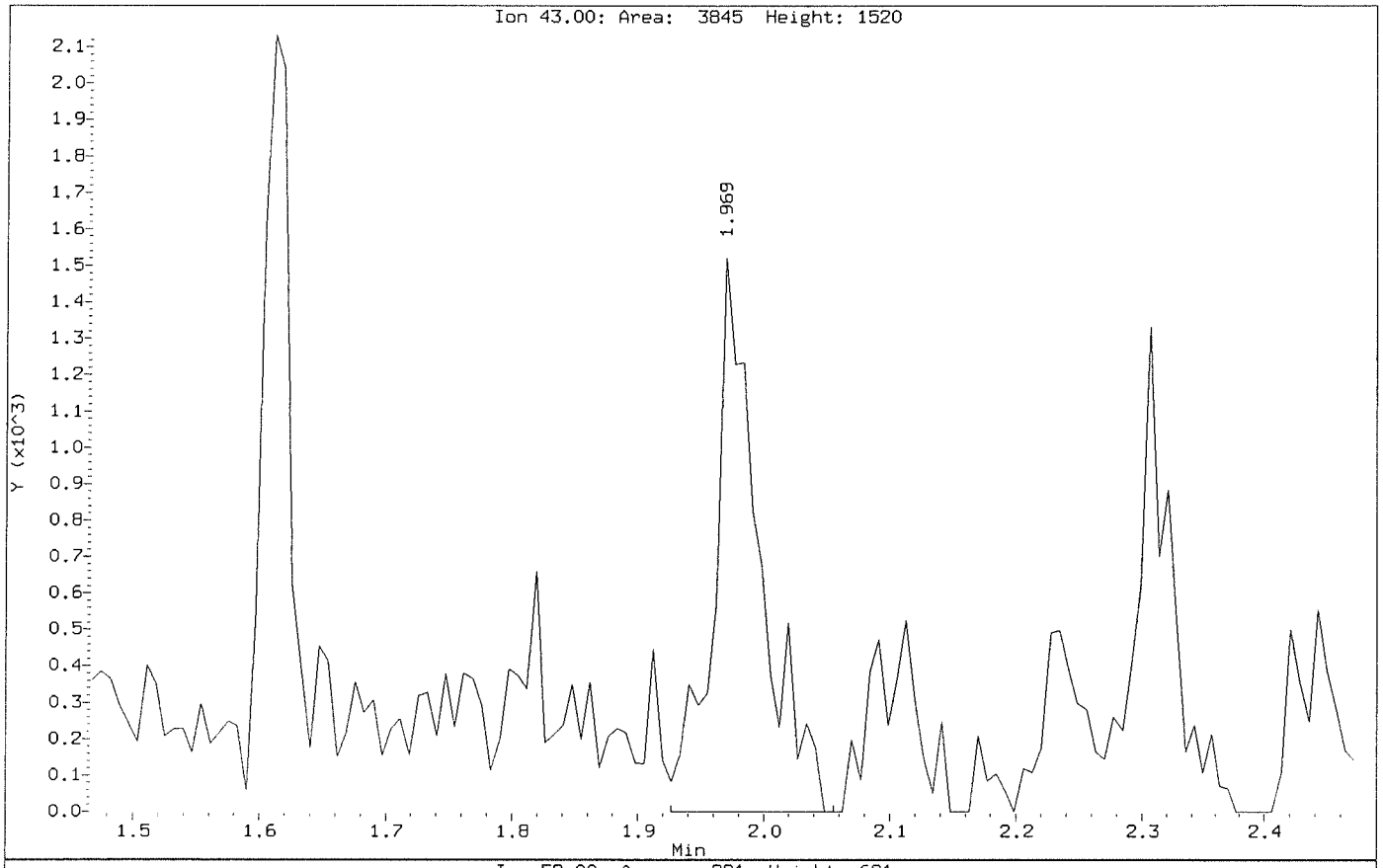
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Client Sample ID: VSTD000.5

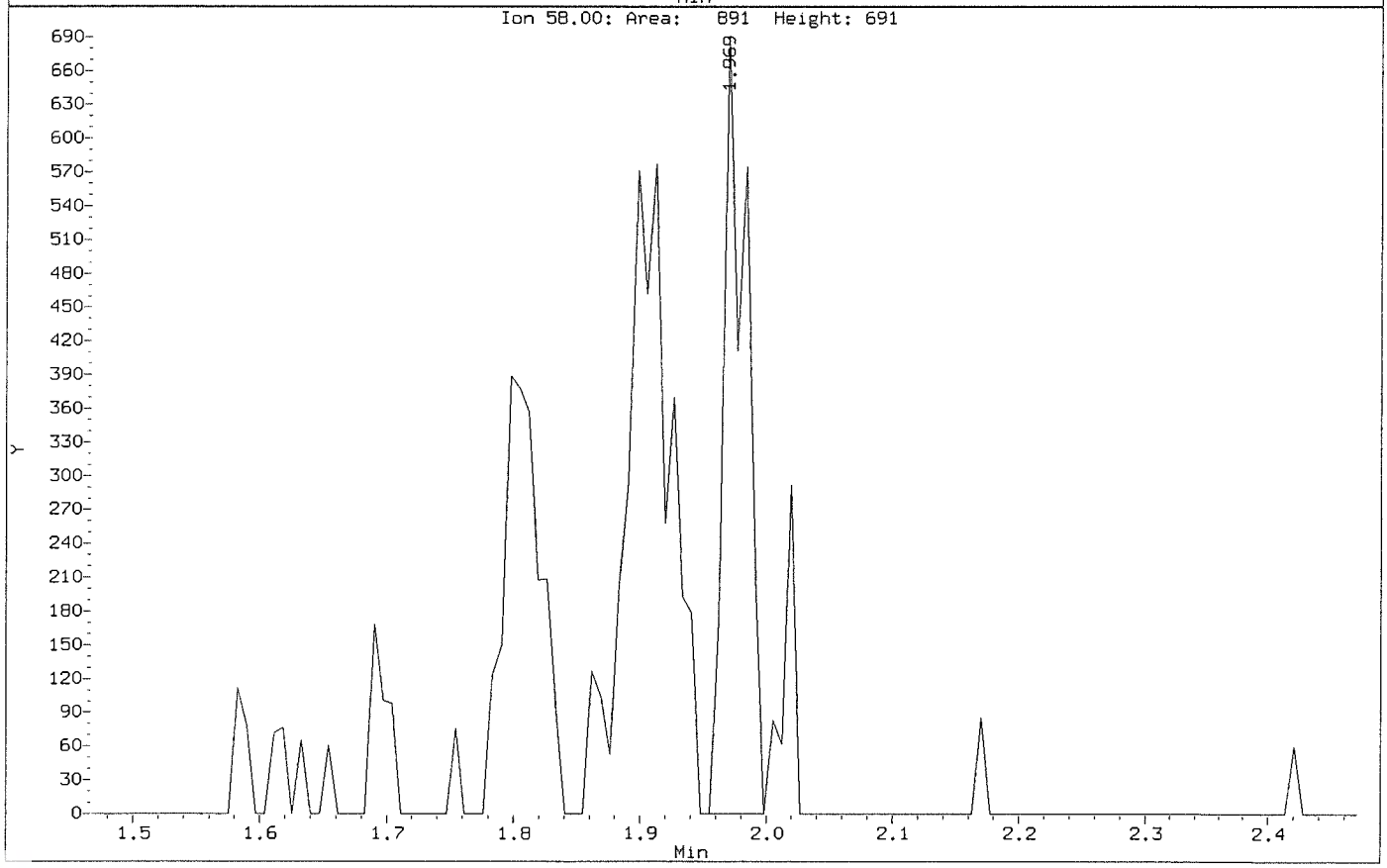
Compound: 4-Chlorotoluene
CAS Number: 106-43-4



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

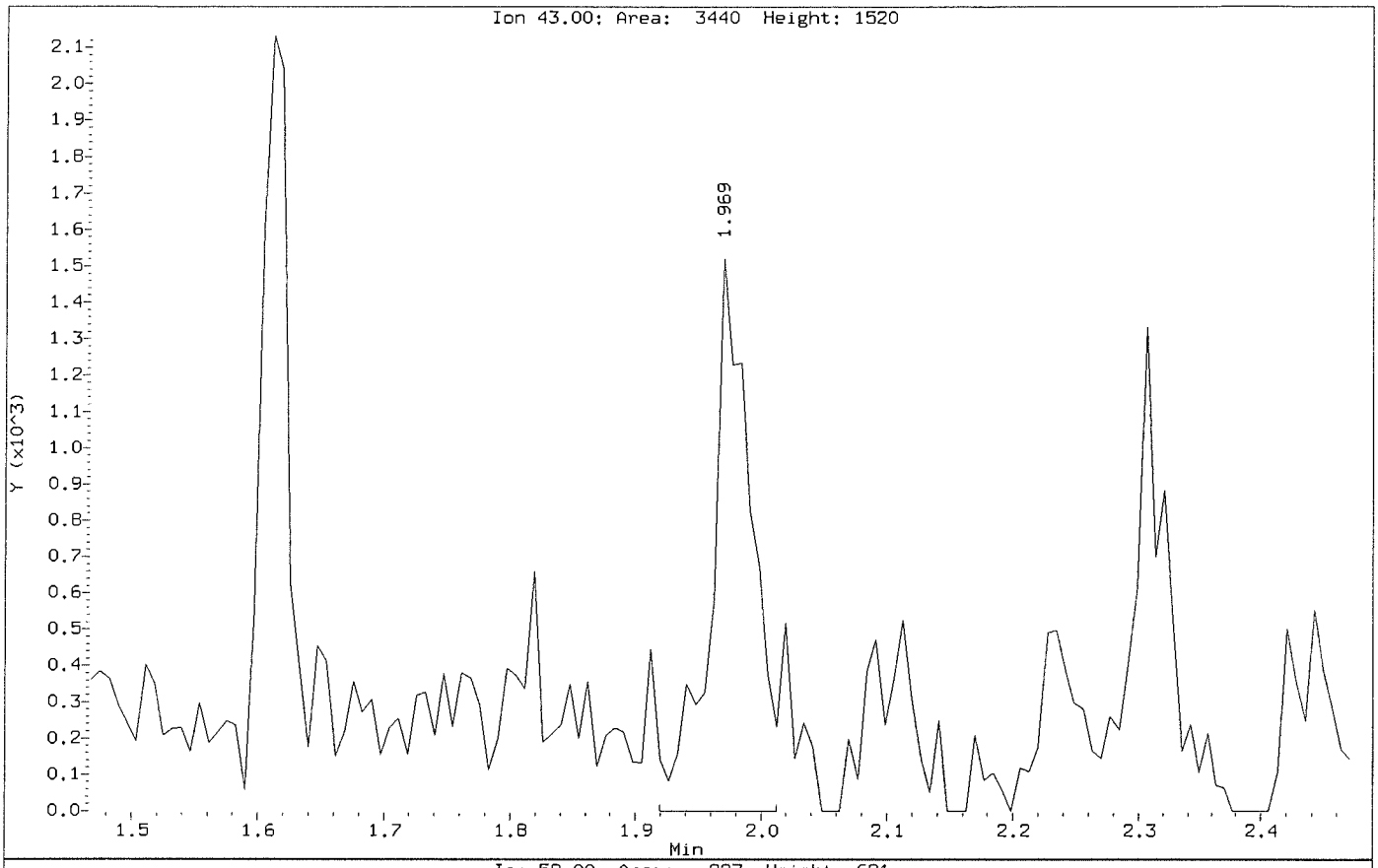
Compound: Acetone
CAS Number: 67-64-1

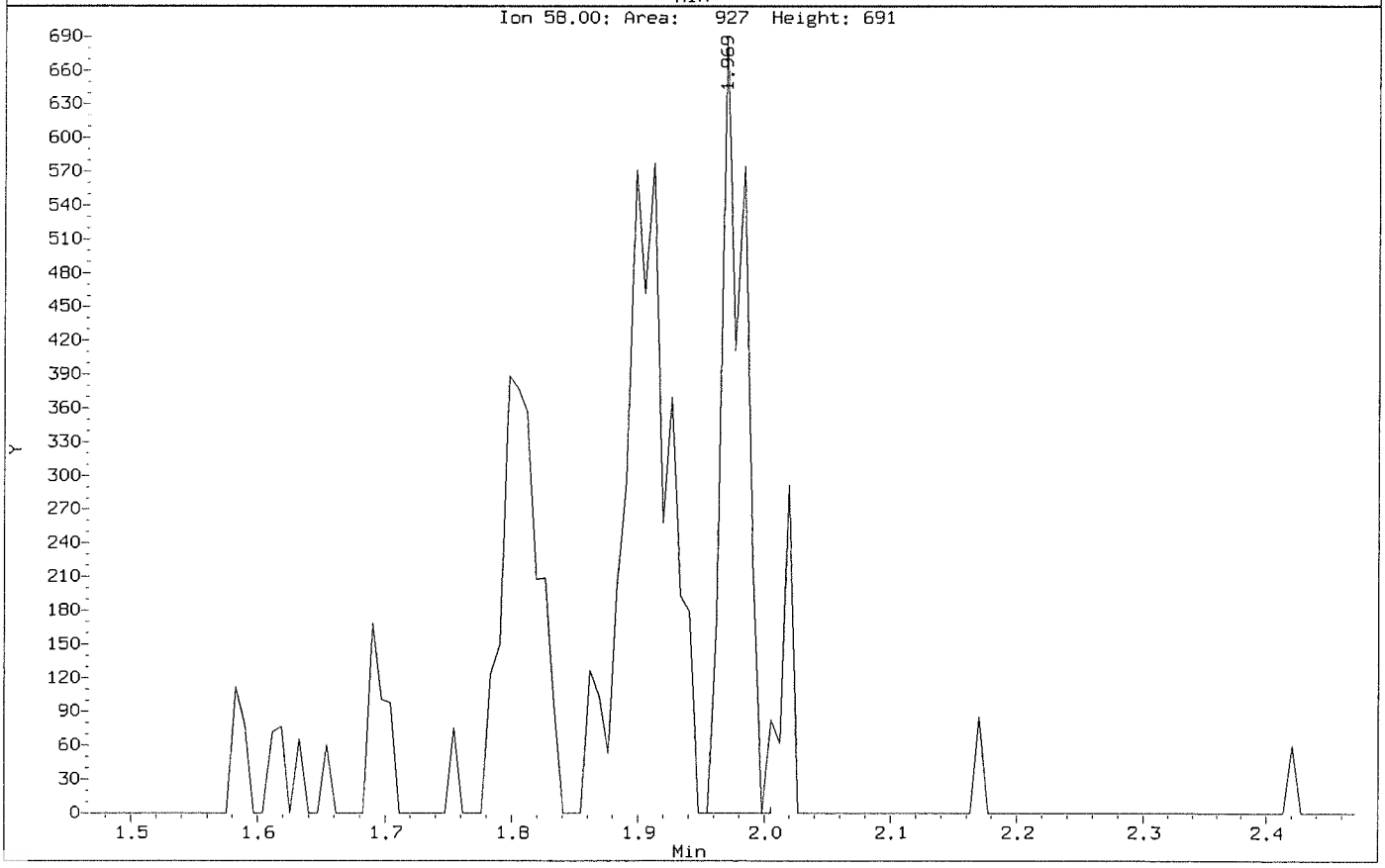




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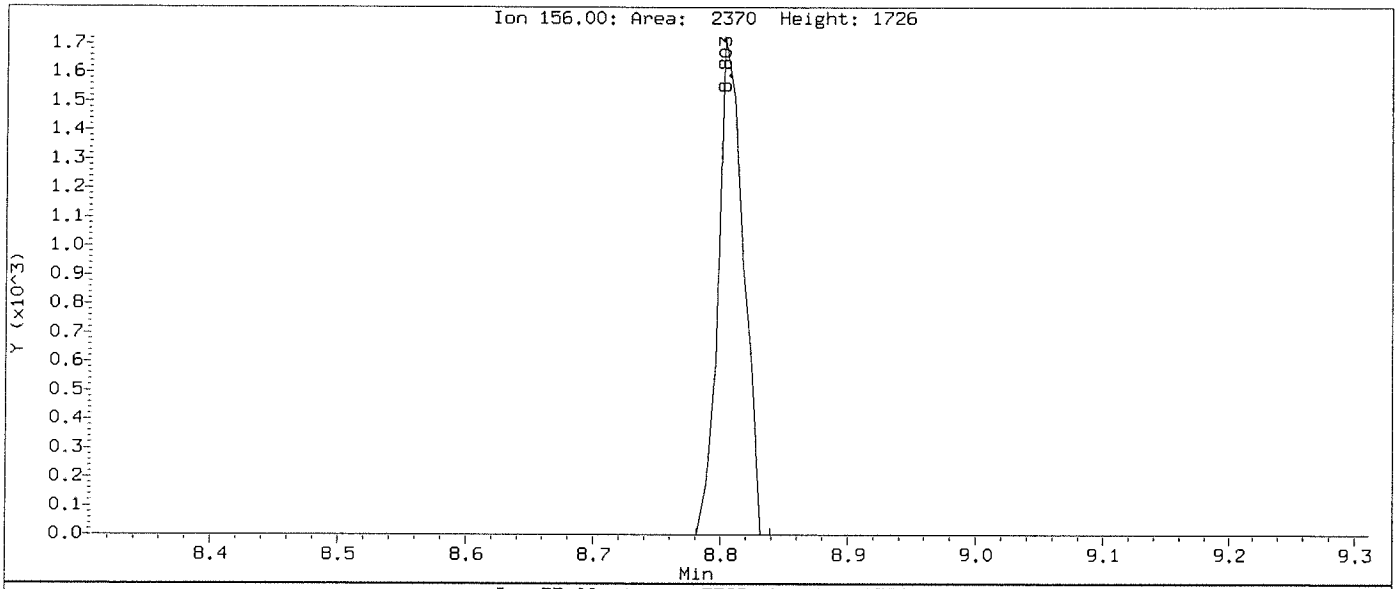
Compound: Acetone
CAS Number: 67-64-1

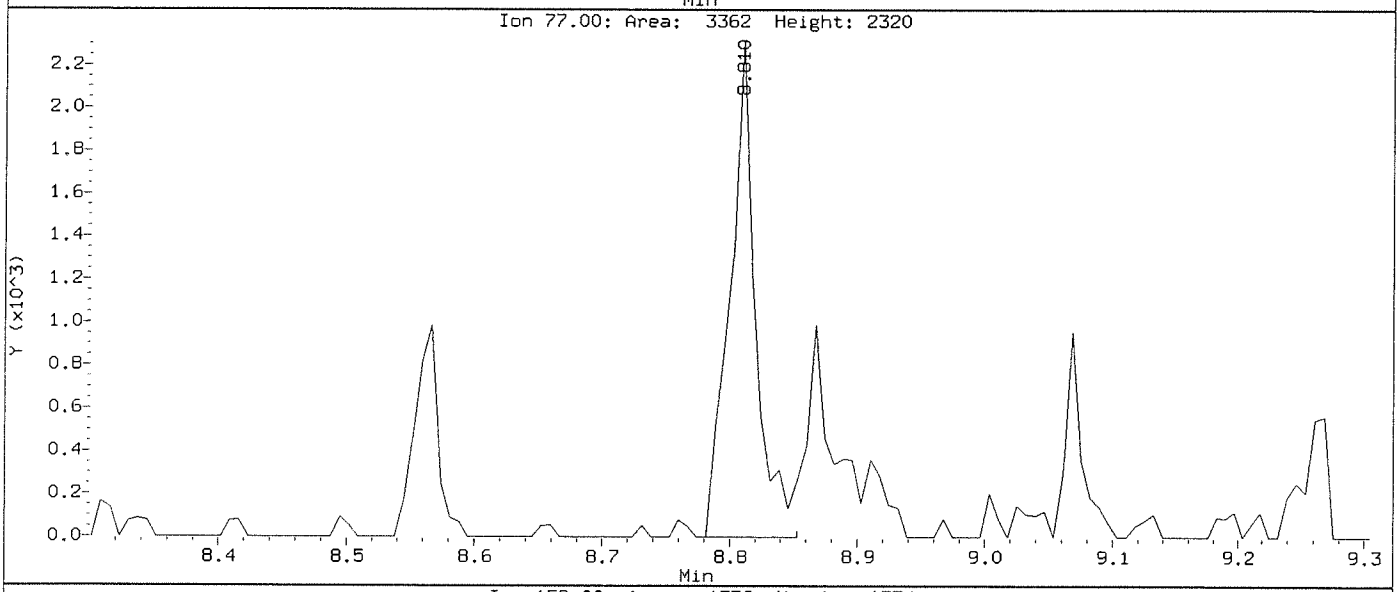


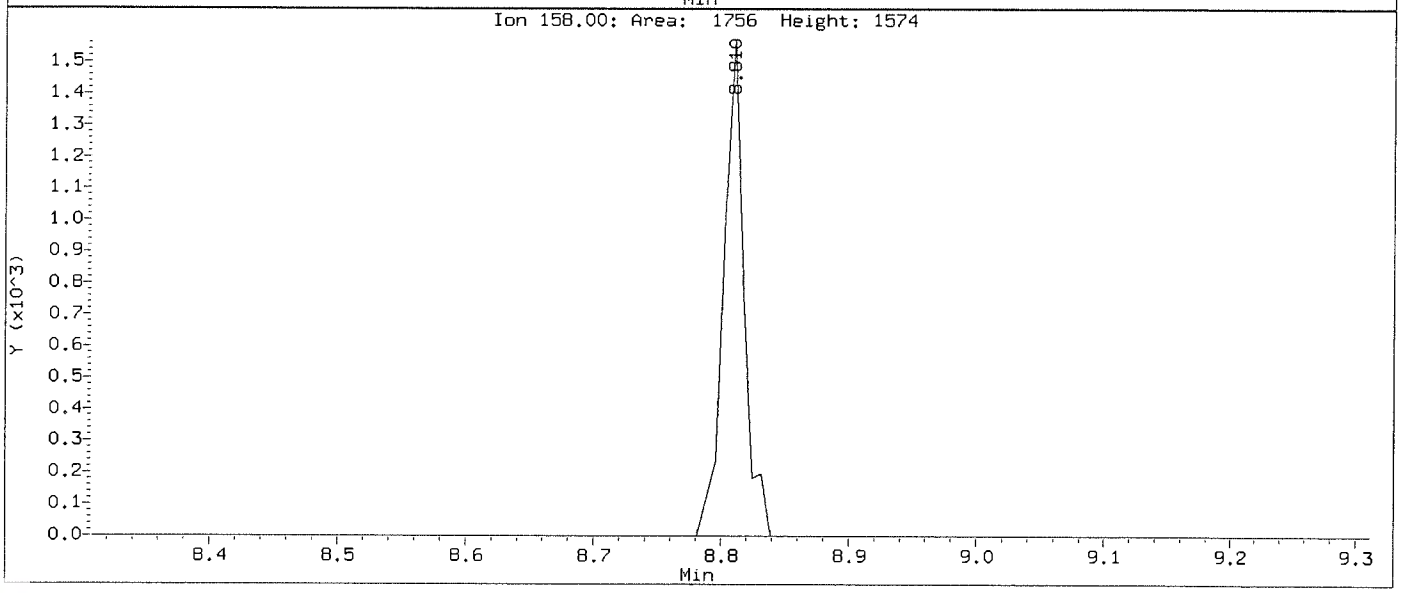


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromobenzene
CAS Number: 108-86-1

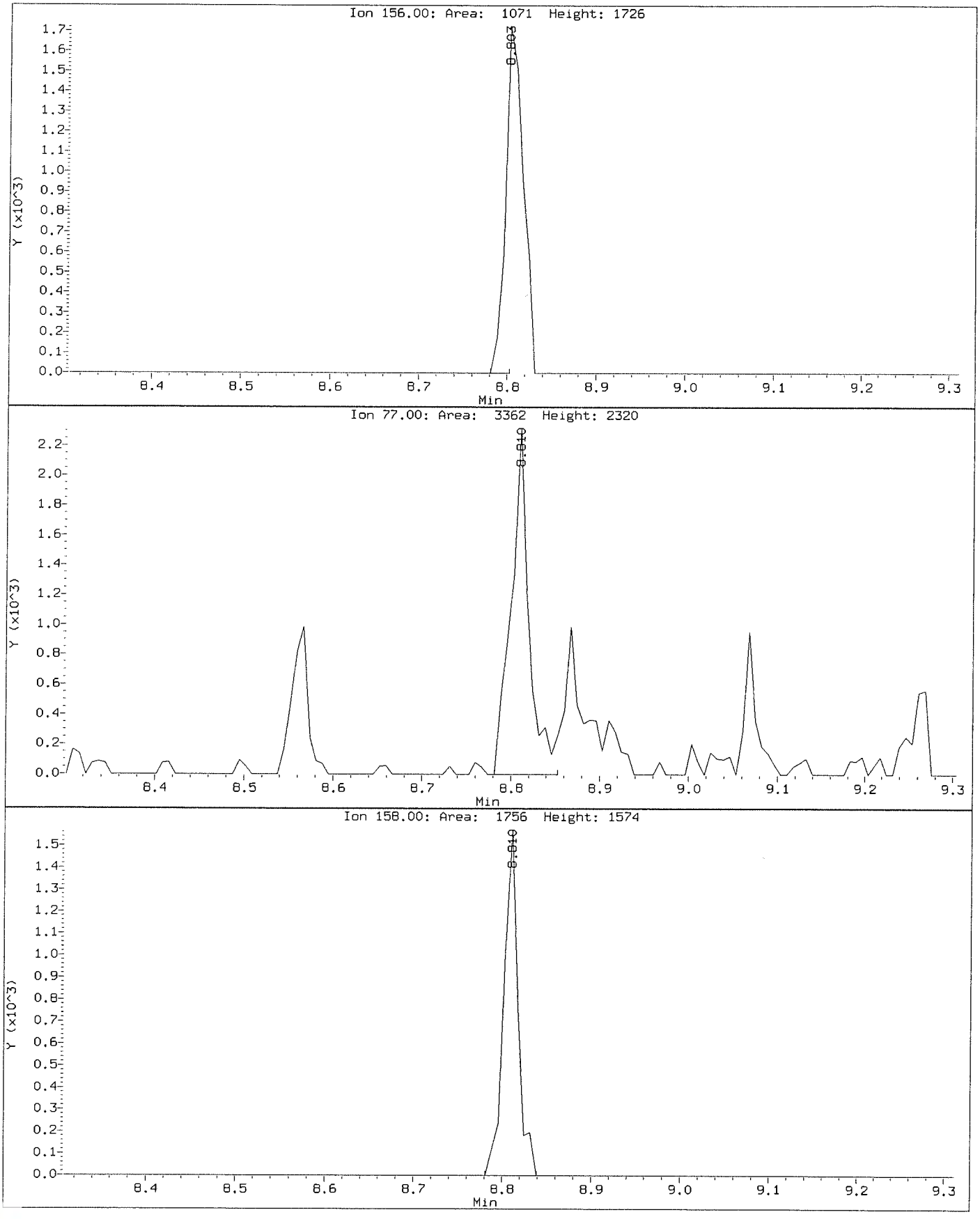






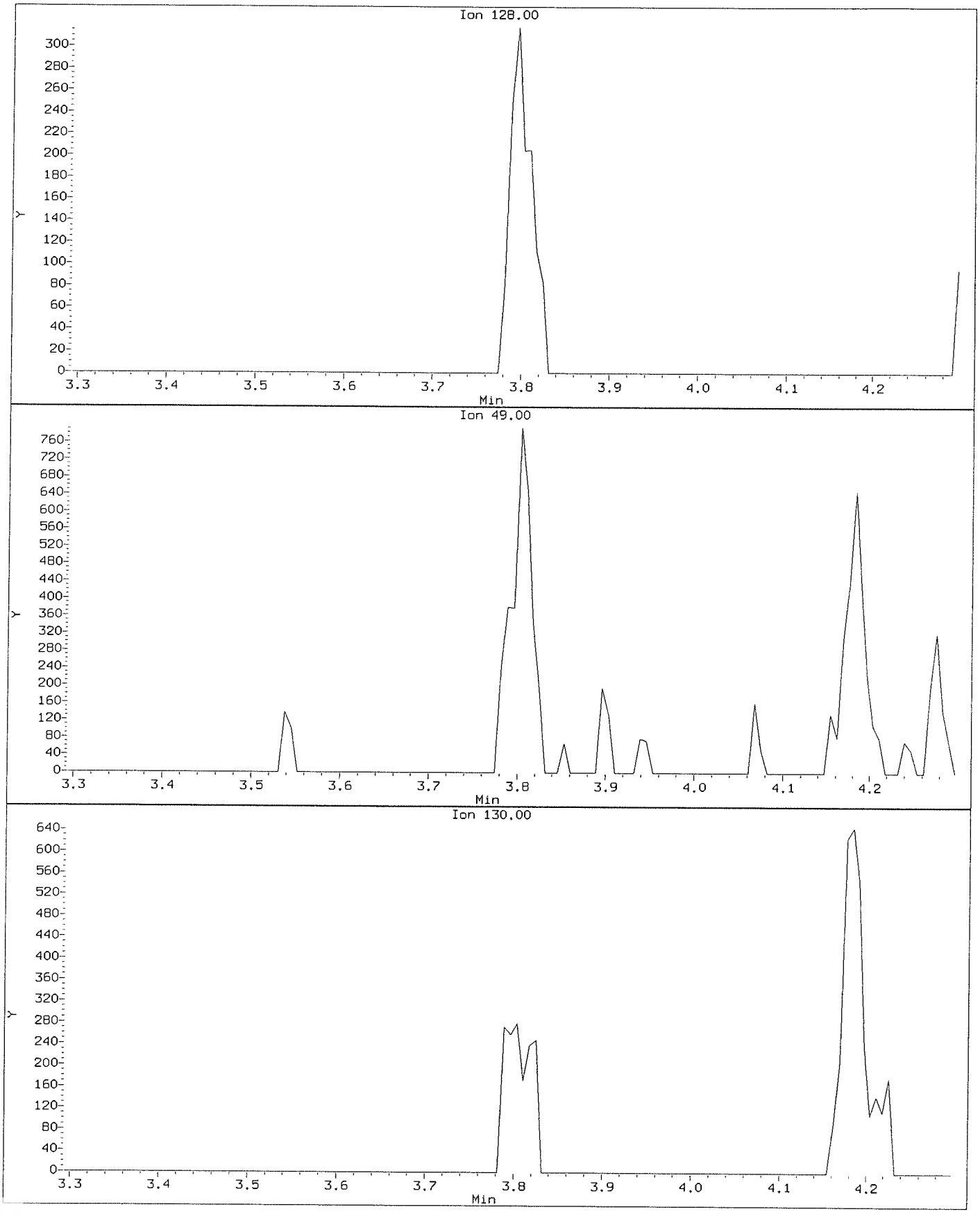
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Client Sample ID: VSTD000.5

Compound: Bromobenzene
CAS Number: 108-86-1



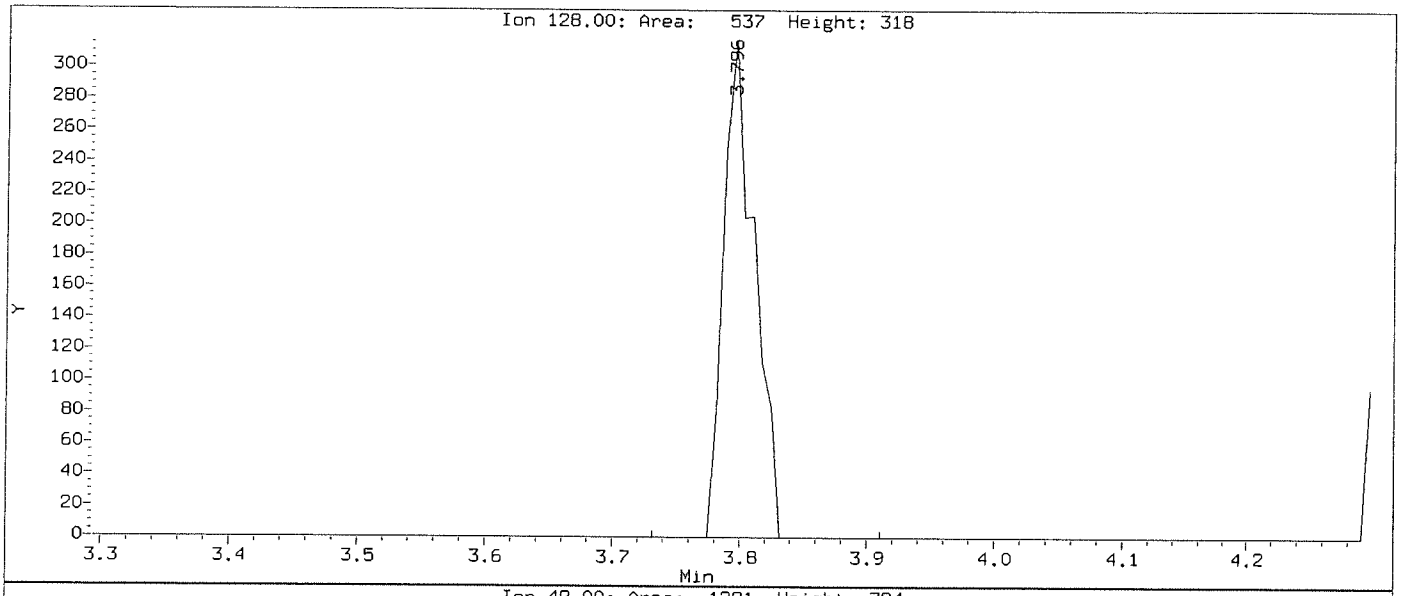
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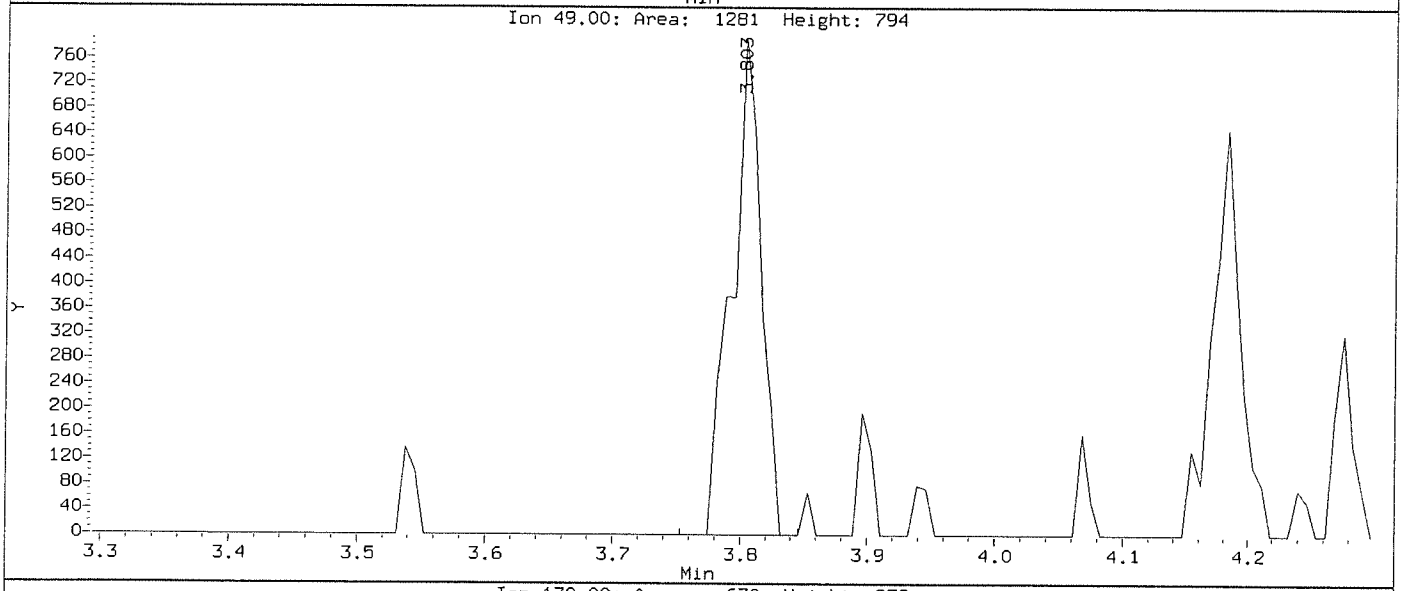
Compound: Bromochloromethane
CAS Number: 74-97-5

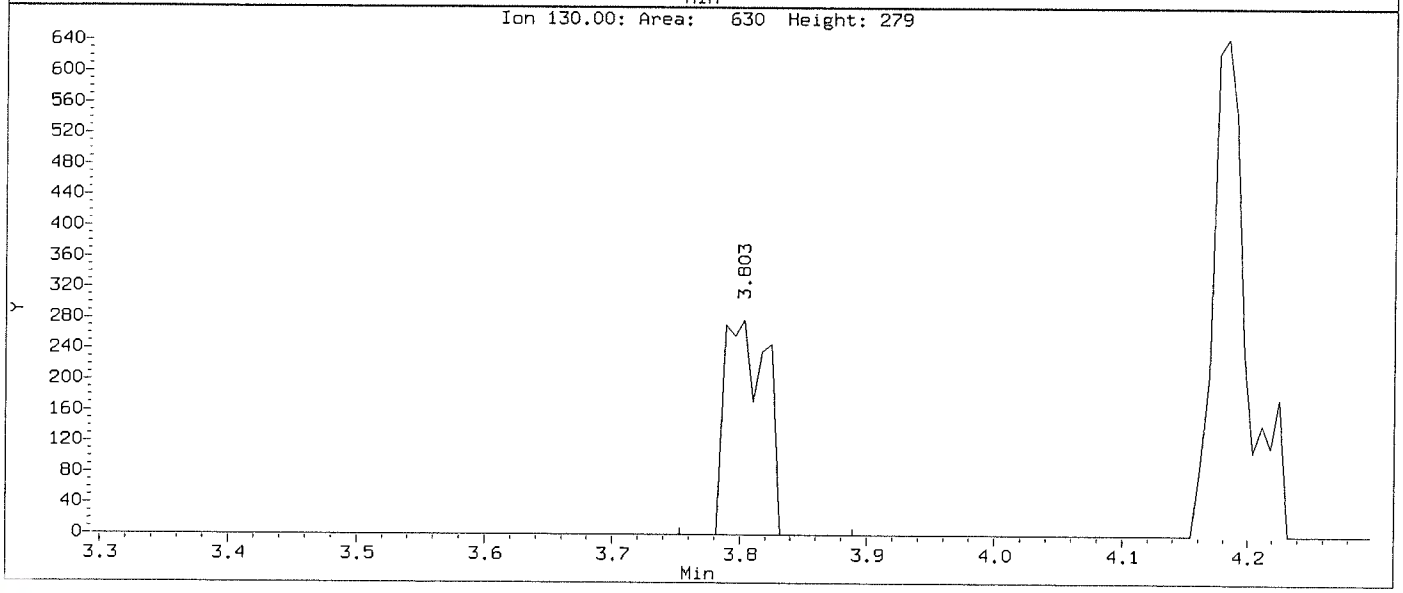


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

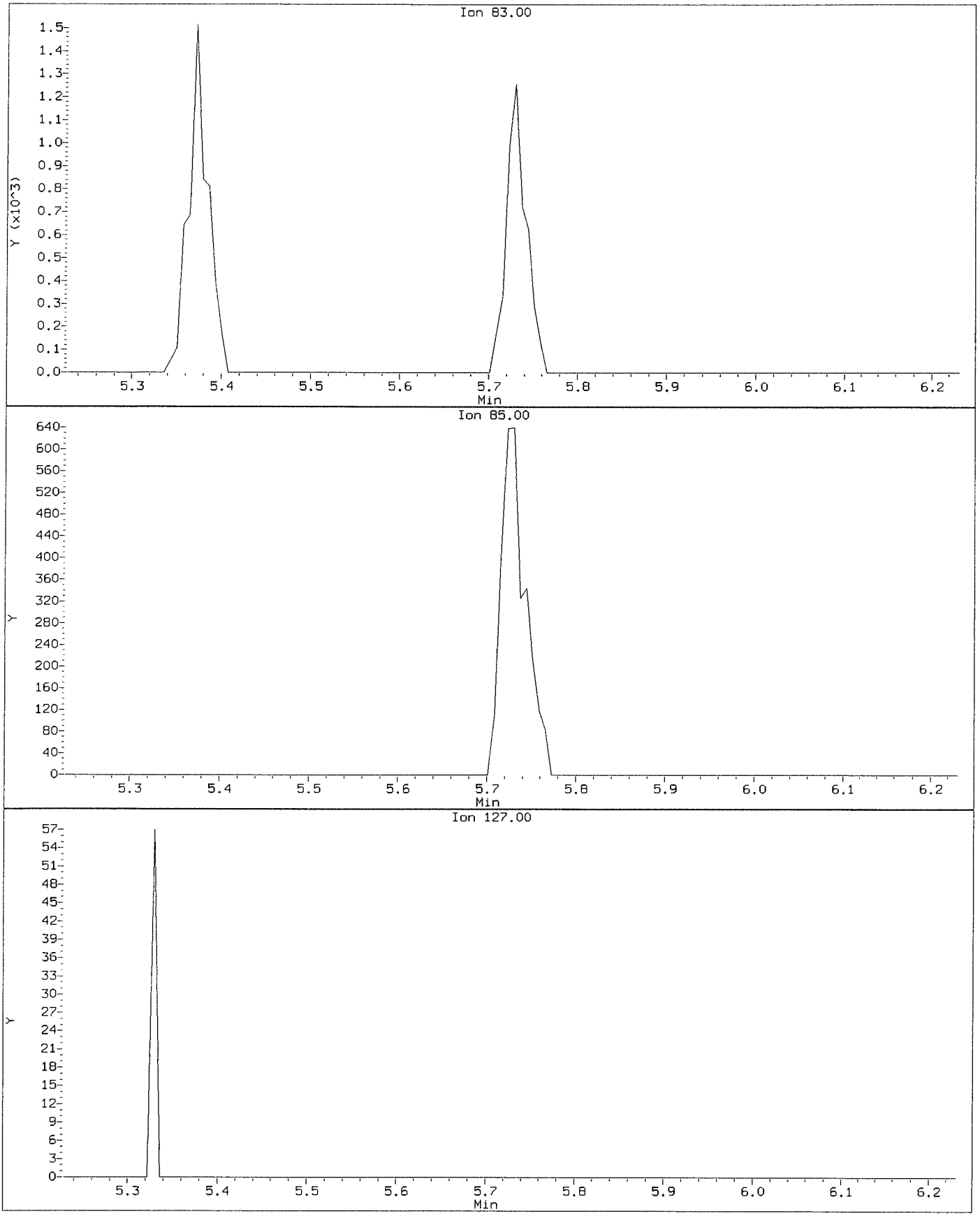






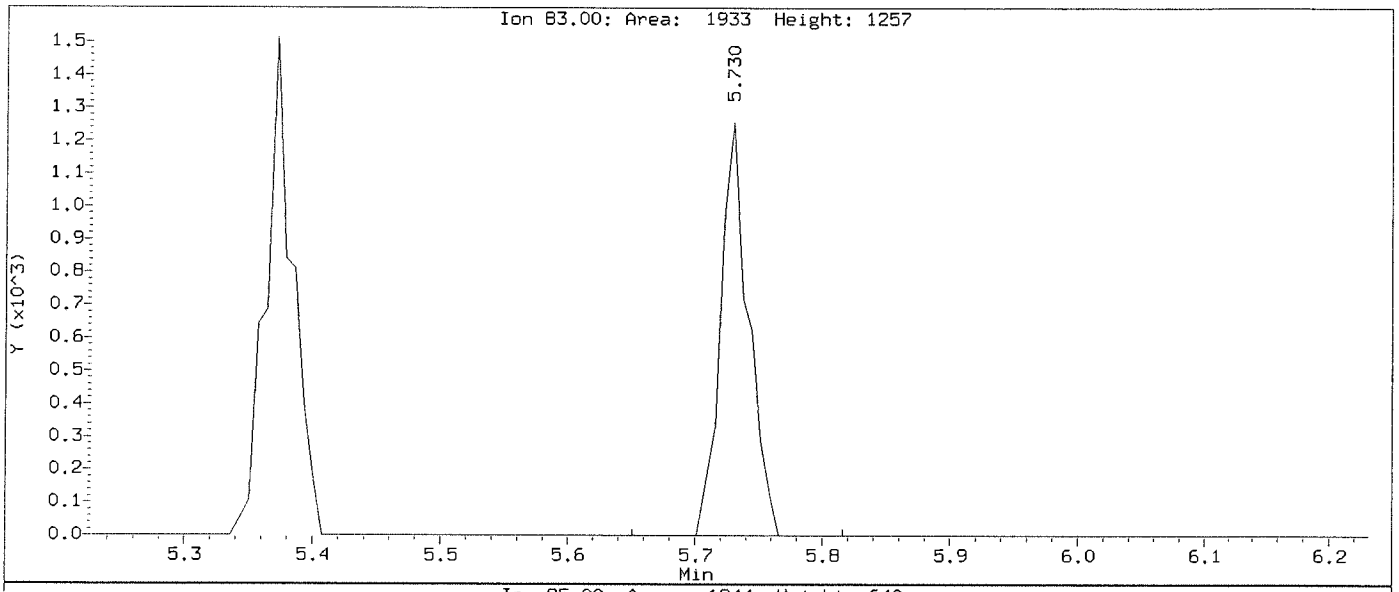
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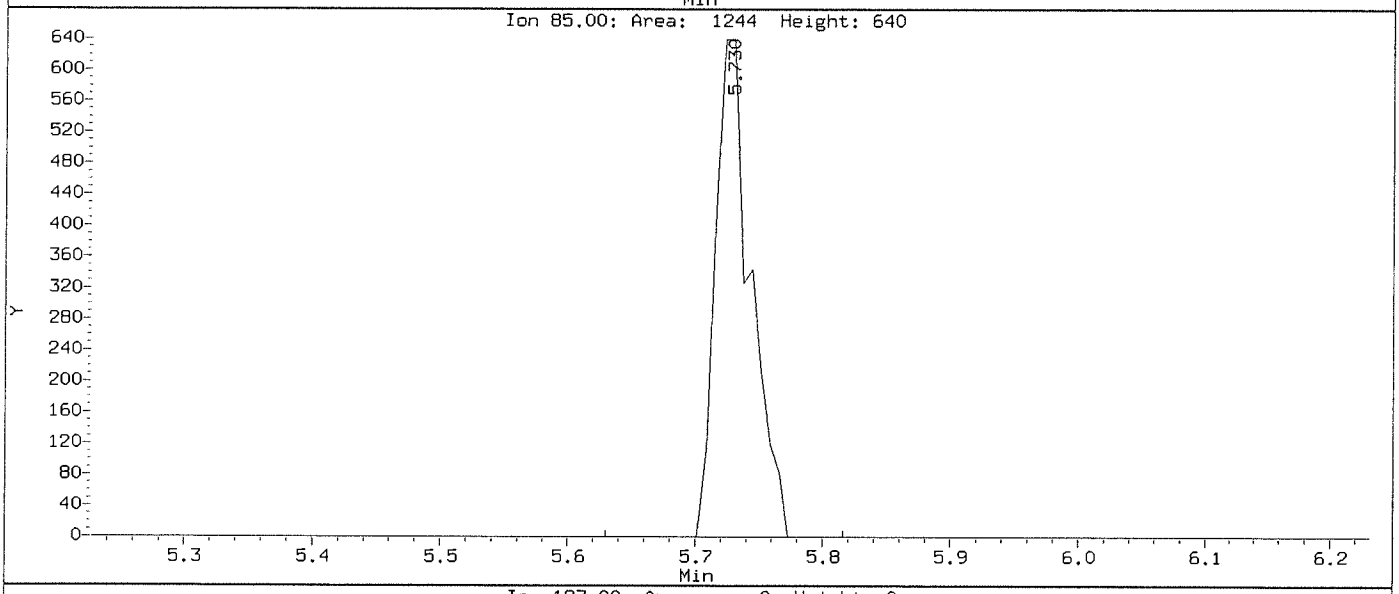
Compound: Bromodichloromethane
CAS Number: 75-27-4

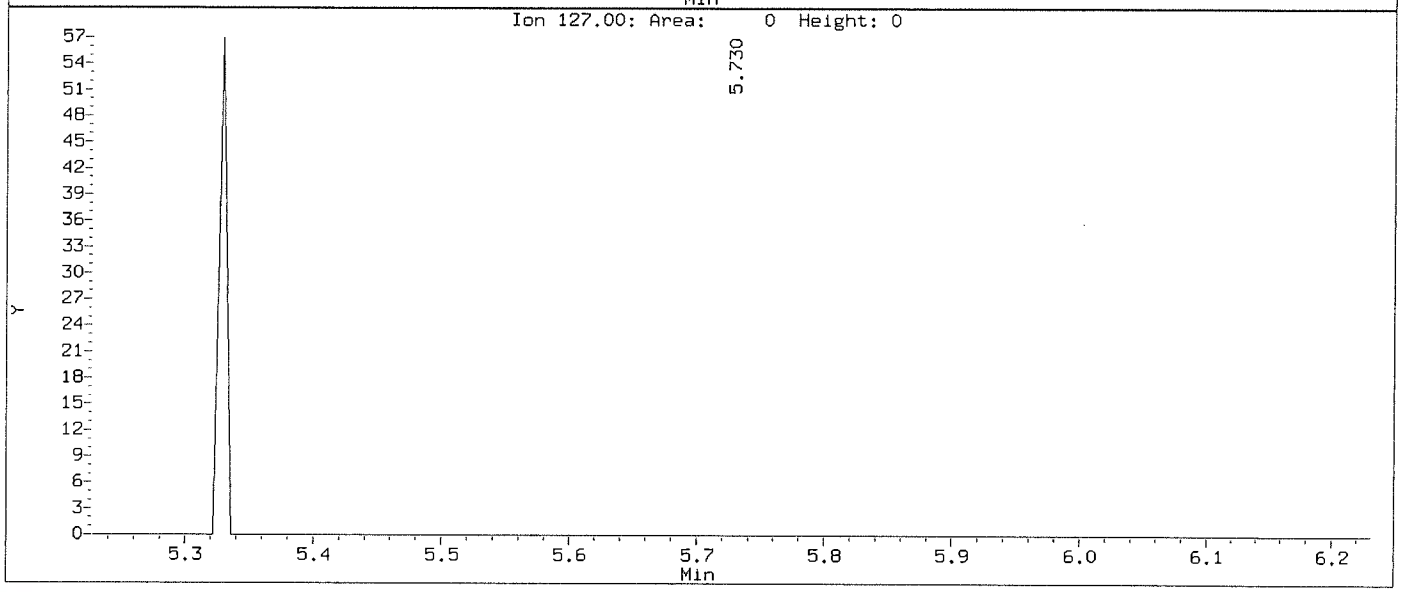


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4

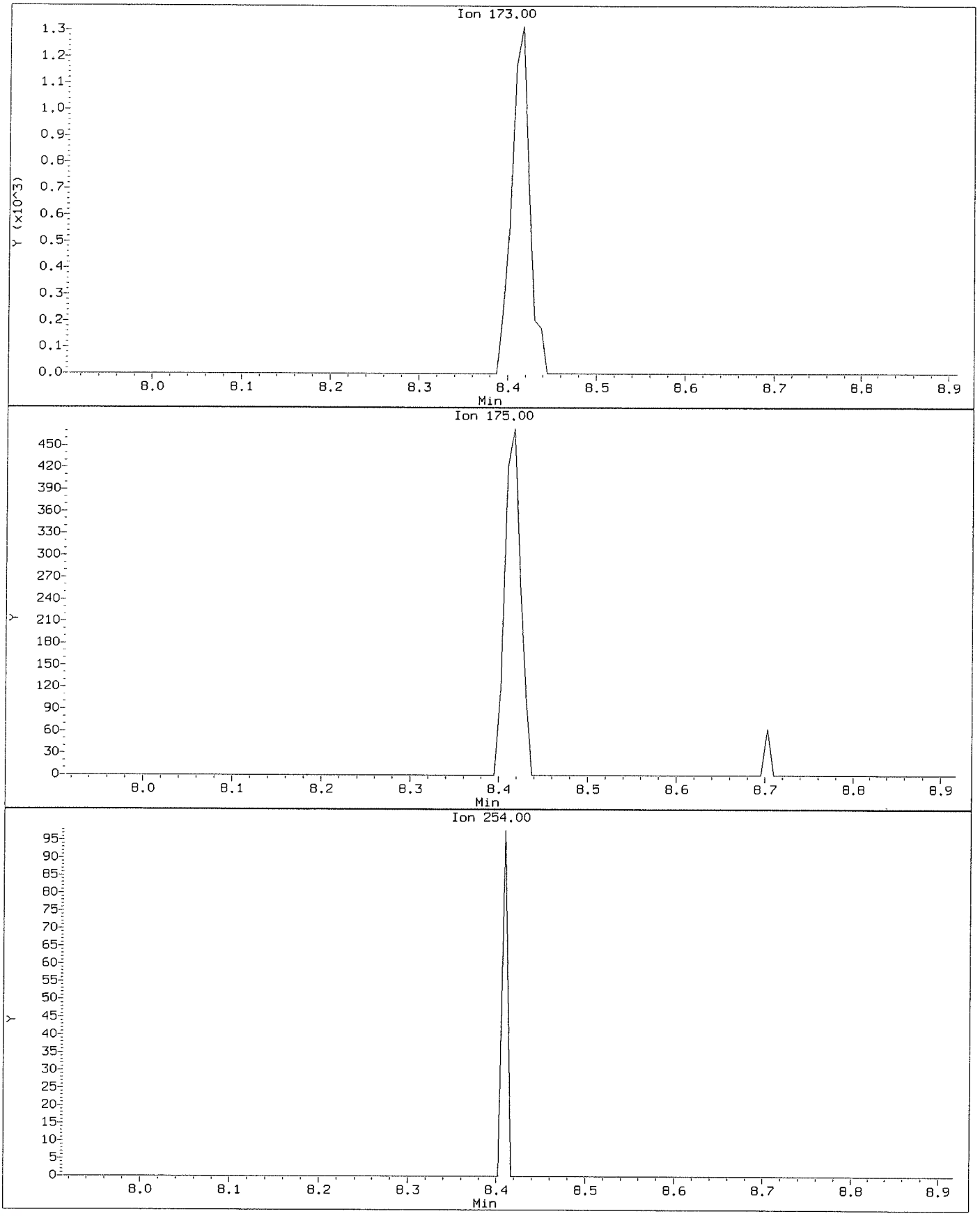






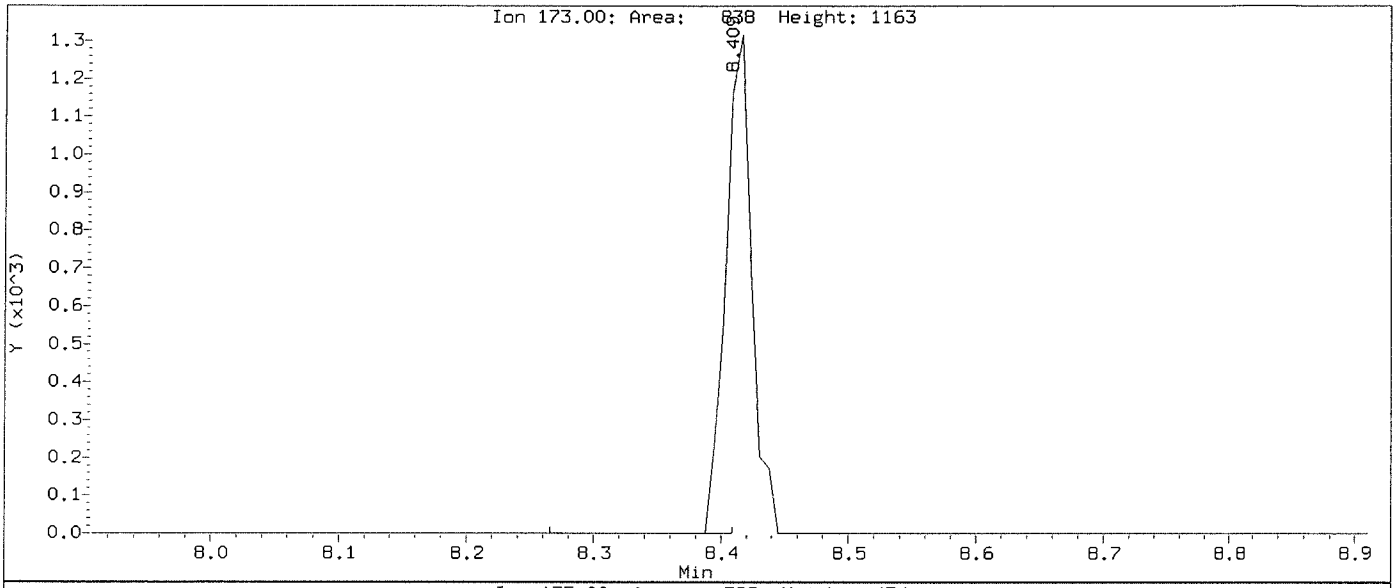
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Instrument: voa6.i
Client Sample ID: VSTD000.5

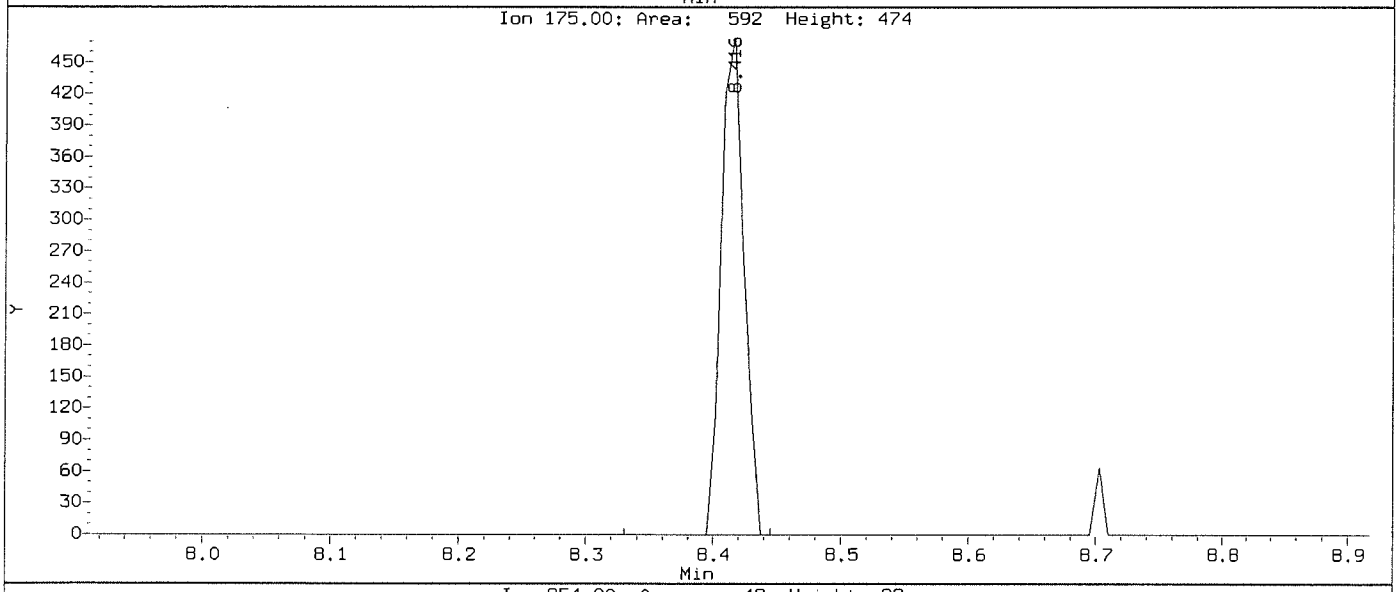
Compound: Bromoform
CAS Number: 75-25-2

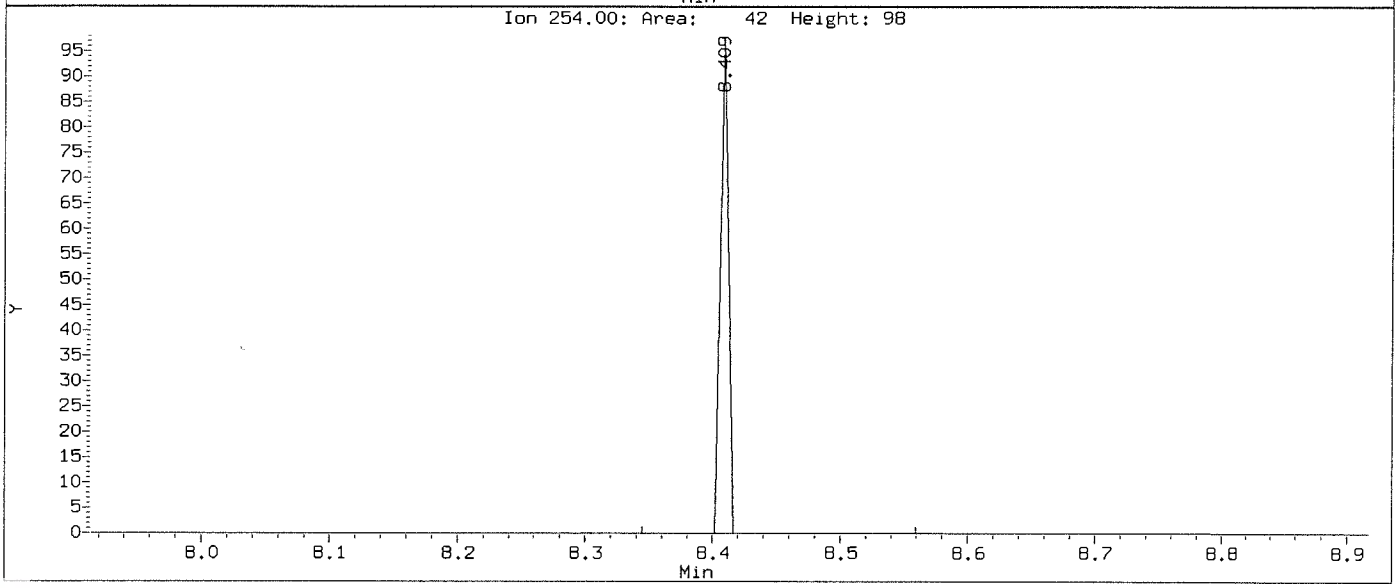


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2

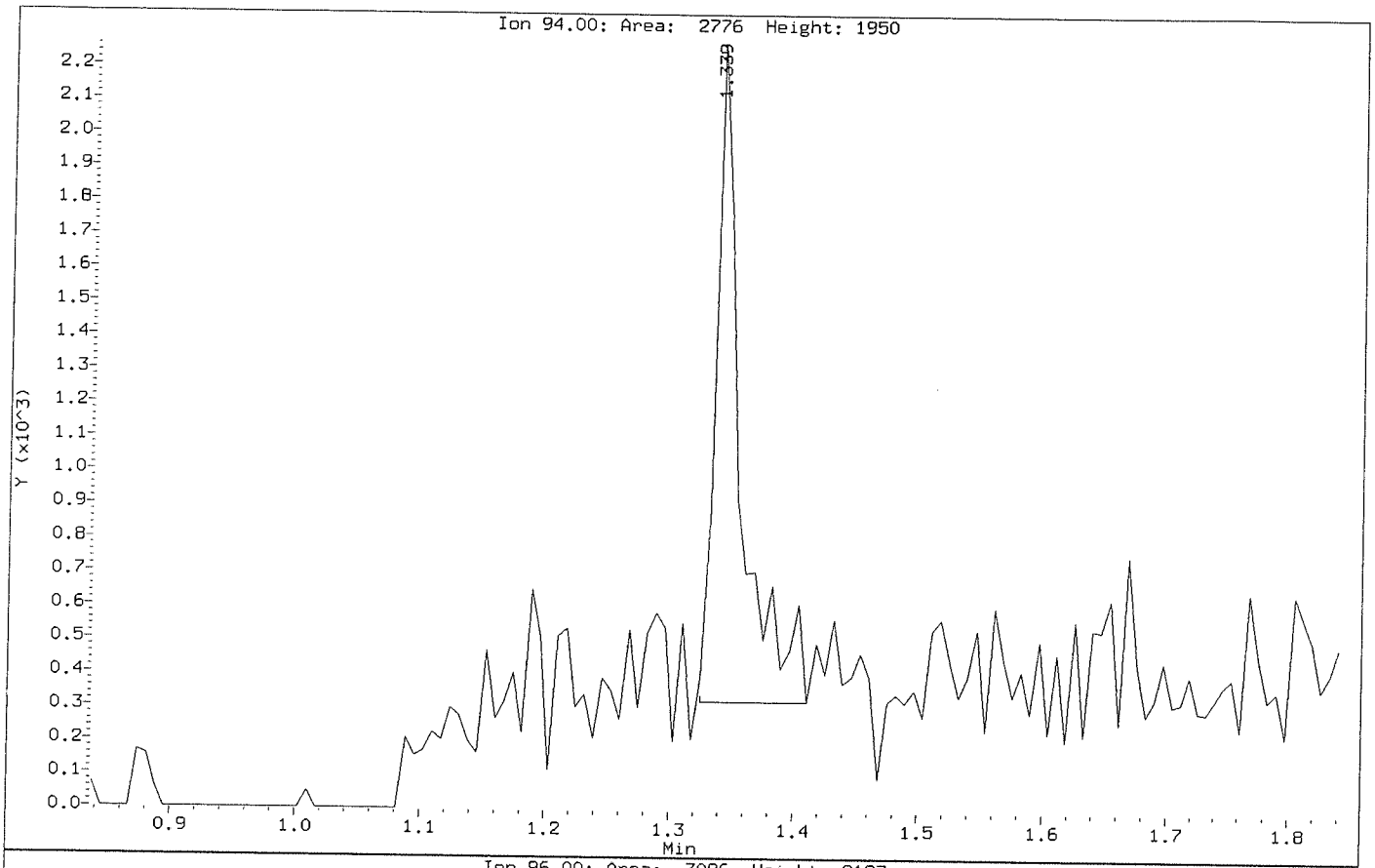


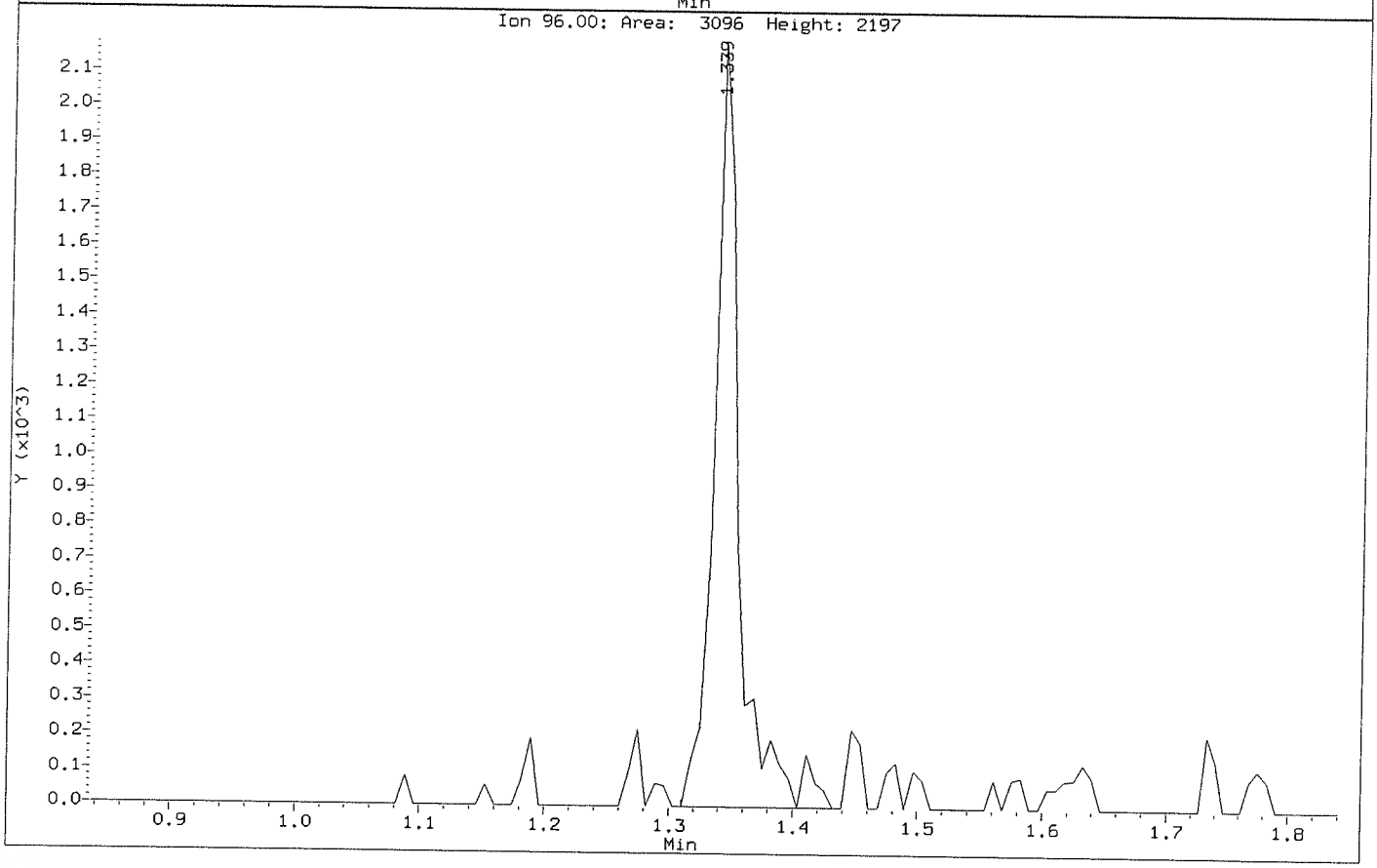




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Instrument: voa6.i
Client Sample ID: VSTD000.5

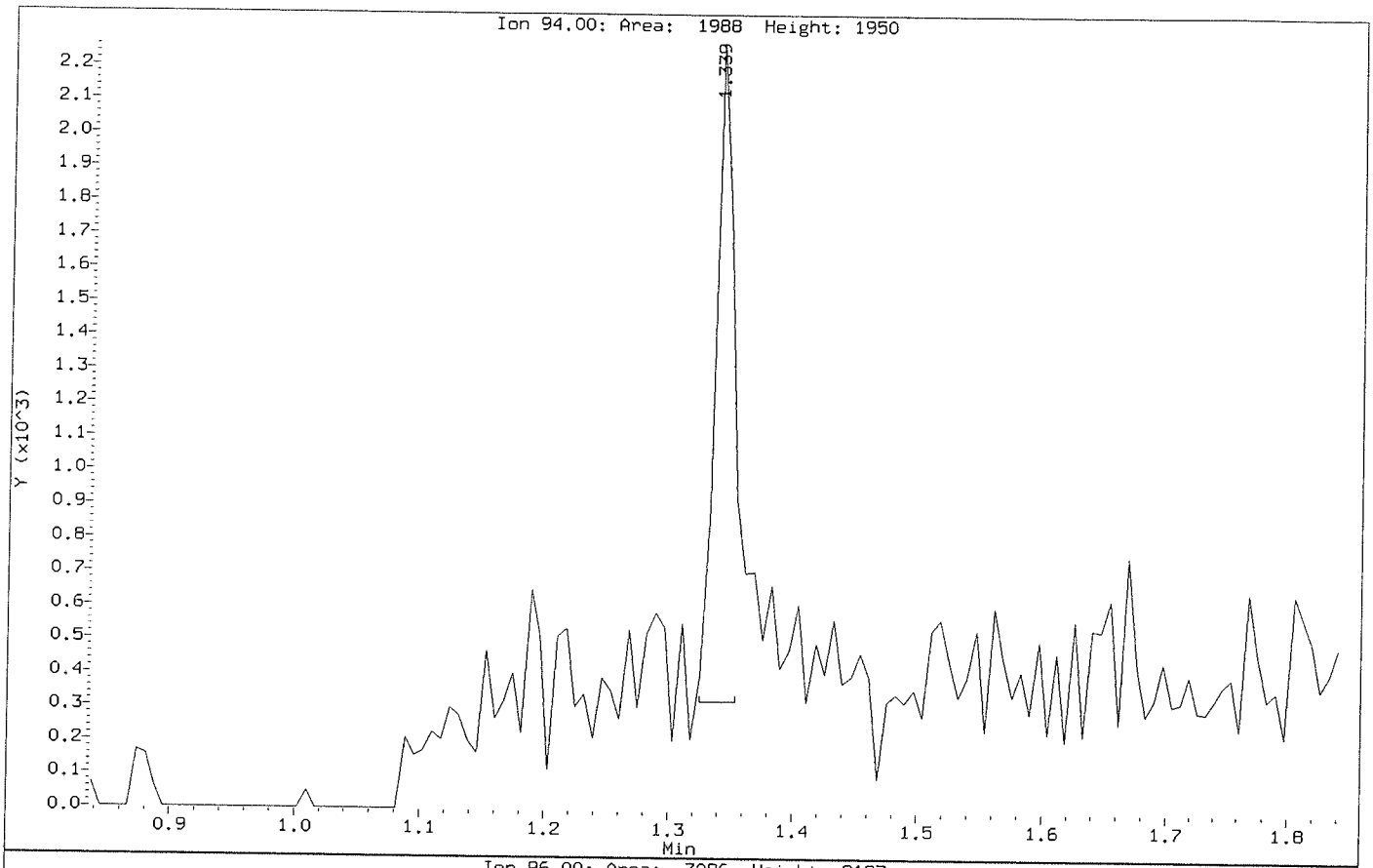
Compound: Bromomethane
CAS Number: 74-83-9

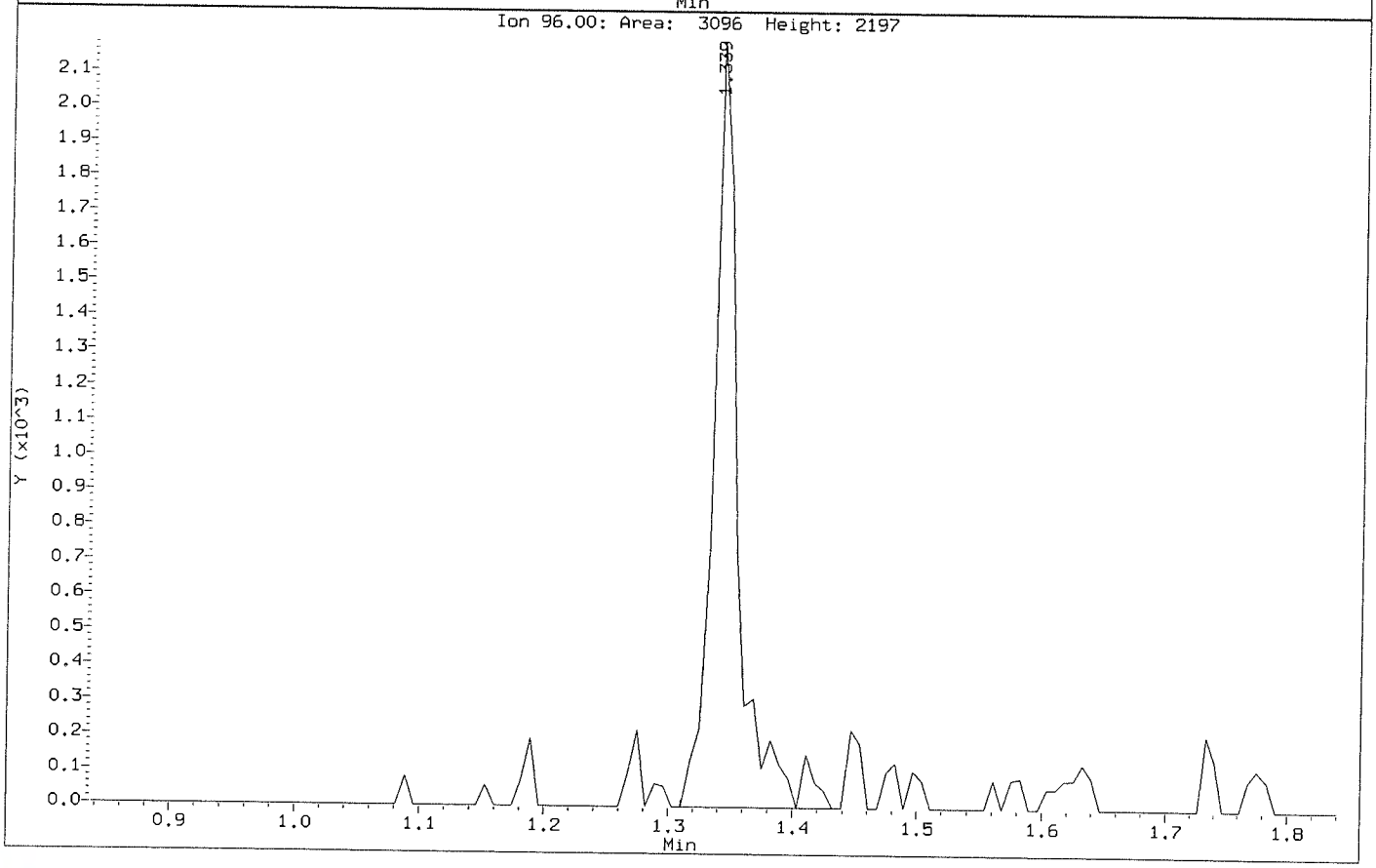




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Instrument: voa6.i
Client Sample ID: VSTD000.5

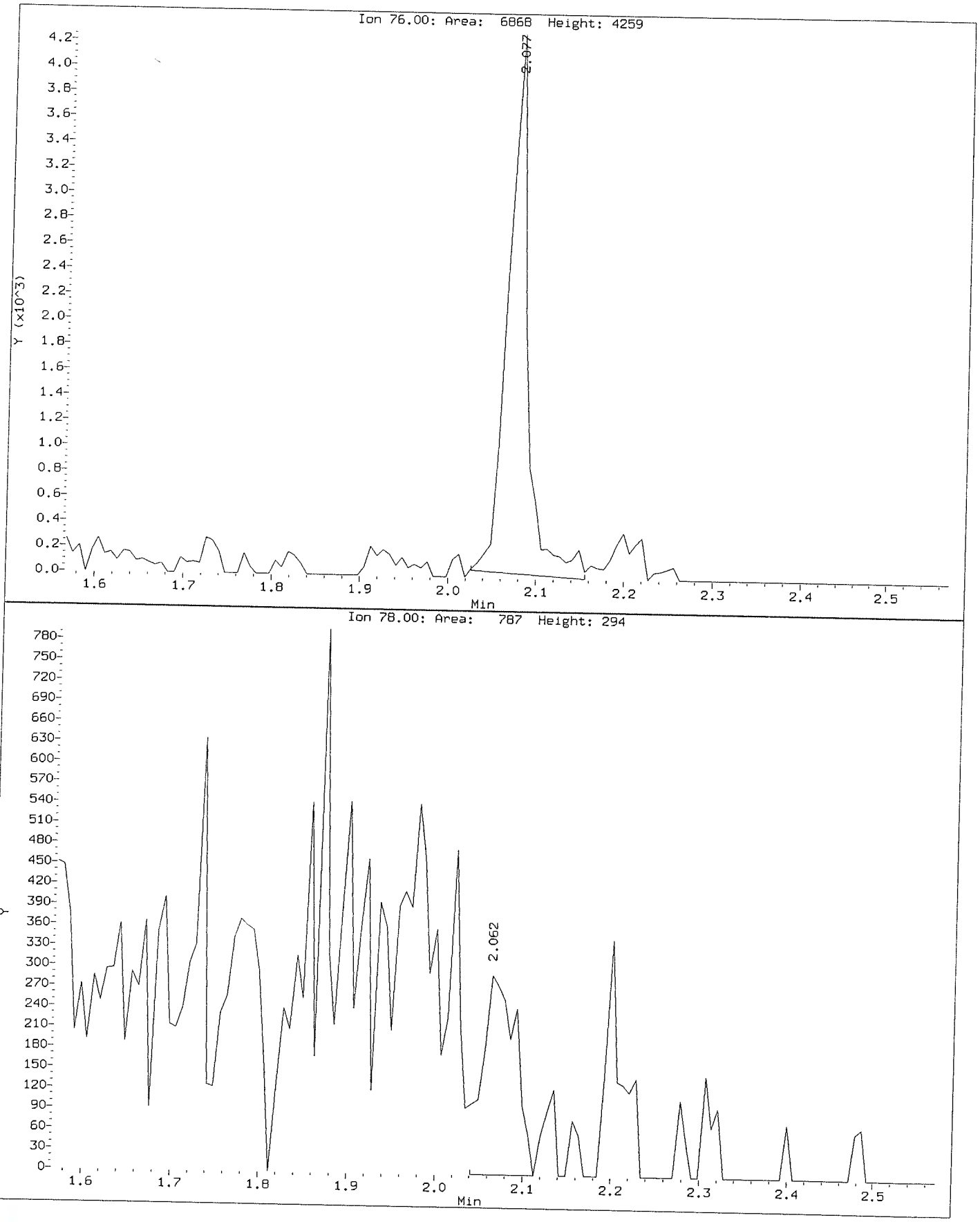
Compound: Bromomethane
CAS Number: 74-83-9





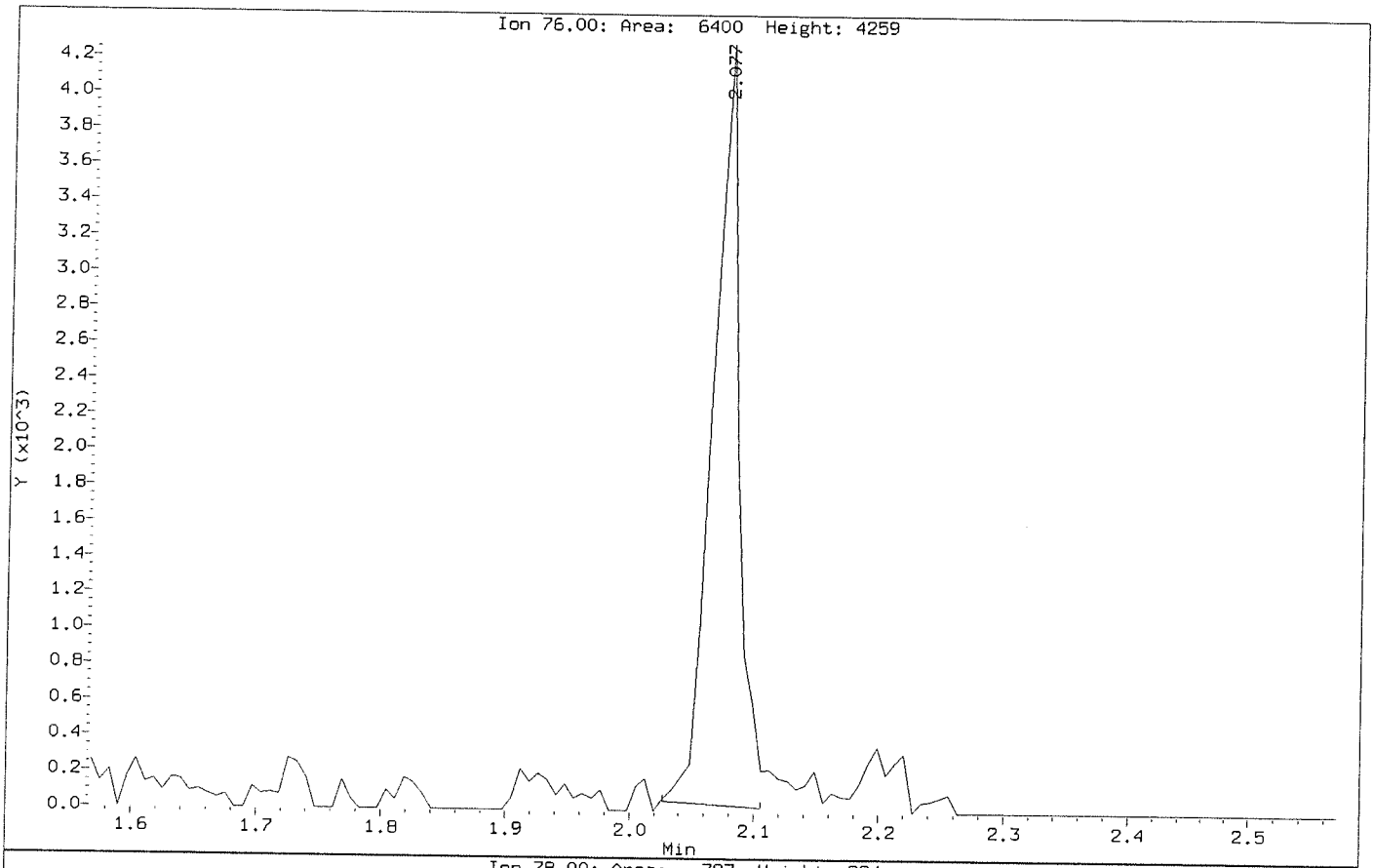
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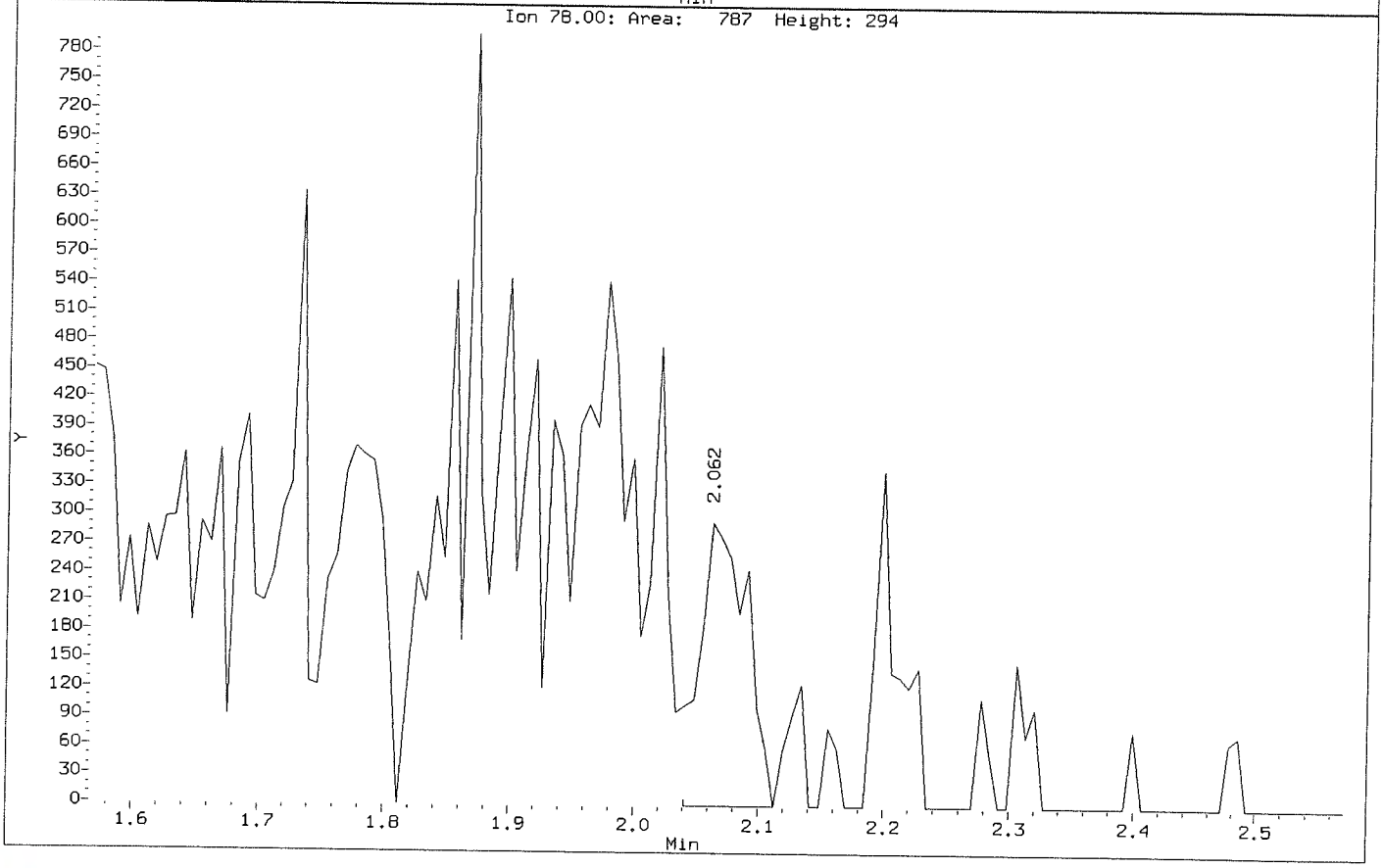
Compound: Carbon Disulfide
CAS Number: 75-15-0



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

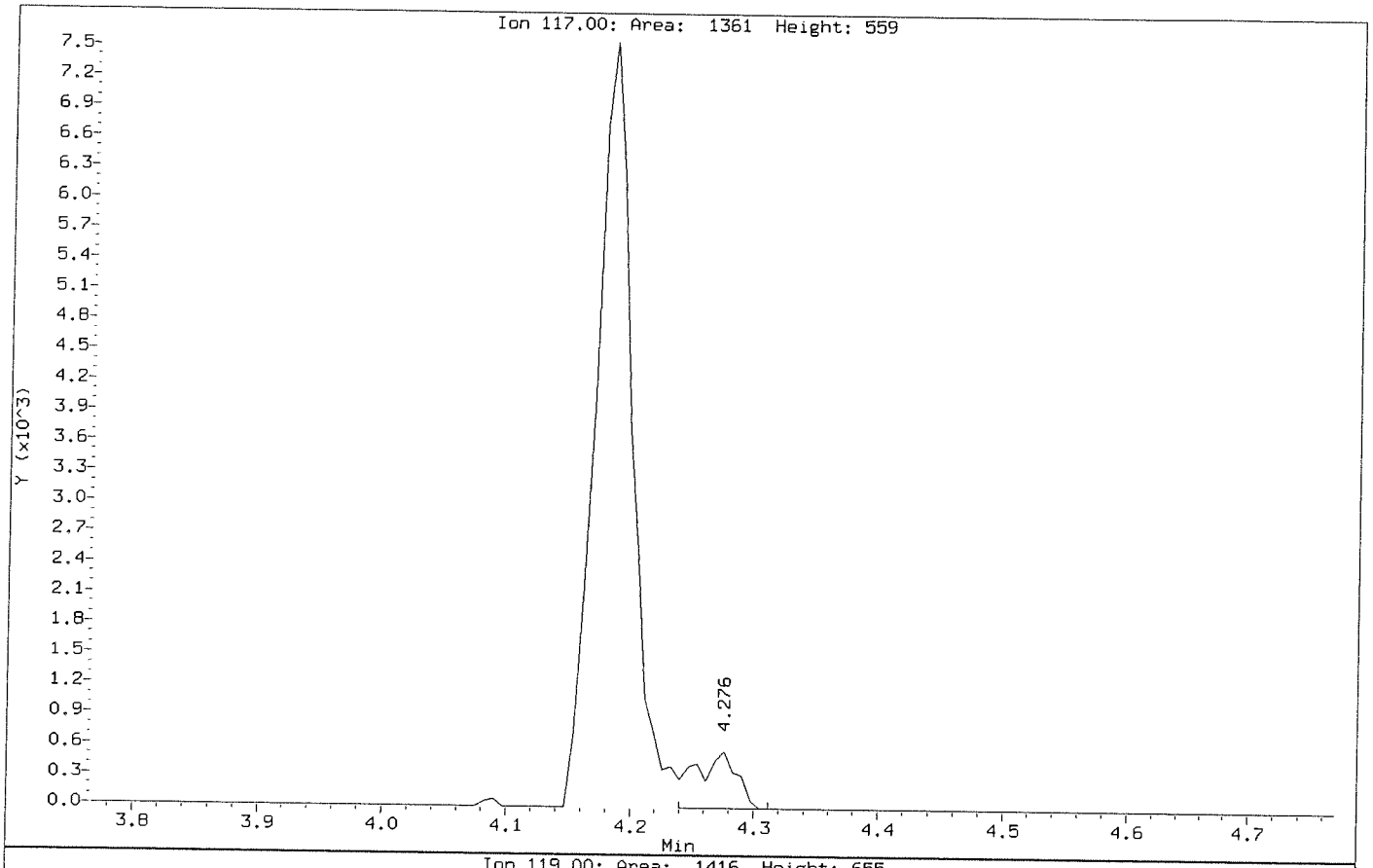
Compound: Carbon Disulfide
CAS Number: 75-15-0

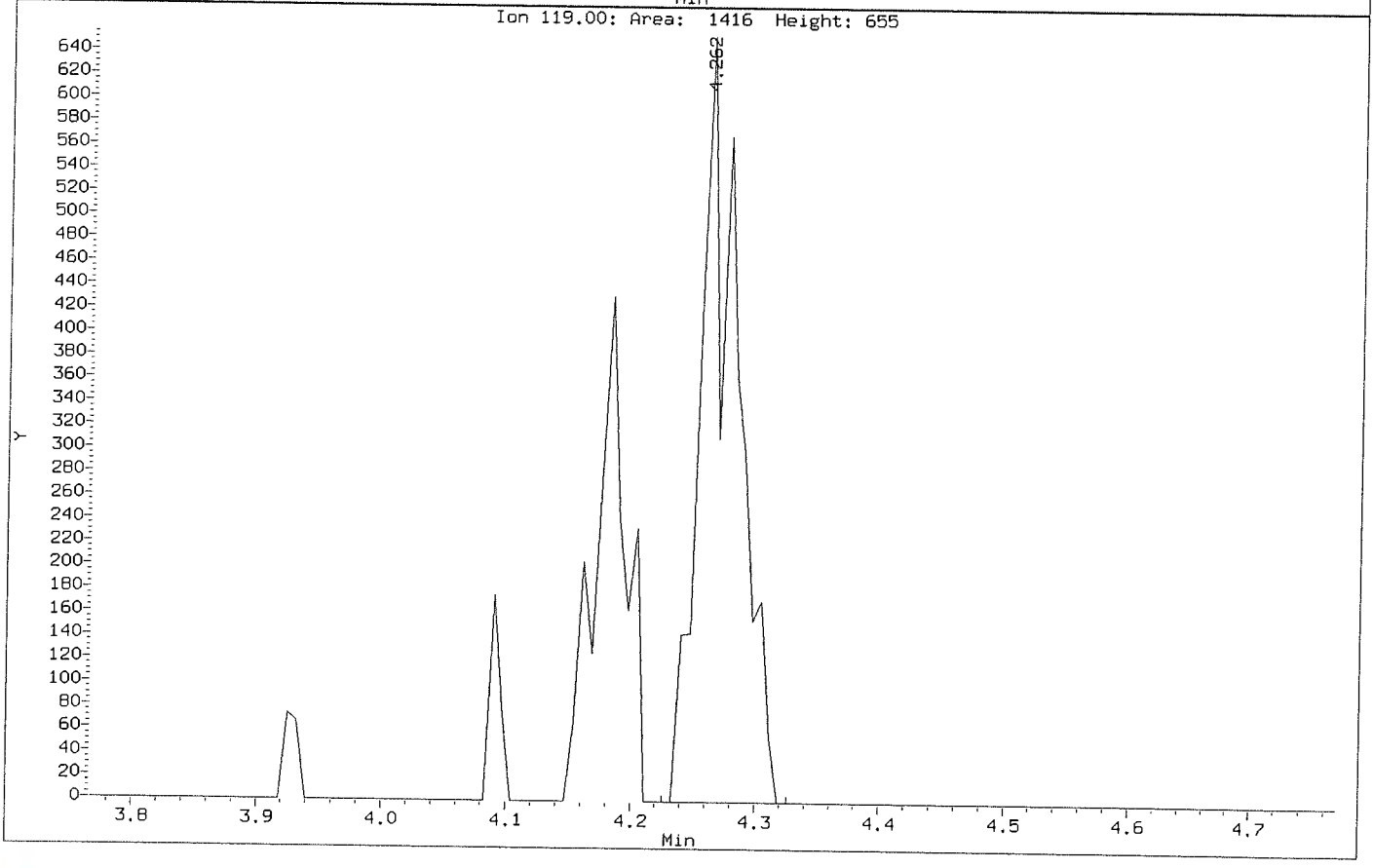




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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

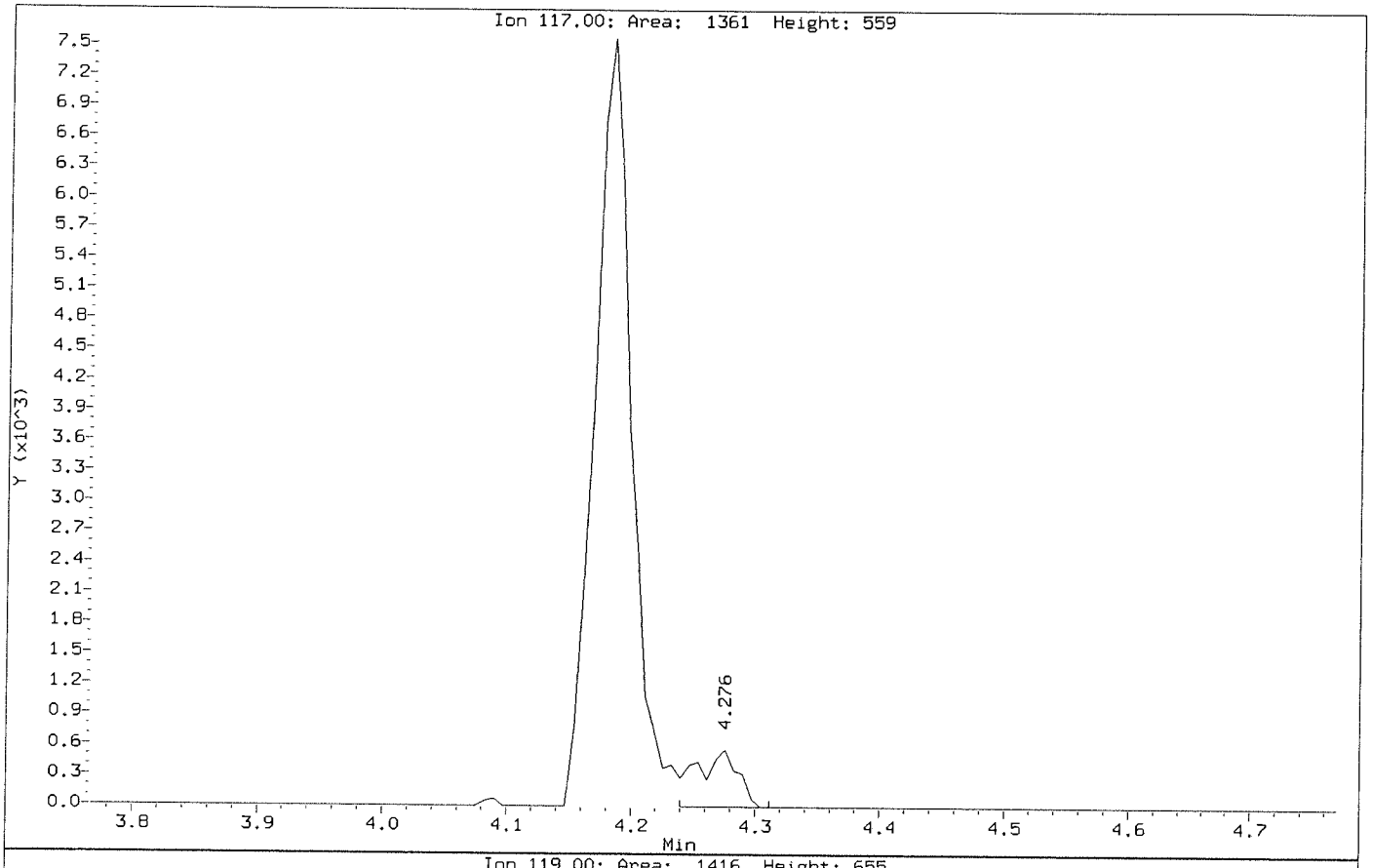
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

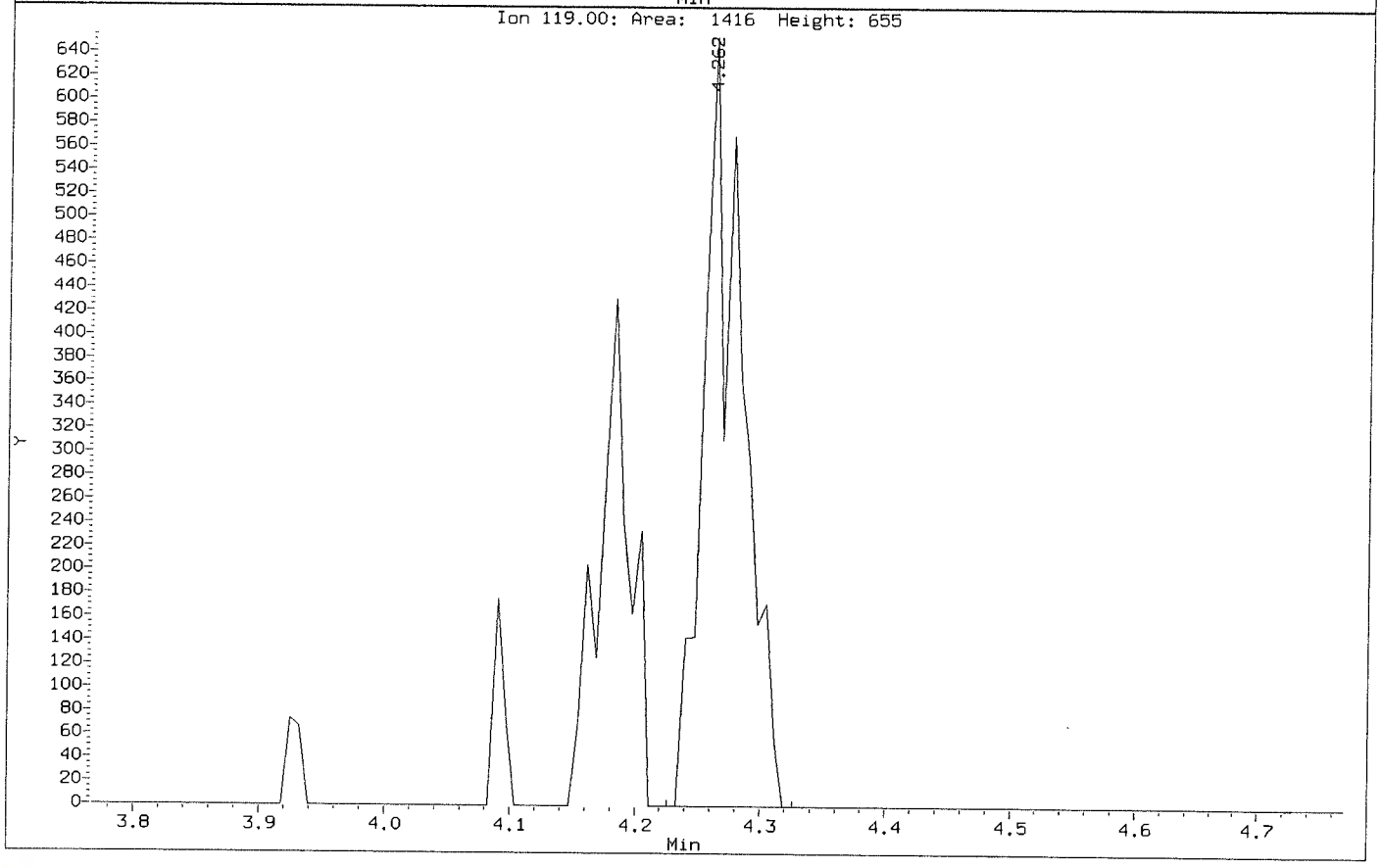




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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

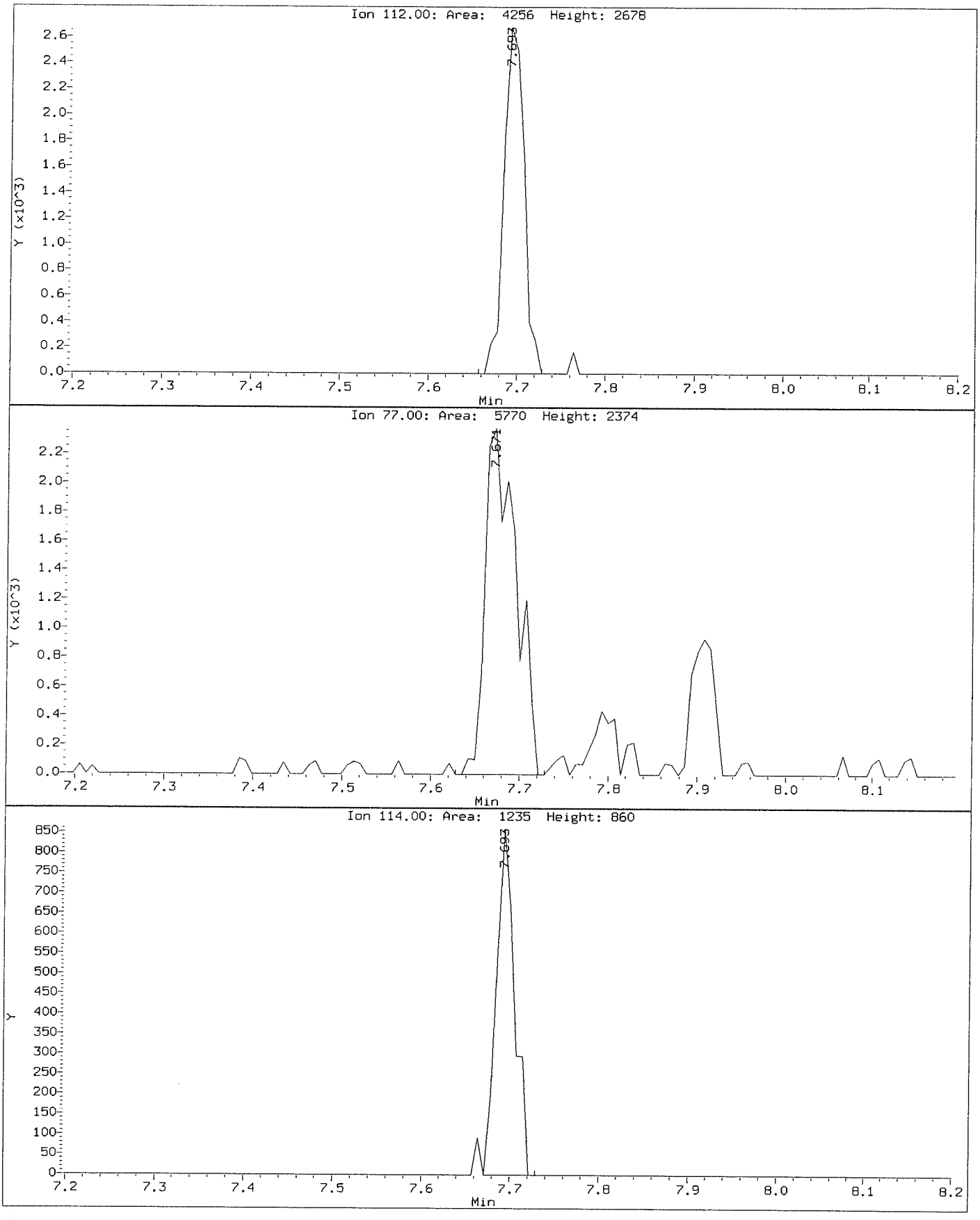
Compound: Carbon Tetrachloride
CAS Number: 56-23-5





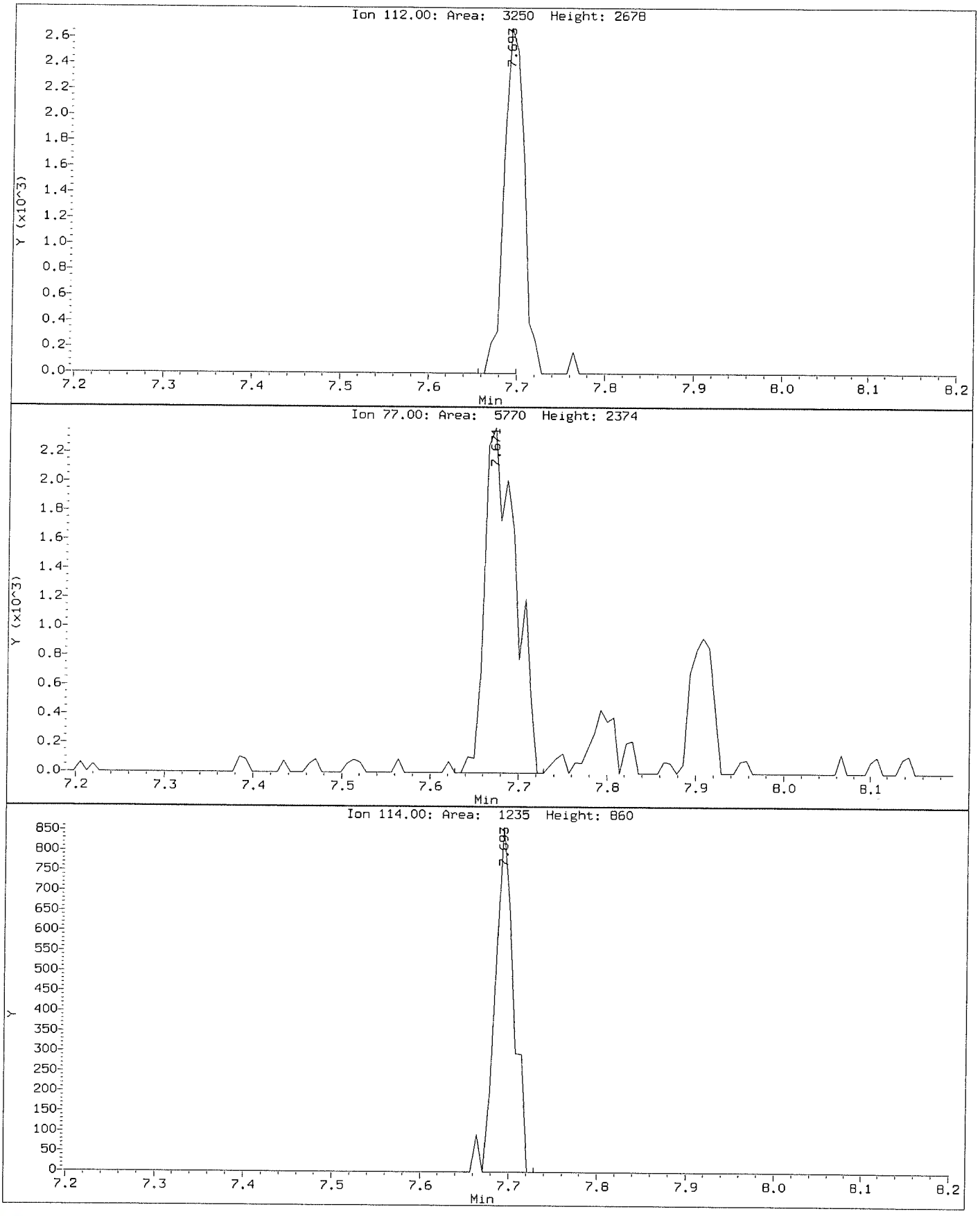
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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Chlorobenzene
CAS Number: 108-90-7



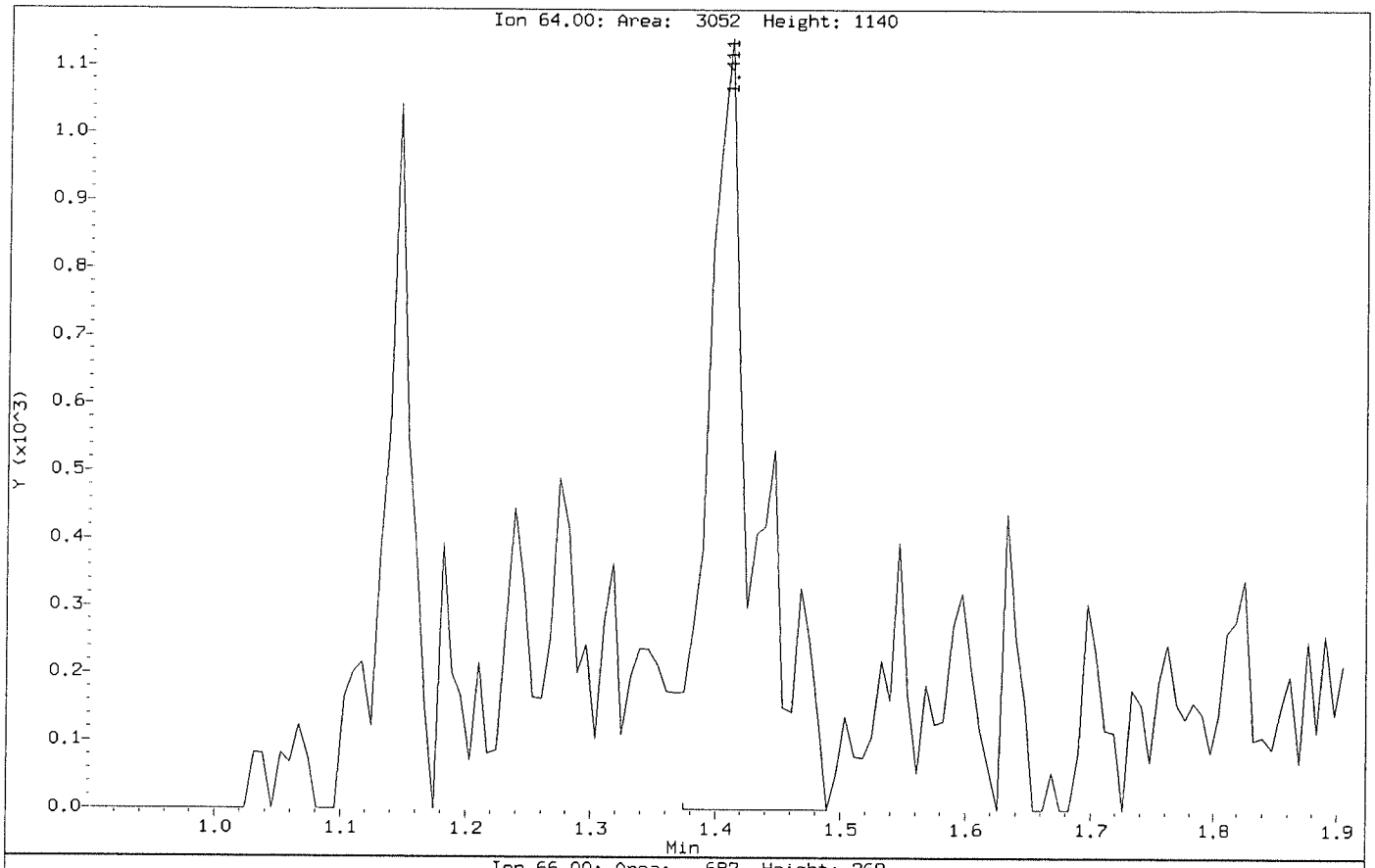
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Instrument: voa6.i
Client Sample ID: VSTD000.5

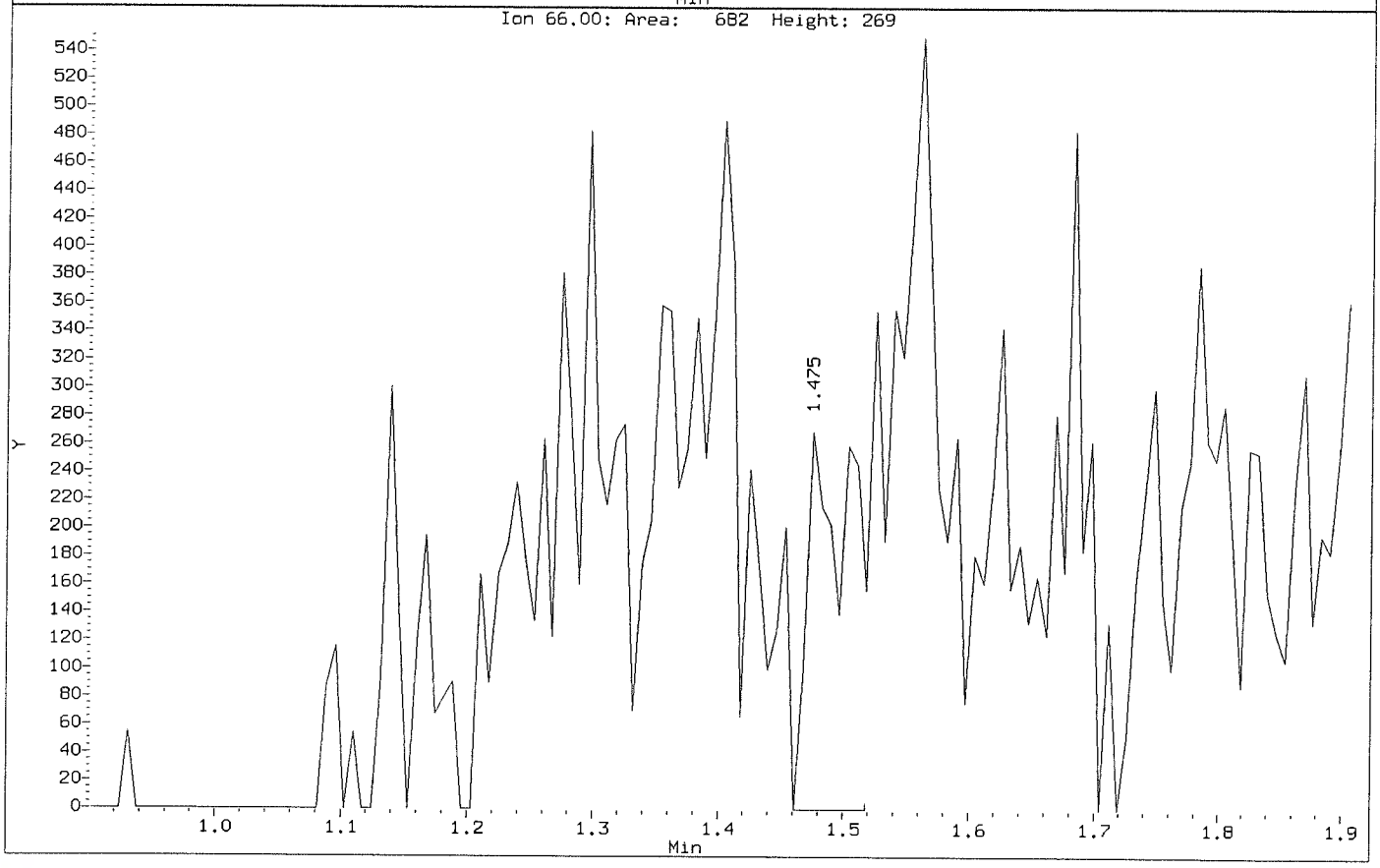
Compound: Chlorobenzene
CAS Number: 108-90-7



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112203.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

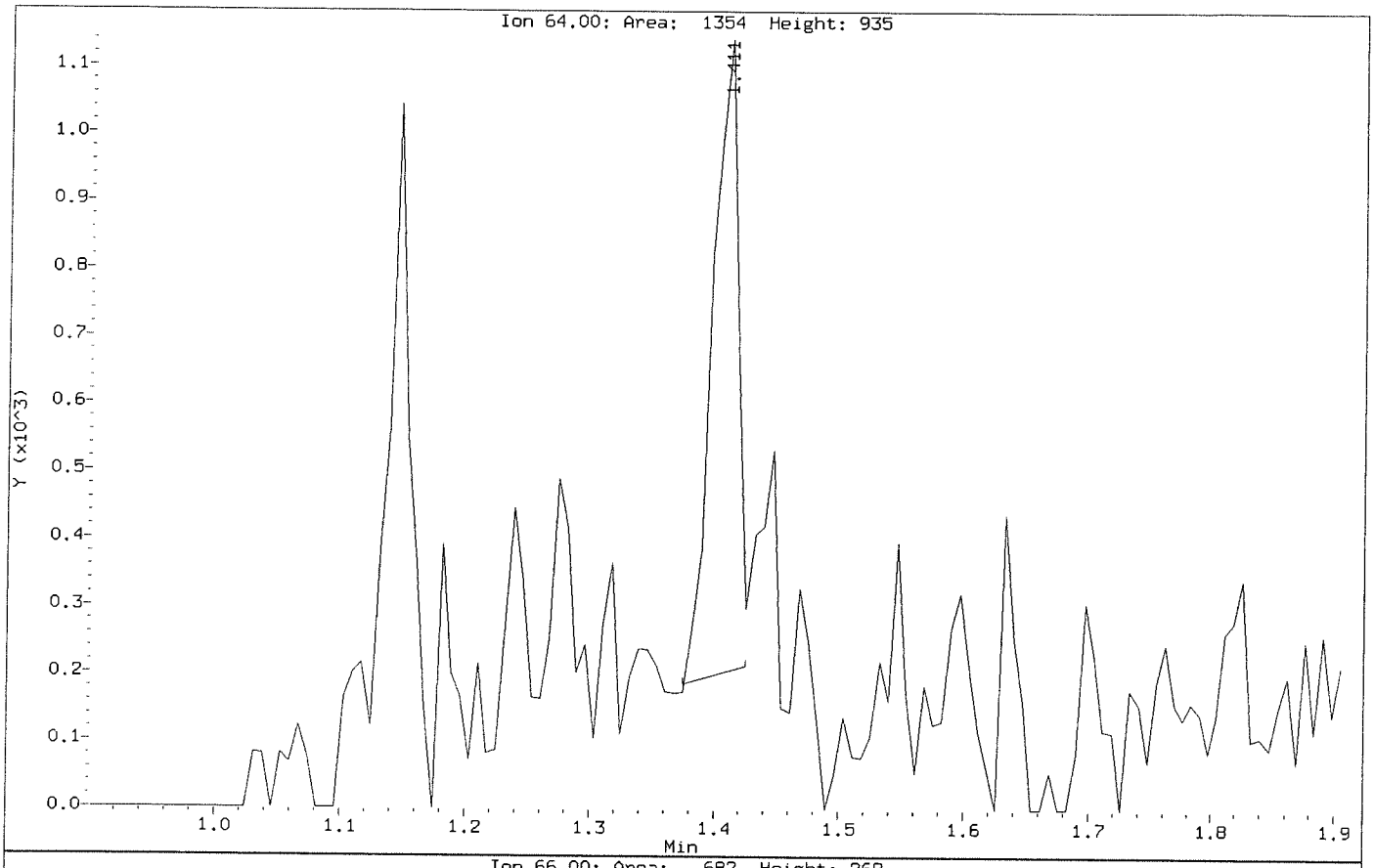
Compound: Chloroethane
CAS Number: 75-00-3

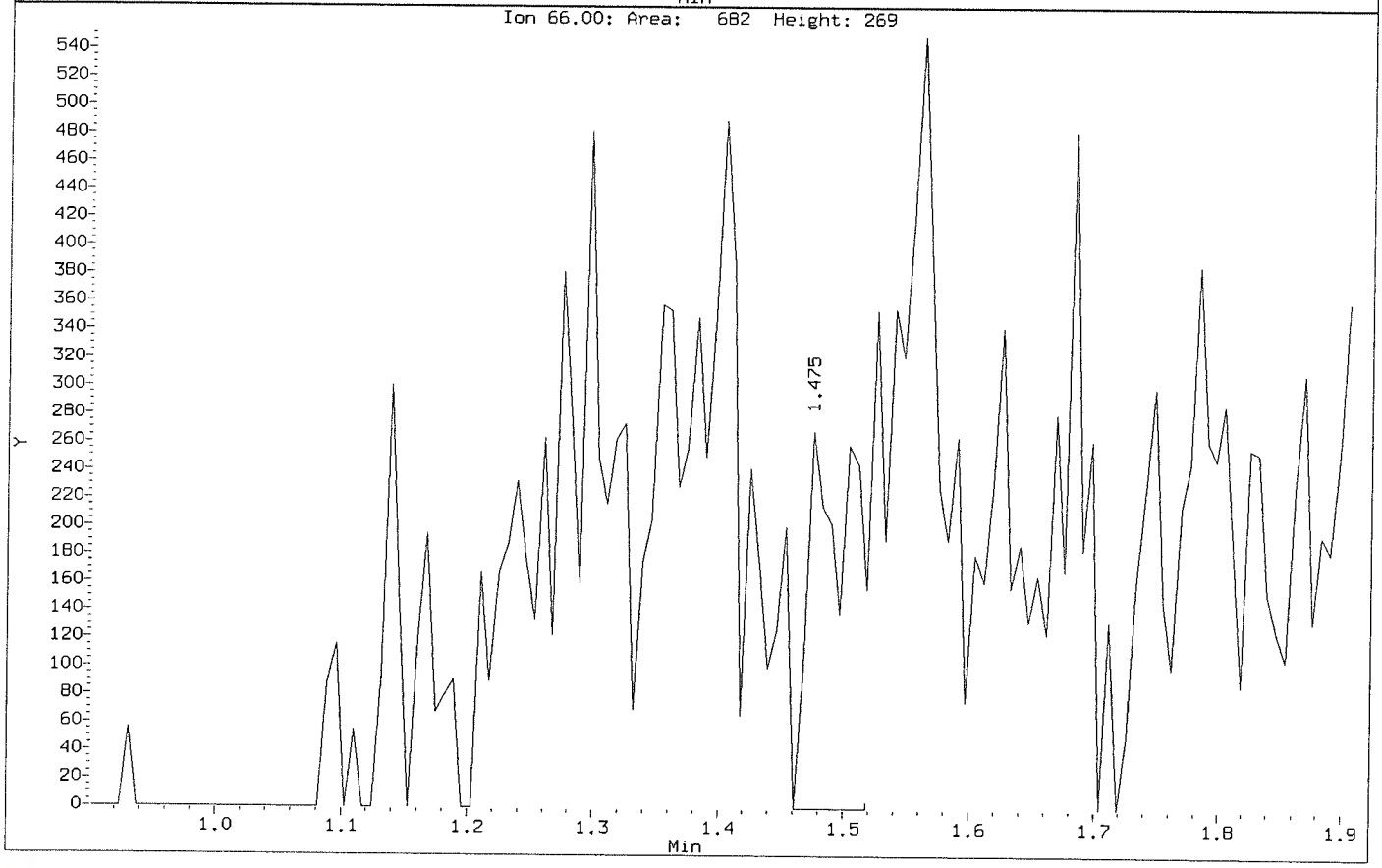




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Injection Date: 22-NOV-2020 16:25
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Client Sample ID: VSTD000.5

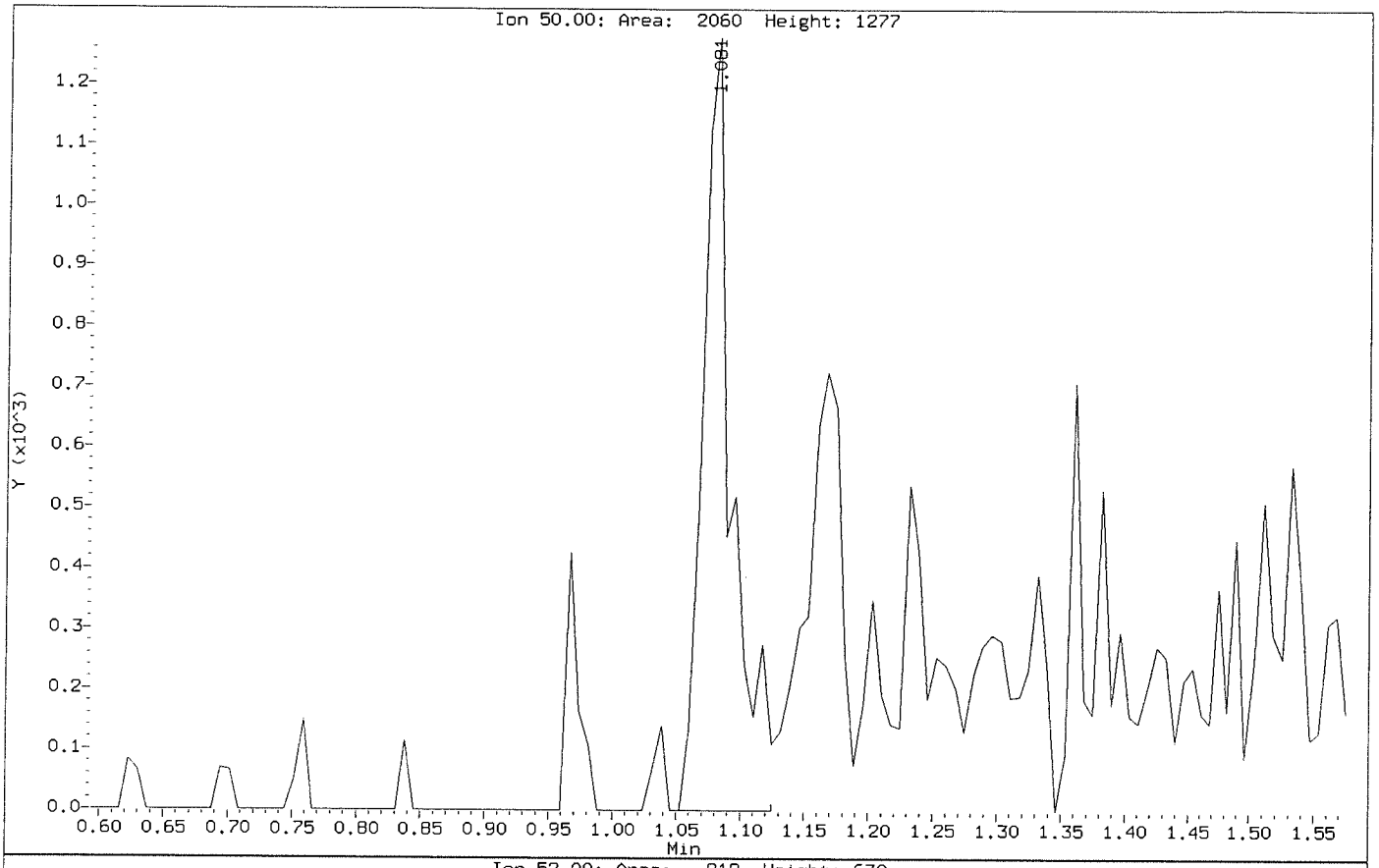
Compound: Chloroethane
CAS Number: 75-00-3

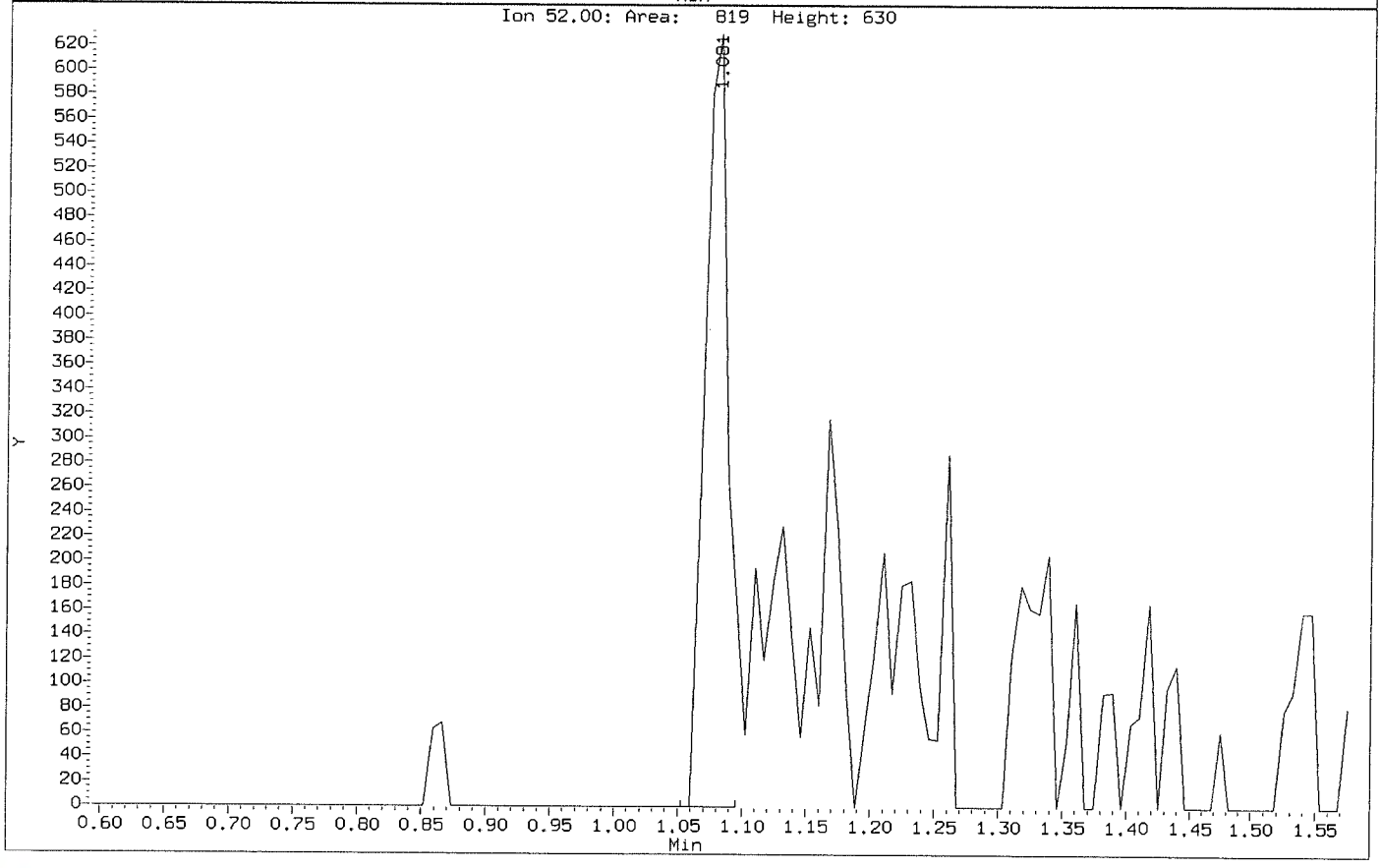




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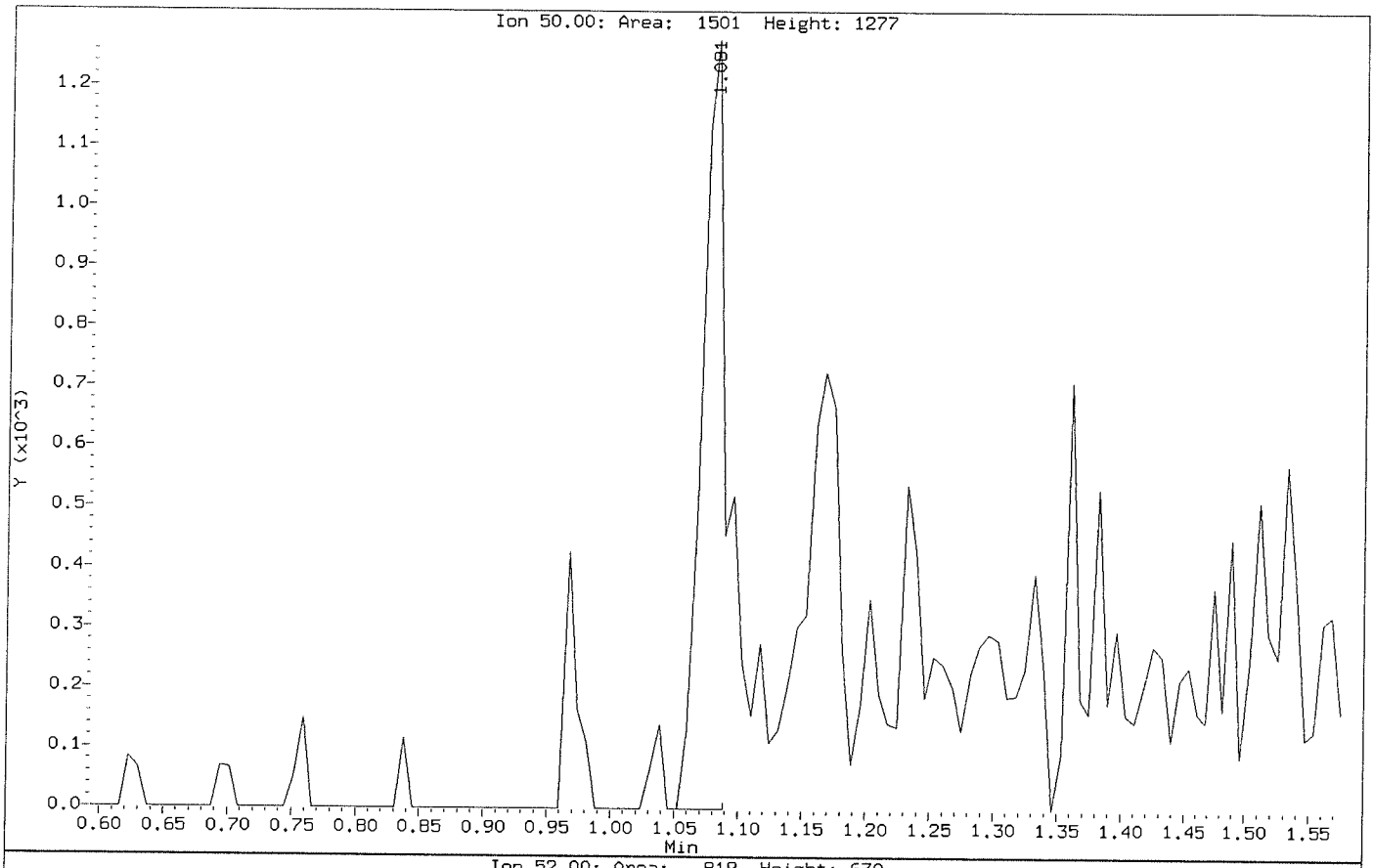
Compound: Chloromethane
CAS Number: 74-87-3

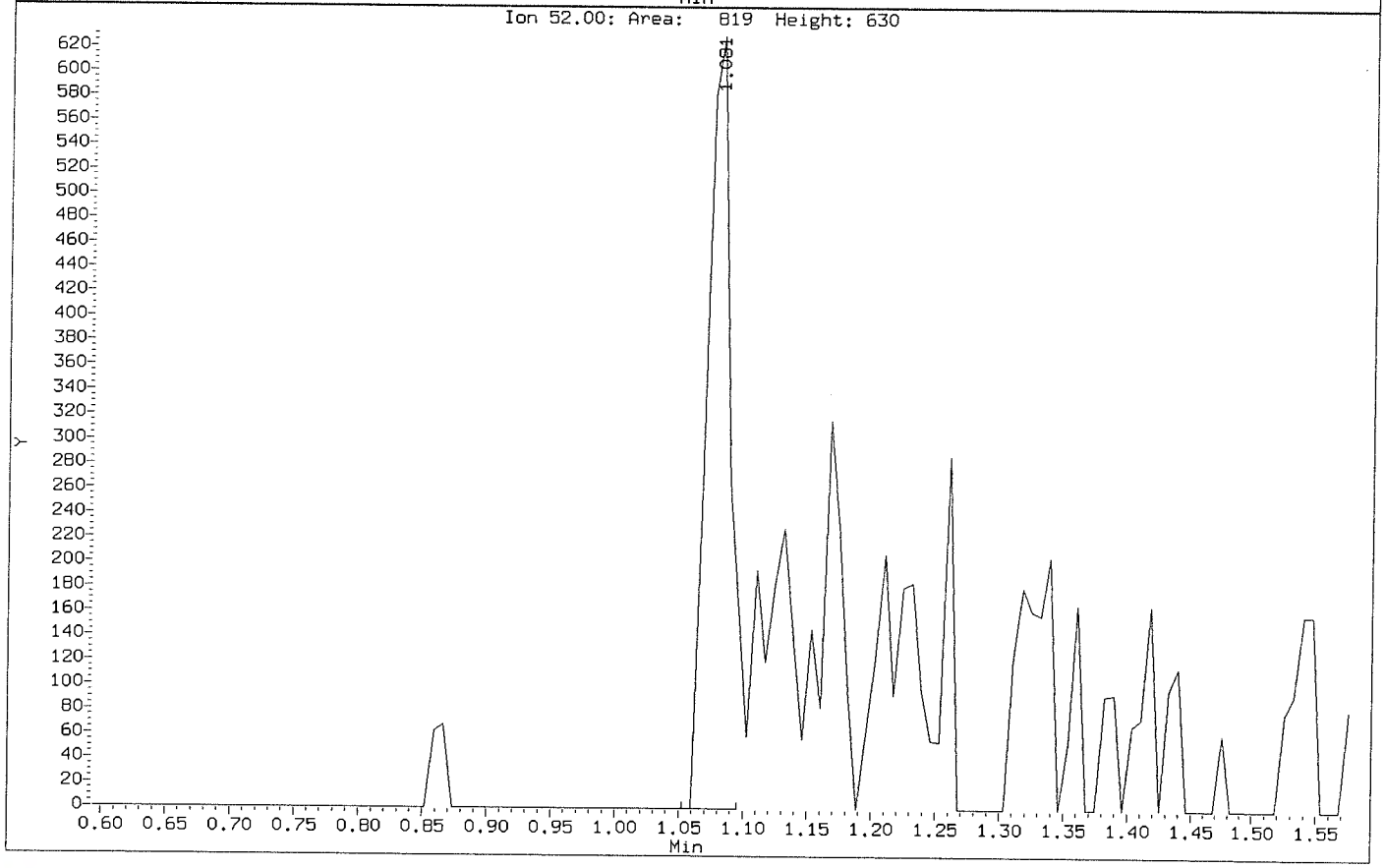




Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112203.D
Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

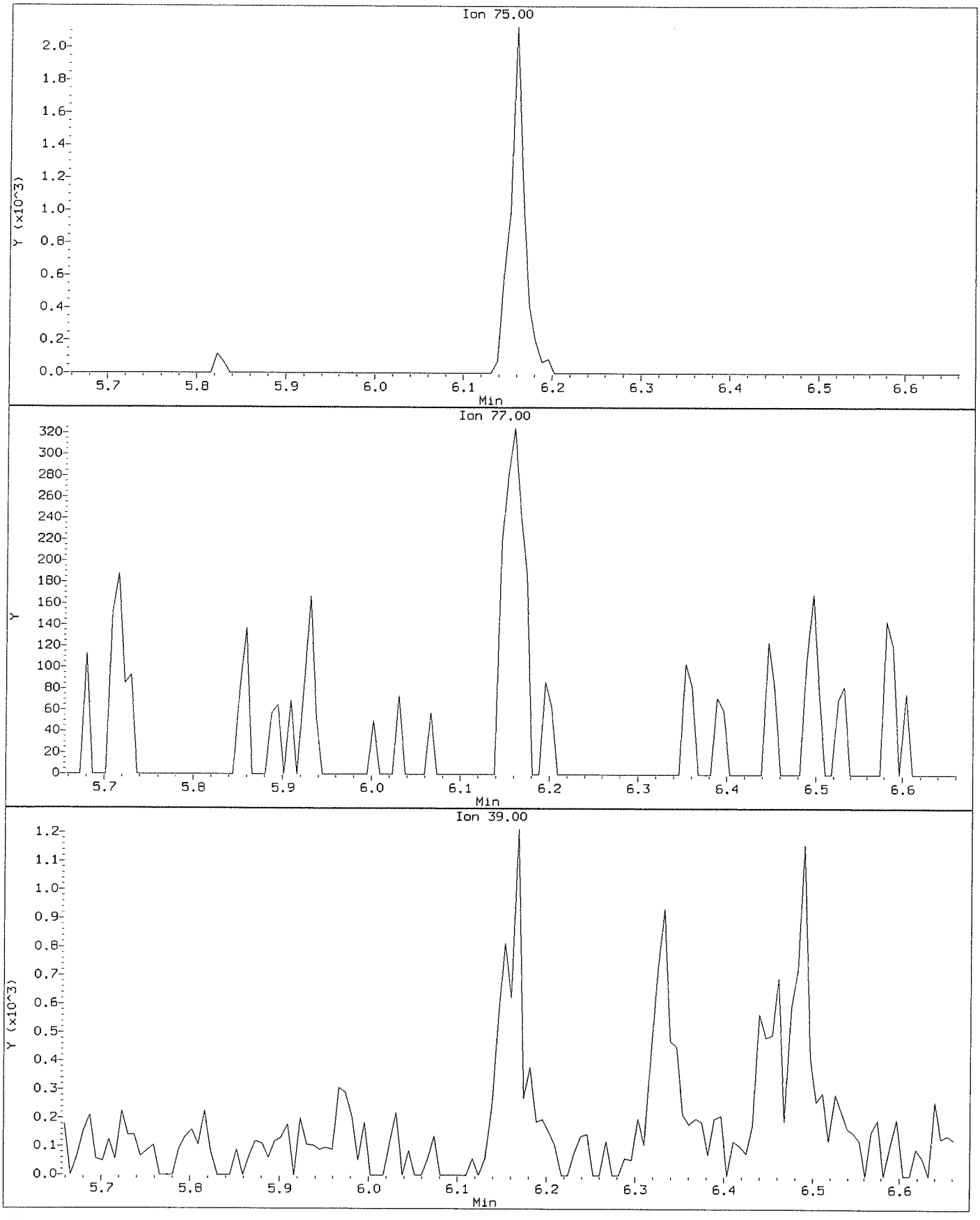
Compound: Chloromethane
CAS Number: 74-87-3





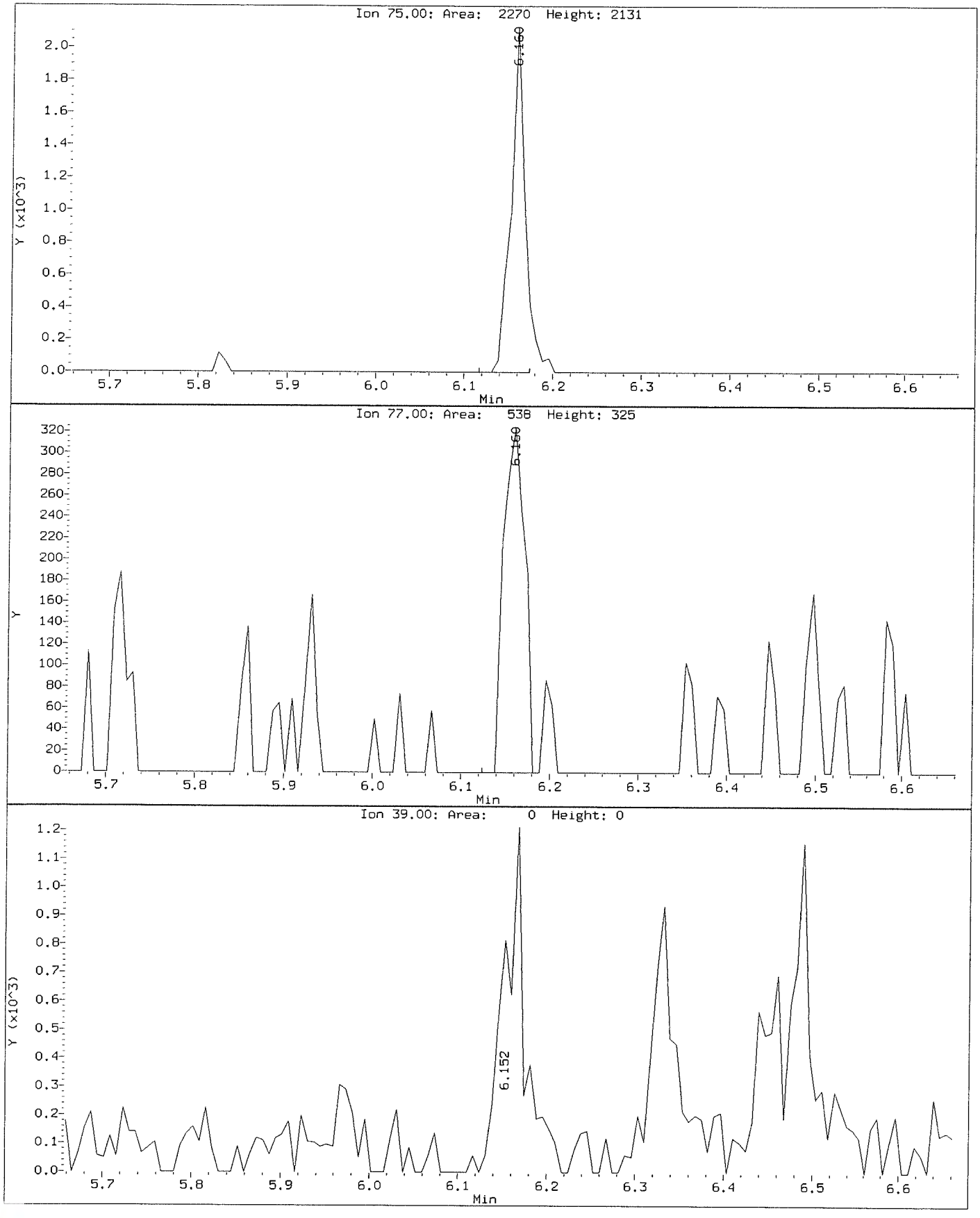
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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,3-Dichloropropene
CAS Number: 10061-01-5



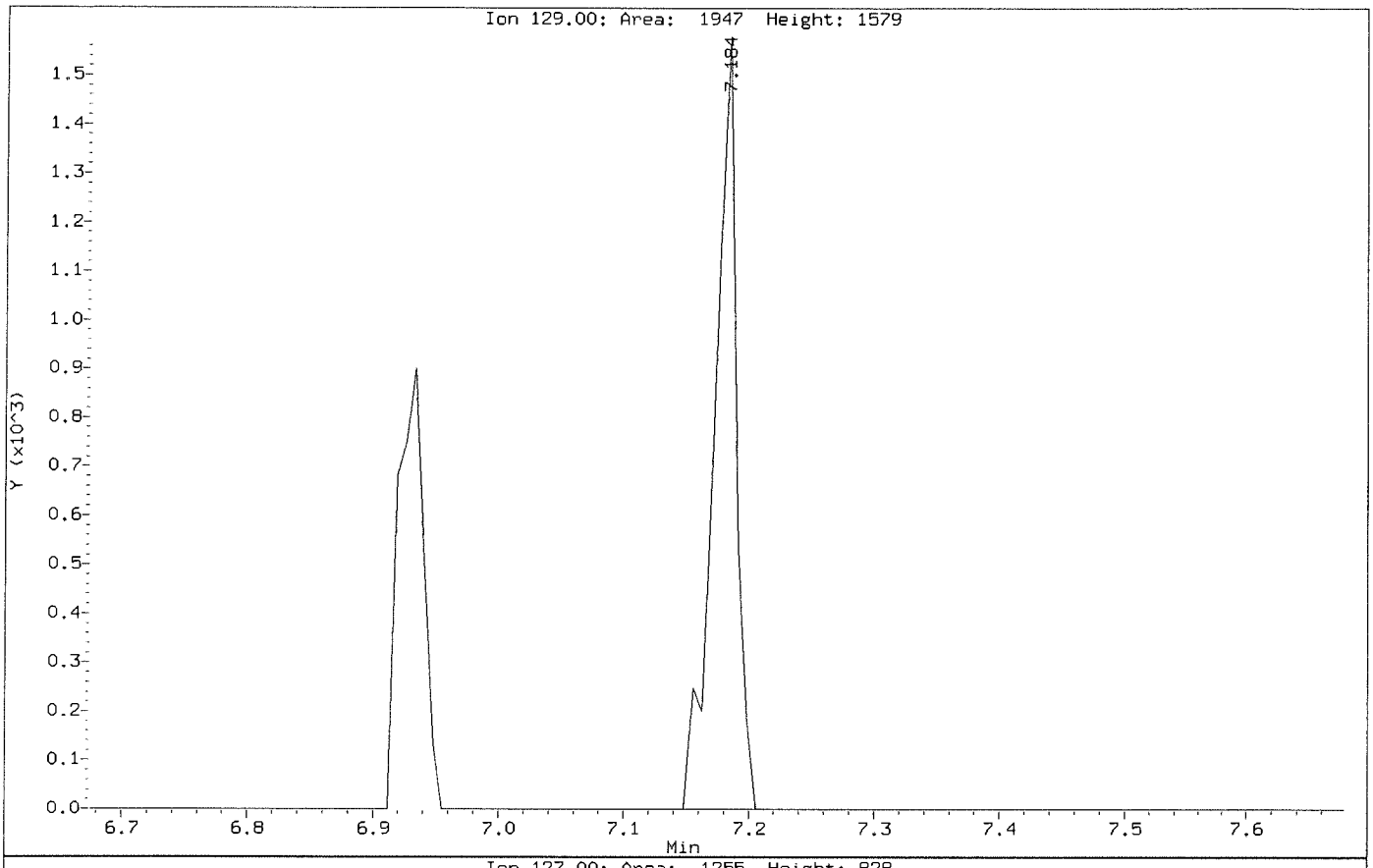
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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

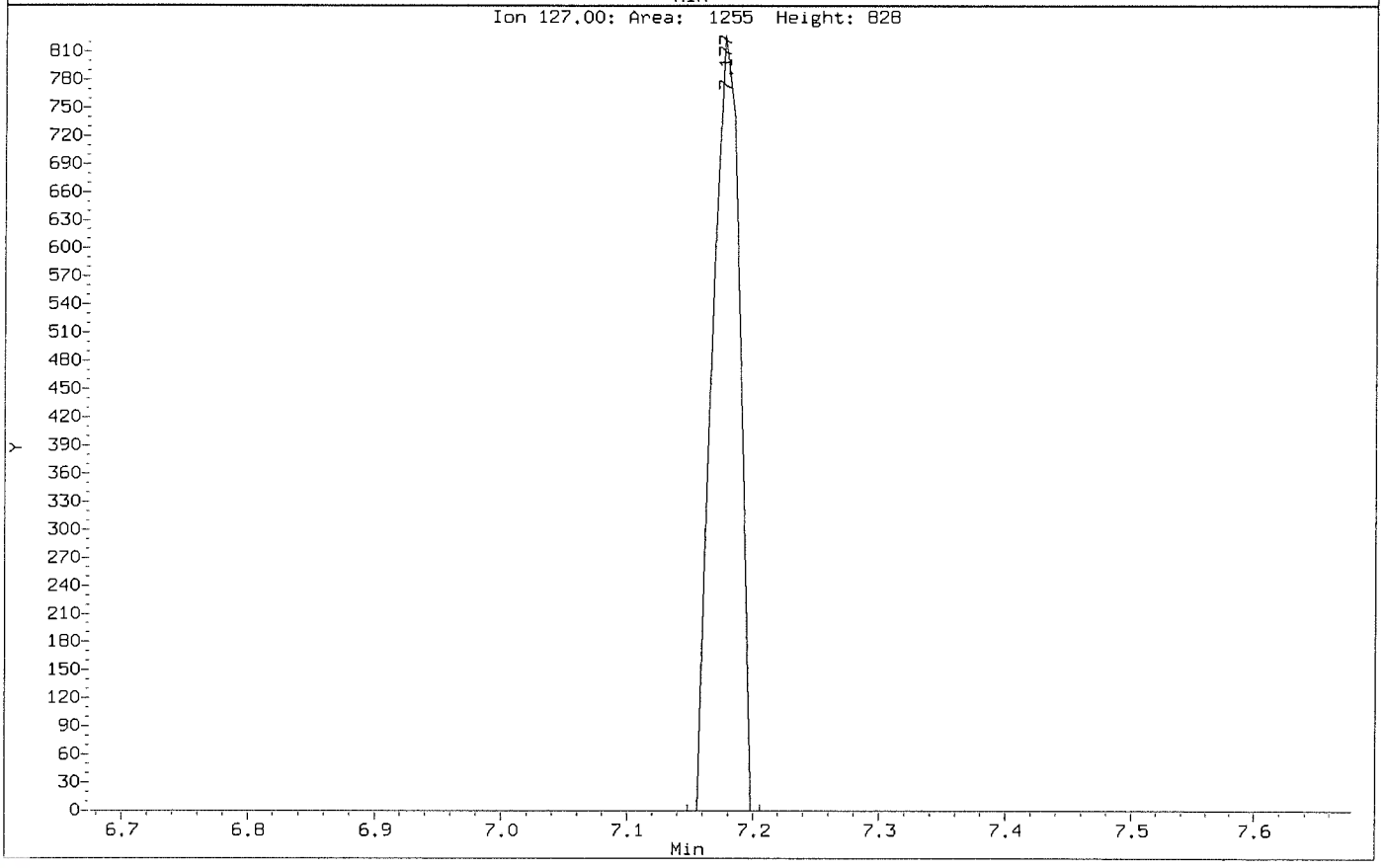
Compound: cis-1,3-Dichloropropene
CAS Number: 10061-01-5



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112203.D
Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

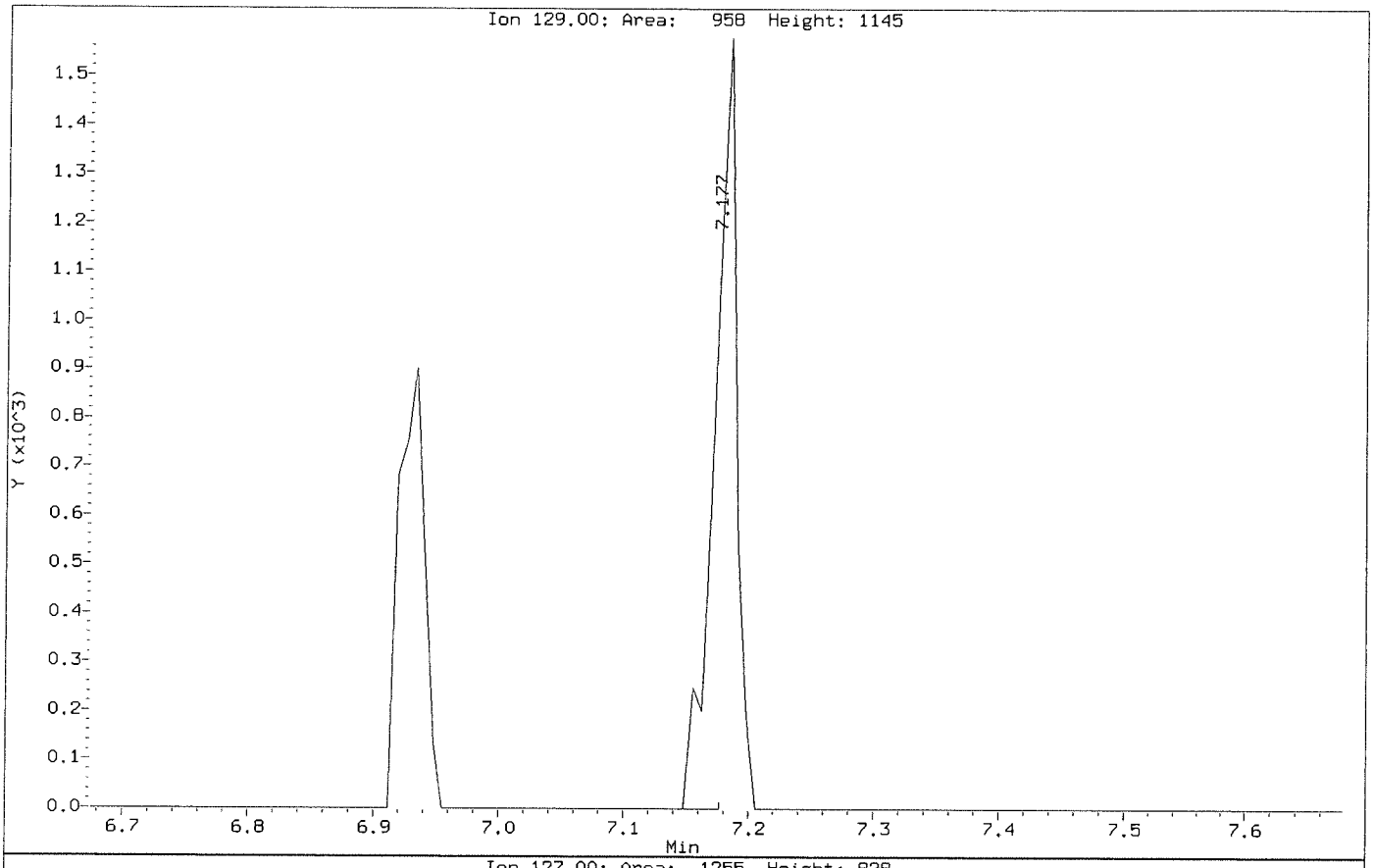
Compound: Dibromochloromethane
CAS Number: 124-48-1

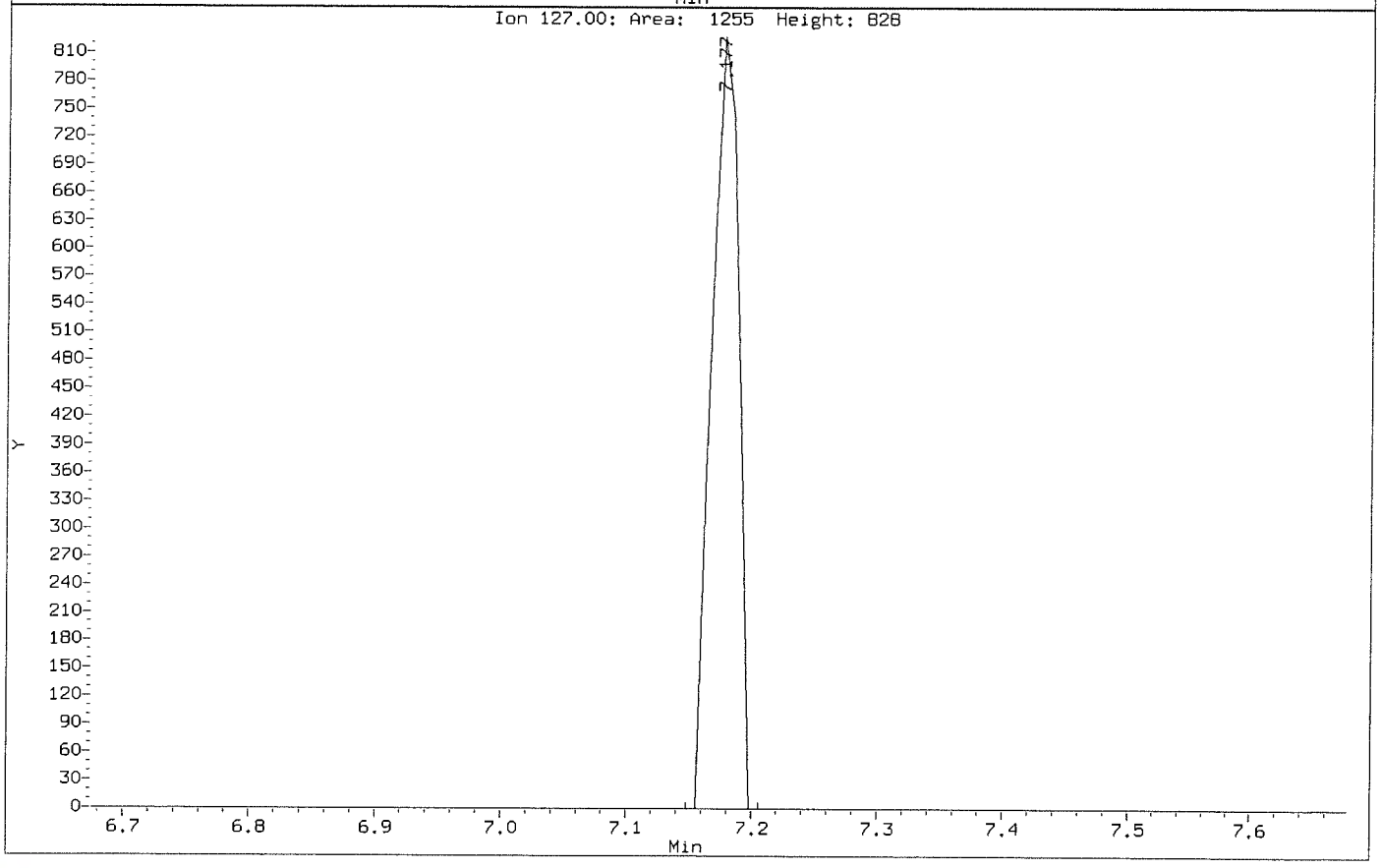




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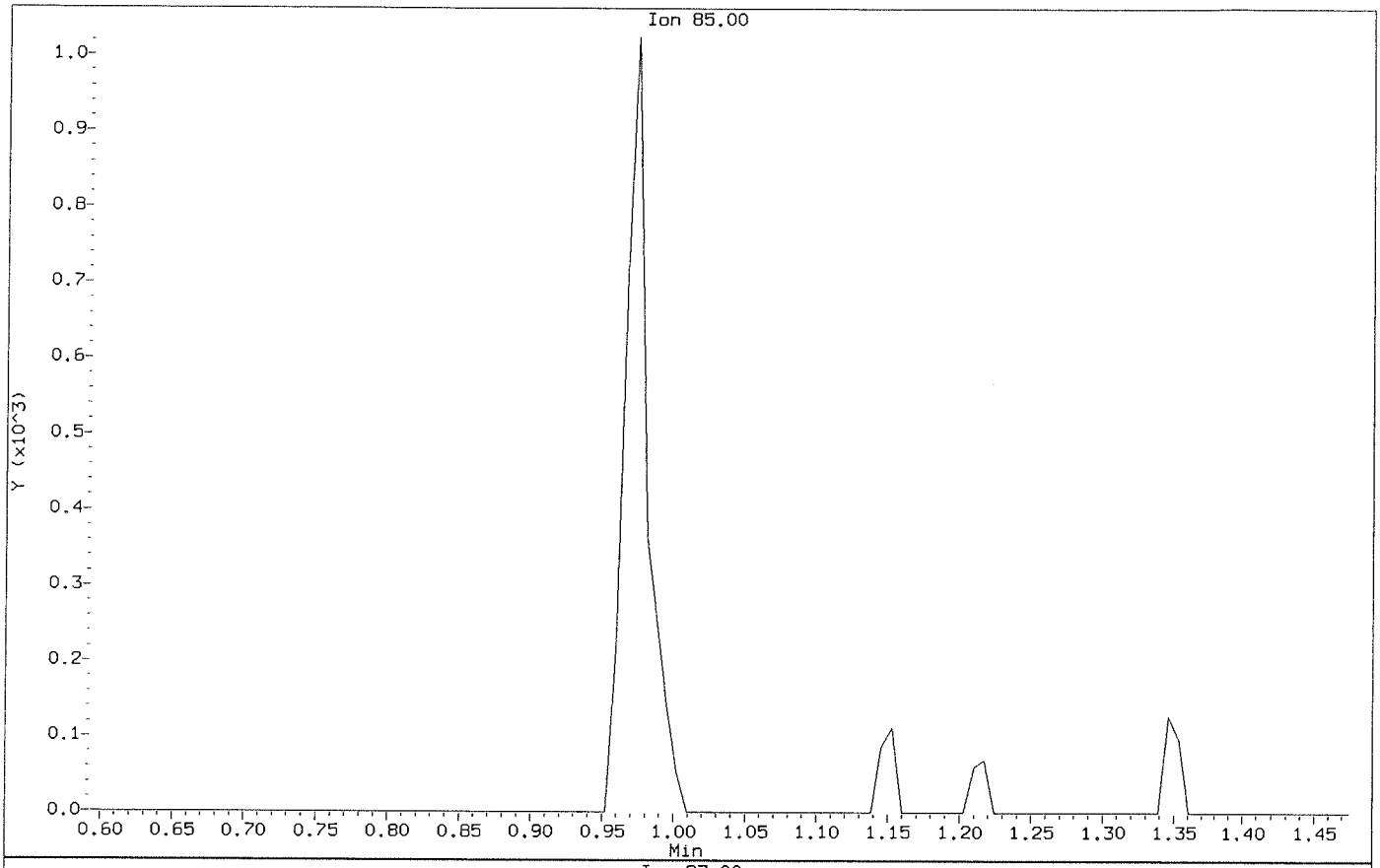
Compound: Dibromochloromethane
CAS Number: 124-48-1

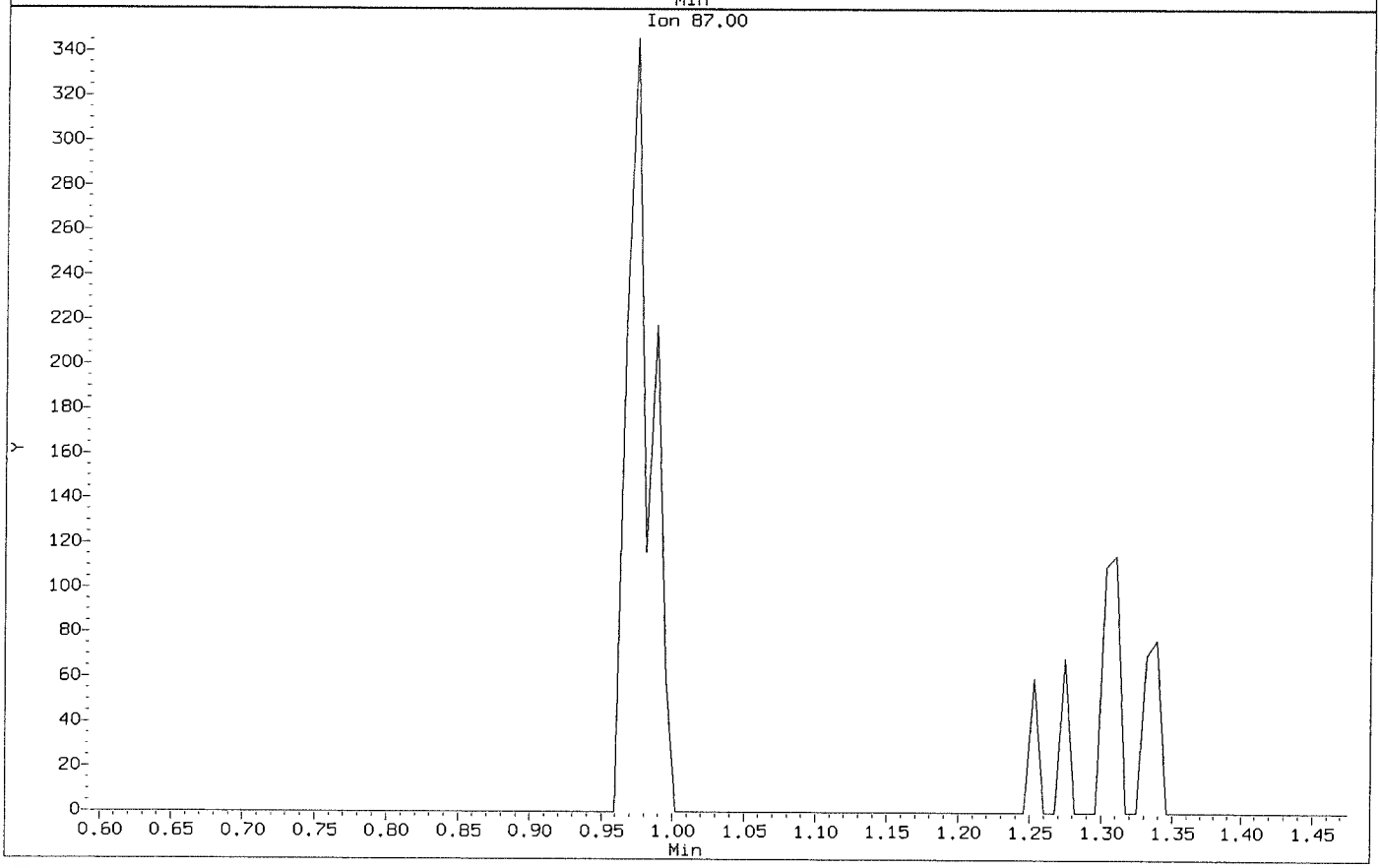




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Instrument: voa6.i
Client Sample ID: VSTD000.5

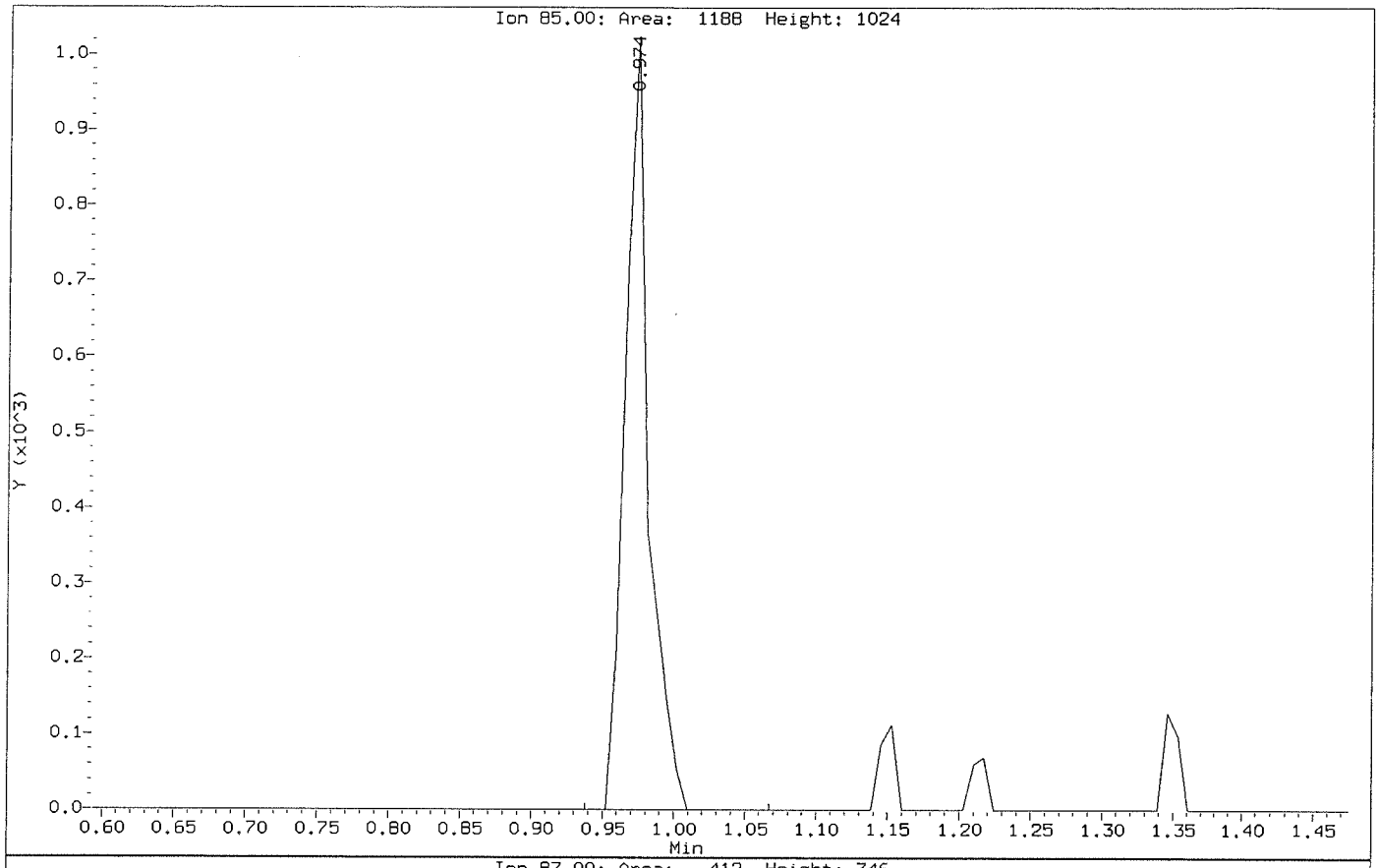
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8

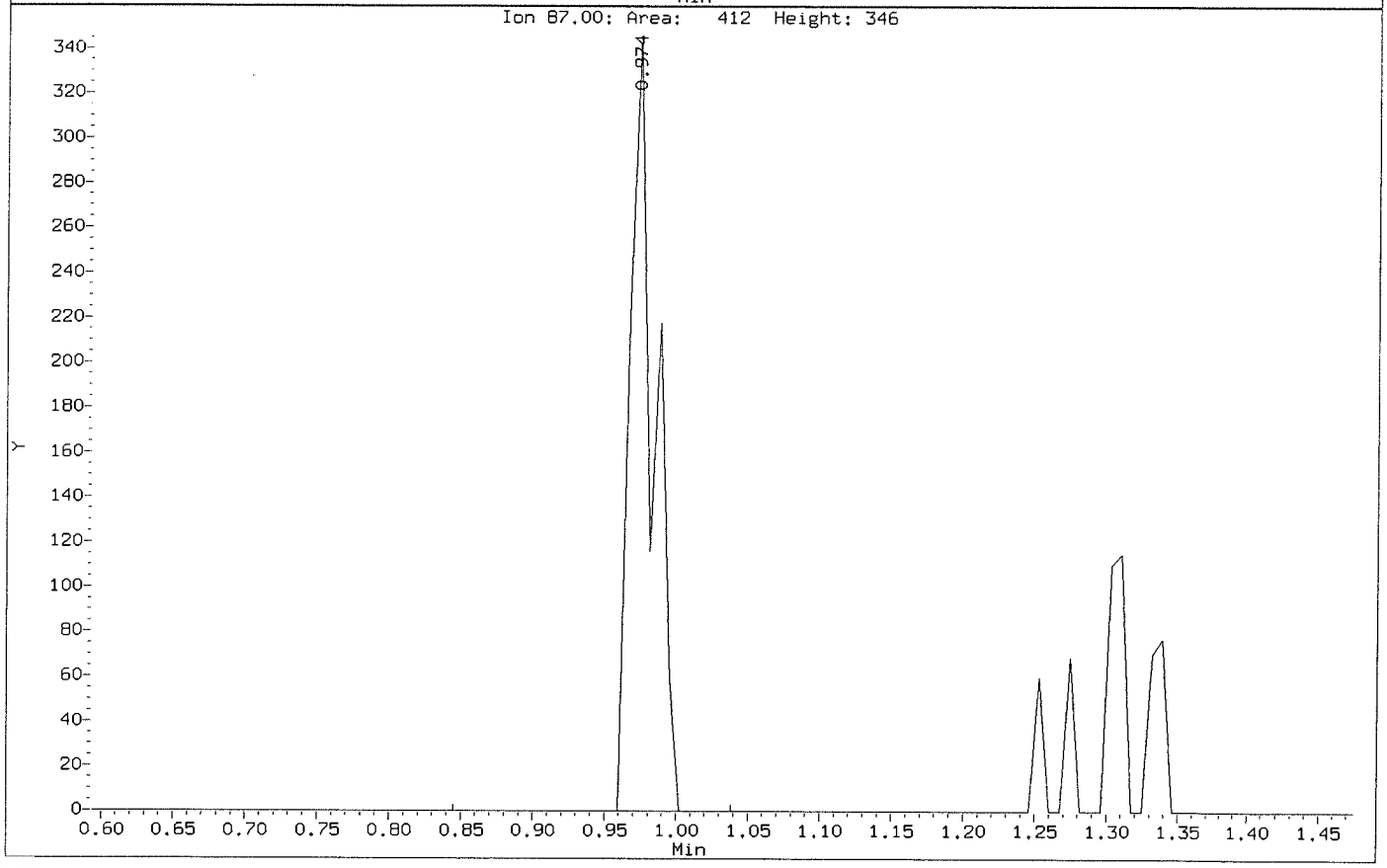




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Client Sample ID: VSTD000.5

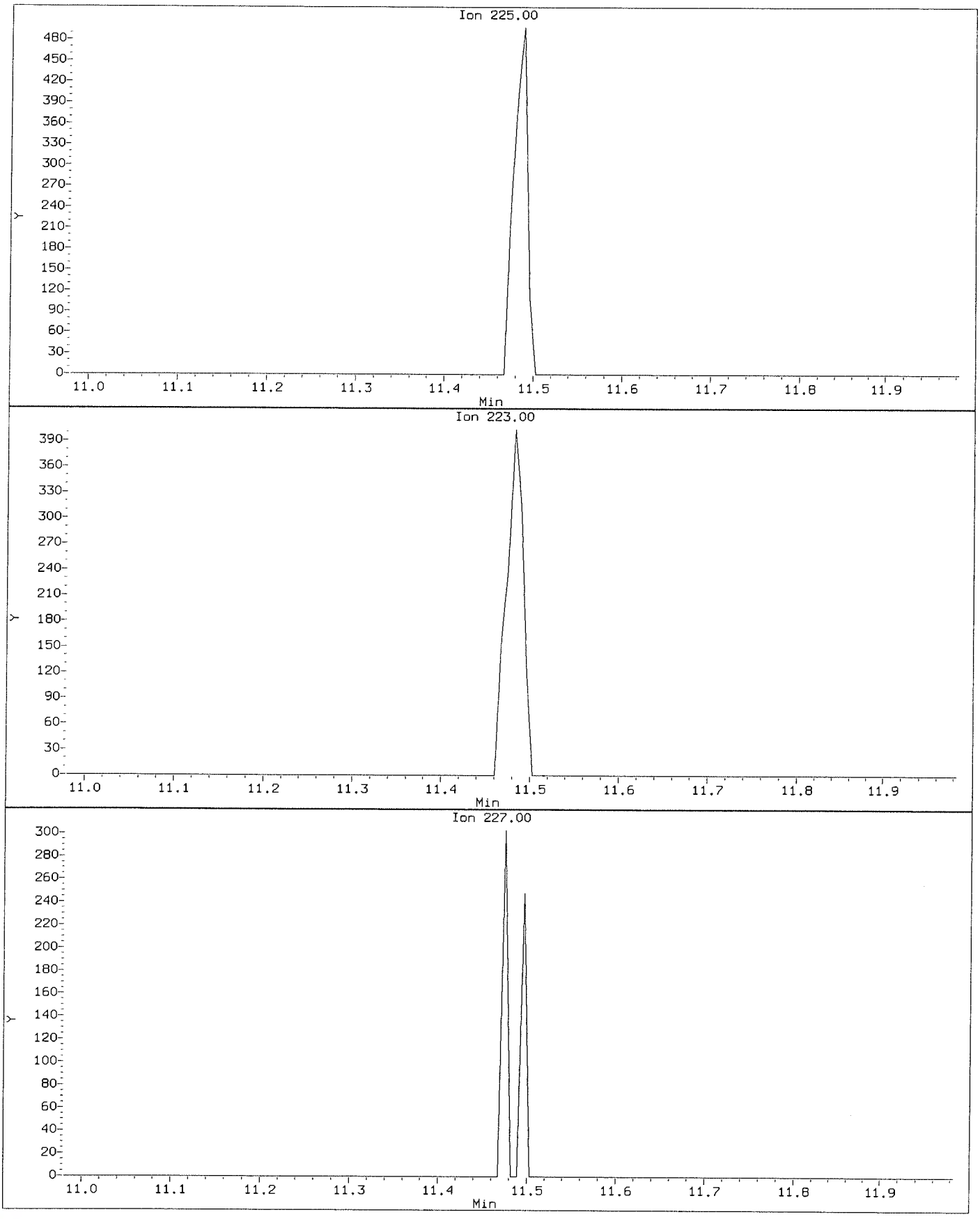
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8





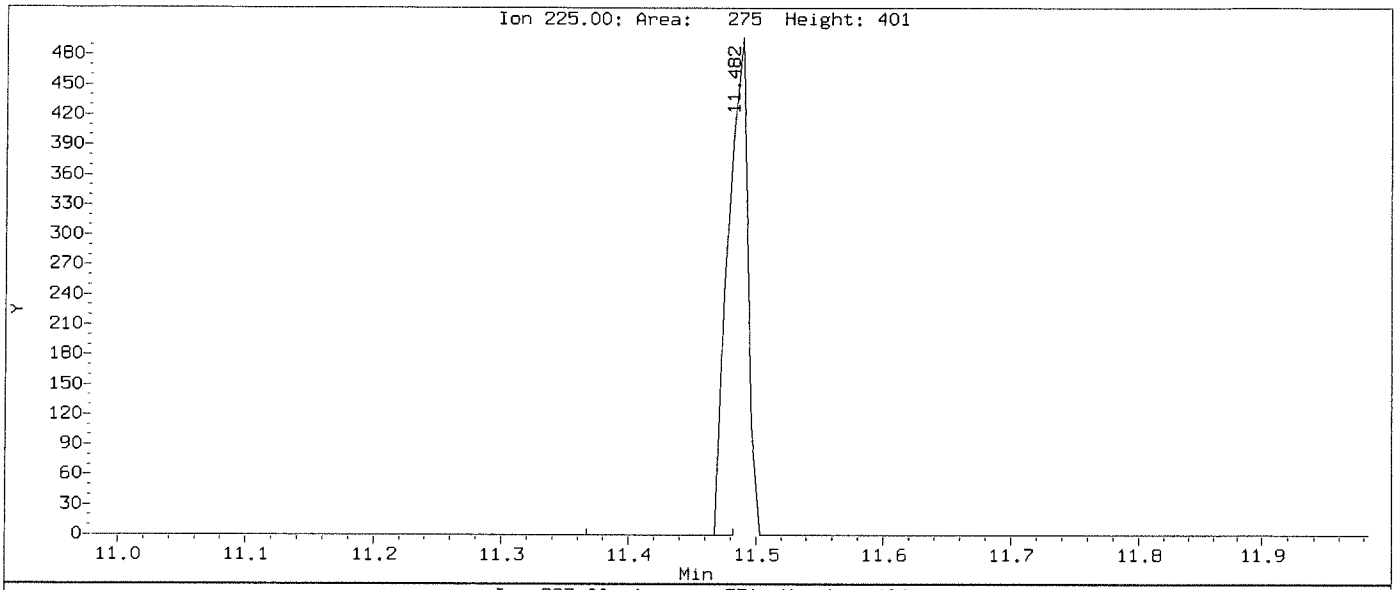
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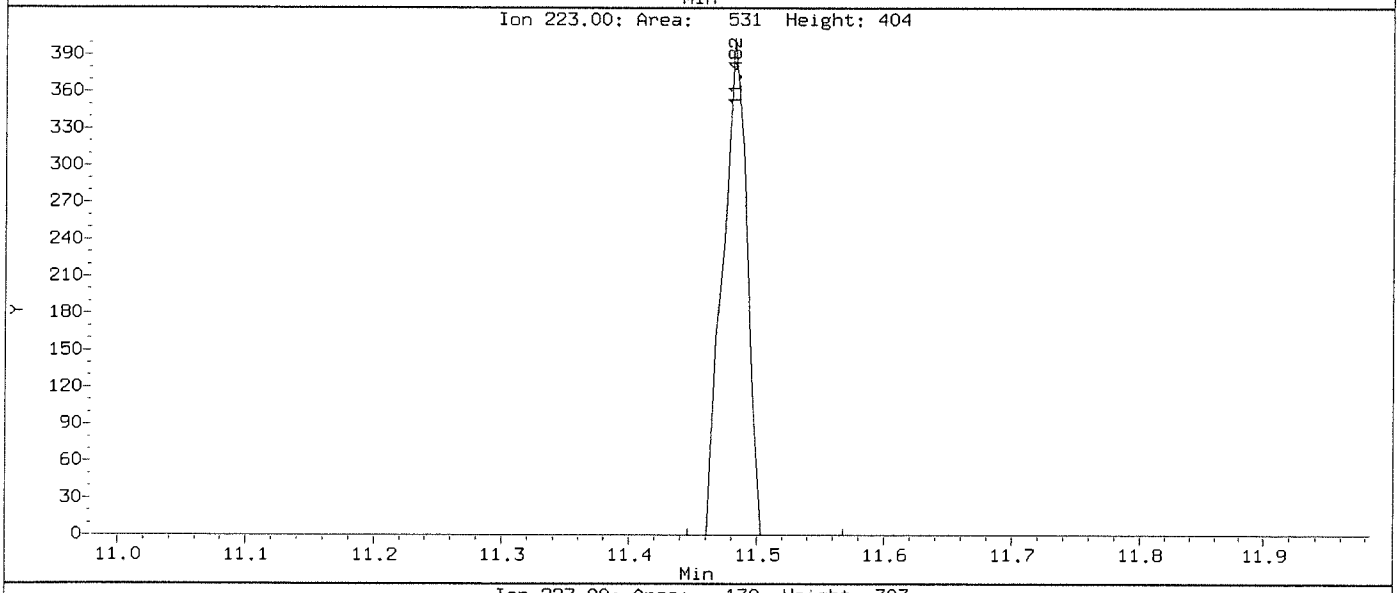
Compound: Hexachlorobutadiene
CAS Number: 87-68-3

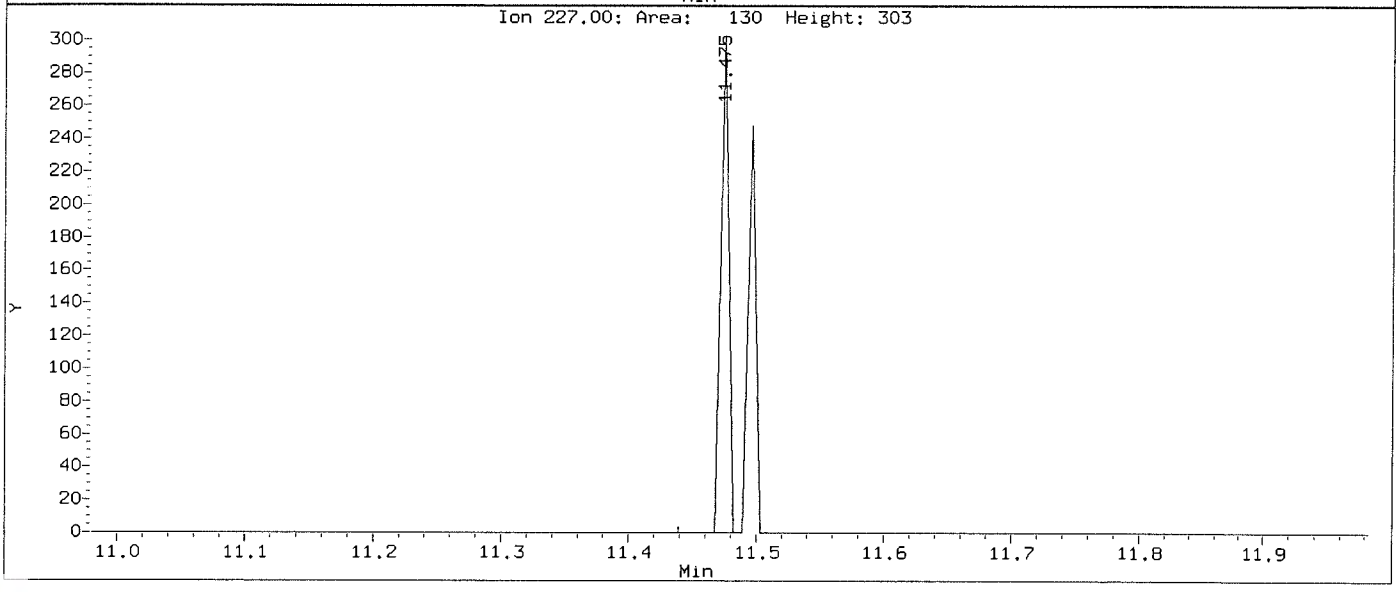


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

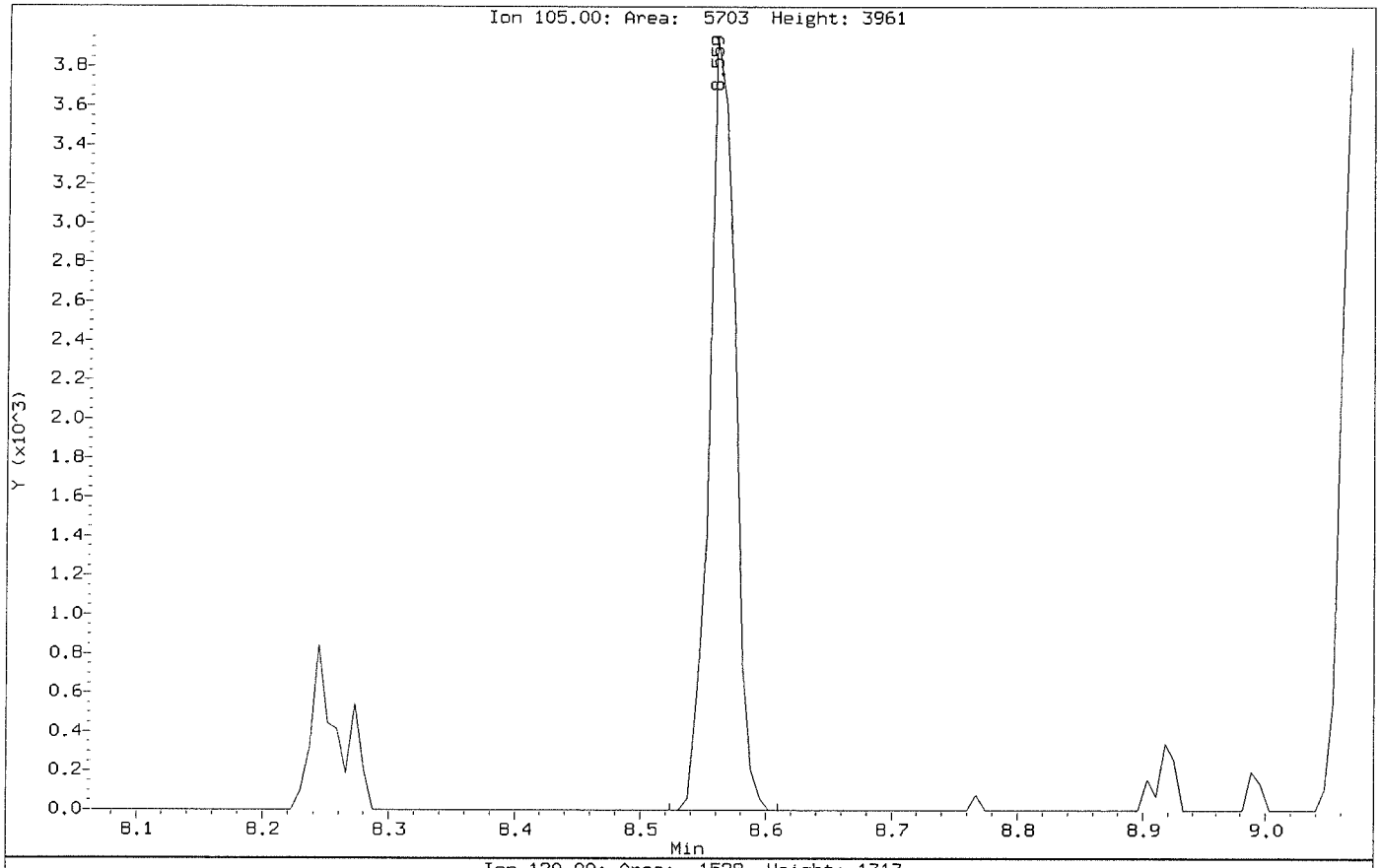


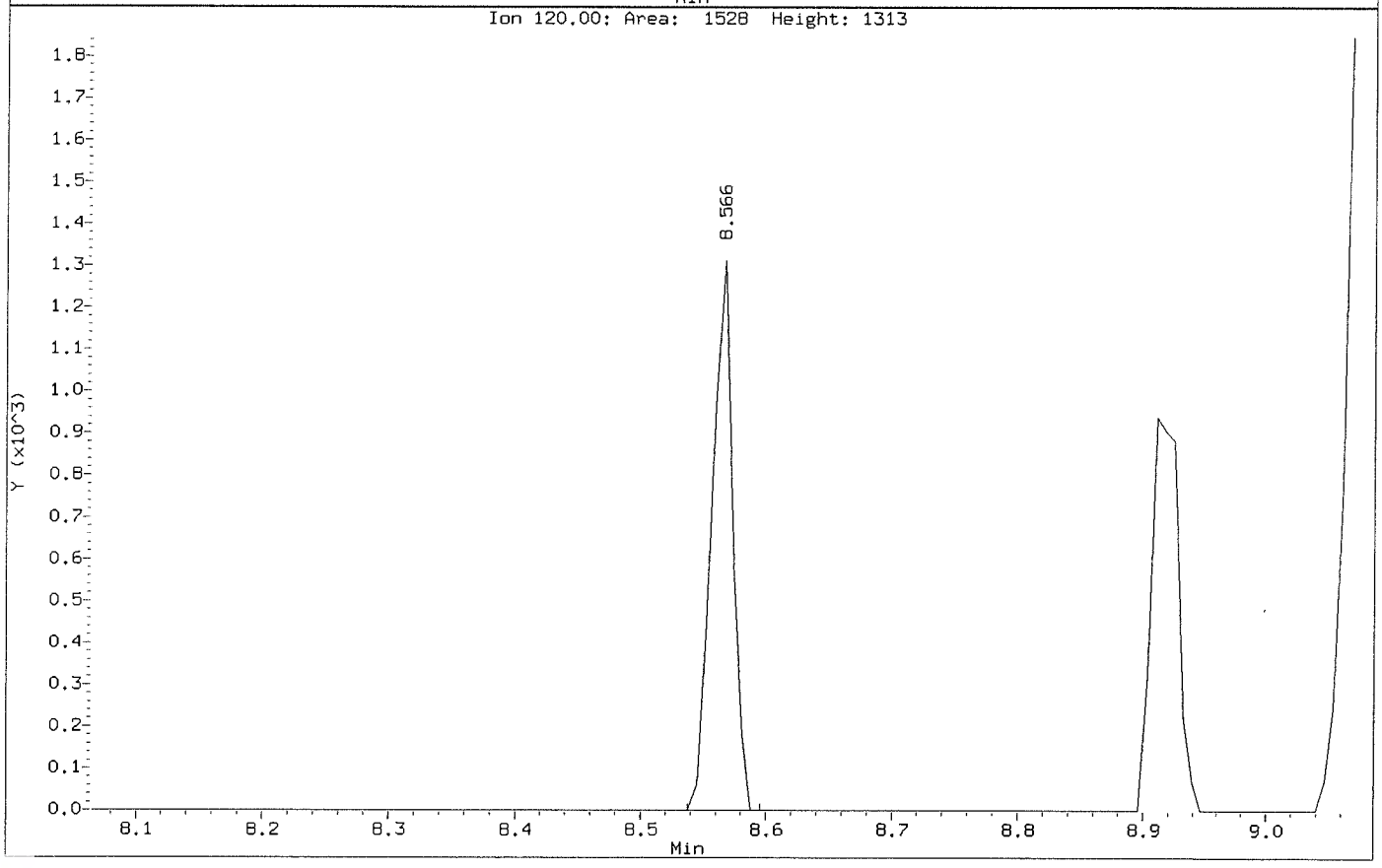




Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112203.D
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Client Sample ID: VSTD000.5

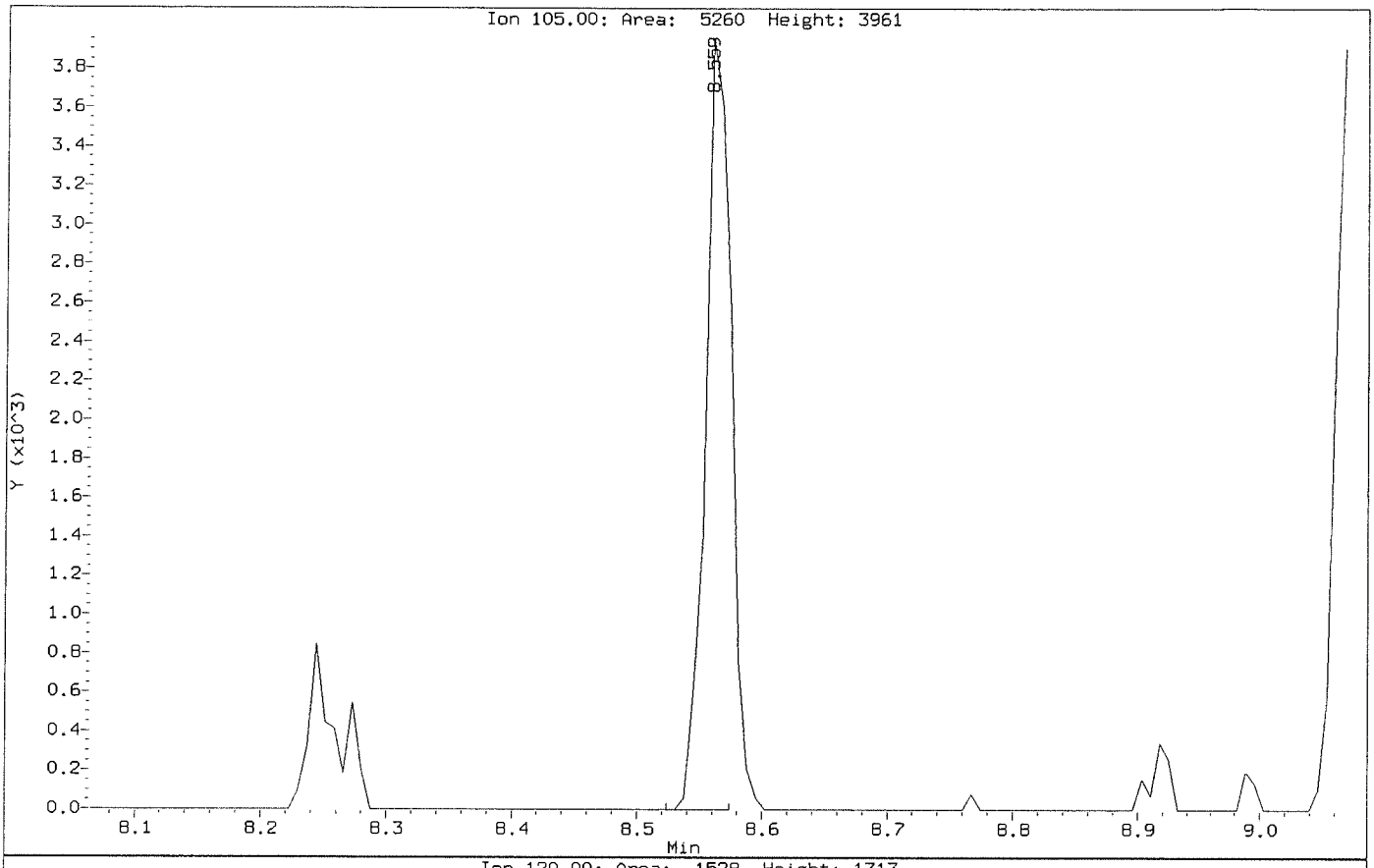
Compound: Isopropylbenzene
CAS Number: 98-82-8

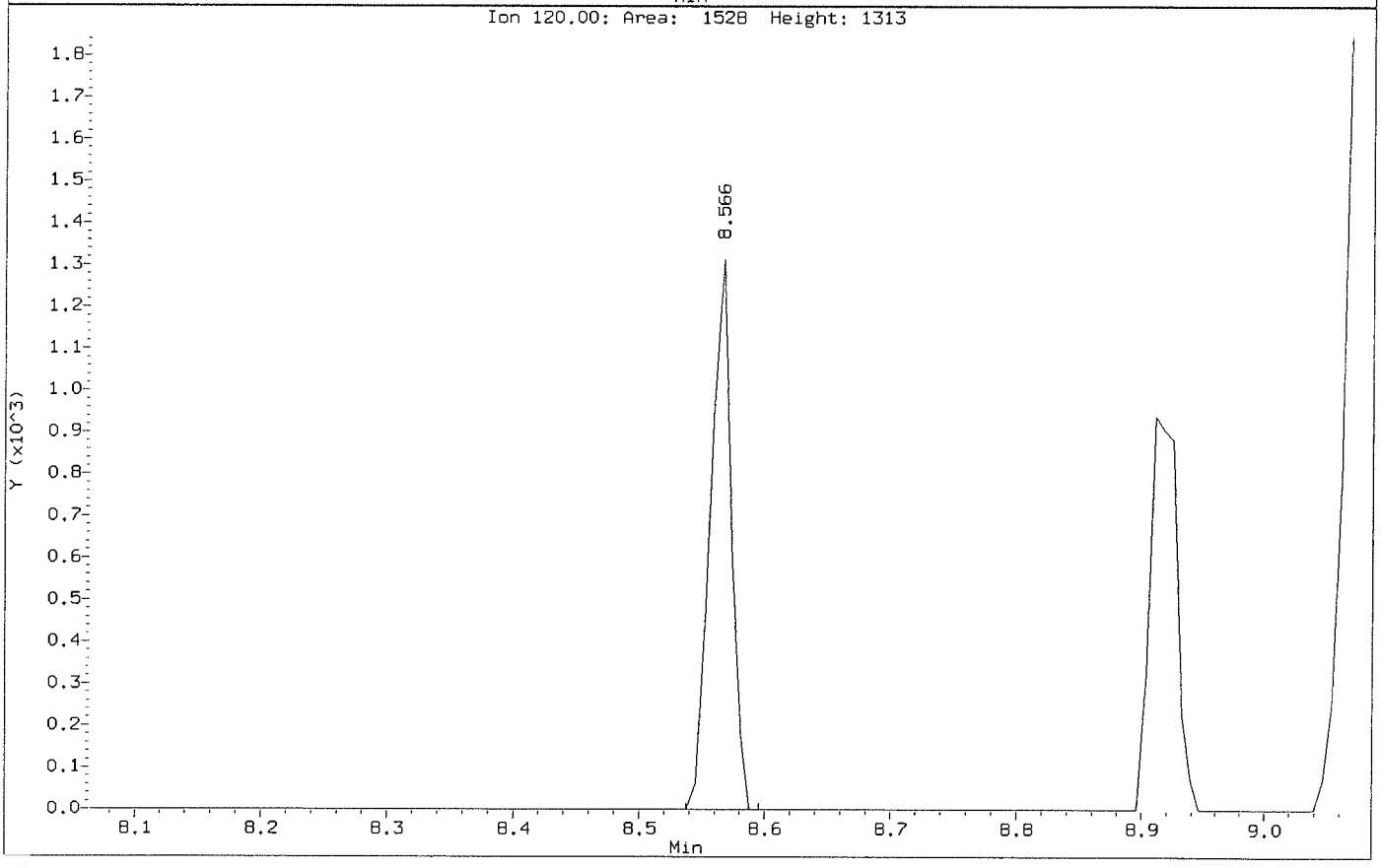




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Injection Date: 22-NOV-2020 16:25
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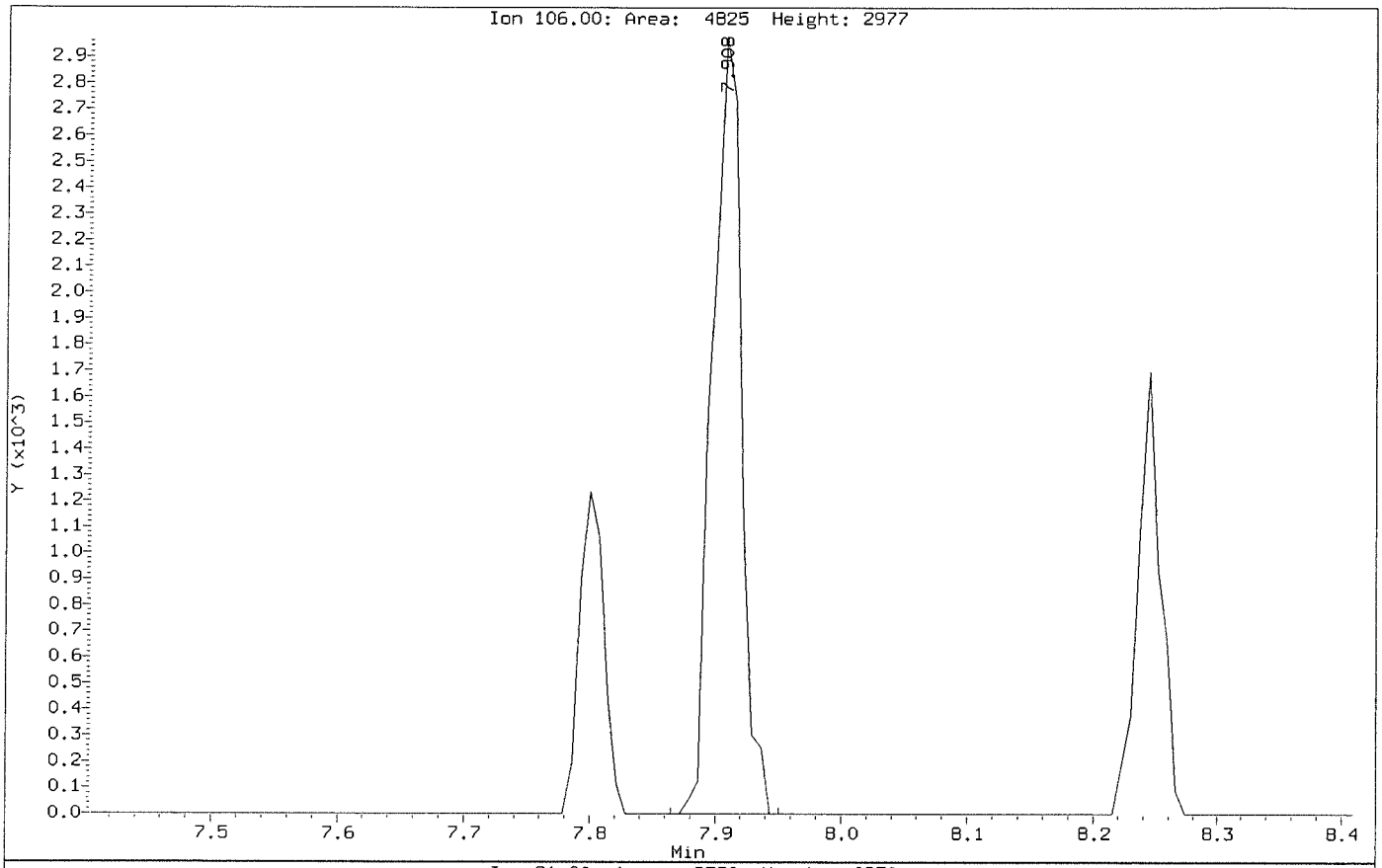
Compound: Isopropylbenzene
CAS Number: 98-82-8

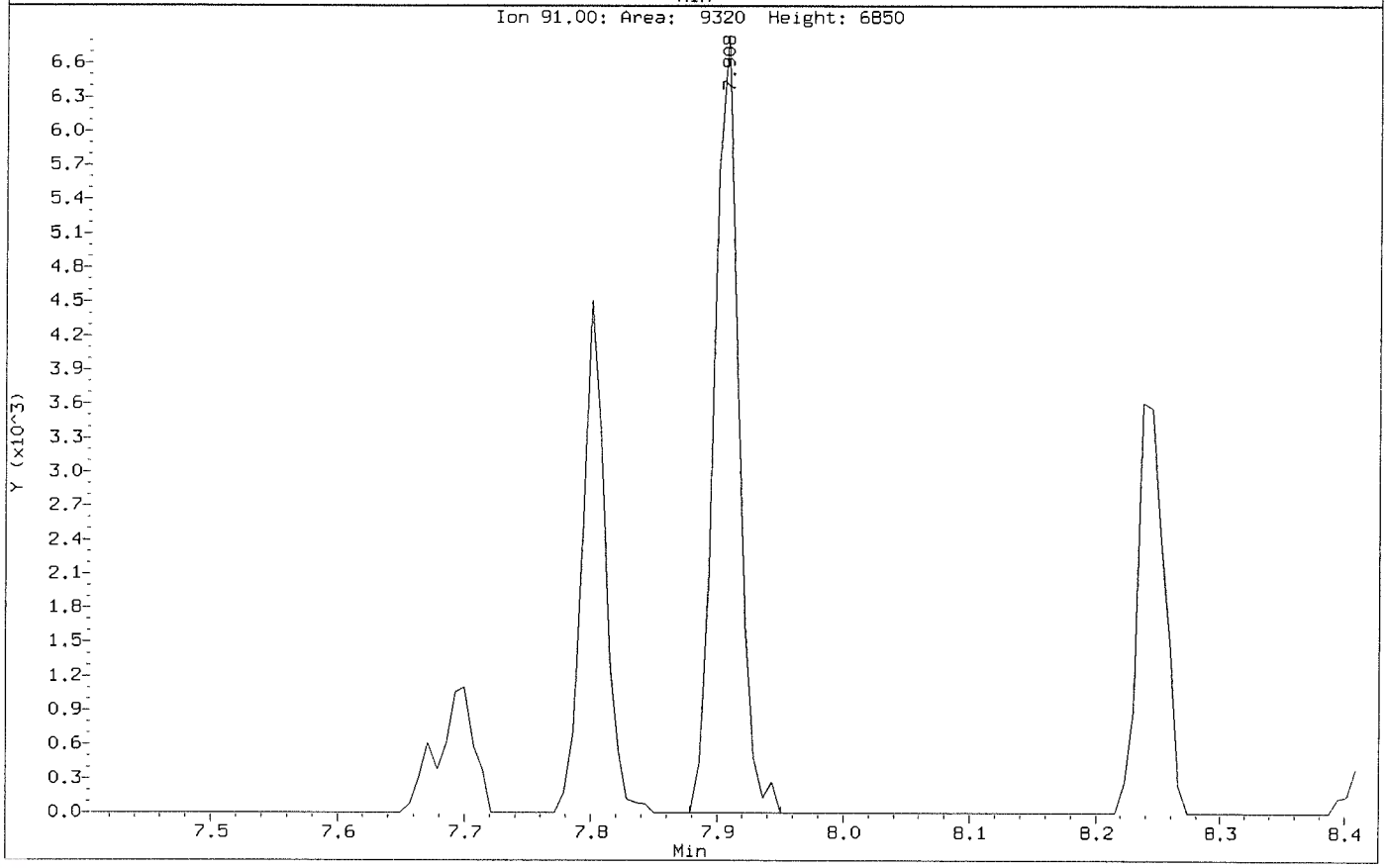




Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112203.D
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Client Sample ID: VSTD000.5

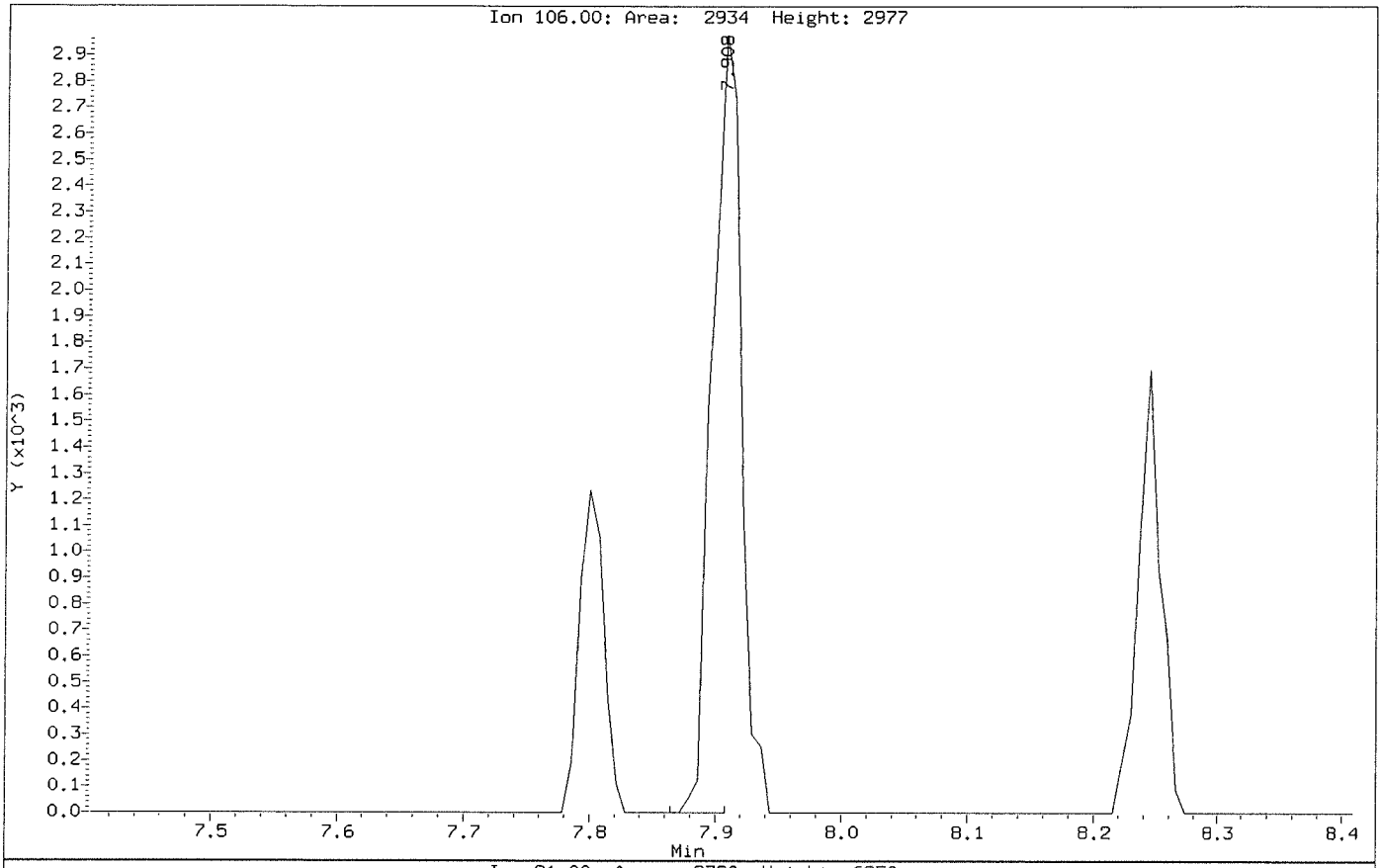
Compound: m,p-Xylenes
CAS Number:

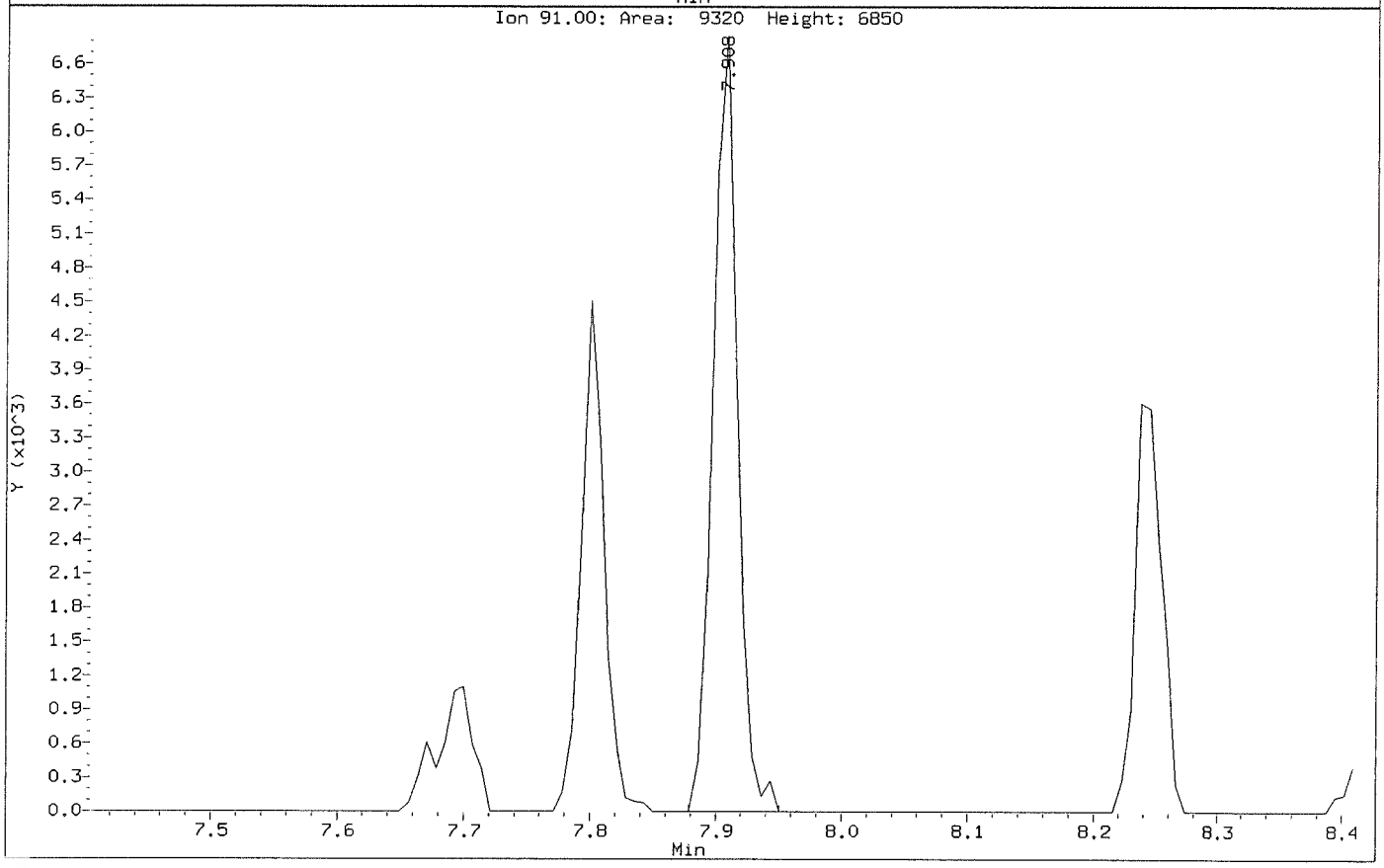




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Injection Date: 22-NOV-2020 16:25
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Client Sample ID: VSTD000.5

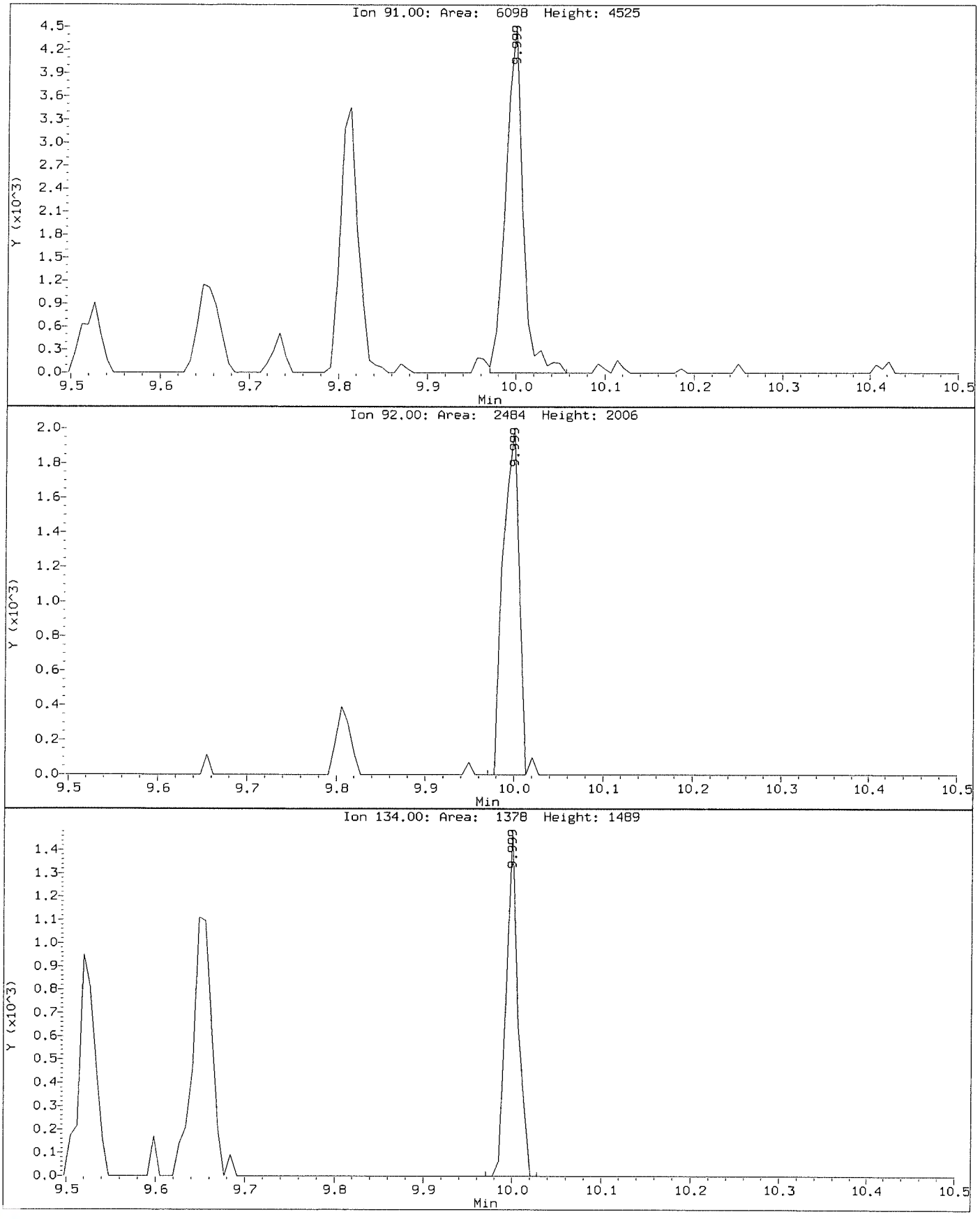
Compound: m,p-Xylenes
CAS Number:





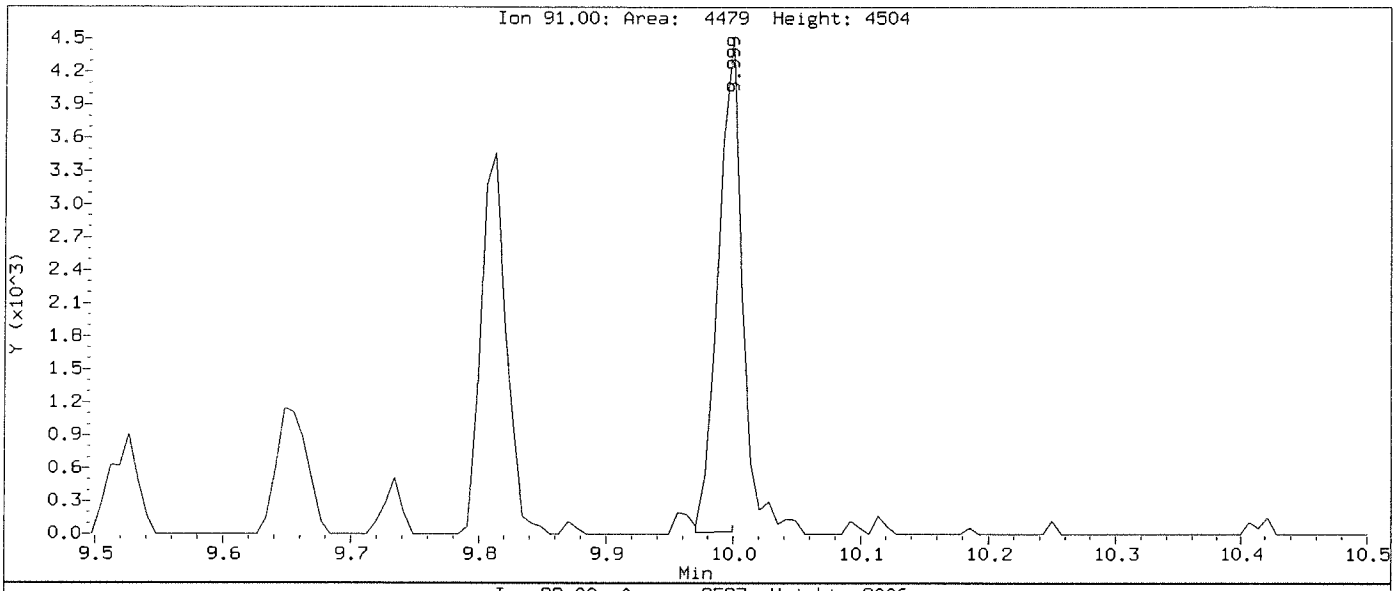
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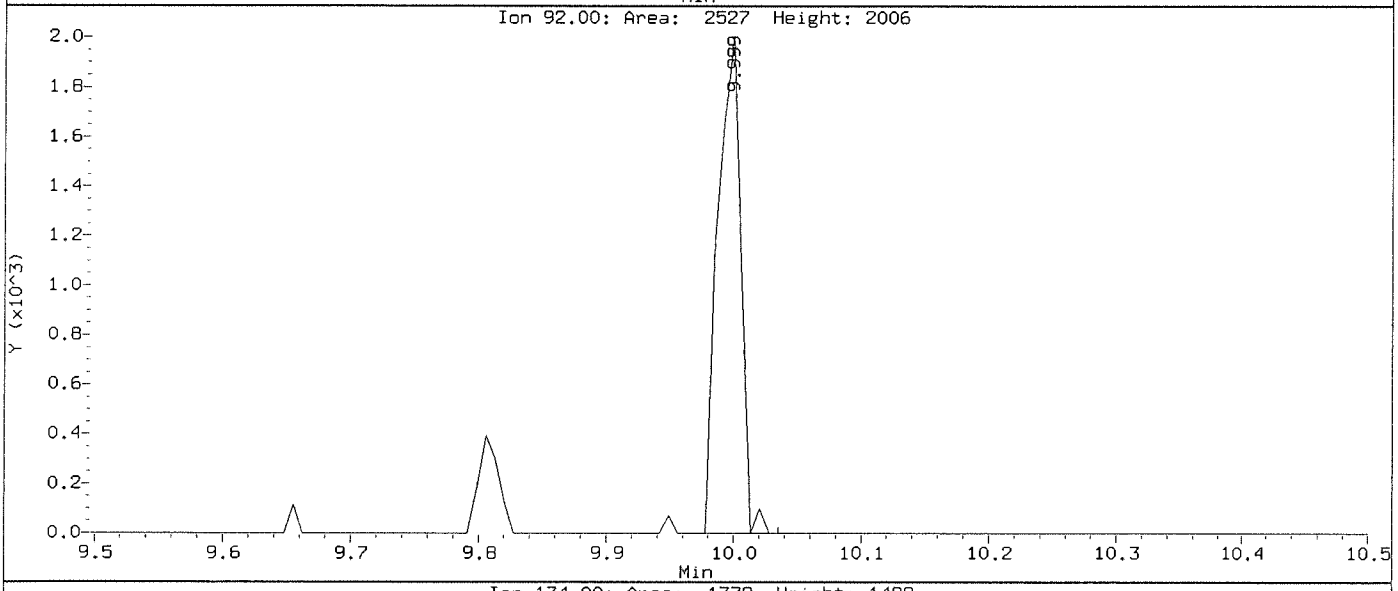
Compound: n-Butylbenzene
CAS Number: 104-51-8

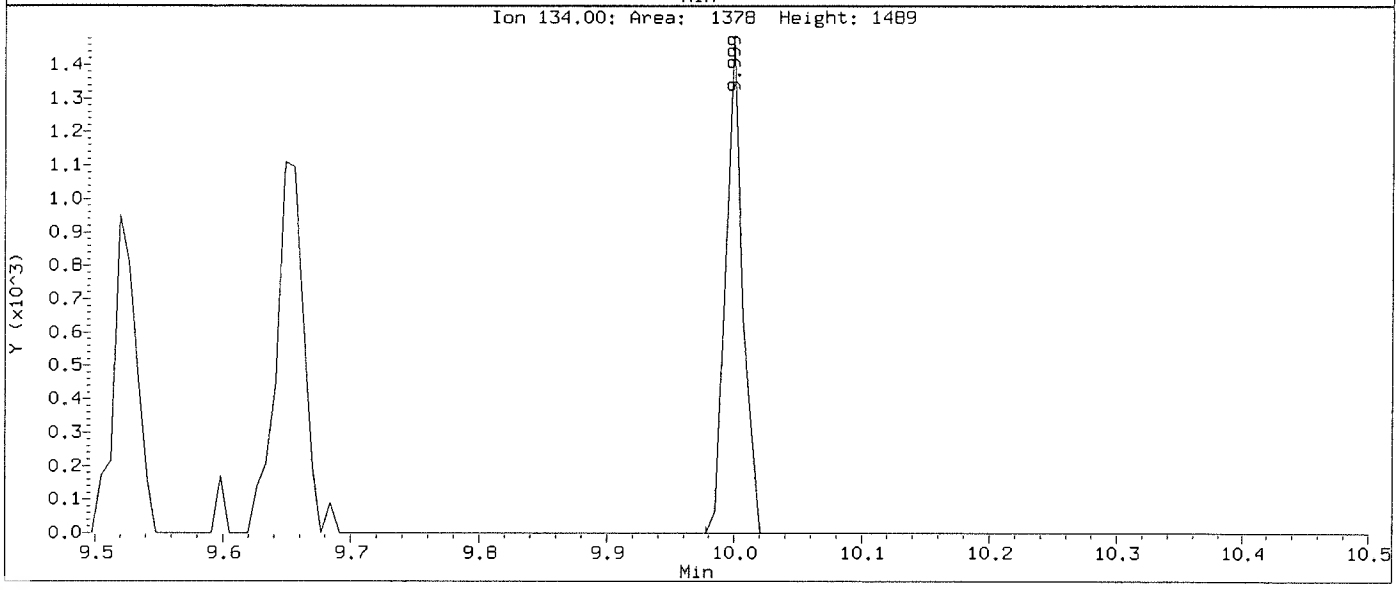


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Compound: n-Butylbenzene
CAS Number: 104-51-8

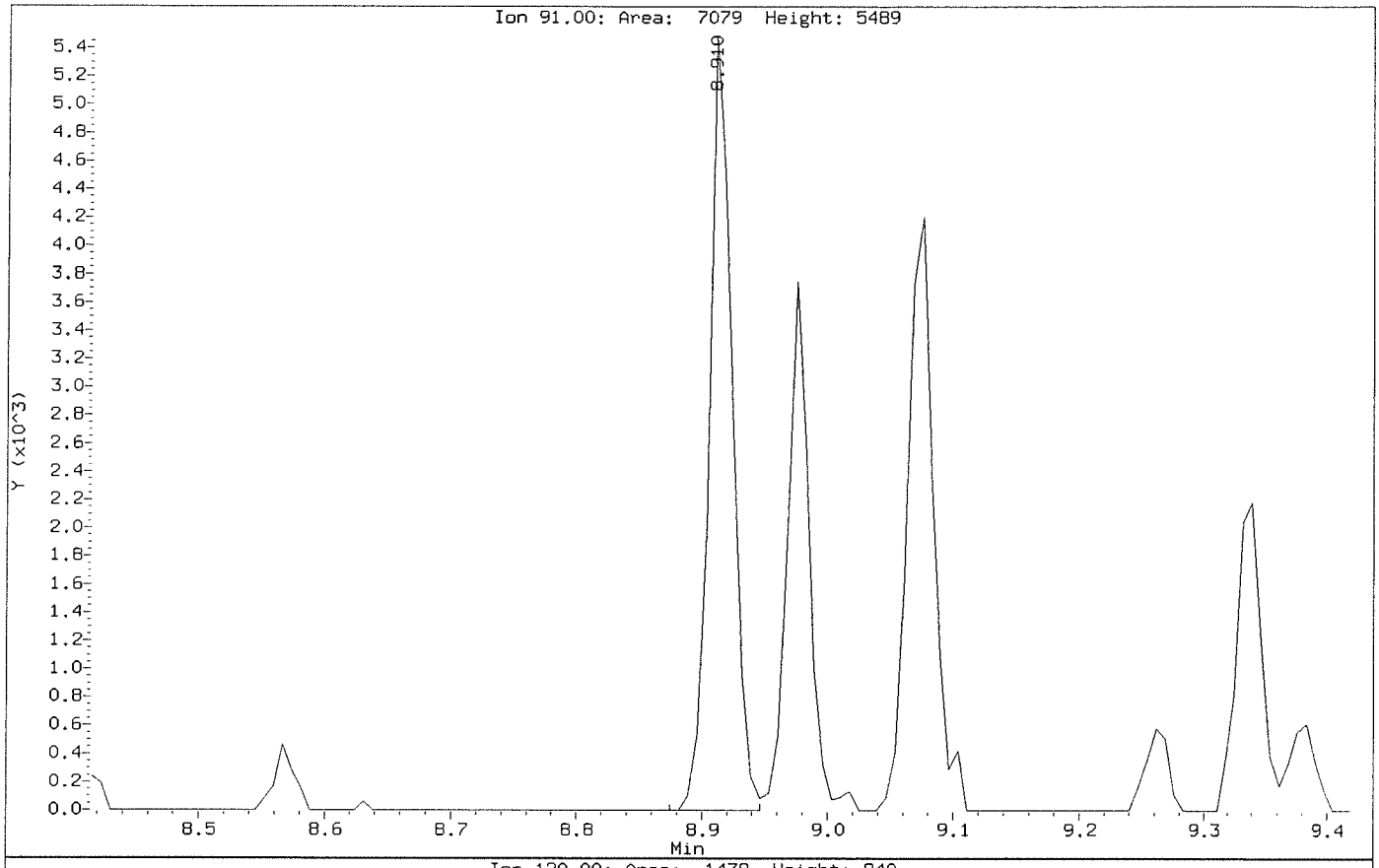


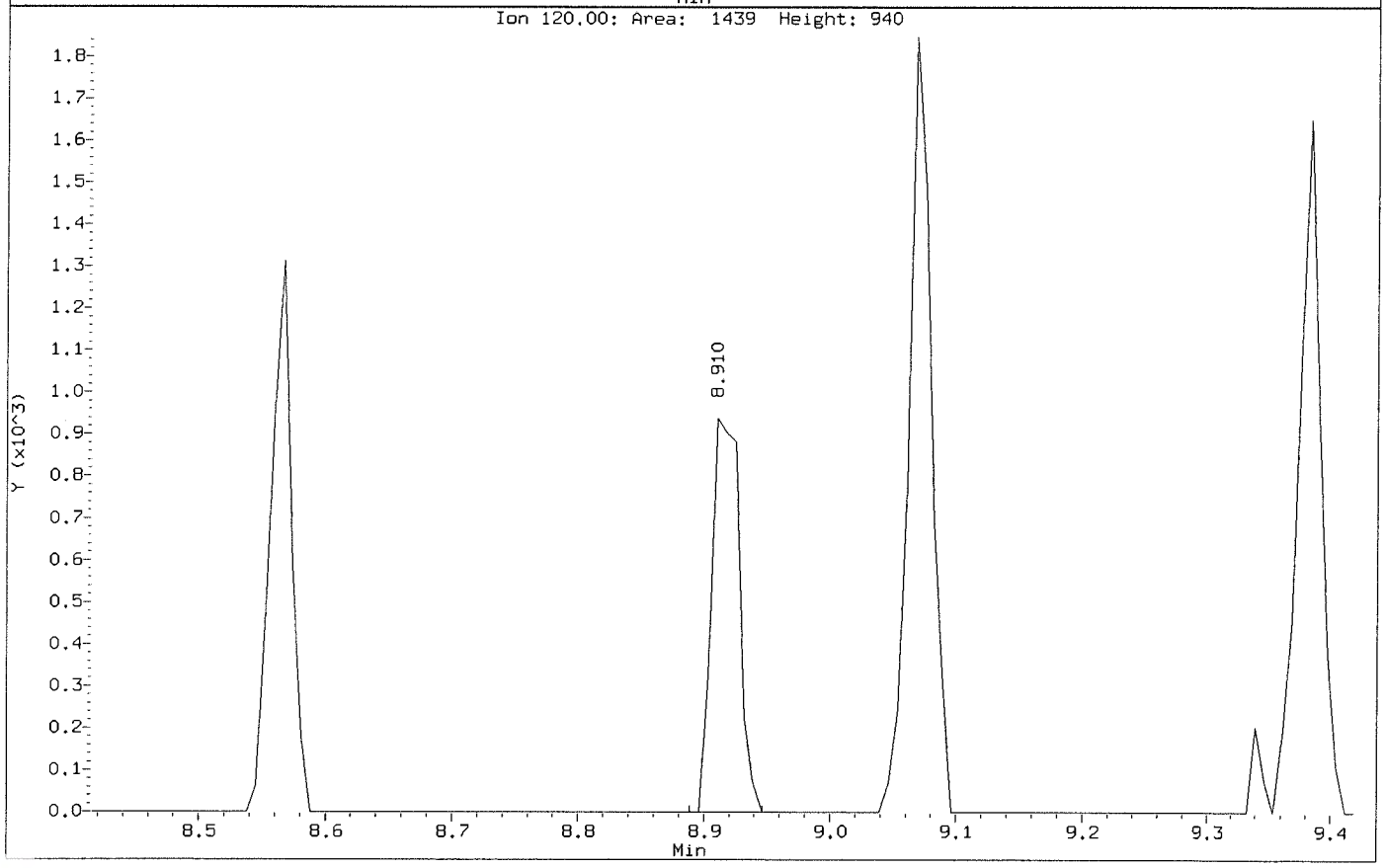




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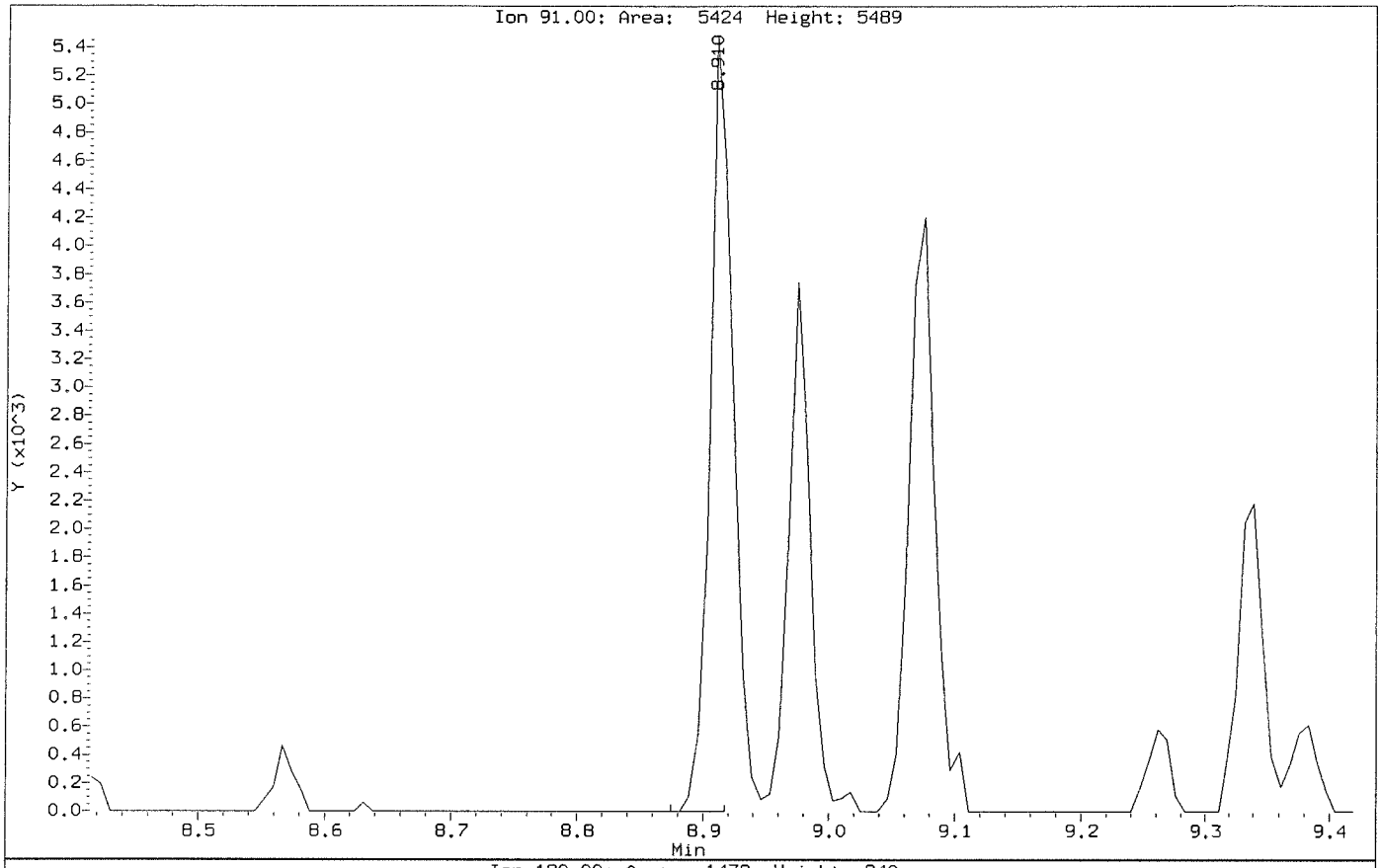
Compound: n-Propylbenzene
CAS Number: 106-65-1

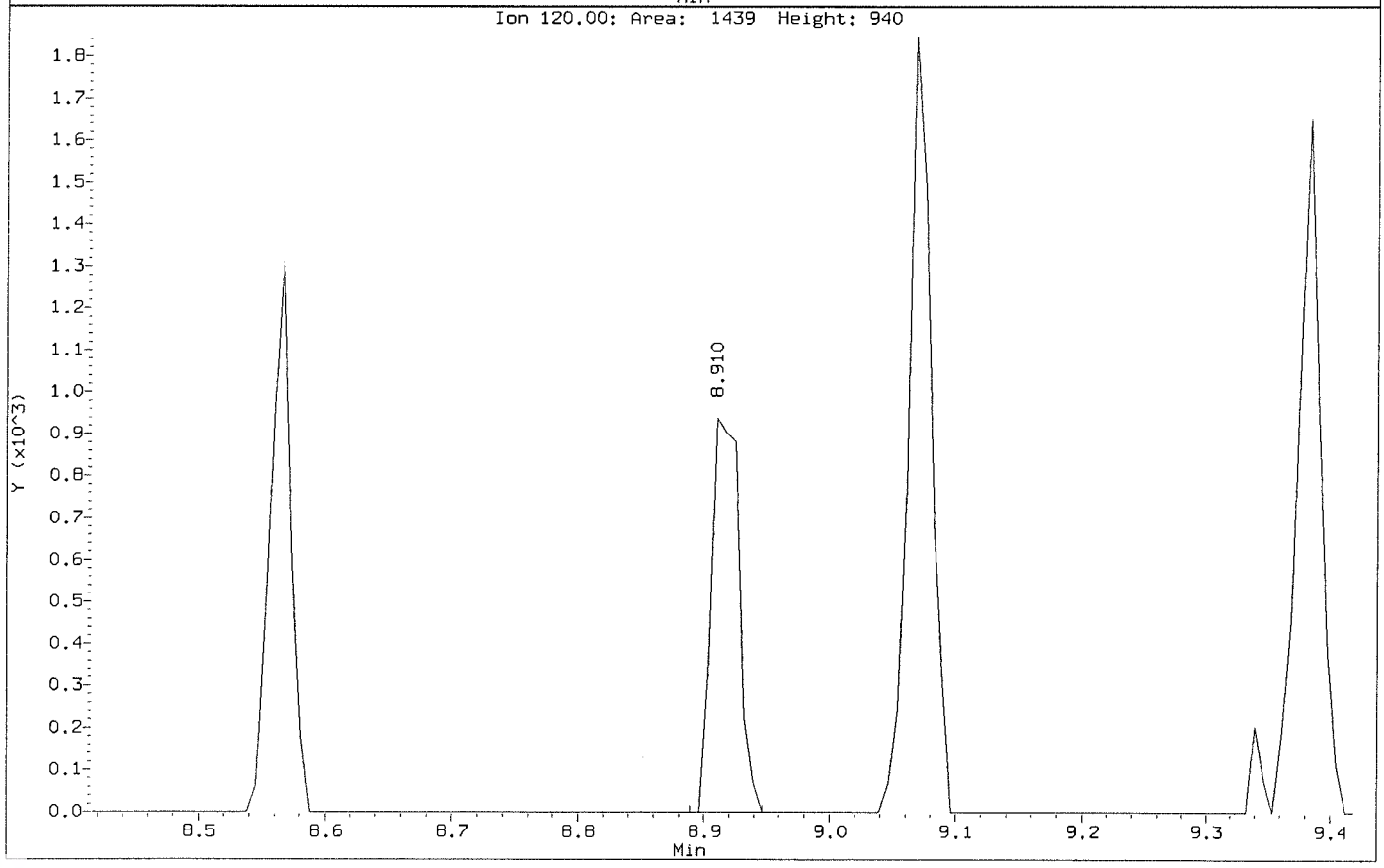




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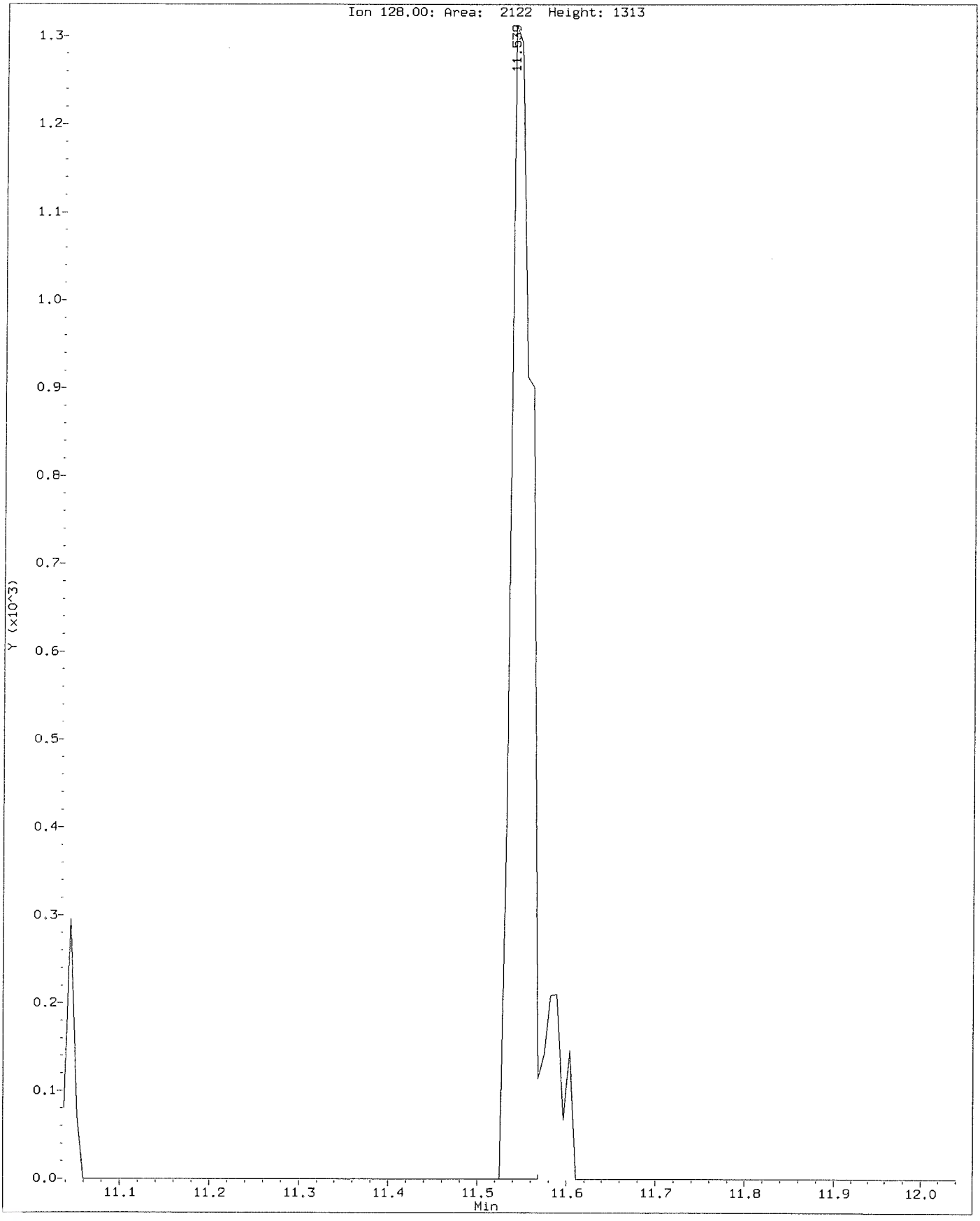
Compound: n-Propylbenzene
CAS Number: 106-65-1





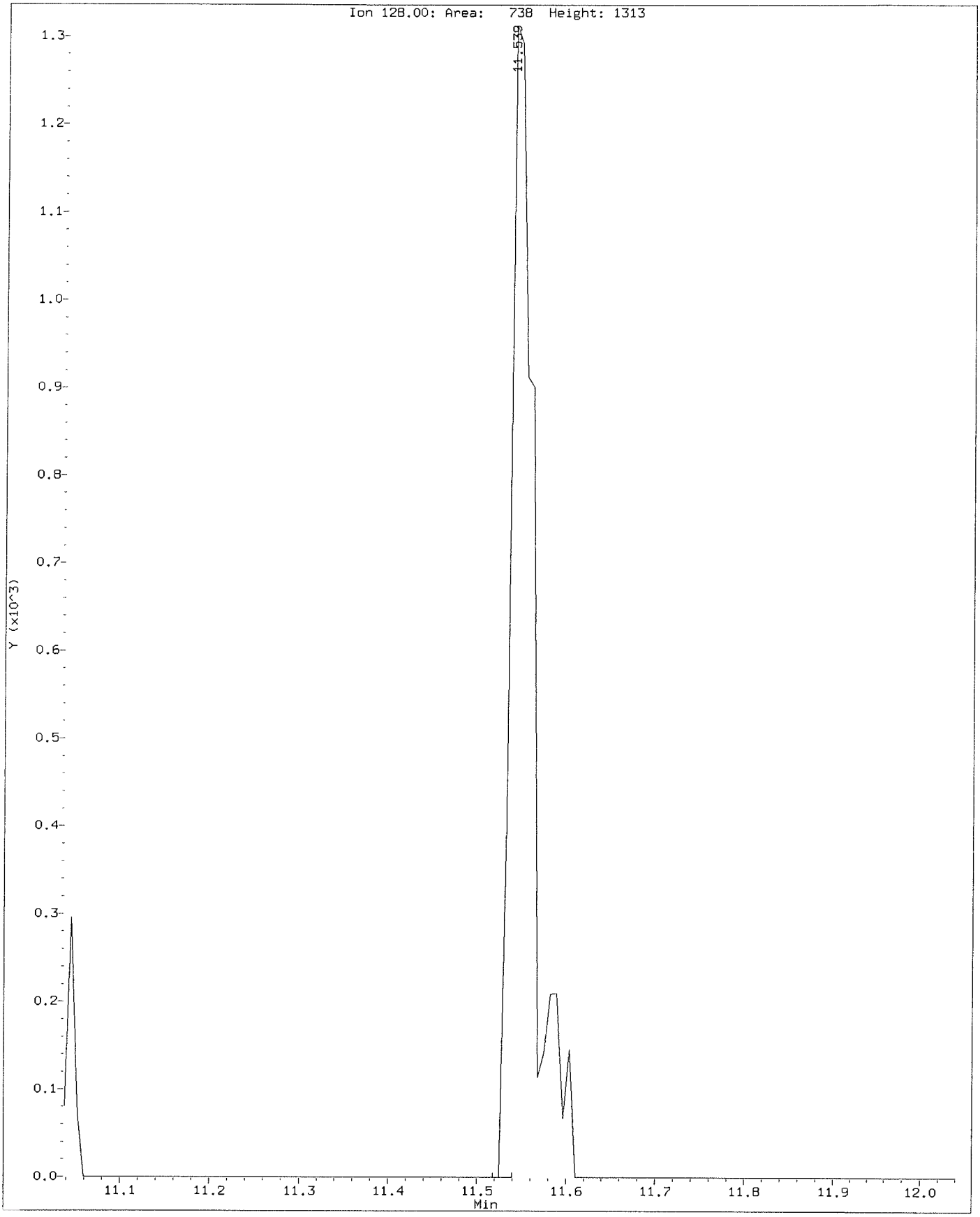
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



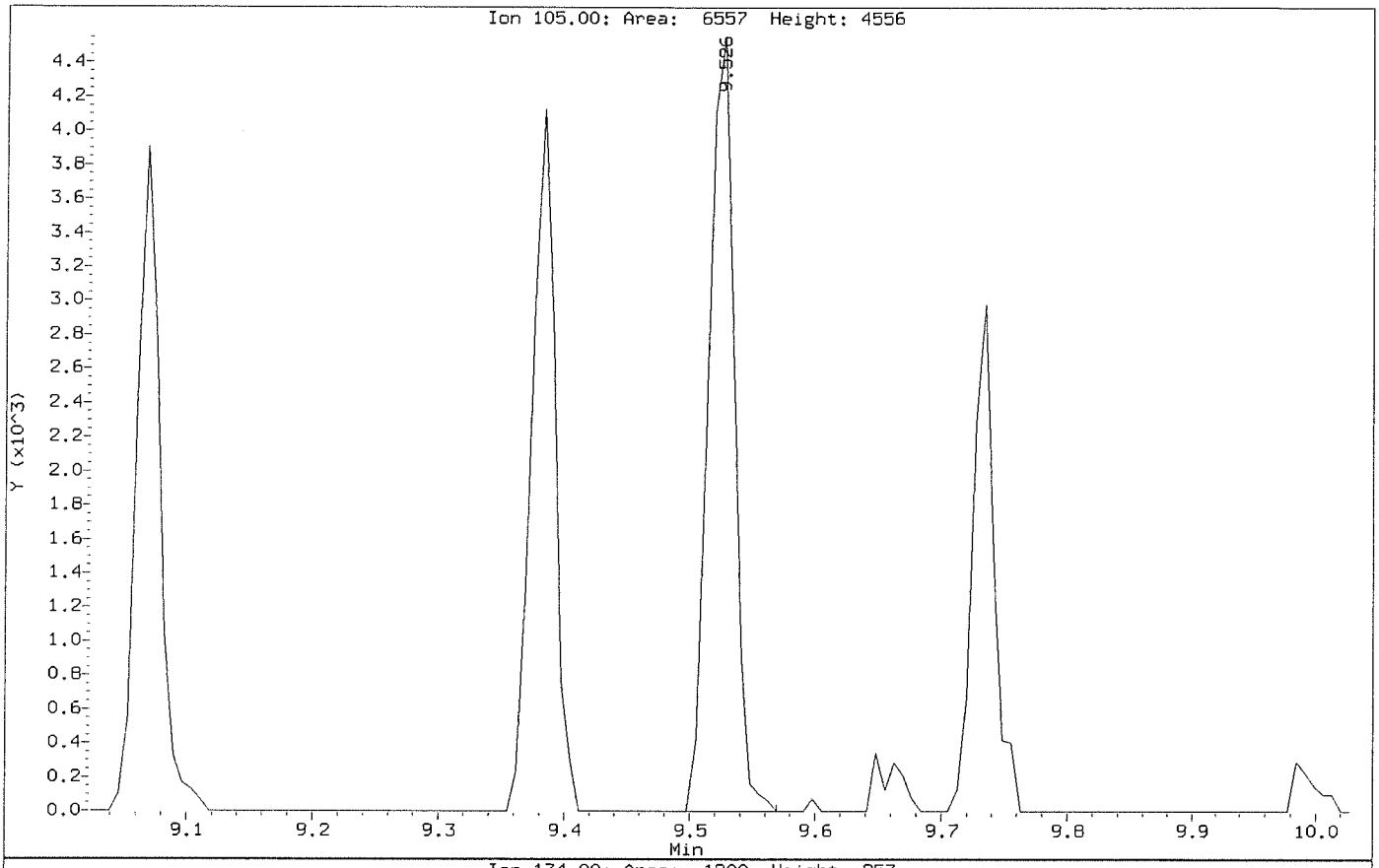
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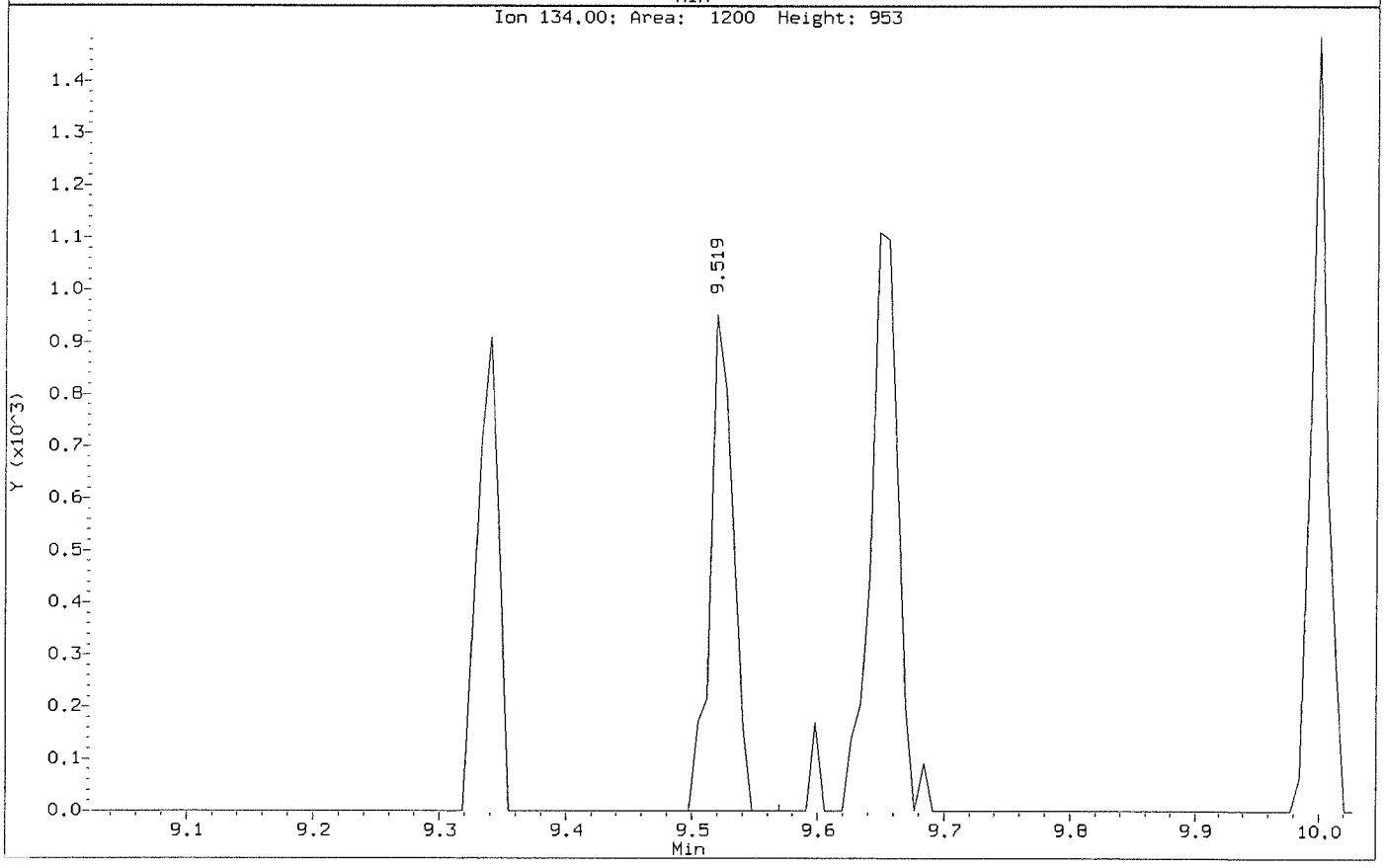
Compound: Naphthalene
CAS Number: 91-20-3



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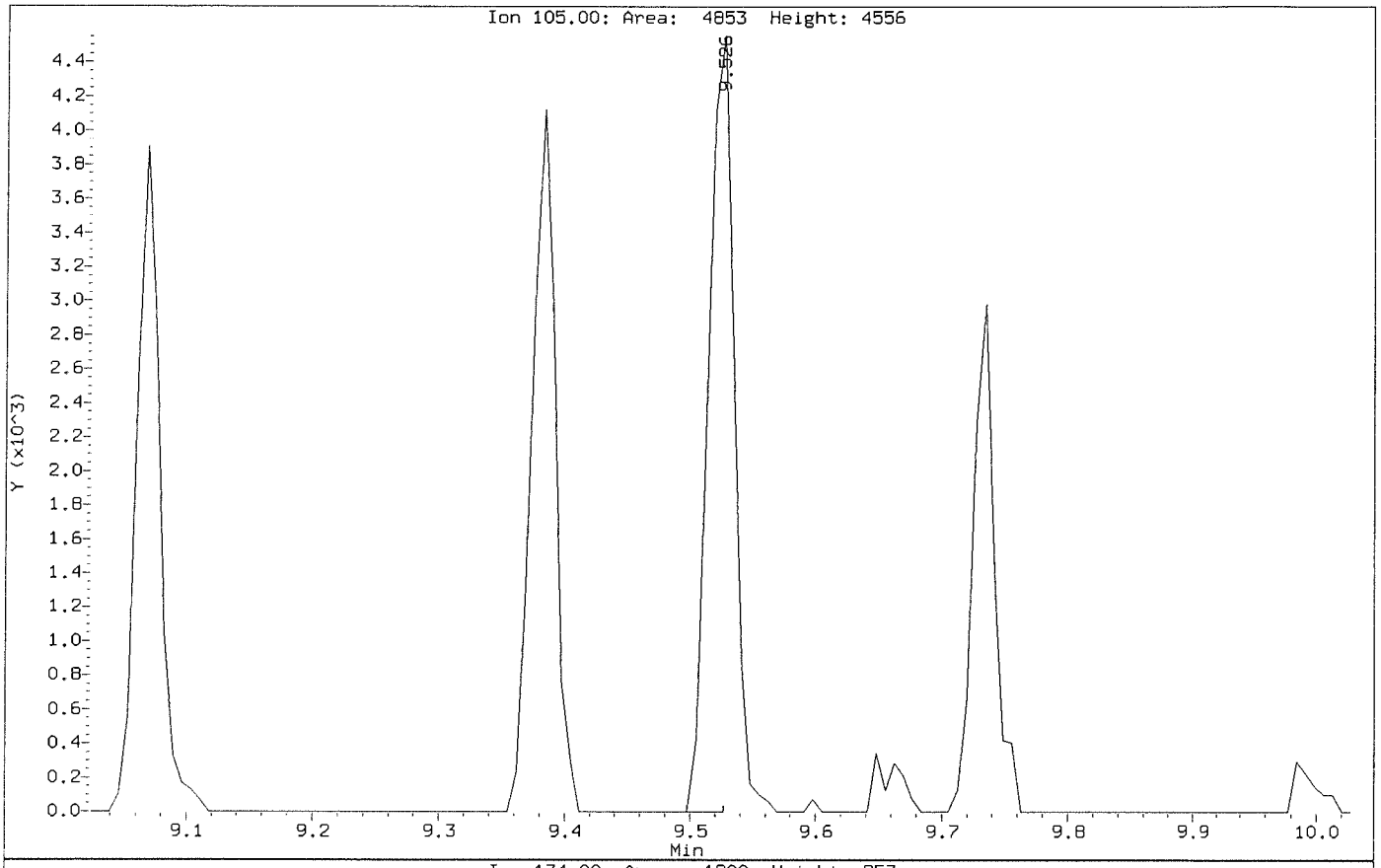
Compound: sec-Butylbenzene
CAS Number: 135-98-8

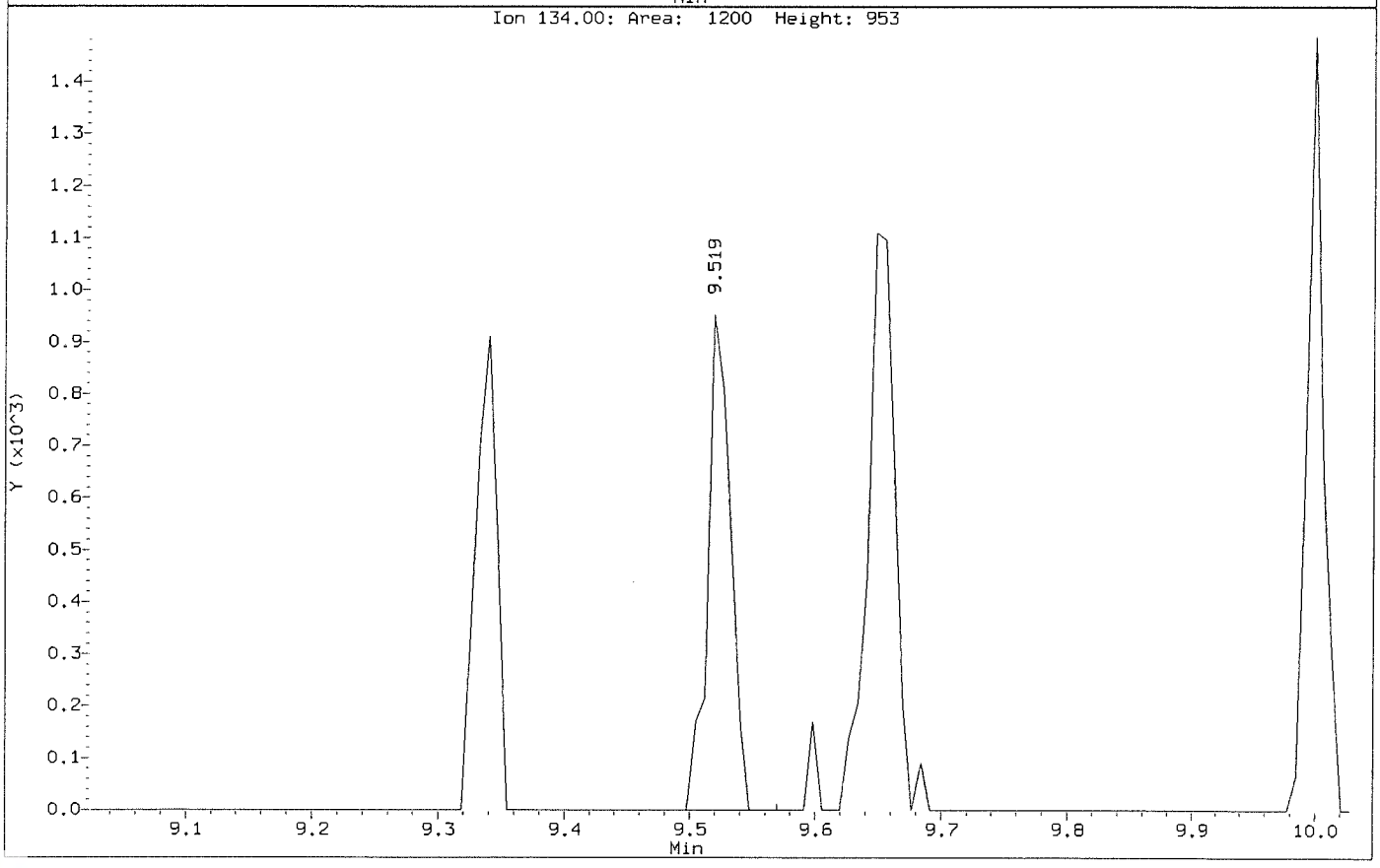




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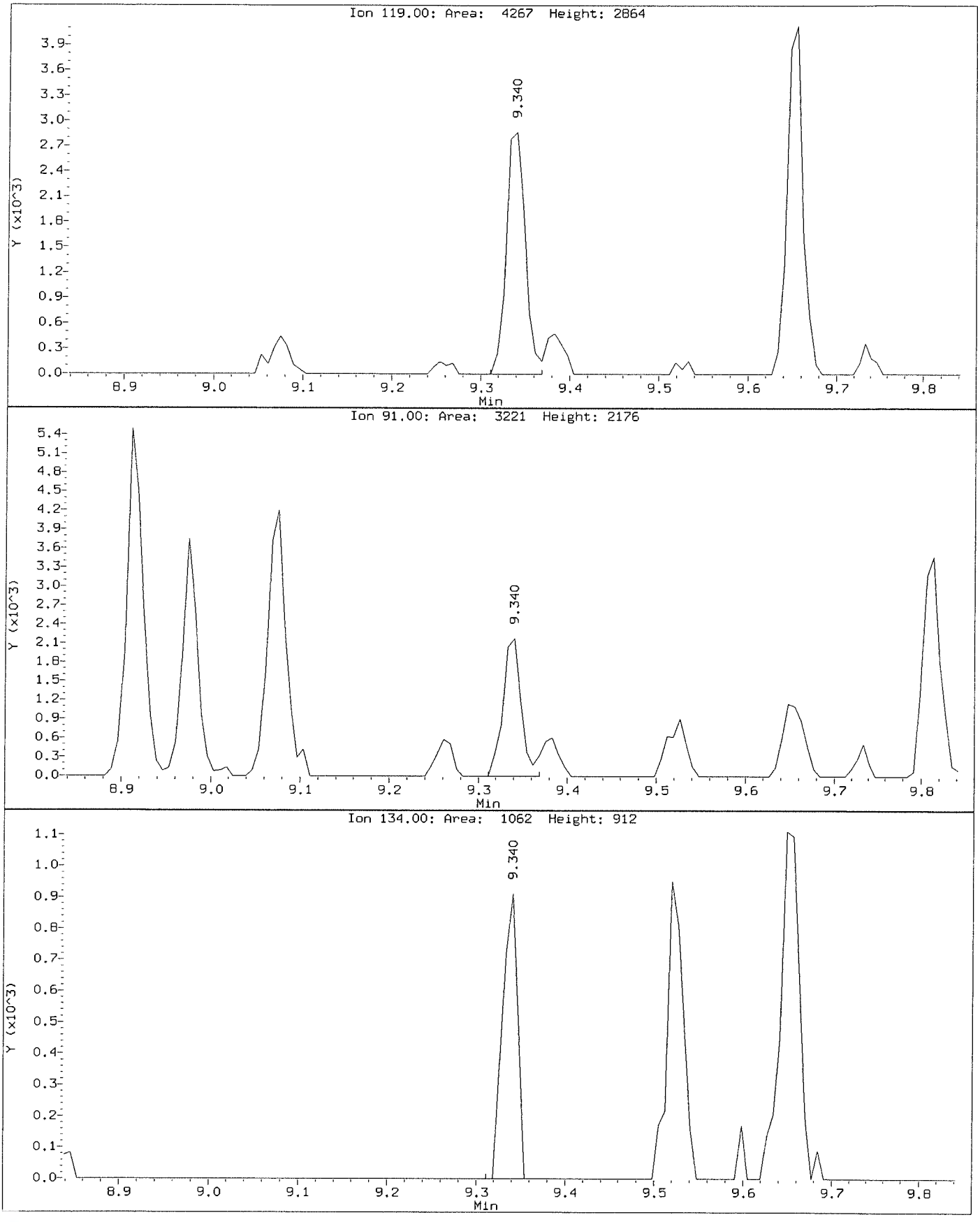
Compound: sec-Butylbenzene
CAS Number: 135-98-8





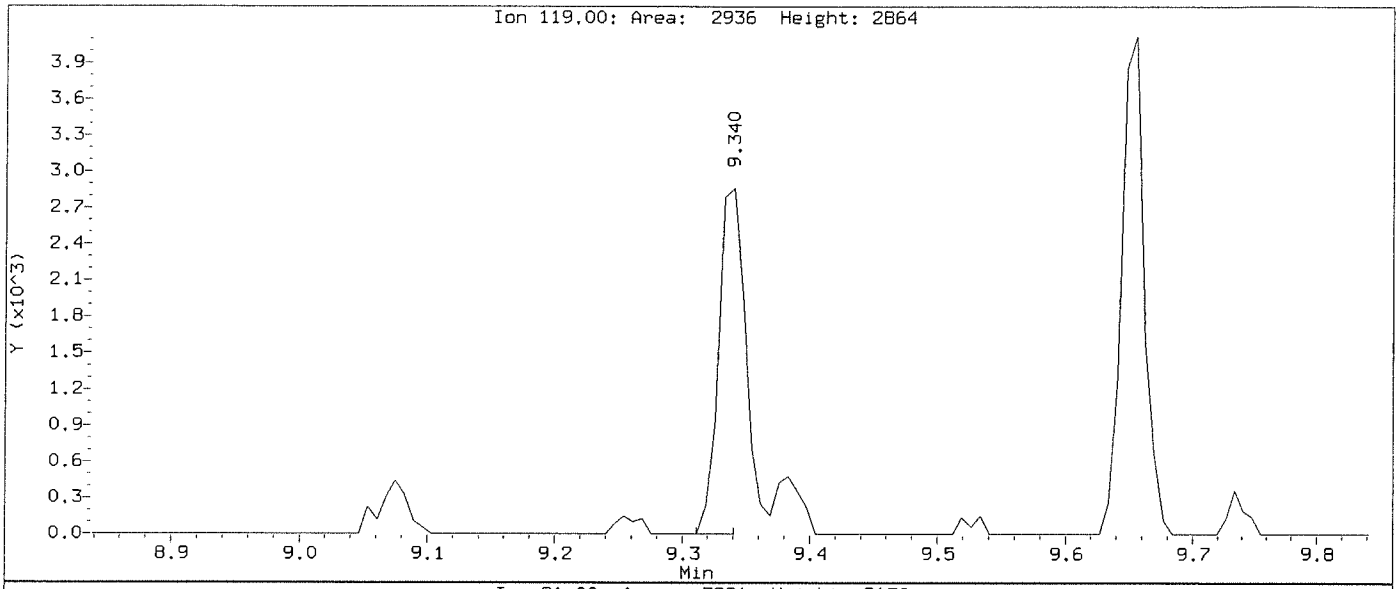
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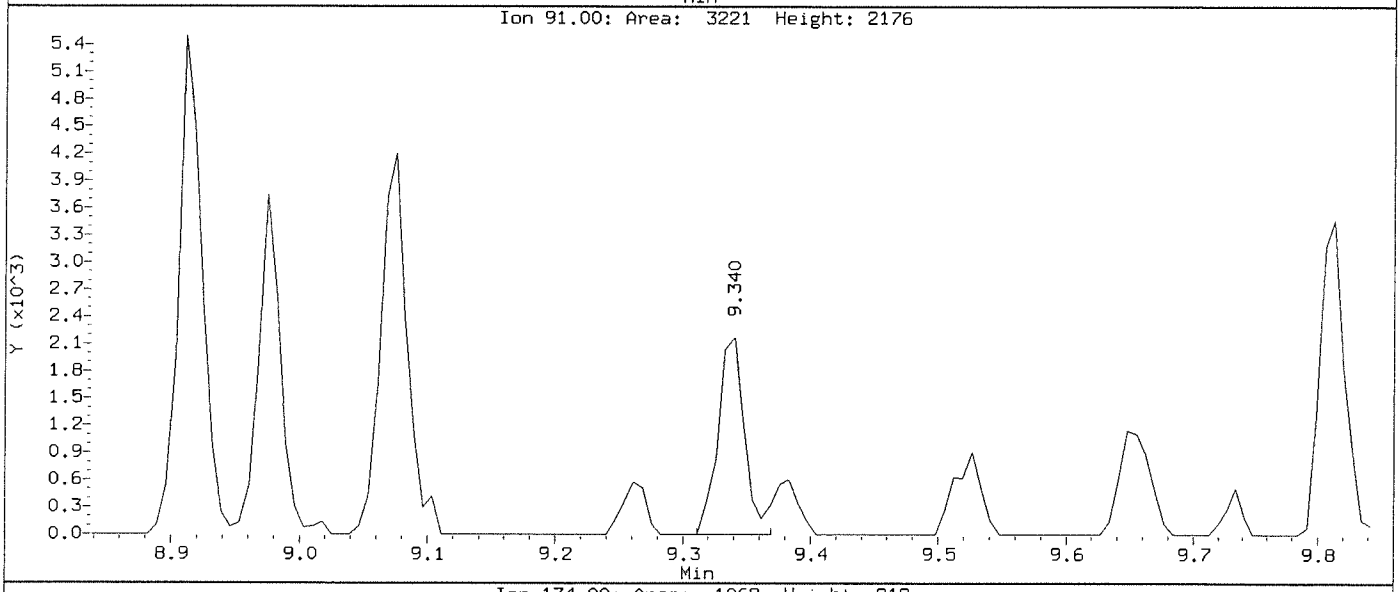
Compound: tert-Butylbenzene
CAS Number: 98-06-6

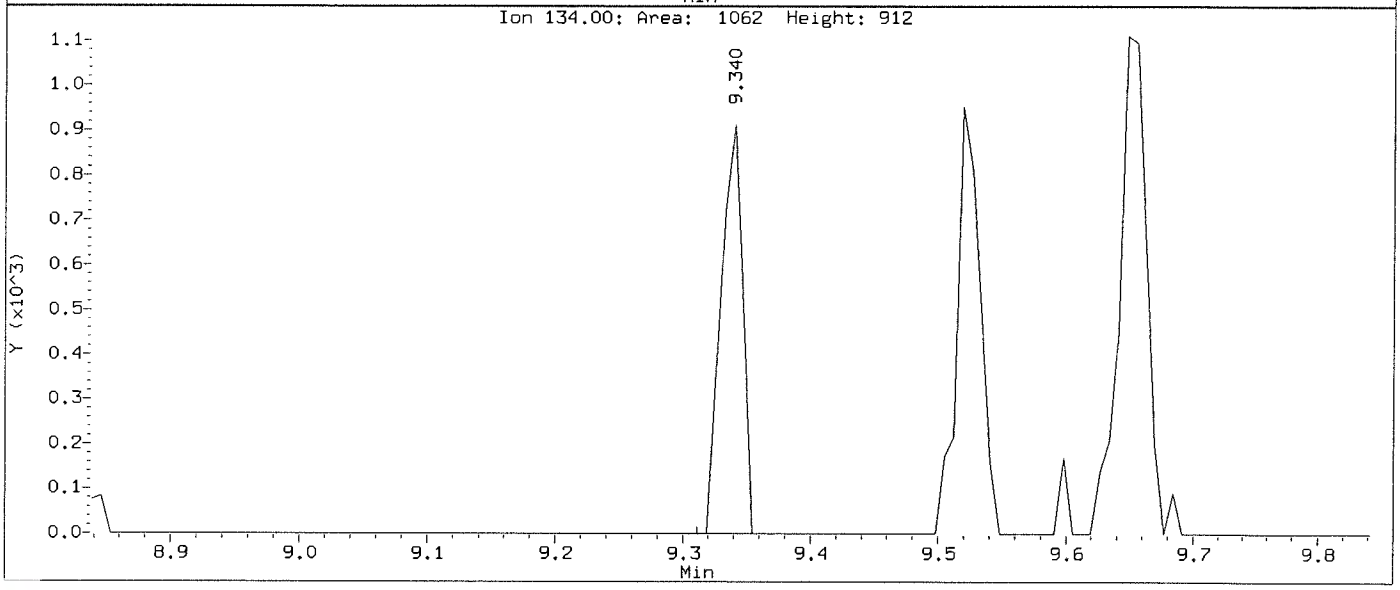


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Compound: tert-Butylbenzene
CAS Number: 98-06-6

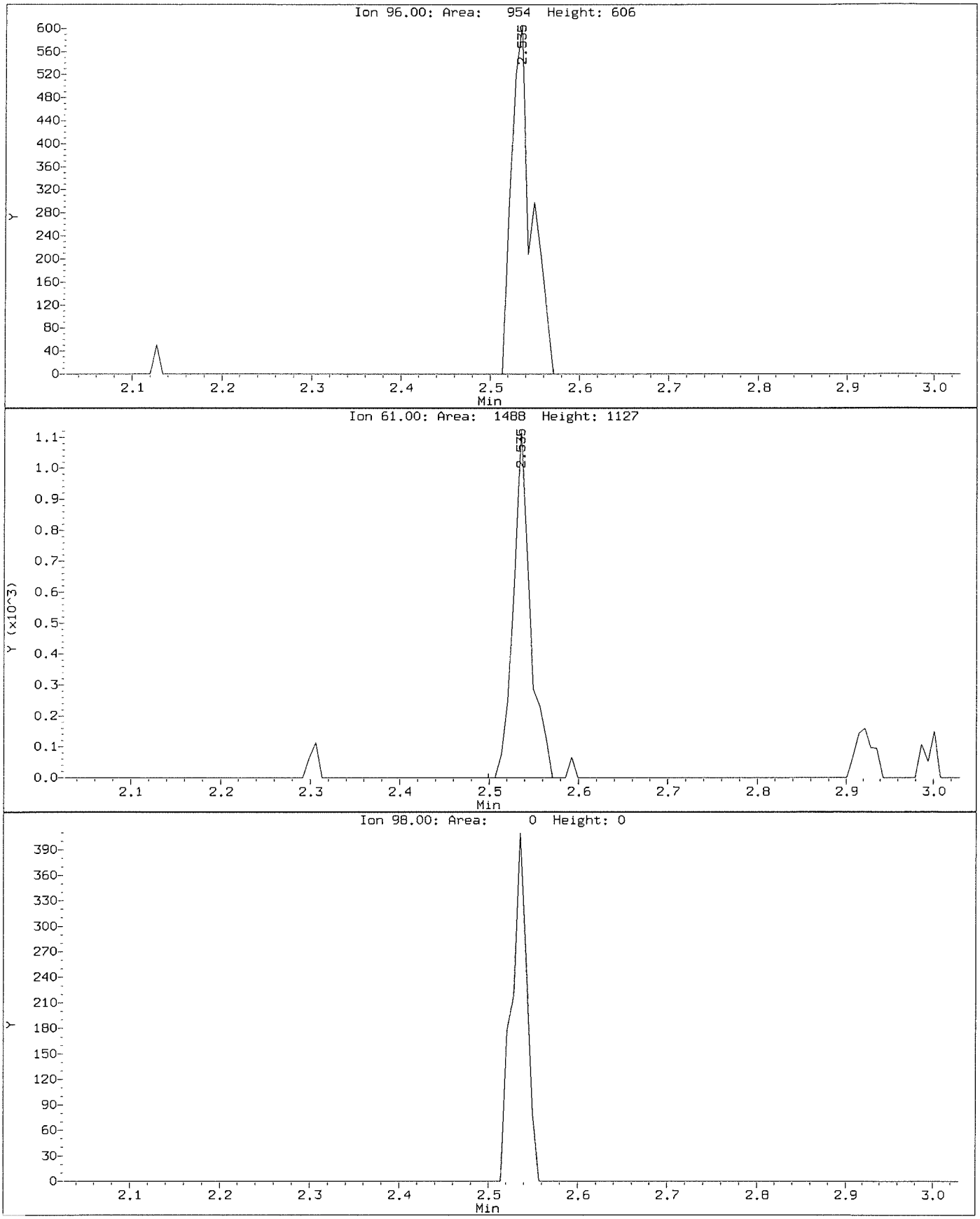






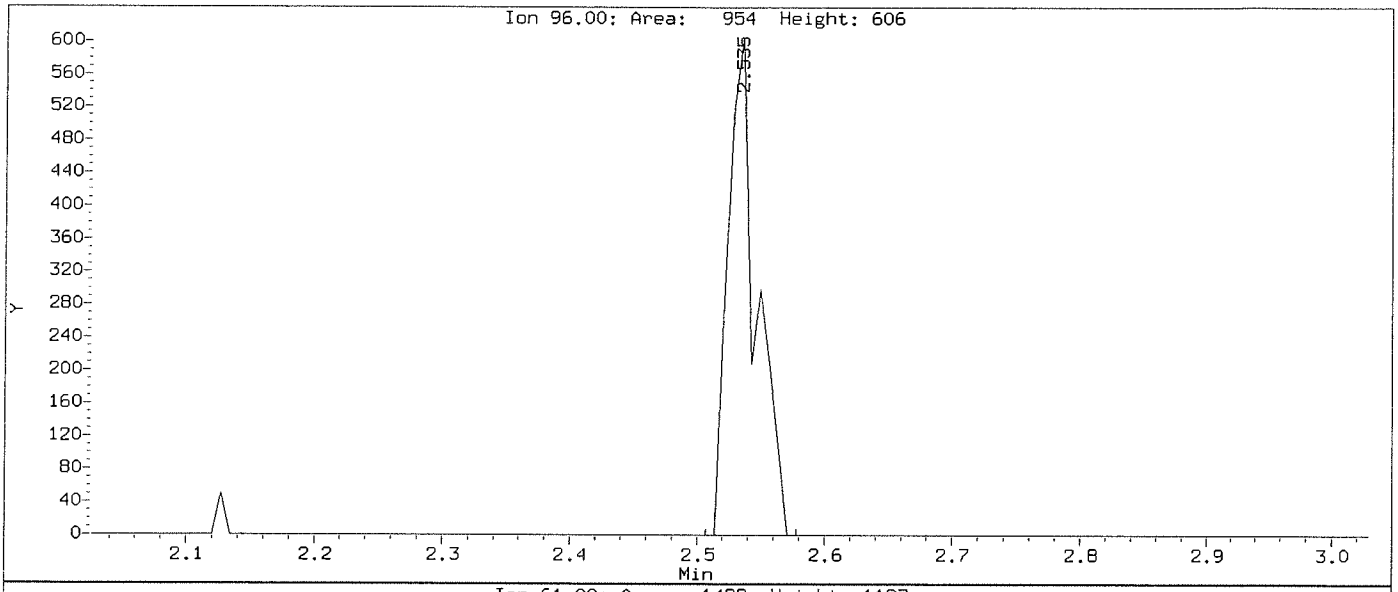
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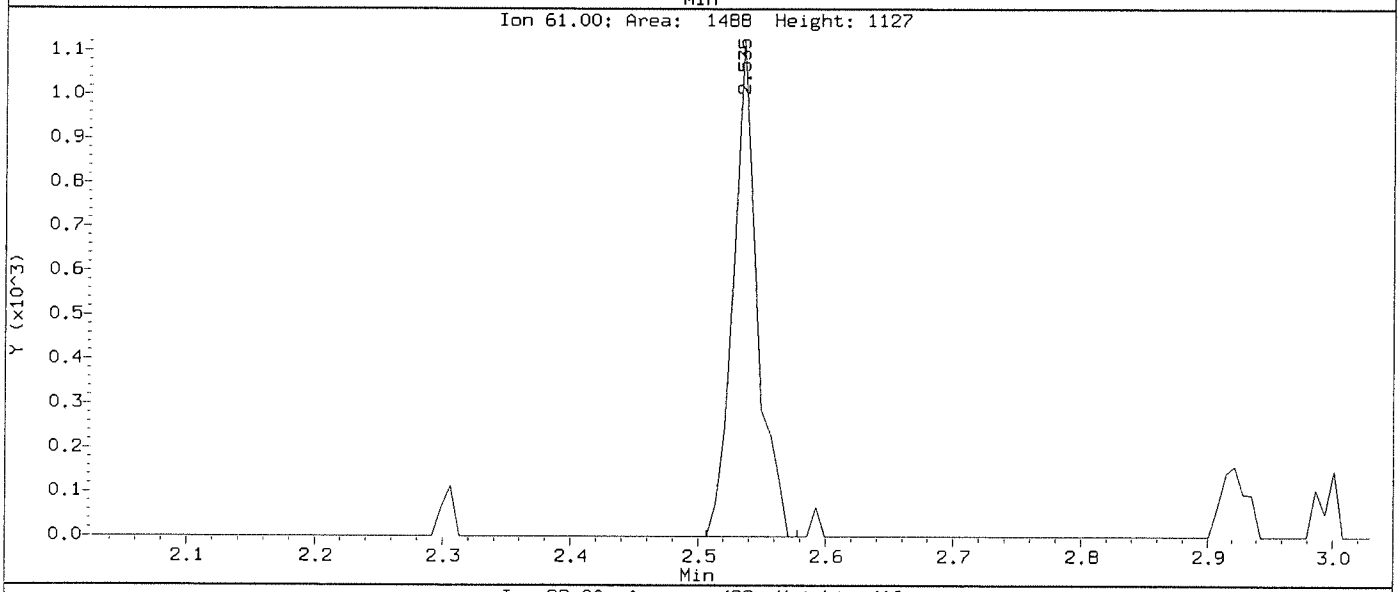
Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5

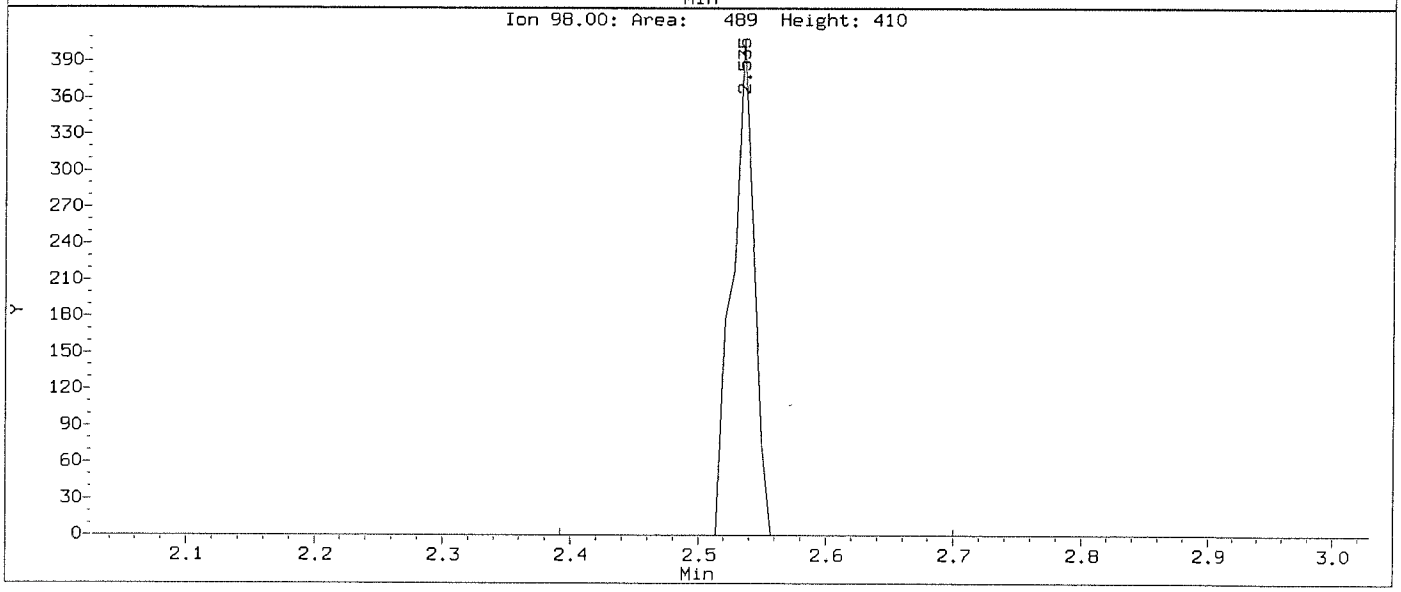


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5

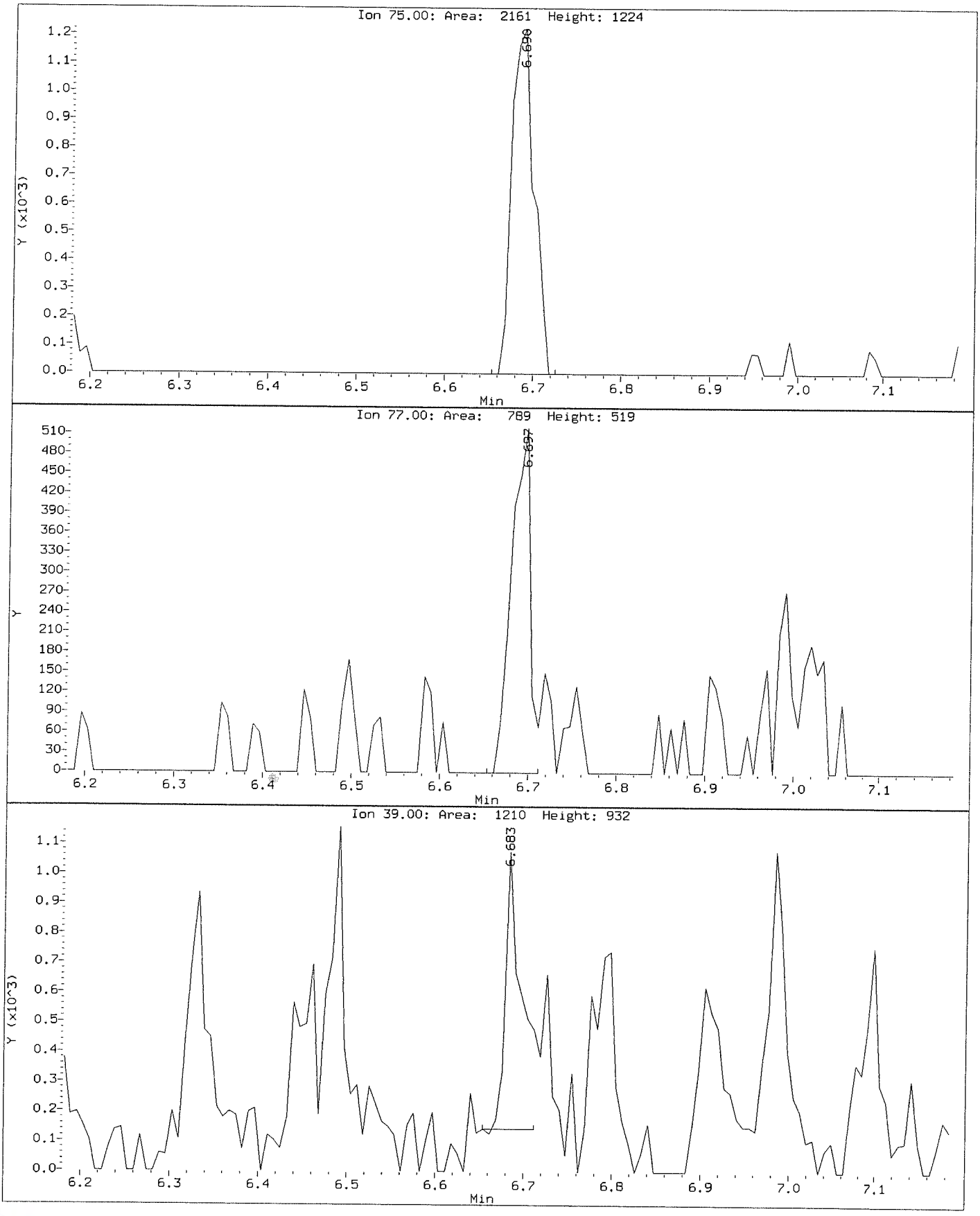






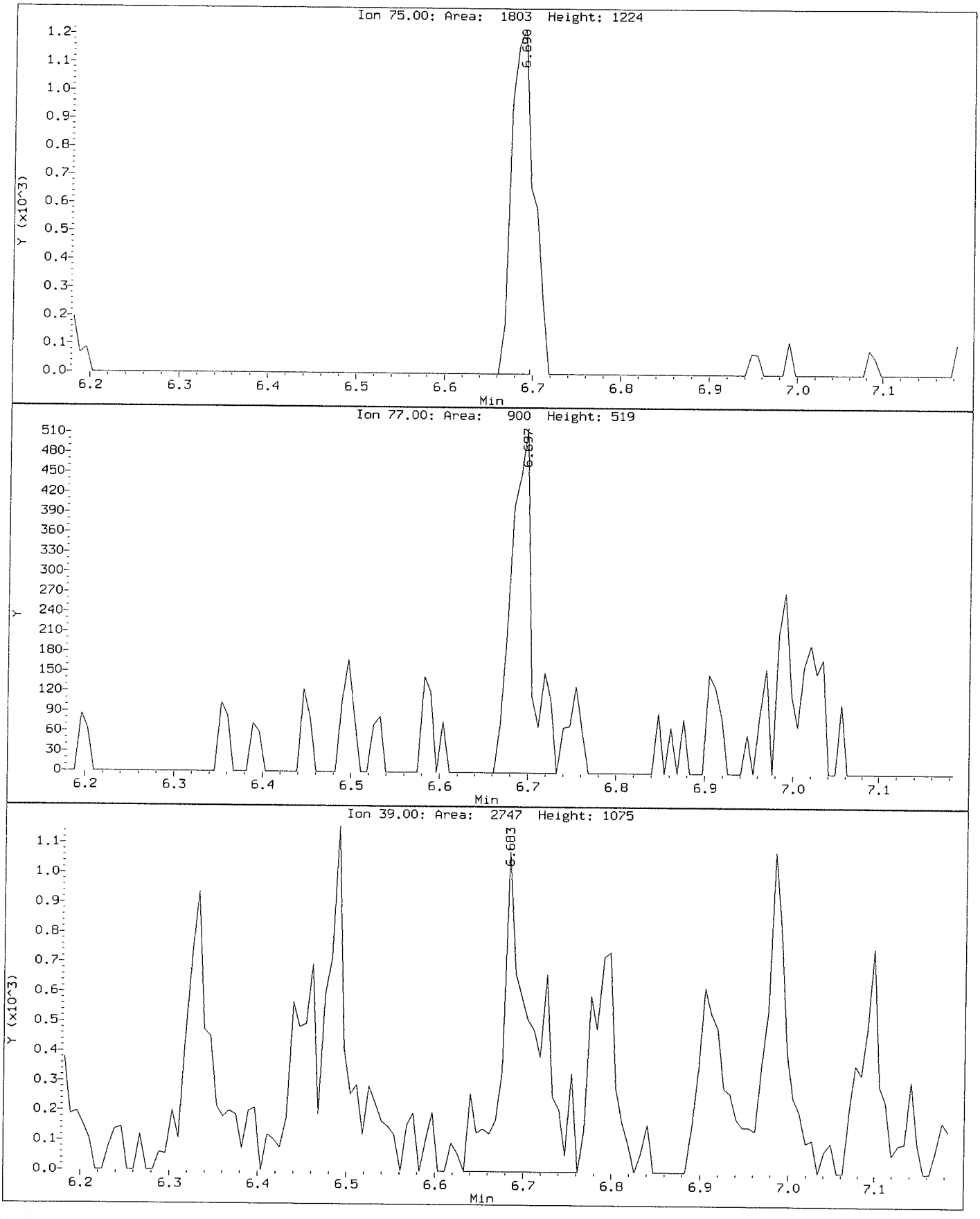
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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,3-Dichloropropene
CAS Number: 10061-02-6



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112203.D
Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,3-Dichloropropene
CAS Number: 10061-02-6



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112204.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112204.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 22-NOV-2020 16:46
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 16:25 Cal File: Y112203.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	157389	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	290010	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	272350	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	117764	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	2846	1.00000	1.24(a)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	2833	1.00000	1.86(a)
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	2622	1.00000	1.02(a)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	7505	1.00000	1.02(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1975	1.00000	0.96(a)
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	2936	1.00000	0.91(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	2422	1.00000	(aM)
138 Freon TF	101	1.912	1.912	(0.457)	3265	1.00000	1.11(a)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1877	1.00000	1.04(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	2937	1.00000	0.77(Ta)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	2970	1.00000	0.97(a)
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	2811	1.00000	0.97(a)
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	456	1.00000	2.25(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	1873	1.00000	1.05(aMH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	1120	1.00000	1.26(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	6306	1.00000	0.94(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	150	1.00000	1.04(aM)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	1756	1.00000	0.84(a)

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112204.D Page 2
Report Date: 18-Dec-2020 11:14

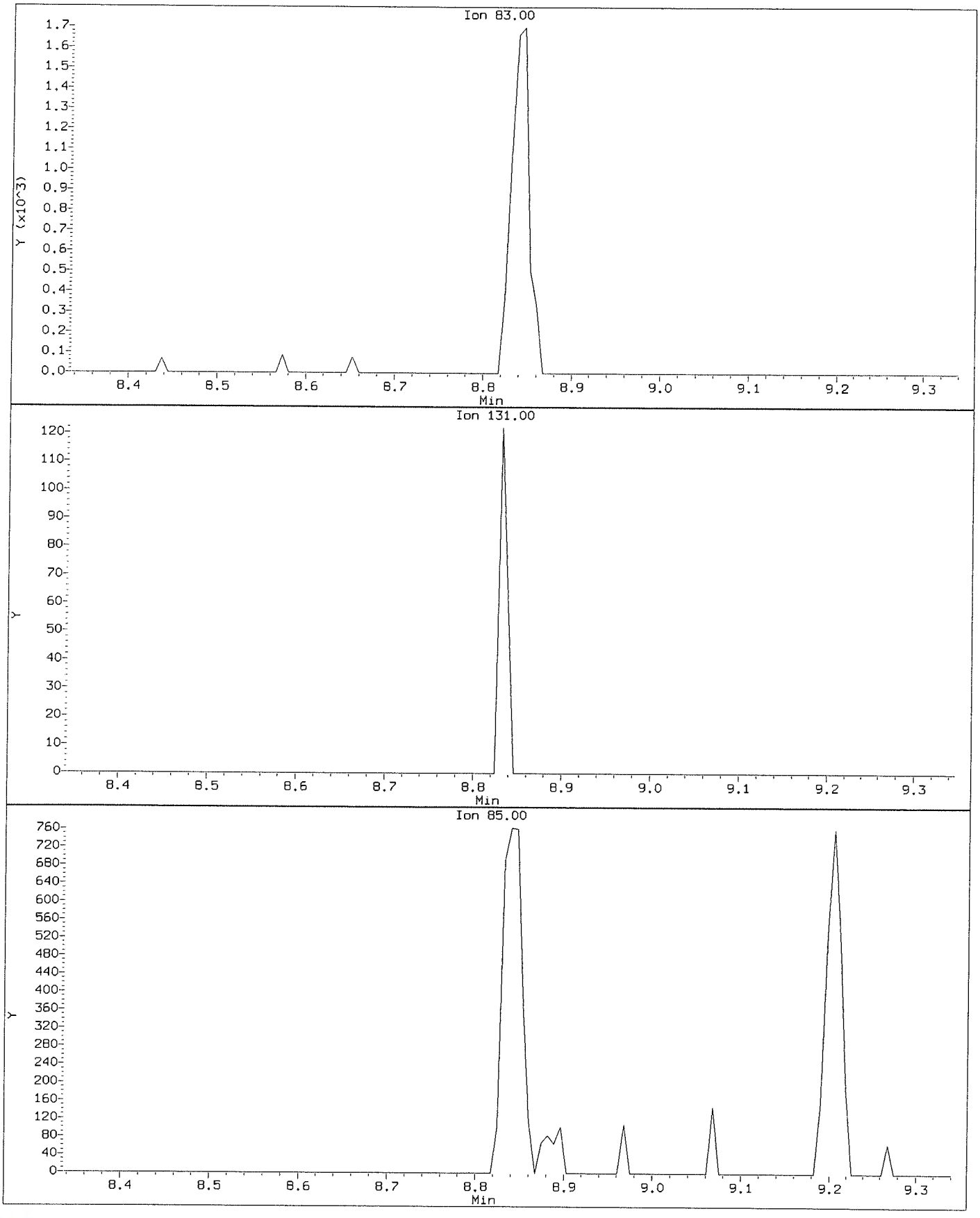
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	3072	1.00000	0.92(a)
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	3122	1.00000	0.97(aM)
42	1,2-Dichloropropane	63	5.429	5.429	(1.092)	2454	1.00000	1.06(aM)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	6209	1.00000	0.88(a)
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	4262	1.00000	1.20(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	2998	1.00000	0.89(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	5321	1.00000	2.05(aM)
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	3485	1.00000	1.04(a)
24	2-Butanone	43	3.595	3.595	(0.860)	1497	2.00000	1.98(aM)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	5818	1.00000	1.00(a)
52	2-Hexanone	43	7.090	7.090	(0.924)	2772	2.00000	2.85(a)
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	6101	1.00000	0.86(a)
82	p-Isopropyltoluene	119	9.648	9.648	(0.999)	8283	1.00000	2.73(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	3914	2.00000	2.76(a)
10	Acetone	43	1.976	1.976	(0.473)	4436	2.00000	1.94(a)
37	Benzene	78	4.519	4.519	(0.909)	7987	1.00000	1.00(a)
74	Bromobenzene	156	8.810	8.810	(0.912)	1761	1.00000	0.88(a)
29	Bromochloromethane	128	3.803	3.803	(0.909)	987	1.00000	0.88(a)
39	Bromodichloromethane	83	5.737	5.737	(1.154)	2628	1.00000	0.85(aM)
66	Bromoform	173	8.408	8.408	(1.096)	847	1.00000	2.76(aM)
6	Bromomethane	94	1.339	1.339	(0.320)	3745	1.00000	2.11(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	11209	2.00000	1.91(a)
34	Carbon Tetrachloride	117	4.261	4.261	(0.857)	2507	1.00000	1.00(aH)
59	Chlorobenzene	112	7.699	7.699	(1.004)	5911	1.00000	1.01(a)
7	Chloroethane	64	1.403	1.403	(0.336)	2057	1.00000	0.84(a)
28	Chloroform	83	3.910	3.910	(0.935)	3974	1.00000	0.96(a)
3	Chloromethane	50	1.081	1.081	(0.258)	3488	1.00000	1.20(aM)
27	cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	2320	1.00000	1.00(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	3169	1.00000	0.86(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	1784	1.00000	0.84(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	1394	1.00000	0.91(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	2576	1.00000	3.54(a)
61	Ethylbenzene	106	7.800	7.800	(1.017)	3051	1.00000	1.03(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	832	1.00000	2.85(aM)
67	Isopropylbenzene	105	8.559	8.559	(1.116)	7847	1.00000	0.88(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	6329	2.00000	8.30
17	Methylene Chloride	84	2.306	2.306	(0.551)	2103	1.00000	0.97(a)
87	n-Butylbenzene	91	9.991	9.991	(1.034)	8864	1.00000	4.21(a)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	9663	1.00000	0.98(a)
92	Naphthalene	128	11.546	11.546	(1.195)	1209	1.00000	1.98(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	3459	1.00000	3.69(a)
81	sec-Butylbenzene	105	9.519	9.519	(0.985)	8872	1.00000	1.62(a)
64	Styrene	104	8.265	8.265	(1.078)	5398	1.00000	0.85(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	5724	1.00000	1.04(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	1668	1.00000	0.99(a)
50	Toluene	91	6.453	6.453	(0.841)	8614	1.00000	0.97(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	1839	1.00000	0.94(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	2740	1.00000	0.86(a)
38	Trichloroethene	130	5.207	5.207	(1.048)	2157	1.00000	1.06(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	6442	1.00000	1.08(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	4113	1.00000	1.08(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.
H - Operator selected an alternate compound hit.

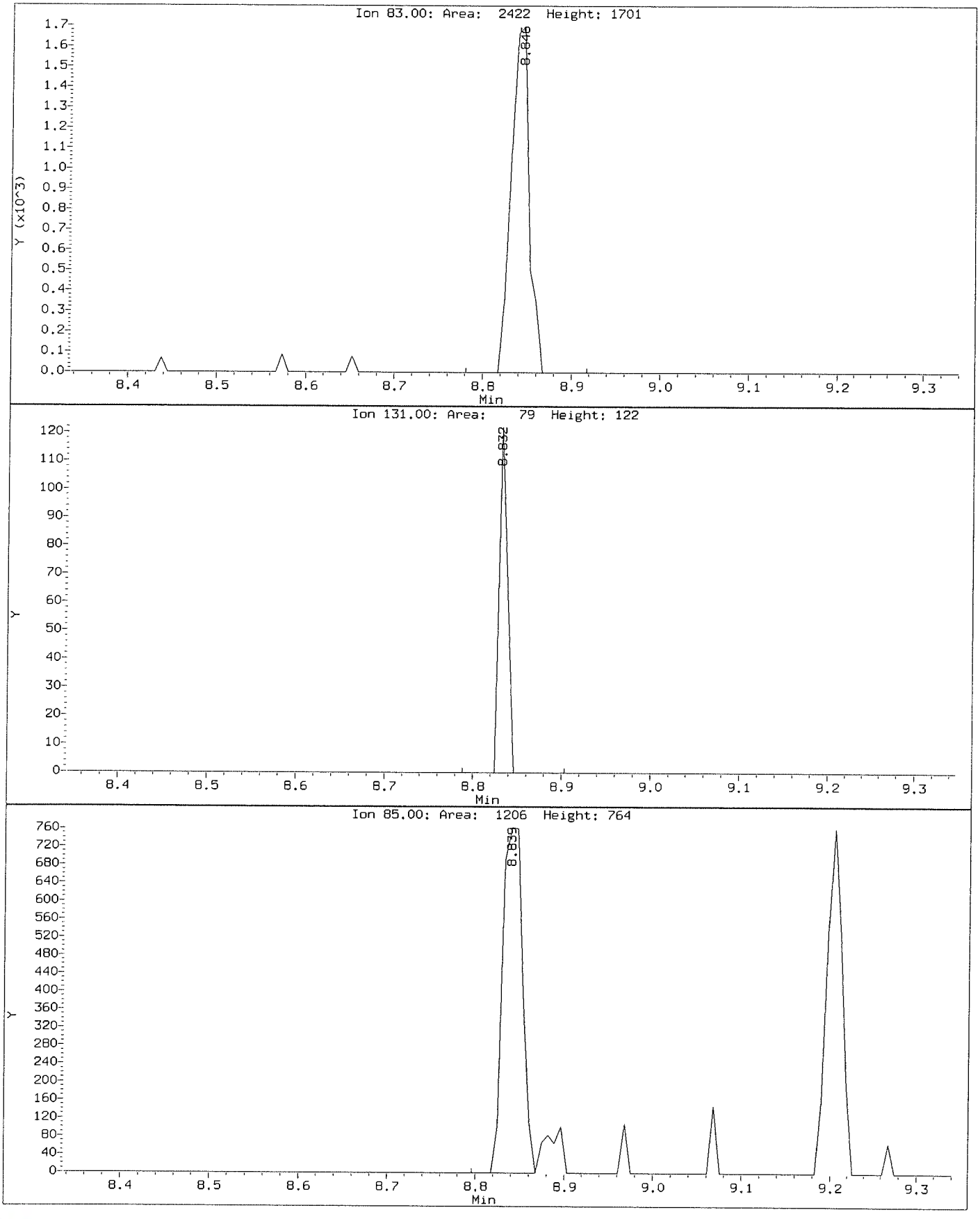
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Injection Date: 22-NOV-2020 16:46
Instrument: voa6.i
Client Sample ID: VSTD001

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



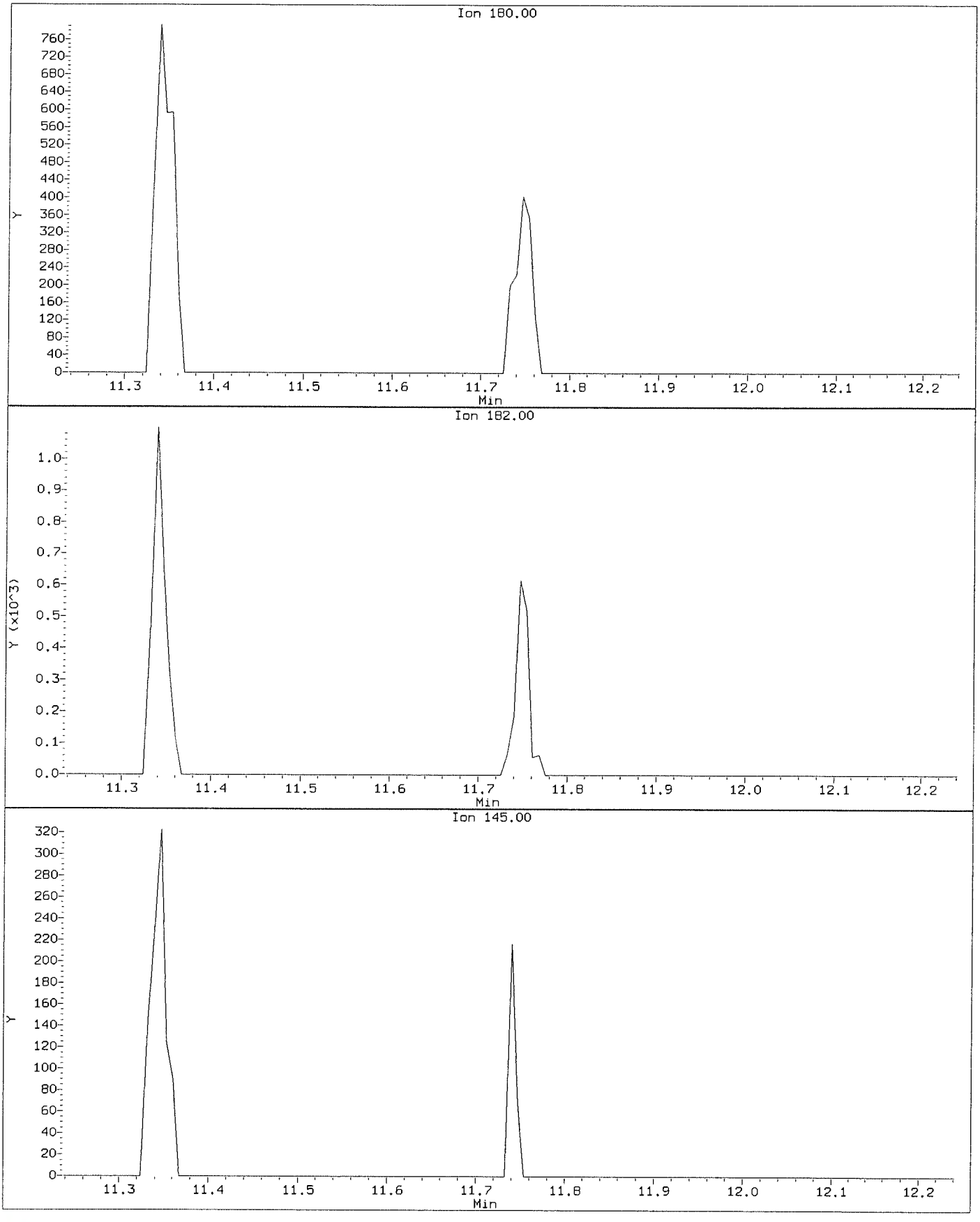
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Client Sample ID: VSTD001

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



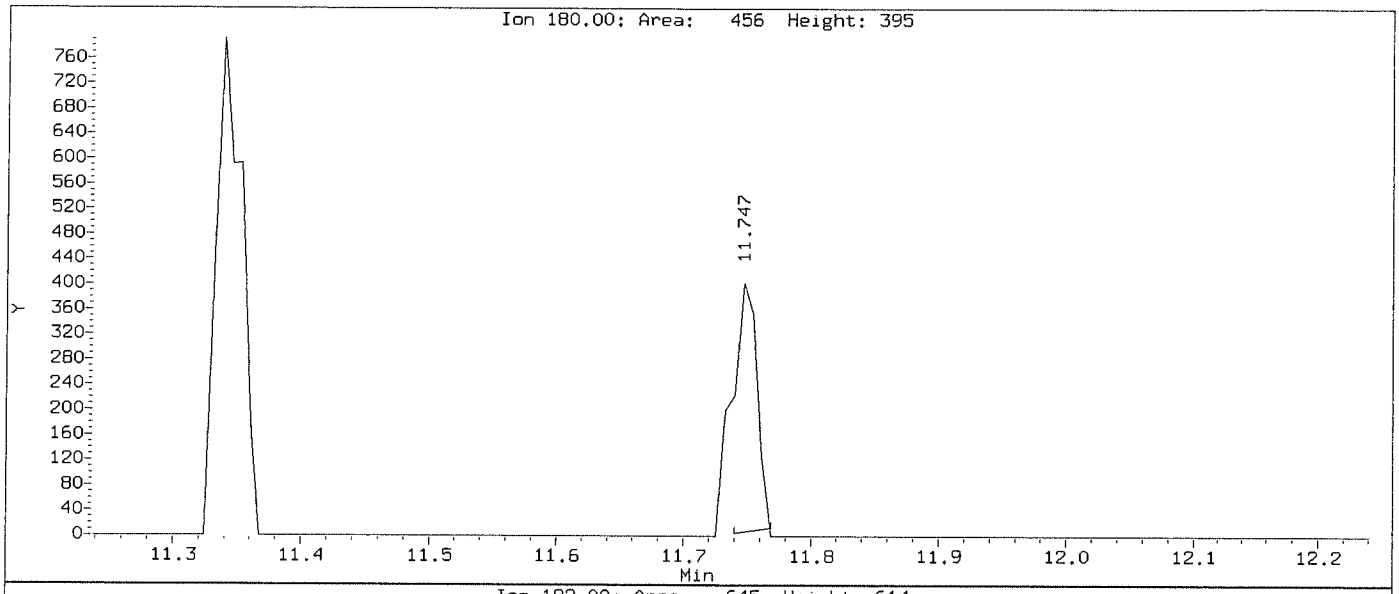
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Client Sample ID: VSTD001

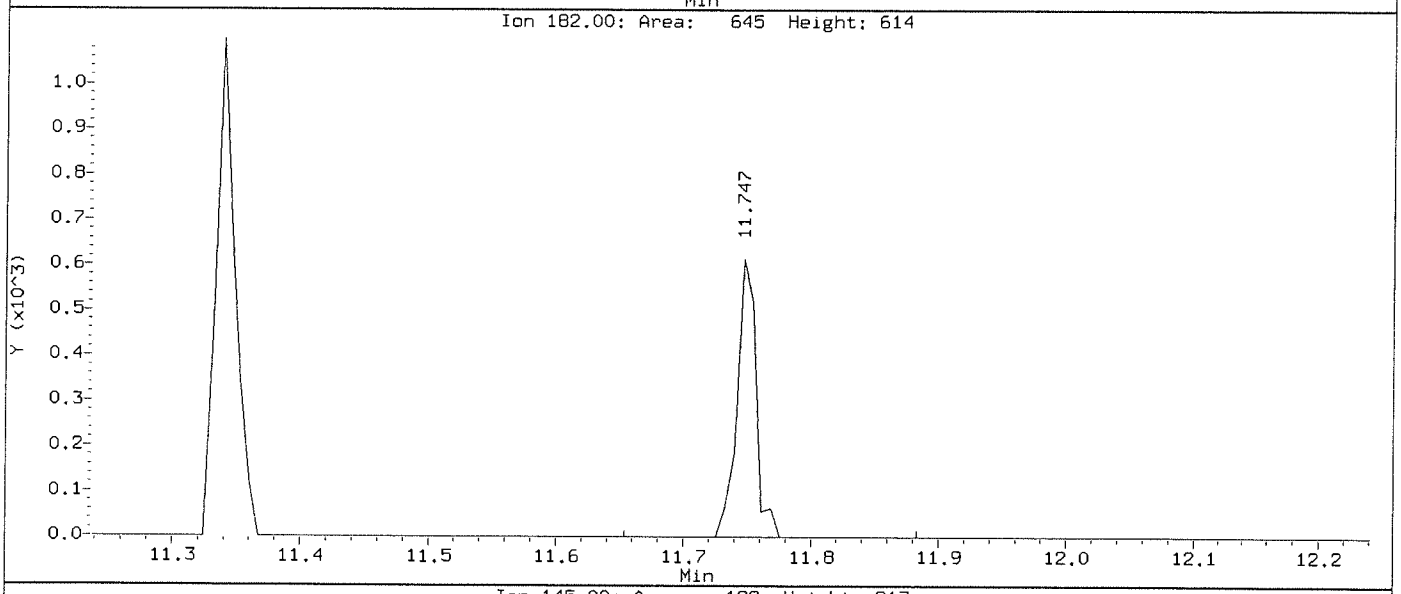
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

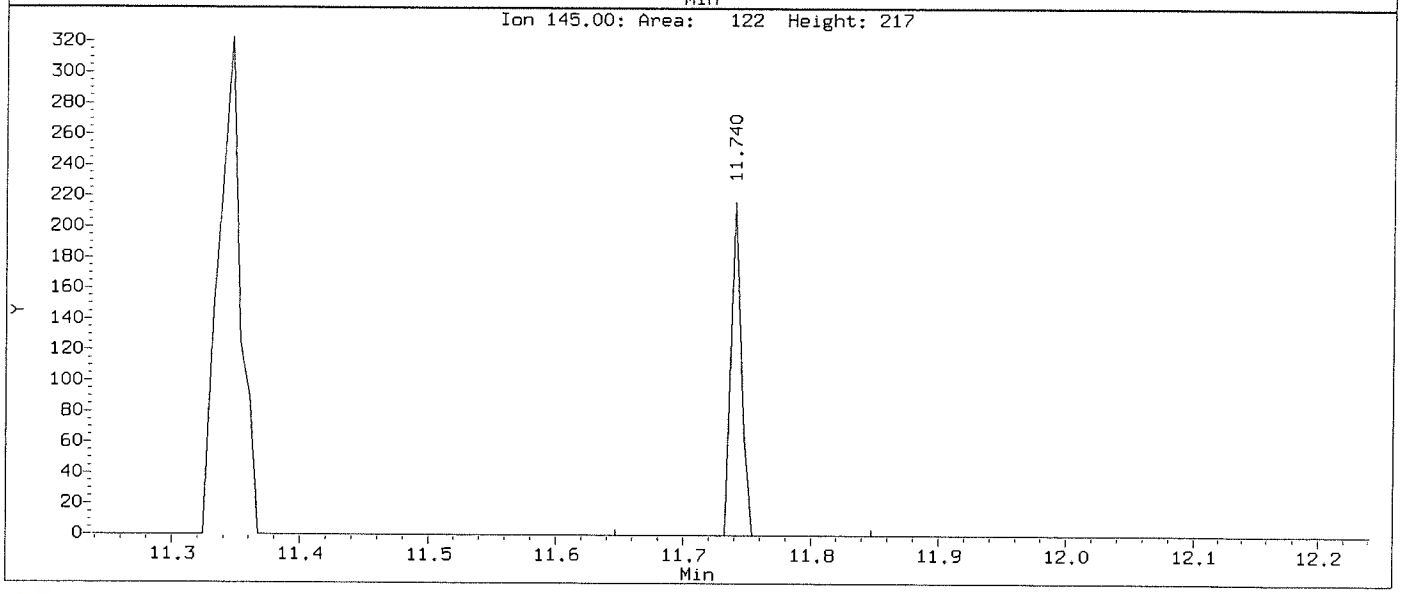


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Instrument: voa6.i
Client Sample ID: VSTD001

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

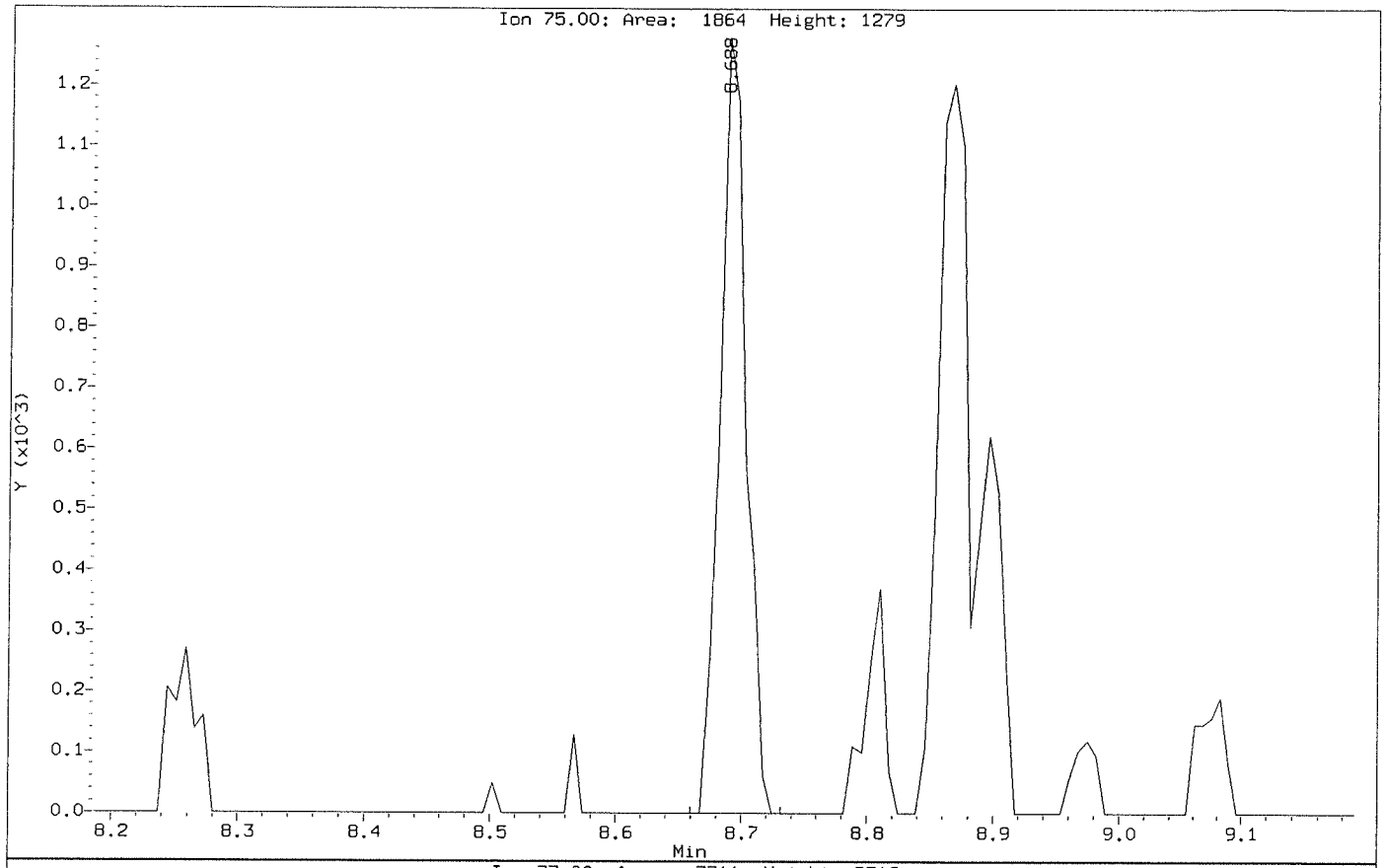


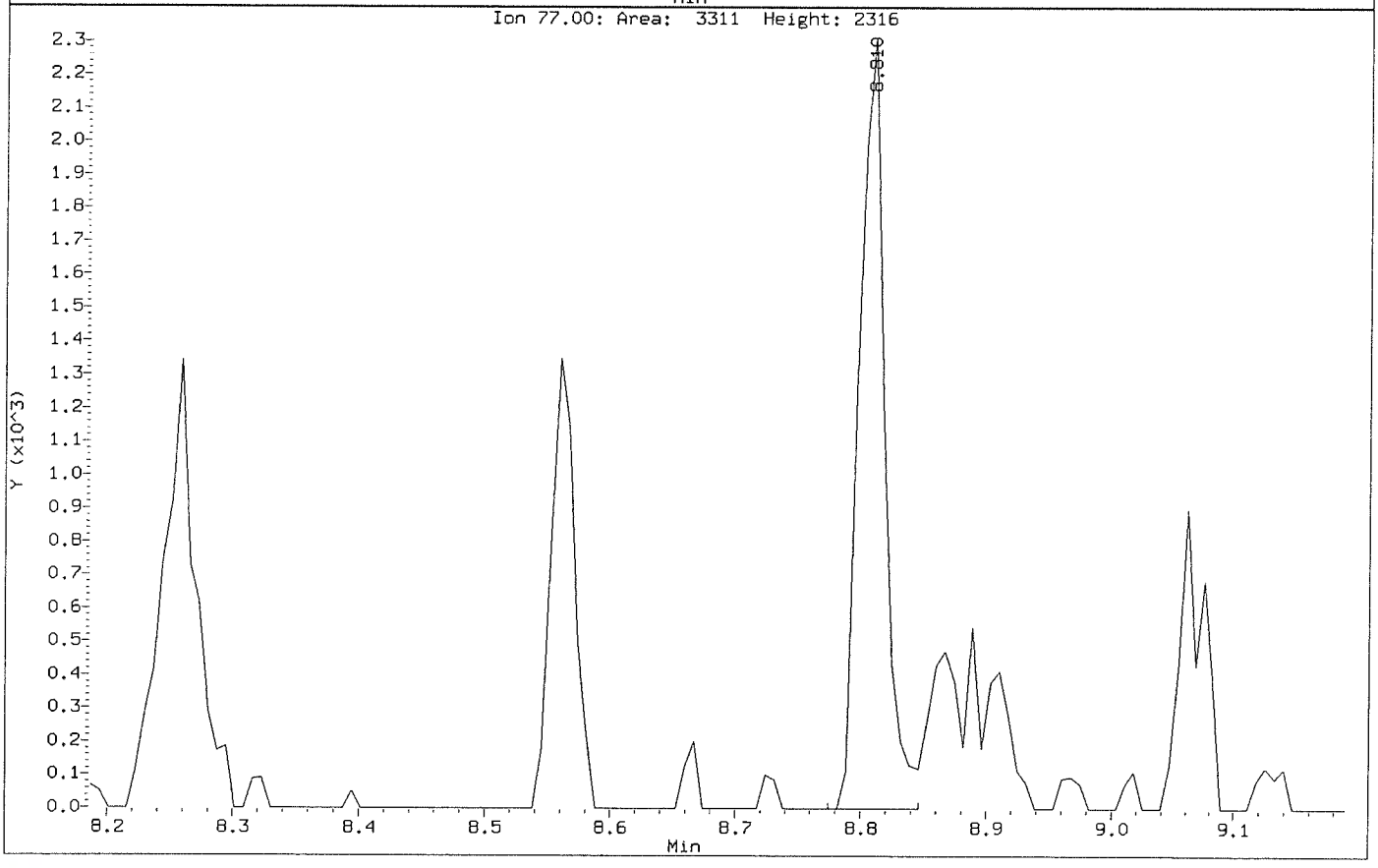




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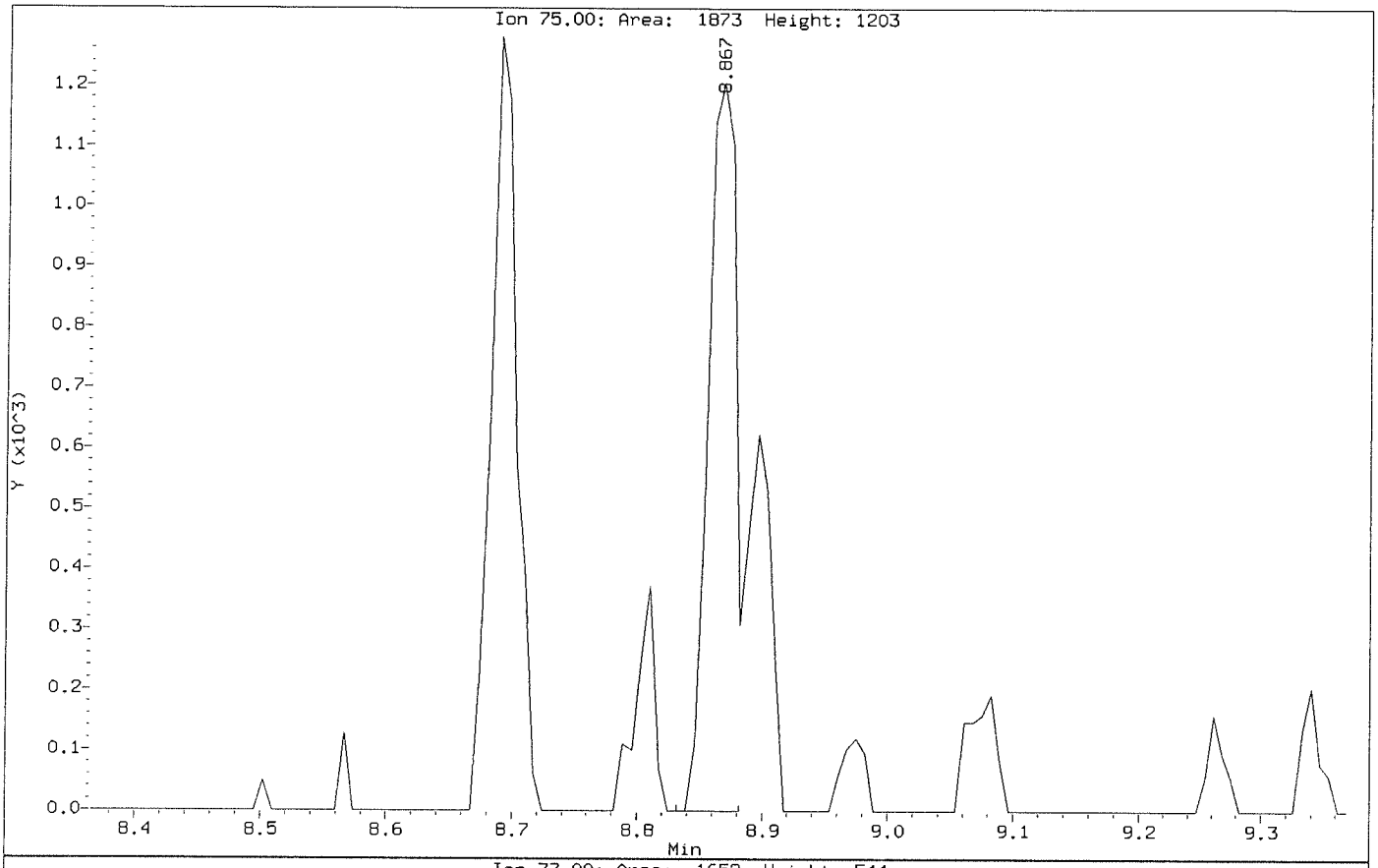
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

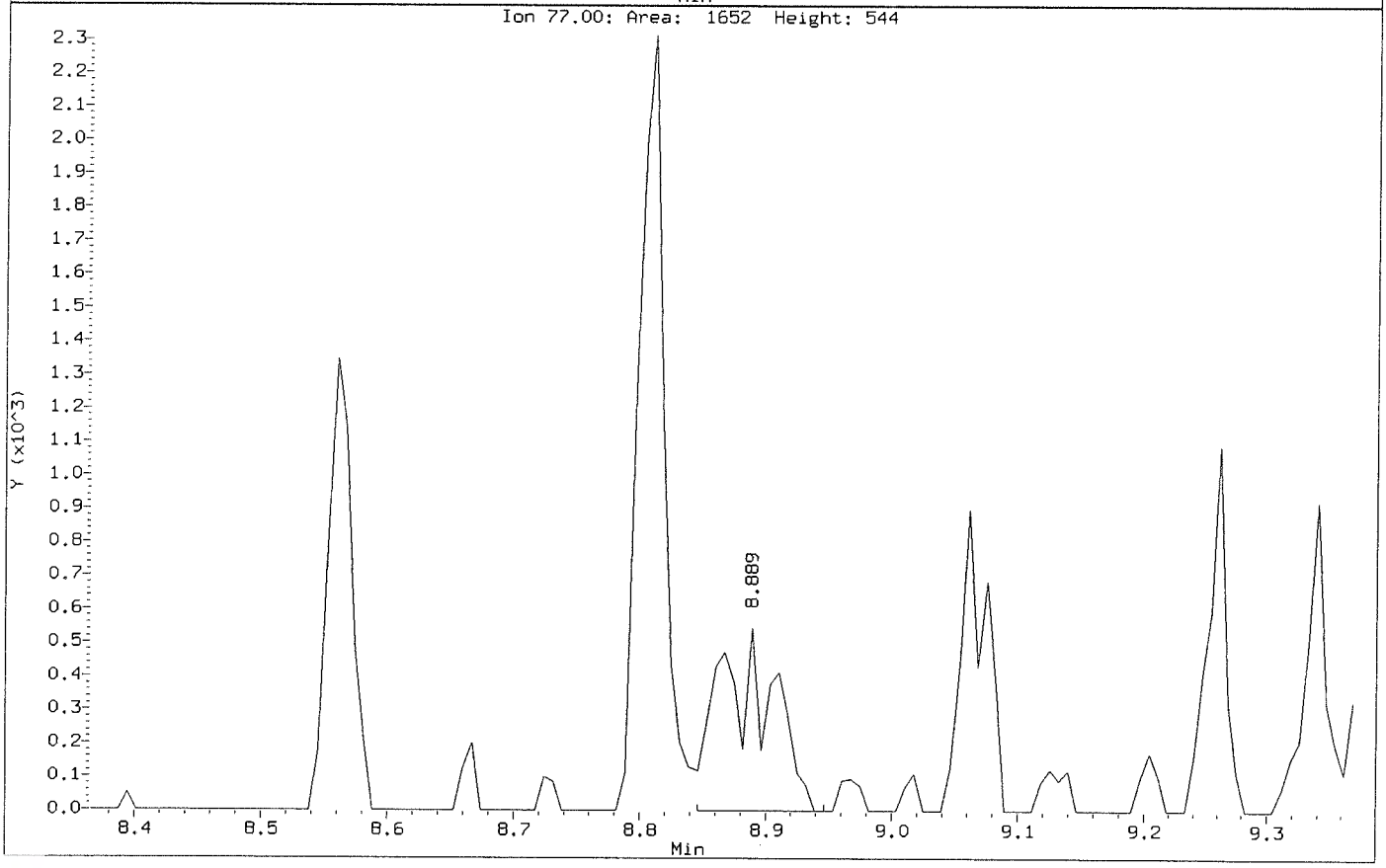




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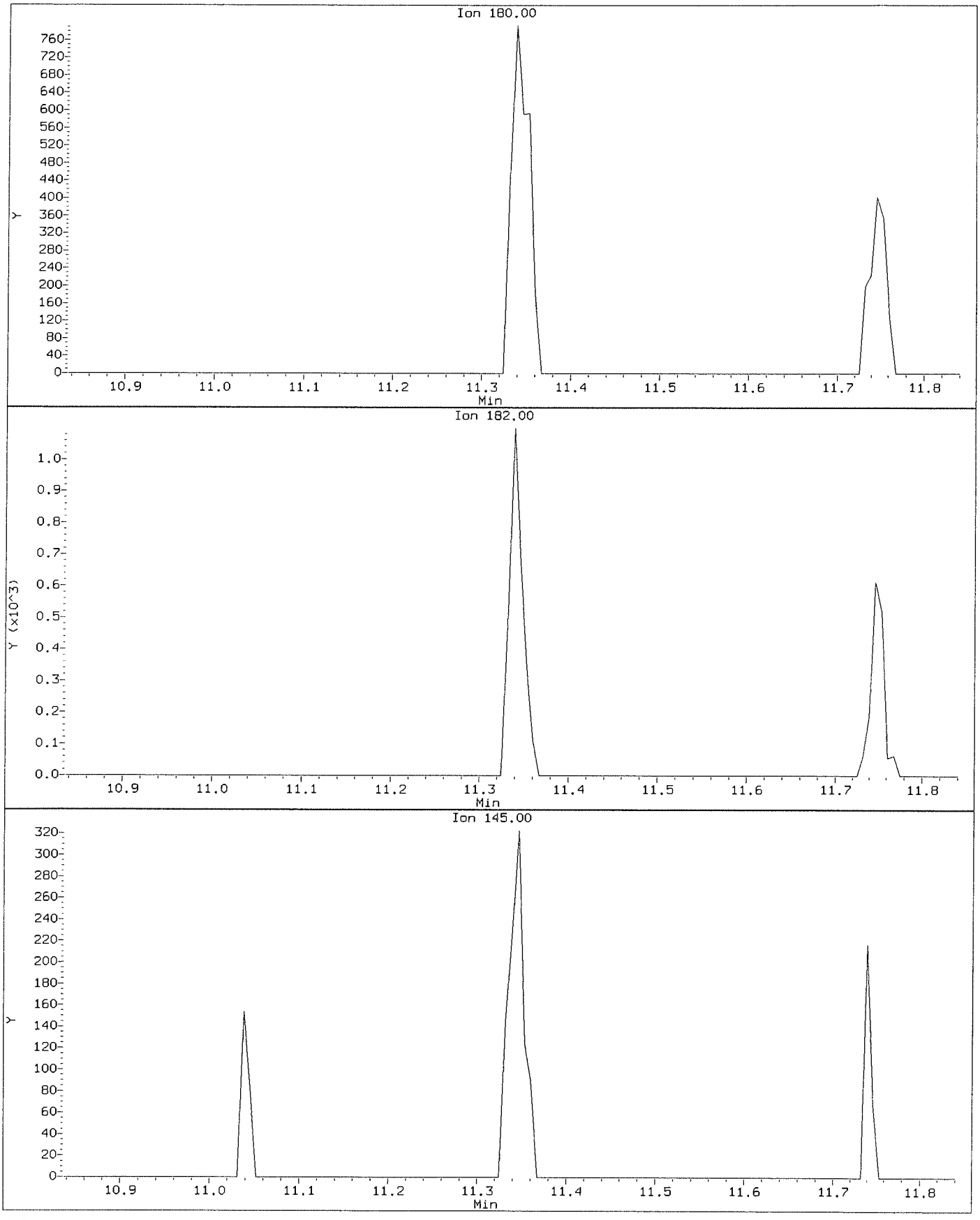
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CAS Number: 96-18-4





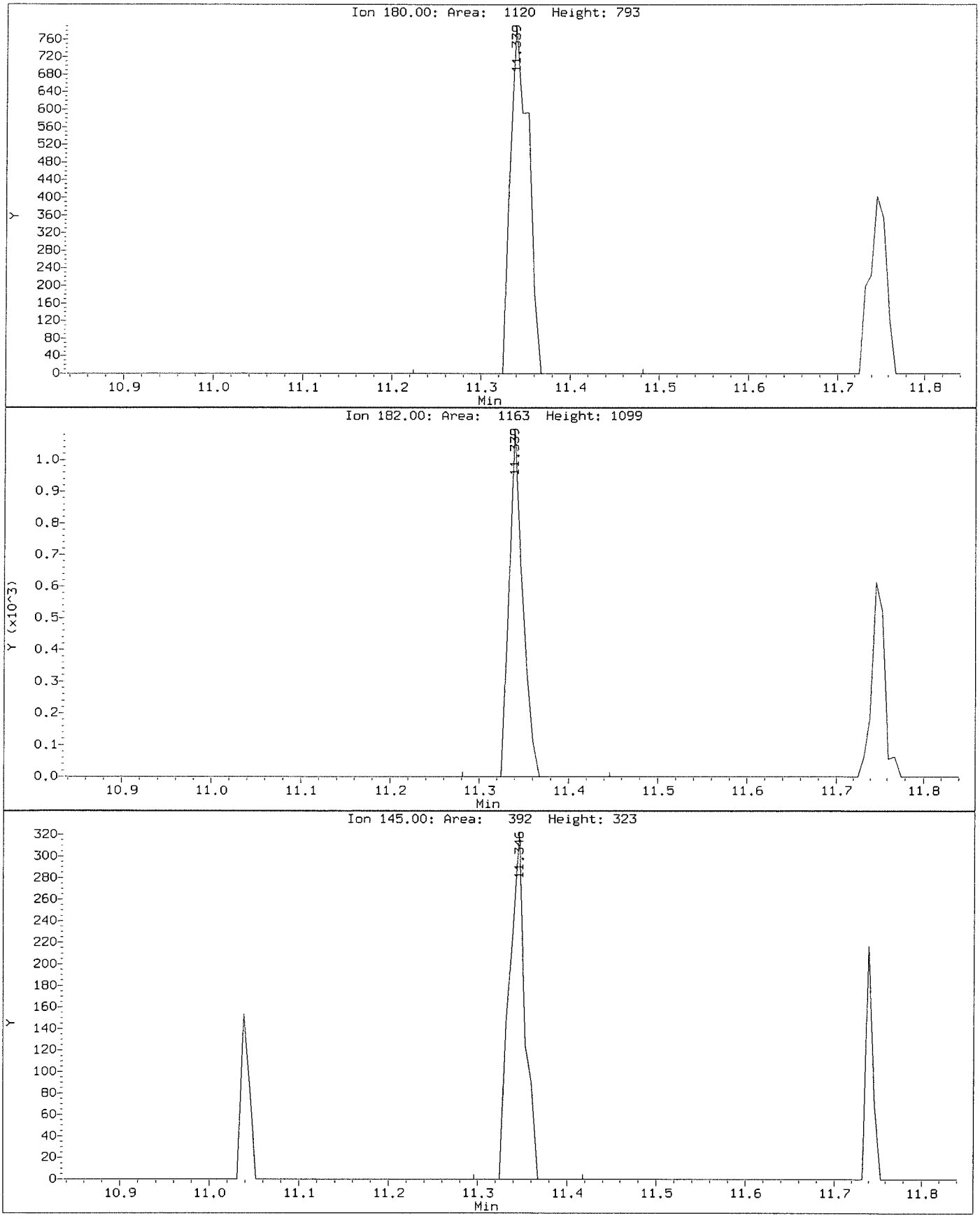
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Instrument: voa6.i
Client Sample ID: VSTD001

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



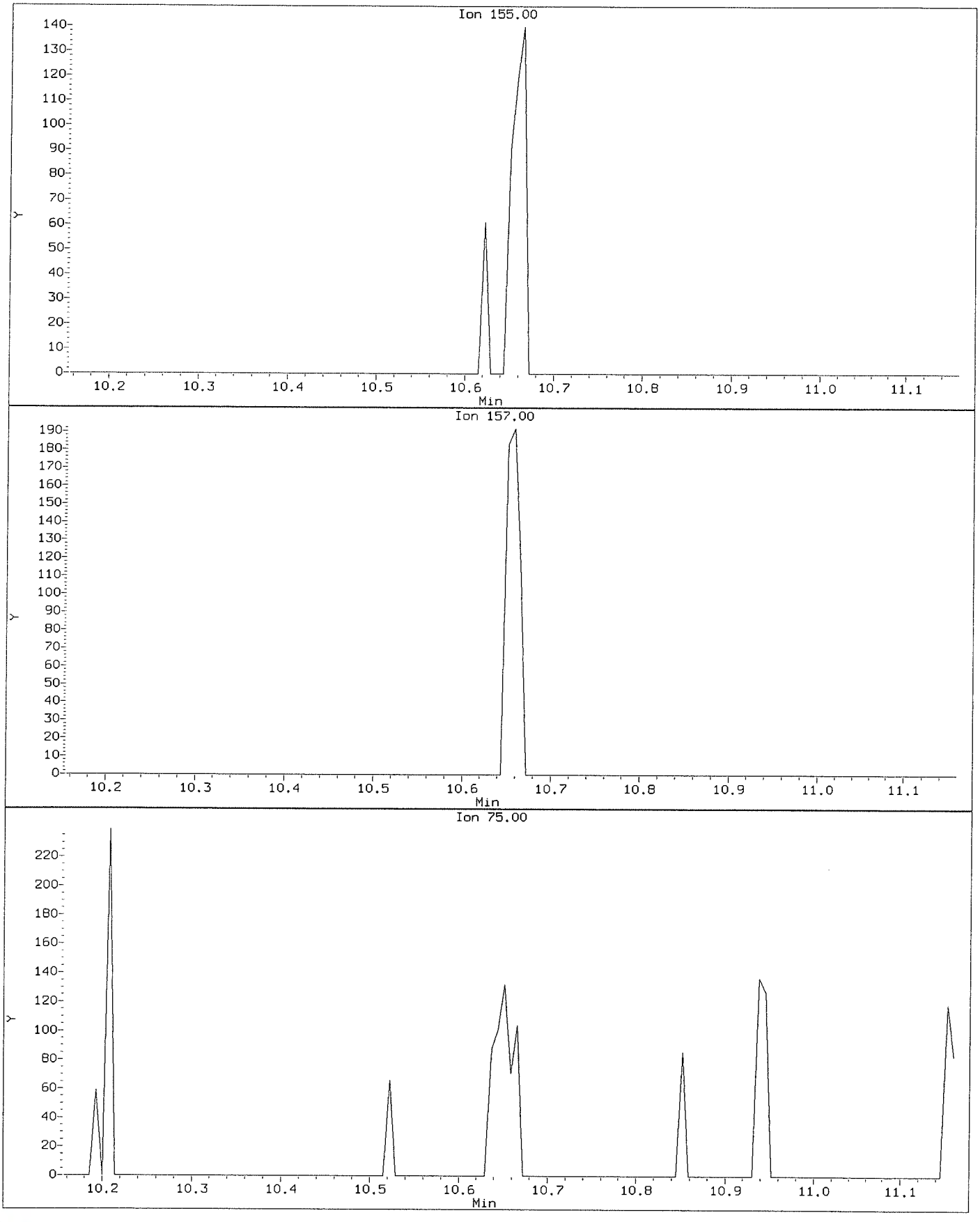
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Instrument: voa6.i
Client Sample ID: VSTD001

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



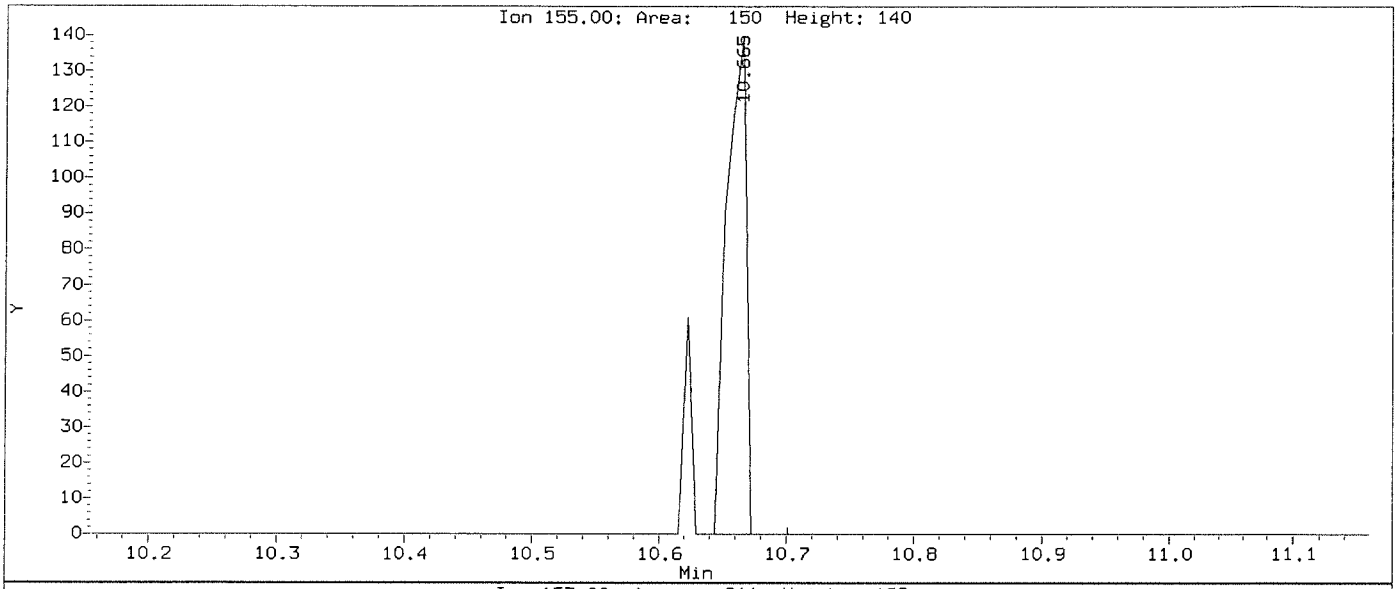
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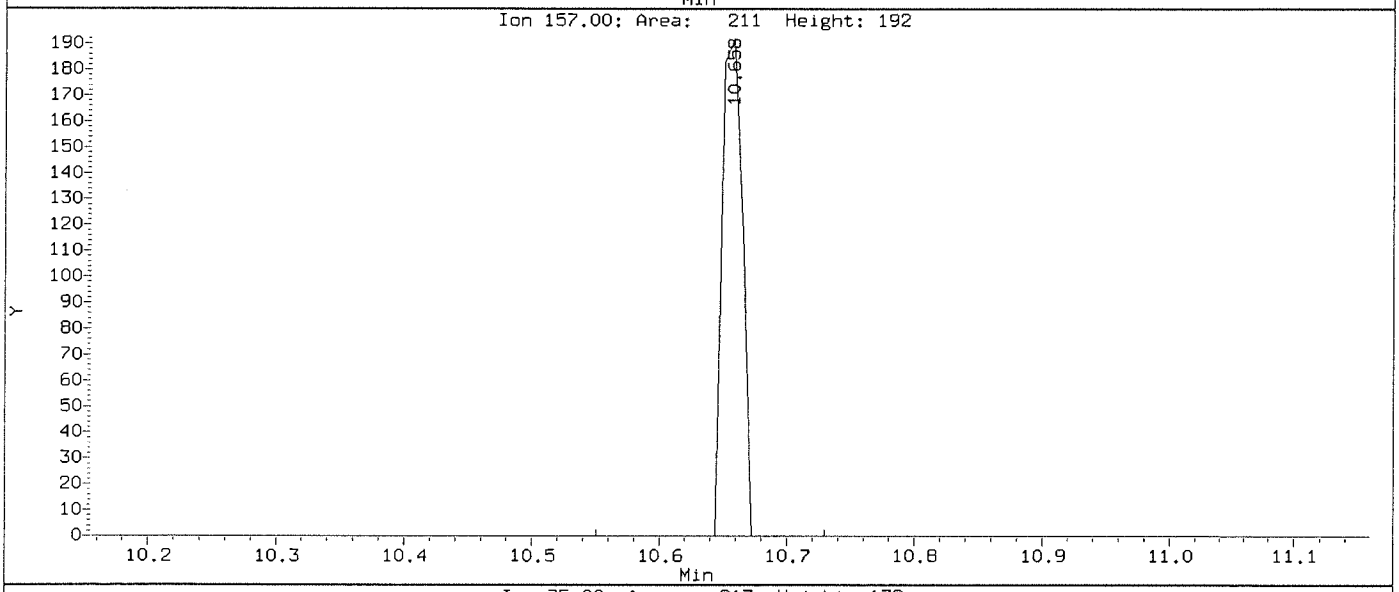
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

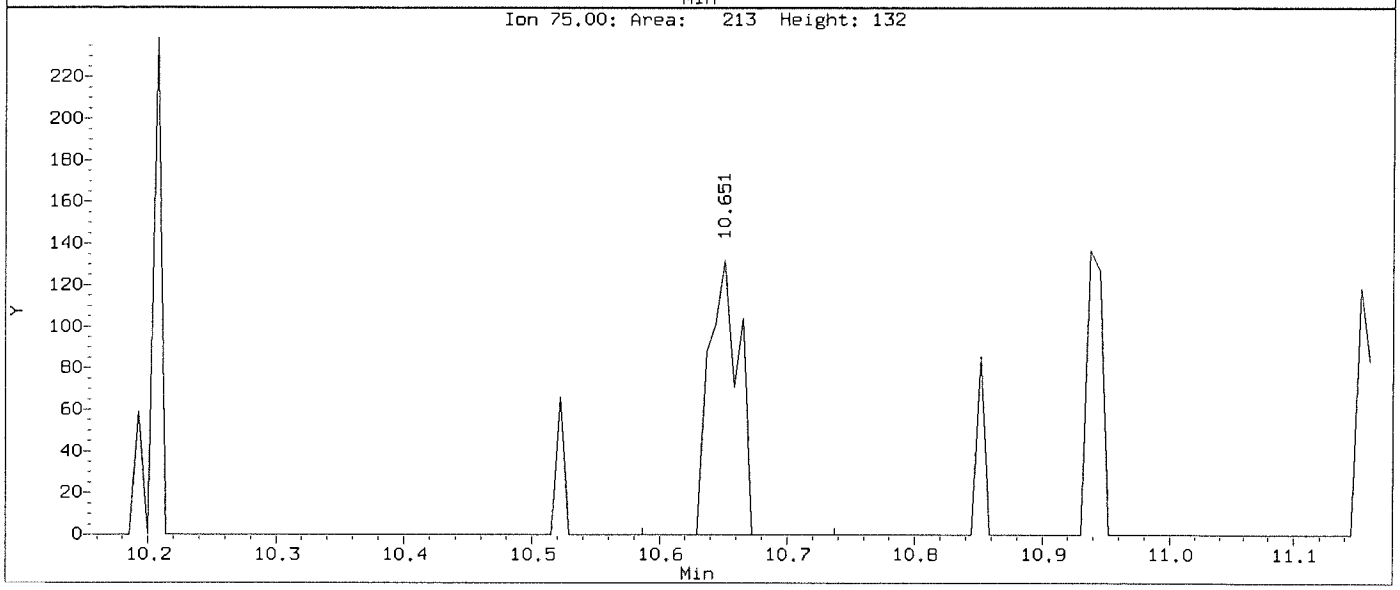


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Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

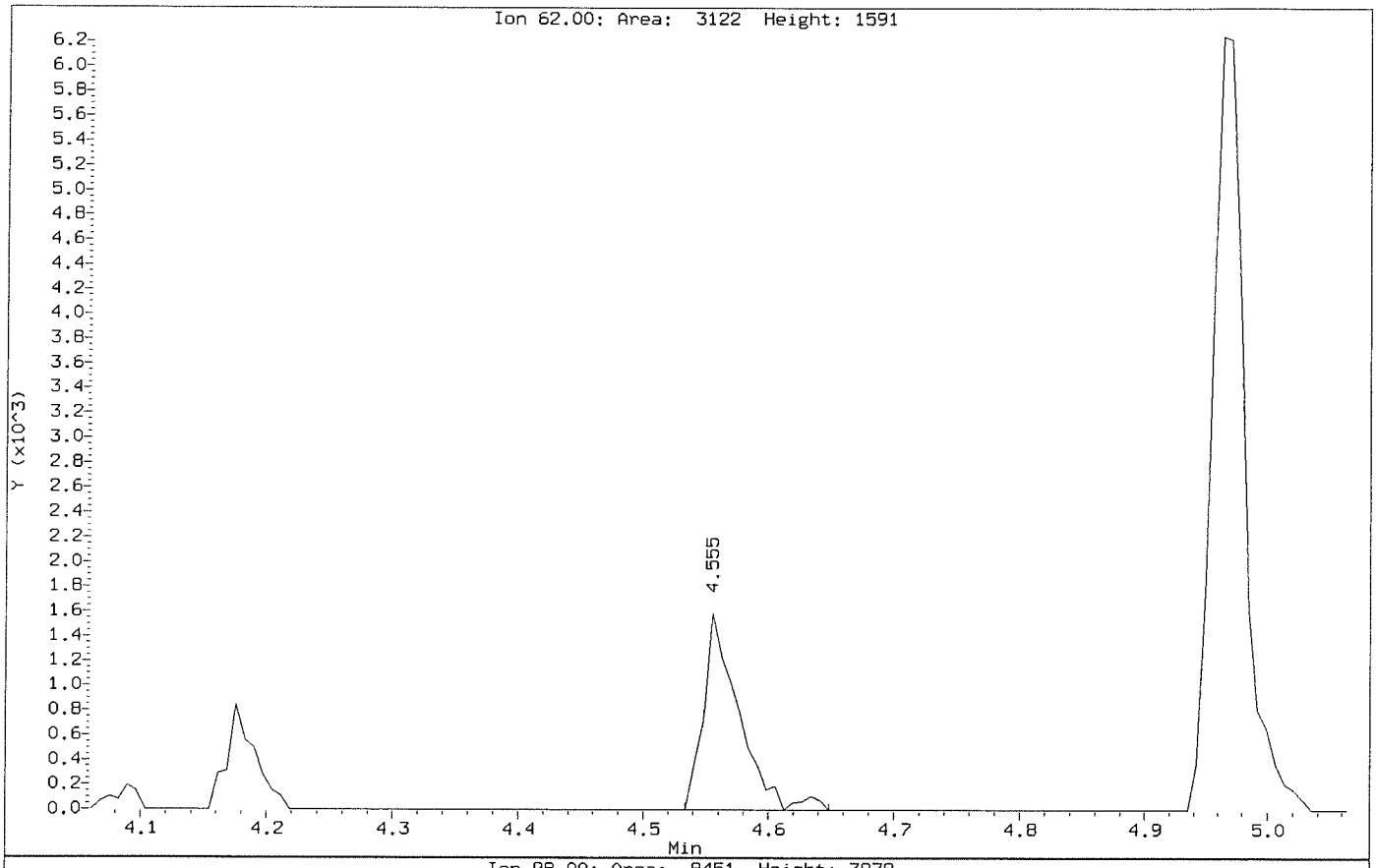


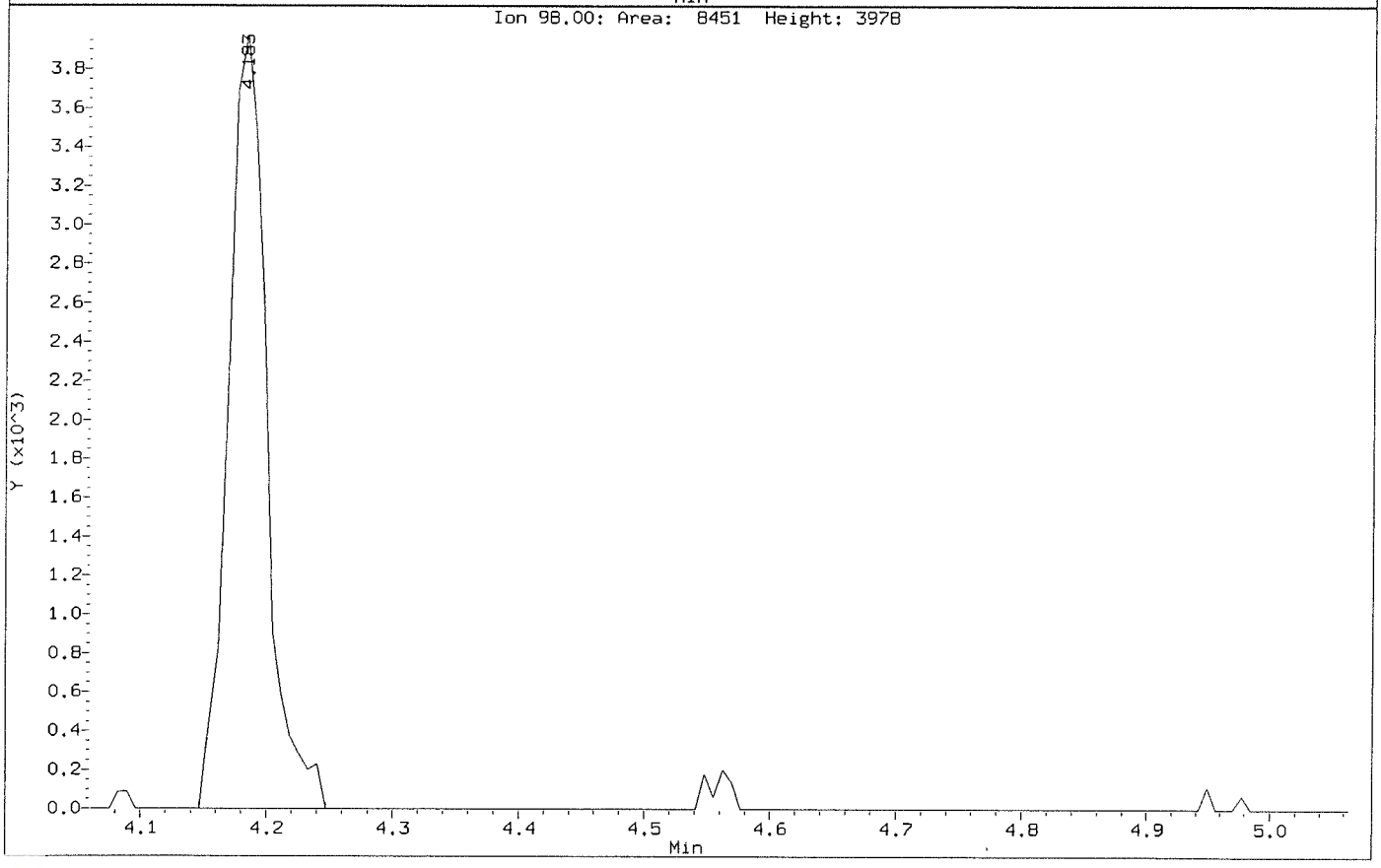




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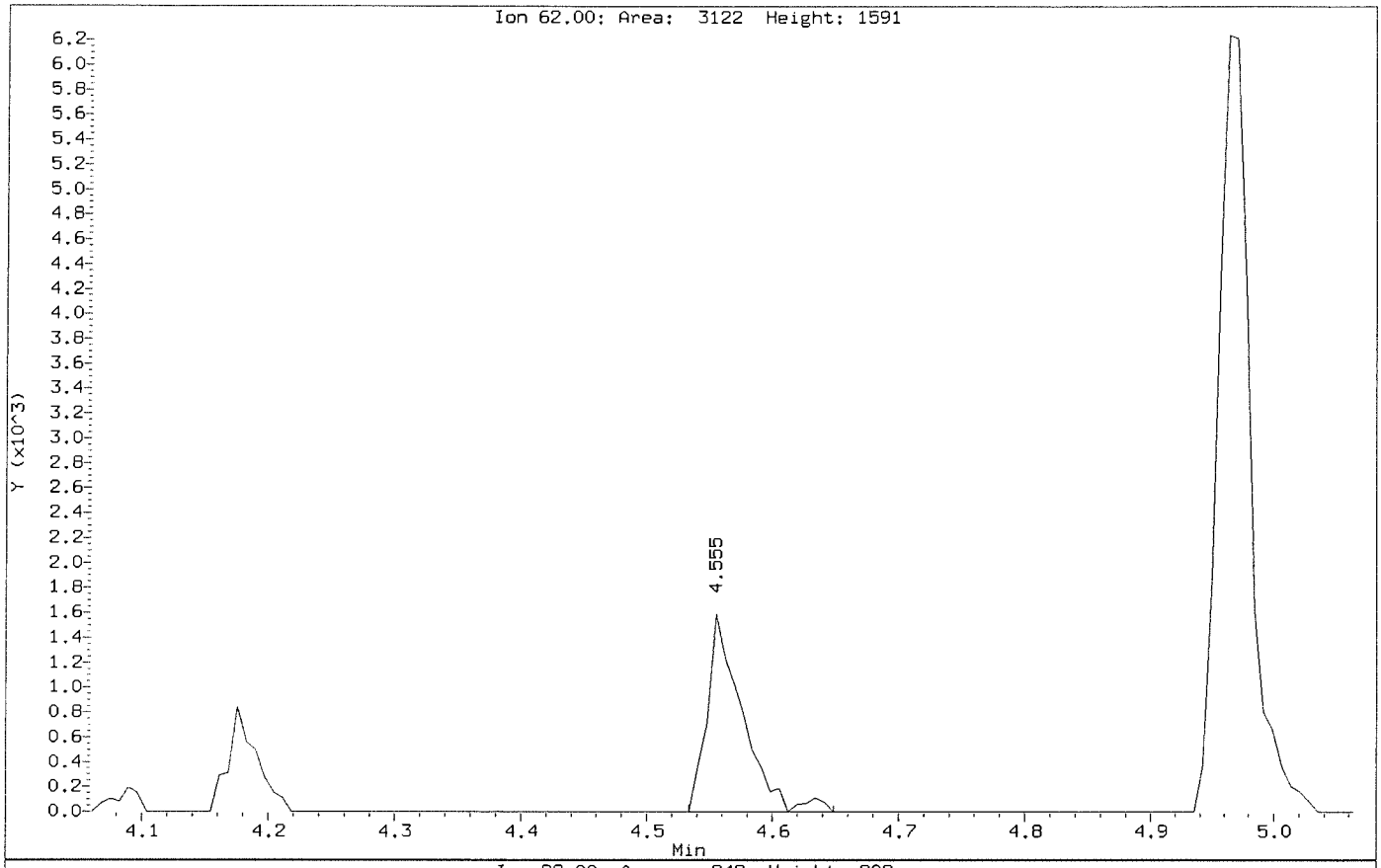
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

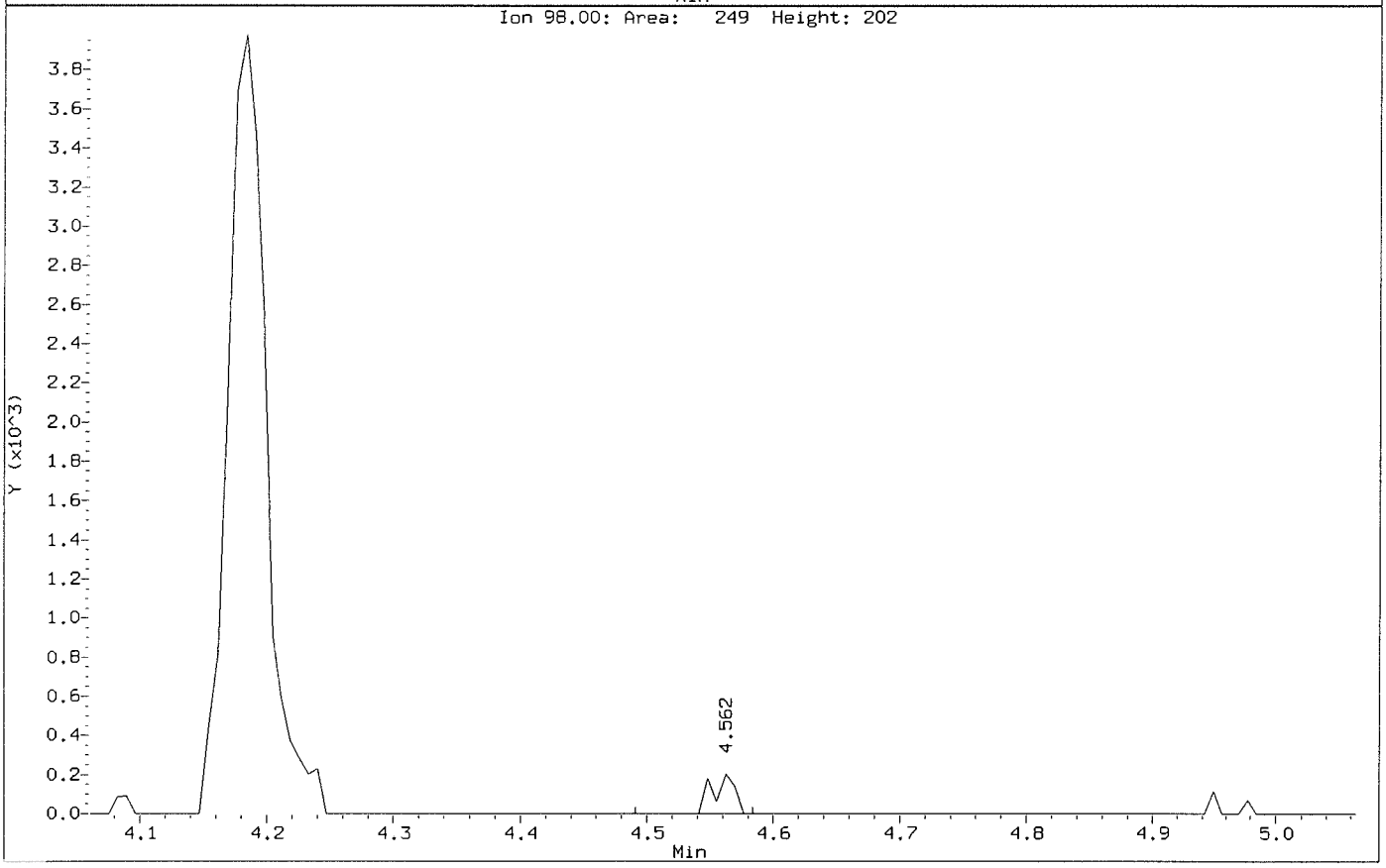




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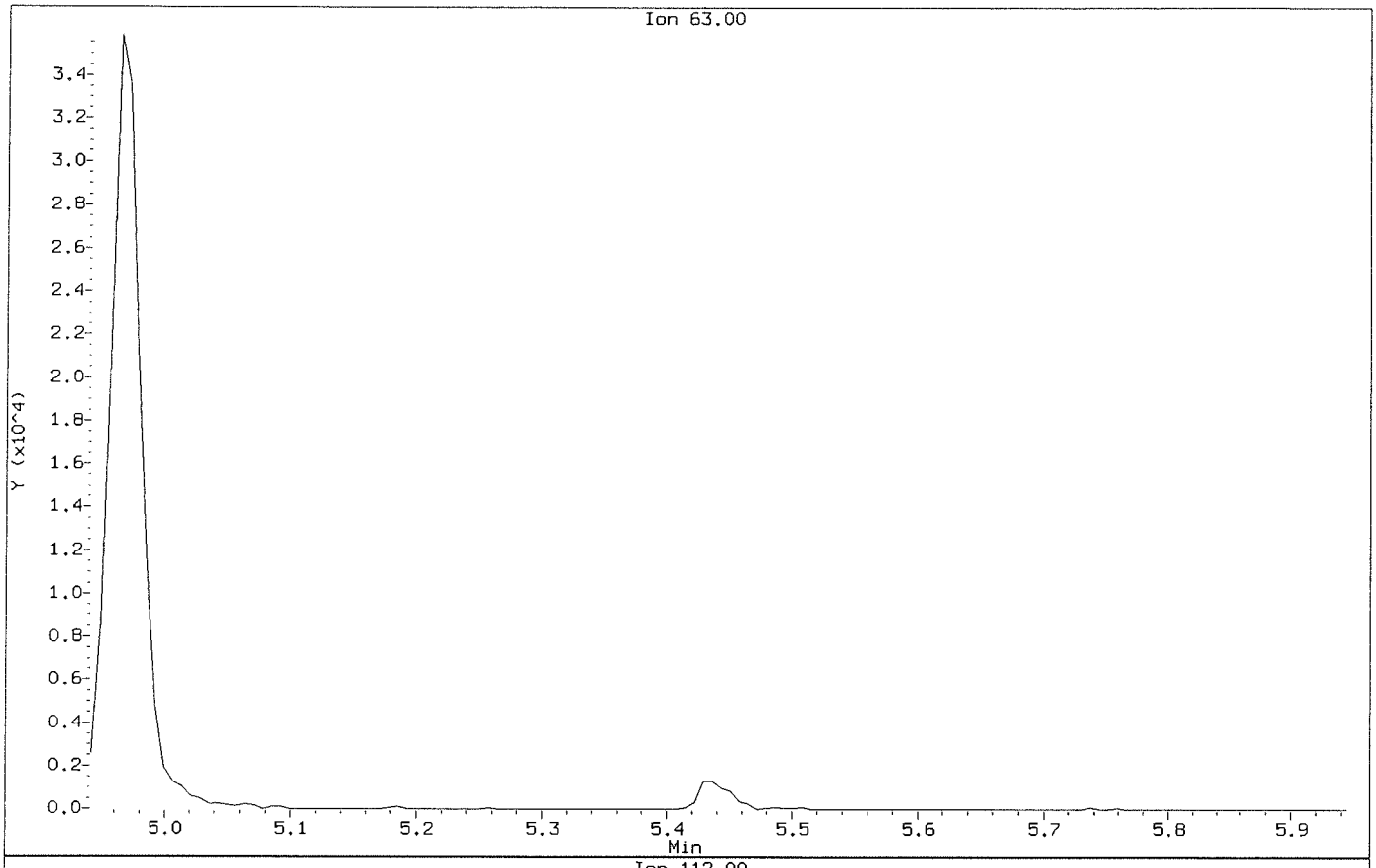
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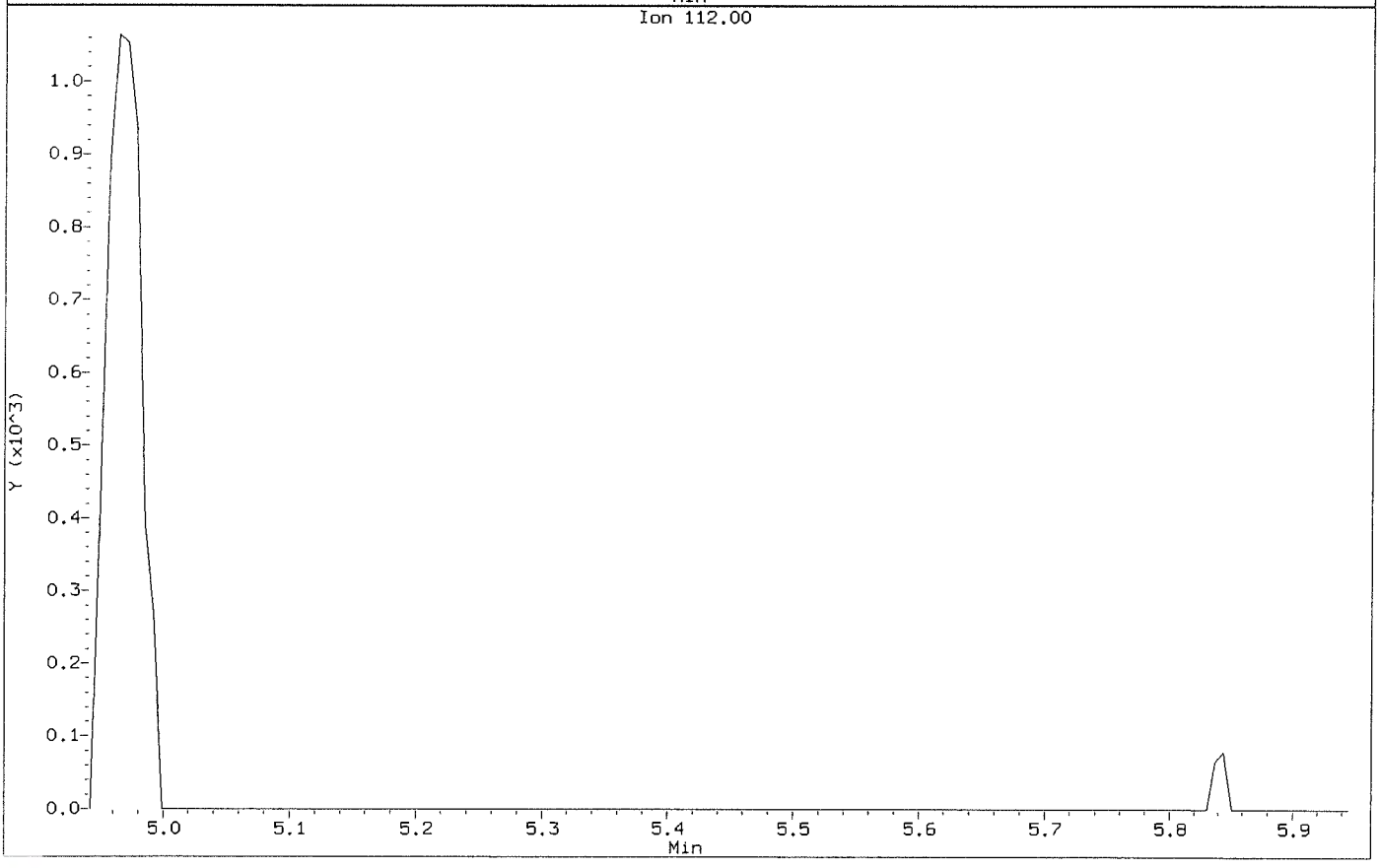




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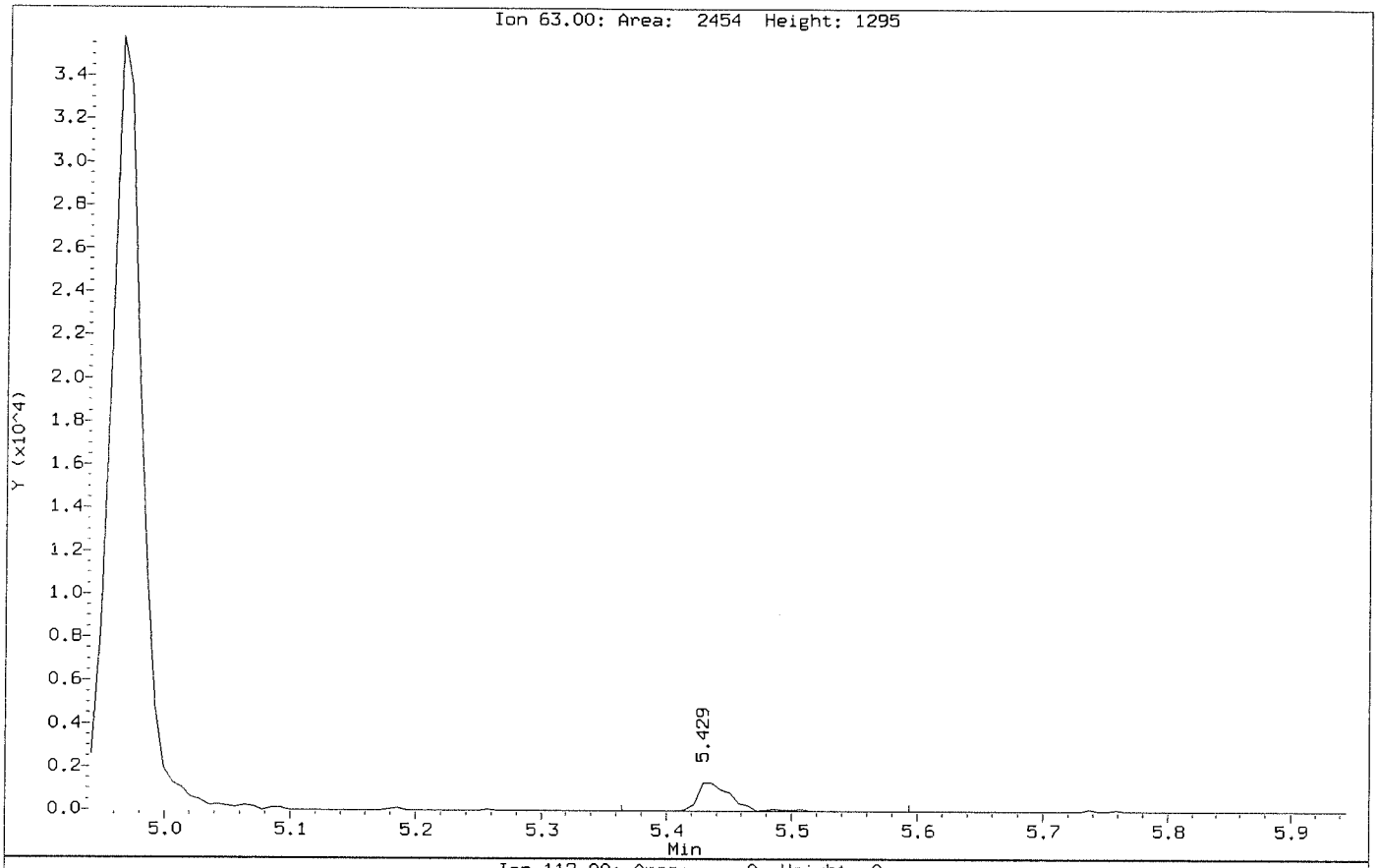
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

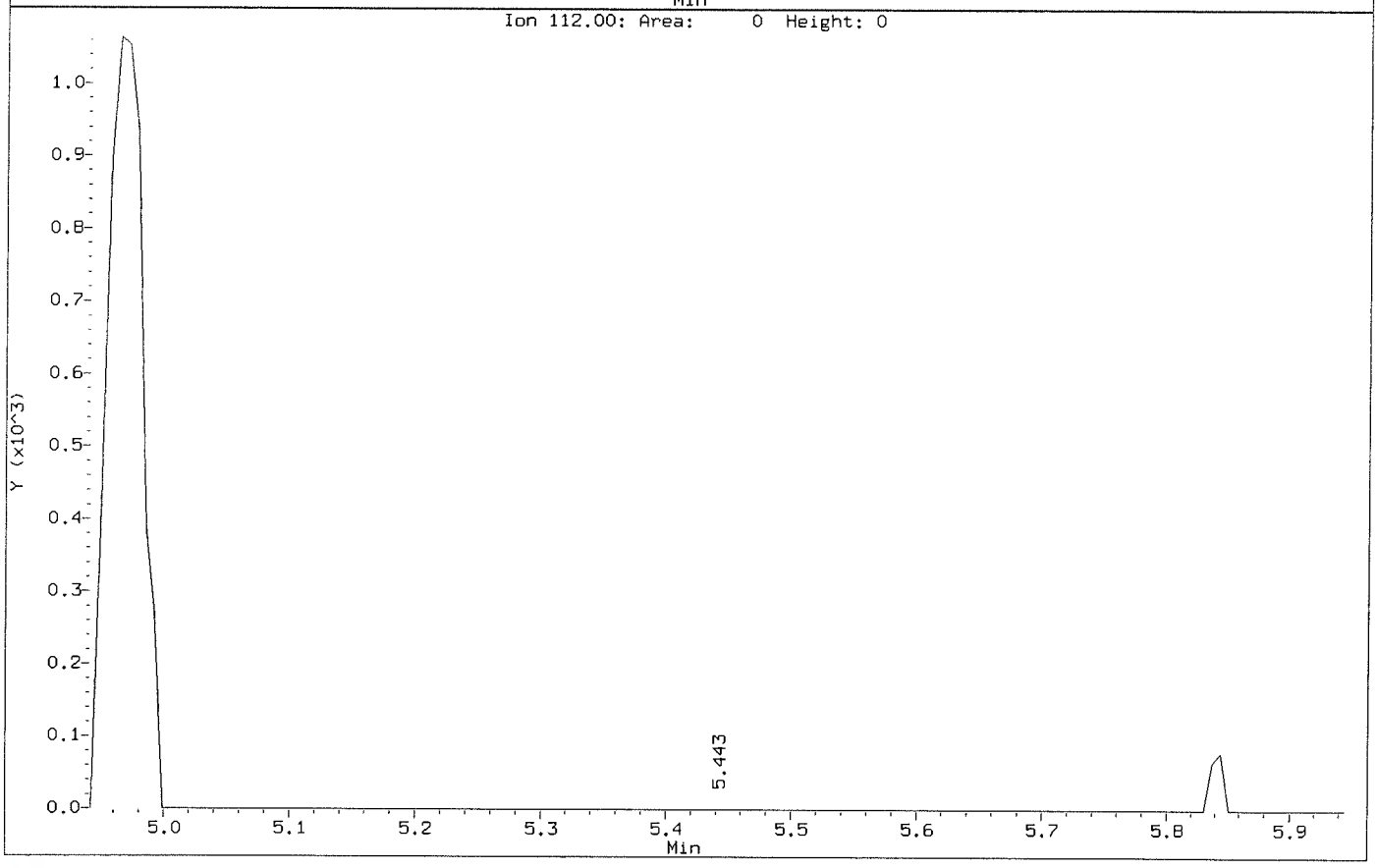




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Instrument: voa6.i
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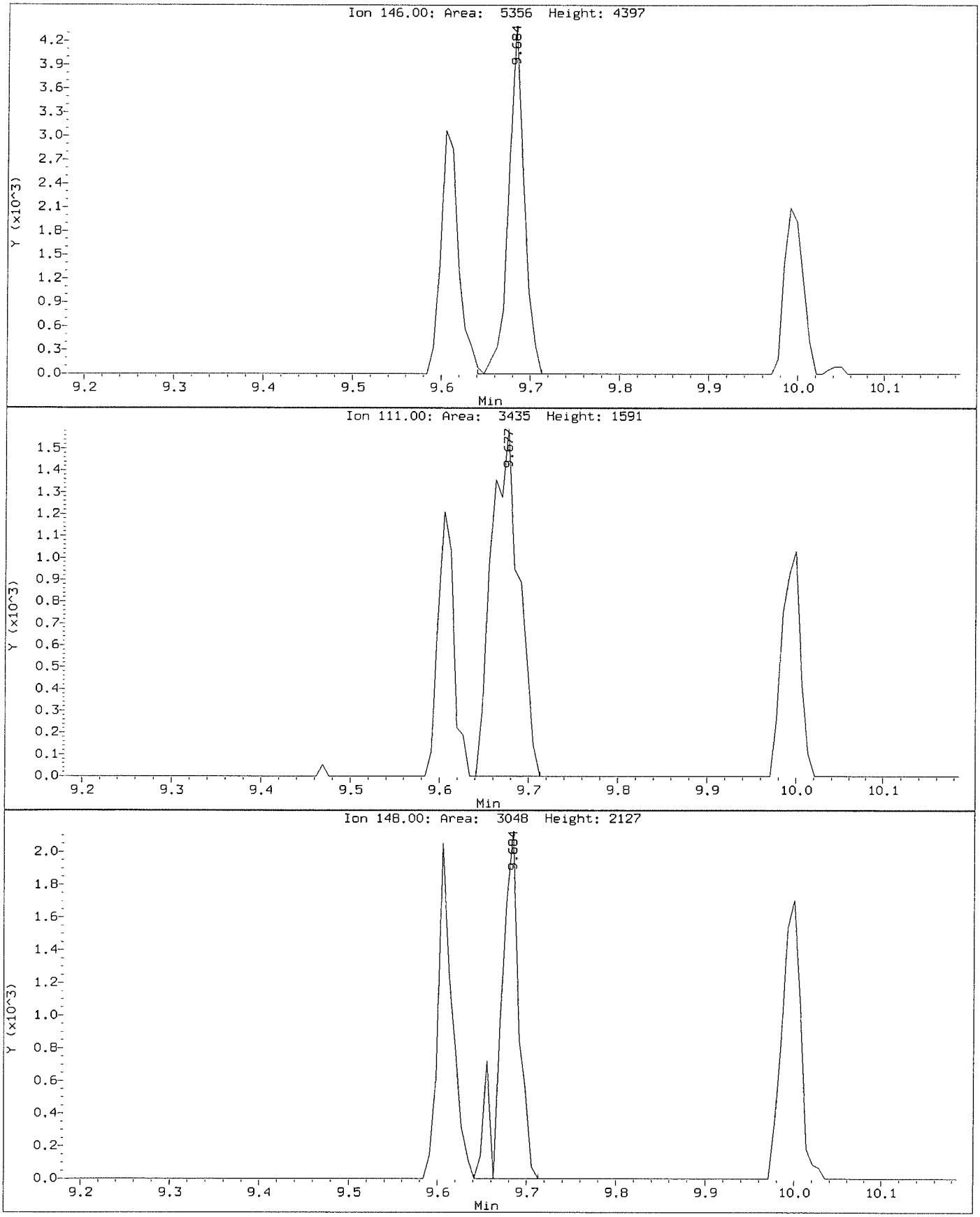
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





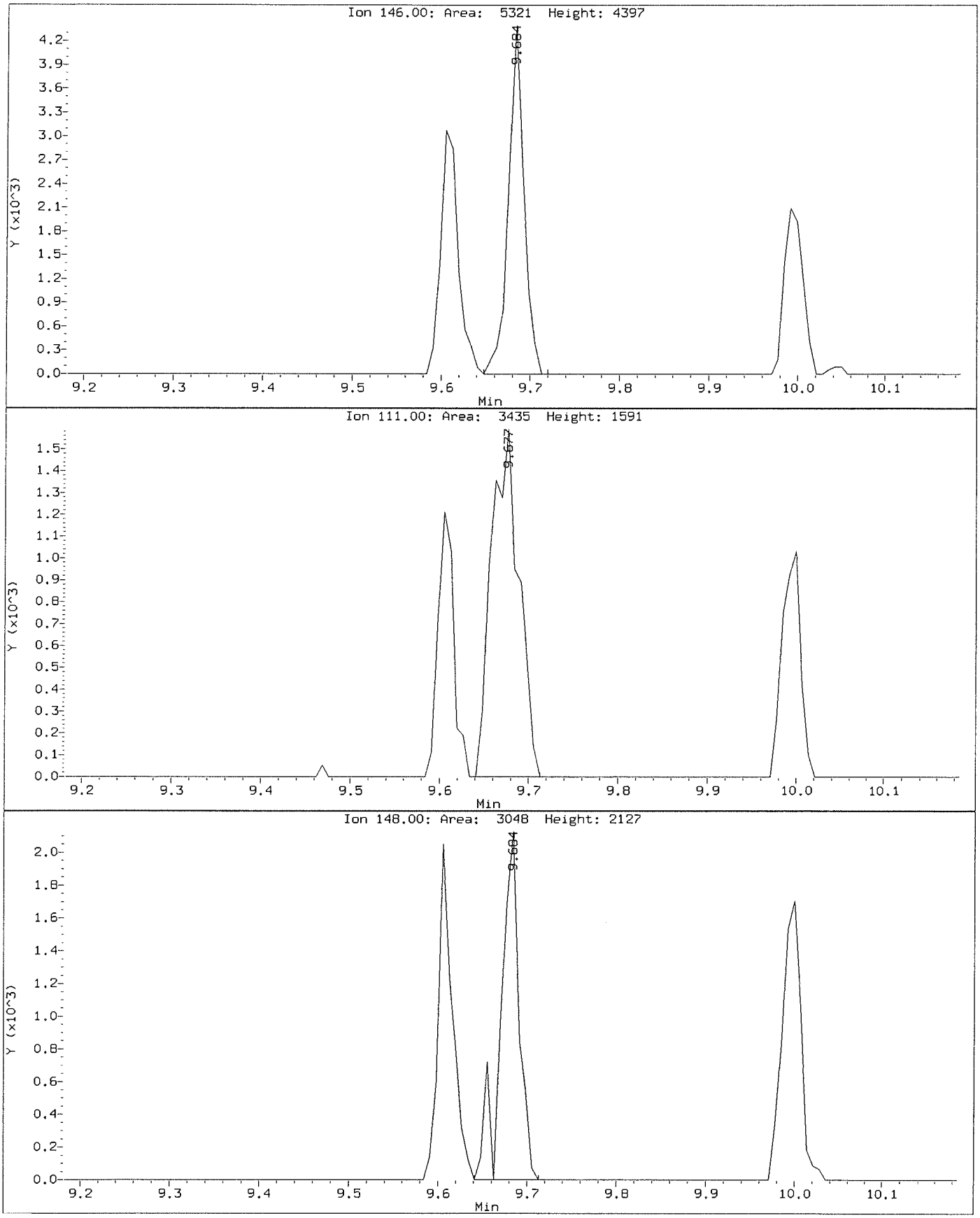
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



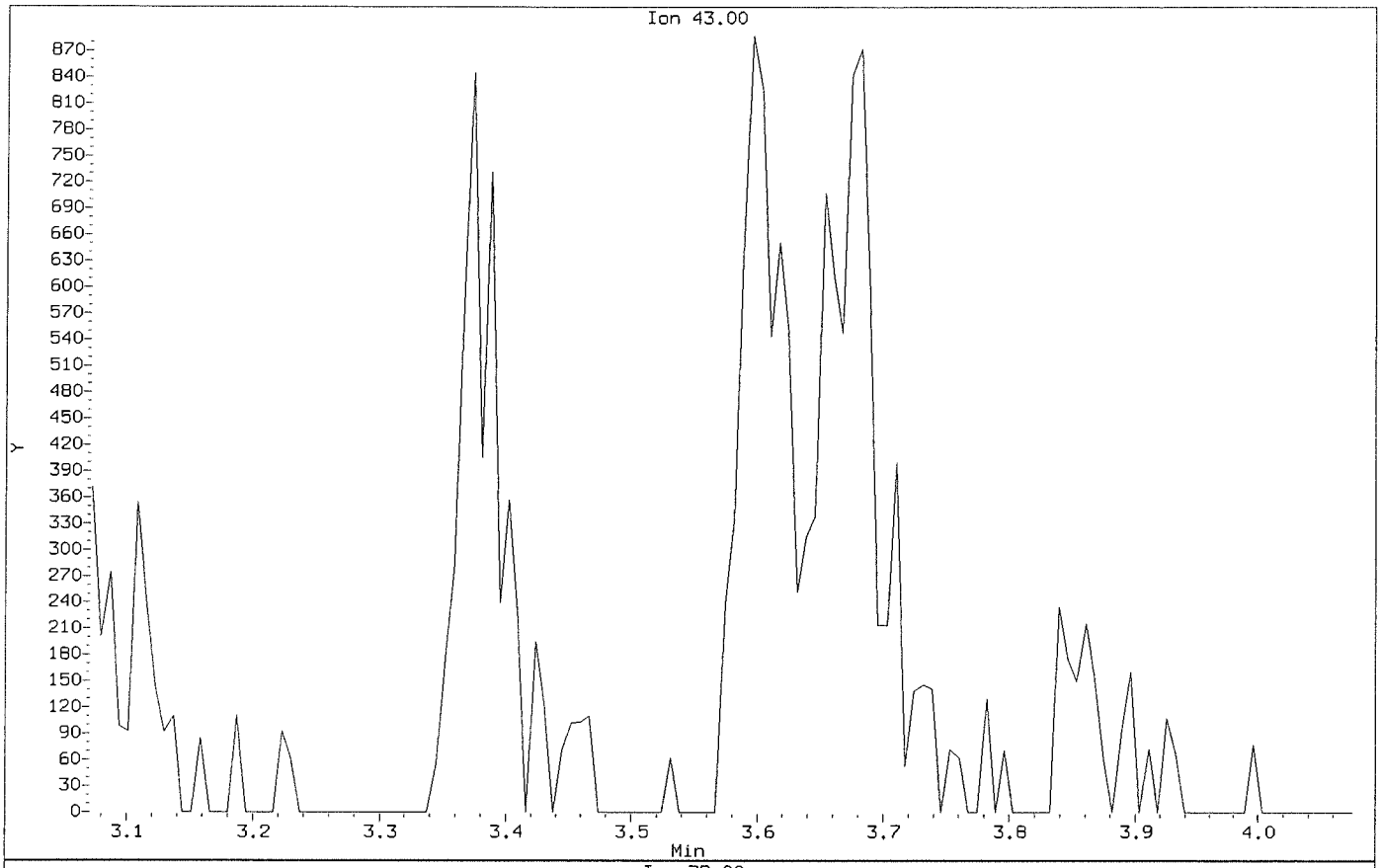
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Client Sample ID: VSTD001

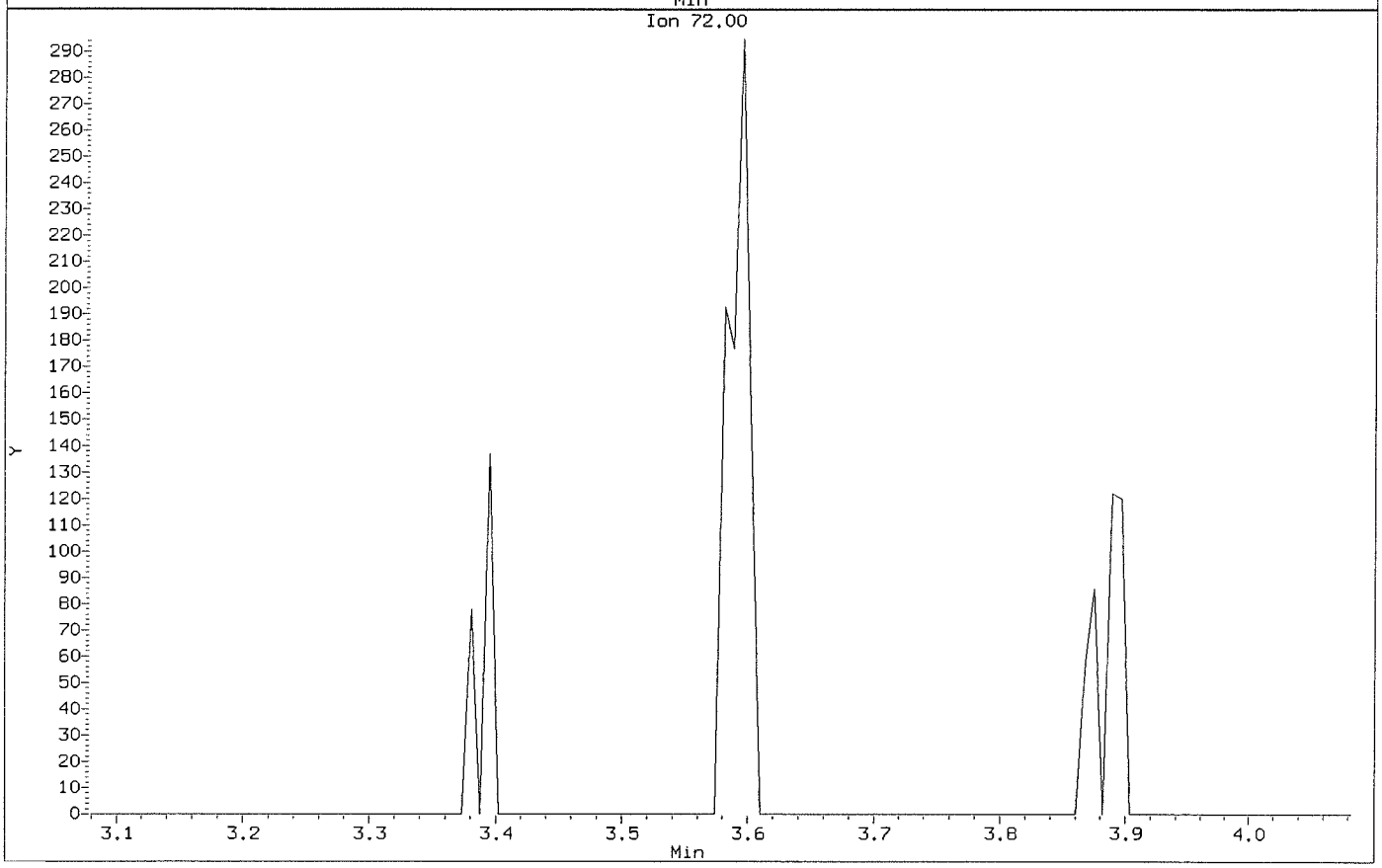
Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



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Client Sample ID: VSTD001

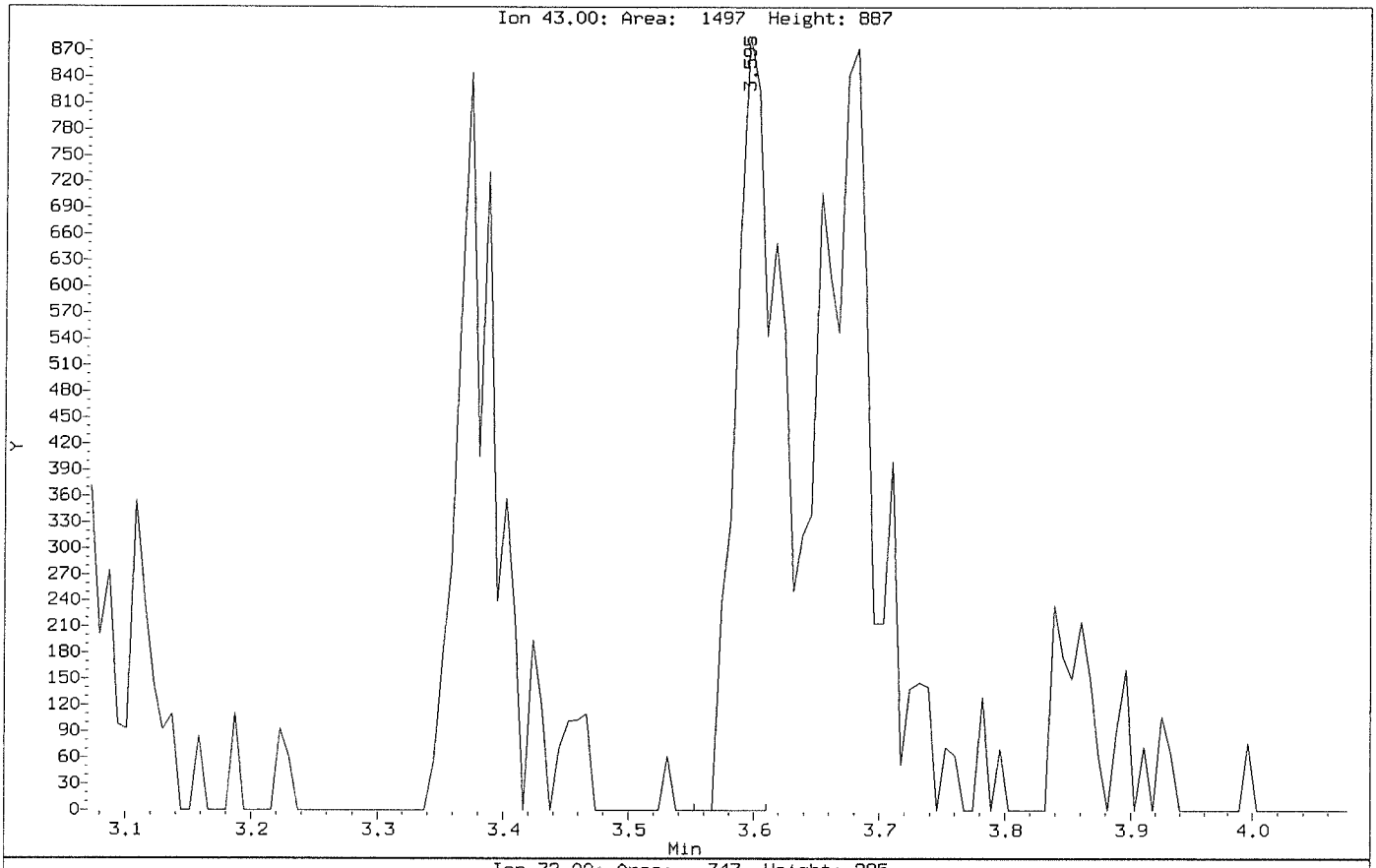
Compound: 2-Butanone
CAS Number: 78-93-3

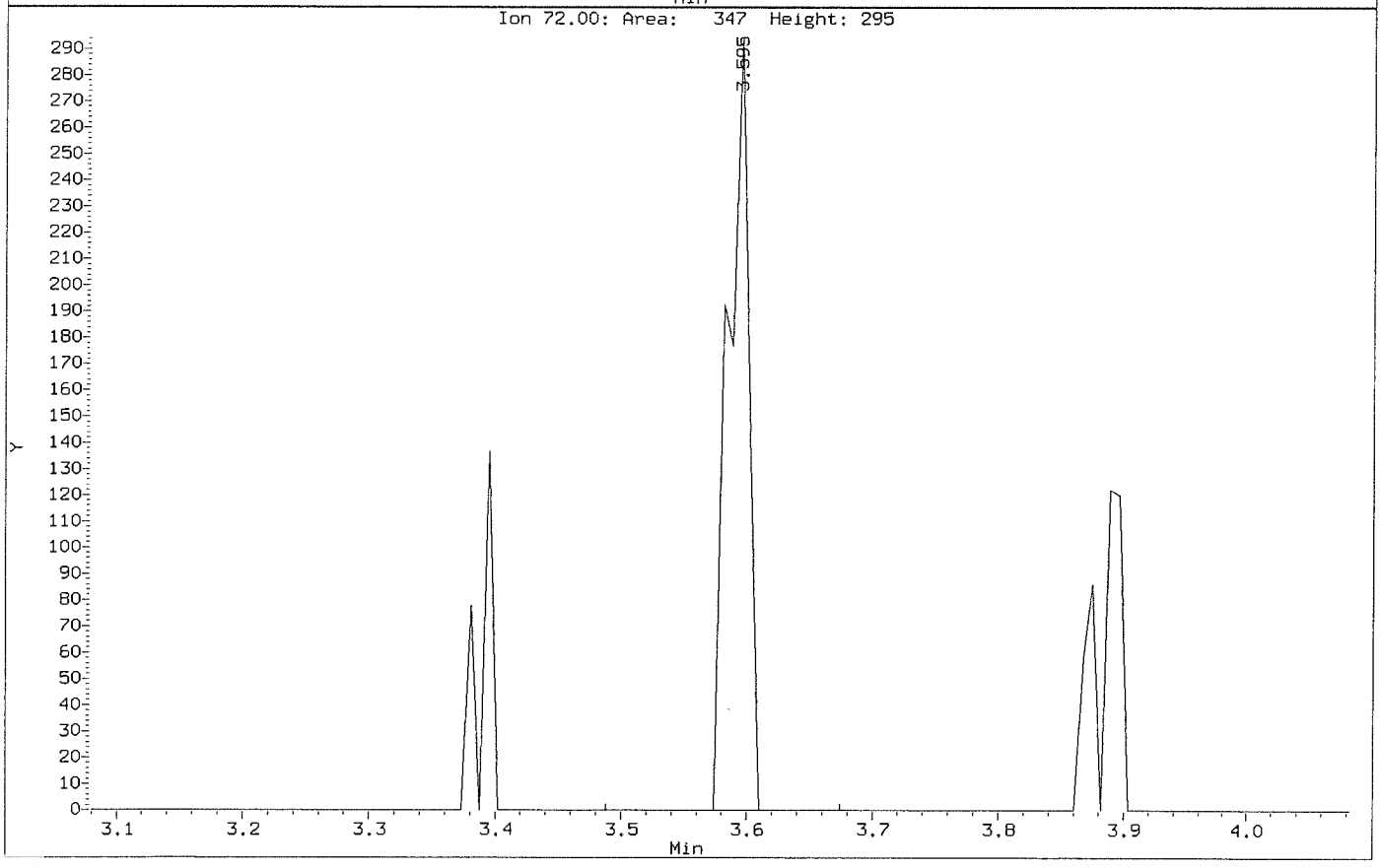




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Client Sample ID: VSTD001

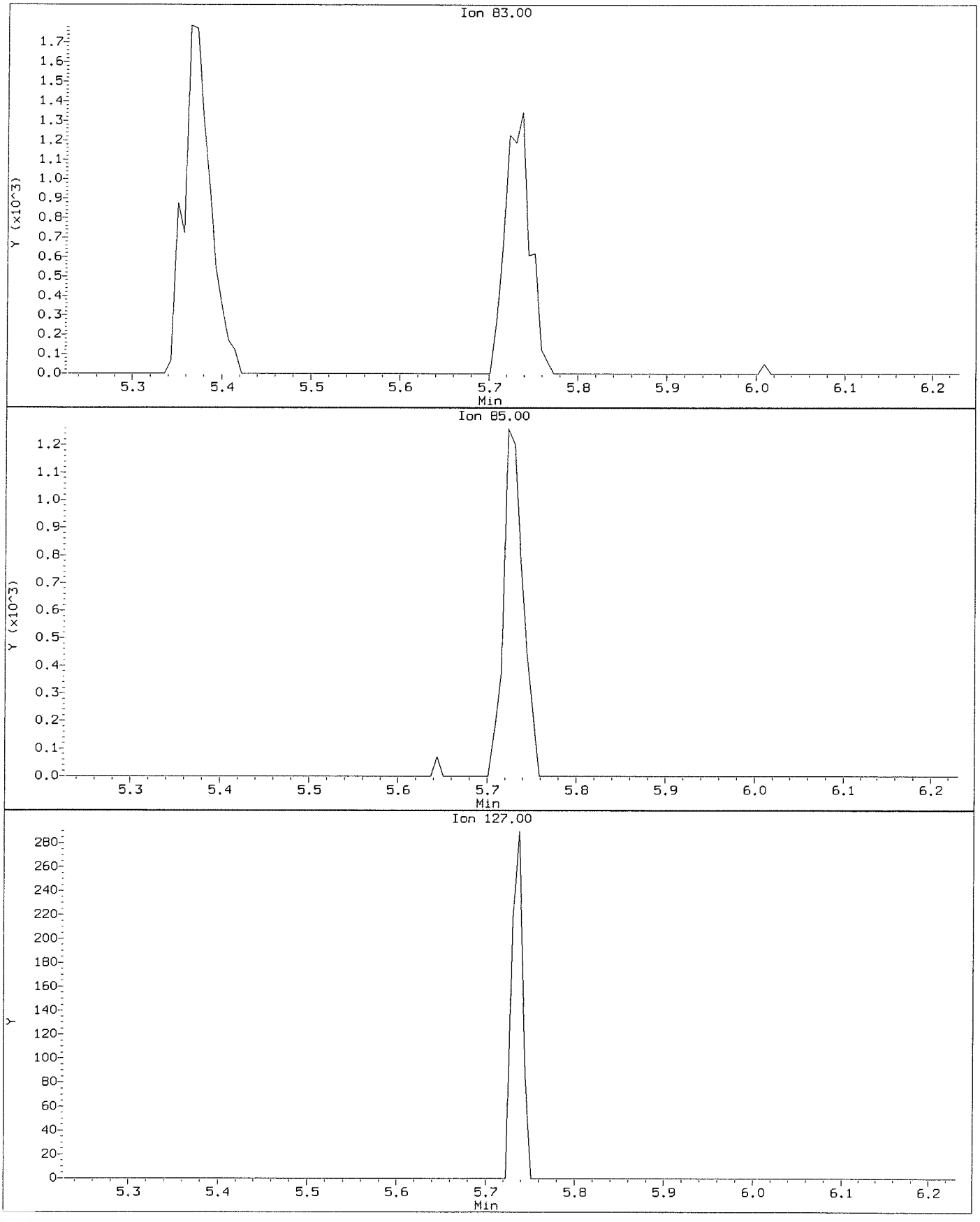
Compound: 2-Butanone
CAS Number: 78-93-3





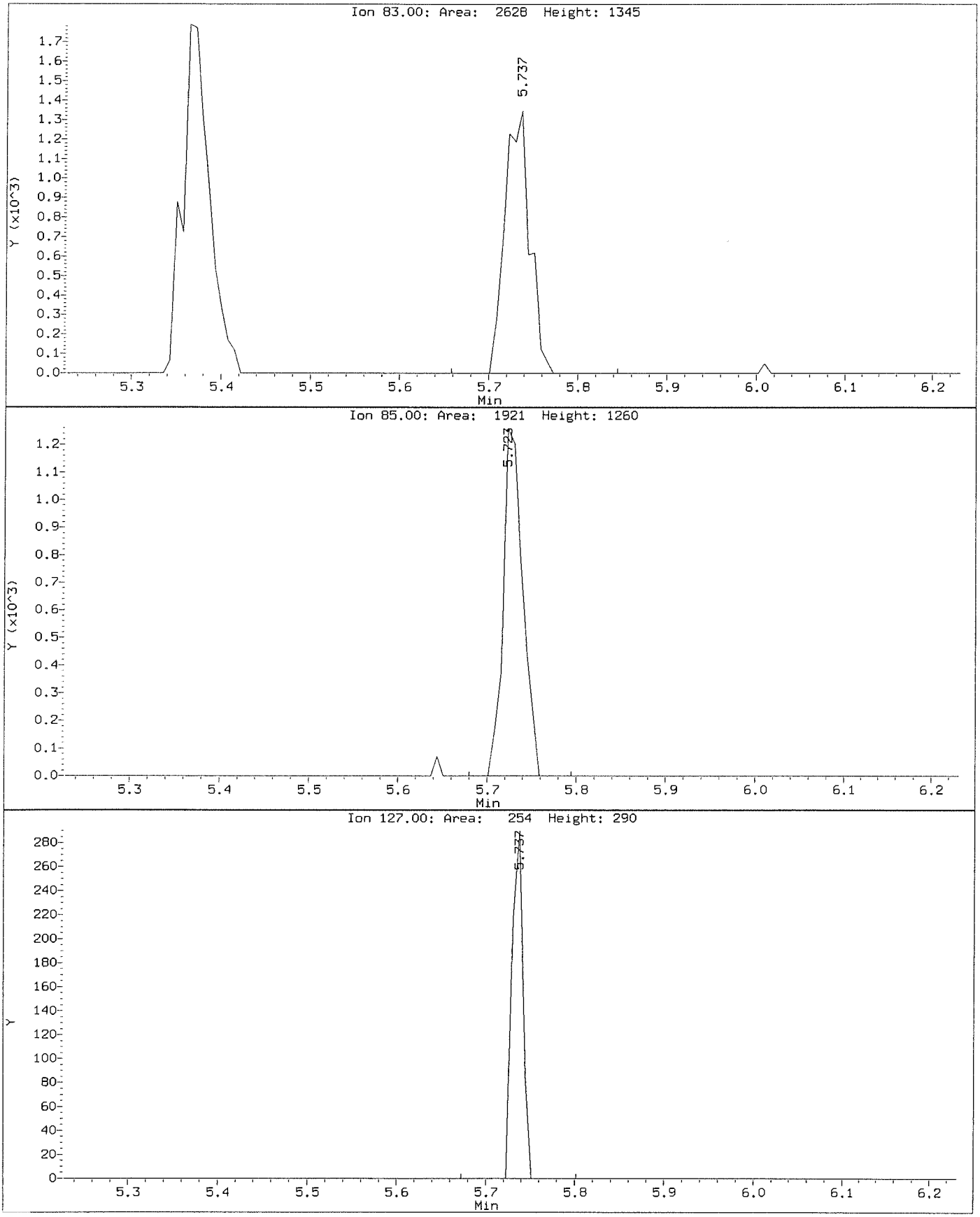
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



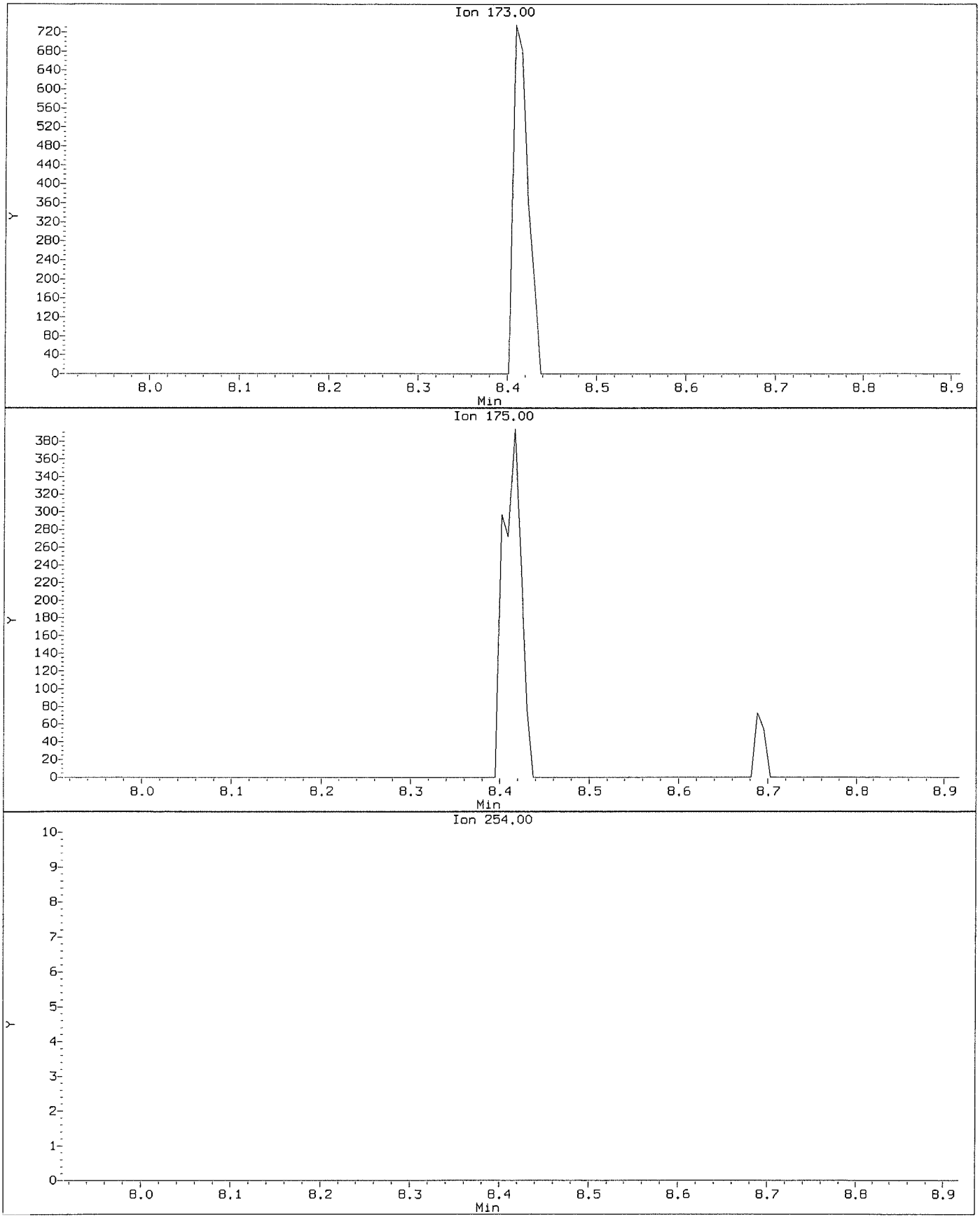
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Compound: Bromodichloromethane
CAS Number: 75-27-4



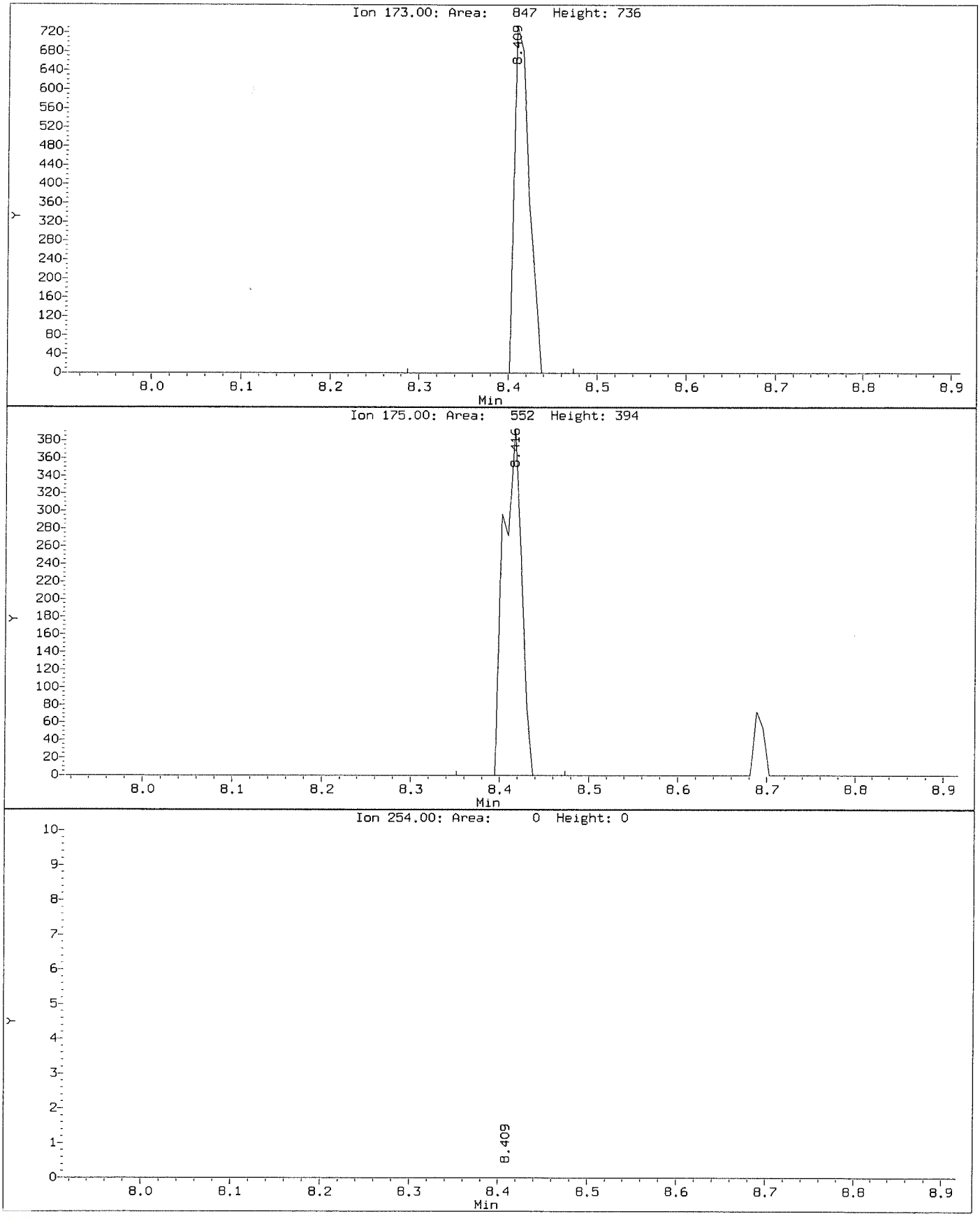
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromoform
CAS Number: 75-25-2



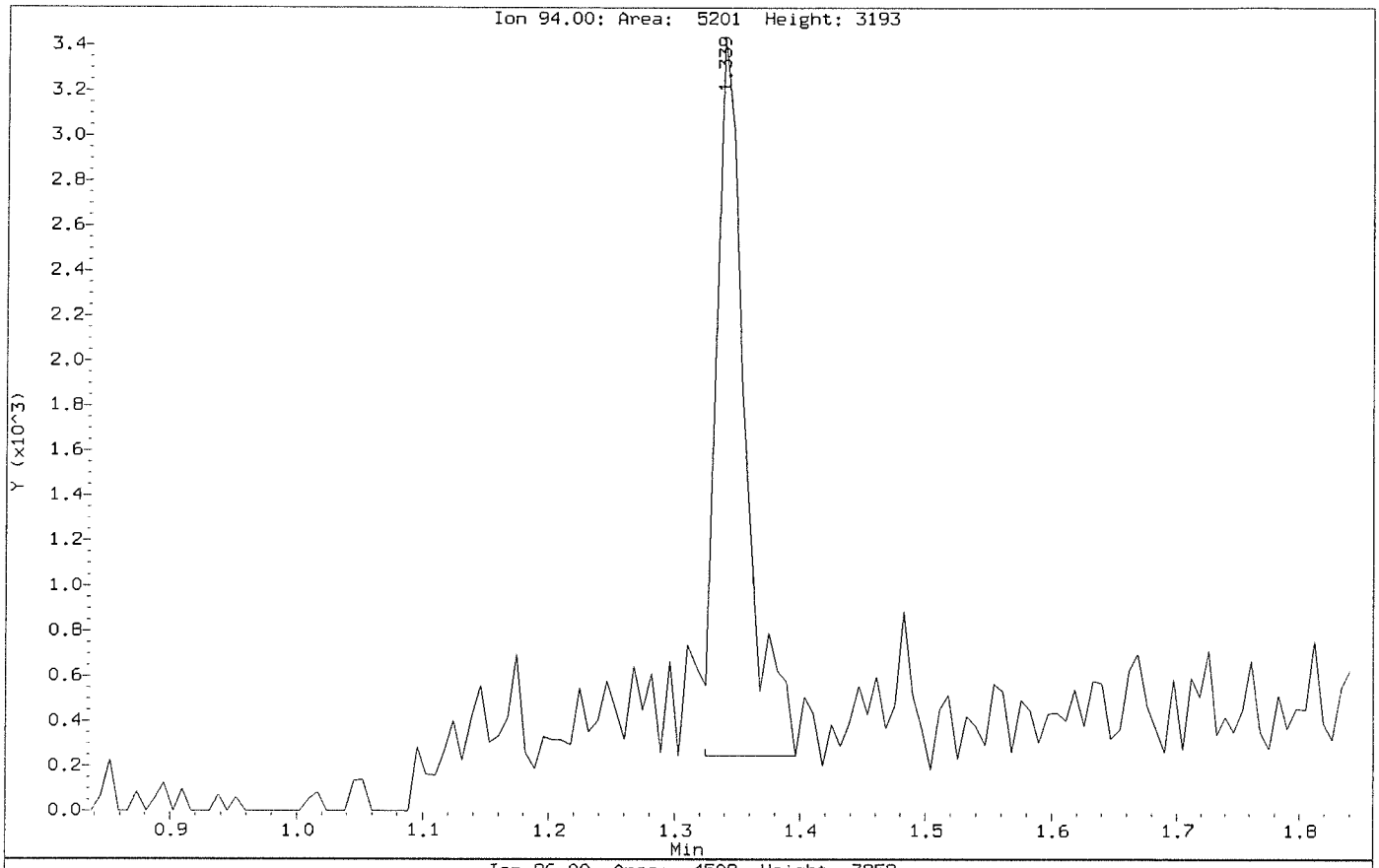
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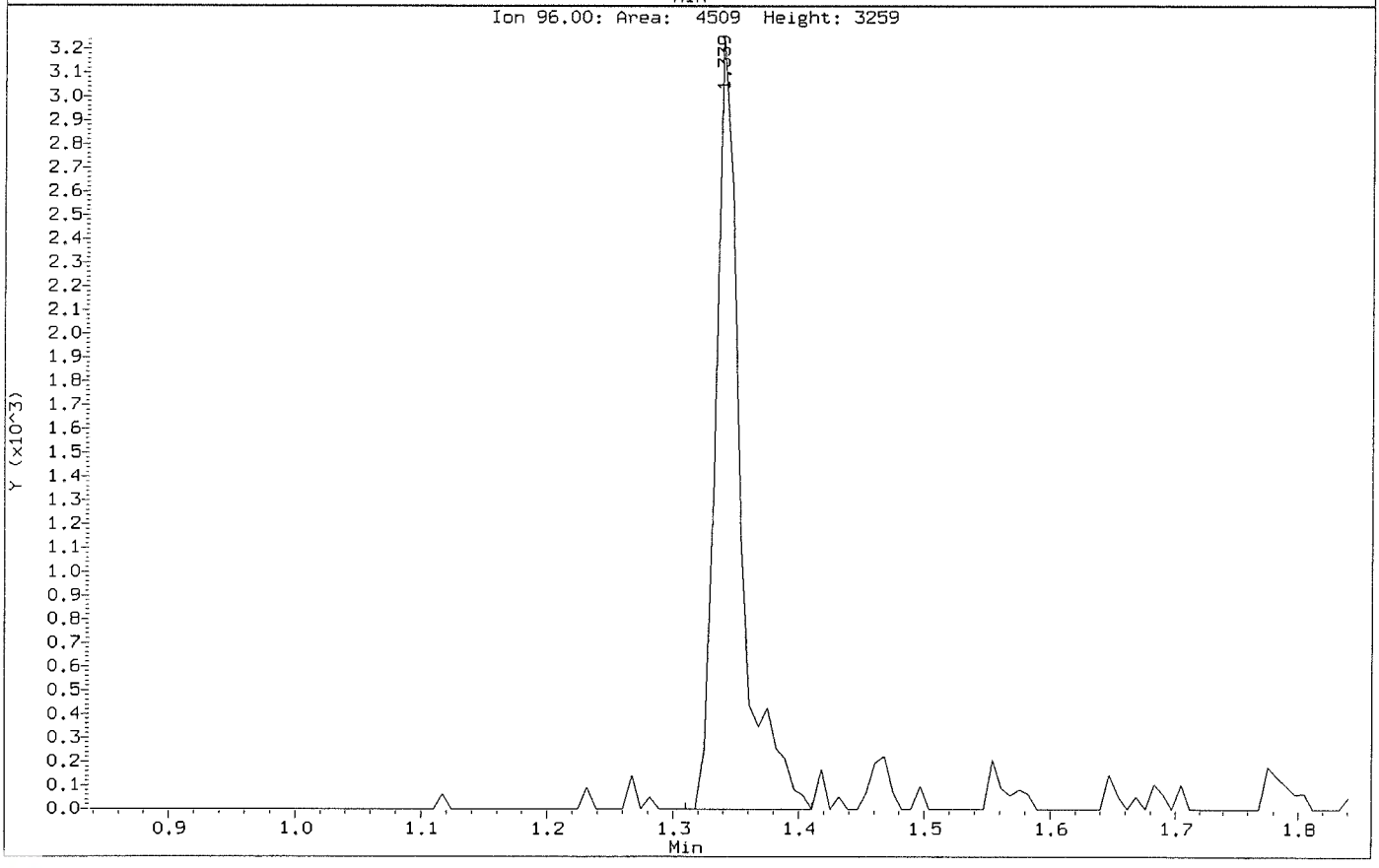
Compound: Bromoform
CAS Number: 75-25-2



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112204.D
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Client Sample ID: VSTD001

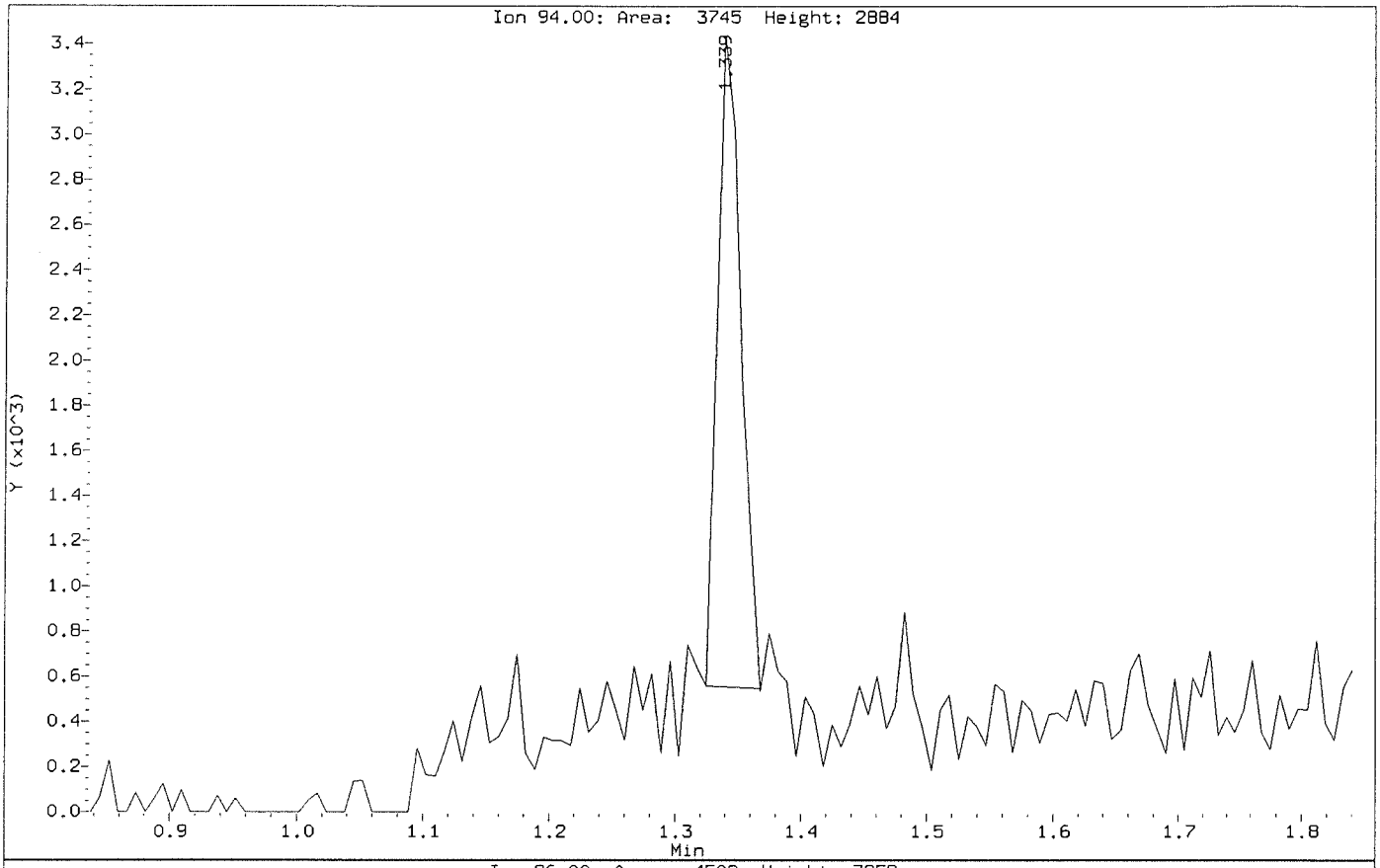
Compound: Bromomethane
CAS Number: 74-83-9

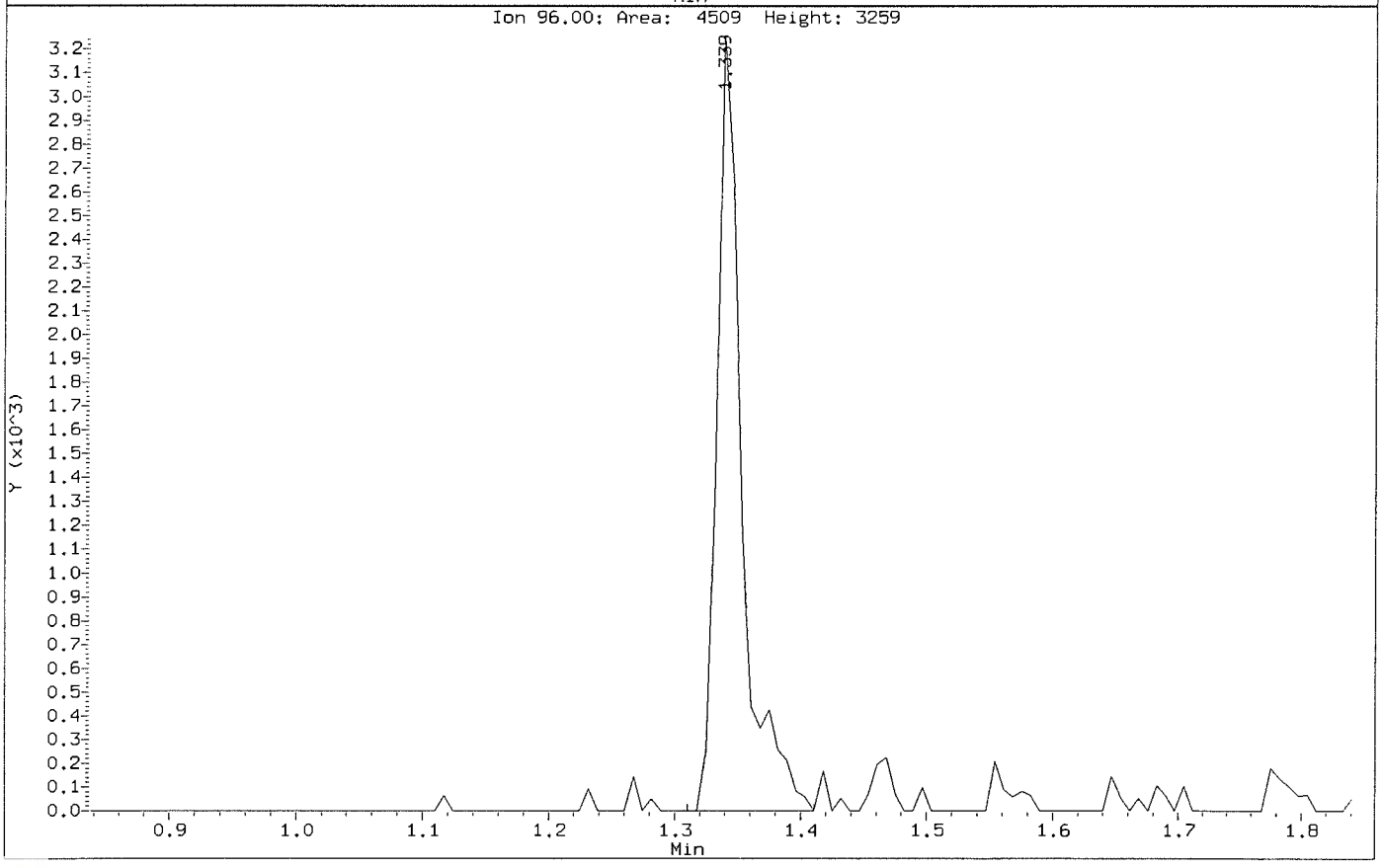




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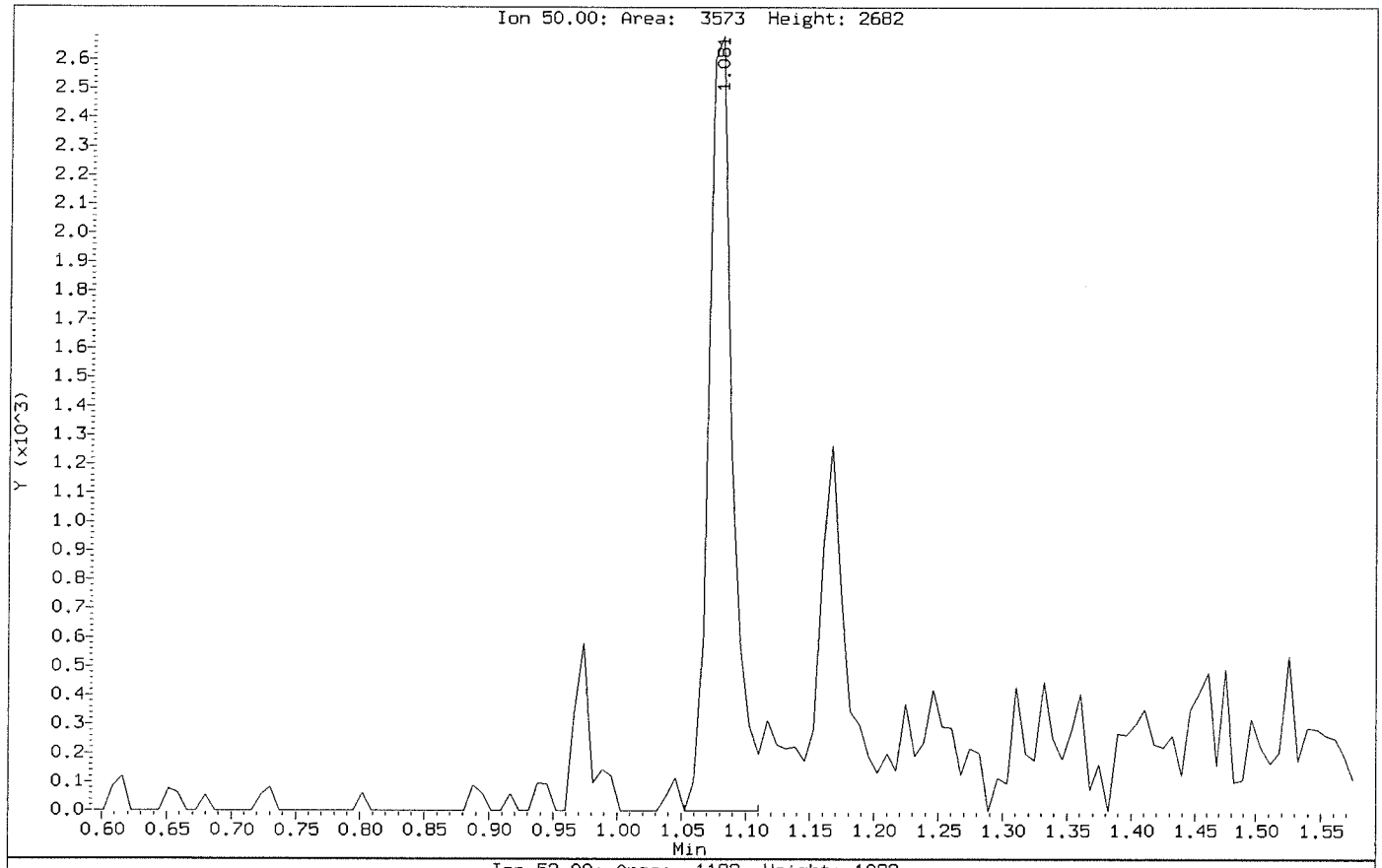
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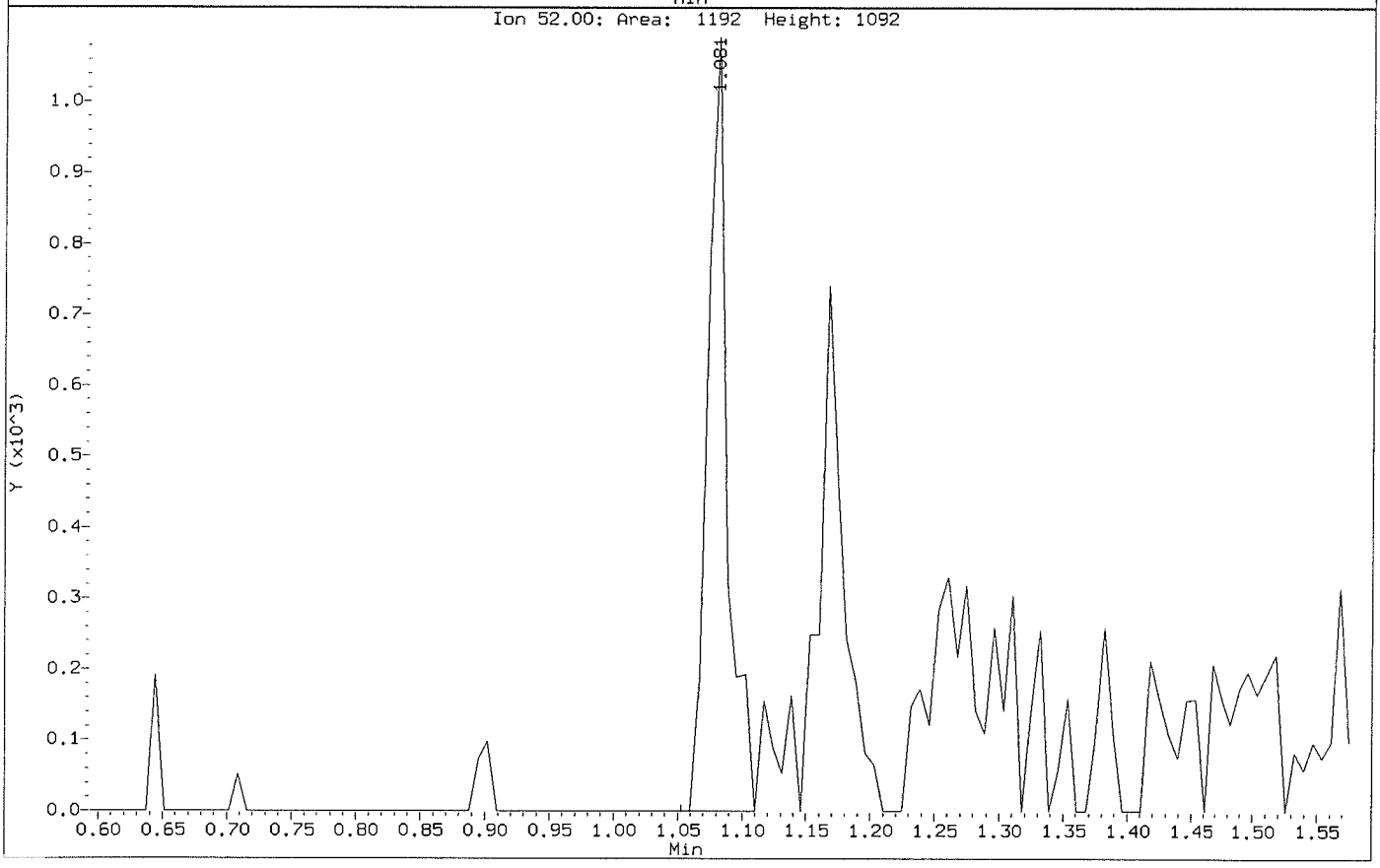




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Instrument: voa6.i
Client Sample ID: VSTD001

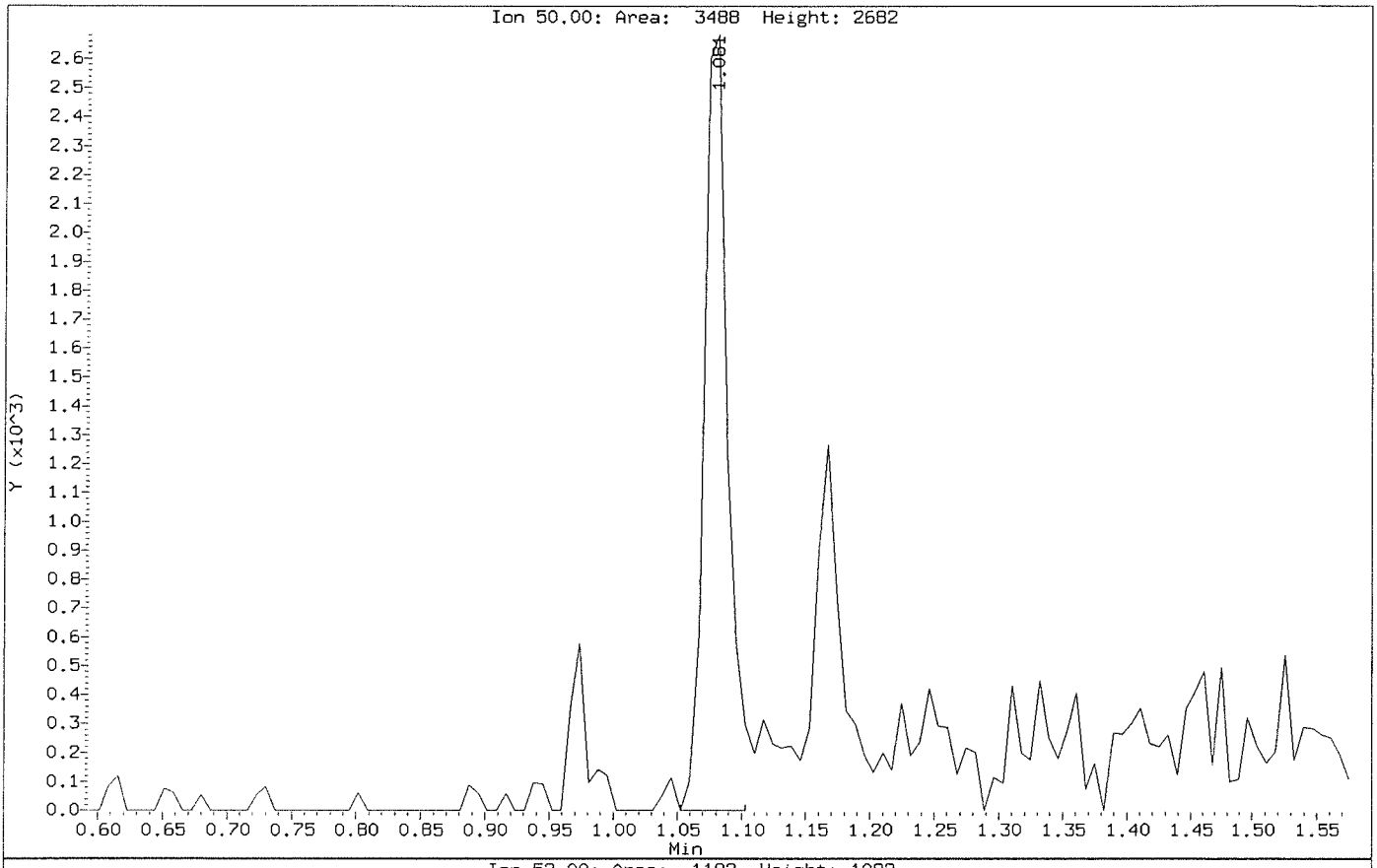
Compound: Chloromethane
CAS Number: 74-87-3

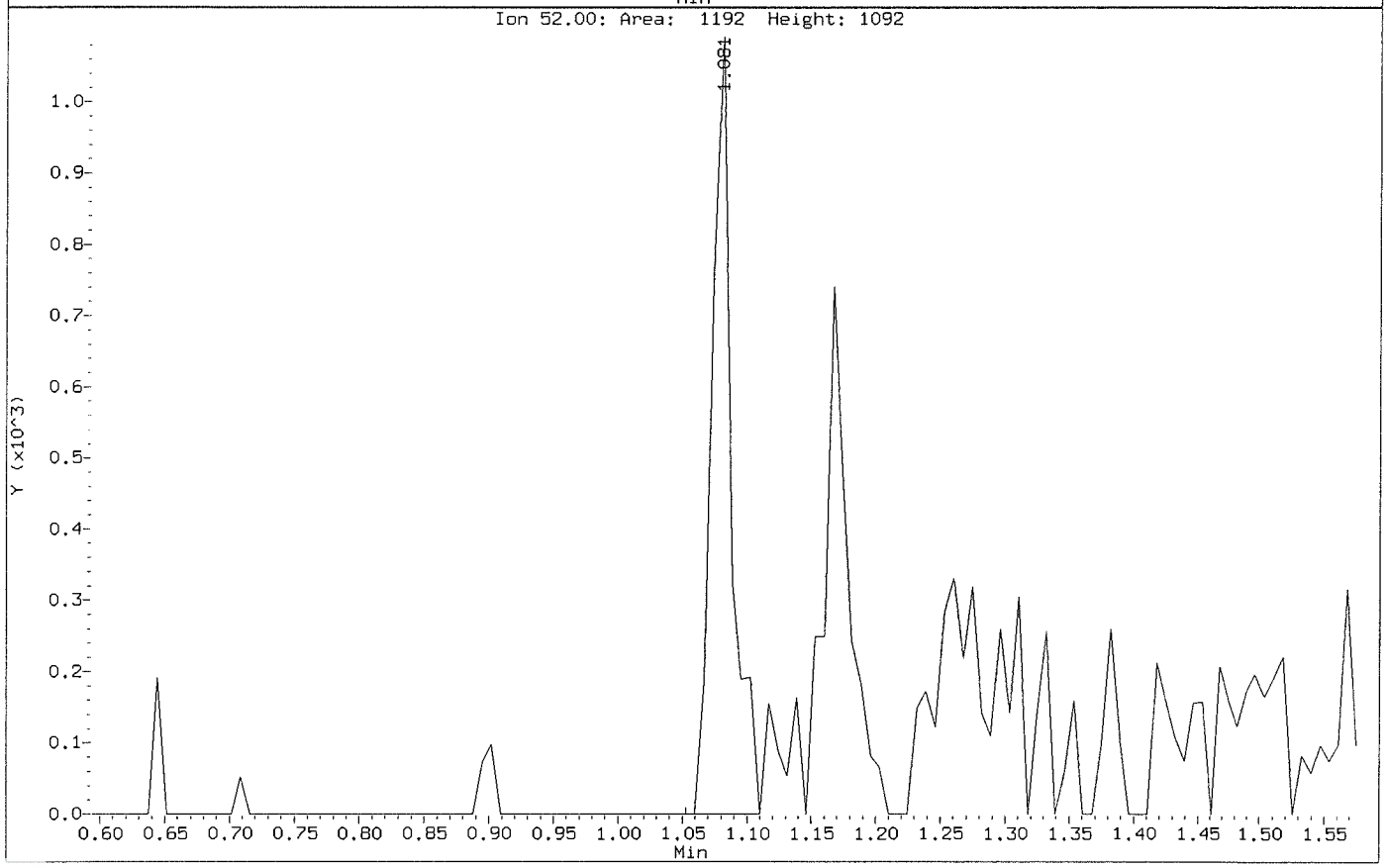




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Instrument: voa6.i
Client Sample ID: VSTD001

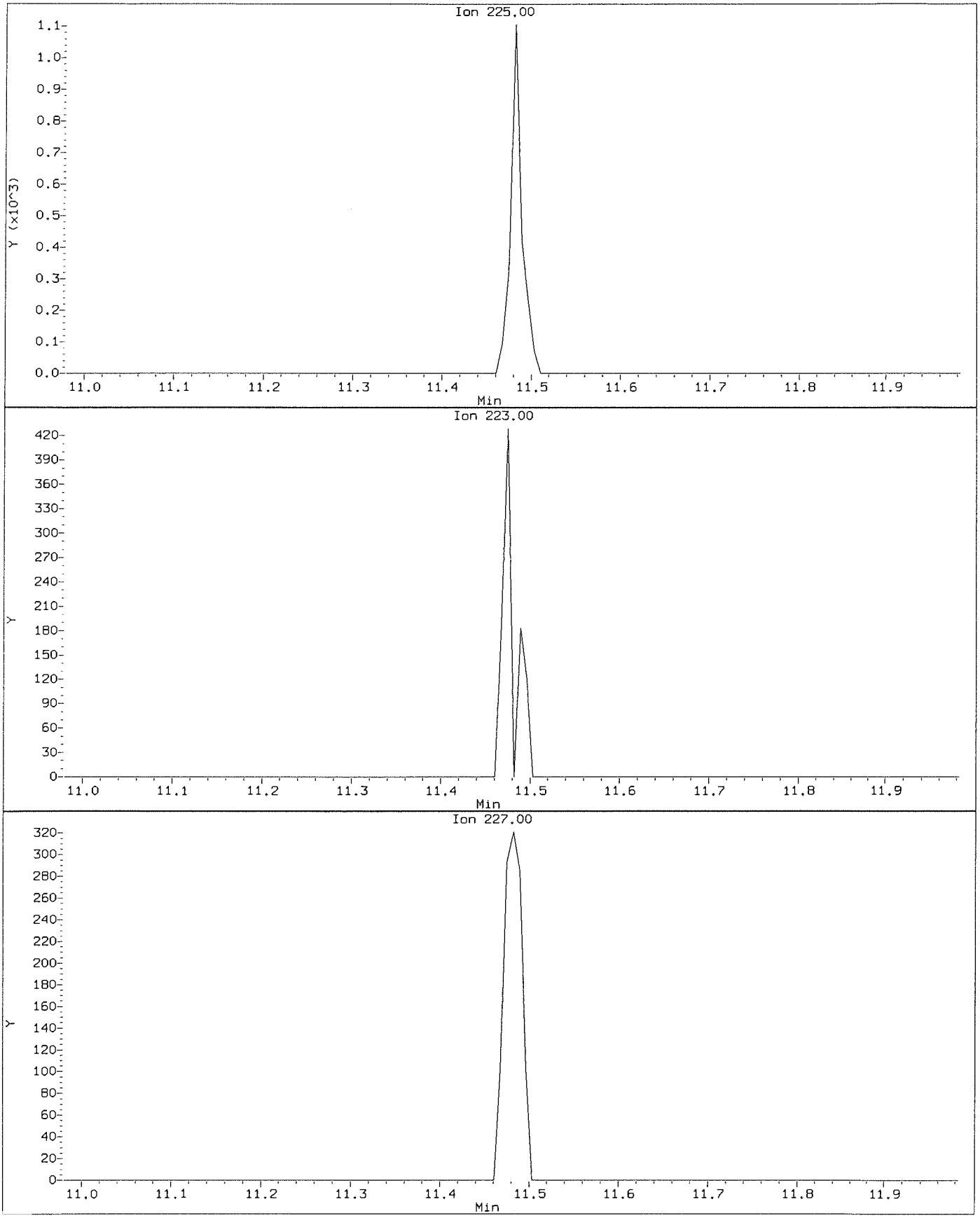
Compound: Chloromethane
CAS Number: 74-87-3





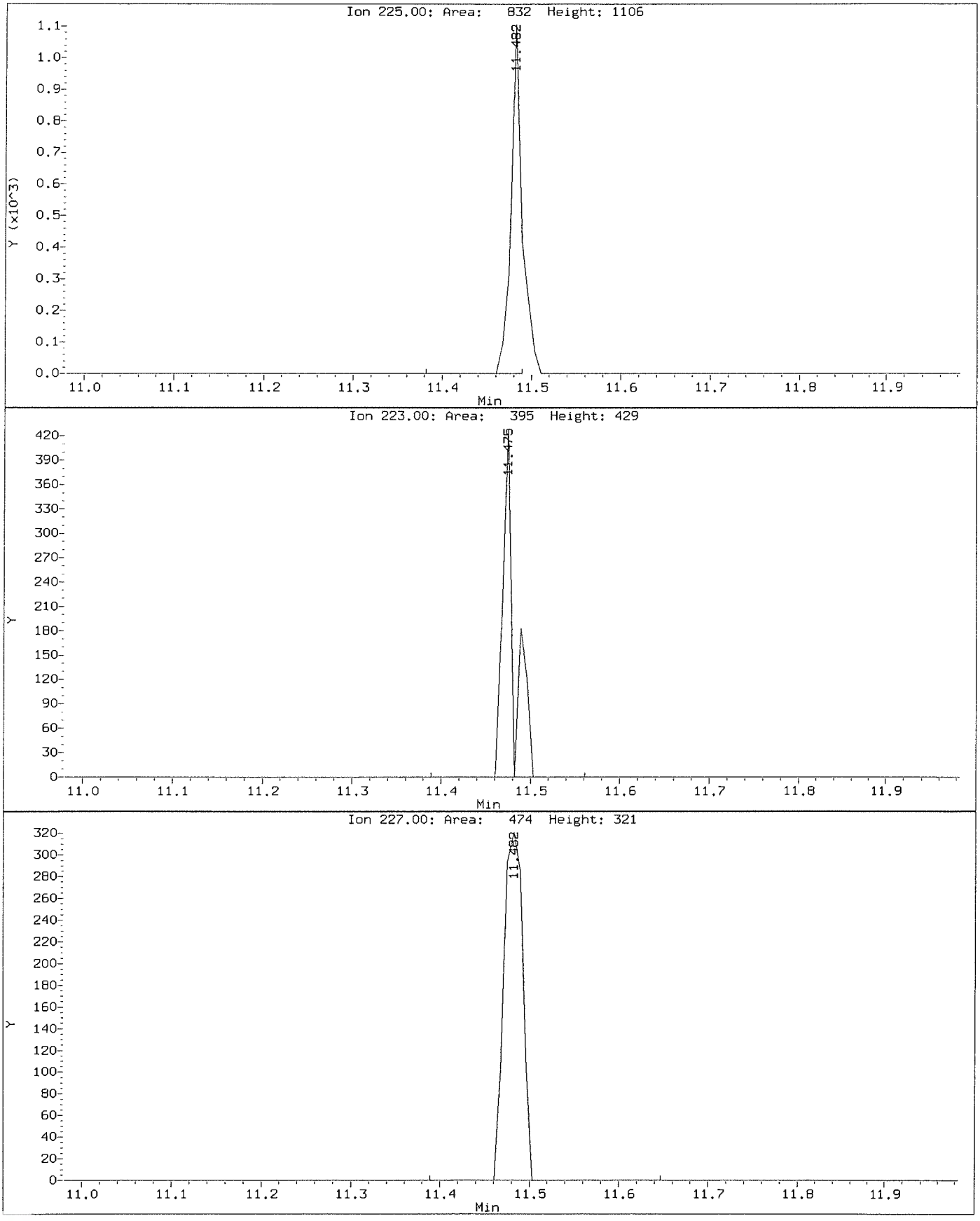
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Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



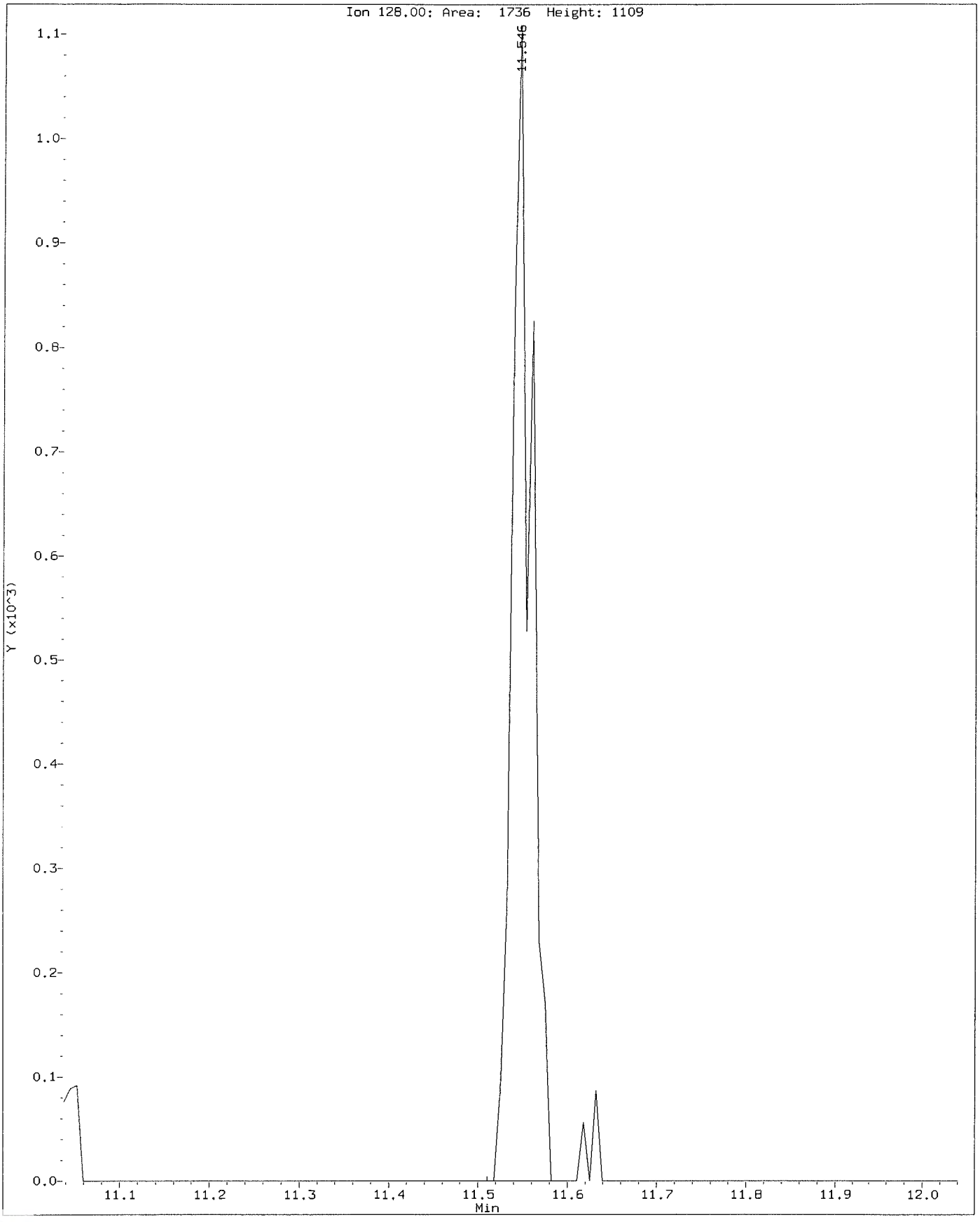
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Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



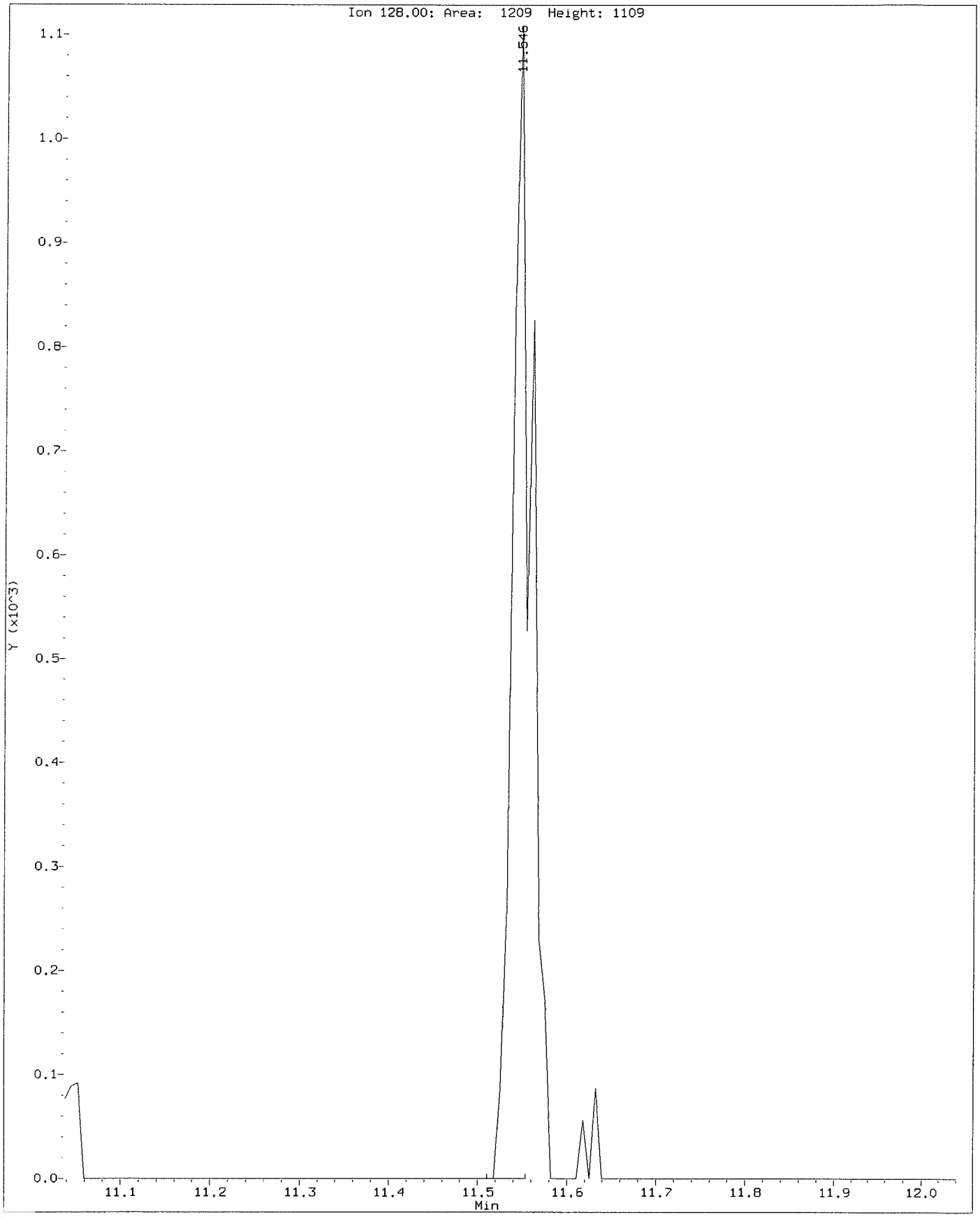
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112204.D
Injection Date: 22-NOV-2020 16:46
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112205.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112205.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 22-NOV-2020 17:07
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 16:46 Cal File: Y112204.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	159458	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	292572	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	273935	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	117985	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	5030	2.00000	2.07(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	5029	2.00000	2.68(a)
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	3765	2.00000	1.57(a)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	14167	2.00000	1.91(a)
60 1,1,1,2-Tetrachloroethane	131	7.771	7.771	(1.013)	3837	2.00000	1.86(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	6325	2.00000	1.95(a)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	4021	2.00000	0.49(aM)
138 Freon TF	101	1.911	1.911	(0.457)	5388	2.00000	1.81(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	3664	2.00000	2.03(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	7563	2.00000	1.96(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	5621	2.00000	1.81(a)
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	6329	2.00000	2.17(a)
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	837	2.00000	3.13(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	3120	2.00000	1.75(aMH)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	1533	2.00000	1.72(aM)
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	12652	2.00000	1.89(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	311	2.00000	2.16(aM)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	4134	2.00000	1.97(a)

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112205.D Page 2
Report Date: 18-Dec-2020 11:14

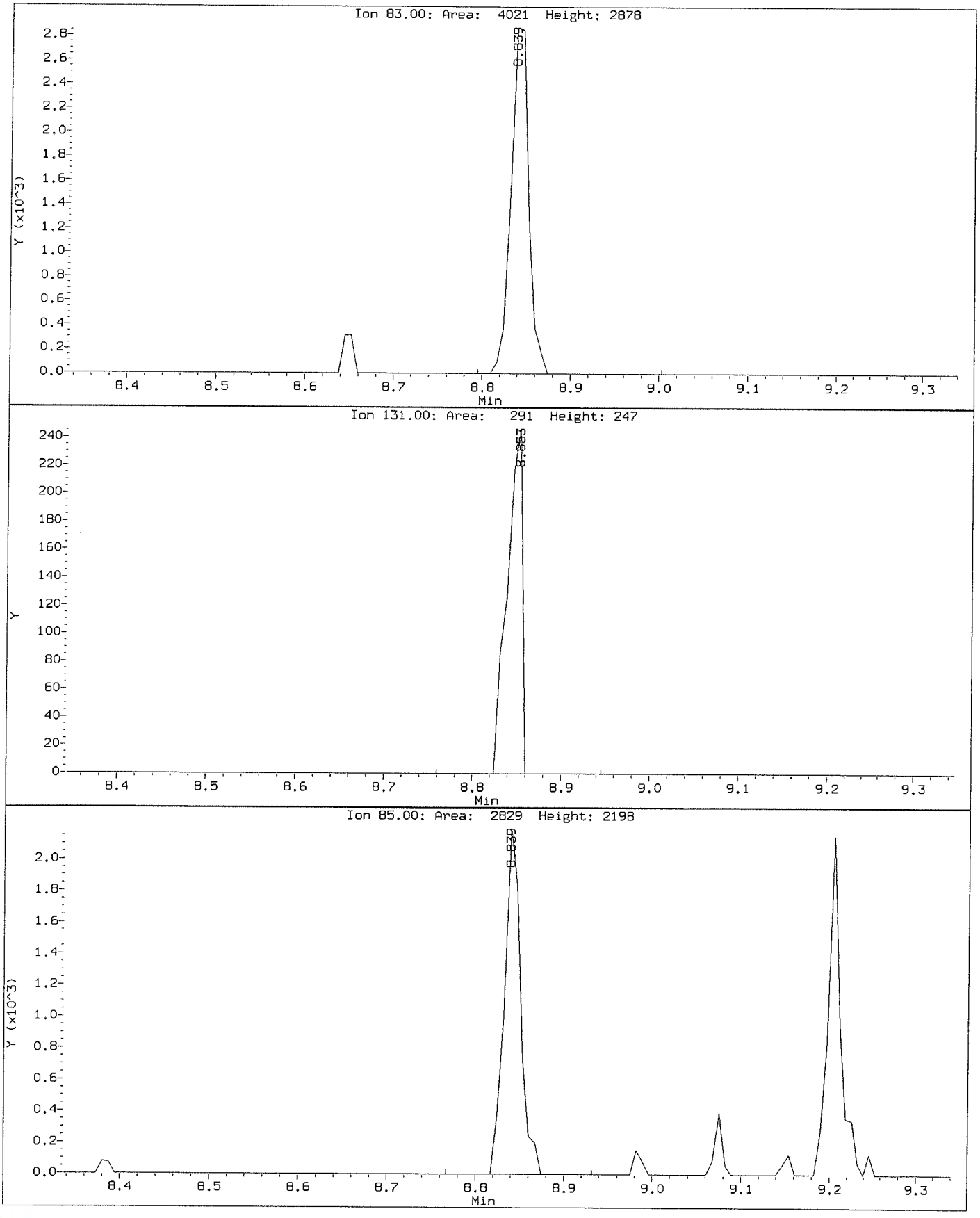
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	6630	2.00000	1.98(a)
33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	6161	2.00000	1.91(aM)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	4718	2.00000	2.02(aM)
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	12971	2.00000	1.85(a)
83 1,3-Dichlorobenzene	146	9.604	9.604	(0.994)	6881	2.00000	1.93(a)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	6788	2.00000	2.01(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	7531	2.00000	2.65(a)
26 2,2-Dichloropropane	77	3.523	3.523	(0.842)	6656	2.00000	1.96(a)
24 2-Butanone	43	3.595	3.595	(0.860)	2353	4.00000	3.08(aM)
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	11318	2.00000	1.96(a)
52 2-Hexanone	43	7.090	7.090	(0.924)	4326	4.00000	3.94(a)
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	12763	2.00000	1.80(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	13477	2.00000	3.44(a)
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	7417	4.00000	4.40(a)
10 Acetone	43	1.969	1.969	(0.471)	5270	4.00000	2.82(a)
37 Benzene	78	4.519	4.519	(0.909)	14884	2.00000	1.86(a)
74 Bromobenzene	156	8.802	8.802	(0.911)	3748	2.00000	1.88(a)
29 Bromochloromethane	128	3.802	3.802	(0.909)	2126	2.00000	1.88(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	6102	2.00000	1.96(aM)
66 Bromoform	173	8.415	8.415	(1.097)	1868	2.00000	3.49(Ta)
6 Bromomethane	94	1.345	1.345	(0.322)	7308	2.00000	3.22(aM)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	22947	4.00000	3.85(a)
34 Carbon Tetrachloride	117	4.261	4.261	(0.857)	4669	2.00000	1.85(aH)
59 Chlorobenzene	112	7.699	7.699	(1.004)	10694	2.00000	1.82(a)
7 Chloroethane	64	1.403	1.403	(0.336)	5068	2.00000	2.05(a)
28 Chloroform	83	3.917	3.917	(0.937)	8193	2.00000	1.96(a)
3 Chloromethane	50	1.080	1.080	(0.258)	6087	2.00000	2.07(aM)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	4637	2.00000	1.98(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	6675	2.00000	1.79(a)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	4276	2.00000	2.01(a)
44 Dibromomethane	93	5.557	5.557	(1.118)	3029	2.00000	1.98(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	5142	2.00000	4.45(a)
61 Ethylbenzene	106	7.799	7.799	(1.017)	5231	2.00000	1.77(a)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	1496	2.00000	3.91(a)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	16143	2.00000	1.81(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	12685	4.00000	9.66
17 Methylene Chloride	84	2.305	2.305	(0.551)	4496	2.00000	2.05(a)
87 n-Butylbenzene	91	9.991	9.991	(1.034)	12843	2.00000	4.72(a)
73 n-Propylbenzene	91	8.910	8.910	(0.922)	19007	2.00000	1.92(a)
92 Naphthalene	128	11.546	11.546	(1.195)	2518	2.00000	2.98(aM)
63 o-Xylene	106	8.243	8.243	(1.075)	6359	2.00000	4.37(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	15802	2.00000	2.50(a)
64 Styrene	104	8.258	8.258	(1.077)	10610	2.00000	1.67(a)
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	9935	2.00000	1.81(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	2921	2.00000	1.72(a)
50 Toluene	91	6.446	6.446	(0.840)	16445	2.00000	1.85(a)
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	3509	2.00000	1.78(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	5689	2.00000	1.78(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	3537	2.00000	1.73(a)
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	11885	2.00000	1.98(a)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	7798	2.00000	2.03(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.
H - Operator selected an alternate compound hit.

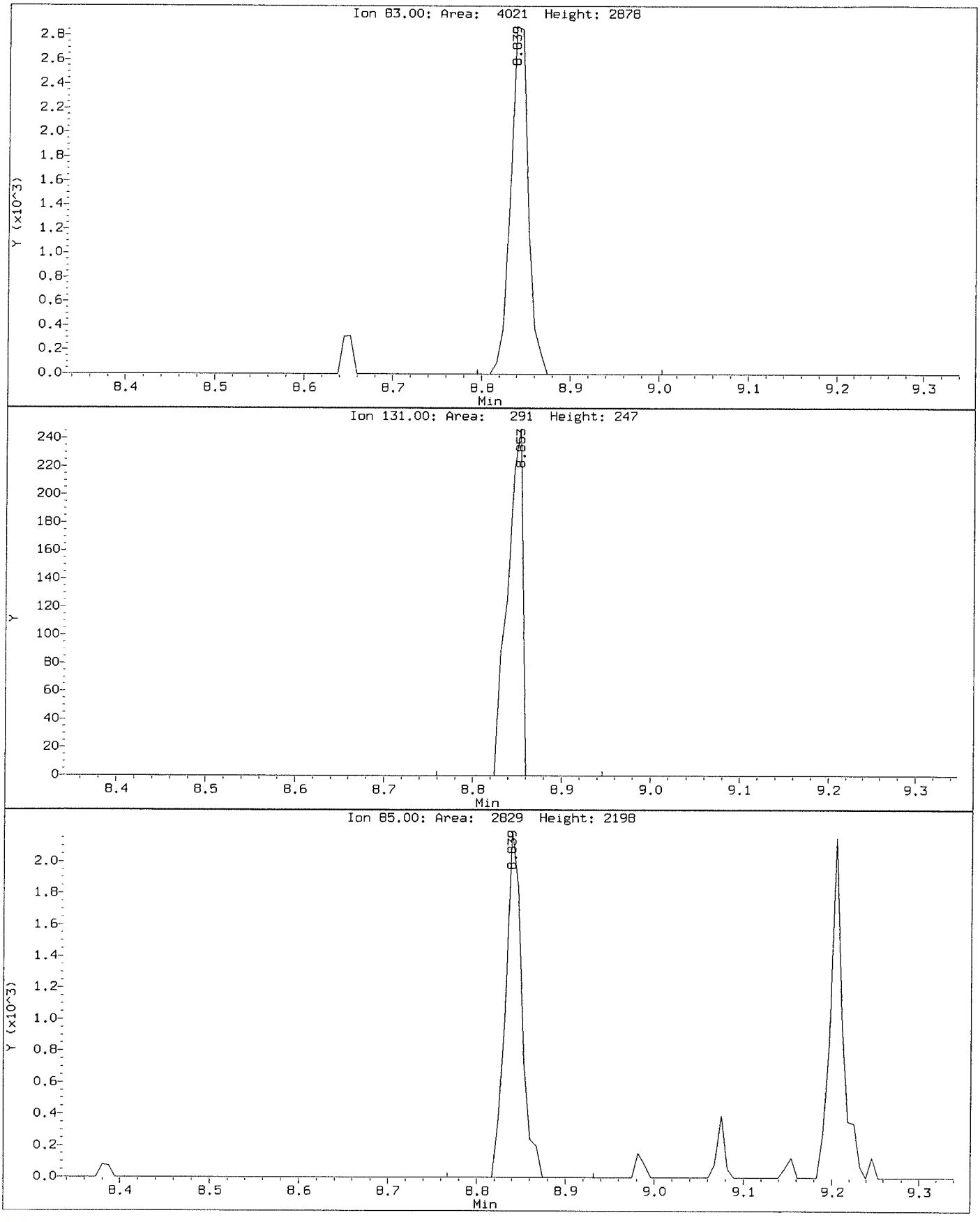
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Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

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



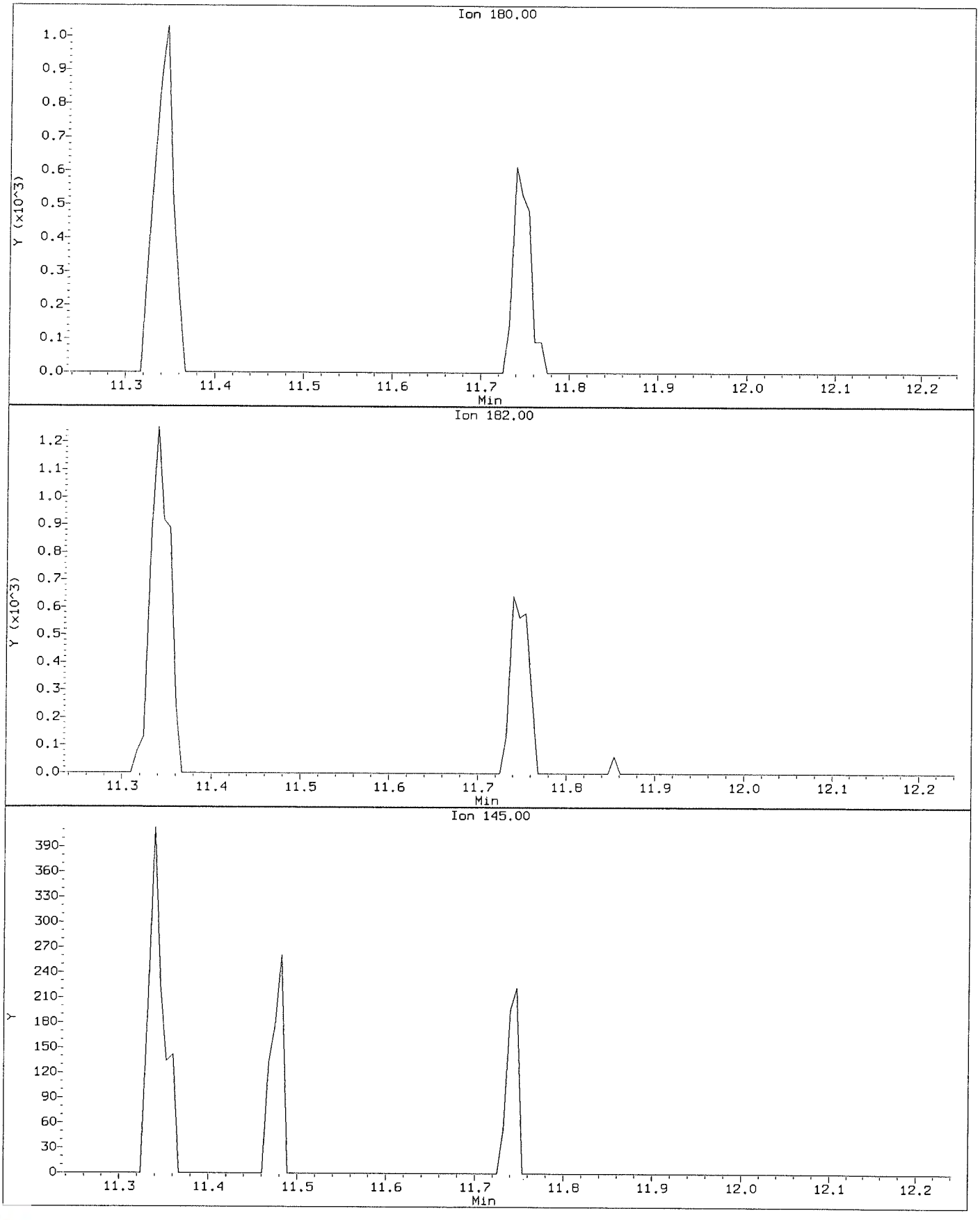
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Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

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



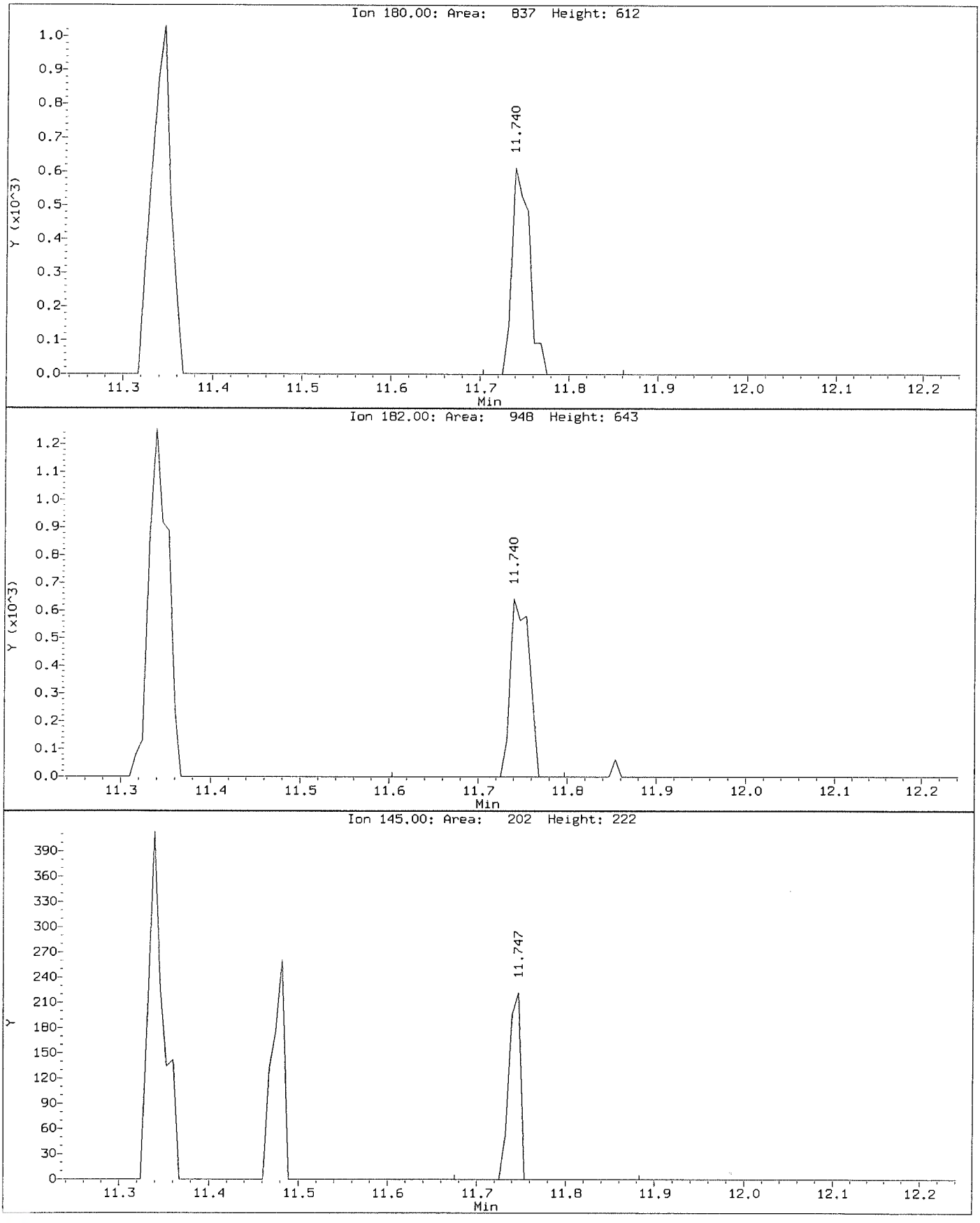
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Instrument: voa6.i
Client Sample ID: VSTD002

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



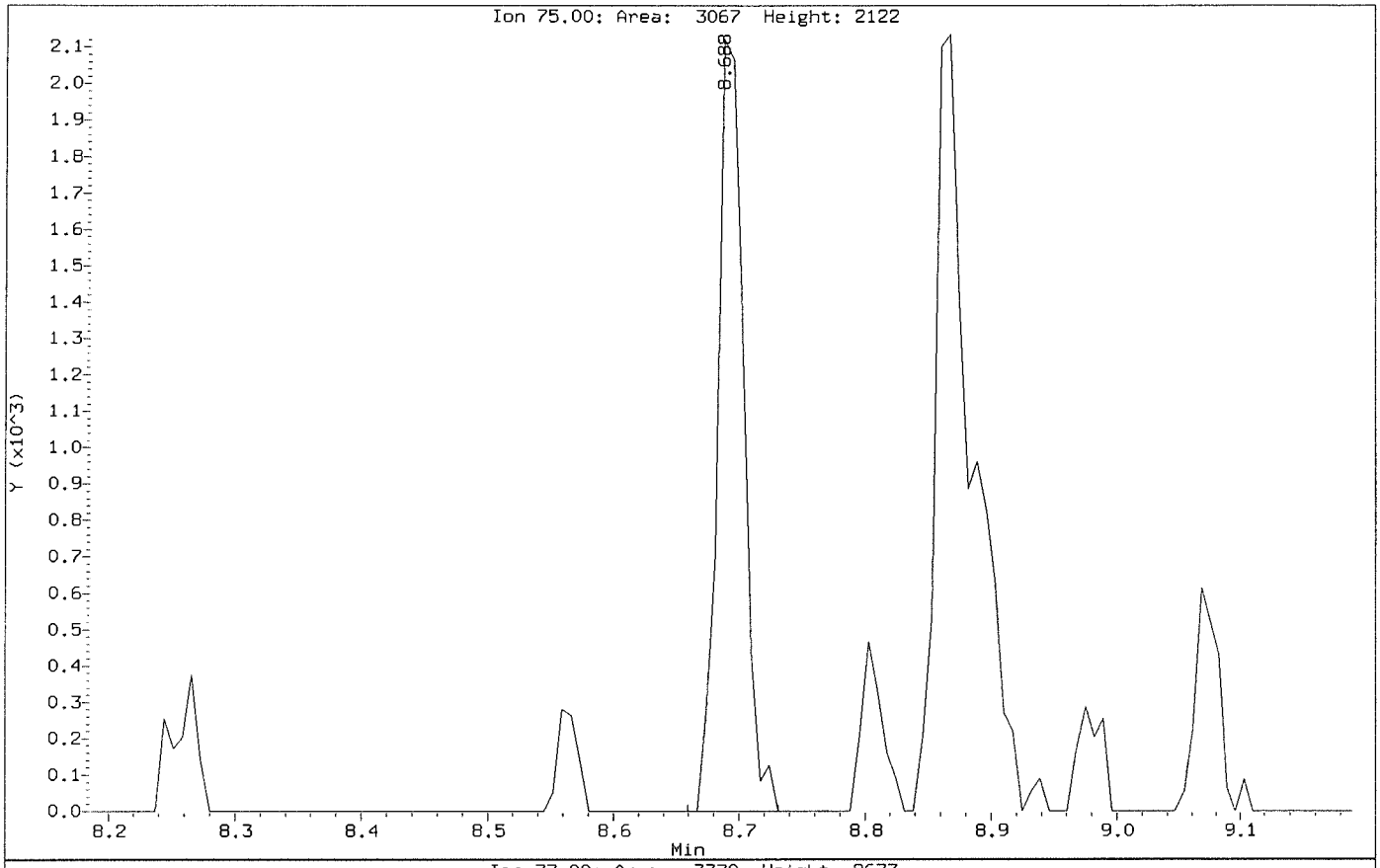
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Client Sample ID: VSTD002

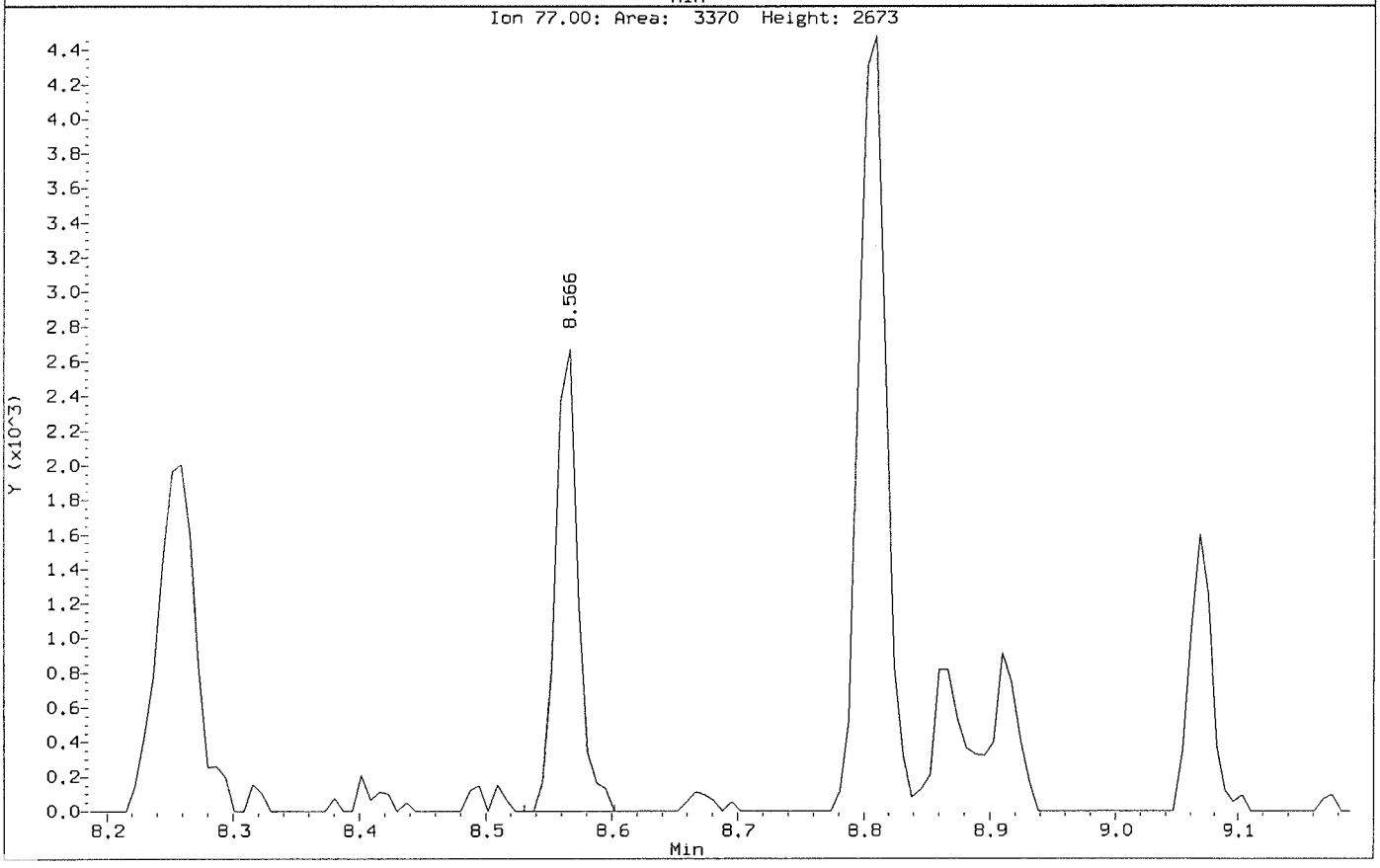
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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Instrument: voa6.i
Client Sample ID: VSTD002

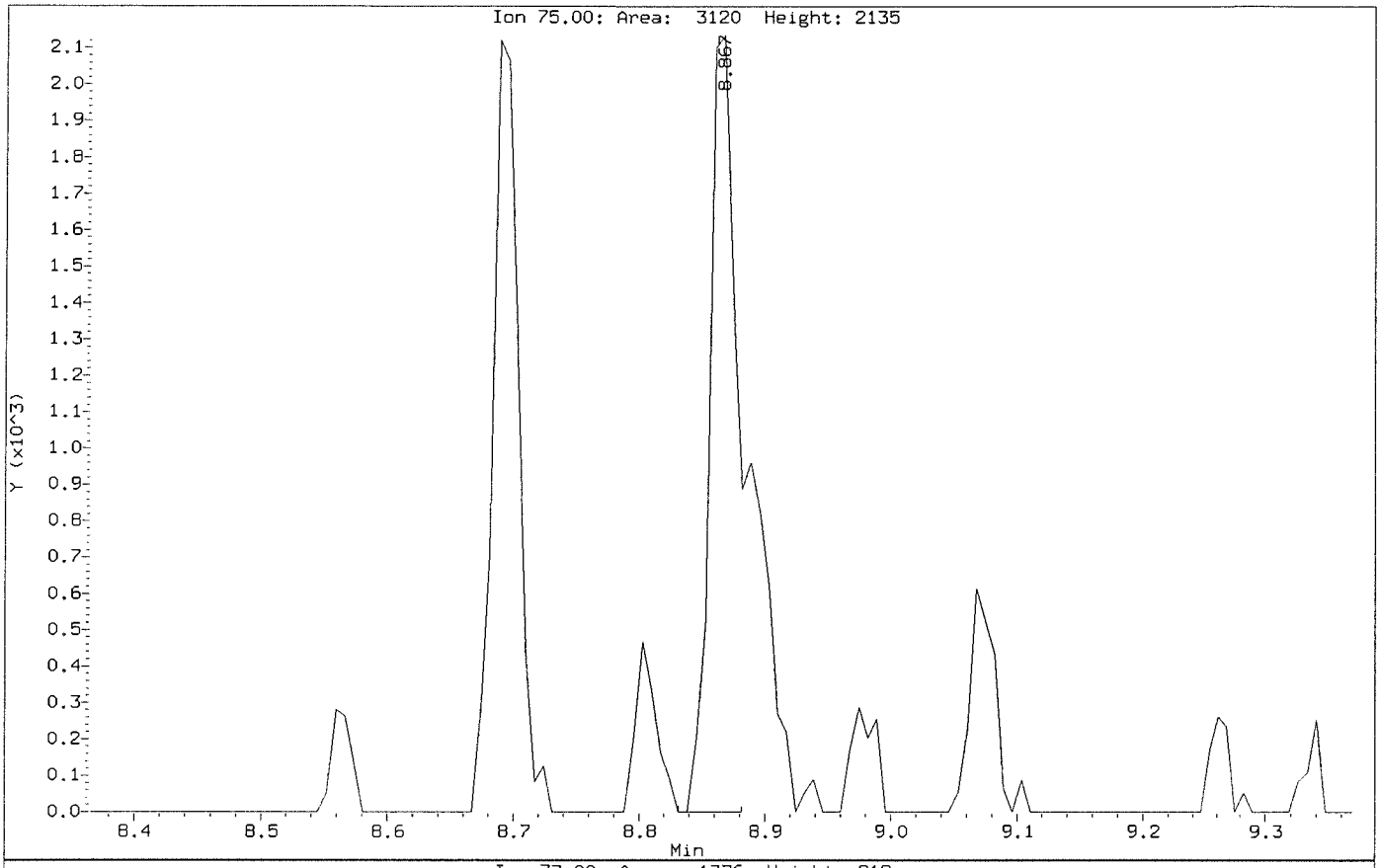
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

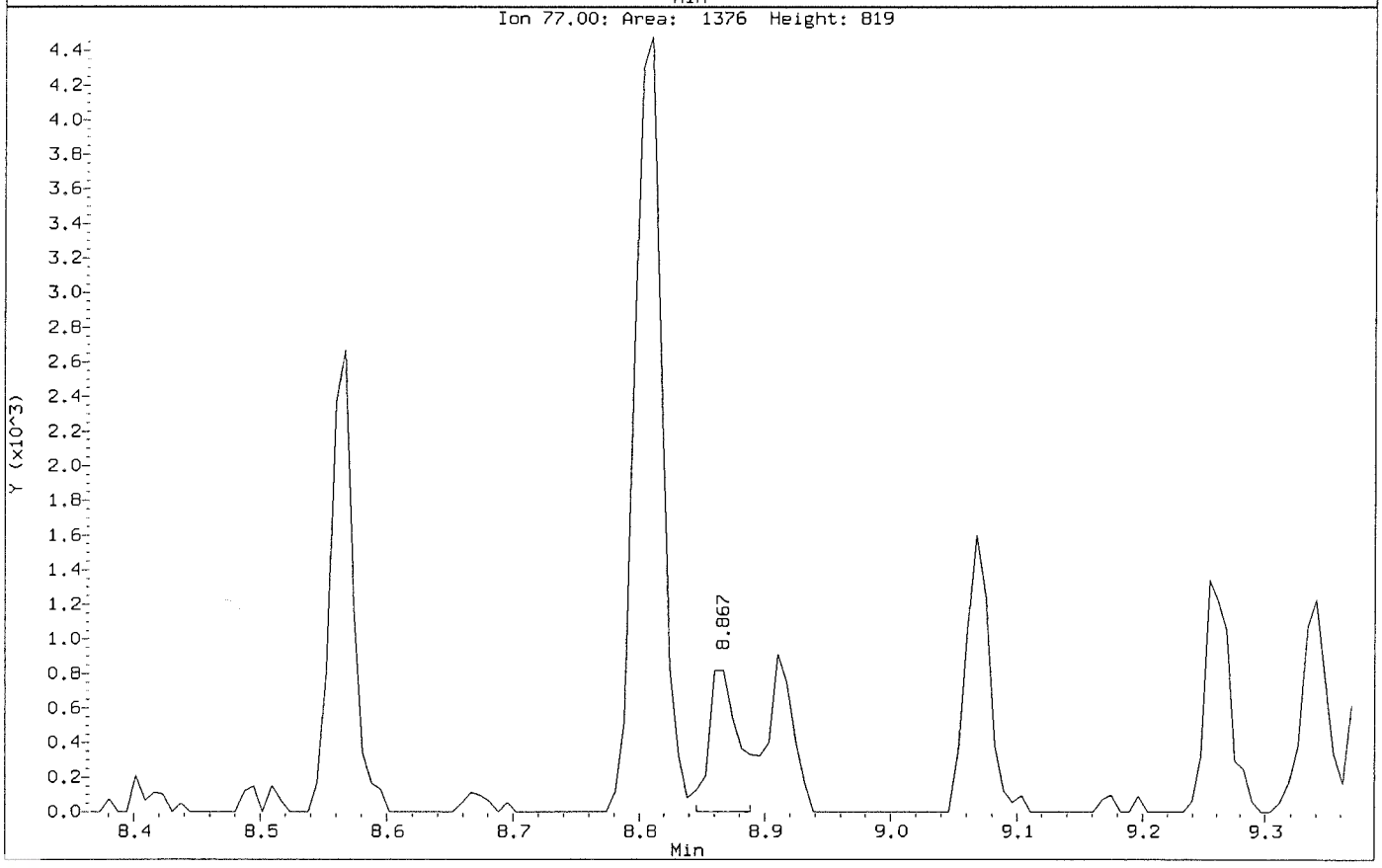




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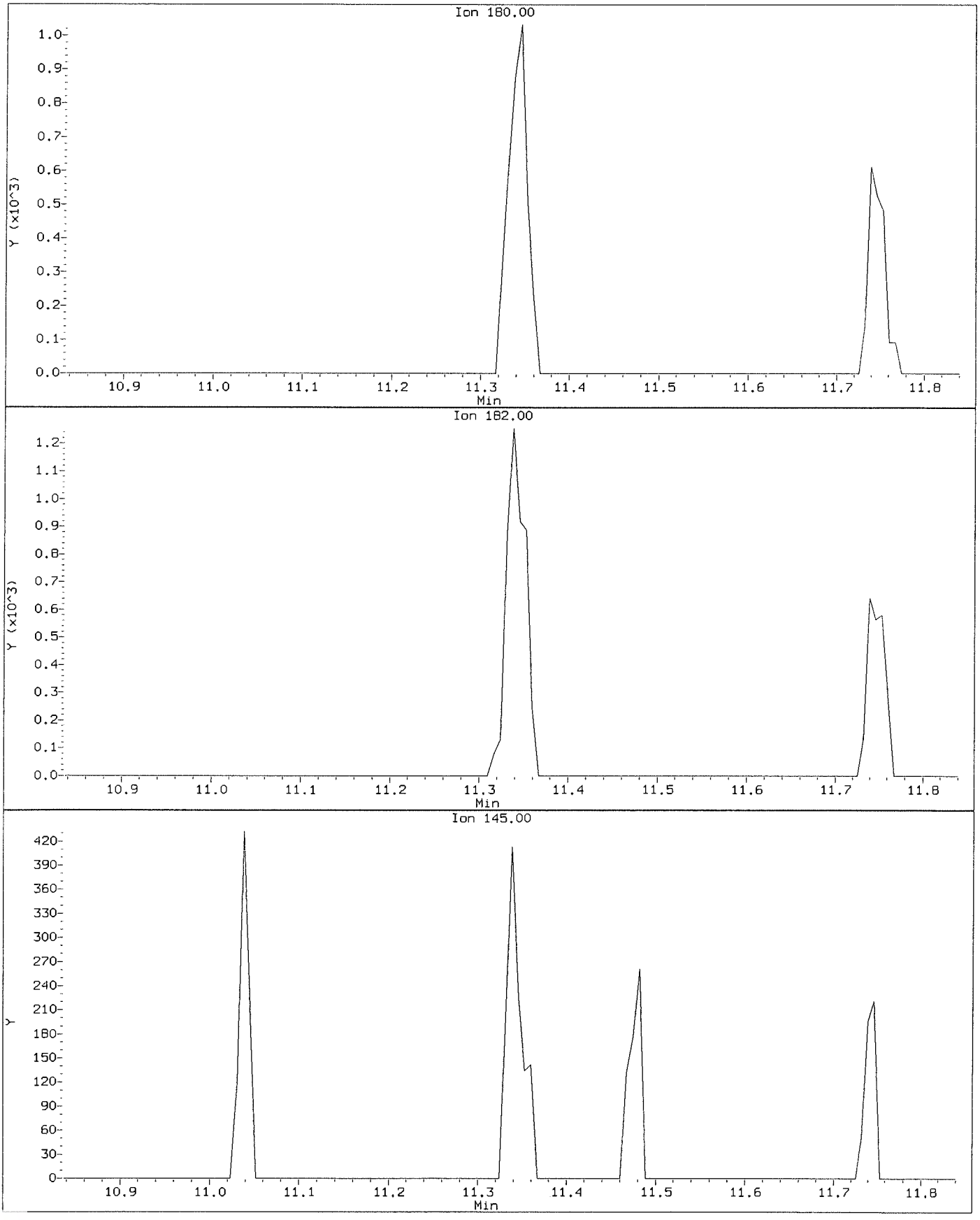
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





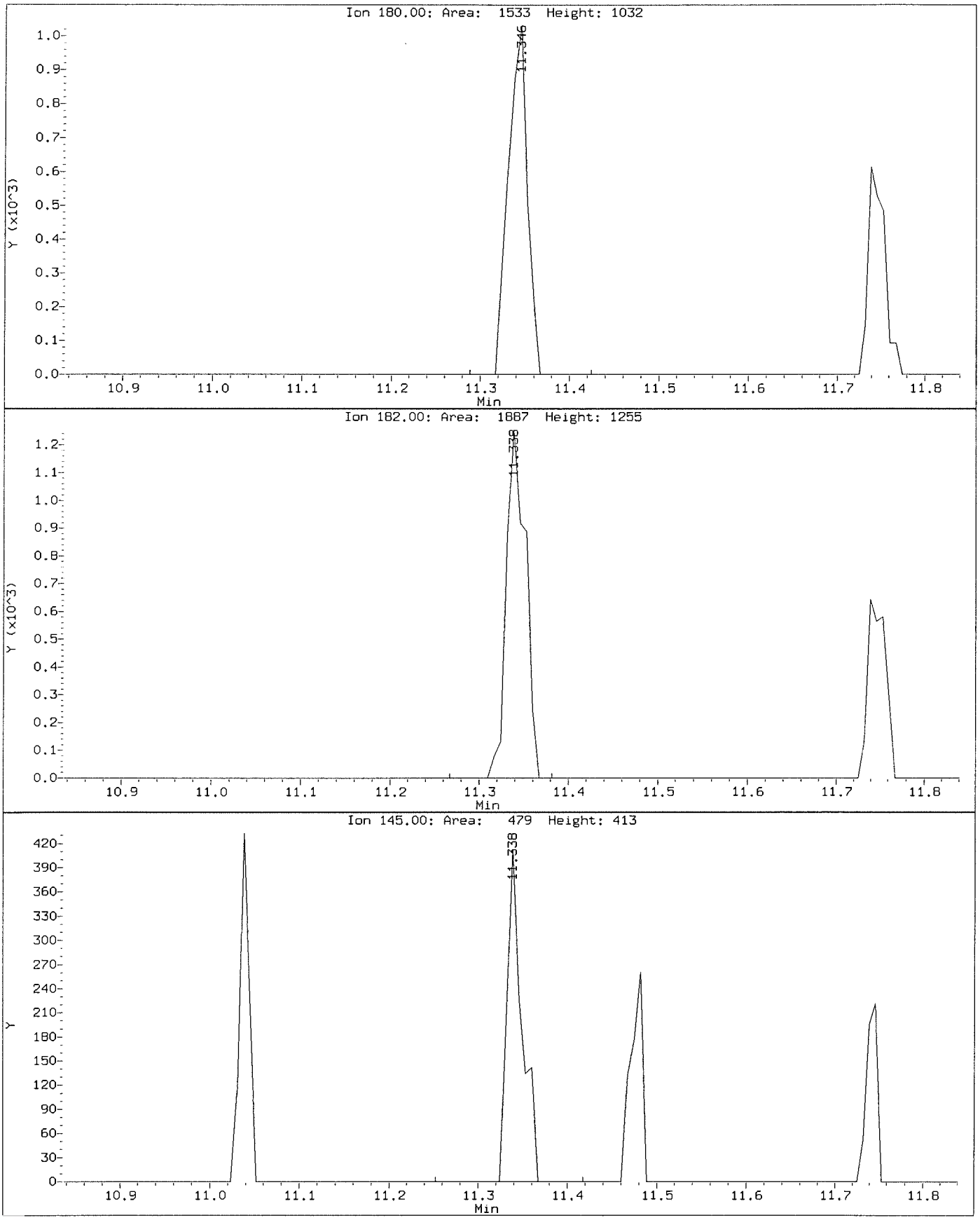
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Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

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



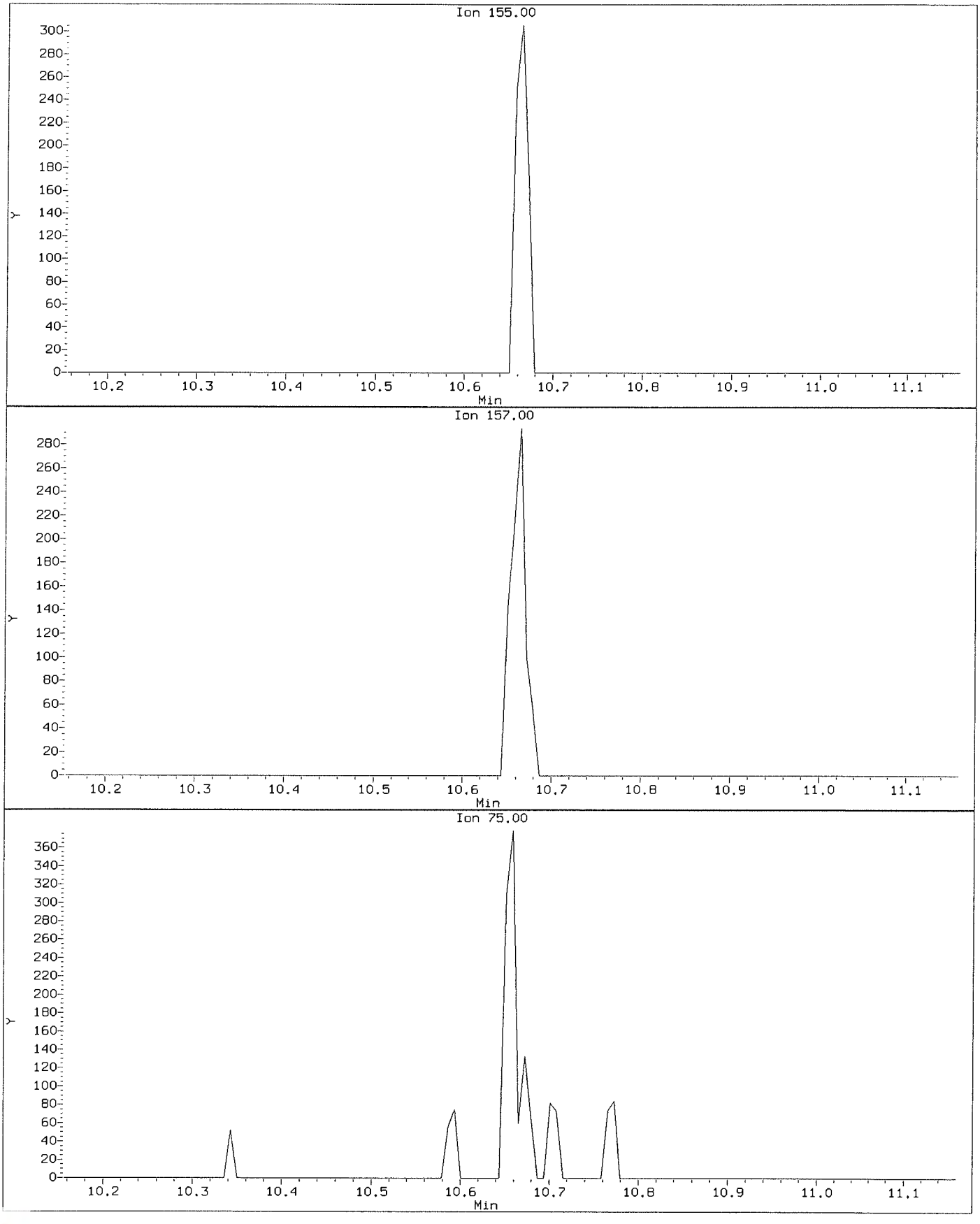
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Client Sample ID: VSTD002

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



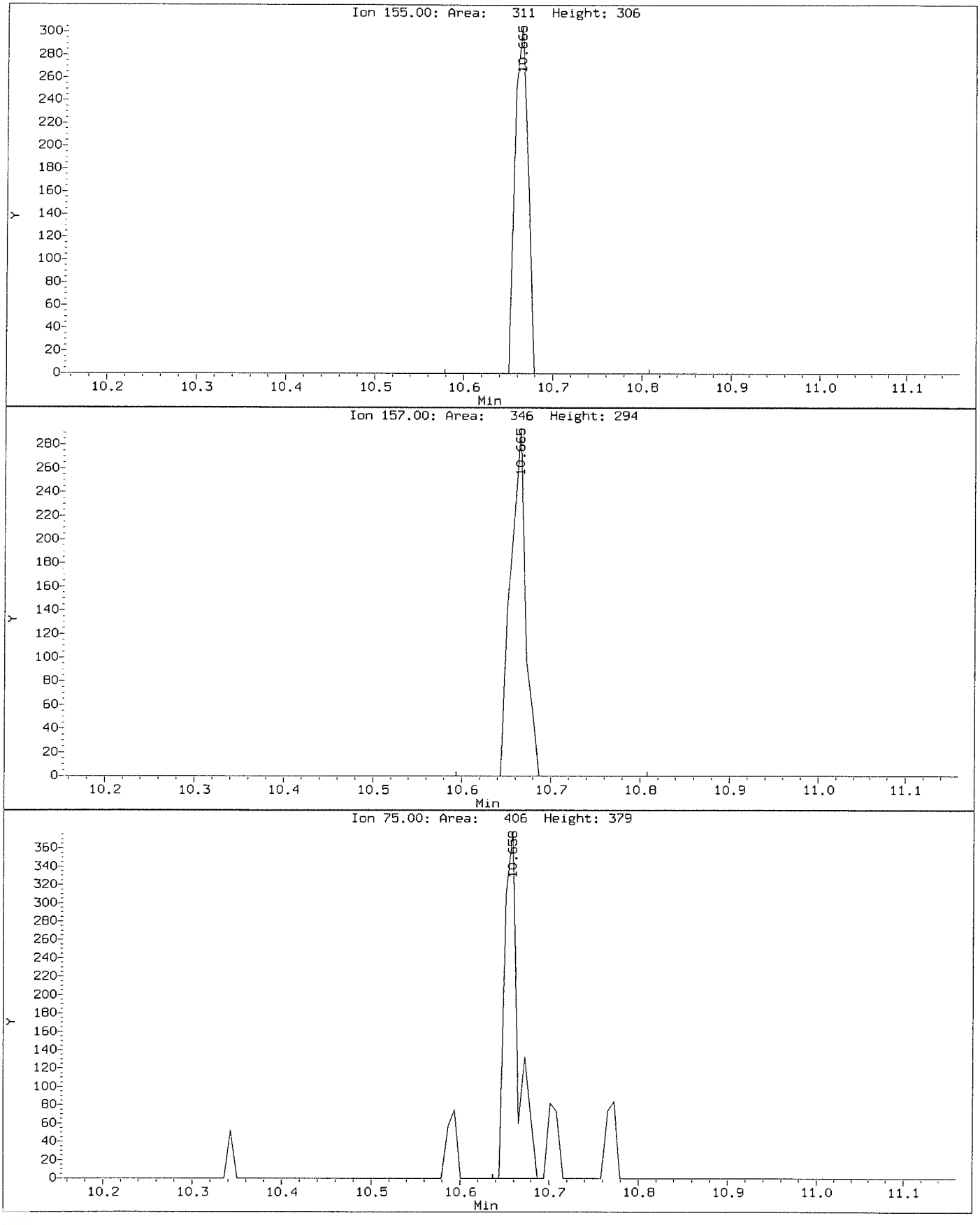
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Instrument: voa6.i
Client Sample ID: VSTD002

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



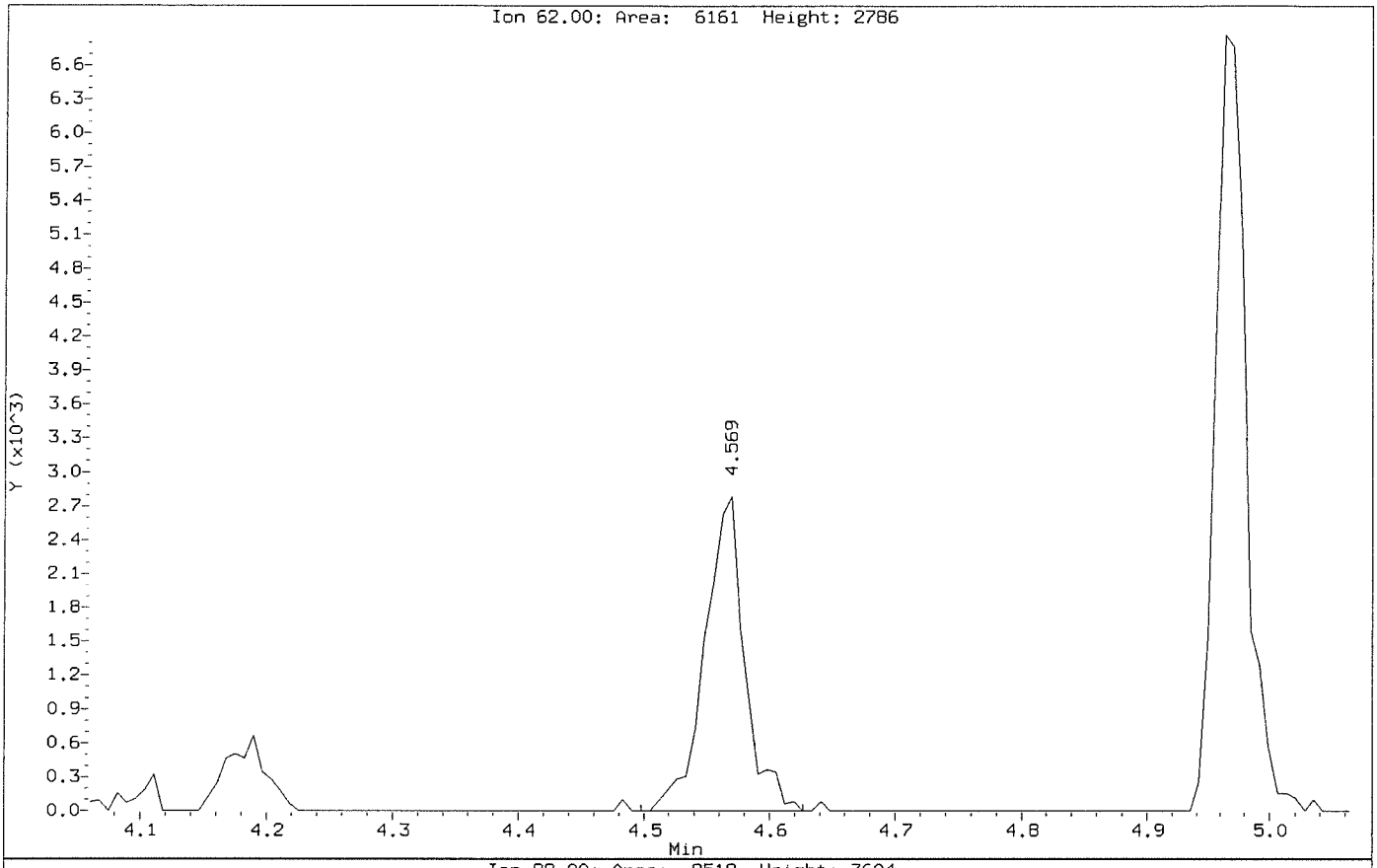
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Client Sample ID: VSTD002

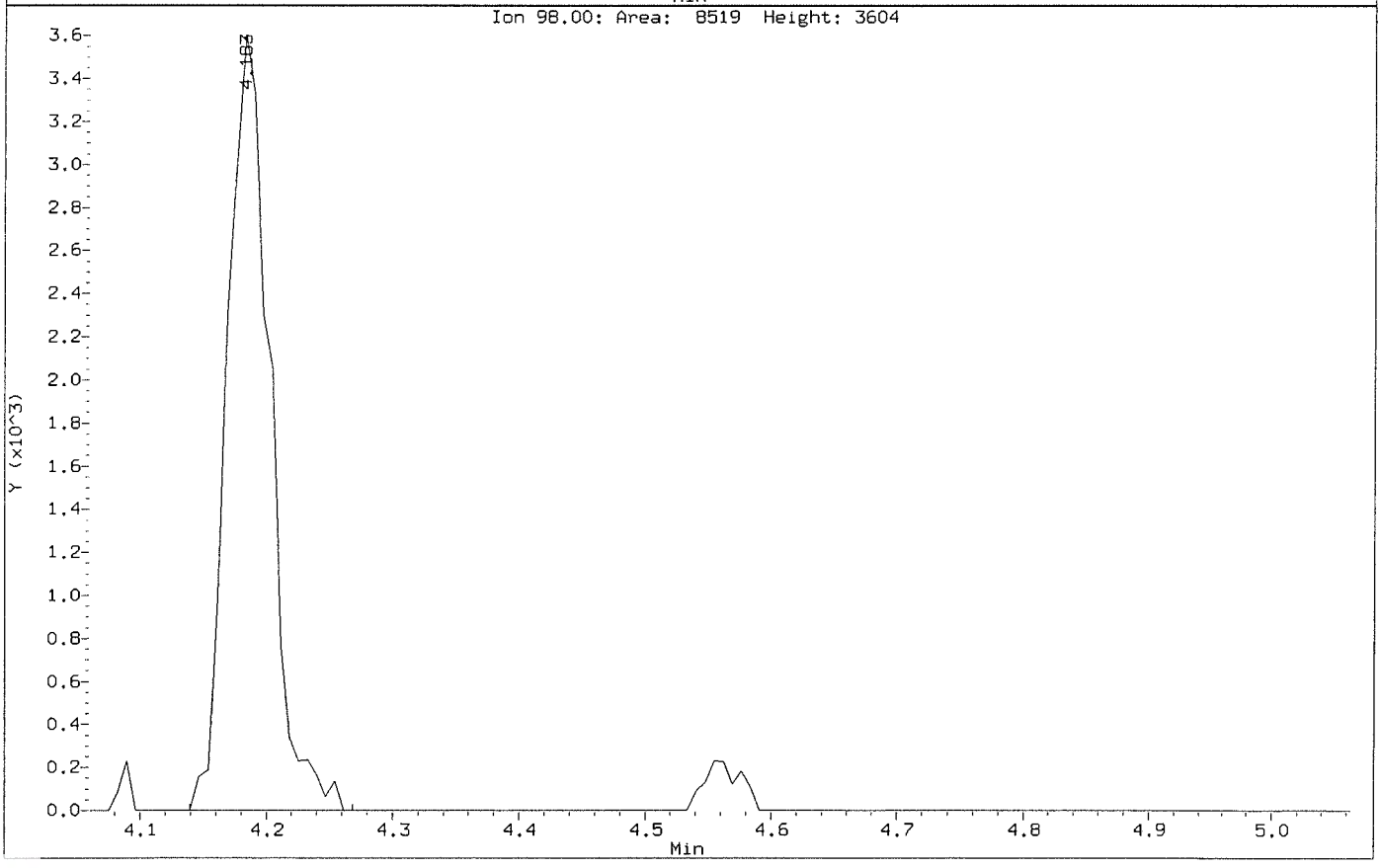
Compound: 1.2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Injection Date: 22-NOV-2020 17:07
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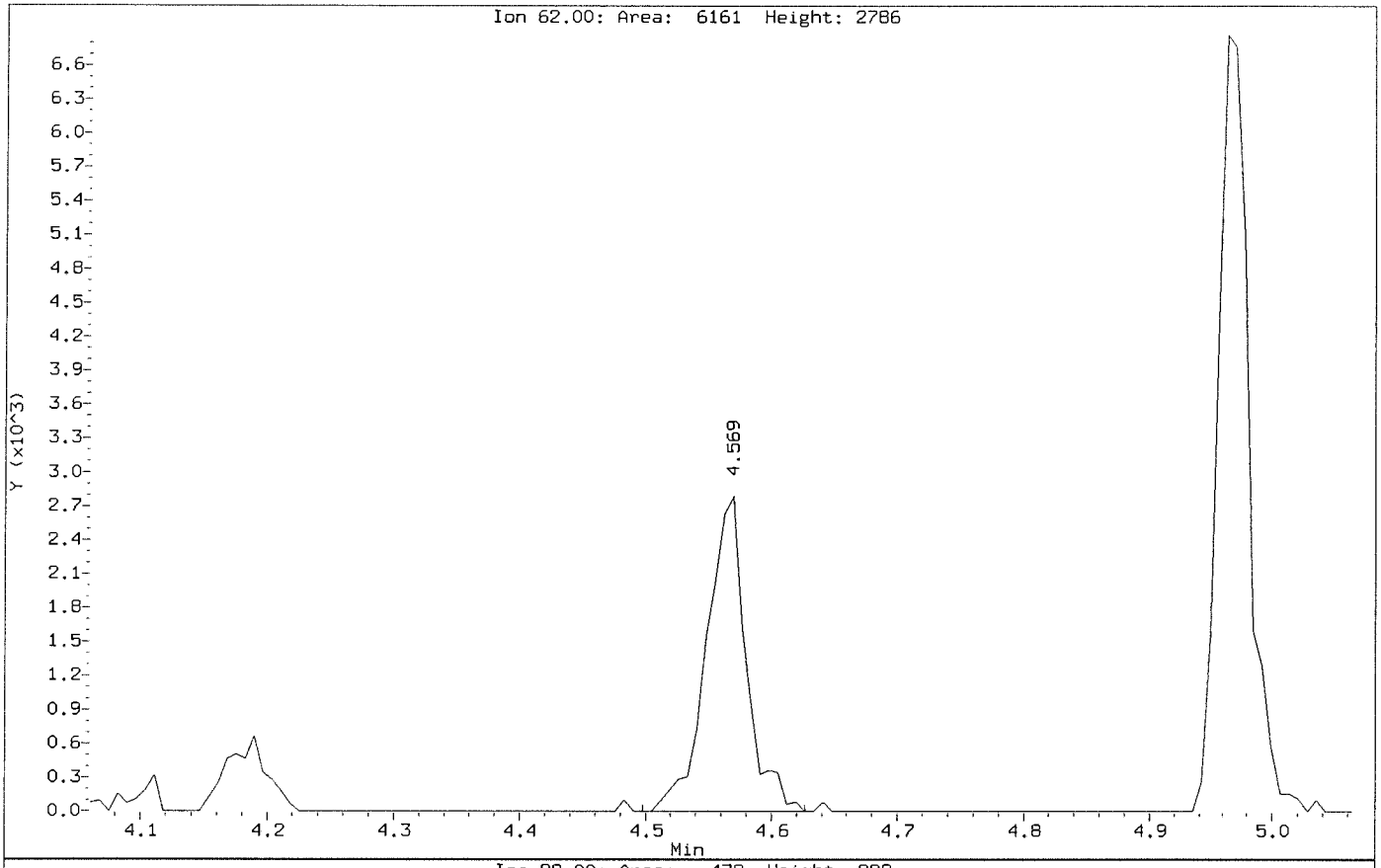
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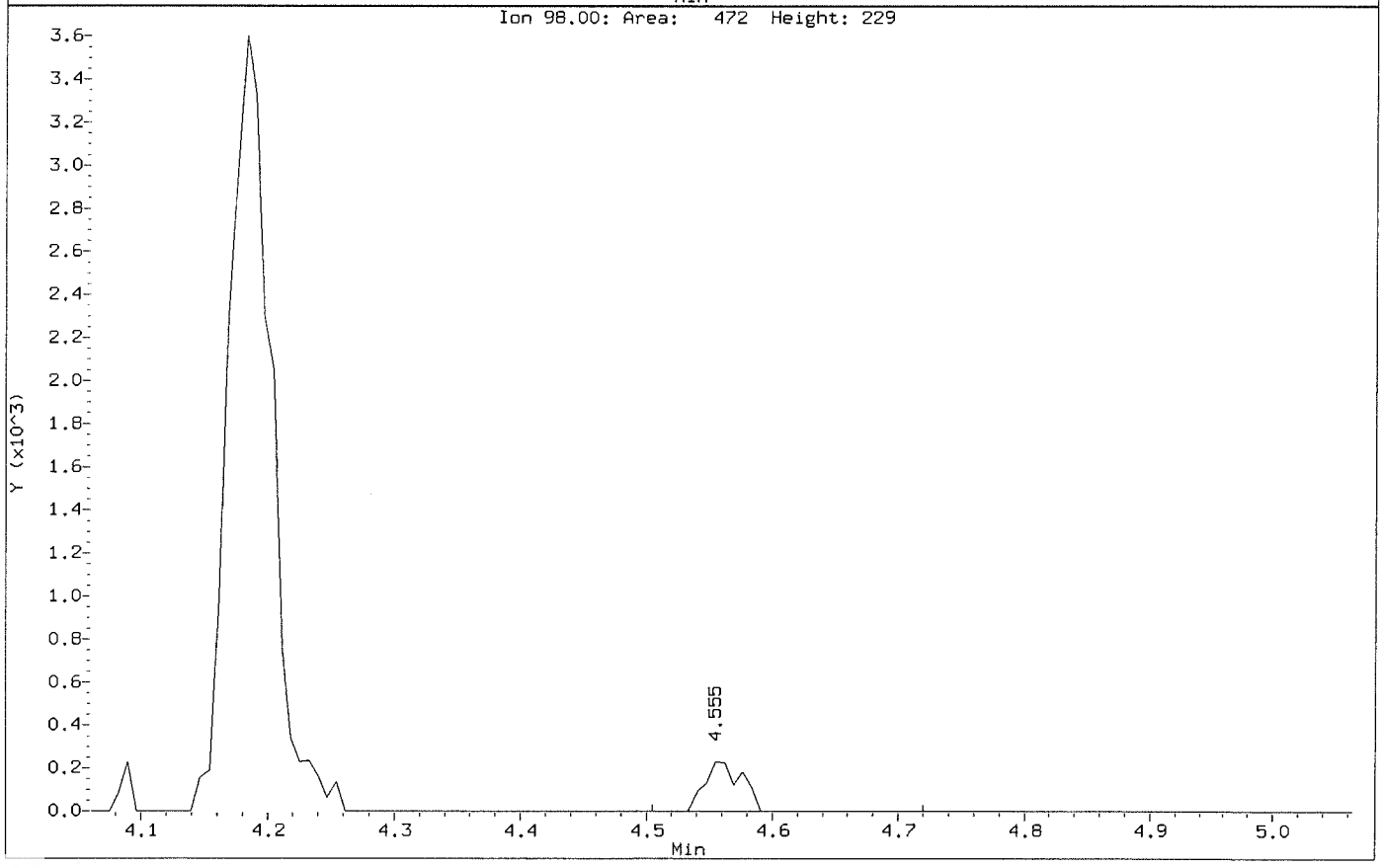




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Instrument: voa6.i
Client Sample ID: VSTD002

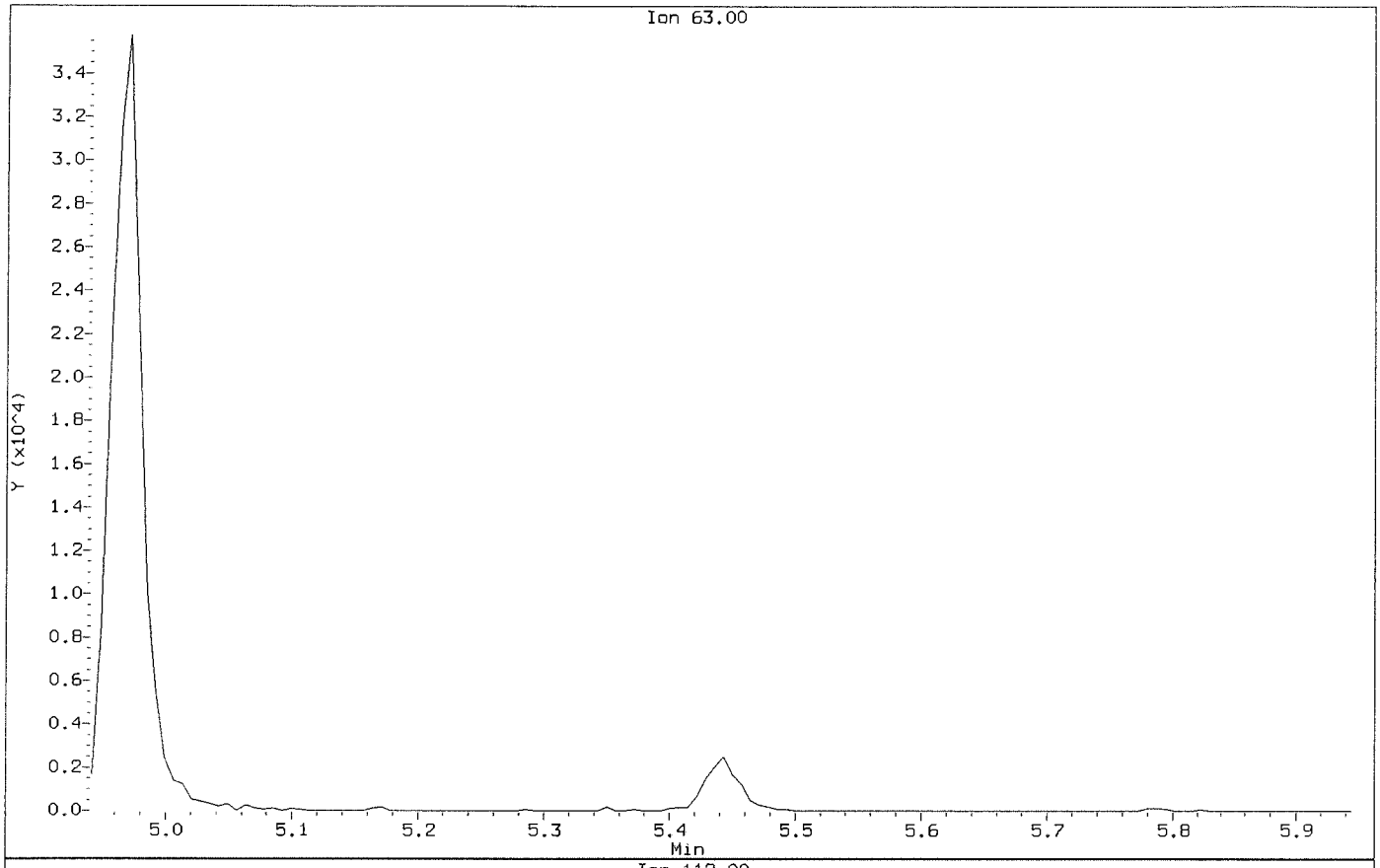
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

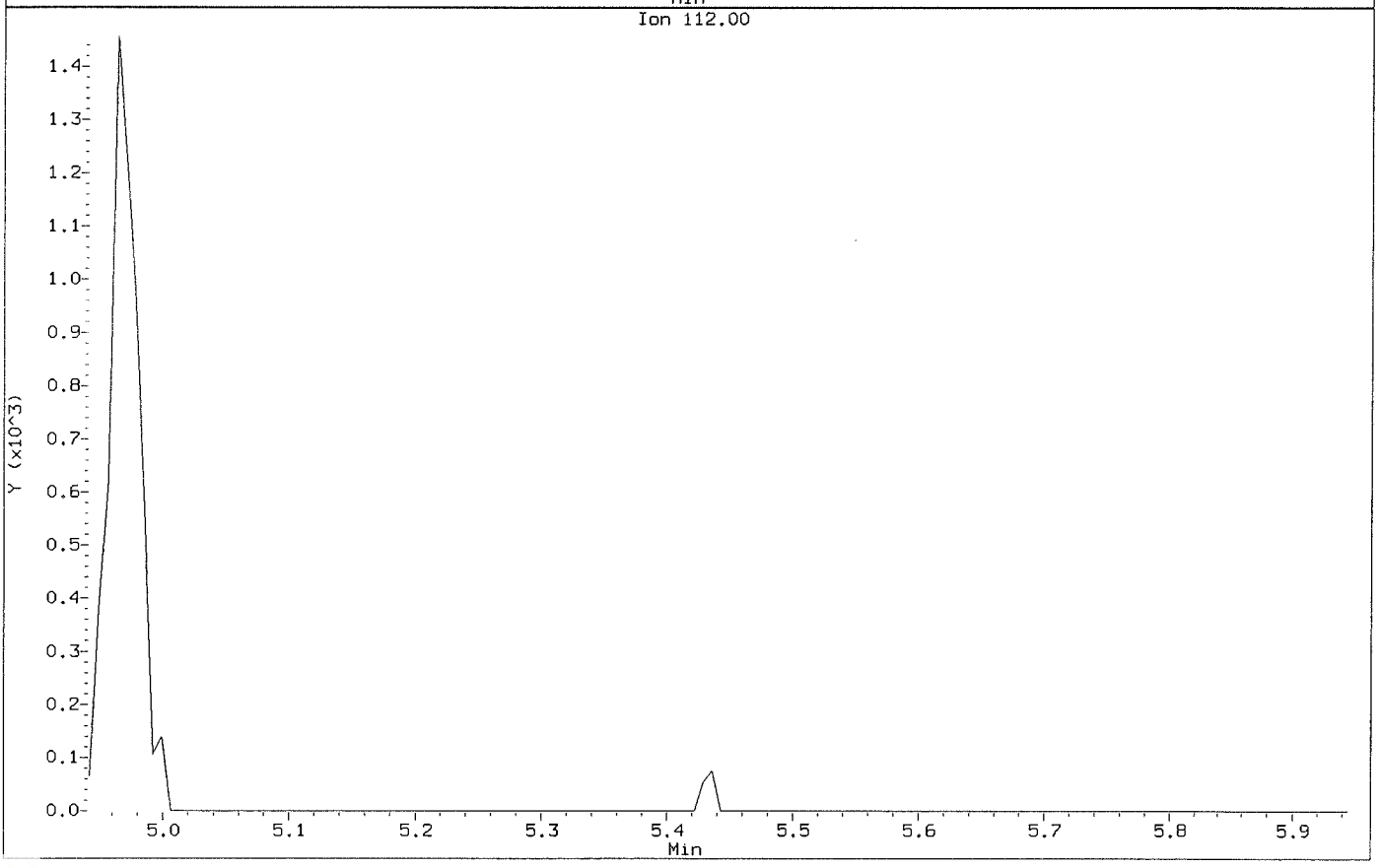




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Instrument: voa6.i
Client Sample ID: VSTD002

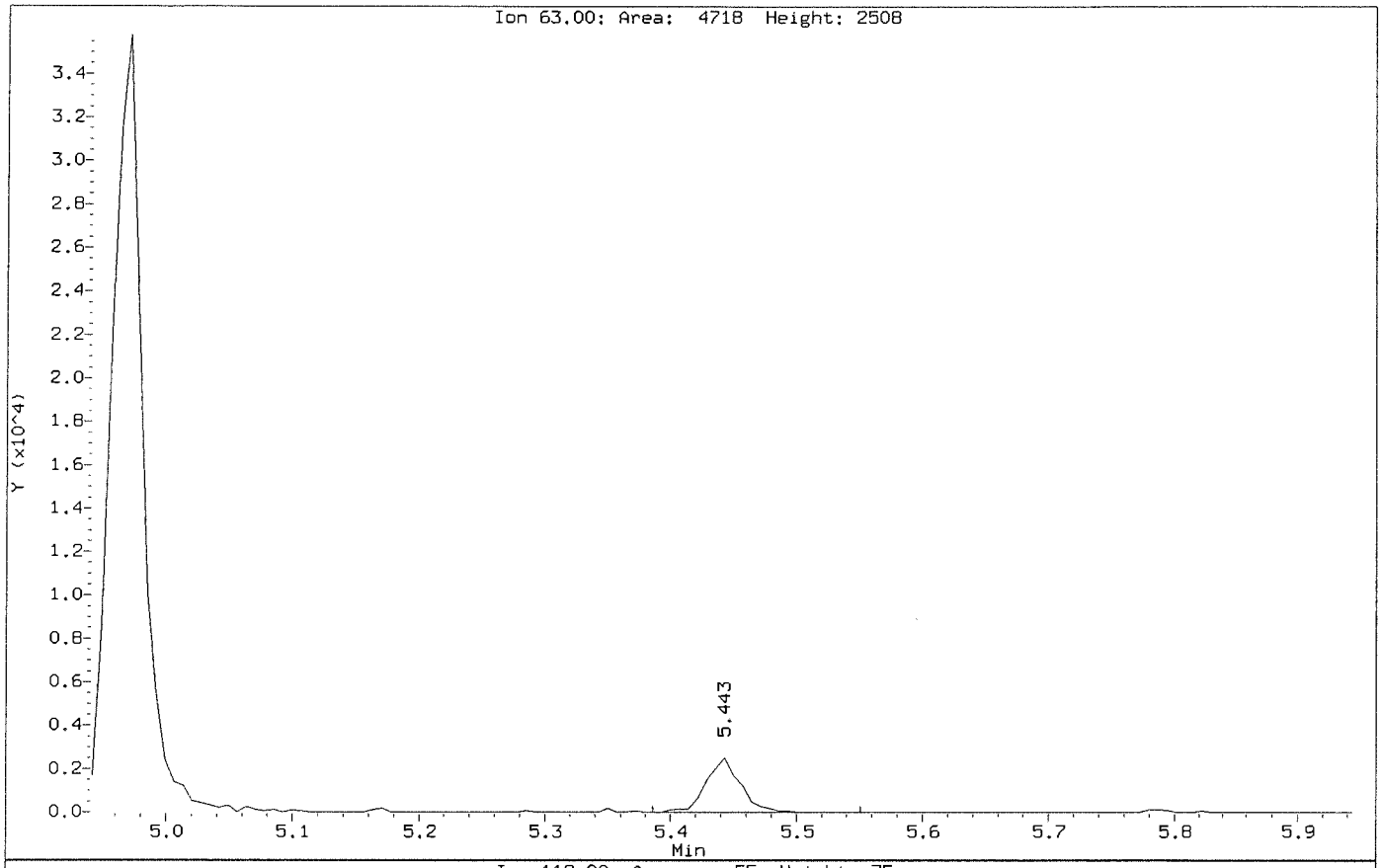
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

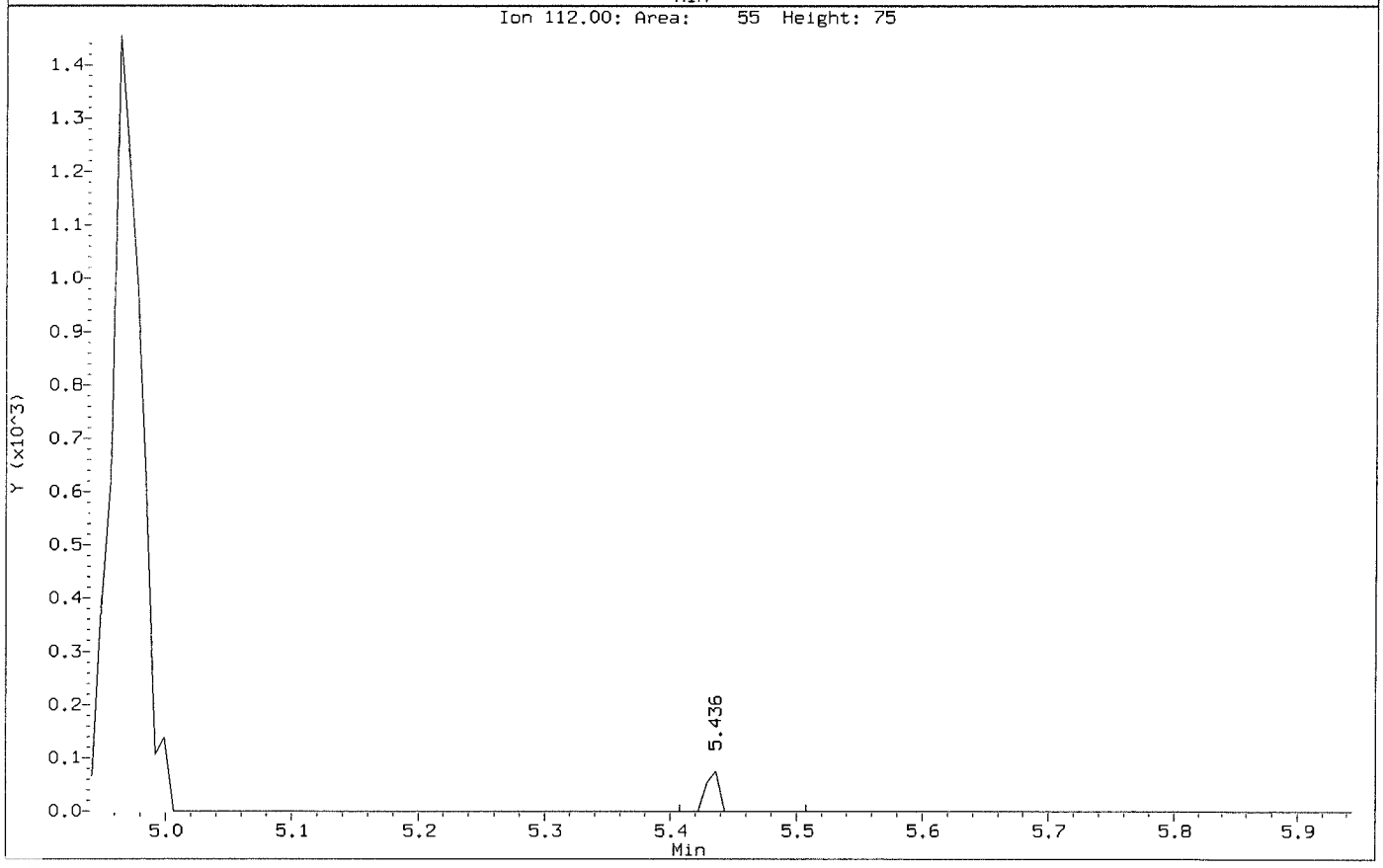




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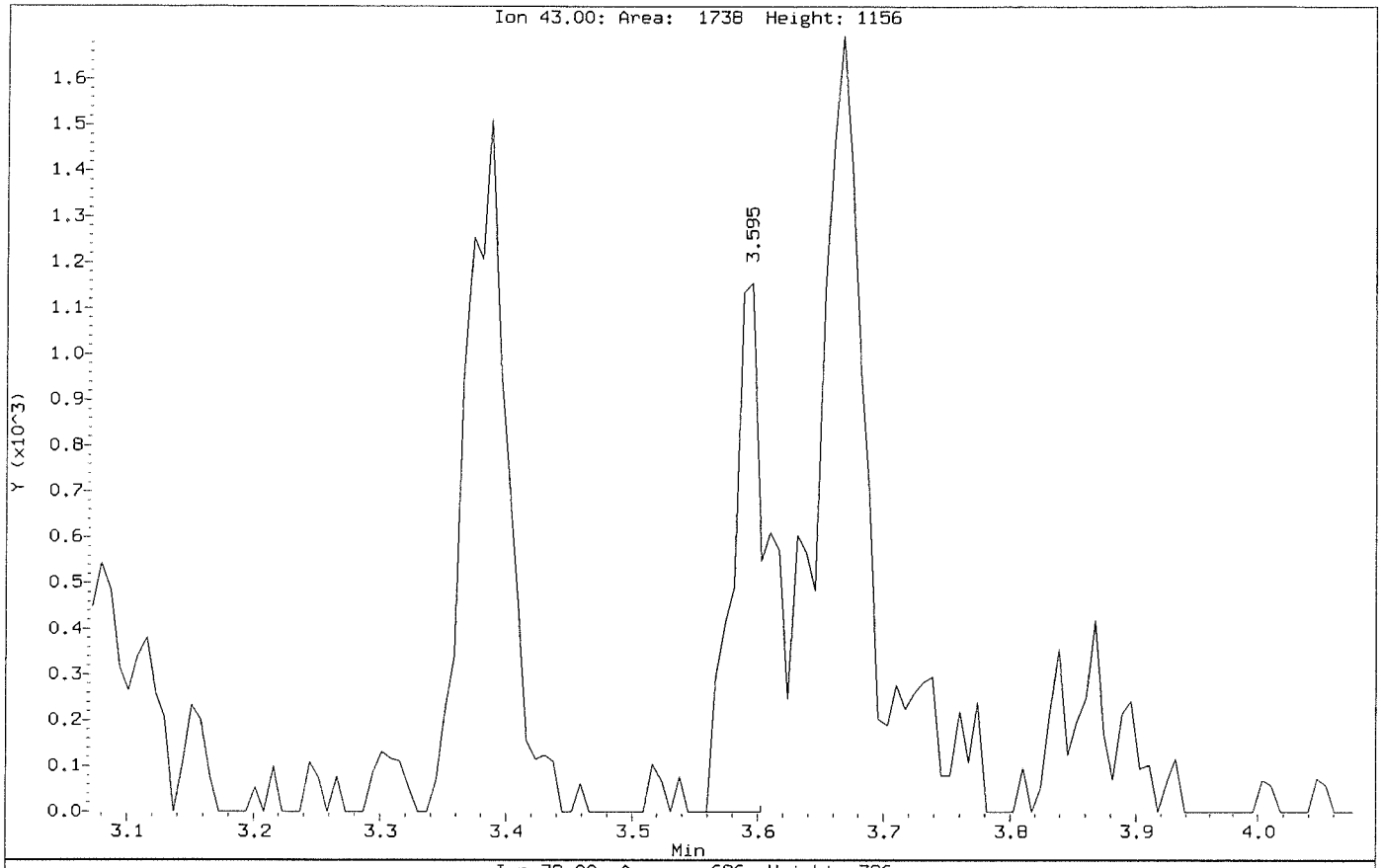
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

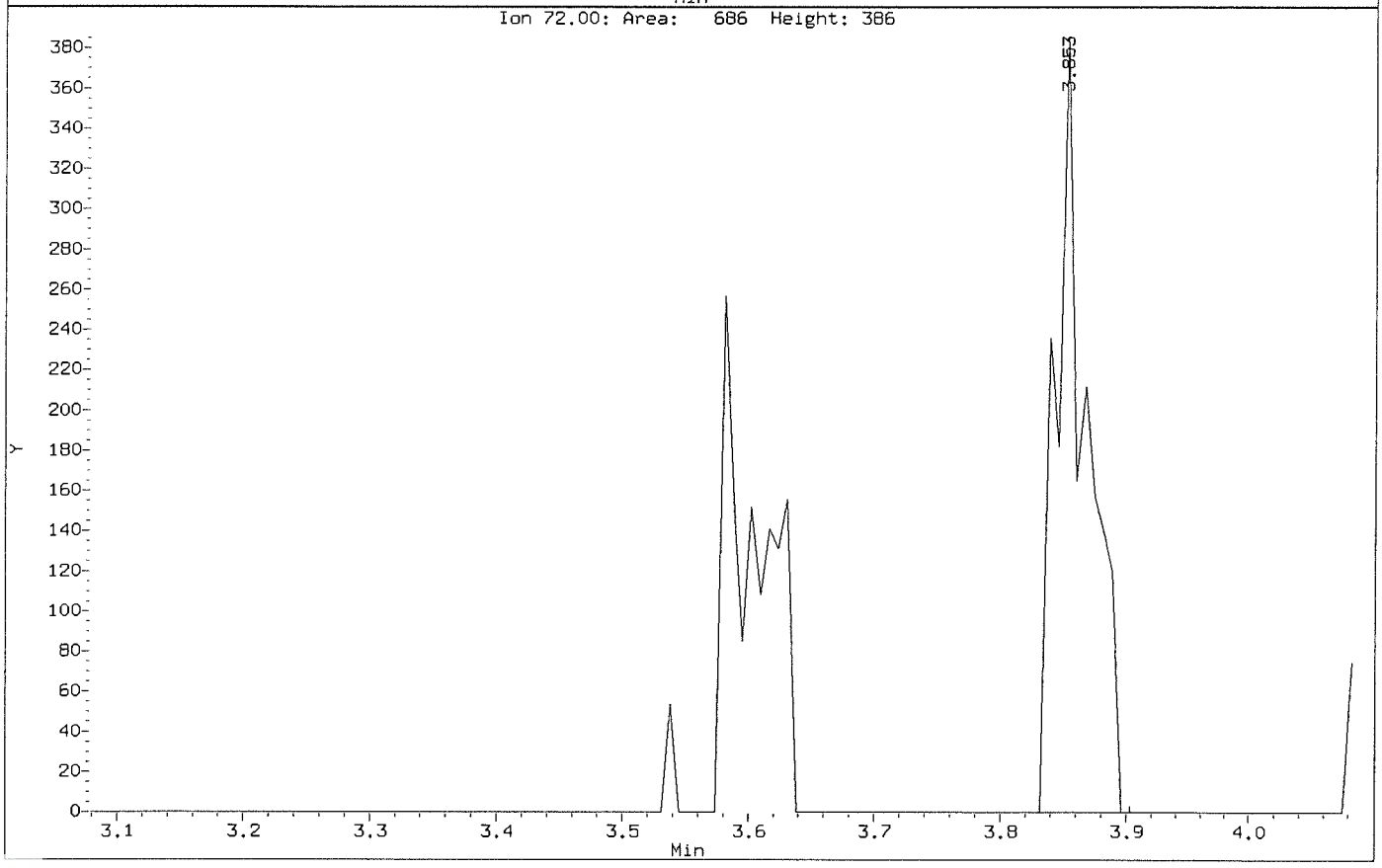




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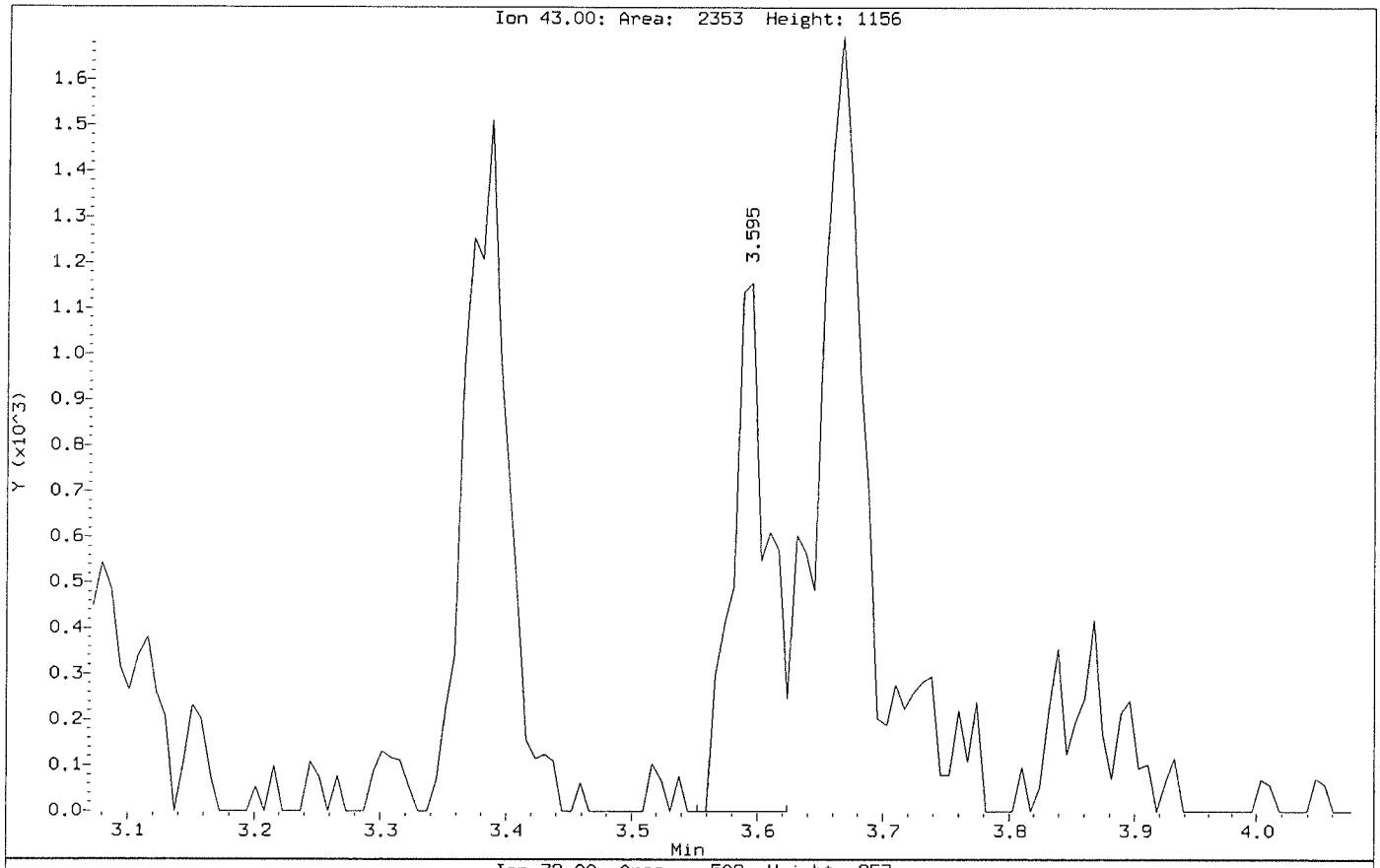
Compound: 2-Butanone
CAS Number: 78-93-3

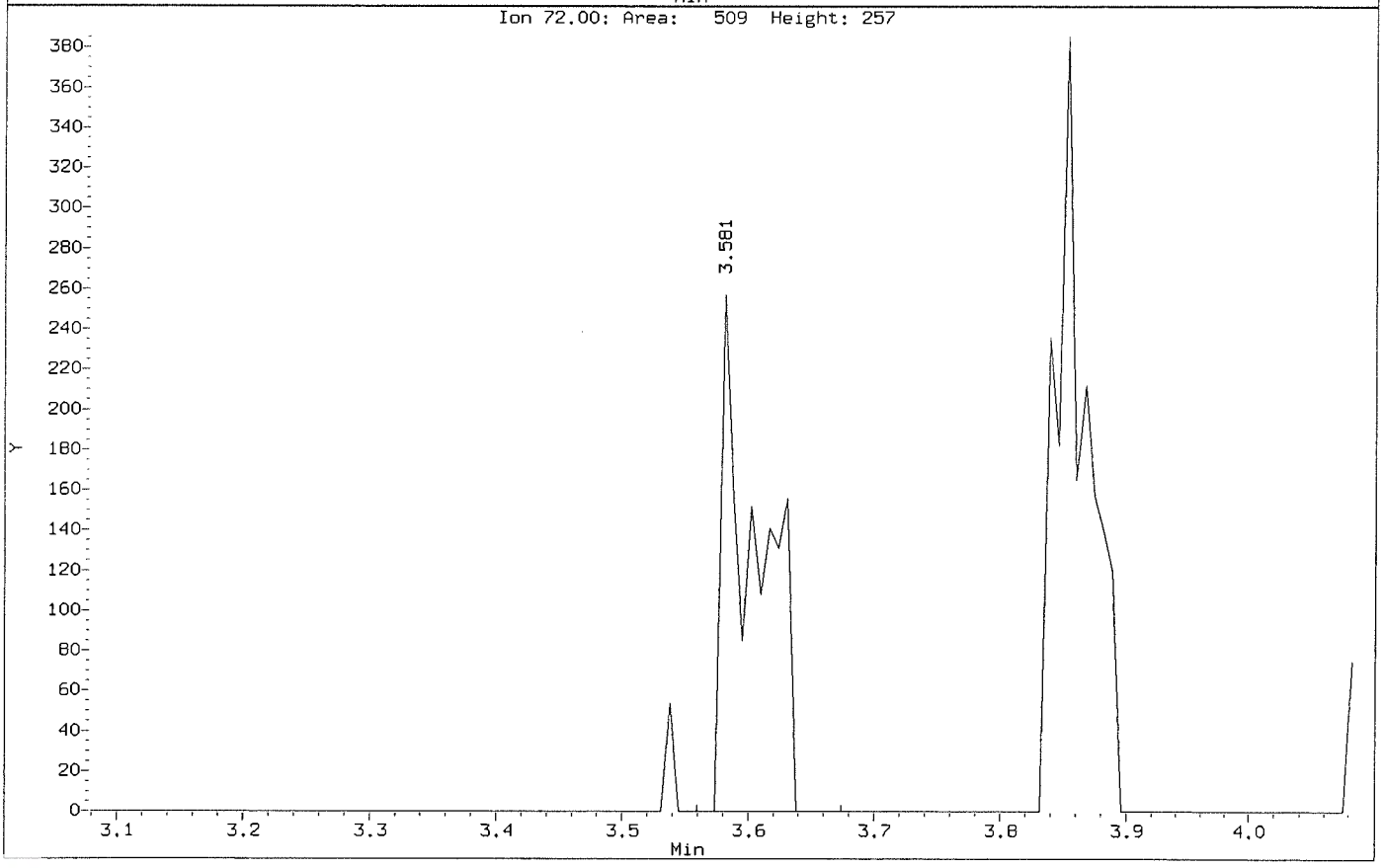




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Client Sample ID: VSTD002

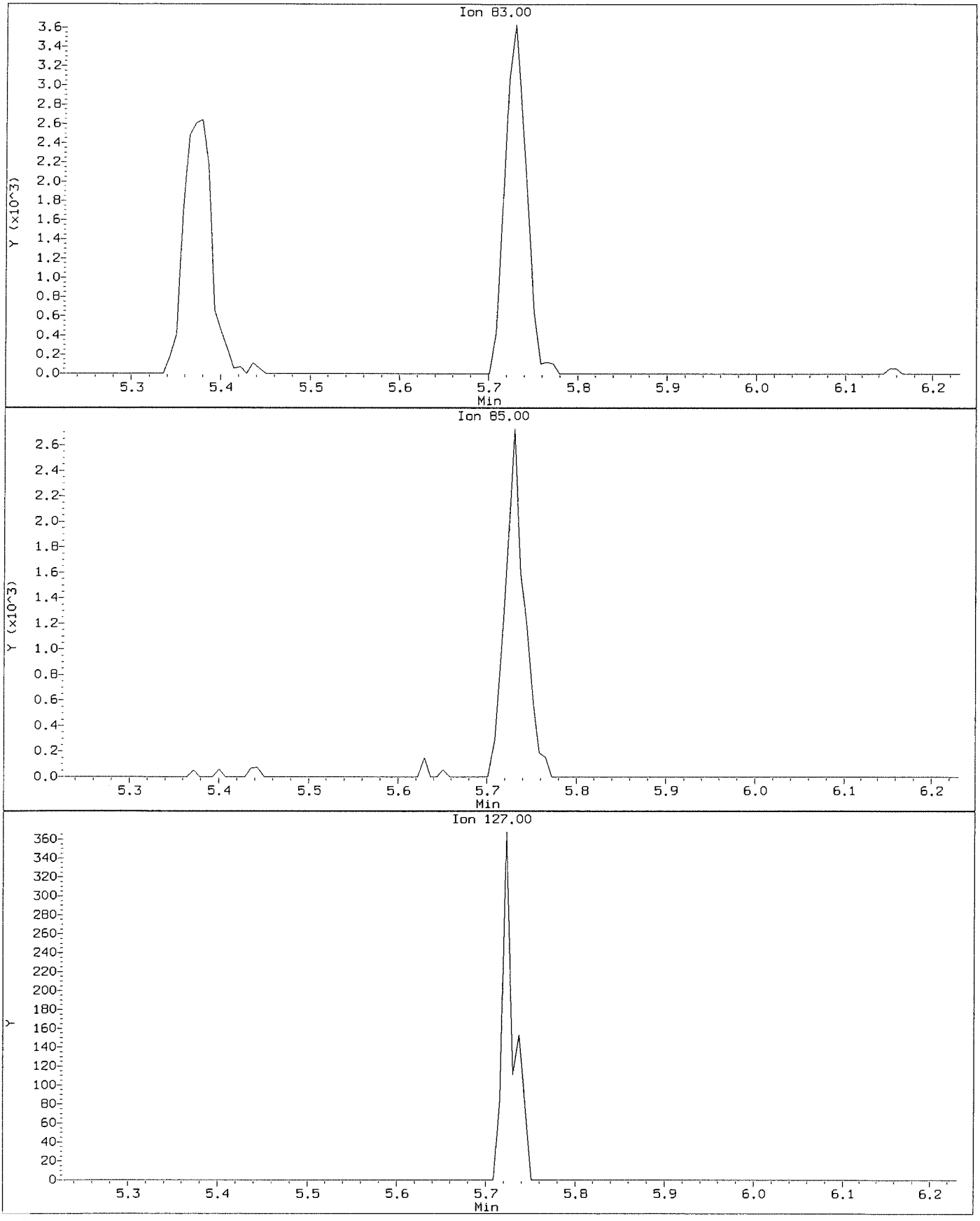
Compound: 2-Butanone
CAS Number: 78-93-3





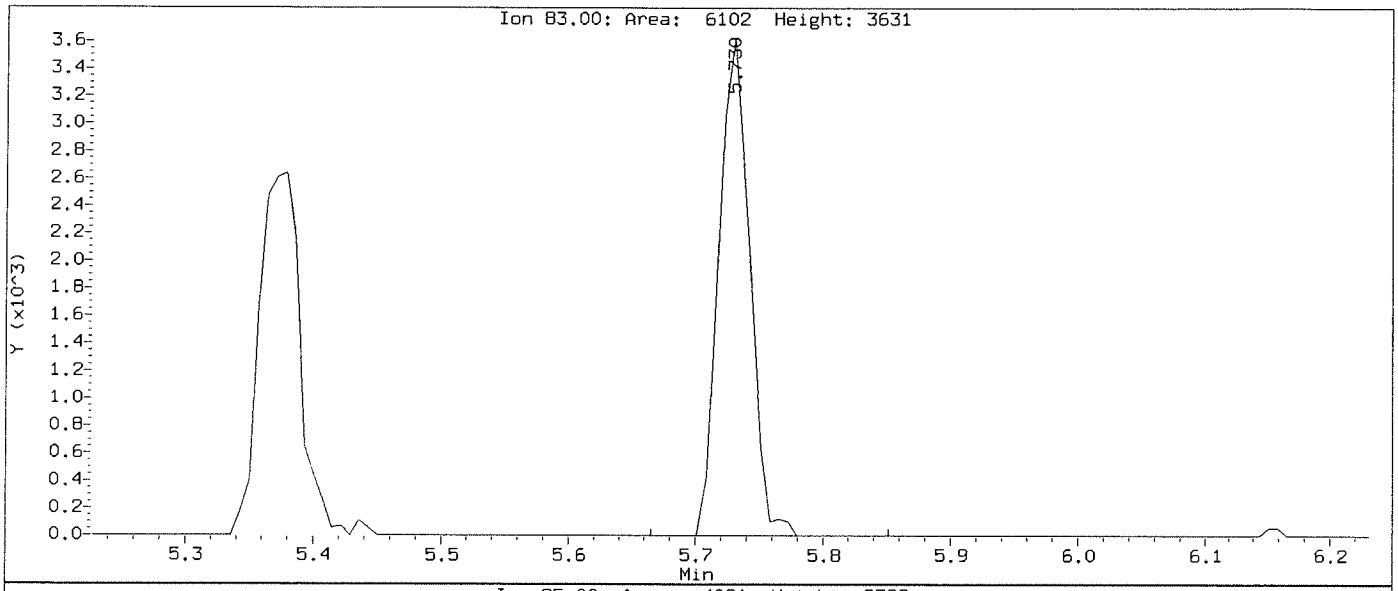
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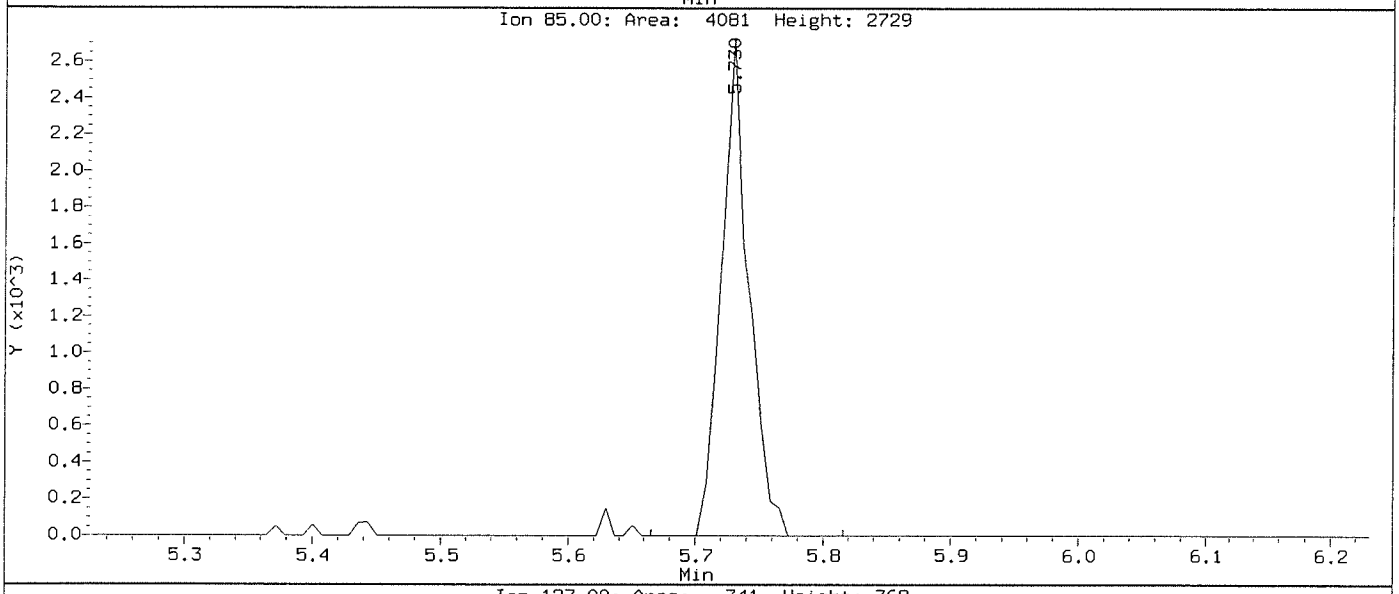
Compound: Bromodichloromethane
CAS Number: 75-27-4

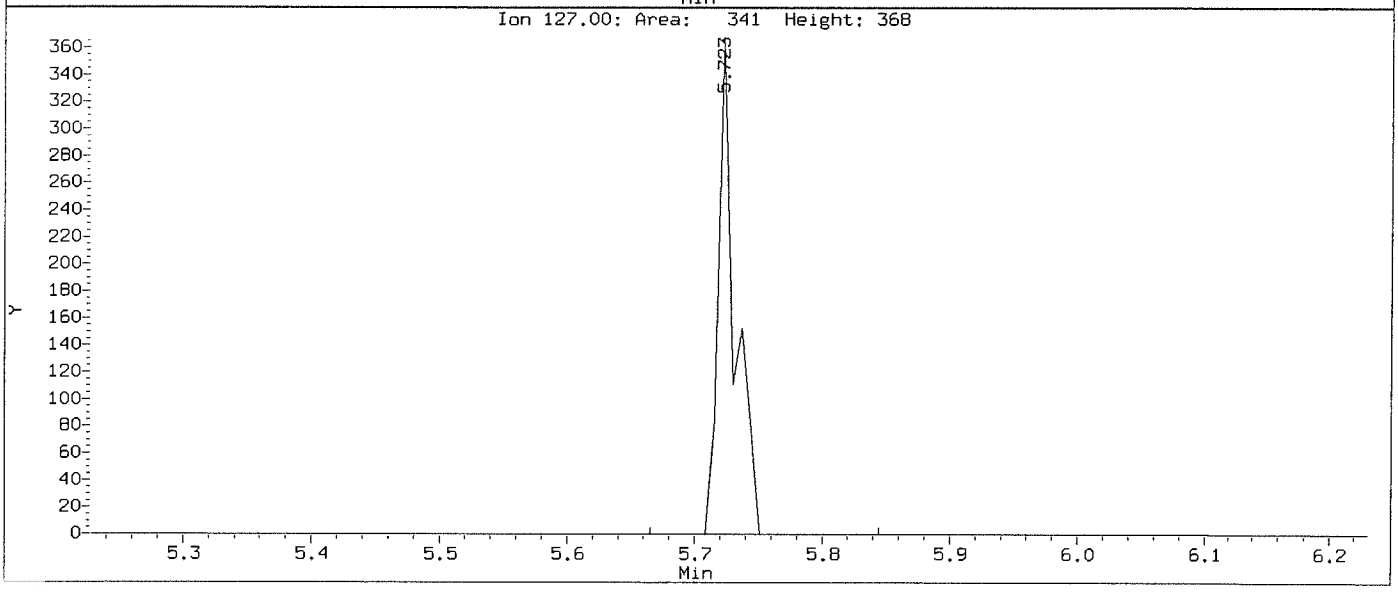


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Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Bromodichloromethane
CAS Number: 75-27-4

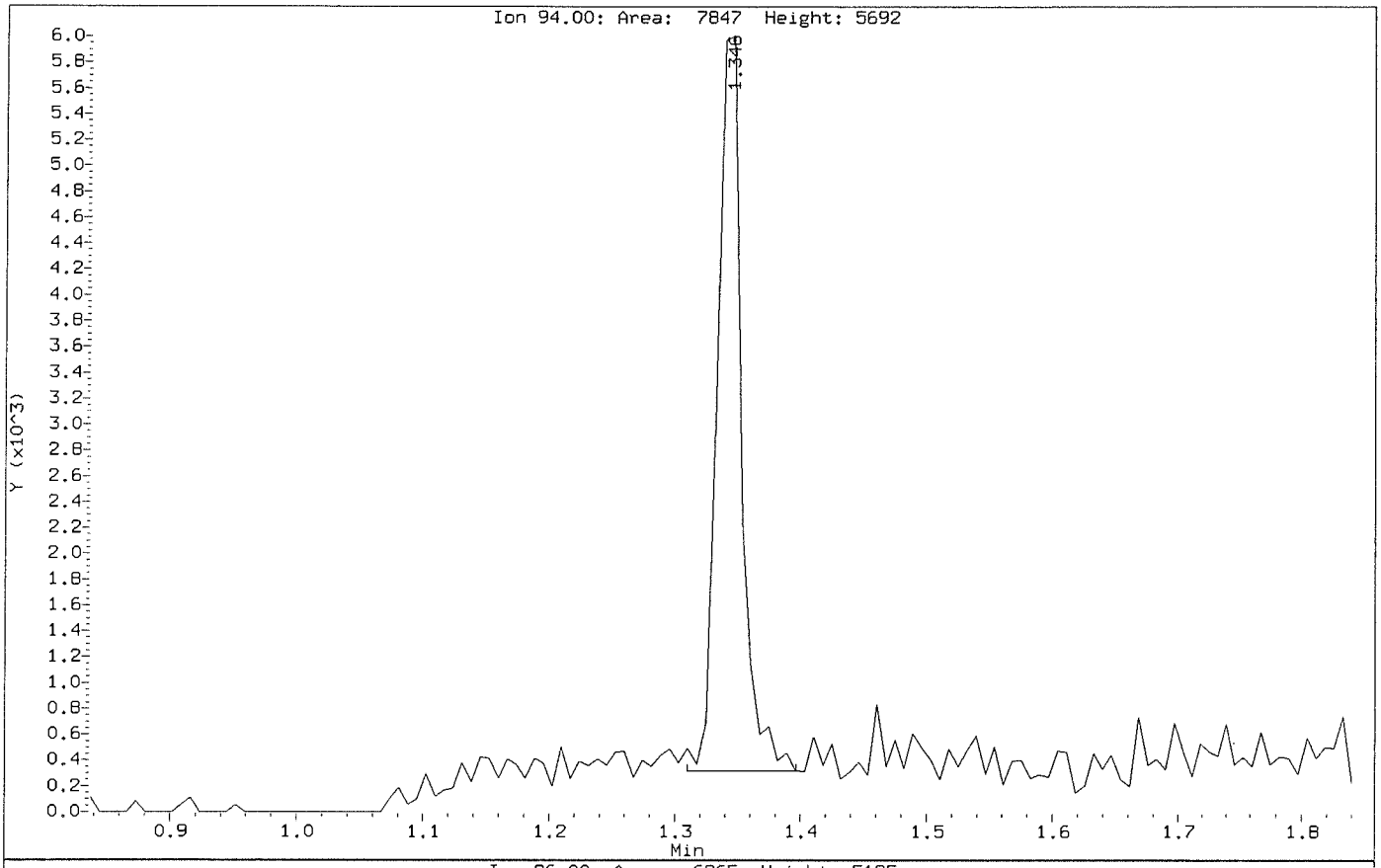


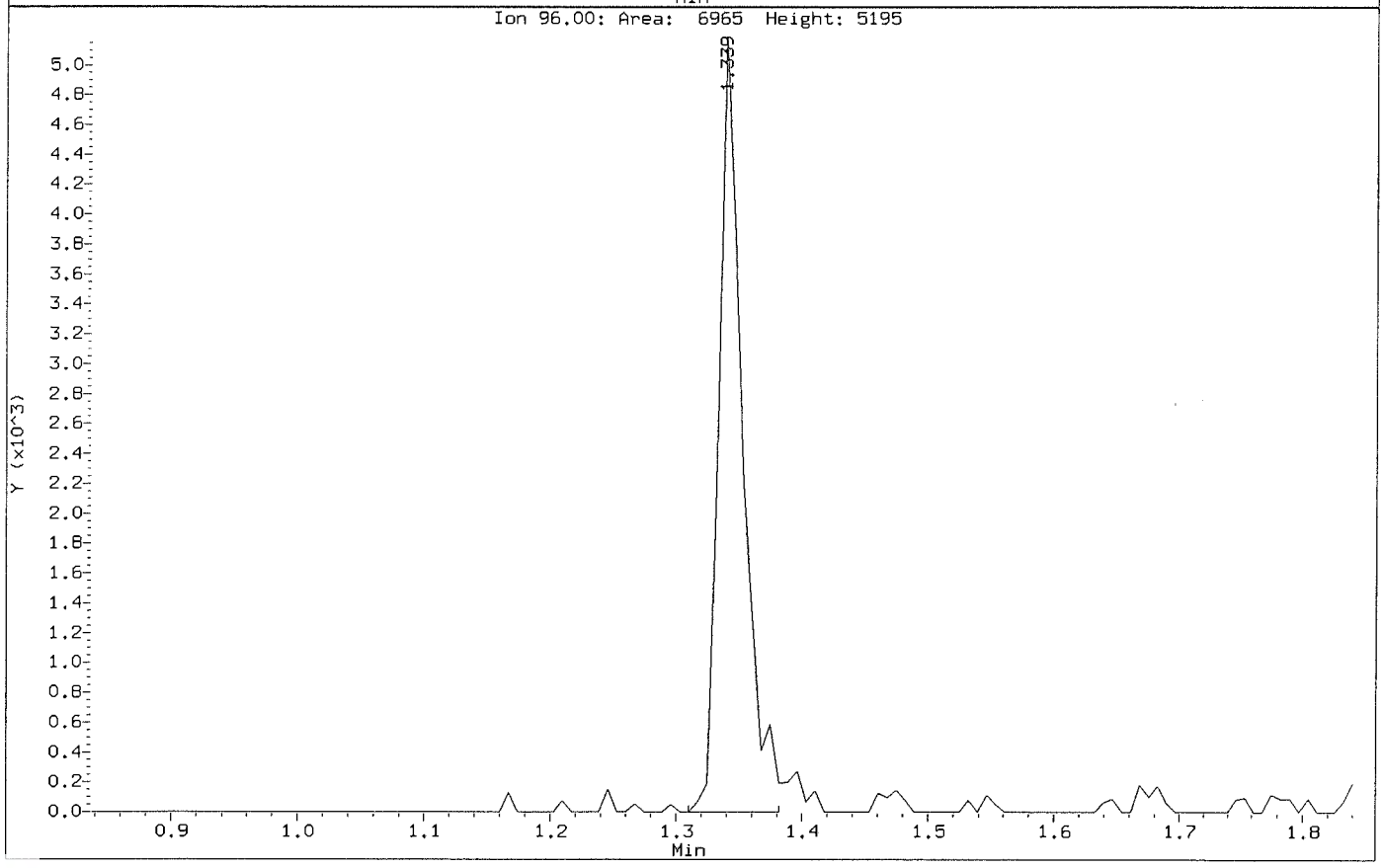




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Client Sample ID: VSTD002

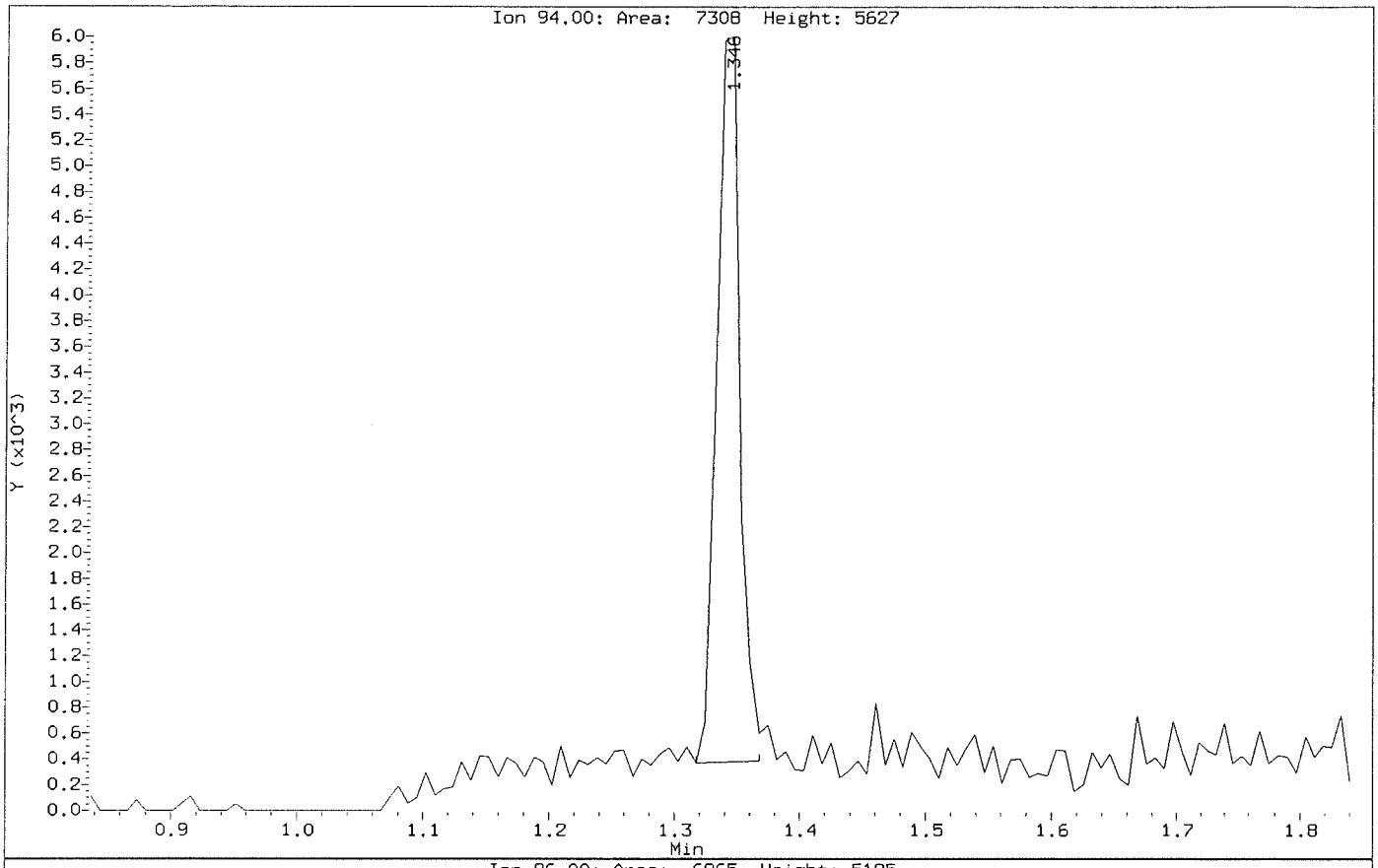
Compound: Bromomethane
CAS Number: 74-83-9

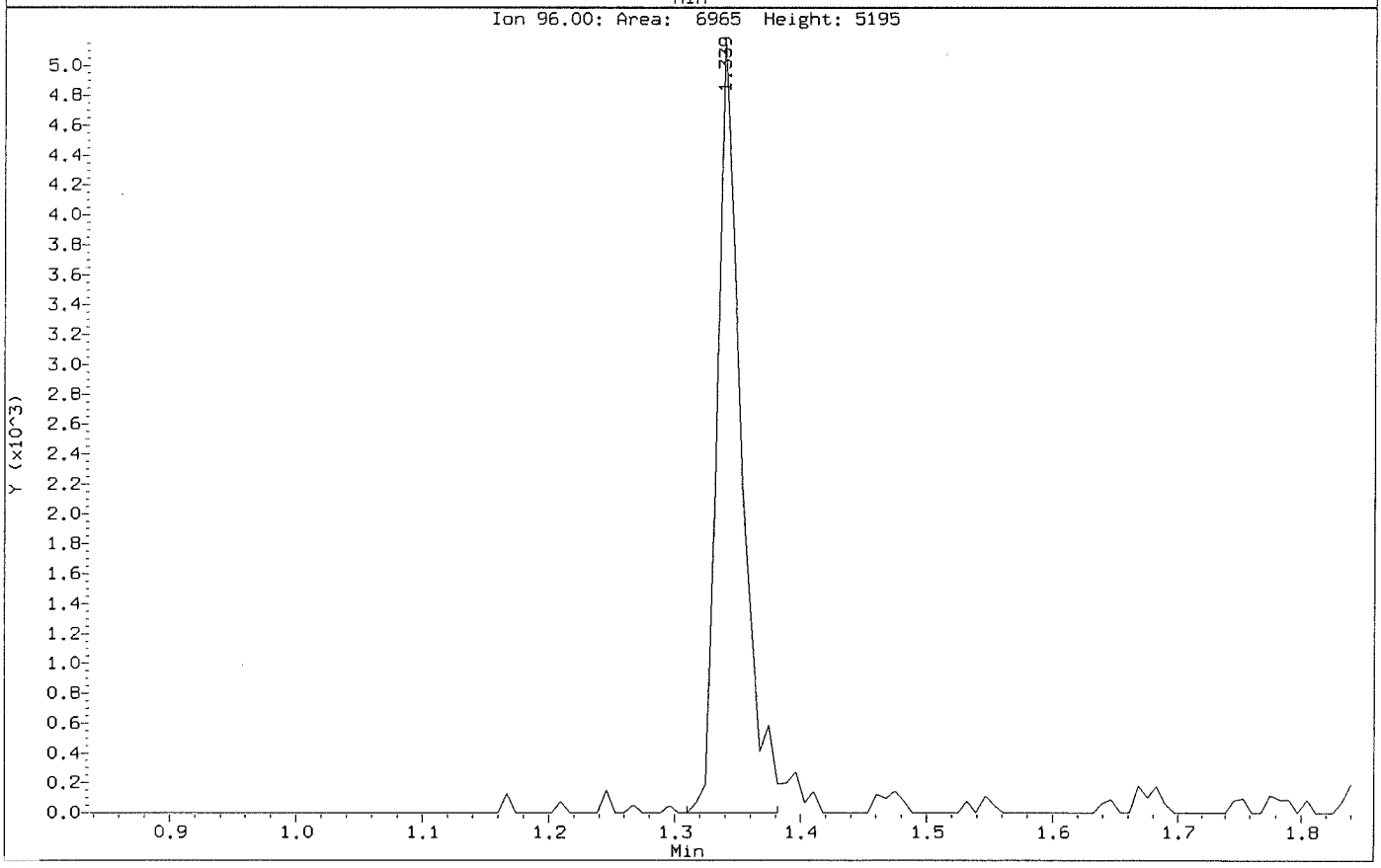




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Instrument: voa6.i
Client Sample ID: VSTD002

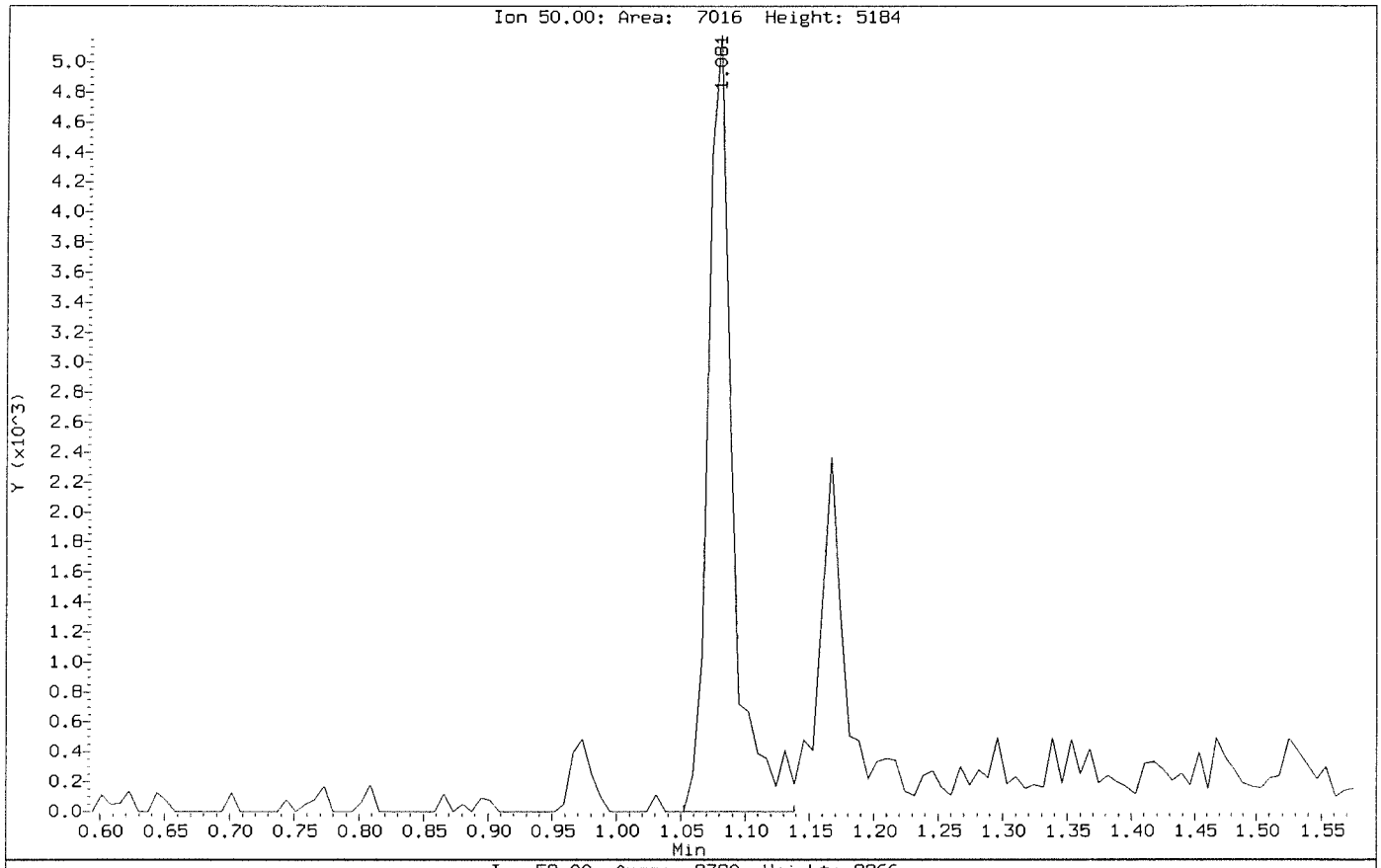
Compound: Bromomethane
CAS Number: 74-83-9

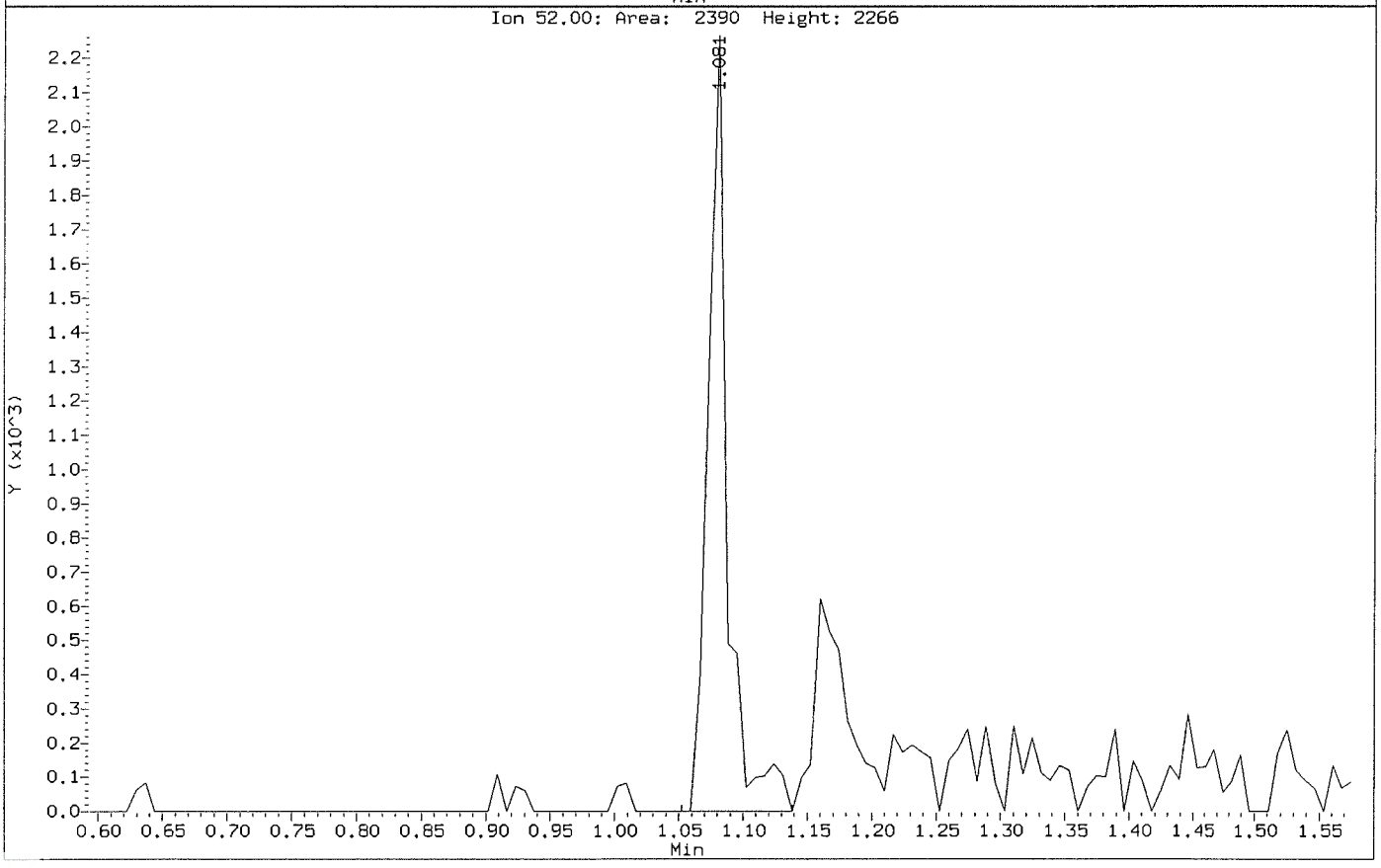




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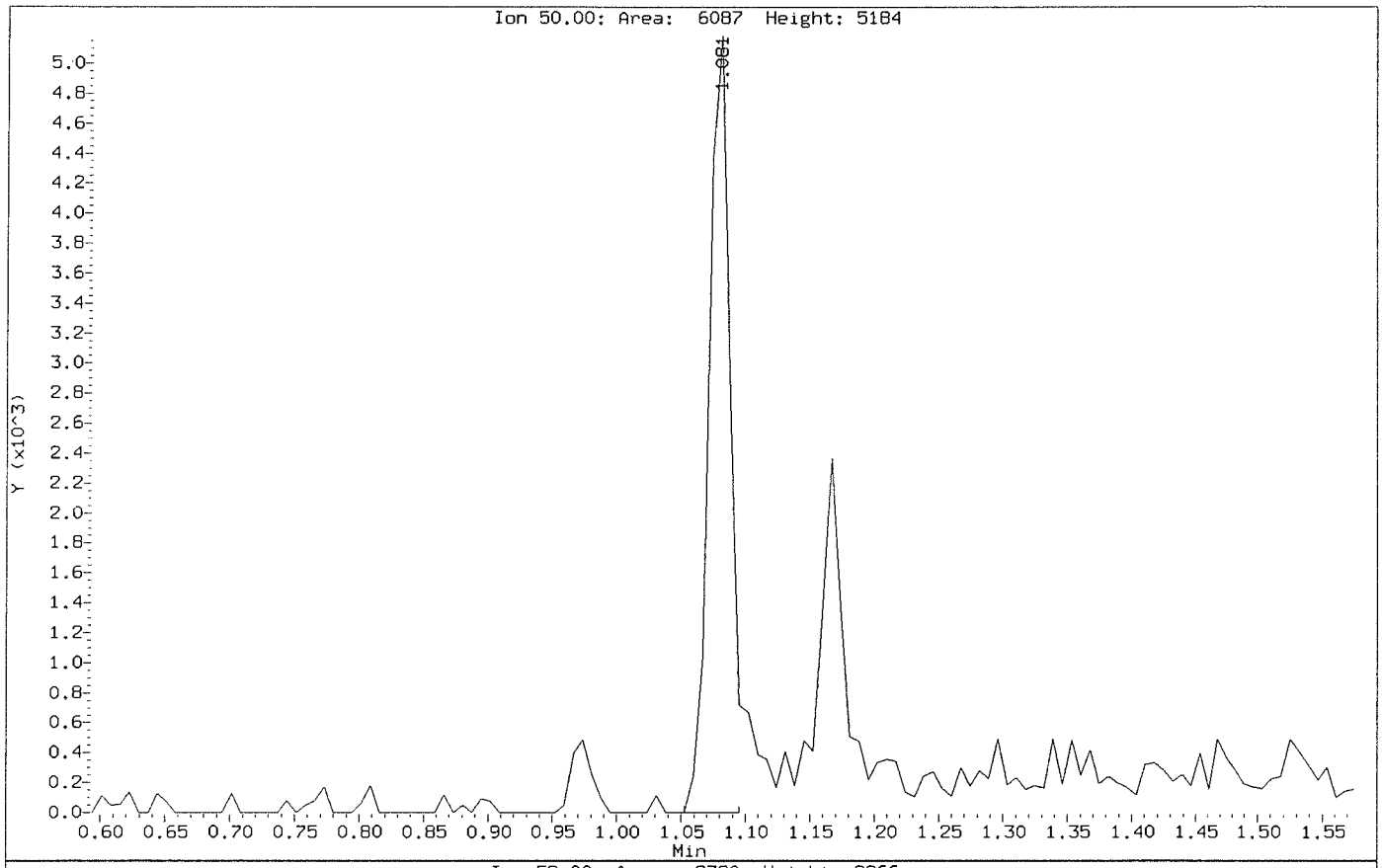
Compound: Chloromethane
CAS Number: 74-87-3

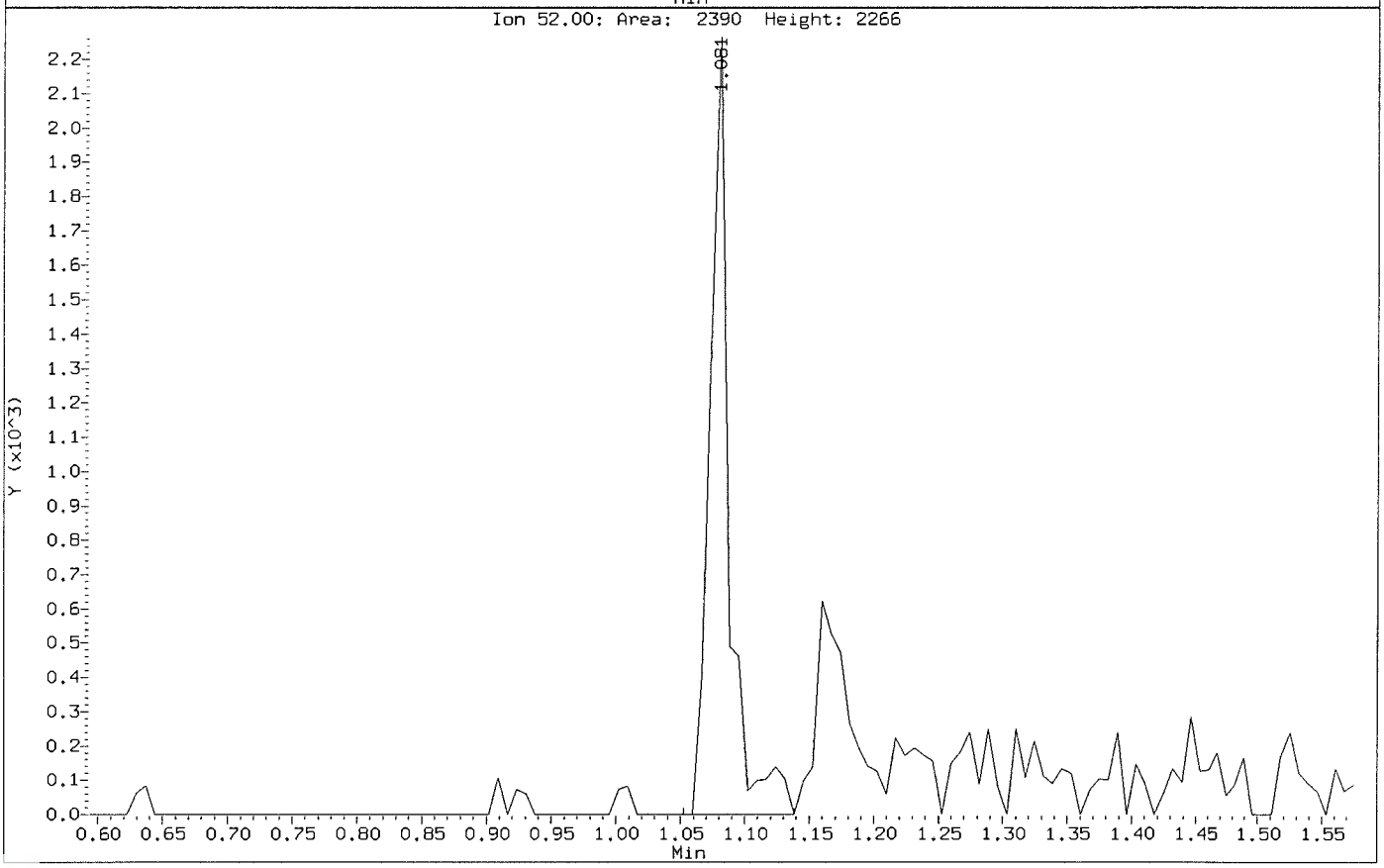




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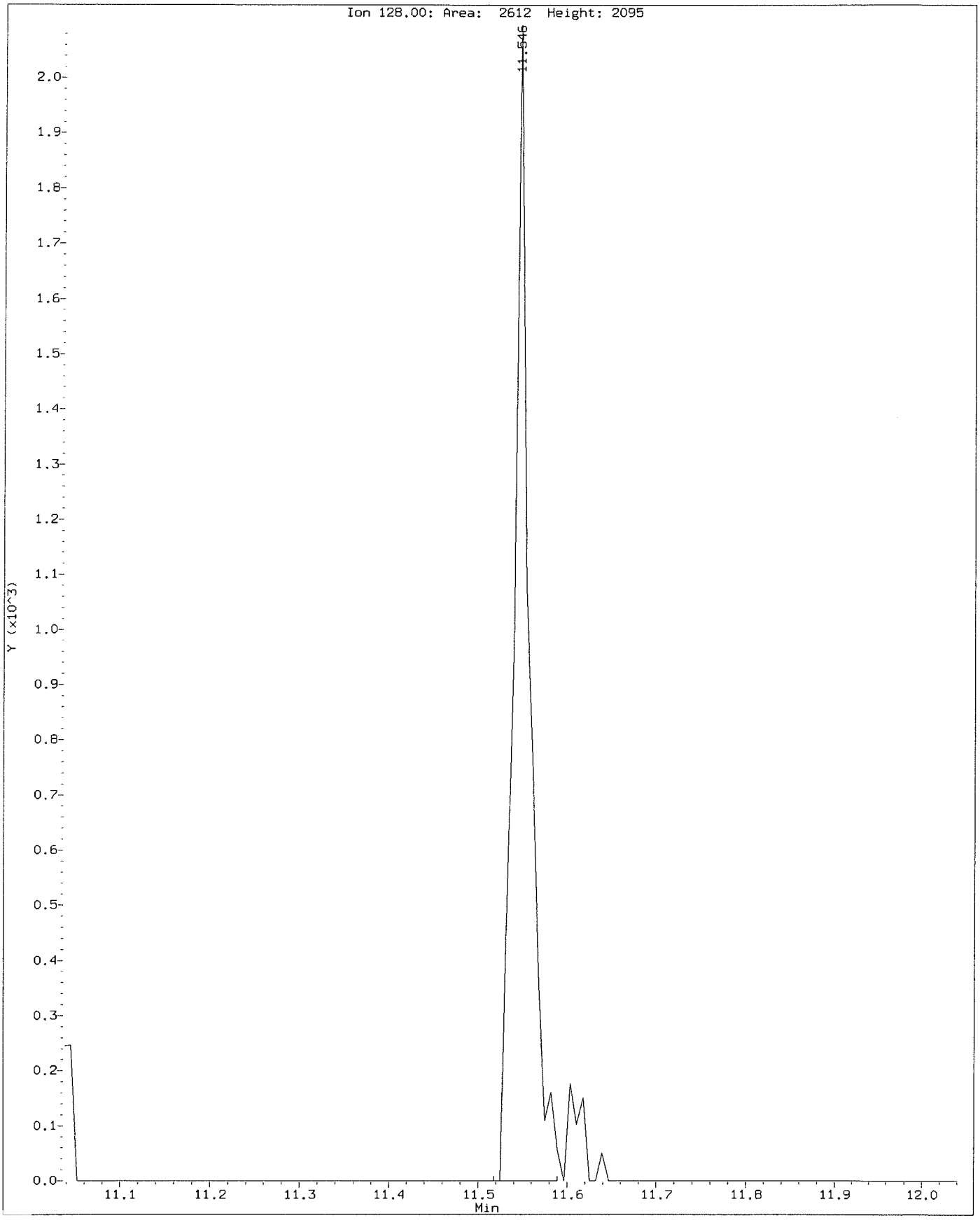
Compound: Chloromethane
CAS Number: 74-87-3





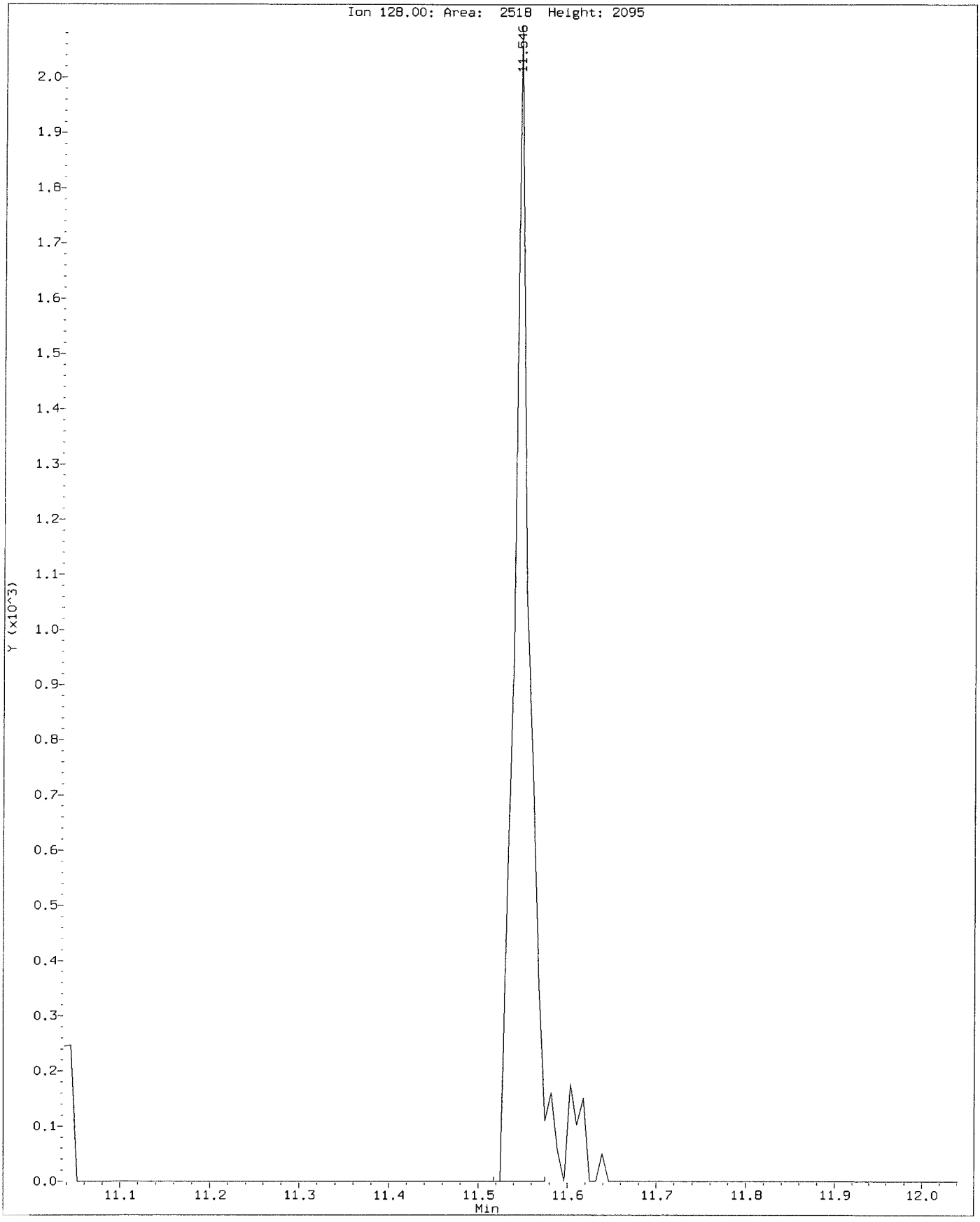
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Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112205.D
Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112206.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112206.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 22-NOV-2020 17:28
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 17:07 Cal File: Y112205.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	162012	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	300318	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	278938	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	121416	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	10956	5.00000	4.29(a)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	10135	5.00000	4.54(a)
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	9677	5.00000	4.44(aM)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	30239	5.00000	4.01(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	10098	5.00000	4.81(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	16671	5.00000	5.06
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	13385	5.00000	4.97(a)
138 Freon TF	101	1.912	1.912	(0.457)	14156	5.00000	4.68(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	8773	5.00000	4.78(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	19172	5.00000	4.90(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	15682	5.00000	4.99(a)
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	14629	5.00000	4.89(a)
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	2811	5.00000	7.48
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	10060	5.00000	5.49(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	3981	5.00000	4.35(a)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	32104	5.00000	4.68(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	622	5.00000	4.20(a)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	10085	5.00000	4.72(a)

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112206.D Page 2
Report Date: 18-Dec-2020 11:14

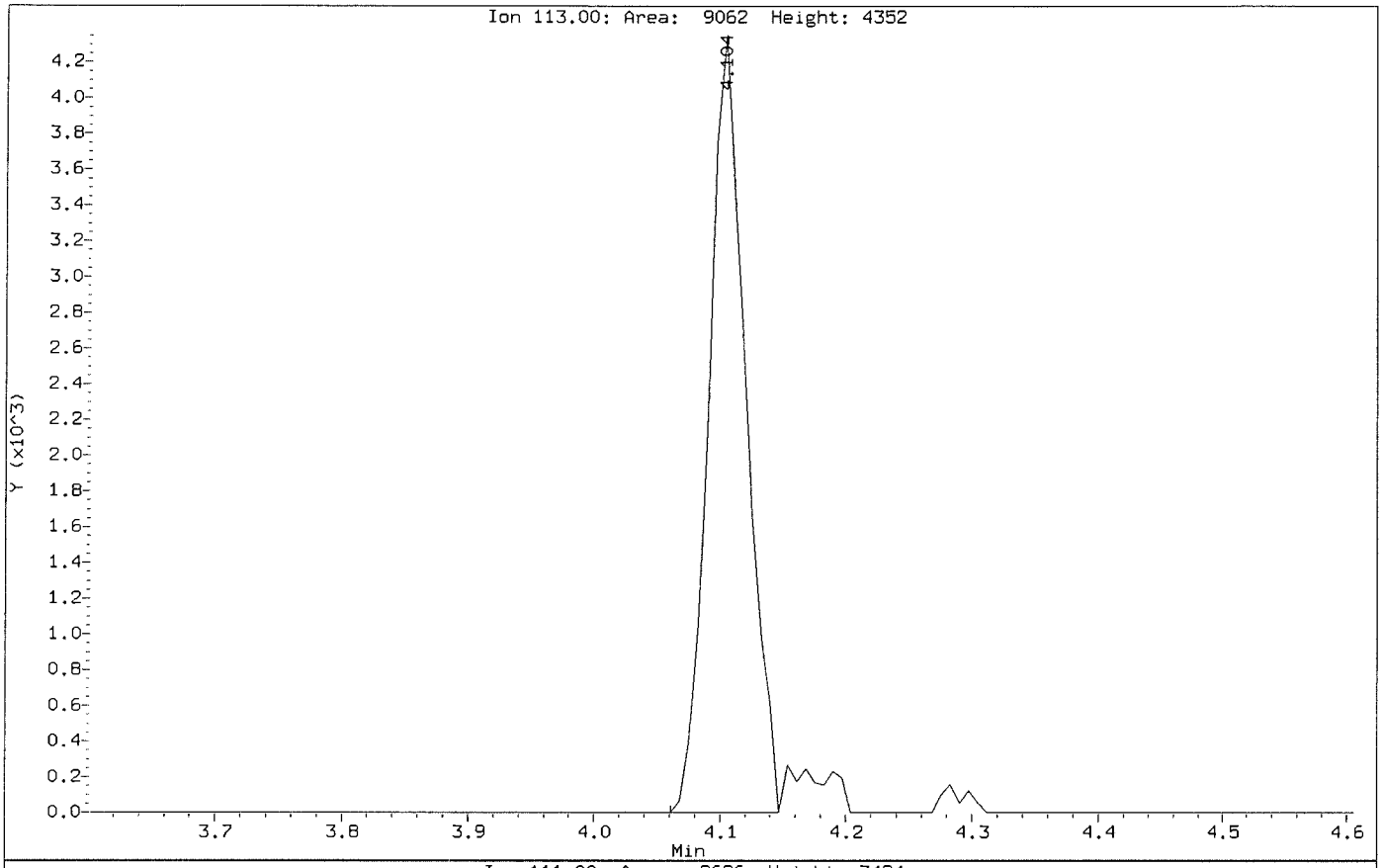
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	16776	5.00000	4.88(a)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	17594	5.00000	5.33
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	11346	5.00000	4.73(aM)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	32081	5.00000	4.45(a)
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	16983	5.00000	4.65(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	17616	5.00000	5.12
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	17906	5.00000	5.37
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	16798	5.00000	4.89(a)
24	2-Butanone	43	3.581	3.581	(0.856)	7778	10.0000	10.03
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	28324	5.00000	4.76(a)
52	2-Hexanone	43	7.090	7.090	(0.924)	13798	10.0000	10.43
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	32892	5.00000	4.52(a)
82	p-Isopropyltoluene	119	9.648	9.648	(0.999)	31739	5.00000	5.85
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	22685	10.0000	11.39
10	Acetone	43	1.976	1.976	(0.473)	13349	10.0000	11.81
37	Benzene	78	4.519	4.519	(0.909)	40967	5.00000	4.99(a)
74	Bromobenzene	156	8.802	8.802	(0.911)	10867	5.00000	5.29
29	Bromochloromethane	128	3.795	3.795	(0.908)	6230	5.00000	5.44
39	Bromodichloromethane	83	5.729	5.729	(1.153)	15385	5.00000	4.83(a)
66	Bromoform	173	8.416	8.416	(1.097)	5740	5.00000	6.23(T)
6	Bromomethane	94	1.339	1.339	(0.320)	17502	5.00000	6.34
19	Carbon Disulfide	76	2.069	2.069	(0.495)	59375	10.0000	9.82
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	11480	5.00000	4.43(aH)
59	Chlorobenzene	112	7.692	7.692	(1.003)	27725	5.00000	4.64(a)
7	Chloroethane	64	1.403	1.403	(0.336)	13742	5.00000	5.47
28	Chloroform	83	3.910	3.910	(0.935)	19691	5.00000	4.64(a)
3	Chloromethane	50	1.081	1.081	(0.258)	15313	5.00000	5.14
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	11040	5.00000	4.65(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	18099	5.00000	4.75(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	10581	5.00000	4.89(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	7923	5.00000	5.04
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	11080	5.00000	6.53
61	Ethylbenzene	106	7.800	7.800	(1.017)	13989	5.00000	4.65(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	3007	5.00000	6.19
67	Isopropylbenzene	105	8.559	8.559	(1.116)	40978	5.00000	4.51(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	33759	10.0000	14.06
17	Methylene Chloride	84	2.306	2.306	(0.551)	9518	5.00000	4.27(a)
87	n-Butylbenzene	91	9.991	9.991	(1.034)	30916	5.00000	6.95
73	n-Propylbenzene	91	8.910	8.910	(0.922)	47698	5.00000	4.69(a)
92	Naphthalene	128	11.546	11.546	(1.195)	6815	5.00000	6.09
63	o-Xylene	106	8.244	8.244	(1.075)	16651	5.00000	6.71
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	37742	5.00000	5.15
64	Styrene	104	8.258	8.258	(1.077)	27600	5.00000	4.26(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	26267	5.00000	4.66(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	8298	5.00000	4.82(a)
50	Toluene	91	6.446	6.446	(0.840)	42173	5.00000	4.68(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	8773	5.00000	4.39(a)
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	16536	5.00000	5.04
38	Trichloroethene	130	5.207	5.207	(1.048)	10544	5.00000	5.04
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	28601	5.00000	4.69(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	19810	5.00000	5.08

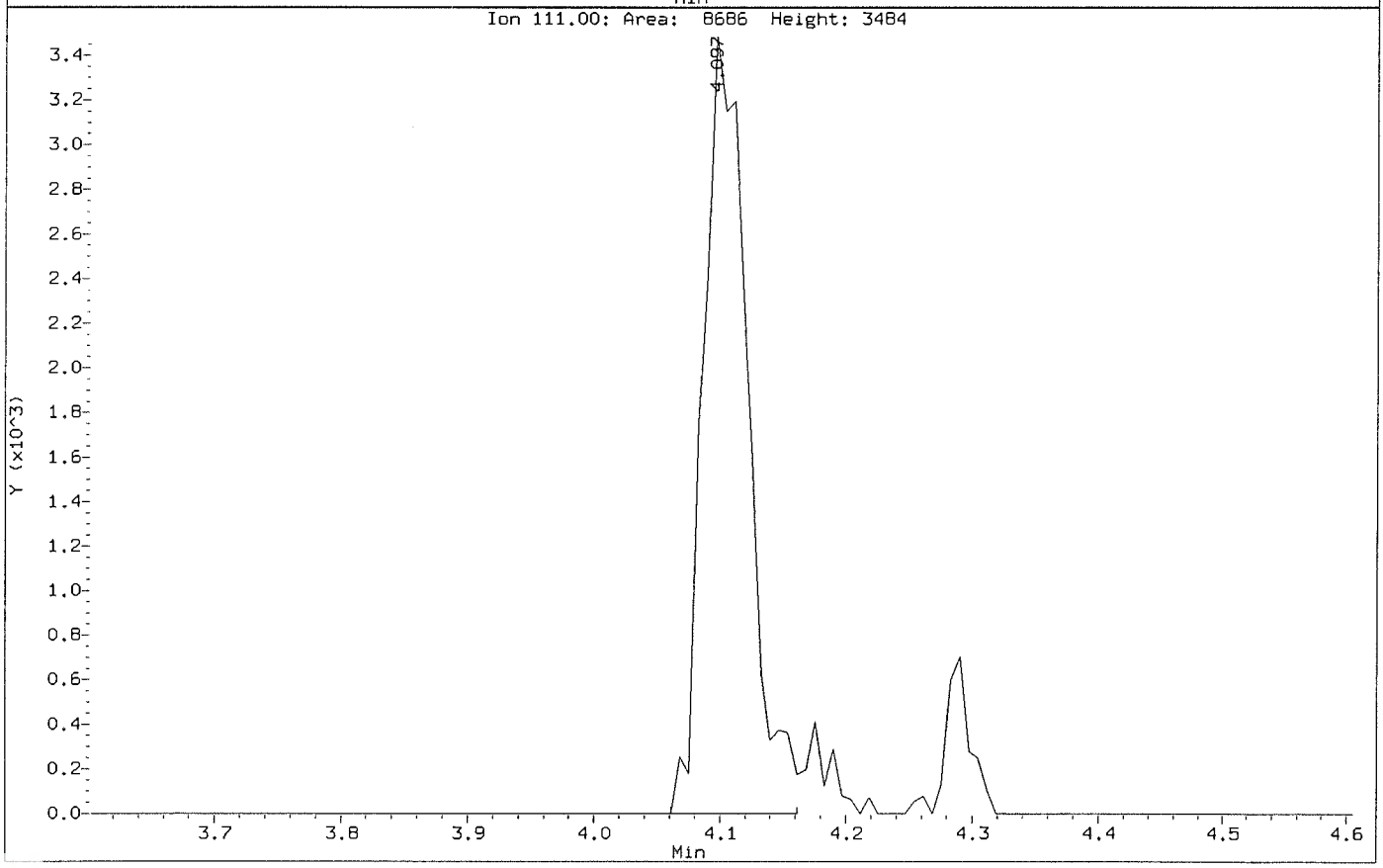
QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112206.D
Injection Date: 22-NOV-2020 17:28
Instrument: voa6.i
Client Sample ID: VSTD005

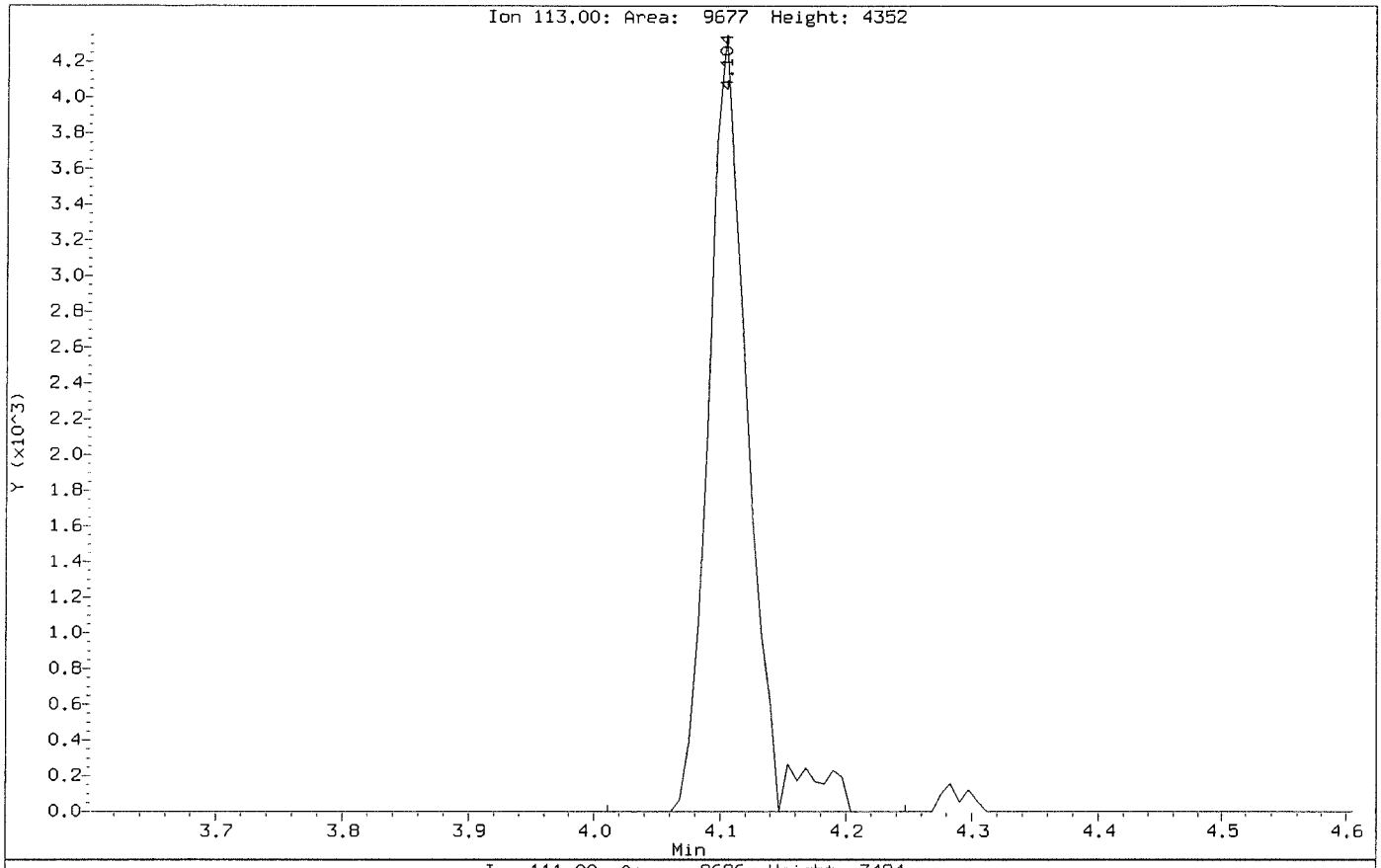
Compound: Dibromofluoromethane
CAS Number: 1868-53-7

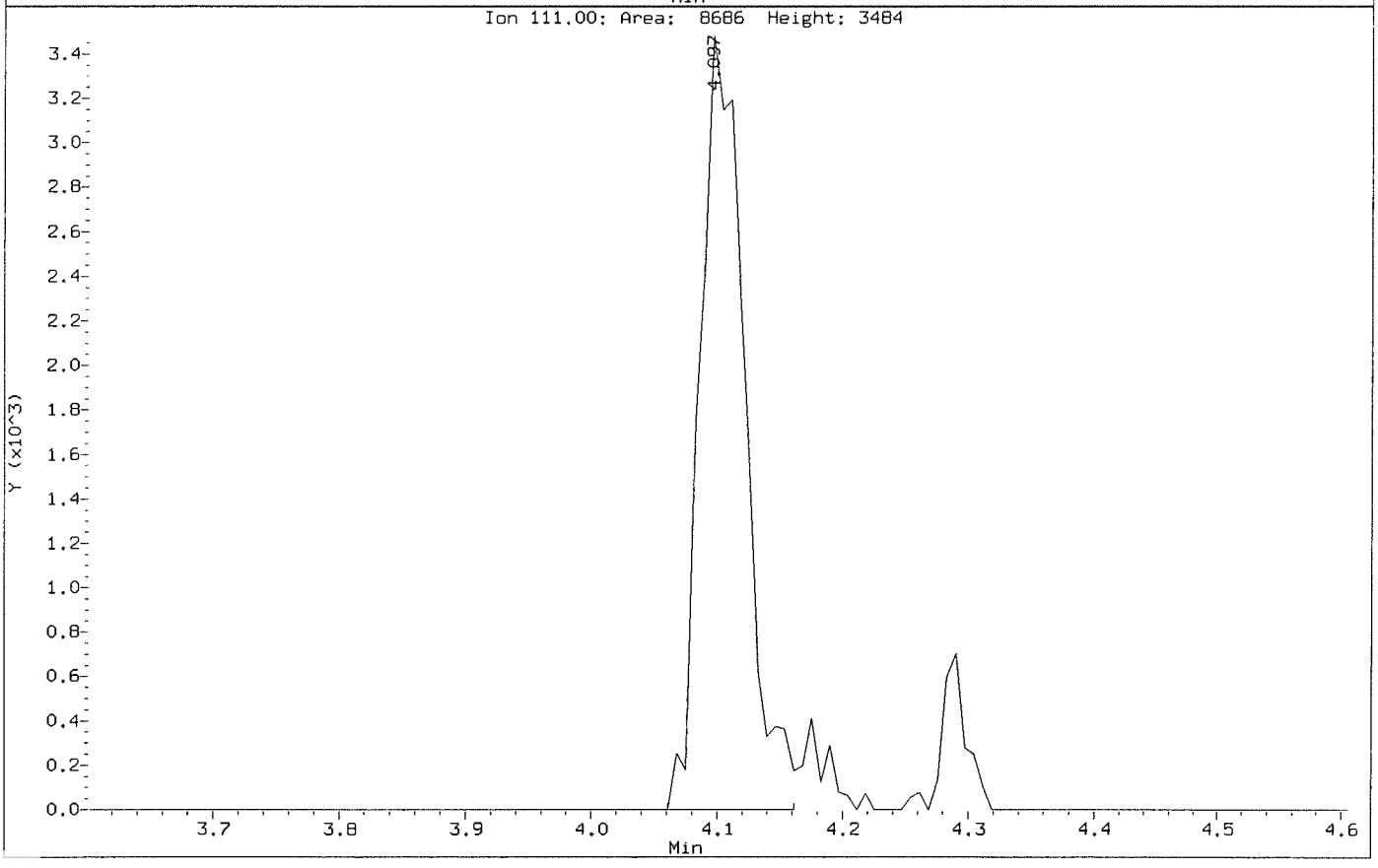




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Injection Date: 22-NOV-2020 17:28
Instrument: voa6.i
Client Sample ID: VSTD005

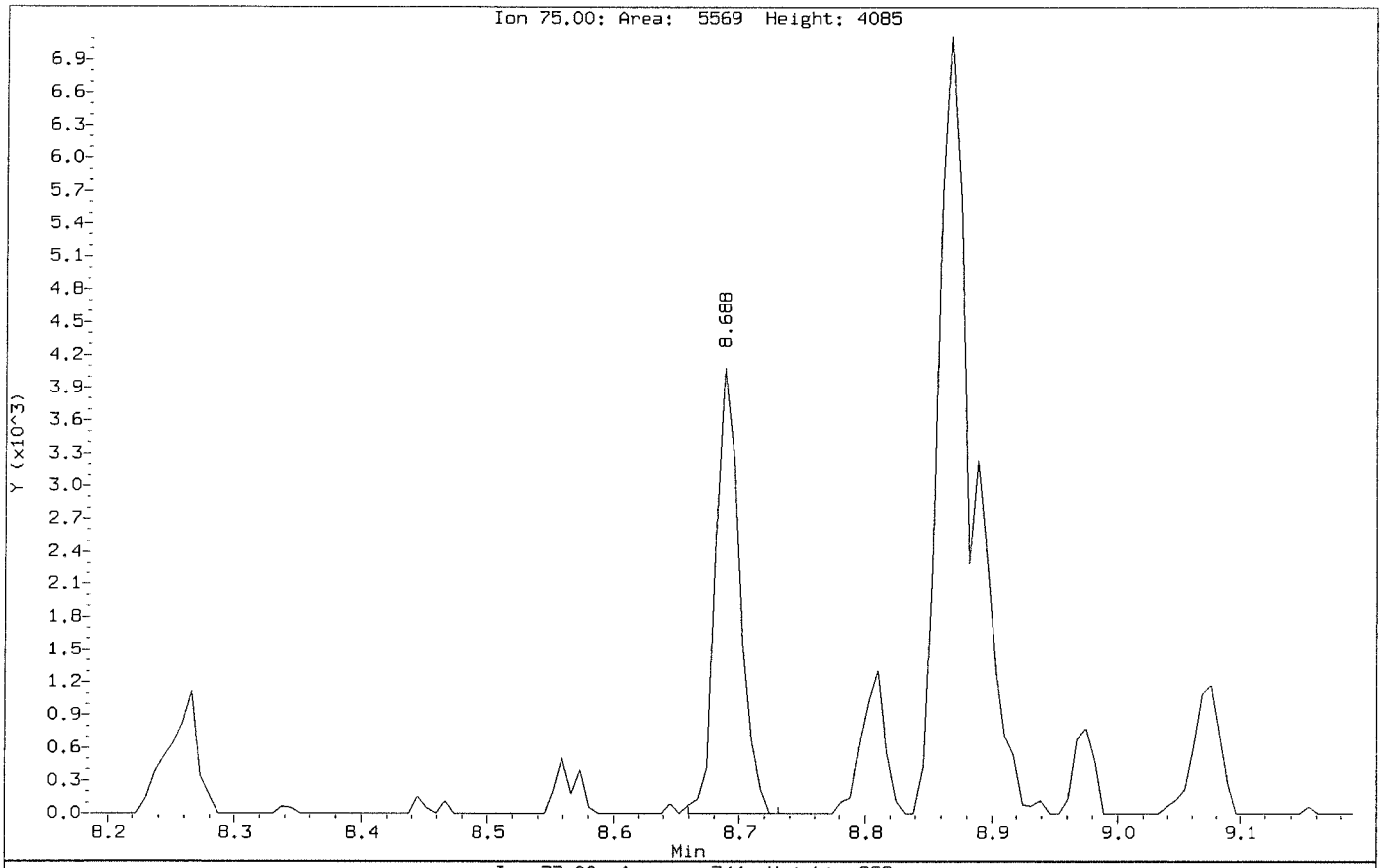
Compound: Dibromofluoromethane
CAS Number: 1868-53-7

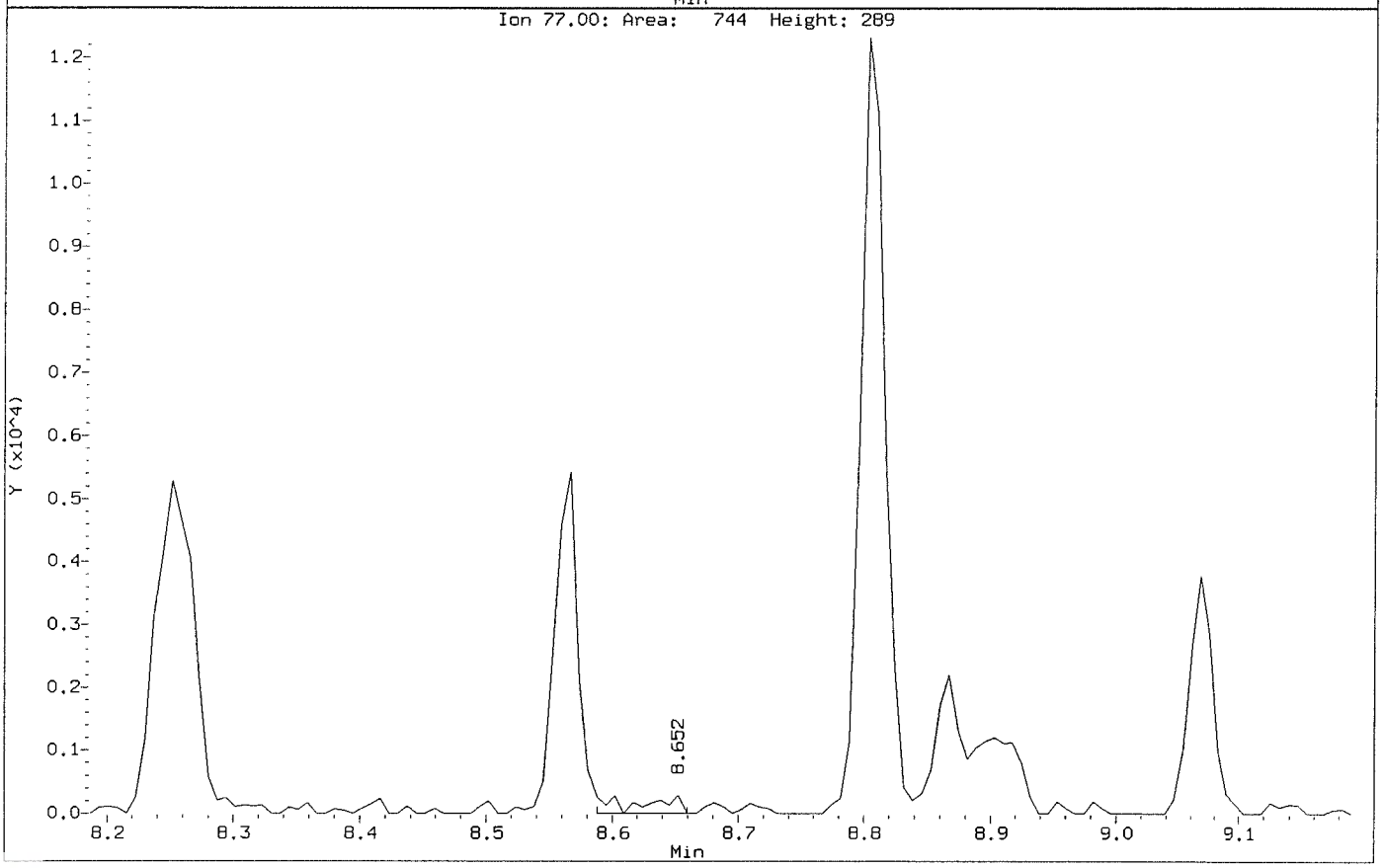




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Instrument: voa6.i
Client Sample ID: VSTD005

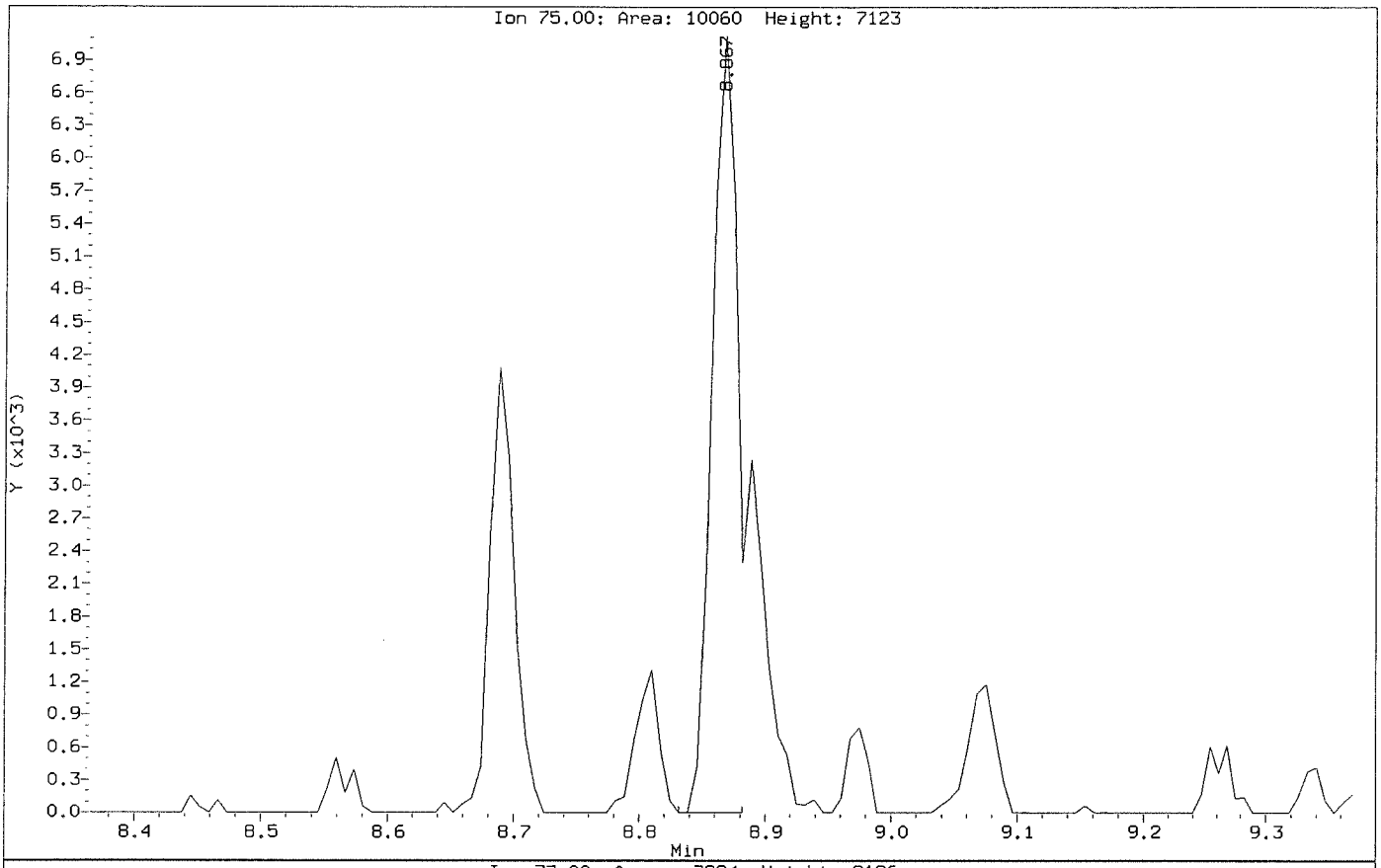
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

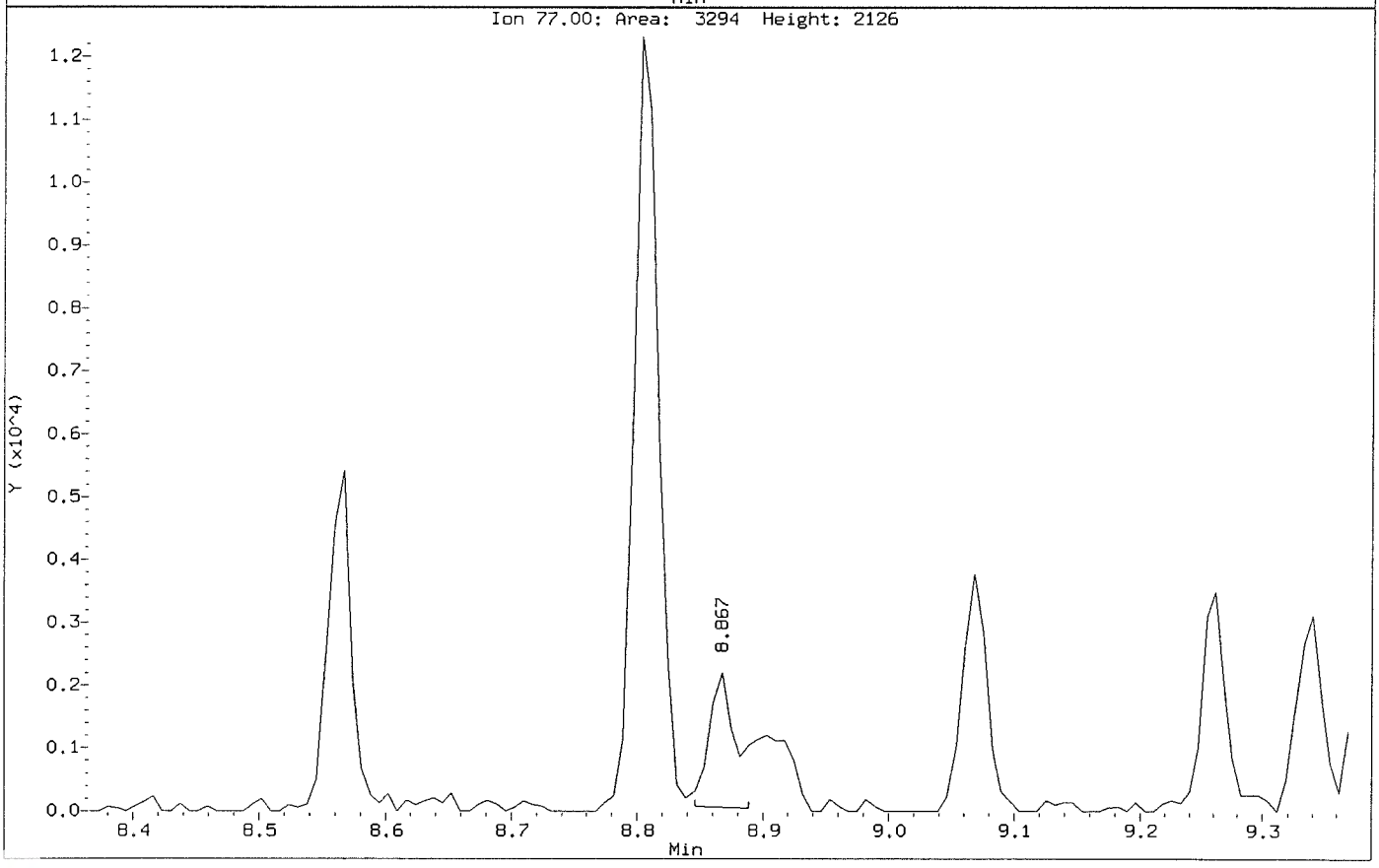




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Injection Date: 22-NOV-2020 17:28
Instrument: voa6.i
Client Sample ID: VSTD005

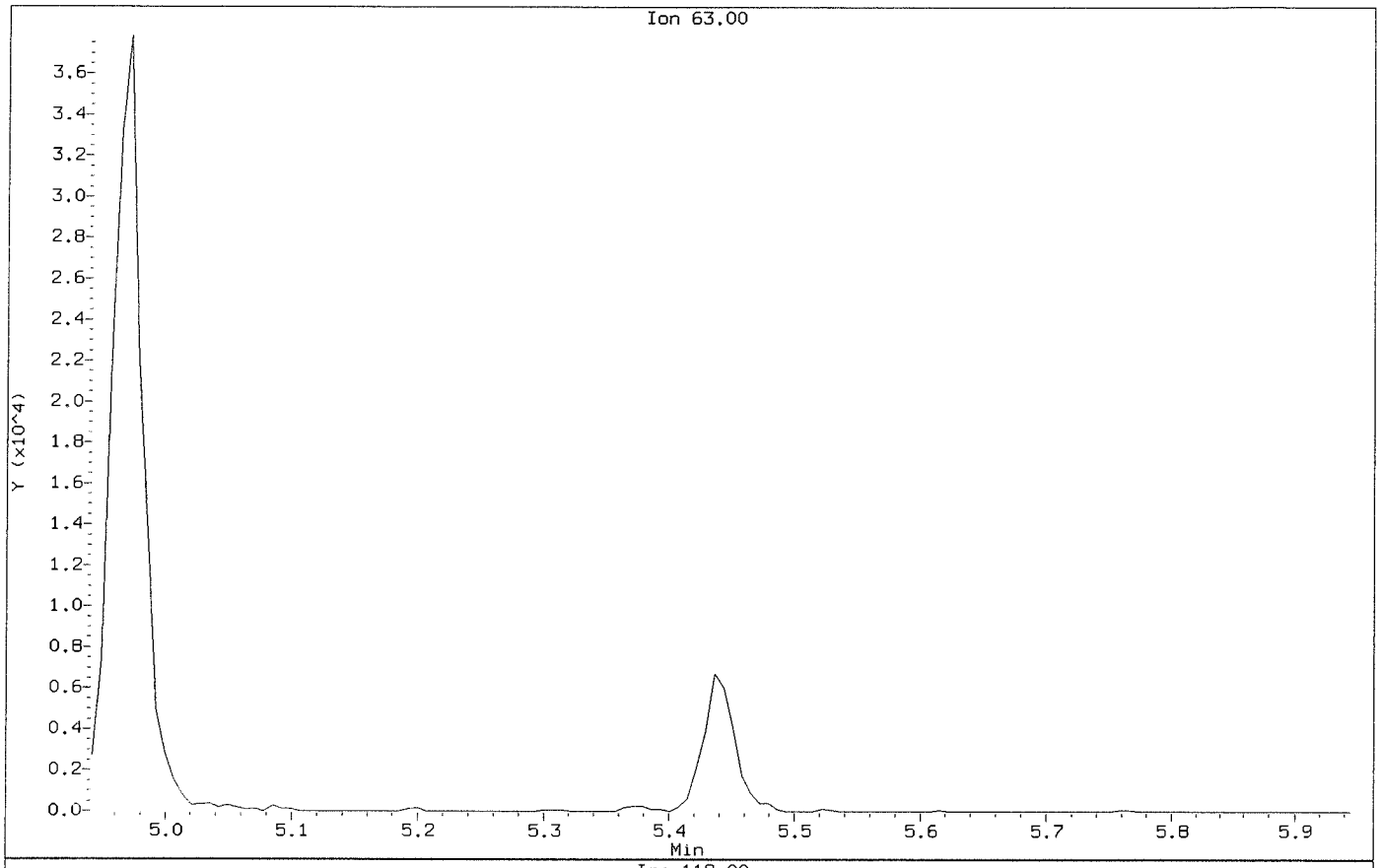
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

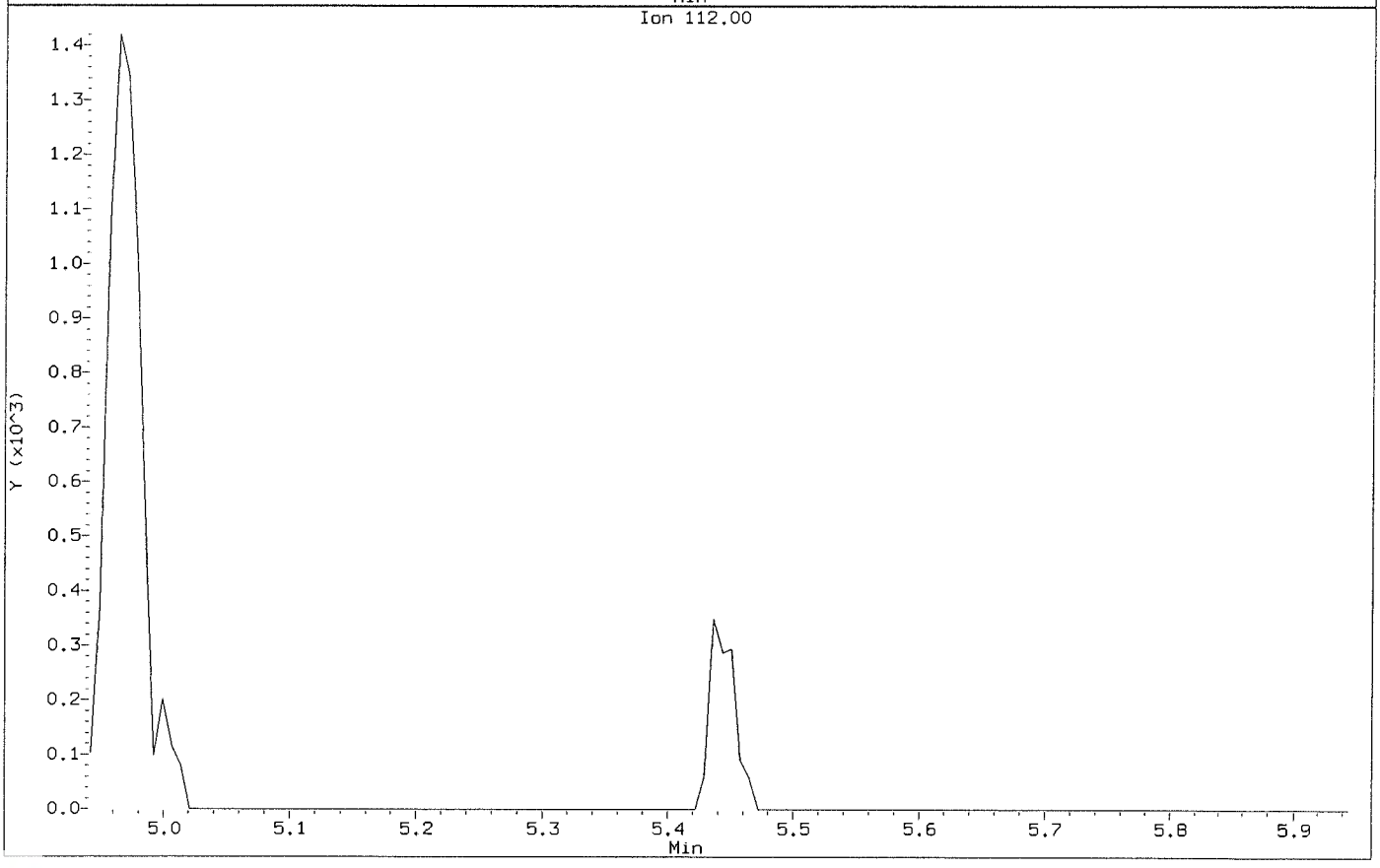




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Injection Date: 22-NOV-2020 17:28
Instrument: voa6.i
Client Sample ID: VSTD005

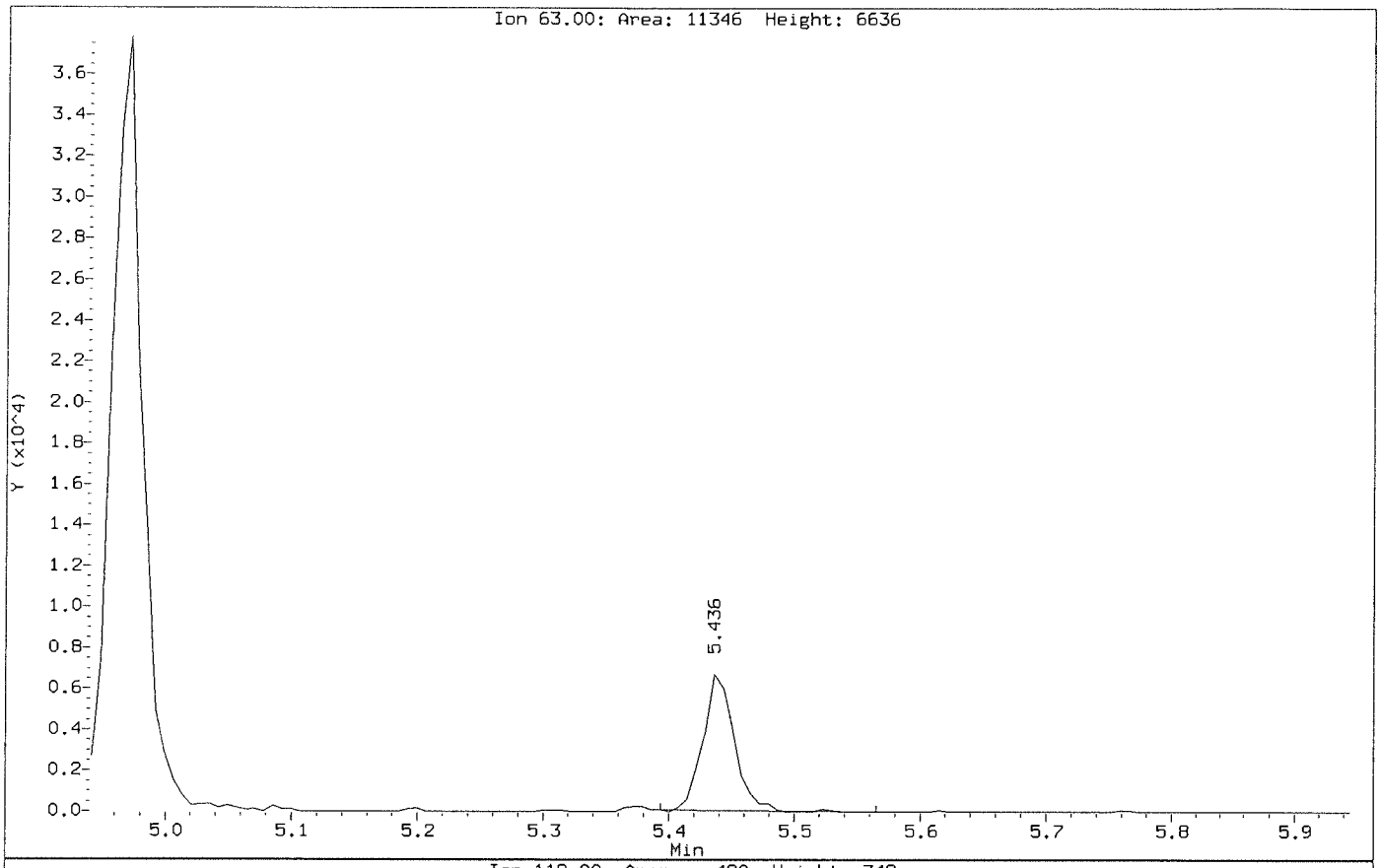
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

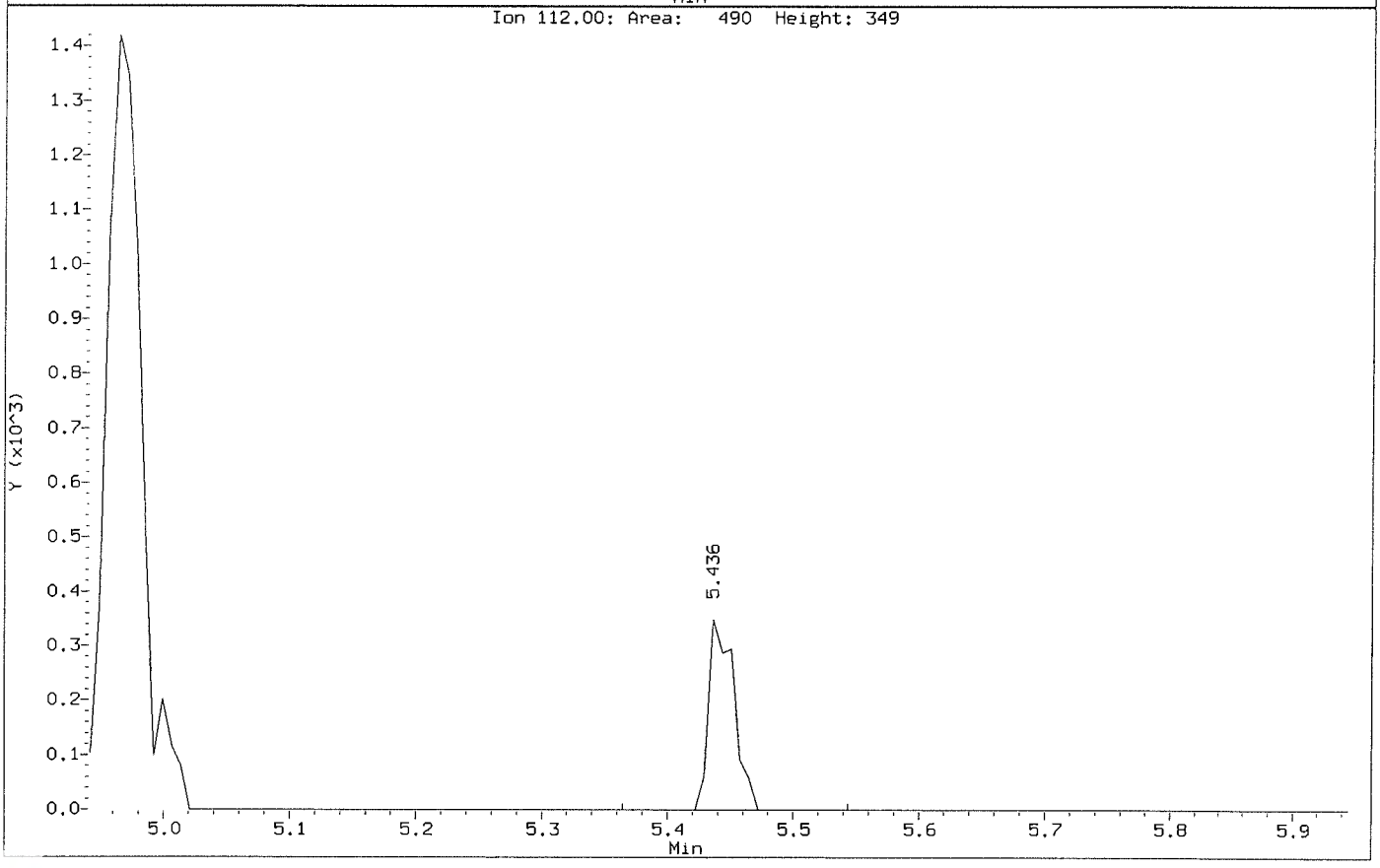




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Injection Date: 22-NOV-2020 17:28
Instrument: voa6.i
Client Sample ID: VSTD005

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112207.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112207.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 22-NOV-2020 17:48
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 17:28 Cal File: Y112206.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	164270	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	303699	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	282945	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	129202	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	51848	20.0000	19.47
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	49820	20.0000	19.00
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	44529	20.0000	20.99
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	147956	20.0000	19.37
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	38358	20.0000	18.04
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	65238	20.0000	19.54
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	49795	20.0000	21.17
138 Freon TF	101	1.919	1.919	(0.459)	58835	20.0000	19.20
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	36256	20.0000	19.50
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	74424	20.0000	18.78
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	60455	20.0000	18.97
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	58901	20.0000	19.50
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	9456	20.0000	21.06
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	41036	20.0000	21.05(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	19049	20.0000	19.56
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	144159	20.0000	19.76
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	3483	20.0000	22.12
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	43727	20.0000	20.21

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112207.D Page 2
Report Date: 18-Dec-2020 11:14

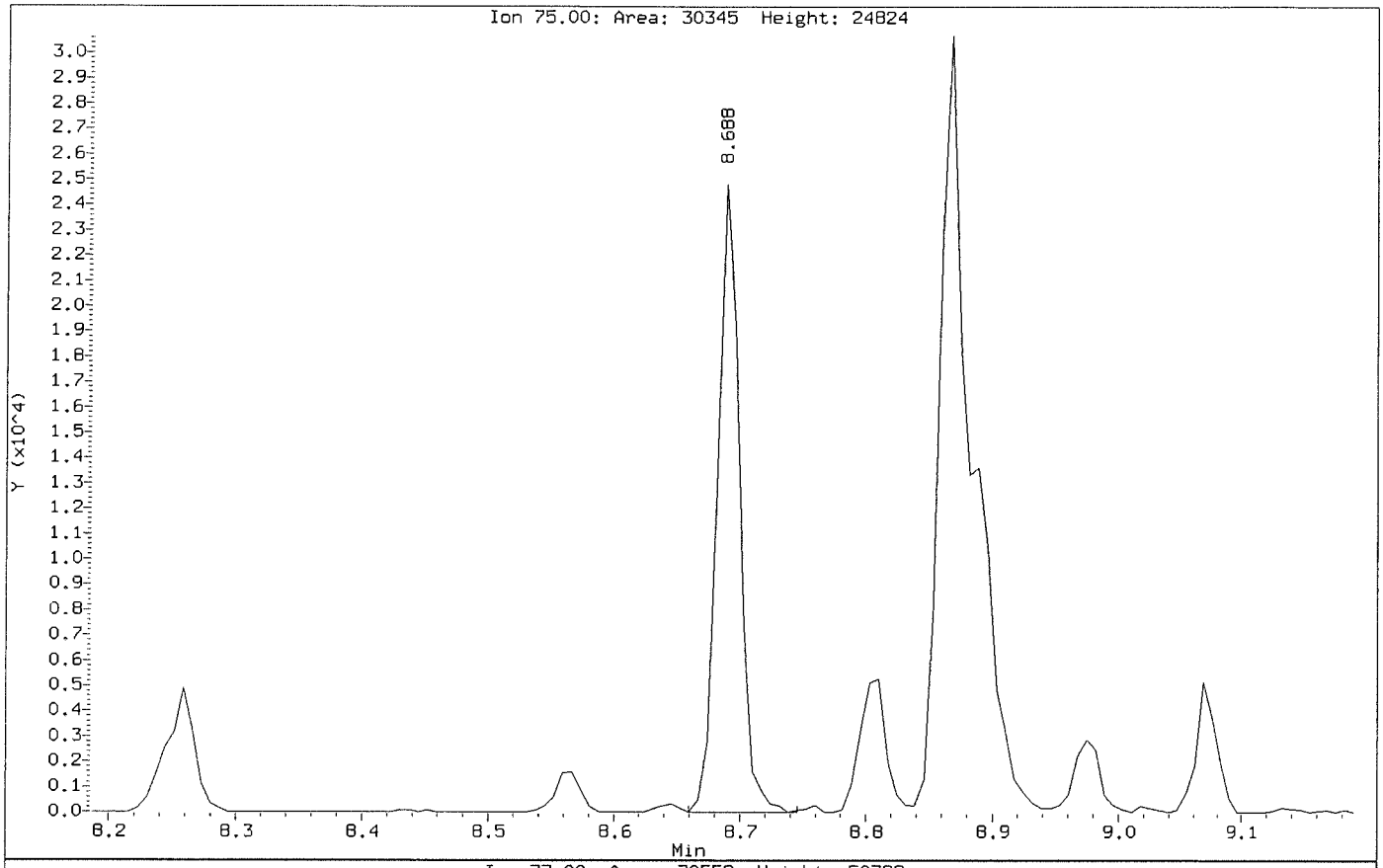
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	70332	20.0000	19.23
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	67060	20.0000	20.09
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	46188	20.0000	19.06
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	144416	20.0000	18.84
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	74965	20.0000	19.29
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	68964	20.0000	19.77
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	75689	20.0000	19.60
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	63587	20.0000	18.25
24 2-Butanone	43	3.581	3.581	(0.856)	30692	40.0000	39.06
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	121736	20.0000	19.25
52 2-Hexanone	43	7.083	7.083	(0.923)	55536	40.0000	38.76
77 4-Chlorotoluene	91	9.067	9.067	(0.938)	147262	20.0000	19.03
82 p-Isopropyltoluene	119	9.648	9.648	(0.999)	143079	20.0000	19.70
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	82310	40.0000	38.39
10 Acetone	43	1.976	1.976	(0.473)	38625	40.0000	39.62
37 Benzene	78	4.519	4.519	(0.909)	160880	20.0000	19.39
74 Bromobenzene	156	8.810	8.810	(0.912)	44985	20.0000	20.60
29 Bromochloromethane	128	3.803	3.803	(0.909)	21762	20.0000	18.74
39 Bromodichloromethane	83	5.729	5.729	(1.153)	62244	20.0000	19.35
66 Bromoform	173	8.416	8.416	(1.097)	23645	20.0000	18.75
6 Bromomethane	94	1.338	1.338	(0.320)	64649	20.0000	20.69
19 Carbon Disulfide	76	2.069	2.069	(0.495)	230757	40.0000	37.67
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	47669	20.0000	18.20(H)
59 Chlorobenzene	112	7.692	7.692	(1.003)	112081	20.0000	18.53
7 Chloroethane	64	1.403	1.403	(0.336)	48658	20.0000	19.11
28 Chloroform	83	3.910	3.910	(0.935)	81754	20.0000	19.03
3 Chloromethane	50	1.081	1.081	(0.258)	57413	20.0000	19.03
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	44802	20.0000	18.63
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	76026	20.0000	19.73
55 Dibromochloromethane	129	7.176	7.176	(0.936)	44871	20.0000	20.45
44 Dibromomethane	93	5.550	5.550	(1.117)	31107	20.0000	19.59
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	46575	20.0000	18.91
61 Ethylbenzene	106	7.800	7.800	(1.017)	57272	20.0000	18.77
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	14061	20.0000	22.06
67 Isopropylbenzene	105	8.559	8.559	(1.116)	175025	20.0000	19.01
62 m,p-Xylenes	106	7.907	7.907	(1.031)	144807	40.0000	37.10(M)
17 Methylene Chloride	84	2.306	2.306	(0.551)	41202	20.0000	18.26
87 n-Butylbenzene	91	9.991	9.991	(1.034)	139828	20.0000	19.59
73 n-Propylbenzene	91	8.910	8.910	(0.922)	210226	20.0000	19.45
92 Naphthalene	128	11.546	11.546	(1.195)	28651	20.0000	20.93
63 o-Xylene	106	8.244	8.244	(1.075)	68365	20.0000	18.37
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	169406	20.0000	20.02
64 Styrene	104	8.258	8.258	(1.077)	120025	20.0000	18.29
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	116360	20.0000	19.42
56 Tetrachloroethene	164	6.933	6.933	(0.904)	32480	20.0000	18.61
50 Toluene	91	6.446	6.446	(0.840)	171666	20.0000	18.79
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	37078	20.0000	18.31
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	64243	20.0000	19.37
38 Trichloroethene	130	5.207	5.207	(1.048)	41000	20.0000	19.40
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	111269	20.0000	18.02
5 Vinyl Chloride	62	1.145	1.145	(0.274)	74922	20.0000	18.95

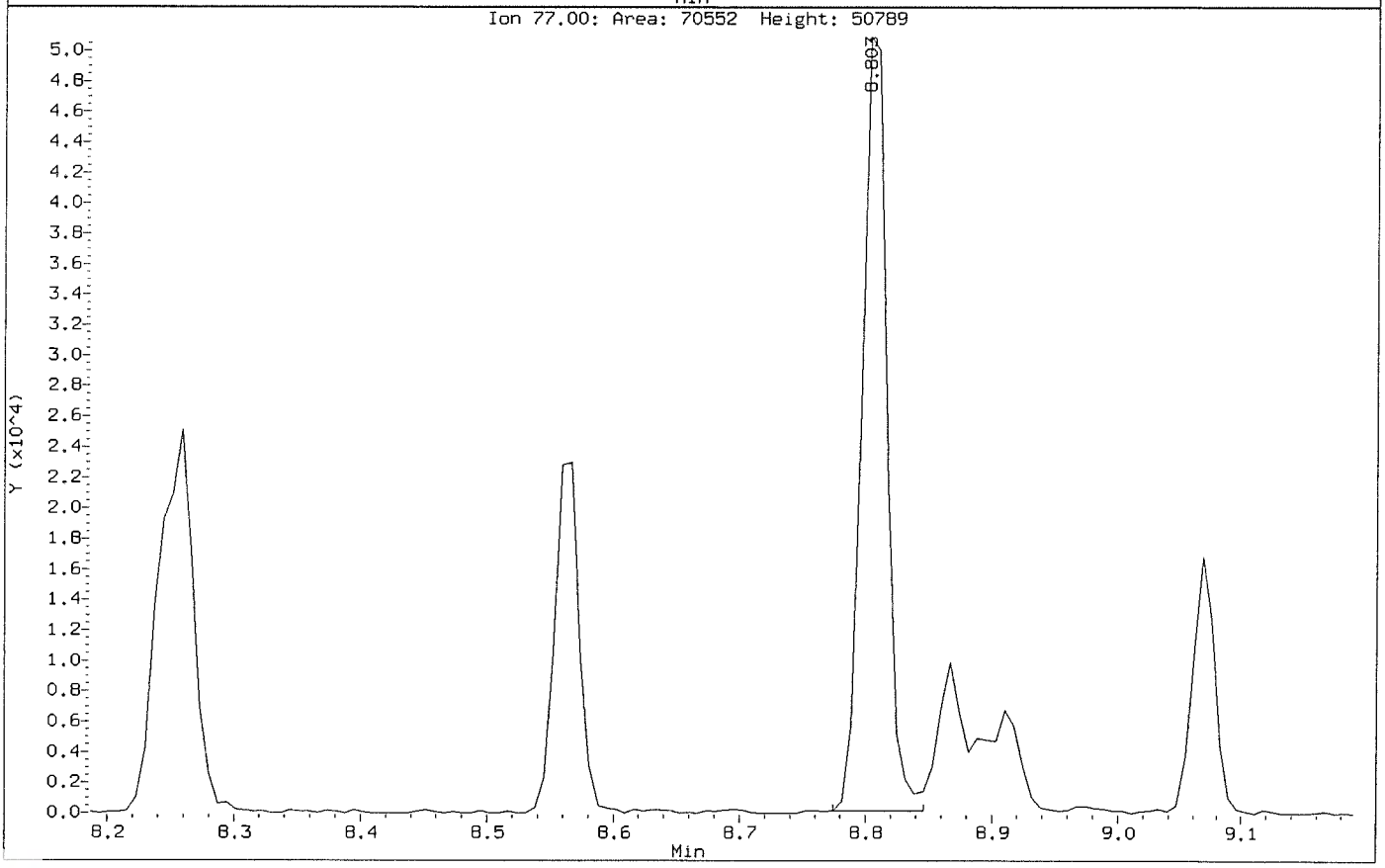
QC Flag Legend

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

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Injection Date: 22-NOV-2020 17:48
Instrument: voa6.i
Client Sample ID: VSTD020

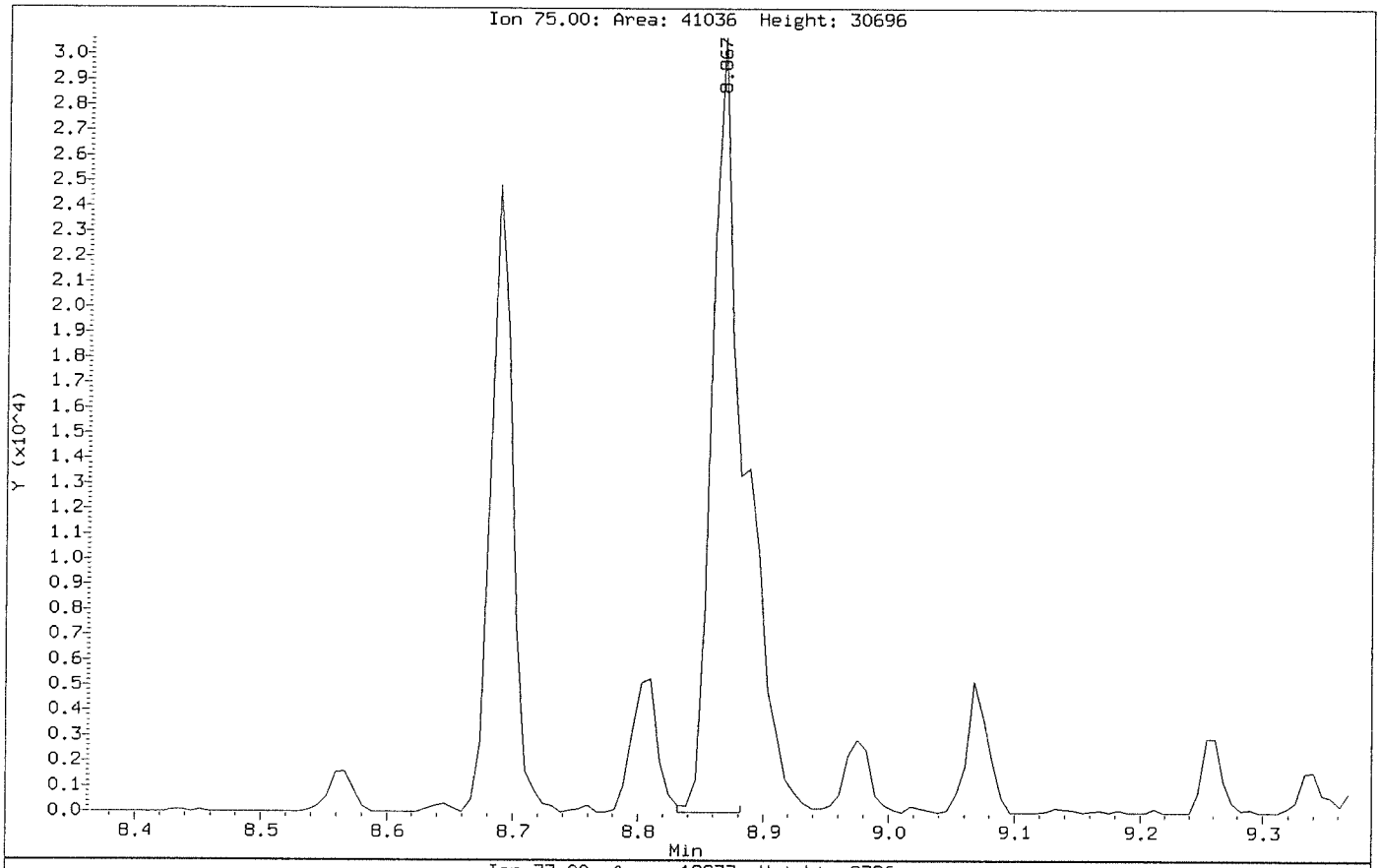
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

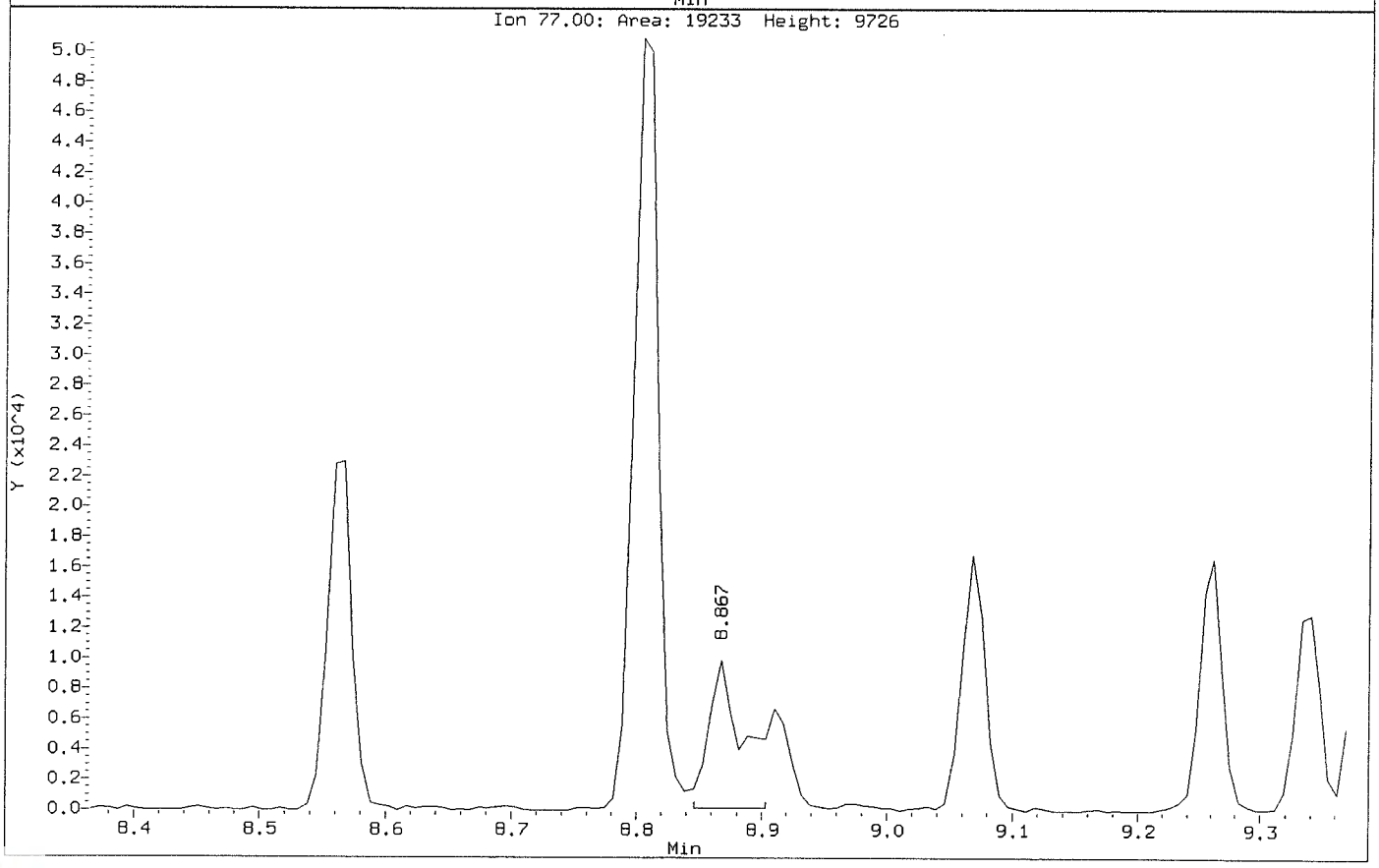




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Instrument: voa6.i
Client Sample ID: VSTD020

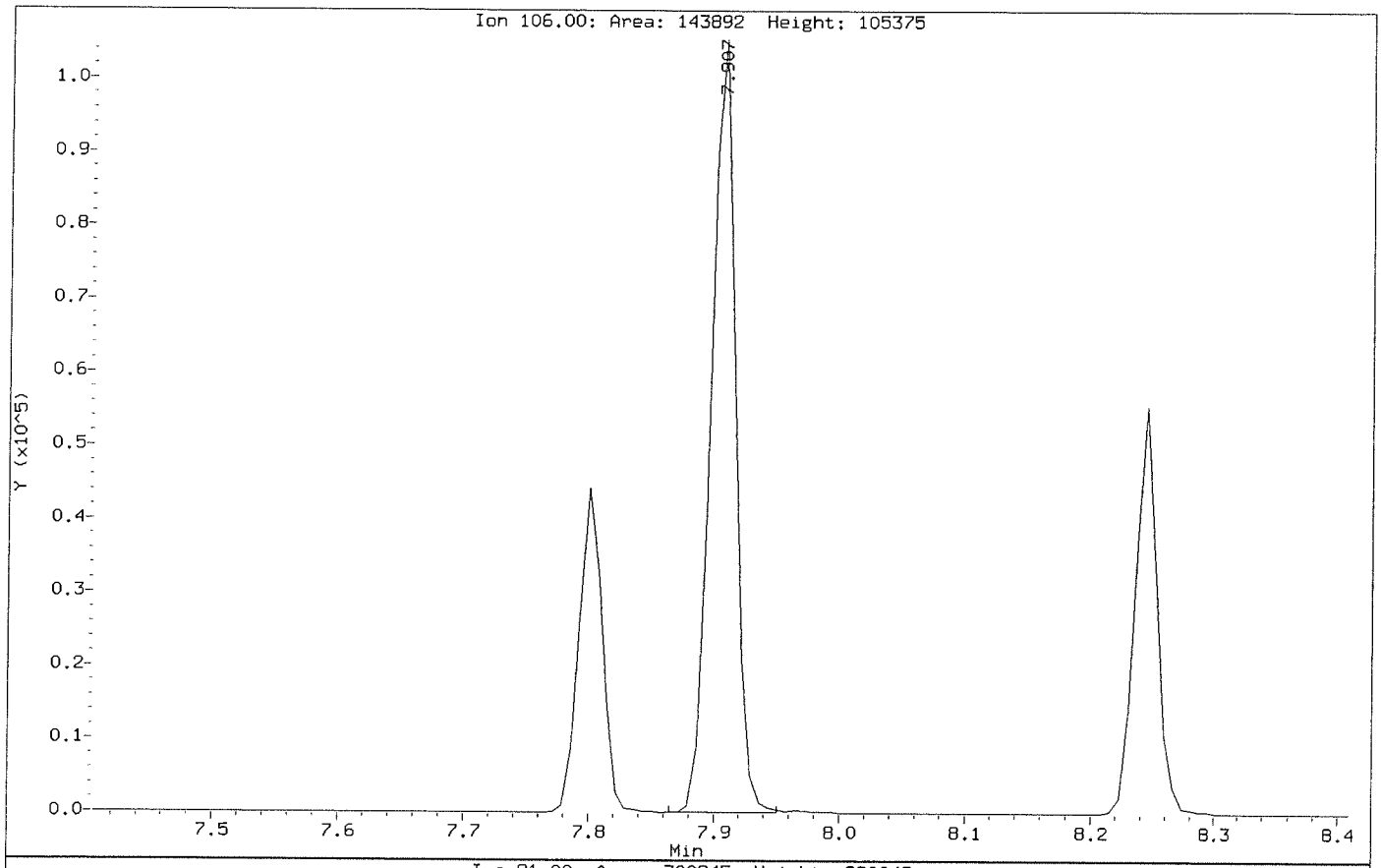
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CAS Number: 96-18-4

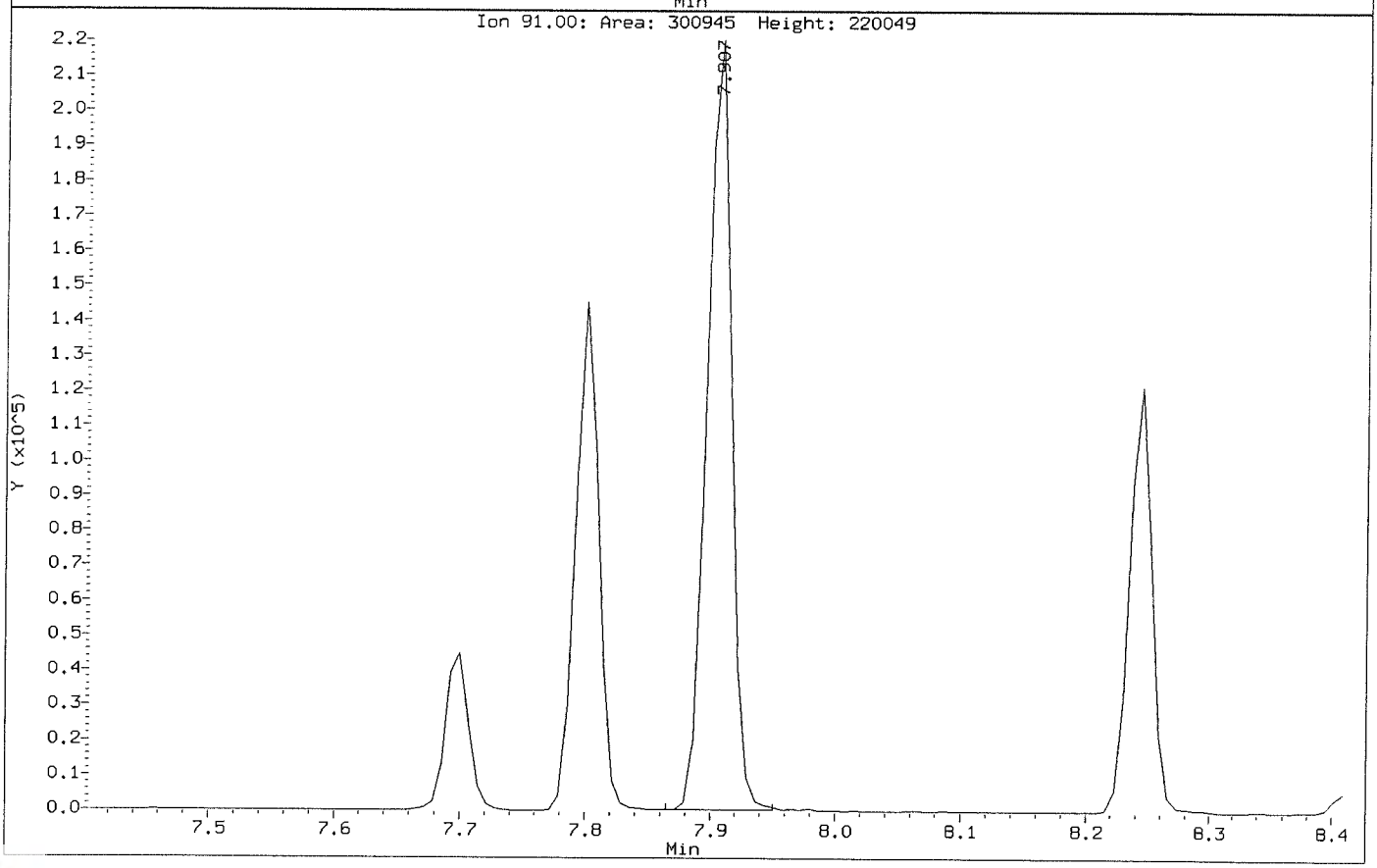




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Instrument: voa6.i
Client Sample ID: VSTD020

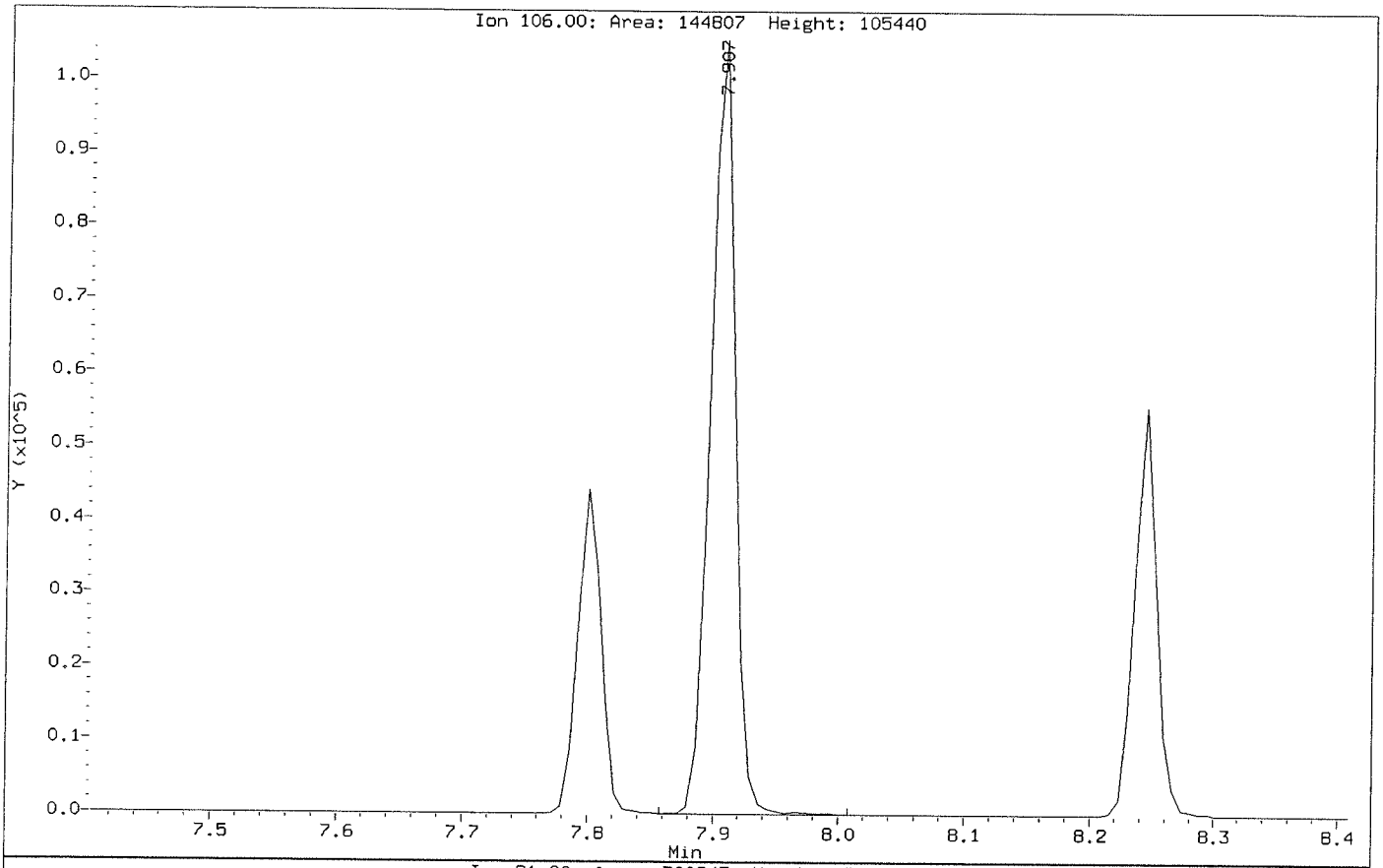
Compound: m,p-Xylenes
CAS Number:

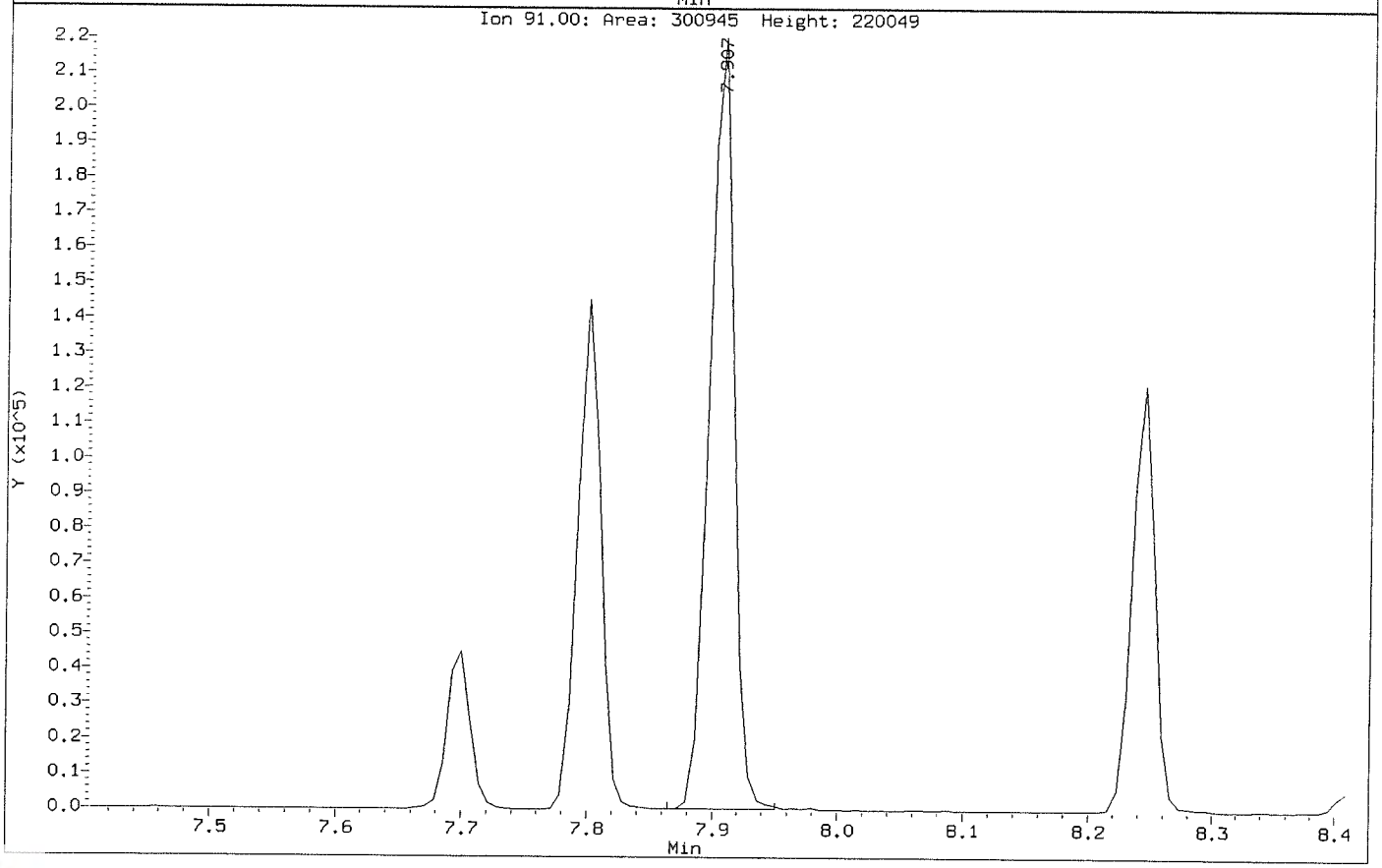




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Injection Date: 22-NOV-2020 17:48
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: m,p-Xylenes
CAS Number:





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112208.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112208.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 22-NOV-2020 18:09
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 17:48 Cal File: Y112207.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	173100	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	325305	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	297896	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	139821	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	142247	50.0000	49.82
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	135731	50.0000	47.87
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	113804	50.0000	50.23
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	387328	50.0000	48.18
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	105050	50.0000	46.92
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	173362	50.0000	49.27
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	134845	50.0000	55.25
138 Freon TF	101	1.919	1.919	(0.459)	145366	50.0000	45.02
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	93425	50.0000	47.72
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	199663	50.0000	47.82
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	154482	50.0000	46.02
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	148007	50.0000	45.75
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	25528	50.0000	50.74
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	109219	50.0000	51.78(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	51330	50.0000	48.72
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	363526	50.0000	46.05
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	8818	50.0000	51.75
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	112205	50.0000	49.26

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112208.D Page 2
Report Date: 18-Dec-2020 11:14

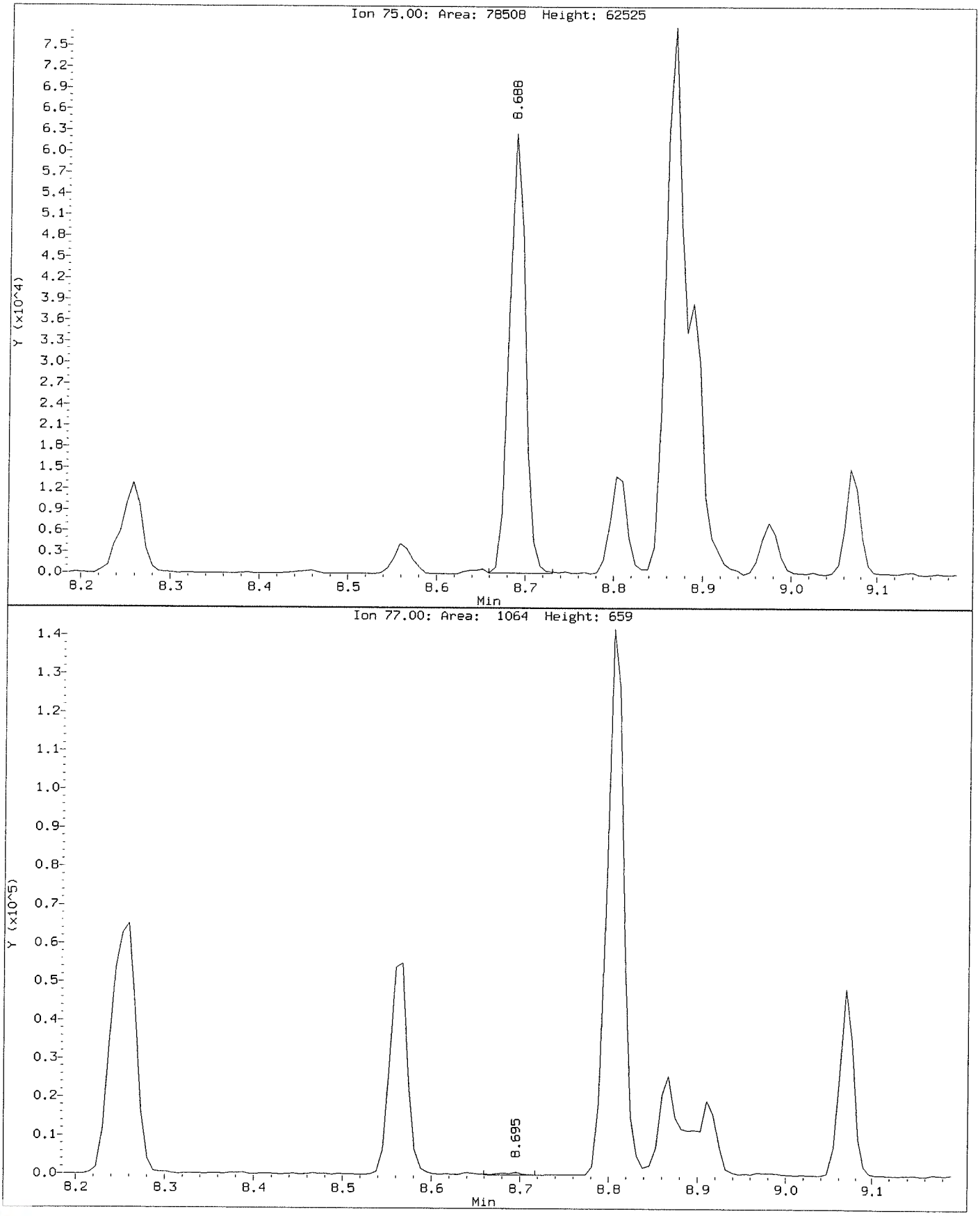
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	187258	50.0000	47.32
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	176991	50.0000	49.51
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	122893	50.0000	47.35
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	374217	50.0000	45.12
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	195589	50.0000	46.50
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	181078	50.0000	49.30
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	204187	50.0000	47.98
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	165497	50.0000	45.09
24 2-Butanone	43	3.580	3.580	(0.856)	80604	100.000	97.36
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	312498	50.0000	45.67
52 2-Hexanone	43	7.083	7.083	(0.923)	147583	100.000	96.49
77 4-Chlorotoluene	91	9.067	9.067	(0.938)	385070	50.0000	46.00
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	360596	50.0000	43.80
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	217806	100.000	95.11
10 Acetone	43	1.976	1.976	(0.473)	97000	100.000	98.83
37 Benzene	78	4.512	4.512	(0.908)	427712	50.0000	48.13
74 Bromobenzene	156	8.809	8.809	(0.912)	116730	50.0000	49.41
29 Bromochloromethane	128	3.795	3.795	(0.908)	59230	50.0000	48.42
39 Bromodichloromethane	83	5.729	5.729	(1.153)	169707	50.0000	49.25
66 Bromoform	173	8.415	8.415	(1.097)	65866	50.0000	46.08
6 Bromomethane	94	1.338	1.338	(0.320)	151605	50.0000	44.92
19 Carbon Disulfide	76	2.069	2.069	(0.495)	588240	100.000	91.14
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	133520	50.0000	47.60(H)
59 Chlorobenzene	112	7.692	7.692	(1.003)	288202	50.0000	45.25
7 Chloroethane	64	1.403	1.403	(0.336)	127505	50.0000	47.53
28 Chloroform	83	3.910	3.910	(0.935)	214032	50.0000	47.28
3 Chloromethane	50	1.073	1.073	(0.257)	143325	50.0000	45.09
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	118869	50.0000	46.92
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	205824	50.0000	49.87
55 Dibromochloromethane	129	7.176	7.176	(0.936)	120122	50.0000	52.00
44 Dibromomethane	93	5.550	5.550	(1.117)	82647	50.0000	48.61
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	121103	50.0000	42.85
61 Ethylbenzene	106	7.799	7.799	(1.017)	150802	50.0000	46.95
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	31828	50.0000	44.48
67 Isopropylbenzene	105	8.566	8.566	(1.117)	439974	50.0000	45.40
62 m,p-Xylenes	106	7.907	7.907	(1.031)	385580	100.000	83.23
17 Methylene Chloride	84	2.305	2.305	(0.551)	107950	50.0000	45.40
87 n-Butylbenzene	91	9.991	9.991	(1.034)	364568	50.0000	42.89
73 n-Propylbenzene	91	8.910	8.910	(0.922)	540327	50.0000	46.19
92 Naphthalene	128	11.546	11.546	(1.195)	79104	50.0000	51.74
63 o-Xylene	106	8.244	8.244	(1.075)	183424	50.0000	42.34
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	430230	50.0000	45.87
64 Styrene	104	8.258	8.258	(1.077)	322747	50.0000	46.72
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	298431	50.0000	46.04
56 Tetrachloroethene	164	6.933	6.933	(0.904)	81692	50.0000	44.47
50 Toluene	91	6.446	6.446	(0.840)	461215	50.0000	47.96
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	101698	50.0000	47.65
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	175301	50.0000	49.35
38 Trichloroethene	130	5.206	5.206	(1.048)	107982	50.0000	47.71
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	287876	50.0000	44.25
5 Vinyl Chloride	62	1.145	1.145	(0.274)	191764	50.0000	46.04

QC Flag Legend

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

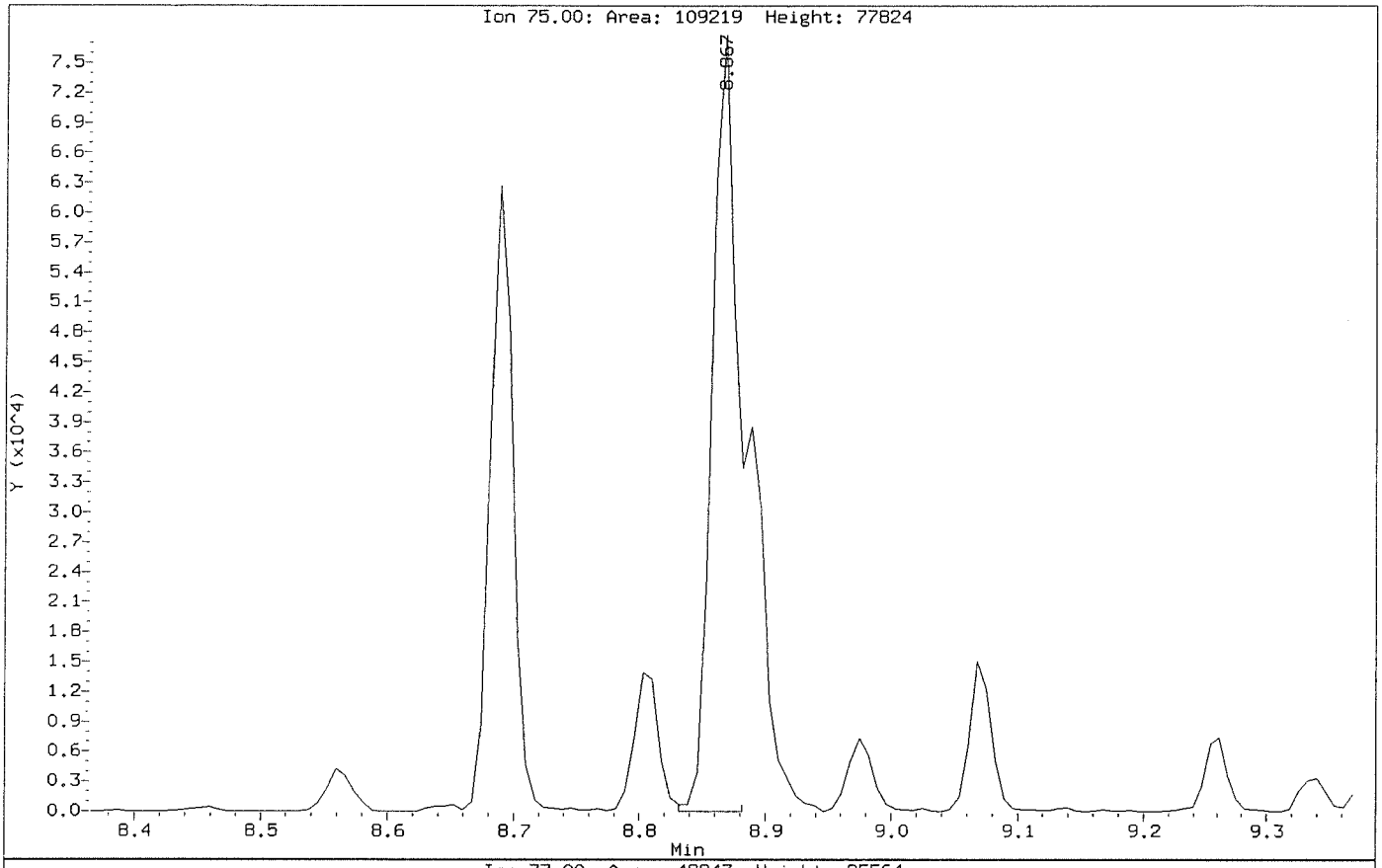
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Injection Date: 22-NOV-2020 18:09
Instrument: voa6.i
Client Sample ID: VSTD050

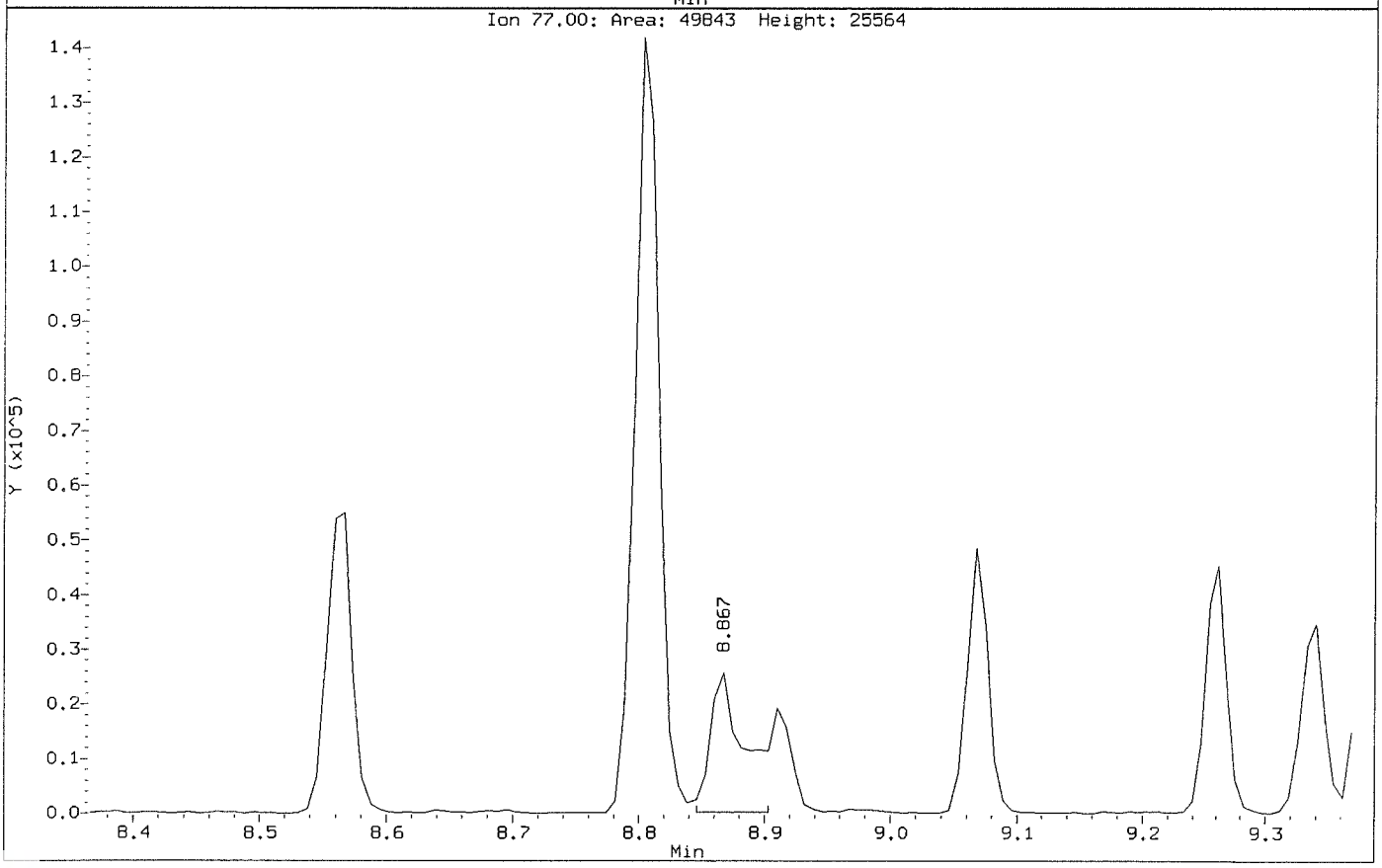
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Injection Date: 22-NOV-2020 18:09
Instrument: voa6.i
Client Sample ID: VSTD050

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112209.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112209.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 22-NOV-2020 18:30
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	174912	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	338881	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	314578	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	160899	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	308941	100.000	104.21
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	300964	100.000	99.44
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	241210	100.000	101.32
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	878888	100.000	103.52
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	243403	100.000	102.96
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	393791	100.000	110.77
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	274263	100.000	98.82
138 Freon TF	101	1.919	1.919	(0.459)	342604	100.000	105.01
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	198697	100.000	96.12
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	452692	100.000	107.29
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	347501	100.000	102.44
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	335682	100.000	99.61
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	52660	100.000	90.00
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	221584	100.000	91.30(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	110272	100.000	90.96
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	930856	100.000	102.47
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	18379	100.000	93.73
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	248466	100.000	103.31

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112209.D Page 2
Report Date: 18-Dec-2020 11:14

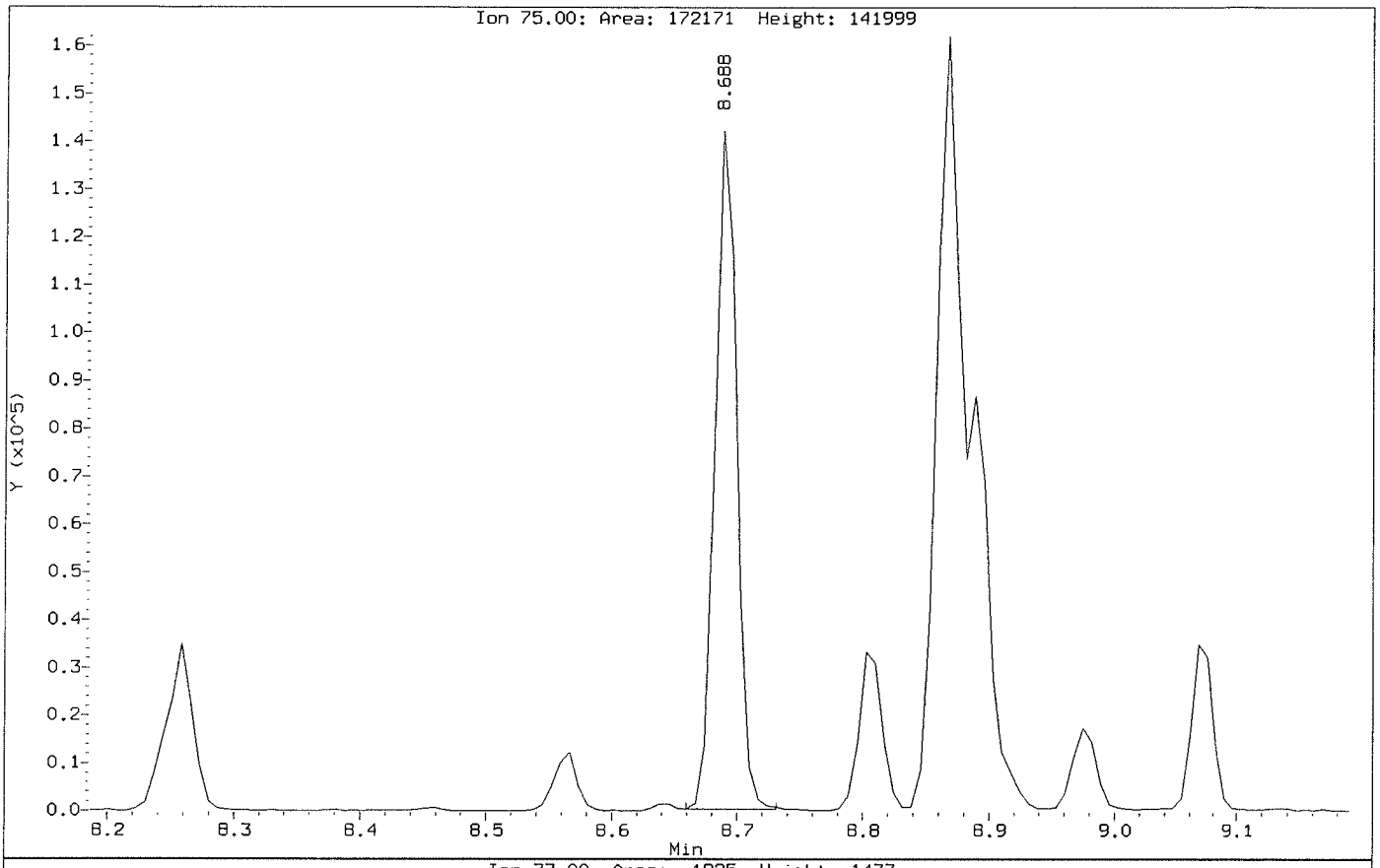
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	449150	100.000	98.64
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	379367	100.000	101.88
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	259783	100.000	96.09
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	952488	100.000	99.80
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	464020	100.000	95.88
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	392384	100.000	101.17
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	485254	100.000	98.48
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	382030	100.000	103.01
24	2-Butanone	43	3.573	3.573	(0.854)	177147	200.000	211.76(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	747259	100.000	94.92
52	2-Hexanone	43	7.090	7.090	(0.924)	322138	200.000	198.49
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	959924	100.000	99.65
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	963171	100.000	99.58
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	481706	200.000	198.19
10	Acetone	43	1.976	1.976	(0.473)	190183	200.000	194.78
37	Benzene	78	4.512	4.512	(0.908)	943951	100.000	101.98
74	Bromobenzene	156	8.809	8.809	(0.912)	266282	100.000	97.96
29	Bromochloromethane	128	3.795	3.795	(0.908)	130533	100.000	105.62
39	Bromodichloromethane	83	5.729	5.729	(1.153)	364666	100.000	101.60
66	Bromoform	173	8.408	8.408	(1.096)	149375	100.000	96.51
6	Bromomethane	94	1.338	1.338	(0.320)	329972	100.000	95.70
19	Carbon Disulfide	76	2.069	2.069	(0.495)	1304310	200.000	199.99
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	316104	100.000	108.18(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	702165	100.000	104.41
7	Chloroethane	64	1.403	1.403	(0.336)	269919	100.000	99.58
28	Chloroform	83	3.910	3.910	(0.935)	466642	100.000	102.02
3	Chloromethane	50	1.073	1.073	(0.257)	293324	100.000	91.34
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	259273	100.000	101.30
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	441422	100.000	102.68
55	Dibromochloromethane	129	7.176	7.176	(0.936)	258336	100.000	105.91
44	Dibromomethane	93	5.550	5.550	(1.117)	177903	100.000	100.44
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	288930	100.000	97.64
61	Ethylbenzene	106	7.799	7.799	(1.017)	355694	100.000	104.88
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	77817	100.000	92.79
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1100783	100.000	107.56
62	m,p-Xylenes	106	7.907	7.907	(1.031)	984046	200.000	191.33
17	Methylene Chloride	84	2.305	2.305	(0.551)	236137	100.000	98.28
87	n-Butylbenzene	91	9.999	9.999	(1.035)	941862	100.000	92.49
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1360226	100.000	101.05
92	Naphthalene	128	11.546	11.546	(1.195)	162905	100.000	91.75
63	o-Xylene	106	8.244	8.244	(1.075)	464311	100.000	97.48
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	1137305	100.000	102.41
64	Styrene	104	8.258	8.258	(1.077)	806480	100.000	110.55
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	769533	100.000	103.18
56	Tetrachloroethene	164	6.933	6.933	(0.904)	202689	100.000	104.50
50	Toluene	91	6.446	6.446	(0.840)	1091136	100.000	107.45
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	233473	100.000	108.28
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	382752	100.000	103.44
38	Trichloroethene	130	5.206	5.206	(1.048)	234410	100.000	99.43
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	676127	100.000	102.86
5	Vinyl Chloride	62	1.145	1.145	(0.274)	422452	100.000	100.38

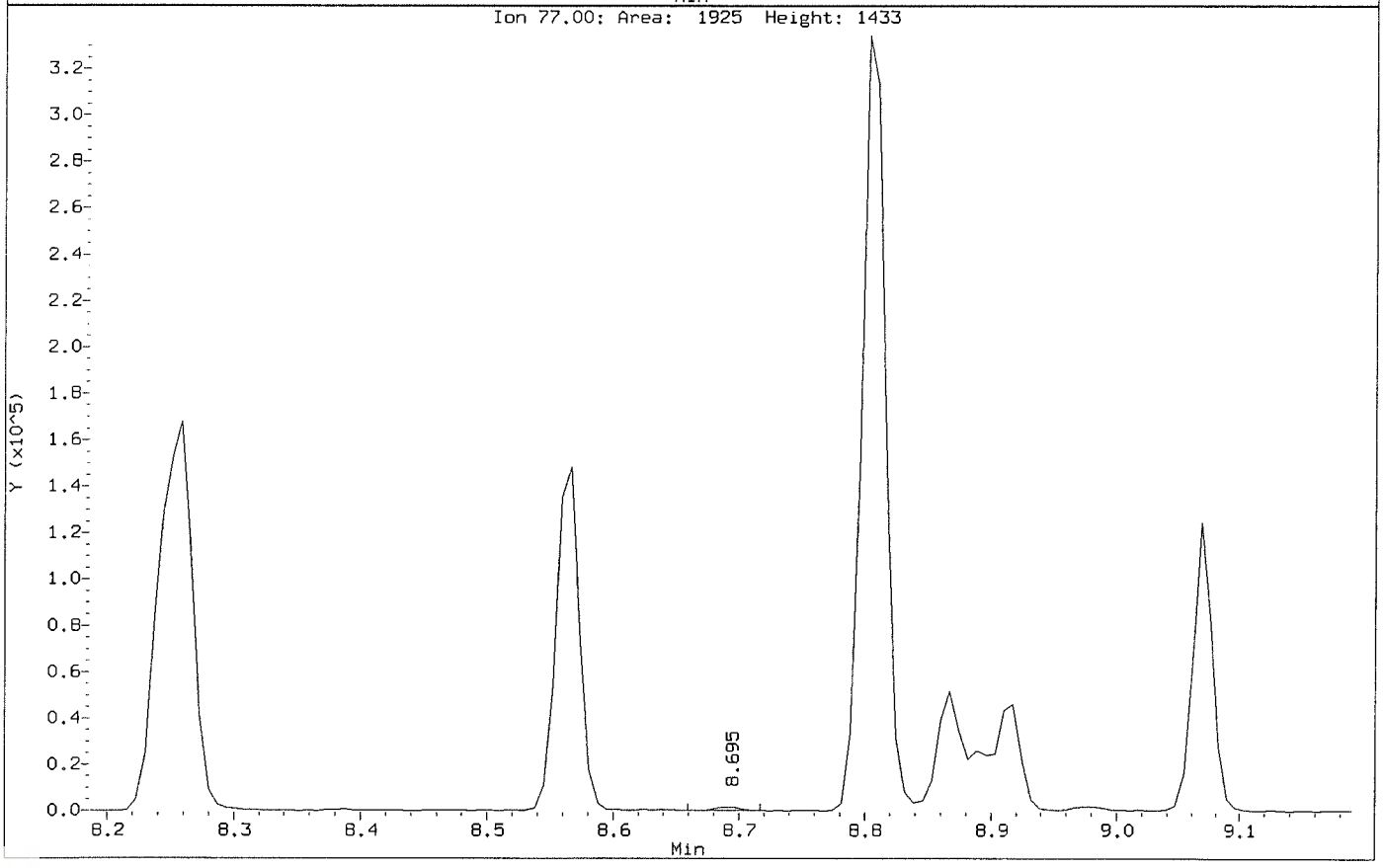
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

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Injection Date: 22-NOV-2020 18:30
Instrument: voa6.i
Client Sample ID: VSTD100

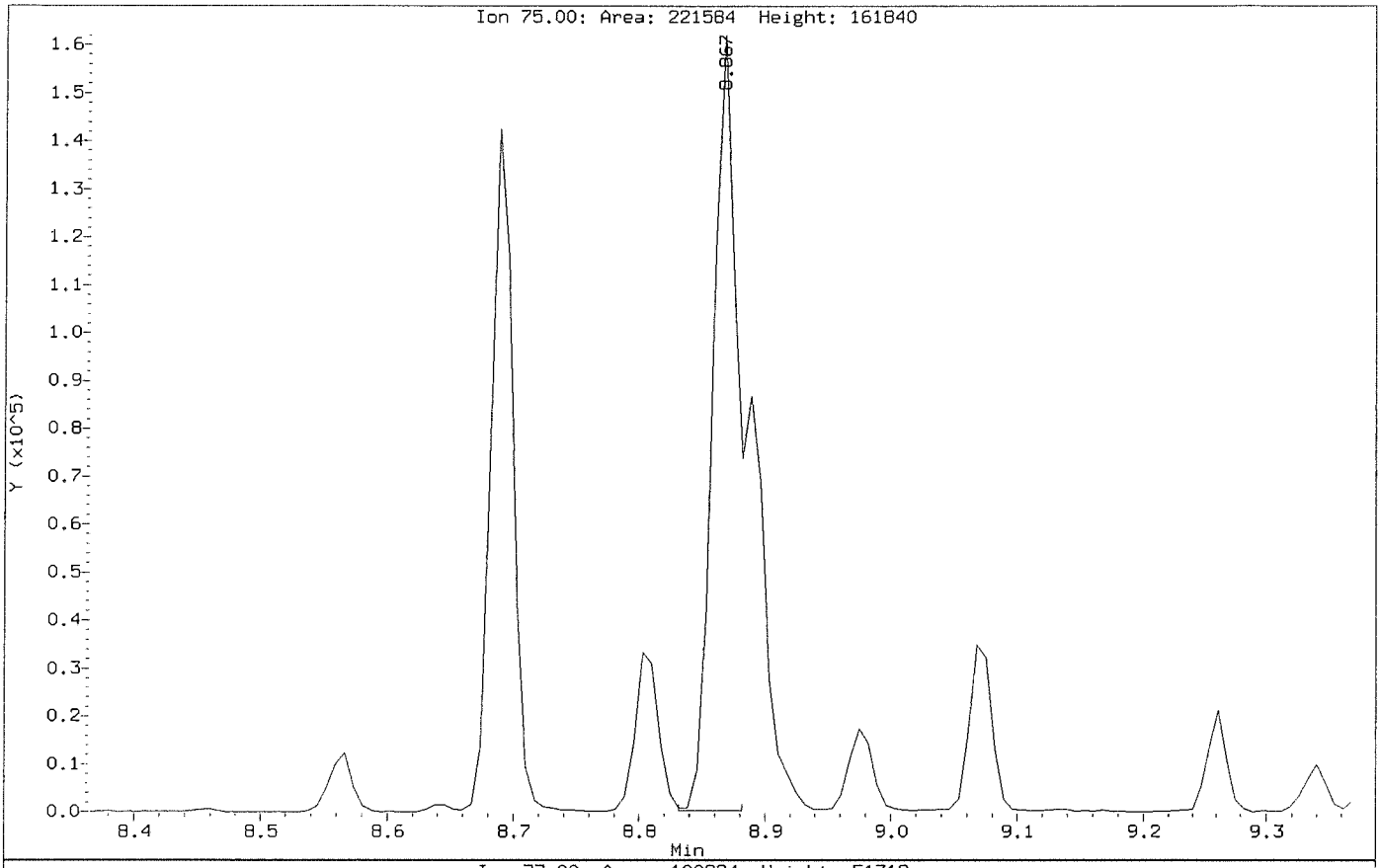
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

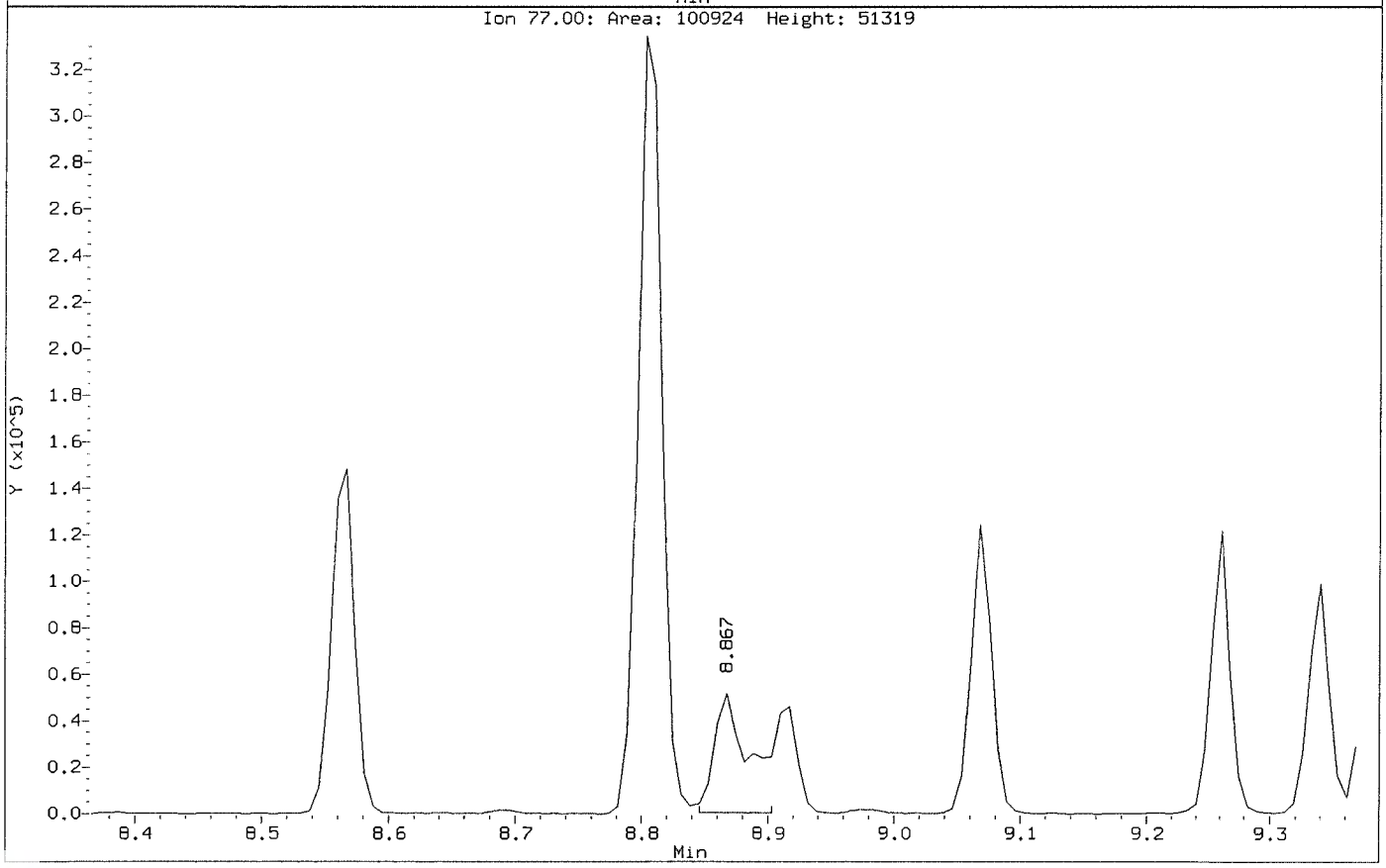




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Injection Date: 22-NOV-2020 18:30
Instrument: voa6.i
Client Sample ID: VSTD100

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112210.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112210.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 22-NOV-2020 18:51
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;;
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:30 Cal File: Y112209.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	179283	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	354977	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	328028	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	163650	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	451276	150.000	145.37
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	486561	150.000	153.40
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	376878	150.000	147.93
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1357855	150.000	153.38
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	371897	150.000	150.87
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	614514	150.000	168.64
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	416268	150.000	148.22
138 Freon TF	101	1.919	1.919	(0.459)	507034	150.000	151.63
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	315232	150.000	146.25
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	672982	150.000	155.62
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	510299	150.000	146.77
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	528428	150.000	149.70
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	86282	150.000	144.25
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	344338	150.000	139.49(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	184486	150.000	149.62
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	1434053	150.000	155.21
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	27735	150.000	139.08
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	382163	150.000	152.39

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112210.D Page 2
Report Date: 18-Dec-2020 11:14

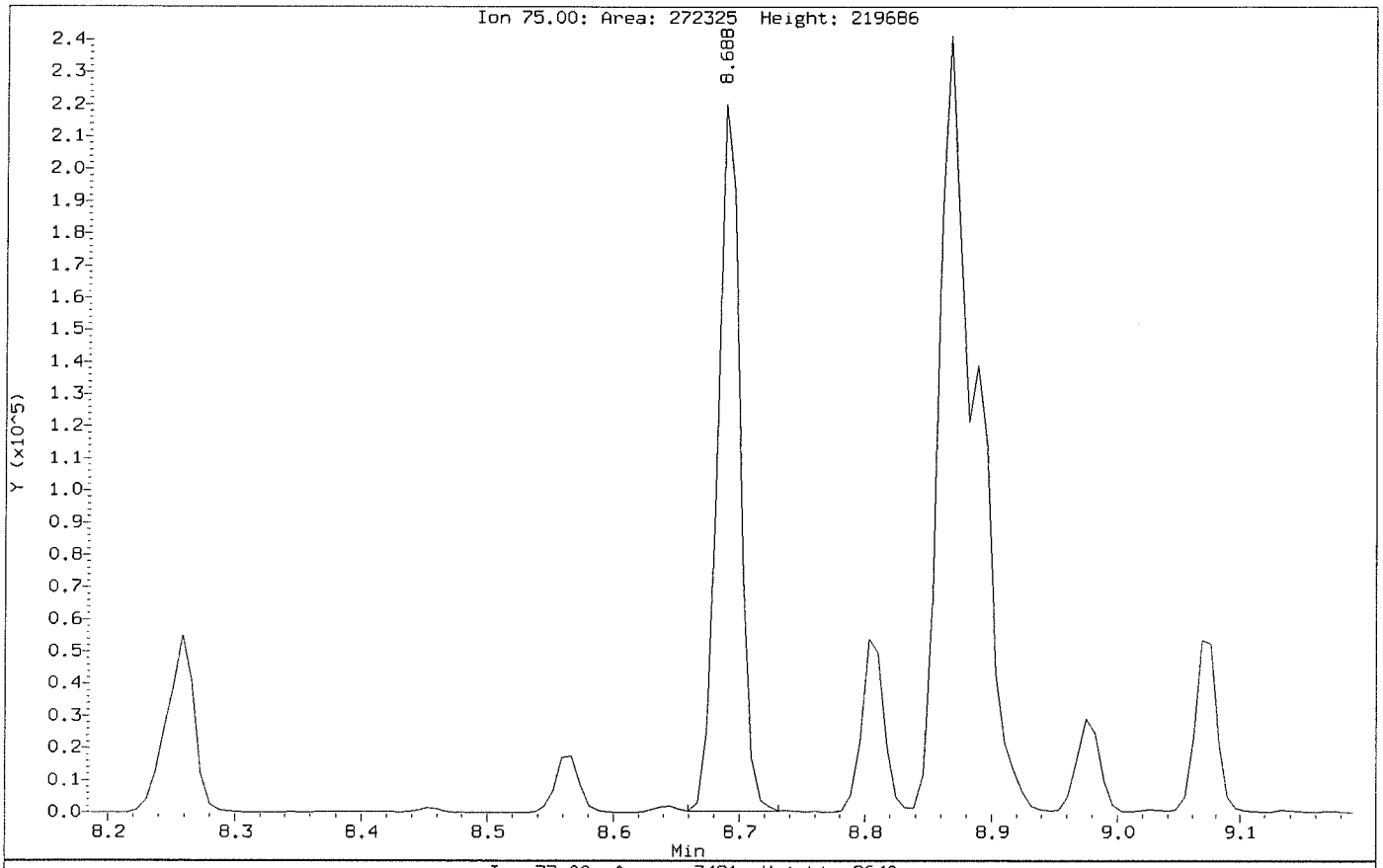
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	741724	150.000	160.16
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	601800	150.000	154.29
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	407687	150.000	143.95
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1568273	150.000	161.56
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	745436	150.000	151.44
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	621098	150.000	153.58
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	753555	150.000	150.05
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	577890	150.000	152.02
24	2-Butanone	43	3.573	3.573	(0.854)	274890	300.000	320.59(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	1197485	150.000	149.55
52	2-Hexanone	43	7.090	7.090	(0.924)	512600	300.000	302.43(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1581071	150.000	161.37
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1468165	150.000	148.46
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	770447	300.000	303.50(A)
10	Acetone	43	1.969	1.969	(0.471)	318811	300.000	320.58(A)
37	Benzene	78	4.519	4.519	(0.909)	1457449	150.000	150.32
74	Bromobenzene	156	8.809	8.809	(0.912)	429455	150.000	155.33
29	Bromochloromethane	128	3.795	3.795	(0.908)	196166	150.000	154.86
39	Bromodichloromethane	83	5.729	5.729	(1.153)	552405	150.000	146.93
66	Bromoform	173	8.416	8.416	(1.097)	240352	150.000	147.77
6	Bromomethane	94	1.338	1.338	(0.320)	546087	150.000	153.95
19	Carbon Disulfide	76	2.069	2.069	(0.495)	2095185	300.000	313.43(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	490971	150.000	160.41(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	1124894	150.000	160.41
7	Chloroethane	64	1.403	1.403	(0.336)	403836	150.000	145.35
28	Chloroform	83	3.910	3.910	(0.935)	696536	150.000	148.56
3	Chloromethane	50	1.073	1.073	(0.257)	461714	150.000	140.27
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	406757	150.000	155.05
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	696648	150.000	154.70
55	Dibromochloromethane	129	7.176	7.176	(0.936)	414295	150.000	162.89
44	Dibromomethane	93	5.557	5.557	(1.118)	274838	150.000	148.14
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	448171	150.000	146.43
61	Ethylbenzene	106	7.799	7.799	(1.017)	561801	150.000	158.87
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	129006	150.000	150.29
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1742775	150.000	163.32
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1602438	300.000	294.90(A)
17	Methylene Chloride	84	2.305	2.305	(0.551)	380674	150.000	154.58
87	n-Butylbenzene	91	9.991	9.991	(1.034)	1548790	150.000	147.64
73	n-Propylbenzene	91	8.917	8.917	(0.923)	2166010	150.000	158.22
92	Naphthalene	128	11.546	11.546	(1.195)	261811	150.000	144.37
63	o-Xylene	106	8.244	8.244	(1.075)	741860	150.000	147.83
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	1736245	150.000	150.38
64	Styrene	104	8.258	8.258	(1.077)	1322043	150.000	173.79
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	1182148	150.000	155.84
56	Tetrachloroethene	164	6.933	6.933	(0.904)	314774	150.000	155.63
50	Toluene	91	6.446	6.446	(0.840)	1752180	150.000	165.48
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	368843	150.000	166.89
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	625133	150.000	161.28
38	Trichloroethene	130	5.206	5.206	(1.048)	376921	150.000	152.64
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	1016000	150.000	150.80
5	Vinyl Chloride	62	1.138	1.138	(0.272)	638007	150.000	147.91

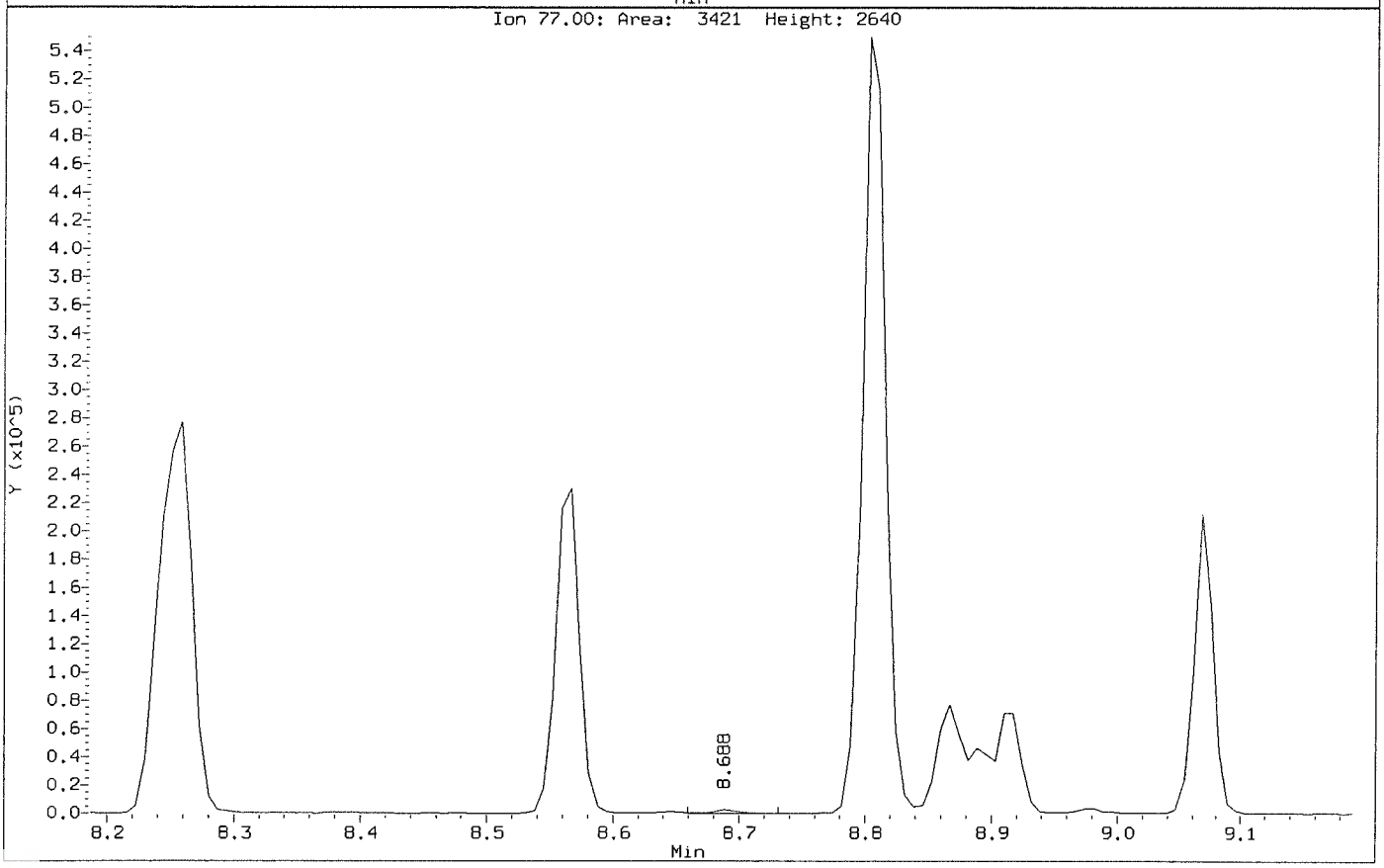
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112210.D
Injection Date: 22-NOV-2020 18:51
Instrument: voa6.i
Client Sample ID: VSTD150

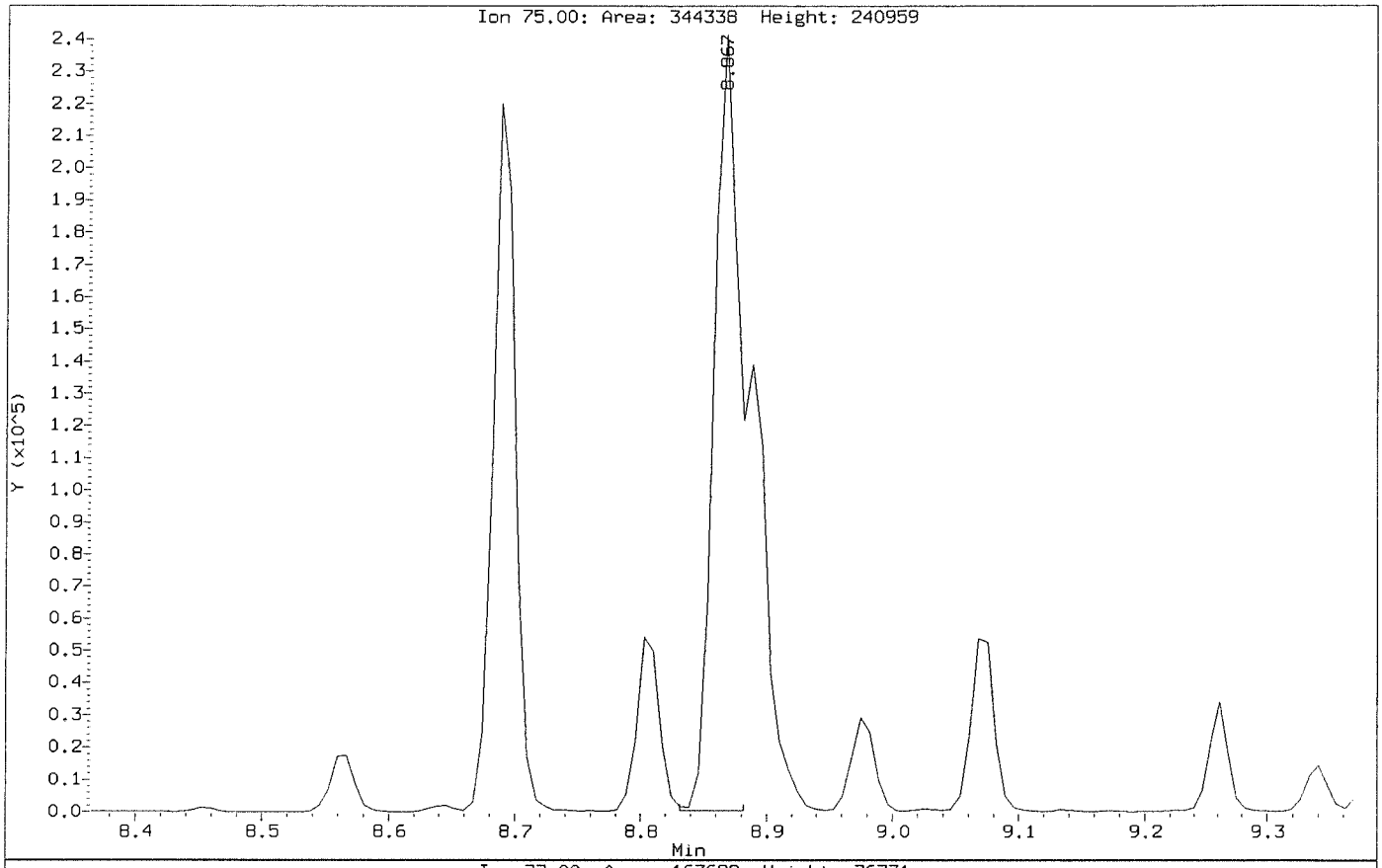
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

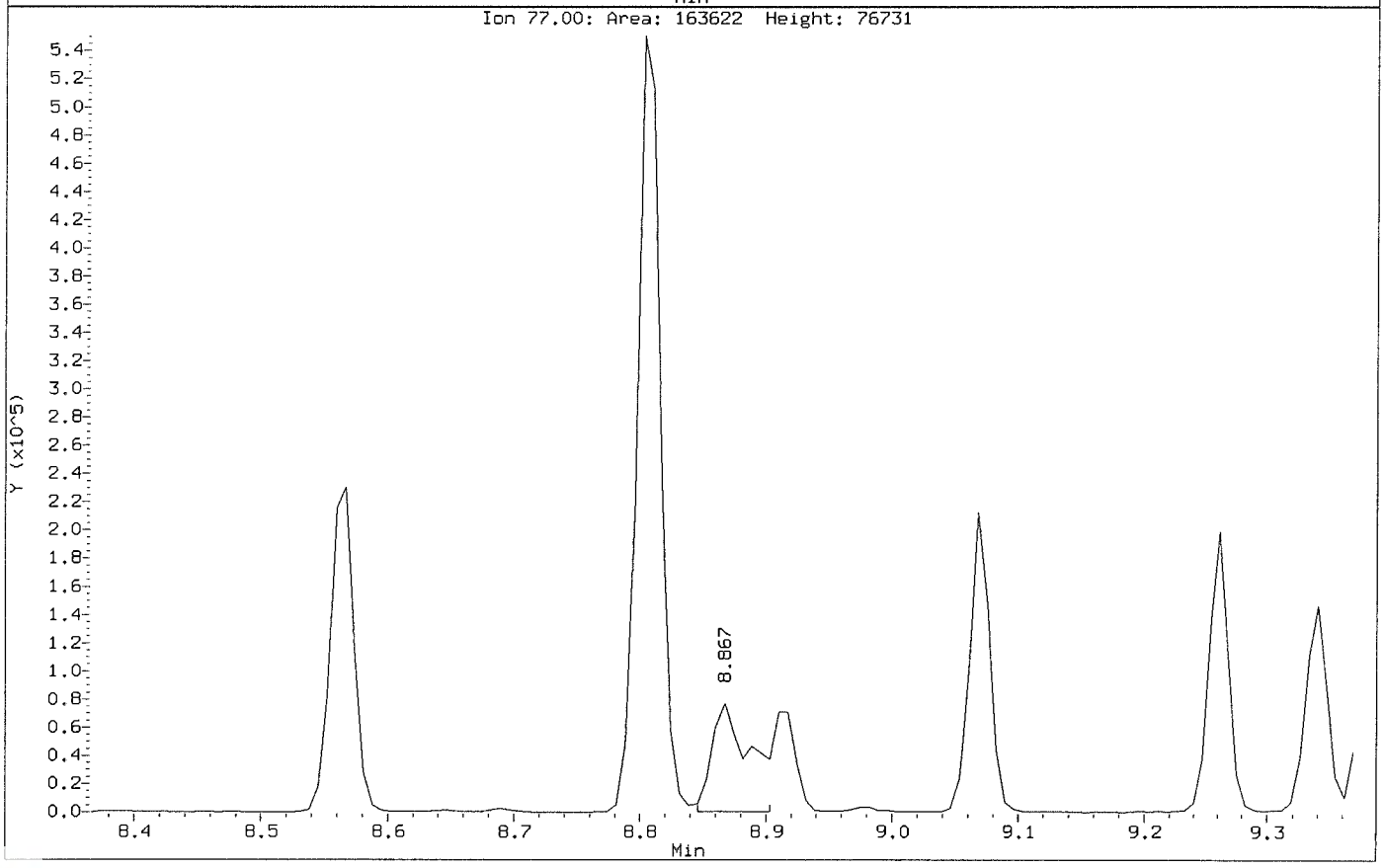




Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112210.D
Injection Date: 22-NOV-2020 18:51
Instrument: voa6.i
Client Sample ID: VSTD150

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112211.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112211.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 22-NOV-2020 19:12
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:51 Cal File: Y112210.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	176035	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	364342	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	341691	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	174972	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	632979	200.000	201.26(A)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	656990	200.000	198.24
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	532354	200.000	200.70(A)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1991247	200.000	215.94(A)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	530863	200.000	206.75(A)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	852384	200.000	238.24(A)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	599923	200.000	200.32(A)
138 Freon TF	101	1.912	1.912	(0.457)	699115	200.000	212.93(A)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	429176	200.000	191.15
22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	934929	200.000	220.18(A)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	729625	200.000	213.73(A)
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	731654	200.000	201.94(A)
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	133285	200.000	207.89(A)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	465250	200.000	176.28(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	266482	200.000	202.13(A)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	2075654	200.000	210.12(A)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	43773	200.000	205.30(A)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	548976	200.000	210.15(A)

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112211.D Page 2
Report Date: 18-Dec-2020 11:14

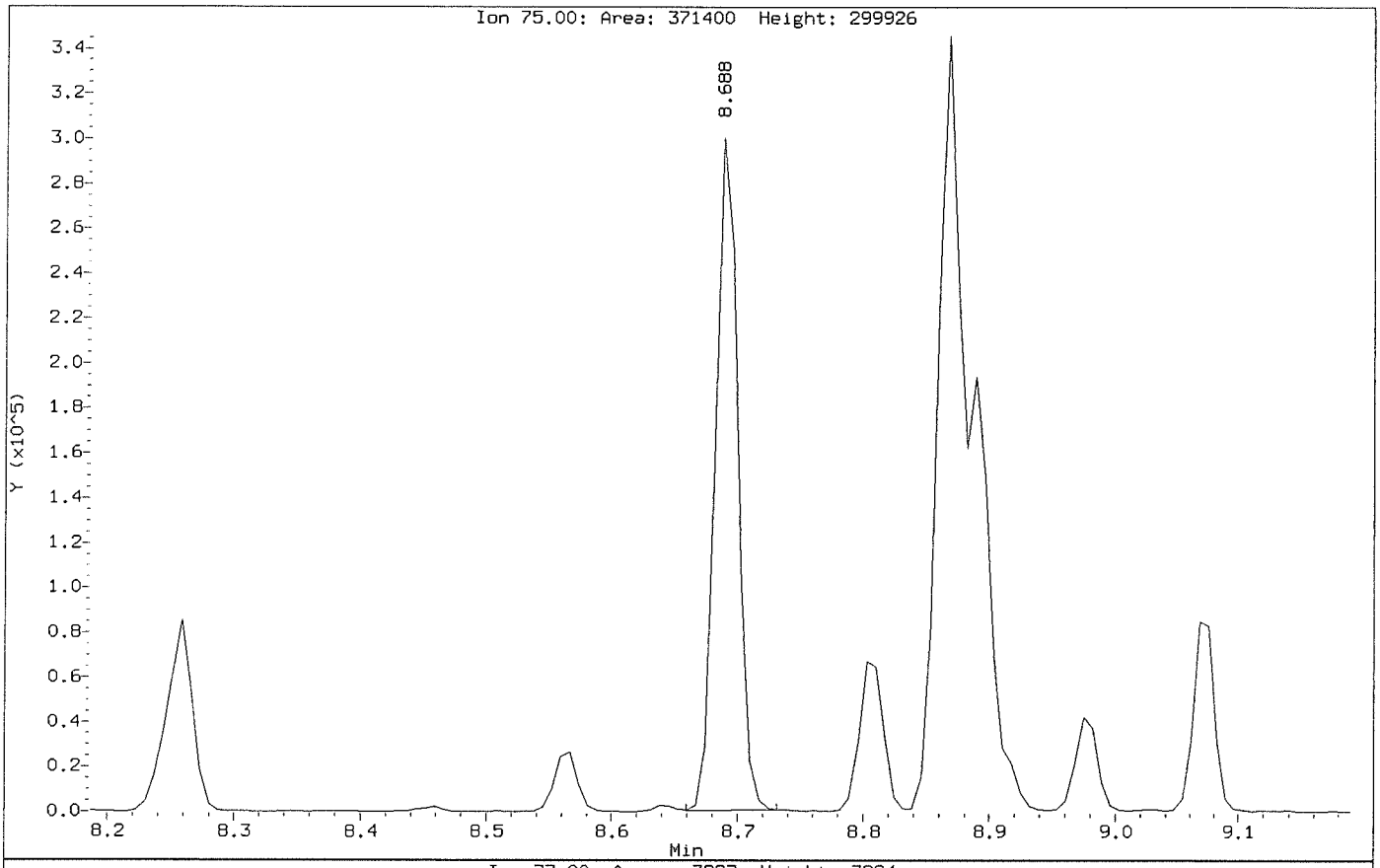
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	1101226	200.000	222.40(A)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	788057	200.000	196.85
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	552993	200.000	190.25
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	2355502	200.000	226.96(A)
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	1071150	200.000	203.53(A)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	828217	200.000	196.61
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	1081362	200.000	201.19(A)
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	796994	200.000	213.53(A)
24	2-Butanone	43	3.573	3.573	(0.854)	351745	400.000	417.80(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	1666350	200.000	194.64
52	2-Hexanone	43	7.090	7.090	(0.924)	706390	400.000	399.82(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	2386668	200.000	227.84(A)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2148410	200.000	202.60(A)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1057100	400.000	399.48(A)
10	Acetone	43	1.969	1.969	(0.471)	376097	400.000	385.81(A)
37	Benzene	78	4.512	4.512	(0.908)	2028339	200.000	203.83(A)
74	Bromobenzene	156	8.810	8.810	(0.912)	586928	200.000	198.55
29	Bromochloromethane	128	3.795	3.795	(0.908)	279430	200.000	224.66(A)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	785121	200.000	203.47(A)
66	Bromoform	173	8.408	8.408	(1.096)	347273	200.000	204.14(A)
6	Bromomethane	94	1.339	1.339	(0.320)	856434	200.000	245.35(A)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	2919808	400.000	444.85(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	698012	200.000	222.20(AH)
59	Chlorobenzene	112	7.699	7.699	(1.004)	1618178	200.000	221.53(A)
7	Chloroethane	64	1.403	1.403	(0.336)	577610	200.000	211.73(A)
28	Chloroform	83	3.910	3.910	(0.935)	974268	200.000	211.64(A)
3	Chloromethane	50	1.073	1.073	(0.257)	637369	200.000	197.20
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	558963	200.000	217.00(A)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	965378	200.000	208.87(A)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	570654	200.000	215.40(A)
44	Dibromomethane	93	5.558	5.558	(1.118)	384598	200.000	201.97(A)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	619478	200.000	205.07(A)
61	Ethylbenzene	106	7.800	7.800	(1.017)	766670	200.000	208.13(A)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	187663	200.000	203.93(A)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2498604	200.000	224.79(A)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	2341187	400.000	410.83(A)
17	Methylene Chloride	84	2.306	2.306	(0.551)	521477	200.000	215.66(A)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	2327830	200.000	206.31(A)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	3050802	200.000	208.43(A)
92	Naphthalene	128	11.539	11.539	(1.194)	402230	200.000	206.98(A)
63	o-Xylene	106	8.244	8.244	(1.075)	1073818	200.000	204.29(A)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	2518787	200.000	199.39
64	Styrene	104	8.258	8.258	(1.077)	1909859	200.000	241.03(A)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	1717849	200.000	211.81(A)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	454926	200.000	215.94(A)
50	Toluene	91	6.446	6.446	(0.840)	2434863	200.000	220.76(A)
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	536782	200.000	247.36(A)
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	843951	200.000	212.14(A)
38	Trichloroethene	130	5.207	5.207	(1.048)	521092	200.000	205.60(A)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	1337090	200.000	202.11(A)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	854012	200.000	201.63(A)

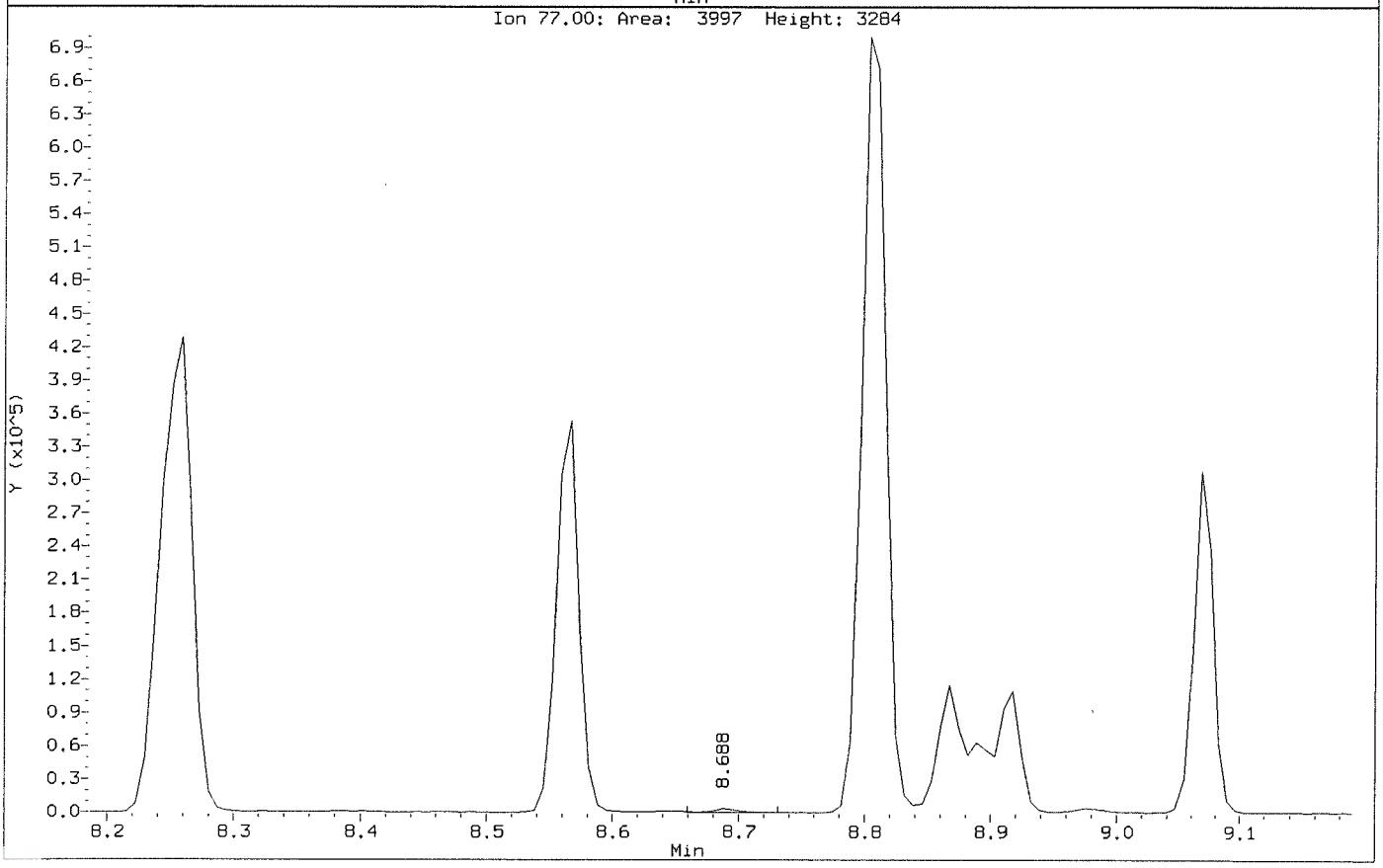
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112211.D
Injection Date: 22-NOV-2020 19:12
Instrument: voa6.i
Client Sample ID: VSTD200

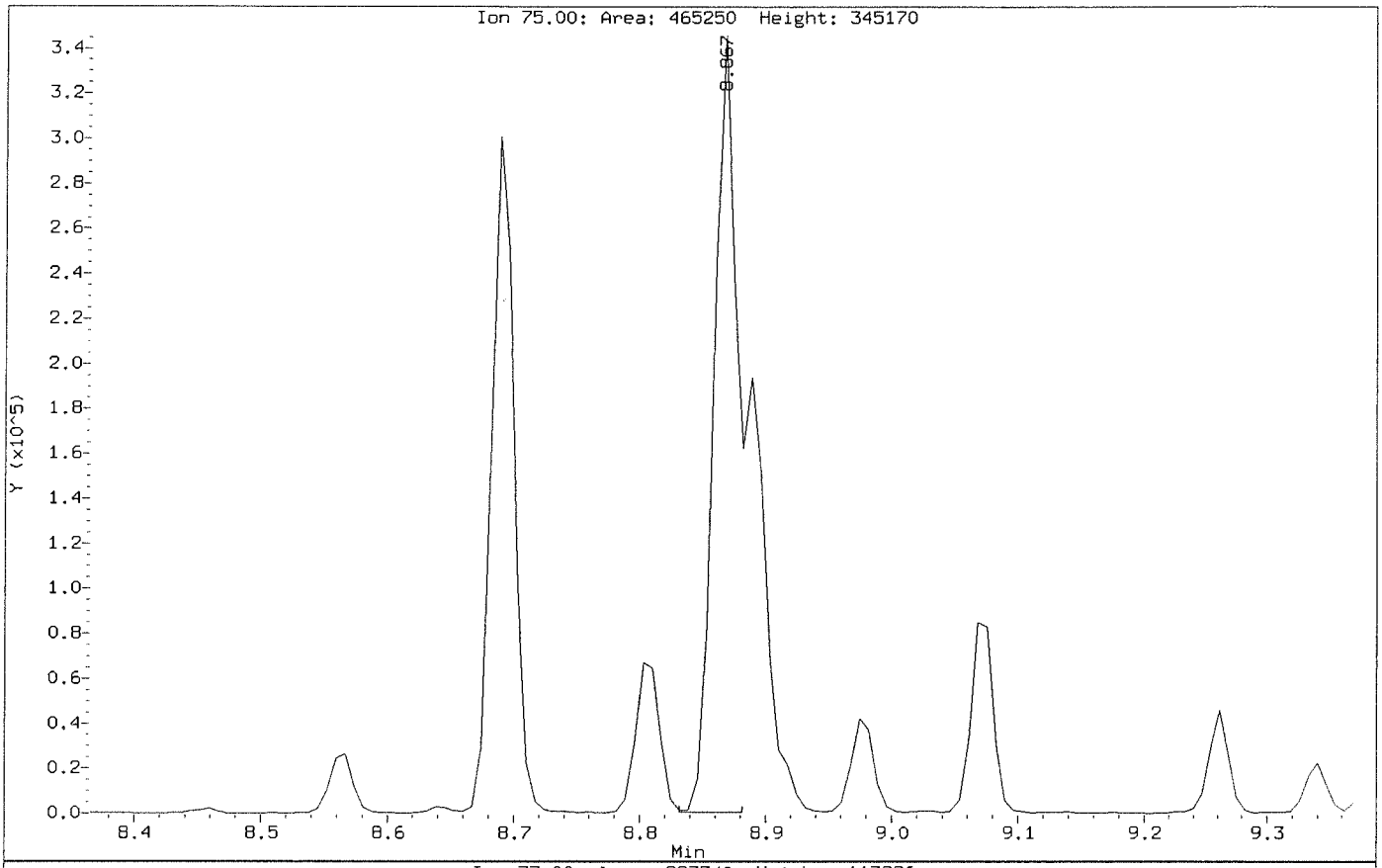
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

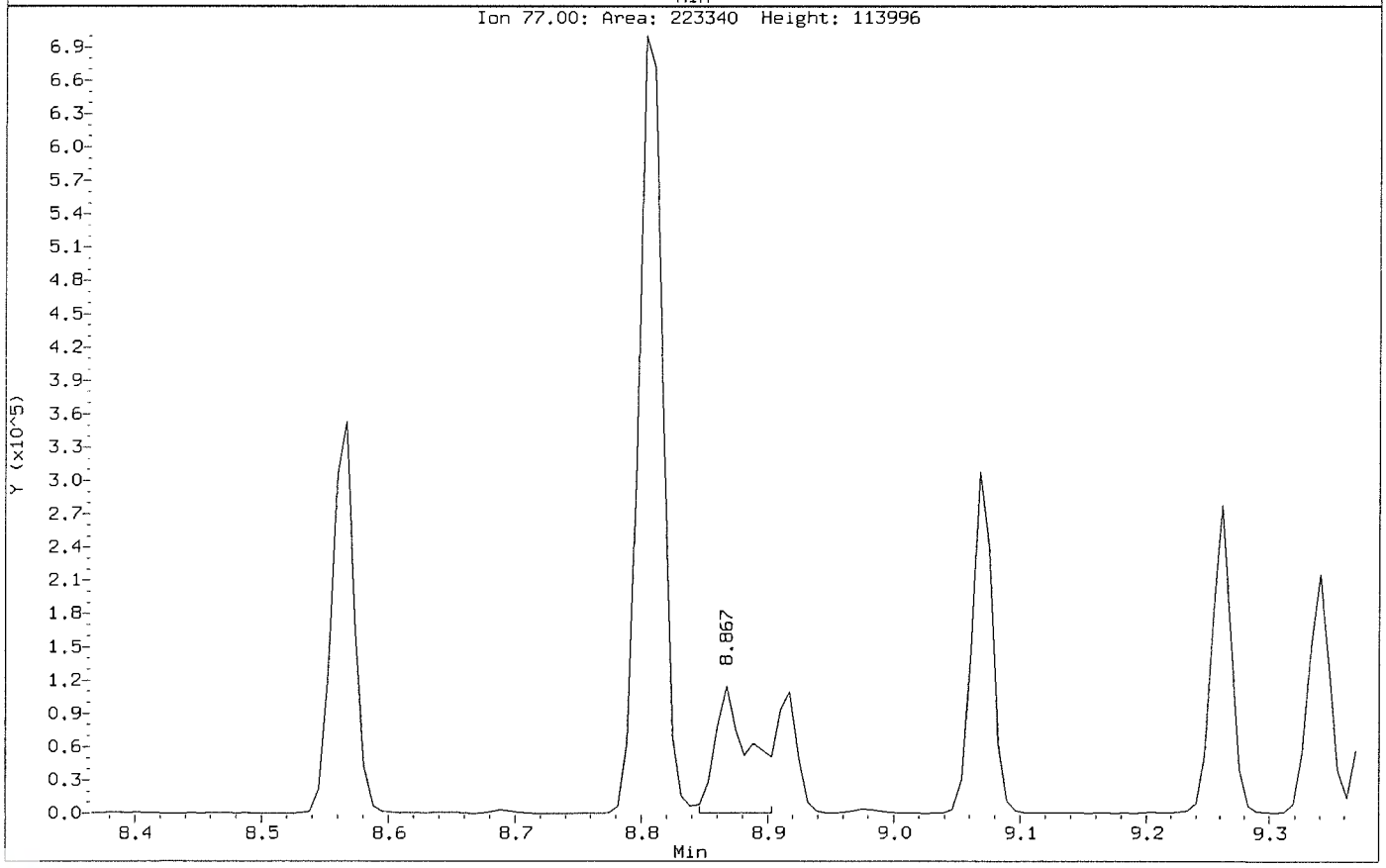




Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112211.D
Injection Date: 22-NOV-2020 19:12
Instrument: voa6.i
Client Sample ID: VSTD200

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112213.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112213.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 22-NOV-2020 19:54
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 14 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	191041	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	343524	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	317689	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	149611	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	158000	50.1387	50.13
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	145881	48.2417	48.24
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	124760	49.9107	49.91
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	423661	49.4162	49.41
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	106218	44.4945	44.49
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	183019	47.1370	47.13
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	135342	51.7383	51.73
138 Freon TF	101	1.919	1.912	(0.459)	154204	43.2779	43.27
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	99550	47.6901	47.69
22 1,1-Dichloroethane	63	2.921	2.922	(0.699)	215768	46.8243	46.82
11 1,1-Dichloroethene	96	1.919	1.912	(0.459)	162205	43.7837	43.78
32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	160298	46.9264	46.92
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	32310	59.8017	59.80(M)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	111149	49.2536	49.25(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	62438	55.3895	55.38
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	382703	45.3098	45.30
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	9070	49.7505	49.75
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	114507	47.1465	47.14

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112213.D Page 2
Report Date: 18-Dec-2020 11:14

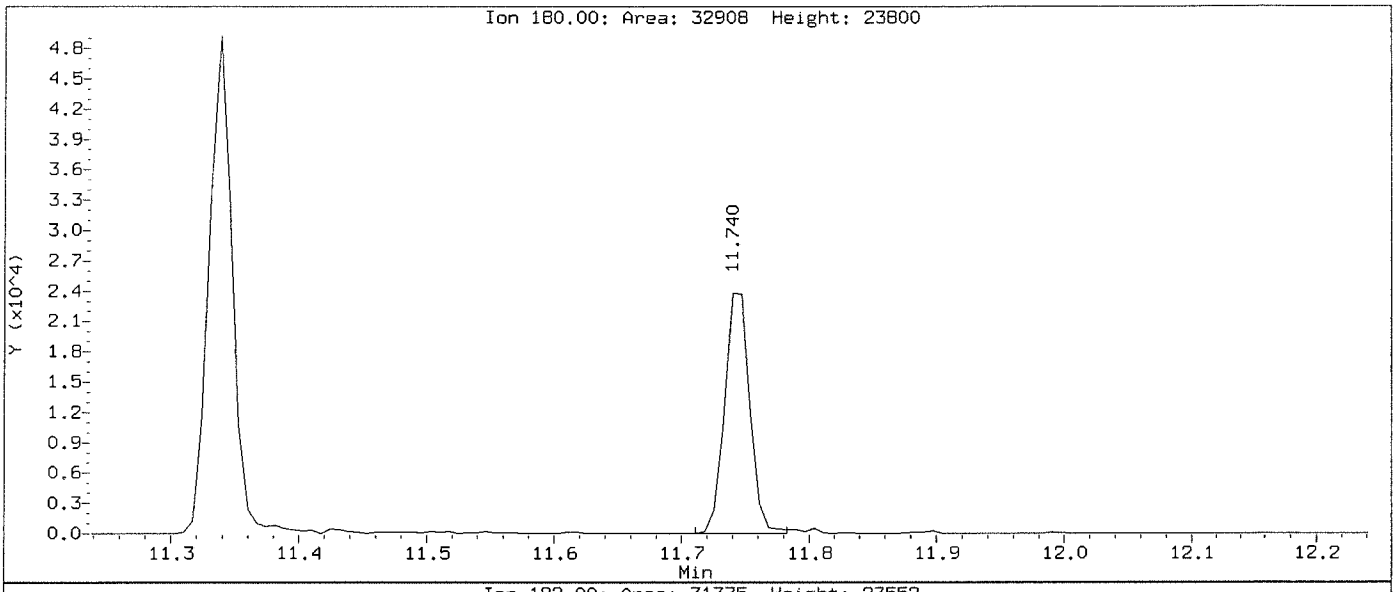
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	200417	47.3378	47.33
33	1,2-Dichloroethane	62	4.555	4.562	(0.916)	193396	51.2378	51.23
42	1,2-Dichloropropane	63	5.436	5.443	(1.094)	127112	46.3815	46.38
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	398122	44.8645	44.86
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	206919	45.9822	45.98
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	195736	49.9779	49.97
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	210237	46.2002	46.20
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	181550	44.8209	44.82
24	2-Butanone	43	3.573	3.573	(0.854)	84328	92.2965	92.29
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	329818	45.0561	45.05
52	2-Hexanone	43	7.083	7.090	(0.923)	150957	92.5868	92.58
77	4-Chlorotoluene	91	9.067	9.075	(0.938)	410501	45.8309	45.83
82	p-Isopropyltoluene	119	9.648	9.655	(0.999)	387100	43.9398	43.93
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	230958	94.5749	94.57
10	Acetone	43	1.976	1.969	(0.473)	98377	90.5699	90.56
37	Benzene	78	4.512	4.512	(0.908)	452437	48.2220	48.22
74	Bromobenzene	156	8.809	8.810	(0.912)	121737	48.1652	48.16
29	Bromochloromethane	128	3.795	3.795	(0.908)	61239	45.3687	45.36
39	Bromodichloromethane	83	5.729	5.729	(1.153)	175889	48.3463	48.34
66	Bromoform	173	8.408	8.408	(1.096)	70405	46.1892	46.18
6	Bromomethane	94	1.338	1.339	(0.320)	168935	45.3471	45.34
19	Carbon Disulfide	76	2.069	2.069	(0.495)	618211	86.7913	86.79
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	139845	47.2150	47.21(H)
59	Chlorobenzene	112	7.692	7.699	(1.003)	305522	44.9875	44.98
7	Chloroethane	64	1.403	1.403	(0.336)	128408	43.3743	43.37
28	Chloroform	83	3.910	3.910	(0.935)	227526	45.5435	45.54
3	Chloromethane	50	1.073	1.073	(0.257)	152059	43.3532	43.35
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	125624	44.9391	44.93
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	216193	49.6113	49.61
55	Dibromochloromethane	129	7.176	7.176	(0.936)	126734	51.4528	51.45
44	Dibromomethane	93	5.550	5.558	(1.117)	88806	49.4635	49.46
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	128617	41.3385	41.33
61	Ethylbenzene	106	7.800	7.800	(1.017)	152428	44.5076	44.50
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	37967	49.4149	49.41
67	Isopropylbenzene	105	8.559	8.566	(1.116)	455328	44.0594	44.05
62	m,p-Xylenes	106	7.907	7.907	(1.031)	404607	82.0111	82.01
17	Methylene Chloride	84	2.305	2.306	(0.551)	121370	46.2523	46.25
87	n-Butylbenzene	91	9.991	9.999	(1.034)	380457	41.9141	41.91
73	n-Propylbenzene	91	8.910	8.917	(0.922)	568646	45.4357	45.43
92	Naphthalene	128	11.539	11.539	(1.194)	97719	59.5751	59.57(M)
63	o-Xylene	106	8.244	8.244	(1.075)	193699	41.9626	41.96
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	451950	45.0587	45.05
64	Styrene	104	8.258	8.258	(1.077)	344151	46.7153	46.71
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	310831	44.8224	44.82
56	Tetrachloroethene	164	6.933	6.933	(0.904)	85296	43.5470	43.54
50	Toluene	91	6.446	6.446	(0.840)	467560	45.5957	45.59
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	108690	46.1531	46.15
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	187417	49.9667	49.96
38	Trichloroethene	130	5.206	5.207	(1.048)	114663	47.9837	47.98
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	308363	42.9520	42.95
5	Vinyl Chloride	62	1.145	1.138	(0.274)	197940	43.0644	43.06

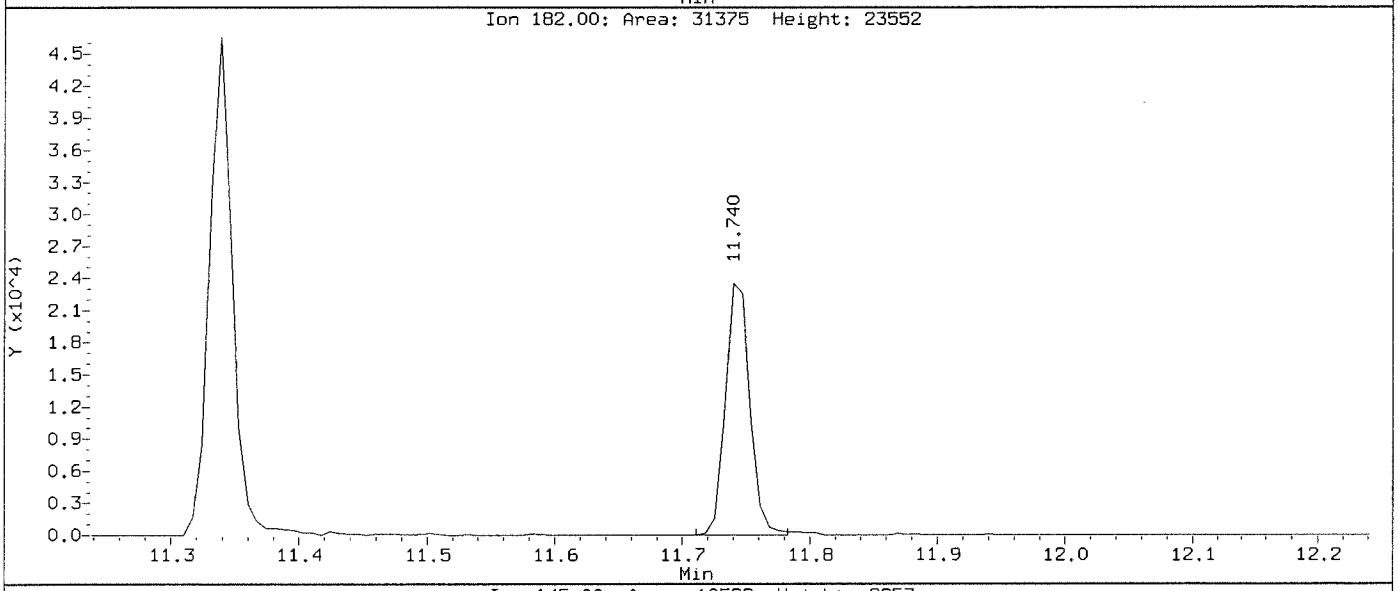
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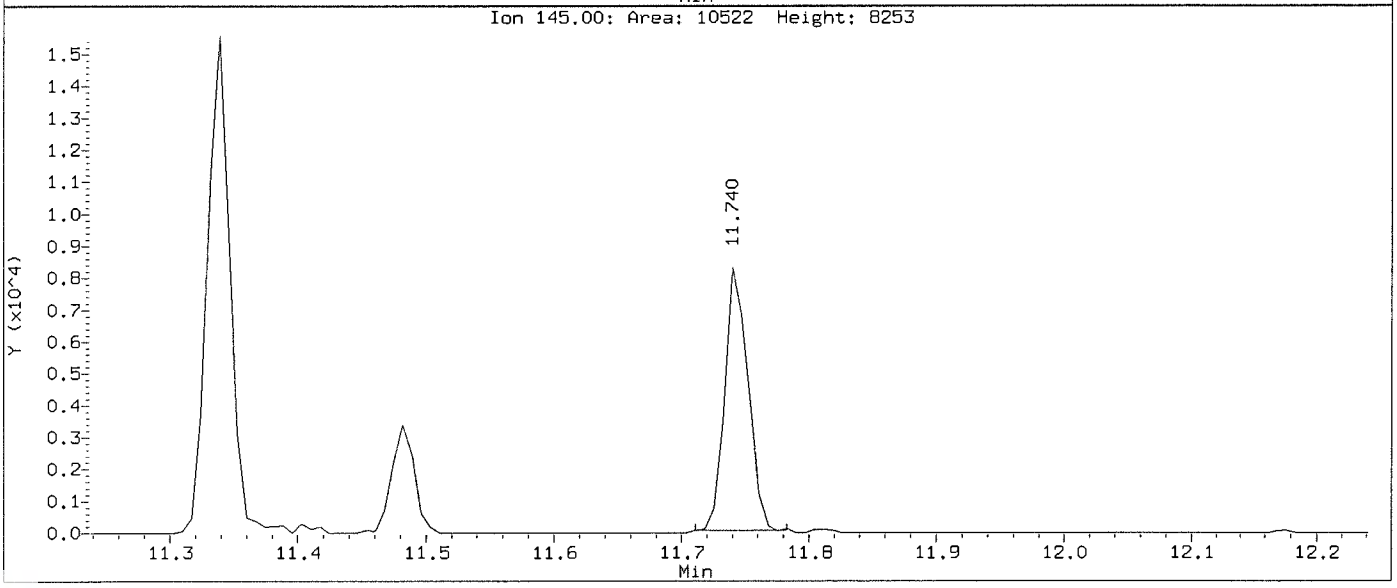
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

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Instrument: voa6.i
Client Sample ID: ICV

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

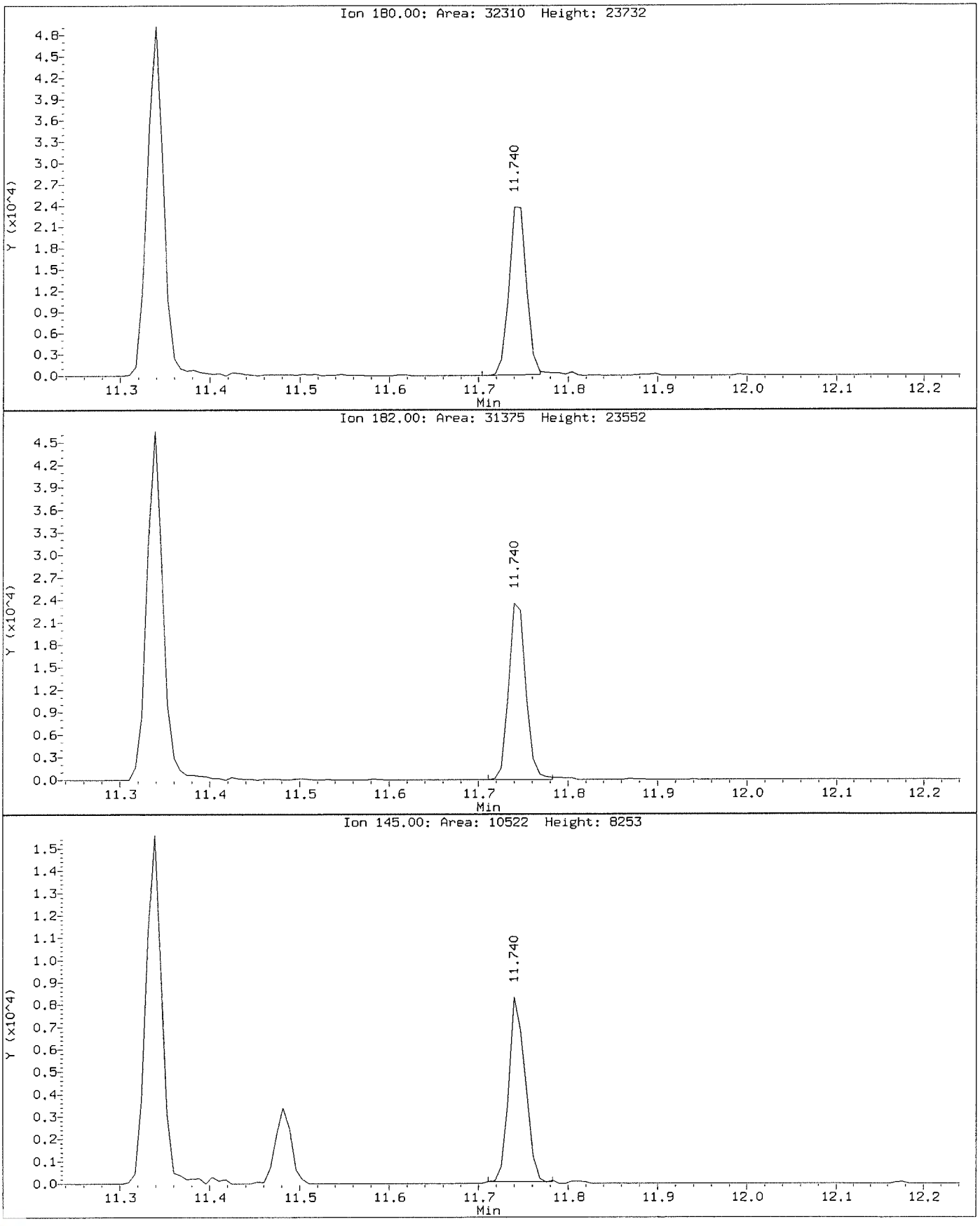






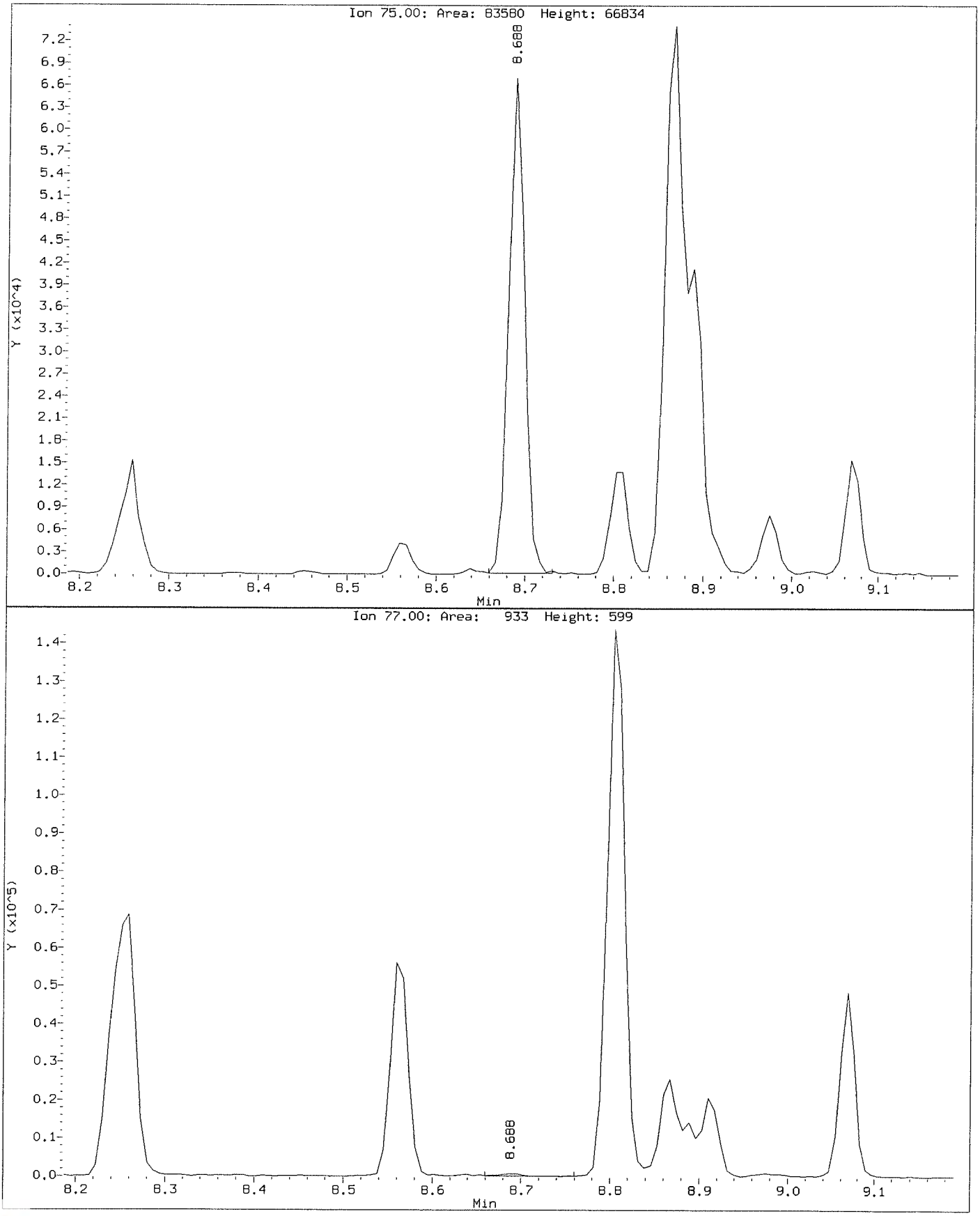
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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



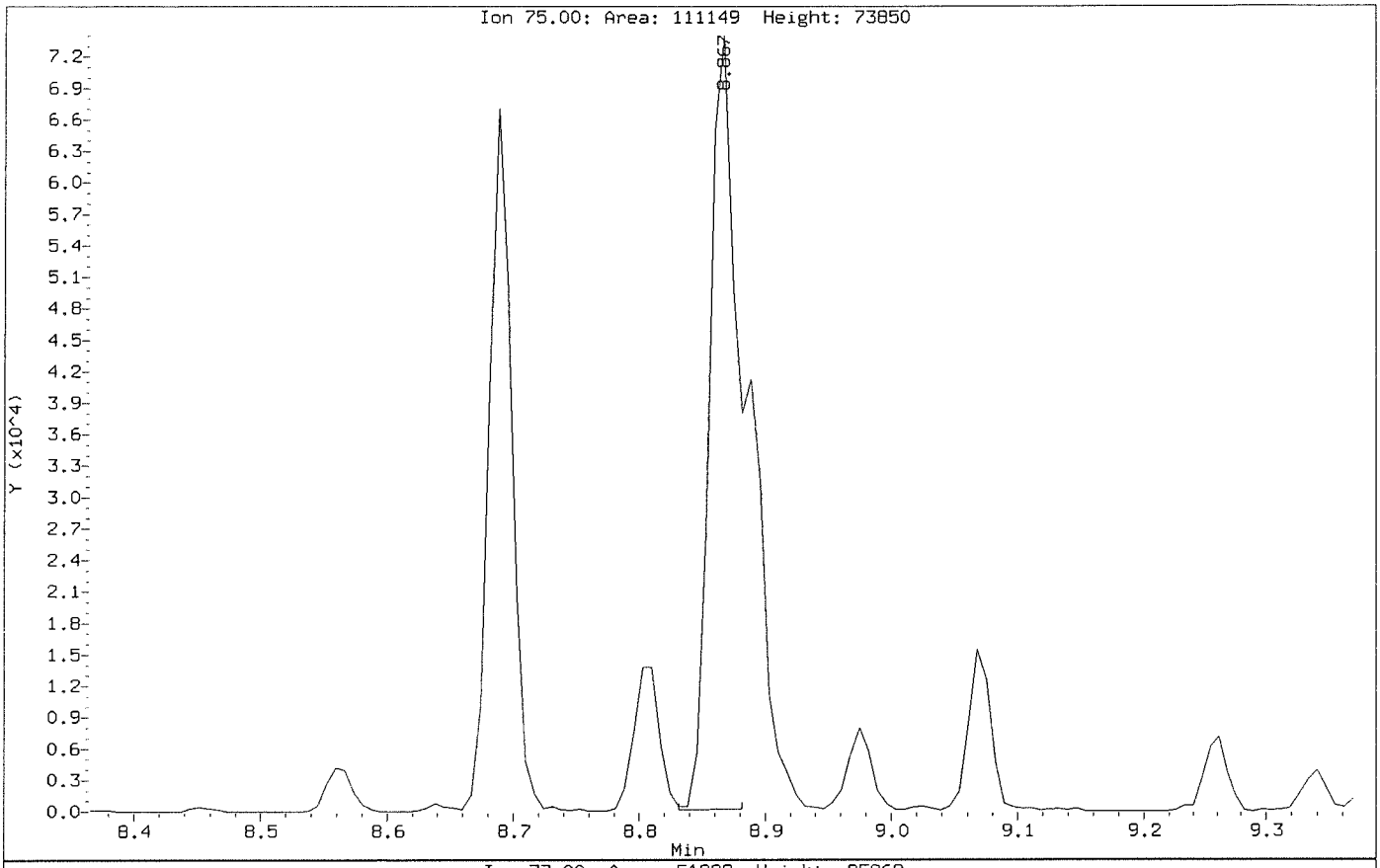
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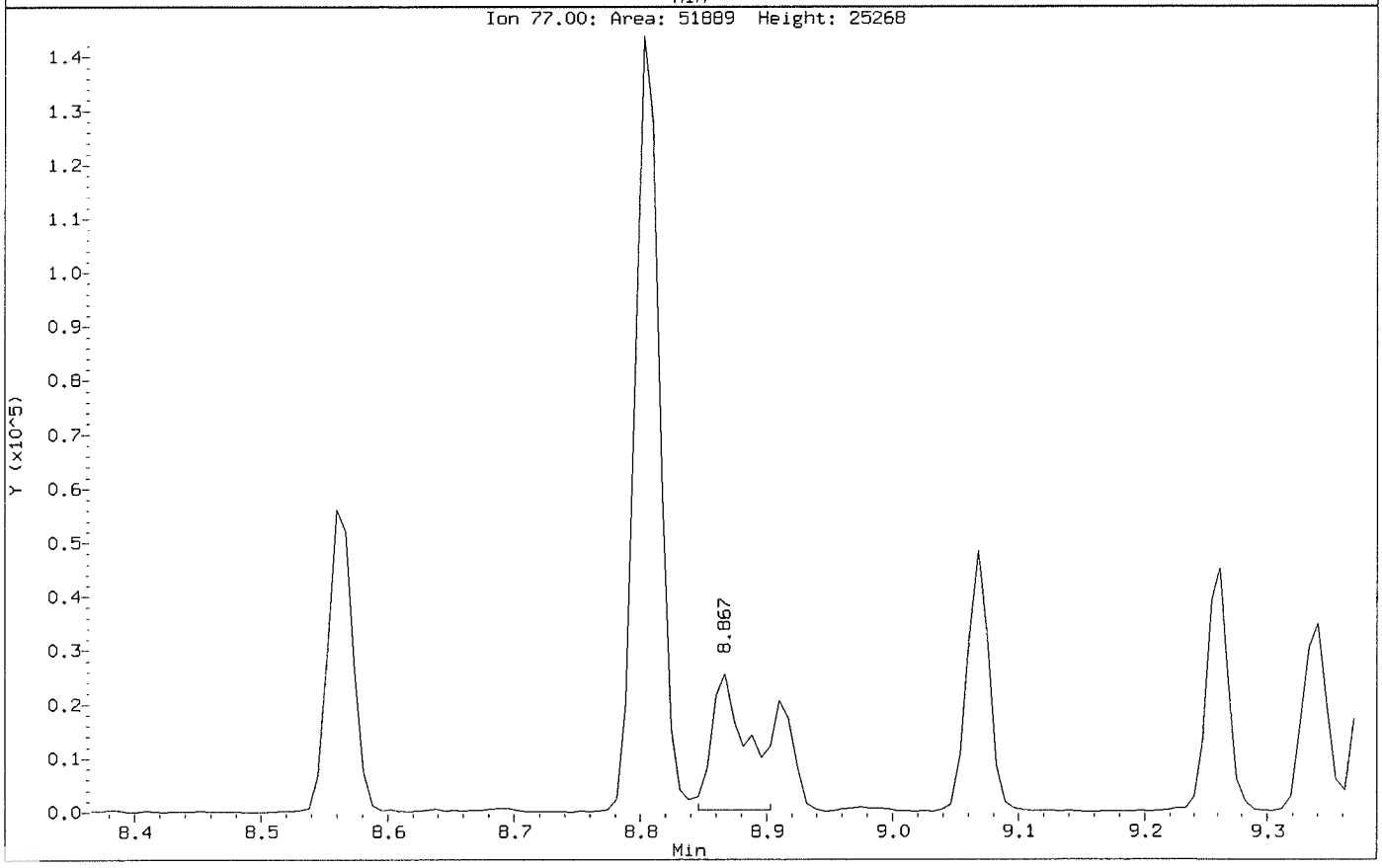
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Instrument: voa6.i
Client Sample ID: ICV

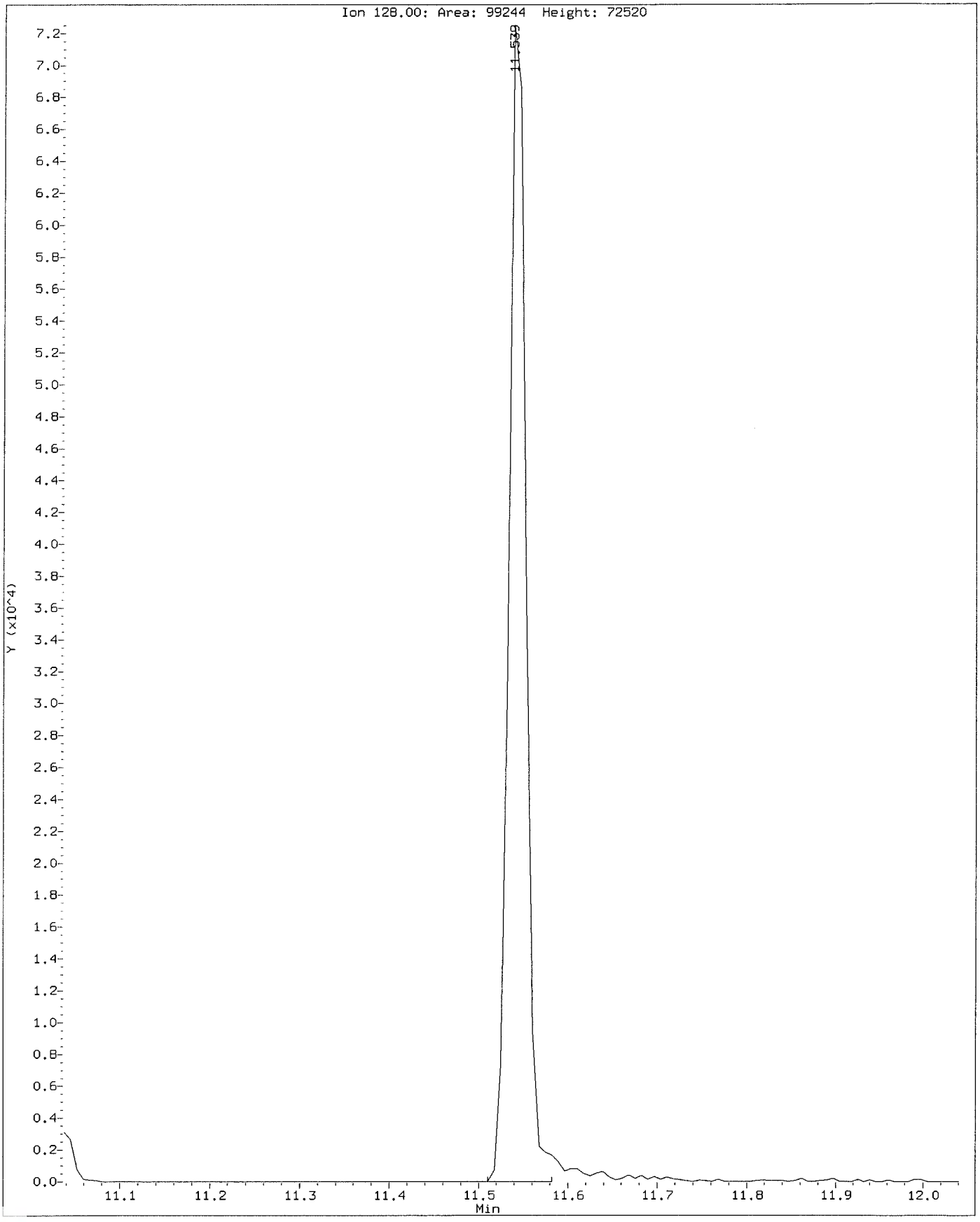
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CAS Number: 96-18-4





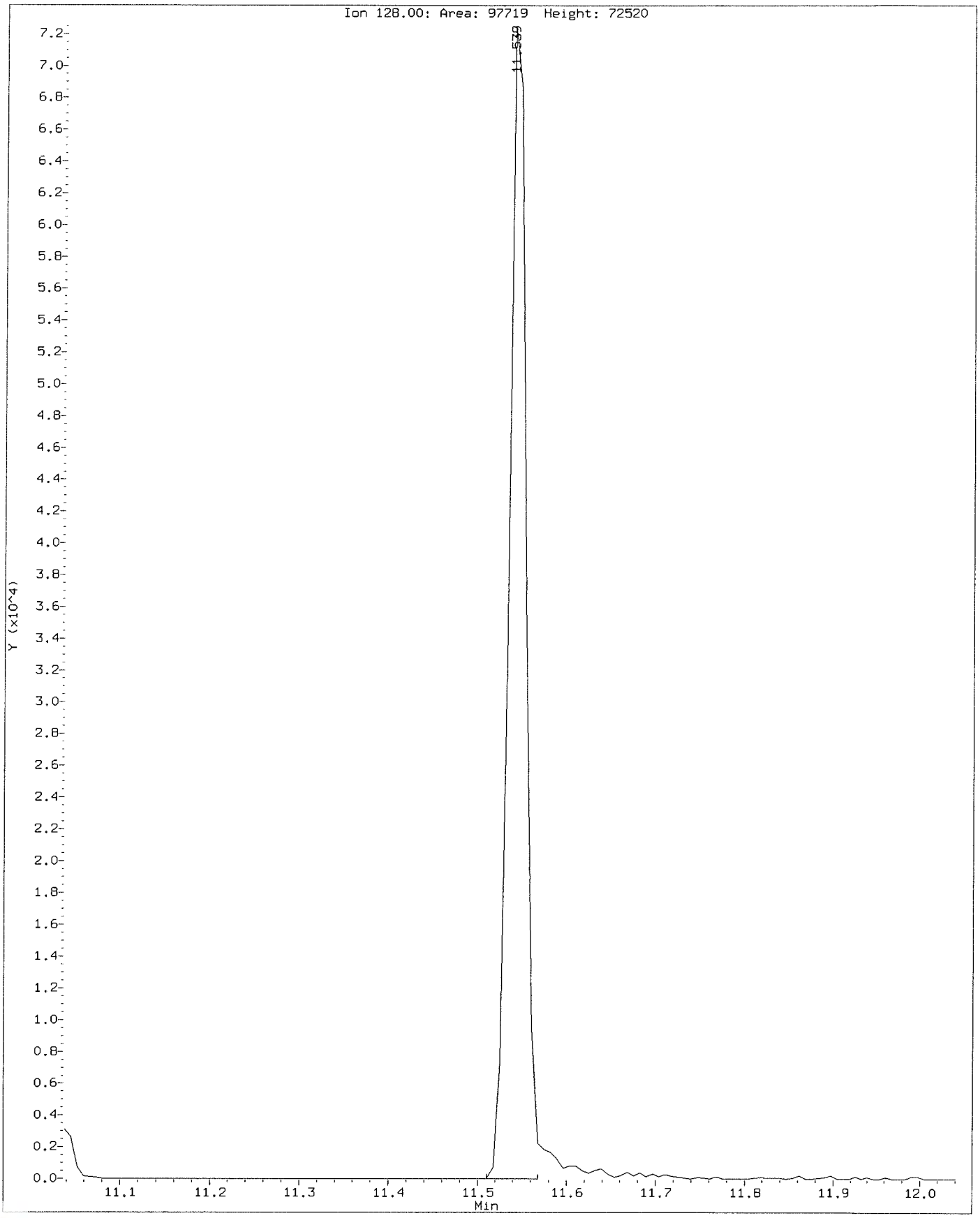
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Injection Date: 22-NOV-2020 19:54
Instrument: voa6.i
Client Sample ID: ICV

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112213.D
Injection Date: 22-NOV-2020 19:54
Instrument: voa6.i
Client Sample ID: ICV

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112216.D Page 1
Report Date: 18-Dec-2020 13:46

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112216.D
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Inj Date : 22-NOV-2020 20:57
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-201122;VLCSW-201122;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:45 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 17 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

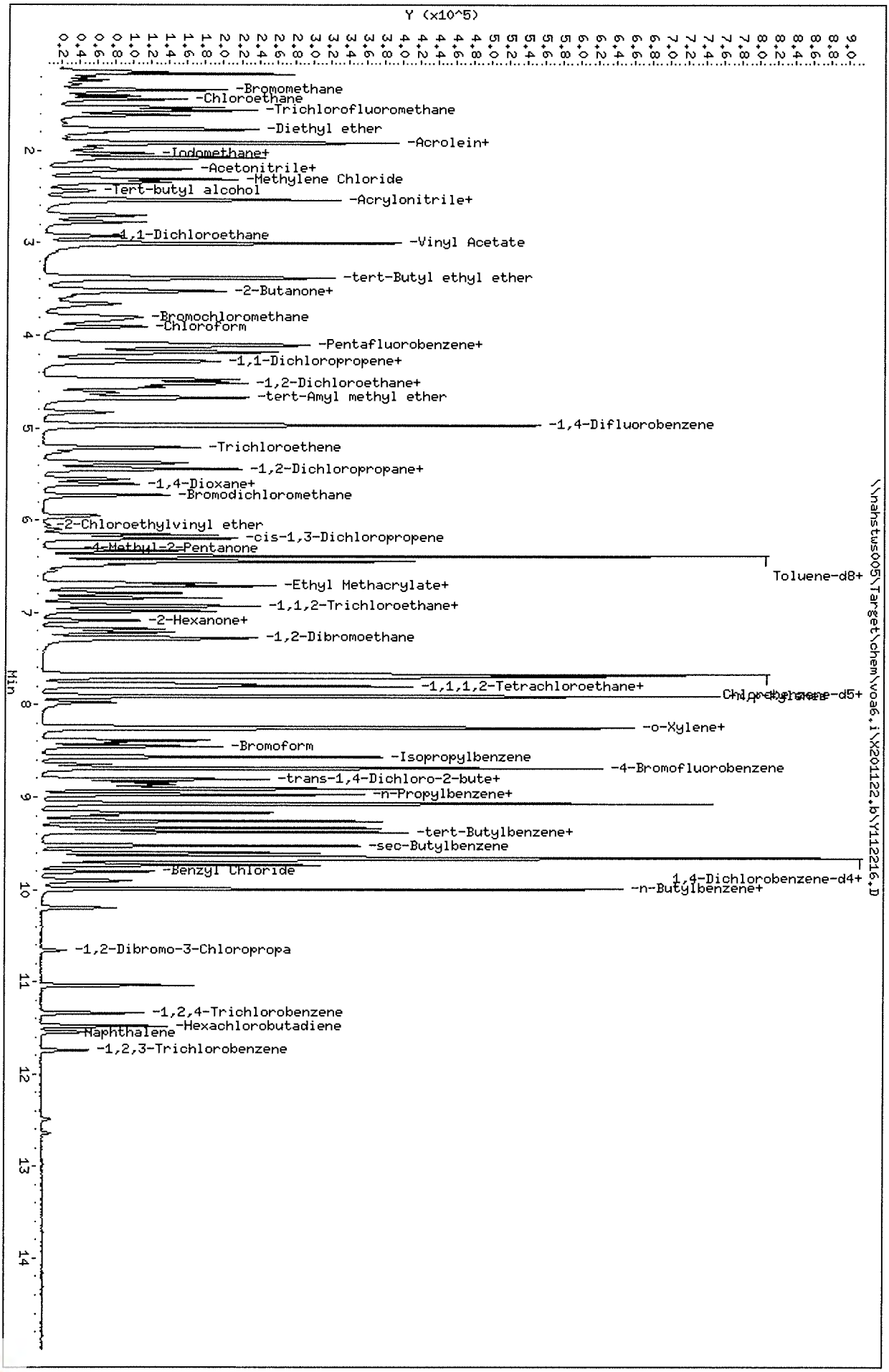
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	173392	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	336432	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	312094	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	139658	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	152460	53.2222	53.22
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	144194	48.5333	48.53
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	124172	54.5624	54.56
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	420267	49.8992	49.89
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	44148	18.8251	18.82
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	77342	21.9472	21.94
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	56728	22.3973	22.39
138 Freon TF	101	1.919	1.919	(0.459)	66761	20.6438	20.64
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	40744	19.8686	19.86
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	84312	20.1591	20.15
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	69260	20.5981	20.59
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	66981	20.0217	20.02
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	12395	25.2865	25.28
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	44160	20.9633	20.96(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	24048	22.8536	22.85
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.971)	165047	20.9332	20.93
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.103)	4043	23.7570	23.75
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	47773	20.0224	20.02

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112216.D Page 2
Report Date: 18-Dec-2020 13:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	80034	20.2510	20.25
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	74926	20.2691	20.26
42	1,2-Dichloropropane	63	5.436	5.443	(1.094)	52008	19.3771	19.37
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	164038	19.8029	19.80
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	88517	21.0724	21.07
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	78053	20.2868	20.28
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	89523	21.3948	21.39
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	73164	19.9012	19.90
24	2-Butanone	43	3.580	3.573	(0.856)	34418	41.5046	41.50
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	142545	20.8607	20.86
52	2-Hexanone	43	7.090	7.083	(0.924)	60586	38.3541	38.35
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	166004	19.8546	19.85
82	p-Isopropyltoluene	119	9.648	9.655	(0.999)	166983	21.1542	21.15
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	94008	39.7222	39.72
10	Acetone	43	1.976	1.976	(0.473)	39097	37.8641	37.86
37	Benzene	78	4.512	4.512	(0.908)	186810	20.3304	20.33
74	Bromobenzene	156	8.810	8.809	(0.912)	49705	21.0673	21.06
29	Bromochloromethane	128	3.803	3.802	(0.909)	26502	21.6324	21.63
39	Bromodichloromethane	83	5.729	5.729	(1.153)	72042	20.2195	20.21
66	Bromoform	173	8.408	8.408	(1.096)	26997	19.3353	19.33
6	Bromomethane	94	1.338	1.338	(0.320)	75447	22.7800	22.78
19	Carbon Disulfide	76	2.069	2.069	(0.495)	273298	42.2740	42.27
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	57674	19.8826	19.88
59	Chlorobenzene	112	7.692	7.692	(1.003)	128145	19.2074	19.20
7	Chloroethane	64	1.403	1.403	(0.336)	51552	19.1860	19.18
28	Chloroform	83	3.910	3.910	(0.935)	90514	19.9622	19.96
3	Chloromethane	50	1.081	1.073	(0.258)	65241	20.4940	20.49
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	52514	20.6978	20.69
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	84581	19.8185	19.81
55	Dibromochloromethane	129	7.176	7.176	(0.936)	48212	19.9245	19.92
44	Dibromomethane	93	5.550	5.557	(1.117)	34627	19.6932	19.69
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	55118	20.8921	20.89
61	Ethylbenzene	106	7.800	7.799	(1.017)	66756	19.8416	19.84
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	16857	24.3021	24.30
67	Isopropylbenzene	105	8.566	8.566	(1.117)	204708	20.1635	20.16
62	m,p-Xylenes	106	7.907	7.907	(1.031)	166754	38.4315	38.43
17	Methylene Chloride	84	2.305	2.305	(0.551)	48014	20.1599	20.15
87	n-Butylbenzene	91	9.991	9.991	(1.034)	163664	20.9678	20.96
73	n-Propylbenzene	91	8.910	8.917	(0.922)	240154	20.5562	20.55
92	Naphthalene	128	11.546	11.539	(1.195)	35392	23.7696	23.76
63	o-Xylene	106	8.244	8.244	(1.075)	80050	19.3247	19.32
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	201333	21.9501	21.95
64	Styrene	104	8.258	8.258	(1.077)	139466	19.2706	19.27
78	tert-Butylbenzene	119	9.340	9.339	(0.967)	140154	21.6508	21.65
56	Tetrachloroethene	164	6.933	6.933	(0.904)	39122	20.3314	20.33
50	Toluene	91	6.446	6.446	(0.840)	200934	19.9460	19.94
20	trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	45105	21.1025	21.10
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	75131	20.4527	20.45
38	Trichloroethene	130	5.206	5.206	(1.048)	47374	20.2428	20.24
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	128744	19.7581	19.75
5	Vinyl Chloride	62	1.145	1.145	(0.274)	86714	20.7860	20.78

QC Flag Legend

M - Compound response manually integrated.

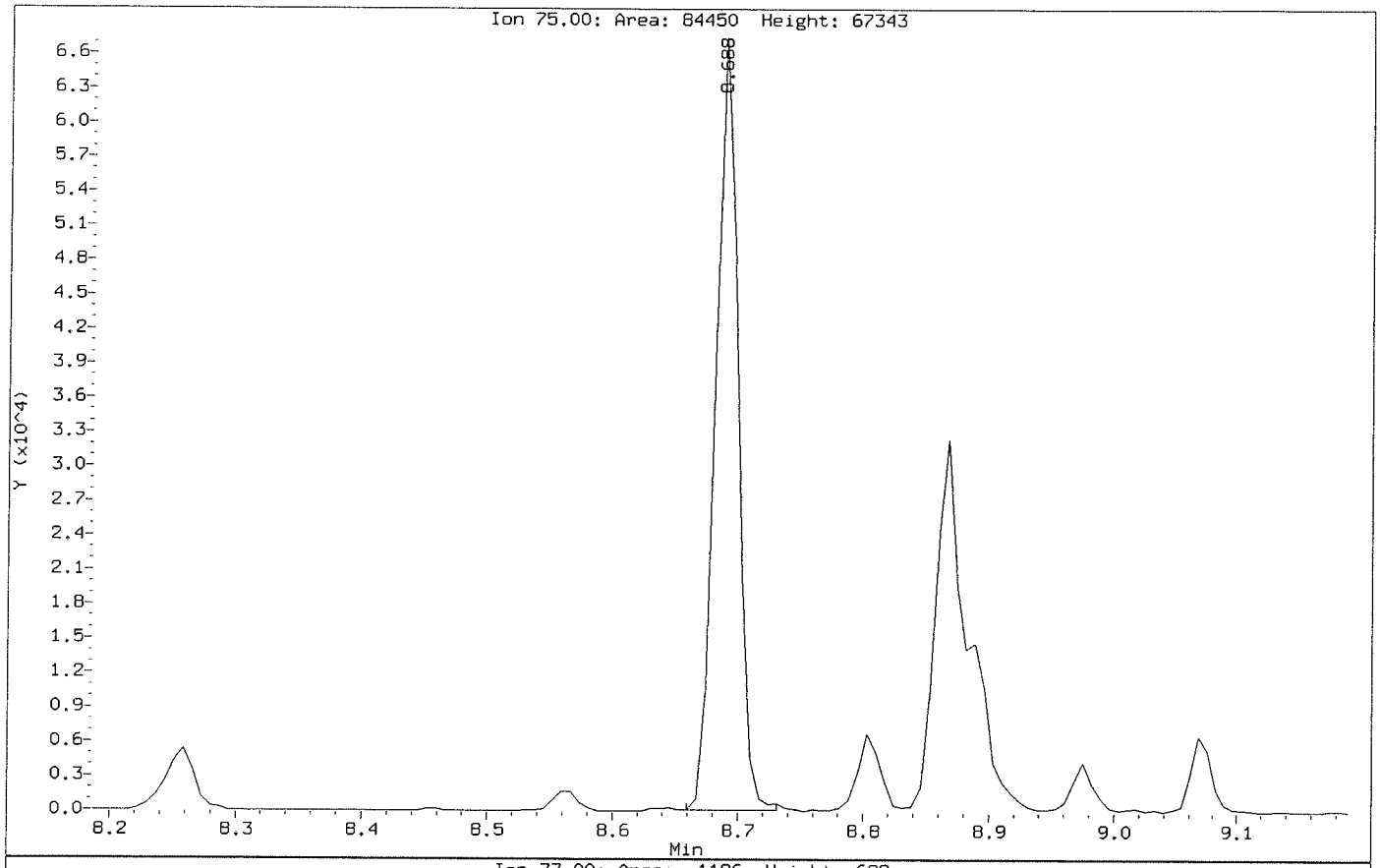


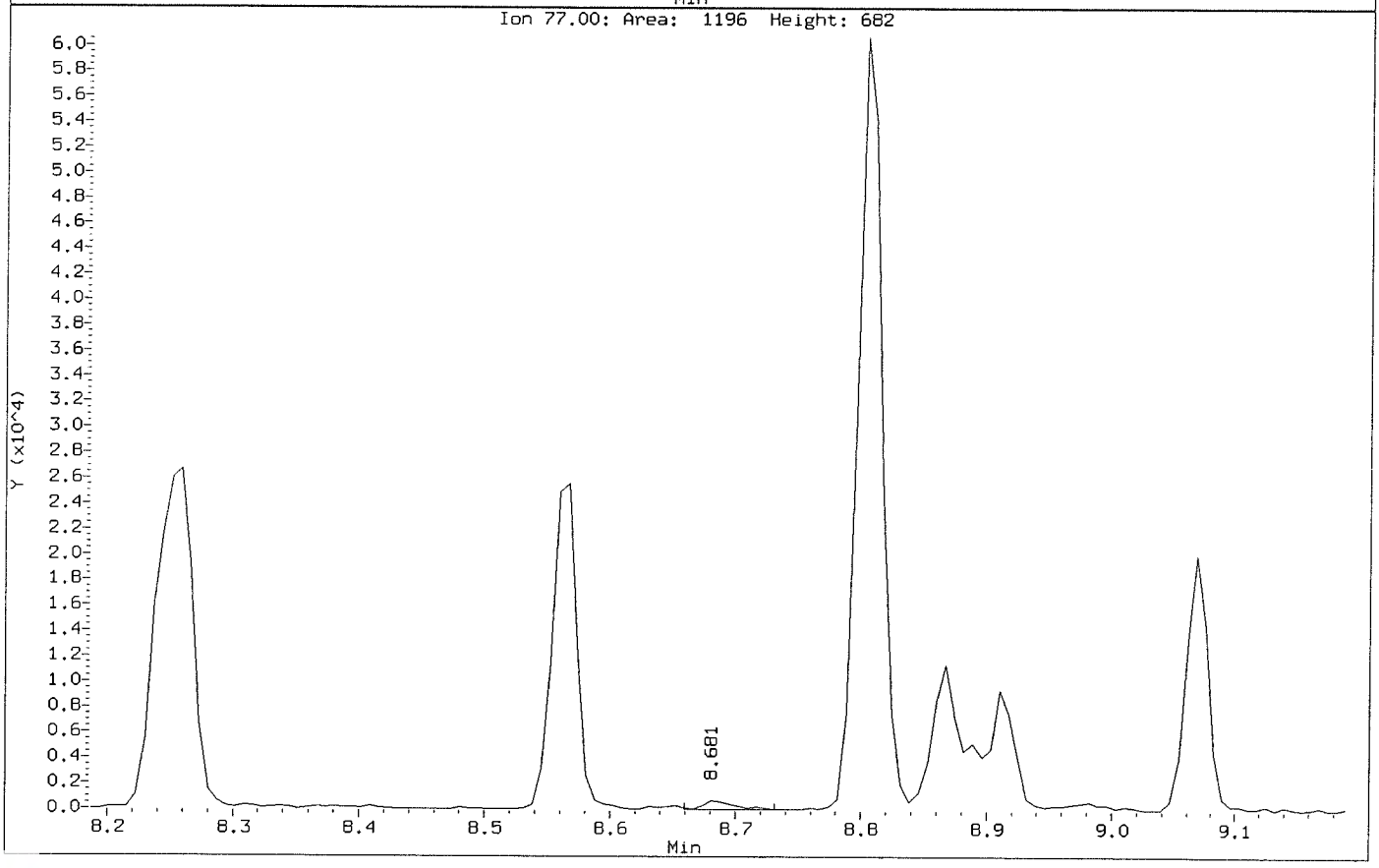
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Purge Volume: 5.0
Column phase: DB624

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

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Instrument: voa6.i
Client Sample ID: VLCSW-201122

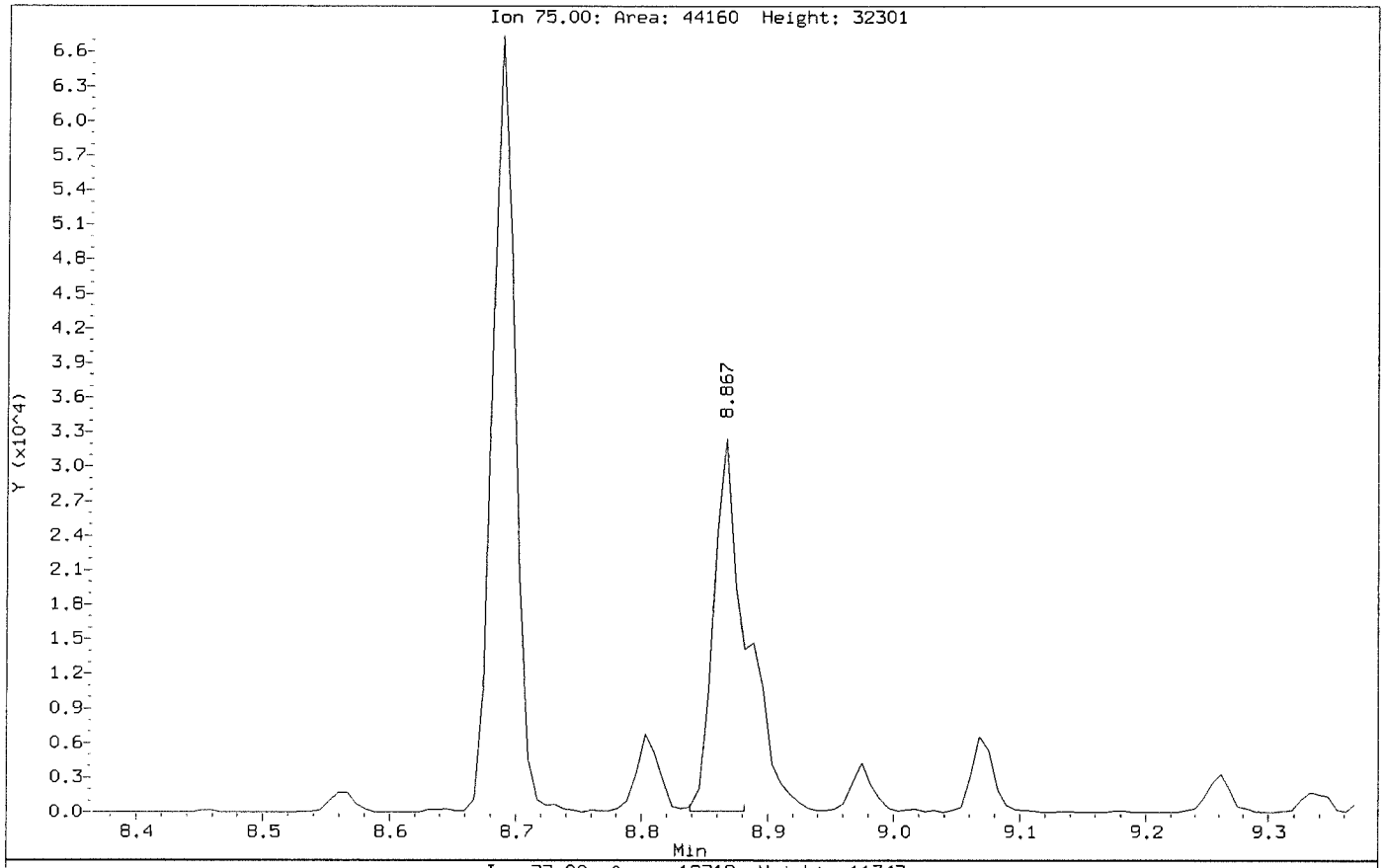
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

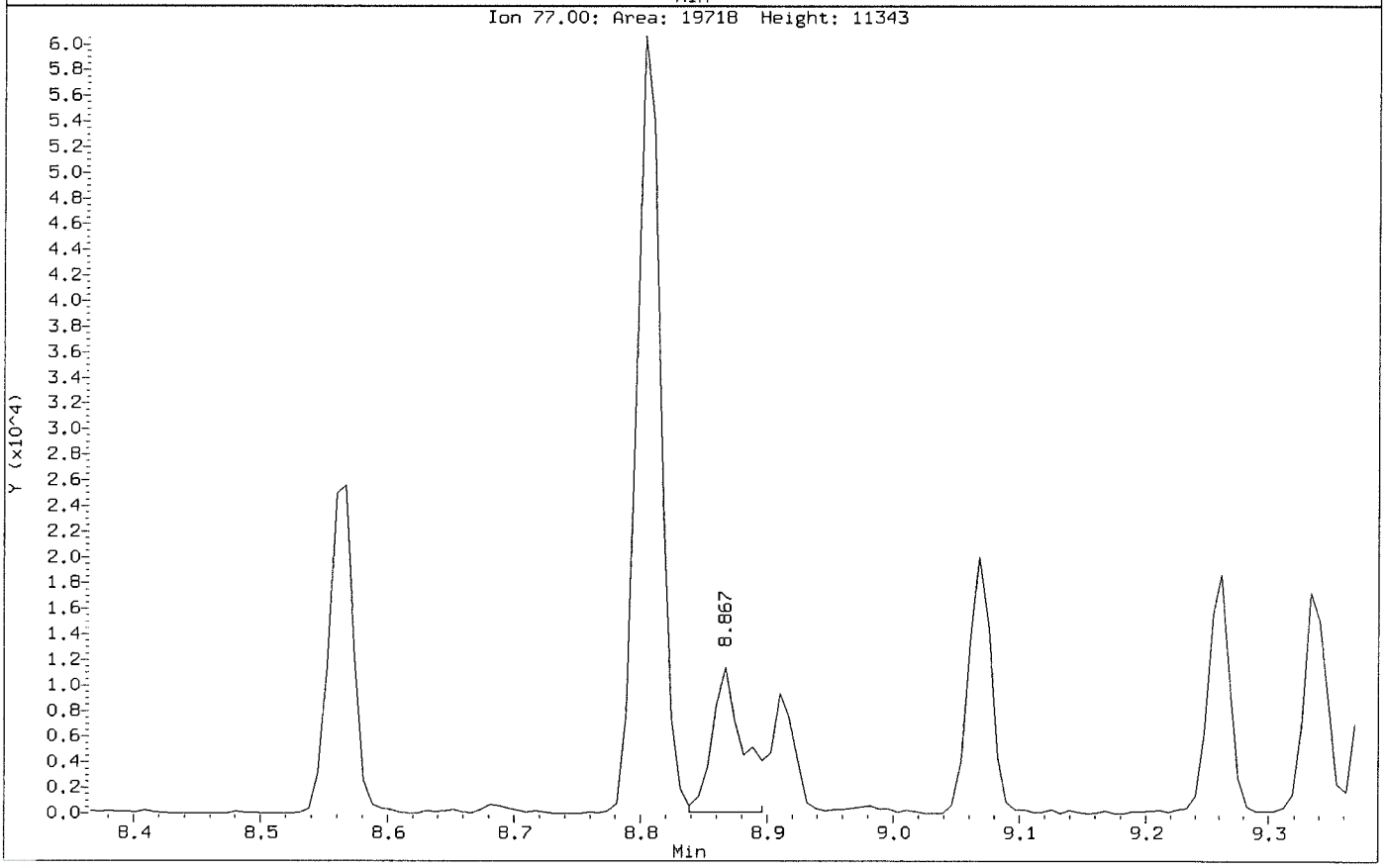




Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112216.D
Injection Date: 22-NOV-2020 20:57
Instrument: voa6.i
Client Sample ID: VLCSW-201122

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112218.D Page 1
Report Date: 18-Dec-2020 13:46

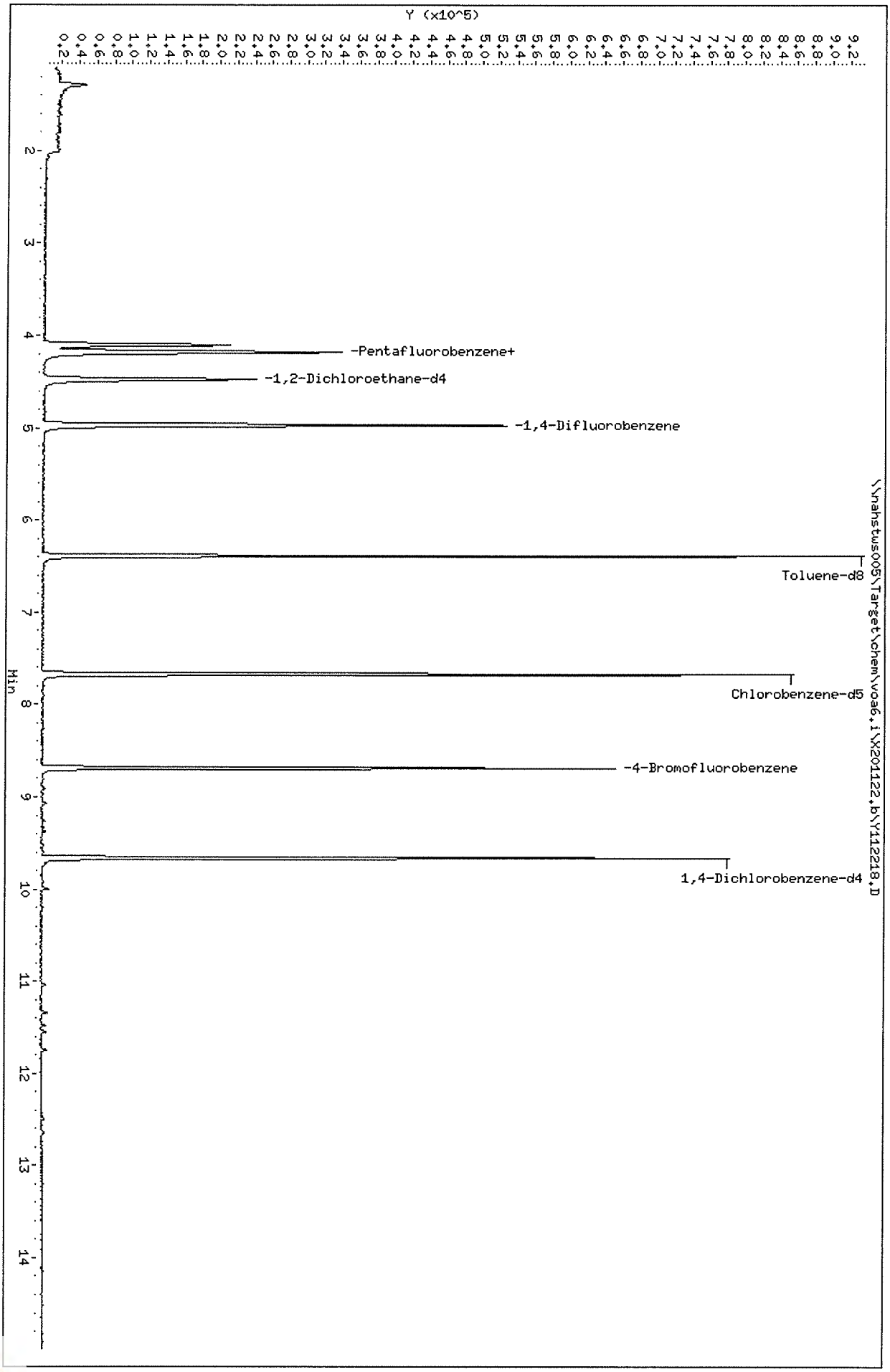
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112218.D
Lab Smp Id: VBLKW-201122 Client Smp ID: VBLKW-201122
Inj Date : 22-NOV-2020 21:39
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-201122;VBLK-201122;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:45 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 19 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	231123	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	402214	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	348869	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	141476	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	164021	43.1768	43.17
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	149177	44.9828	44.98
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	134387	44.5884	44.58
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	485703	51.5896	51.58



Data File: \\nahstws005\Target\chem\voa6,i\X201122,b\Y112218,D
Date : 22-NOV-2020 21:39
Client ID: VBLKW-201122
Sample Info: VBLKW-201122;VBLK-201122;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\X201122.b\Y112219.D Page 1
Report Date: 18-Dec-2020 13:41

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112219.D
Lab Smp Id: HS20110527-04 Client Smp ID: HS20110527-04
Inj Date : 22-NOV-2020 22:00
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-04;HS20110527-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:39 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

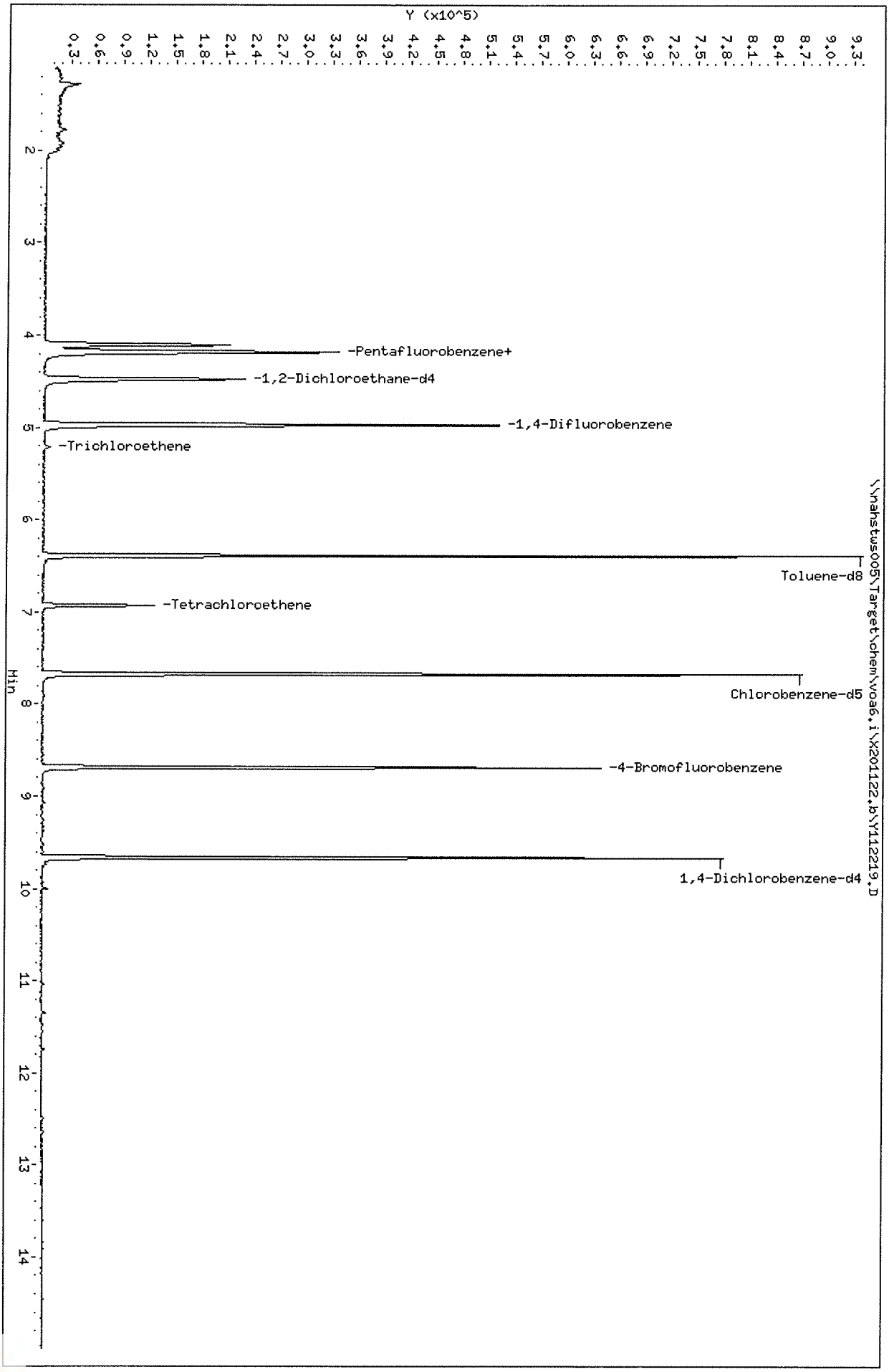
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	228585	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	393549	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	349143	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	145678	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	163053	43.3937	43.39
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	147935	44.5812	44.58
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	134170	44.9993	44.99
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	491973	52.2145	52.21
56 Tetrachloroethene	164	6.926	6.933	(0.903)	20501	9.52365	9.52
38 Trichloroethene	130	5.214	5.206	(1.049)	2224	0.81239	0.81(a)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112219.D
Date : 22-NOV-2020 22:00
Client ID: HS20110527-04
Sample Info: HS20110527-04;HS20110527-04;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112219.D

Date : 22-NOV-2020 22:00

Client ID: HS20110527-04

Instrument: voa6.i

Sample Info: HS20110527-04;HS20110527-04;;;

Purge Volume: 5.0

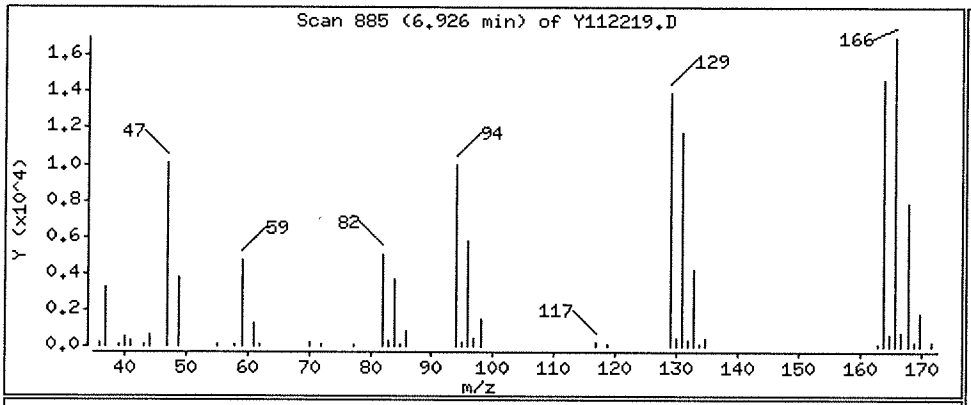
Operator: PC

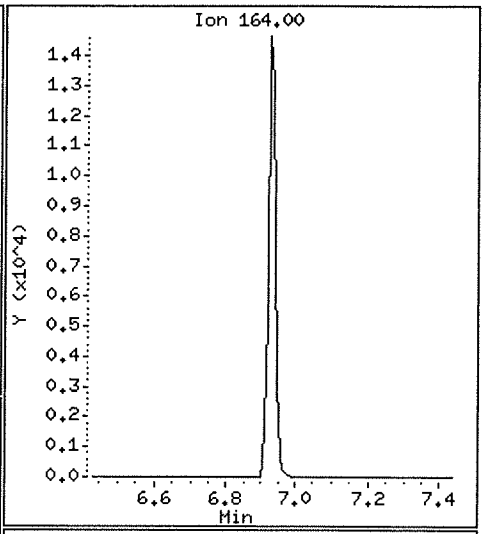
Column phase: DB624

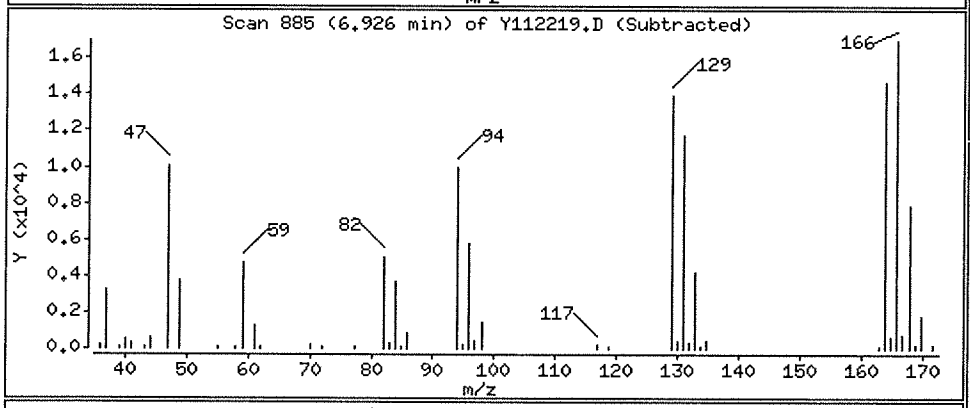
Column diameter: 0.18

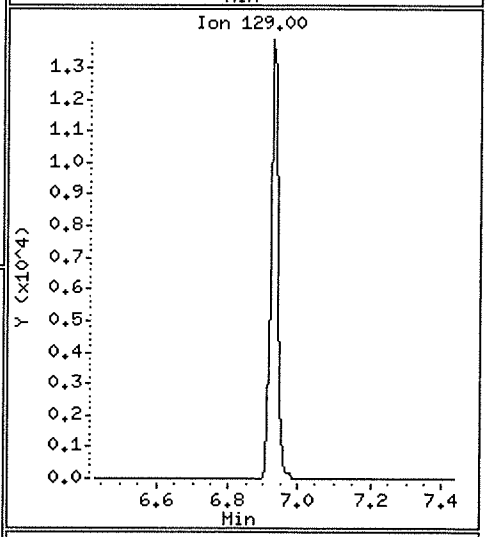
56 Tetrachloroethene

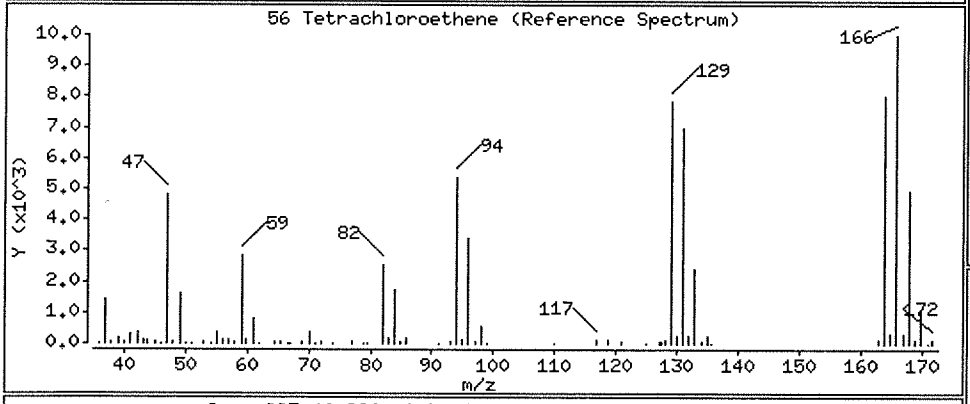
Concentration: 9.52 ug/l

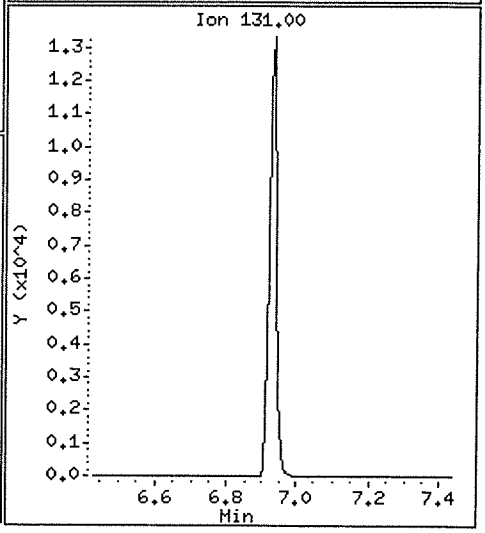


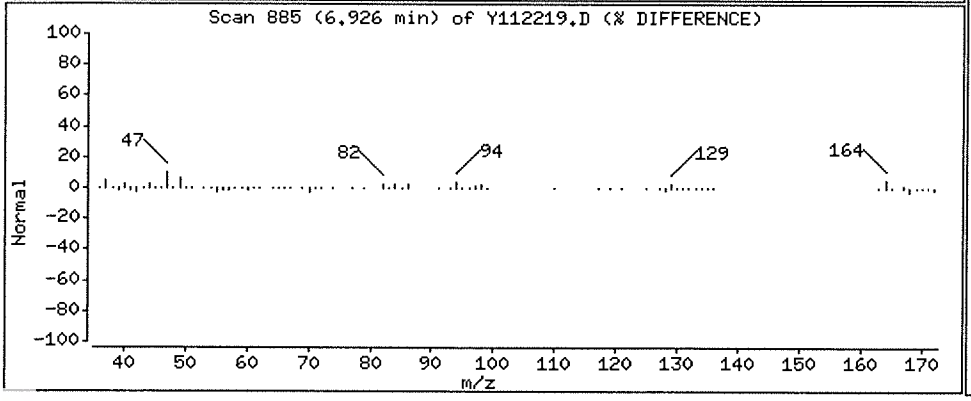












Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112219.D

Date : 22-NOV-2020 22:00

Client ID: HS20110527-04

Instrument: voa6.i

Sample Info: HS20110527-04;HS20110527-04;;;

Purge Volume: 5.0

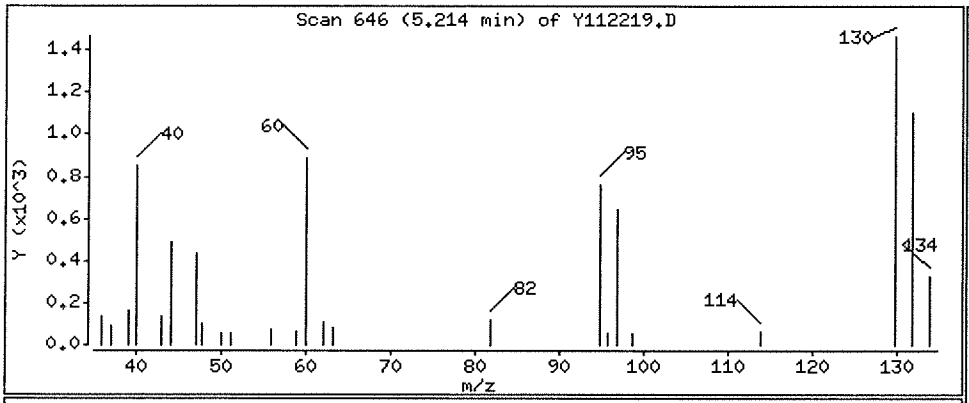
Operator: PC

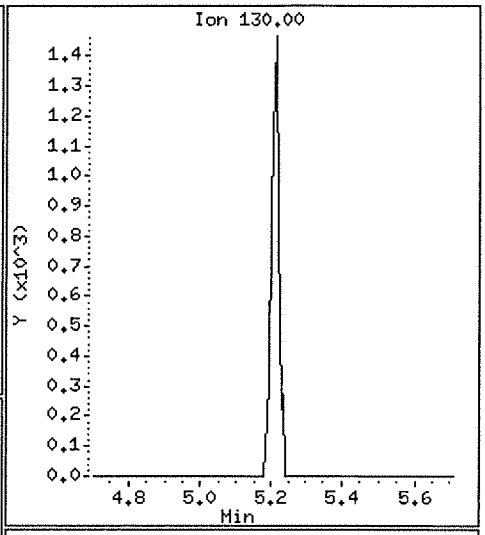
Column phase: DB624

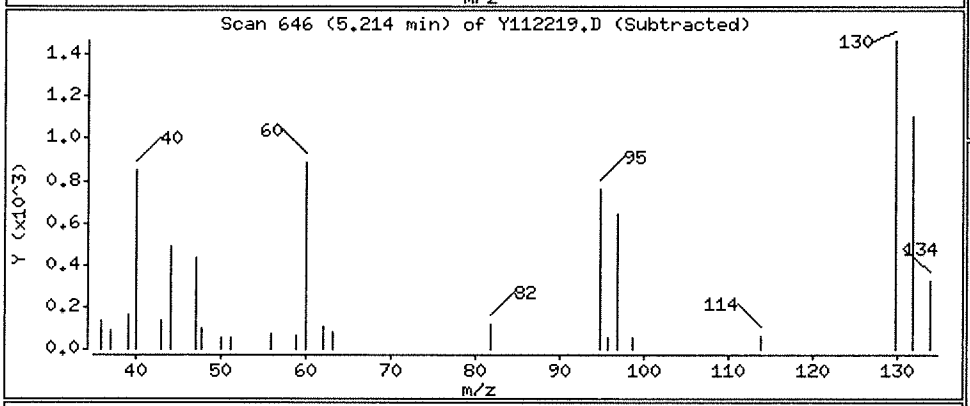
Column diameter: 0.18

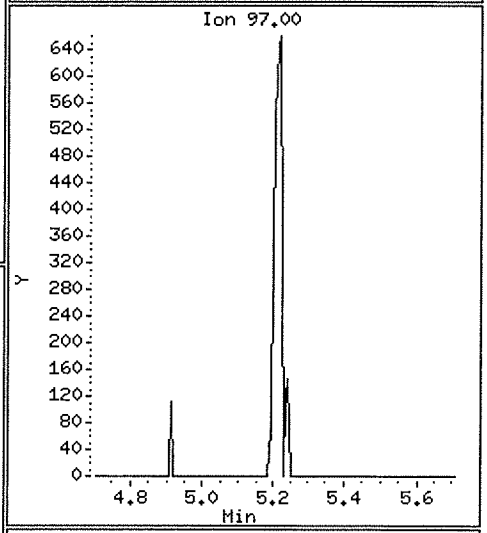
38 Trichloroethene

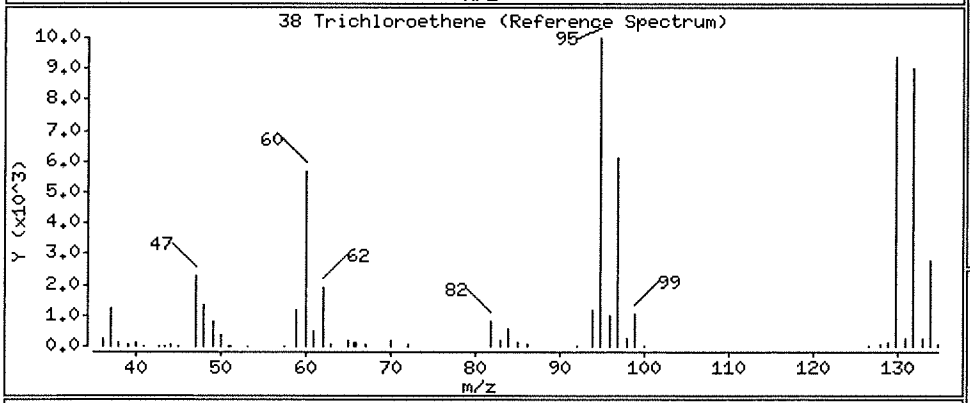
Concentration: 0.81 ug/l

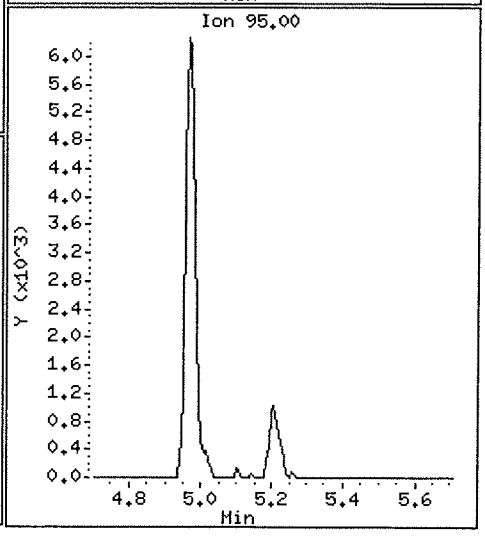


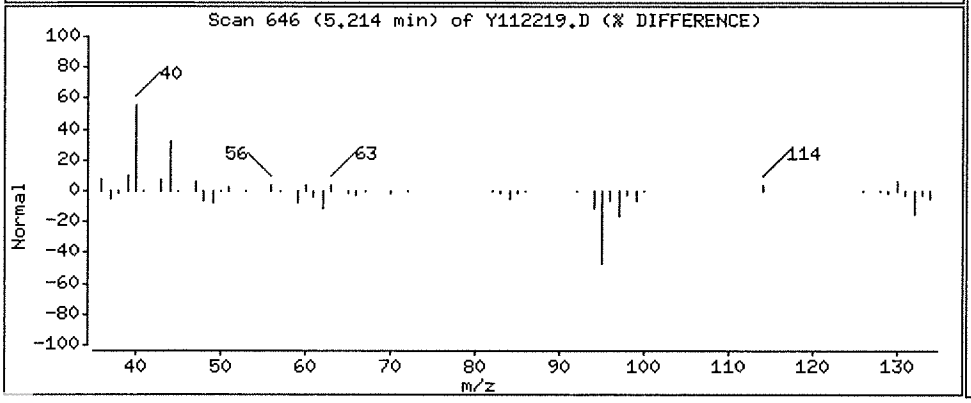












Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112220.D Page 1
Report Date: 18-Dec-2020 13:41

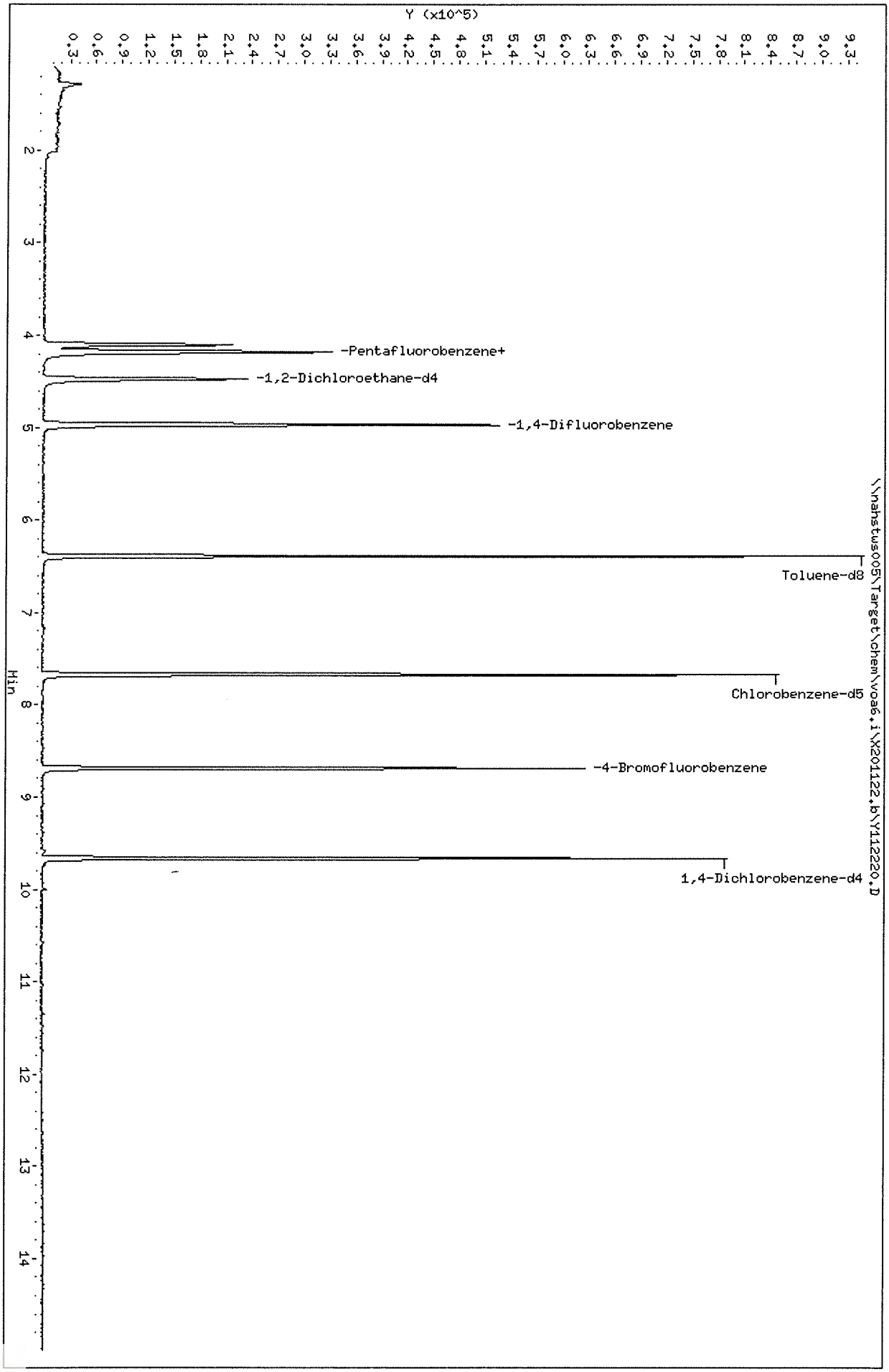
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112220.D
Lab Smp Id: HS20110527-01 Client Smp ID: HS20110527-01
Inj Date : 22-NOV-2020 22:21
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-01;HS20110527-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:39 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	227322	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	391471	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	341959	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	144405	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	161629	43.2567	43.25
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	146328	45.0147	45.01
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	136134	45.8865	45.88
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	478818	51.8860	51.88



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112220.D
Date : 22-NOV-2020 22:21
Client ID: HS20110527-01
Sample Info: HS20110527-01;HS20110527-01;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112221.D Page 1
Report Date: 18-Dec-2020 13:41

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112221.D
Lab Smp Id: HS20110527-02 Client Smp ID: HS20110527-02
Inj Date : 22-NOV-2020 22:42
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-02;HS20110527-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:39 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

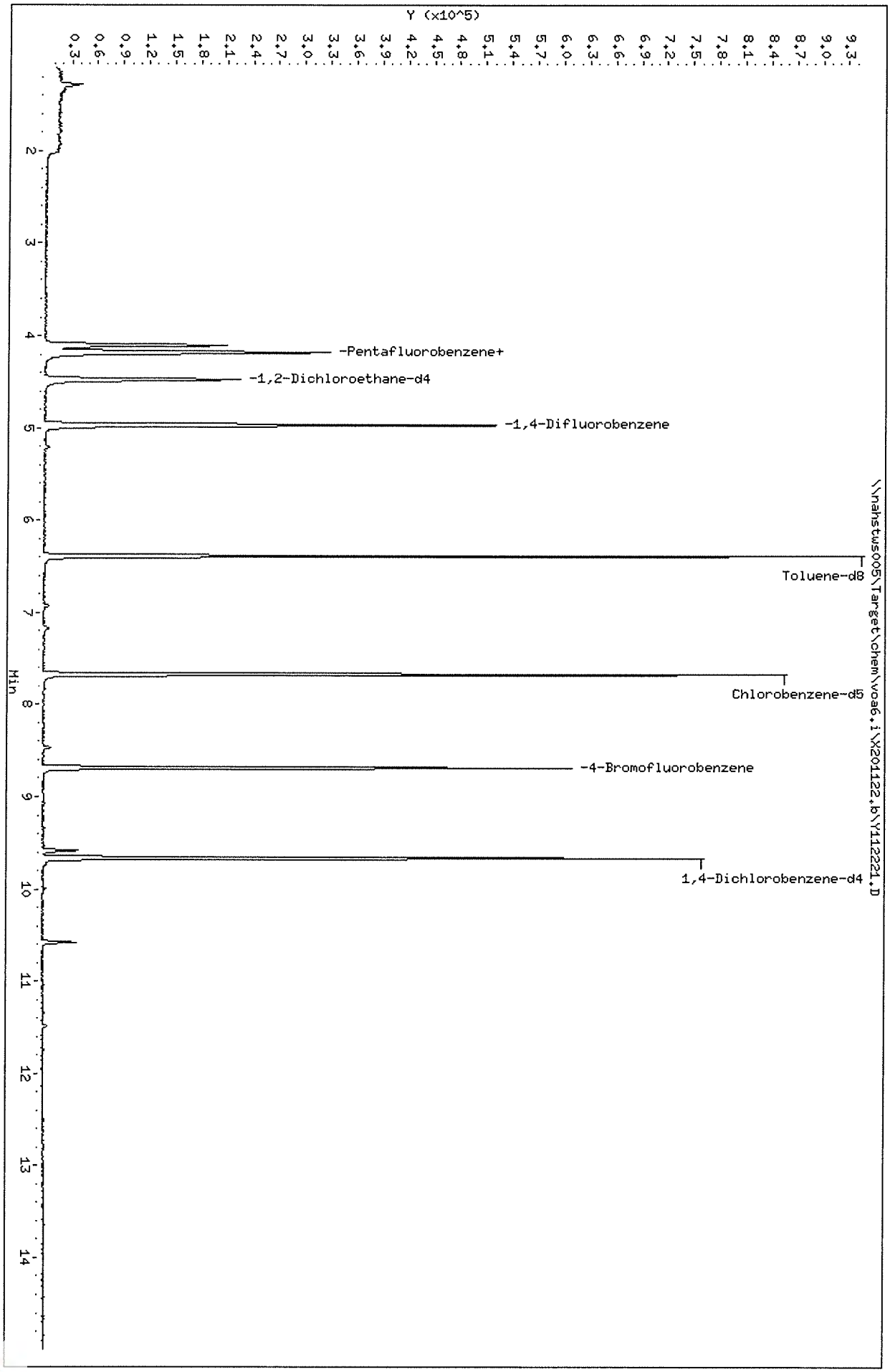
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	225780	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	387921	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	343421	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	143223	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	159734	43.0463	43.04
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	142930	43.8059	43.80
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	134227	45.5619	45.56
$	48 Toluene-d8	98	6.388	6.388	(0.833)	478680	51.6502	51.65

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112221.D
Date : 22-NOV-2020 22:42
Client ID: HS20110527-02
Sample Info: HS20110527-02;HS20110527-02;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112222.D Page 1
Report Date: 18-Dec-2020 13:41

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112222.D
Lab Smp Id: HS20110527-03 Client Smp ID: HS20110527-03
Inj Date : 22-NOV-2020 23:04
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-03;HS20110527-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:39 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

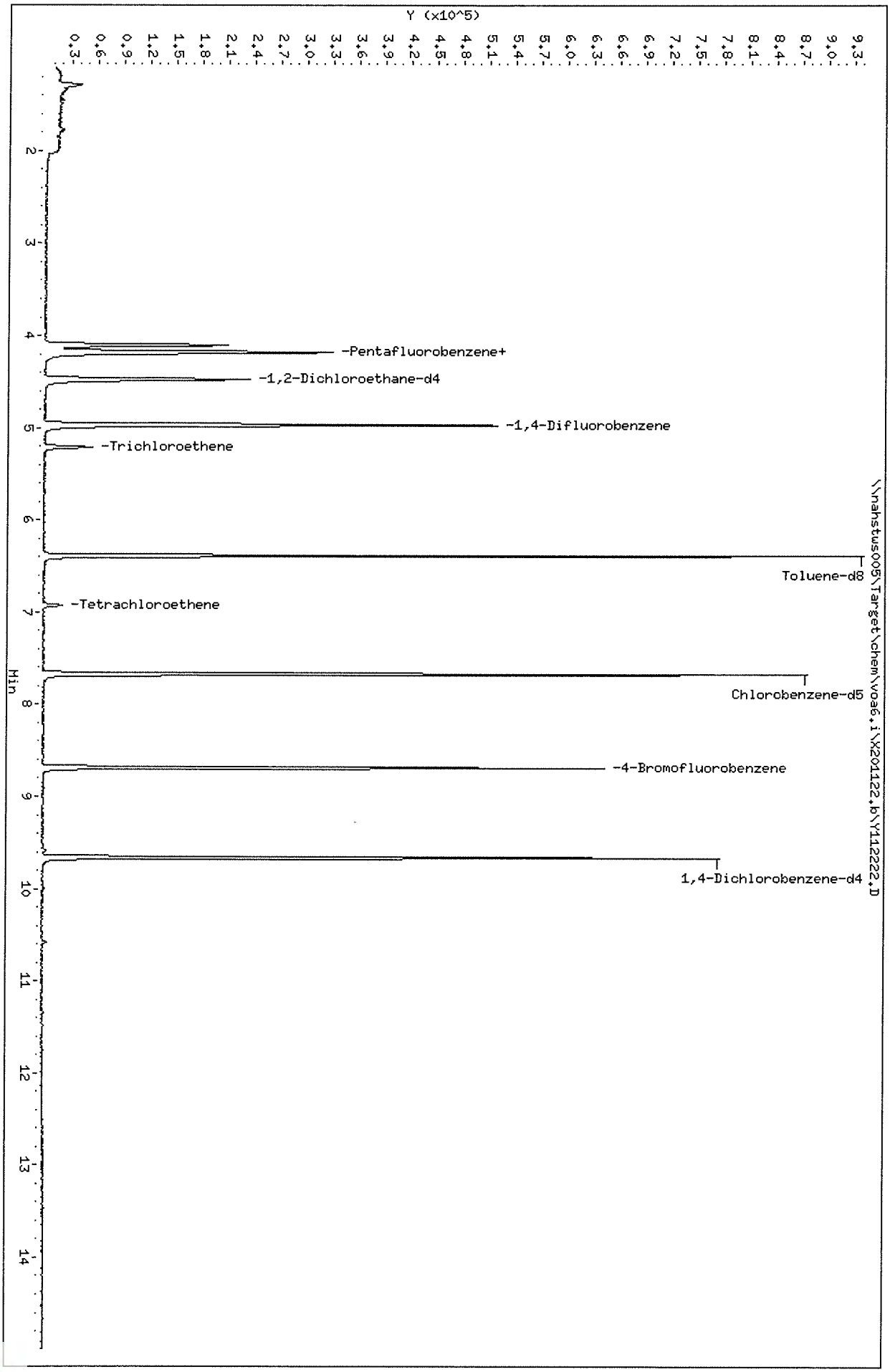
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	226299	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	390778	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	341776	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	144623	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	158302	42.5730	42.57
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	151149	46.4935	46.49
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	133875	45.3443	45.34
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	481518	52.2065	52.20
56 Tetrachloroethene	164	6.933	6.933	(0.904)	4359	2.06860	2.06(a)
38 Trichloroethene	130	5.206	5.206	(1.048)	14963	5.50447	5.50

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112222.D
Date : 22-NOV-2020 23:04
Client ID: HS20110527-03
Sample Info: HS20110527-03;HS20110527-03;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112222.D

Date : 22-NOV-2020 23:04

Client ID: HS20110527-03

Instrument: voa6.i

Sample Info: HS20110527-03;HS20110527-03;;;

Purge Volume: 5.0

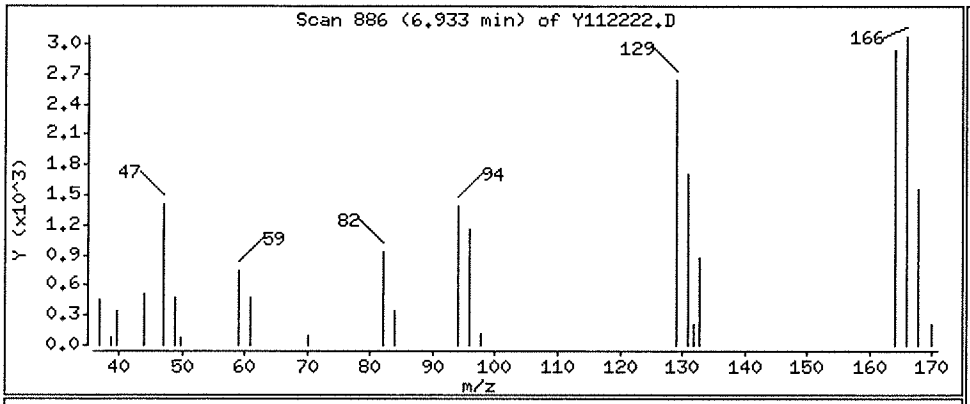
Operator: PC

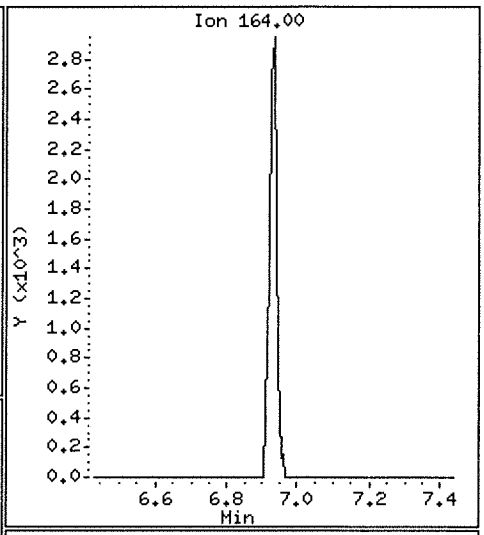
Column phase: DB624

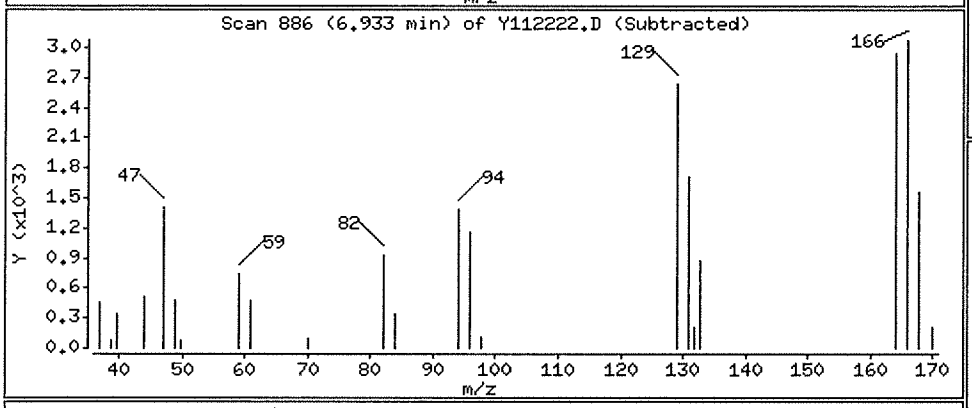
Column diameter: 0.18

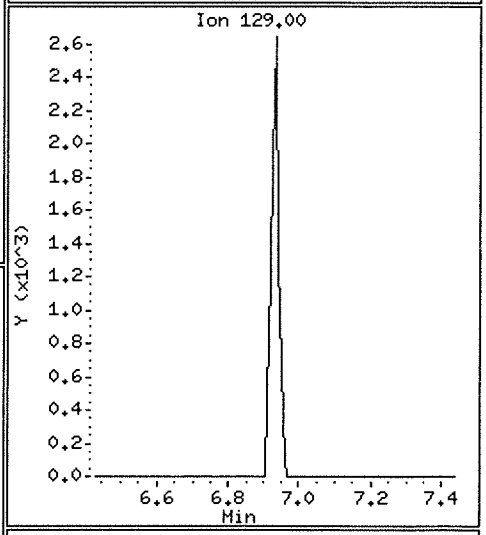
56 Tetrachloroethene

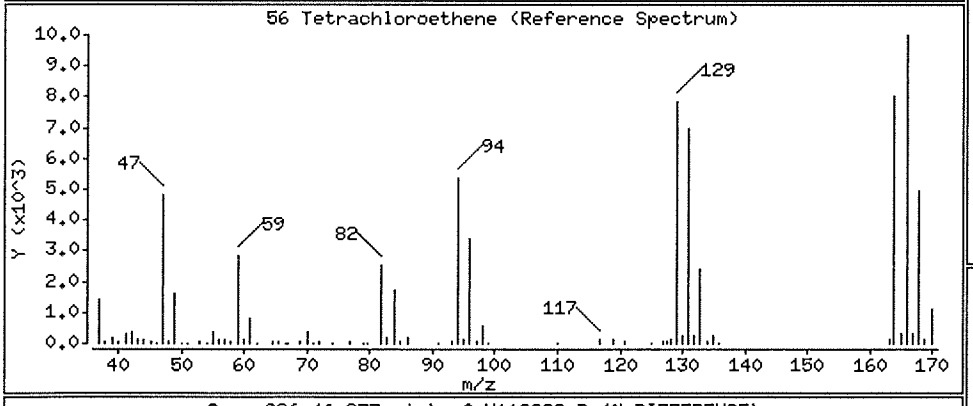
Concentration: 2.06 ug/l

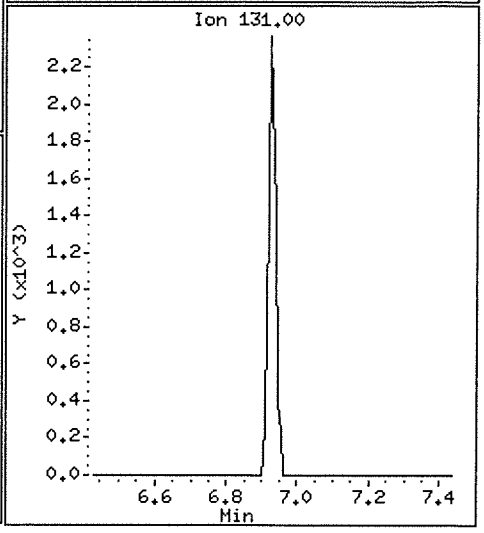


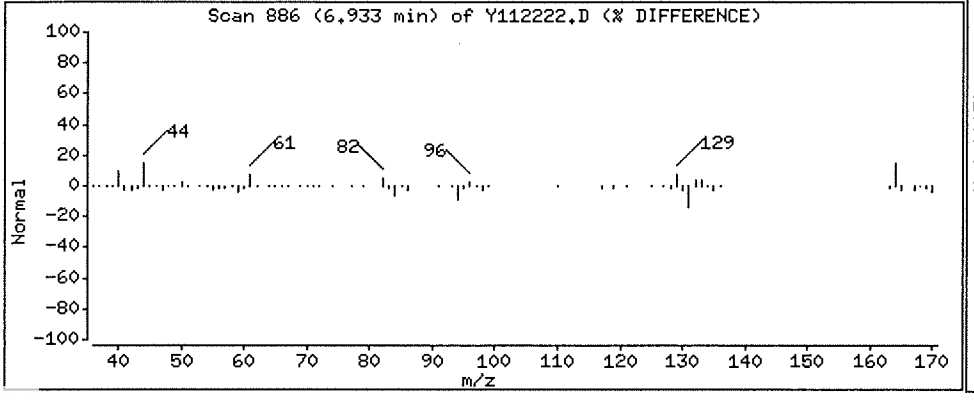












Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112222.D

Date : 22-NOV-2020 23:04

Client ID: HS20110527-03

Instrument: voa6.i

Sample Info: HS20110527-03;HS20110527-03;;;

Purge Volume: 5.0

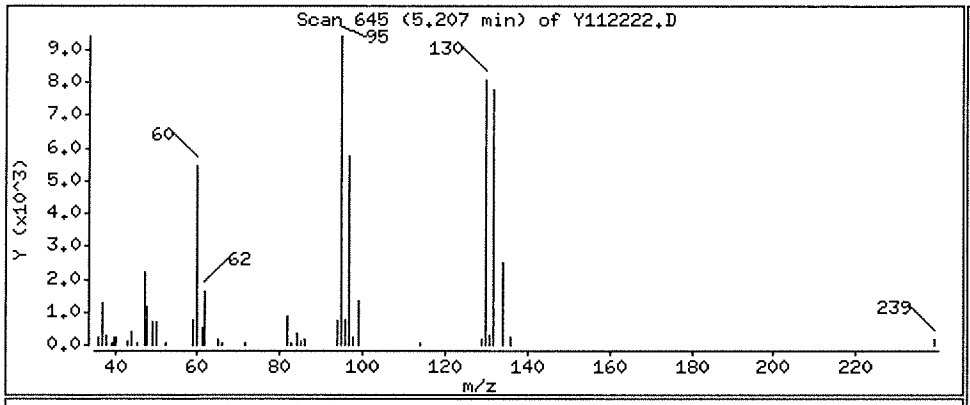
Operator: PC

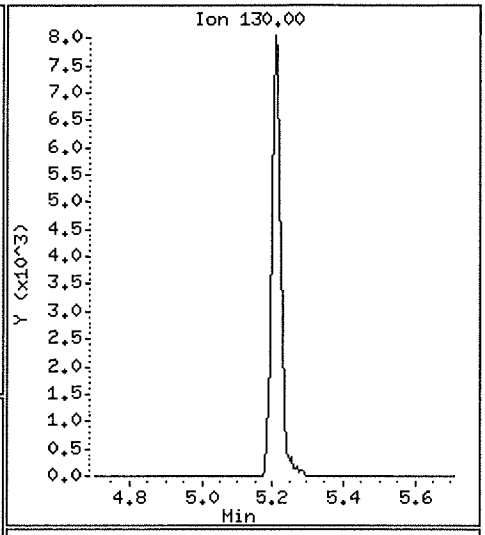
Column phase: DB624

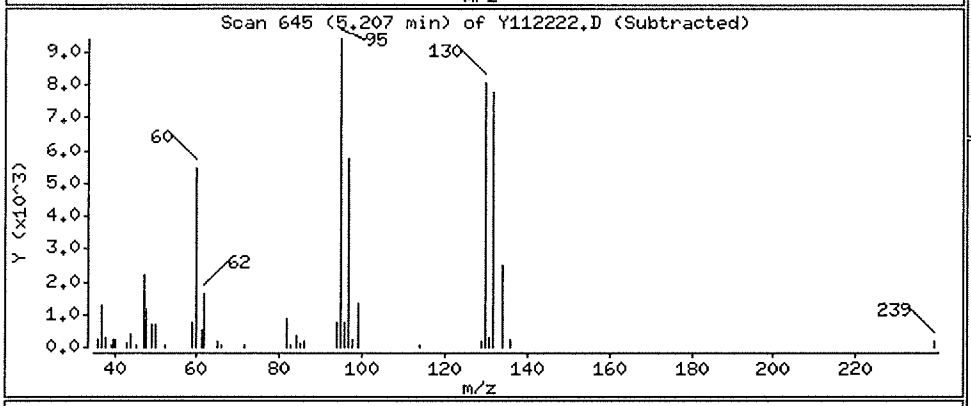
Column diameter: 0.18

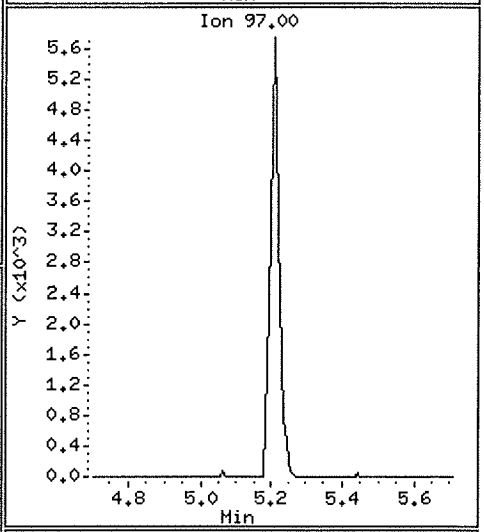
38 Trichloroethene

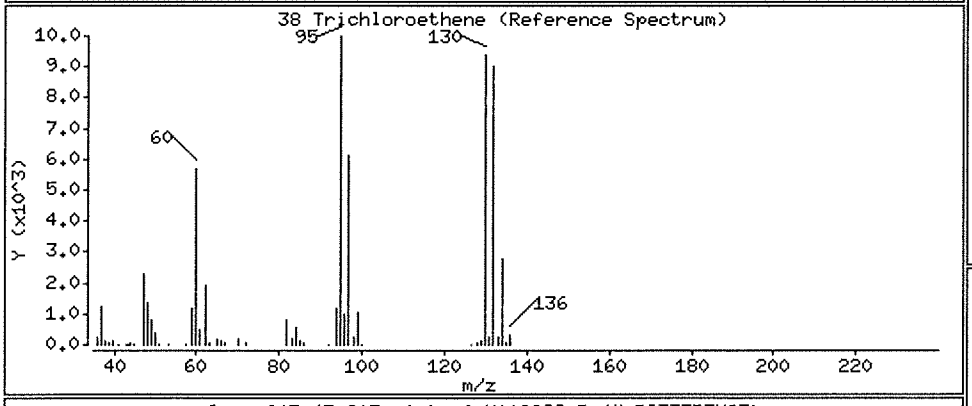
Concentration: 5.50 ug/l

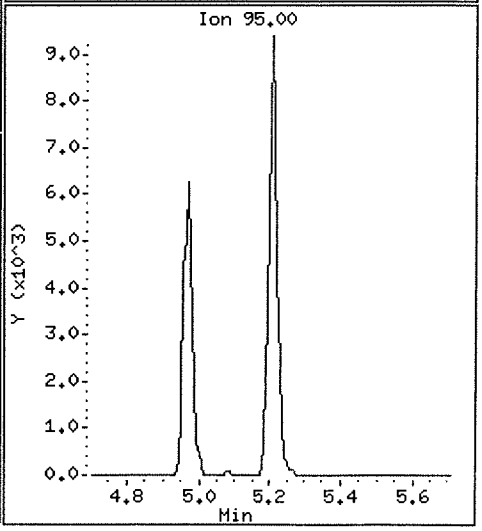


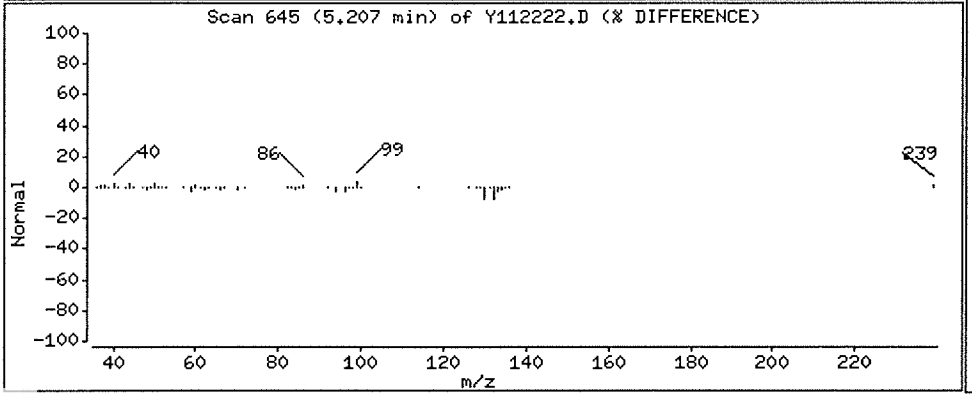












Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112223.D Page 1
Report Date: 18-Dec-2020 13:41

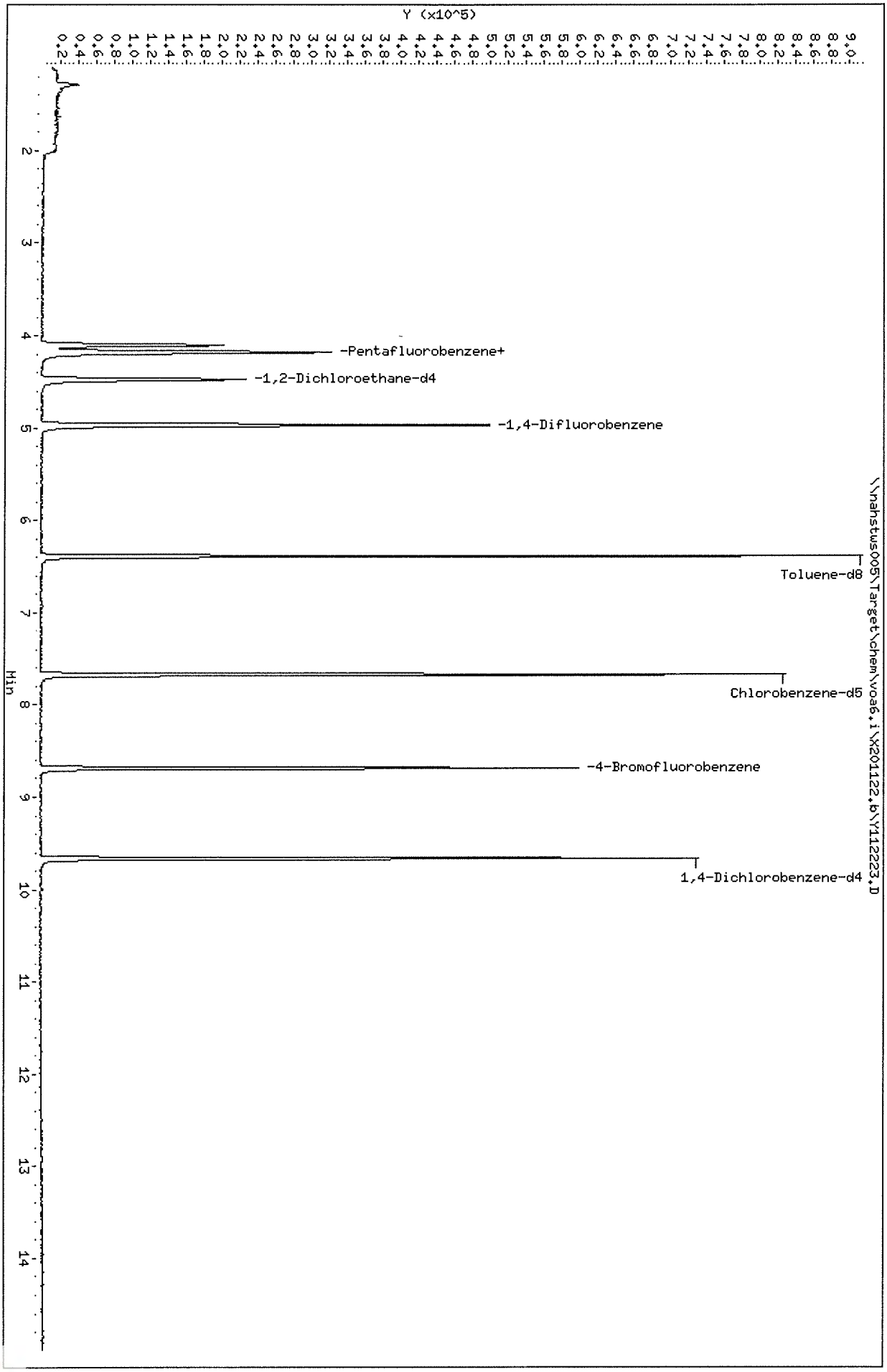
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112223.D
Lab Smp Id: HS20110527-05 Client Smp ID: HS20110527-05
Inj Date : 22-NOV-2020 23:25
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-05;HS20110527-05;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:39 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	223300	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	375383	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	332980	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	136902	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	159141	43.3558	43.35
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	137327	43.4162	43.41
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	128149	44.0234	44.02
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	468176	52.1008	52.10



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112223.D
Date : 22-NOV-2020 23:25
Client ID: HS20110527-05
Sample Info: HS20110527-05;HS20110527-05;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112224.D Page 1
Report Date: 18-Dec-2020 13:41

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112224.D
Lab Smp Id: HS20110527-06 Client Smp ID: HS20110527-06
Inj Date : 22-NOV-2020 23:46
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-06;HS20110527-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:39 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

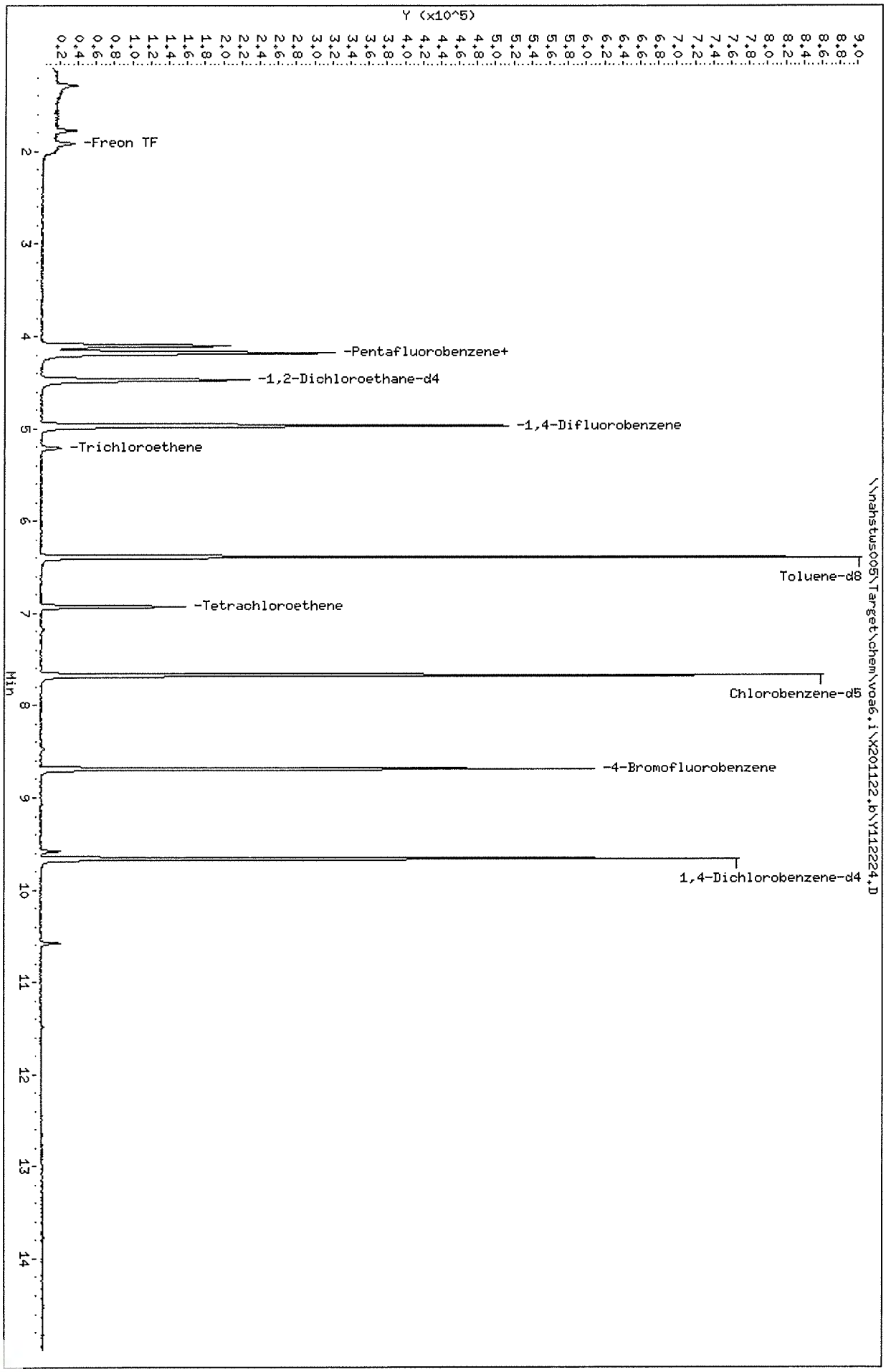
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	222068	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	380833	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	339582	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	142441	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	156365	42.8472	42.84
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	140961	43.6931	43.69
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	127912	44.1816	44.18
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	475017	51.8344	51.83
138 Freon TF	101	1.919	1.919	(0.459)	7276	1.75672	1.75(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	25967	12.4025	12.40
38 Trichloroethene	130	5.207	5.206	(1.048)	5746	2.16899	2.16(a)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112224.D
Date : 22-NOV-2020 23:46
Client ID: HS20110527-06
Sample Info: HS20110527-06;HS20110527-06;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112224.D

Date : 22-NOV-2020 23:46

Client ID: HS20110527-06

Instrument: voa6.i

Sample Info: HS20110527-06;HS20110527-06;;;

Purge Volume: 5.0

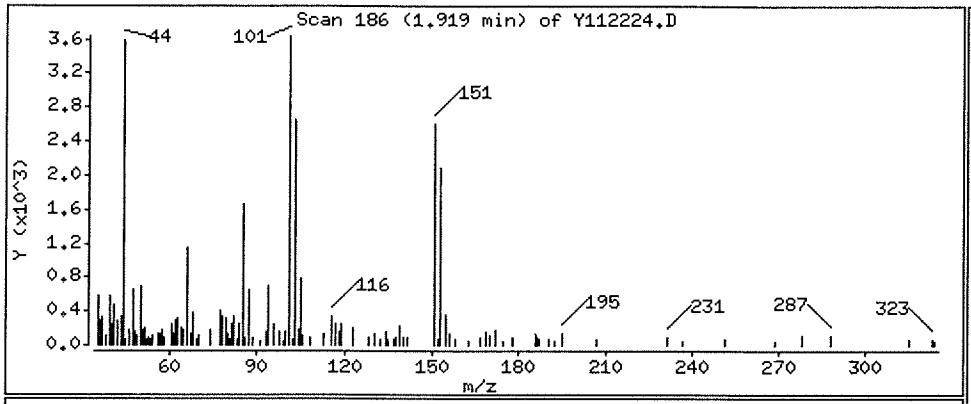
Operator: PC

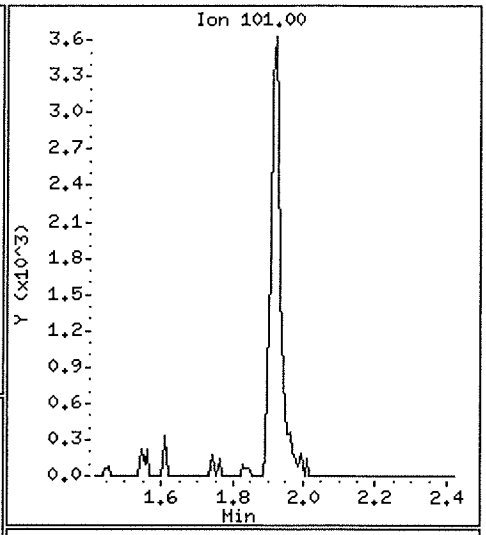
Column phase: DB624

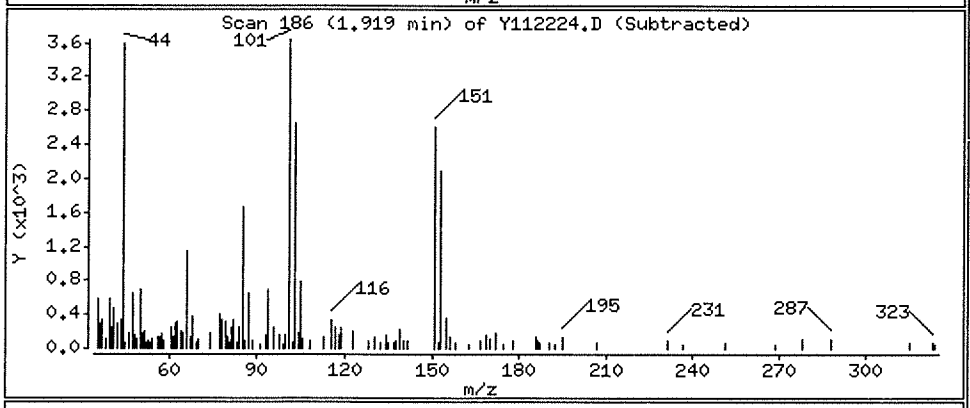
Column diameter: 0.18

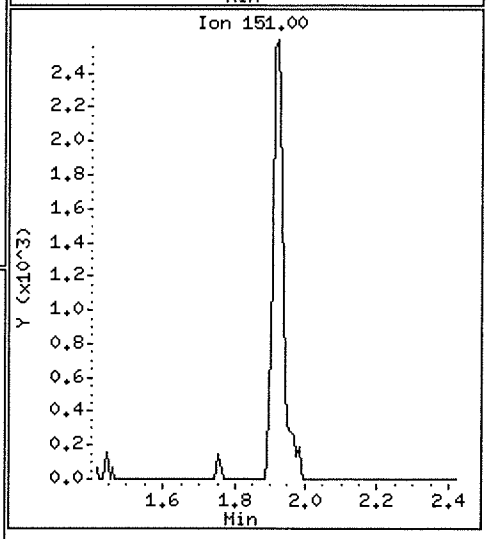
138 Freon TF

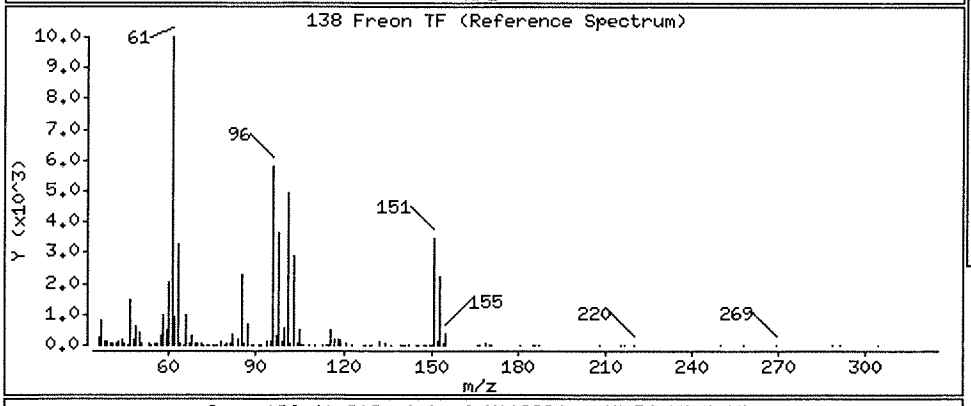
Concentration: 1.75 ug/l

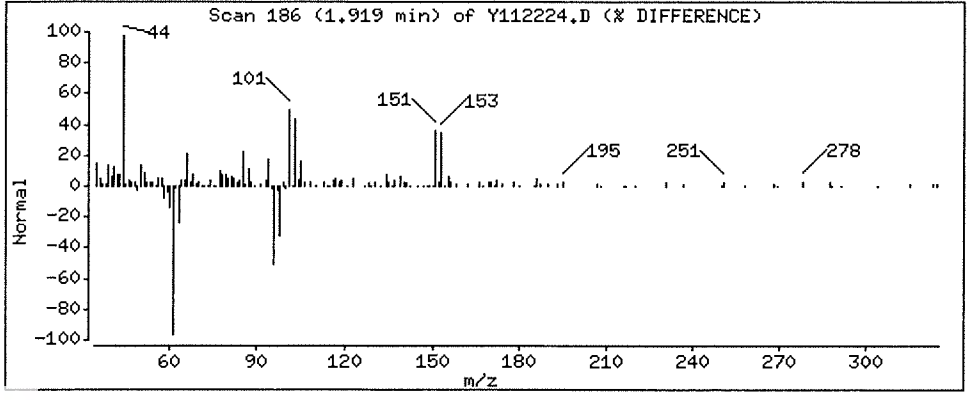












Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112224.D

Date : 22-NOV-2020 23:46

Client ID: HS20110527-06

Instrument: voa6.i

Sample Info: HS20110527-06;HS20110527-06;;;

Purge Volume: 5.0

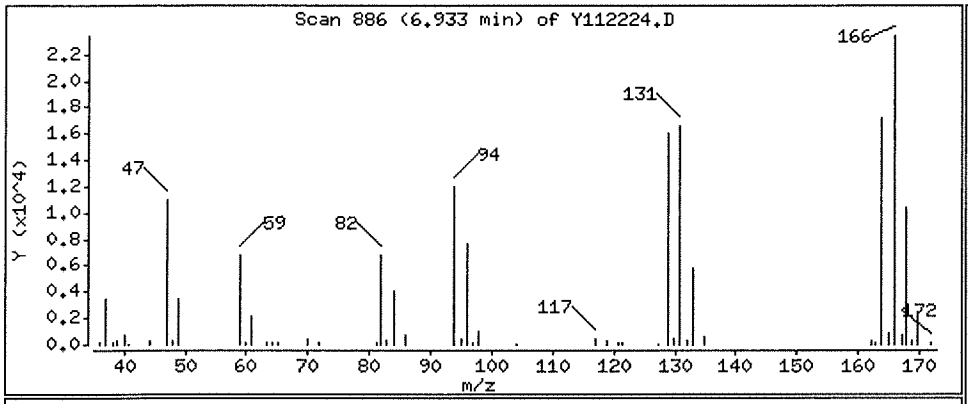
Operator: PC

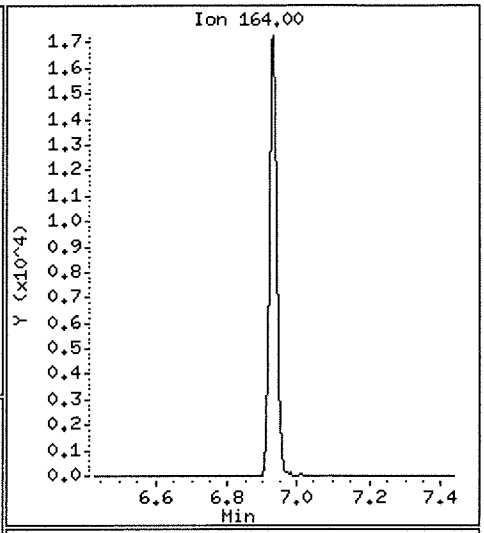
Column phase: DB624

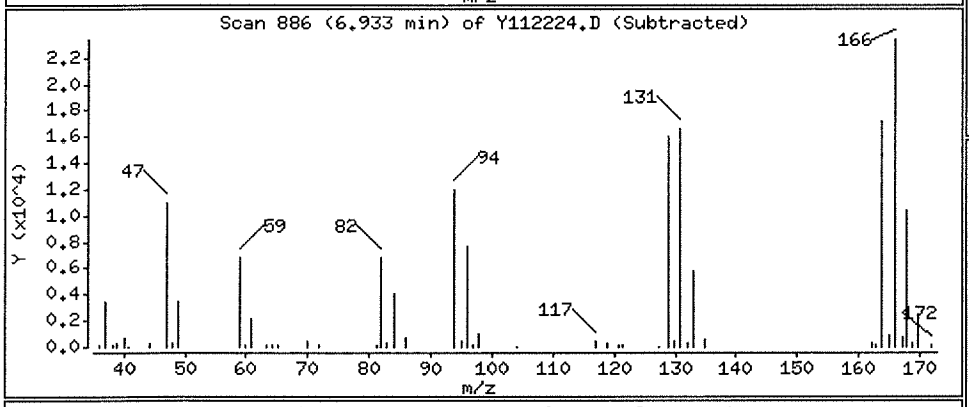
Column diameter: 0.18

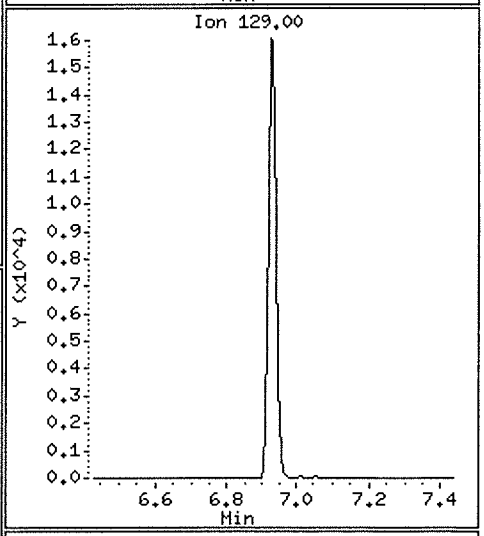
56 Tetrachloroethene

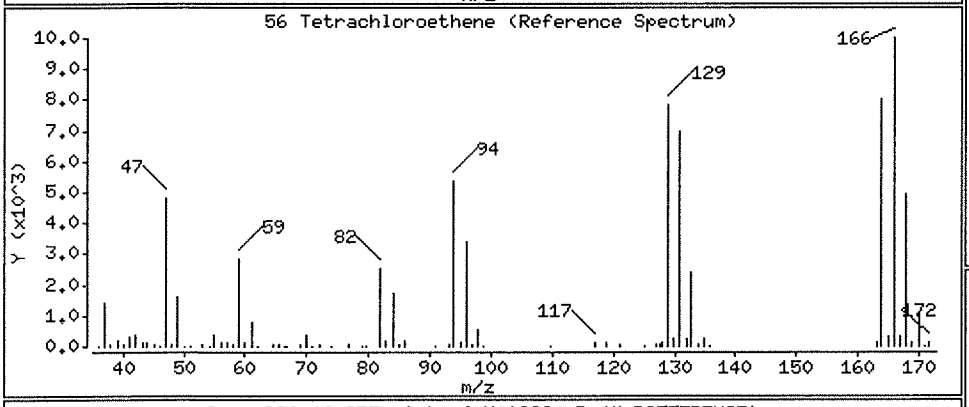
Concentration: 12.40 ug/l

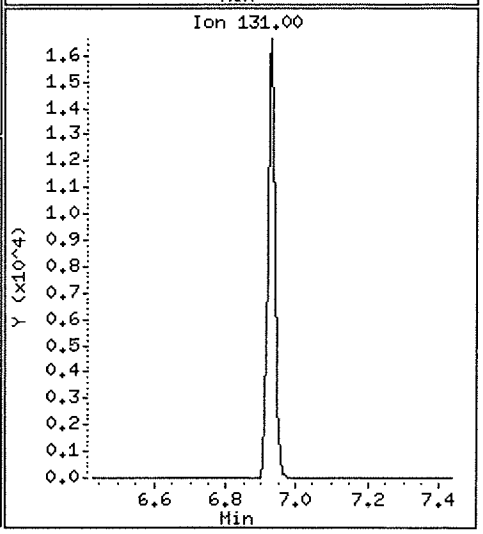


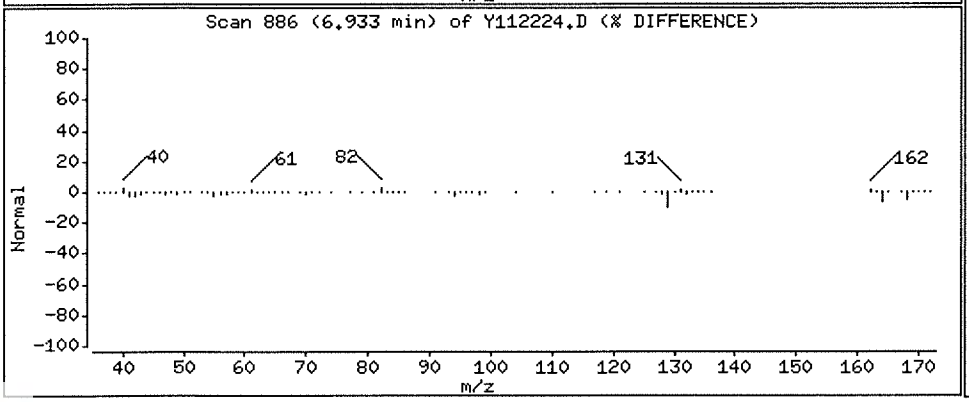












Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112224.D

Date : 22-NOV-2020 23:46

Client ID: HS20110527-06

Instrument: voa6.i

Sample Info: HS20110527-06;HS20110527-06;;;

Purge Volume: 5.0

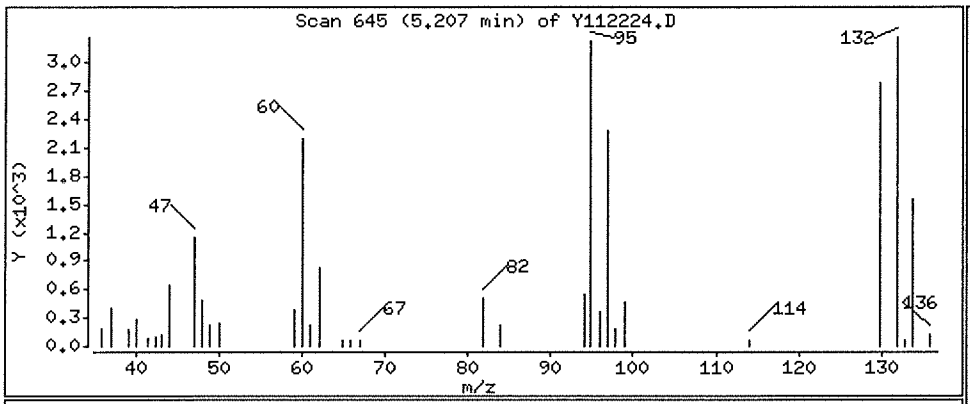
Operator: PC

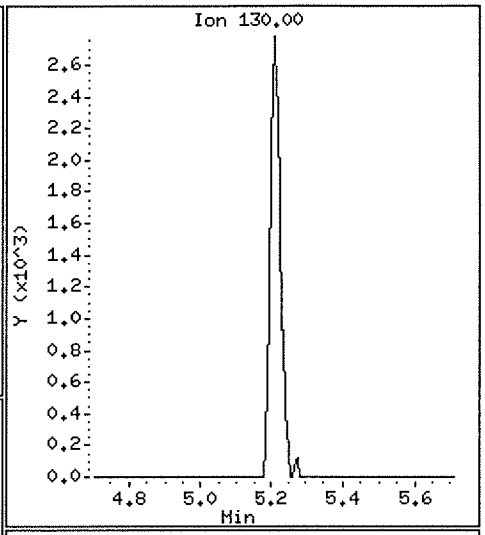
Column phase: DB624

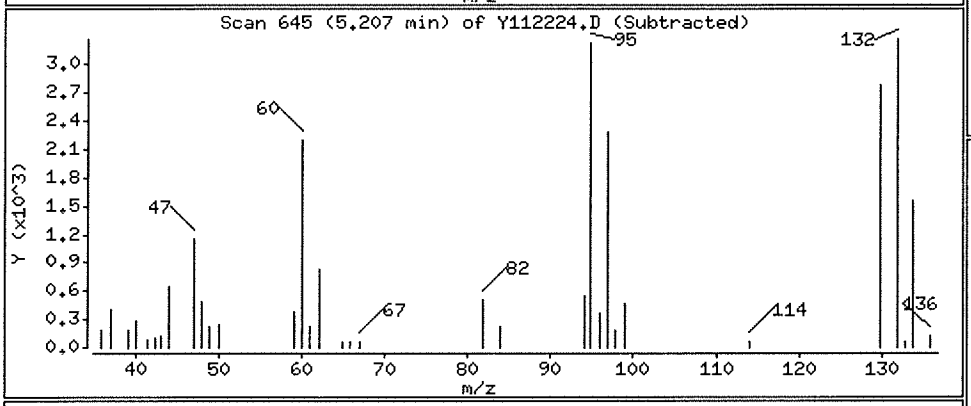
Column diameter: 0.18

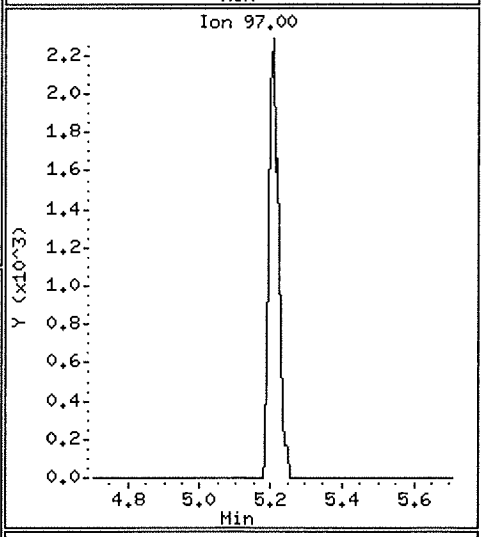
38 Trichloroethene

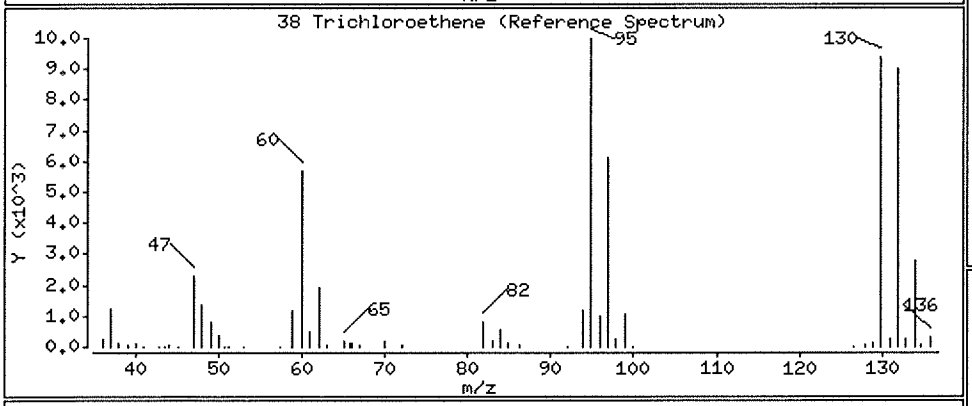
Concentration: 2.16 ug/l

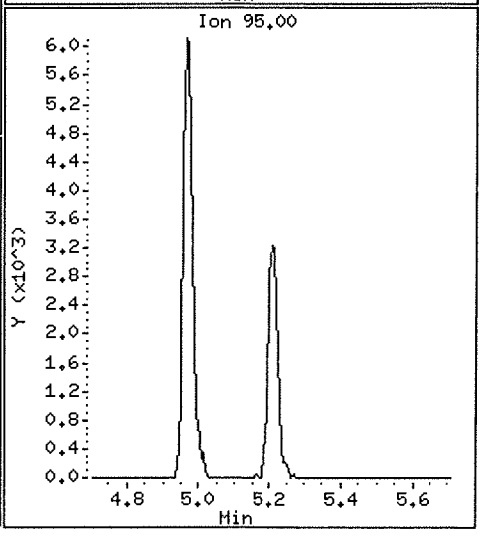


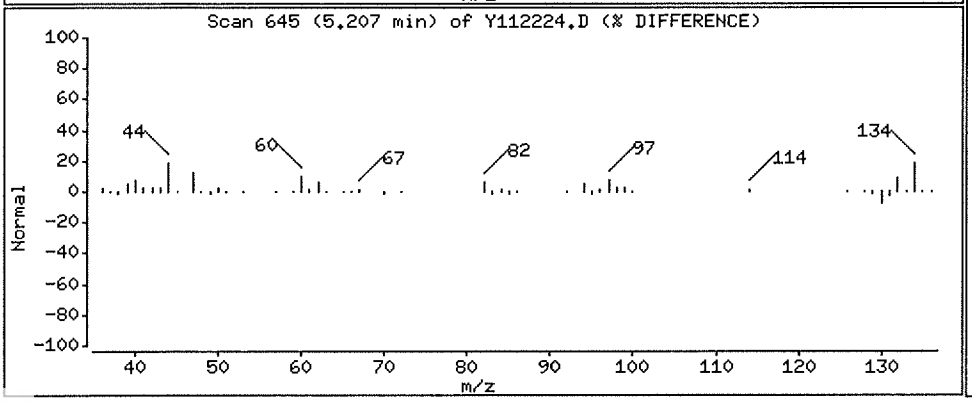












Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112225.D Page 1
Report Date: 18-Dec-2020 13:41

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112225.D
Lab Smp Id: HS20110527-07 Client Smp ID: HS20110527-07
Inj Date : 23-NOV-2020 00:07
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-07;HS20110527-07;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:39 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

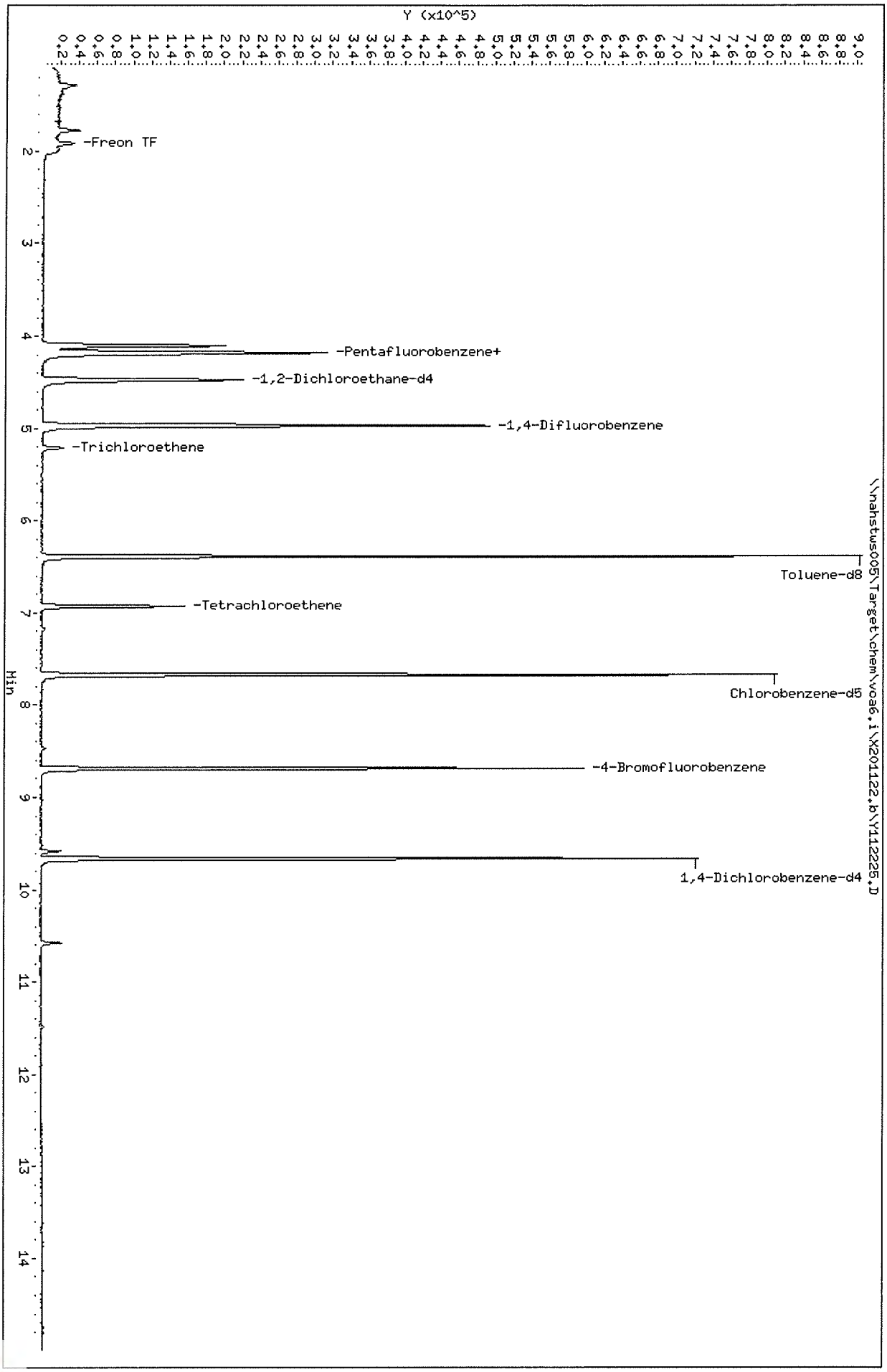
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	220094	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	369962	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	332997	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	135094	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	157249	43.4620	43.46
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	139731	44.1590	44.15
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	129814	45.2121	45.21
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	469642	52.2613	52.26
138 Freon TF	101	1.919	1.919	(0.459)	8294	2.02047	2.02(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	27026	13.1636	13.16
38 Trichloroethene	130	5.207	5.206	(1.048)	6036	2.34541	2.34(a)

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6,i\X201122,b\Y112225,D
Date : 23-NOV-2020 00:07
Client ID: HS20110527-07
Sample Info: HS20110527-07;HS20110527-07;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112225.D

Date : 23-NOV-2020 00:07

Client ID: HS20110527-07

Instrument: voa6.i

Sample Info: HS20110527-07;HS20110527-07;;;

Purge Volume: 5.0

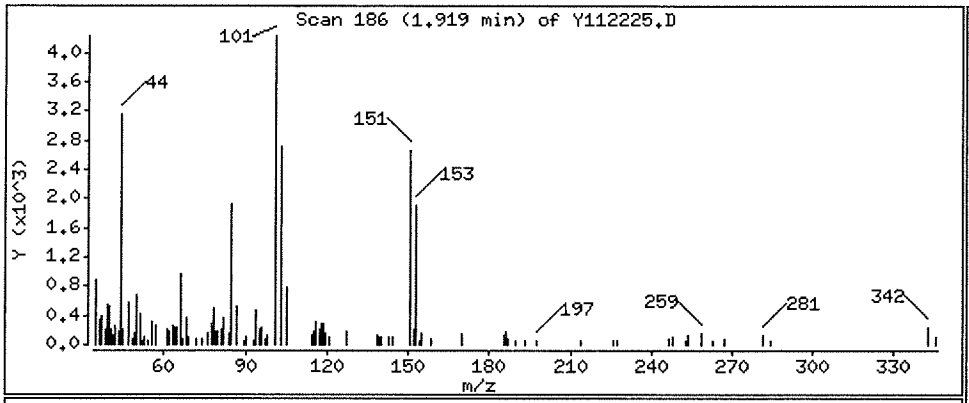
Operator: PC

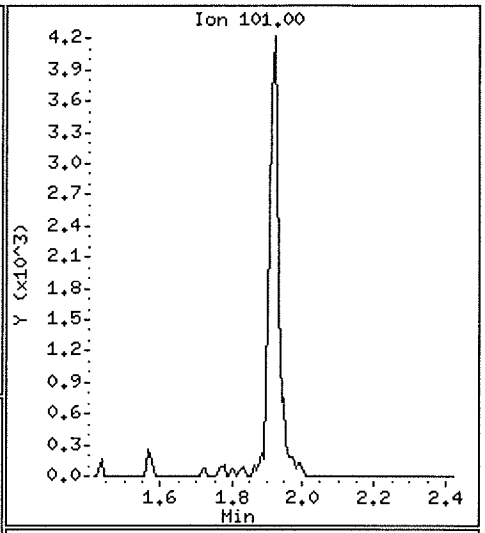
Column phase: DB624

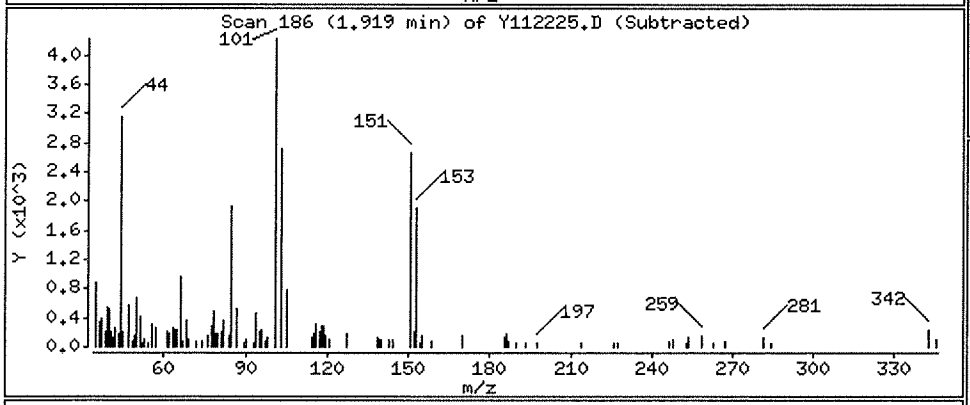
Column diameter: 0.18

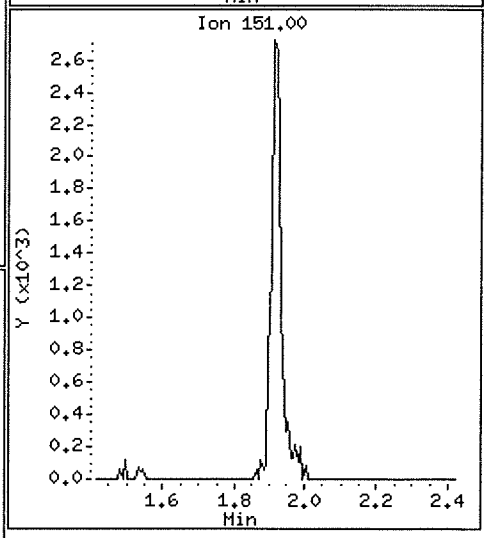
138 Freon TF

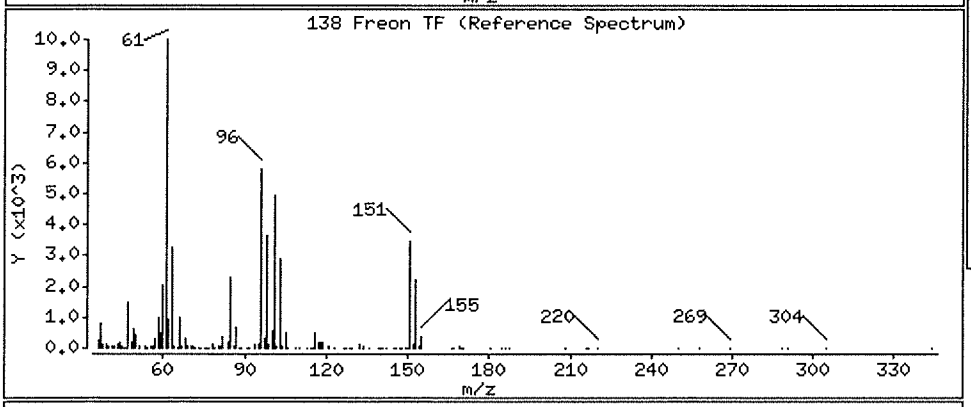
Concentration: 2.02 ug/l

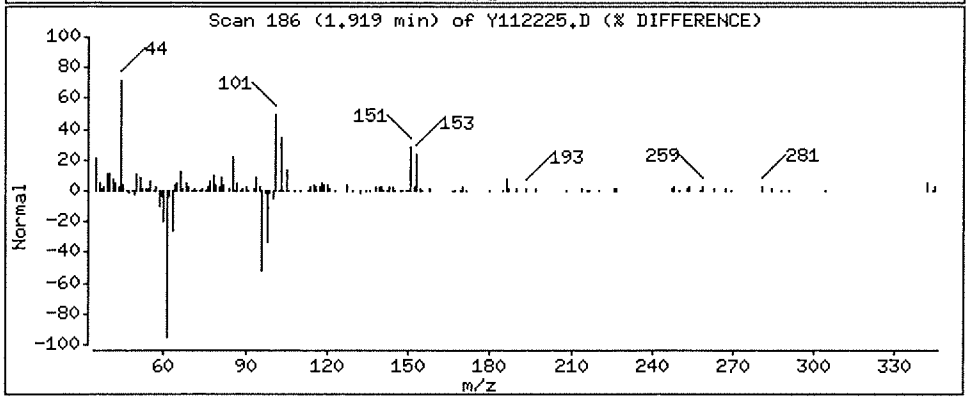












Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112225.D

Date : 23-NOV-2020 00:07

Client ID: HS20110527-07

Instrument: voa6.i

Sample Info: HS20110527-07;HS20110527-07;;;

Purge Volume: 5.0

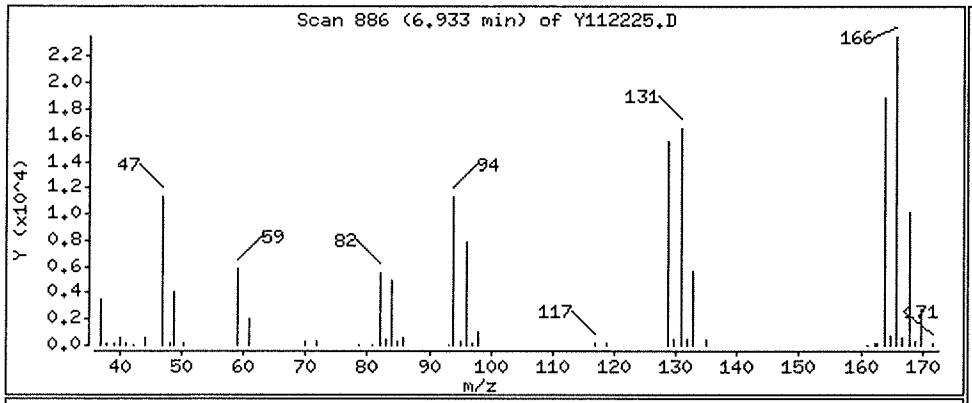
Operator: PC

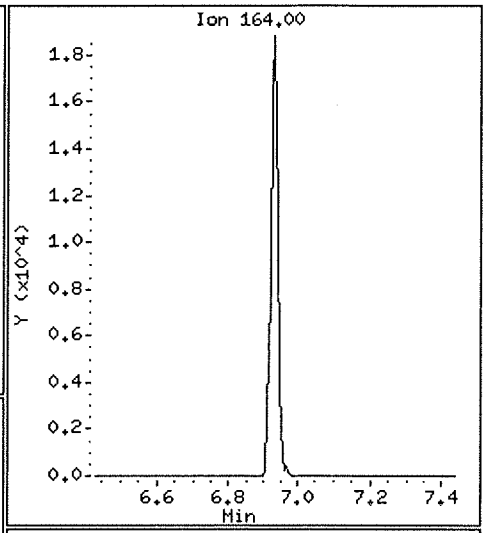
Column phase: DB624

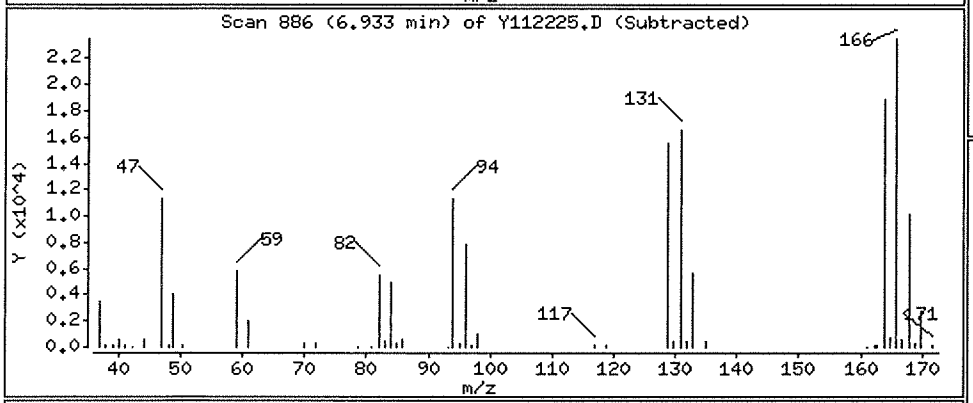
Column diameter: 0.18

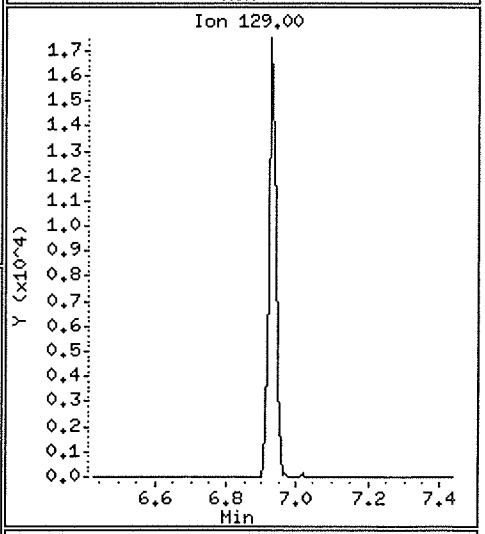
56 Tetrachloroethene

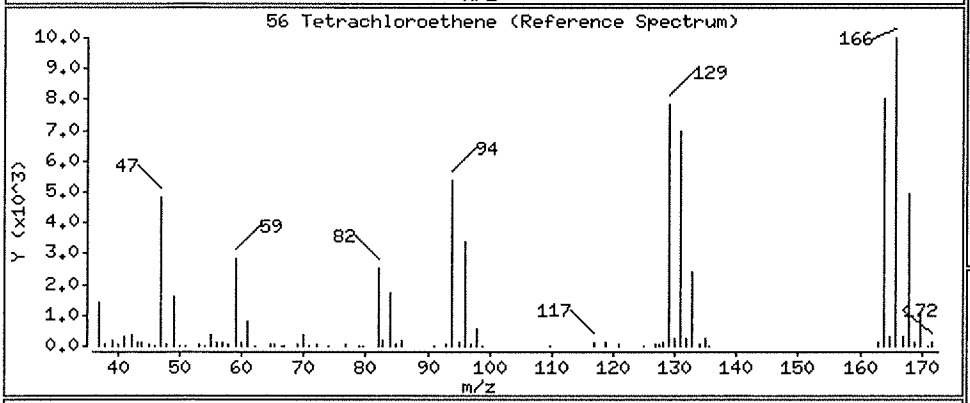
Concentration: 13.16 ug/l

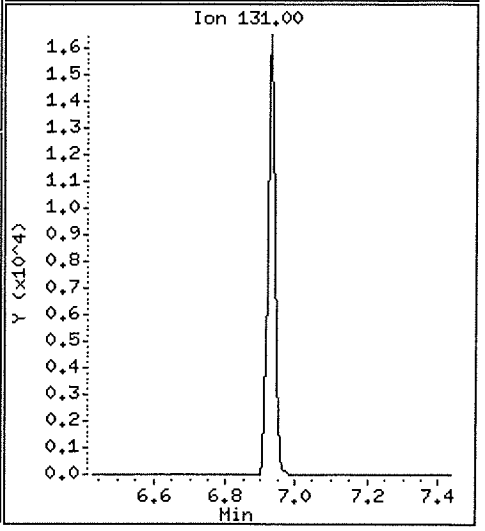


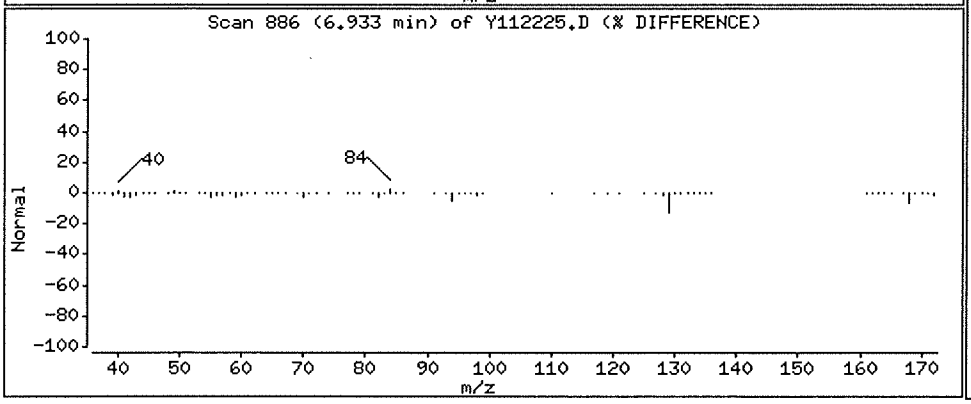












Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112225.D

Date : 23-NOV-2020 00:07

Client ID: HS20110527-07

Instrument: voa6.i

Sample Info: HS20110527-07;HS20110527-07;;;

Purge Volume: 5.0

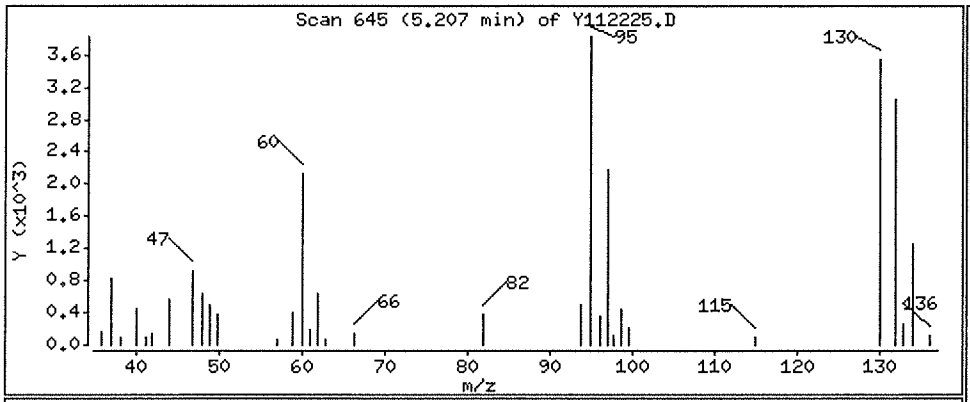
Operator: PC

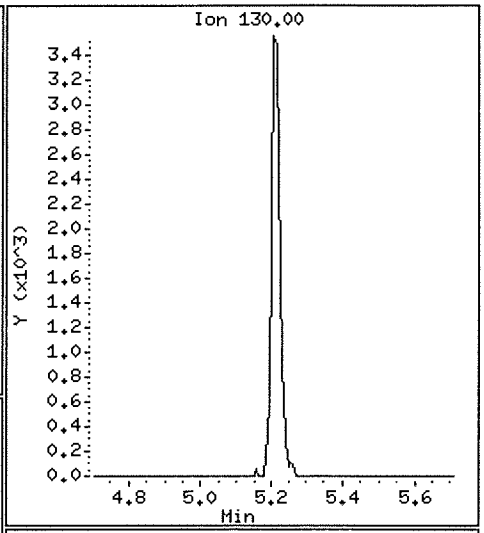
Column phase: DB624

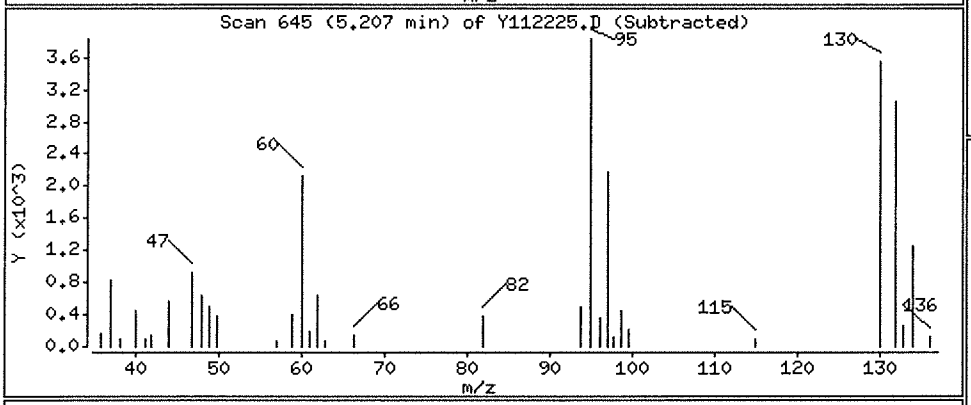
Column diameter: 0.18

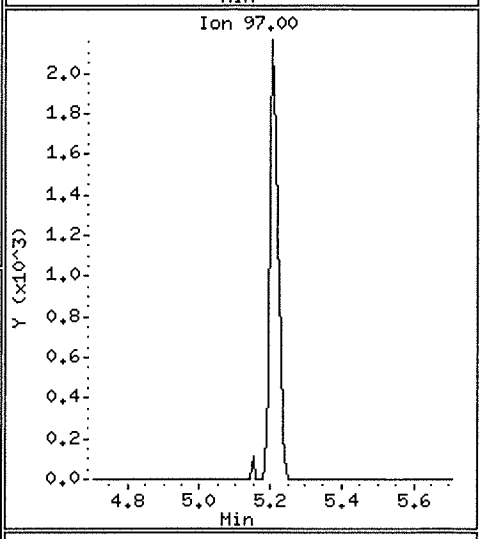
38 Trichloroethene

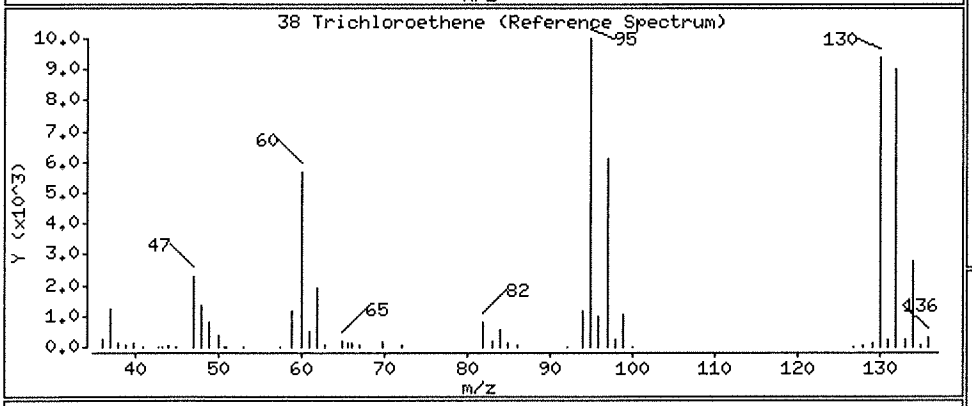
Concentration: 2.34 ug/l

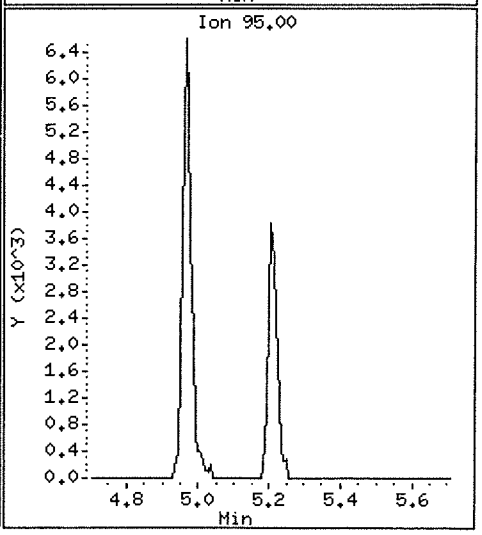


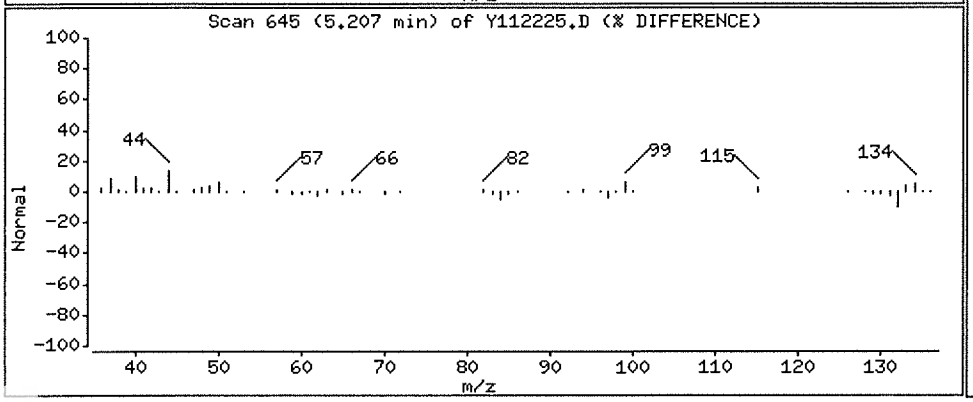












Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112226.D Page 1
Report Date: 18-Dec-2020 13:41

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112226.D
Lab Smp Id: HS20110527-08 Client Smp ID: HS20110527-08
Inj Date : 23-NOV-2020 00:28
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-08;HS20110527-08;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:39 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 27
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

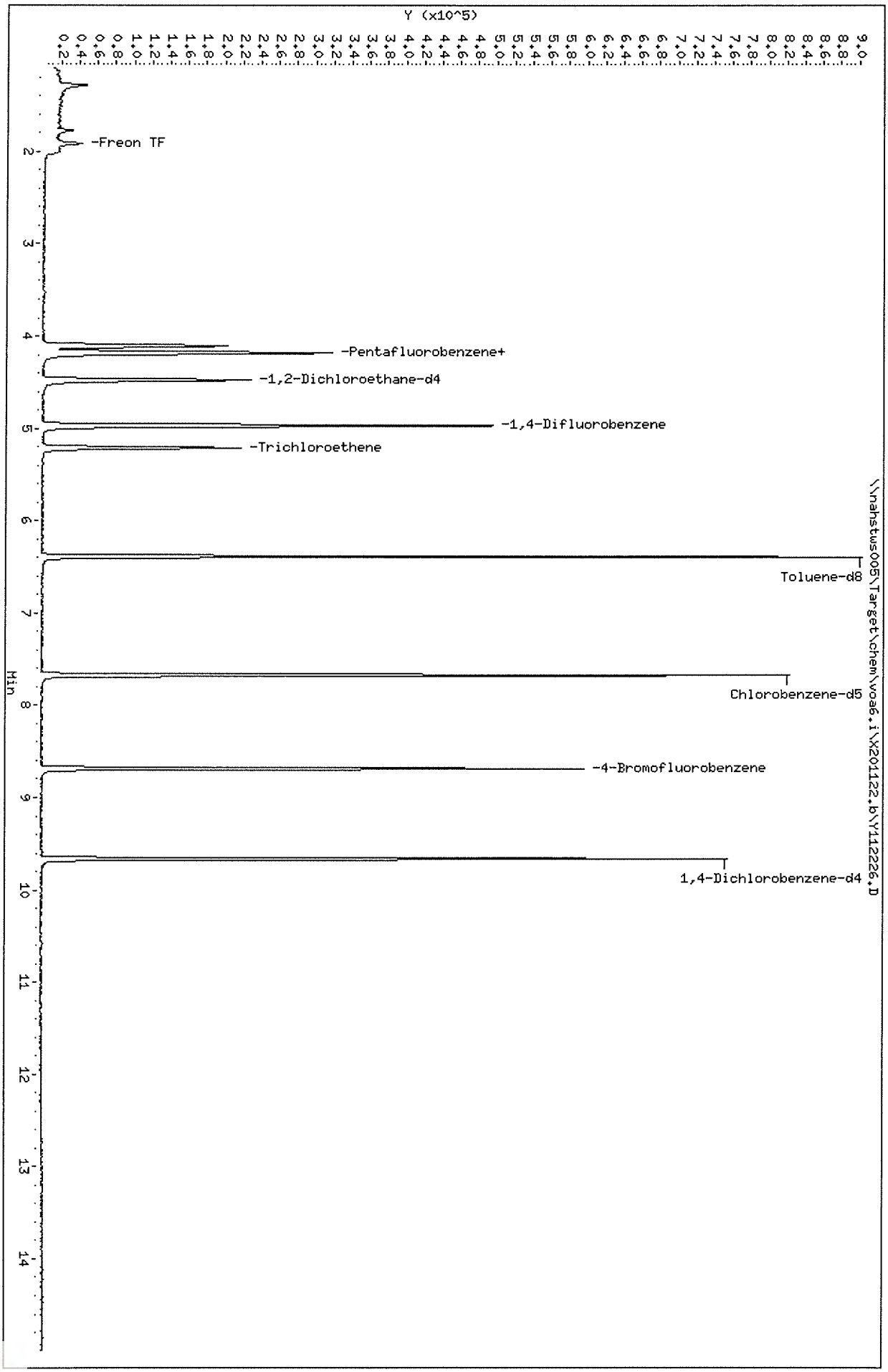
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	217847	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	372370	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	326941	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	136892	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	154014	43.0169	43.01
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	137610	44.2916	44.29
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	128620	45.2571	45.25
$	48 Toluene-d8	98	6.388	6.388	(0.833)	459135	52.0385	52.03
	138 Freon TF	101	1.912	1.919	(0.457)	9293	2.28718	2.28(a)
	38 Trichloroethene	130	5.207	5.206	(1.048)	58991	22.7739	22.77

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112226.D
Date : 23-NOV-2020 00:28
Client ID: HS20110527-08
Sample Info: HS20110527-08;HS20110527-08;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112226.D

Date : 23-NOV-2020 00:28

Client ID: HS20110527-08

Instrument: voa6.i

Sample Info: HS20110527-08;HS20110527-08;;;

Purge Volume: 5.0

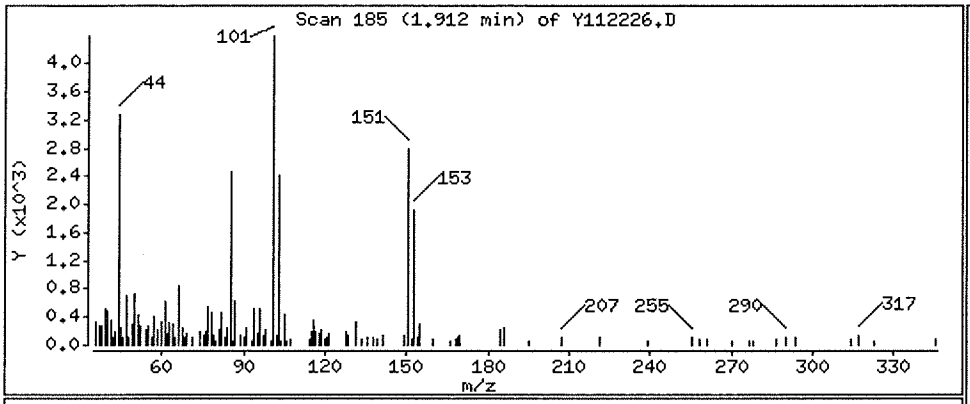
Operator: PC

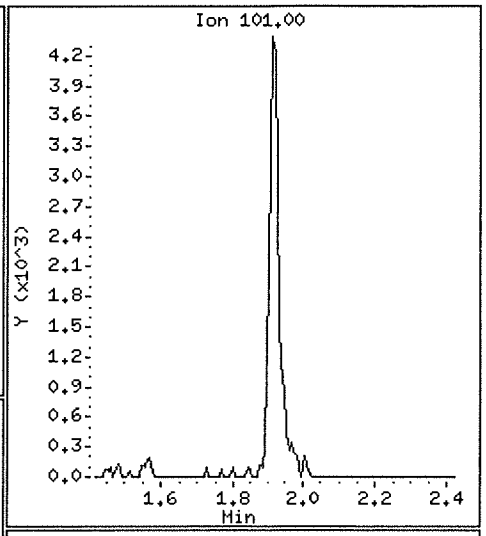
Column phase: DB624

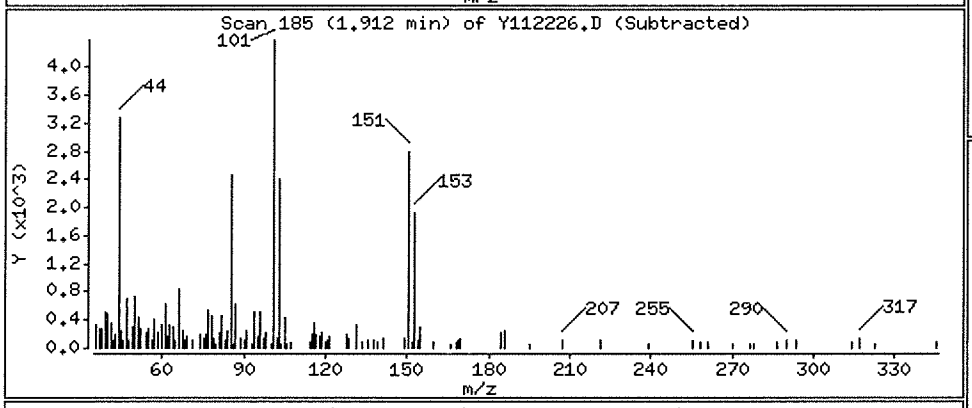
Column diameter: 0.18

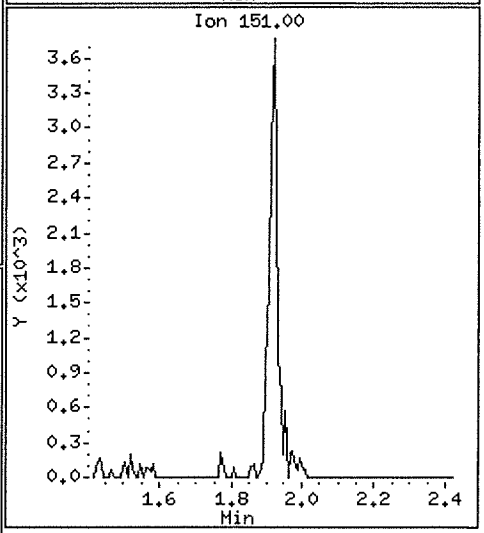
138 Freon TF

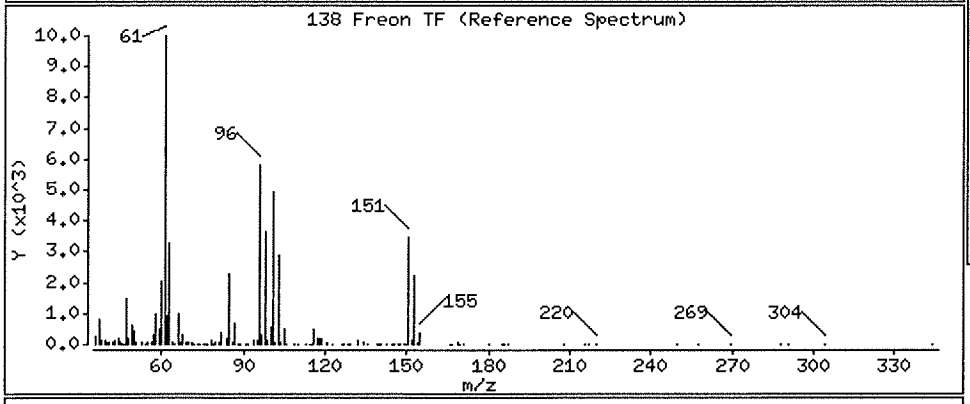
Concentration: 2.28 ug/l

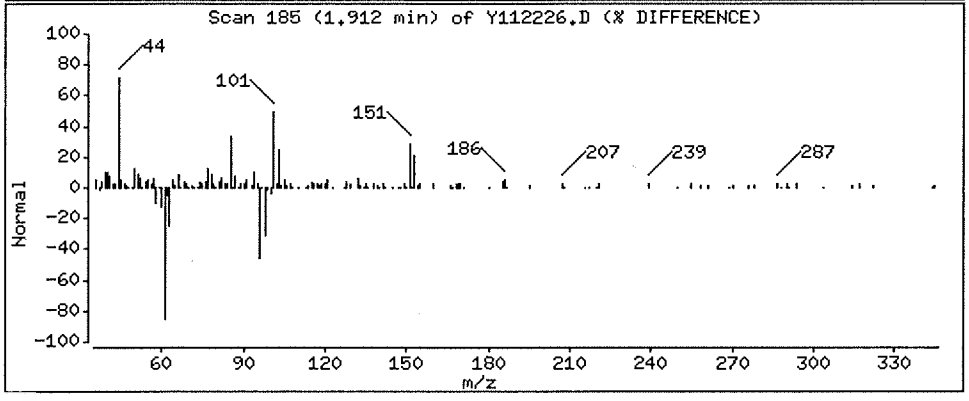












Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112226.D

Date : 23-NOV-2020 00:28

Client ID: HS20110527-08

Instrument: voa6.i

Sample Info: HS20110527-08;HS20110527-08;;;

Purge Volume: 5.0

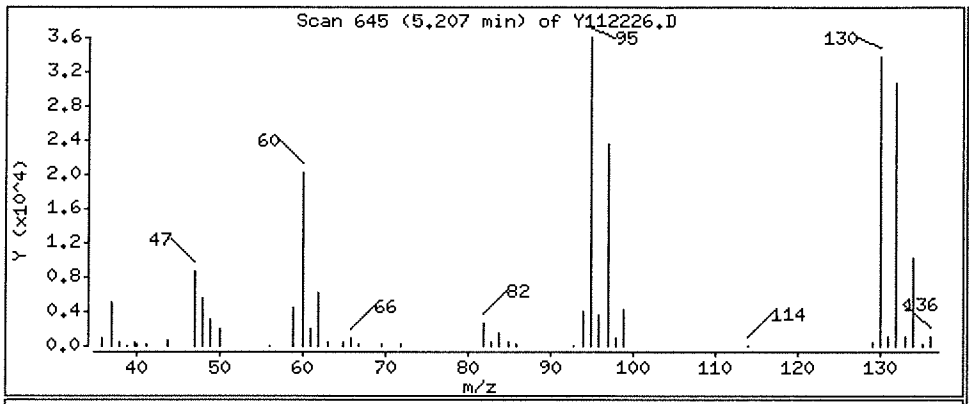
Operator: PC

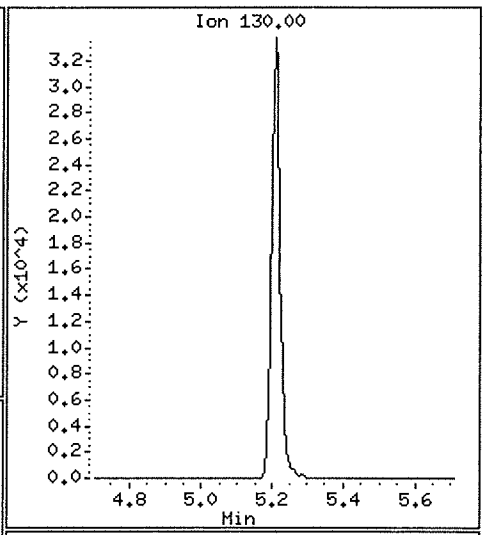
Column phase: DB624

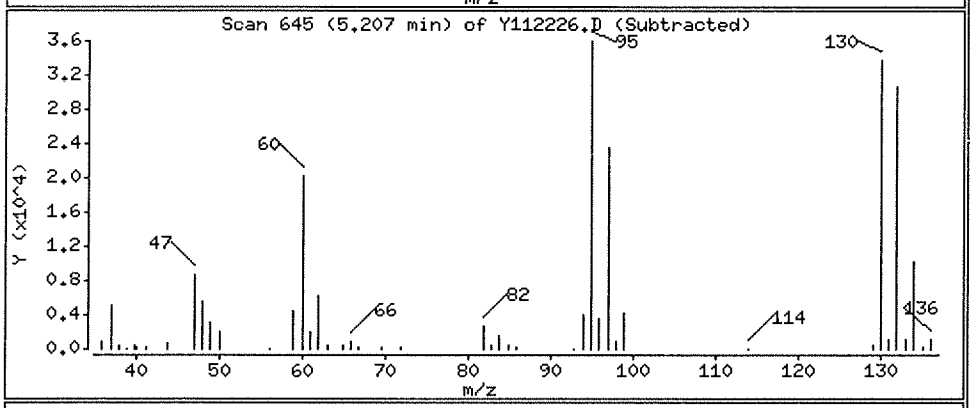
Column diameter: 0.18

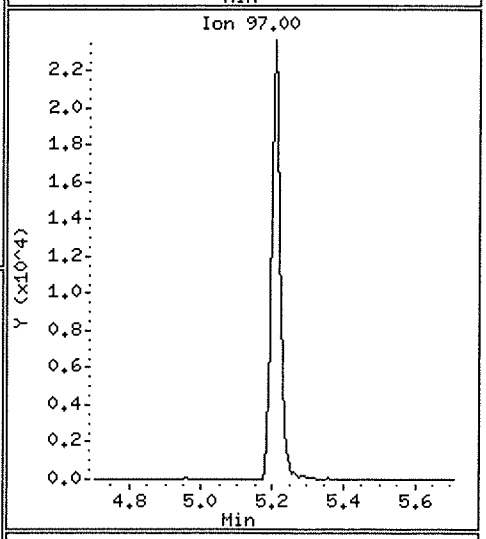
38 Trichloroethene

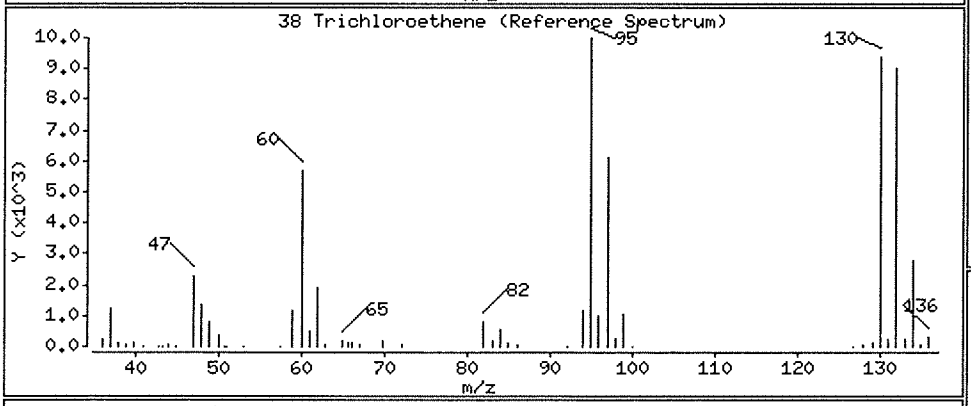
Concentration: 22.77 ug/l

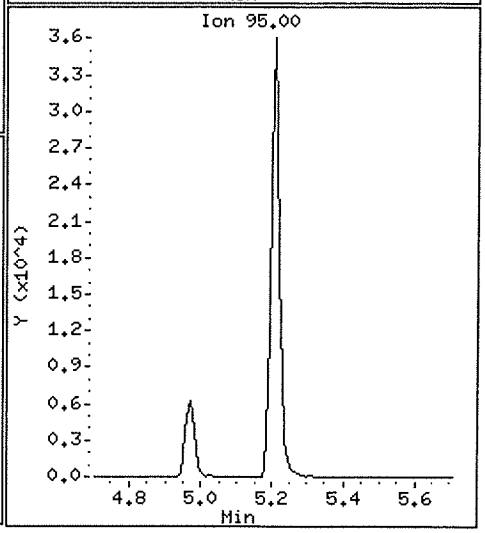


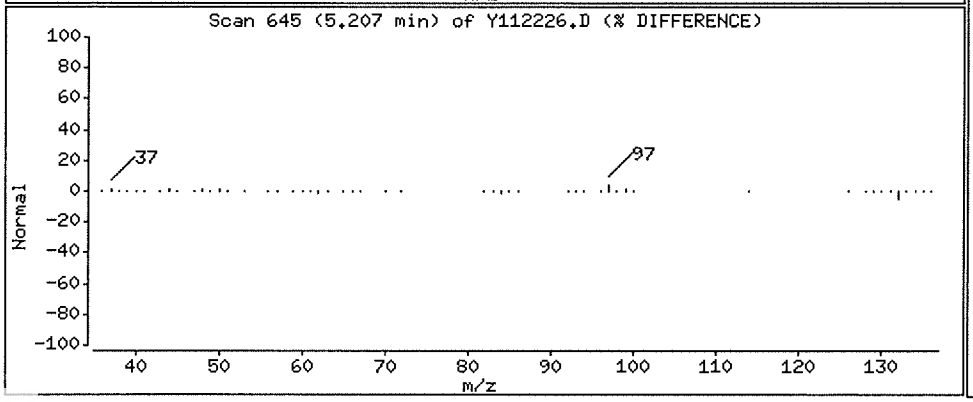












Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112227.D Page 1
Report Date: 18-Dec-2020 13:41

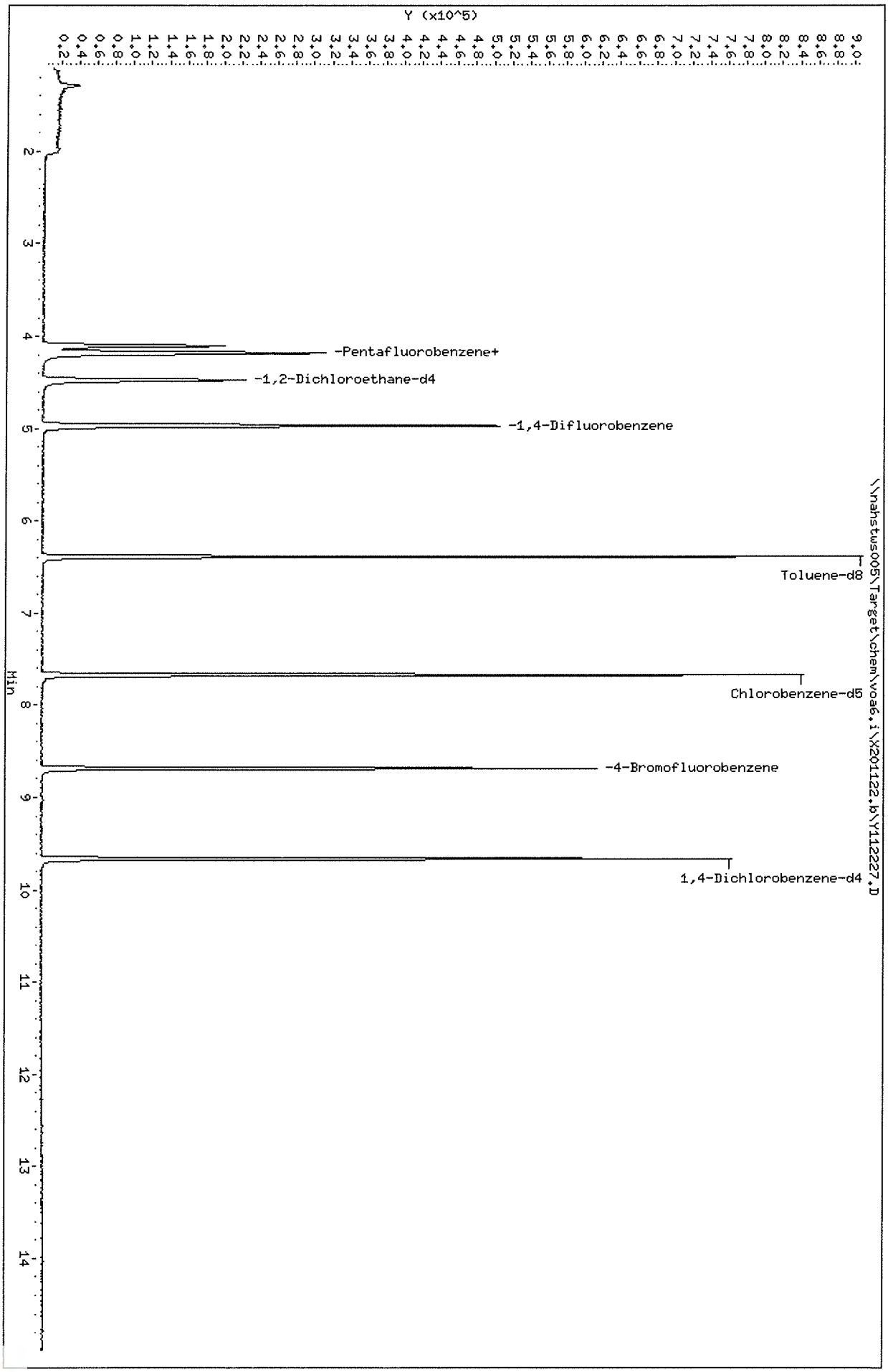
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112227.D
Lab Smp Id: HS20110527-09 Client Smp ID: HS20110527-09
Inj Date : 23-NOV-2020 00:49
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-09;HS20110527-09;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:39 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 28
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	221087	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	376566	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	337485	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	138695	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	152834	42.0822	42.08
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	143659	44.7841	44.78
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	127191	44.1289	44.12
$	48 Toluene-d8	98	6.388	6.388	(0.833)	462430	50.7744	50.77



Data File: \\nahstws005\Target\chem\voa6,i\X201122,b\Y112227,D
Date : 23-NOV-2020 00:49
Client ID: HS20110527-09
Sample Info: HS20110527-09;HS20110527-09;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112228.D Page 1
Report Date: 18-Dec-2020 13:41

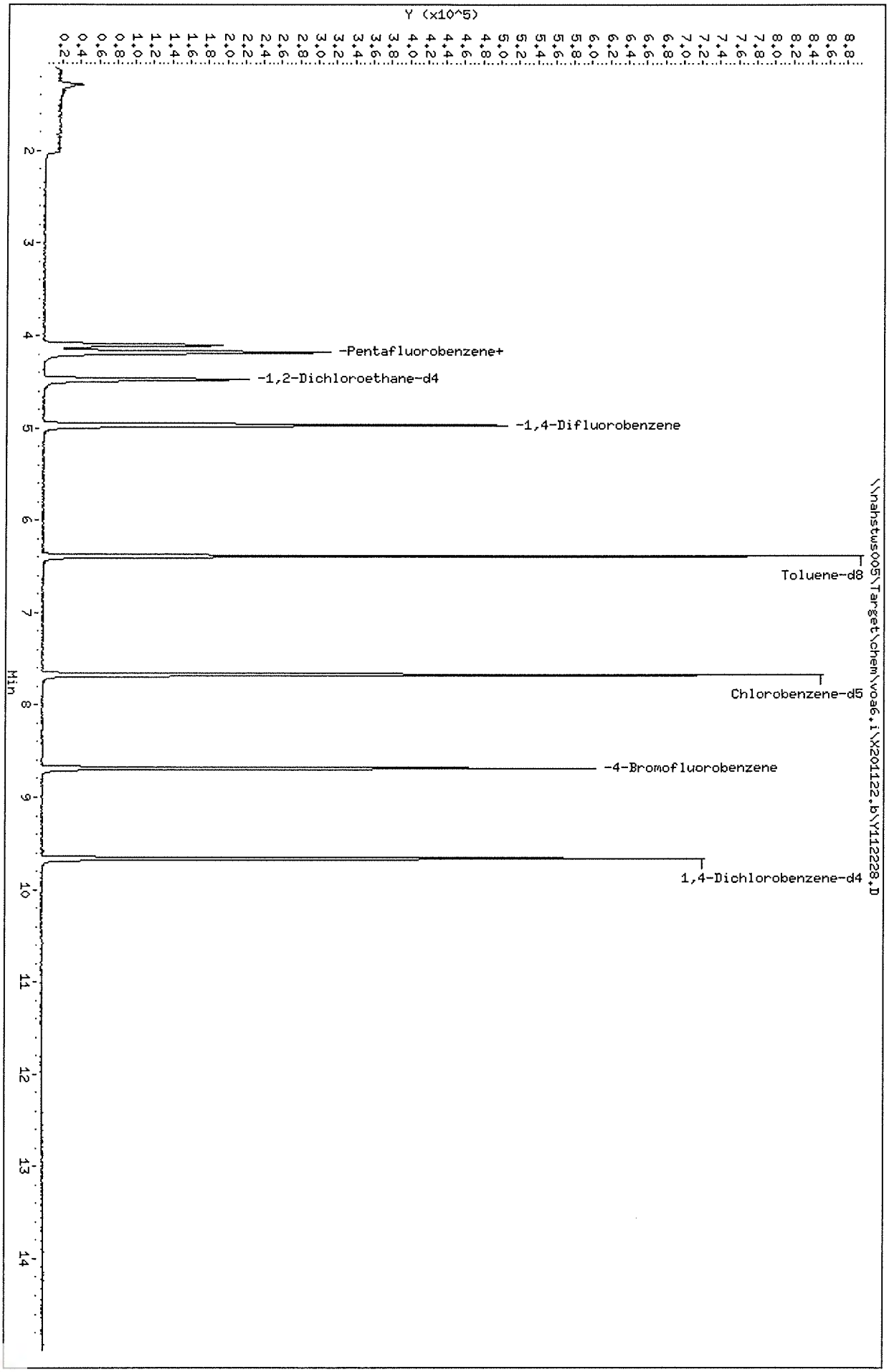
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112228.D
Lab Smp Id: HS20110527-10 Client Smp ID: HS20110527-10
Inj Date : 23-NOV-2020 01:10
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-10;HS20110527-10;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:39 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 29
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	216122	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	379594	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	327639	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	135540	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	150707	42.4419	42.44
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	140071	44.9740	44.97
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	124889	44.3205	44.32
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	465004	52.5914	52.59



Data File: \\nahstws005\Target\chem\voa6,i\X201122,b\Y112228,D
Date : 23-NOV-2020 01:10
Client ID: HS20110527-10
Sample Info: HS20110527-10;HS20110527-10r;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112229.D Page 1
Report Date: 18-Dec-2020 13:46

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112229.D
Lab Smp Id: HS20110527-04MS Client Smp ID: HS20110527-04MS
Inj Date : 23-NOV-2020 01:31
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-04MS;HS20110527-04MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:45 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 30 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

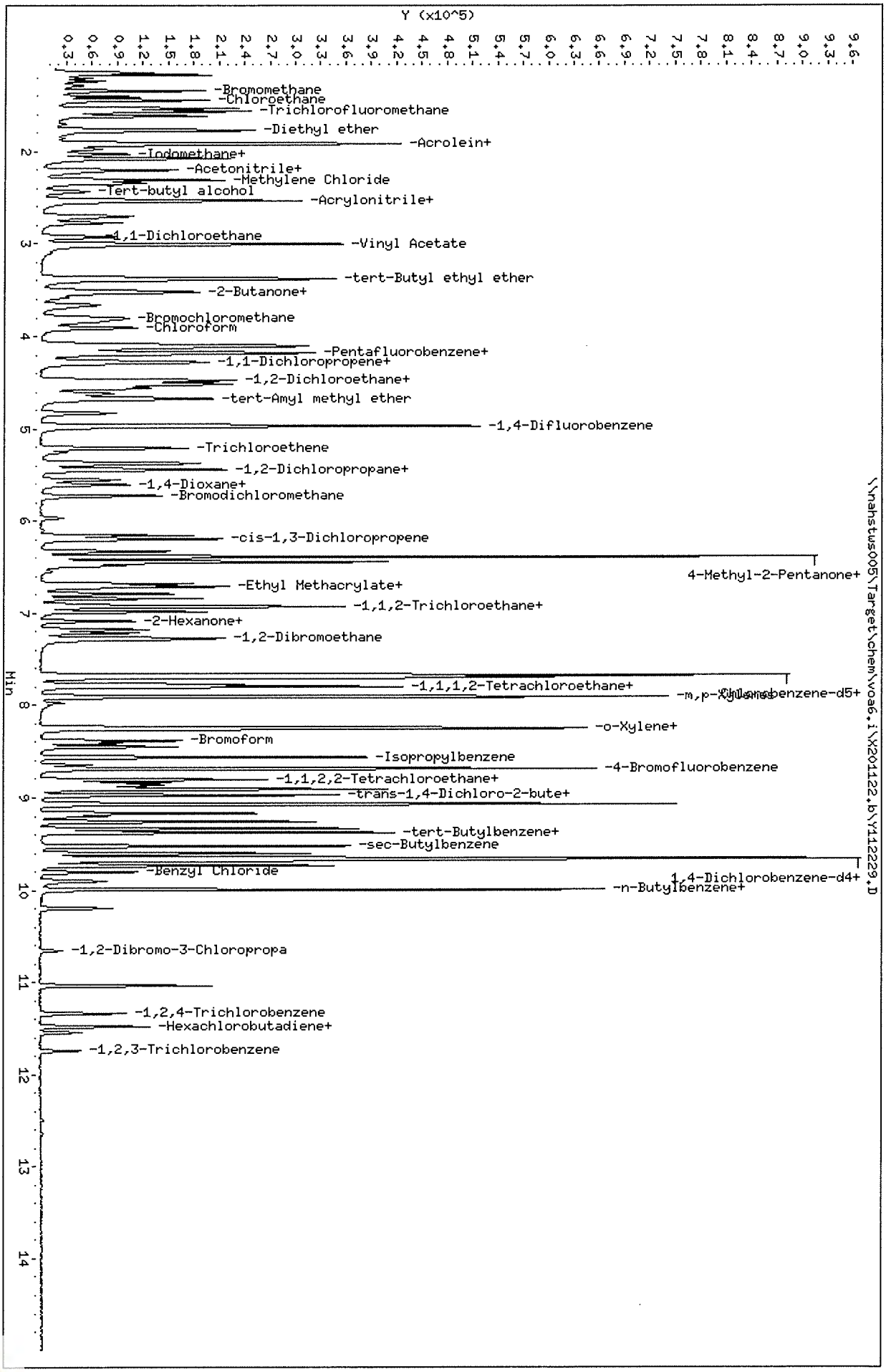
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	218714	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	385778	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	345736	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	153334	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	163667	45.4739	45.47
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	154907	47.0922	47.09
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	133154	46.6269	46.62
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	472093	50.5984	50.59
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	44419	17.0976	17.09
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	79991	17.9952	17.99
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	54860	19.5476	19.54
138 Freon TF	101	1.919	1.919	(0.459)	70217	17.2132	17.21
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	39494	17.3850	17.38
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	85352	16.1789	16.17
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	72854	17.1772	17.17
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	65262	17.0126	17.01
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	11107	20.8595	20.85
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	44789	19.3655	19.36(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	21245	18.3891	18.38
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.971)	172551	19.9330	19.93
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.103)	3227	17.2709	17.27
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	45099	17.0625	17.06

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112229.D Page 2
Report Date: 18-Dec-2020 13:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	79048	18.2175	18.21
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	72171	17.0265	17.02
42	1,2-Dichloropropane	63	5.436	5.443	(1.094)	51051	16.5875	16.58
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	169423	18.6288	18.62
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	88418	19.1715	19.17
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	78173	18.3410	18.34
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	88332	19.2869	19.28
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	68575	14.7877	14.78
24	2-Butanone	43	3.580	3.573	(0.856)	30761	29.4079	29.40
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	136094	18.1403	18.14
52	2-Hexanone	43	7.090	7.083	(0.924)	60376	34.5918	34.59
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	168323	18.3364	18.33
82	p-Isopropyltoluene	119	9.648	9.655	(0.999)	167863	19.5022	19.50
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	91188	34.8954	34.89
10	Acetone	43	1.976	1.976	(0.473)	41573	31.4178	31.41
37	Benzene	78	4.512	4.512	(0.908)	183613	17.4265	17.42
74	Bromobenzene	156	8.809	8.809	(0.912)	50611	19.5380	19.53
29	Bromochloromethane	128	3.803	3.802	(0.909)	24323	15.7397	15.73
39	Bromodichloromethane	83	5.729	5.729	(1.153)	70590	17.2778	17.27
66	Bromoform	173	8.416	8.408	(1.097)	27703	18.0682	18.06
6	Bromomethane	94	1.338	1.338	(0.320)	79542	19.1905	19.19
19	Carbon Disulfide	76	2.069	2.069	(0.495)	247918	30.4017	30.40
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	57521	17.2934	17.29
59	Chlorobenzene	112	7.692	7.692	(1.003)	131131	17.7424	17.74
7	Chloroethane	64	1.403	1.403	(0.336)	55486	16.3710	16.37
28	Chloroform	83	3.910	3.910	(0.935)	90425	15.8101	15.81
3	Chloromethane	50	1.081	1.073	(0.258)	58124	14.4749	14.47
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	50392	15.7457	15.74
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	77661	15.8694	15.86
55	Dibromochloromethane	129	7.176	7.176	(0.936)	46797	17.4579	17.45
44	Dibromomethane	93	5.557	5.557	(1.118)	33858	16.7928	16.79
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	40530	13.2644	13.26
61	Ethylbenzene	106	7.799	7.799	(1.017)	66124	17.7413	17.74
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	14672	19.5812	19.58
67	Isopropylbenzene	105	8.566	8.566	(1.117)	199782	17.7635	17.76
62	m,p-Xylenes	106	7.907	7.907	(1.031)	162490	34.6397	34.63
17	Methylene Chloride	84	2.305	2.305	(0.551)	45502	15.1462	15.14
87	n-Butylbenzene	91	9.991	9.991	(1.034)	167418	19.7450	19.74
73	n-Propylbenzene	91	8.910	8.917	(0.922)	248174	19.3480	19.34
92	Naphthalene	128	11.546	11.539	(1.195)	31232	19.3148	19.31
63	o-Xylene	106	8.244	8.244	(1.075)	79604	17.6424	17.64
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	206835	20.5810	20.58
64	Styrene	104	8.258	8.258	(1.077)	137377	17.1349	17.13
78	tert-Butylbenzene	119	9.340	9.339	(0.967)	137315	19.3203	19.32
56	Tetrachloroethene	164	6.933	6.933	(0.904)	56382	26.4501	26.45
50	Toluene	91	6.446	6.446	(0.840)	199987	17.9203	17.92
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	42943	15.9277	15.92
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	68460	16.2528	16.25
38	Trichloroethene	130	5.206	5.206	(1.048)	48063	17.9102	17.91
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	137909	16.7789	16.77
5	Vinyl Chloride	62	1.145	1.145	(0.274)	83888	15.9417	15.94

QC Flag Legend

M - Compound response manually integrated.

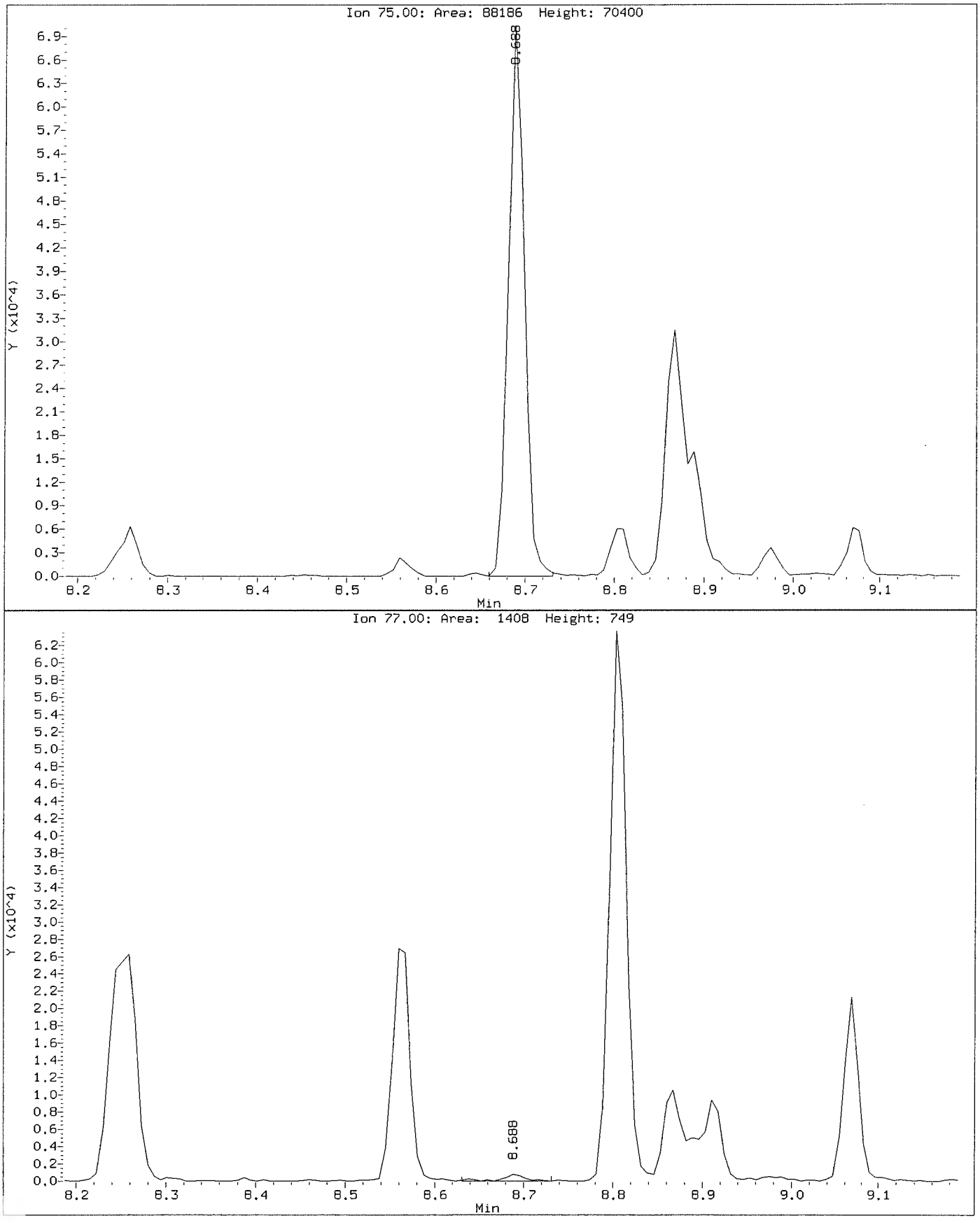


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Sample Info: HS20110527-04MS;HS20110527-04MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

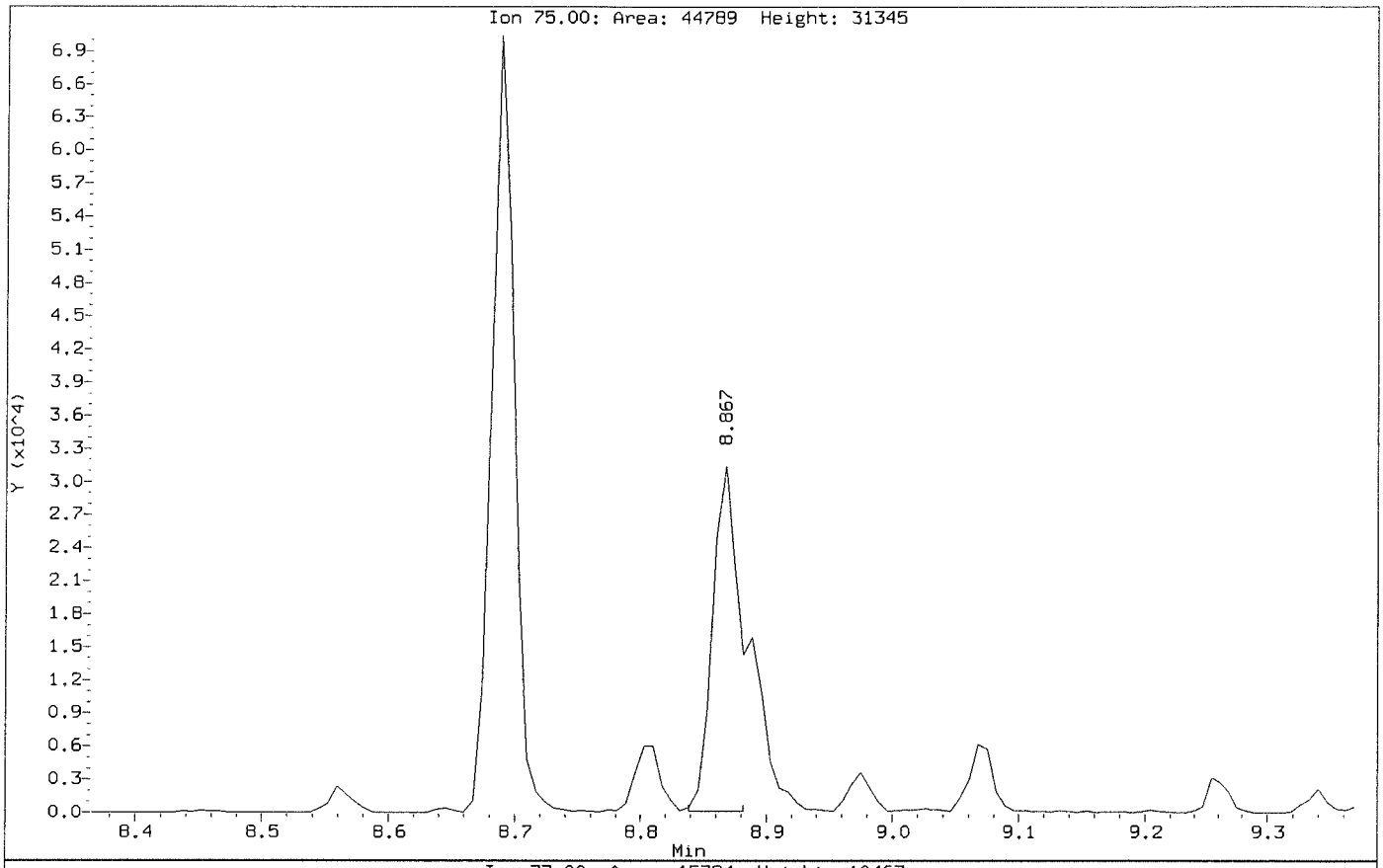
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Injection Date: 23-NOV-2020 01:31
Instrument: voa6.i
Client Sample ID: HS20110527-04MS

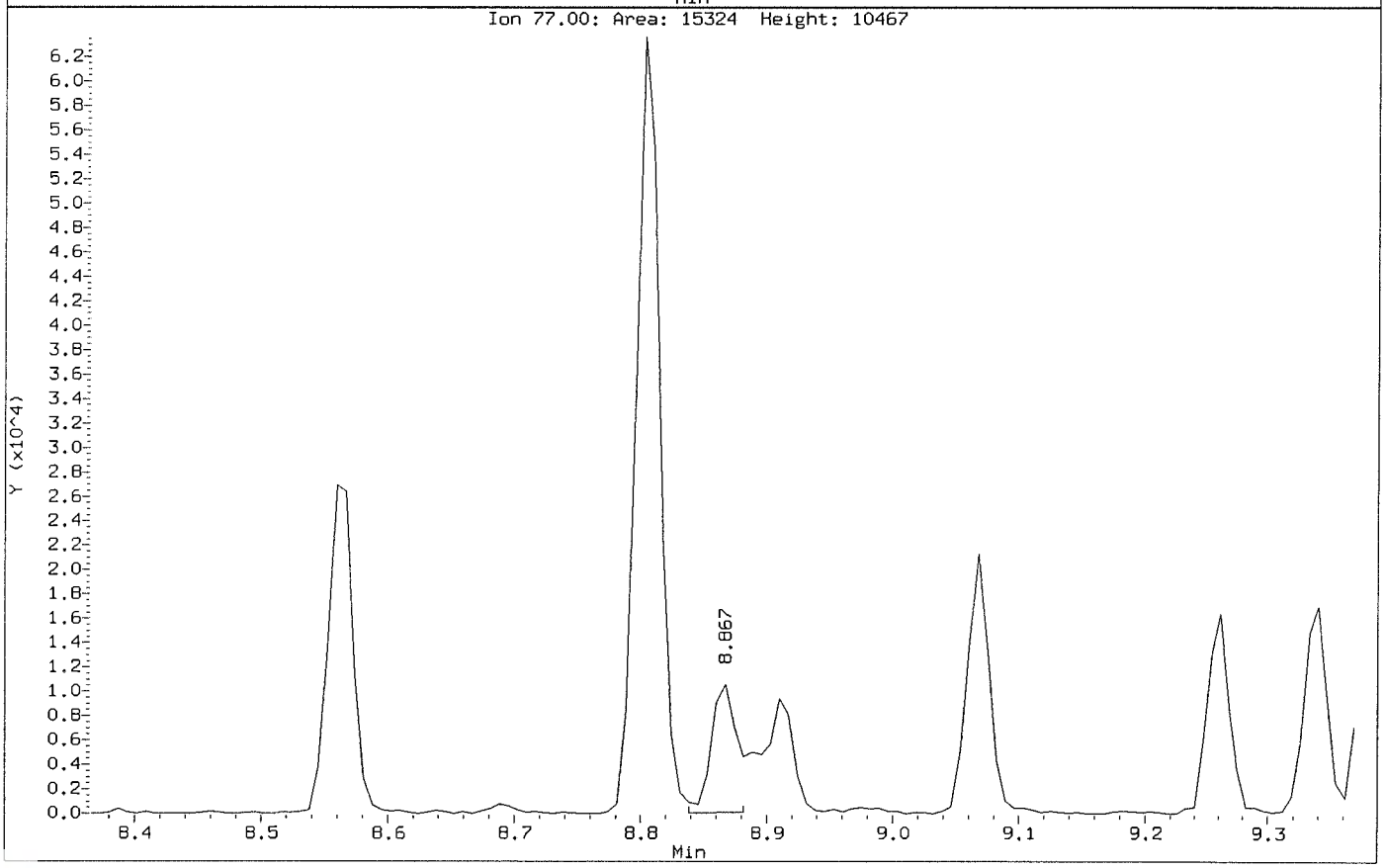
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112229.D
Injection Date: 23-NOV-2020 01:31
Instrument: voa6.i
Client Sample ID: HS20110527-04MS

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112230.D Page 1
Report Date: 18-Dec-2020 13:46

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112230.D
Lab Smp Id: HS20110527-04MSD Client Smp ID: HS20110527-04MSD
Inj Date : 23-NOV-2020 01:52
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-04MSD;HS20110527-04MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:45 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 30 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

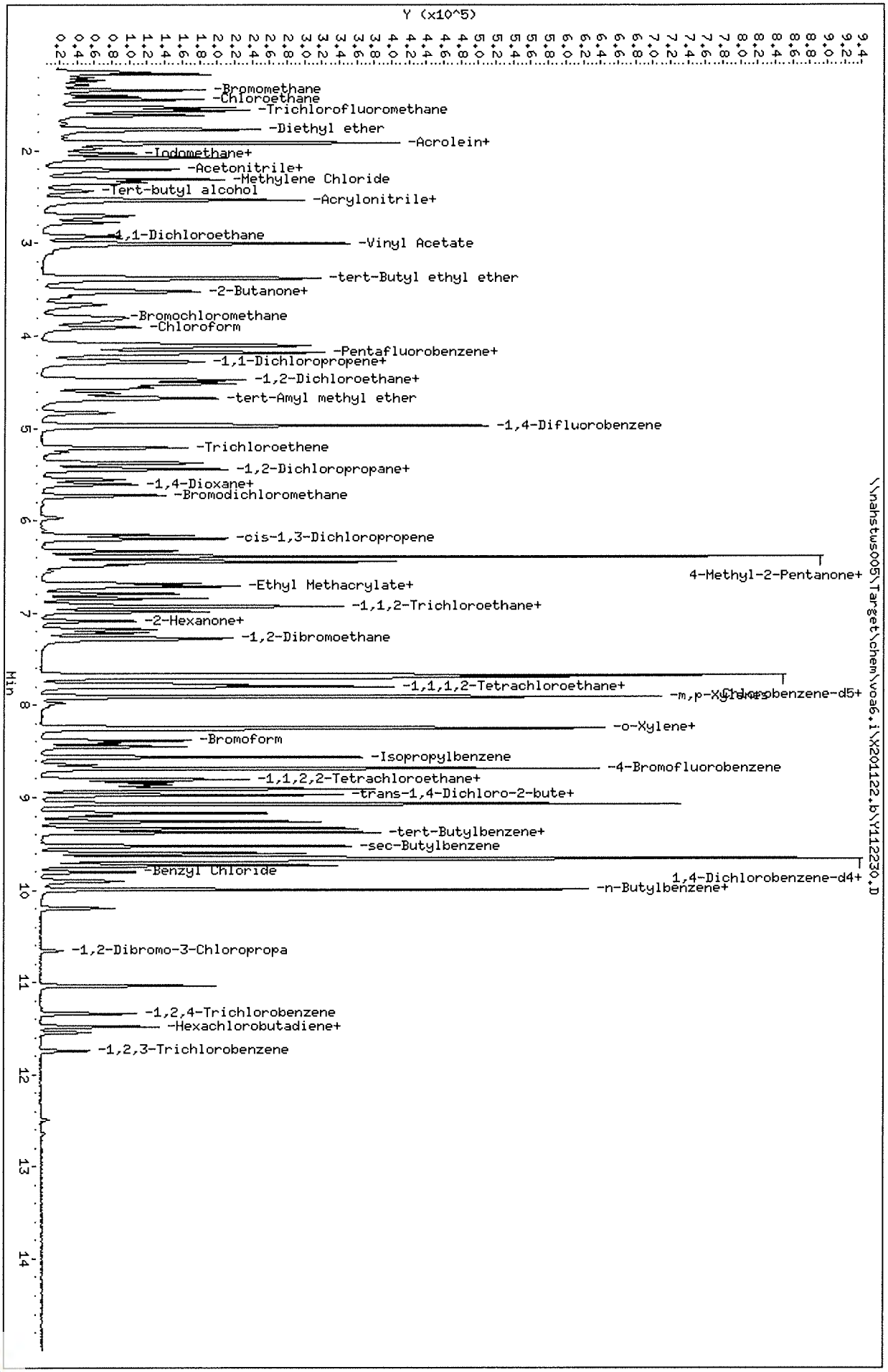
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	217923	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	379130	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	339641	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	142055	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	155261	43.3427	43.34
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	149531	46.2889	46.28
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	129858	45.6652	45.66
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	461516	50.3524	50.35
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	43102	16.8884	16.88
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	75235	16.9867	16.98
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	55525	21.4954	21.49
138 Freon TF	101	1.911	1.919	(0.457)	66742	16.4207	16.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	38594	17.2937	17.29
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	85817	16.3260	16.32
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	68155	16.1276	16.12
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	60738	16.1109	16.11
93 1,2,3-Trichlorobenzene	180	11.739	11.746	(1.215)	12936	25.9135	25.91
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	45053	21.0263	21.02(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	24190	22.6007	22.60
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.971)	163821	20.4271	20.42
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.103)	3668	21.1898	21.18
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	45618	17.5686	17.56

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112230.D Page 2
Report Date: 18-Dec-2020 13:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	78284	19.4739	19.47
33	1,2-Dichloroethane	62	4.562	4.555	(0.918)	71217	17.0960	17.09
42	1,2-Dichloropropane	63	5.436	5.443	(1.094)	48282	15.9629	15.96
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	164721	19.5498	19.54
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	85789	20.0783	20.07
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	78523	18.7537	18.75
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	84257	19.8405	19.84
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	66674	14.4299	14.42
24	2-Butanone	43	3.580	3.573	(0.856)	31519	30.2419	30.24
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	134347	19.3292	19.32
52	2-Hexanone	43	7.090	7.083	(0.924)	59982	34.9727	34.97
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	164695	19.3656	19.36
82	p-Isopropyltoluene	119	9.648	9.655	(0.999)	162819	20.3439	20.34
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	90805	35.3599	35.35
10	Acetone	43	1.976	1.976	(0.473)	38305	28.8130	28.81
37	Benzene	78	4.512	4.512	(0.908)	180162	17.3988	17.39
74	Bromobenzene	156	8.809	8.809	(0.912)	48942	20.3938	20.39
29	Bromochloromethane	128	3.795	3.802	(0.908)	23437	15.2214	15.22
39	Bromodichloromethane	83	5.729	5.729	(1.153)	70614	17.5867	17.58
66	Bromoform	173	8.416	8.408	(1.097)	27518	18.2458	18.24
6	Bromomethane	94	1.338	1.338	(0.320)	75772	18.3877	18.38
19	Carbon Disulfide	76	2.069	2.069	(0.495)	235678	29.0056	29.00
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	54729	16.7425	16.74
59	Chlorobenzene	112	7.692	7.692	(1.003)	123117	16.9570	16.95
7	Chloroethane	64	1.403	1.403	(0.336)	54074	16.0123	16.01
28	Chloroform	83	3.910	3.910	(0.935)	90259	15.8383	15.83
3	Chloromethane	50	1.073	1.073	(0.257)	55876	13.9655	13.96
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	49849	15.6326	15.63
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	75121	15.6196	15.61
55	Dibromochloromethane	129	7.176	7.176	(0.936)	48651	18.4752	18.47
44	Dibromomethane	93	5.557	5.557	(1.118)	34412	17.3668	17.36
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	36635	12.2747	12.27
61	Ethylbenzene	106	7.799	7.799	(1.017)	65645	17.9289	17.92
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	15147	21.6460	21.64
67	Isopropylbenzene	105	8.566	8.566	(1.117)	194420	17.5969	17.59
62	m,p-Xylenes	106	7.907	7.907	(1.031)	159111	34.5504	34.55
17	Methylene Chloride	84	2.305	2.305	(0.551)	45140	15.0802	15.08
87	n-Butylbenzene	91	9.999	9.991	(1.035)	159914	20.2624	20.26
73	n-Propylbenzene	91	8.910	8.917	(0.922)	239143	20.1243	20.12
92	Naphthalene	128	11.546	11.539	(1.195)	35071	23.1841	23.18
63	o-Xylene	106	8.244	8.244	(1.075)	77480	17.5064	17.50
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	197592	21.2020	21.20
64	Styrene	104	8.258	8.258	(1.077)	131345	16.6765	16.67
78	tert-Butylbenzene	119	9.340	9.339	(0.967)	136360	20.7093	20.70
56	Tetrachloroethene	164	6.933	6.933	(0.904)	56876	27.1607	27.16
50	Toluene	91	6.446	6.446	(0.840)	195769	17.8572	17.85
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	41856	15.5809	15.58
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	69936	16.8944	16.89
38	Trichloroethene	130	5.206	5.206	(1.048)	46718	17.7143	17.71
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	131932	16.1100	16.10
5	Vinyl Chloride	62	1.145	1.145	(0.274)	78043	14.8848	14.88

QC Flag Legend

M - Compound response manually integrated.

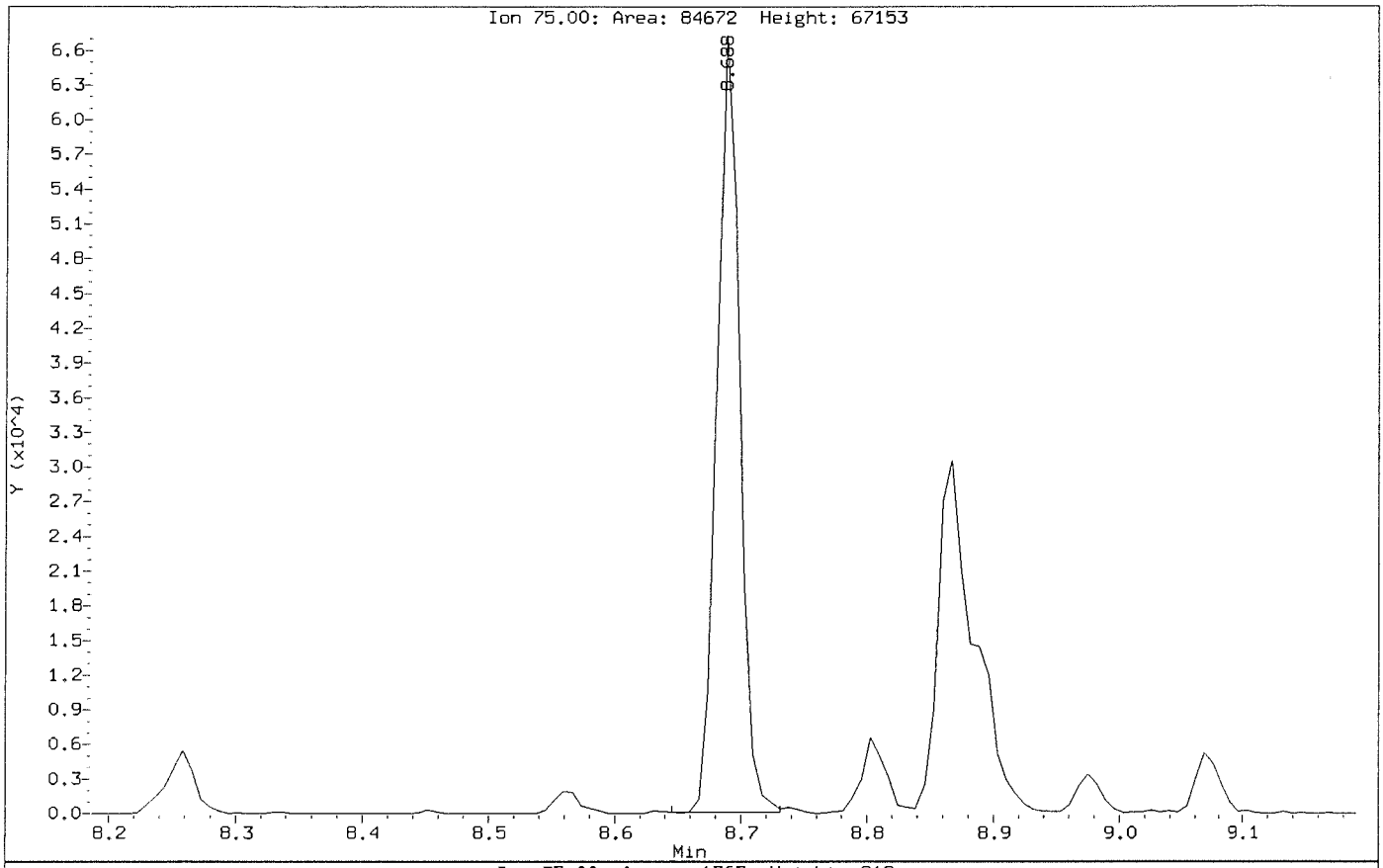


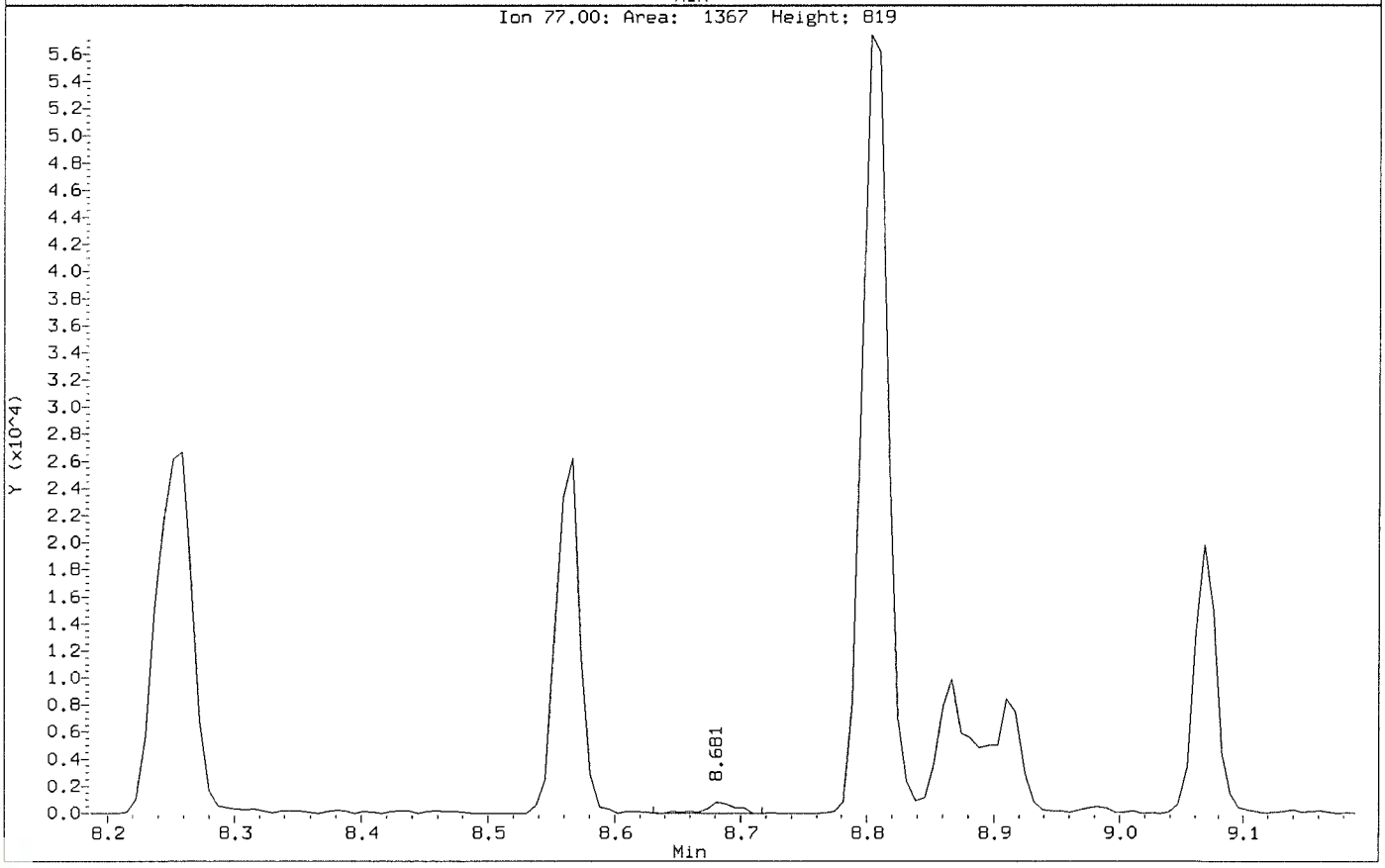
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Date : 23-NOV-2020 01:52
Client ID: HS20110527-04HSD
Sample Info: HS20110527-04HSD;HS20110527-04HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112230.D
Injection Date: 23-NOV-2020 01:52
Instrument: voa6.i
Client Sample ID: HS20110527-04MSD

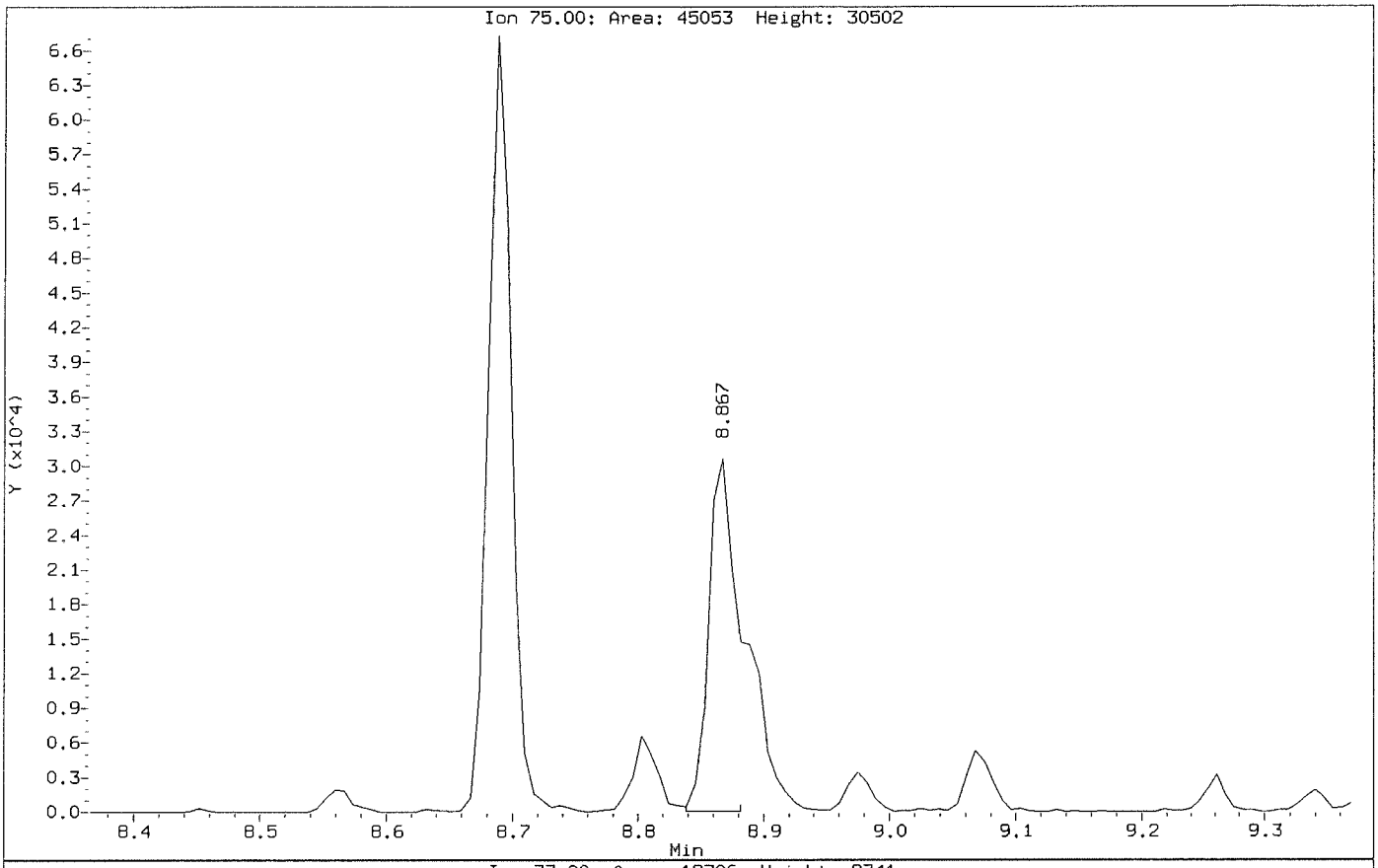
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

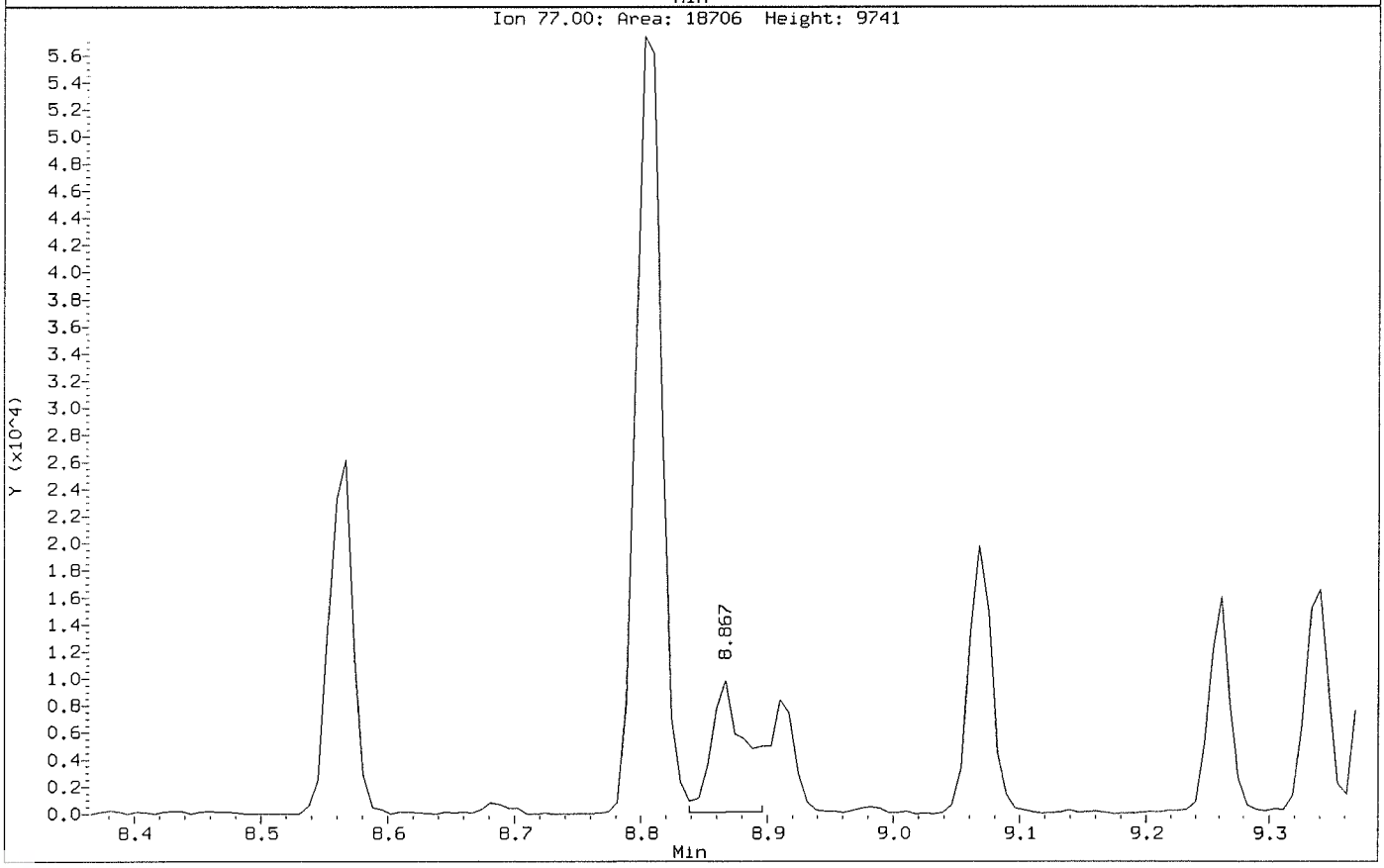




Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112230.D
Injection Date: 23-NOV-2020 01:52
Instrument: voa6.i
Client Sample ID: HS20110527-04MSD

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112231.D Page 1
Report Date: 18-Dec-2020 13:56

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112231.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 23-NOV-2020 02:13
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 13:56 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

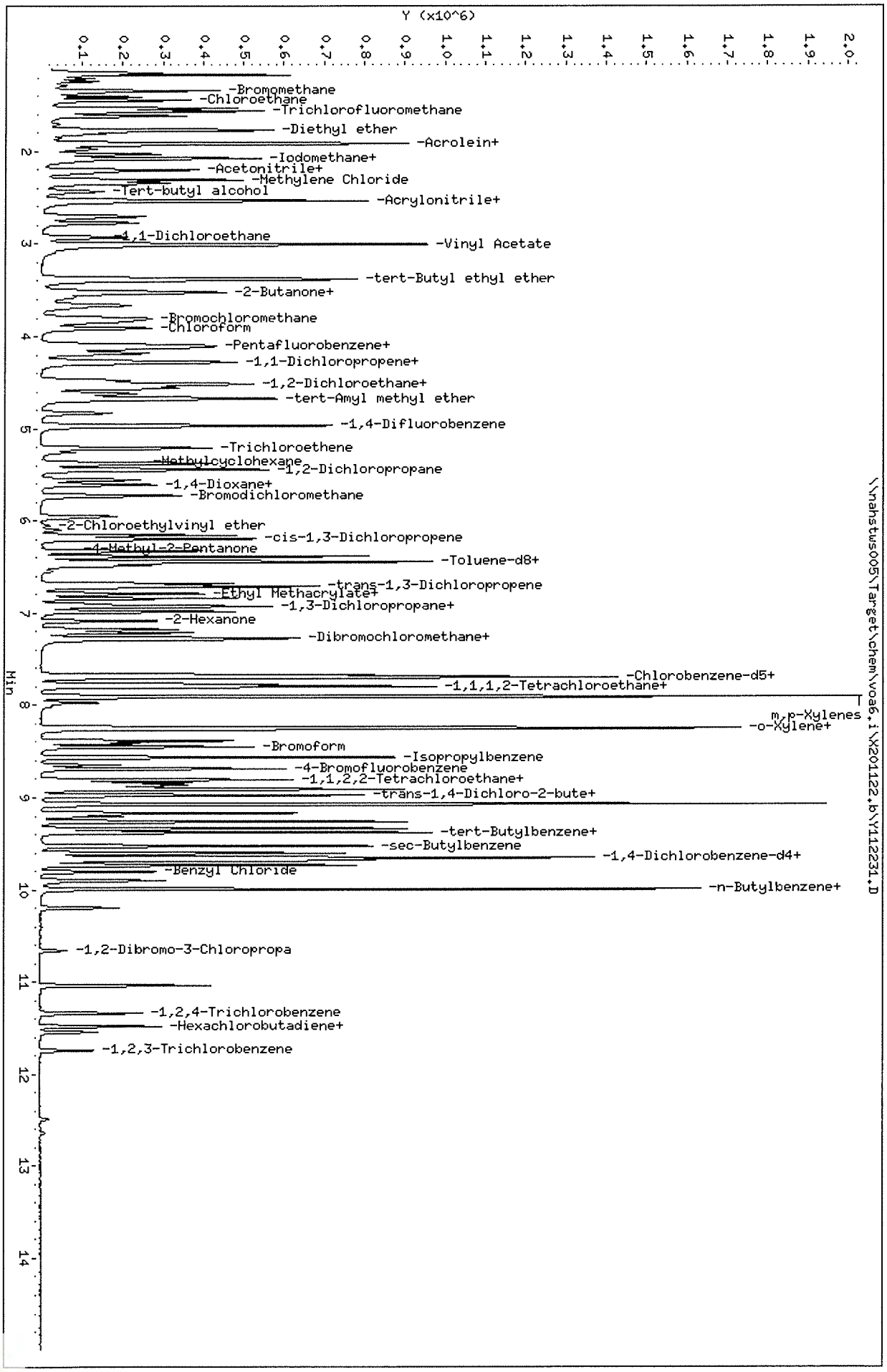
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	172921	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	332670	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	307365	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	145445	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	150208	50.0000	52.59
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	145784	50.0000	49.79
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	122387	50.0000	53.94
$	48 Toluene-d8	98	6.388	6.388	(0.833)	418517	50.0000	50.45
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	111823	50.0000	48.41
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	185128	50.0000	52.67
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	140124	50.0000	55.19
	138 Freon TF	101	1.919	1.919	(0.459)	152879	50.0000	47.40
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	97556	50.0000	48.30
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	207965	50.0000	49.86
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	162846	50.0000	48.56
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	157690	50.0000	47.66
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	27828	50.0000	53.11
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	112614	50.0000	51.33(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	56818	50.0000	51.84
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	394044	50.0000	47.98
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	9414	50.0000	53.11
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	115266	50.0000	49.05

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112231.D Page 2
Report Date: 18-Dec-2020 13:56

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	200431	50.0000	48.69
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	184990	50.0000	50.60
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	127601	50.0000	48.07
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	407069	50.0000	47.18
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	205089	50.0000	46.88
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	195082	50.0000	51.48
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	212985	50.0000	48.11
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	159084	50.0000	43.39
24	2-Butanone	43	3.573	3.573	(0.854)	83146	100.000	100.53
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	331931	50.0000	46.64
52	2-Hexanone	43	7.083	7.083	(0.923)	157590	100.000	99.83
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	422439	50.0000	48.51
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	403323	50.0000	46.97
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	236008	100.000	99.83
10	Acetone	43	1.976	1.976	(0.473)	97242	100.000	99.19
37	Benzene	78	4.512	4.512	(0.908)	447972	50.0000	49.30
74	Bromobenzene	156	8.809	8.809	(0.912)	121915	50.0000	49.61
29	Bromochloromethane	128	3.802	3.802	(0.909)	62743	50.0000	51.35
39	Bromodichloromethane	83	5.729	5.729	(1.153)	175127	50.0000	49.70
66	Bromoform	173	8.408	8.408	(1.096)	72449	50.0000	48.99
6	Bromomethane	94	1.338	1.338	(0.320)	163208	50.0000	48.33
19	Carbon Disulfide	76	2.069	2.069	(0.495)	610100	100.000	94.62
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	141583	50.0000	49.36
59	Chlorobenzene	112	7.692	7.692	(1.003)	312440	50.0000	47.55
7	Chloroethane	64	1.403	1.403	(0.336)	128760	50.0000	48.05
28	Chloroform	83	3.910	3.910	(0.935)	223849	50.0000	49.50
3	Chloromethane	50	1.073	1.073	(0.257)	146072	50.0000	46.01
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	124746	50.0000	49.30
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	209515	50.0000	49.64
55	Dibromochloromethane	129	7.176	7.176	(0.936)	124322	50.0000	52.16
44	Dibromomethane	93	5.557	5.557	(1.118)	86985	50.0000	50.02
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	127097	50.0000	44.89
61	Ethylbenzene	106	7.799	7.799	(1.017)	160231	50.0000	48.35
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	34719	50.0000	46.57
67	Isopropylbenzene	105	8.566	8.566	(1.117)	474196	50.0000	47.42
62	m,p-Xylenes	106	7.907	7.907	(1.031)	421967	100.000	87.86
17	Methylene Chloride	84	2.305	2.305	(0.551)	115364	50.0000	48.57
87	n-Butylbenzene	91	9.991	9.991	(1.034)	391684	50.0000	44.20
73	n-Propylbenzene	91	8.917	8.917	(0.923)	572847	50.0000	47.08
92	Naphthalene	128	11.539	11.539	(1.194)	87257	50.0000	54.80
63	o-Xylene	106	8.244	8.244	(1.075)	197734	50.0000	44.11
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	461459	50.0000	47.25
64	Styrene	104	8.258	8.258	(1.077)	346548	50.0000	48.62
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	322009	50.0000	47.76
56	Tetrachloroethene	164	6.933	6.933	(0.904)	89653	50.0000	47.30
50	Toluene	91	6.446	6.446	(0.840)	478288	50.0000	48.20
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	106366	50.0000	49.89
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	182728	50.0000	50.30
38	Trichloroethene	130	5.206	5.206	(1.048)	114852	50.0000	49.63
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	316032	50.0000	48.63
5	Vinyl Chloride	62	1.145	1.145	(0.274)	200134	50.0000	48.10

QC Flag Legend

M - Compound response manually integrated.

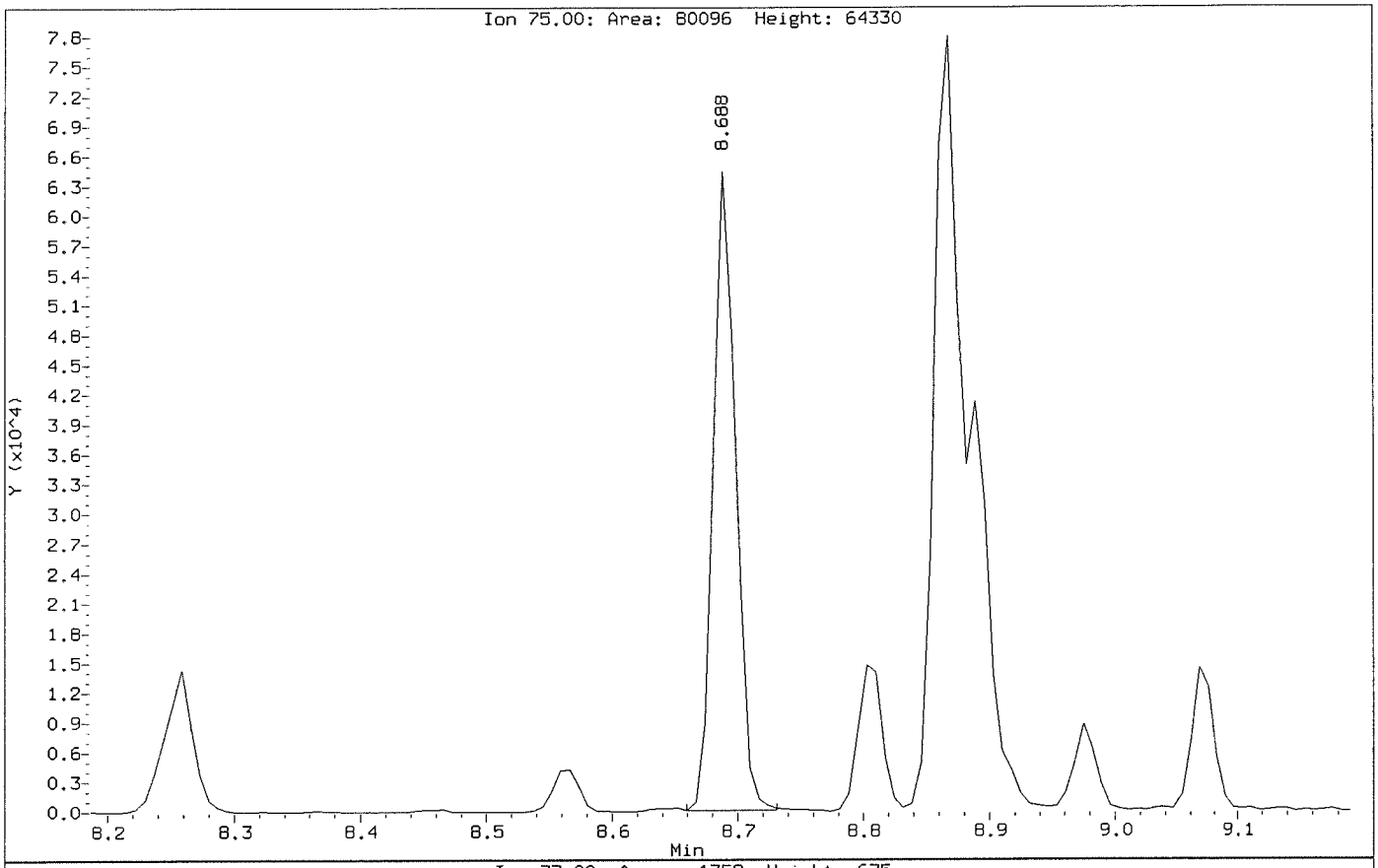


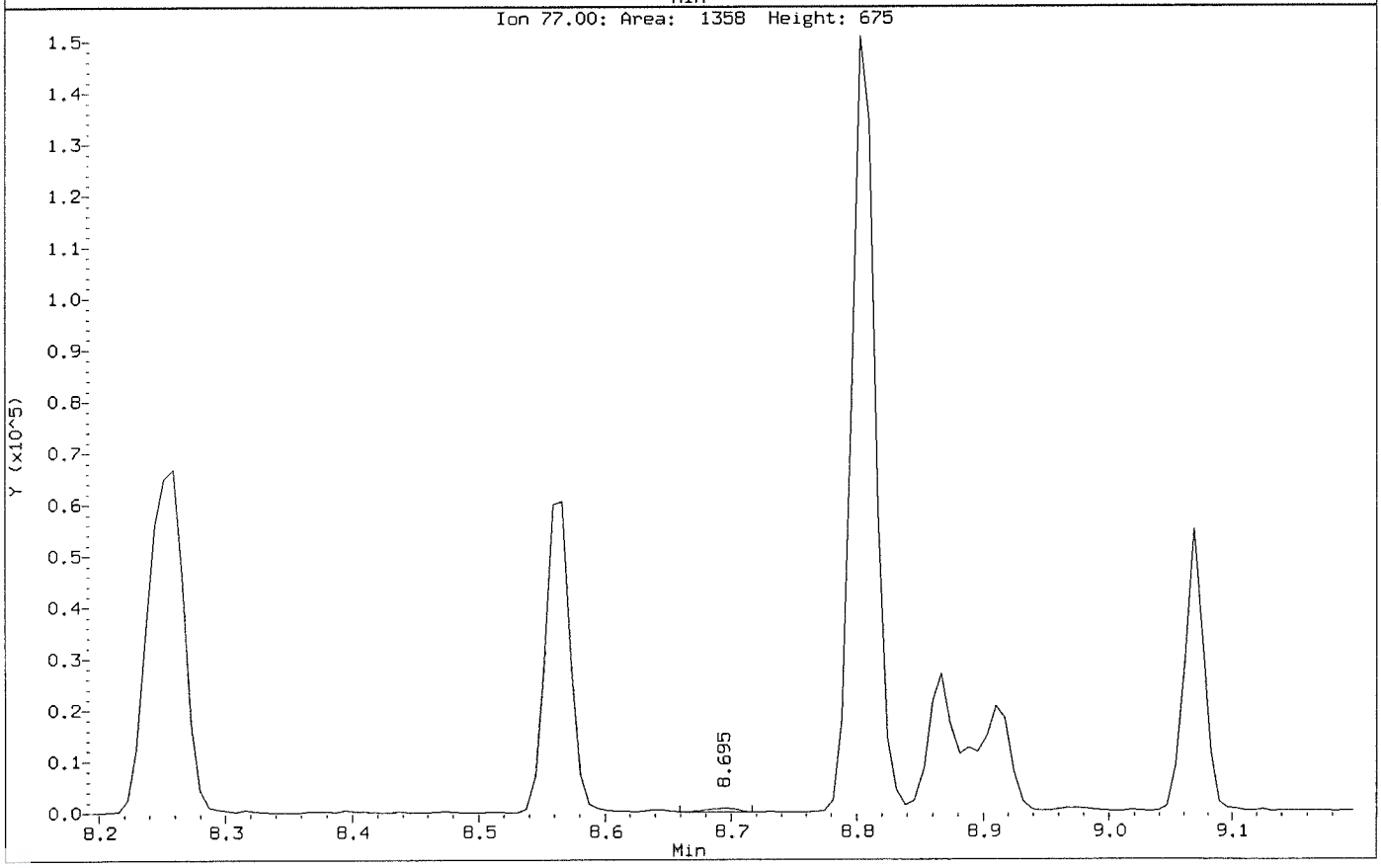
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Date : 23-NOV-2020 02:13
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112231.D
Injection Date: 23-NOV-2020 02:13
Instrument: voa6.i
Client Sample ID: CCV-END

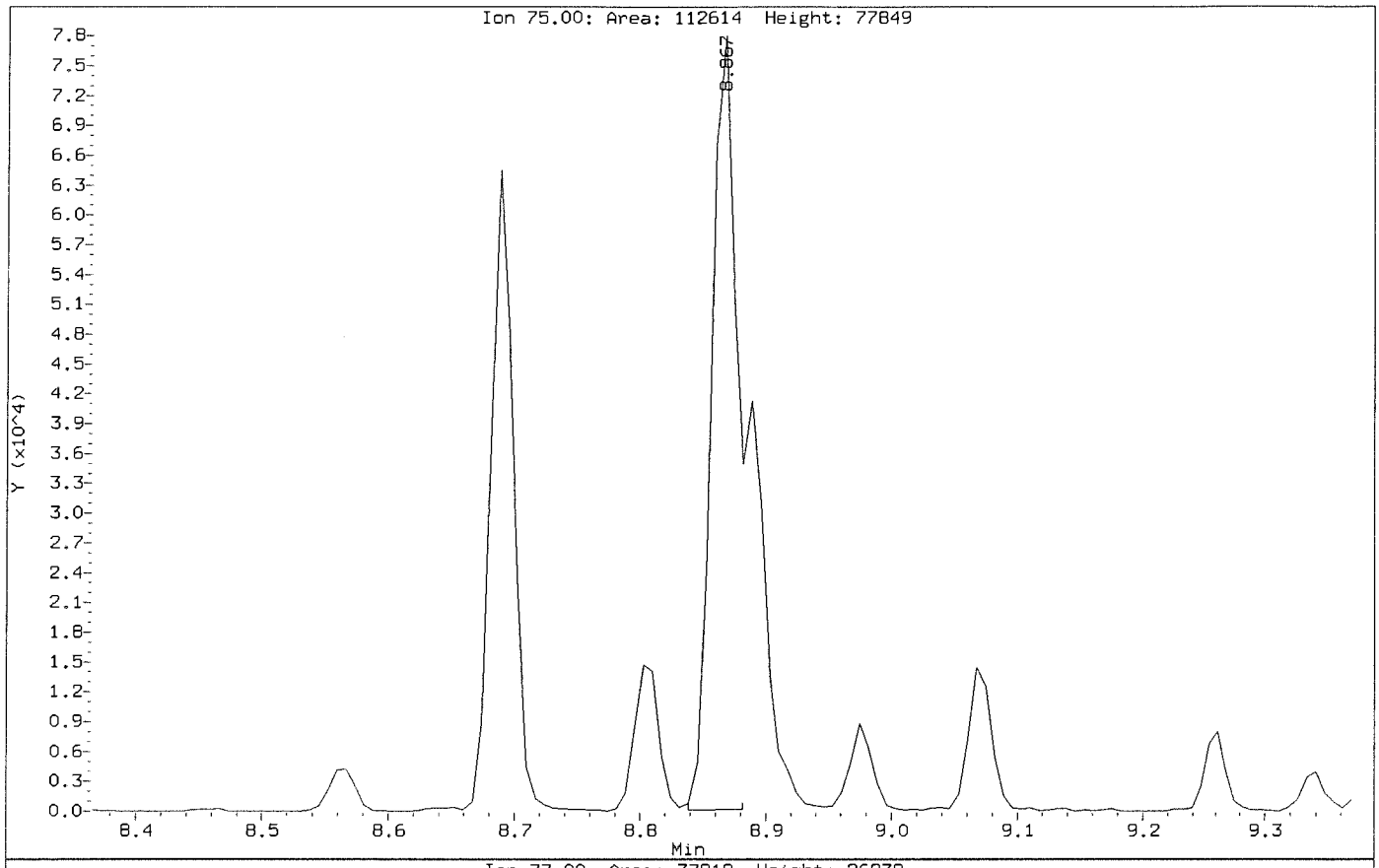
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

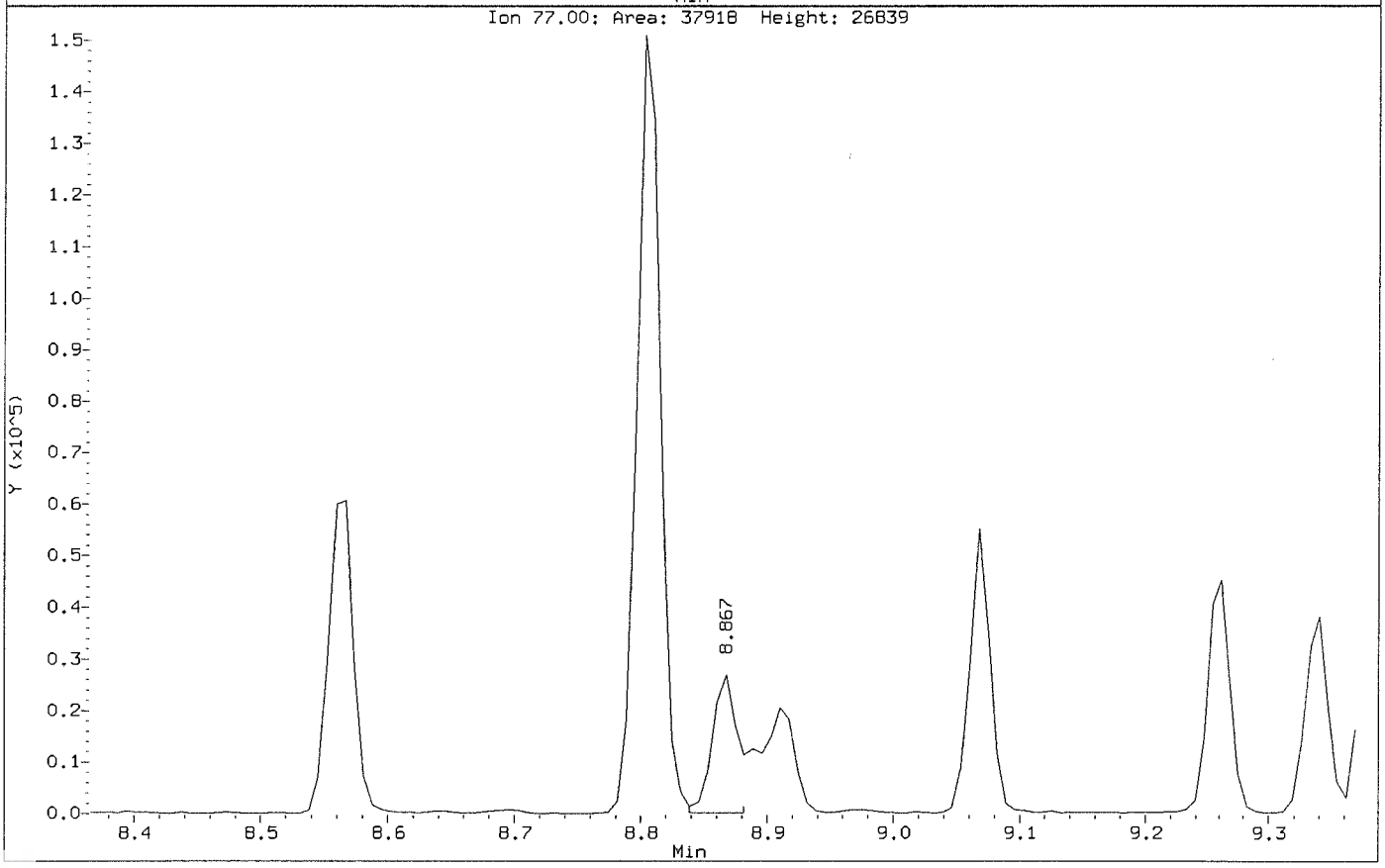




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Injection Date: 23-NOV-2020 02:13
Instrument: voa6.i
Client Sample ID: CCV-END

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





MSVOA06 -Logbook

Batch: 42732 **Analyst:** Devak Giga

Date: 11-23-2020 **Reviewer:**

Method: 8260_W **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	11-23-2020 10:31 am	1.00	0.00 mL	0.00 mL	X112201.D	Liquid	Y	NA
2	CCV	CCV	11-23-2020 10:52 am	1.00	5.00 mL	0.00 mL	X112202.D	Liquid	Y	NA
3	BLANK	SAMP	11-23-2020 11:12 am	1.00	5.00 mL	0.00 mL	X112203.D	Liquid	Y	NA
4	CCB	SAMP	11-23-2020 11:34 am	1.00	5.00 mL	0.00 mL	X112204.D	Liquid	Y	NA
5	VLCSW-201123	LCS	11-23-2020 11:55 am	1.00	5.00 mL	0.00 mL	X112205.D	Liquid	Y	NA
6	BLANK	SAMP	11-23-2020 12:16 pm	1.00	5.00 mL	0.00 mL	X112206.D	Liquid	Y	NA
7	VBLK-201123	MBLK	11-23-2020 12:37 pm	1.00	5.00 mL	0.00 mL	X112207.D	Liquid	Y	NA
8	HS20110527-11	SAMP	11-23-2020 12:58 pm	1.00	5.00 mL	0.00 mL	X112208.D	Liquid	Y	NA
9	HS20110527-18	SAMP	11-23-2020 01:19 pm	1.00	5.00 mL	0.00 mL	X112209.D	Liquid	Y	NA
10	HS20110527-12	SAMP	11-23-2020 01:40 pm	1.00	5.00 mL	0.00 mL	X112210.D	Liquid	Y	NA
11	HS20110527-13	SAMP	11-23-2020 02:01 pm	1.00	5.00 mL	0.00 mL	X112211.D	Liquid	Y	NA
12	HS20110527-14	SAMP	11-23-2020 02:22 pm	1.00	5.00 mL	0.00 mL	X112212.D	Liquid	Y	NA
13	HS20110527-15	SAMP	11-23-2020 02:43 pm	1.00	5.00 mL	0.00 mL	X112213.D	Liquid	Y	NA
14	HS20110527-16	SAMP	11-23-2020 03:04 pm	1.00	5.00 mL	0.00 mL	X112214.D	Liquid	Y	NA
15	HS20110527-17	SAMP	11-23-2020 03:25 pm	1.00	5.00 mL	0.00 mL	X112215.D	Liquid	Y	NA
16	HS20110505-03	SAMP	11-23-2020 03:46 pm	1.00	5.00 mL	0.00 mL	X112216.D	Liquid	Y	NA
17	HS20110505-01	SAMP	11-23-2020 04:07 pm	1.00	5.00 mL	0.00 mL	X112217.D	Liquid	Y	NA
18	HS20110985-28	SAMP	11-23-2020 04:28 pm	1.00	5.00 mL	0.00 mL	X112218.D	Liquid	Y	NA
19	HS20110985-03	SAMP	11-23-2020 04:49 pm	1.00	5.00 mL	0.00 mL	X112219.D	Liquid	Y	NA
20	HS20110985-10	SAMP	11-23-2020 05:10 pm	1.00	5.00 mL	0.00 mL	X112220.D	Liquid	Y	NA
21	HS20110985-28MS	MS	11-23-2020 05:31 pm	1.00	5.00 mL	0.00 mL	X112221.D	Liquid	Y	NA
22	HS20110985-28MSD	MSD	11-23-2020 05:52 pm	1.00	5.00 mL	0.00 mL	X112222.D	Liquid	Y	NA
23	HS20110985-07	SAMP	11-23-2020 06:14 pm	5.00	5.00 mL	0.00 mL	X112223.D	Liquid	Y	NA
24	HS20110985-05	SAMP	11-23-2020 06:35 pm	1.00	5.00 mL	0.00 mL	X112224.D	Liquid	Y	NA
25	HS20110985-15	SAMP	11-23-2020 06:56 pm	1.00	5.00 mL	0.00 mL	X112225.D	Liquid	Y	NA
26	HS20110985-18	SAMP	11-23-2020 07:17 pm	5.00	5.00 mL	0.00 mL	X112226.D	Liquid	Y	NA
27	HS20110985-18	SAMP	11-23-2020 07:38 pm	25.00	5.00 mL	0.00 mL	X112227.D	Liquid	Y	NA
28	HS20110985-16	SAMP	11-23-2020 07:59 pm	25.00	5.00 mL	0.00 mL	X112228.D	Liquid	Y	NA
29	HS20110985-16	SAMP	11-23-2020 08:20 pm	250.0(	5.00 mL	0.00 mL	X112229.D	Liquid	Y	NA
30	CCV-END	CCV	11-23-2020 08:41 pm	1.00	5.00 mL	0.00 mL	X112230.D	Liquid	Y	NA
31	BFB	TUNE	11-23-2020 09:02 pm	1.00	0.00 mL	0.00 mL	Y112201.D	Liquid	Y	NA
32	CCV	CCV	11-23-2020 09:23 pm	1.00	5.00 mL	0.00 mL	Y112202.D	Liquid	Y	NA
33	BLANK	SAMP	11-23-2020 09:44 pm	1.00	5.00 mL	0.00 mL	Y112203.D	Liquid	Y	NA
34	CCB	SAMP	11-23-2020 10:05 pm	1.00	5.00 mL	0.00 mL	Y112204.D	Liquid	Y	NA
35	VLCSW-201123	LCS	11-23-2020 10:26 pm	1.00	5.00 mL	0.00 mL	Y112205.D	Liquid	Y	NA
36	BLANK	SAMP	11-23-2020 10:47 pm	1.00	5.00 mL	0.00 mL	Y112206.D	Liquid	Y	NA
37	VBLKM-201123	MBLK	11-23-2020 11:08 pm	50.00	5.00 mL	0.00 mL	Y112207.D	Liquid	Y	NA
38	VBLKW-201123	MBLK	11-23-2020 11:29 pm	1.00	5.00 mL	0.00 mL	Y112208.D	Liquid	Y	NA
39	HS20111076-13	SAMP	11-23-2020 11:50 pm	1.00	5.00 mL	0.00 mL	Y112209.D	Liquid	Y	NA
40	HS20111076-31	SAMP	11-24-2020 12:11 am	1.00	5.00 mL	0.00 mL	Y112210.D	Liquid	Y	NA
41	HS20111076-01	SAMP	11-24-2020 12:32 am	1.00	5.00 mL	0.00 mL	Y112211.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS20111076-06	SAMP	11-24-2020 12:53 am	1.00	5.00 mL	0.00 mL	Y112212.D	Liquid	Y	NA
43	HS20111076-22	SAMP	11-24-2020 01:14 am	1.00	5.00 mL	0.00 mL	Y112213.D	Liquid	Y	NA
44	HS20110689-01	SAMP	11-24-2020 01:35 am	100.0(	5.00 mL	0.00 mL	Y112214.D	Liquid	Y	NA
45	HS20110689-02	SAMP	11-24-2020 01:56 am	100.0(	5.00 mL	0.00 mL	Y112215.D	Liquid	Y	NA
46	HS20110689-03	SAMP	11-24-2020 02:17 am	100.0(	5.00 mL	0.00 mL	Y112216.D	Liquid	Y	NA
47	HS20110689-04	SAMP	11-24-2020 02:38 am	100.0(	5.00 mL	0.00 mL	Y112217.D	Liquid	Y	NA
48	HS20110985-25	SAMP	11-24-2020 02:59 am	1.00	5.00 mL	0.00 mL	Y112218.D	Liquid	Y	NA
49	HS20111076-31MS	MS	11-24-2020 03:21 am	1.00	5.00 mL	0.00 mL	Y112219.D	Liquid	Y	NA
50	HS20111076-31MSD	MSD	11-24-2020 03:42 am	1.00	5.00 mL	0.00 mL	Y112220.D	Liquid	Y	NA
51	HS20111076-21	SAMP	11-24-2020 04:03 am	5.00	5.00 mL	0.00 mL	Y112221.D	Liquid	Y	NA
52	HS20111076-32	SAMP	11-24-2020 04:24 am	1.00	5.00 mL	0.00 mL	Y112222.D	Liquid	Y	NA
53	HS20110985-22	SAMP	11-24-2020 04:45 am	5.00	5.00 mL	0.00 mL	Y112223.D	Liquid	Y	NA
54	HS20110985-22	SAMP	11-24-2020 05:06 am	25.00	5.00 mL	0.00 mL	Y112224.D	Liquid	Y	NA
55	HS20110985-30	SAMP	11-24-2020 05:27 am	10.00	5.00 mL	0.00 mL	Y112225.D	Liquid	Y	NA
56	HS20110985-30	SAMP	11-24-2020 05:48 am	100.0(	5.00 mL	0.00 mL	Y112226.D	Liquid	Y	NA
57	HS20110985-31	SAMP	11-24-2020 06:09 am	50.00	5.00 mL	0.00 mL	Y112227.D	Liquid	Y	NA
58	HS20110985-31	SAMP	11-24-2020 06:30 am	250.0(	5.00 mL	0.00 mL	Y112228.D	Liquid	Y	NA
59	HS20110985-29	SAMP	11-24-2020 06:51 am	50.00	5.00 mL	0.00 mL	Y112229.D	Liquid	Y	NA
60	HS20110985-29	SAMP	11-24-2020 07:12 am	500.0(	5.00 mL	0.00 mL	Y112230.D	Liquid	Y	NA
61	CCV-END	CCV	11-24-2020 07:33 am	1.00	5.00 mL	0.00 mL	Y112231.D	Liquid	Y	NA
62	BLANK	SAMP	11-24-2020 07:54 am	1.00	5.00 mL	0.00 mL	Y112232.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-55-06
IS ID	31106-55-06
CAL STD ID	31106-55-01/02
BFB ID	31106-*55-06
pH Paper	634-64-10

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

	CLIENT SAMPLE NO.	SMC1 #	SMC2 #	SMC3 (TOL) #	OTHER (DCE) #	TOT OUT
01	VLCSW-201123	94	101	98	97	0
02	VBLK-201123	90	88	103	86	0
03	HS20110527-11	89	92	102	87	0
04	HS20110527-18	91	92	104	86	0
05	HS20110527-12	90	91	103	86	0
06	HS20110527-13	88	91	103	87	0
07	HS20110527-14	89	90	104	86	0
08	HS20110527-15	90	92	103	88	0
09	HS20110527-16	89	88	105	84	0
10	HS20110527-17	87	89	102	86	0
11	HS20110985-28	90	93	103	88	0
12	HS20110985-28	93	92	101	90	0
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		QC LIMITS
SMC1	= 4-Bromofluorobenzene	(70-130)
SMC2	= Dibromofluoromethane	(70-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER(DCE)	= 1,2-Dichloroethane-d4	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLK-201123

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Lab File ID: X112207 Lab Sample ID: VBLK-201123

Date Analyzed: 11/23/20 Time Analyzed: 1237

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-201123	VLCSW-201123	X112205	1155
02	HS20110527-1	HS20110527-11	X112208	1258
03	HS20110527-1	HS20110527-18	X112209	1319
04	HS20110527-1	HS20110527-12	X112210	1340
05	HS20110527-1	HS20110527-13	X112211	1401
06	HS20110527-1	HS20110527-14	X112212	1422
07	HS20110527-1	HS20110527-15	X112213	1443
08	HS20110527-1	HS20110527-16	X112214	1504
09	HS20110527-1	HS20110527-17	X112215	1525
10	HS20110985-2	HS20110985-28M	X112221	1731
11	HS20110985-2	HS20110985-28M	X112222	1752
12				
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Lab File ID: X112201 BFB Injection Date: 11/23/20

Instrument ID: VOA6 BFB Injection Time: 1031

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	28.9
75	30.0 - 60.0% of mass 95	56.8
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	0.8 (1.3)1
174	Greater than 50.0% of mass 95	60.7
175	5.0 - 9.0% of mass 174	5.4 (8.9)1
176	95.0 - 101.0% of mass 174	60.2 (99.1)1
177	5.0 - 9.0% of mass 176	4.7 (7.8)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X112202	11/23/20	1052
02	VLCSW-201123	VLCSW-201123	X112205	11/23/20	1155
03	VBLK-201123	VBLK-201123	X112207	11/23/20	1237
04	HS20110527-1	HS20110527-11	X112208	11/23/20	1258
05	HS20110527-1	HS20110527-18	X112209	11/23/20	1319
06	HS20110527-1	HS20110527-12	X112210	11/23/20	1340
07	HS20110527-1	HS20110527-13	X112211	11/23/20	1401
08	HS20110527-1	HS20110527-14	X112212	11/23/20	1422
09	HS20110527-1	HS20110527-15	X112213	11/23/20	1443
10	HS20110527-1	HS20110527-16	X112214	11/23/20	1504
11	HS20110527-1	HS20110527-17	X112215	11/23/20	1525
12	HS20110985-2	HS20110985-28M	X112221	11/23/20	1731
13	HS20110985-2	HS20110985-28M	X112222	11/23/20	1752
14	CCV-END	CCV-END	X112230	11/23/20	2041
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Instrument ID: VOA6 Calibration Date: 11/23/20 Time: 1052

Lab File ID: X112202 Init. Calib. Date(s): 11/22/20 11/22/20

Init. Calib. Times: 1125 1912

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
cis-1,3-Dichloropropene	0.6340000	0.6446405	0.6446405	0.2	-1.68	20.00	AVRG
trans-1,3-Dichloropropene	0.5460000	0.5644406	0.5644406	0.1	-3.38	20.00	AVRG
1,3-Dichlorobenzene	1.5040000	1.3911619	1.3911619	0.6	7.50	20.00	AVRG
2,2-Dichloropropane	1.0600000	0.9777992	0.9777992	0.1	7.75	20.00	AVRG
1,1-Dichloropropene	0.4970000	0.4536906	0.4536906	0.1	8.71	20.00	AVRG
Dibromomethane	0.2610000	0.2513639	0.2513639	0.1	3.69	20.00	AVRG
1,2-Dibromoethane	0.3820000	0.3867546	0.3867546	0.1	-1.24	20.00	AVRG
trans-1,2-Dichloroethene	0.6160000	0.5859396	0.5859396	0.1	4.88	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3760000	0.3721809	0.3721809	0.1	1.02	20.00	AVRG
1,1,1-Trichloroethane	1.0160000	0.9733186	0.9733186	0.1	4.20	20.00	AVRG
1,1,2,2-Tetrachloroethane	55.145075	50.000000	0.9624992	0.3	-10.29	20.00	LINR
Toluene	1.6140000	1.5759343	1.5759343	0.4	2.36	20.00	AVRG
1,1,2-Trichloroethane	0.3280000	0.3128370	0.3128370	0.1	4.62	20.00	AVRG
1,1-Dichloroethane	1.2060000	1.1291436	1.1291436	0.2	6.37	20.00	AVRG
1,1-Dichloroethene	0.9700000	0.9118175	0.9118175	0.1	6.00	20.00	AVRG
Trichlorofluoromethane	1.8790000	1.6789752	1.6789752	0.1	10.64	20.00	AVRG
1,2,3-Trichlorobenzene	58.042707	50.000000	0.2094774	0.01	-16.08	20.00	LINR
Tetrachloroethene	0.3080000	0.2784382	0.2784382	0.2	9.60	20.00	AVRG
1,2,4-Trichlorobenzene	0.3770000	0.3994530	0.3994530	0.1	-5.96	20.00	AVRG
1,2,4-Trimethylbenzene	2.8230000	2.5574903	2.5574903	0.1	9.40	20.00	AVRG
tert-Butylbenzene	2.3170000	2.0045344	2.0045344	0.1	13.48	20.00	AVRG
Trichloroethene	0.3480000	0.3397018	0.3397018	0.2	2.38	20.00	AVRG
1,2-Dichlorobenzene	1.4150000	1.3693403	1.3693403	0.4	3.23	20.00	AVRG
1,2-Dichloroethane	0.5490000	0.5386966	0.5386966	0.1	1.88	20.00	AVRG
1,2-Dichloropropane	0.3990000	0.3709409	0.3709409	0.1	7.03	20.00	AVRG
1,3,5-Trimethylbenzene	2.9650000	2.6779411	2.6779411	0.1	9.68	20.00	AVRG
1,3-Dichloropropane	0.6160000	0.6254580	0.6254580	0.1	-1.54	20.00	AVRG
1,4-Dichlorobenzene	48.507692	50.000000	1.4763132	0.4	2.98	20.00	LINR
2-Butanone	0.2390000	0.2378195	0.2378195	0.1	0.49	20.00	AVRG
2-Chlorotoluene	2.4460000	2.2272721	2.2272721	0.1	8.94	20.00	AVRG
2-Hexanone	99.282360	100.00000	0.2549351	0.1	0.72	20.00	LINR
4-Chlorotoluene	2.9930000	2.8355500	2.8355500	0.1	5.26	20.00	AVRG
Styrene	1.1590000	1.1080660	1.1080660	0.3	4.39	20.00	AVRG
4-Methyl-2-Pentanone	98.225164	100.00000	0.3776641	0.1	1.77	20.00	LINR
Acetone	100.46554	100.00000	0.2846503	0.1	-0.46	20.00	LINR
Benzene	1.3660000	1.3376122	1.3376122	0.5	2.08	20.00	AVRG
Bromobenzene	0.8450000	0.8436499	0.8436499	0.1	0.16	20.00	AVRG
Bromochloromethane	0.3530000	0.3262763	0.3262763	0.1	7.57	20.00	AVRG
Bromodichloromethane	0.5290000	0.5182470	0.5182470	0.2	2.03	20.00	AVRG
Bromoform	48.642393	50.000000	0.2339592	0.1	2.72	20.00	LINR
Bromomethane	45.077555	50.000000	0.8789224	0.1	9.84	20.00	LINR
Carbon Disulfide	1.8640000	1.6783983	1.6783983	0.1	9.96	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011052

Instrument ID: VOA6 Calibration Date: 11/23/20 Time: 1052

Lab File ID: X112202 Init. Calib. Date(s): 11/22/20 11/22/20

Init. Calib. Times: 1125 1912

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
Carbon Tetrachloride	0.4310000	0.4072005	0.4072005	0.1	5.52	20.00	AVRG
Chlorobenzene	1.0690000	0.9968341	0.9968341	0.5	6.75	20.00	AVRG
Chloroethane	0.7740000	0.6958366	0.6958366	0.1	10.10	20.00	AVRG
Chloroform	1.3070000	1.2176831	1.2176831	0.2	6.83	20.00	AVRG
Chloromethane	0.9180000	0.7794144	0.7794144	0.1	15.10	20.00	AVRG
cis-1,2-Dichloroethene	0.7320000	0.6780232	0.6780232	0.1	7.37	20.00	AVRG
Dibromochloromethane	0.3880000	0.4106914	0.4106914	0.1	-5.85	20.00	AVRG
Dichlorodifluoromethane	43.088823	50.000000	0.7036646	0.1	13.82	20.00	LINR
Ethylbenzene	0.5390000	0.5114830	0.5114830	0.1	5.10	20.00	AVRG
Hexachlorobutadiene	50.029630	50.000000	0.2570289	0.1	-0.06	20.00	LINR
Isopropylbenzene	1.6260000	1.4548353	1.4548353	0.1	10.53	20.00	AVRG
m,p-Xylenes	85.486602	100.00000	0.6662763	0.1	14.51	20.00	LINR
Methylene Chloride	0.6870000	0.6377347	0.6377347	0.1	7.17	20.00	AVRG
n-Butylbenzene	41.748948	50.000000	2.5321624	0.5	16.50	20.00	LINR
n-Propylbenzene	4.1820000	3.7326237	3.7326237	0.1	10.74	20.00	AVRG
Naphthalene	59.507766	50.000000	0.6524023	0.2	-19.02	20.00	LINR
o-Xylene	43.473661	50.000000	0.6332897	0.3	13.05	20.00	LINR
sec-Butylbenzene	42.383229	50.000000	2.8365518	0.1	15.23	20.00	2RDR
Vinyl Chloride	1.2030000	1.0982404	1.0982404	0.1	8.71	20.00	AVRG
1,2,3-Trichloropropane	0.7540000	0.7819087	0.7819087	0.1	-3.70	20.00	AVRG
p-Isopropyltoluene	42.705928	50.000000	2.5120148	0.1	14.59	20.00	LINR
1,2-Dibromo-3-Chloropropane	6.1e-002	7.14e-002	7.14e-002	0.05	-17.05	20.00	AVRG
Freon TF	0.9320000	0.7704327	0.7704327	0.1	17.34	20.00	AVRG
4-Bromofluorobenzene	47.193618	50.000000	0.4490327	0.1	5.61	20.00	2RDR
Dibromofluoromethane	48.826461	50.000000	0.6384176	0.1	2.35	20.00	2RDR
Toluene-d8	1.3490000	1.3247929	1.3247929	0.1	1.79	20.00	AVRG
1,2-Dichloroethane-d4	49.040494	50.000000	0.8084809	0.1	1.92	20.00	2RDR

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Instrument ID: VOA6 Calibration Date: 11/23/20 Time: 2041

Lab File ID: X112230 Init. Calib. Date(s): 11/22/20 11/22/20

Init. Calib. Times: 1125 1912

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
cis-1,3-Dichloropropene	0.6340000	0.6120833	0.6120833	0.2	3.46	50.00	AVRG
trans-1,3-Dichloropropene	0.5460000	0.5286953	0.5286953	0.1	3.17	50.00	AVRG
1,3-Dichlorobenzene	1.5040000	1.4024308	1.4024308	0.6	6.75	50.00	AVRG
2,2-Dichloropropane	1.0600000	0.9400311	0.9400311	0.1	11.32	50.00	AVRG
1,1-Dichloropropene	0.4970000	0.4737101	0.4737101	0.1	4.69	50.00	AVRG
Dibromomethane	0.2610000	0.2498228	0.2498228	0.1	4.28	50.00	AVRG
1,2-Dibromoethane	0.3820000	0.3706818	0.3706818	0.1	2.96	50.00	AVRG
trans-1,2-Dichloroethene	0.6160000	0.6148617	0.6148617	0.1	0.18	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3760000	0.3617776	0.3617776	0.1	3.78	50.00	AVRG
1,1,1-Trichloroethane	1.0160000	1.0515499	1.0515499	0.1	-3.50	50.00	AVRG
1,1,2,2-Tetrachloroethane	51.046166	50.000000	0.8928683	0.3	-2.09	50.00	LINR
Toluene	1.6140000	1.5548880	1.5548880	0.4	3.66	50.00	AVRG
1,1,2-Trichloroethane	0.3280000	0.3178835	0.3178835	0.1	3.08	50.00	AVRG
1,1-Dichloroethane	1.2060000	1.1415483	1.1415483	0.2	5.34	50.00	AVRG
1,1-Dichloroethene	0.9700000	0.9642696	0.9642696	0.1	0.59	50.00	AVRG
Trichlorofluoromethane	1.8790000	1.8617383	1.8617383	0.1	0.92	50.00	AVRG
1,2,3-Trichlorobenzene	48.371099	50.000000	0.1738321	0.01	3.26	50.00	LINR
Tetrachloroethene	0.3080000	0.2952197	0.2952197	0.2	4.15	50.00	AVRG
1,2,4-Trichlorobenzene	0.3770000	0.3573501	0.3573501	0.1	5.21	50.00	AVRG
1,2,4-Trimethylbenzene	2.8230000	2.7462861	2.7462861	0.1	2.72	50.00	AVRG
tert-Butylbenzene	2.3170000	2.2343889	2.2343889	0.1	3.56	50.00	AVRG
Trichloroethene	0.3480000	0.3486546	0.3486546	0.2	-0.19	50.00	AVRG
1,2-Dichlorobenzene	1.4150000	1.3241166	1.3241166	0.4	6.42	50.00	AVRG
1,2-Dichloroethane	0.5490000	0.5443772	0.5443772	0.1	0.84	50.00	AVRG
1,2-Dichloropropane	0.3990000	0.3809800	0.3809800	0.1	4.52	50.00	AVRG
1,3,5-Trimethylbenzene	2.9650000	2.8139605	2.8139605	0.1	5.09	50.00	AVRG
1,3-Dichloropropane	0.6160000	0.6235682	0.6235682	0.1	-1.23	50.00	AVRG
1,4-Dichlorobenzene	48.078403	50.000000	1.4630876	0.4	3.84	50.00	LINR
2-Butanone	0.2390000	0.2373545	0.2373545	0.1	0.69	50.00	AVRG
2-Chlorotoluene	2.4460000	2.2202670	2.2202670	0.1	9.23	50.00	AVRG
2-Hexanone	96.037533	100.00000	0.2465275	0.1	3.96	50.00	LINR
4-Chlorotoluene	2.9930000	2.8444256	2.8444256	0.1	4.96	50.00	AVRG
Styrene	1.1590000	1.1466630	1.1466630	0.3	1.06	50.00	AVRG
4-Methyl-2-Pentanone	96.374791	100.00000	0.3704826	0.1	3.62	50.00	LINR
Acetone	105.00163	100.00000	0.2971068	0.1	-5.00	50.00	LINR
Benzene	1.3660000	1.3553031	1.3553031	0.5	0.78	50.00	AVRG
Bromobenzene	0.8450000	0.8063292	0.8063292	0.1	4.58	50.00	AVRG
Bromochloromethane	0.3530000	0.3454798	0.3454798	0.1	2.13	50.00	AVRG
Bromodichloromethane	0.5290000	0.5199060	0.5199060	0.2	1.72	50.00	AVRG
Bromoform	45.863967	50.000000	0.2199798	0.1	8.27	50.00	LINR
Bromomethane	47.943658	50.000000	0.9359679	0.1	4.11	50.00	LINR
Carbon Disulfide	1.8640000	1.7699334	1.7699334	0.1	5.05	50.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011052

Instrument ID: VOA6 Calibration Date: 11/23/20 Time: 2041

Lab File ID: X112230 Init. Calib. Date(s): 11/22/20 11/22/20

Init. Calib. Times: 1125 1912

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
Carbon Tetrachloride	0.4310000	0.4216418	0.4216418	0.1	2.17	50.00	AVRG
Chlorobenzene	1.0690000	1.0209920	1.0209920	0.5	4.49	50.00	AVRG
Chloroethane	0.7740000	0.7502701	0.7502701	0.1	3.06	50.00	AVRG
Chloroform	1.3070000	1.2891408	1.2891408	0.2	1.37	50.00	AVRG
Chloromethane	0.9180000	0.8256196	0.8256196	0.1	10.06	50.00	AVRG
cis-1,2-Dichloroethene	0.7320000	0.7038077	0.7038077	0.1	3.85	50.00	AVRG
Dibromochloromethane	0.3880000	0.3995951	0.3995951	0.1	-2.99	50.00	AVRG
Dichlorodifluoromethane	45.218275	50.000000	0.7406749	0.1	9.56	50.00	LINR
Ethylbenzene	0.5390000	0.5091621	0.5091621	0.1	5.54	50.00	AVRG
Hexachlorobutadiene	45.317659	50.000000	0.2320608	0.1	9.36	50.00	LINR
Isopropylbenzene	1.6260000	1.5927447	1.5927447	0.1	2.04	50.00	AVRG
m,p-Xylenes	88.529759	100.00000	0.6920884	0.1	11.47	50.00	LINR
Methylene Chloride	0.6870000	0.6504964	0.6504964	0.1	5.31	50.00	AVRG
n-Butylbenzene	44.725643	50.000000	2.7270077	0.5	10.55	50.00	LINR
n-Propylbenzene	4.1820000	3.9412644	3.9412644	0.1	5.76	50.00	AVRG
Naphthalene	48.558876	50.000000	0.5301683	0.2	2.88	50.00	LINR
o-Xylene	44.177364	50.000000	0.6442696	0.3	11.64	50.00	LINR
sec-Butylbenzene	48.090396	50.000000	3.2301196	0.1	3.82	50.00	2RDR
Vinyl Chloride	1.2030000	1.1647626	1.1647626	0.1	3.18	50.00	AVRG
1,2,3-Trichloropropane	0.7540000	0.7154073	0.7154073	0.1	5.12	50.00	AVRG
p-Isopropyltoluene	46.678433	50.000000	2.7546512	0.1	6.64	50.00	LINR
1,2-Dibromo-3-Chloropropane	6.1e-002	6.13e-002	6.13e-002	0.05	-0.49	50.00	AVRG
Freon TF	0.9320000	0.8922405	0.8922405	0.1	4.27	50.00	AVRG
4-Bromofluorobenzene	48.825741	50.000000	0.4648567	0.1	2.35	50.00	2RDR
Dibromofluoromethane	51.697083	50.000000	0.6772224	0.1	-3.39	50.00	2RDR
Toluene-d8	1.3490000	1.3616208	1.3616208	0.1	-0.94	50.00	AVRG
1,2-Dichloroethane-d4	52.243434	50.000000	0.8626837	0.1	-4.49	50.00	2RDR

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Lab File ID (Standard): X112202 Date Analyzed: 11/23/20

Instrument ID: VOA6 Time Analyzed: 1052

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

		IS1(DCB) AREA #	IS1(DCB) RT #	IS2(CBZ) AREA #	IS2(CBZ) RT #	IS3(DFB) AREA #	IS3(DFB) RT #
	12 HOUR STD	151730	9.66	319342	7.67	354140	4.97
	UPPER LIMIT	303460	10.16	638684	8.17	708280	5.47
	LOWER LIMIT	75865	9.16	159671	7.17	177070	4.47
	CLIENT SAMPLE NO.						
01	VLCSW-201123	140119	9.66	318369	7.67	340549	4.97
02	VBLK-201123	146902	9.66	346785	7.67	399701	4.97
03	HS20110527-11	140989	9.66	342191	7.67	384807	4.97
04	HS20110527-18	144068	9.66	343359	7.67	386975	4.97
05	HS20110527-12	139000	9.66	338625	7.67	388079	4.97
06	HS20110527-13	139932	9.66	340831	7.67	386181	4.96
07	HS20110527-14	132611	9.66	327795	7.67	374558	4.97
08	HS20110527-15	141150	9.66	341522	7.67	384118	4.97
09	HS20110527-16	136314	9.66	322837	7.67	373756	4.97
10	HS20110527-17	142908	9.66	336303	7.67	376413	4.97
11	HS20110985-28	143303	9.66	336710	7.67	381411	4.97
12	HS20110985-28	161277	9.66	356627	7.67	396279	4.97
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DFB) = 1,4-Difluorobenzene

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

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110527

Lab File ID (Standard): X112202 Date Analyzed: 11/23/20

Instrument ID: VOA6 Time Analyzed: 1052

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	193281	4.18				
	UPPER LIMIT	386562	4.68				
	LOWER LIMIT	96641	3.68				
	CLIENT SAMPLE NO.						
01	VLCSW-201123	182259	4.18				
02	VBLK-201123	232637	4.18				
03	HS20110527-11	223512	4.18				
04	HS20110527-18	225085	4.18				
05	HS20110527-12	222783	4.18				
06	HS20110527-13	220031	4.18				
07	HS20110527-14	218089	4.18				
08	HS20110527-15	217588	4.18				
09	HS20110527-16	217898	4.18				
10	HS20110527-17	221772	4.18				
11	HS20110985-28	214077	4.18				
12	HS20110985-28	225974	4.18				
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

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

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

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112201.D

Date : 23-NOV-2020 10:31

Client ID: BFB

Instrument: voa6.i

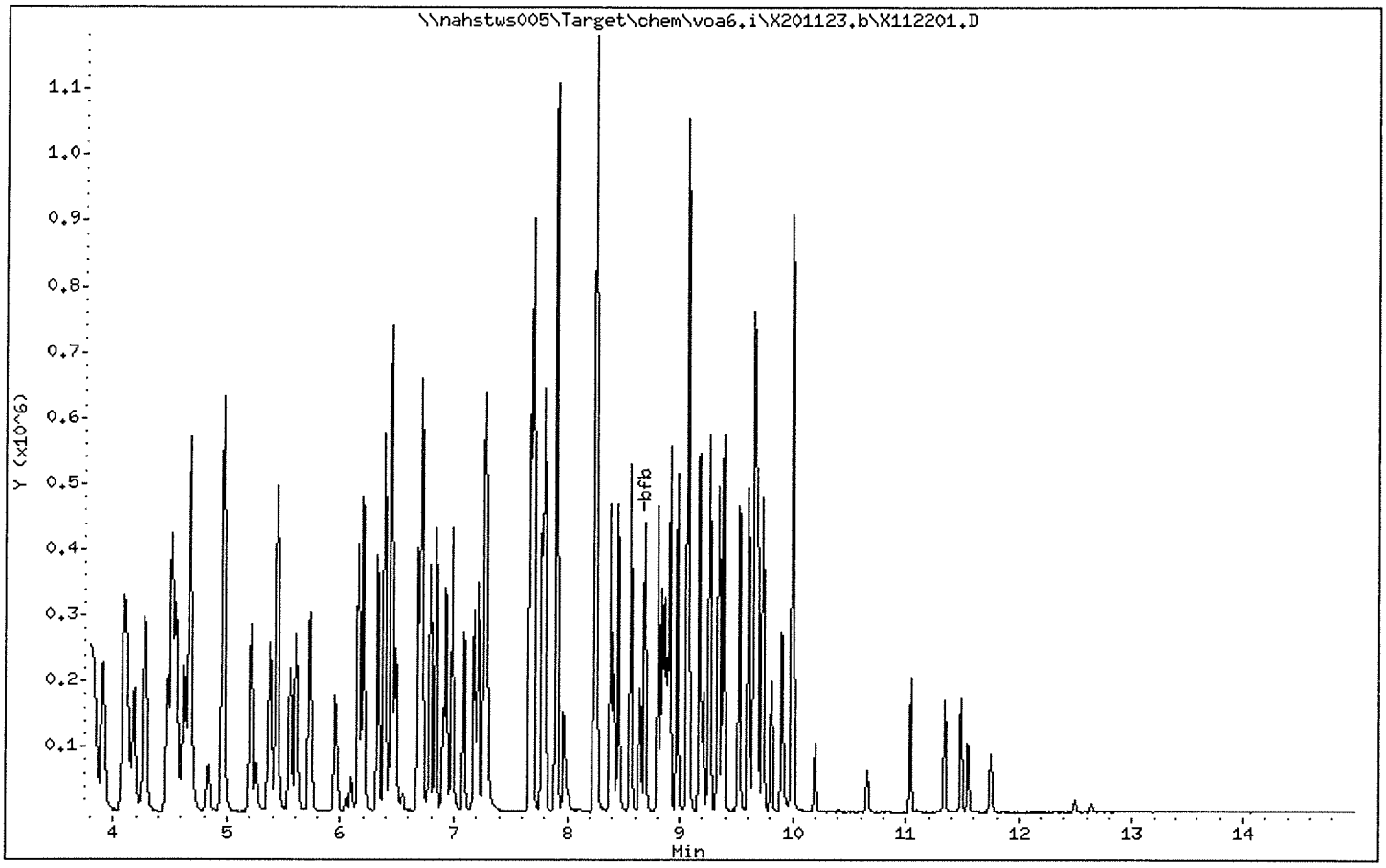
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112201.D

Date : 23-NOV-2020 10:31

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

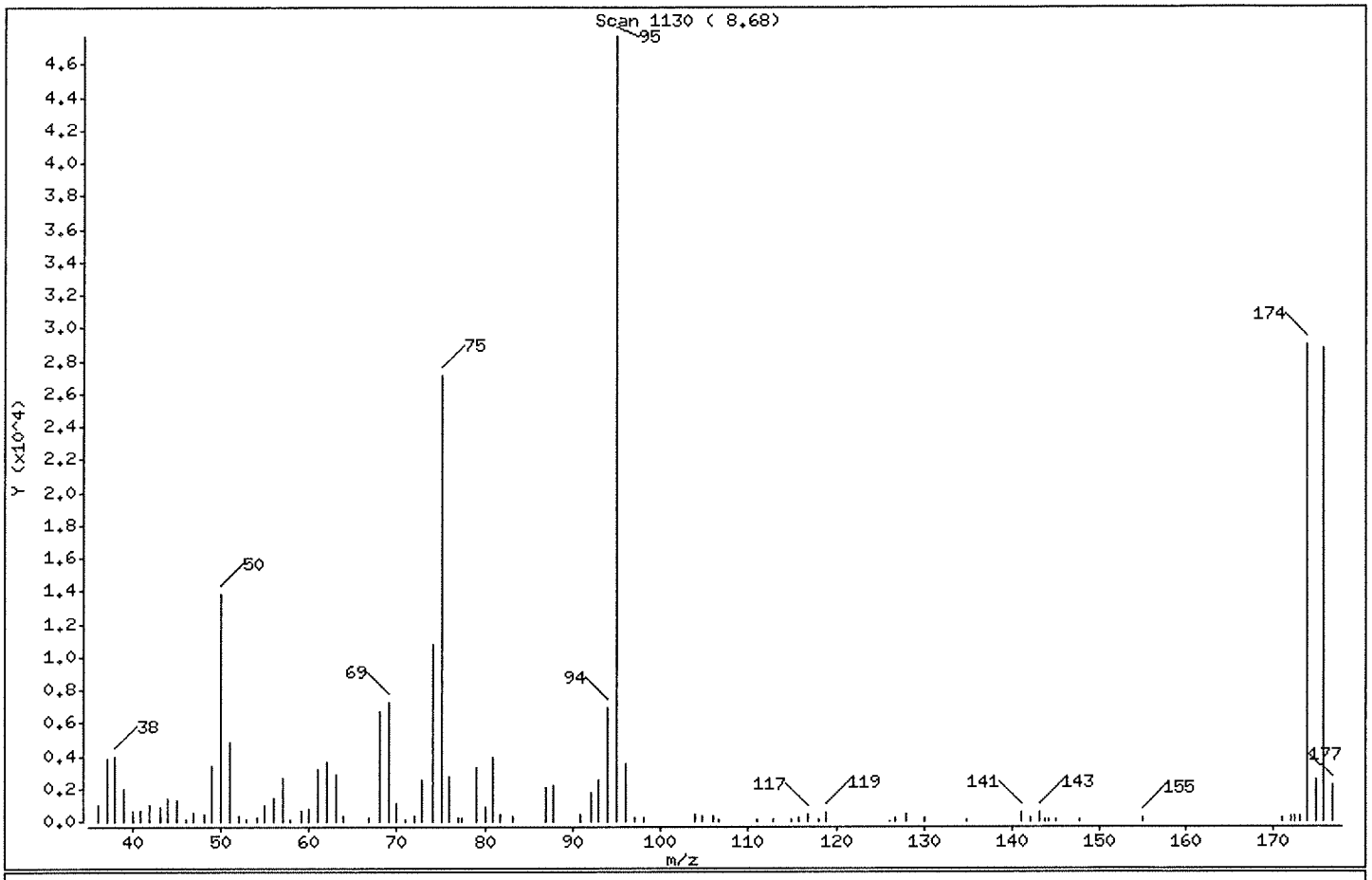
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	28.86
75	30.00 - 60.00% of mass 95	56.79
96	5.00 - 9.00% of mass 95	7.30
173	Less than 2.00% of mass 174	0.78 (1.29)
174	Greater than 50.00% of mass 95	60.75
175	5.00 - 9.00% of mass 174	5.40 (8.89)
176	95.00 - 101.00% of mass 174	60.23 (99.14)
177	5.00 - 9.00% of mass 176	4.68 (7.77)

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112201.D

Date : 23-NOV-2020 10:31

Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

Data File: X112201.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 88

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	934	59.10	629	86.90	2098	127.90	449
37.10	3823	60.00	742	87.80	2200	130.00	263
38.10	3921	61.00	3212	90.90	388	134.80	96
39.10	1987	62.00	3645	92.10	1701	141.00	535
40.00	697	63.00	2856	92.90	2551	142.00	223
40.90	702	63.90	296	94.00	6865	143.00	581
42.00	964	66.90	186	95.00	47672	143.80	60
43.10	880	68.00	6705	96.00	3482	144.10	66
44.00	1388	69.00	7229	97.10	222	144.90	163
45.00	1297	69.90	1082	98.10	260	147.60	58
46.00	72	71.00	78	103.90	455	154.90	244
46.90	594	72.00	334	104.80	304	171.00	184
48.10	408	72.90	2496	105.90	369	172.00	305
49.00	3386	74.00	10693	106.70	73	172.60	344
50.00	13757	75.00	27072	111.00	106	173.10	373
51.00	4813	76.00	2698	112.90	103	173.90	28960
52.00	313	76.90	182	114.90	101	174.90	2575
53.00	164	77.30	213	115.80	268	175.90	28712
54.10	195	79.00	3274	116.80	461	176.90	2232
55.00	959	80.00	909	117.90	142		
56.00	1432	80.90	3920	118.90	537		
57.00	2660	81.80	493	126.00	54		
57.90	93	83.20	284	126.80	261		

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112202.D Page 1
Report Date: 18-Dec-2020 15:51

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112202.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 23-NOV-2020 10:52
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:51 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

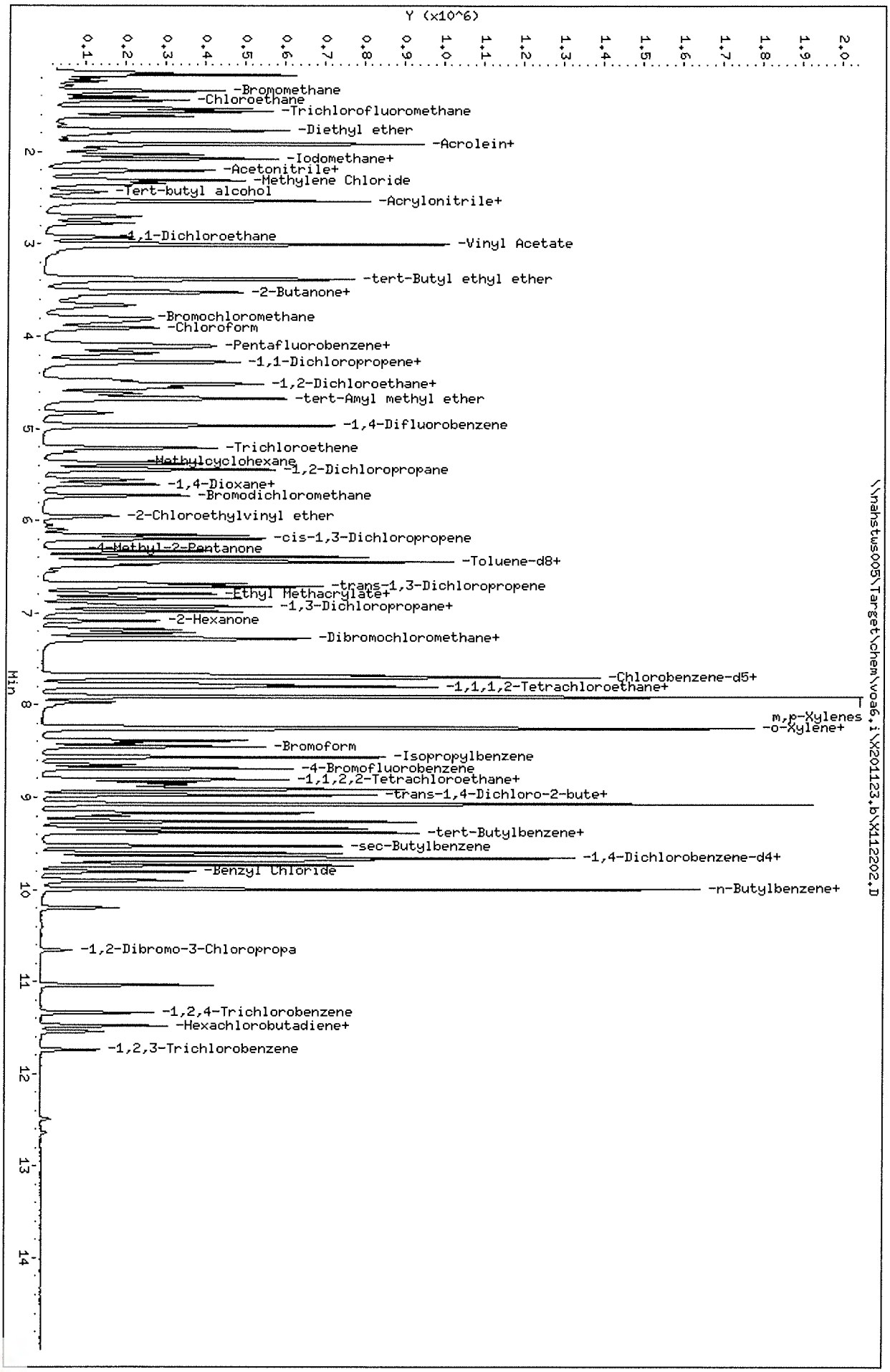
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	193281	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	354140	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	319342	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	151730	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	156264	50.0000	49.04
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	143395	50.0000	47.19
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	123394	50.0000	48.82
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	423062	50.0000	49.09
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	118853	50.0000	49.52
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	188124	50.0000	47.89
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	146040	50.0000	55.14
138 Freon TF	101	1.919	1.919	(0.459)	148910	50.0000	41.30
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	99902	50.0000	47.61
22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	218242	50.0000	46.81
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	176237	50.0000	47.02
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	160670	50.0000	45.62
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	31784	50.0000	58.04
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	118639	50.0000	51.83(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	60609	50.0000	53.01
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	388048	50.0000	45.30
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	10830	50.0000	58.57
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	123507	50.0000	50.58

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	207770	50.0000	48.38
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	190774	50.0000	49.02
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	131365	50.0000	46.49
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	406324	50.0000	45.14
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	211081	50.0000	46.25
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	199735	50.0000	50.73
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	224001	50.0000	48.50
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	188990	50.0000	46.11
24 2-Butanone	43	3.581	3.581	(0.856)	91932	100.000	99.45
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	337944	50.0000	45.52
52 2-Hexanone	43	7.083	7.083	(0.923)	162823	100.000	99.28
77 4-Chlorotoluene	91	9.067	9.067	(0.938)	430238	50.0000	47.36
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	381148	50.0000	42.70
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	241208	100.000	98.22
10 Acetone	43	1.976	1.976	(0.473)	110035	100.000	100.46
37 Benzene	78	4.512	4.512	(0.908)	473702	50.0000	48.97
74 Bromobenzene	156	8.810	8.810	(0.912)	128007	50.0000	49.93
29 Bromochloromethane	128	3.795	3.795	(0.908)	63063	50.0000	46.17
39 Bromodichloromethane	83	5.729	5.729	(1.153)	183532	50.0000	48.93
66 Bromoform	173	8.408	8.408	(1.096)	74713	50.0000	48.64
6 Bromomethane	94	1.339	1.339	(0.320)	169879	50.0000	45.07
19 Carbon Disulfide	76	2.069	2.069	(0.495)	648805	100.000	90.03
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	144206	50.0000	47.22
59 Chlorobenzene	112	7.692	7.692	(1.003)	318331	50.0000	46.63
7 Chloroethane	64	1.403	1.403	(0.336)	134492	50.0000	44.90
28 Chloroform	83	3.910	3.910	(0.935)	235355	50.0000	46.56
3 Chloromethane	50	1.073	1.073	(0.257)	150646	50.0000	42.45
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	131049	50.0000	46.33
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	228293	50.0000	50.81
55 Dibromochloromethane	129	7.176	7.176	(0.936)	131151	50.0000	52.97
44 Dibromomethane	93	5.558	5.558	(1.118)	89018	50.0000	48.09
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	136005	50.0000	43.08
61 Ethylbenzene	106	7.800	7.800	(1.017)	163338	50.0000	47.44
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	38999	50.0000	50.02
67 Isopropylbenzene	105	8.559	8.559	(1.116)	464590	50.0000	44.72
62 m,p-Xylenes	106	7.907	7.907	(1.031)	425540	100.000	85.48
17 Methylene Chloride	84	2.306	2.306	(0.551)	123262	50.0000	46.42
87 n-Butylbenzene	91	9.991	9.991	(1.034)	384205	50.0000	41.74
73 n-Propylbenzene	91	8.910	8.910	(0.922)	566351	50.0000	44.62
92 Naphthalene	128	11.539	11.539	(1.194)	98989	50.0000	59.50
63 o-Xylene	106	8.244	8.244	(1.075)	202236	50.0000	43.47
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	430390	50.0000	42.38
64 Styrene	104	8.258	8.258	(1.077)	353852	50.0000	47.78
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	304148	50.0000	43.24
56 Tetrachloroethene	164	6.933	6.933	(0.904)	88917	50.0000	45.16
50 Toluene	91	6.446	6.446	(0.840)	503262	50.0000	48.82
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	113251	50.0000	47.53
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	199891	50.0000	51.69
38 Trichloroethene	130	5.207	5.207	(1.048)	120302	50.0000	48.83
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	324514	50.0000	44.67
5 Vinyl Chloride	62	1.145	1.145	(0.274)	212269	50.0000	45.64

QC Flag Legend

M - Compound response manually integrated.

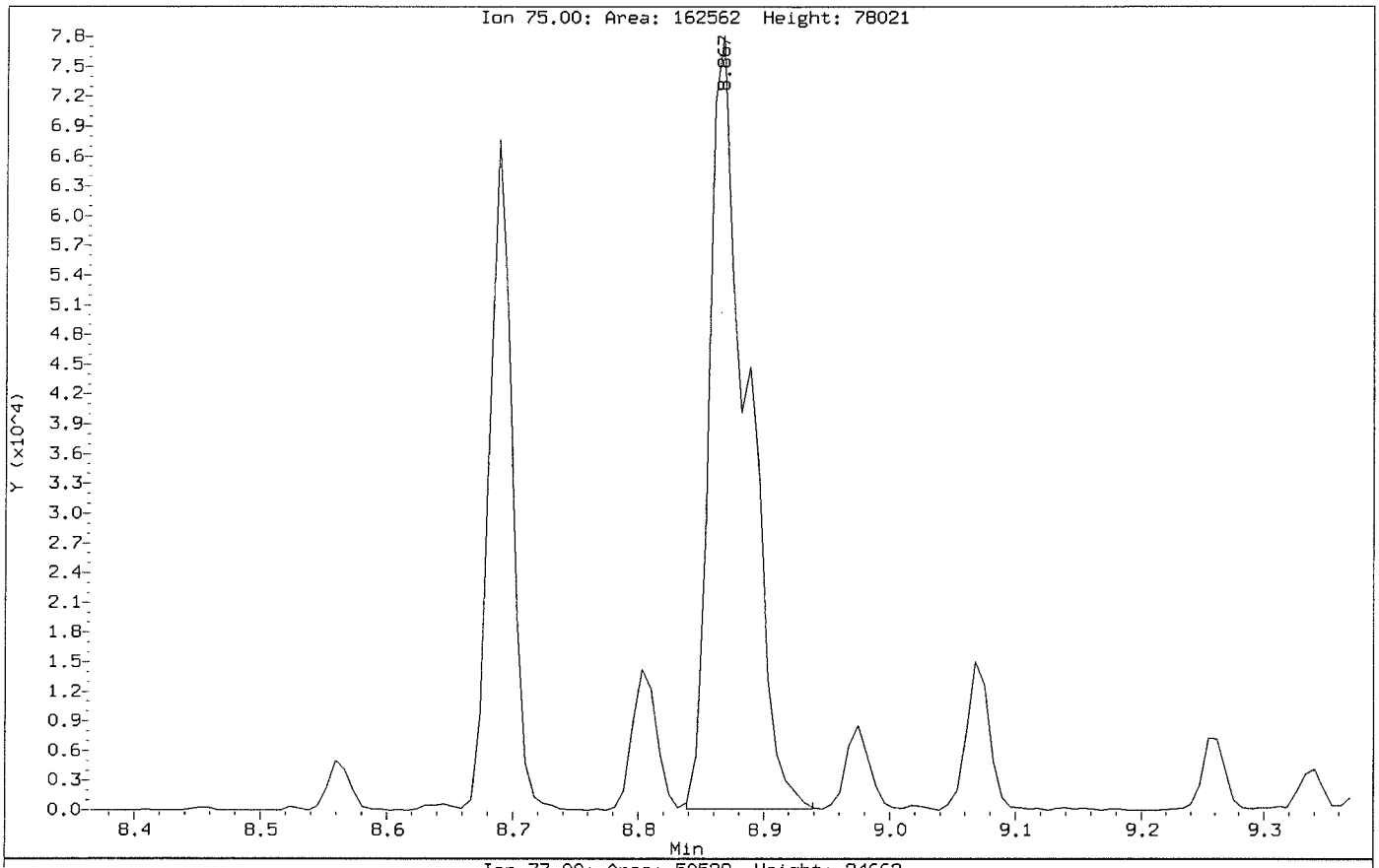


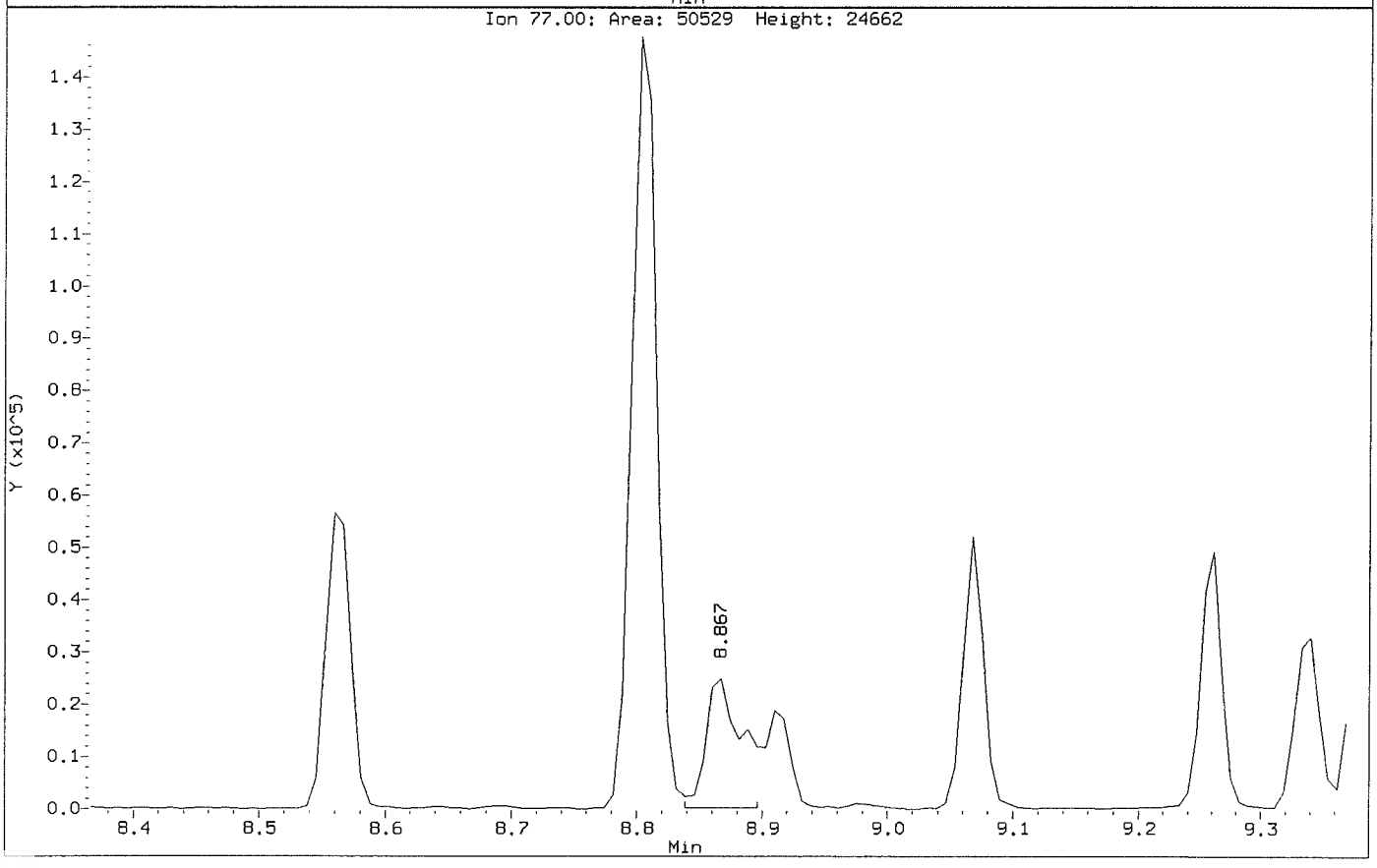
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Date : 23-NOV-2020 10:52
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\Before\X112202.D
Injection Date: 23-NOV-2020 10:52
Instrument: voa6.i
Client Sample ID: CCV

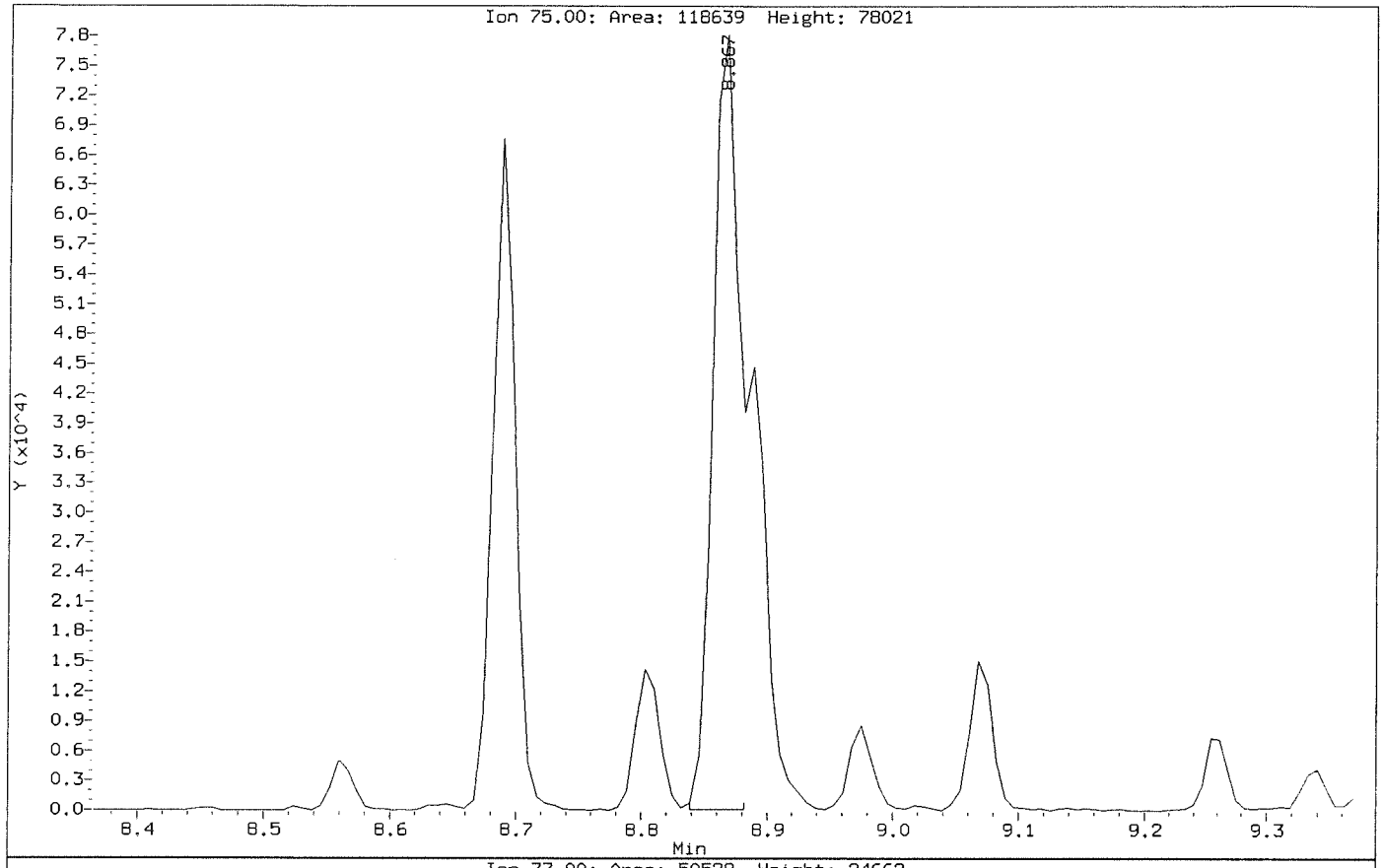
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

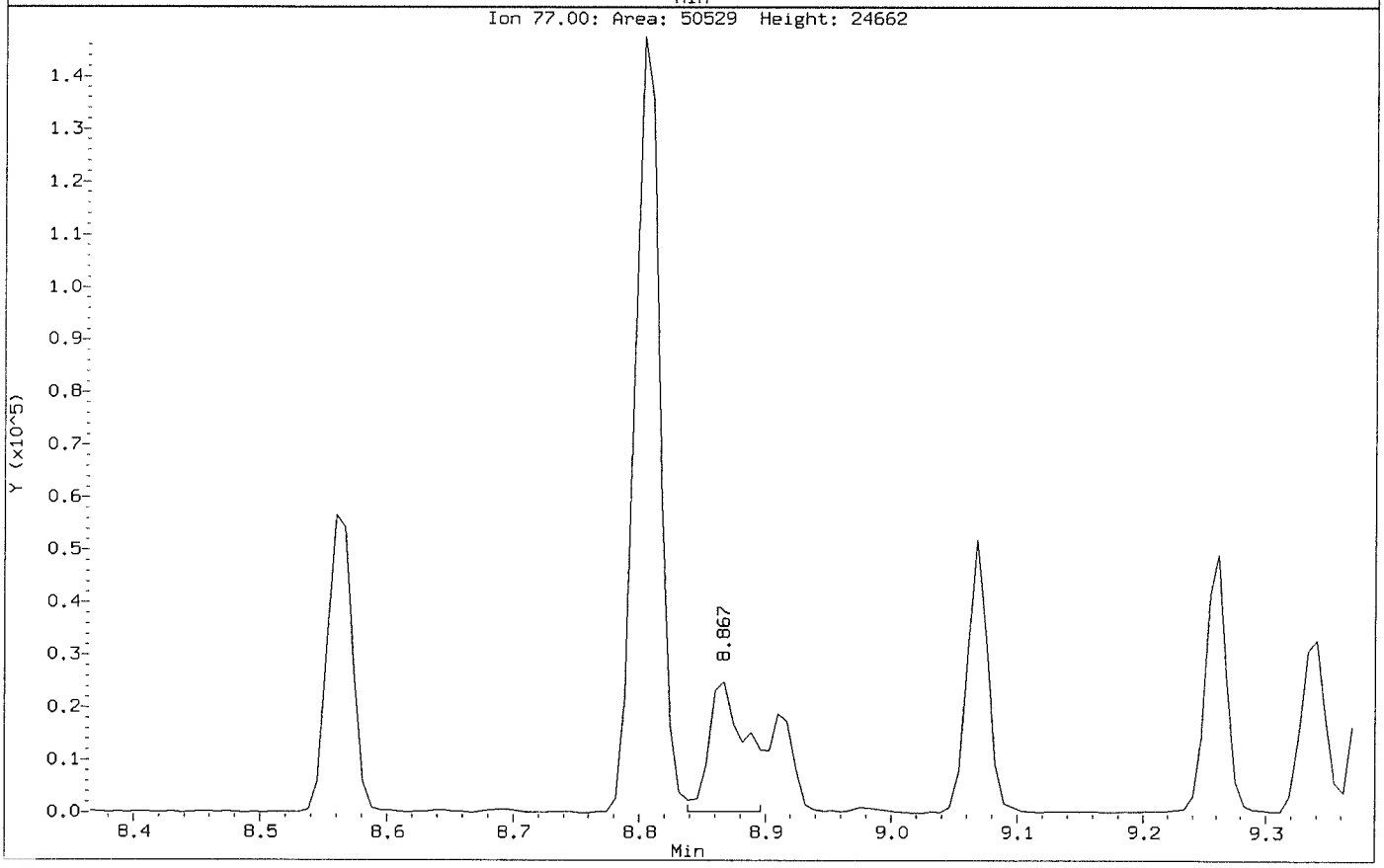




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Injection Date: 23-NOV-2020 10:52
Instrument: voa6.i
Client Sample ID: CCV

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112205.D
Lab Smp Id: VLCSW-201123 Client Smp ID: VLCSW-201123
Inj Date : 23-NOV-2020 11:55
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-201123;VLCSW-201123;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:52 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

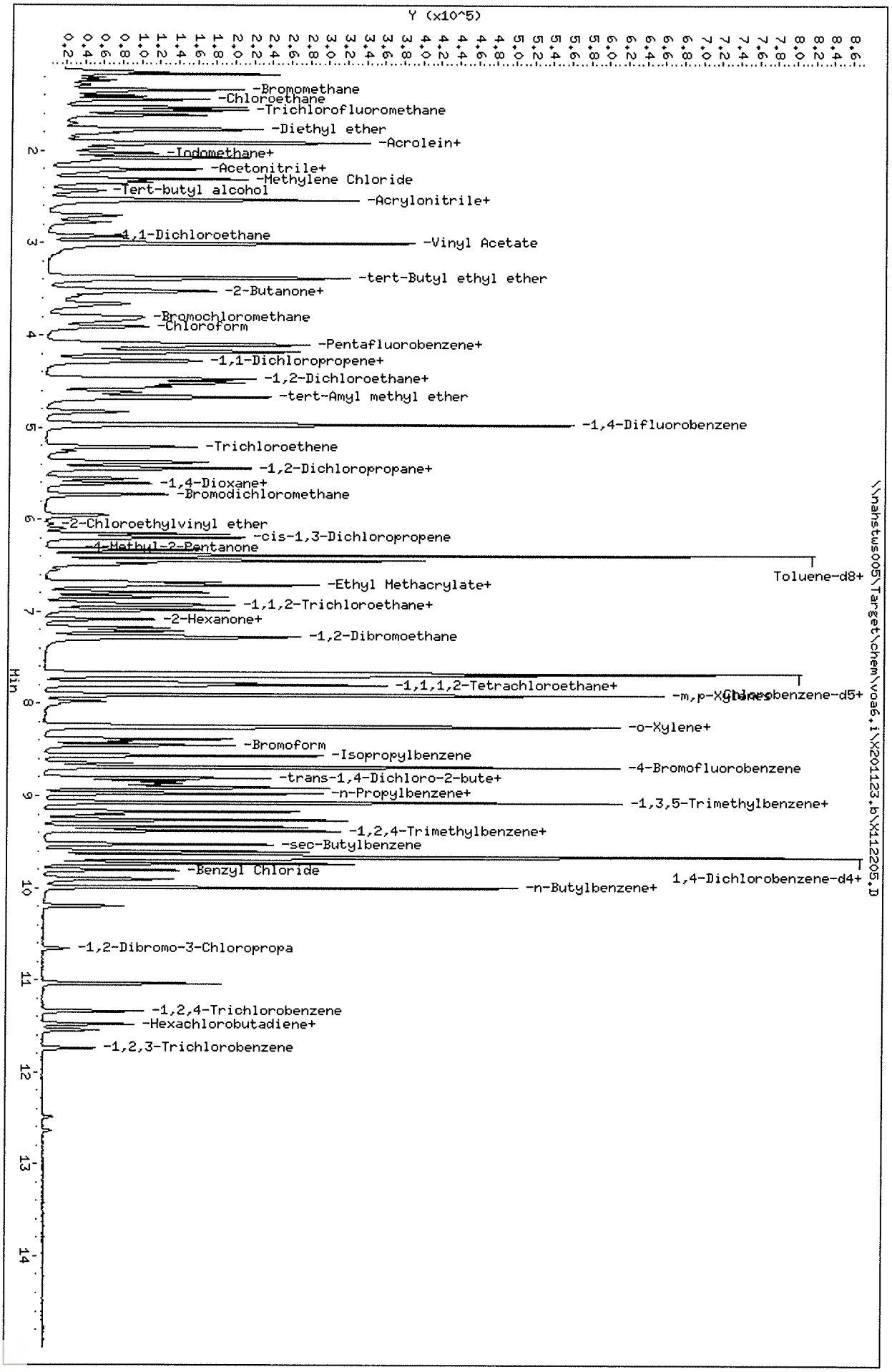
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	182259	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	340549	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	318369	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	140119	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	145364	48.3945	48.39
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	142918	47.1806	47.18
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	121065	50.7387	50.73
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	422435	49.1680	49.16
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	42624	17.8170	17.81
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	67174	18.1345	18.13
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	54916	21.5574	21.55
138 Freon TF	101	1.919	1.919	(0.459)	50183	14.7627	14.76
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	39212	18.7446	18.74
22 1,1-Dichloroethane	63	2.921	2.922	(0.699)	80294	18.2644	18.26
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	64036	18.1180	18.11
32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	58103	17.1580	17.15
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	12263	24.9516	24.95
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	44681	21.1408	21.14(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	24045	22.7756	22.77
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	133840	16.9193	16.91
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	3382	19.8075	19.80
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	47740	19.6142	19.61

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112205.D Page 2
Report Date: 18-Dec-2020 15:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	74170	18.7055	18.70
33	1,2-Dichloroethane	62	4.562	4.555	(0.918)	73538	19.6531	19.65
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	51129	18.8193	18.81
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	126140	15.1777	15.17
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	79169	18.7850	18.78
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	76868	19.5850	19.58
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	78742	18.8289	18.82
26	2,2-Dichloropropane	77	3.509	3.516	(0.839)	67838	17.5548	17.55
24	2-Butanone	43	3.573	3.581	(0.854)	36589	41.9760	41.97
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	120415	17.5641	17.56
52	2-Hexanone	43	7.090	7.083	(0.924)	64371	39.9099	39.90
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	143589	17.1172	17.11
82	p-Isopropyltoluene	119	9.648	9.655	(0.999)	120401	15.6469	15.64(M)
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	93659	38.8161	38.81
10	Acetone	43	1.976	1.976	(0.473)	47373	44.1345	44.13
37	Benzene	78	4.512	4.512	(0.908)	172636	18.5608	18.56
74	Bromobenzene	156	8.809	8.810	(0.912)	47727	20.1623	20.16
29	Bromochloromethane	128	3.803	3.795	(0.909)	24943	19.3693	19.36
39	Bromodichloromethane	83	5.722	5.729	(1.151)	69041	19.1430	19.14
66	Bromoform	173	8.416	8.408	(1.097)	27293	19.1812	19.18
6	Bromomethane	94	1.338	1.339	(0.320)	71222	20.5518	20.55
19	Carbon Disulfide	76	2.069	2.069	(0.495)	239555	35.2519	35.25
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	48365	16.4718	16.47
59	Chlorobenzene	112	7.692	7.692	(1.003)	120326	17.6799	17.67
7	Chloroethane	64	1.403	1.403	(0.336)	47788	16.9199	16.91
28	Chloroform	83	3.910	3.910	(0.935)	86308	18.1086	18.10
3	Chloromethane	50	1.073	1.073	(0.257)	56801	16.9747	16.97
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	47635	17.8614	17.86
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	83058	19.2264	19.22
55	Dibromochloromethane	129	7.176	7.176	(0.936)	49363	19.9981	19.99
44	Dibromomethane	93	5.557	5.558	(1.118)	34056	19.1343	19.13
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	45550	16.9818	16.98
61	Ethylbenzene	106	7.799	7.800	(1.017)	58023	16.9060	16.90
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	11709	17.2936	17.29
67	Isopropylbenzene	105	8.566	8.559	(1.117)	154824	14.9494	14.94
62	m,p-Xylenes	106	7.907	7.907	(1.031)	142292	33.2814	33.28
17	Methylene Chloride	84	2.305	2.306	(0.551)	45479	18.1665	18.16
87	n-Butylbenzene	91	9.991	9.991	(1.034)	116638	15.7816	15.78
73	n-Propylbenzene	91	8.910	8.910	(0.922)	185958	15.8649	15.86
92	Naphthalene	128	11.546	11.539	(1.195)	38326	25.5705	25.57(M)
63	o-Xylene	106	8.244	8.244	(1.075)	73533	17.6887	17.68
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	143013	15.7211	15.72(M)
64	Styrene	104	8.258	8.258	(1.077)	126273	17.1038	17.10
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	101934	15.6948	15.69(M)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	30683	15.6314	15.63
50	Toluene	91	6.446	6.446	(0.840)	180335	17.5484	17.54
20	trans-1,2-Dichloroethene	96	2.535	2.528	(0.606)	38542	17.1547	17.15
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	72681	19.5466	19.54
38	Trichloroethene	130	5.206	5.207	(1.048)	42032	17.7430	17.74
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	111464	16.2740	16.27
5	Vinyl Chloride	62	1.145	1.145	(0.274)	74905	17.0818	17.08

QC Flag Legend

M - Compound response manually integrated.

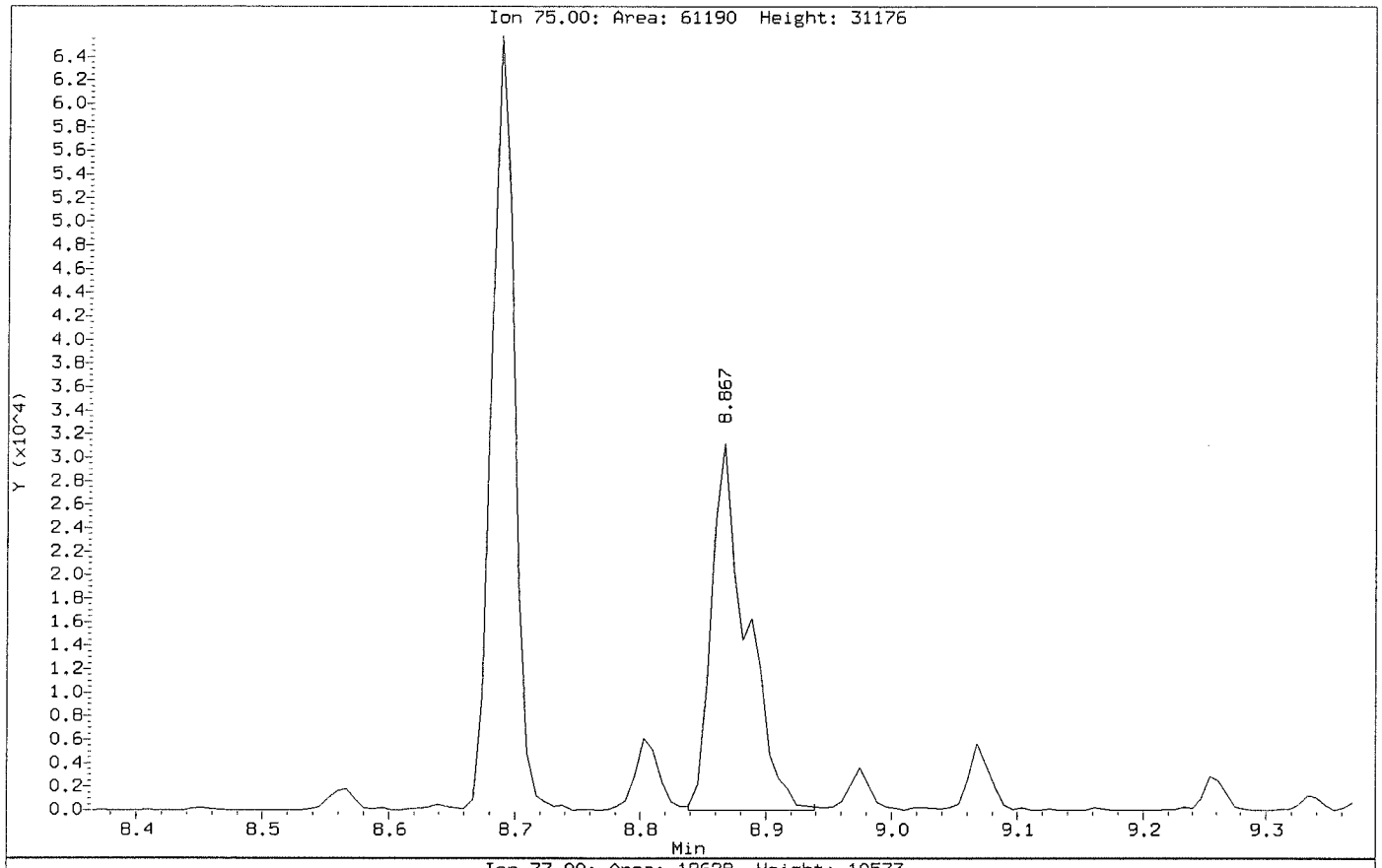


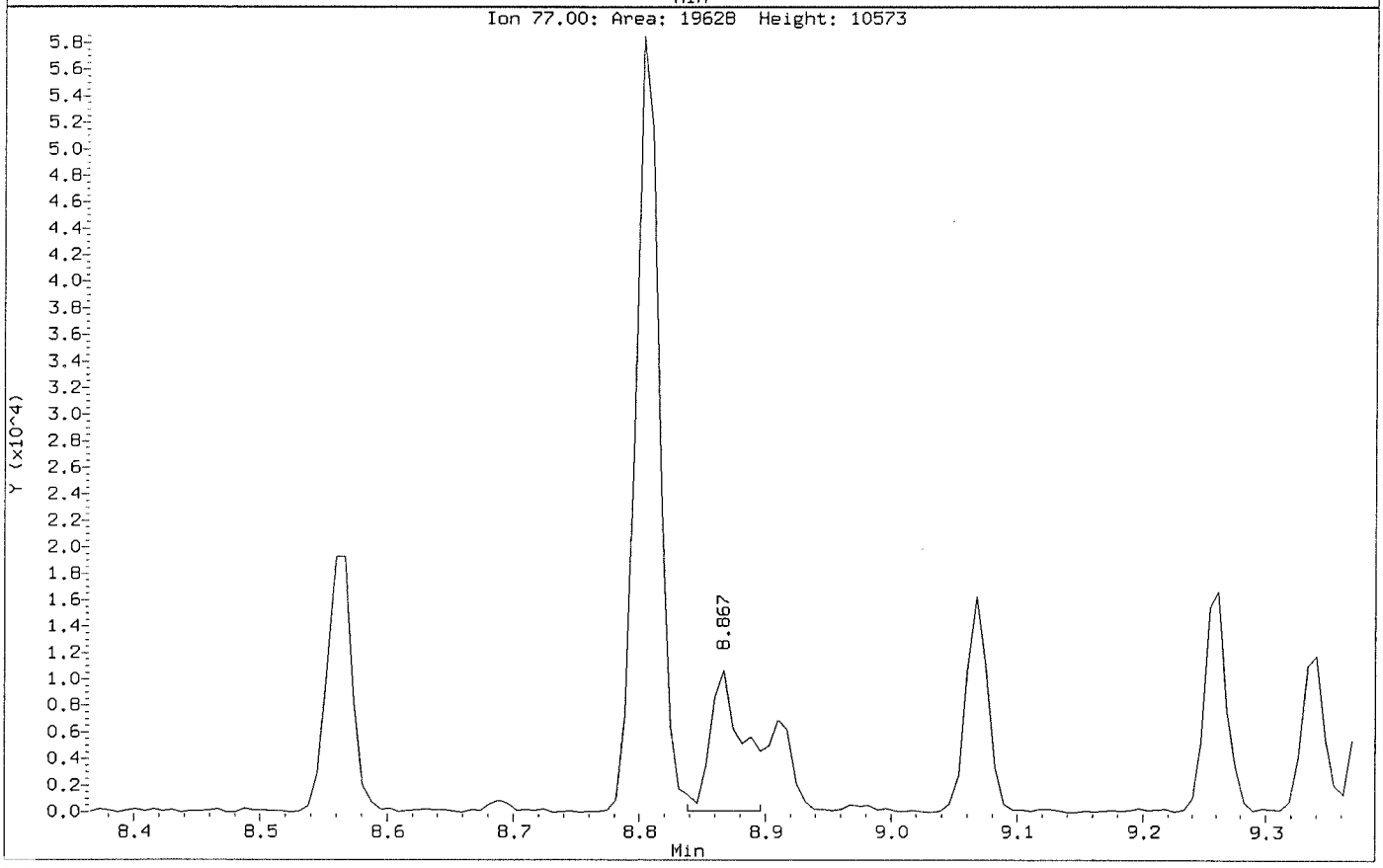
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Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\Before\X112205.D
Injection Date: 23-NOV-2020 11:55
Instrument: voa6.i
Client Sample ID: VLCSW-201123

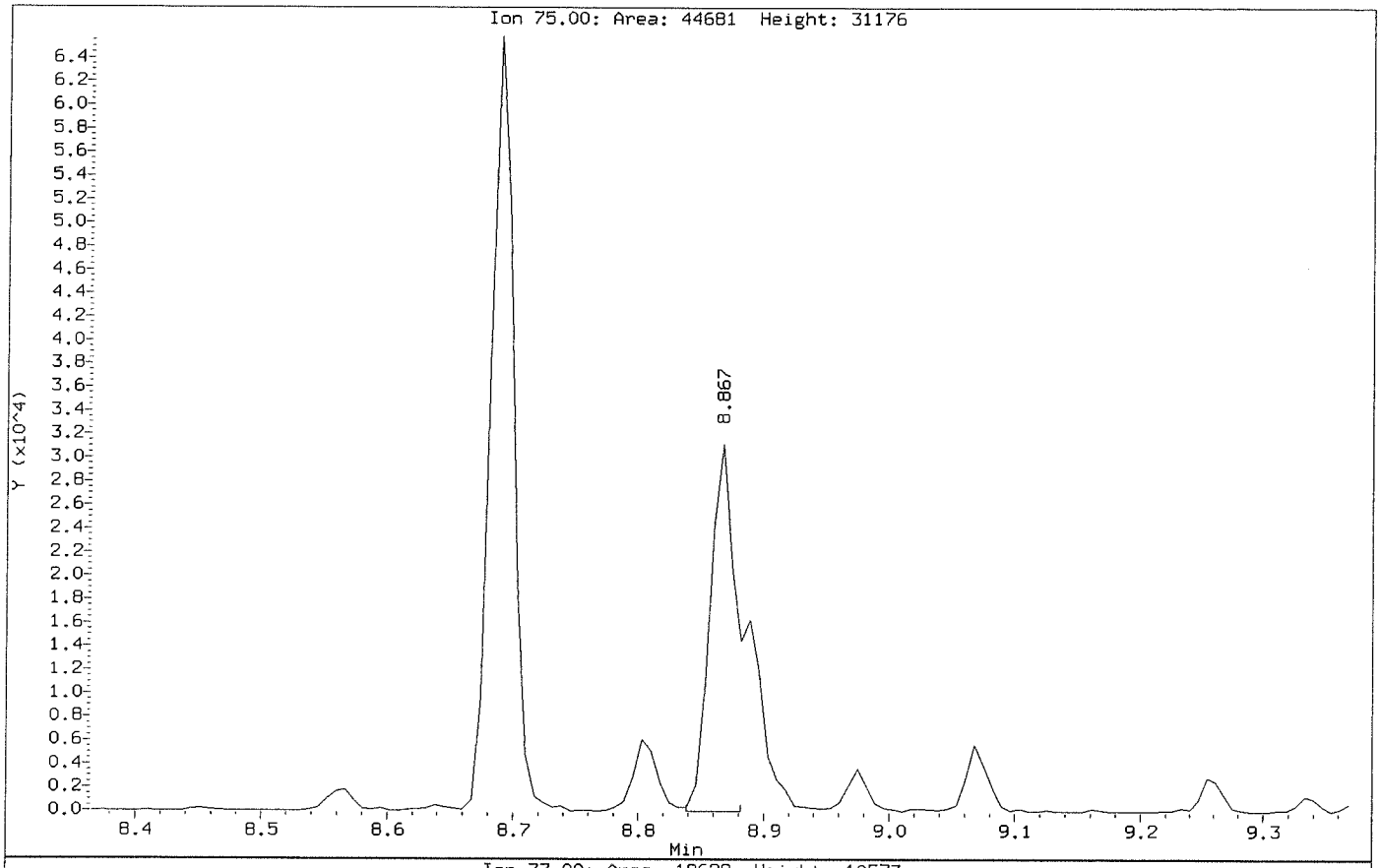
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CAS Number: 96-18-4

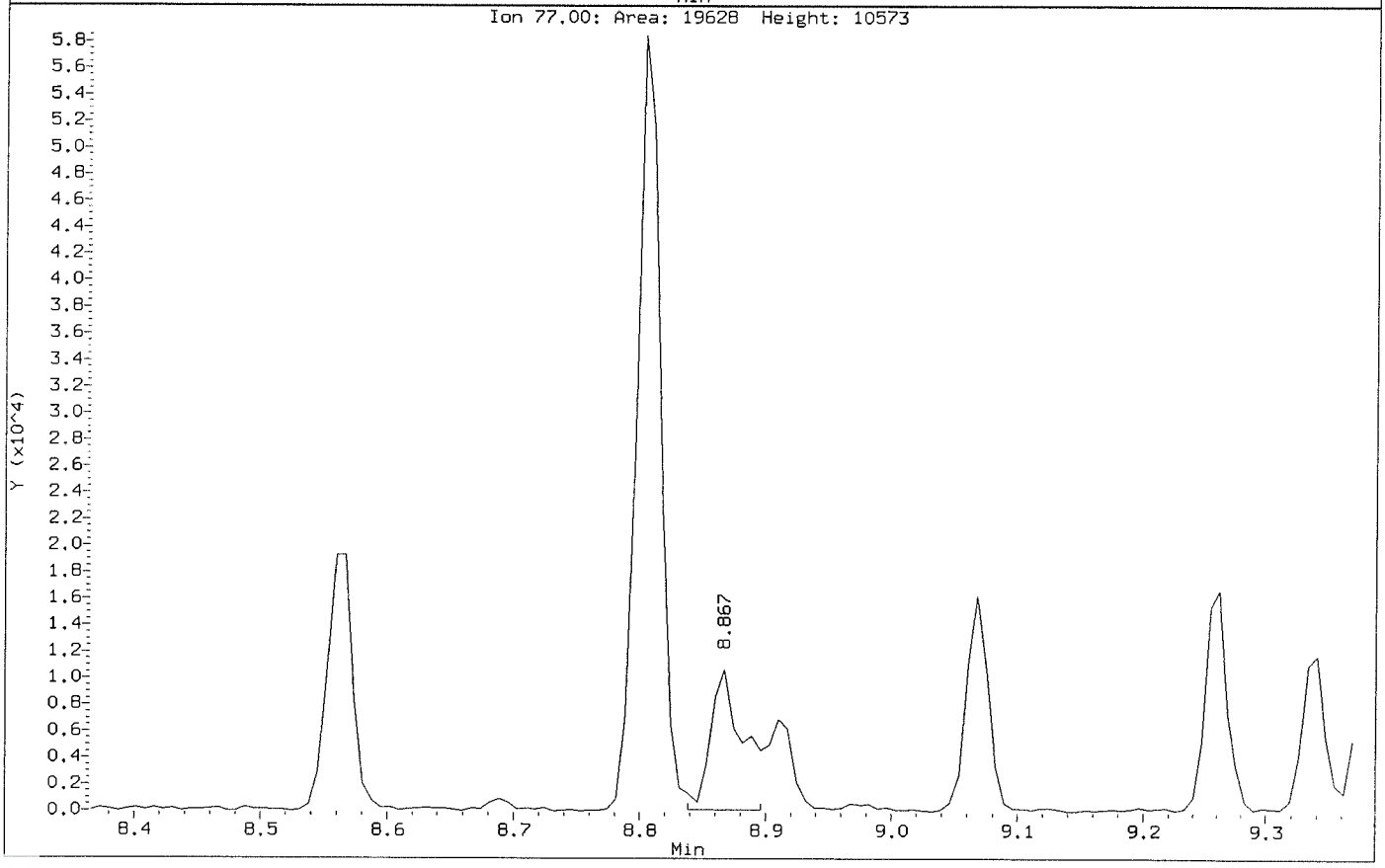




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Client Sample ID: VLCSW-201123

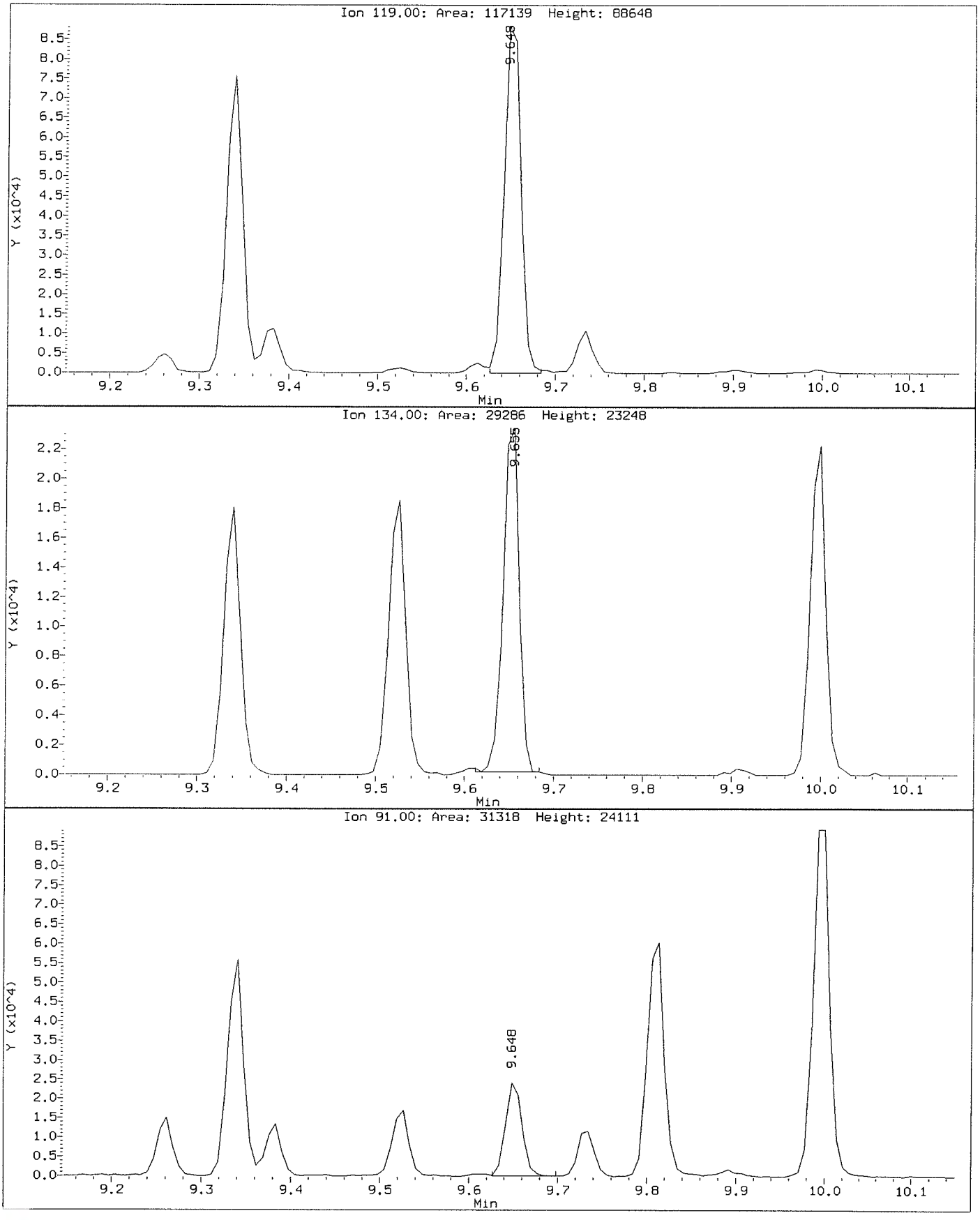
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





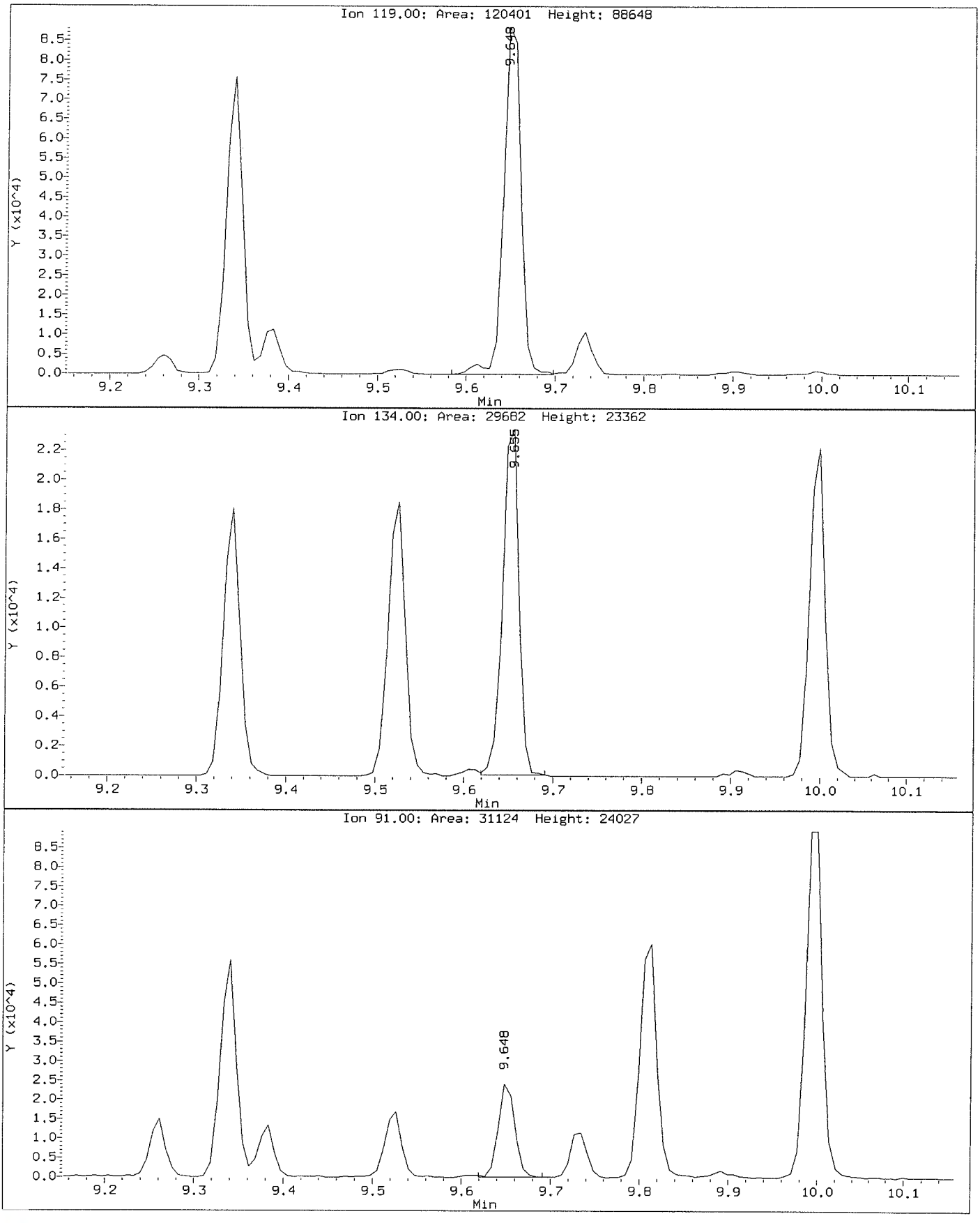
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Injection Date: 23-NOV-2020 11:55
Instrument: voa6.i
Client Sample ID: VLCSW-201123

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



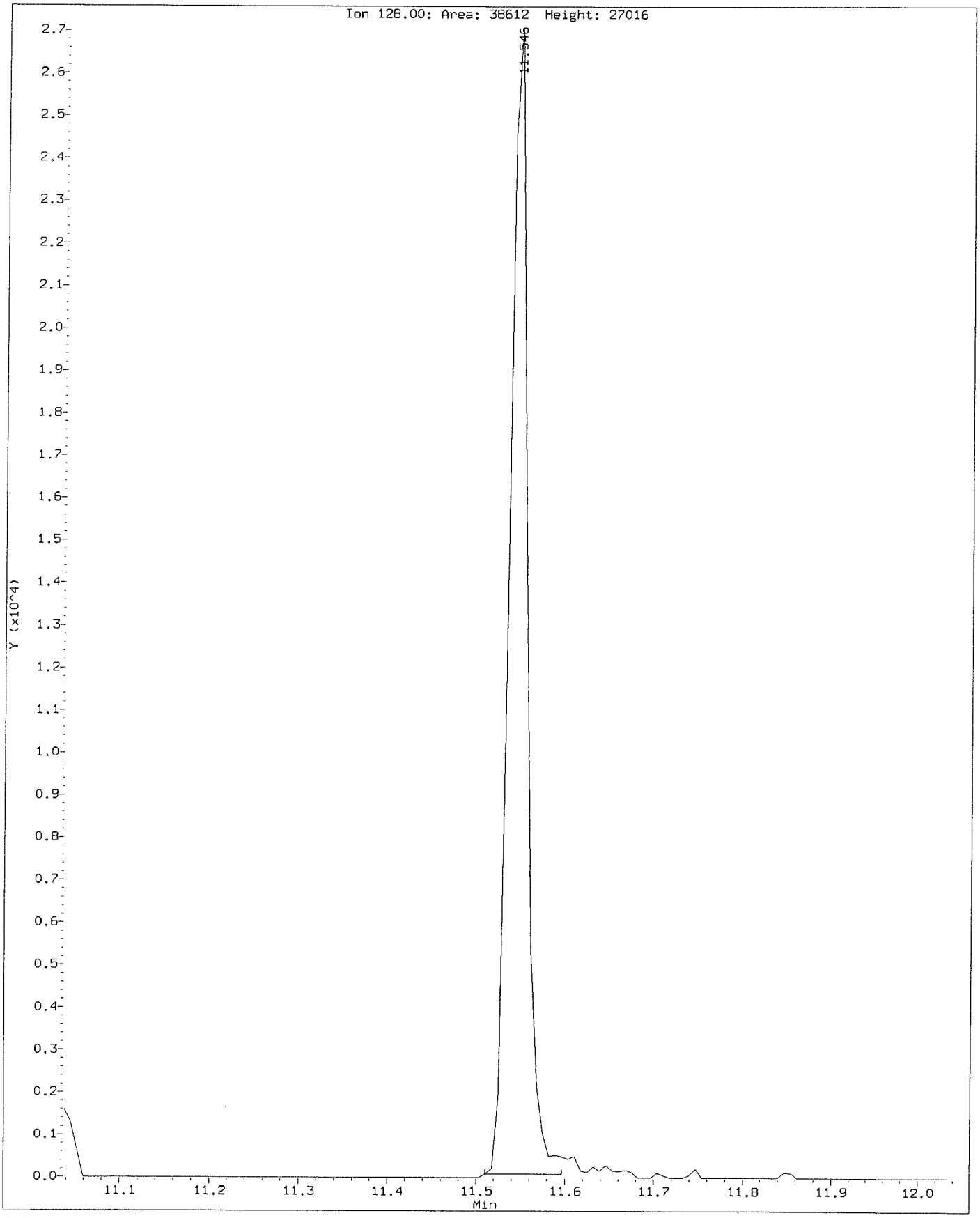
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Client Sample ID: VLCSW-201123

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



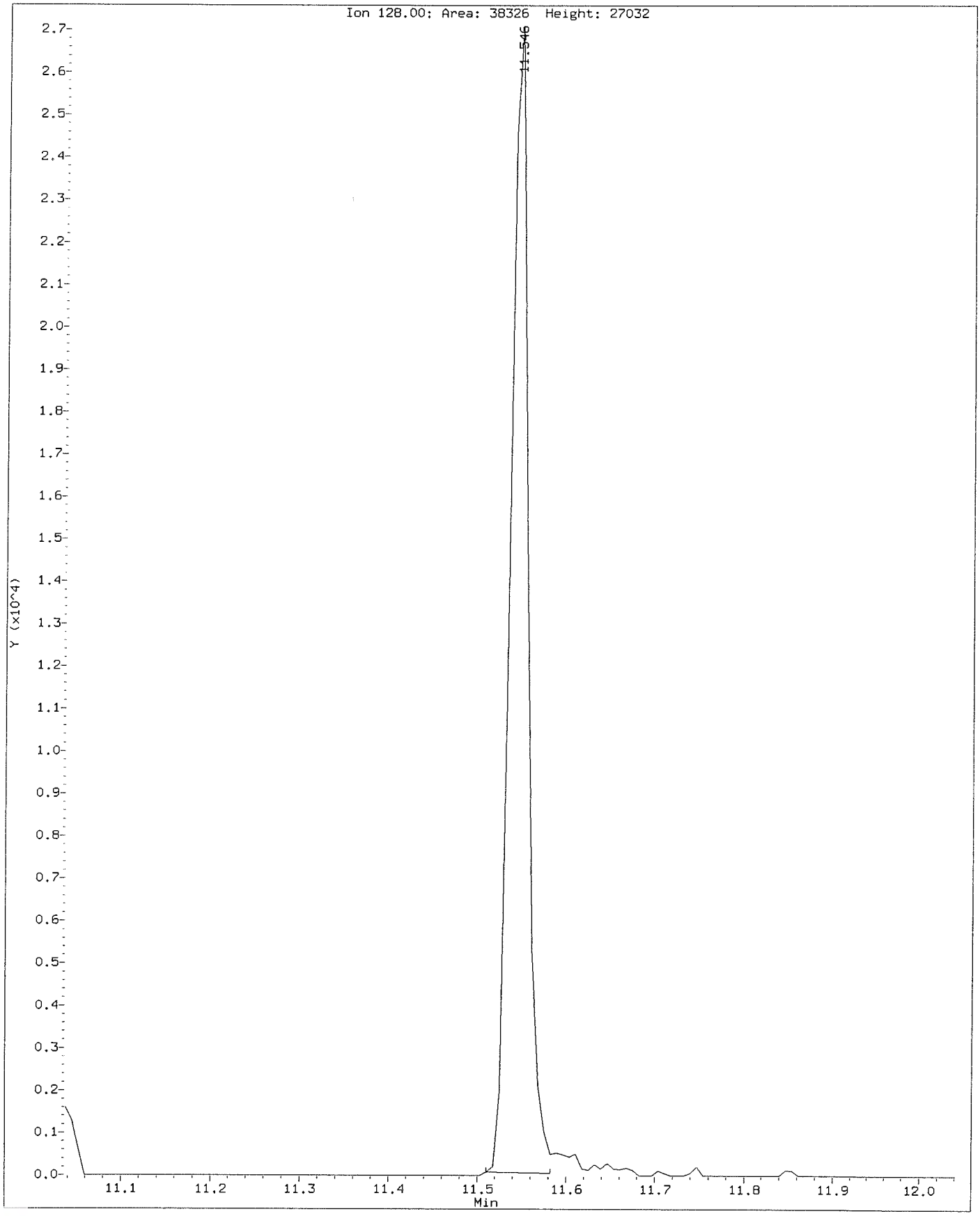
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Instrument: voa6.i
Client Sample ID: VLCSW-201123

Compound: Naphthalene
CAS Number: 91-20-3



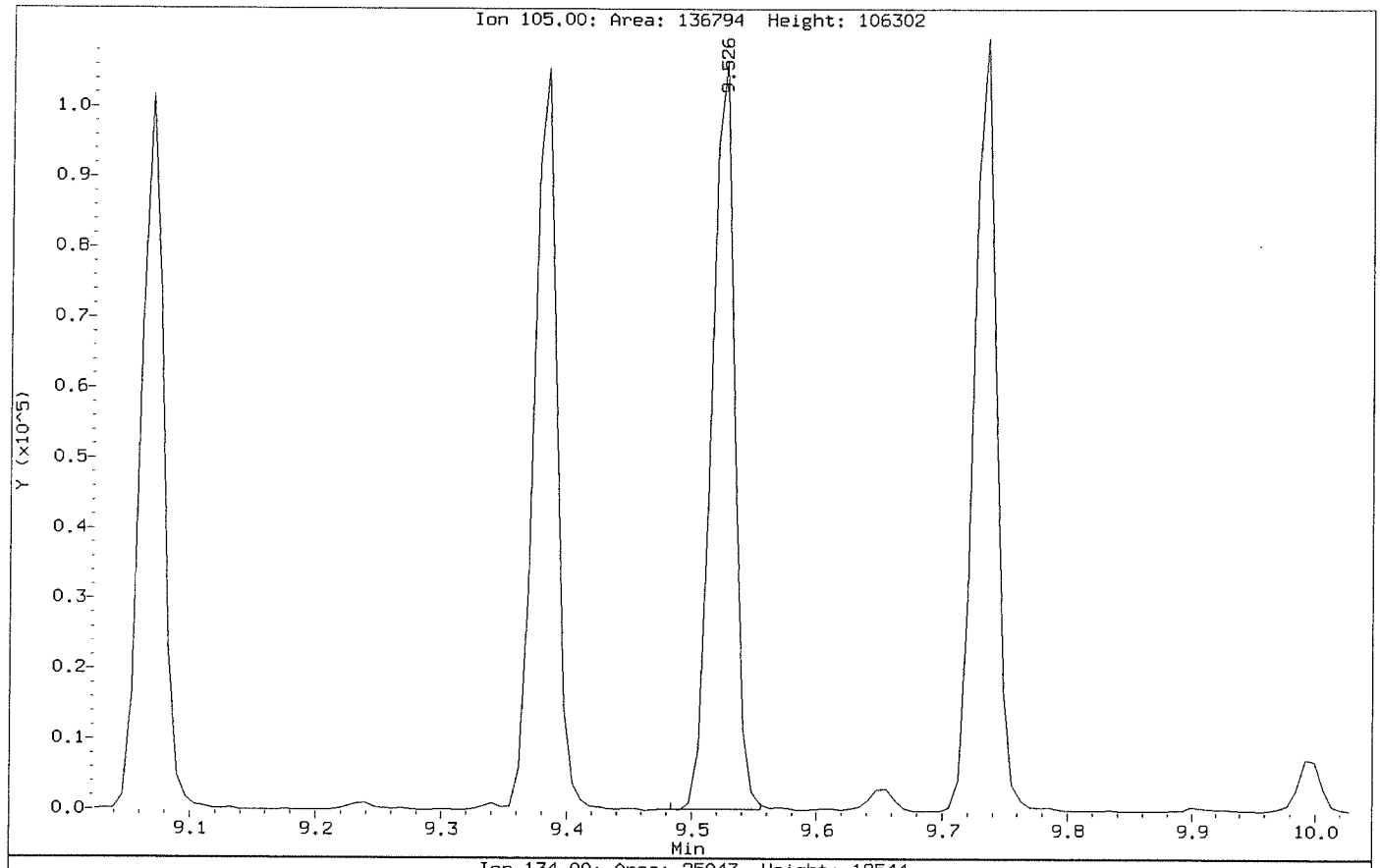
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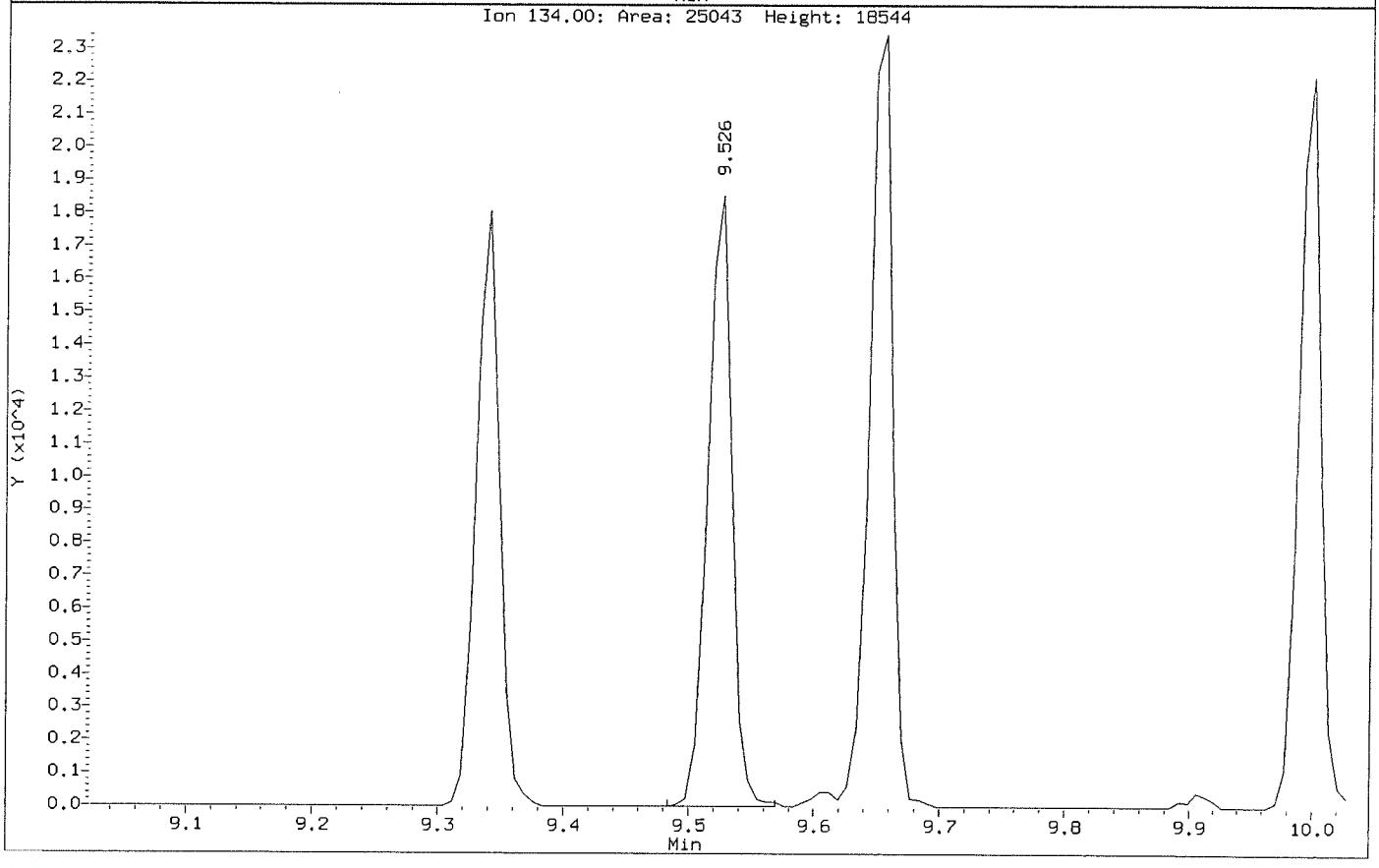
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CAS Number: 91-20-3



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Instrument: voa6.i
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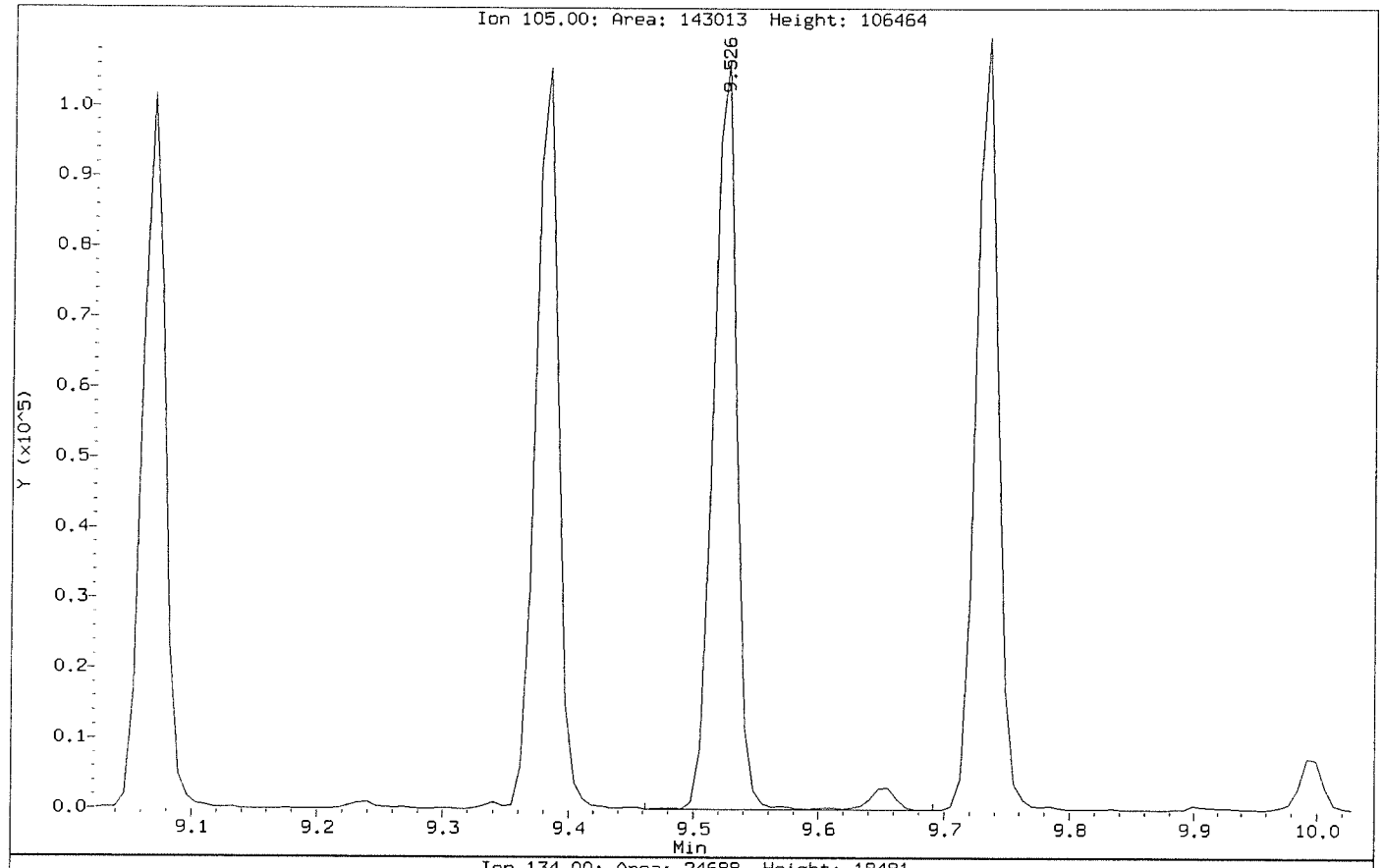
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CAS Number: 135-98-8

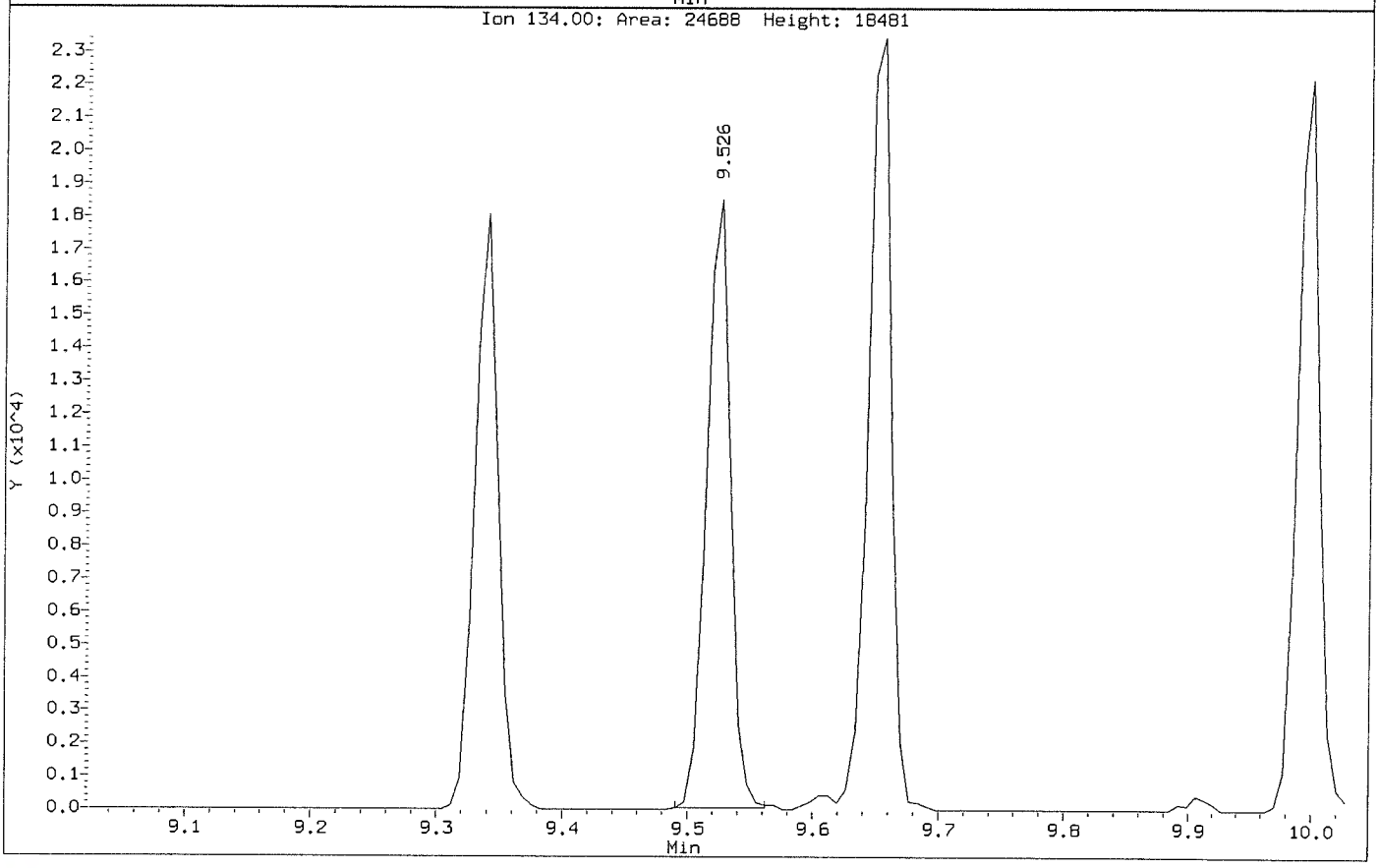




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Instrument: voa6.i
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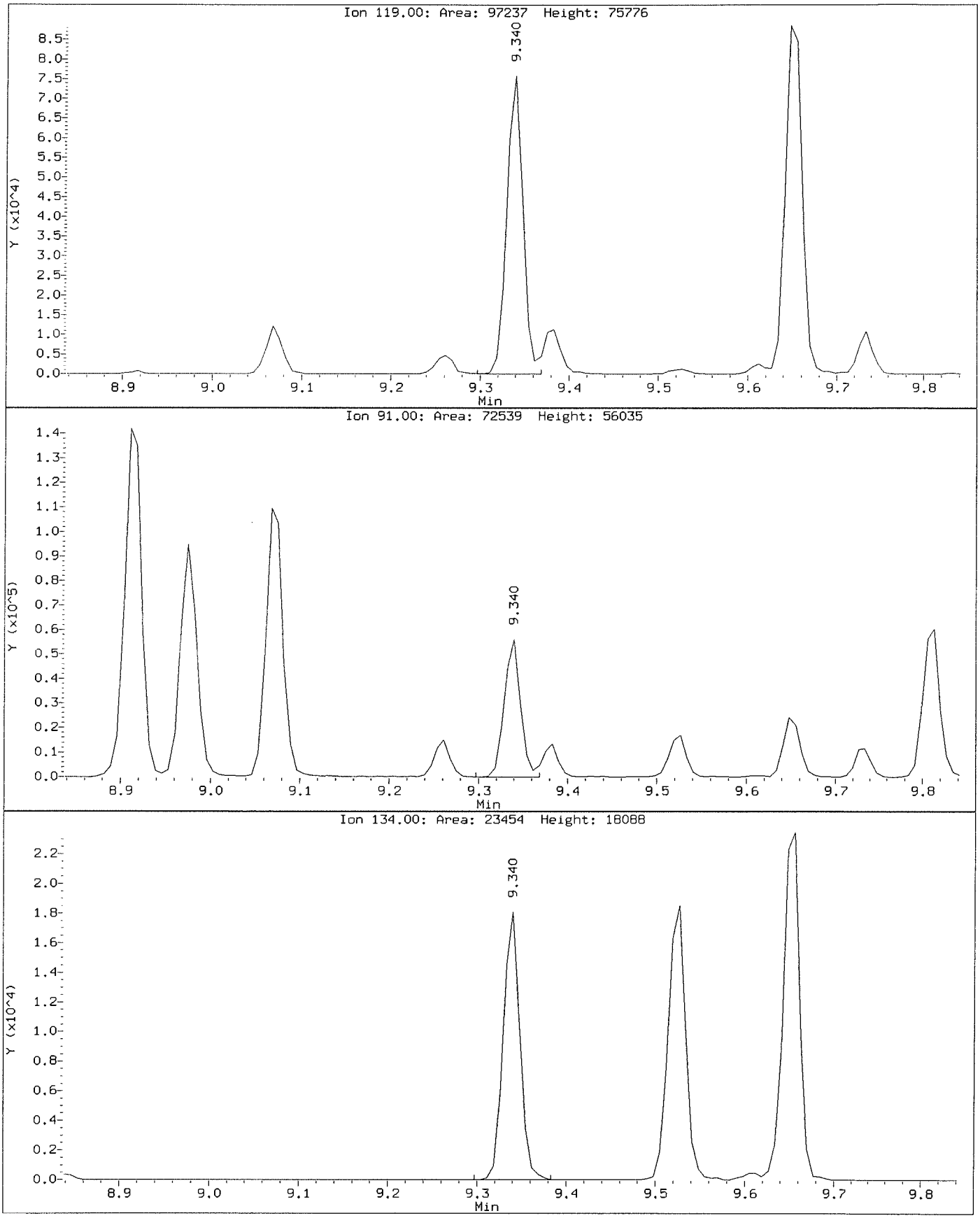
Compound: sec-Butylbenzene
CAS Number: 135-98-8





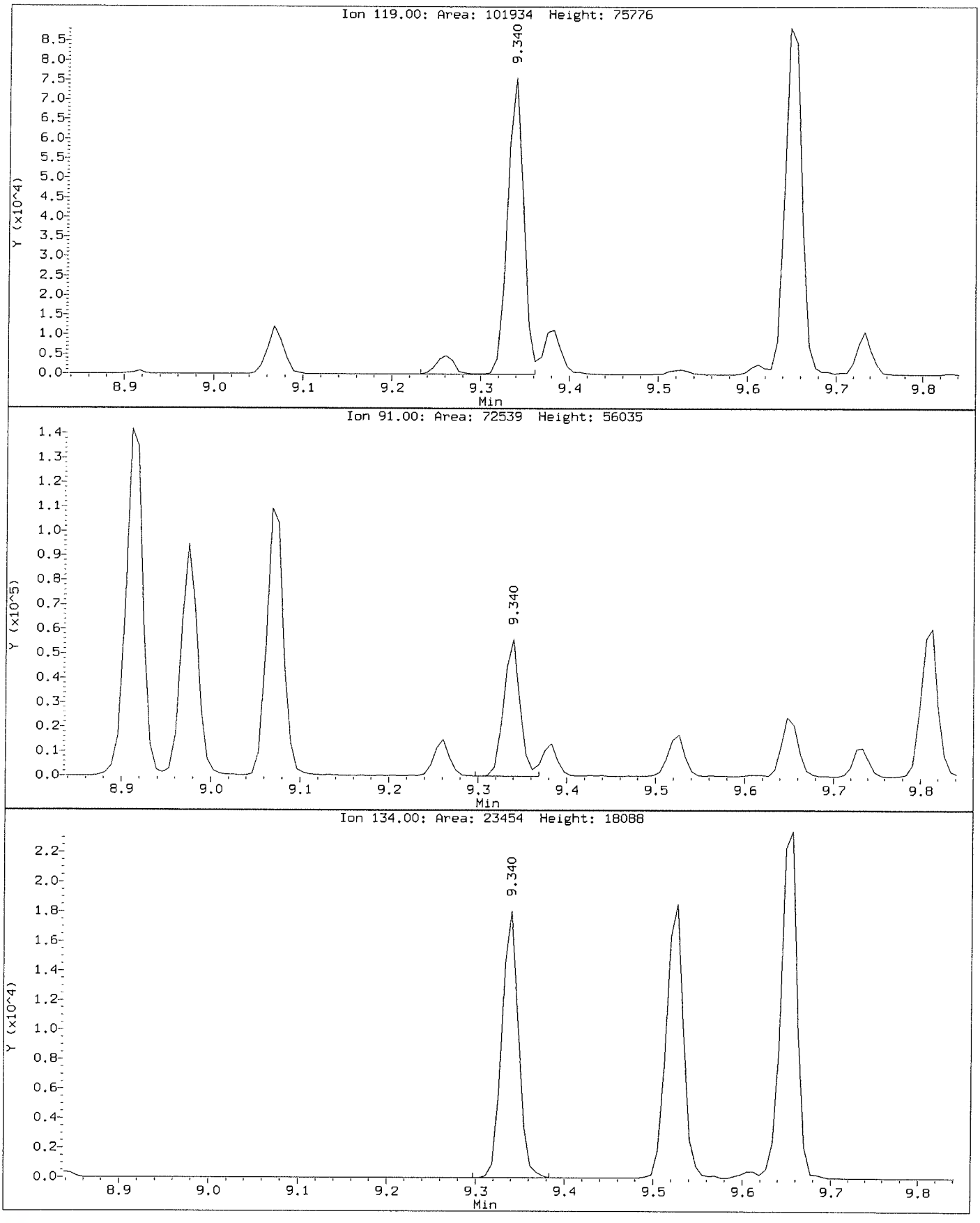
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Instrument: voa6.i
Client Sample ID: VLCSW-201123

Compound: tert-Butylbenzene
CAS Number: 98-06-6



Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112205.D
Injection Date: 23-NOV-2020 11:55
Instrument: voa6.i
Client Sample ID: VLCSW-201123

Compound: tert-Butylbenzene
CAS Number: 98-06-6



Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112207.D Page 1
Report Date: 18-Dec-2020 15:53

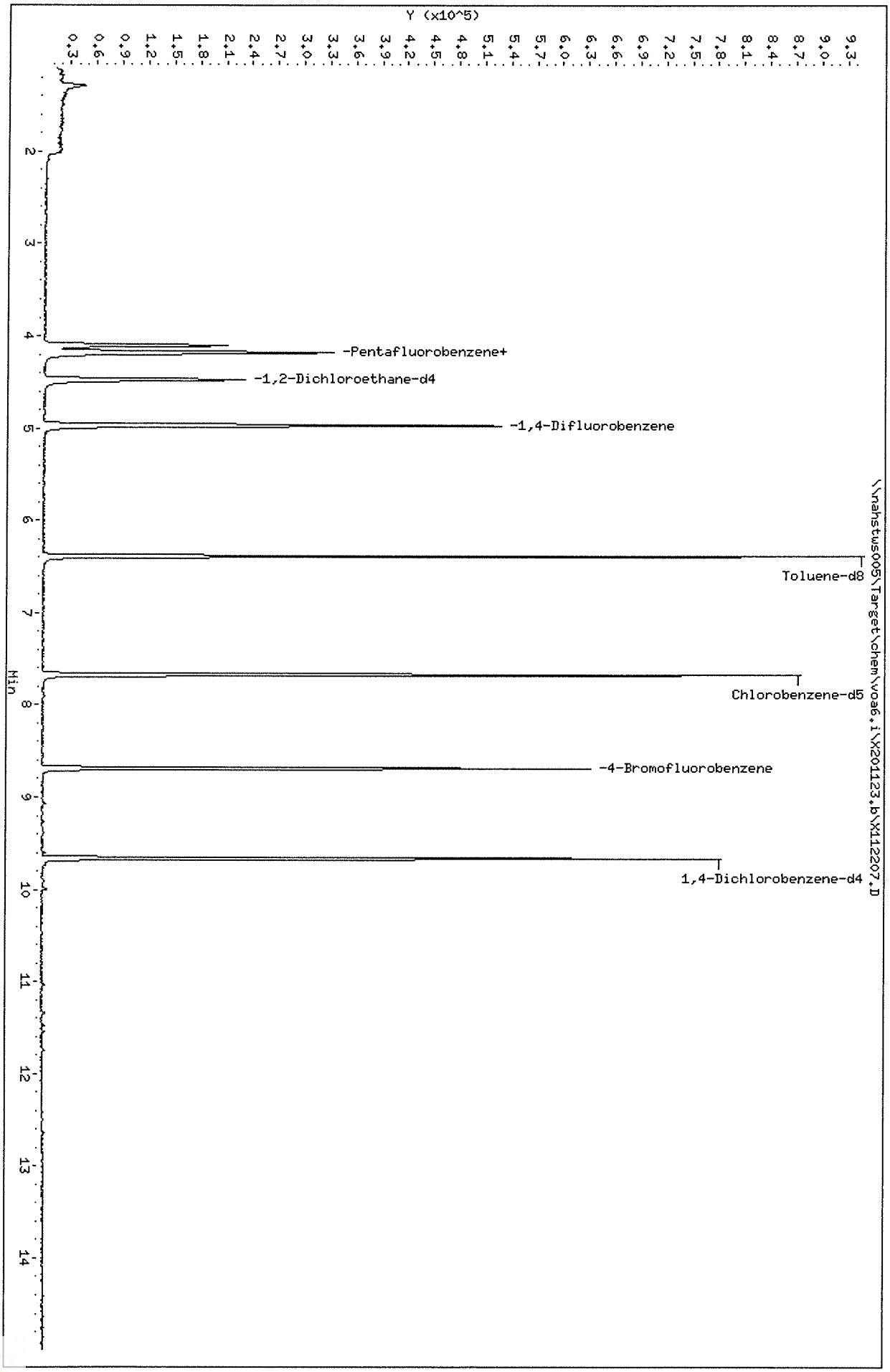
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112207.D
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Inj Date : 23-NOV-2020 12:37
Operator : PC Inst ID: voa6.i
Smp Info : VBLK-201123;VBLK-201123;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:52 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	232637	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	399701	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	346785	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	146902	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	163896	42.8700	42.86
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	148244	44.9704	44.97
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	133867	44.1389	44.13
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	483980	51.7155	51.71



Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112207.D
Date : 23-NOV-2020 12:37
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Sample Info: VBLK-201123;VBLK-201123;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\X201123.b\X112208.D Page 1
Report Date: 18-Dec-2020 15:47

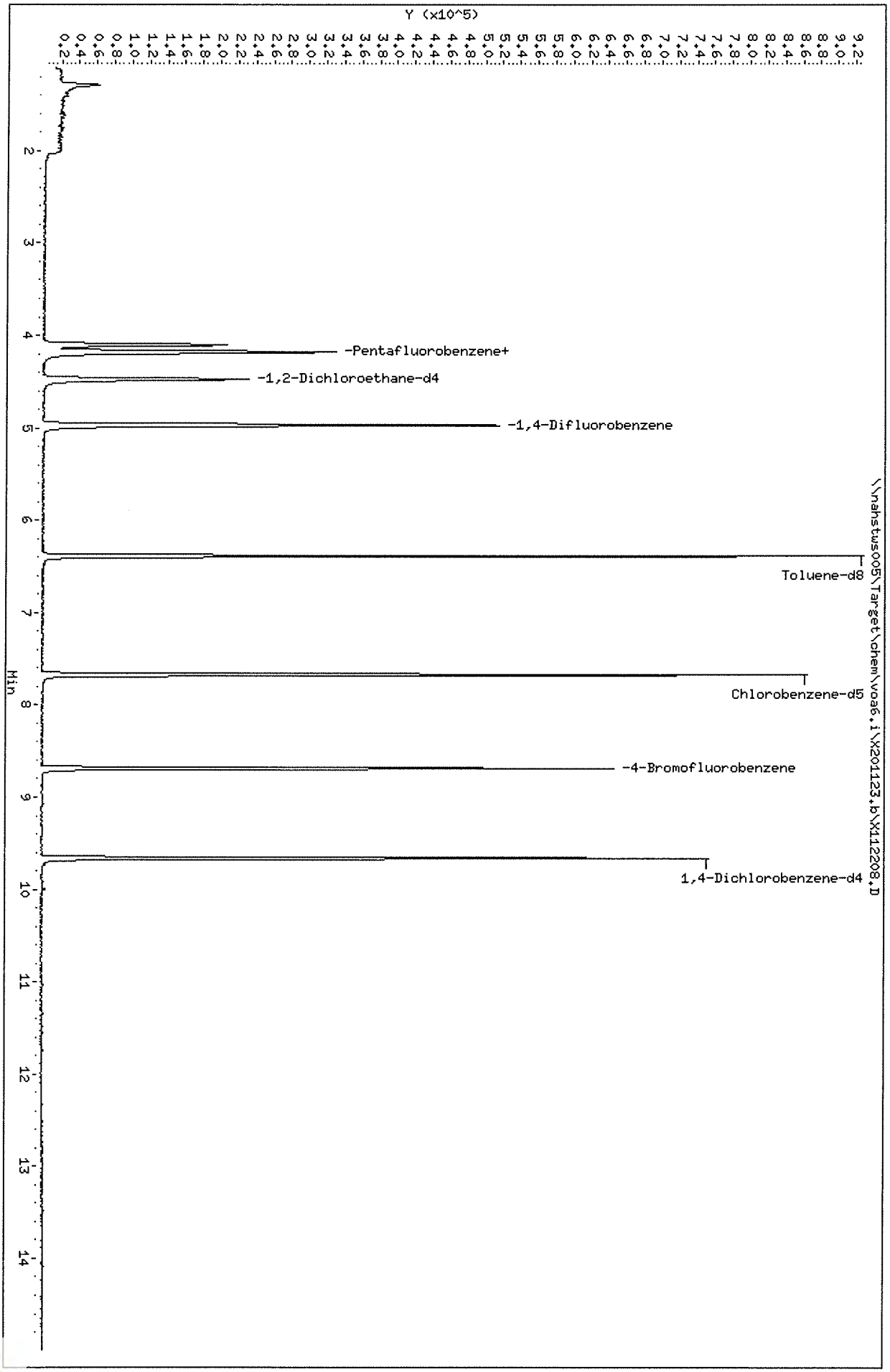
ALS Laboratory Group

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Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:43 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	223512	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	384807	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	342191	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	140989	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	159959	43.5333	43.53
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	145488	44.7315	44.73
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	134212	46.0064	46.00
$	48 Toluene-d8	98	6.388	6.388	(0.833)	472486	51.1651	51.16



Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112208.D
Date : 23-NOV-2020 12:58
Client ID: HS20110527-11
Sample Info: HS20110527-11;HS20110527-11;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112209.D Page 1
Report Date: 18-Dec-2020 15:47

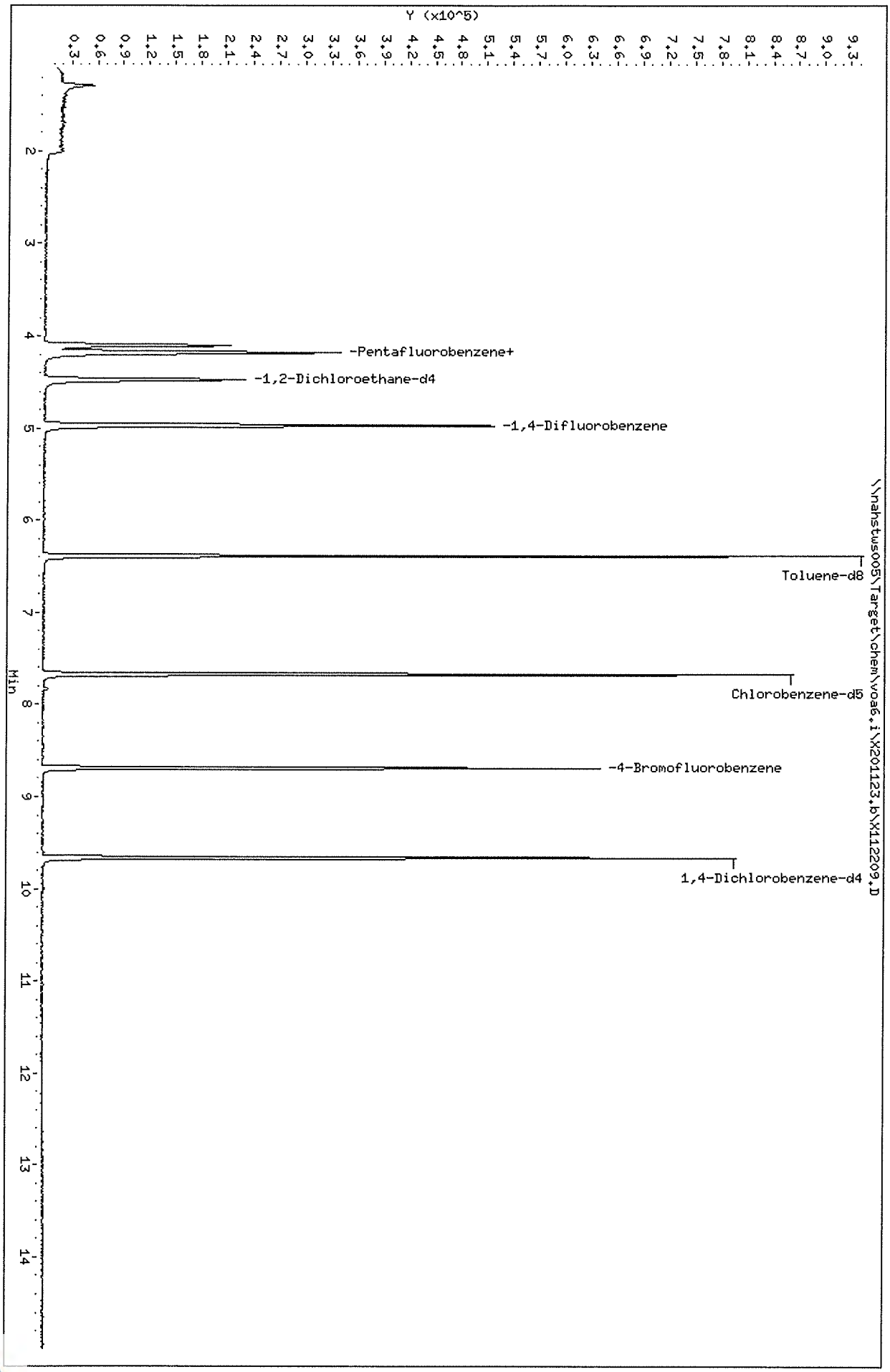
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112209.D
Lab Smp Id: HS20110527-18 Client Smp ID: HS20110527-18
Inj Date : 23-NOV-2020 13:19
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-18;HS20110527-18;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:43 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	225085	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	386975	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	343359	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	144068	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	159768	43.1852	43.18
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	147965	45.3266	45.32
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	135124	45.9956	45.99
$	48 Toluene-d8	98	6.388	6.388	(0.833)	483901	52.2230	52.22



Data File: \\nahstws005\Target\chem\voa6,i\X201123,b\X112209,D
Date : 23-NOV-2020 13:19
Client ID: HS20110527-18
Sample Info: HS20110527-18;HS20110527-18;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112210.D Page 1
Report Date: 18-Dec-2020 15:47

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112210.D
Lab Smp Id: HS20110527-12 Client Smp ID: HS20110527-12
Inj Date : 23-NOV-2020 13:40
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-12;HS20110527-12;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:43 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

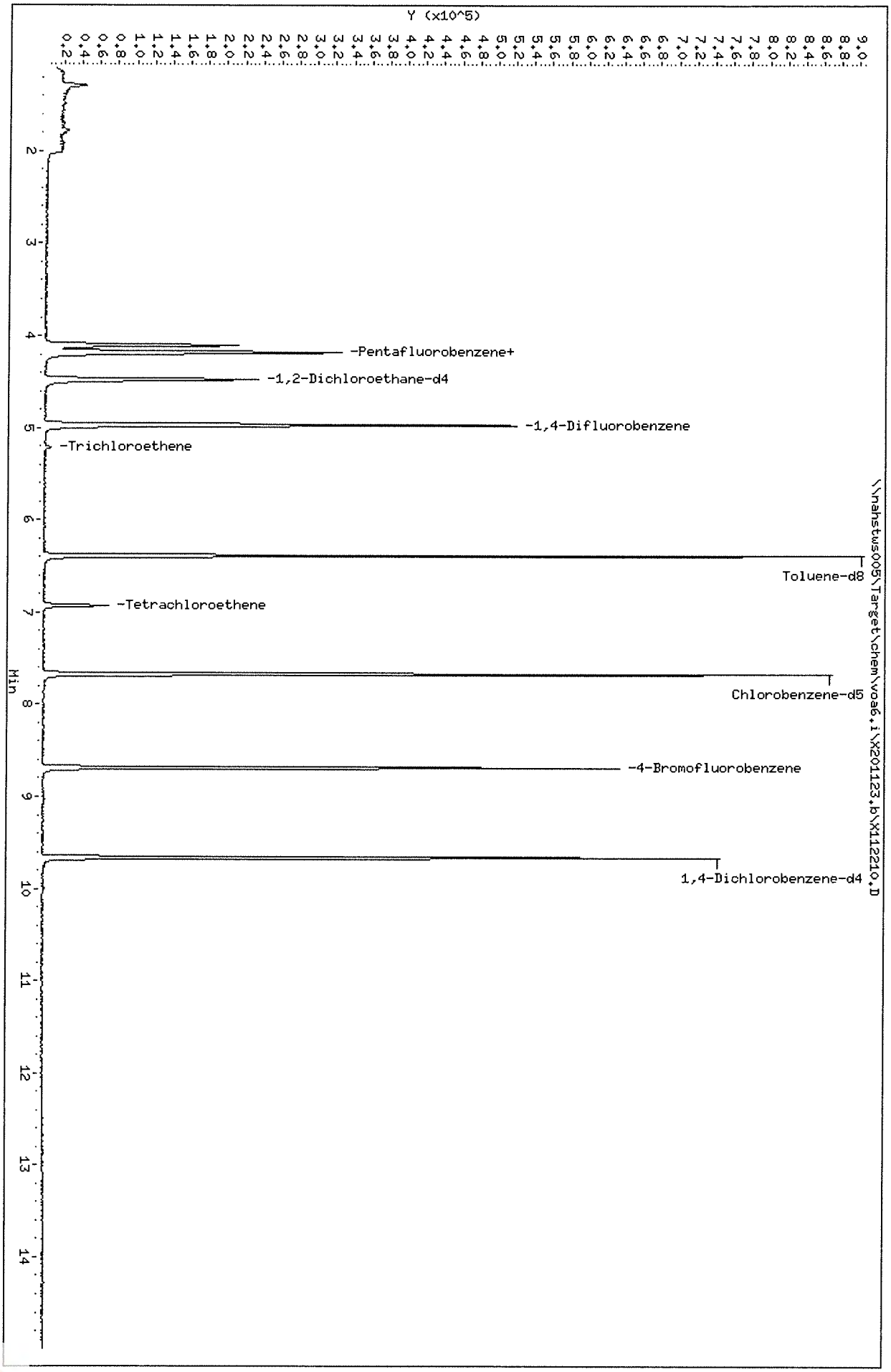
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	222783	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	388079	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	338625	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	139000	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	158256	43.2178	43.21
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	144333	44.8416	44.84
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	132192	45.4772	45.47
$	48 Toluene-d8	98	6.388	6.388	(0.833)	472703	51.7276	51.72
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	10895	5.21843	5.21
	38 Trichloroethene	130	5.214	5.207	(1.049)	1952	0.72308	0.72(a)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112210.D
Date : 23-NOV-2020 13:40
Client ID: HS20110527-12
Sample Info: HS20110527-12;HS20110527-12;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112210.D

Date : 23-NOV-2020 13:40

Client ID: HS20110527-12

Instrument: voa6.i

Sample Info: HS20110527-12;HS20110527-12;;;

Purge Volume: 5.0

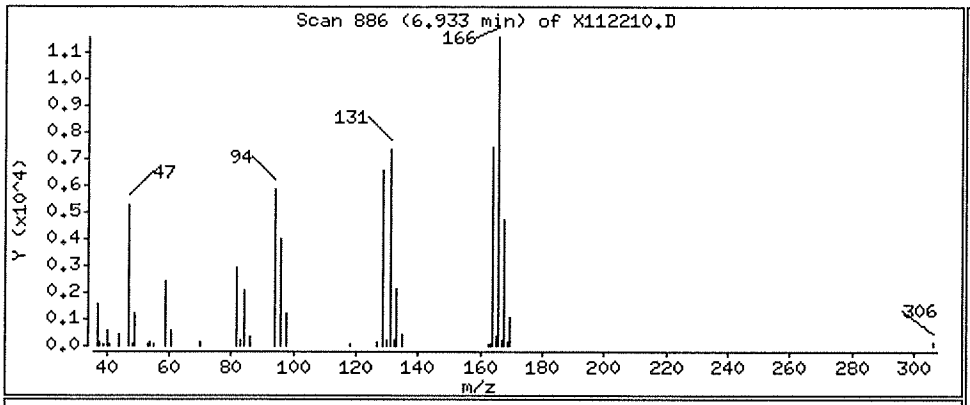
Operator: PC

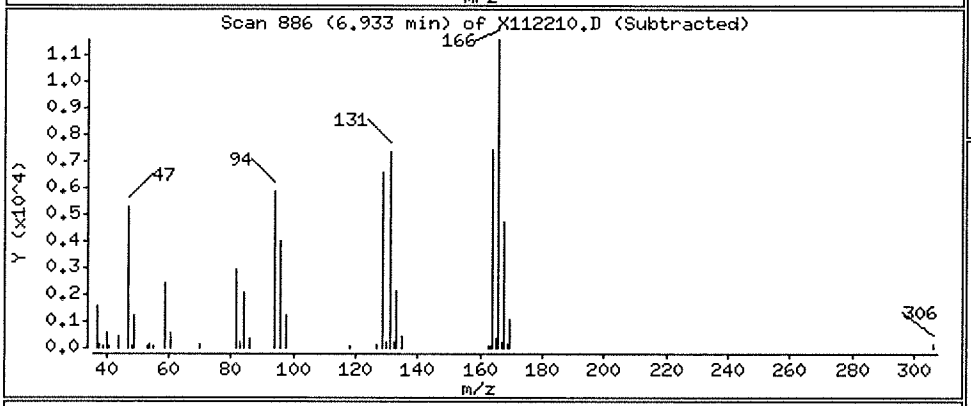
Column phase: DB624

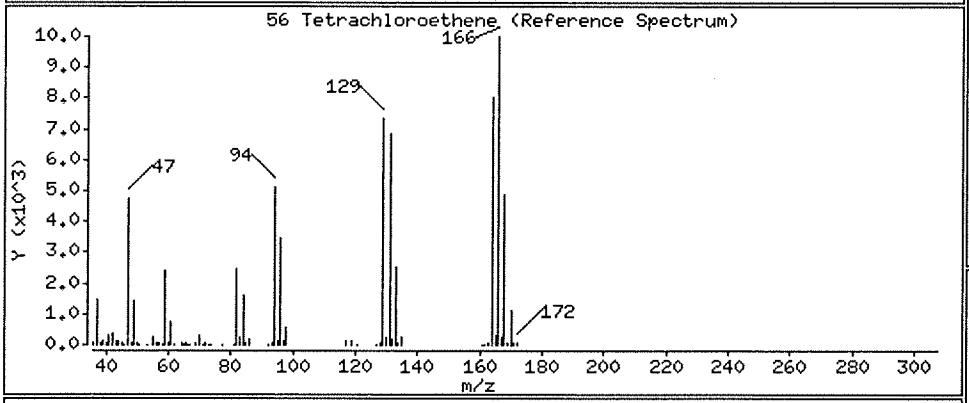
Column diameter: 0.18

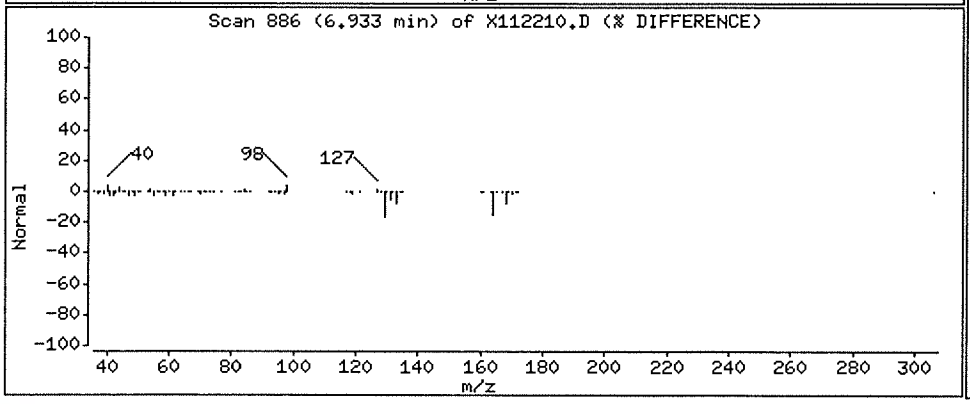
56 Tetrachloroethene

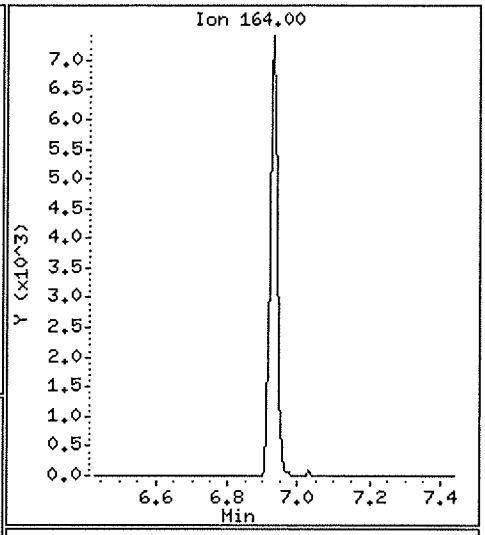
Concentration: 5.21 ug/l

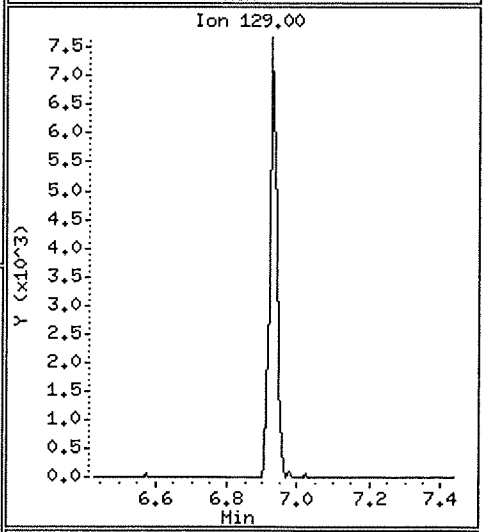


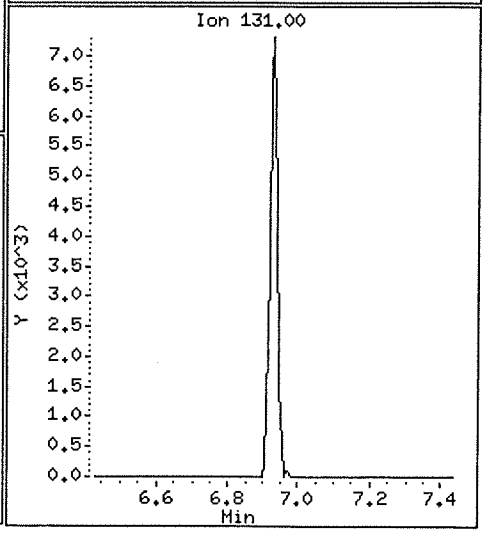












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112210.D

Date : 23-NOV-2020 13:40

Client ID: HS20110527-12

Instrument: voa6.i

Sample Info: HS20110527-12;HS20110527-12;;;

Purge Volume: 5.0

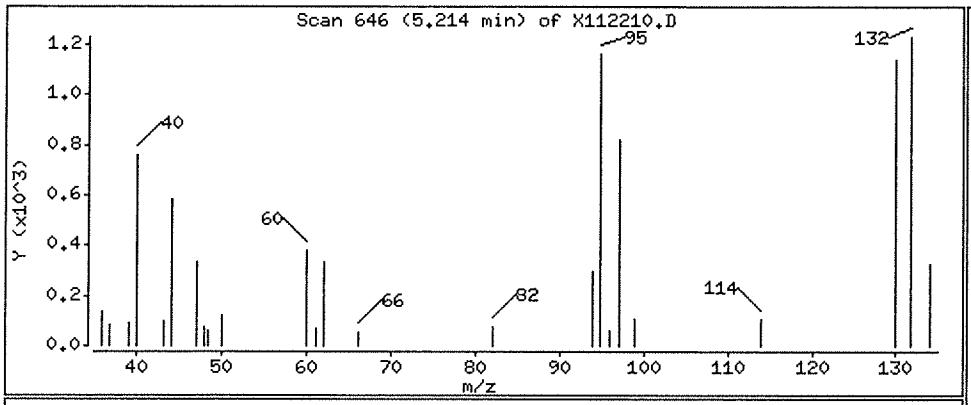
Operator: PC

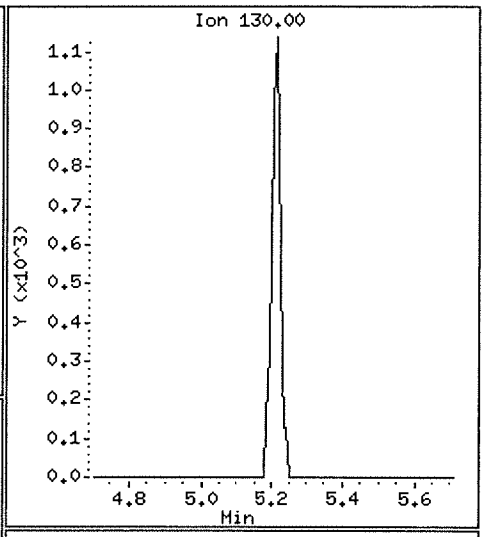
Column phase: DB624

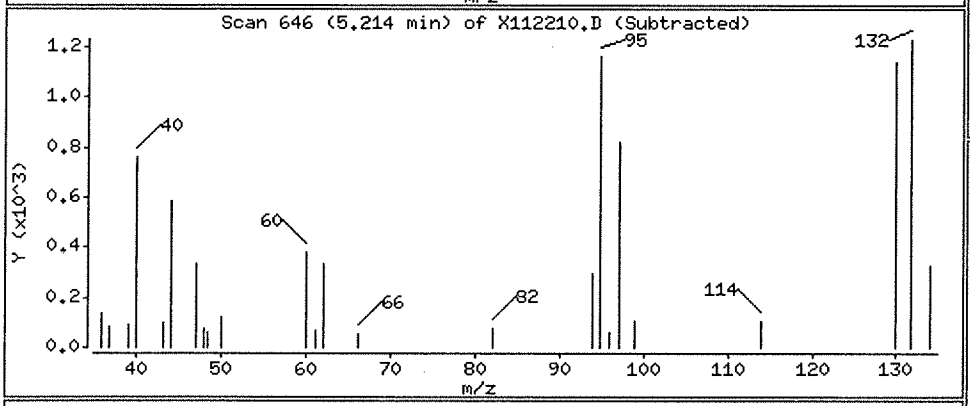
Column diameter: 0.18

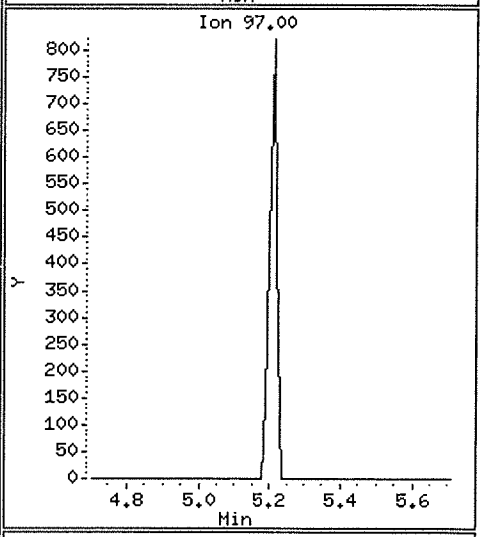
38 Trichloroethene

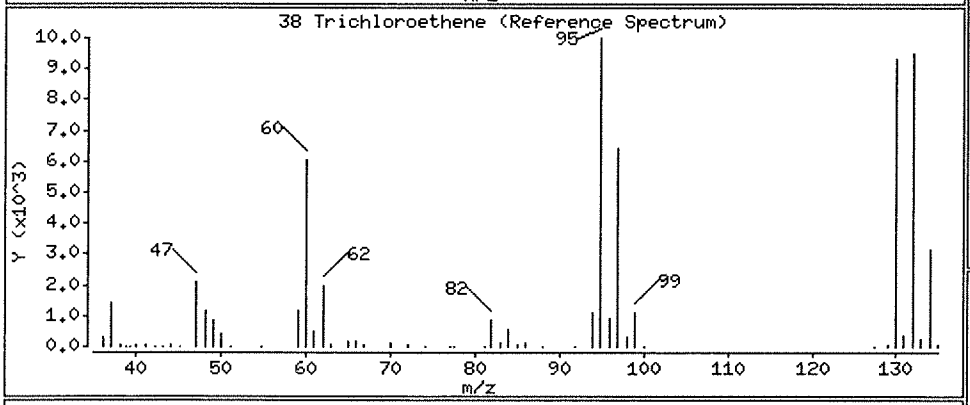
Concentration: 0.72 ug/l

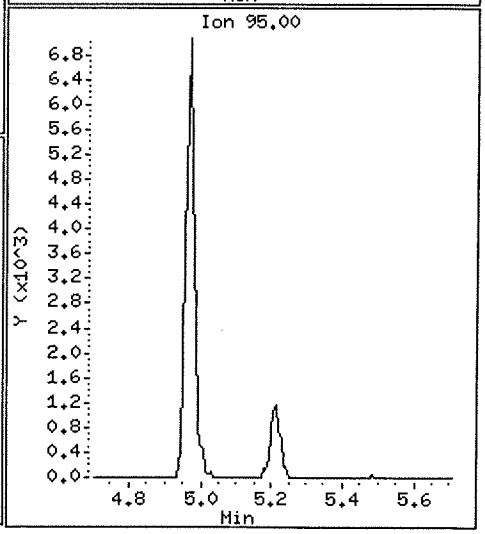


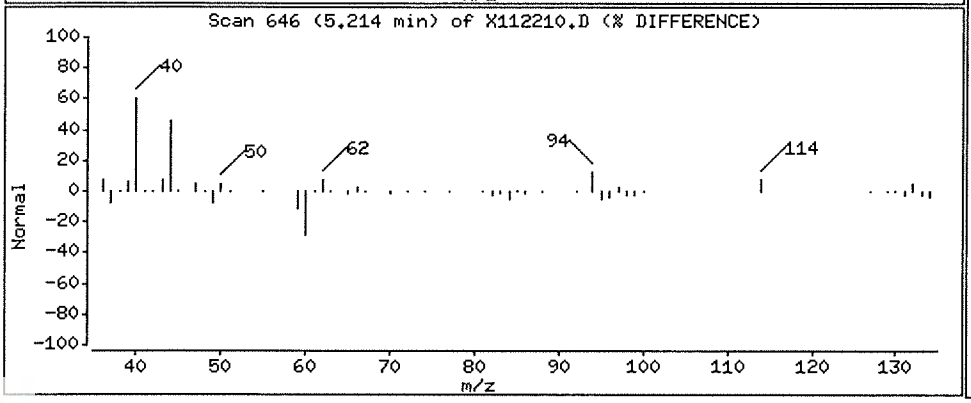












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112211.D Page 1
Report Date: 18-Dec-2020 15:47

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112211.D
Lab Smp Id: HS20110527-13 Client Smp ID: HS20110527-13
Inj Date : 23-NOV-2020 14:01
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-13;HS20110527-13;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:43 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

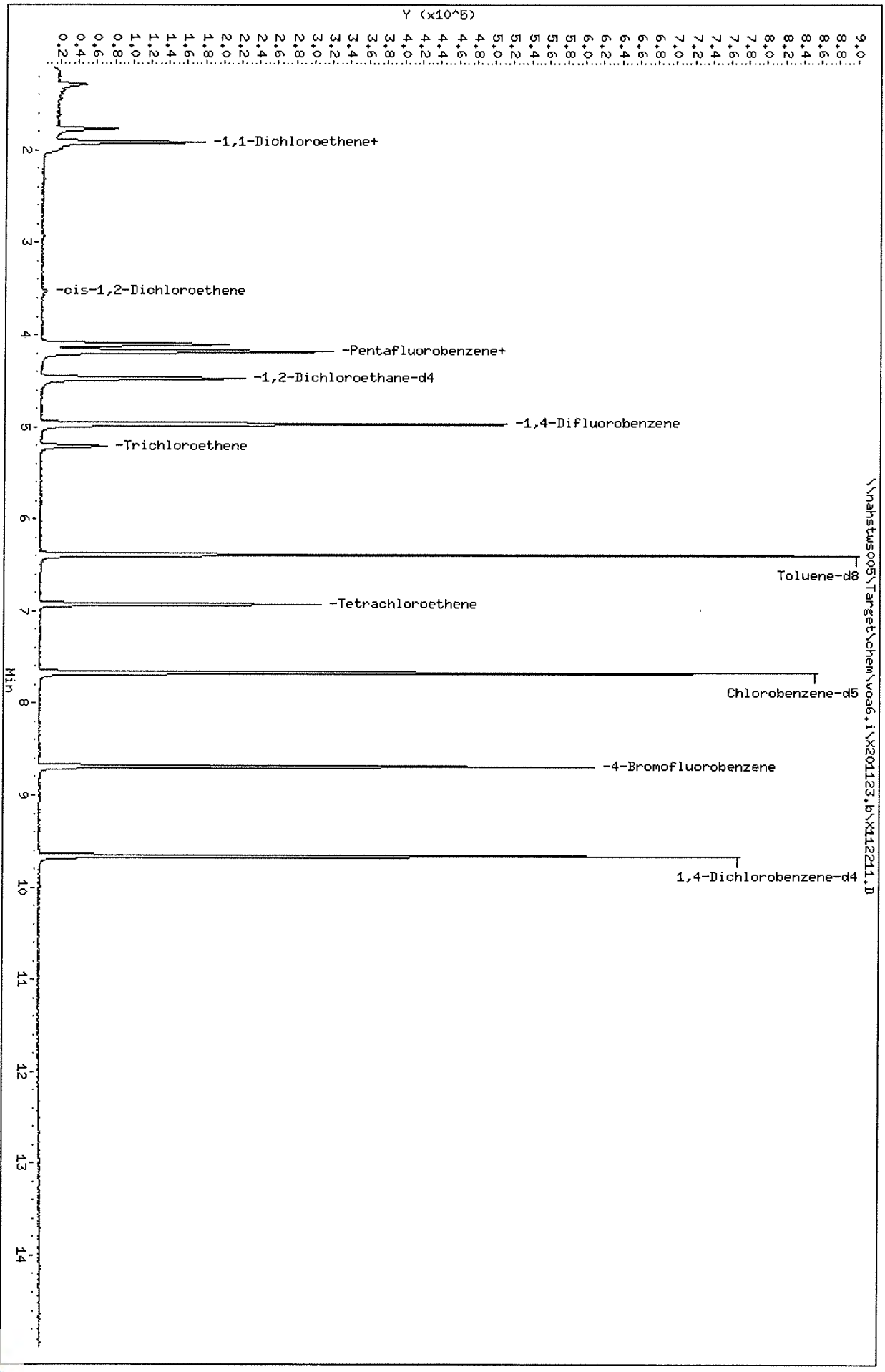
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	220031	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.970	(1.000)	386181	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	340831	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	139932	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	156895	43.3784	43.37
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	142250	43.9264	43.92
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	130523	45.4649	45.46
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	472226	51.3410	51.34
138 Freon TF	101	1.919	1.919	(0.459)	54468	13.2725	13.27
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	9160	2.14677	2.14(a)
27 cis-1,2-Dichloroethene	96	3.538	3.530	(0.846)	2071	0.64324	0.64(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	48276	22.9733	22.97
38 Trichloroethene	130	5.214	5.207	(1.051)	20814	7.74804	7.74

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6,i\X201123,b\X112211.D
Date : 23-NOV-2020 14:01
Client ID: HS20110527-13
Sample Info: HS20110527-13;HS20110527-13;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112211.D

Date : 23-NOV-2020 14:01

Client ID: HS20110527-13

Instrument: voa6.i

Sample Info: HS20110527-13;HS20110527-13;;;

Purge Volume: 5.0

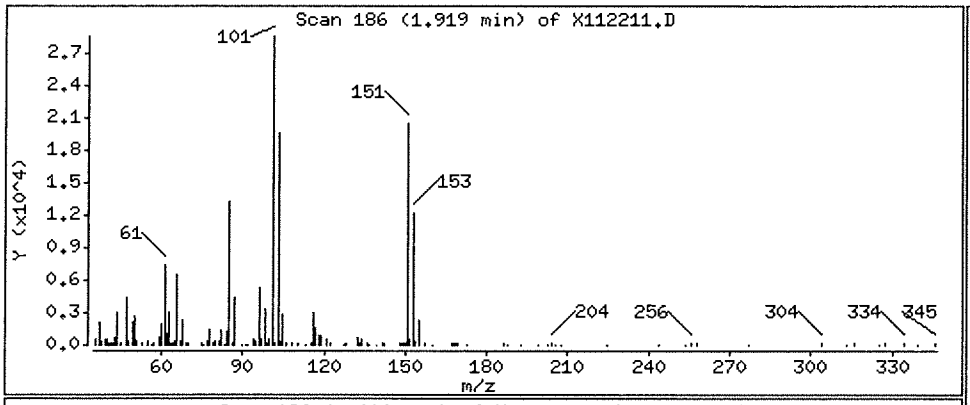
Operator: PC

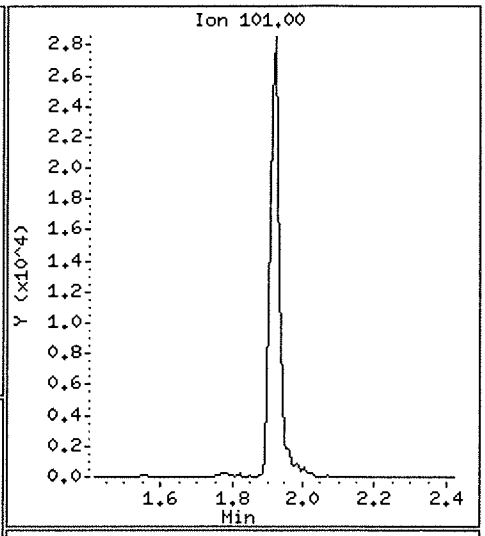
Column phase: DB624

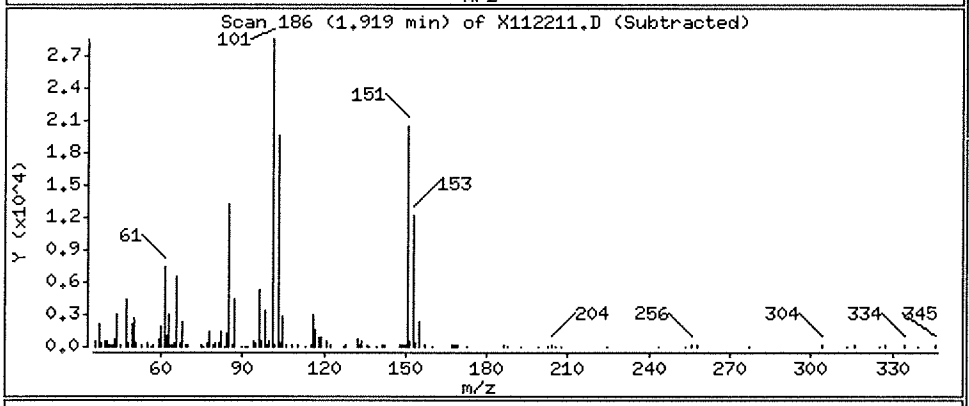
Column diameter: 0.18

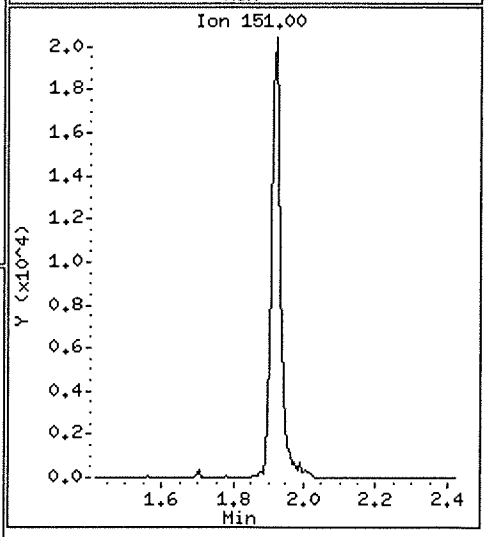
138 Freon TF

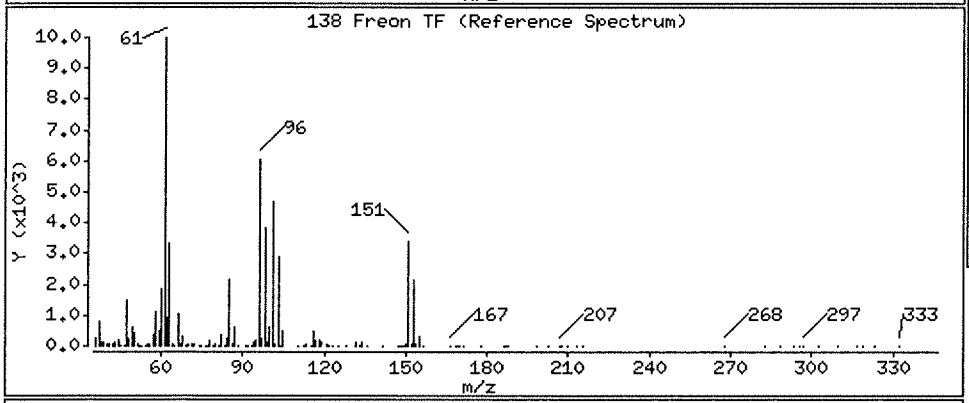
Concentration: 13.27 ug/l

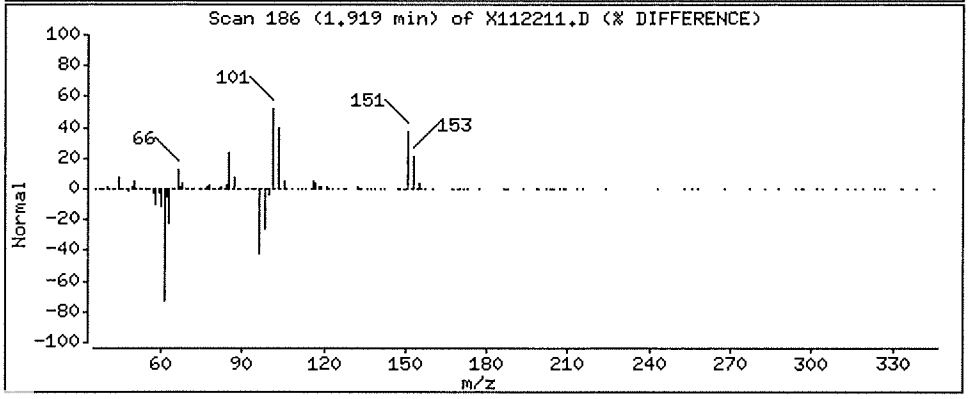












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112211.D

Date : 23-NOV-2020 14:01

Client ID: HS20110527-13

Instrument: voa6.i

Sample Info: HS20110527-13;HS20110527-13;;;

Purge Volume: 5.0

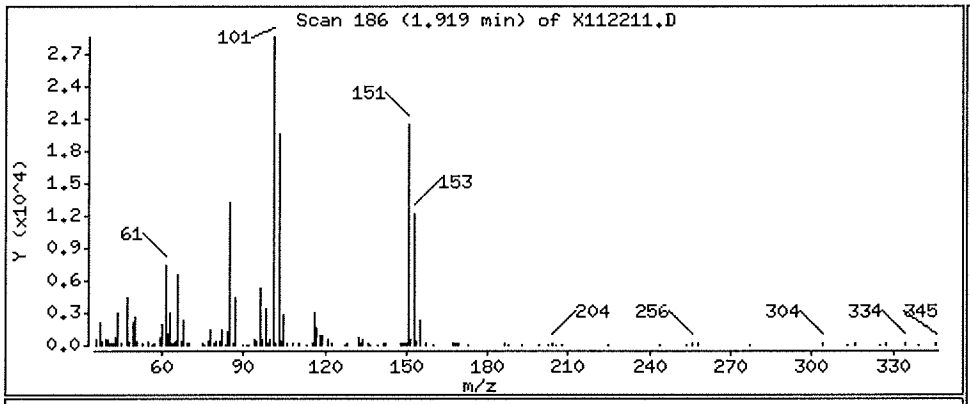
Operator: PC

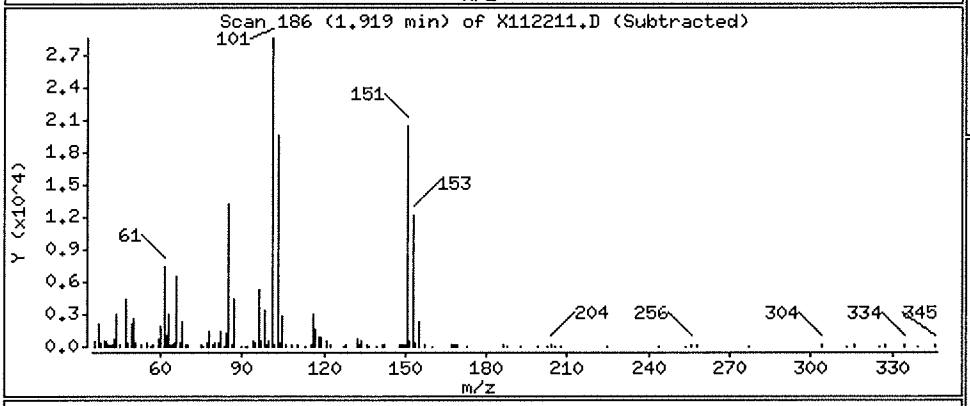
Column phase: DB624

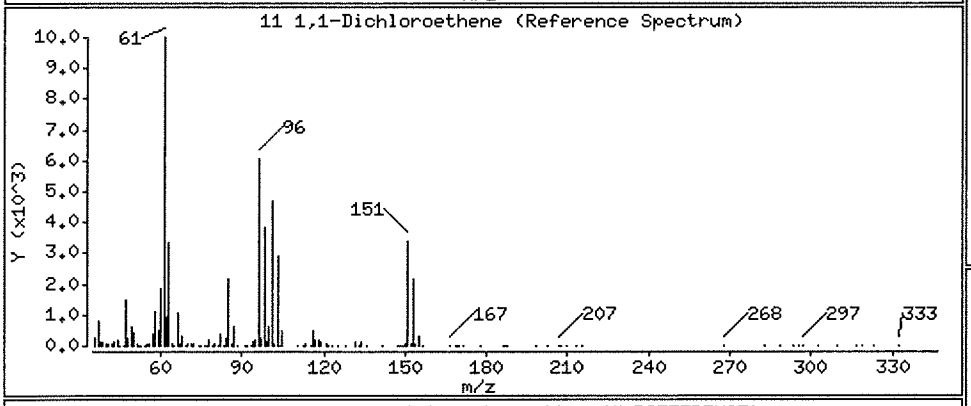
Column diameter: 0.18

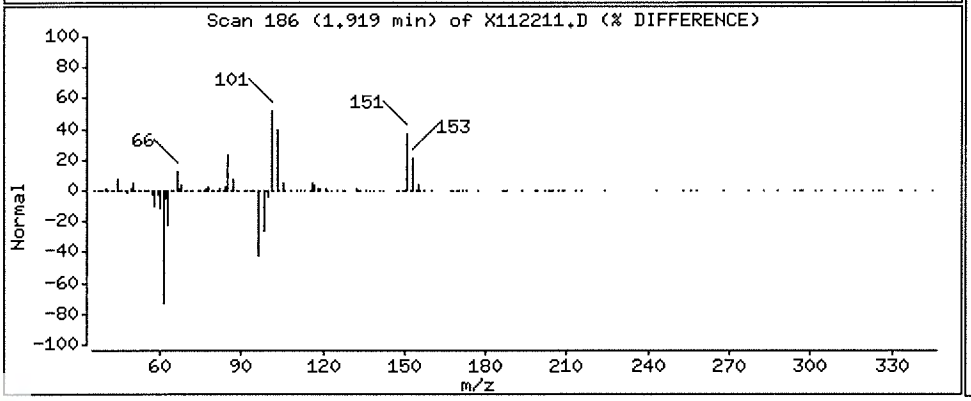
11 1,1-Dichloroethene

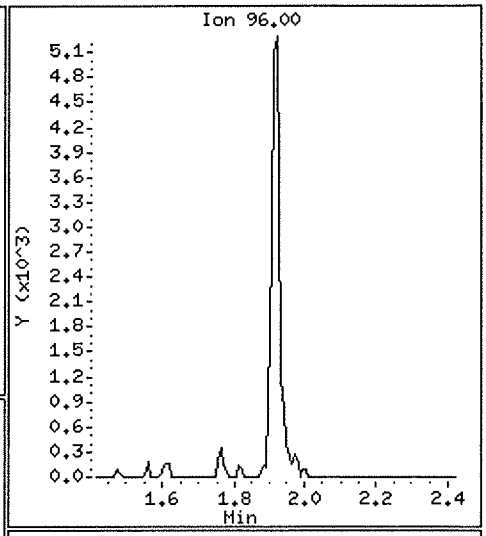
Concentration: 2.14 ug/l

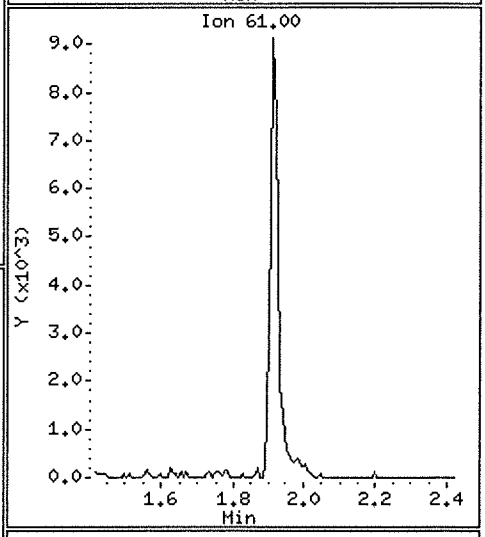


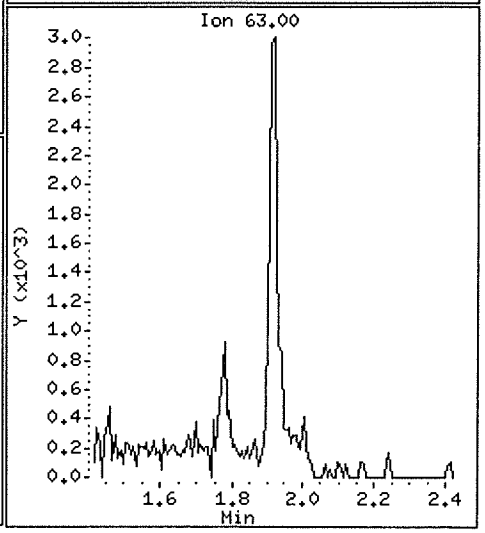












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112211.D

Date : 23-NOV-2020 14:01

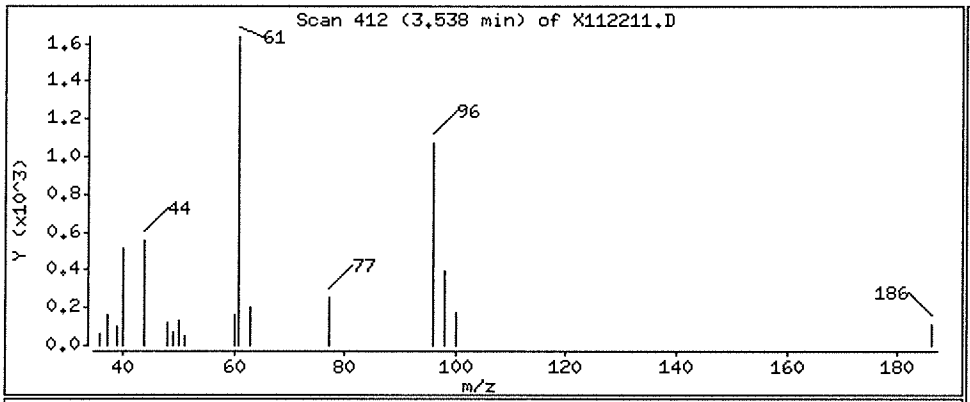
Client ID: HS20110527-13 Instrument: voa6.i

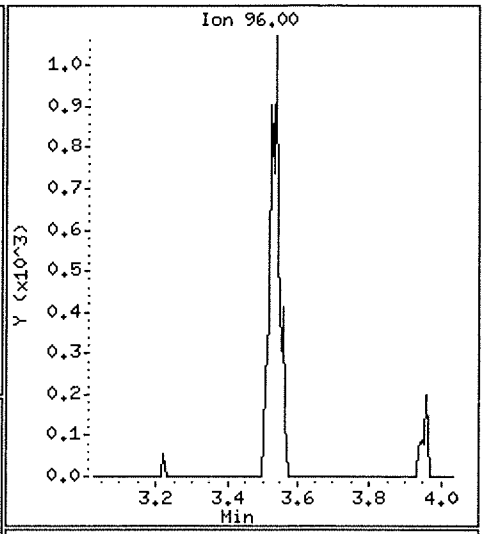
Sample Info: HS20110527-13;HS20110527-13;;;

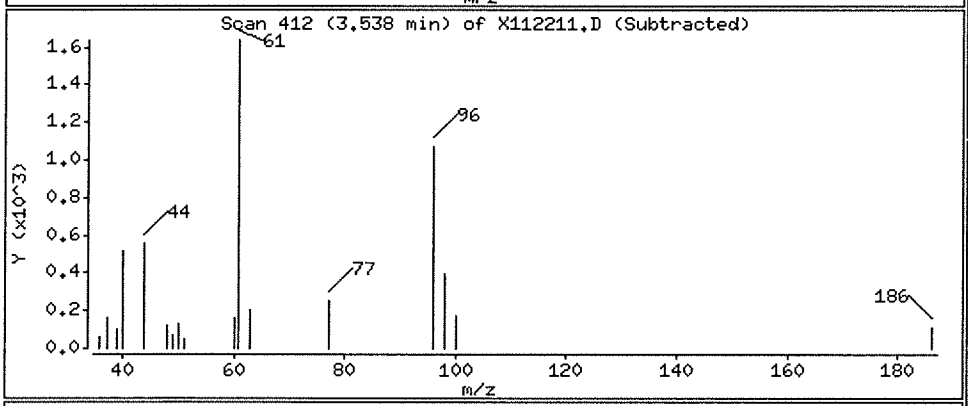
Purge Volume: 5.0 Operator: PC

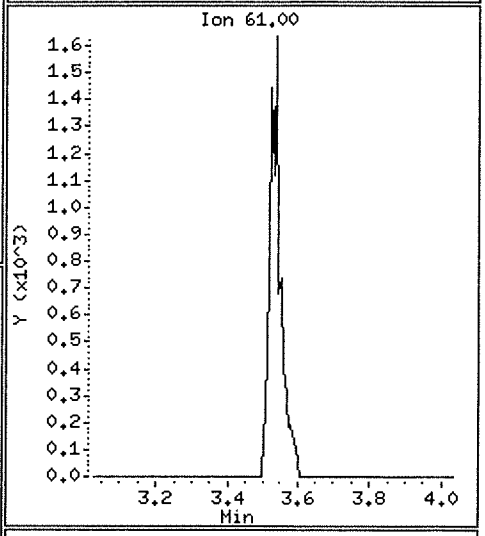
Column phase: DB624 Column diameter: 0.18

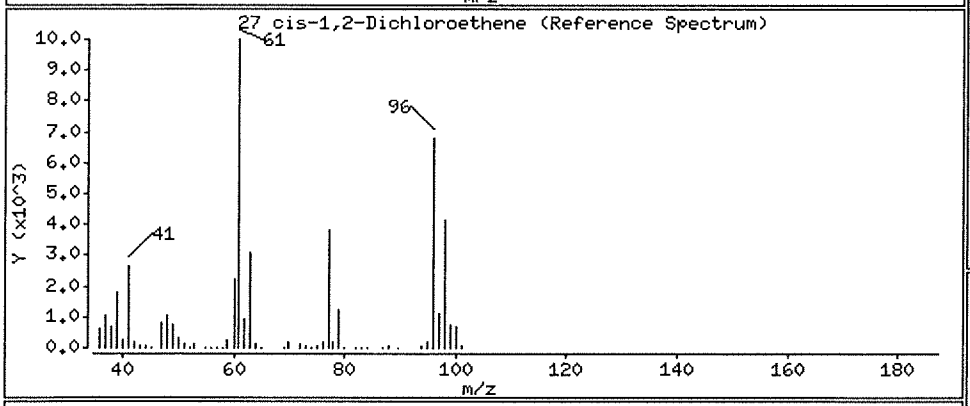
27 cis-1,2-Dichloroethene Concentration: 0.64 ug/l

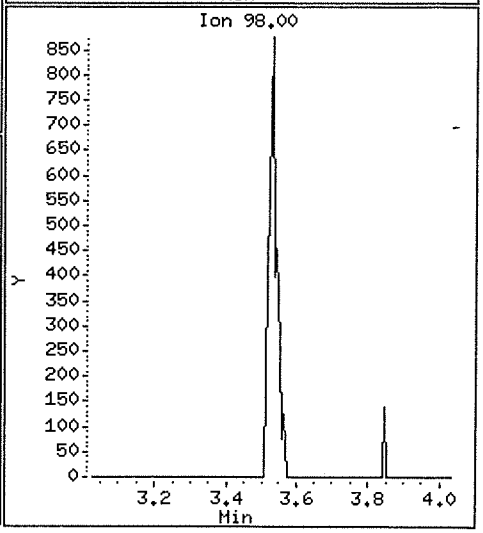


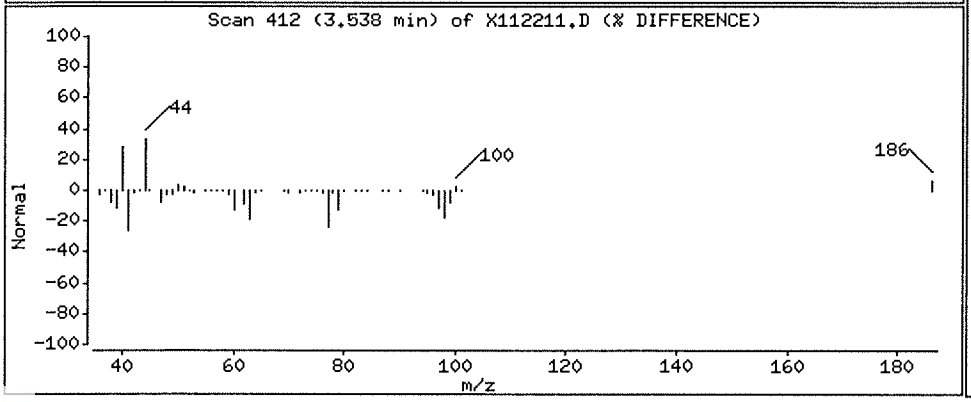












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112211.D

Date : 23-NOV-2020 14:01

Client ID: HS20110527-13

Instrument: voa6.i

Sample Info: HS20110527-13;HS20110527-13;;;

Purge Volume: 5.0

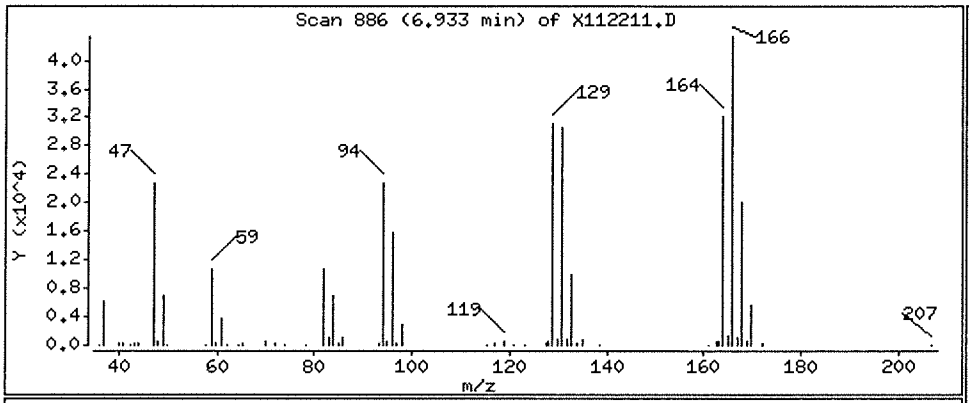
Operator: PC

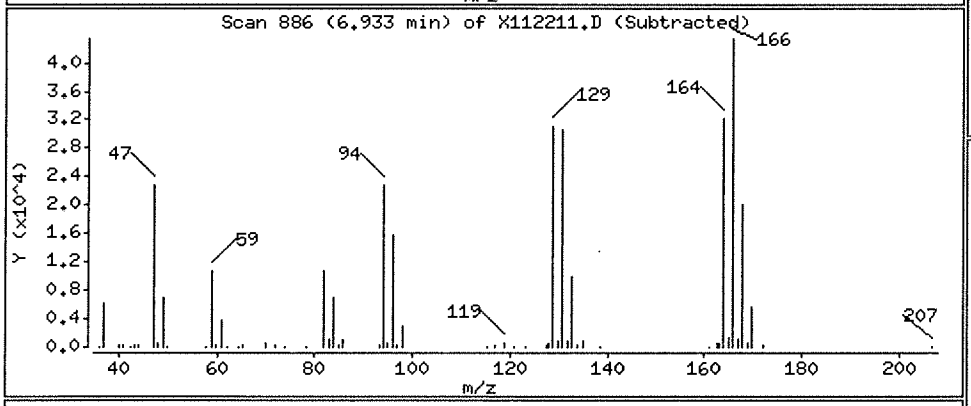
Column phase: DB624

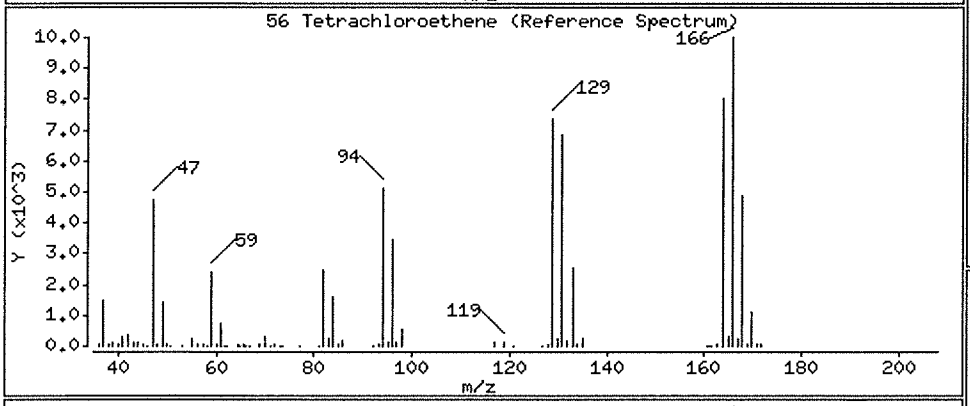
Column diameter: 0.18

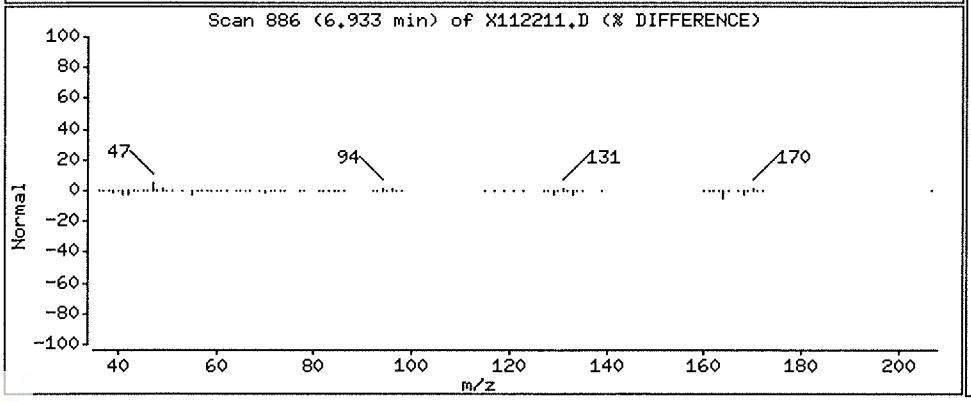
56 Tetrachloroethene

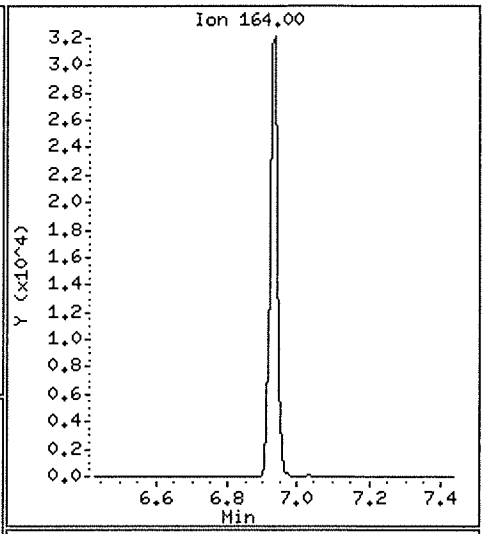
Concentration: 22.97 ug/l

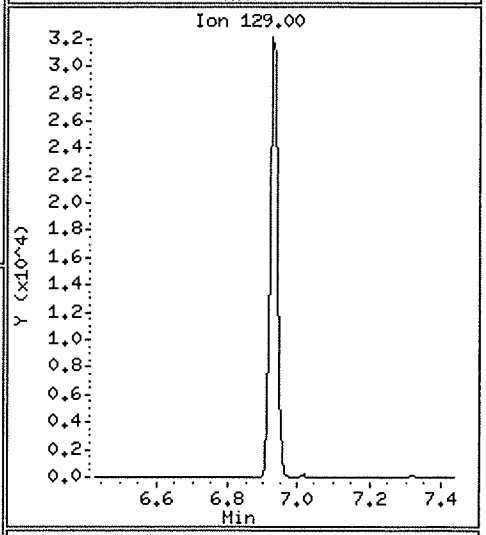


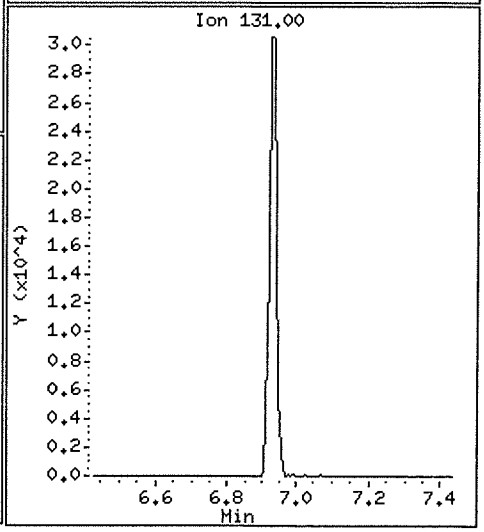












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112211.D Page 7

Date : 23-NOV-2020 14:01

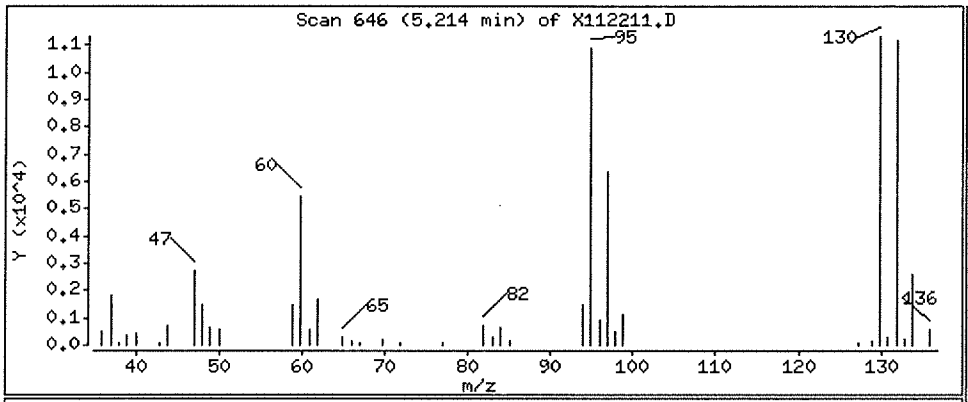
Client ID: HS20110527-13 Instrument: voa6.i

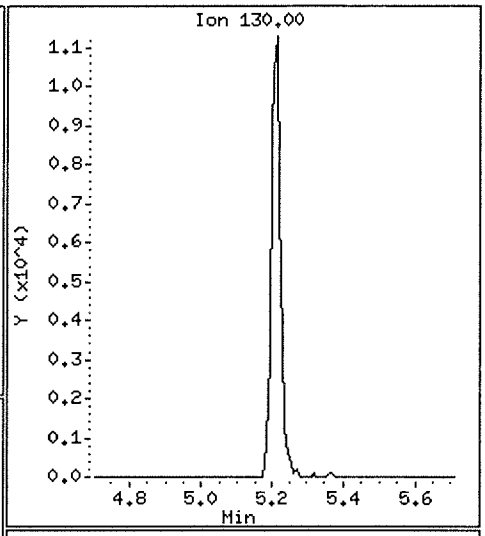
Sample Info: HS20110527-13;HS20110527-13;;;

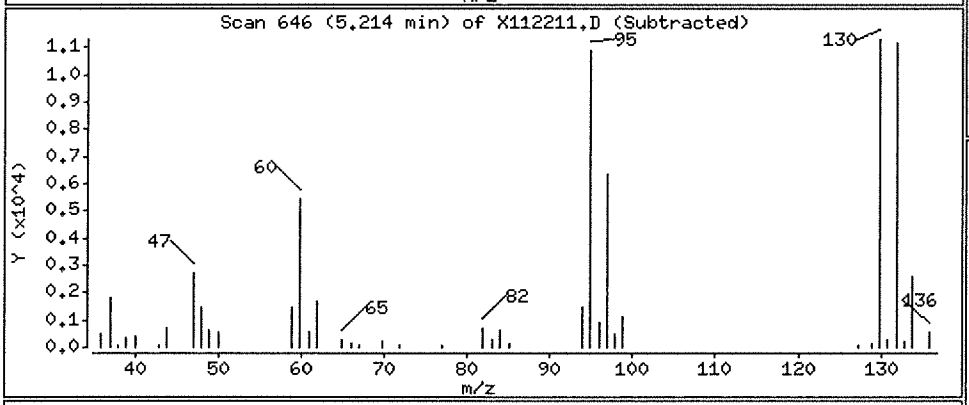
Purge Volume: 5.0 Operator: PC

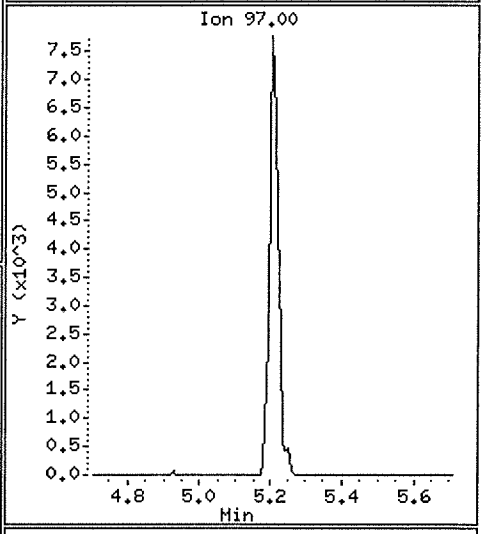
Column phase: DB624 Column diameter: 0.18

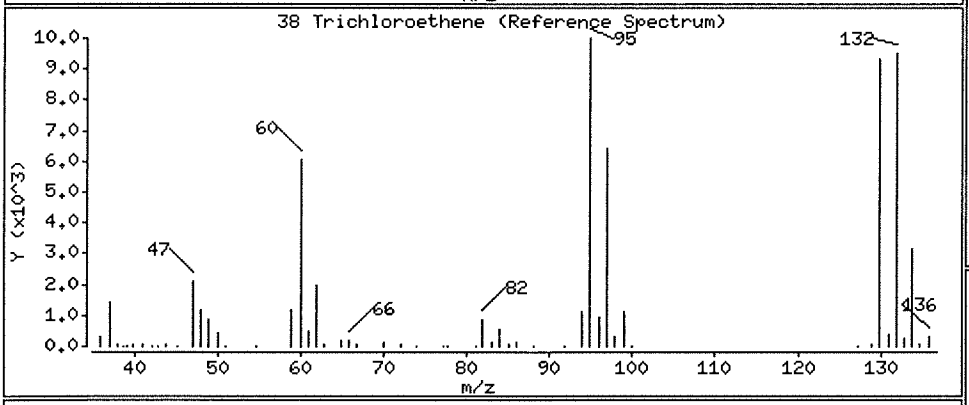
38 Trichloroethene Concentration: 7.74 ug/l

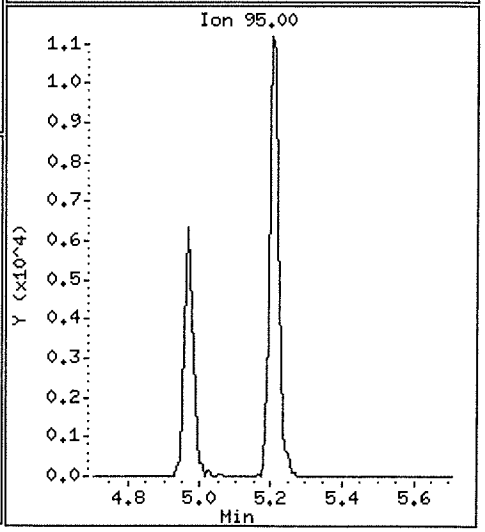


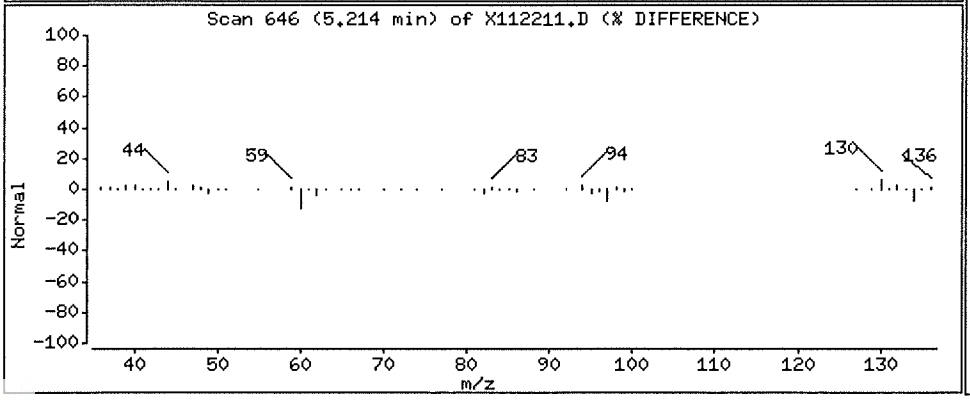












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112212.D Page 1
Report Date: 18-Dec-2020 15:47

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112212.D
Lab Smp Id: HS20110527-14 Client Smp ID: HS20110527-14
Inj Date : 23-NOV-2020 14:22
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-14;HS20110527-14;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:43 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

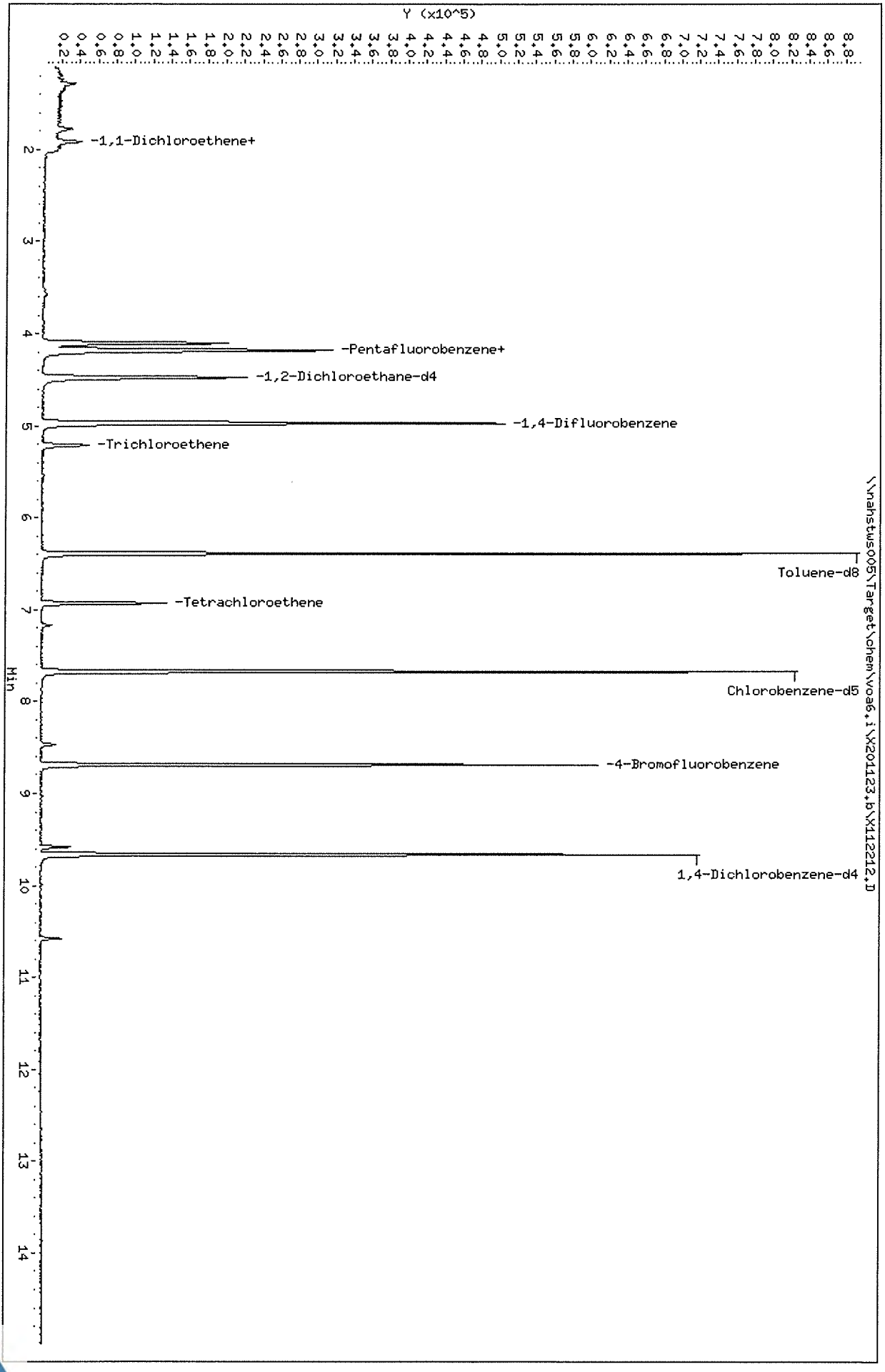
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	218089	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	374558	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	327795	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	132611	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	155074	43.2594	43.25
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	139190	44.6757	44.67
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	128467	45.1559	45.15
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	461028	52.1169	52.11
138 Freon TF	101	1.918	1.919	(0.459)	7694	1.89154	1.89(a)
11 1,1-Dichloroethene	96	1.911	1.919	(0.457)	3132	0.74056	0.74(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	22166	10.9677	10.96
38 Trichloroethene	130	5.206	5.207	(1.048)	14168	5.43772	5.43

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112212.D
Date : 23-NOV-2020 14:22
Client ID: HS20110527-14
Sample Info: HS20110527-14;HS20110527-14;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112212.D

Date : 23-NOV-2020 14:22

Client ID: HS20110527-14

Instrument: voa6.i

Sample Info: HS20110527-14;HS20110527-14;;;

Purge Volume: 5.0

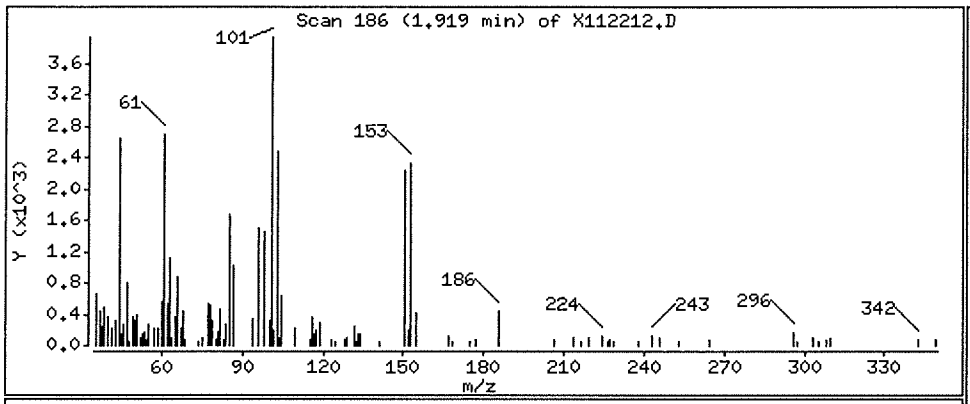
Operator: PC

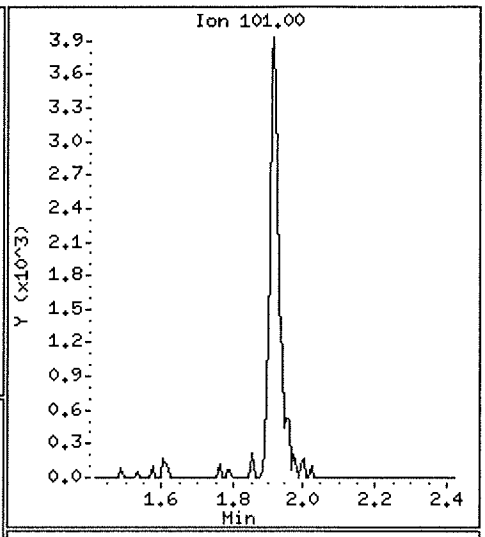
Column phase: DB624

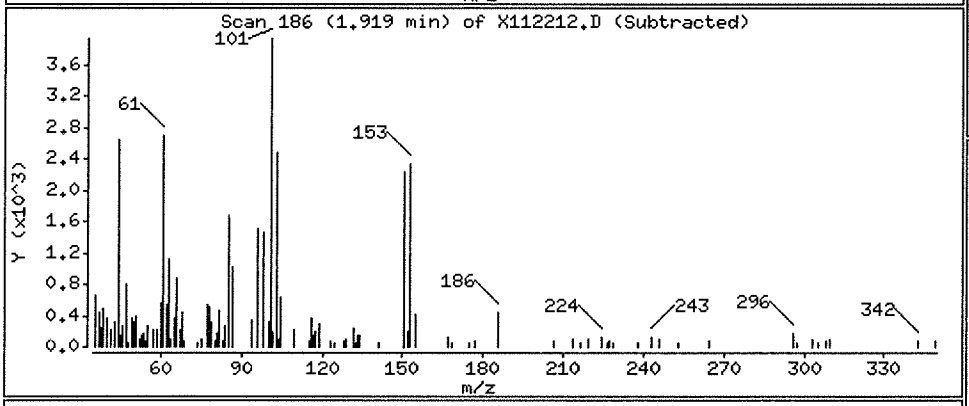
Column diameter: 0.18

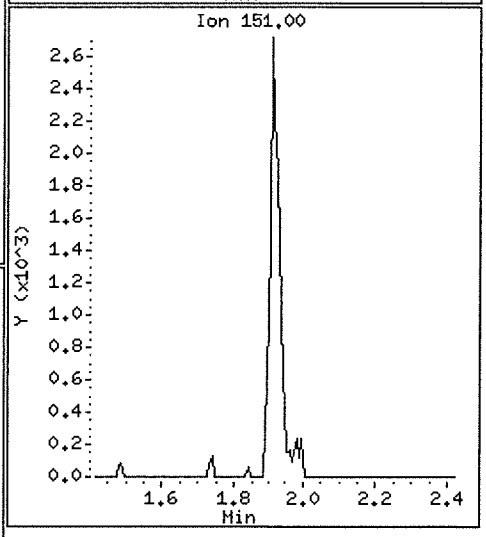
138 Freon TF

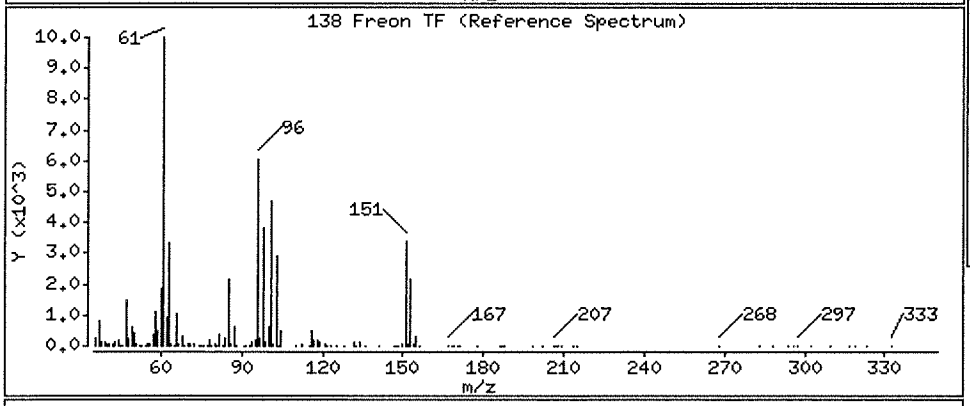
Concentration: 1.89 ug/l

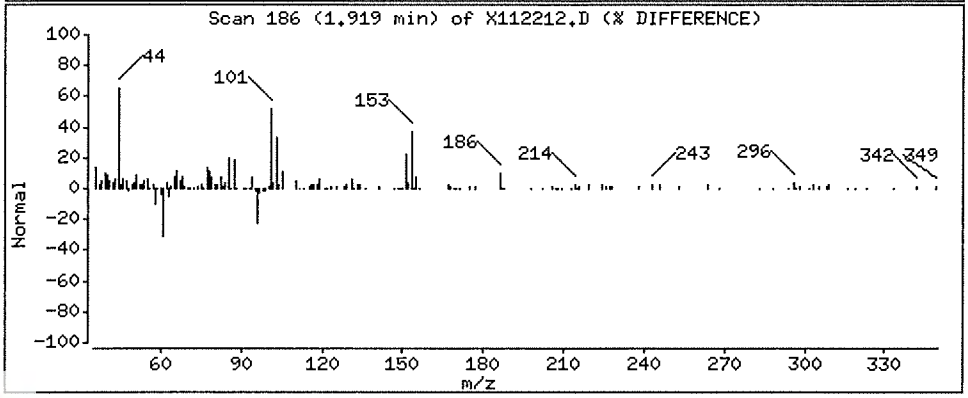












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112212.D

Date : 23-NOV-2020 14:22

Client ID: HS20110527-14

Instrument: voa6.i

Sample Info: HS20110527-14;HS20110527-14;;;

Purge Volume: 5.0

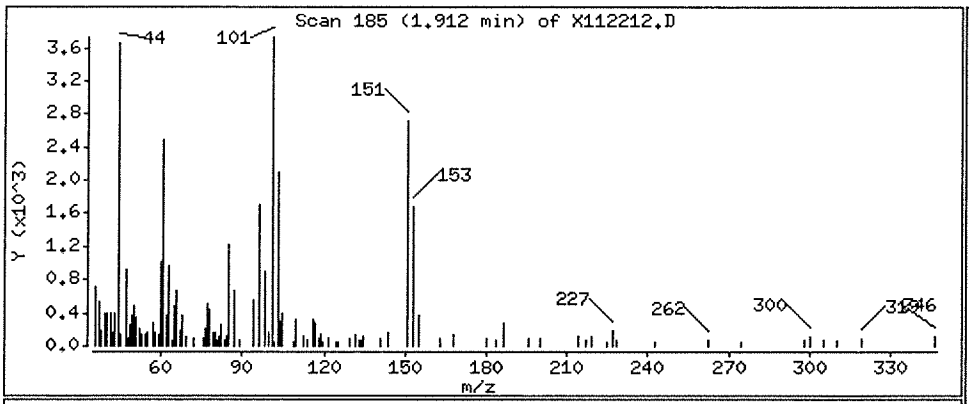
Operator: PC

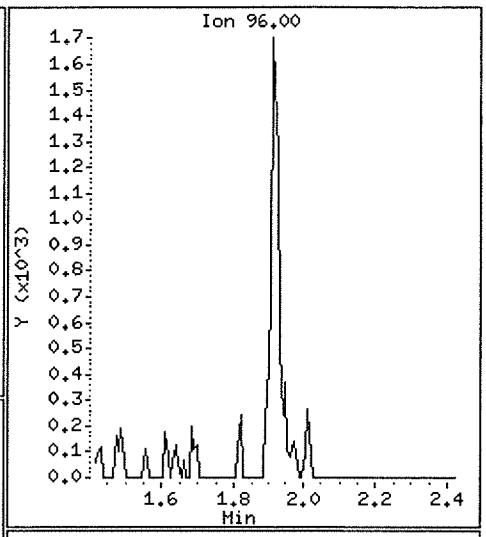
Column phase: DB624

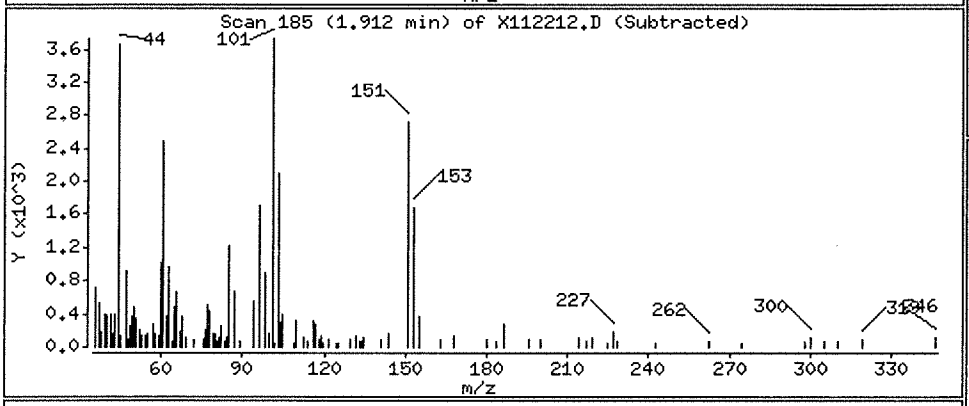
Column diameter: 0.18

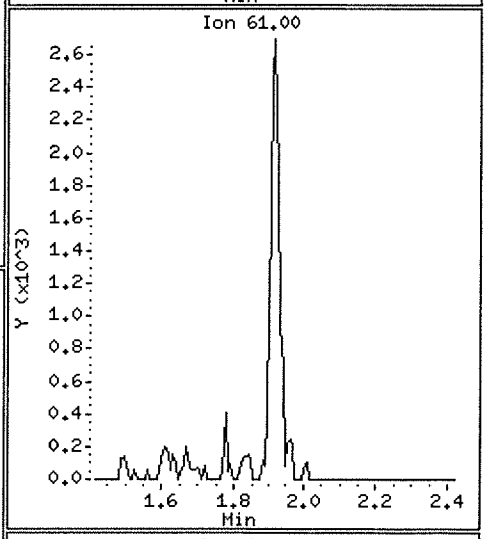
11 1,1-Dichloroethene

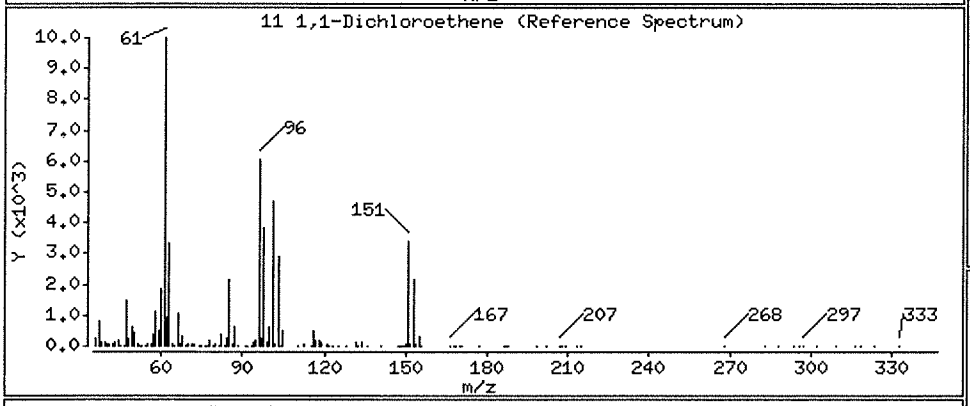
Concentration: 0.74 ug/l

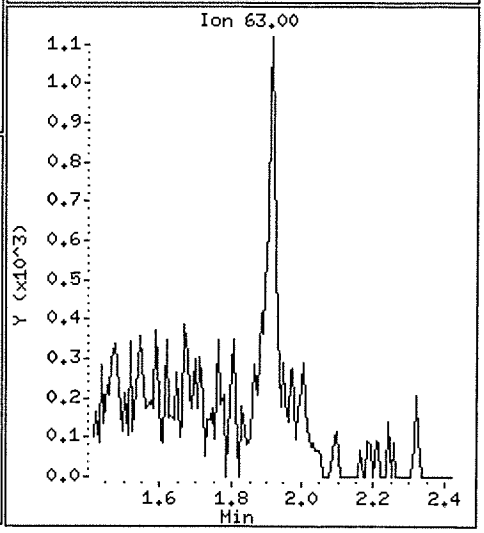


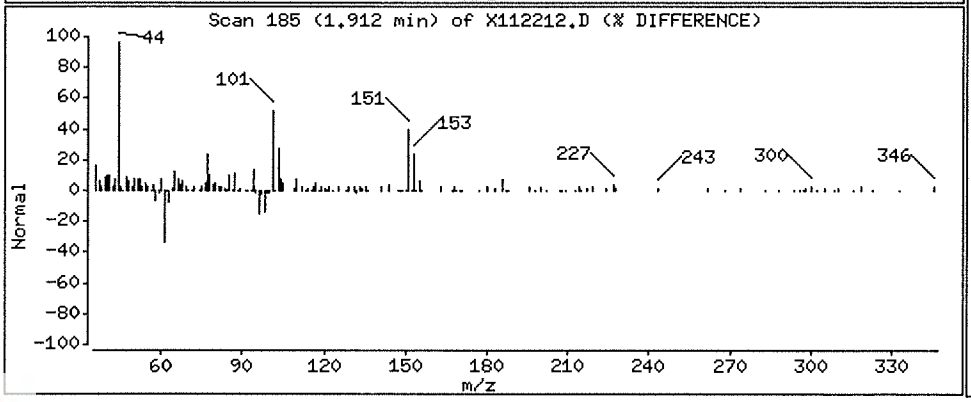












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112212.D Page 5

Date : 23-NOV-2020 14:22

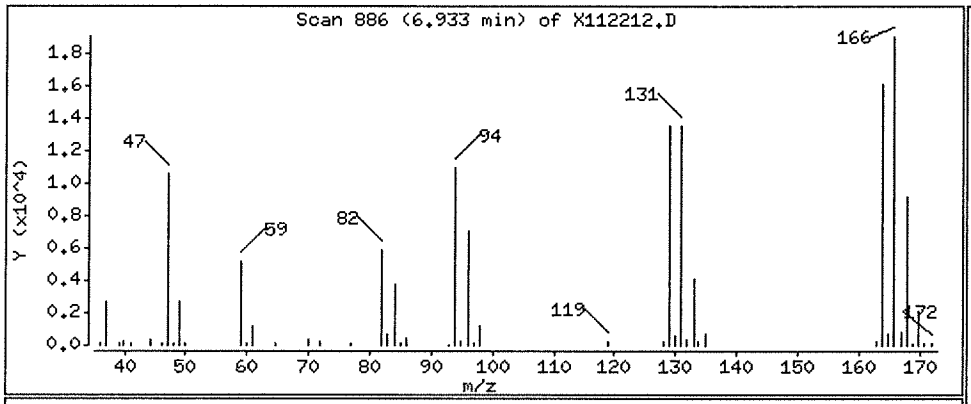
Client ID: HS20110527-14 Instrument: voa6.i

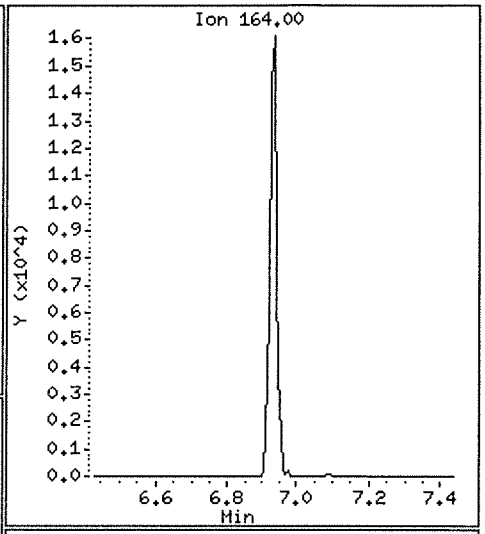
Sample Info: HS20110527-14;HS20110527-14;;;

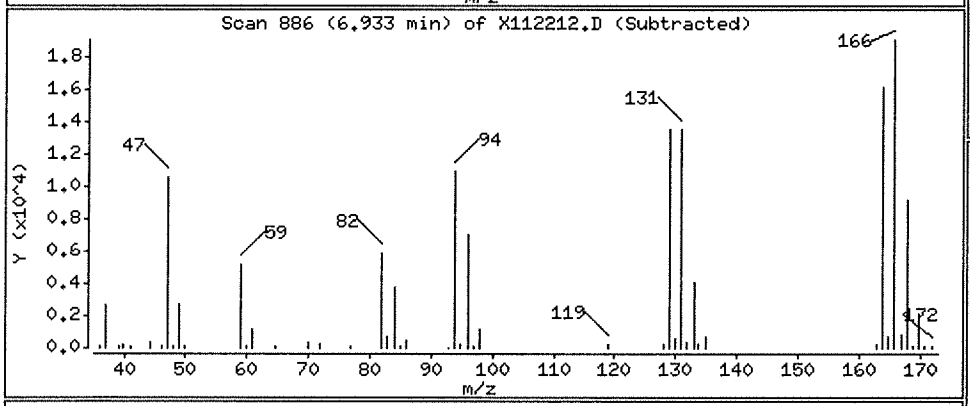
Purge Volume: 5.0 Operator: PC

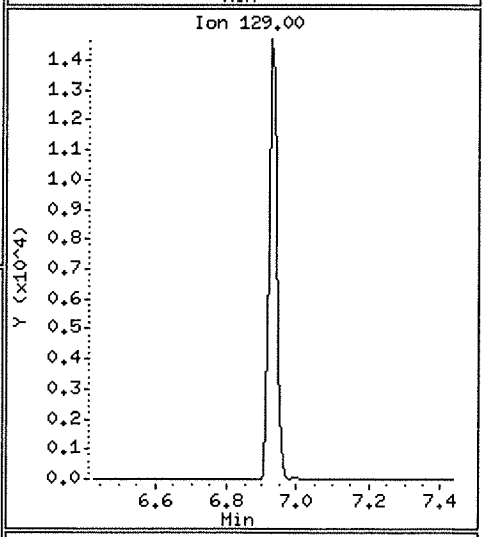
Column phase: DB624 Column diameter: 0.18

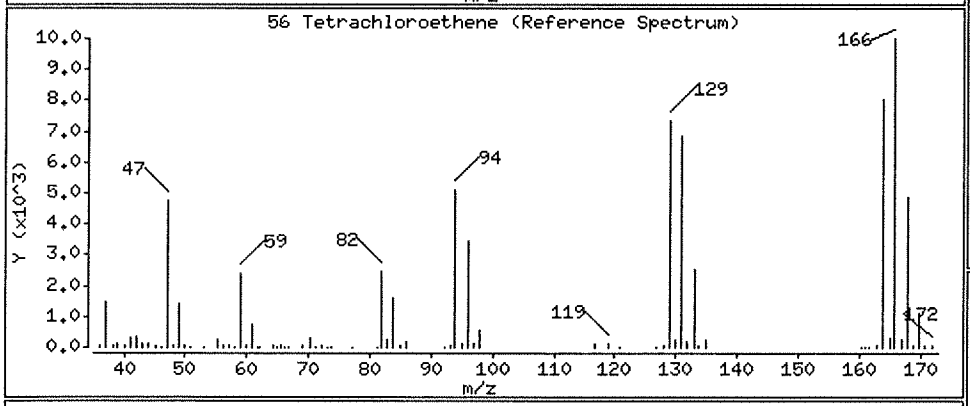
56 Tetrachloroethene Concentration: 10.96 ug/l

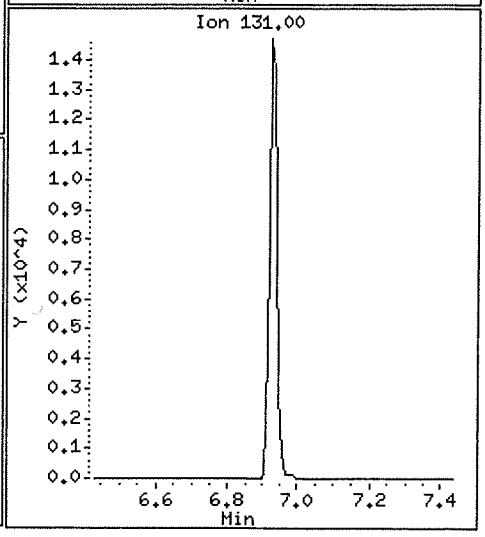


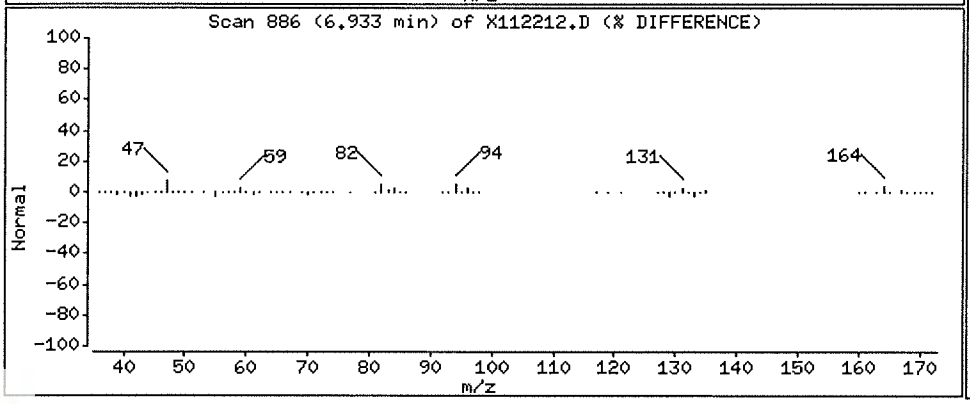












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112212.D

Date : 23-NOV-2020 14:22

Client ID: HS20110527-14

Instrument: voa6.i

Sample Info: HS20110527-14;HS20110527-14;;;

Purge Volume: 5.0

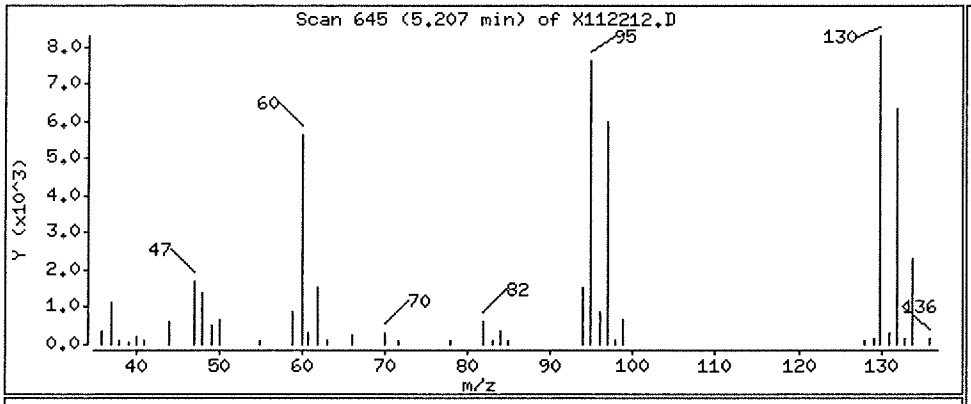
Operator: PC

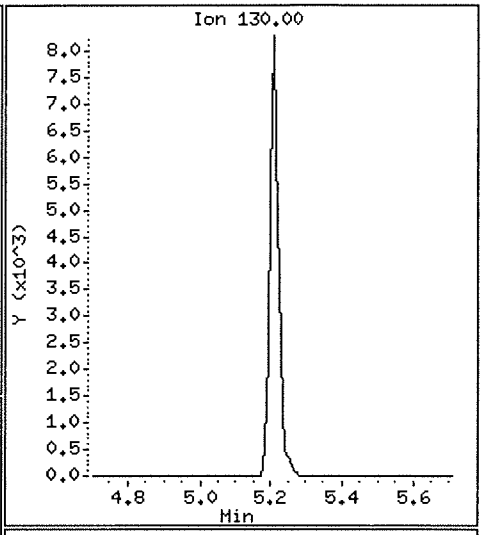
Column phase: DB624

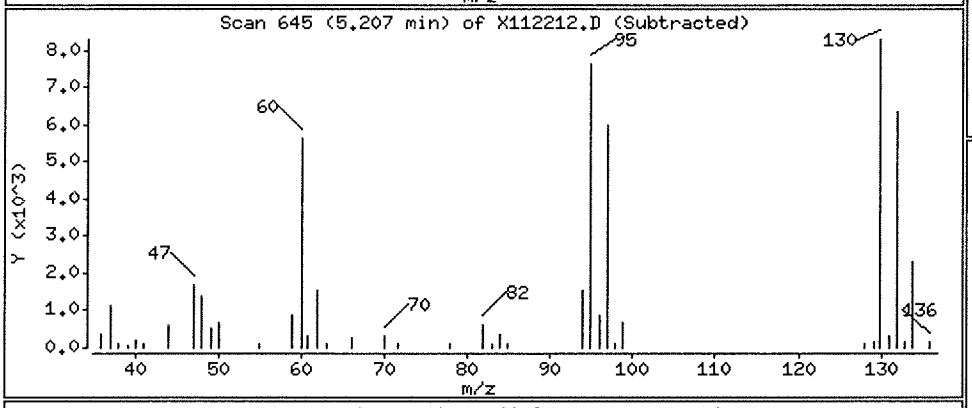
Column diameter: 0.18

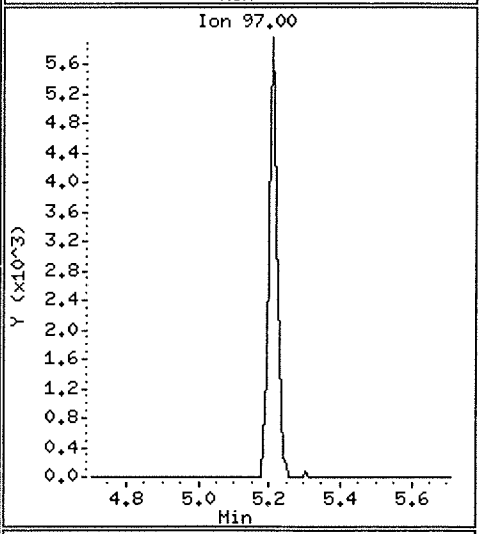
38 Trichloroethene

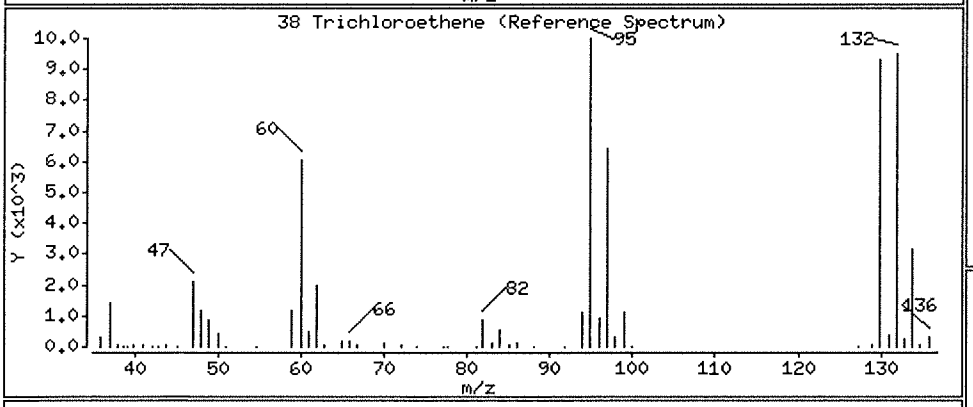
Concentration: 5.43 ug/l

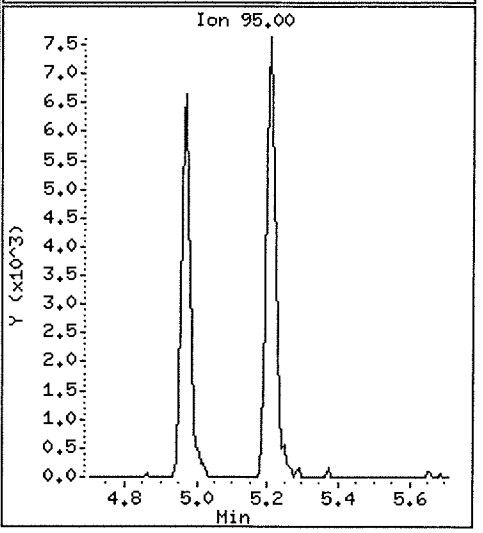


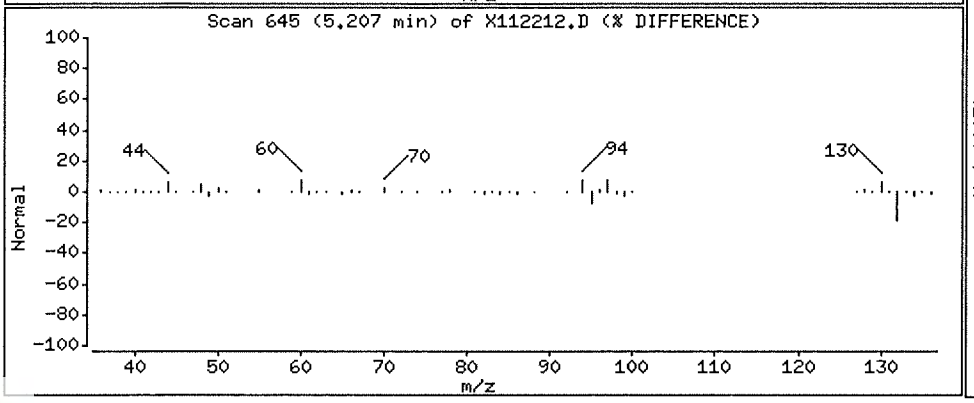












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112213.D Page 1
Report Date: 18-Dec-2020 15:47

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112213.D
Lab Smp Id: HS20110527-15 Client Smp ID: HS20110527-15
Inj Date : 23-NOV-2020 14:43
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-15;HS20110527-15;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:43 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

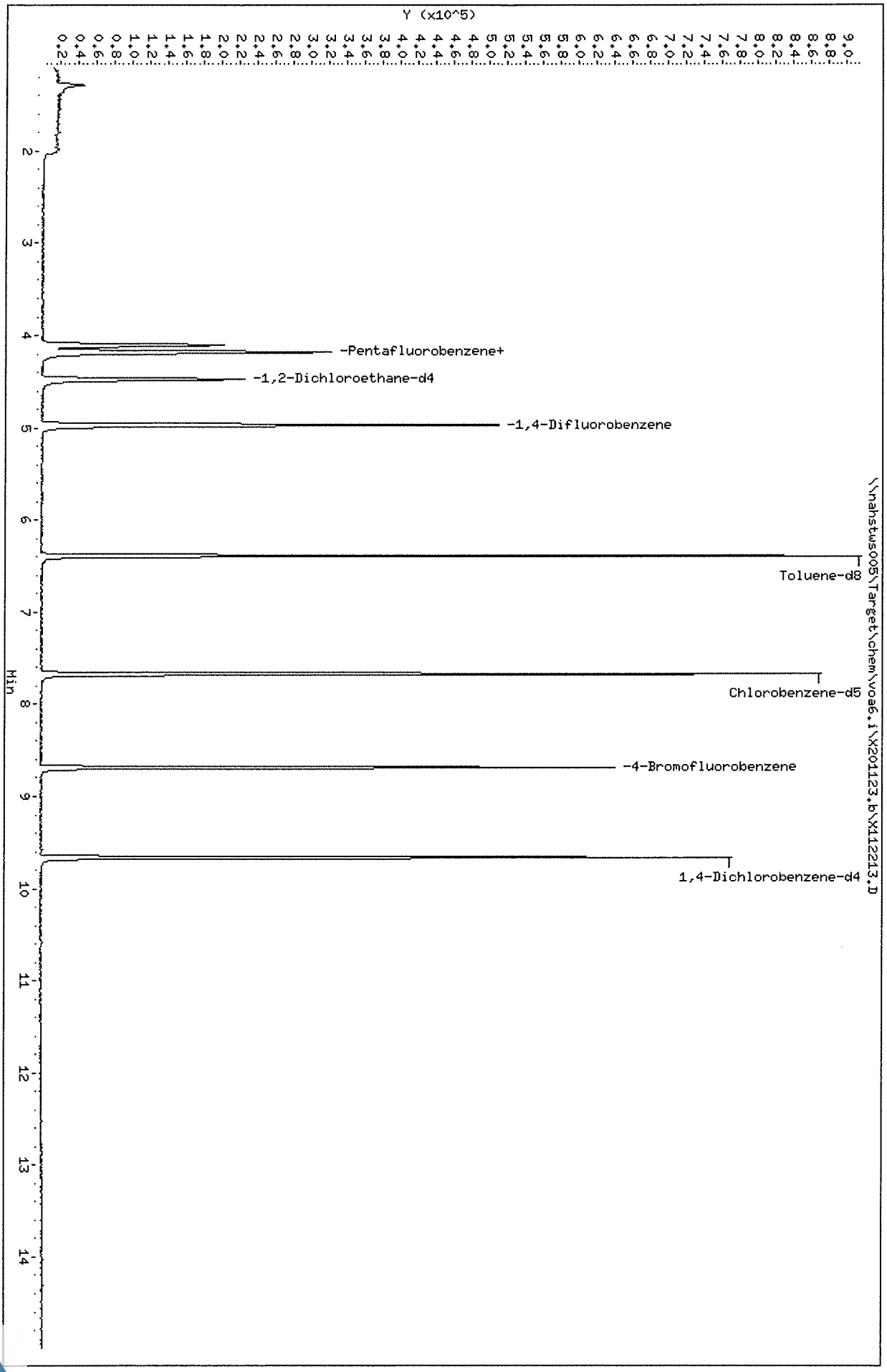
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	217588	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	384118	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	341522	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	141150	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	157590	44.0446	44.04
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	145403	44.7918	44.79
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	131094	46.1567	46.15
$	48 Toluene-d8	98	6.388	6.388	(0.833)	475353	51.5764	51.57

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112213.D
Date : 23-NOV-2020 14:43
Client ID: HS20110527-15
Sample Info: HS20110527-15;HS20110527-15;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112214.D Page 1
Report Date: 18-Dec-2020 15:47

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112214.D
Lab Smp Id: HS20110527-16 Client Smp ID: HS20110527-16
Inj Date : 23-NOV-2020 15:04
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-16;HS20110527-16;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:43 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

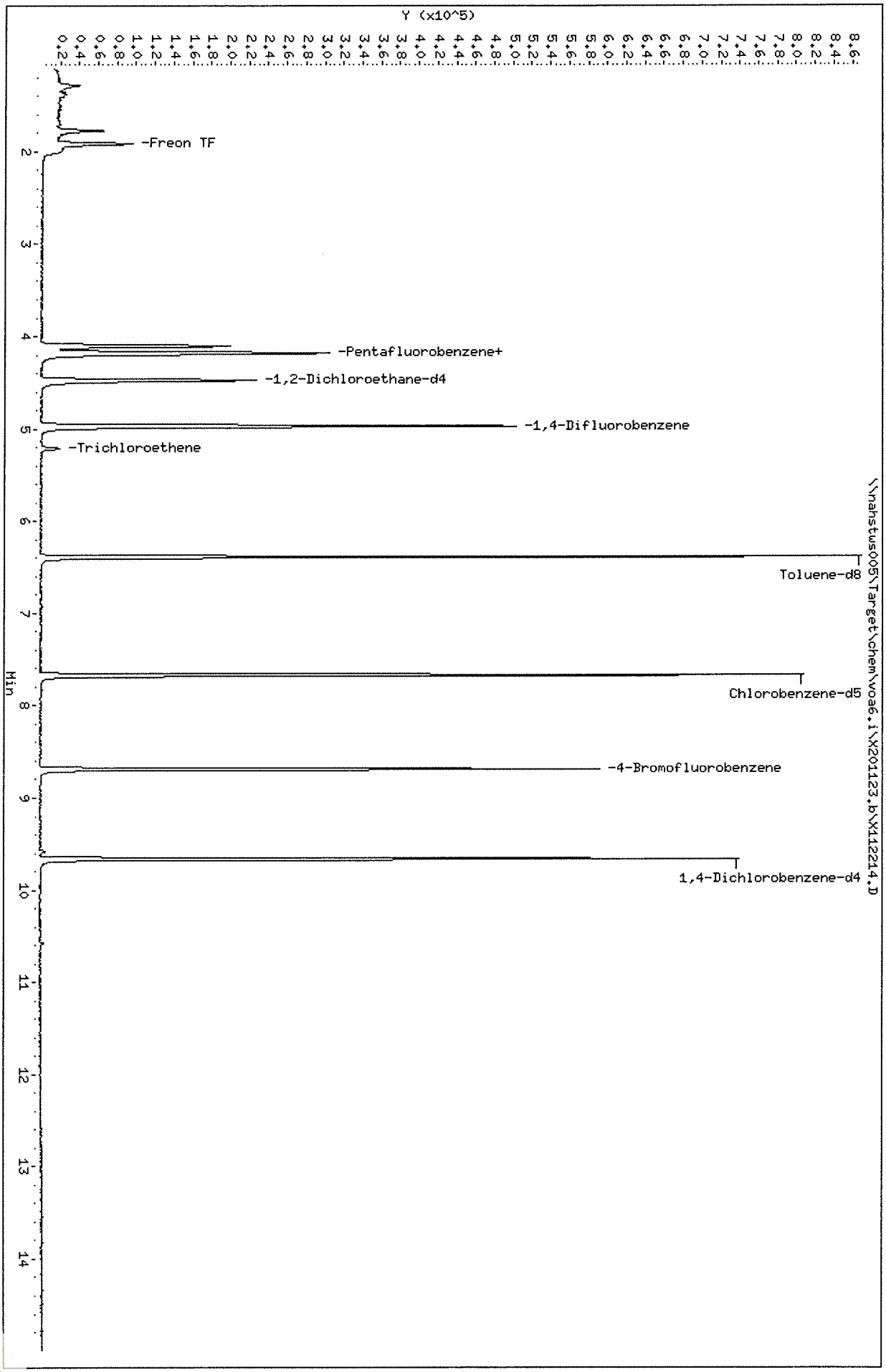
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	217898	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	373756	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	322837	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	136314	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	151401	42.2931	42.29
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	136355	44.4425	44.44
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	125222	44.0828	44.08
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	456002	52.3404	52.34
138 Freon TF	101	1.919	1.919	(0.459)	29706	7.30950	7.30
38 Trichloroethene	130	5.206	5.207	(1.048)	4520	1.73851	1.73(a)

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112214.D
Date : 23-NOV-2020 15:04
Client ID: HS20110527-16
Sample Info: HS20110527-16;HS20110527-16;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112214.D

Date : 23-NOV-2020 15:04

Client ID: HS20110527-16

Instrument: voa6.i

Sample Info: HS20110527-16;HS20110527-16;;;

Purge Volume: 5.0

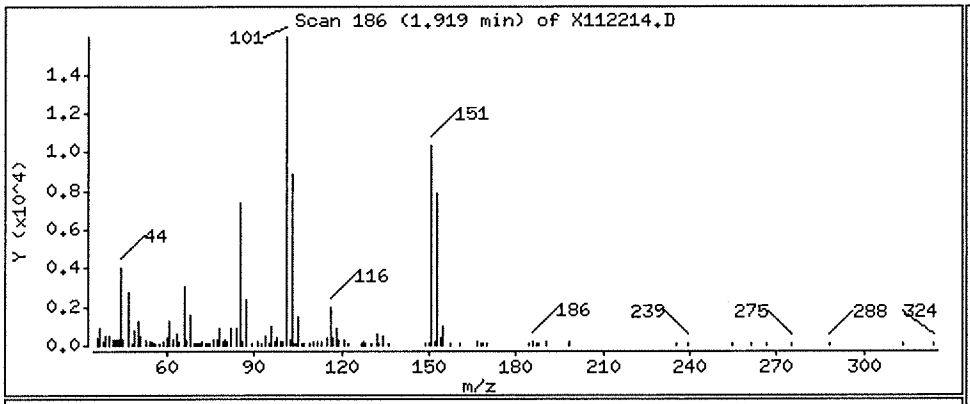
Operator: PC

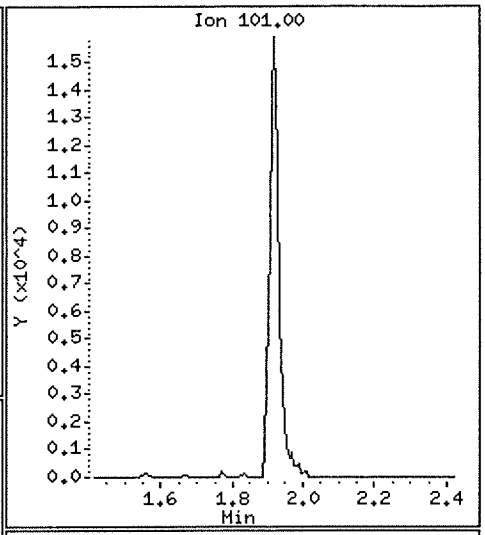
Column phase: DB624

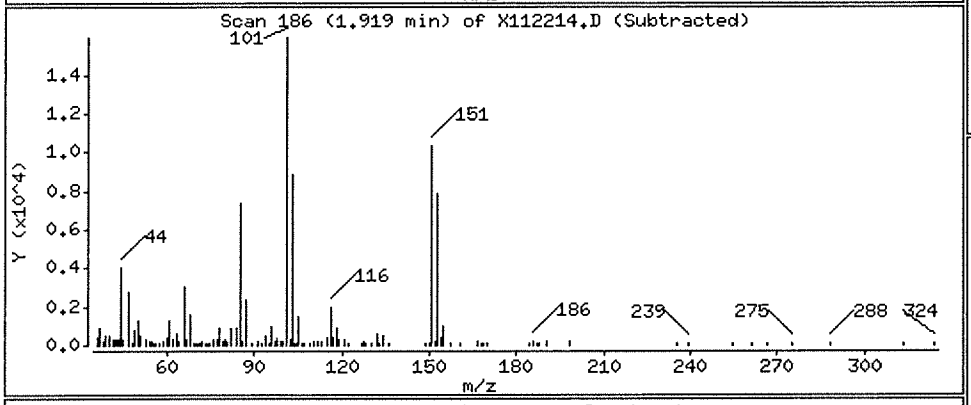
Column diameter: 0.18

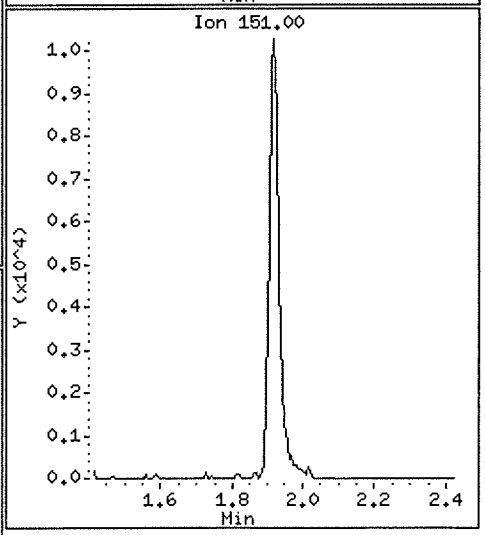
138 Freon TF

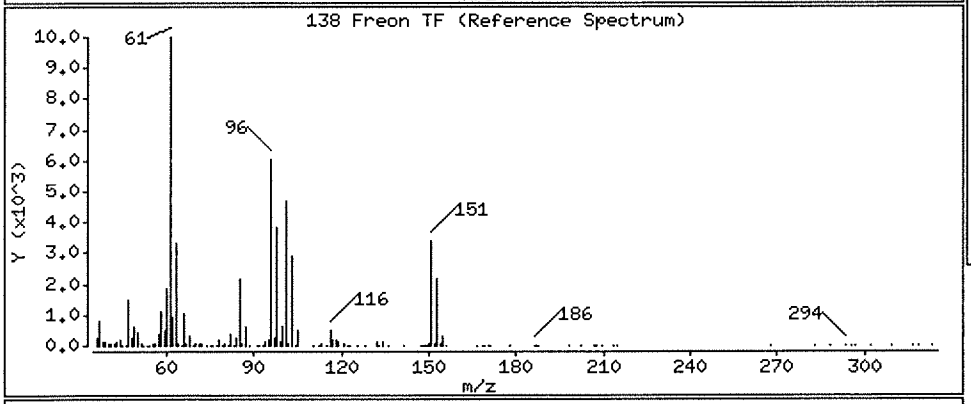
Concentration: 7.30 ug/l

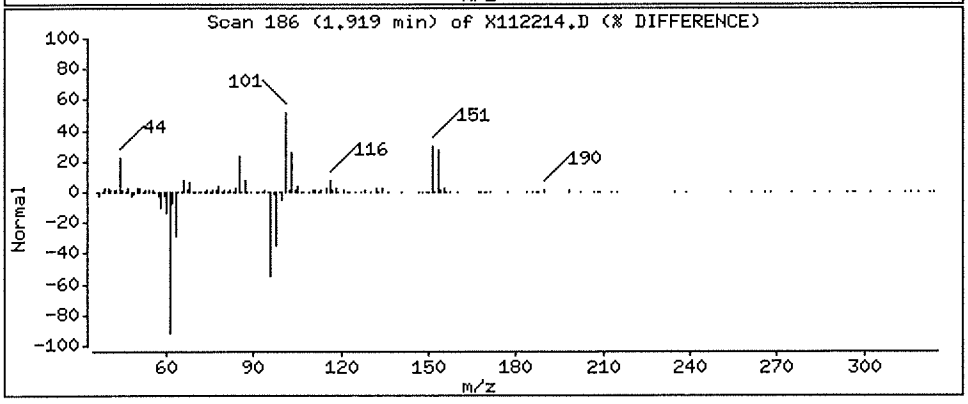












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112214.D

Date : 23-NOV-2020 15:04

Client ID: HS20110527-16

Instrument: voa6.i

Sample Info: HS20110527-16;HS20110527-16;;;

Purge Volume: 5.0

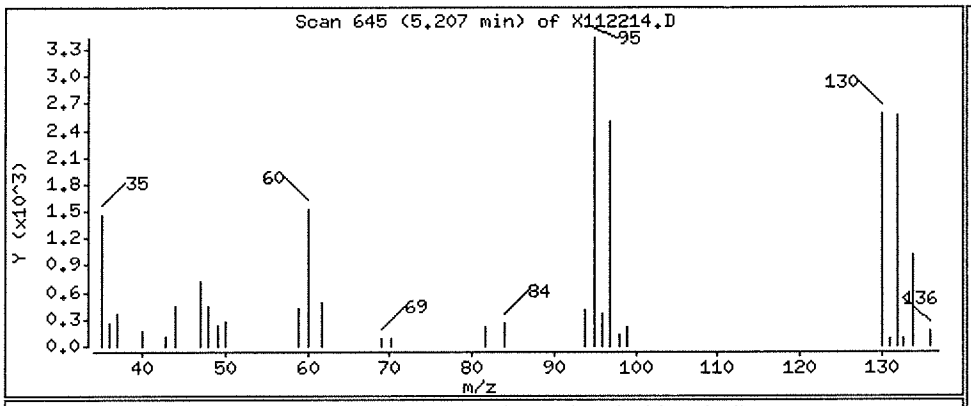
Operator: PC

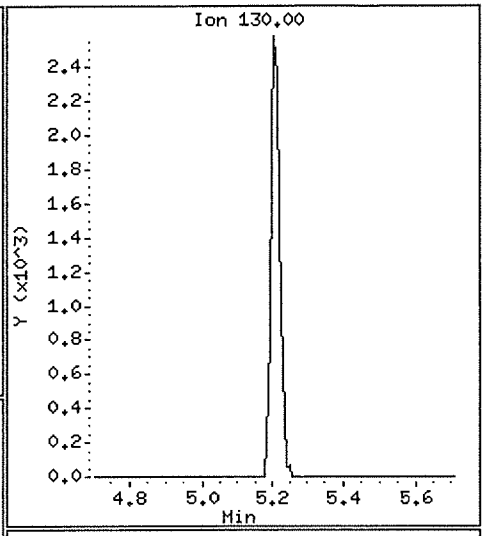
Column phase: DB624

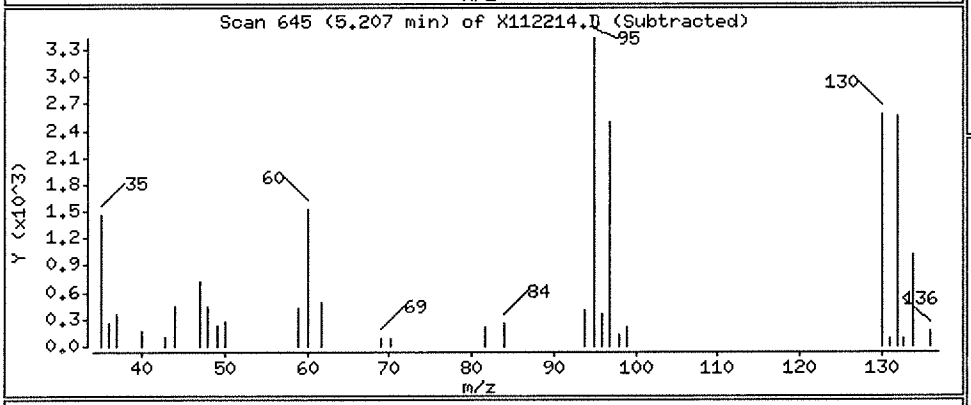
Column diameter: 0.18

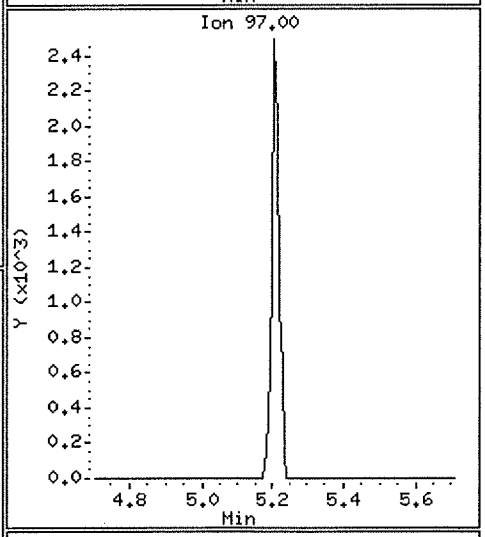
38 Trichloroethene

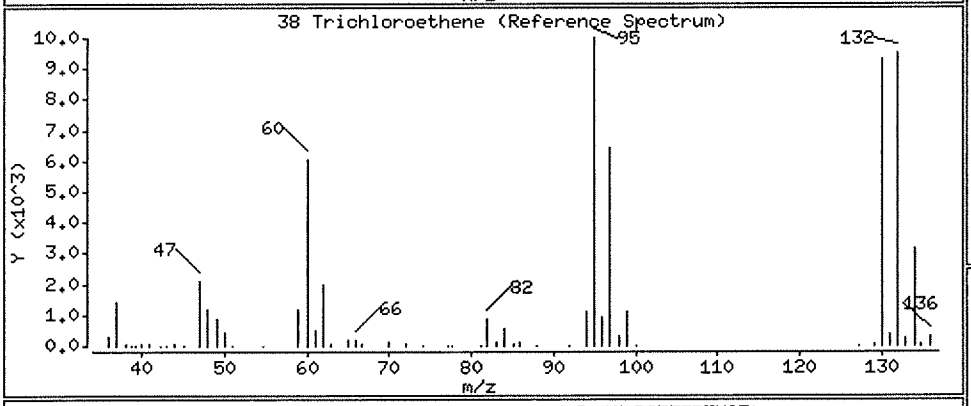
Concentration: 1.73 ug/l

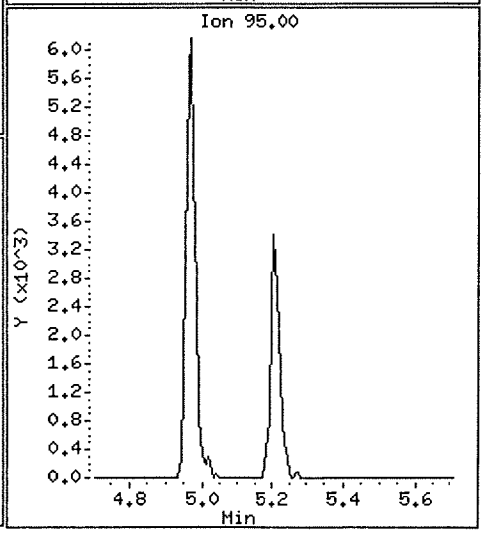


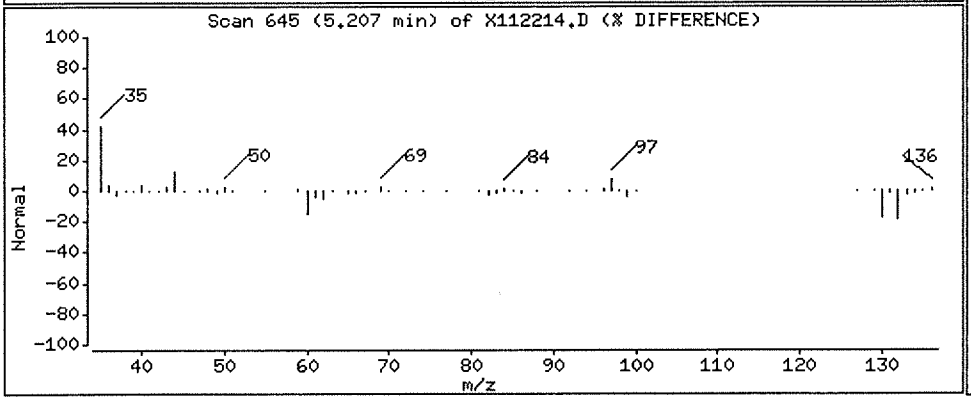












ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112215.D
Lab Smp Id: HS20110527-17 Client Smp ID: HS20110527-17
Inj Date : 23-NOV-2020 15:25
Operator : PC Inst ID: voa6.i
Smp Info : HS20110527-17;HS20110527-17;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:43 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	221772	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	376413	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	336303	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	142908	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	156260	42.8749	42.87
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	139294	43.5993	43.59
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	128152	44.3198	44.31
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	463711	51.0940	51.09
38 Trichloroethene	130	5.206	5.207	(1.048)	26230	10.0175	10.01

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112215.D

Date : 23-NOV-2020 15:25

Client ID: HS20110527-17

Instrument: voa6.i

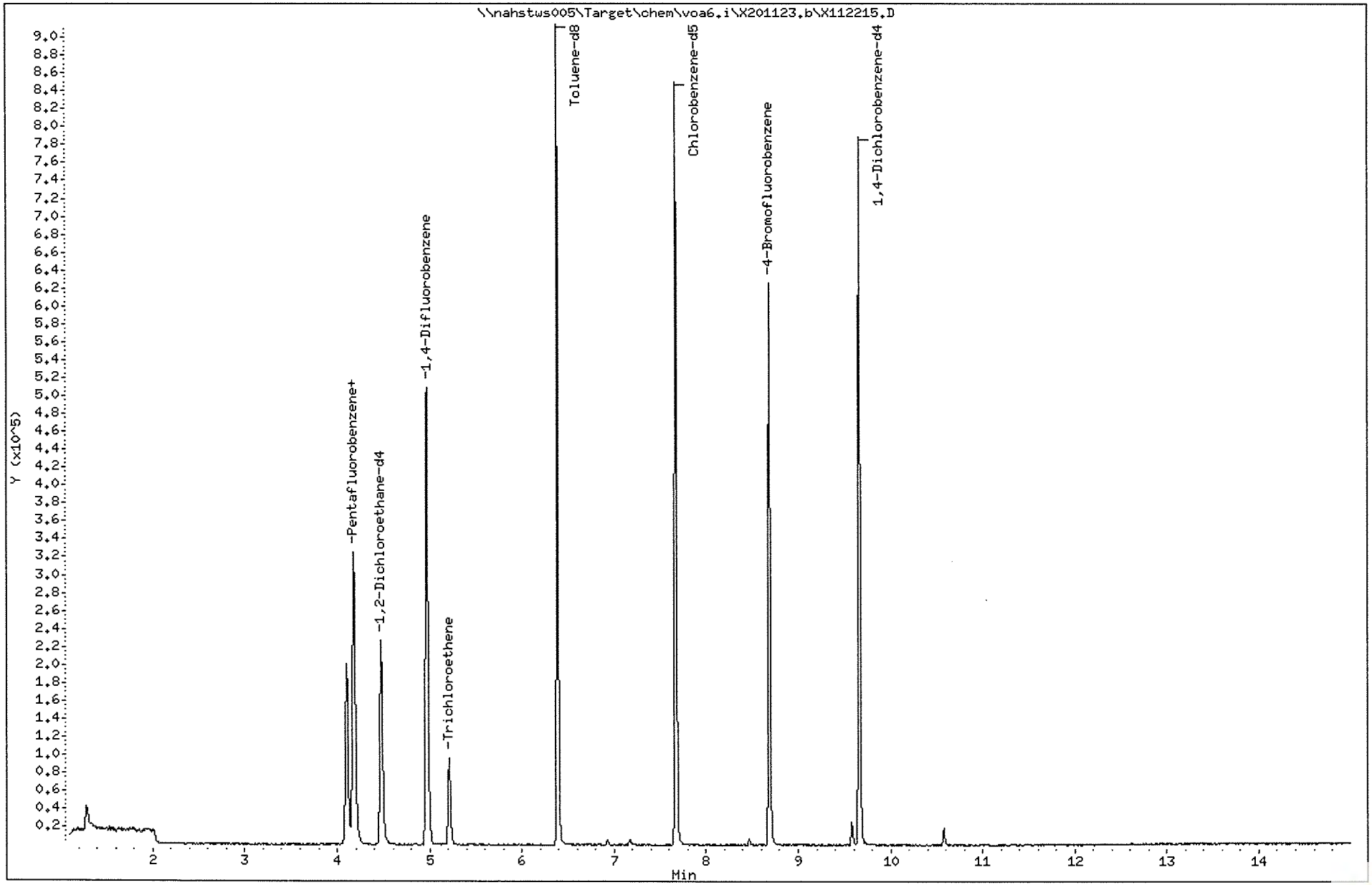
Sample Info: HS20110527-17;HS20110527-17;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112215.D

Date : 23-NOV-2020 15:25

Client ID: HS20110527-17

Instrument: voa6.i

Sample Info: HS20110527-17;HS20110527-17;;;

Purge Volume: 5.0

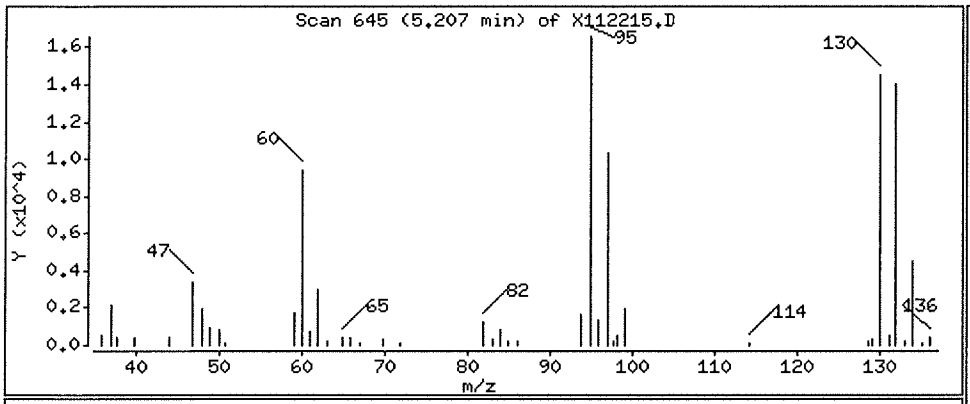
Operator: PC

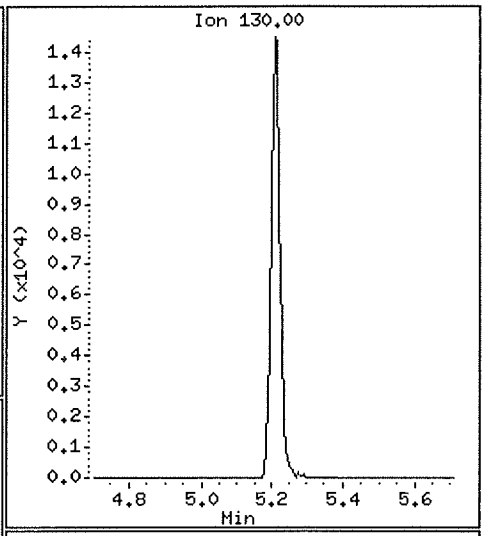
Column phase: DB624

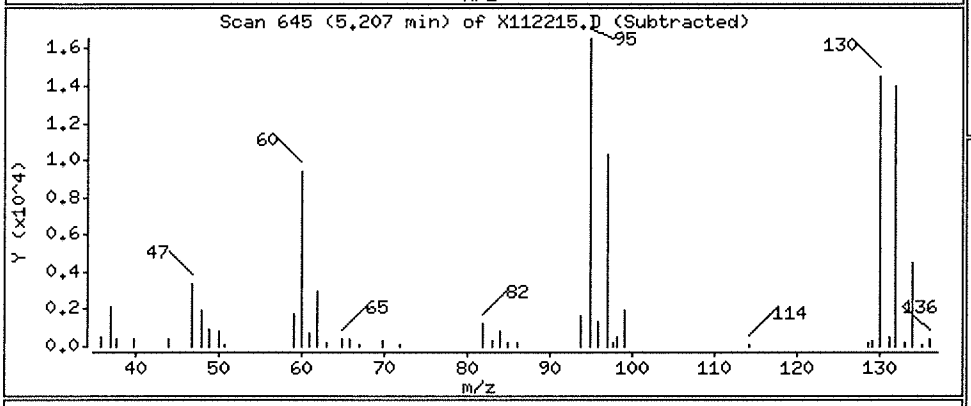
Column diameter: 0.18

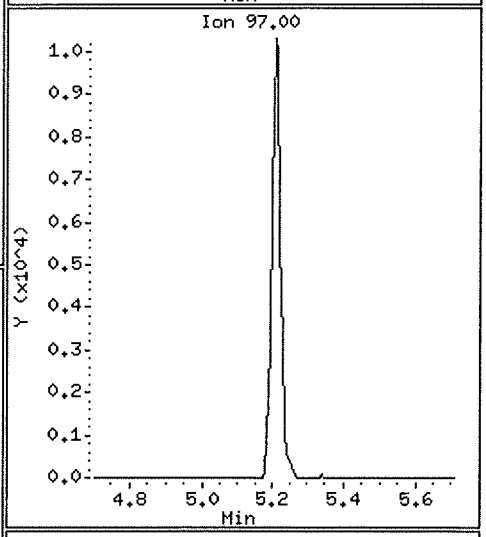
38 Trichloroethene

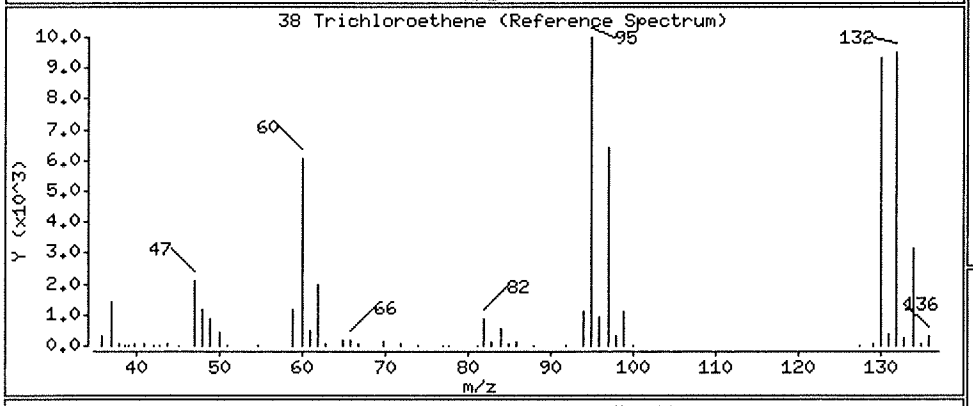
Concentration: 10.01 ug/l

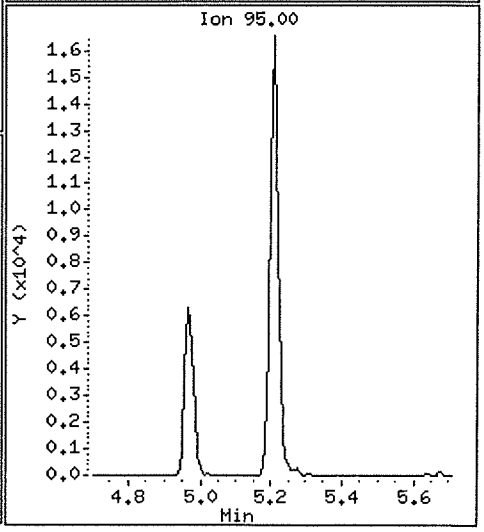


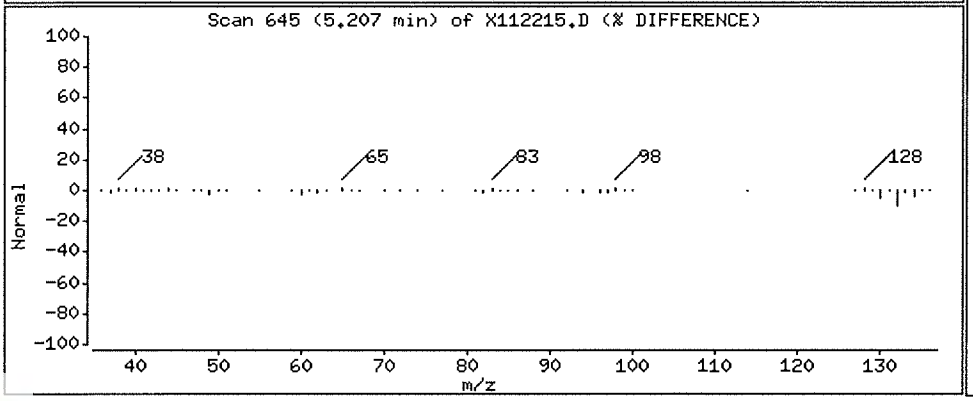












Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112221.D Page 1
Report Date: 18-Dec-2020 15:53

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112221.D
Lab Smp Id: HS20110985-28MS Client Smp ID: HS20110985-28MS
Inj Date : 23-NOV-2020 17:31
Operator : PC Inst ID: voa6.i
Smp Info : HS20110985-28MS;HS20110985-28MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:52 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 21 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

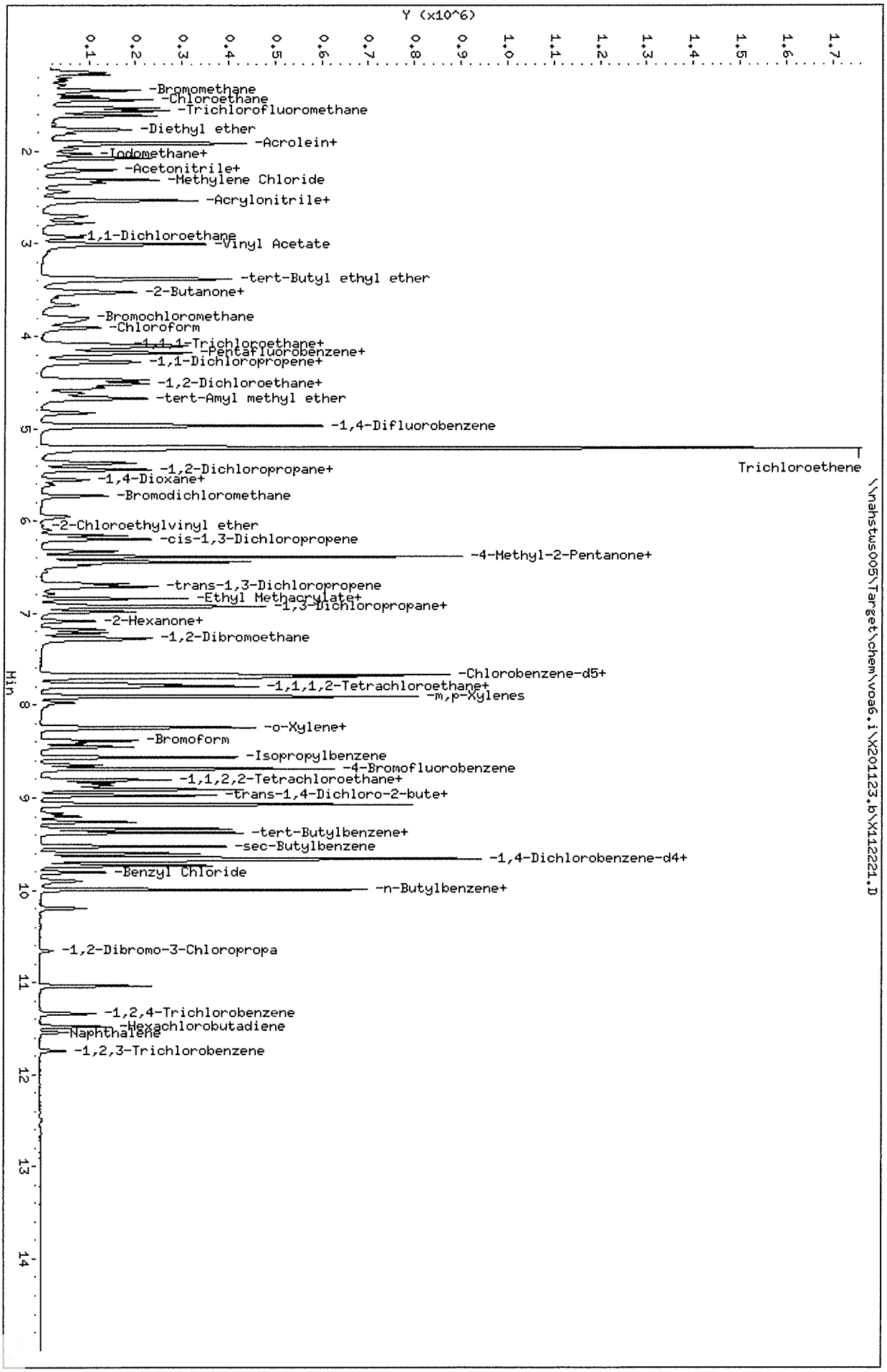
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	214077	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	381411	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	336710	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	143303	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	154871	43.9956	43.99
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	144764	45.2237	45.22
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	130156	46.5661	46.56
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	467574	51.4574	51.45
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	57042	22.5450	22.54
31 1,1,1-Trichloroethane	97	4.082	4.089	(0.976)	81170	18.6560	18.65
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	57996	22.3100	22.31
138 Freon TF	101	1.919	1.919	(0.459)	77383	19.3808	19.38
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	65311	29.5202	29.52
22 1,1-Dichloroethane	63	2.929	2.922	(0.700)	87706	16.9852	16.98
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	75339	18.1478	18.14
32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	70204	18.5104	18.51
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	13531	26.8249	26.82
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	47940	22.1788	22.17(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	25440	23.5616	23.56
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	189338	23.4032	23.40
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	4260	24.3954	24.39
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	47470	18.4409	18.44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	87564	21.5927	21.59
33	1,2-Dichloroethane	62	4.562	4.555	(0.918)	74545	17.7879	17.78
42	1,2-Dichloropropane	63	5.443	5.436	(1.095)	52925	17.3933	17.39
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	178644	21.0176	21.01
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	95124	22.0693	22.06
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	80611	19.4200	19.41
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	98296	22.8527	22.85
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	77256	17.0205	17.02
24	2-Butanone	43	3.580	3.581	(0.856)	35730	34.8982	34.89
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	151697	21.6354	21.63
52	2-Hexanone	43	7.083	7.083	(0.923)	67909	39.8123	39.81
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	181922	21.2050	21.20
82	p-Isopropyltoluene	119	9.648	9.655	(0.999)	182545	22.4342	22.43
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	92962	36.4850	36.48
10	Acetone	43	1.976	1.976	(0.473)	50873	40.0773	40.07
37	Benzene	78	4.512	4.512	(0.908)	191628	18.3954	18.39
74	Bromobenzene	156	8.802	8.810	(0.911)	54932	22.6905	22.69
29	Bromochloromethane	128	3.795	3.795	(0.908)	24306	16.0694	16.06
39	Bromodichloromethane	83	5.729	5.729	(1.153)	72030	17.8321	17.83
66	Bromoform	173	8.416	8.408	(1.097)	28776	19.1285	19.12
6	Bromomethane	94	1.338	1.339	(0.320)	78706	19.3901	19.39
19	Carbon Disulfide	76	2.069	2.069	(0.495)	258097	32.3355	32.33
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	62816	19.1015	19.10
59	Chlorobenzene	112	7.692	7.692	(1.003)	142028	19.7319	19.73
7	Chloroethane	64	1.403	1.403	(0.336)	55219	16.6451	16.64
28	Chloroform	83	3.910	3.910	(0.935)	103809	18.5433	18.54
3	Chloromethane	50	1.073	1.073	(0.257)	56203	14.2996	14.29
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	52653	16.8086	16.80
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	80832	16.7065	16.70
55	Dibromochloromethane	129	7.176	7.176	(0.936)	48473	18.5679	18.56
44	Dibromomethane	93	5.557	5.558	(1.118)	35449	17.7832	17.78
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	44162	14.4715	14.47
61	Ethylbenzene	106	7.800	7.800	(1.017)	72159	19.8795	19.87
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	17885	25.0765	25.07
67	Isopropylbenzene	105	8.566	8.559	(1.117)	222916	20.3517	20.35
62	m,p-Xylenes	106	7.907	7.907	(1.031)	180687	38.5681	38.56
17	Methylene Chloride	84	2.305	2.306	(0.551)	47558	16.1734	16.17
87	n-Butylbenzene	91	9.999	9.991	(1.035)	181914	22.4580	22.45
73	n-Propylbenzene	91	8.910	8.910	(0.922)	271750	22.6690	22.66
92	Naphthalene	128	11.539	11.539	(1.194)	34198	22.4459	22.44
63	o-Xylene	106	8.244	8.244	(1.075)	86065	19.2678	19.26
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	229013	24.2583	24.25
64	Styrene	104	8.258	8.258	(1.077)	43985	5.63328	5.63
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	150033	22.5874	22.58
56	Tetrachloroethene	164	6.933	6.933	(0.904)	77677	37.4169	37.41
50	Toluene	91	6.446	6.446	(0.840)	218859	20.1371	20.13
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	43059	16.3167	16.31
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	71350	17.1329	17.13
38	Trichloroethene	130	5.206	5.207	(1.048)	466328	175.762	175.76
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	152123	18.9092	18.90
5	Vinyl Chloride	62	1.145	1.145	(0.274)	86554	16.8046	16.80

QC Flag Legend

M - Compound response manually integrated.

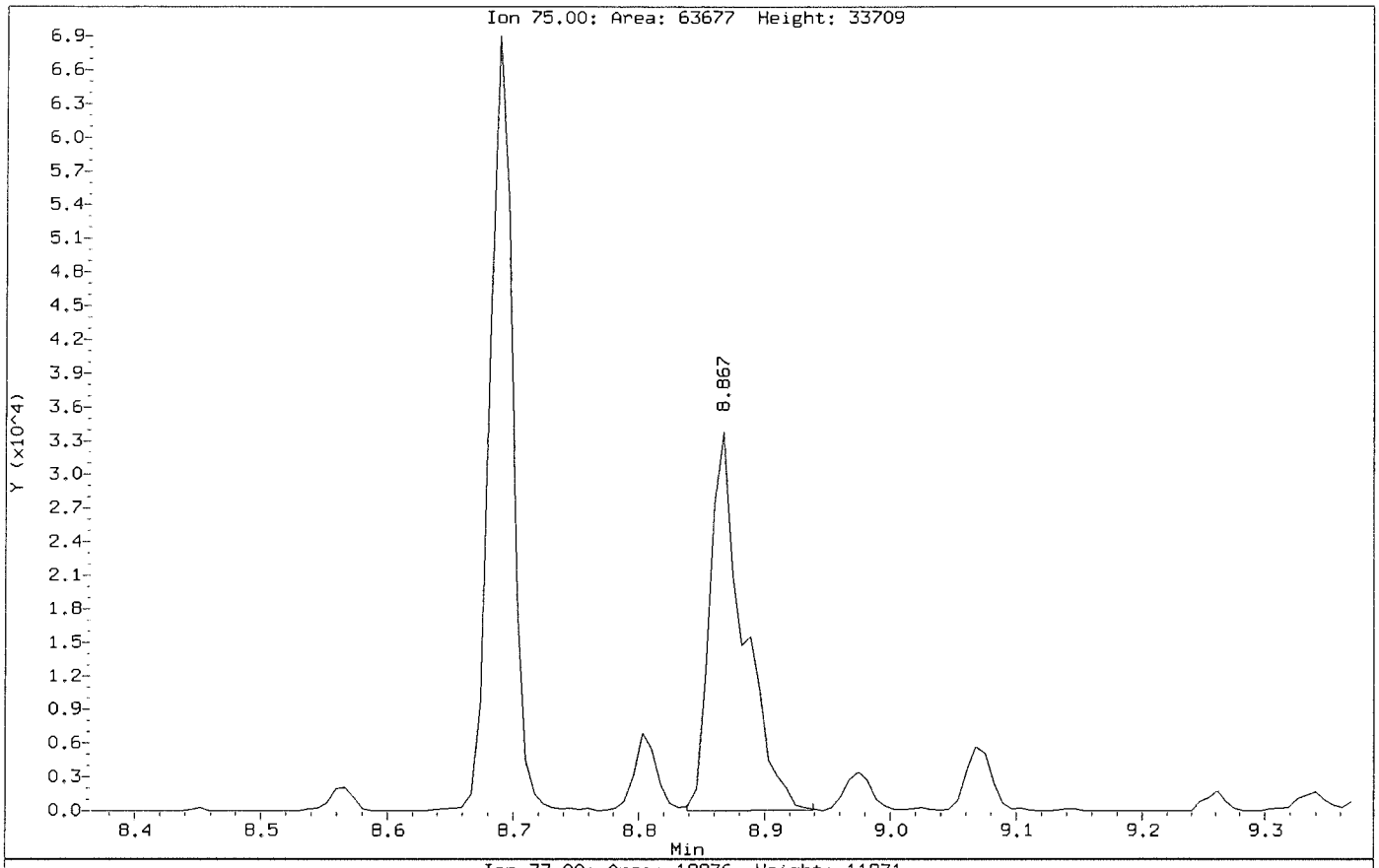


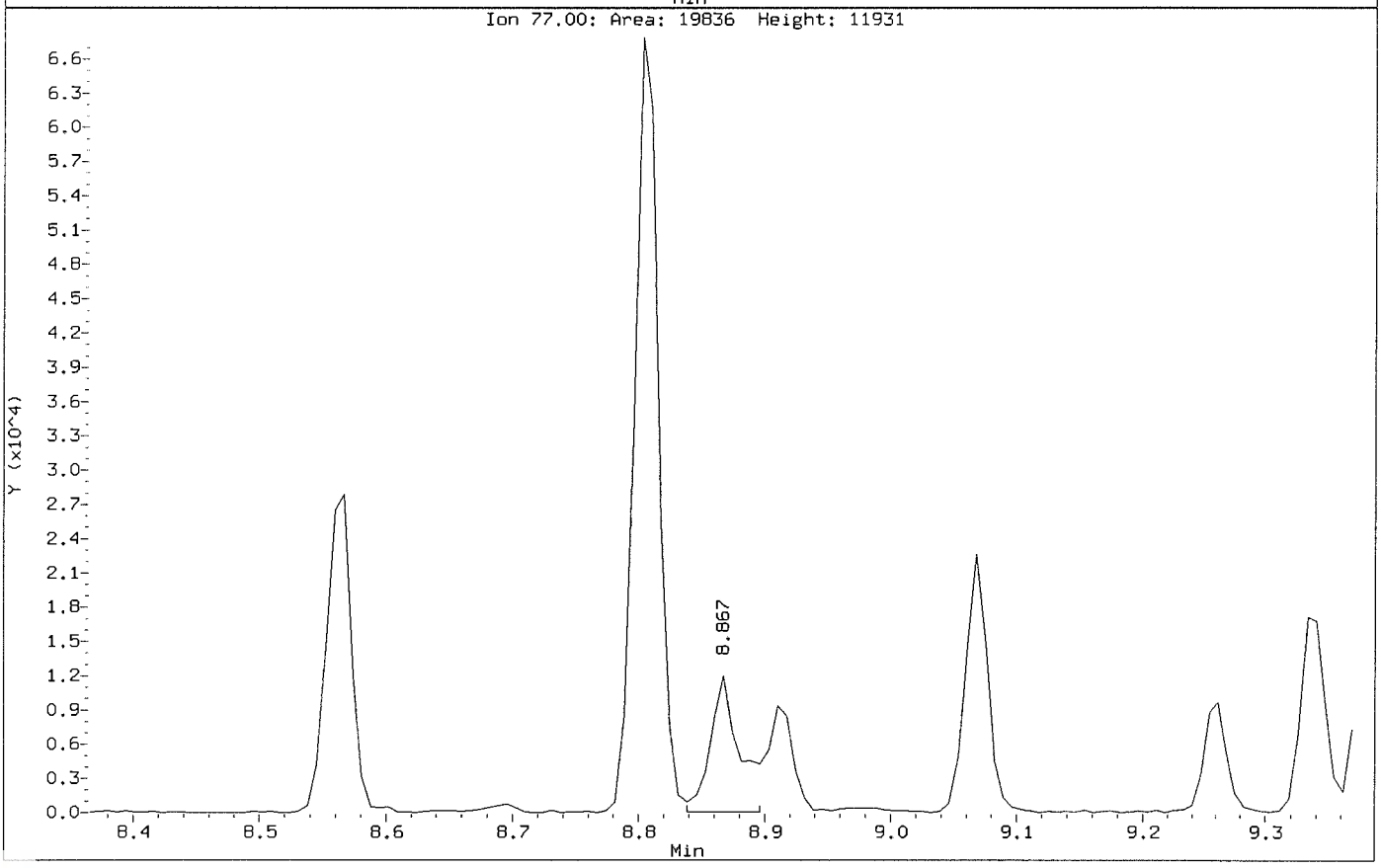
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Sample Info: HS20110985-28MS;HS20110985-28MS;3;;MS
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Column phase: DB624

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

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Instrument: voa6.i
Client Sample ID: HS20110985-28MS

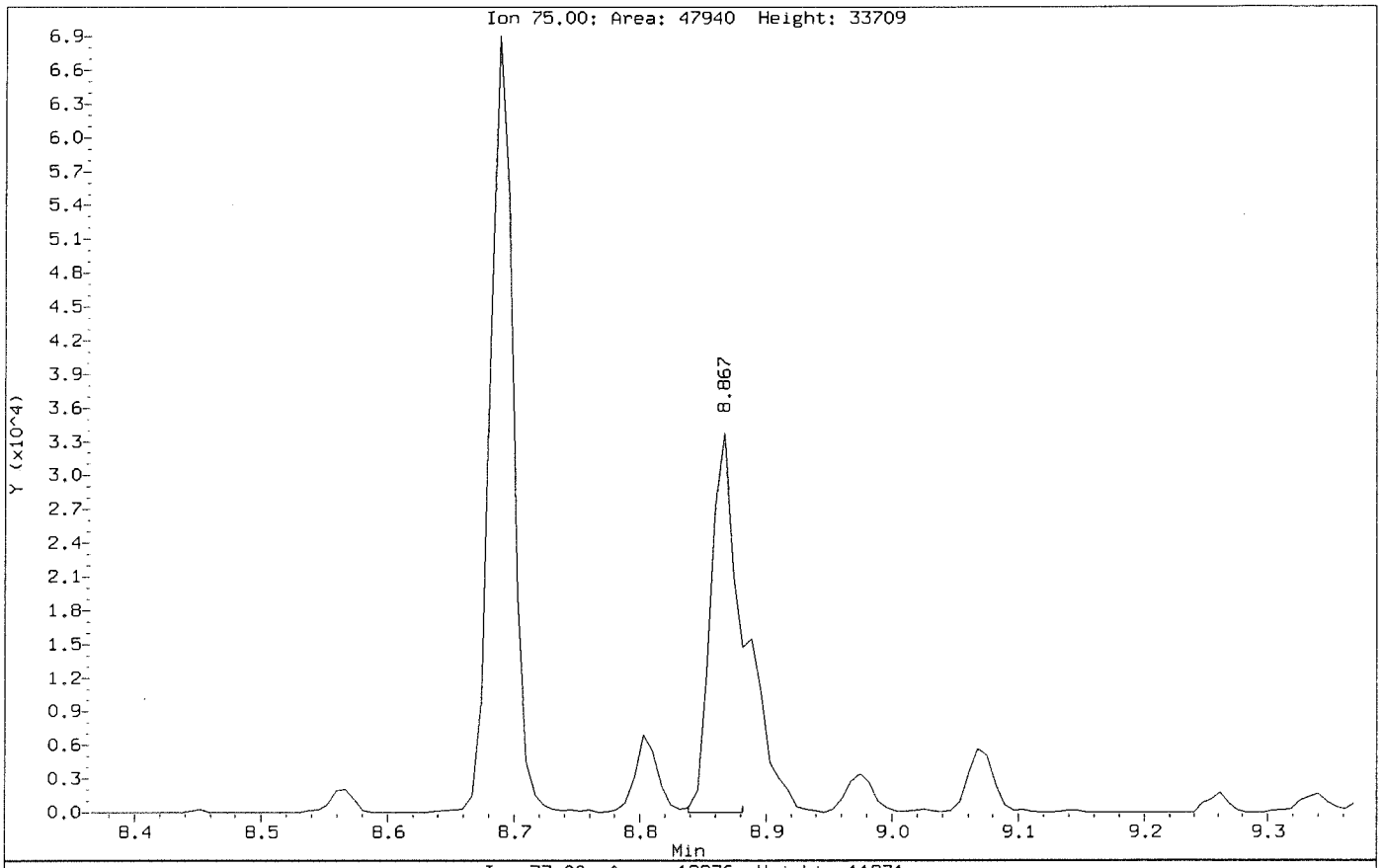
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CAS Number: 96-18-4

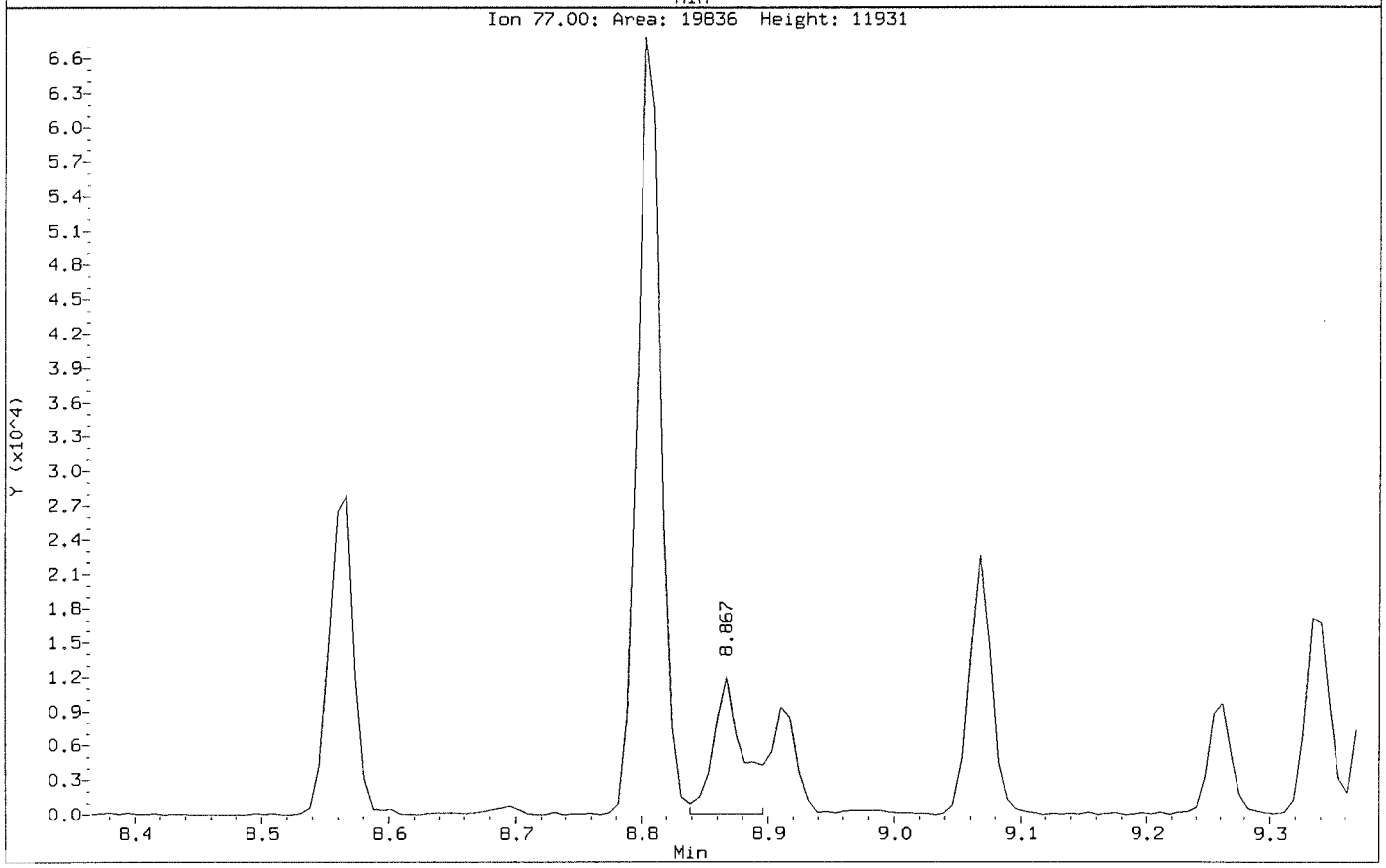




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Injection Date: 23-NOV-2020 17:31
Instrument: voa6.i
Client Sample ID: HS20110985-28MS

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





Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112222.D Page 1
Report Date: 18-Dec-2020 15:53

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112222.D
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Inj Date : 23-NOV-2020 17:52
Operator : PC Inst ID: voa6.i
Smp Info : HS20110985-28MSD;HS20110985-28MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment   :
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Meth Date : 18-Dec-2020 15:52 dev.giga Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 21 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

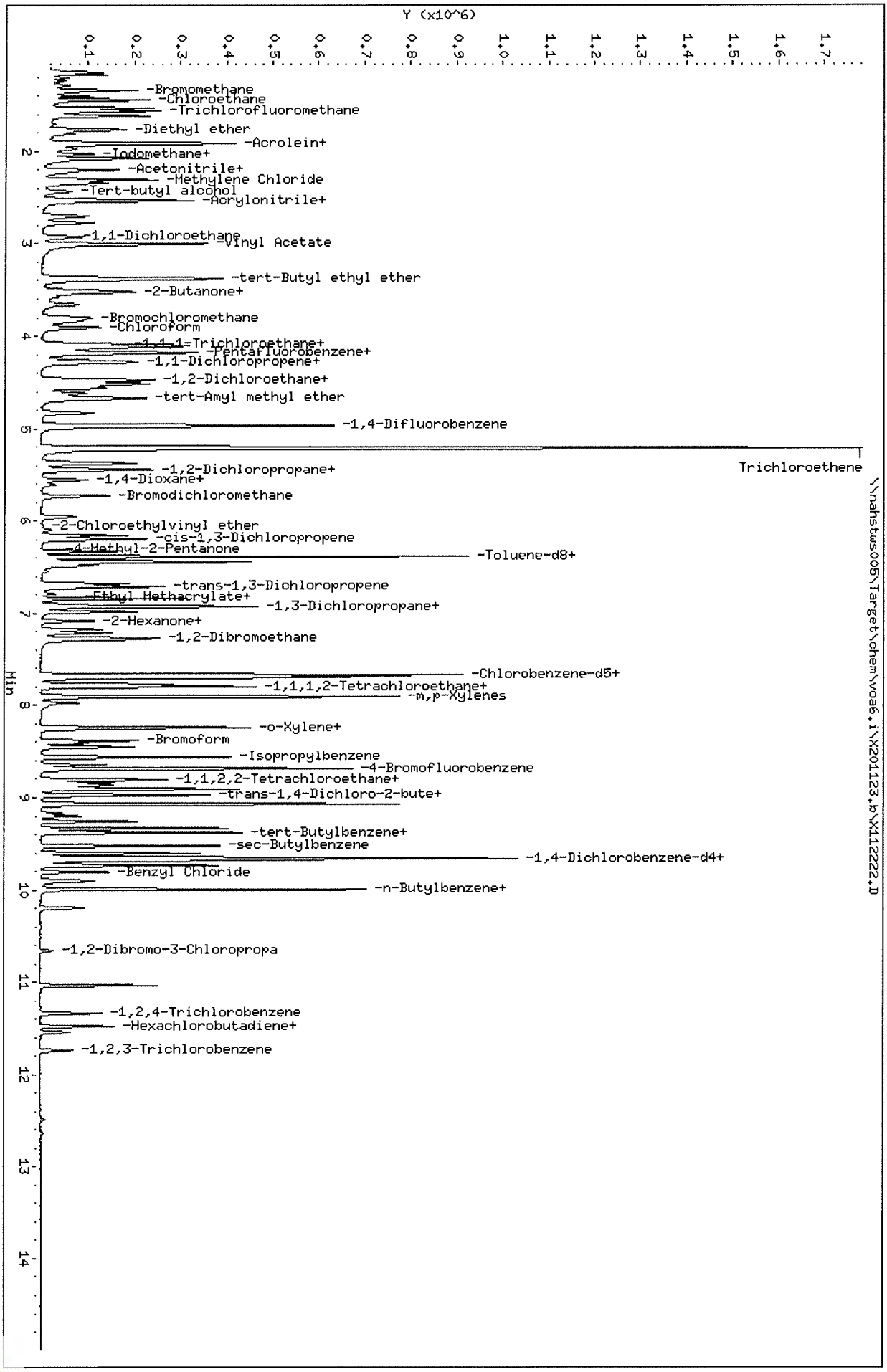
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	225974	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	396279	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	356627	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	161277	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	166431	44.7724	44.77
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	157629	46.4681	46.46
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	135848	46.0583	46.05
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	485314	50.4269	50.42
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	55302	20.6366	20.63
31 1,1,1-Trichloroethane	97	4.082	4.089	(0.976)	81999	17.8543	17.85
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	61330	20.8718	20.87
138 Freon TF	101	1.919	1.919	(0.459)	75000	17.7951	17.79
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	66875	28.5390	28.53
22 1,1-Dichloroethane	63	2.921	2.922	(0.699)	90899	16.6768	16.67
11 1,1-Dichloroethene	96	1.911	1.919	(0.457)	71536	16.3245	16.32
32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	68051	17.2695	17.26
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	15368	27.0601	27.06
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	45829	18.8393	18.83(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	27868	22.9338	22.93
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	184797	20.2963	20.29
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	4558	23.1929	23.19
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	47873	17.5589	17.55

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112222.D Page 2
Report Date: 18-Dec-2020 15:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	88455	19.3815	19.38
33	1,2-Dichloroethane	62	4.562	4.555	(0.918)	76081	17.4733	17.47
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	54003	17.0817	17.08
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	180944	18.9157	18.91
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	97630	20.1263	20.12
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	81716	18.5867	18.58
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	94870	19.6818	19.68
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	77674	16.2117	16.21
24	2-Butanone	43	3.580	3.581	(0.856)	38209	35.3547	35.35
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	150580	19.0826	19.08
52	2-Hexanone	43	7.083	7.083	(0.923)	66670	36.9684	36.96
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	178170	18.4531	18.45
82	p-Isopropyltoluene	119	9.648	9.655	(0.999)	184290	20.2870	20.28
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	98437	36.4764	36.47
10	Acetone	43	1.976	1.976	(0.473)	49446	36.6495	36.64
37	Benzene	78	4.512	4.512	(0.908)	193084	17.8398	17.83
74	Bromobenzene	156	8.809	8.810	(0.912)	53928	19.7932	19.79
29	Bromochloromethane	128	3.803	3.795	(0.909)	25899	16.2211	16.22
39	Bromodichloromethane	83	5.729	5.729	(1.153)	75095	17.8933	17.89
66	Bromoform	173	8.408	8.408	(1.096)	29153	18.3900	18.38
6	Bromomethane	94	1.338	1.339	(0.320)	75996	17.8151	17.81
19	Carbon Disulfide	76	2.069	2.069	(0.495)	255653	30.3430	30.34
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	61982	18.1407	18.14
59	Chlorobenzene	112	7.692	7.692	(1.003)	135696	17.7994	17.79
7	Chloroethane	64	1.403	1.403	(0.336)	54478	15.5571	15.55
28	Chloroform	83	3.910	3.910	(0.935)	103493	17.5135	17.51
3	Chloromethane	50	1.073	1.073	(0.257)	57838	13.9409	13.94
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	52745	15.9515	15.95
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	82286	16.3690	16.36
55	Dibromochloromethane	129	7.176	7.176	(0.936)	50250	18.1735	18.17
44	Dibromomethane	93	5.557	5.558	(1.118)	37798	18.2502	18.25
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	42686	13.4708	13.47
61	Ethylbenzene	106	7.800	7.800	(1.017)	71808	18.6780	18.67
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	18802	23.5246	23.52
67	Isopropylbenzene	105	8.566	8.559	(1.117)	218469	18.8318	18.83
62	m,p-Xylenes	106	7.907	7.907	(1.031)	174884	35.8423	35.84
17	Methylene Chloride	84	2.305	2.306	(0.551)	49031	15.7965	15.79
87	n-Butylbenzene	91	9.991	9.991	(1.034)	184337	20.5262	20.52
73	n-Propylbenzene	91	8.910	8.910	(0.922)	274901	20.3762	20.37
92	Naphthalene	128	11.546	11.539	(1.195)	41145	23.9219	23.92
63	o-Xylene	106	8.244	8.244	(1.075)	82992	17.8006	17.80
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	225207	21.2825	21.28
64	Styrene	104	8.258	8.258	(1.077)	43355	5.24249	5.24
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	152744	20.4327	20.43
56	Tetrachloroethene	164	6.926	6.933	(0.903)	76852	34.9521	34.95
50	Toluene	91	6.446	6.446	(0.840)	214754	18.6559	18.65
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	42278	15.1773	15.17
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	74108	17.1275	17.12
38	Trichloroethene	130	5.206	5.207	(1.048)	463123	168.005	168.00
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	147136	17.3264	17.32
5	Vinyl Chloride	62	1.145	1.145	(0.274)	76363	14.0455	14.04

QC Flag Legend

M - Compound response manually integrated.

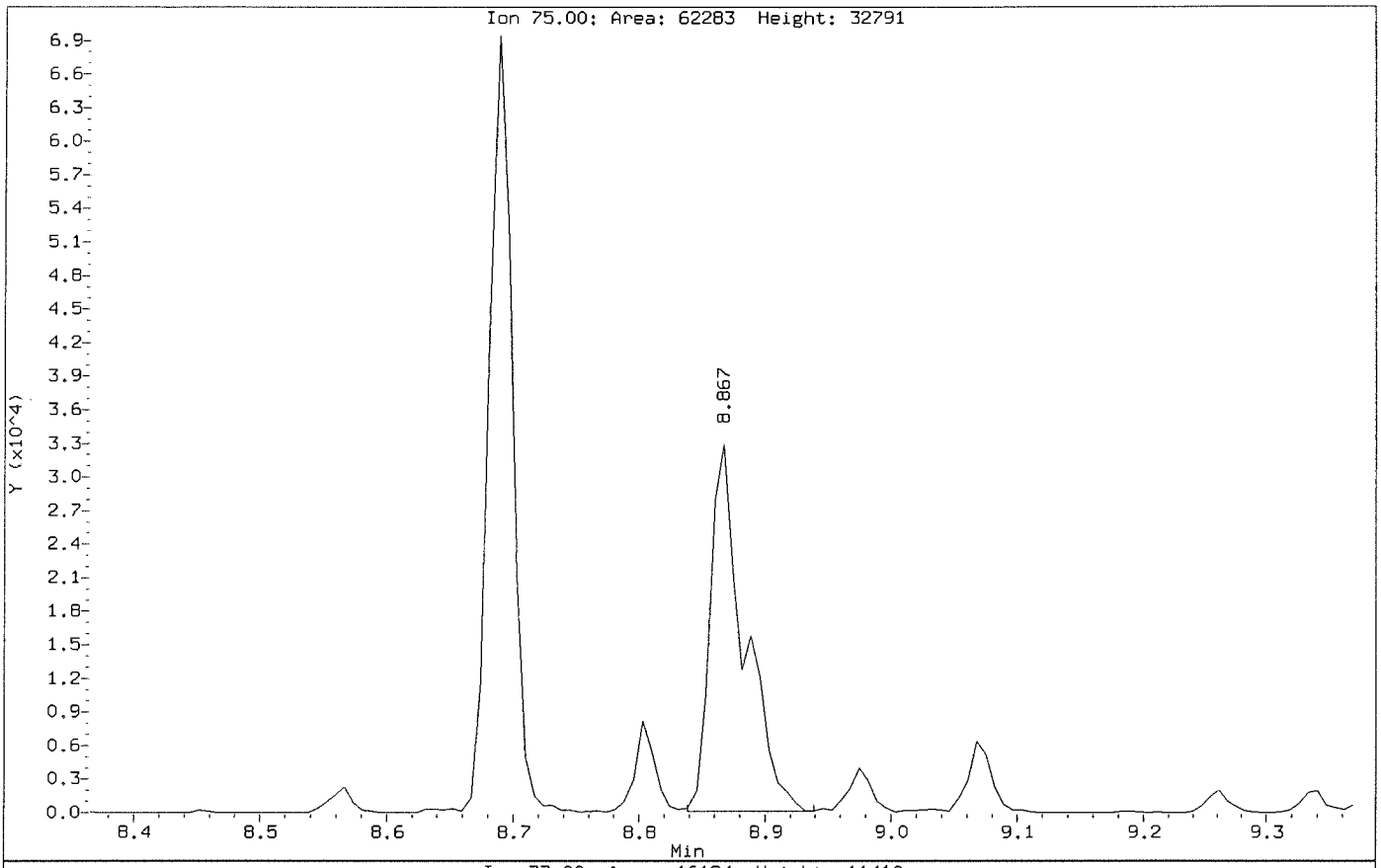


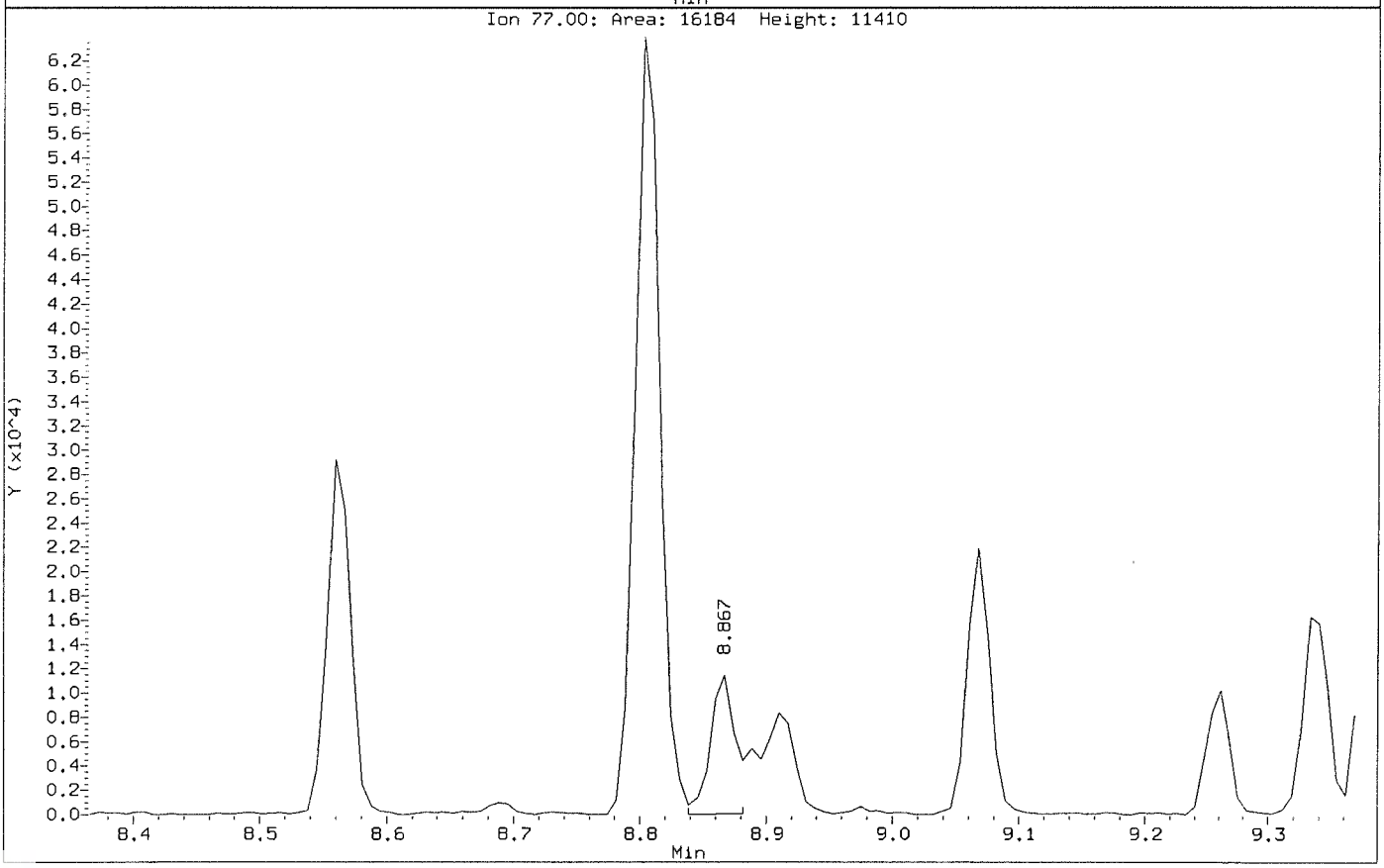
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Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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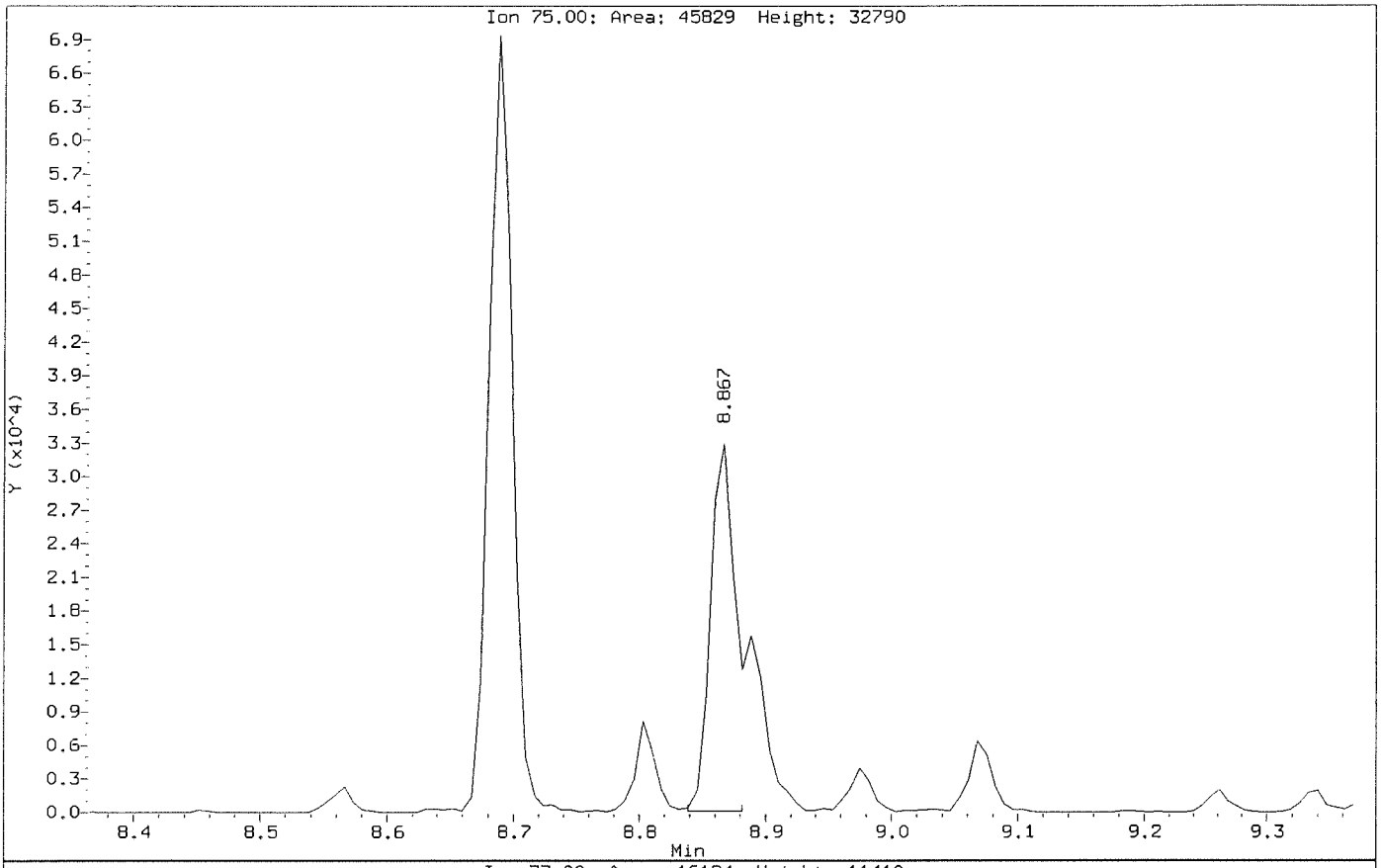
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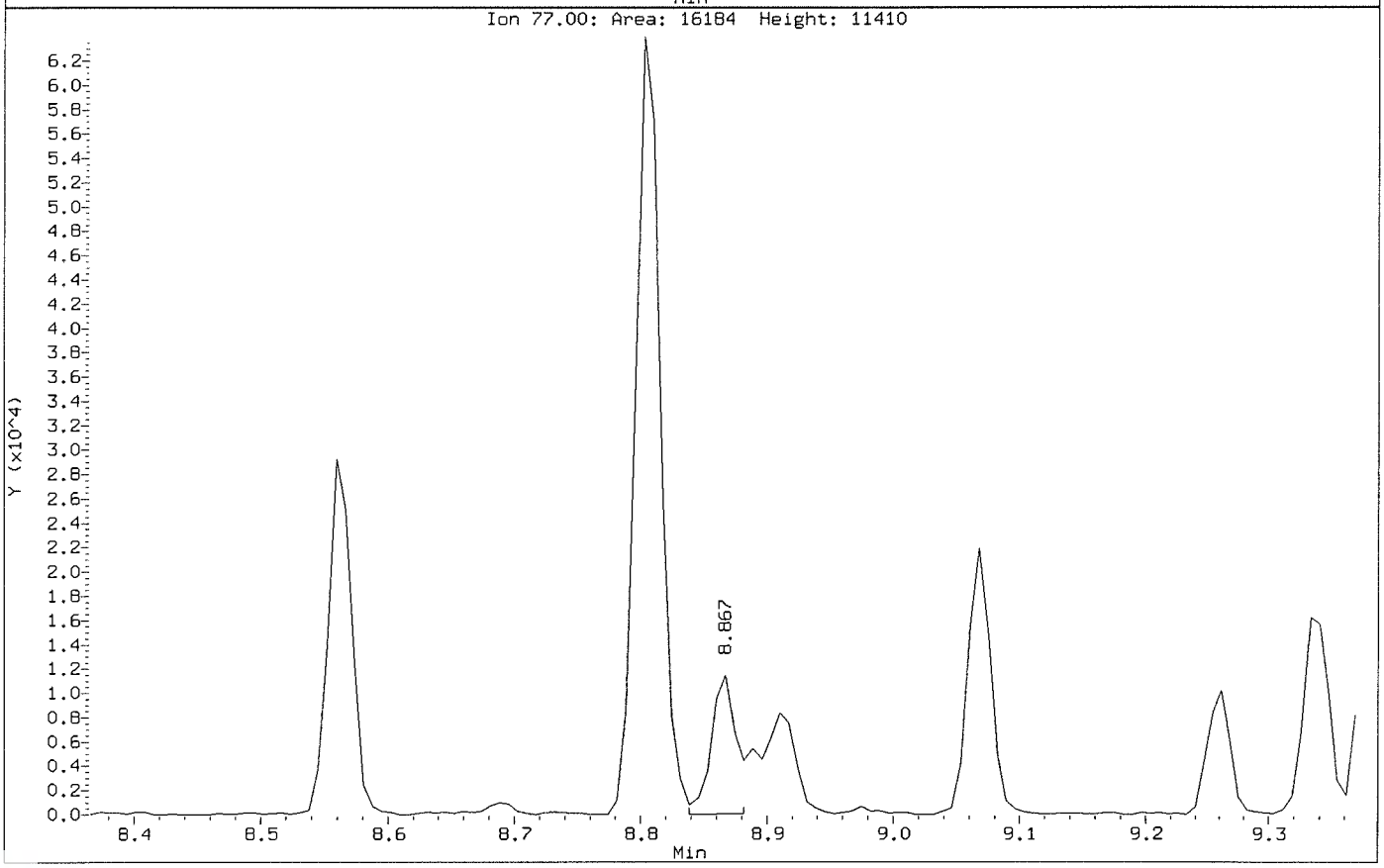




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Injection Date: 23-NOV-2020 17:52
Instrument: voa6.i
Client Sample ID: HS20110985-28MSD

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





Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112230.D Page 1
Report Date: 18-Dec-2020 15:49

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201123.b\X112230.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 23-NOV-2020 20:41
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\X201123.b\8260W.m
Meth Date : 18-Dec-2020 15:49 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 29 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

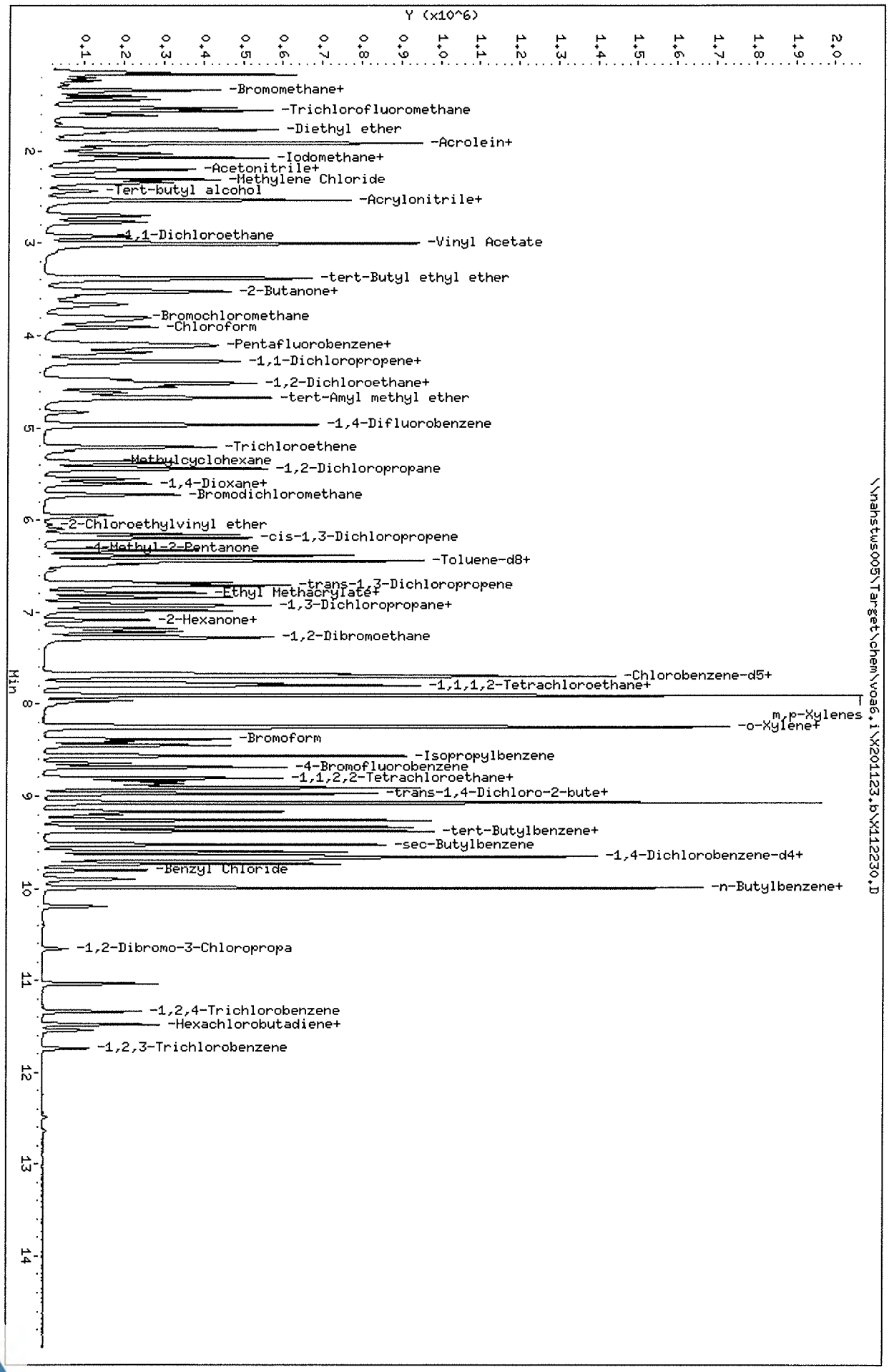
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	177692	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	340073	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	306260	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	149909	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	153292	50.0000	52.24
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	142367	50.0000	48.82
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	120337	50.0000	51.69
$	48 Toluene-d8	98	6.388	6.388	(0.833)	417010	50.0000	50.45
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	110798	50.0000	48.14
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	186852	50.0000	51.73
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	133849	50.0000	51.04
	138 Freon TF	101	1.919	1.919	(0.459)	158544	50.0000	47.83
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	97355	50.0000	48.37
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	202844	50.0000	47.32
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	171343	50.0000	49.72
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	161096	50.0000	47.63
	93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	26059	50.0000	48.37
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	107246	50.0000	47.42(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	53570	50.0000	47.42
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	411693	50.0000	48.64
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	9186	50.0000	50.28
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	113525	50.0000	48.48

Data File: \\nahstws005\Target\chem\voa6.i\X201123.b\X112230.D Page 2
Report Date: 18-Dec-2020 15:49

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	198497	50.0000	46.79
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	185128	50.0000	49.54
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	129561	50.0000	47.75
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	421838	50.0000	47.44
83	1,3-Dichlorobenzene	146	9.604	9.604	(0.994)	210237	50.0000	46.62
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	190974	50.0000	50.58
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	219330	50.0000	48.07
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	167036	50.0000	44.33
24	2-Butanone	43	3.580	3.580	(0.856)	84352	100.000	99.25
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	332838	50.0000	45.37
52	2-Hexanone	43	7.090	7.090	(0.924)	151003	100.000	96.03
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	426405	50.0000	47.51
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	412947	50.0000	46.67
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	226928	100.000	96.37
10	Acetone	43	1.976	1.976	(0.473)	105587	100.000	105.00
37	Benzene	78	4.512	4.512	(0.908)	460902	50.0000	49.62
74	Bromobenzene	156	8.809	8.809	(0.912)	120876	50.0000	47.72
29	Bromochloromethane	128	3.795	3.795	(0.908)	61389	50.0000	48.89
39	Bromodichloromethane	83	5.729	5.729	(1.153)	176806	50.0000	49.09
66	Bromoform	173	8.408	8.408	(1.096)	67371	50.0000	45.86
6	Bromomethane	94	1.338	1.338	(0.320)	166314	50.0000	47.94
19	Carbon Disulfide	76	2.069	2.069	(0.495)	629006	100.000	94.94
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	143389	50.0000	48.90
59	Chlorobenzene	112	7.692	7.692	(1.003)	312689	50.0000	47.76
7	Chloroethane	64	1.403	1.403	(0.336)	133317	50.0000	48.41
28	Chloroform	83	3.910	3.910	(0.935)	229070	50.0000	49.29
3	Chloromethane	50	1.073	1.073	(0.257)	146706	50.0000	44.96
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	125061	50.0000	48.09
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	208153	50.0000	48.25
55	Dibromochloromethane	129	7.176	7.176	(0.936)	122380	50.0000	51.53
44	Dibromomethane	93	5.557	5.557	(1.118)	84958	50.0000	47.80
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	131612	50.0000	45.21
61	Ethylbenzene	106	7.799	7.799	(1.017)	155936	50.0000	47.23
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	34788	50.0000	45.31
67	Isopropylbenzene	105	8.566	8.566	(1.117)	487794	50.0000	48.96
62	m,p-Xylenes	106	7.907	7.907	(1.031)	423918	100.000	88.52
17	Methylene Chloride	84	2.305	2.305	(0.551)	115588	50.0000	47.35
87	n-Butylbenzene	91	9.991	9.991	(1.034)	408803	50.0000	44.72
73	n-Propylbenzene	91	8.910	8.910	(0.922)	590831	50.0000	47.11
92	Naphthalene	128	11.538	11.538	(1.194)	79477	50.0000	48.55
63	o-Xylene	106	8.244	8.244	(1.075)	197314	50.0000	44.17
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	484224	50.0000	48.09
64	Styrene	104	8.258	8.258	(1.077)	351177	50.0000	49.44
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	334955	50.0000	48.20
56	Tetrachloroethene	164	6.933	6.933	(0.904)	90414	50.0000	47.88
50	Toluene	91	6.446	6.446	(0.840)	476200	50.0000	48.17
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	109256	50.0000	49.87
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	179795	50.0000	48.42
38	Trichloroethene	130	5.206	5.206	(1.048)	118568	50.0000	50.12
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	330816	50.0000	49.54
5	Vinyl Chloride	62	1.145	1.145	(0.274)	206969	50.0000	48.41

QC Flag Legend

M - Compound response manually integrated.

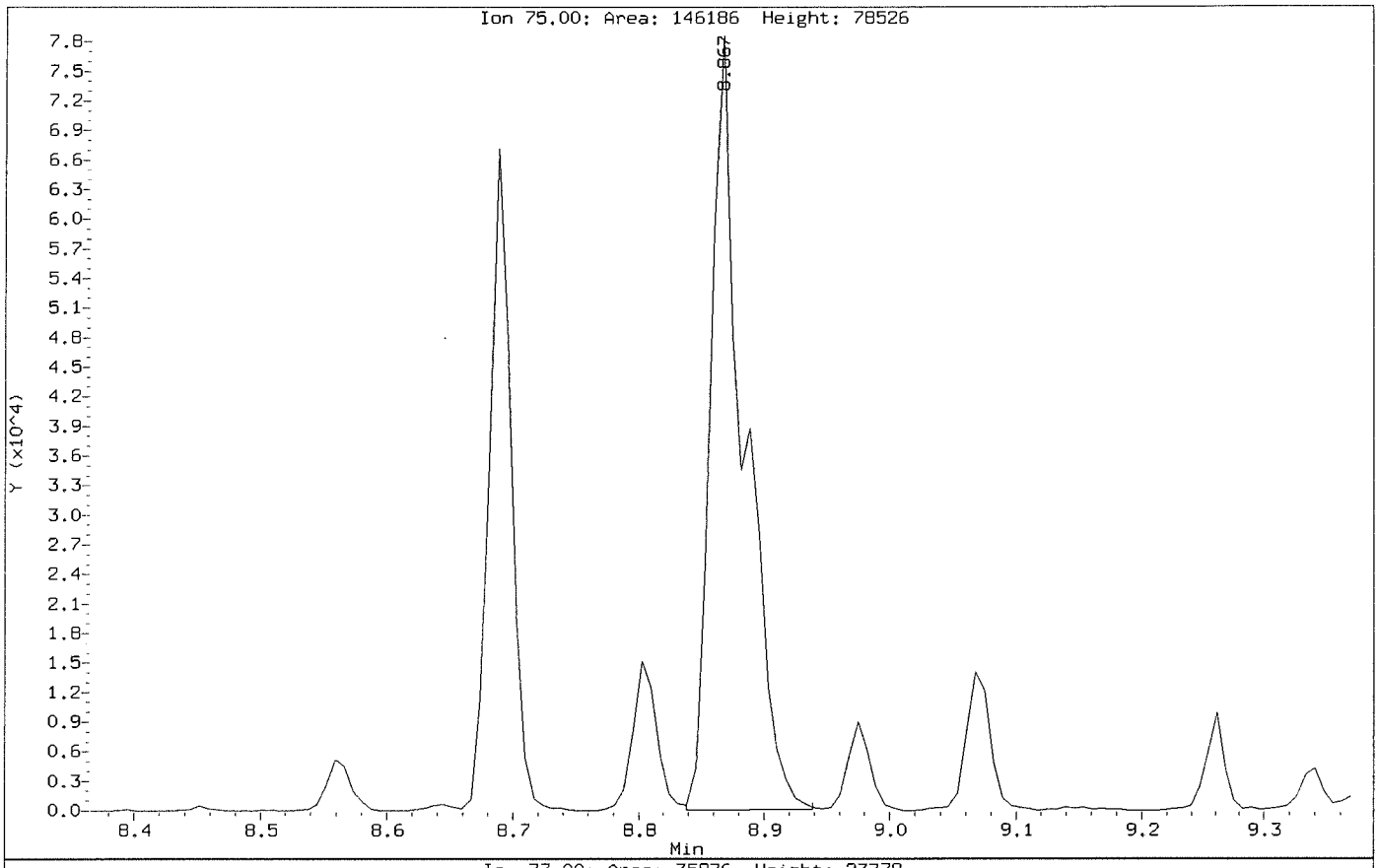


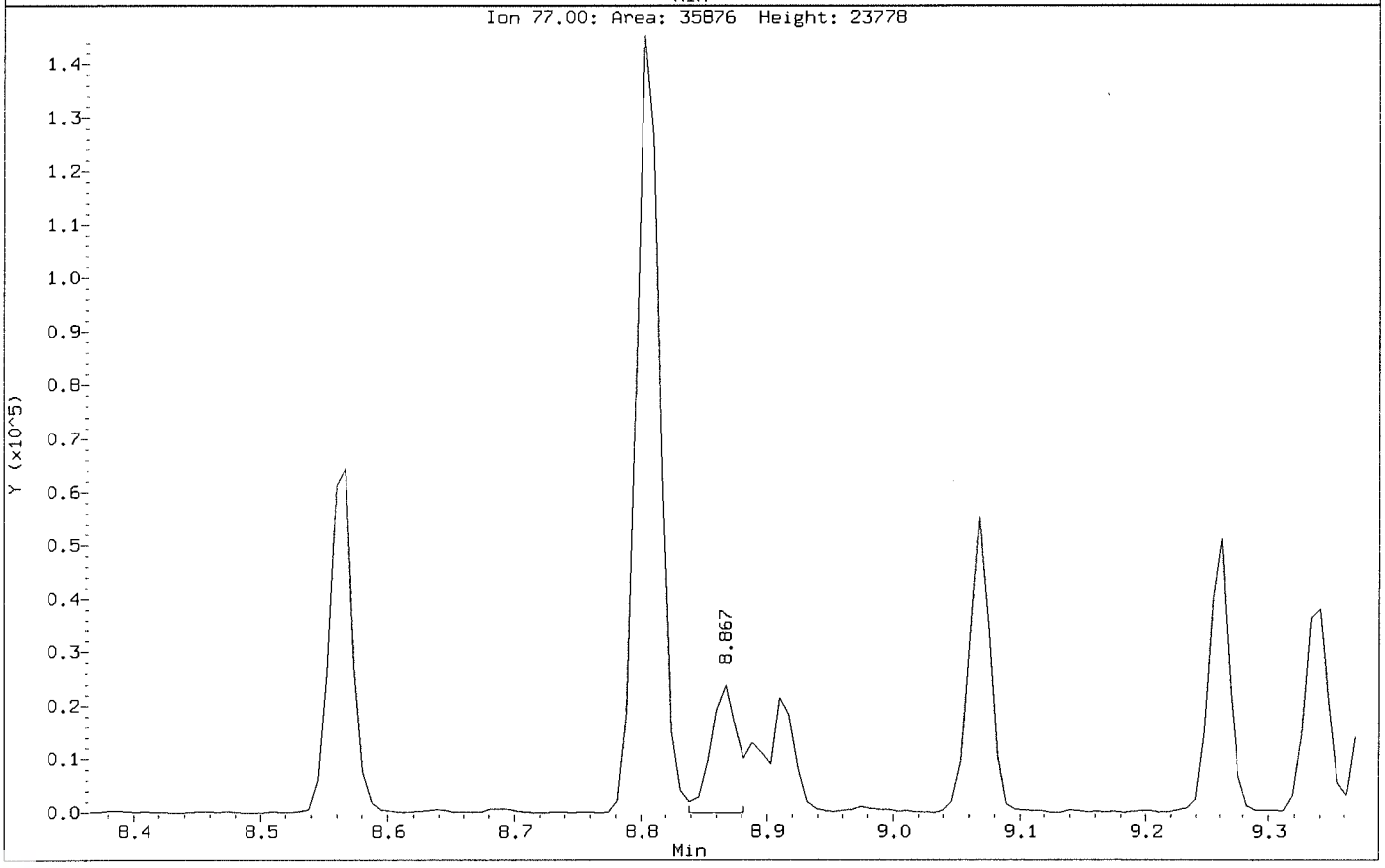
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Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

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

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Injection Date: 23-NOV-2020 20:41
Instrument: voa6.i
Client Sample ID: CCV-END

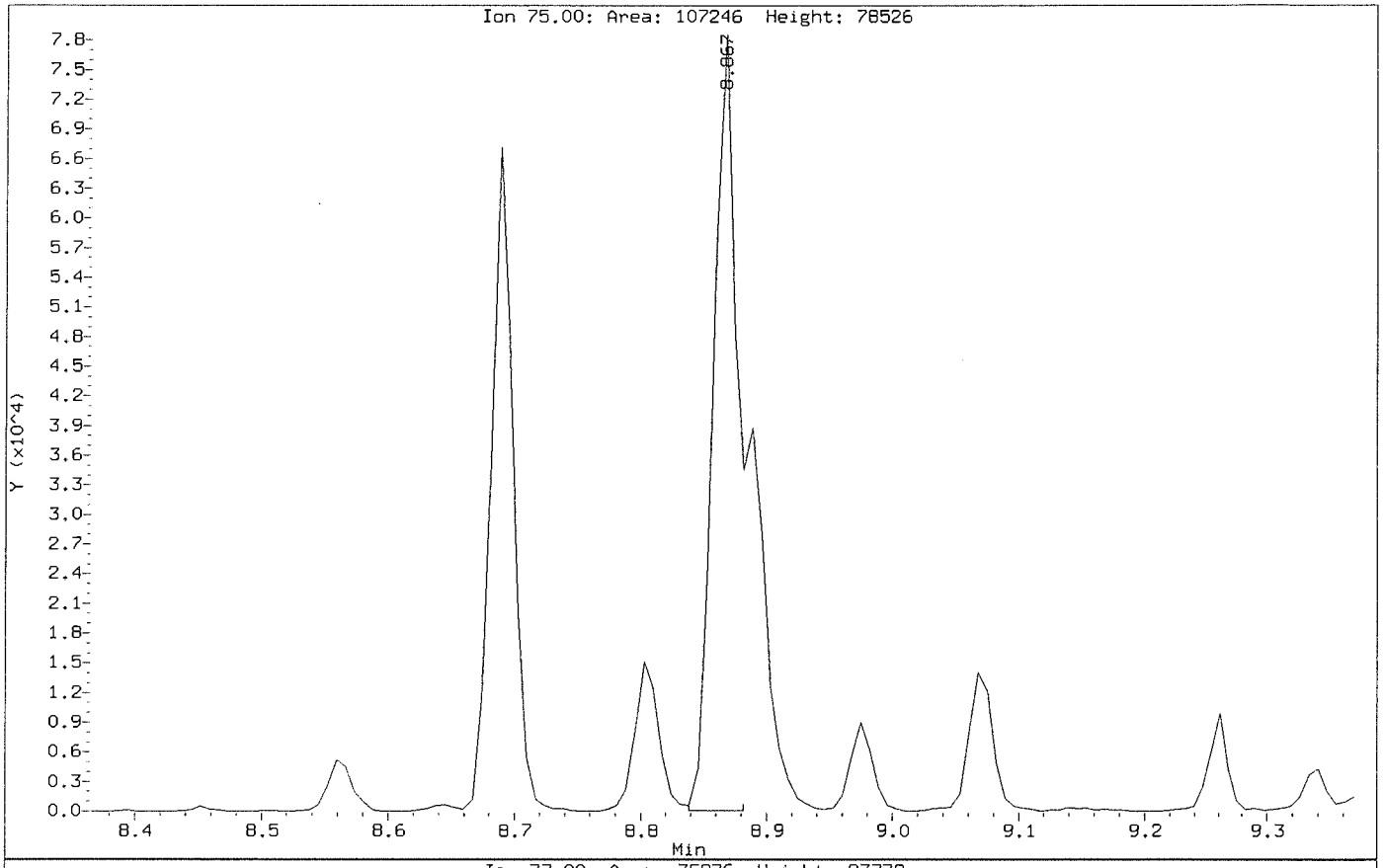
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

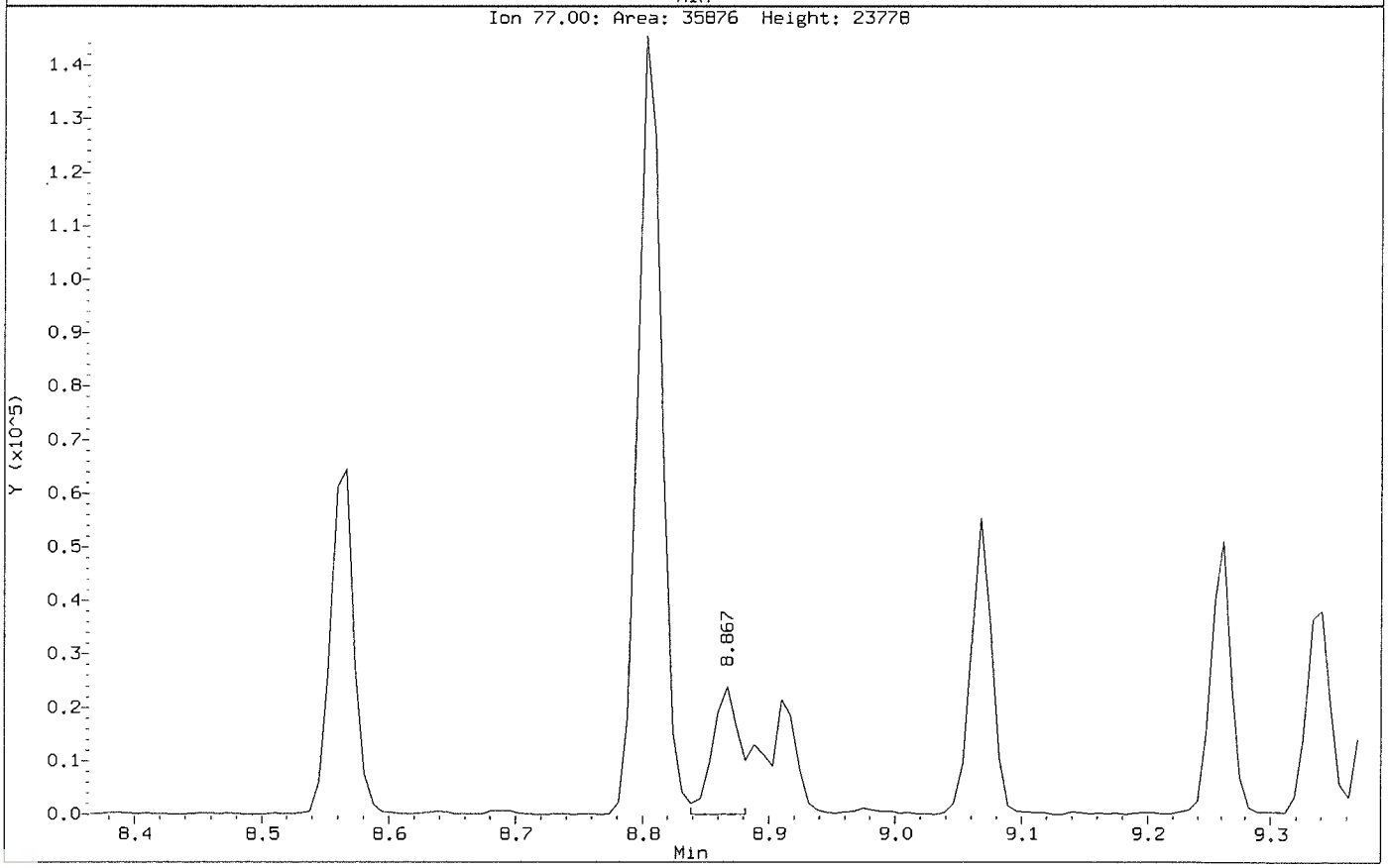




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Injection Date: 23-NOV-2020 20:41
Instrument: voa6.i
Client Sample ID: CCV-END

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

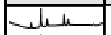
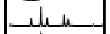
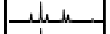
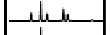
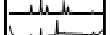
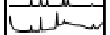
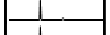




HS20110527 Wet Chem Raw Data (9056_anions_W)

ALS WO# HS20110527

Sequence: 111120
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method	Volume	Status
	STD1		Calibration	BE1	1.00	1	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD2		Calibration	BE2	1.00	2	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD3		Calibration	BE3	1.00	3	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD4		Calibration	BE4	1.00	4	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD5		Calibration	BE5	1.00	5	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD6		Calibration	BE6	1.00	6	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	ICV		Unknown	BE7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	ICB		Unknown	BE8	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	MBLK-111120		Unknown	BA7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	LCS-111120		Unknown	BA8	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20110527-11		Unknown	GC6	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20110527-12		Unknown	GC7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20110527-13		Unknown	GC8	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20110527-15		Unknown	GD1	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20101419-01		Unknown	GD5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20101419-01MS		Unknown	GD6	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
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	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished

Sequence: 111120
Last Update Operator: alshs.nouser

Inject Time
11/7/2020 12:52:05 PM -06:00
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Sequence: 111120
Injection #6: STD6

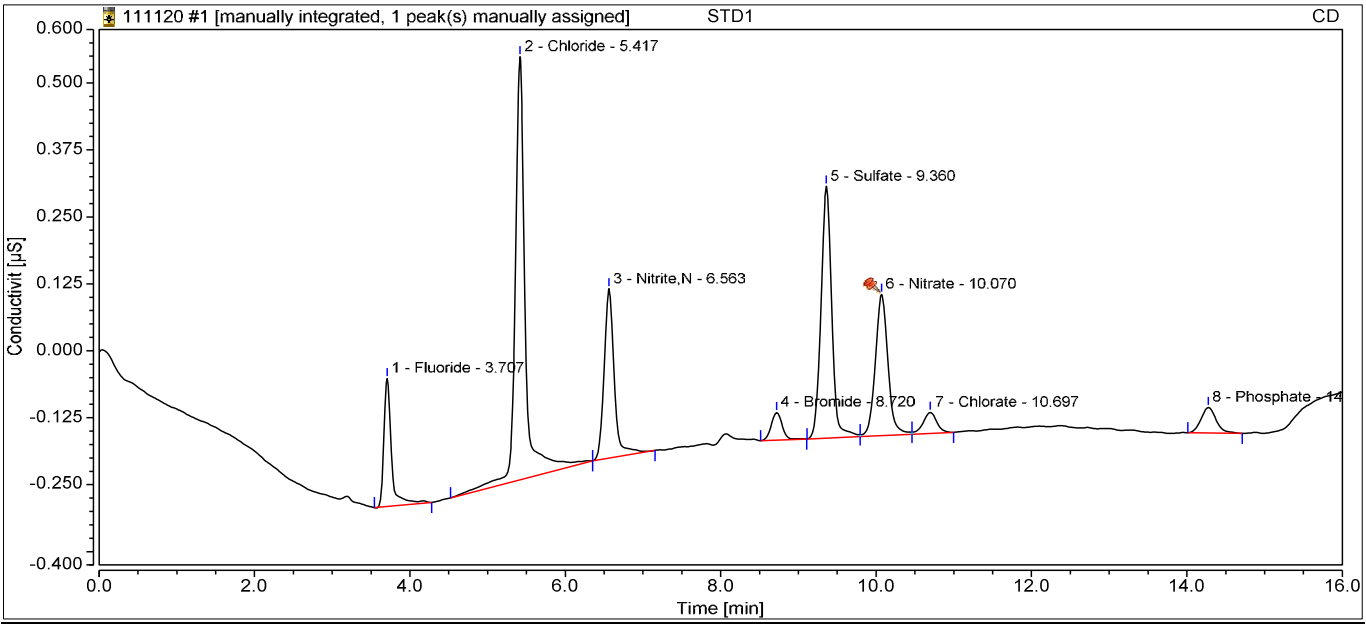
Calibration

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***	***12.0978***	***0.99928***	***-0.0051***	***0.3357***	***0.0000***
2	Chloride	Lin, WithOffset, 1/	Area	6	12.3068	0.99920	-0.0015	0.2206	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	11.7649	0.99922	0.0073	0.4620	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	20.1069	0.99803	-0.0017	0.0918	0.0000
6	Sulfate	Lin, WithOffset, 1/	Area	6	9.9698	0.99950	-0.0100	0.1628	0.0000
7	Nitrate	Lin, WithOffset, 1/	Area	6	14.1002	0.99903	-0.0103	0.5494	0.0000
8	Chlorate	Lin, WithOffset, 1/	Area	6	19.2245	0.99828	-0.0026	0.0930	0.0000
9	Phosphate	Lin, WithOffset, 1/	Area	6	28.2447	0.99719	-0.0176	0.2145	0.0000
Maximum					**28.2447**	0.99950			
Minimum					9.9698	**0.99719**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**BE1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 12:52**	*Sample Weight:*	**1.0000**

Run Time:

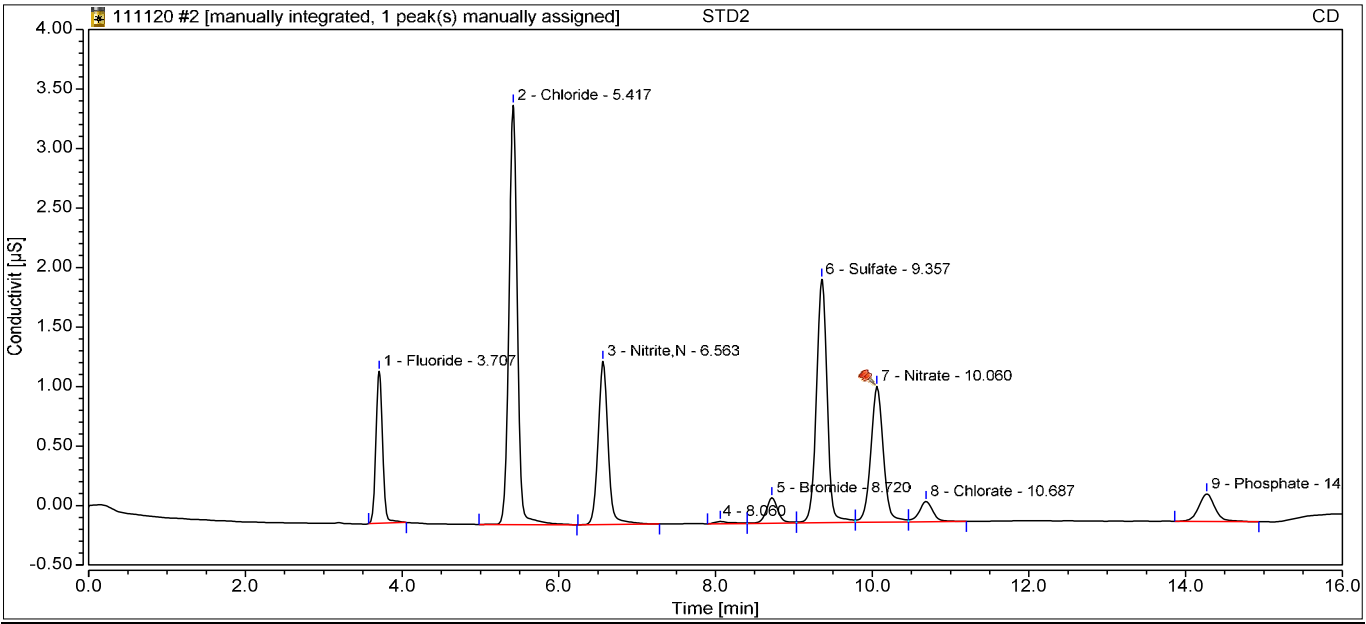


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB*	0.027	0.0951	0.0951	1.0000
2	5.42	Chloride	BMB	0.119	0.5468	0.5468	1.0000
3	6.56	Nitrite,N	BMB	0.047	0.0869	0.0869	1.0000
4	8.72	Bromide	BMB	0.008	0.1097	0.1097	1.0000
5	9.36	Sulfate	BM	0.075	0.5225	0.5225	1.0000
6	10.07	Nitrate	M ^	0.050	0.1090	0.1090	1.0000
7	10.70	Chlorate	MB	0.008	0.1141	0.1141	1.0000
8	14.28	Phosphate	BMB	0.011	0.1319	0.1319	1.0000
Total:			**0.000**	**0.345**		**1.72**	

2 STD2			
Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**BE2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 13:10**	*Sample Weight:*	**1.0000**

Run Time:



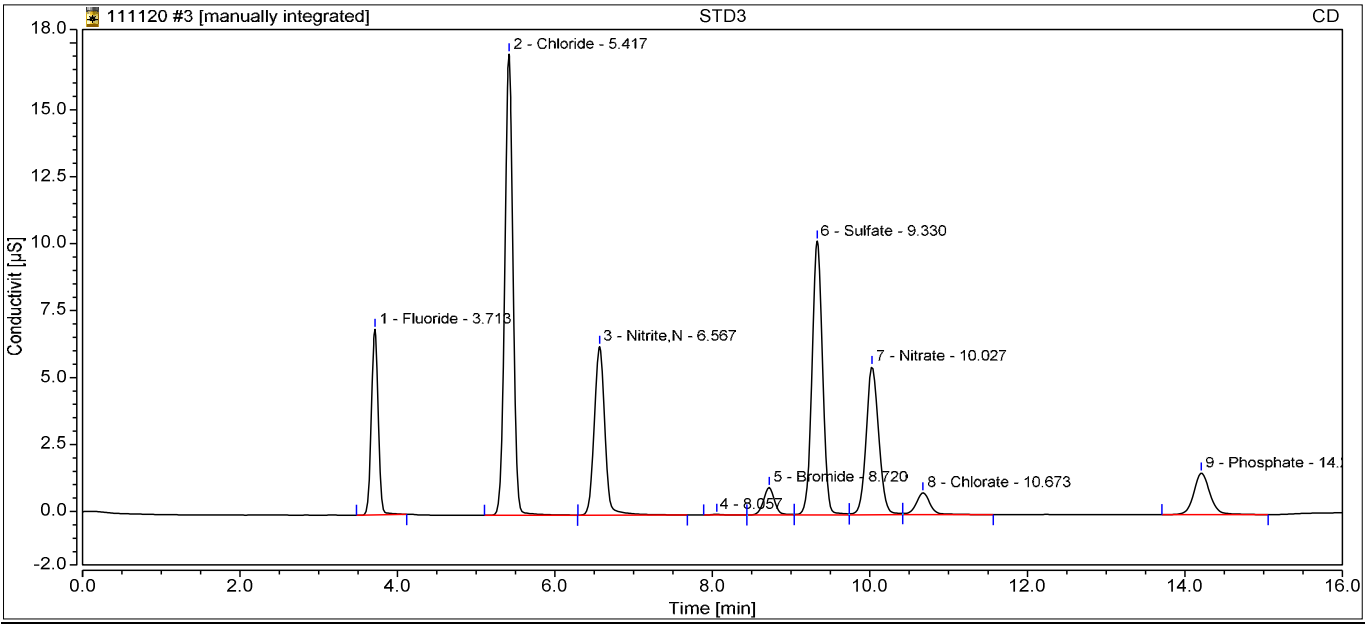
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB*	0.125	0.3869	0.3869	1.0000
2	5.42	Chloride	BMB	0.439	1.9952	1.9952	1.0000
3	6.56	Nitrite,N	BMB	0.203	0.4236	0.4236	1.0000
5	8.72	Bromide	M	0.037	0.4221	0.4221	1.0000
6	9.36	Sulfate	M	0.324	2.0502	2.0502	1.0000
7	10.06	Nitrate	M ^	0.213	0.4058	0.4058	1.0000
8	10.69	Chlorate	MB	0.035	0.3992	0.3992	1.0000
9	14.27	Phosphate	BMB	0.055	0.3401	0.3401	1.0000
Total:			**0.000**	**1.430**		**6.42**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**BE3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 13:28**	*Sample Weight:*	**1.0000**

Run Time:



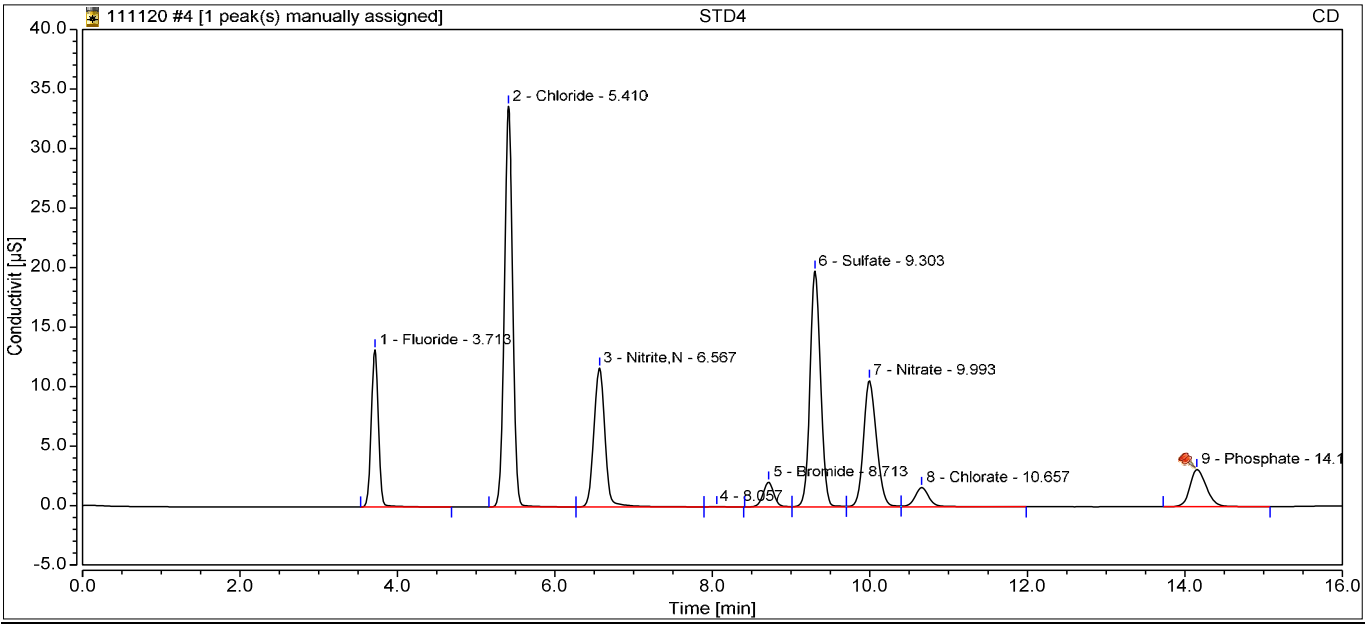
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB*	0.696	2.0869	2.0869	1.0000
2	5.42	Chloride	BMB	2.108	9.5643	9.5643	1.0000
3	6.57	Nitrite,N	BMB	0.976	2.0958	2.0958	1.0000
5	8.72	Bromide	M	0.167	1.8381	1.8381	1.0000
6	9.33	Sulfate	M	1.569	9.6977	9.6977	1.0000
7	10.03	Nitrate	M	1.029	1.8917	1.8917	1.0000
8	10.67	Chlorate	MB	0.170	1.8529	1.8529	1.0000
9	14.21	Phosphate	BMB	0.365	1.7851	1.7851	1.0000
Total:			**0.000**	**7.079**		**30.81**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**BE4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 13:46**	*Sample Weight:*	**1.0000**

Run Time:



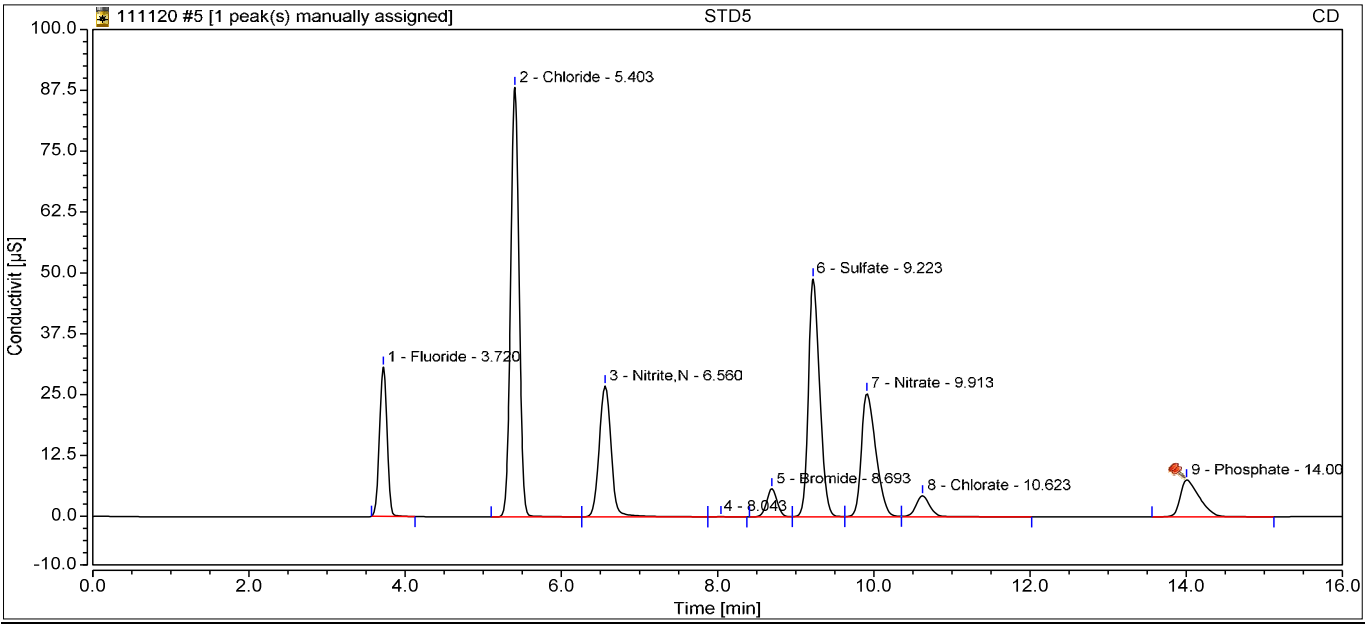
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	1.391	4.1578	4.1578	1.0000
2	5.41	Chloride	BMB	4.136	18.7555	18.7555	1.0000
3	6.57	Nitrite,N	BMB	1.893	4.0825	4.0825	1.0000
5	8.71	Bromide	BM	0.332	3.6357	3.6357	1.0000
6	9.30	Sulfate	M	3.072	18.9278	18.9278	1.0000
7	9.99	Nitrate	M	2.044	3.7386	3.7386	1.0000
8	10.66	Chlorate	MB	0.338	3.6596	3.6596	1.0000
9	14.15	Phosphate	BMB^	0.759	3.6223	3.6223	1.0000
Total:			**0.000**	**13.965**		**60.58**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**BE5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 14:04**	*Sample Weight:*	**1.0000**

Run Time:



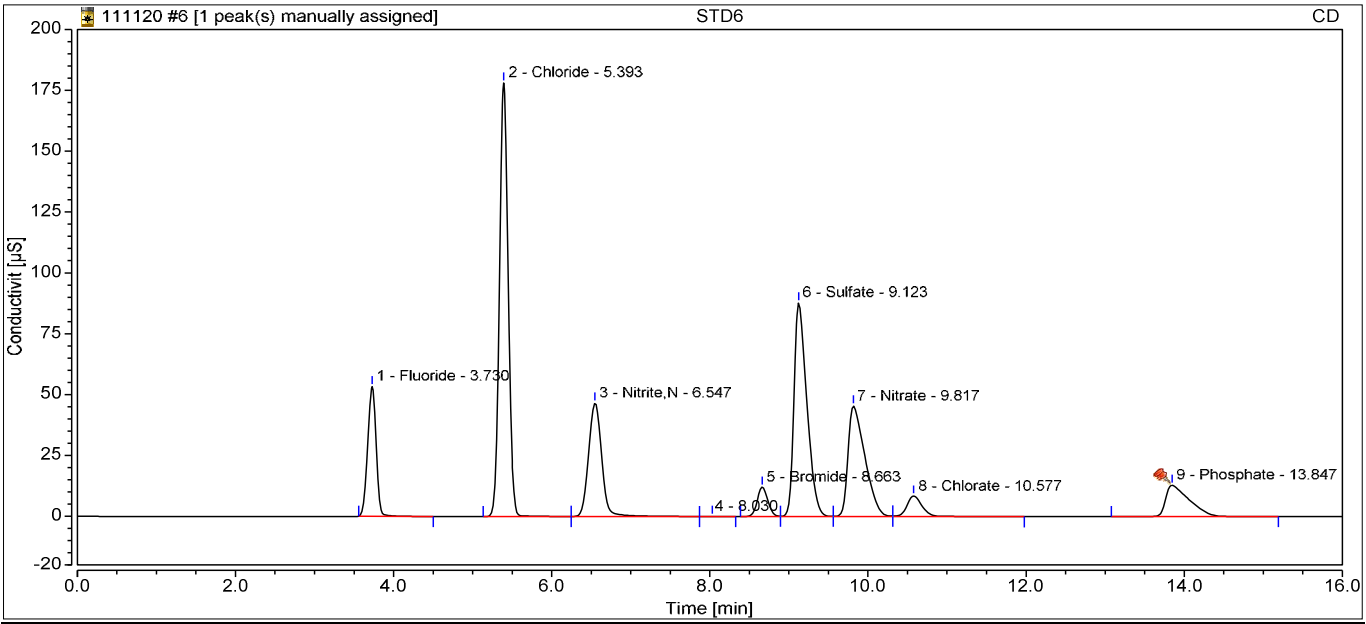
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	3.422	10.2082	10.2082	1.0000
2	5.40	Chloride	BMB	10.987	49.8141	49.8141	1.0000
3	6.56	Nitrite,N	BMB	4.749	10.2632	10.2632	1.0000
5	8.69	Bromide	BM	0.908	9.9065	9.9065	1.0000
6	9.22	Sulfate	M	8.142	50.0682	50.0682	1.0000
7	9.91	Nitrate	M	5.452	9.9421	9.9421	1.0000
8	10.62	Chlorate	MB	0.919	9.9135	9.9135	1.0000
9	14.01	Phosphate	BMB^	2.134	10.0298	10.0298	1.0000
Total:			**0.000**	**36.713**		**160.15**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**BE6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 14:22**	*Sample Weight:*	**1.0000**

Run Time:



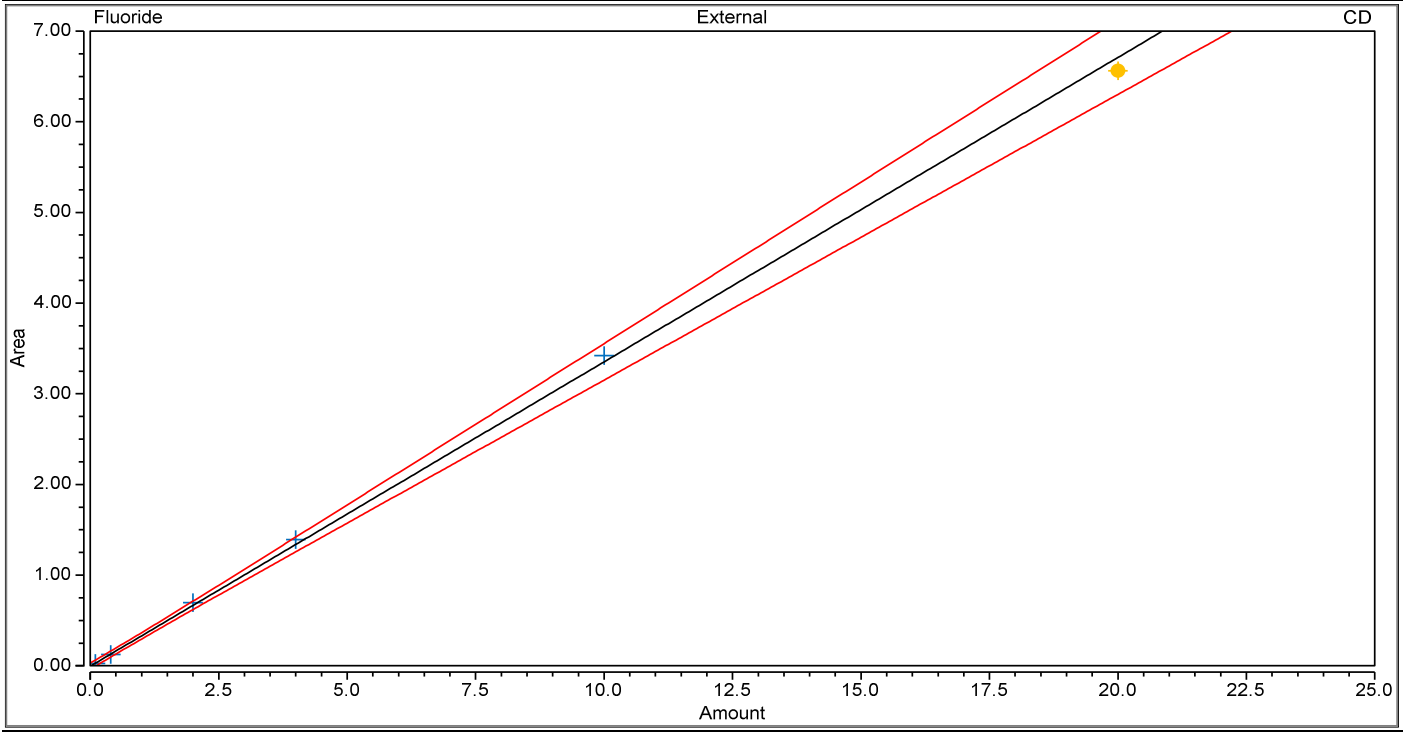
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	6.563	19.5651	19.5651	1.0000
2	5.39	Chloride	BMB	22.459	101.8240	101.8240	1.0000
3	6.55	Nitrite,N	BMB	9.038	19.5479	19.5479	1.0000
5	8.66	Bromide	BM	1.889	20.5879	20.5879	1.0000
6	9.12	Sulfate	M	16.473	101.2335	101.2335	1.0000
7	9.82	Nitrate	M	11.205	20.4127	20.4127	1.0000
8	10.58	Chlorate	MB	1.909	20.5607	20.5607	1.0000
9	13.85	Phosphate	BMB^	4.400	20.5908	20.5908	1.0000
Total:			**0.000**	**73.936**		**324.32**	

Calibration

Calibration Details	Fluoride		
Calibration Type	Lin, WithOffset, 1/A	*Offset (C0)*	-0.0051
Evaluation Type	Area	*Slope (C1)*	0.3357
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9993

Calibration Plot **Fluoride**



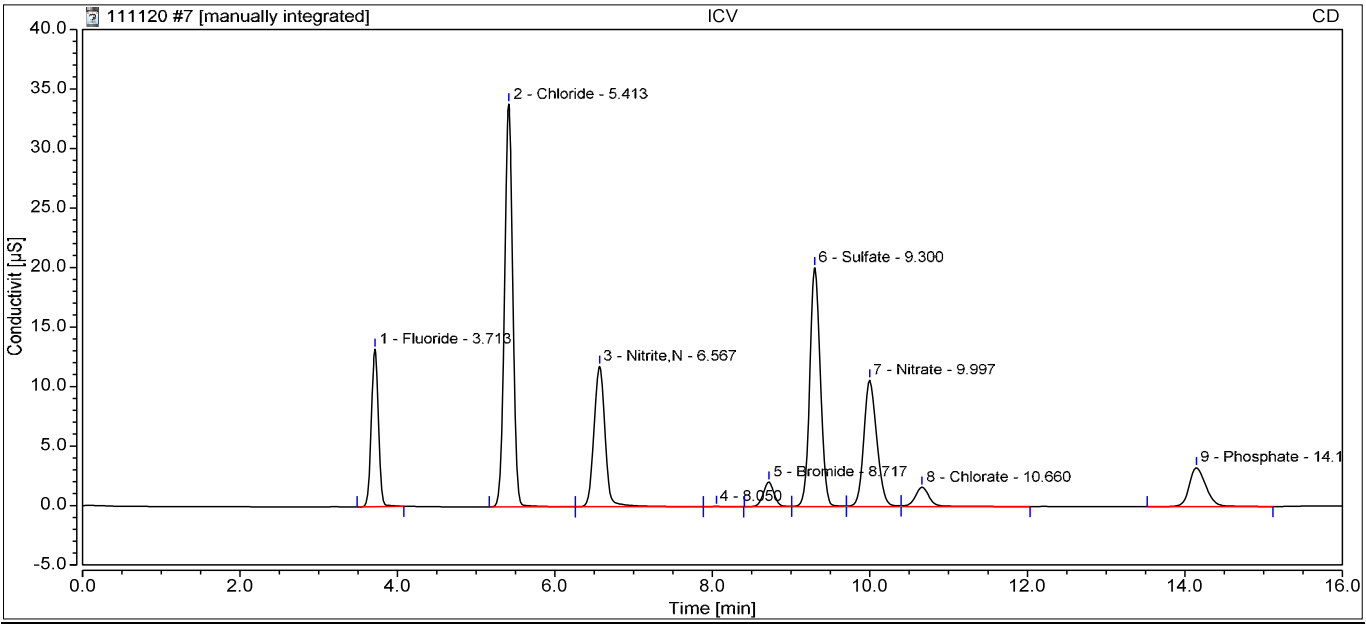
Calibration Results **Fluoride**

No.	Injection Name	Calibration Level	X Value CD Fluoride	Y Value CD Fluoride	Y Value CD Fluoride	Area µS*min CD Fluoride	Height µS CD Fluoride
1	STD1	1	0.1000	0.0268	0.0268	0.027	0.239
2	STD2	2	0.4000	0.1248	0.1248	0.125	1.277
3	STD3	3	2.0000	0.6955	0.6955	0.696	6.925
4	STD4	4	4.0000	1.3908	1.3908	1.391	13.203
5	STD5	5	10.0000	3.4221	3.4221	3.422	30.624
6	STD6	6	20.0000	6.5634	6.5634	6.563	53.254

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**BE7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 14:40**	*Sample Weight:*	**1.0000**

Run Time:



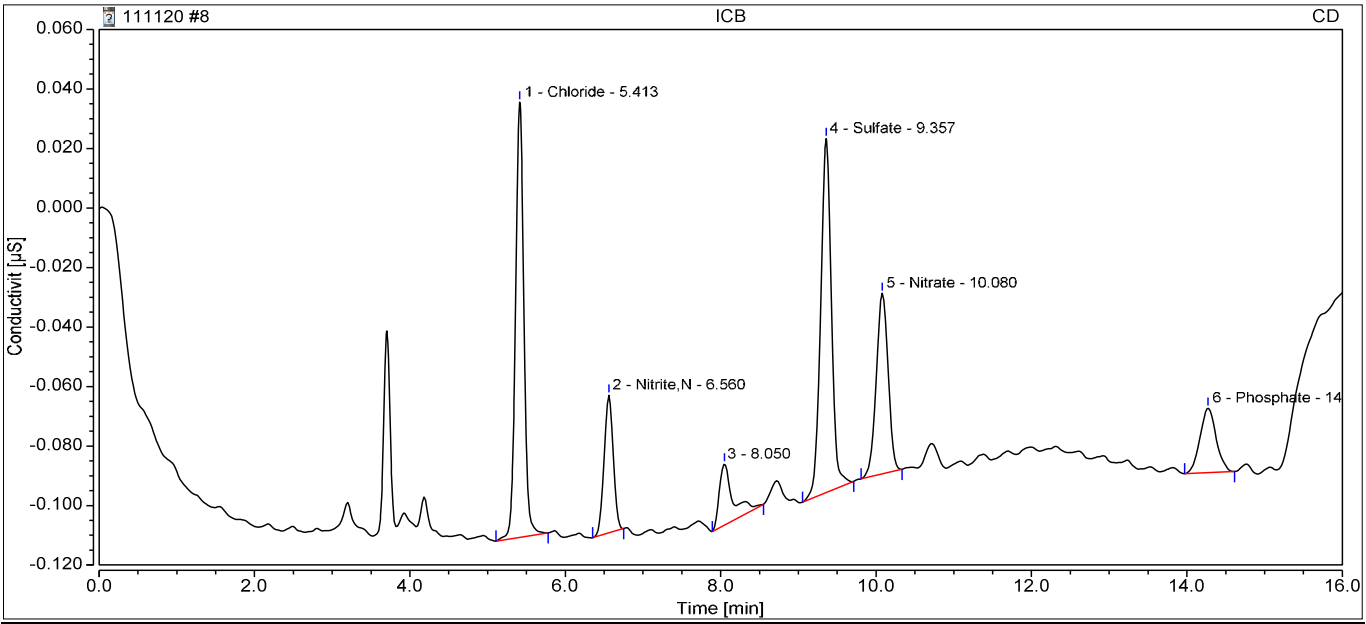
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB*	1.371	4.0986	4.0986	1.0000
2	5.41	Chloride	BMB	4.158	18.8583	18.8583	1.0000
3	6.57	Nitrite,N	BMB	1.919	4.1389	4.1389	1.0000
5	8.72	Bromide	BM	0.334	3.6542	3.6542	1.0000
6	9.30	Sulfate	M	3.120	19.2234	19.2234	1.0000
7	10.00	Nitrate	M	2.047	3.7444	3.7444	1.0000
8	10.66	Chlorate	MB	0.346	3.7490	3.7490	1.0000
9	14.15	Phosphate	BMB	0.801	3.8145	3.8145	1.0000
Total:			**0.000**	**14.096**		**61.28**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BE8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 14:58**	*Sample Weight:*	**1.0000**

Run Time:



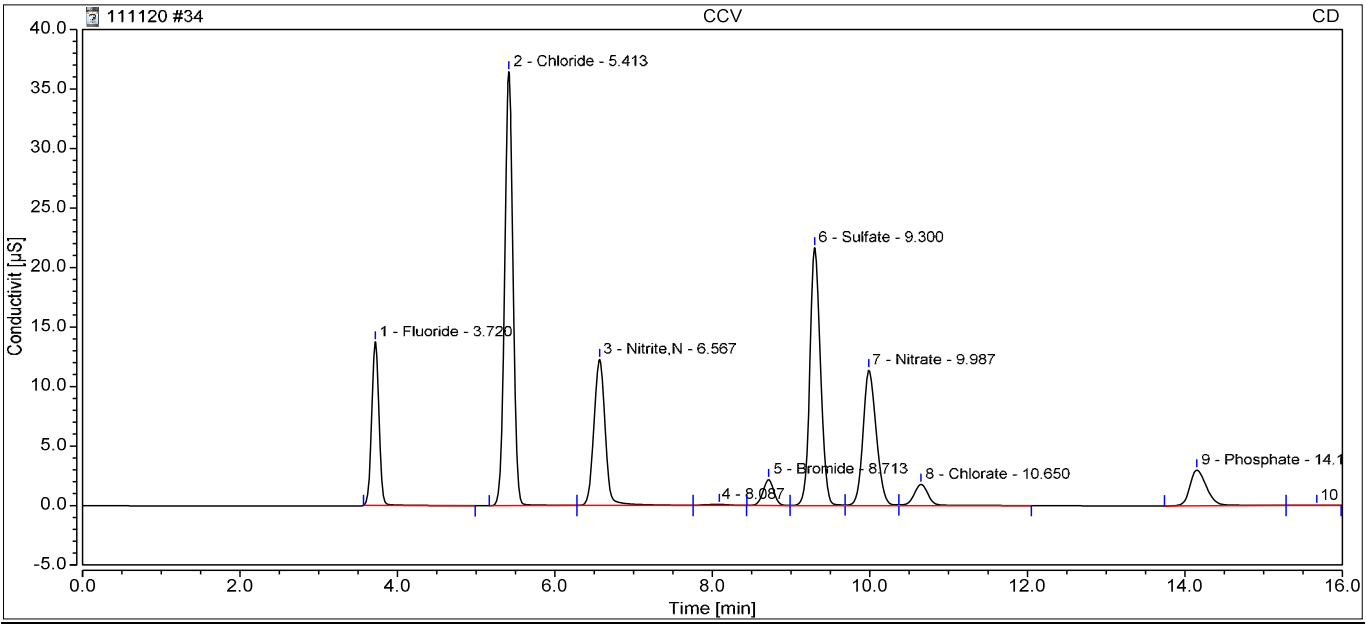
Integration Results

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	5.41	Chloride	BMB	0.018	0.0896	0.0896	1.0000
2	6.56	Nitrite,N	BMB	0.006	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
4	9.36	Sulfate	BMB	0.019	0.1785	0.1785	1.0000
5	10.08	Nitrate	BMB	0.011	0.0383	0.0383	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
6	14.27	Phosphate	BMB	0.005	0.1062	0.1062	1.0000
Total:			**0.000**	**0.060**		**0.41**	

34 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/11/2020 16:17**	*Sample Weight:*	**1.0000**

Run Time:



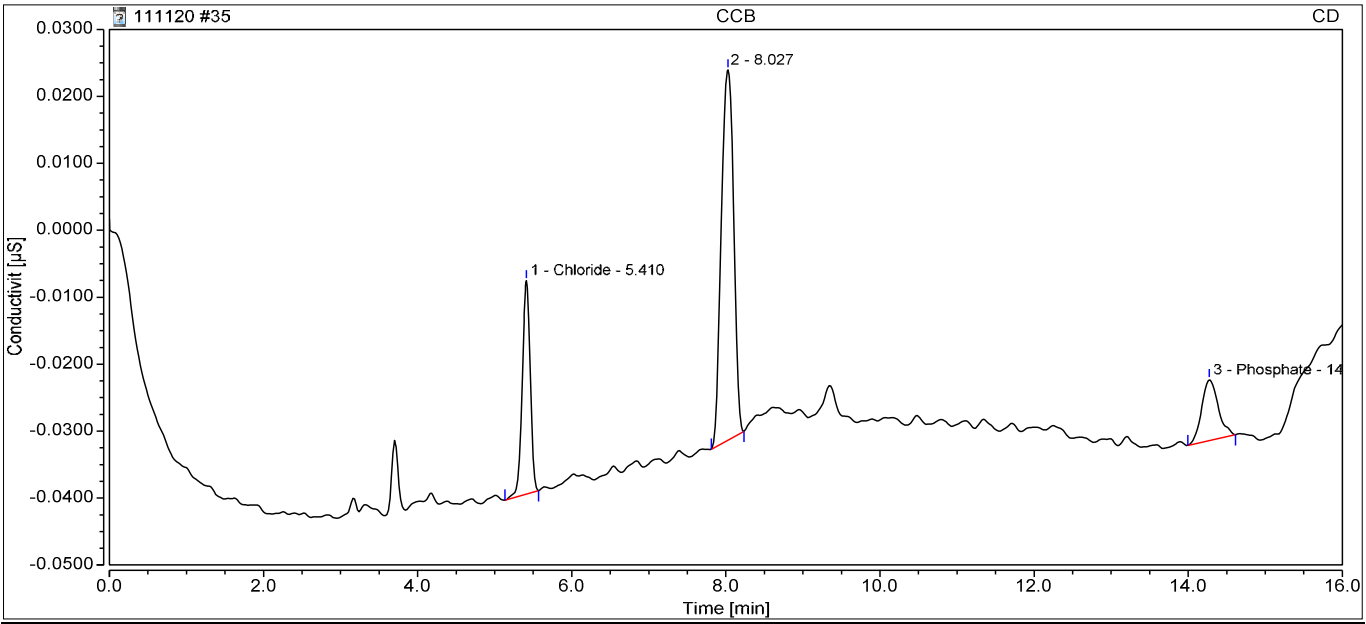
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.466	4.3820	4.3820	1.0000
2	5.41	Chloride	BMB	4.534	20.5634	20.5634	1.0000
3	6.57	Nitrite,N	BMB	2.035	4.3889	4.3889	1.0000
5	8.71	Bromide	BM	0.349	3.8193	3.8193	1.0000
6	9.30	Sulfate	M	3.384	20.8479	20.8479	1.0000
7	9.99	Nitrate	M	2.227	4.0722	4.0722	1.0000
8	10.65	Chlorate	MB	0.377	4.0880	4.0880	1.0000
9	14.15	Phosphate	BMB	0.743	3.5459	3.5459	1.0000
Total:			**0.000**	**15.117**		**65.71**	

35 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/11/2020 16:35**	*Sample Weight:*	**1.0000**

Run Time:



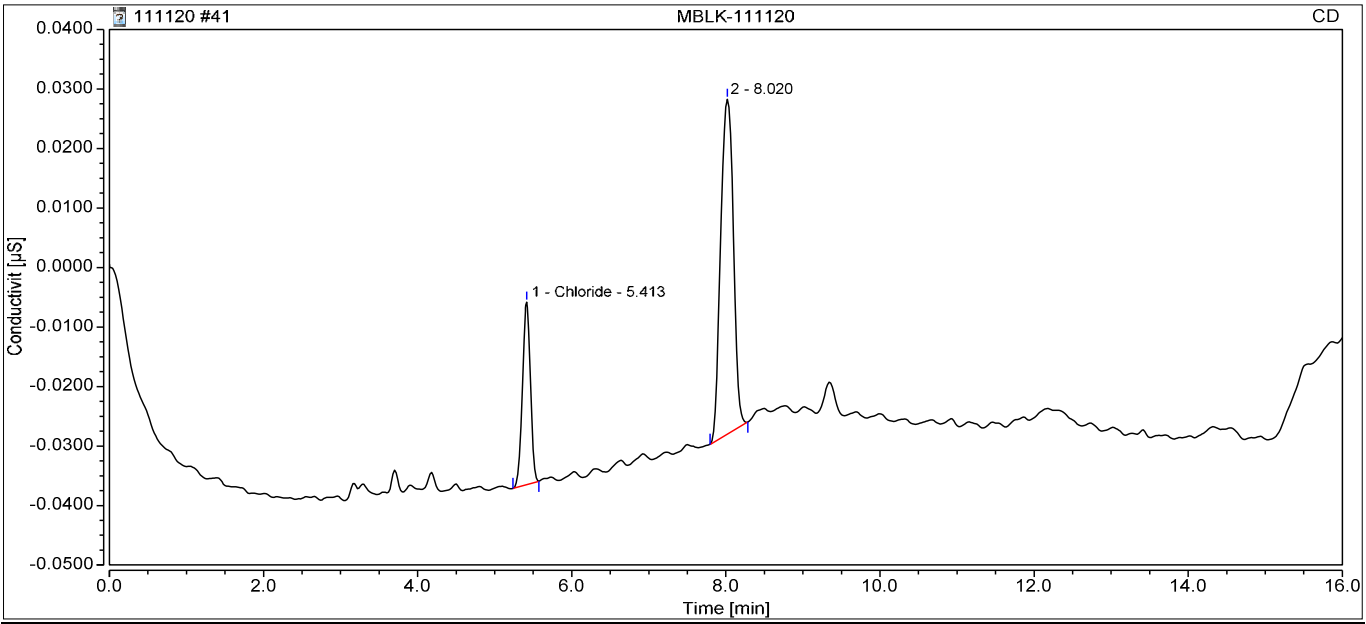
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.41	Chloride	BMB	0.004	0.0244	0.0244	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
3	14.27	Phosphate	BMB	0.002	0.0924	0.0924	1.0000
Total:			**0.000**	**0.006**		**0.12**	

41 MBLK-111120

Sample Name:	**MBLK-111120**	*Injection Volume:*	**5.00**
Vial Number:	**BA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/11/2020 18:24**	*Sample Weight:*	**1.0000**

Run Time:



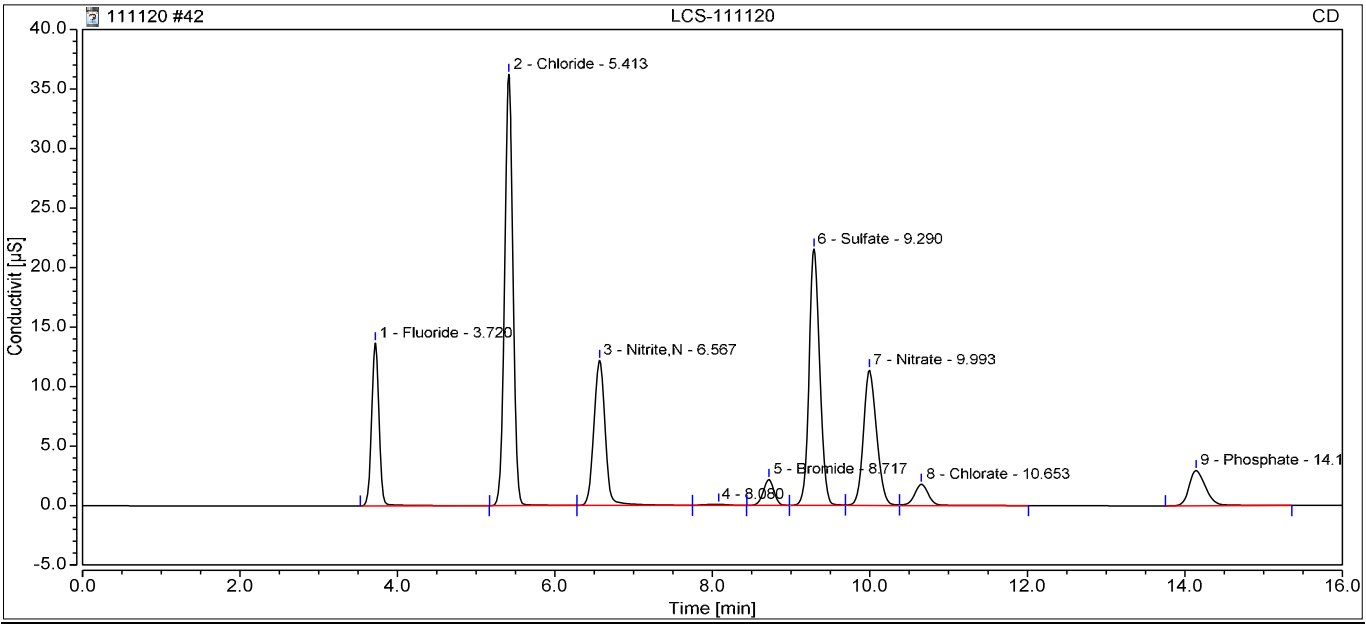
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.41	Chloride	BMB	0.004	0.0237	0.0237	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.004**		**0.02**	

42 LCS-111120

Sample Name:	**LCS-111120**	*Injection Volume:*	**5.00**
Vial Number:	**BA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/11/2020 18:42**	*Sample Weight:*	**1.0000**

Run Time:



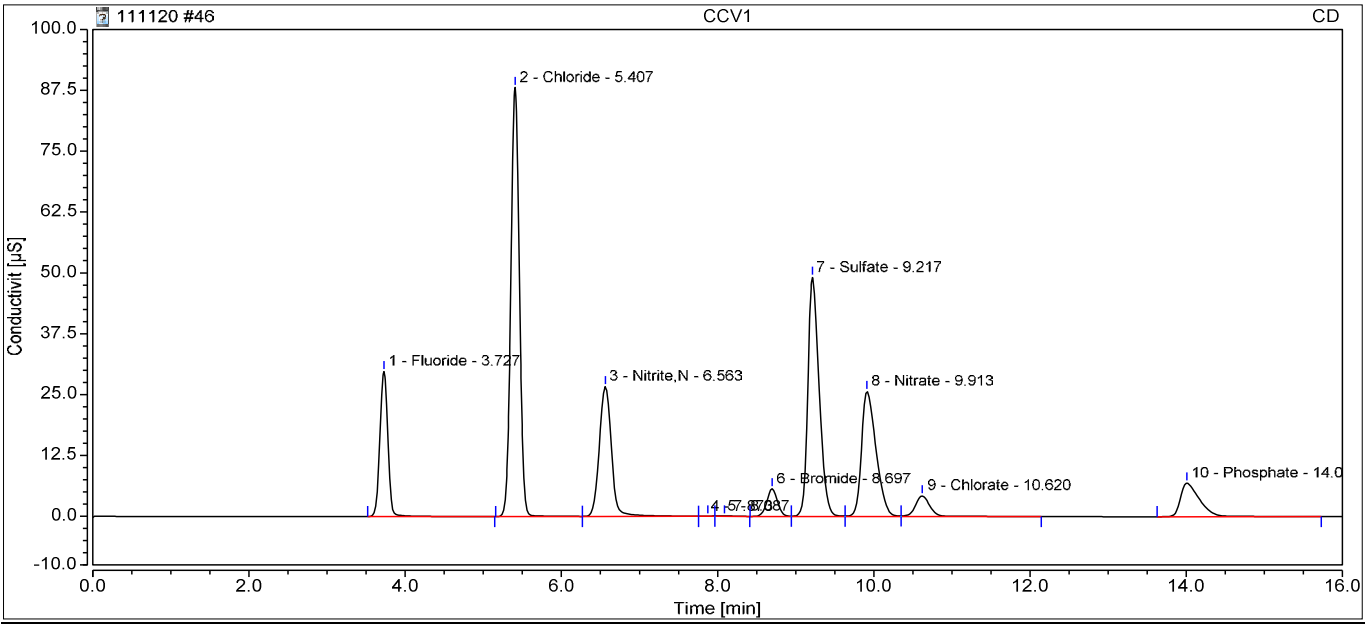
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.499	4.4799	4.4799	1.0000
2	5.41	Chloride	BMB	4.502	20.4146	20.4146	1.0000
3	6.57	Nitrite,N	BMB	2.024	4.3647	4.3647	1.0000
5	8.72	Bromide	BM	0.347	3.8003	3.8003	1.0000
6	9.29	Sulfate	M	3.371	20.7663	20.7663	1.0000
7	9.99	Nitrate	M	2.219	4.0577	4.0577	1.0000
8	10.65	Chlorate	MB	0.374	4.0484	4.0484	1.0000
9	14.14	Phosphate	BMB	0.726	3.4666	3.4666	1.0000
Total:			**0.000**	**15.062**		**65.40**	

46 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/11/2020 19:54**	*Sample Weight:*	**1.0000**

Run Time:



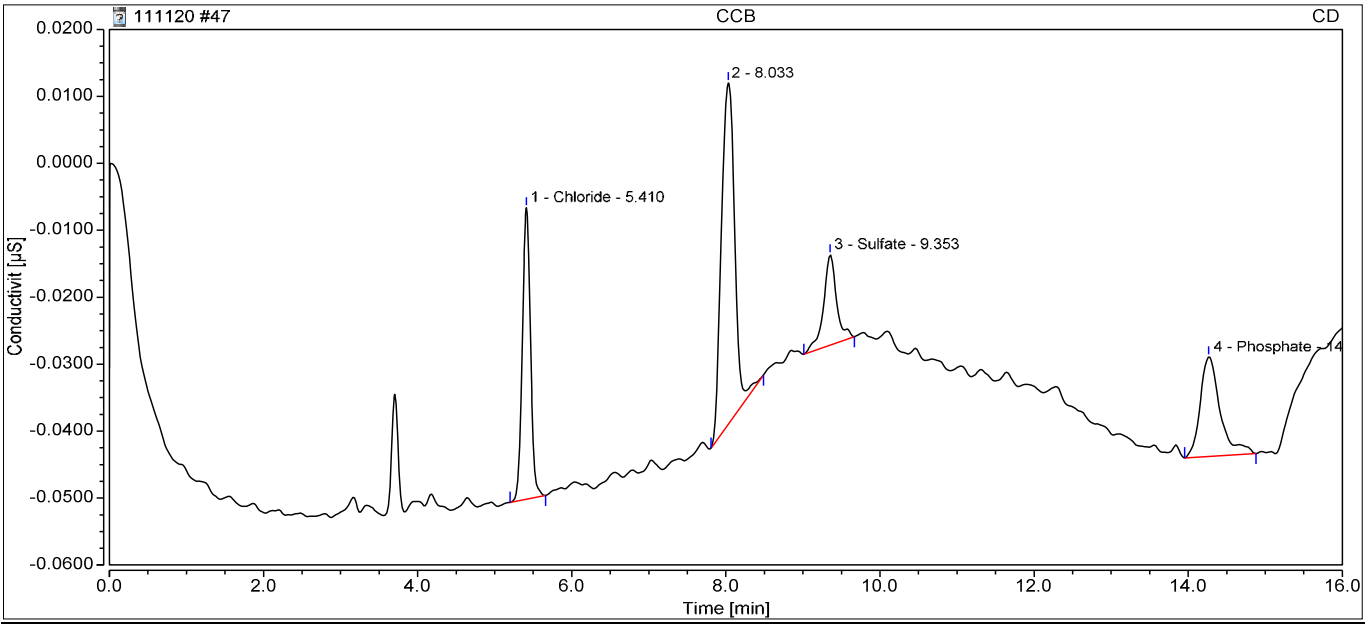
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	3.517	10.4924	10.4924	1.0000
2	5.41	Chloride	BMB	11.103	50.3429	50.3429	1.0000
3	6.56	Nitrite,N	BMB	4.790	10.3520	10.3520	1.0000
6	8.70	Bromide	BM	0.898	9.7943	9.7943	1.0000
7	9.22	Sulfate	M	8.217	50.5277	50.5277	1.0000
8	9.91	Nitrate	M	5.537	10.0971	10.0971	1.0000
9	10.62	Chlorate	MB	0.922	9.9490	9.9490	1.0000
10	14.01	Phosphate	BMB	1.931	9.0824	9.0824	1.0000
Total:			**0.000**	**36.916**		**160.64**	

47 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/11/2020 20:12**	*Sample Weight:*	**1.0000**

Run Time:



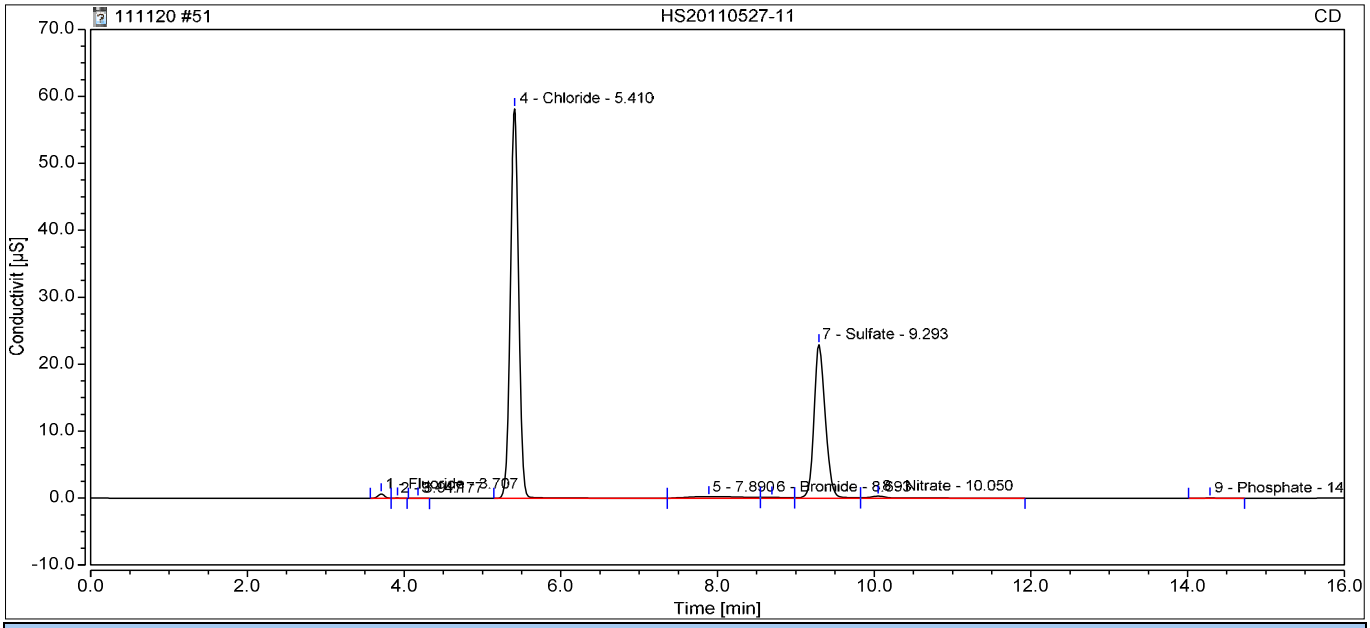
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.41	Chloride	BMB	0.005	0.0313	0.0313	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
3	9.35	Sulfate	BMB	0.003	0.0777	0.0777	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
4	14.27	Phosphate	BMB	0.004	0.1025	0.1025	1.0000
Total:			**0.000**	**0.012**		**0.21**	

51 HS20110527-11

Sample Name:	**HS20110527-11**	*Injection Volume:*	**5.00**
Vial Number:	**GC6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/11/2020 21:24**	*Sample Weight:*	**1.0000**

Run Time:

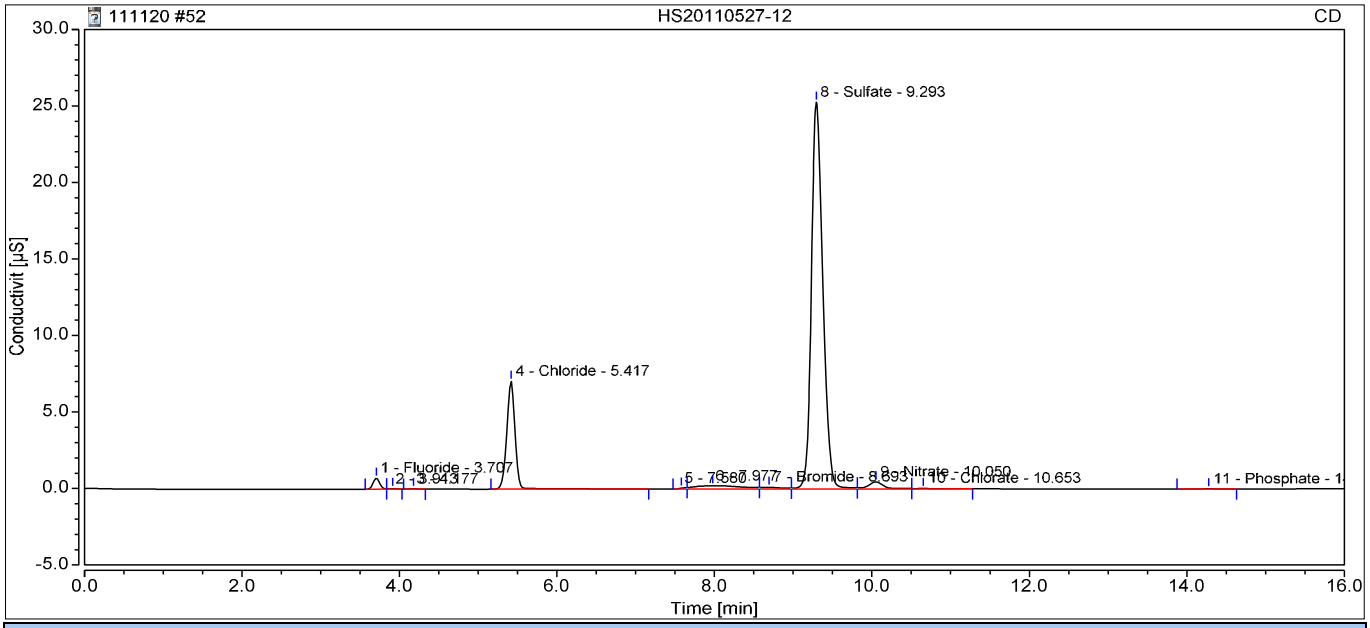


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.063	0.2021	0.2021	1.0000
4	5.41	Chloride	BMB	7.196	32.6312	32.6312	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
6	8.69	Bromide	M	0.051	0.5780	0.5780	1.0000
7	9.29	Sulfate	M	3.852	23.7207	23.7207	1.0000
8	10.05	Nitrate	MB	0.095	0.1923	0.1923	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
9	14.29	Phosphate	BMB	0.006	0.1086	0.1086	1.0000
Total:			**0.000**	**11.264**		**57.43**	

52 HS20110527-12			
Sample Name:	**HS20110527-12**	*Injection Volume:*	**5.00**
Vial Number:	**GC7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/11/2020 21:42**	*Sample Weight:*	**1.0000**

Run Time:

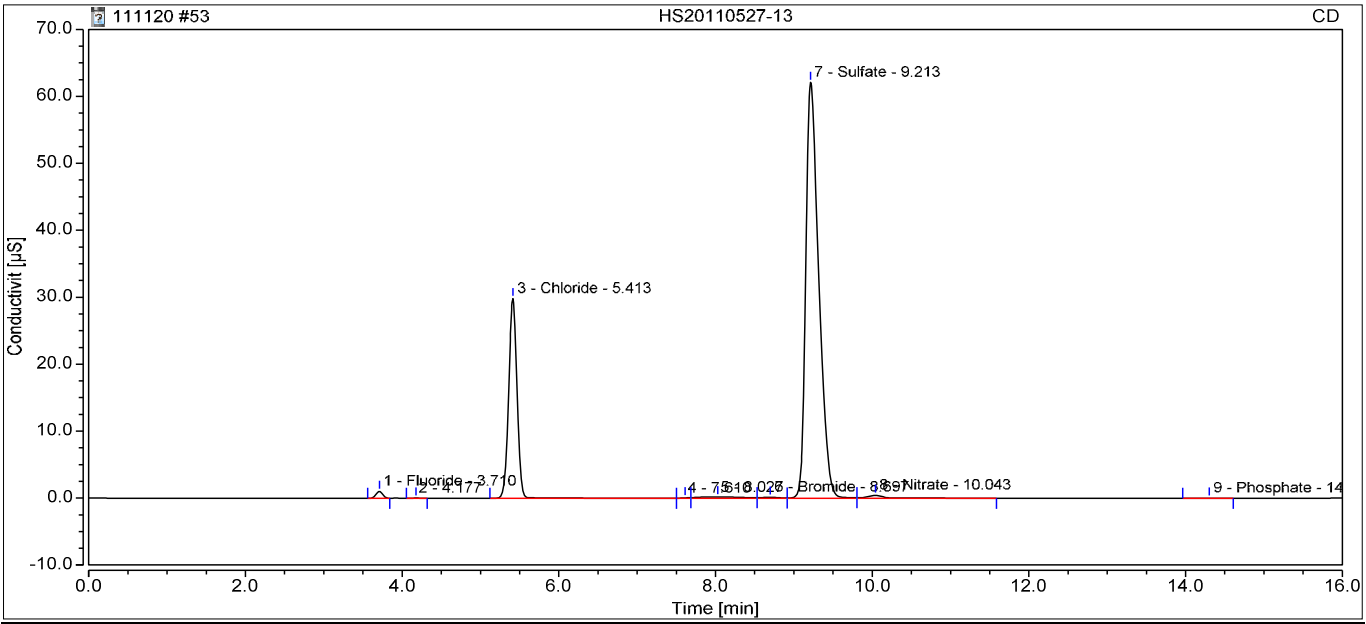


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.068	0.2180	0.2180	1.0000
4	5.42	Chloride	BMB	0.882	4.0070	4.0070	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
7	8.69	Bromide	M	0.035	0.3942	0.3942	1.0000
8	9.29	Sulfate	M	4.232	26.0502	26.0502	1.0000
9	10.05	Nitrate	M	0.103	0.2065	0.2065	1.0000
10	10.65	Chlorate	MB	0.008	0.1148	0.1148	1.0000
11	14.28	Phosphate	BMB	0.003	0.0963	0.0963	1.0000
Total:			**0.000**	**5.331**		**31.09**	

53 HS20110527-13			
Sample Name:	**HS20110527-13**	*Injection Volume:*	**5.00**
Vial Number:	**GC8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/11/2020 22:00**	*Sample Weight:*	**1.0000**

Run Time:



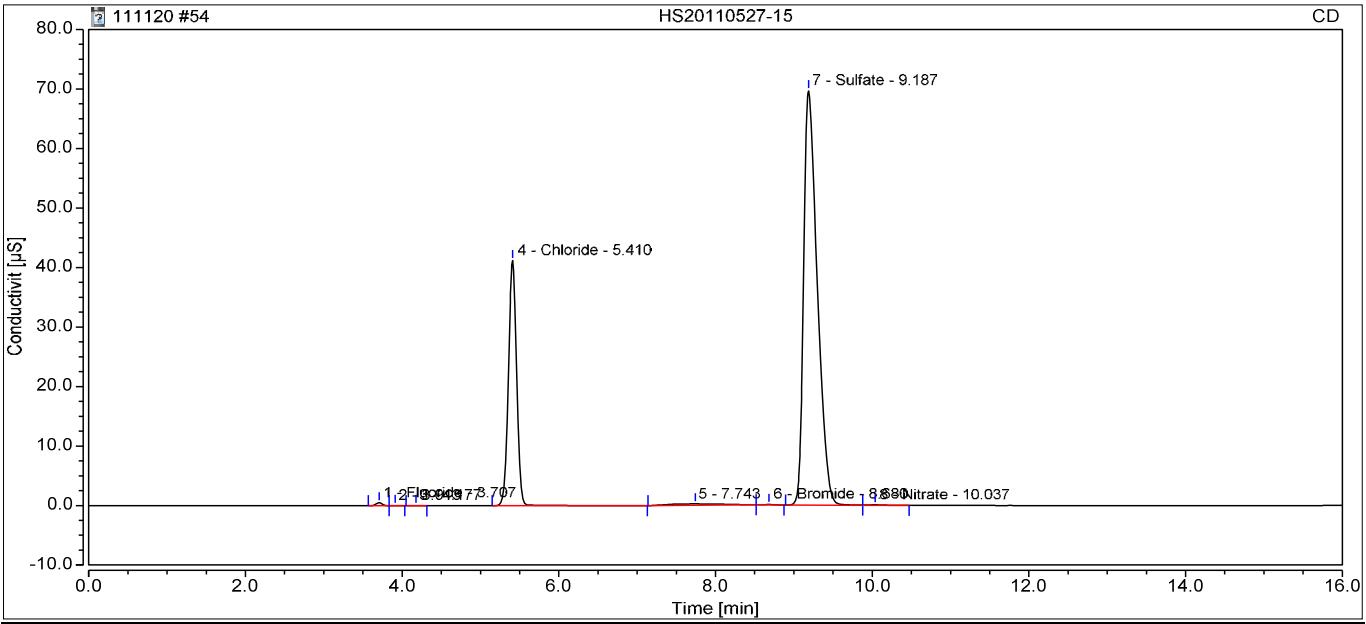
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.102	0.3183	0.3183	1.0000
3	5.41	Chloride	BMB	3.714	16.8456	16.8456	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
6	8.70	Bromide	M	0.040	0.4572	0.4572	1.0000
7	9.21	Sulfate	M	11.909	73.2060	73.2060	1.0000
8	10.04	Nitrate	MB	0.115	0.2283	0.2283	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
9	14.30	Phosphate	BMB	0.002	0.0920	0.0920	1.0000
Total:			**0.000**	**15.883**		**91.15**	

54 HS20110527-15

Sample Name:	**HS20110527-15**	*Injection Volume:*	**5.00**
Vial Number:	**GD1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/11/2020 22:18**	*Sample Weight:*	**1.0000**

Run Time:



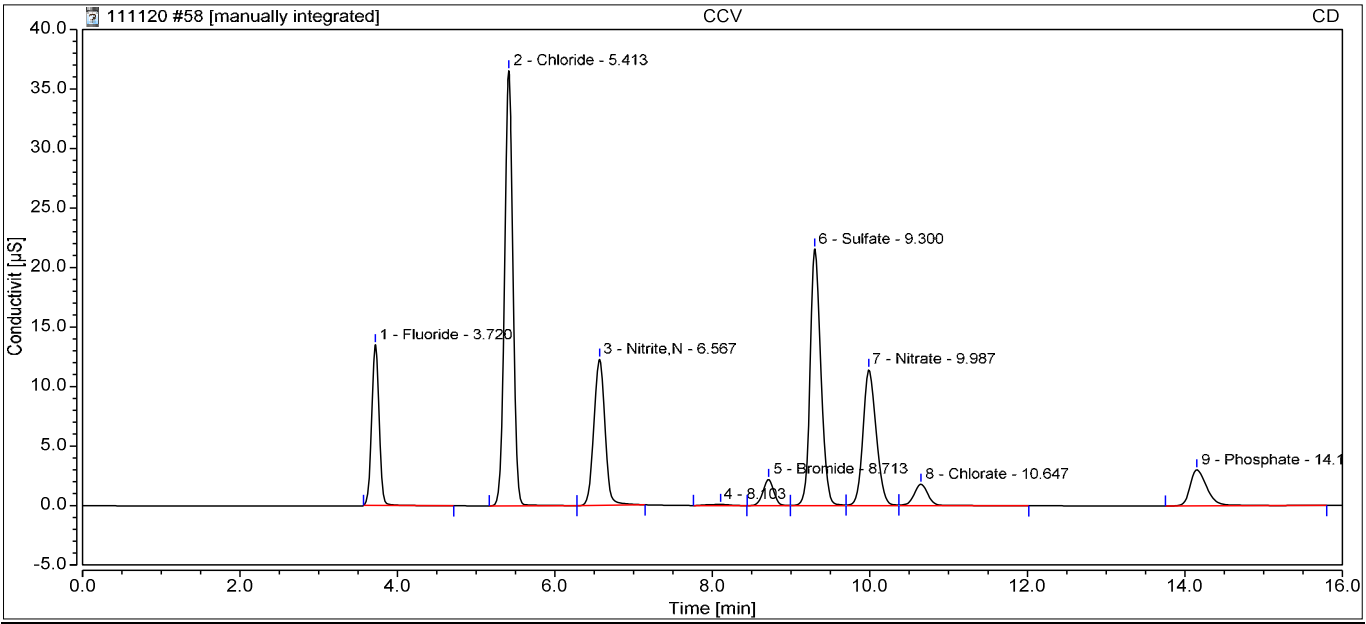
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.048	0.1584	0.1584	1.0000
4	5.41	Chloride	BMB	5.029	22.8062	22.8062	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
6	8.68	Bromide	BMB	0.010	0.1319	0.1319	1.0000
7	9.19	Sulfate	BM	14.003	86.0624	86.0624	1.0000
8	10.04	Nitrate	MB	0.016	0.0485	0.0485	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**	**19.107**		**109.21**	

58 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/11/2020 23:30**	*Sample Weight:*	**1.0000**

Run Time:



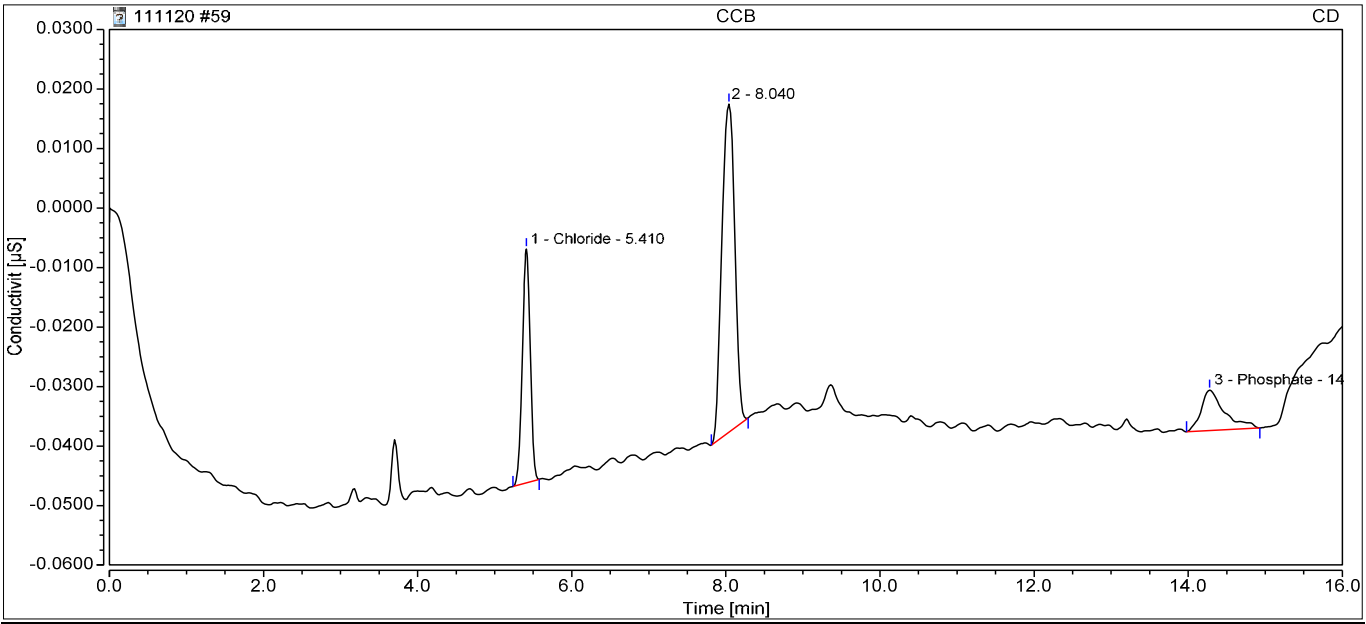
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.468	4.3880	4.3880	1.0000
2	5.41	Chloride	BMb*	4.555	20.6572	20.6572	1.0000
3	6.57	Nitrite,N	bMB*	2.000	4.3128	4.3128	1.0000
5	8.71	Bromide	BM	0.351	3.8446	3.8446	1.0000
6	9.30	Sulfate	M	3.395	20.9113	20.9113	1.0000
7	9.99	Nitrate	M	2.238	4.0924	4.0924	1.0000
8	10.65	Chlorate	MB	0.379	4.1055	4.1055	1.0000
9	14.15	Phosphate	BMB	0.755	3.6028	3.6028	1.0000
Total:			**0.000**	**15.142**		**65.91**	

59 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/11/2020 23:48**	*Sample Weight:*	**1.0000**

Run Time:

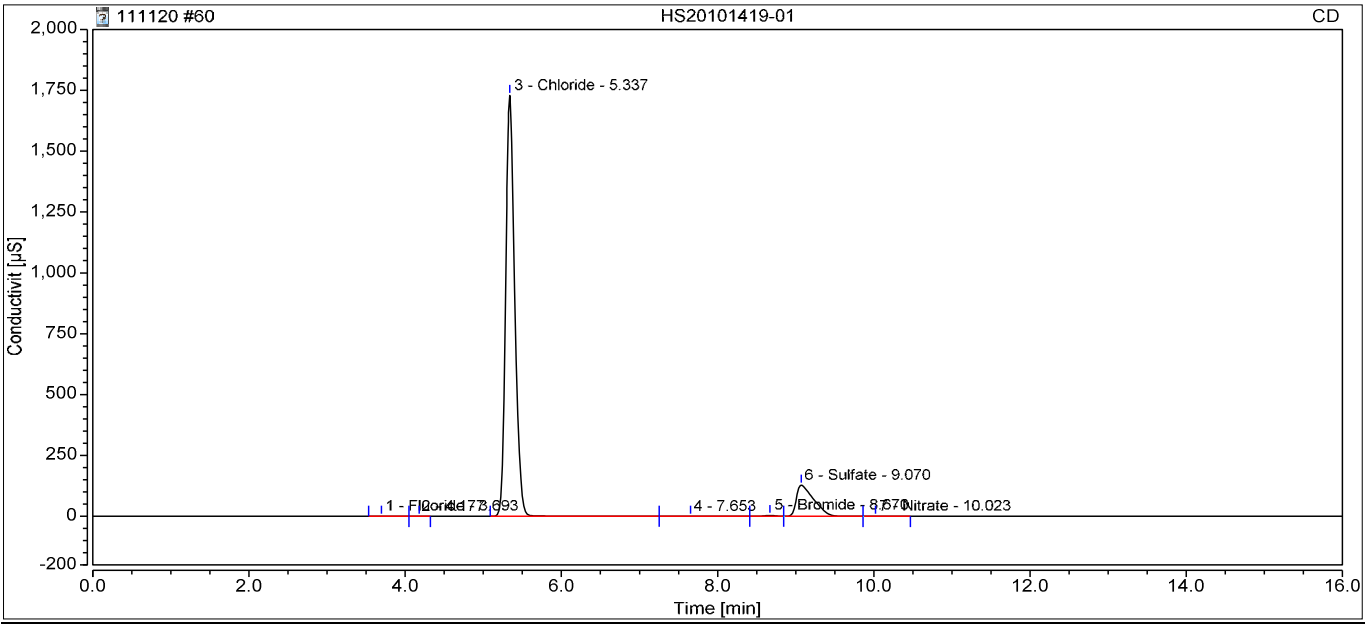


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.41	Chloride	BMB	0.005	0.0281	0.0281	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
3	14.28	Phosphate	BMB	0.002	0.0929	0.0929	1.0000
Total:			**0.000**	**0.007**		**0.12**	

60 HS20101419-01			
Sample Name:	**HS20101419-01**	*Injection Volume:*	**5.00**
Vial Number:	**GD5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/12/2020 00:06**	*Sample Weight:*	**1.0000**

Run Time:



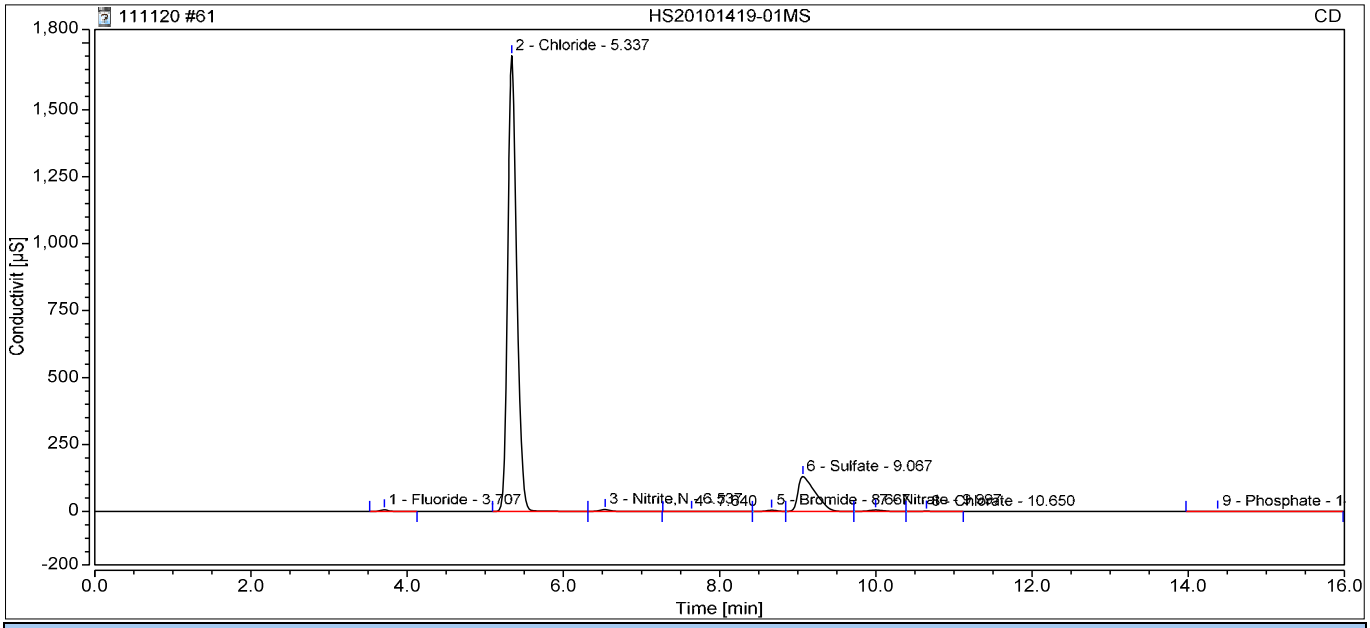
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.69	Fluoride	BMB	0.067	0.2141	0.2141	1.0000
3	5.34	Chloride	BMB	232.233	1052.8238	1052.8238	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
5	8.67	Bromide	BM	0.492	5.3769	5.3769	1.0000
6	9.07	Sulfate	M	32.742	201.1562	201.1562	1.0000
7	10.02	Nitrate	MB	0.024	0.0627	0.0627	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**	**265.558**		**1259.63**	

61 HS20101419-01MS

Sample Name:	**HS20101419-01MS**	*Injection Volume:*	**5.00**
Vial Number:	**GD6**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/12/2020 00:24**	*Sample Weight:*	**1.0000**

Run Time:



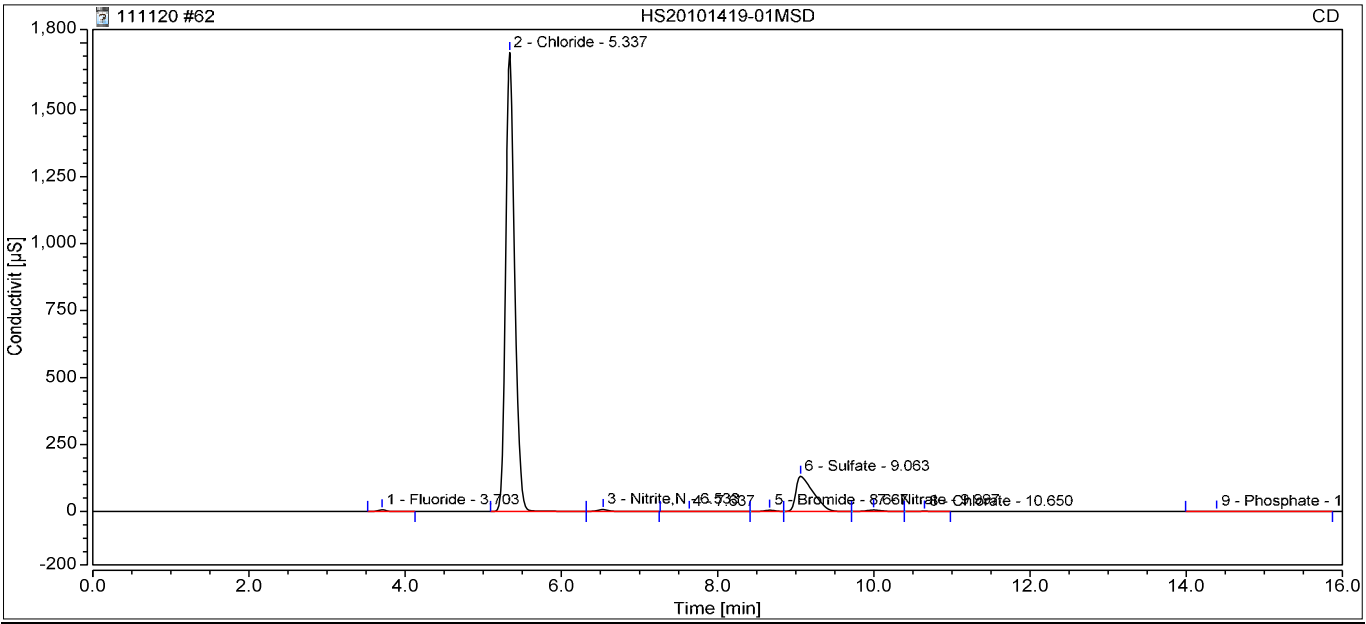
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.730	2.1896	2.1896	1.0000
2	5.34	Chloride	BMB	227.999	1033.6318	1033.6318	1.0000
3	6.54	Nitrite,N	BMB	1.026	2.2051	2.2051	1.0000
5	8.67	Bromide	M	0.681	7.4357	7.4357	1.0000
6	9.07	Sulfate	M	33.221	204.0951	204.0951	1.0000
7	10.00	Nitrate	M	1.121	2.0599	2.0599	1.0000
8	10.65	Chlorate	MB	0.162	1.7670	1.7670	1.0000
9	14.38	Phosphate	BMB	0.173	0.8863	0.8863	1.0000
Total:			**0.000**	**265.113**		**1254.27**	

62 HS20101419-01MSD

Sample Name:	**HS20101419-01MSD**	*Injection Volume:*	**5.00**
Vial Number:	**GD7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/12/2020 00:42**	*Sample Weight:*	**1.0000**

Run Time:

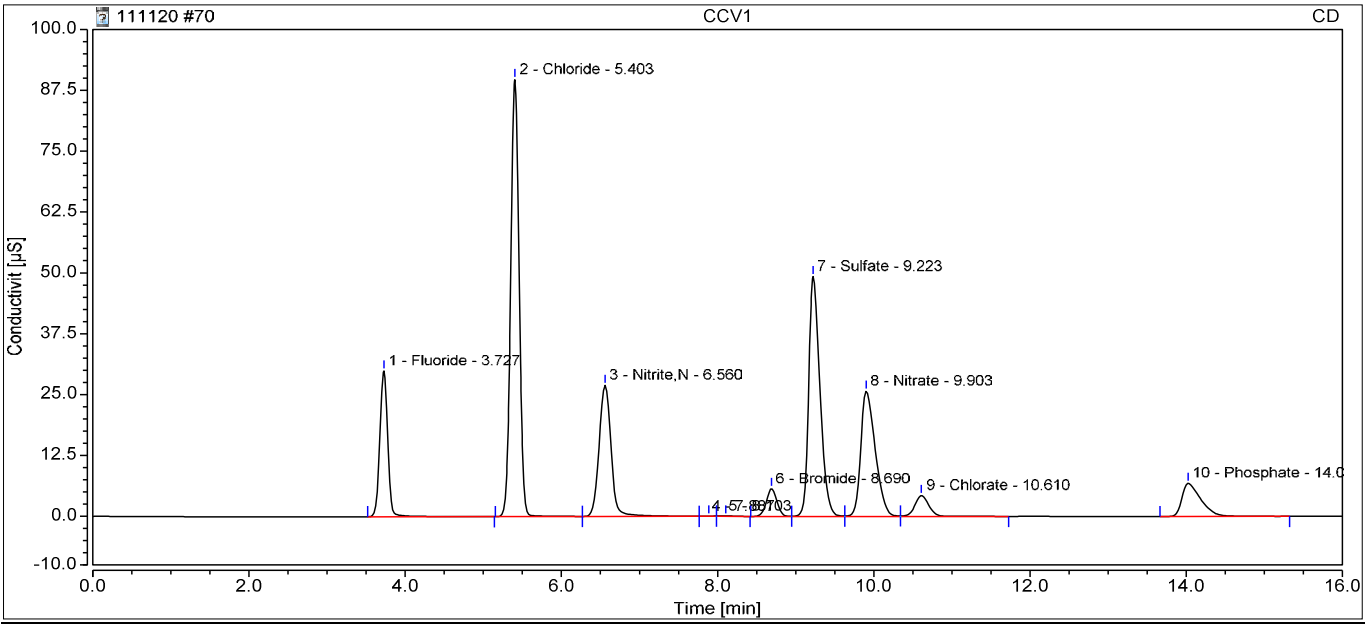


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.737	2.2098	2.2098	1.0000
2	5.34	Chloride	BMB	229.119	1038.7069	1038.7069	1.0000
3	6.53	Nitrite,N	BMB	1.031	2.2163	2.2163	1.0000
5	8.67	Bromide	M	0.682	7.4447	7.4447	1.0000
6	9.06	Sulfate	M	33.584	206.3246	206.3246	1.0000
7	10.00	Nitrate	M	1.121	2.0592	2.0592	1.0000
8	10.65	Chlorate	MB	0.161	1.7561	1.7561	1.0000
9	14.39	Phosphate	BMB	0.190	0.9656	0.9656	1.0000
Total:			**0.000**	**266.624**		**1261.68**	

70 CCV1			
Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/12/2020 03:06**	*Sample Weight:*	**1.0000**

Run Time:



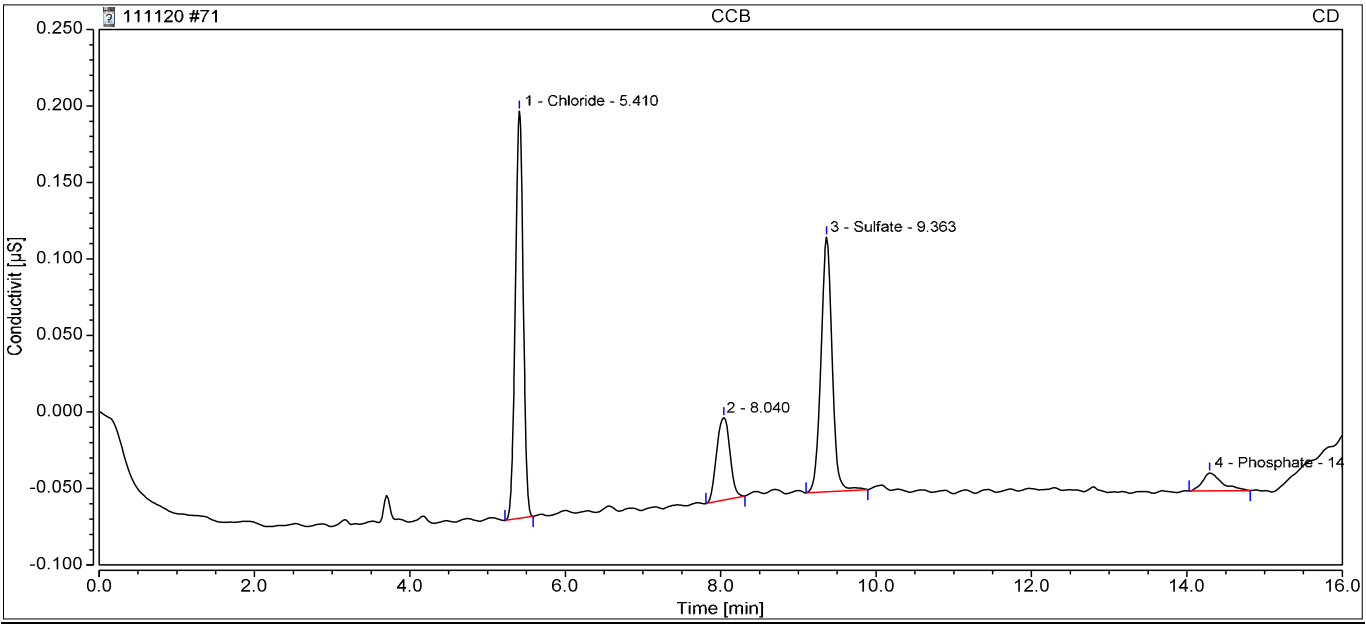
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	3.485	10.3946	10.3946	1.0000
2	5.40	Chloride	BMB	11.143	50.5239	50.5239	1.0000
3	6.56	Nitrite,N	BMB	4.788	10.3481	10.3481	1.0000
6	8.69	Bromide	BM	0.894	9.7497	9.7497	1.0000
7	9.22	Sulfate	M	8.203	50.4422	50.4422	1.0000
8	9.90	Nitrate	M	5.528	10.0807	10.0807	1.0000
9	10.61	Chlorate	MB	0.896	9.6689	9.6689	1.0000
10	14.03	Phosphate	BMB	1.931	9.0811	9.0811	1.0000
Total:			**0.000**	**36.868**		**160.29**	

71 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/12/2020 03:24**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.41	Chloride	BMB	0.031	0.1482	0.1482	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
3	9.36	Sulfate	BMB	0.028	0.2308	0.2308	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
4	14.29	Phosphate	BMB	0.003	0.0979	0.0979	1.0000
Total:			**0.000**	**0.062**		**0.48**	

HS20110527 ALS Kelso Tier IV Report K2010530

ALS WO# HS20110527

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November 25, 2020

Analytical Report for Service Request No: K2010530

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

RE: HS20110527

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 13, 2020
For your reference, these analyses have been assigned our service request number **K2010530.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20110527
Sample Matrix: Ground Water

Service Request: K2010530
Date Received: 11/13/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Four ground water samples were received for analysis at ALS Environmental on 11/13/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 11/25/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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K2010530

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:** **15143**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110527
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110527-11**	**35BWW26-201110**	**Groundwater**	**10 Nov 2020 07:20**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			25 Nov 2020
2.	**HS20110527-12**	**35BWW04-201110**	**Groundwater**	**10 Nov 2020 08:05**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			25 Nov 2020
3.	**HS20110527-13**	**35BWW14-201110**	**Groundwater**	**10 Nov 2020 09:00**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			25 Nov 2020
4.	**HS20110527-15**	**35BWW23-201110**	**Groundwater**	**10 Nov 2020 10:30**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			25 Nov 2020

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: 11/12/2020 1800

Received By: _____ Date/Time: 11/13/20 1030

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

PM VL

Cooler Receipt and Preservation Form

Client ALS Houston Service Request K20 10530

Received: 11/13/20 Opened: 11/13/20 By: NP Unloaded: 11/13/20 By: NP

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed
0.5	—	IR01	15143	—	—	1891 8582 7783	

6. Packing material: *Inserts* (Baggies) (Bubble Wrap) *Gel Packs* (Wet Ice) *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2010530
Project:	HS20110527	**Date Collected:**	11/10/20
Sample Matrix:	Ground Water	**Date Received:**	11/13/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
35BWW26-201110	K2010530-001	**0.51**	0.50	0.20	0.07	1	11/19/20 17:48	
35BWW04-201110	K2010530-002	**0.76**	0.50	0.20	0.07	1	11/19/20 17:48	
35BWW14-201110	K2010530-003	**0.52**	0.50	0.20	0.07	1	11/19/20 17:48	
35BWW23-201110	K2010530-004	**1.13**	0.50	0.20	0.07	1	11/19/20 17:48	
Method Blank	K2010530-MB	ND U	0.50	0.20	0.07	1	11/19/20 17:48	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010530
Project:	HS20110527	**Date Analyzed:**	11/19/20
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	704227

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2010530-LCS	24.3	25.0	97	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2010530
Project: HS20110527

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	704227	KQ2018410-01	11/19/20 17:48	25.0	25.2	101	90-110
CCV2	704227	KQ2018410-02	11/19/20 17:48	25.0	25.1	100	90-110
CCV3	704227	KQ2018410-03	11/19/20 17:48	25.0	25.0	100	90-110
CCV4	704227	KQ2018410-04	11/19/20 17:48	25.0	24.8	99	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2010530
Project: HS20110527

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	704227	KQ2018410-05	11/19/20 17:48	0.50	0.20	0.07	ND	U
CCB2	704227	KQ2018410-06	11/19/20 17:48	0.50	0.20	0.07	ND	U
CCB3	704227	KQ2018410-07	11/19/20 17:48	0.50	0.20	0.07	ND	U
CCB4	704227	KQ2018410-08	11/19/20 17:48	0.50	0.20	0.07	ND	U

Raw Data

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General Chemistry

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Work Request # Original ( ) K2010450, 10465, 10479, 10529, 10530, 10552, 10553, 10645, 10682

Tier: I I II IV IV II II IV I

Date Analyzed: 11/19/20

Analyst: MAS Run # 704227

Analysis: SM 5310 C/TOCT

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

-RSD was high between parent & dup. Results were less than 5x MRL.

Final Approved by: QC Date: 11/20/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MSPECHT **Analysis Lot:** 704227 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2010450-001	Carbon, Total Organic	N/A		Ground Water	8.81 mg/L	10 mL	8.81 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	I
K2010450-002	Carbon, Total Organic	N/A		Ground Water	15.51 mg/L	10 mL	15.5 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	I
K2010450-003	Carbon, Total Organic	N/A		Ground Water	21.72 mg/L	10 mL	21.7 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	I
K2010450-004	Carbon, Total Organic	N/A		Ground Water	24.00 mg/L	10 mL	24.0 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	I
K2010450-005	Carbon, Total Organic	N/A		Ground Water	7.75 mg/L	10 mL	7.75 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	I
K2010465-002	Carbon, Total Organic	N/A		Water	26.09 mg/L	10 mL	26.1 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	I
K2010479-001	Carbon, Total Organic	N/A		Ground Water	0.73 mg/L	10 mL	0.73 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	II
K2010479-002	Carbon, Total Organic	N/A		Ground Water	0.33 mg/L	10 mL	0.33 mg/L J	1	0.07	0.50			11/19/20 17:48:00	N	II
K2010529-001	Carbon, Total Organic	N/A		Water	1.25 mg/L	10 mL	1.25 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010530-001	Carbon, Total Organic	N/A		Ground Water	0.51 mg/L	10 mL	0.51 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010530-002	Carbon, Total Organic	N/A		Ground Water	0.76 mg/L	10 mL	0.76 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010530-003	Carbon, Total Organic	N/A		Ground Water	0.52 mg/L	10 mL	0.52 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010530-004	Carbon, Total Organic	N/A		Ground Water	1.13 mg/L	10 mL	1.13 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010552-001	Carbon, Total Organic	N/A		Water	0.13 mg/L	10 mL	0.13 mg/L J	1	0.07	0.50			11/19/20 17:48:00	N	II
K2010553-001	Carbon, Total Organic	N/A		Water	0.06 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/19/20 17:48:00	N	II
K2010645-001	Carbon, Total Organic	N/A		Ground Water	0.99 mg/L	10 mL	0.99 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010645-002	Carbon, Total Organic	N/A		Ground Water	0.74 mg/L	10 mL	0.74 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010645-003	Carbon, Total Organic	N/A		Ground Water	0.93 mg/L	10 mL	0.93 mg/L	1	0.07	0.50			11/19/20 17:48:00	Y	IV
K2010682-001	Carbon, Total Organic	N/A		Water	2.70 mg/L	10 mL	2.70 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	II
K2010682-002	Carbon, Total Organic	N/A		Water	1.64 mg/L	10 mL	1.64 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	II
KQ2018410-01	Carbon, Total Organic	CCV		Ground Water	25.20 mg/L	10 mL	25.2 mg/L	1					11/19/20 17:48:00	N	I
KQ2018410-02	Carbon, Total Organic	CCV		Ground Water	25.09 mg/L	10 mL	25.1 mg/L	1					11/19/20 17:48:00	N	I
KQ2018410-03	Carbon, Total Organic	CCV		Ground Water	25.00 mg/L	10 mL	25.0 mg/L	1					11/19/20 17:48:00	N	I
KQ2018410-04	Carbon, Total Organic	CCV		Ground Water	24.83 mg/L	10 mL	24.8 mg/L	1					11/19/20 17:48:00	N	I
KQ2018410-05	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/19/20 17:48:00	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MSPECHT **Analysis Lot:** 704227 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2018410-06	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/19/20 17:48:00	N	I
KQ2018410-07	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/19/20 17:48:00	N	I
KQ2018410-08	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/19/20 17:48:00	N	I
KQ2018410-09	Carbon, Total Organic	MB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/19/20 17:48:00	N	I
KQ2018410-10	Carbon, Total Organic	LCS		Ground Water	24.30 mg/L	10 mL	24.3 mg/L	1	0.07	0.50	97		11/19/20 17:48:00	N	I
KQ2018410-11	Carbon, Total Organic	MS	K2010645-003	Ground Water	27.33 mg/L	10 mL	27.3 mg/L	1	0.07	0.50	106		11/19/20 17:48:00	N	IV
KQ2018410-12	Carbon, Total Organic	DUP	K2010645-003	Ground Water	0.83 mg/L	10 mL	0.83 mg/L	1	0.07	0.50		11*	11/19/20 17:48:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS Kelso Critical Consumables Evaluation

This is a new lot and requires pre-testing before use on samples.

Department: General Chemistry

☒ New Lot/Pre-Testing ☐ New Vendor Pre-Testing

☐ Acetic Acid

Date Received: 11/9/2020 **Date Delivered to Lab**: 11/9/2020

Department	Critical Consumable	Vendor	Lot Number	Part Number
EN-40	250ml AOX	Systems Plus	Bottle - 72862 Acid - 20200411434	GL250A/PCP26/L16US-A
EN-40				
EN-40				

Analysis - To be completed by Lab

Analysis	Critical Consumable	Test Date	Initials	Contamination Blank <½ MRL Y/N	LCS Pass Y/N
AOX 1650C	250ml Amber	11.19.20	ES	Y	Y

☒ This consumable product/ Lot Number has been tested and **acceptable** for the following analysis:

☐ Describe or reference the failure: Run # 703914

Routing and filing instructions **for passing** evaluations:

☐ Lab – Scan the raw data.

☐ Lab – Forward this form and scanned raw data to QA representative via email.

☐ QA – Update spreadsheet (G:\QA\Critical Consumables\Critical Consumables Eval Spreadsheet) with Pass/Fail and relevant information.

Schedule: 11192020

Version: 1
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/11/19 17:48 - Thursday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2010529-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2010530-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2010530-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2010530-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2010530-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2010450-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2010450-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
10	Sample	K2010450-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2010450-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2010450-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2010465-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2010479-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2010479-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2010552-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2010553-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2010645-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2010645-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	K2010645-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2010645-003 DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2010645-003 MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2010682-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2010682-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
27	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
28	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
29	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
30	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
31	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
32	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
33	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
34	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
35	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
36	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
37	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
38	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
39	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready

Schedule: 11192020

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
40	Sample		CAS_salt_010711 (CAS_salt_010711)	1	False	Ready
41	Sample		CAS_salt_010711 (CAS_salt_010711)	1	False	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	False	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	False	Ready
					False	

Fusion Report - 11192020
Thursday, November 19, 2020 05:48 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/11/20 09:50 - Friday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	11192020	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v1)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/11/19 17:48

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	14.80	27.71	12.91	49.65	05:23
2	TC Clean	9.07	21.80	12.73	50.15	04:05
3	TC Clean	1.26	14.00	12.74	50.10	03:48
4	TC Clean	0.79	13.64	12.85	49.99	03:47

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/11/19 18:10

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.46	12.34	12.80	49.63	05:14
2	TC Clean	3.85	16.50	12.65	50.03	04:01
3	TC Clean	0.82	13.63	12.80	50.16	03:51
4	TC Clean	0.28	13.25	12.98	50.22	03:48

Sample Type: Clean From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/11/19 18:32

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.31	12.37	12.68	49.52	05:09
2	TC Clean	3.20	15.94	12.74	50.07	04:04
3	TC Clean	1.05	13.73	12.68	50.23	03:49
4	TC Clean	0.53	13.45	12.92	49.98	03:46

Sample Type: Blank (Creating v1483) From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/11/19 18:54

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.38	12.36	12.74	49.74	05:14
2	TC Clean	3.71	16.63	12.92	50.18	04:04
3	TC Clean	1.09	13.90	12.82	50.08	03:58
4	TC Clean	1.13	13.86	12.72	50.14	03:56
5	Reagent Blank	4.73	17.55	12.81	49.96	05:06
6	Acid Blank	0.01	12.60	12.58	49.71	05:29

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/19 19:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.53	21.29	12.77	50.59	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2029 ppm (PASS)	0.0000 ppm	0%	2020/11/19 19:42

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.2029	252.0290	186.69	199.59	12.91	50.59	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/11/19 19:57

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.47	19.25	12.78	50.63	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/19 20:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.09	19.05	12.96	50.64	10:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.3031 ppm (PASS)	0.0000 ppm	0%	2020/11/19 20:26

Pos	Base Analysis	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time

	Type									
C	TOC	25.0 ppm	1	24.3031	243.0309	180.37	193.39	13.02	50.66	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	2	TOC	ICS	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/19 20:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.43	21.31	12.88	50.69	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	K2010529-001	1.2491 ppm	0.0438 ppm	3.5100%	2020/11/19 20:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2181	12.1808	17.76	30.81	13.05	50.71	10:29
2	TOC	1.2801	12.8009	18.20	31.19	12.99	50.71	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	K2010530-001	0.5093 ppm	0.0323 ppm	6.3300%	2020/11/19 21:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5321	5.3210	12.95	25.72	12.77	50.73	10:27
2	TOC	0.4865	4.8649	12.63	25.52	12.89	50.74	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	5	TOC	K2010530-002	0.7611 ppm	0.0215 ppm	2.8200%	2020/11/19 21:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7763	7.7630	14.66	27.63	12.97	50.73	10:28
2	TOC	0.7459	7.4594	14.45	27.48	13.03	50.77	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC)	CAS_salt_010711	CAS_salt_010711

(v1483) (v4) (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	6	TOC	K2010530-003	0.5170 ppm	0.0954 ppm	18.4400%	2020/11/19 22:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4496	4.4956	12.37	25.47	13.10	50.78	10:29
2	TOC	0.5844	5.8442	13.32	26.39	13.07	50.78	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2010530-004	1.1261 ppm	0.0129 ppm	1.1500%	2020/11/19 22:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1170	11.1701	17.05	30.13	13.08	50.78	10:24
2	TOC	1.1353	11.3526	17.18	30.16	12.98	50.79	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2010450-001	8.8123 ppm	0.0381 ppm	0.4300%	2020/11/19 23:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.7853	87.8534	70.85	83.98	13.13	50.79	10:26
2	TOC	8.8392	88.3922	71.22	84.33	13.11	50.82	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2010450-002	15.5060 ppm	0.0166 ppm	0.1100%	2020/11/19 23:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	15.4943	154.9427	117.91	131.03	13.12	50.88	10:30
2	TOC	15.5178	155.1779	118.07	131.16	13.09	50.88	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time

◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.0857 ppm (PASS)	0.0000 ppm	0%	2020/11/20 00:12

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.0857	250.8572	185.86	198.87	13.01	50.96	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/11/20 00:26

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.38	19.59	13.21	50.94	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2010450-003	21.7161 ppm	0.1607 ppm	0.7400%	2020/11/20 00:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	21.8297	218.2971	162.35	175.40	13.05	50.93	10:31
2	TOC	21.6025	216.0248	160.76	173.66	12.91	50.94	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2010450-004	24.0028 ppm	0.4076 ppm	1.7000%	2020/11/20 01:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	24.2911	242.9107	179.62	192.71	13.10	50.92	10:30
2	TOC	23.7146	237.1457	175.57	188.58	13.01	50.97	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2010450-005	7.7486 ppm	0.0648 ppm	0.8400%	2020/11/20 01:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.7028	77.0277	63.25	76.37	13.12	50.95	10:29
2	TOC	7.7944	77.9444	63.90	77.12	13.23	50.95	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2010465-002	26.0945 ppm	0.5570 ppm	2.1300%	2020/11/20 02:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	25.7007	257.0065	189.50	202.65	13.14	50.95	10:24
2	TOC	26.4884	264.8841	195.03	208.32	13.29	50.93	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2010479-001	0.7344 ppm	0.3193 ppm	43.4800%	2020/11/20 02:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9602	9.6020	15.95	29.12	13.17	50.95	10:29
2	TOC	0.5086	5.0858	12.79	26.10	13.31	50.92	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2010479-002	0.3289 ppm	0.0017 ppm	0.5200%	2020/11/20 03:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3301	3.3010	11.53	24.55	13.01	50.92	10:31
2	TOC	0.3277	3.2768	11.52	24.62	13.10	50.91	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2010552-001	0.1306 ppm	0.0326 ppm	24.9300%	2020/11/20 03:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1536	1.5362	10.30	23.67	13.38	50.93	10:28

2	TOC	0.1076	1.0757	9.97	23.21	13.24	50.92	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K2010553-001	0.0638 ppm	0.0306 ppm	48.0200%	2020/11/20 03:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0421	0.4214	9.51	22.86	13.35	50.92	10:27
2	TOC	0.0855	0.8548	9.82	22.99	13.17	50.99	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2010645-001	0.9908 ppm	0.0699 ppm	7.0500%	2020/11/20 04:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9414	9.4138	15.82	29.03	13.21	50.97	10:30
2	TOC	1.0402	10.4017	16.52	29.81	13.29	50.95	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2010645-002	0.7427 ppm	0.0446 ppm	6.0000%	2020/11/20 04:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7112	7.1115	14.21	27.55	13.35	50.96	10:28
2	TOC	0.7742	7.7416	14.65	27.83	13.19	50.96	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.9983 ppm (PASS)	0.0000 ppm	0%	2020/11/20 05:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.9983	249.9833	185.25	198.34	13.09	50.98	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/11/20 05:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.12	19.56	13.44	51.01	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/20 05:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	5.75	19.17	13.43	51.03	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	23.9990 ppm (PASS)	0.0000 ppm	0%	2020/11/20 06:06

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.9990	239.9902	178.24	191.47	13.23	51.10	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	21	TOC	K2010645-003	0.9320 ppm	0.1304 ppm	14.0000%	2020/11/20 06:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0242	10.2420	16.40	29.82	13.41	51.03	10:29
2	TOC	0.8397	8.3974	15.11	28.58	13.47	50.99	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	22	TOC	K2010645-003 DUP	0.8321 ppm	0.0126 ppm	1.5100%	2020/11/20 06:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8232	8.2320	14.99	28.31	13.31	50.96	10:27
2	TOC	0.8410	8.4102	15.12	28.48	13.36	50.95	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	23	TOC	K2010645-003 MS	27.3345 ppm	0.2816 ppm	1.0300%	2020/11/20 07:17

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.5336	275.3363	202.36	215.57	13.21	50.89	10:27
2	TOC	27.1353	271.3533	199.57	213.19	13.62	50.88	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	24	TOC	K2010682-001	2.7006 ppm	0.0783 ppm	2.9000%	2020/11/20 07:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.7560	27.5597	28.55	41.99	13.44	50.87	10:27
2	TOC	2.6452	26.4520	27.77	41.09	13.32	50.84	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	25	TOC	K2010682-002	1.6366 ppm	0.0271 ppm	1.6600%	2020/11/20 08:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6174	16.1738	20.56	33.71	13.14	50.85	10:27

2	TOC	1.6557	16.5572	20.83	33.97	13.14	50.83	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.8267 ppm (PASS)	0.0000 ppm	0%	2020/11/20 08:41

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.8267	248.2669	184.05	197.19	13.14	50.78	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/11/20 08:56

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.22	19.26	13.04	50.76	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1482	1.4370	-0.0500	0.0000	0.0000	0.0000	2020/11/18 12:19	Fusion1 (Fusion1)
v1483	1.5777	0.0150	0.0000	0.0000	0.0000	2020/11/19 19:27	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version:	v38	Calibration curve formula:	TOC: y = 7.015x + 9.892
Ver Creation:	2020/06/13 16:40	r^2 value:	TOC: r^2 = 0.99974
Comment:			
Operator:	Fusion1 (Fusion1)		
Basic Analysis Type	TOC		

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	9.5750	0.0000		2020/06/13 15:13
0.500 ppm	12.9010	0.5000		2020/06/13 15:28
1.0 ppm	15.6320	1.0000		2020/06/13 15:42
5.0 ppm	43.2510	5.0000		2020/06/13 15:56
10 ppm	82.4040	10.0000		2020/06/13 16:11
25 ppm	188.6880	25.0000		2020/06/13 16:25
50 ppm	358.6500	50.0000		2020/06/13 16:39

Methods

Name: CAS_salt_010711 (TOC)

Version:	v4	Operator:	Fusion1 (Fusion1)
Ver Creation:	2019/02/21 17:57		
Comment:			

Parameter	Value
SampleVolume	10.0 mL
Dilution	1:10
AcidVolume	0.5 ml
ReagentVolume	2.0 ml
UVReactorPrerinse	Off
UVReactorPrerinseVolume	5.0
NumberOfUVReactorPrerinses	1
ICSpargeTime	1.00 mins
DetectorSweepFlow	500 ml/min
PreSpargeTime	2.00 mins
SystemFlow	500 ml/min

Advanced Parameter	Value
NeedleRinseVolume	5.0 ml
VialPrimeVolume	2.0 ml
ICSamplePrimeVolume	2.0 ml
ICSpargeRinseVolume	12.0 ml
BaselineStabilizeTime	0.70 min
DetectorPressureFlow	150 ml/min
SyringeSpeedWaste	10
SyringeSpeedAcid	7
SyringeSpeedReagent	7
SyringeSpeedDIWater	7
NDIRPressurization	60 psig
SyringeSpeedSampleDispense	5
SyringeSpeedSampleAspirate	4
SyringeSpeedUVDispense	5
SyringeSpeedUVAspirate	5
SyringeSpeedICDispense	5
SyringeSpeedICAspirate	5
NDIRPressureStabilize	1.75 min
SampleMixing	Off

SampleMixingCycles	1
SampleMixingVolume	10.0
LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/11/20 09:10

ALS Environmental

StarLIMS Run: 704227

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-55J 50 ppm LCS: 19-GEN-8-57K 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-58F

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 19-GEN-8-55I 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-58E

21 % H3PO4: 19-GEN-08-55L

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: MAS	Date Analyzed: 11/19/2020
Reviewed By: JC	Date Reviewed: 11/20/20

HS20110527 ALS Simi Valley P2006450 Tier IV

ALS WO# HS20110527

LABORATORY REPORT

November 24, 2020

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

RE: HS20110527

Dear RJ:

Enclosed are the results of the samples submitted to our laboratory on November 12, 2020. For your reference, these analyses have been assigned our service request number P2006450.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Hayden Akers
Project Manager

Client: ALS Laboratory Group Service Request No: P2006450
Project: HS20110527

CASE NARRATIVE

The samples were received intact under chain of custody on November 12, 2020 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175 as described in laboratory SOP VOA-DISGAS. This analyte is included on the laboratory's NELAP and DoD-ELAP scope of accreditation.

The samples labeled P2006450-001 and P2006450-004 had a pH of 5. This may give a high bias for carbon dioxide.

Manual integrations were performed on the following sample(s) and analyte(s). Refer to the raw data for additional information.

Sample Identification(s)	Analyte(s)
P2006450-LCS	Carbon dioxide
P2006450-LCSD	Carbon dioxide
P2006450-003	Carbon dioxide

Methane, Ethene and Ethane Analysis

The samples were also analyzed for methane, ethene, and ethane using a gas chromatograph equipped with a flame ionization detector (FID). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least two hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (methane, ethene and ethane) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP accreditation.

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

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

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-007
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

dit

DETAIL SUMMARY REPORT

Client: ALS Laboratory Group
Project ID: HS20110527

Service Request: P2006450

Date Received: 11/12/2020
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
35BWW26-201110	P2006450-001	Water	11/10/2020	07:20	X	X
35BWW04-201110	P2006450-002	Water	11/10/2020	08:05	X	X
35BWW14-201110	P2006450-003	Water	11/10/2020	09:00	X	X
35BWW23-201110	P2006450-004	Water	11/10/2020	10:30	X	X

PJ006450

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:** **15144**

SUBCONTRACT TO:

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065

Phone: +1 805 526 7161

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS20110527
TSR: Sonia West

	LAB SAMPLE ID / ANALYSIS REQUESTED	CLIENT SAMPLE ID	MATRIX	COLLECT DATE / DUE DATE
1.	**HS20110527-11**	**35BWW26-201110**	**Groundwater**	**10 Nov 2020 07:20**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	25 Nov 2020
2.	**HS20110527-12**	**35BWW04-201110**	**Groundwater**	**10 Nov 2020 08:05**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	25 Nov 2020
3.	**HS20110527-13**	**35BWW14-201110**	**Groundwater**	**10 Nov 2020 09:00**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	25 Nov 2020
4.	**HS20110527-15**	**35BWW23-201110**	**Groundwater**	**10 Nov 2020 10:30**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	25 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.
3 Vials neat & 3 Vials HCL

QC Level: DOD IV (DoD Data Package)

R2006450

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID: 15144**

Relinquished By: _____ Date/Time: 11/11/2020 1800

Received By: _____ Date/Time: 11-12-20 0930 2° WET

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

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2006450

Project: HS20110527

Sample(s) received on: 11/12/20 Date opened: 11/12/20 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: ° C Blank Temperature: 2° C	Wet Ice		
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? Cooler lid. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2006450-001.01	40mL VOA NP		5		A	wh 11/20/20
P2006450-001.02	40mL VOA NP				A	
P2006450-001.03	40mL VOA NP				A	
P2006450-001.04	40ml VOA HCL		1		A	wh 11/20/20
P2006450-001.05	40ml VOA HCL				A	
P2006450-001.06	40ml VOA HCL				A	
P2006450-002.01	40mL VOA NP		6		A	wh 11/20/20
P2006450-002.02	40mL VOA NP				A	
P2006450-002.03	40mL VOA NP				A	
P2006450-002.04	40ml VOA HCL		1		A	wh 11/20/20
P2006450-002.05	40ml VOA HCL				A	
P2006450-002.06	40ml VOA HCL				A	
P2006450-003.01	40mL VOA NP		6		A	wh 11/20/20
P2006450-003.02	40mL VOA NP				A	
P2006450-003.03	40mL VOA NP				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2006450

Project: HS20110527

Sample(s) received on: 11/12/20 Date opened: 11/12/20 by: ADAVID

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2006450-003.04	40ml VOA HCL		1		A	wh 11/20/20
P2006450-003.05	40ml VOA HCL				A	
P2006450-003.06	40ml VOA HCL				A	
P2006450-004.01	40mL VOA NP		5		A	wh 11/20/20
P2006450-004.02	40mL VOA NP				A	
P2006450-004.03	40mL VOA NP				A	
P2006450-004.04	40ml VOA HCL		1		A	wh 11/20/20
P2006450-004.05	40ml VOA HCL				A	
P2006450-004.06	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Project ID: **HS20110527** ALS Project ID: P2006450

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Wade Henton
Matrix: Liquid
Test Notes:

Date(s) Collected: 11/10/20
Date Received: 11/12/20
Date Analyzed: 11/20/20

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
35BWW26-201110	P2006450-001	0.10	**330,000**	1,000	860	370	
35BWW04-201110	P2006450-002	0.10	**94,000**	1,000	860	370	
35BWW14-201110	P2006450-003	0.10	**42,000**	1,000	860	370	
35BWW23-201110	P2006450-004	0.050	**630,000**	2,000	1,700	740	
Method Control Sample	P201120-MB	0.10	860	1,000	860	370	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P201120-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Wade Henton
Matrix: Liquid
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 11/20/20
Volume(s) Analyzed: NA ml(s)

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result[1] LCS ug/L	Result[1] DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	18,700	19,200	**82**	**84**	80-122	2	12	

[1] = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW26-201110**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P2006450-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/10/20
Date Received: 11/12/20
Date Analyzed: 11/19/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW04-201110**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P2006450-002

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/10/20
Date Received: 11/12/20
Date Analyzed: 11/19/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW14-201110**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P2006450-003

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/10/20
Date Received: 11/12/20
Date Analyzed: 11/19/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW23-201110**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P2006450-004

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/10/20
Date Received: 11/12/20
Date Analyzed: 11/19/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **Method Control Sample**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P201119-MB

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 11/19/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS20110527**

ALS Project ID: P2006450
ALS Sample ID: P201119-LCS
P201119-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 11/19/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result$_1$ LCS µg/L	Result$_1$ DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	2.35	2.55	**93**	**101**	73-125	8	26	
74-85-1	Ethene	4.40	4.94	4.96	**112**	**113**	72-133	0.9	11	
74-84-0	Ethane	4.72	4.83	4.80	**102**	**102**	74-131	0	10	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 17:13:59
Operator : WH
Sample : P2006450-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 17:24:51 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

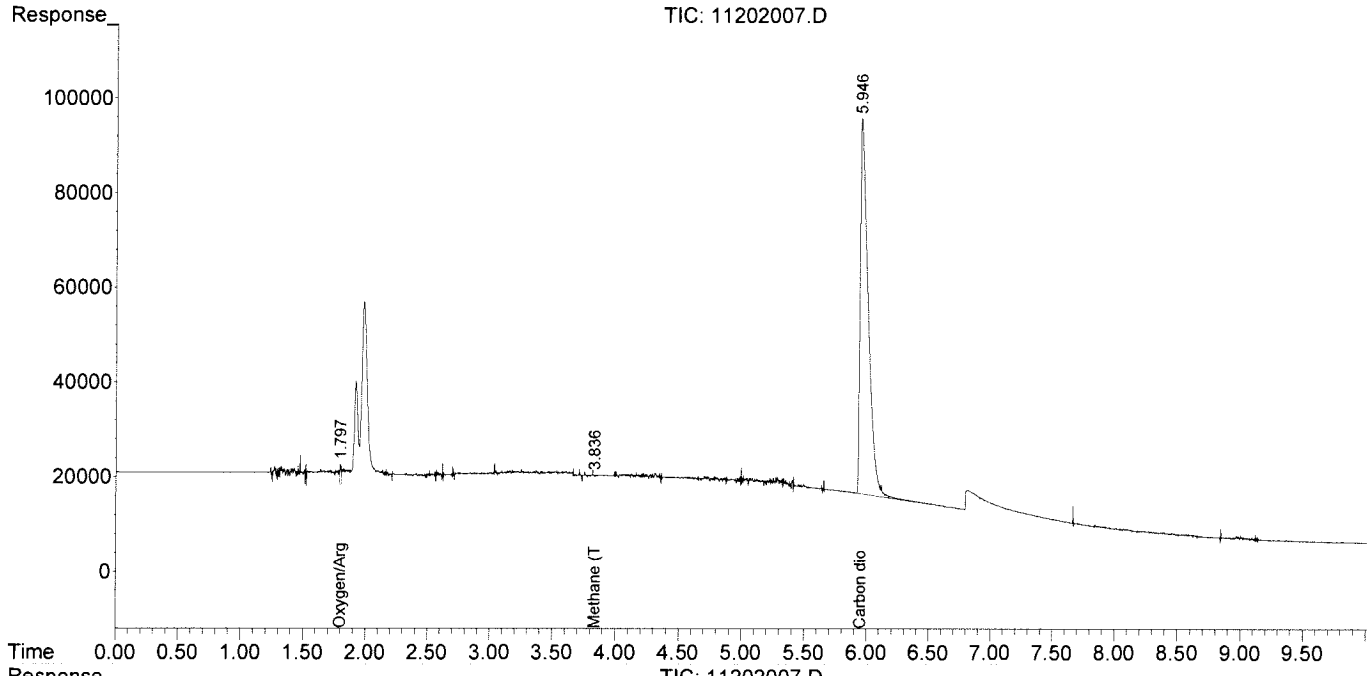
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.798	30920	0.006	ppm
2)	Carbon monoxide	1.798	30920	N.D.	ppm
3)	Methane (TCD)	3.836	3987	421.555	ppm
4)	Carbon dioxide	5.948	3517158	14983.898	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

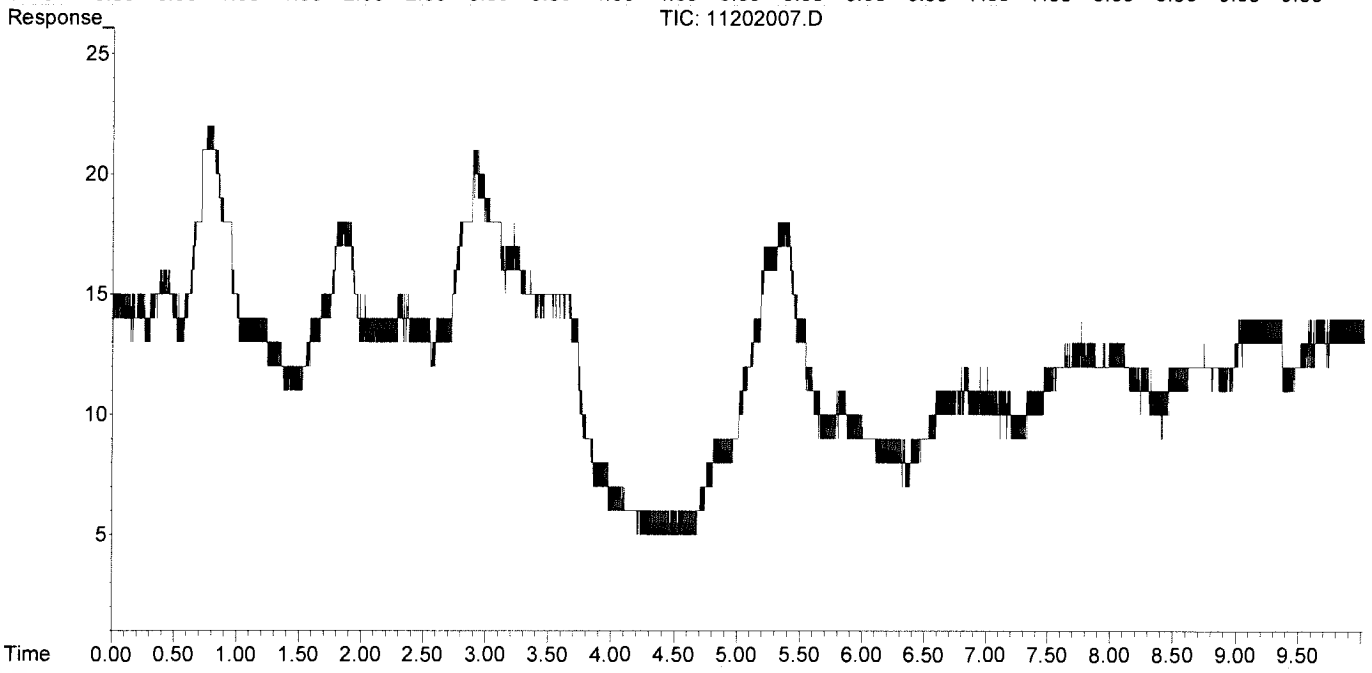
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 17:13:59
Operator : WH
Sample : P2006450-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 17:24:51 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202008.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 17:28:09
Operator : WH
Sample : P2006450-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 17:44:42 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

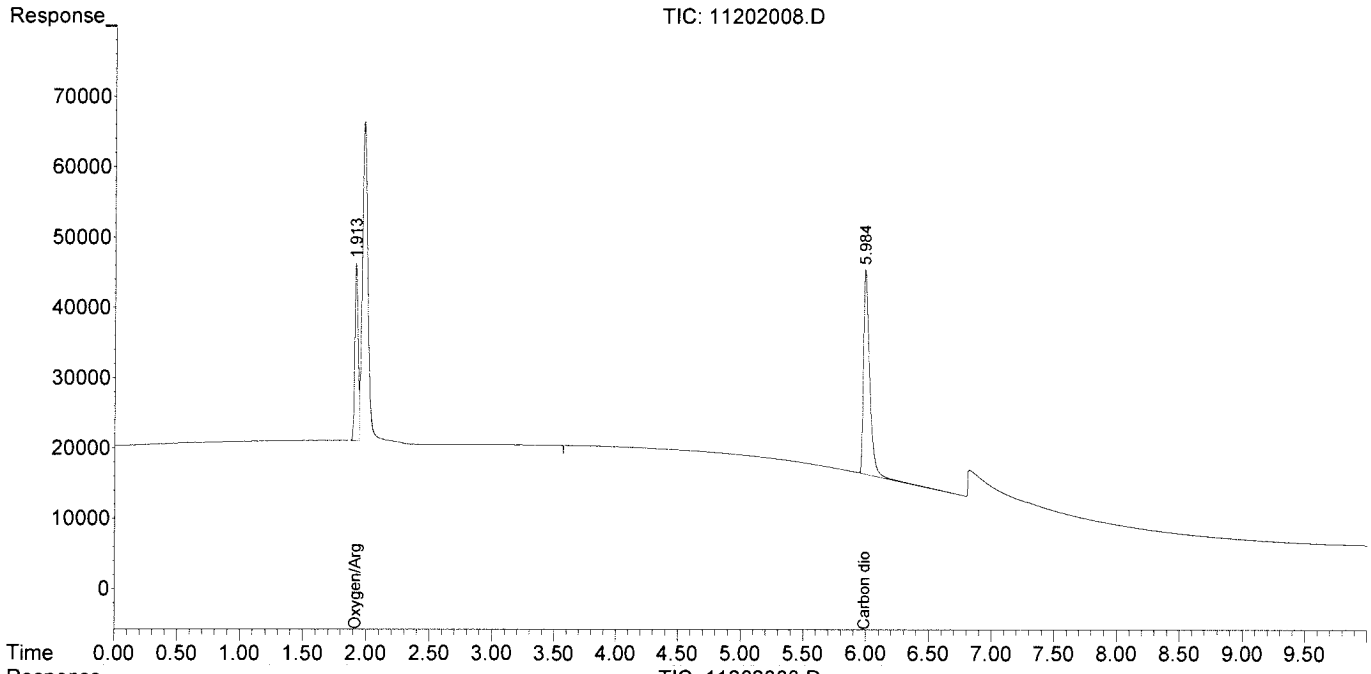
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.914f	448345	0.094	ppm
2)	Carbon monoxide	1.914f	448345	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	5.985	1014705	4322.877	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

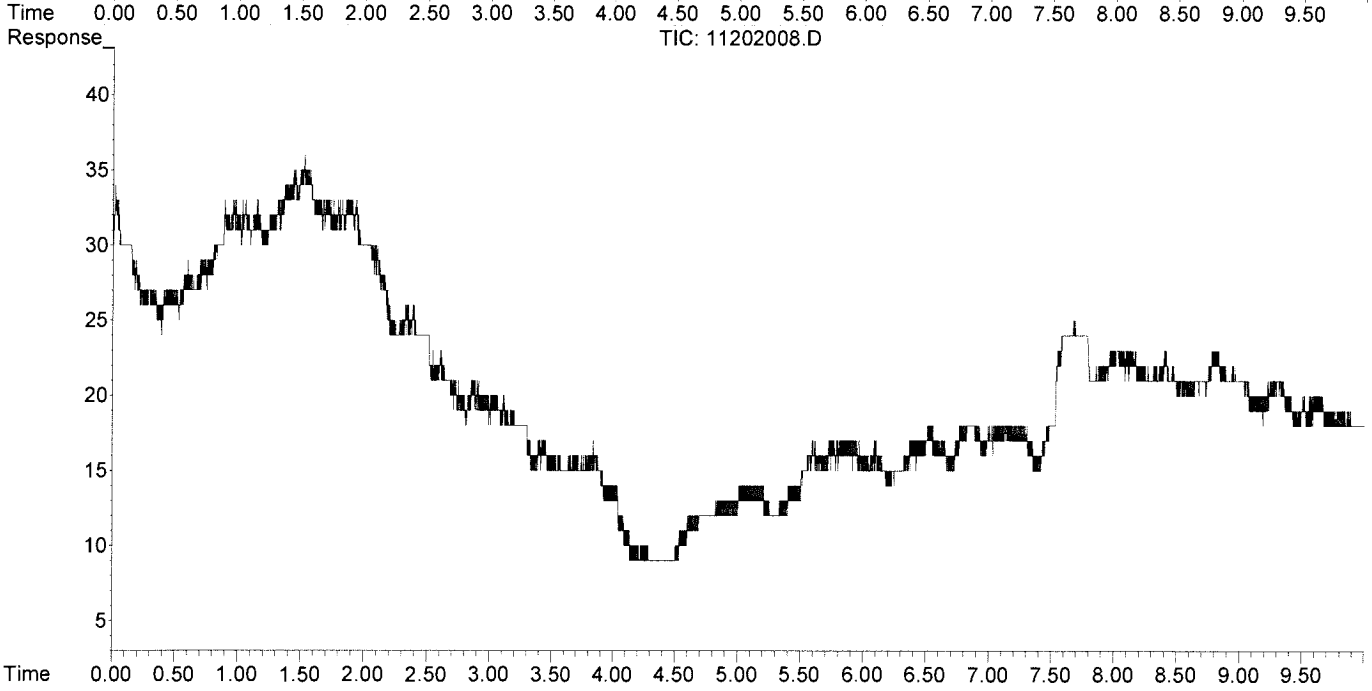
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202008.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 17:28:09
Operator : WH
Sample : P2006450-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 17:44:42 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202009.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 17:43:31
Operator : WH
Sample : P2006450-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 22 15:27:51 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

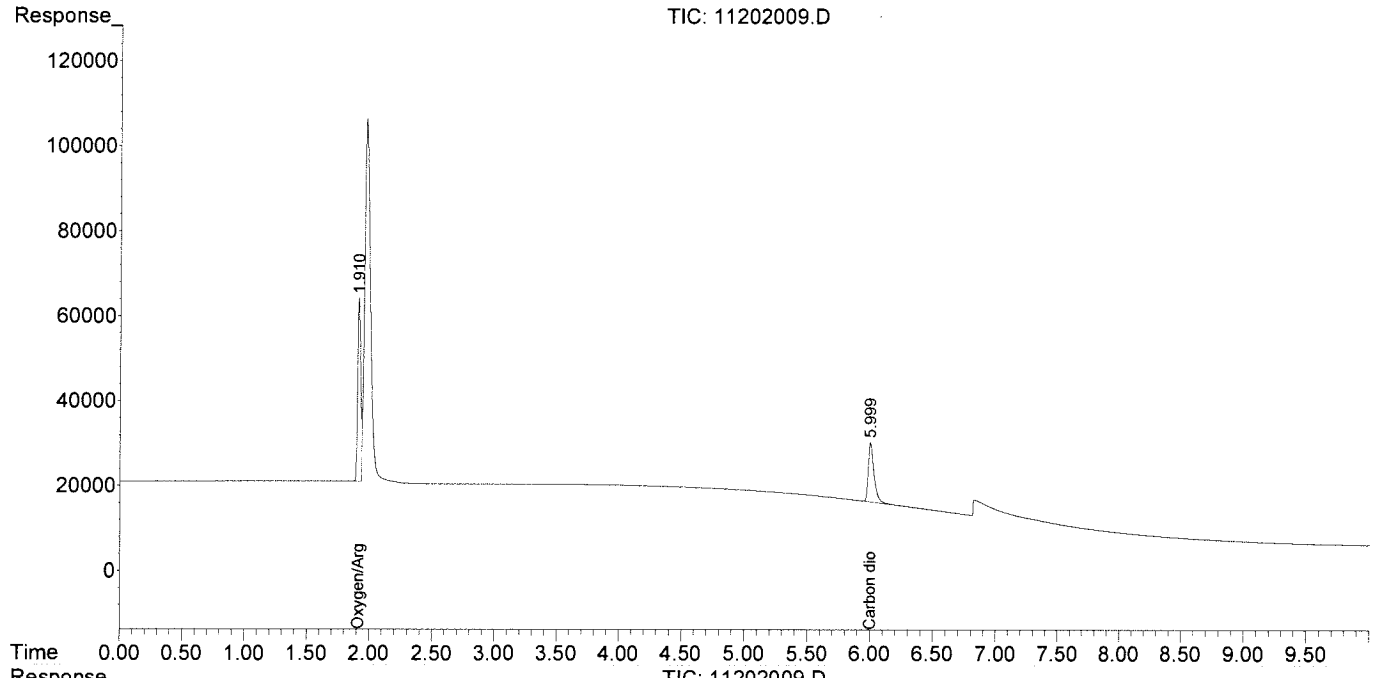
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.910f	723035	0.152	ppm	
2)	Carbon monoxide	1.910f	723035	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.999	453310	1931.206	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

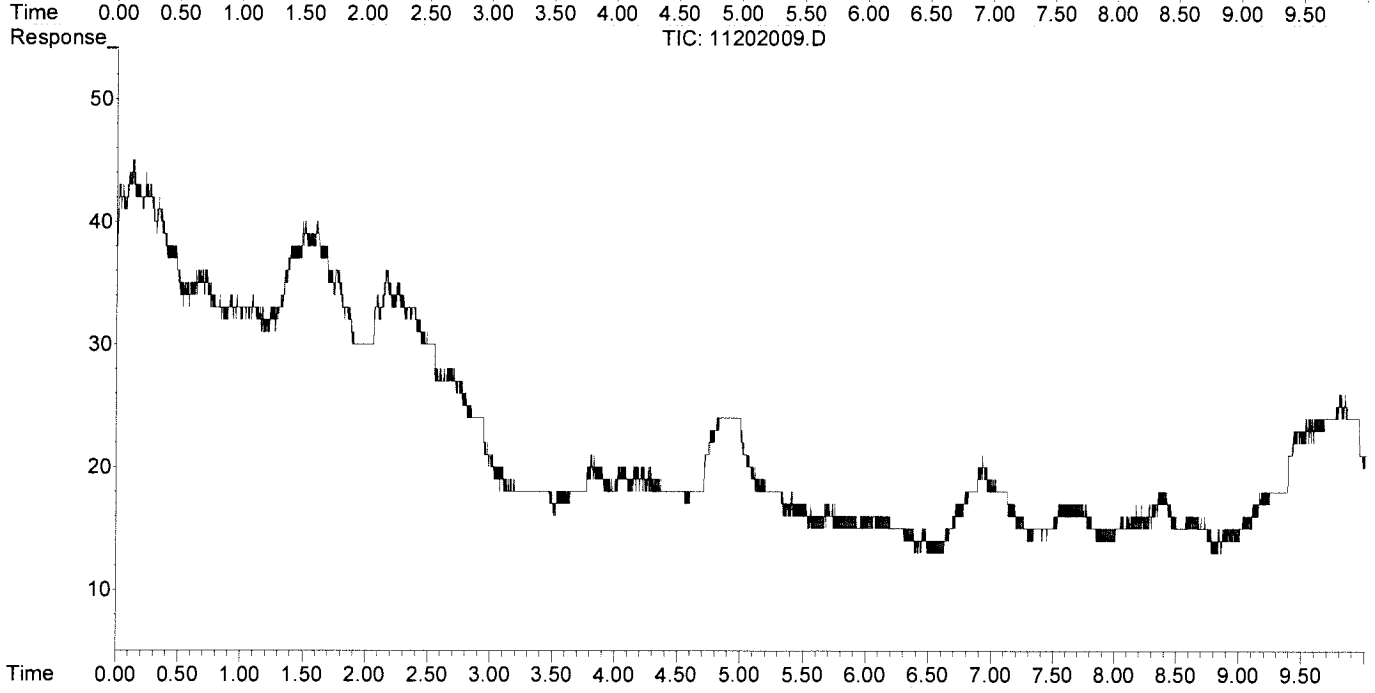
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202009.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 17:43:31
Operator : WH
Sample : P2006450-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 22 15:27:51 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

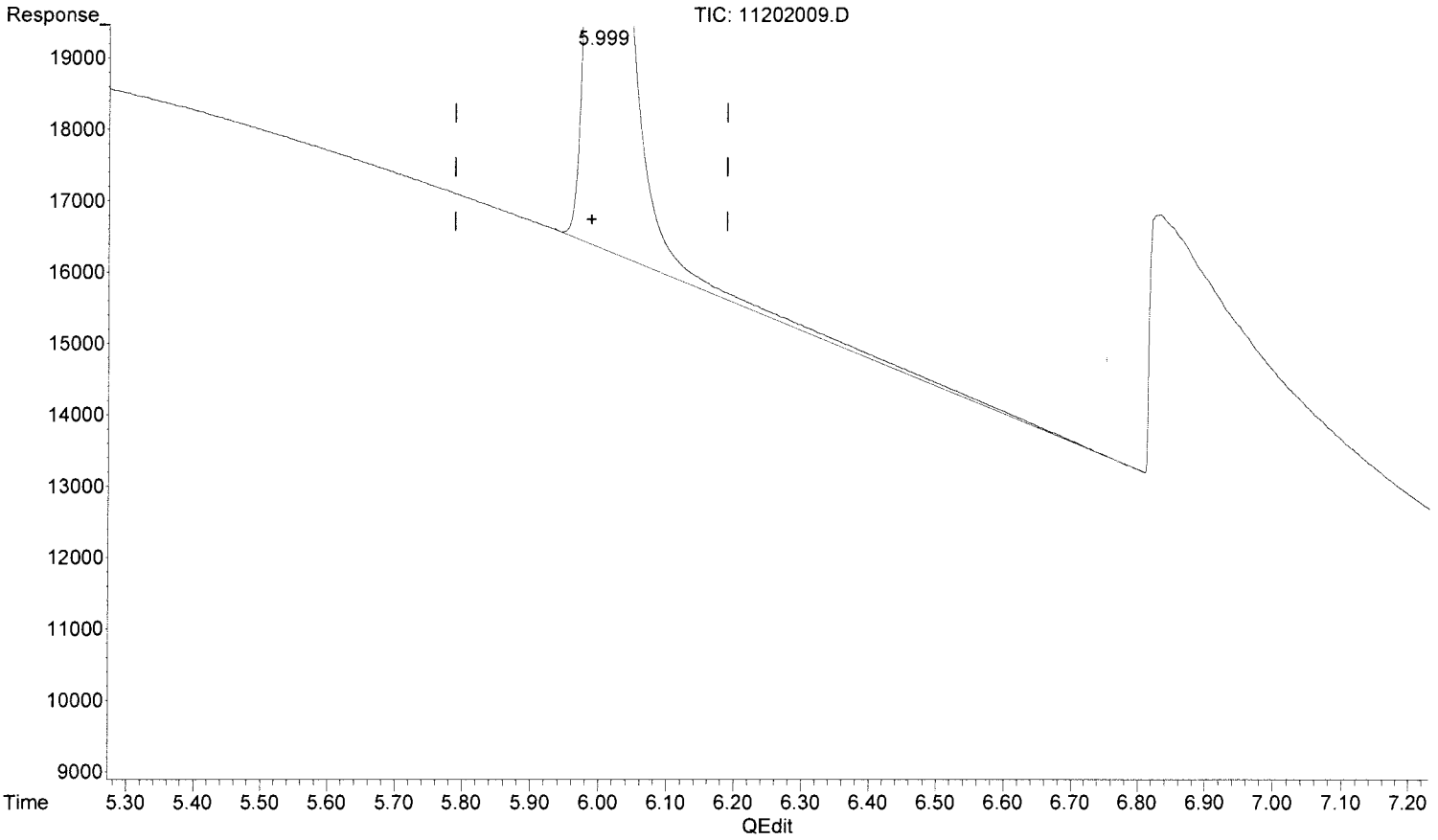




Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202009.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 17:43:31
Operator : WH
Sample : P2006450-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 22 15:27:51 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

6.000min 2035.526 ppm

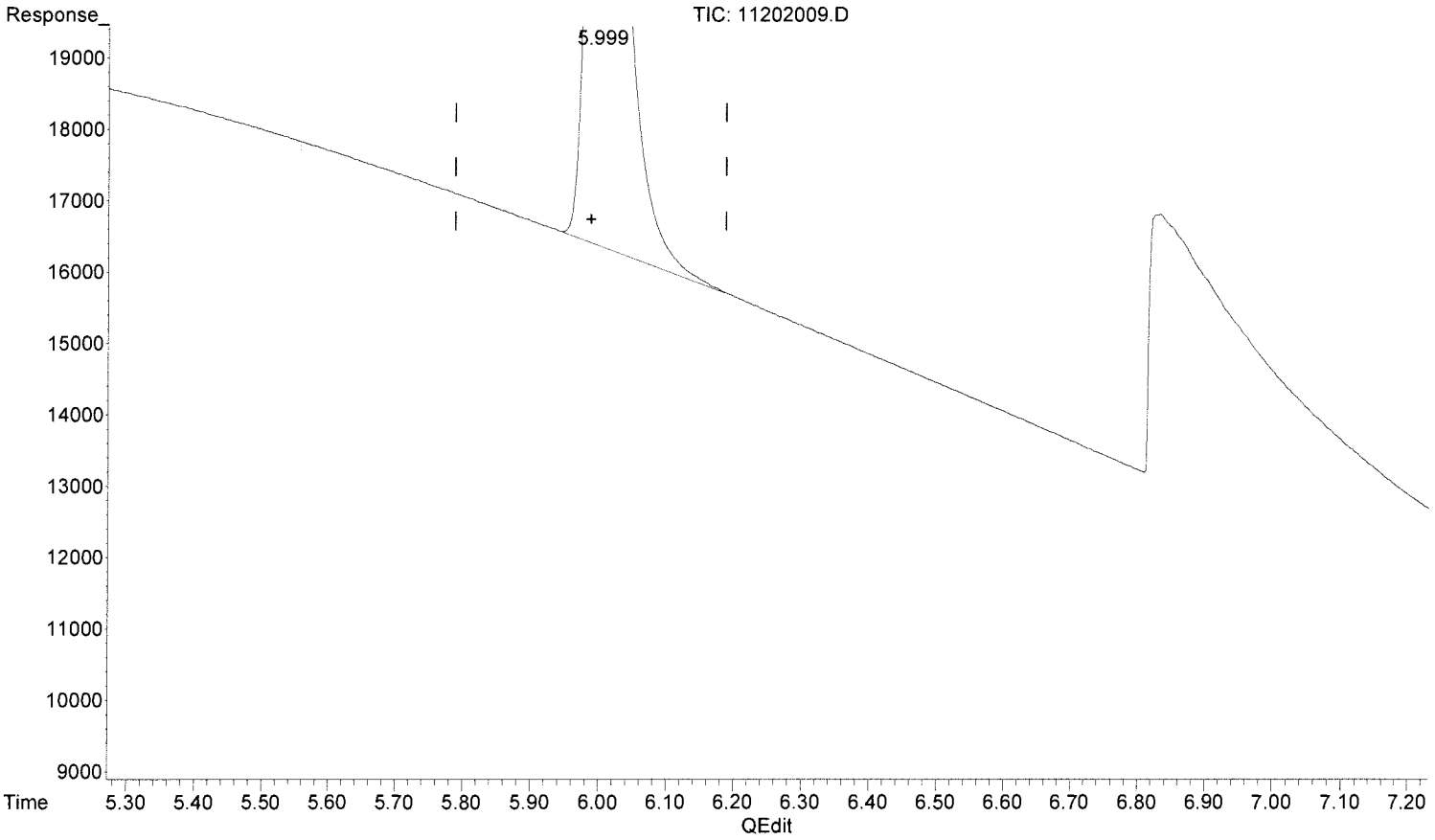
response 477797

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202009.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 17:43:31
Operator : WH
Sample : P2006450-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 22 15:27:51 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.999min 1931.206 ppm m

response 453310

11/22/20

@ 11/23/20

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202011.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 18:16:58
Operator : WH
Sample : P2006450-004 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 18:47:28 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

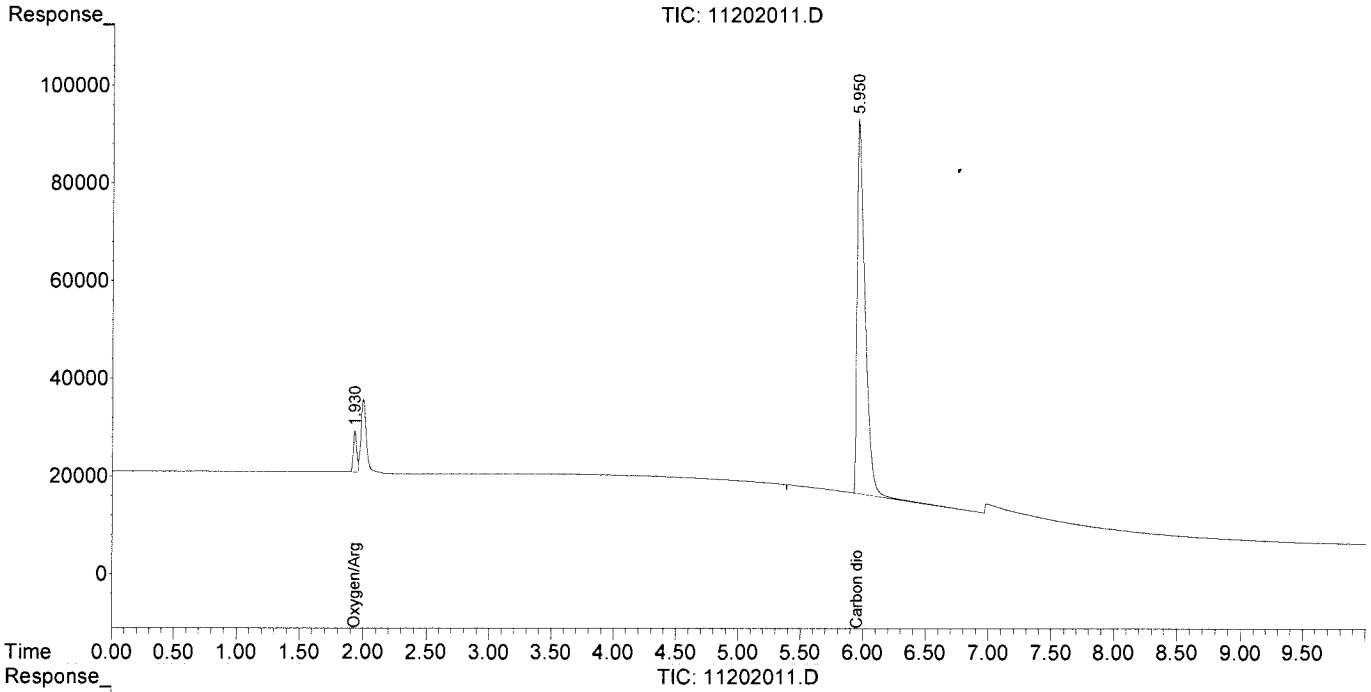
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.930f	153253	0.032	ppm
2)	Carbon monoxide	1.930f	153253	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	5.951	3373074	14370.066	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

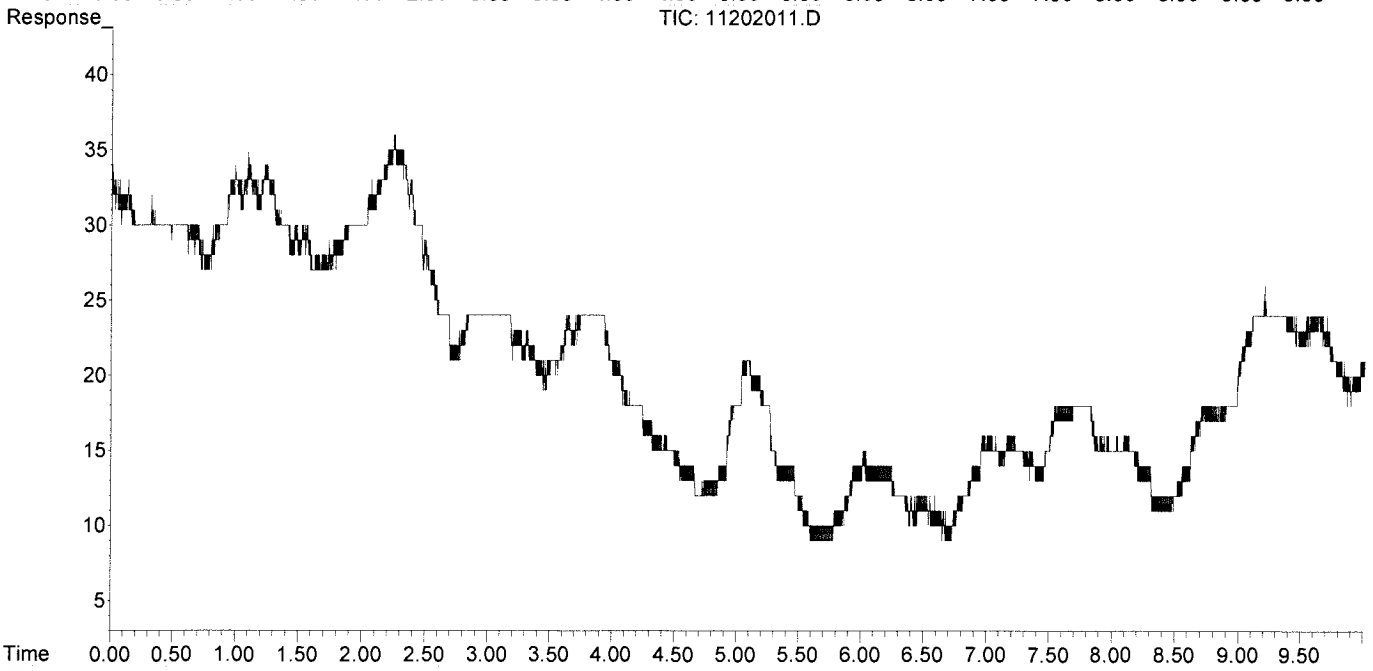
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202011.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 18:16:58
Operator : WH
Sample : P2006450-004 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 18:47:28 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 15:45:50
Operator : WH
Sample : mcs 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 16:38:02 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

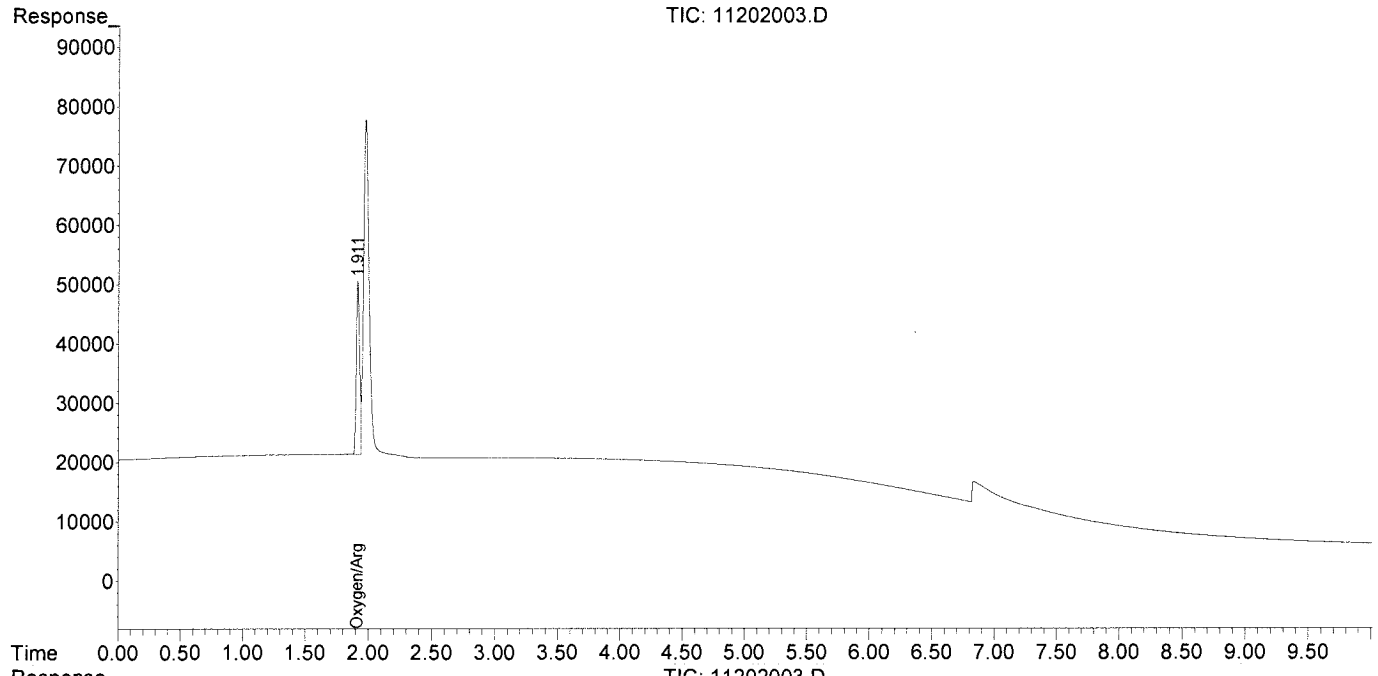
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.912f	510319	0.107	ppm
2)	Carbon monoxide	1.912f	510319	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

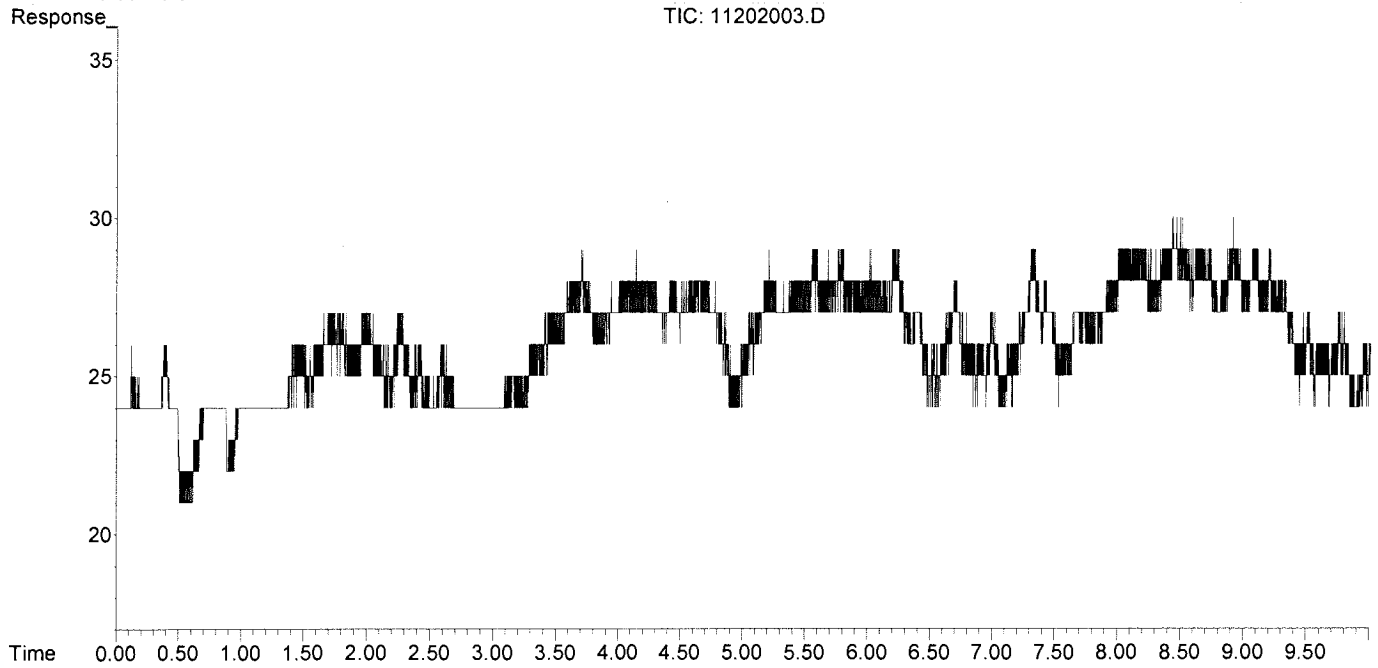
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 15:45:50
Operator : WH
Sample : mcs 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 16:38:02 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 16:24:12
Operator : WH
Sample : lcs 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 16:38:14 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

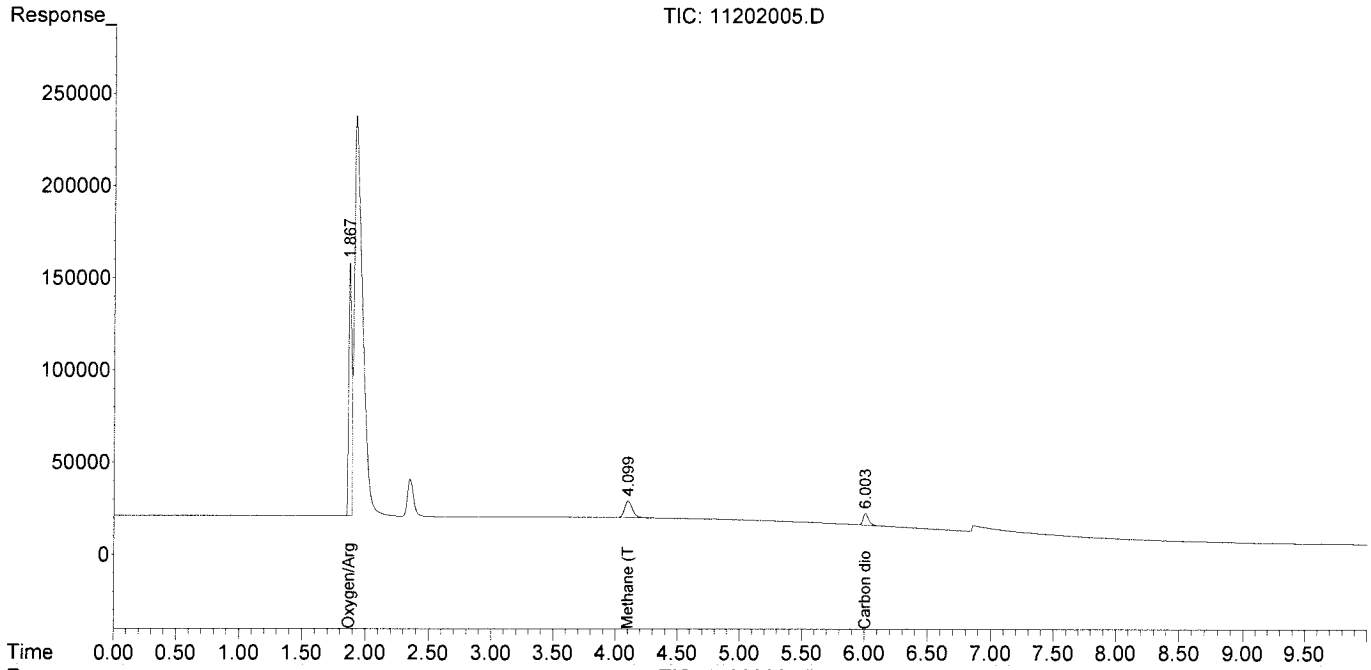
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.868	2233000	0.469	ppm	
2)	Carbon monoxide	1.868	2233000	N.D.	ppm	
3)	Methane (TCD)	4.099f	407587	43097.399	ppm	
4)	Carbon dioxide	6.003	200710	855.069	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

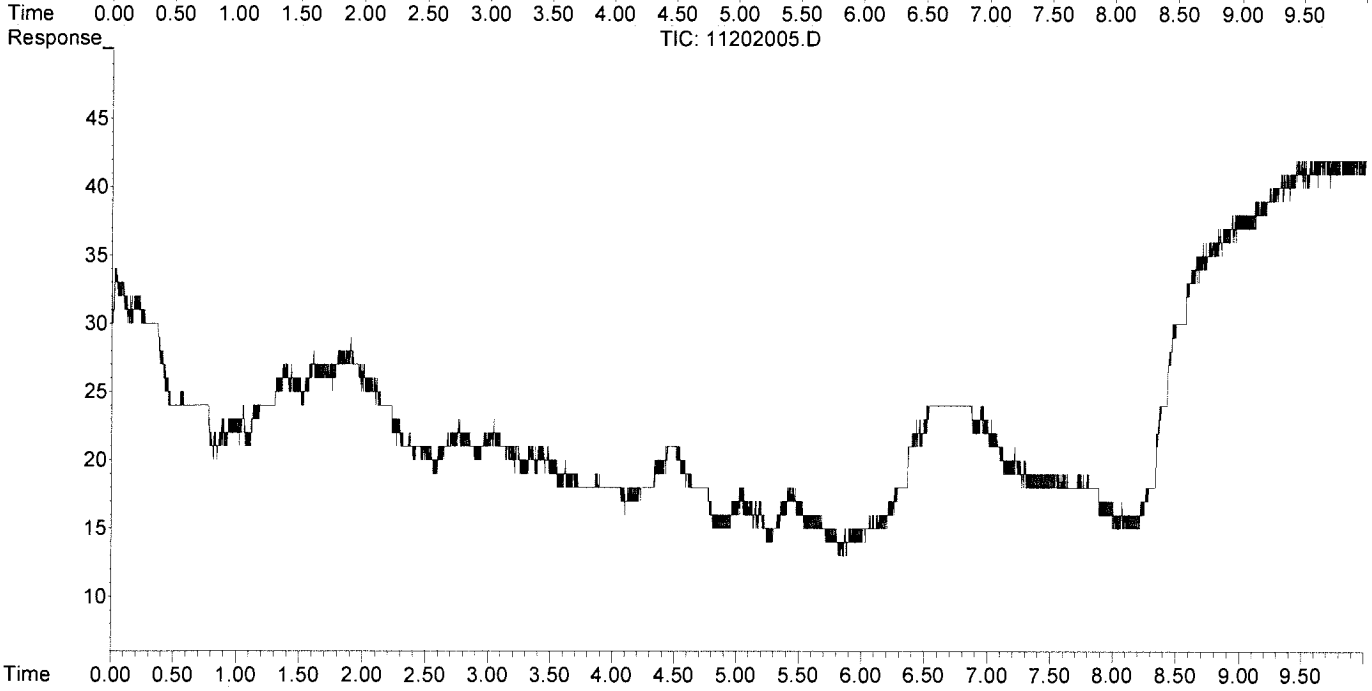
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 16:24:12
Operator : WH
Sample : lcs 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 16:38:14 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

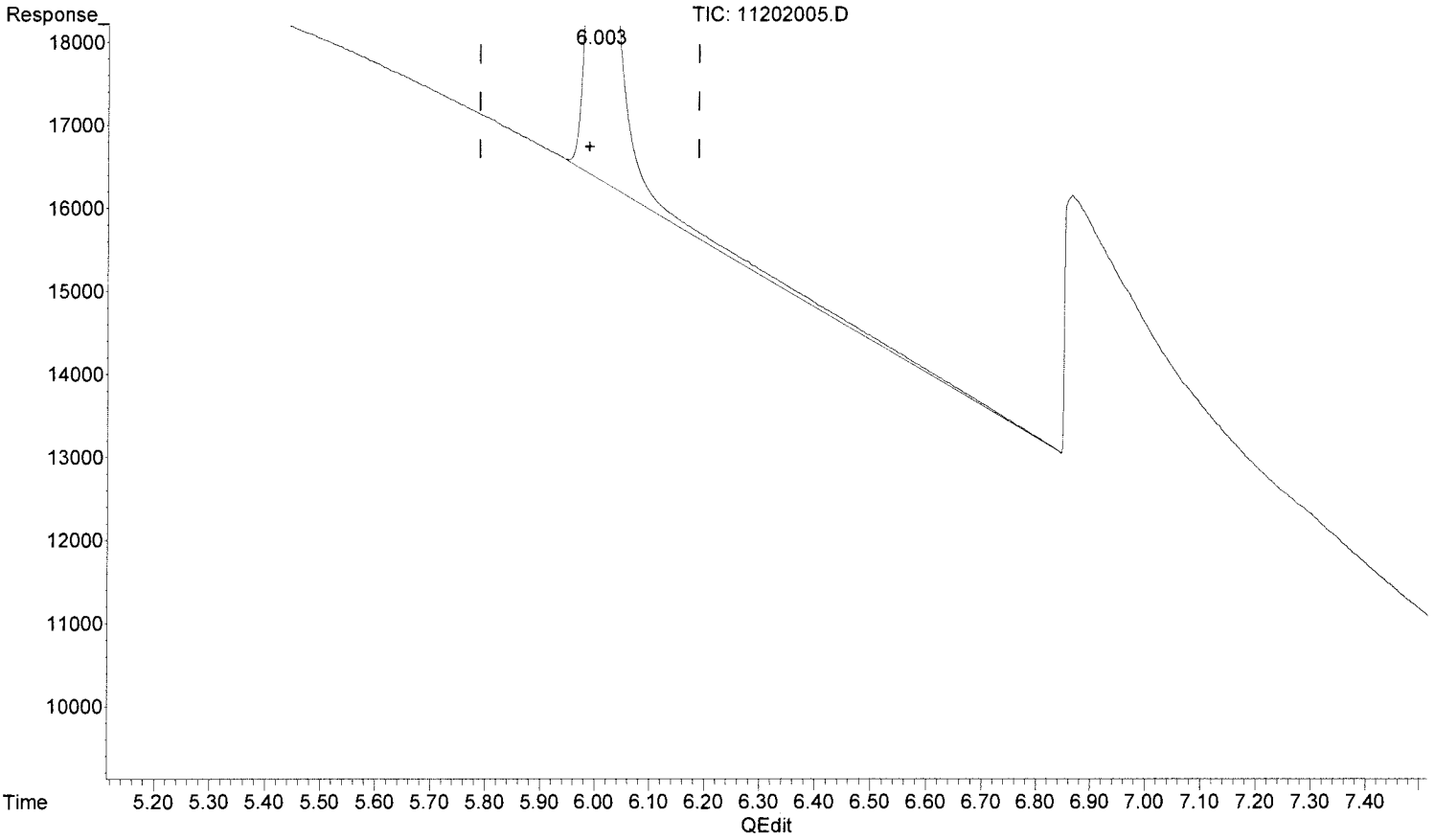




Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 16:24:12
Operator : WH
Sample : lcs 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 16:38:14 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

6.004min 969.892 ppm

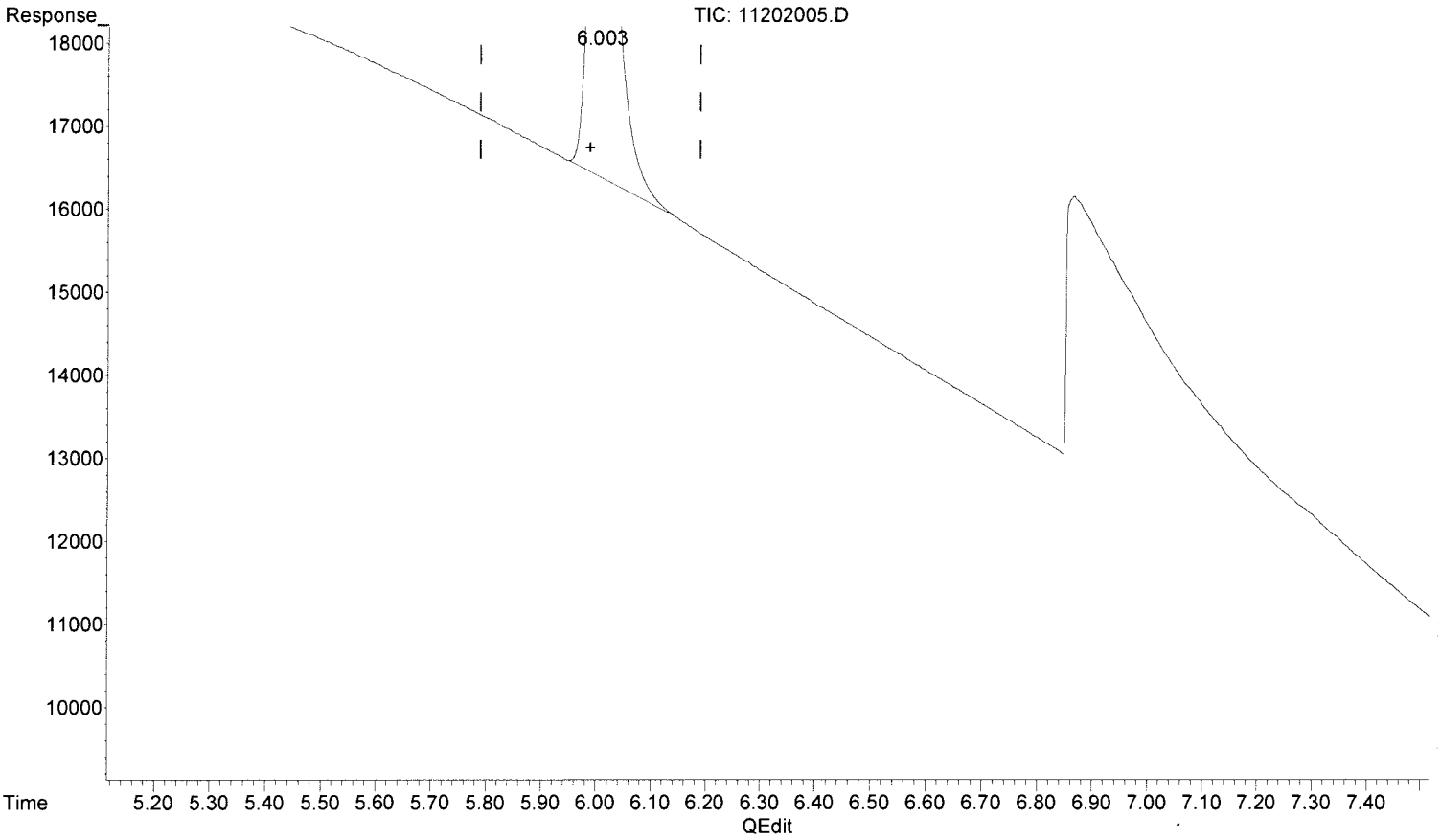
response 227662

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 16:24:12
Operator : WH
Sample : lcs 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 16:38:14 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

6.003min 855.069 ppm m

response 200710

11/22/20
BVC
CV 11/23/20

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 16:51:27
Operator : WH
Sample : lcsd 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 17:09:04 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

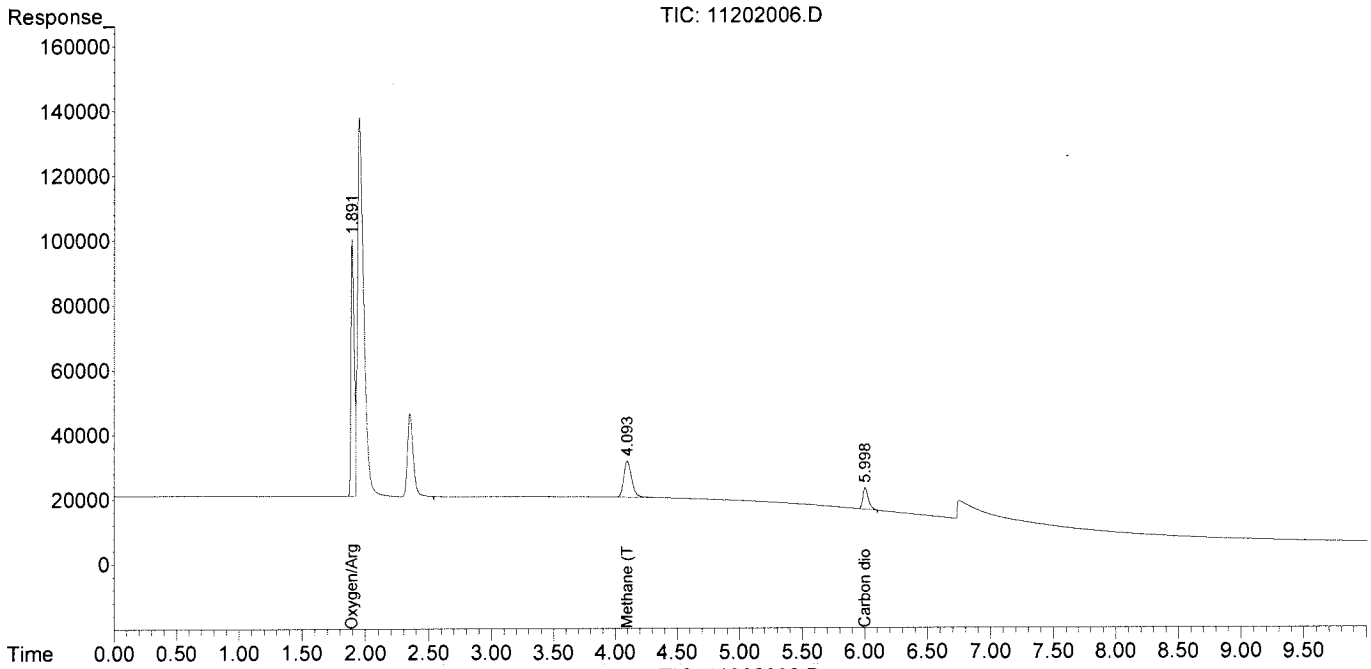
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.892	1387991	0.292	ppm	
2)	Carbon monoxide	1.892	1387991	N.D.	ppm	
3)	Methane (TCD)	4.093f	507383	53649.625	ppm	
4)	Carbon dioxide	5.998	206851	881.235	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

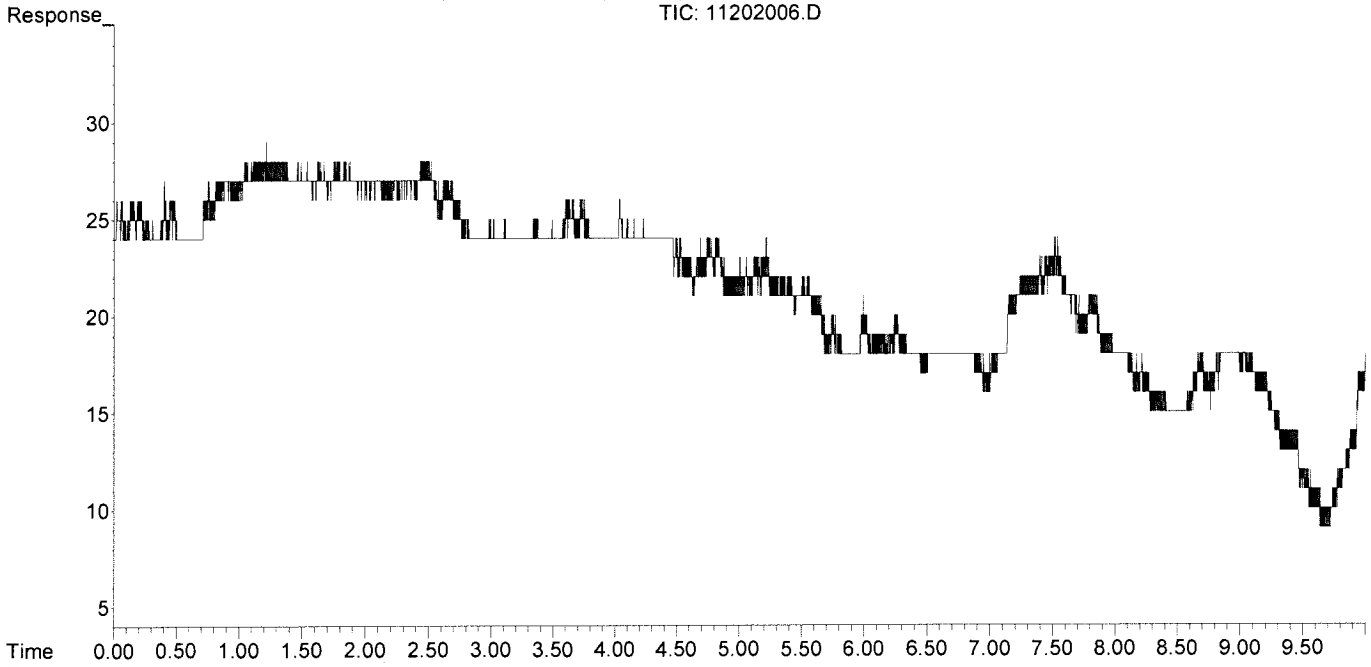
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 16:51:27
Operator : WH
Sample : lcsd 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 17:09:04 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

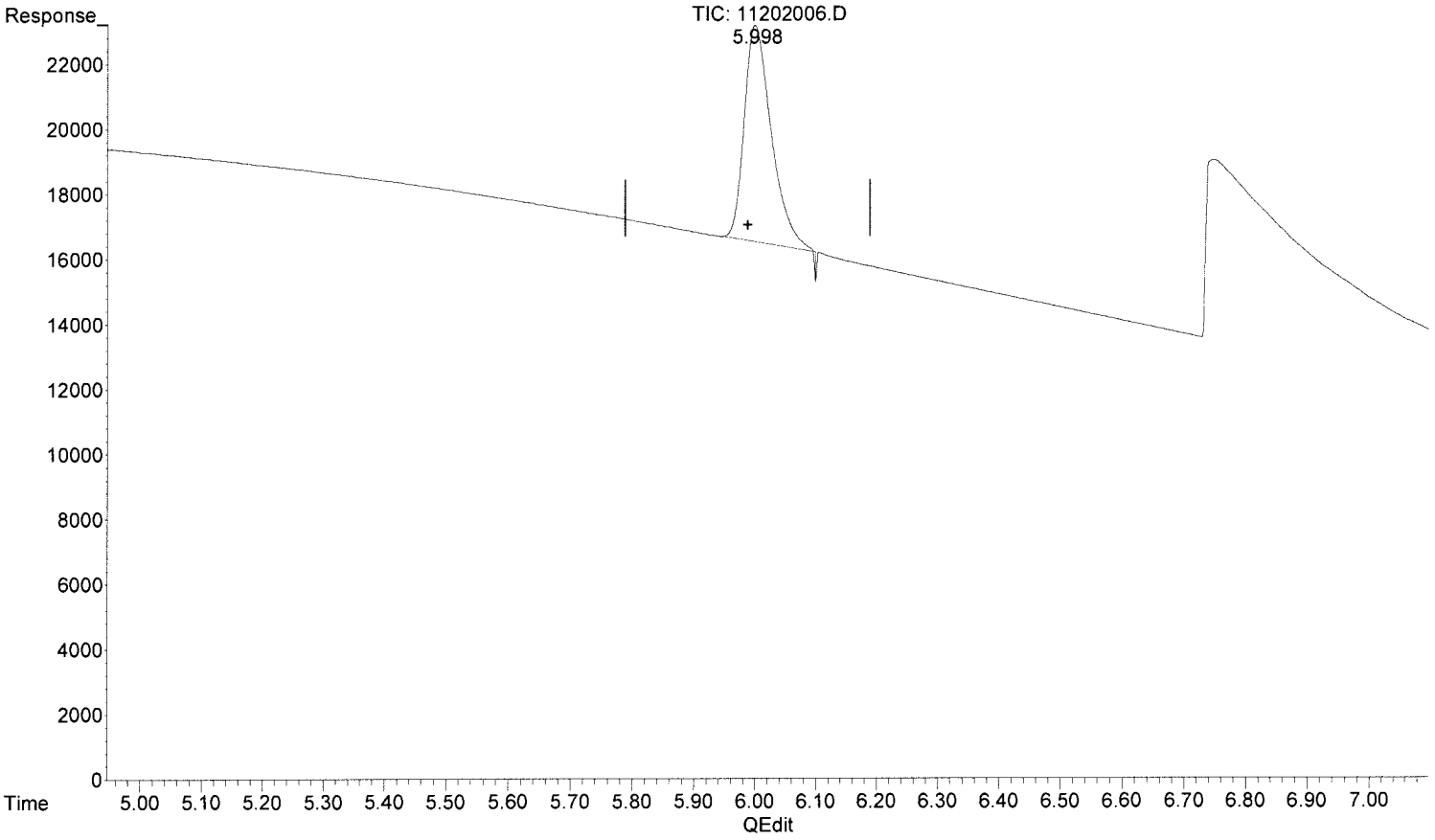




Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 16:51:27
Operator : WH
Sample : lcsd 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 17:09:04 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.998min 881.235 ppm m

response 206851

11/22/20 BV no problem

@ 11/23/20

(+) = Expected Retention Time

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1)	Oxygen/Argon	4.760						4.760 E6	0.00
2)	Carbon monoxide	2.775		1.066	0.043	0.033	0.027	0.657 E6	170.12
3)	Methane (TCD)							9.457	0.00
4)	Carbon dioxide	2.717	2.193	2.338	2.272	2.265	2.298	2.347 E2	7.99

Signal #2 Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg	%RSD
6)	Methane (FID)	1.253	1.160	1.005	0.927	0.848	0.848	0.945 E4	15.85
7)	Ethylene	1.677	1.605	1.900	1.749	1.597	1.579	1.684 E4	7.30
8)	Ethane	1.769	1.631	1.866	1.767	1.639	1.667	1.723 E4	5.40
9)	Propylene	2.402	2.309	2.767	2.551	2.331	2.333	2.449 E4	7.32
10)	Propane	2.906	2.737	2.817	2.639	2.410	2.420	2.655 E4	7.75
11)	Isobutylene							0.000	-1.00
12)	Isobutane							0.000	-1.00
13)	n-Butane							0.000	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS082817_CO2.M Wed Aug 30 13:24:19 2017

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291715.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291716.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291717.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291719.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291720.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291721.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241711.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Aug 29 14:21 2017	Aug 29 14:20 2017	29-Aug-2017, 14:07
2	2	Aug 29 14:52 2017	Aug 29 14:51 2017	29-Aug-2017, 14:22
3	3	Aug 29 15:04 2017	Aug 29 15:04 2017	29-Aug-2017, 14:53
4	4	Aug 29 15:36 2017	Aug 29 15:36 2017	29-Aug-2017, 15:23
5	5	Aug 29 15:57 2017	Aug 29 15:57 2017	29-Aug-2017, 15:44
6	6	Aug 29 16:13 2017	Aug 29 16:13 2017	29-Aug-2017, 16:00
7	7	Aug 25 09:05 2017	Aug 24 16:00 2017	24-Aug-2017, 15:44
8	8	Aug 25 09:06 2017	Aug 24 16:13 2017	24-Aug-2017, 16:02
9	9	Aug 25 09:06 2017	Aug 24 16:31 2017	24-Aug-2017, 16:16
10	10	Aug 25 09:07 2017	Aug 24 16:42 2017	24-Aug-2017, 16:33

RS082817_CO2.M Wed Aug 30 13:24:30 2017

dit Compounds -- Compound #4 -- Carbon dioxide

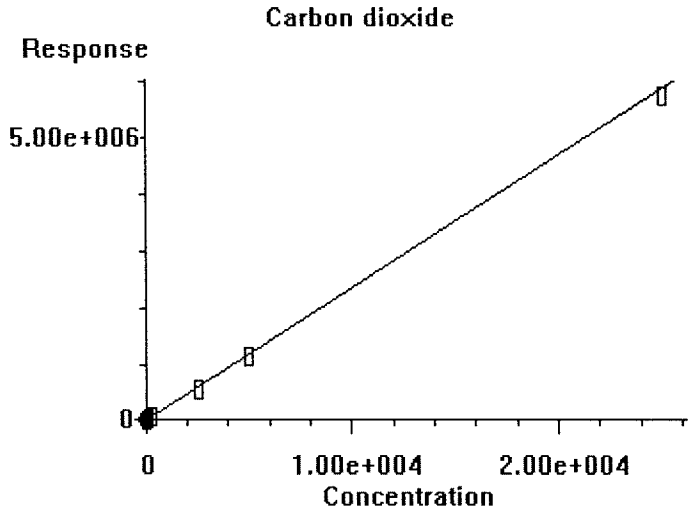
Search by: Ret Time Name Index Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	25.000000	6793.665186
2	100.000000	21932.418000
3	250.000000	58460.642510
4	2500.000000	568043.388750
5	5000.000000	1132363.215937
6	25000.000000	5744294.891563
7	25000.000000	
8	25000.000000	
9	2000.000000	
10	30000.000000	

Lvl ID	Concentration	Response



0.000e+000	Quadratic term
2.347e+002	Linear term
0.000e+000	Constant term
7.987%	RF Rel Std Dev

OK Cancel Help Print Calibration Curve Copy Calibration Curve

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

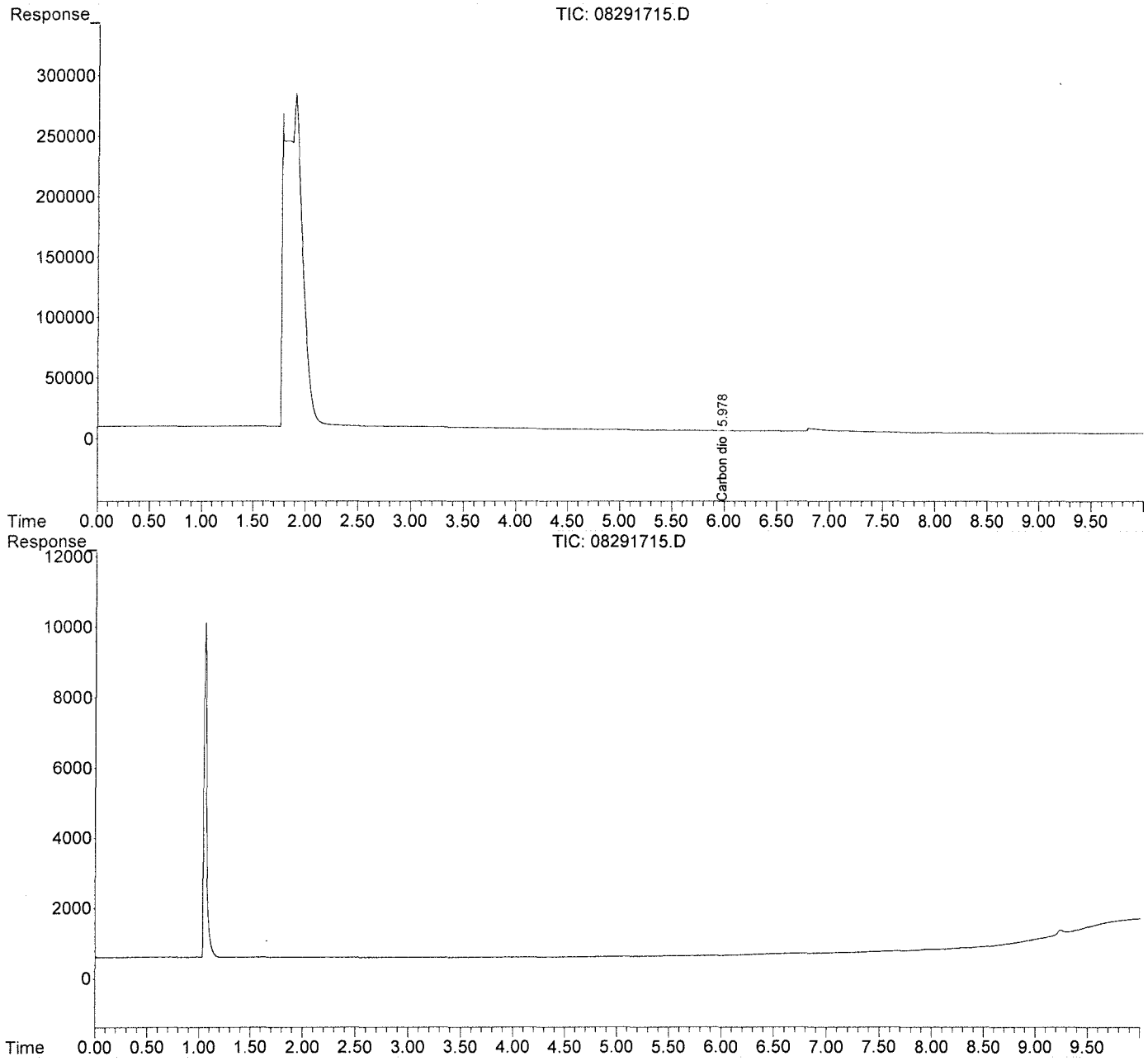
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.776	277465	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	6794	27.870	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

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

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

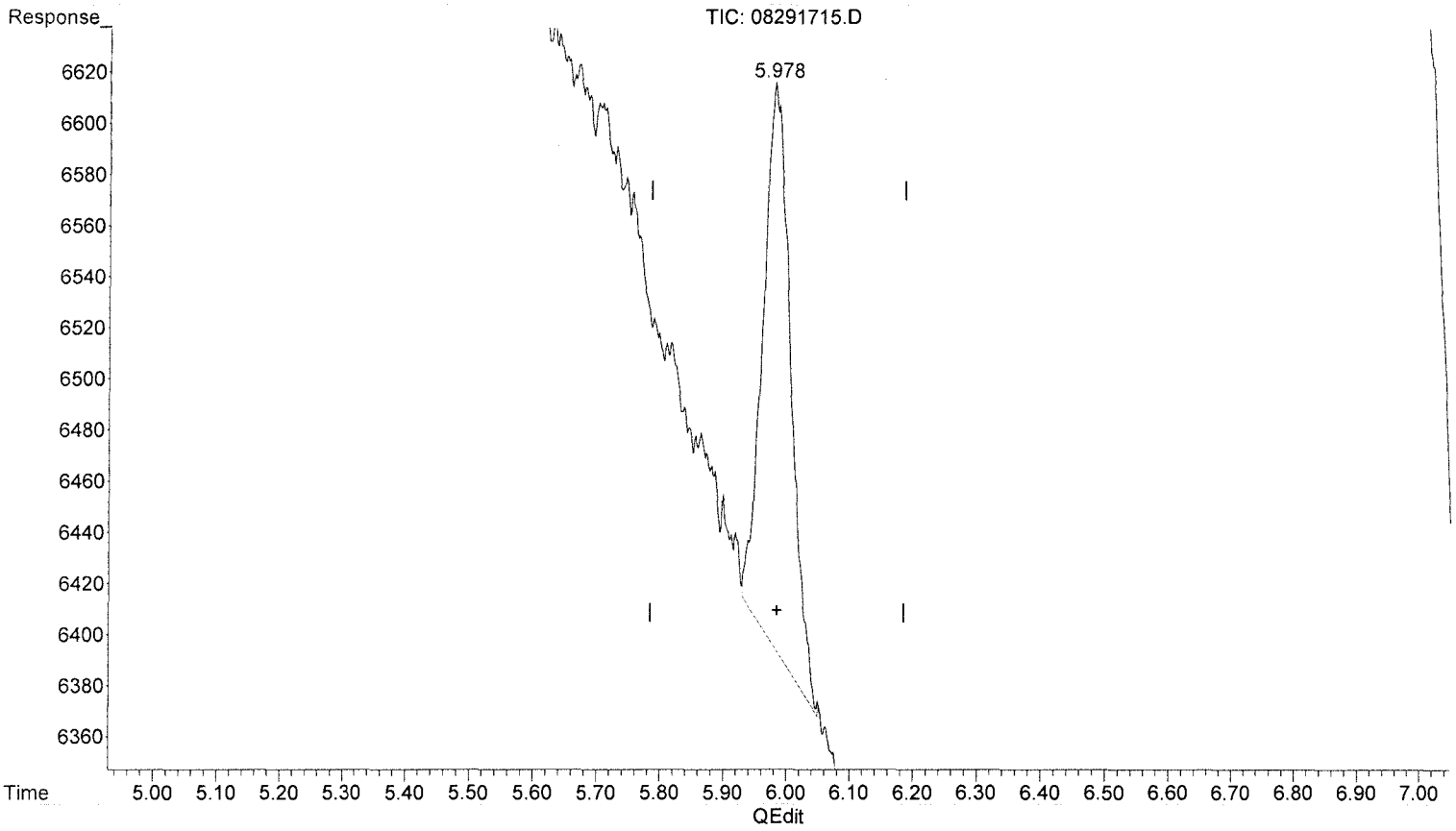
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.978min 27.870 ppm m

response 6794

M 9/30/17
Blu
M.
prelim

M 9/4/17

(+) = Expected Retention Time

RS082817_CO2.M Wed Aug 30 13:17:47 2017

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

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

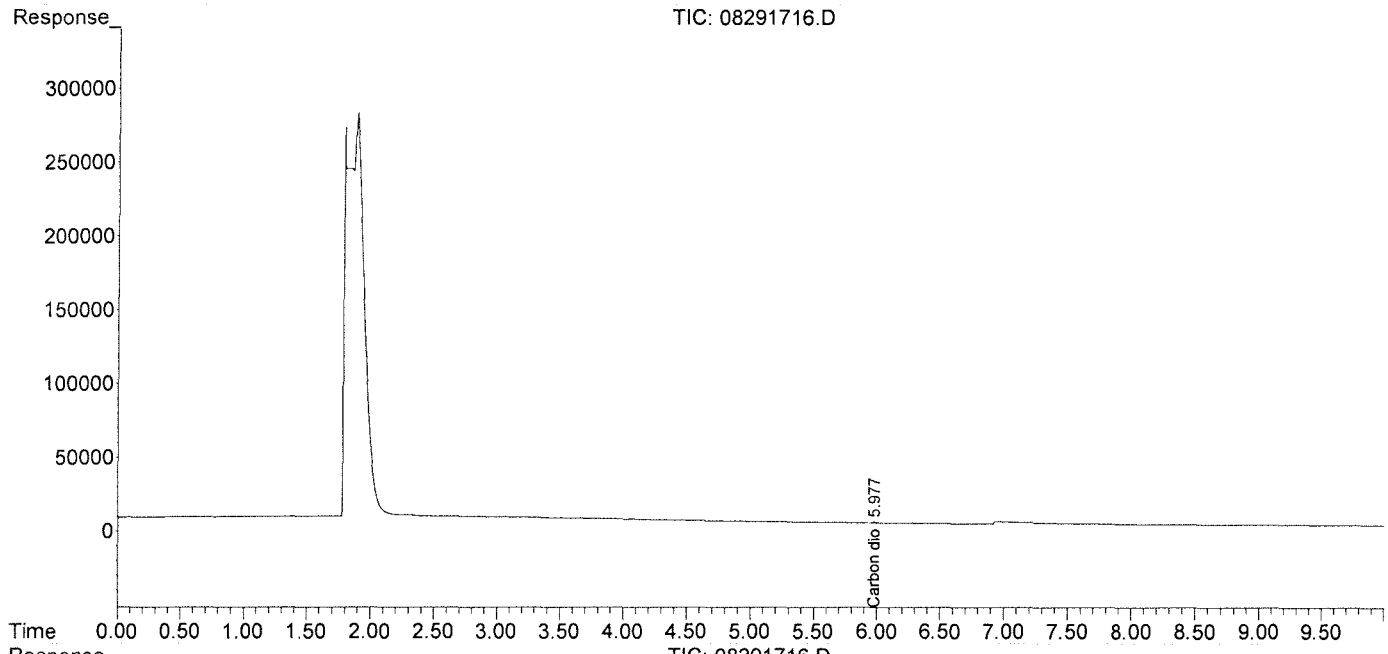
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.790	-598962	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	21932	87.858	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

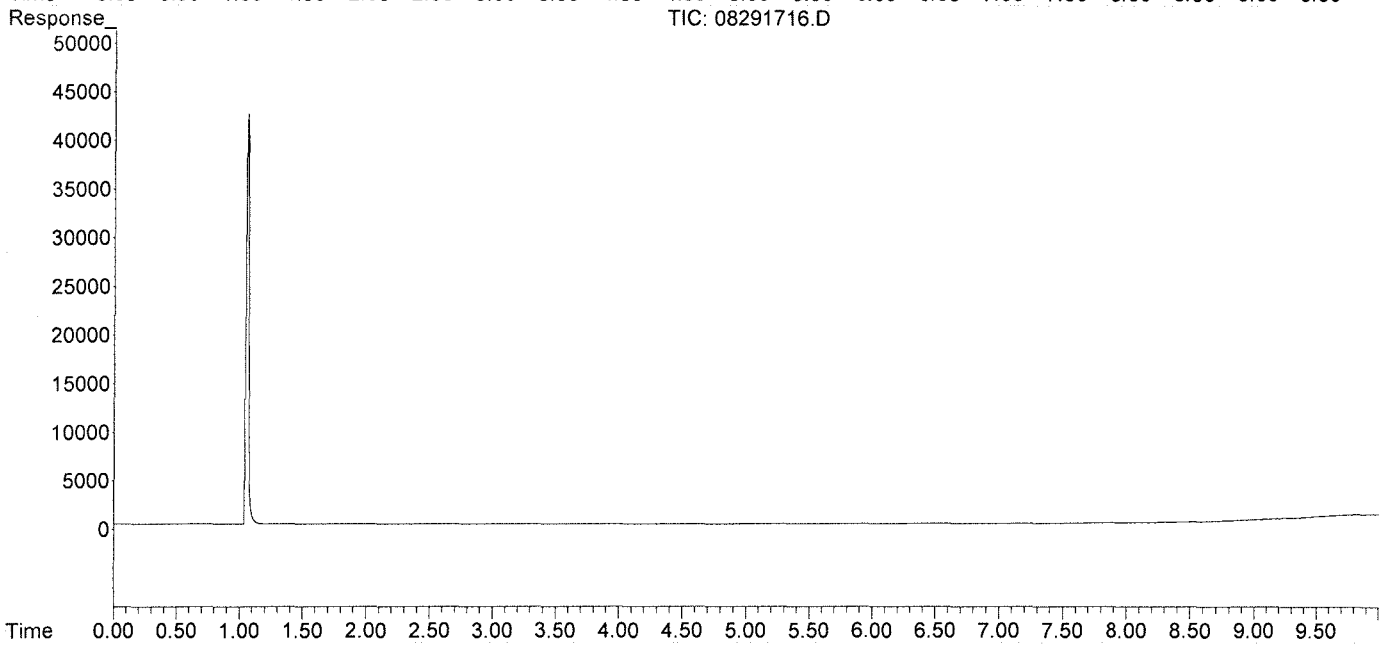
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

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

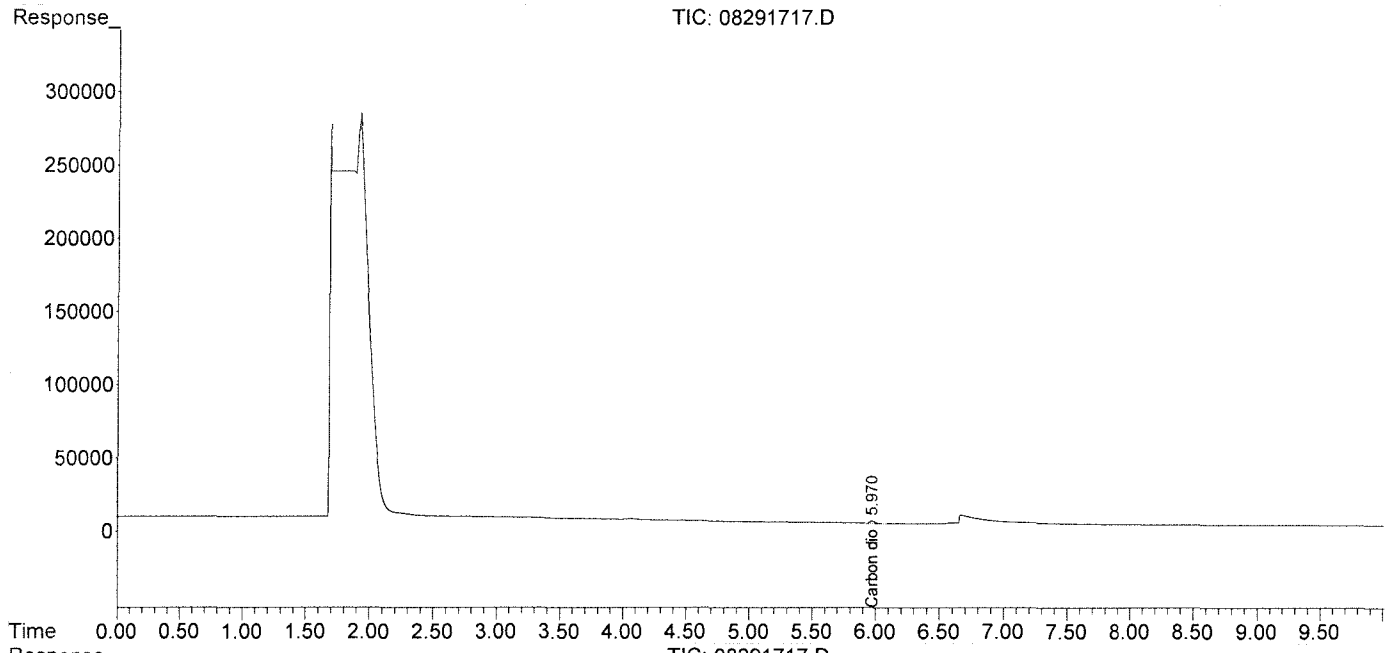
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.920f	-30716454	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.970	58461	240.204	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

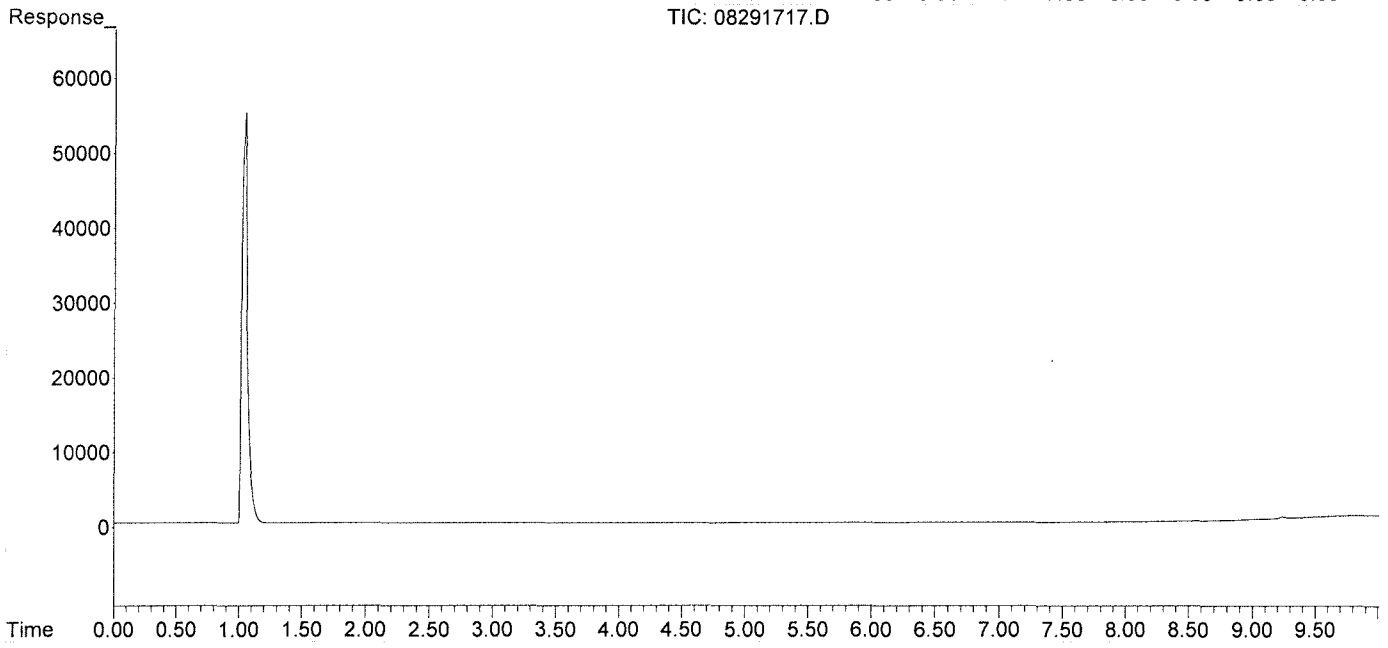
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

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

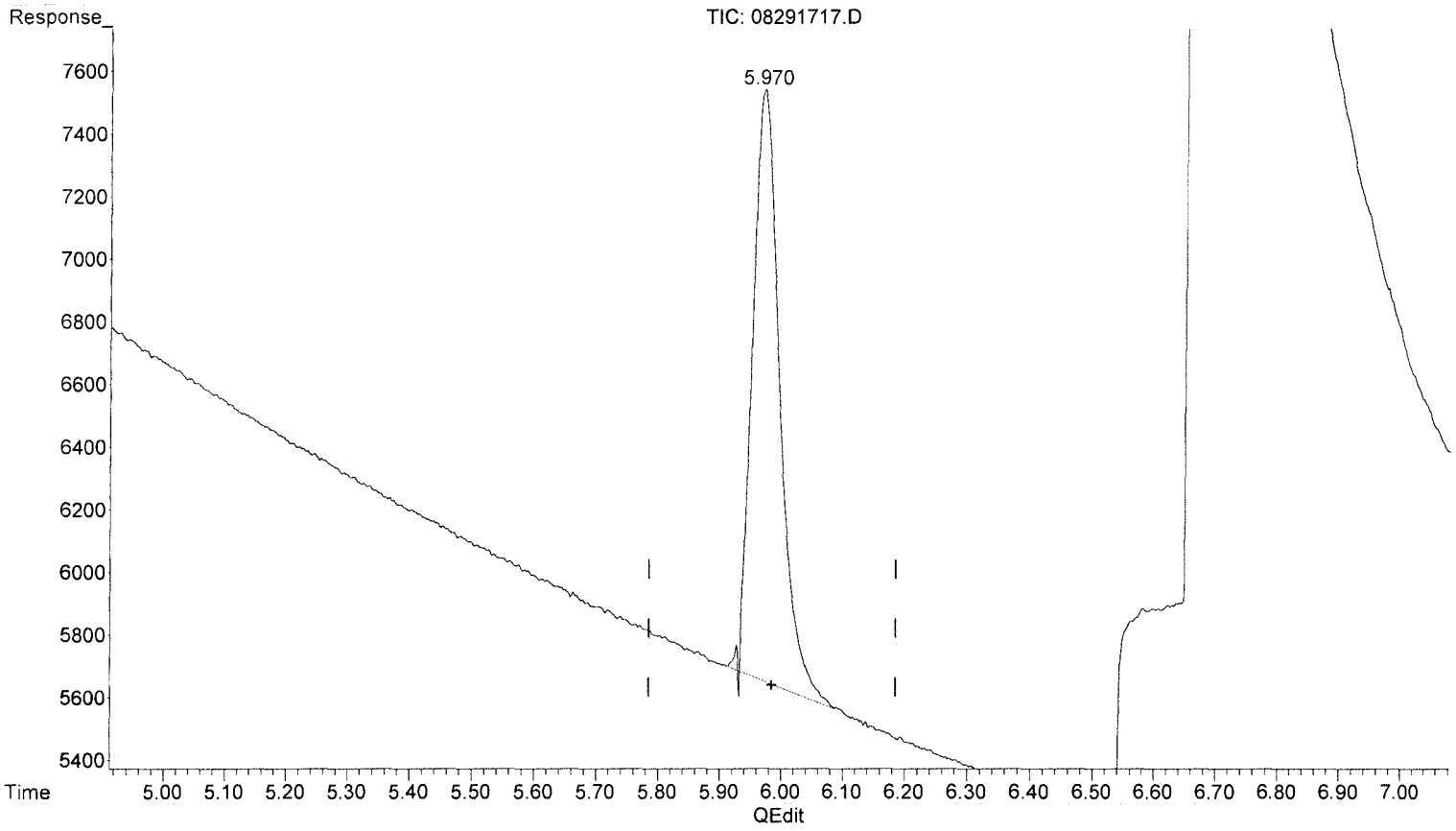




Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.970min 240.204 ppm m

response 58461

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

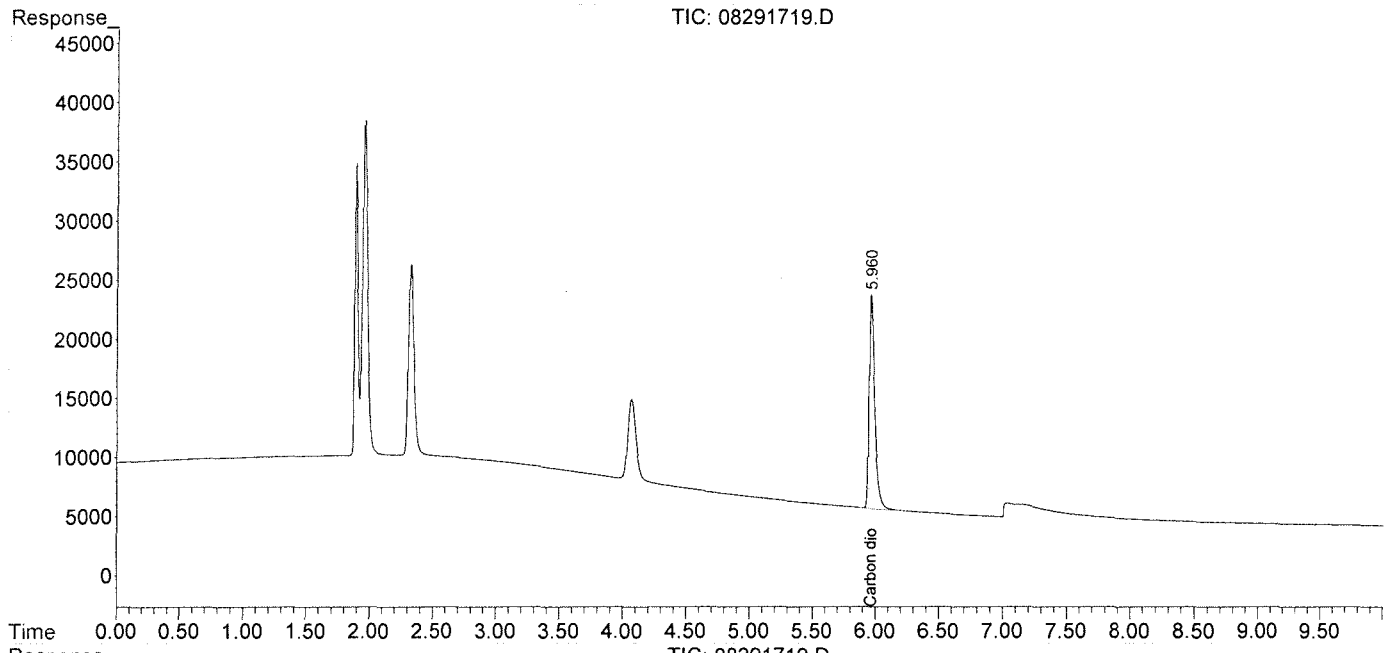
	Compound	R.T.	Response	Conc	Units	
Target	Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.891	425113	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.962	568043	2369.673	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

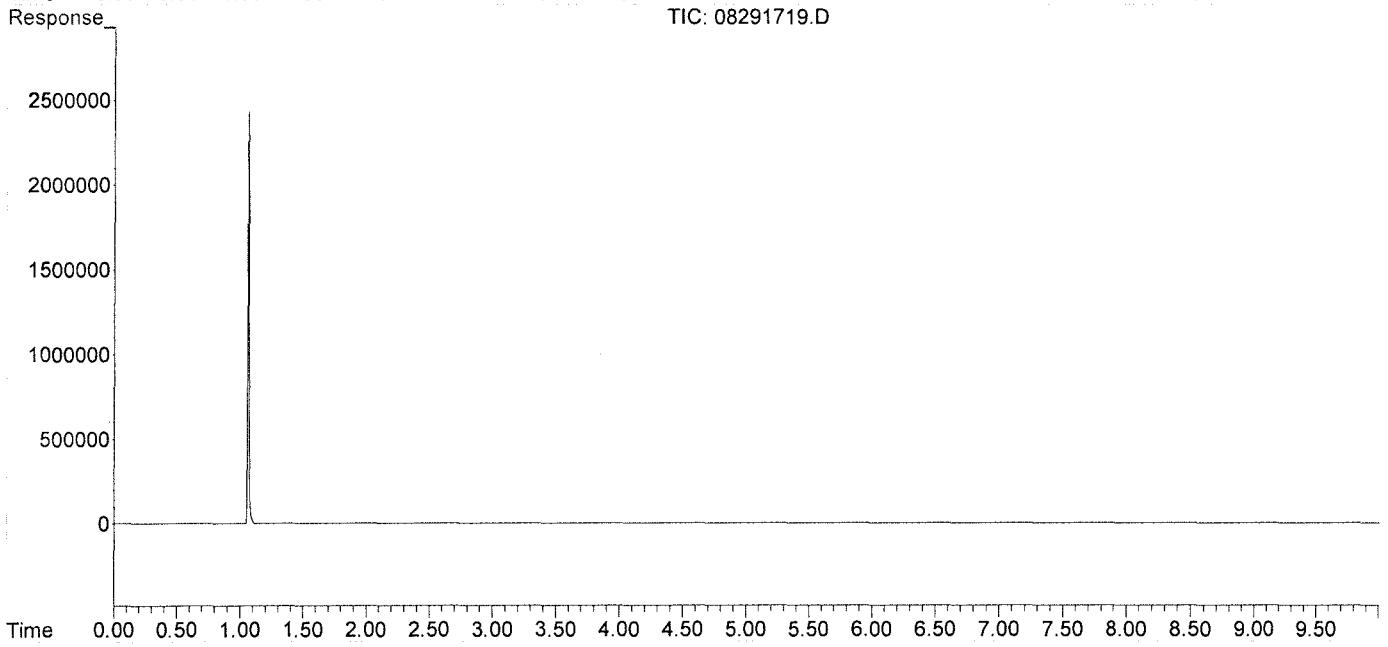
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

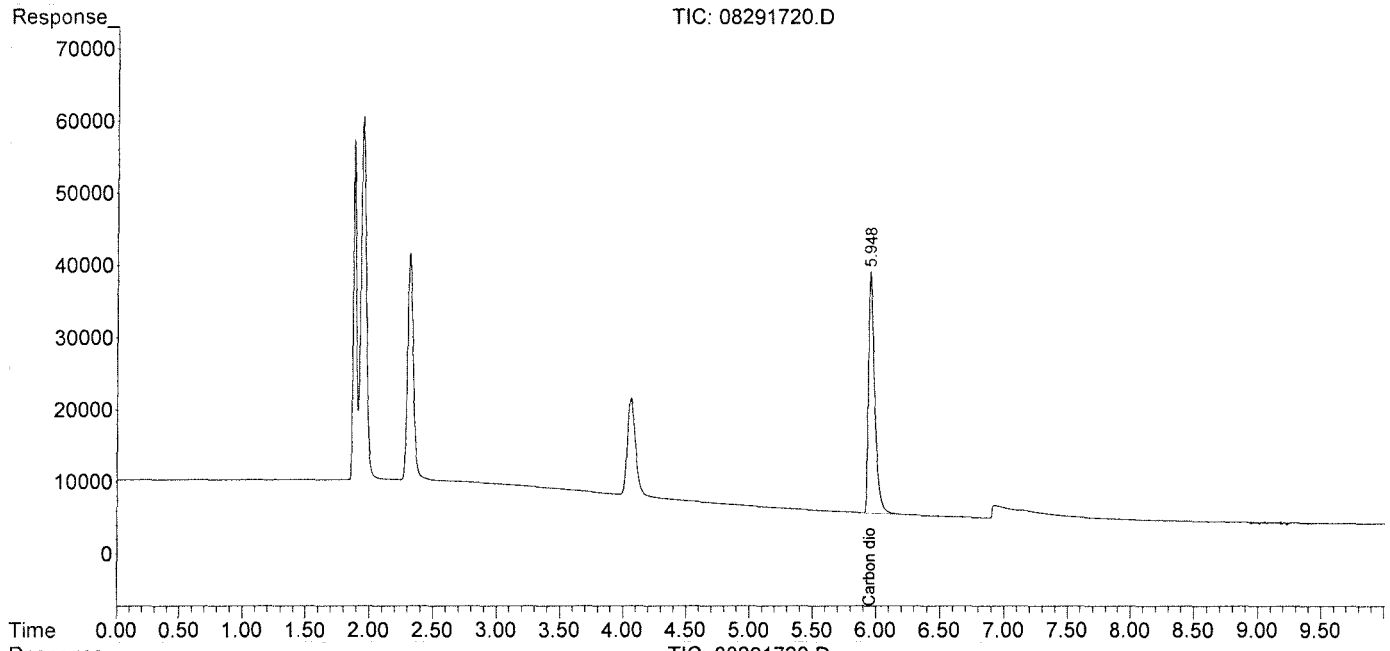
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.880	819221	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.948	1132363	4753.126	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

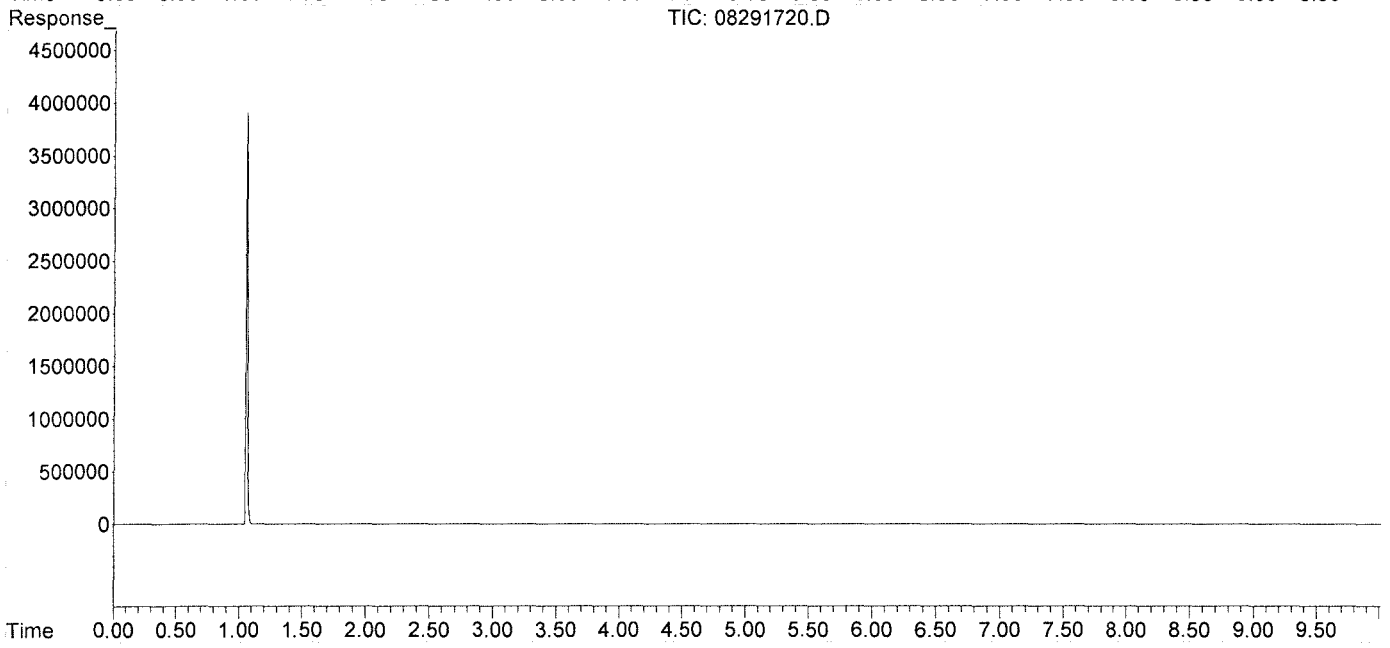
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

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

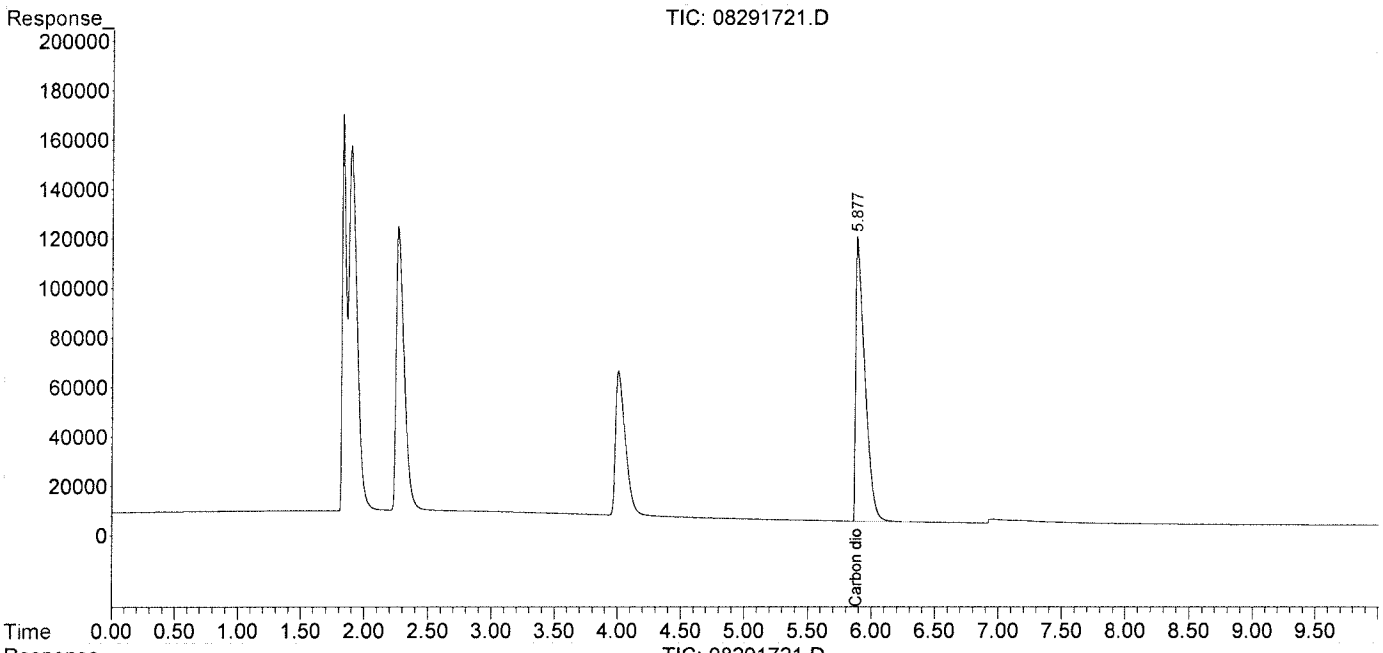
	Compound	R.T.	Response	Conc	Units	
Target	Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.827	3325463	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.879f	5744295	24443.288	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

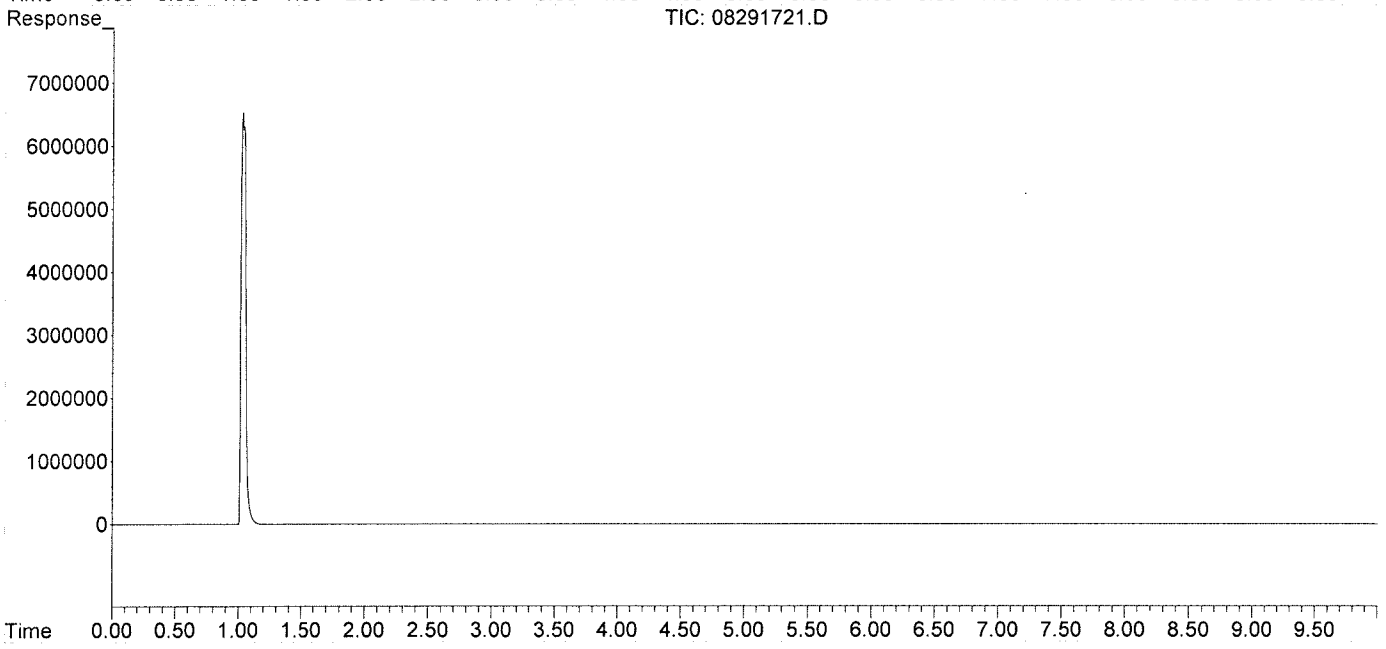
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.886	536422	0.113	ppm	actual %D
2)	Carbon monoxide	1.886	536422	N.D.	ppm	
3)	Methane (TCD)	4.059f	626500	66244.710	ppm	
4)	Carbon dioxide	5.947	1163775	4957.948	ppm	5000 99.16
6)	Methane (FID)	1.062	37290742	3947.023	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

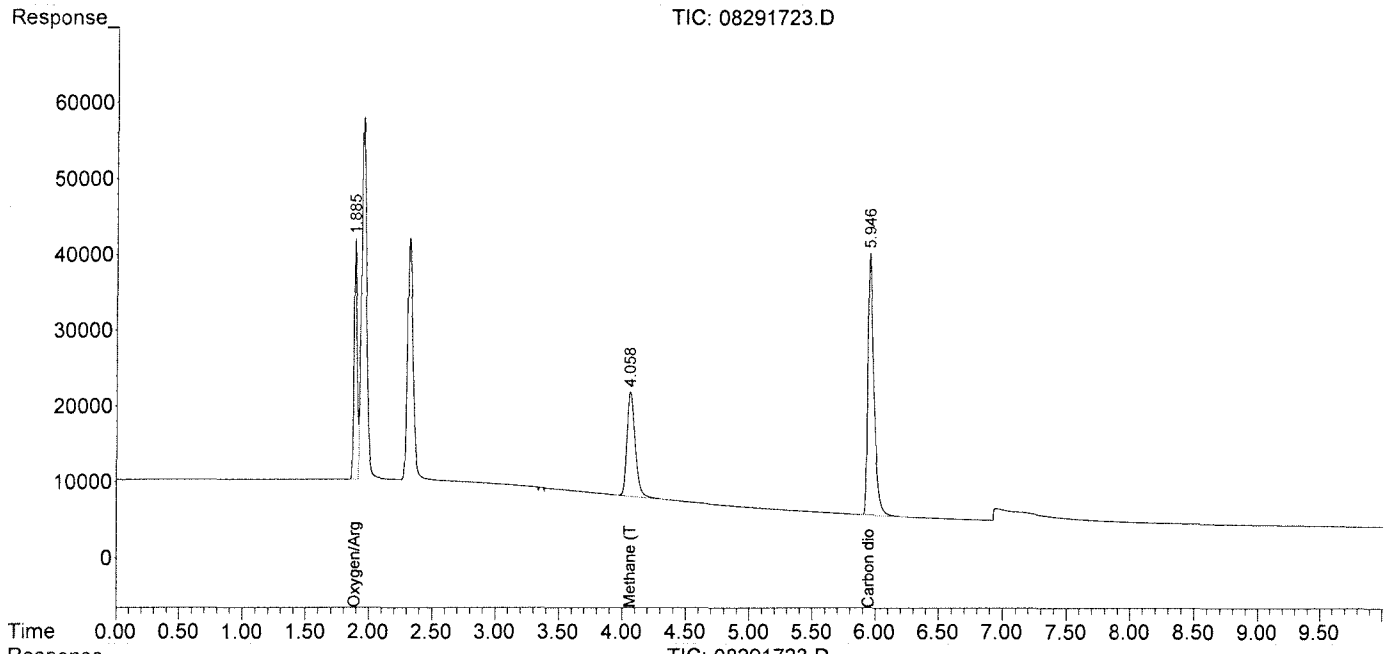
(f)=RT Delta > 1/2 Window (m)=manual int.

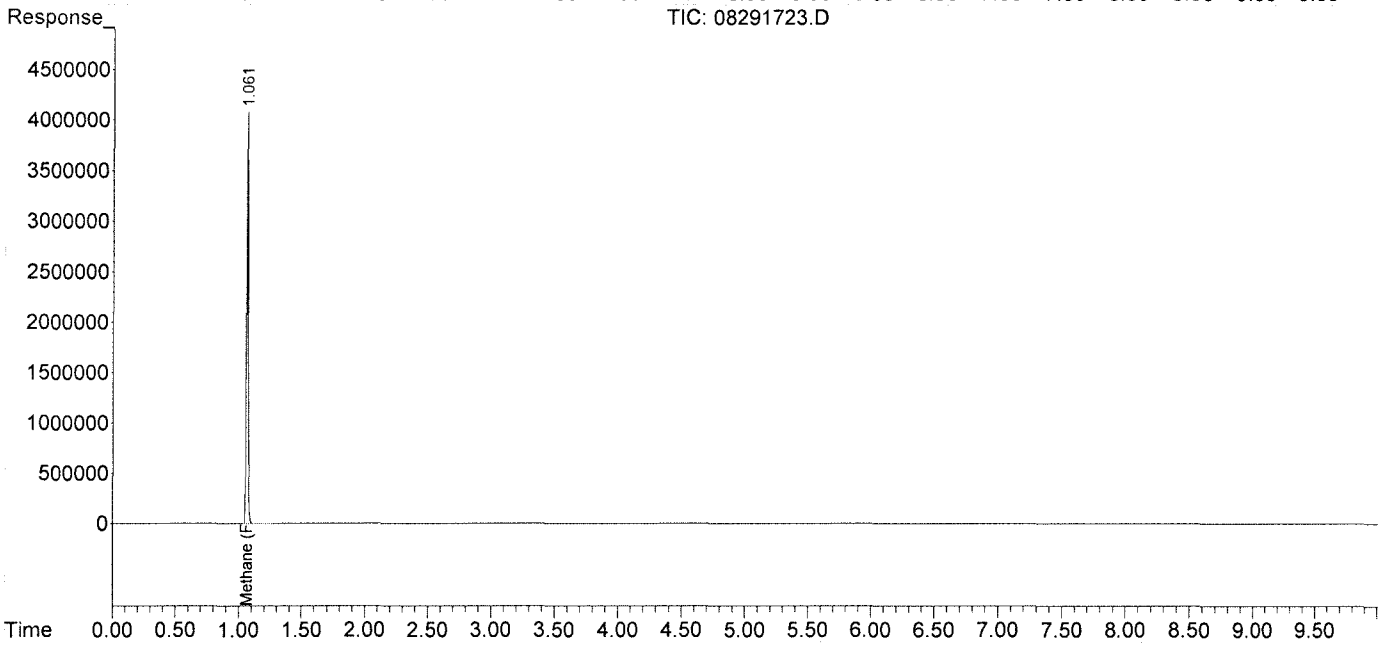
W 9/4/17

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Dissolved Gases by RSK175

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Laboratory Group
Service Request: P2006450
Sample Vol. (ml) : 32.00 ml
Analyst : WH
Date Analysis : 11/20/20
Head Space Vol.(ml) : 8.00 ml
Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Carbon Dioxide
std s32-11102001	0.100	4985.921
ACTUAL		5000.00
%Difference		0.3%
mcs 0.1ml	0.100	0.000
rb 0.1ml	0.100	0.000
lcs 0.1mL	0.100	855.069
lcsd 0.1mL	0.100	881.235
P2006450-001 0.1ml	0.100	14983.90
P2006450-002 0.1ml	0.100	4322.88
P2006450-003 0.1ml	0.100	1931.21
P2006450-004 50ul	0.050	14370.07

FINAL HEAD SPACE RESULT (ppm)

	Carbon Dioxide
WWt.	44.10
HENRY'S CONSTANT	1.42E+03
RL	100.00
mcs 0.1ml	0.000
lcs 0.1mL	8550.690
lcsd 0.1mL	8812.350
P2006450-001 0.1ml	149838.98
P2006450-002 0.1ml	43228.77
P2006450-003 0.1ml	19312.06
P2006450-004 50ul	287401.32

REV01

std s32-11102001	4940.383
ACTUAL	5000.00
%Difference	1.2%

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 15:09:43
Operator : WH
Sample : std s32-11102001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:30:17 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

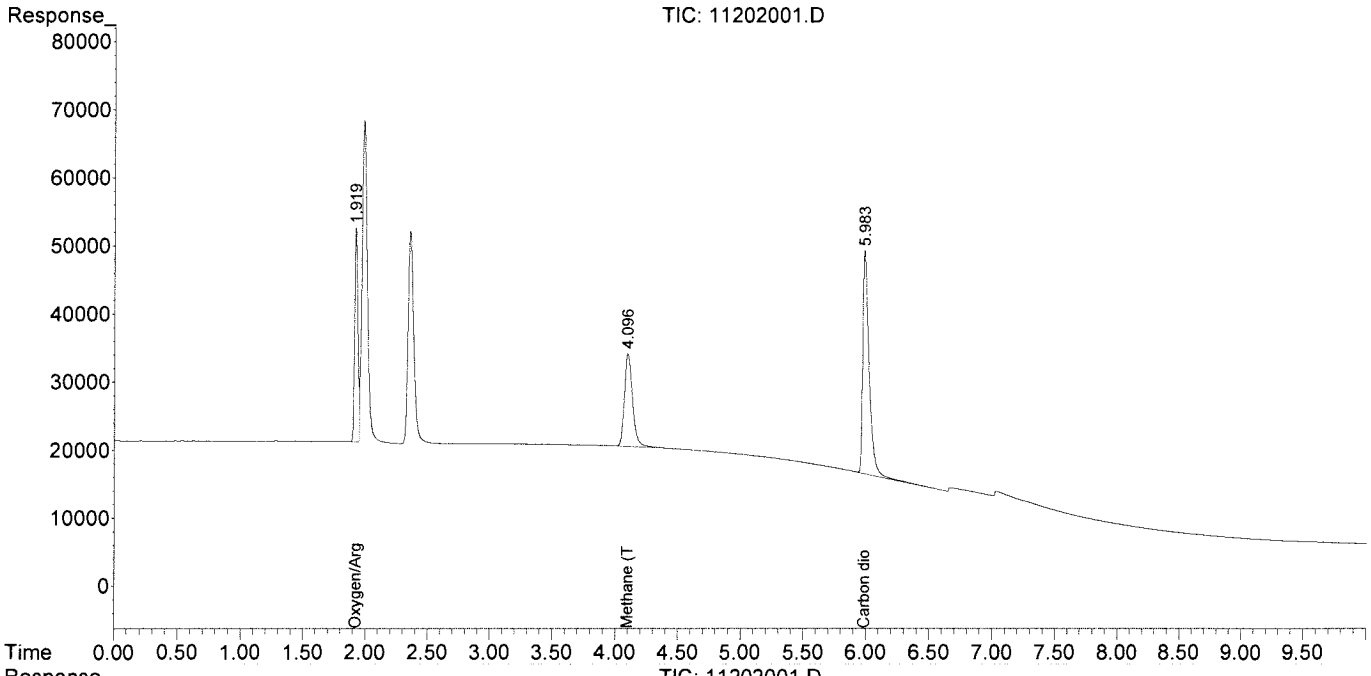
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.920f	554852	0.117	ppm
2)	Carbon monoxide	1.920f	554852	N.D.	ppm
3)	Methane (TCD)	4.096f	620519	65612.372	ppm
4)	Carbon dioxide	5.984	1170341	4985.921	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

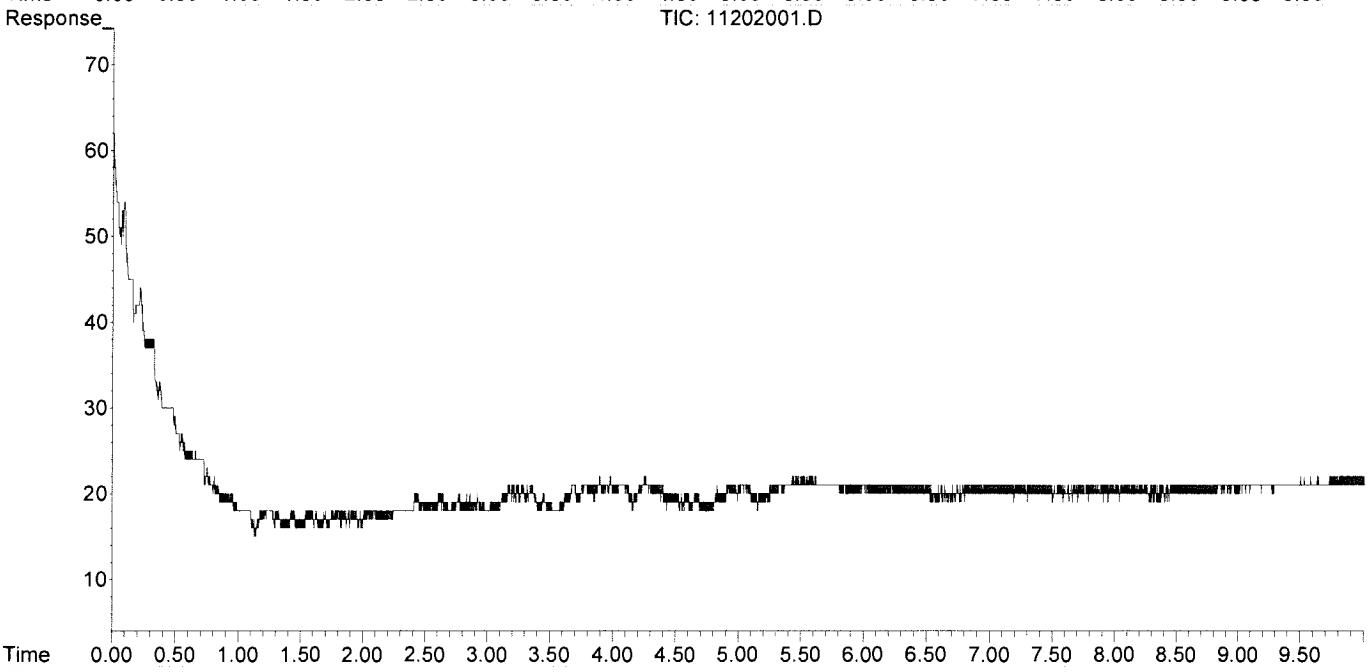
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 15:09:43
Operator : WH
Sample : std s32-11102001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:30:17 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202012.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 18:33:30
Operator : WH
Sample : std s32-11102001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 18:47:39 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

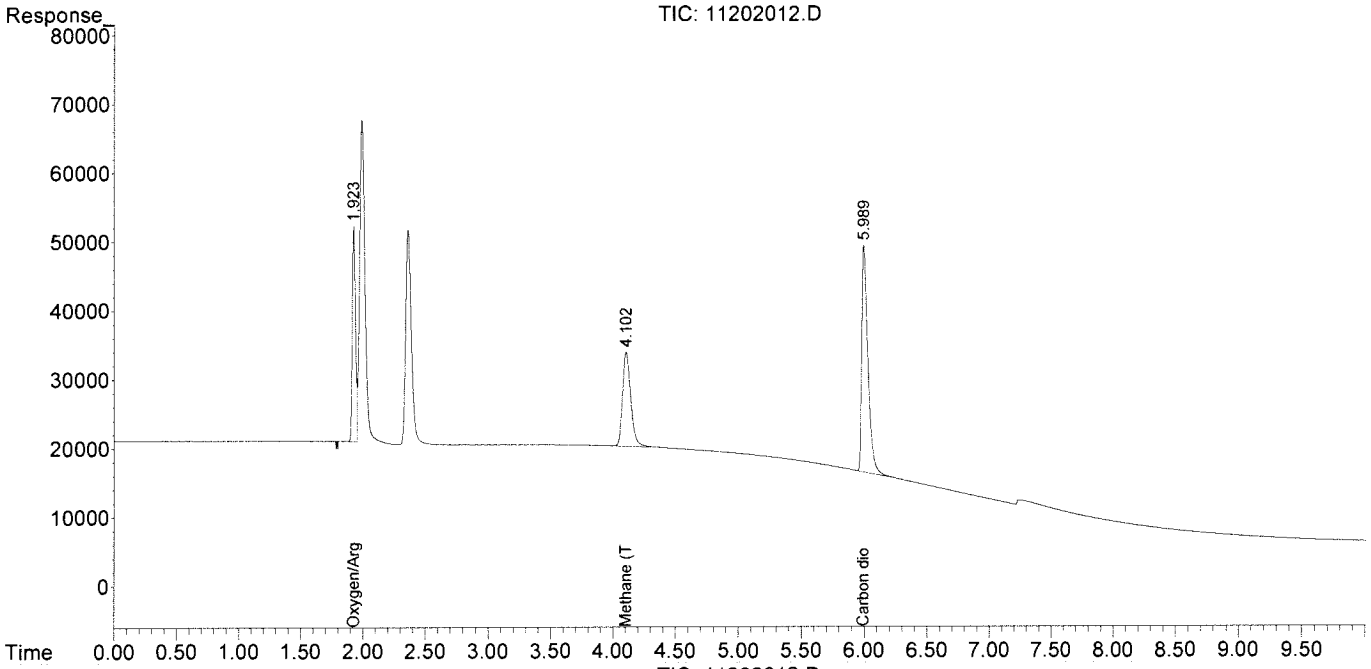
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.923f	551172	0.116	ppm	
2)	Carbon monoxide	1.923f	551172	N.D.	ppm	
3)	Methane (TCD)	4.103f	621606	65727.296	ppm	
4)	Carbon dioxide	5.989	1159652	4940.383	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

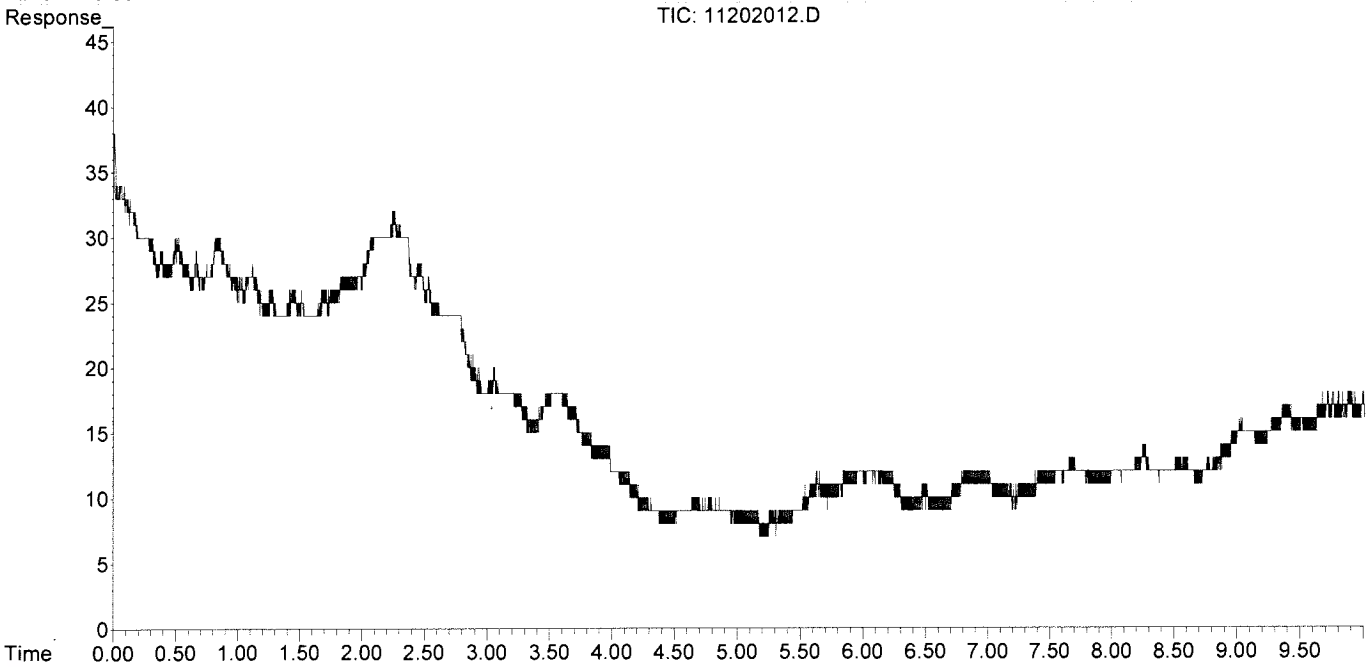
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202012.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 18:33:30
Operator : WH
Sample : std s32-11102001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 18:47:39 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

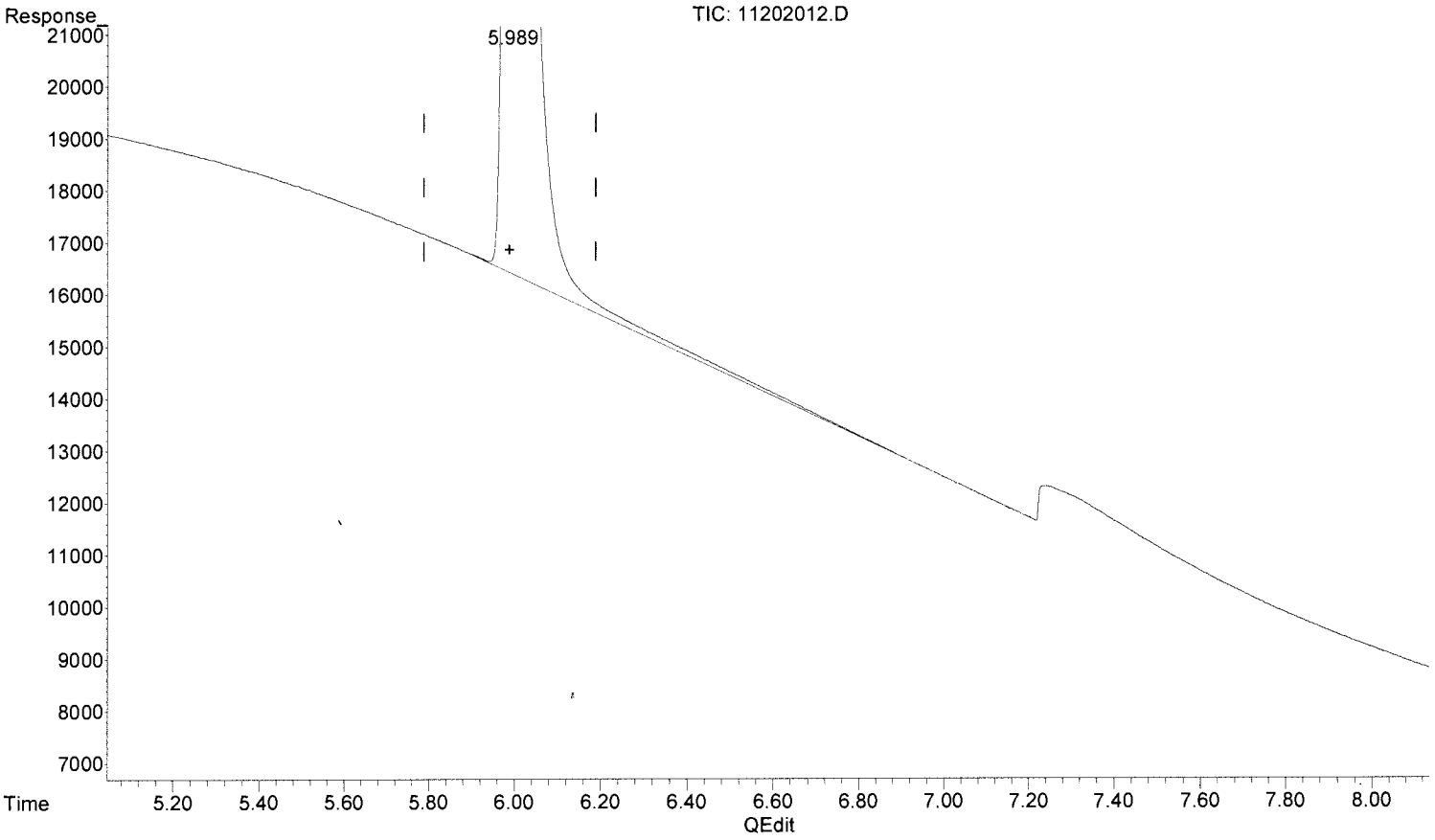




Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202012.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 18:33:30
Operator : WH
Sample : std s32-11102001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 18:47:39 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.990min 5100.916 ppm

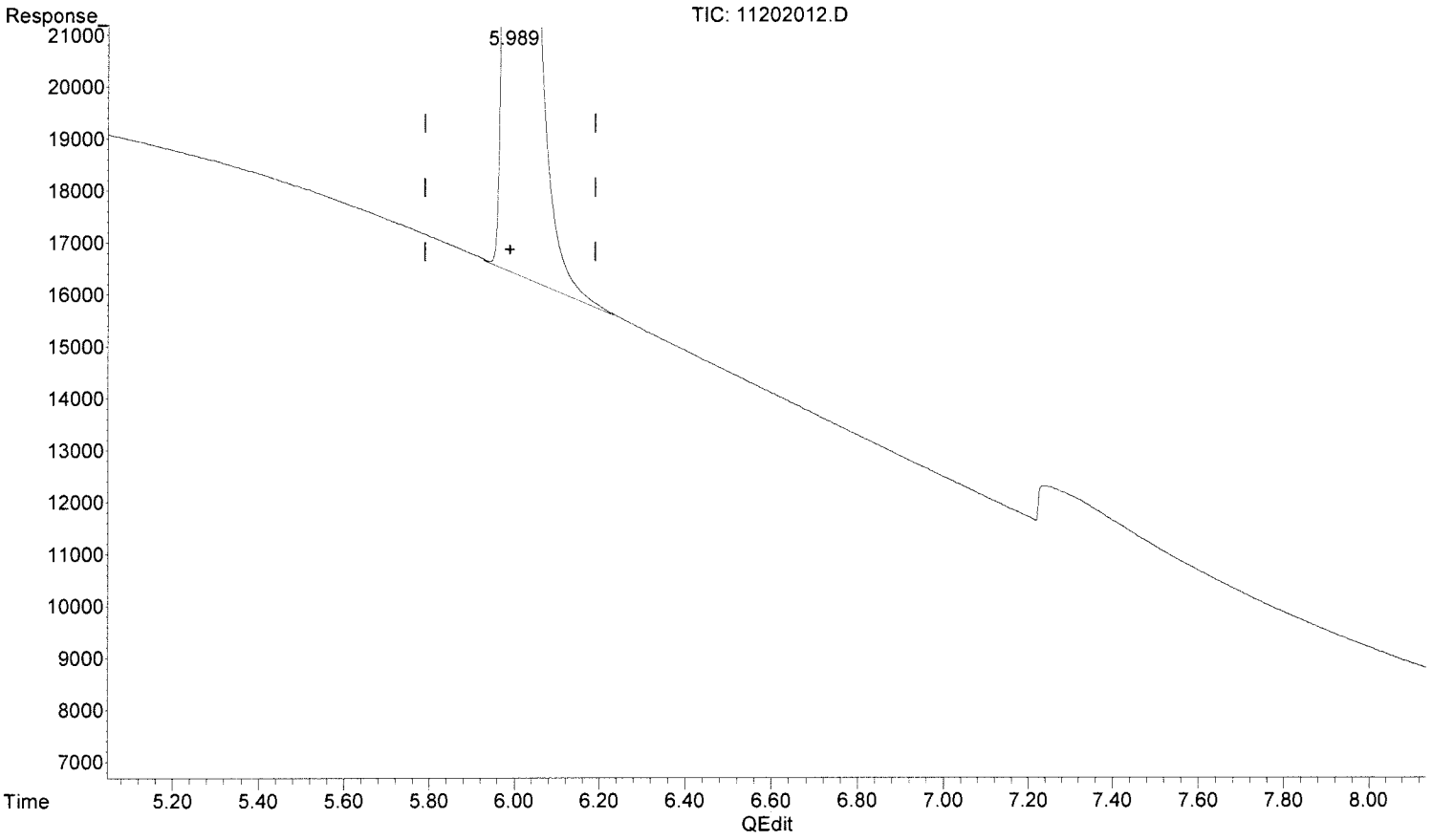
response 1197334

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_TCD\2020_11\20\
Data File : 11202012.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 18:33:30
Operator : WH
Sample : std s32-11102001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 18:47:39 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.989min 4940.383 ppm m

response 1159652

11/22/20 BLC

11/23/20

(+) = Expected Retention Time

Injection Log

Directory: I:\GC10\DATA\RSK_FID\2017_08\29\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	29-Aug-17, 07:58:00	08291701.D	std s30-06161601		MC	RSKBOTH.M	Pass
2	29-Aug-17, 08:11:02	08291702.D	mb 0.5ml		MC	RSKBOTH.M	Pass
3	29-Aug-17, 08:24:13	08291703.D	4089-001 0.5ml		MC	RSKBOTH.M	
4	29-Aug-17, 08:39:29	08291704.D	4089-002 0.5ml		MC	RSKBOTH.M	
5	29-Aug-17, 08:53:38	08291705.D	4089-003 0.5ml		MC	RSKBOTH.M	
6	29-Aug-17, 09:33:52	08291706.D	4089-004 0.5ml		MC	RSKBOTH.M	
7	29-Aug-17, 09:50:51	08291707.D	4089-005 0.5ml		MC	RSKBOTH.M	
8	29-Aug-17, 10:07:54	08291708.D	4089-006 0.5ml		MC	RSKBOTH.M	
9	29-Aug-17, 10:42:34	08291709.D	4089-007 0.5ml		MC	RSKBOTH.M	
10	29-Aug-17, 11:06:01	08291710.D	4089-008 0.5ml		MC	RSKBOTH.M	
11	29-Aug-17, 11:23:53	08291711.D	4089-009 0.5ml		MC	RSKBOTH.M	
12	29-Aug-17, 11:37:17	08291712.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
13	29-Aug-17, 11:50:31	08291713.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
14	29-Aug-17, 12:29:45	08291714.D	std s30-06161601		MC	RSKBOTH.M	Pass
15	29-Aug-17, 14:07:01	08291715.D	25ppm s32-08291701 0.25ml		MC	RSKBOTH.M	Curve
16	29-Aug-17, 14:22:12	08291716.D	100ppm s32-08291702 0.2ml		MC	RSKBOTH.M	Curve
17	29-Aug-17, 14:53:00	08291717.D	250ppm s32-08291702 0.5ml		MC	RSKBOTH.M	Curve
18	29-Aug-17, 15:07:43	08291718.D	mis inject		MC	RSKBOTH.M	
19	29-Aug-17, 15:23:21	08291719.D	2500ppm s32-08231701 50ul		MC	RSKBOTH.M	Curve
20	29-Aug-17, 15:44:54	08291720.D	5000ppm s32-08231701 0.1ml		MC	RSKBOTH.M	Curve
21	29-Aug-17, 16:00:09	08291721.D	25000ppm s32-08231701 0.5ml		MC	RSKBOTH.M	Curve
22	29-Aug-17, 16:15:43	08291722.D	mb 0.1ml		MC	RSKBOTH.M	Pass
23	29-Aug-17, 16:35:37	08291723.D	icv s30-07071701		MC	RSKBOTH.M	Pass

Injection Log

Directory: I:\GC10\DATA\RSK_TCD\2020_11\17\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	17-Nov-20, 13:37:26	11172001.D	std s32-11102001		WH	RSKBOTH.M	pass
2	17-Nov-20, 13:58:25	11172002.D	rb 0.1ml		WH	RSKBOTH.M	pass
3	17-Nov-20, 14:11:18	11172003.D	mcs 0.1ml		WH	RSKBOTH.M	pass
4	17-Nov-20, 14:29:05	11172004.D	lcs tcd 0.1ml		WH	RSKBOTH.M	pass
5	17-Nov-20, 14:43:43	11172005.D	lcsd tcd 0.1ml		WH	RSKBOTH.M	pass
6	17-Nov-20, 14:59:24	11172006.D	P2006296-002 0.1ml		WH	RSKBOTH.M	
7	17-Nov-20, 15:22:43	11172007.D	P2006296-003 0.1ml		WH	RSKBOTH.M	
8	17-Nov-20, 15:35:22	11172008.D	P2006296-001 0.1ml		WH	RSKBOTH.M	
9	17-Nov-20, 15:50:07	11172009.D	P2006296-001ms 0.1ml		WH	RSKBOTH.M	
10	17-Nov-20, 16:01:53	11172010.D	P2006296-001msd 0.1ml		WH	RSKBOTH.M	
11	17-Nov-20, 16:14:21	11172011.D	P2006253-001 0.1ml		WH	RSKBOTH.M	
12	17-Nov-20, 16:28:18	11172012.D	P2006253-002 0.1ml		WH	RSKBOTH.M	
13	17-Nov-20, 16:46:52	11172013.D	P2006253-003 0.1ml		WH	RSKBOTH.M	
14	17-Nov-20, 17:02:41	11172014.D	P2006253-004 0.1ml		WH	RSKBOTH.M	
15	17-Nov-20, 17:24:53	11172015.D	P2006253-005 0.1ml		WH	RSKBOTH.M	
16	17-Nov-20, 17:39:25	11172016.D	std s32-11102001		WH	RSKBOTH.M	pass

Data Path : I:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192004.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 13:26
Operator : WH
Sample : P2006450-001 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 13:42:40 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

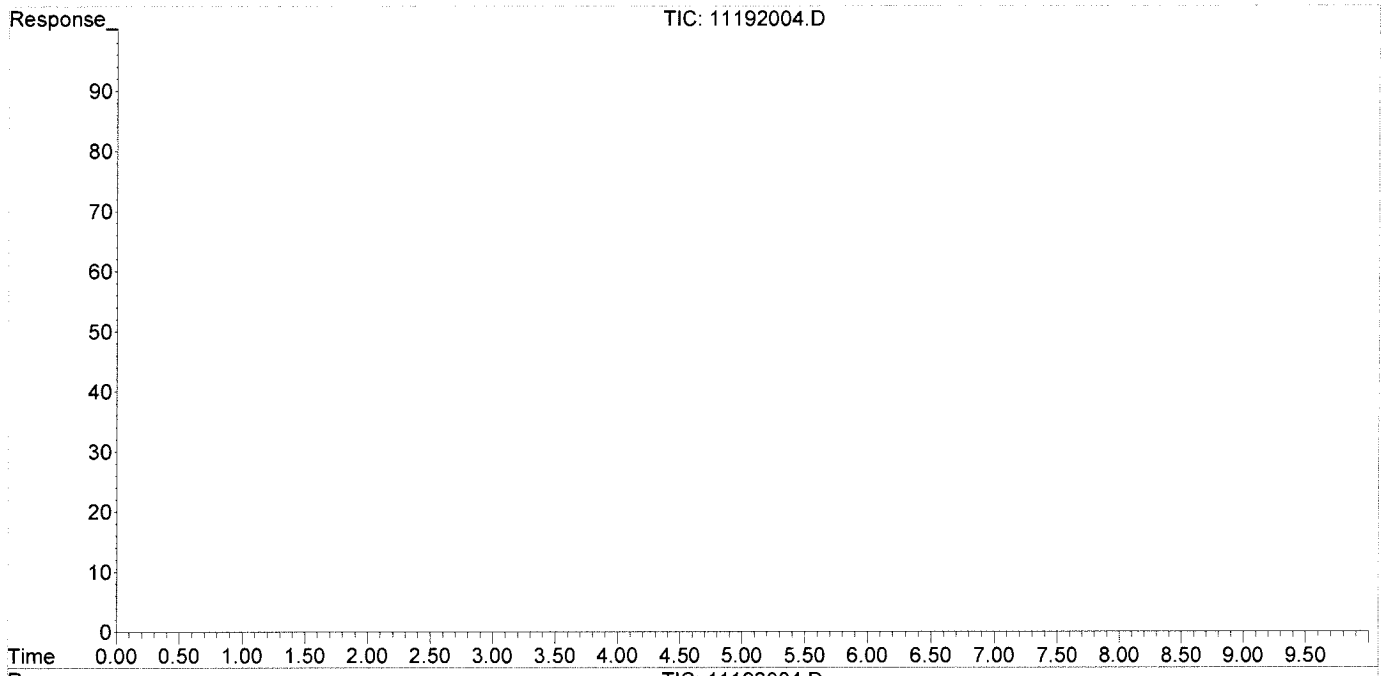
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.103	1668	0.184	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

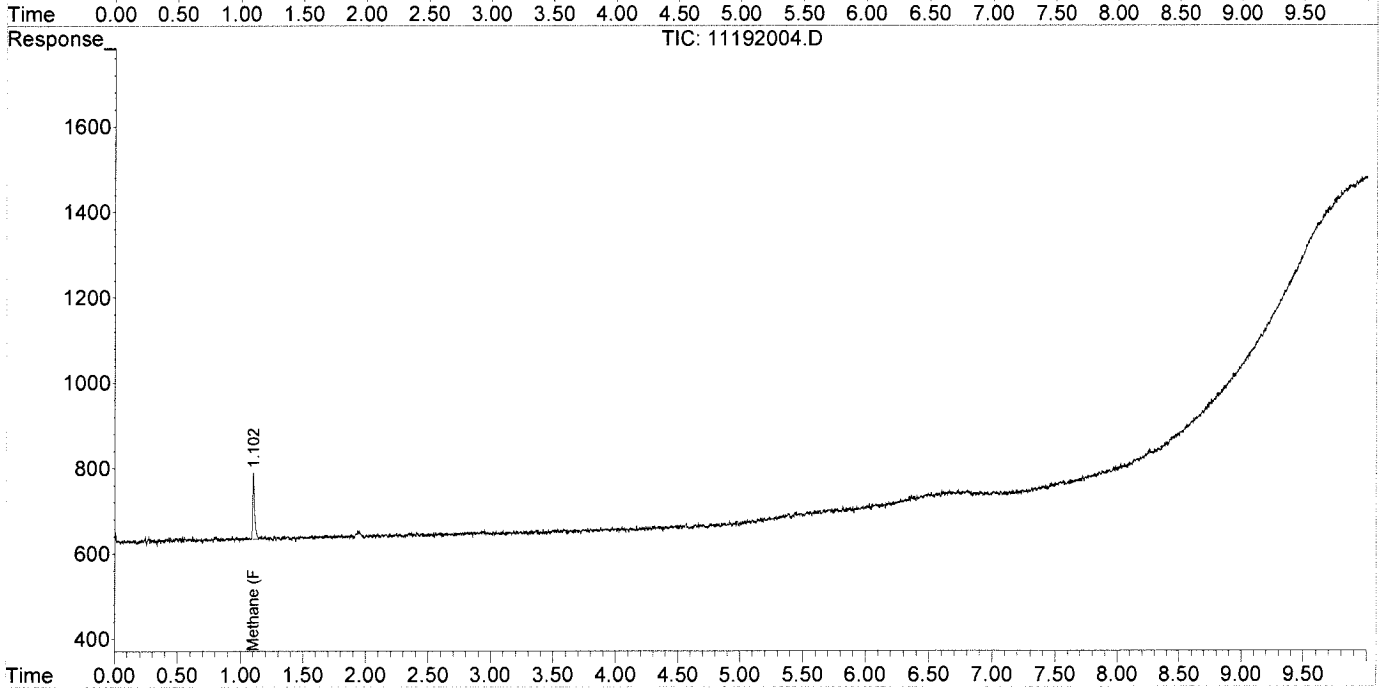
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192004.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 13:26
Operator : WH
Sample : P2006450-001 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 13:42:40 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : I:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 13:45
Operator : WH
Sample : P2006450-002 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 14:11:26 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

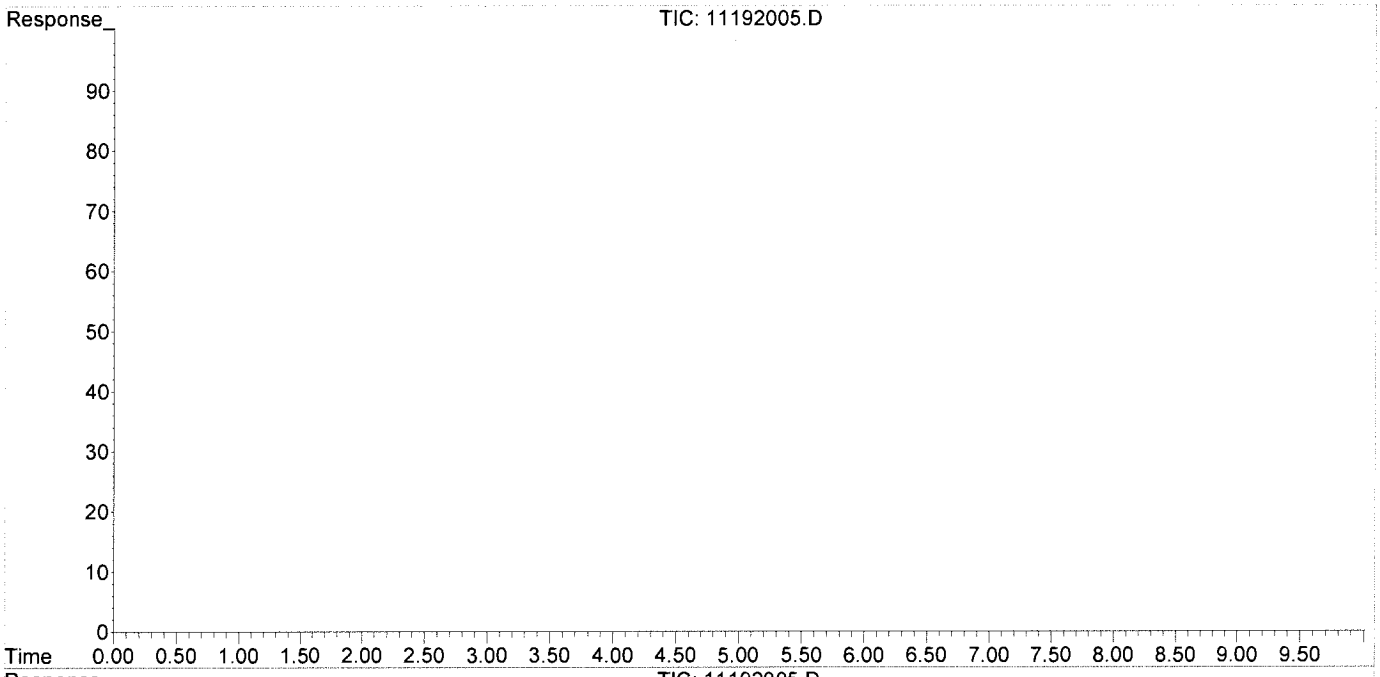
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000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

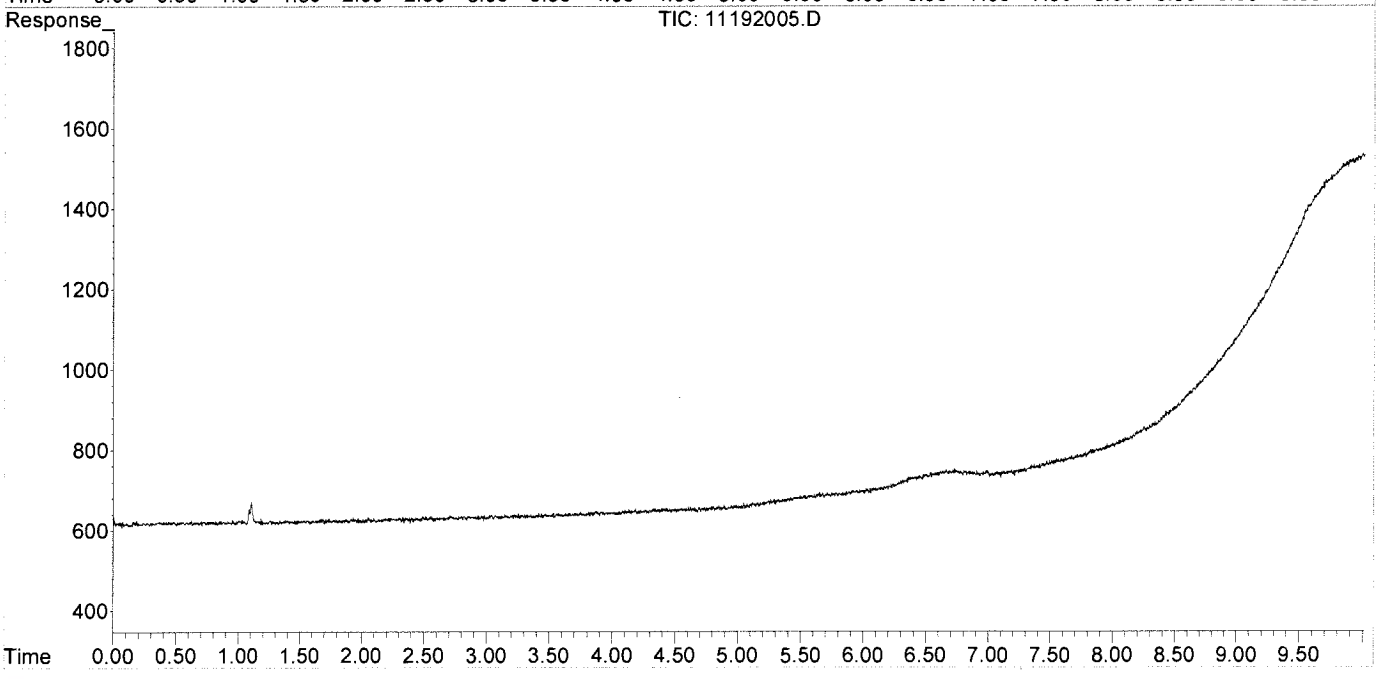
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 13:45
Operator : WH
Sample : P2006450-002 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 14:11:26 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : I:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 14:03
Operator : WH
Sample : P2006450-003 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 14:12:04 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

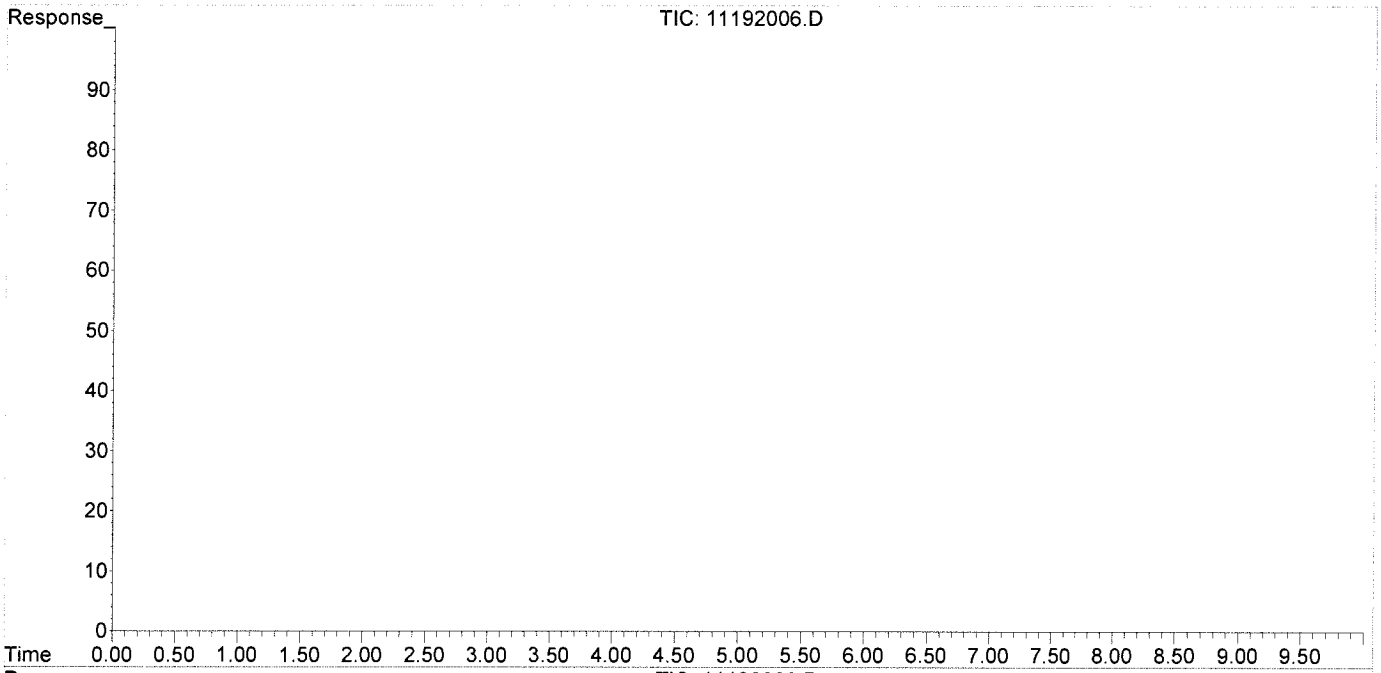
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.107	927	0.102	ppm	m
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

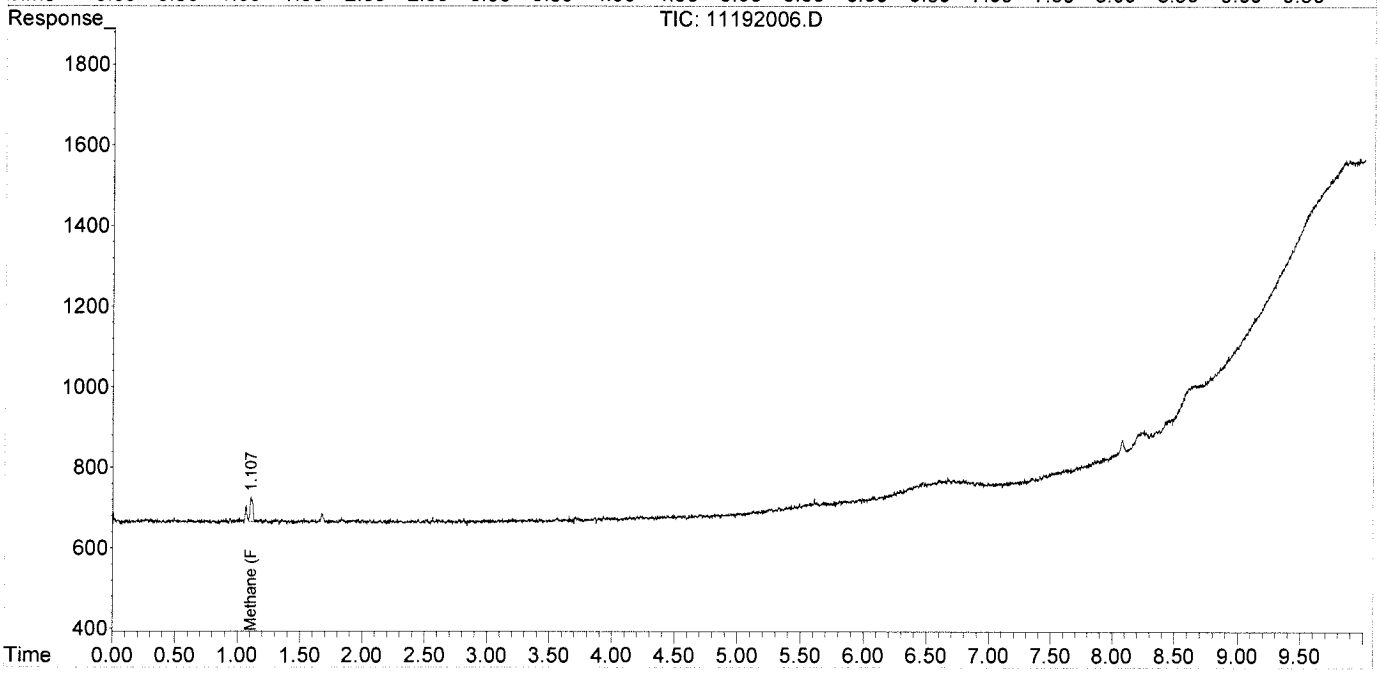
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 14:03
Operator : WH
Sample : P2006450-003 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 14:12:04 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

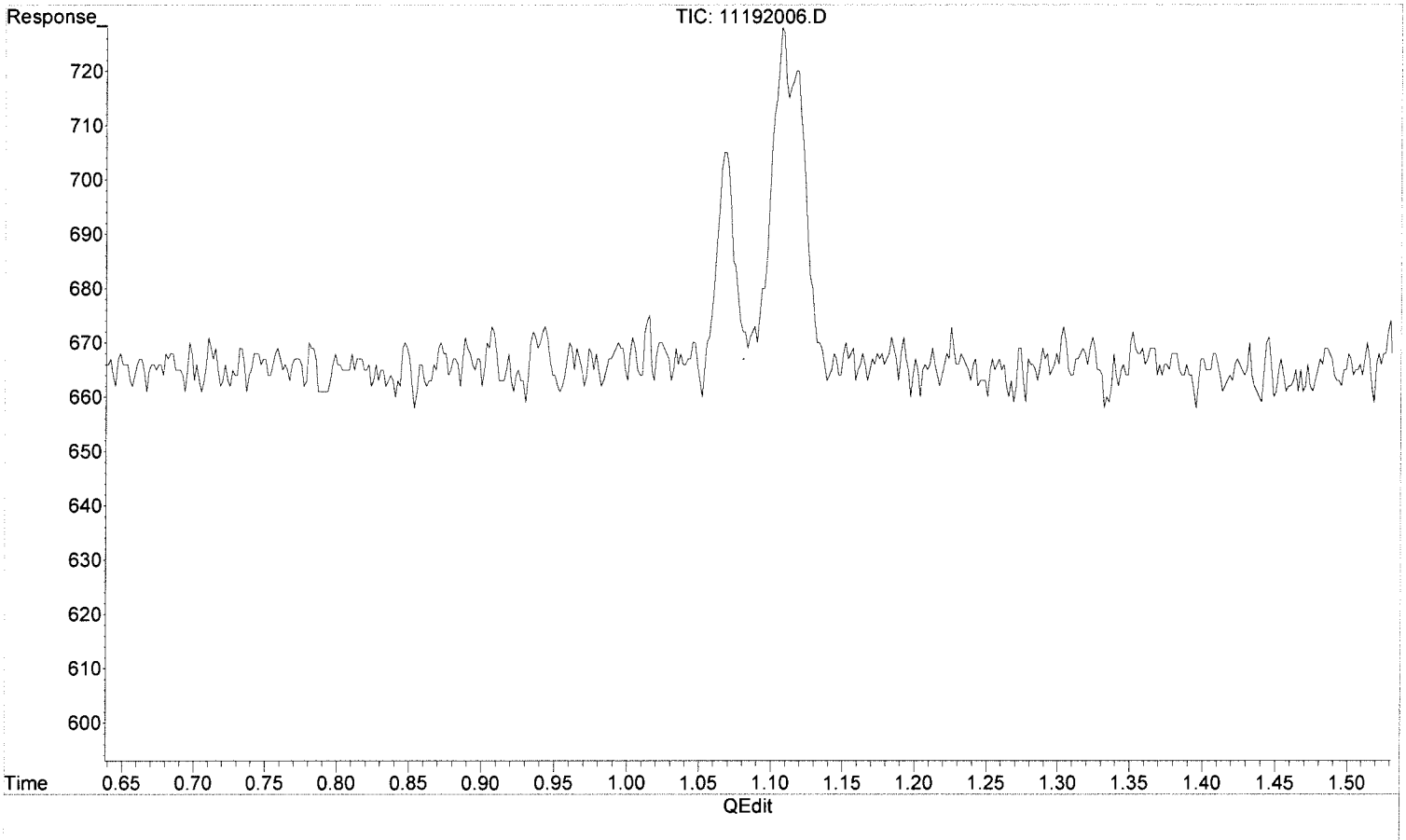




Data Path : I:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 14:03
Operator : WH
Sample : P2006450-003 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 14:12:04 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(6) Methane (FID)

1.128min 0.000 ppm

response 0

Manual Integration:

Before

11/19/20

(+) = Expected Retention Time

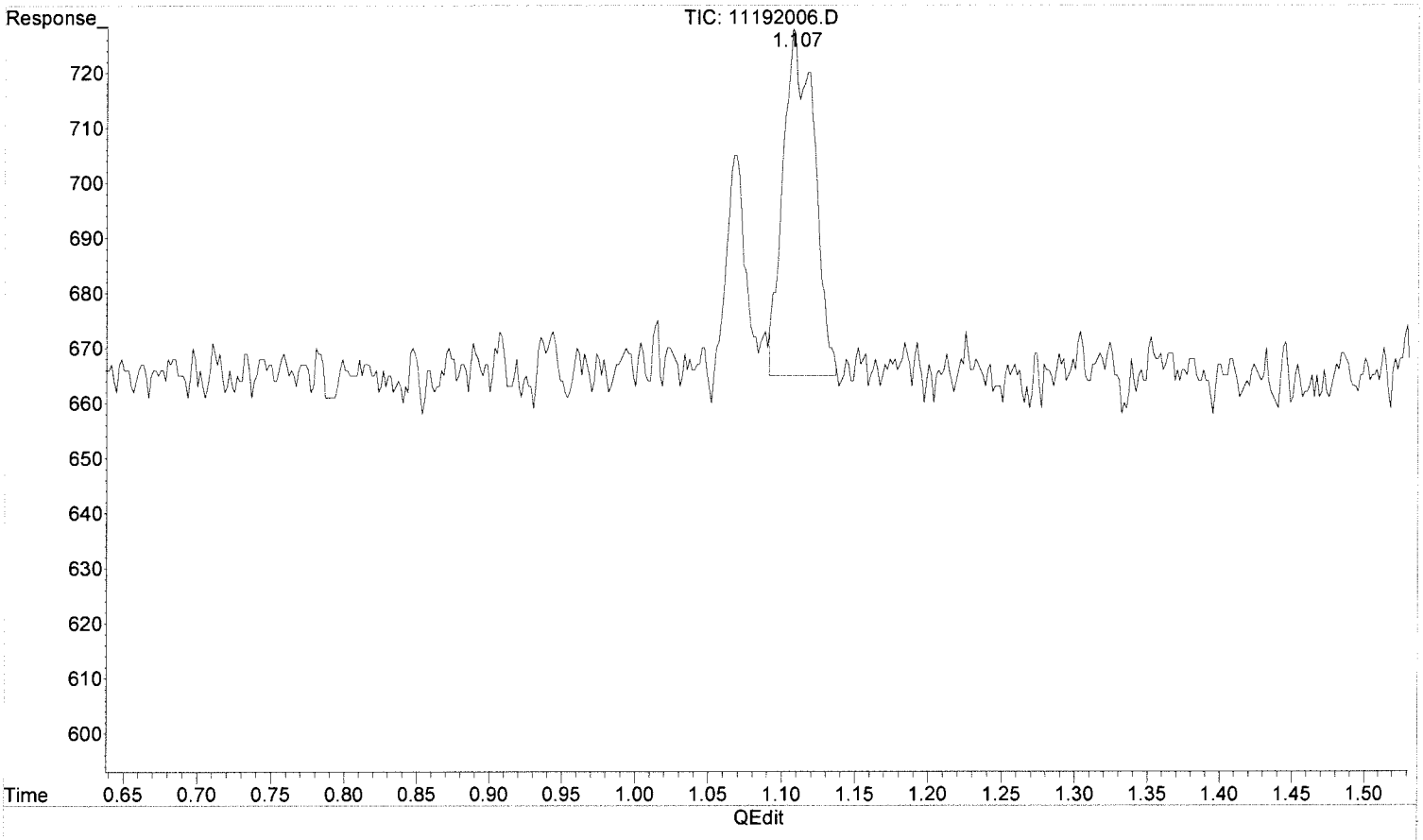
RS091217_R.M Thu Nov 19 17:55:30 2020

Data Path : I:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 14:03
Operator : WH
Sample : P2006450-003 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 14:12:04 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

CB 11/19/20

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



(6) Methane (FID)
1.107min 0.102 ppm m
response 927

Manual Integration:
After
MP
11/19/20

(+) = Expected Retention Time
RS091217_R.M Thu Nov 19 17:55:48 2020

Data Path : I:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 14:15
Operator : WH
Sample : P2006450-004 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 14:33:57 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

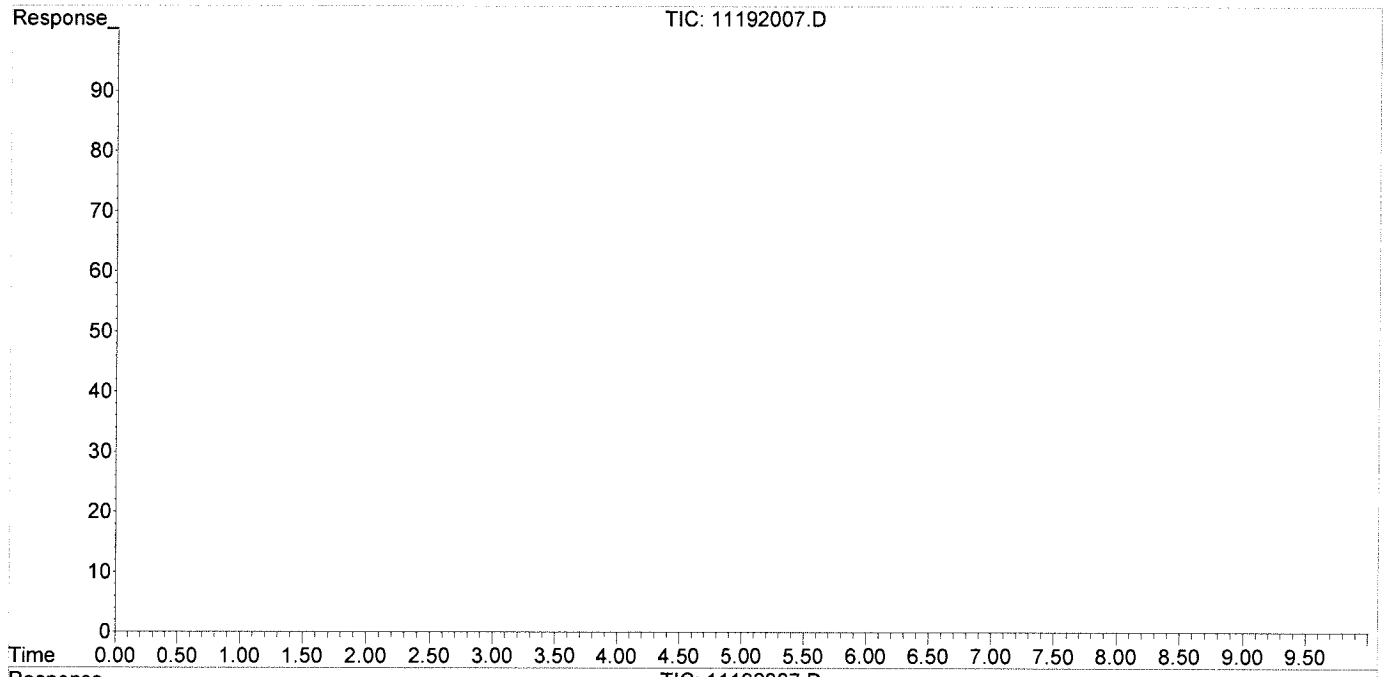
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.079	1331	0.147	ppm	m
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

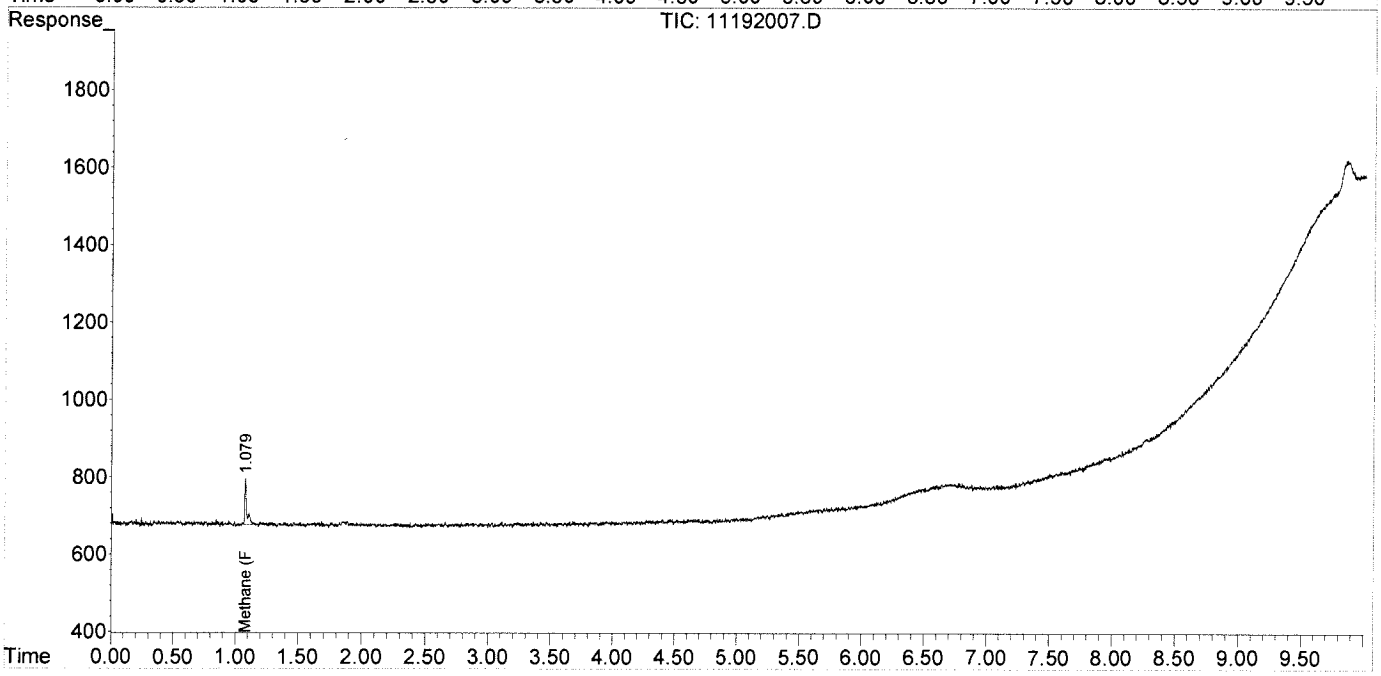
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 14:15
Operator : WH
Sample : P2006450-004 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 14:33:57 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

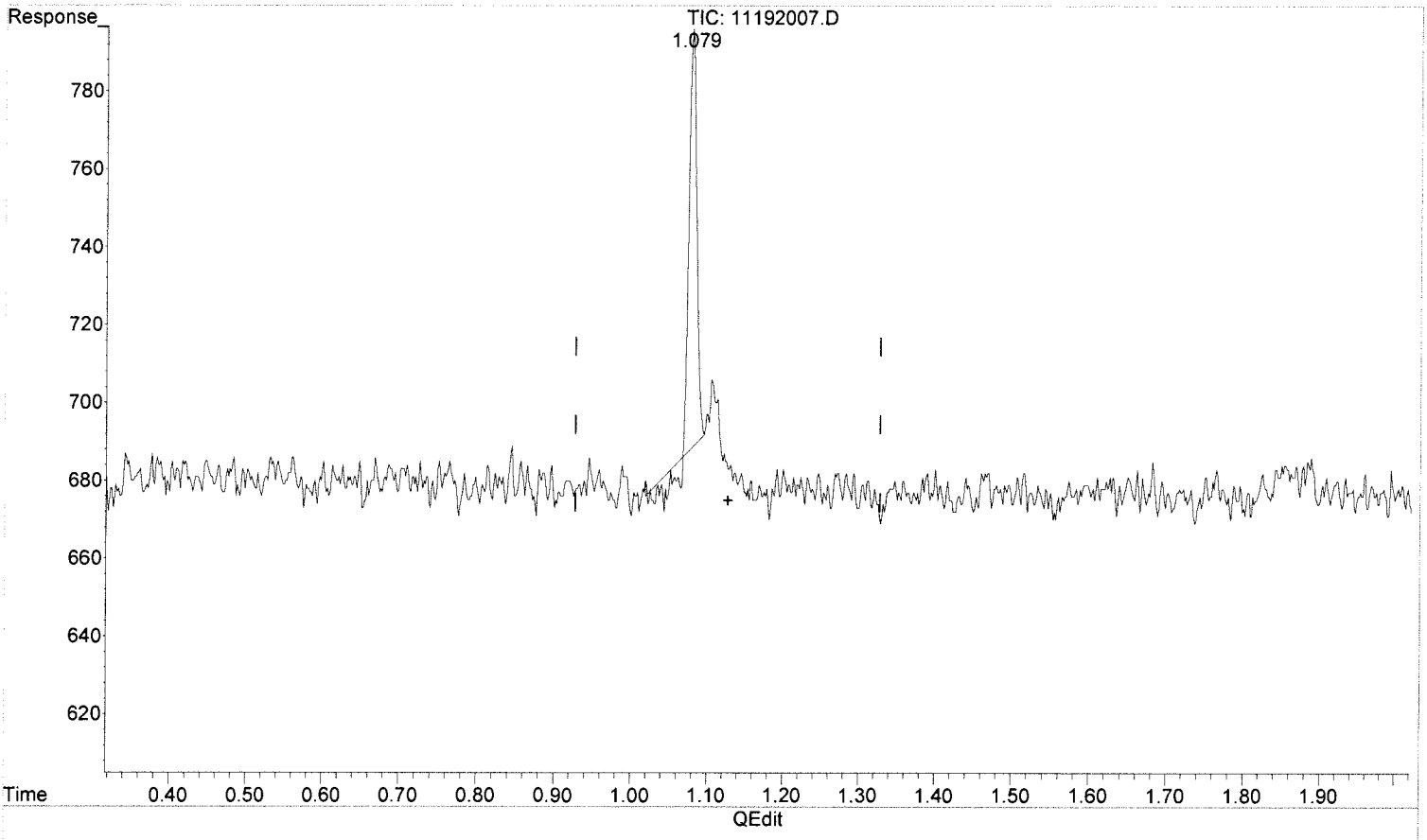




Data Path : I:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 14:15
Operator : WH
Sample : P2006450-004 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 14:33:57 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(6) Methane (FID)

1.079min 0.070 ppm

response 635

Manual Integration:

Before

11/19/20

(+) = Expected Retention Time

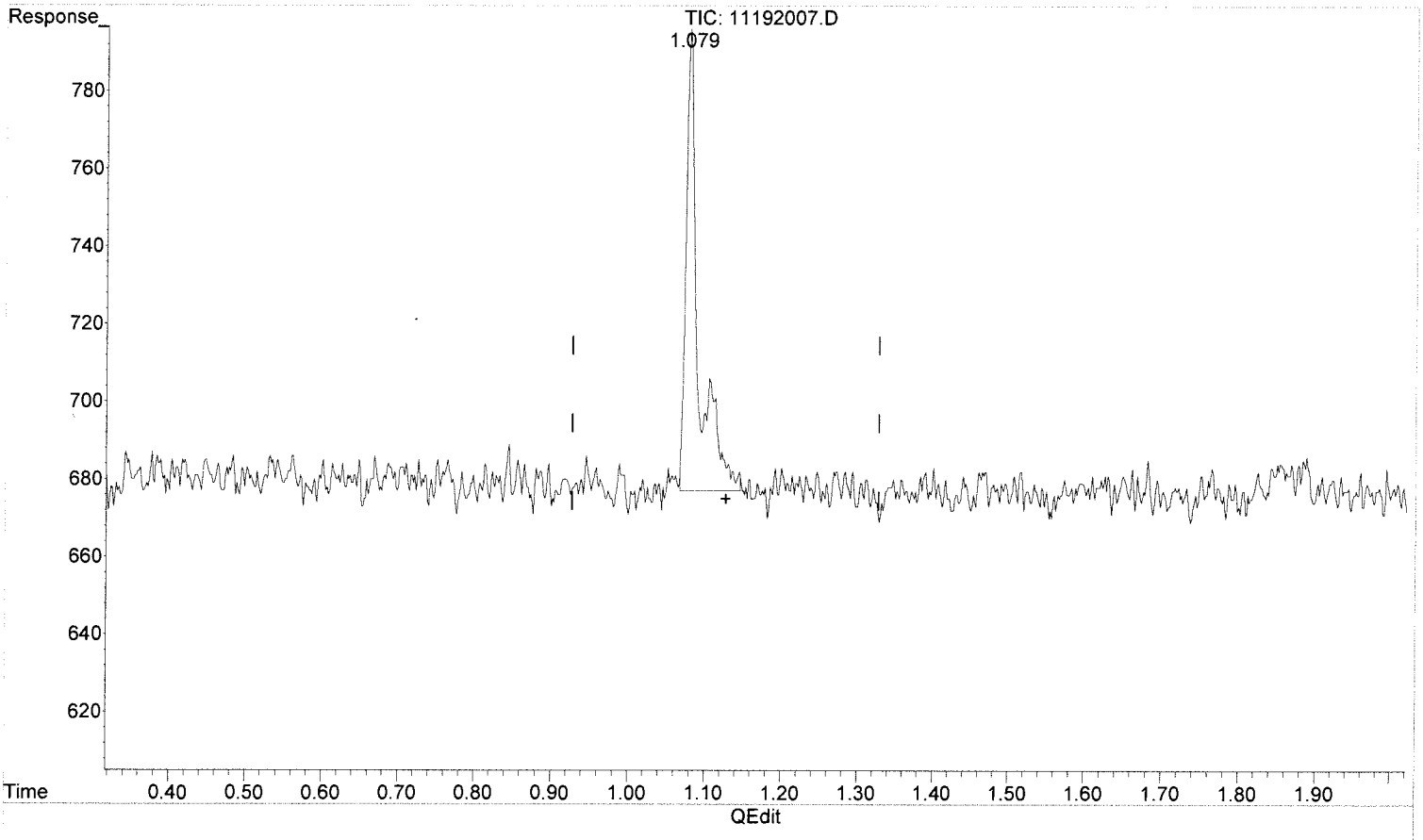
01073838

Data Path : I:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 14:15
Operator : WH
Sample : P2006450-004 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 14:33:57 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

CB 11/19/20

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



(6) Methane (FID)
1.079min 0.147 ppm m
response 1331

Manual Integration:
After
BLC
11/19/20

hm 11/22/20

(+) = Expected Retention Time
RS091217_R.M Thu Nov 19 17:57:27 2020

Data Path : J:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 12:58:30
Operator : WH
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 13:23:10 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

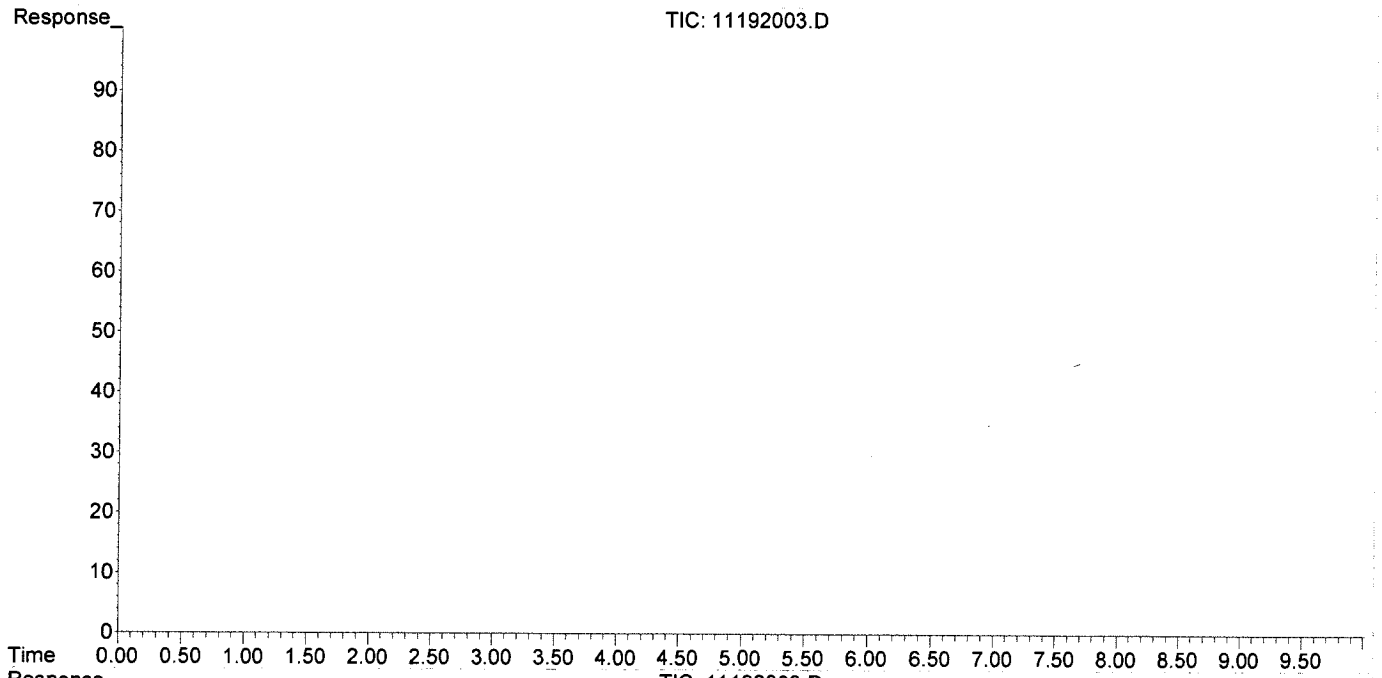
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.109	1118	0.123	ppm	m
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

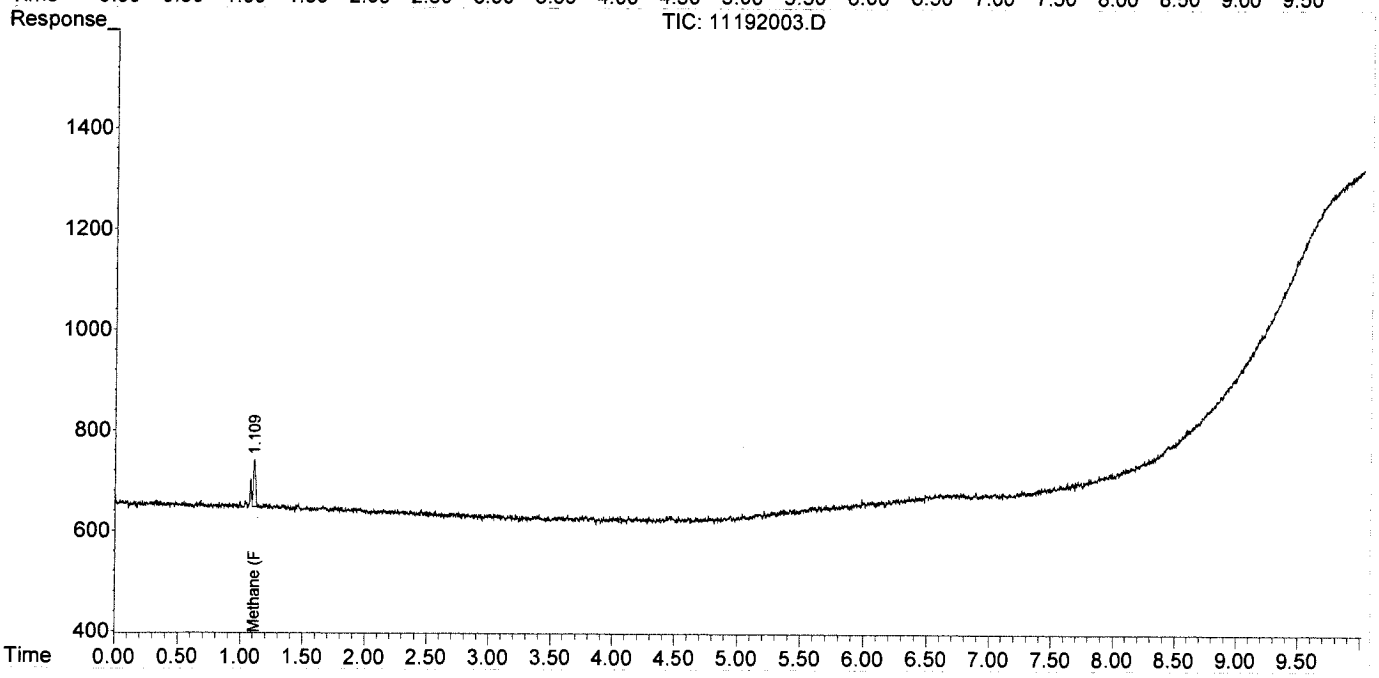
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 12:58:30
Operator : WH
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 13:23:10 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

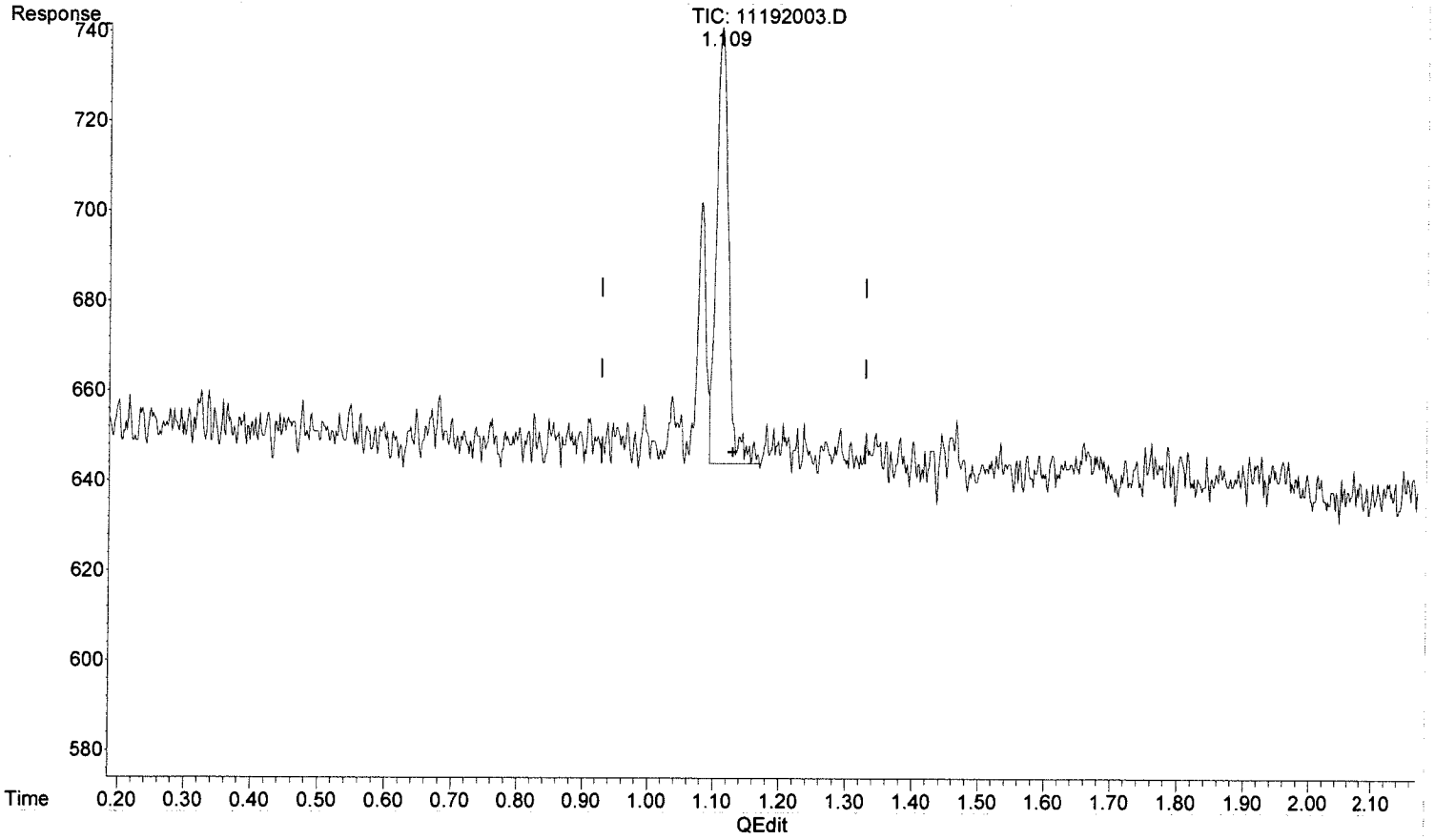




Data Path : J:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 12:58:30
Operator : WH
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 13:23:10 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(6) Methane (FID)

1.109min 0.138 ppm

response 1250

(+) = Expected Retention Time

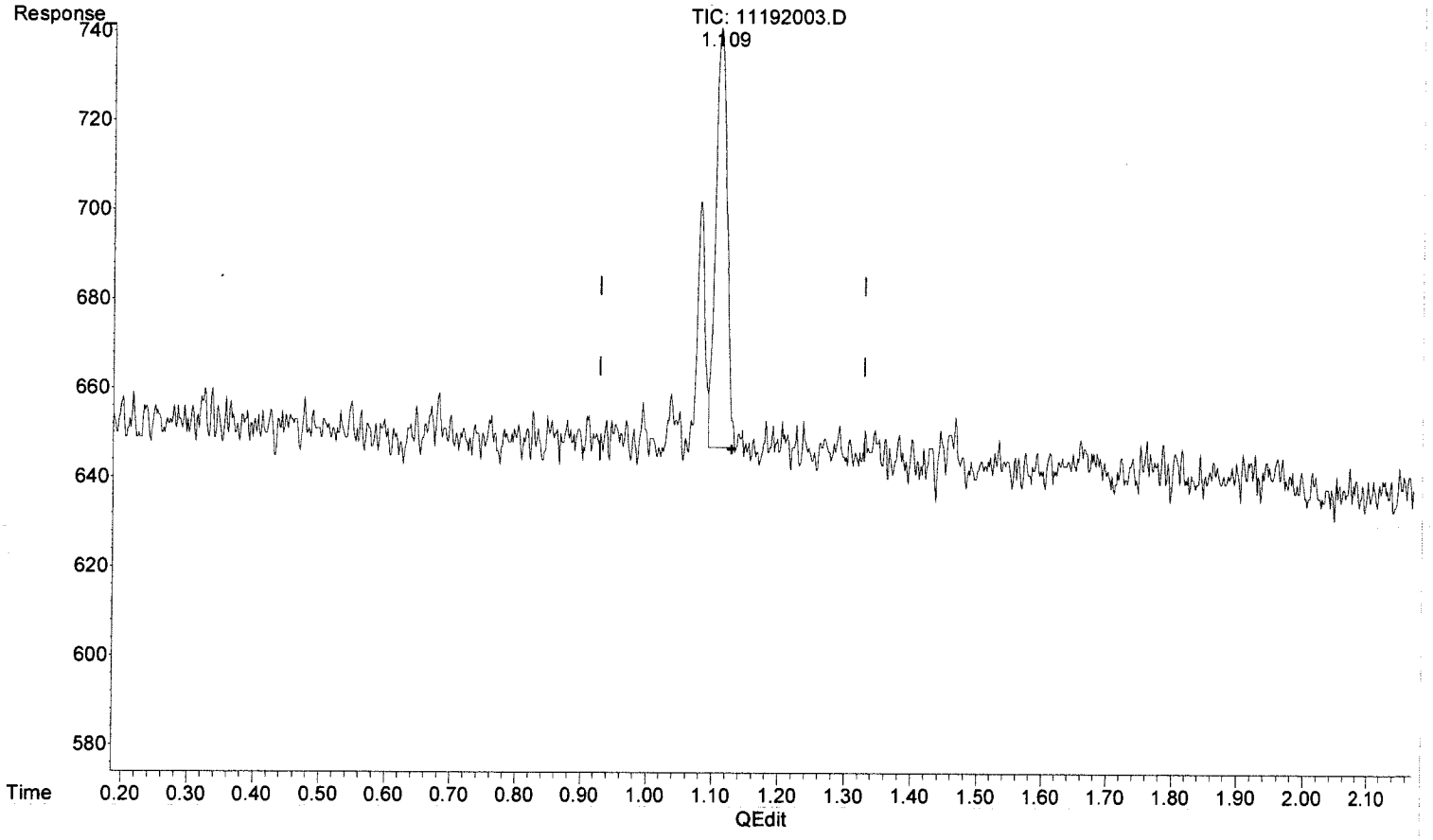
RS091217_R.M Thu Nov 19 17:20:56 2020

Data Path : J:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 12:58:30
Operator : WH
Sample : MCS 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 13:23:10 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

CB
11/19/20

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



(6) Methane (FID)

1.109min 0.123 ppm m

response 1118

we did re pic

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192013.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 15:55:59
Operator : WH
Sample : lcs fid 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 16:21:47 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

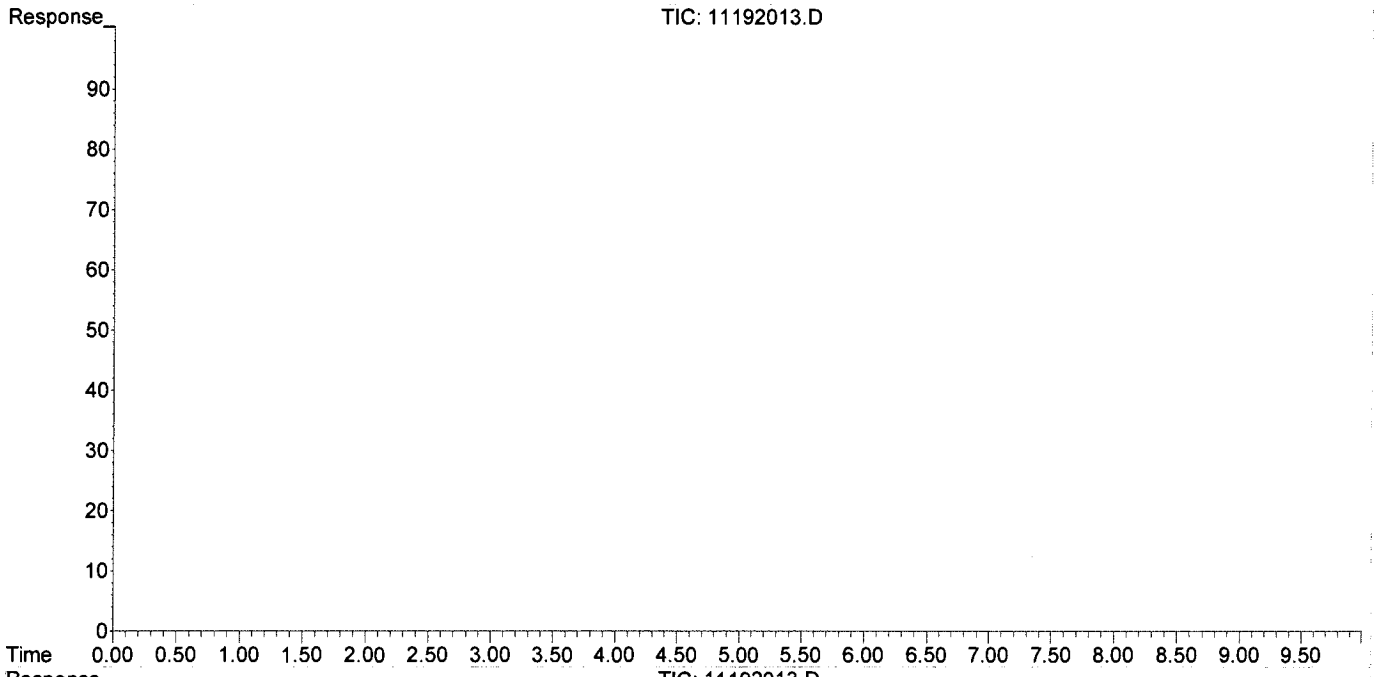
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.126	12310	1.357	ppm
7)	Ethylene	1.698	18624	1.113	ppm
8)	Ethane	1.964	21775	1.285	ppm
9)	Propylene	4.335	26170	1.117	ppm
10)	Propane	4.456	33368	1.341	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.658	45155	1.696	ppm
13)	n-Butane	6.658	45155	1.696	ppm

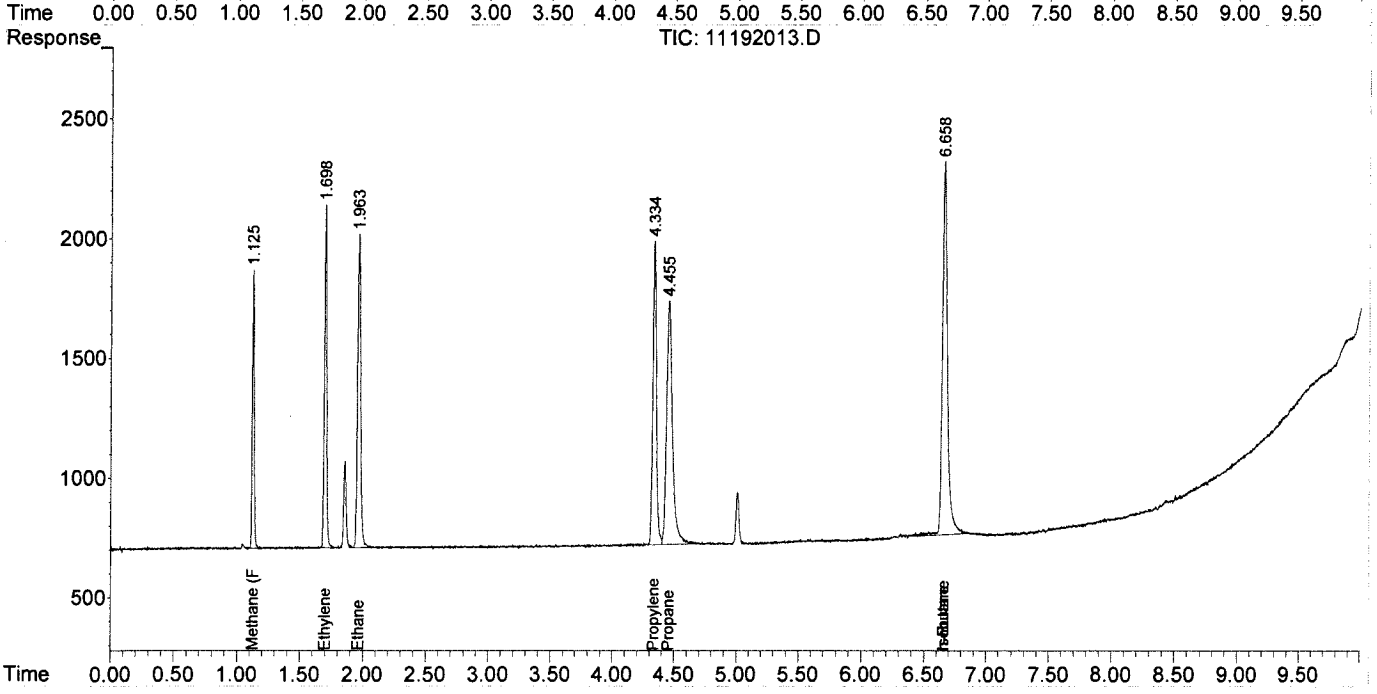
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192013.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 15:55:59
Operator : WH
Sample : lcs fid 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 16:21:47 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192014.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 16:09:04
Operator : WH
Sample : lcsd fid 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 16:21:58 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

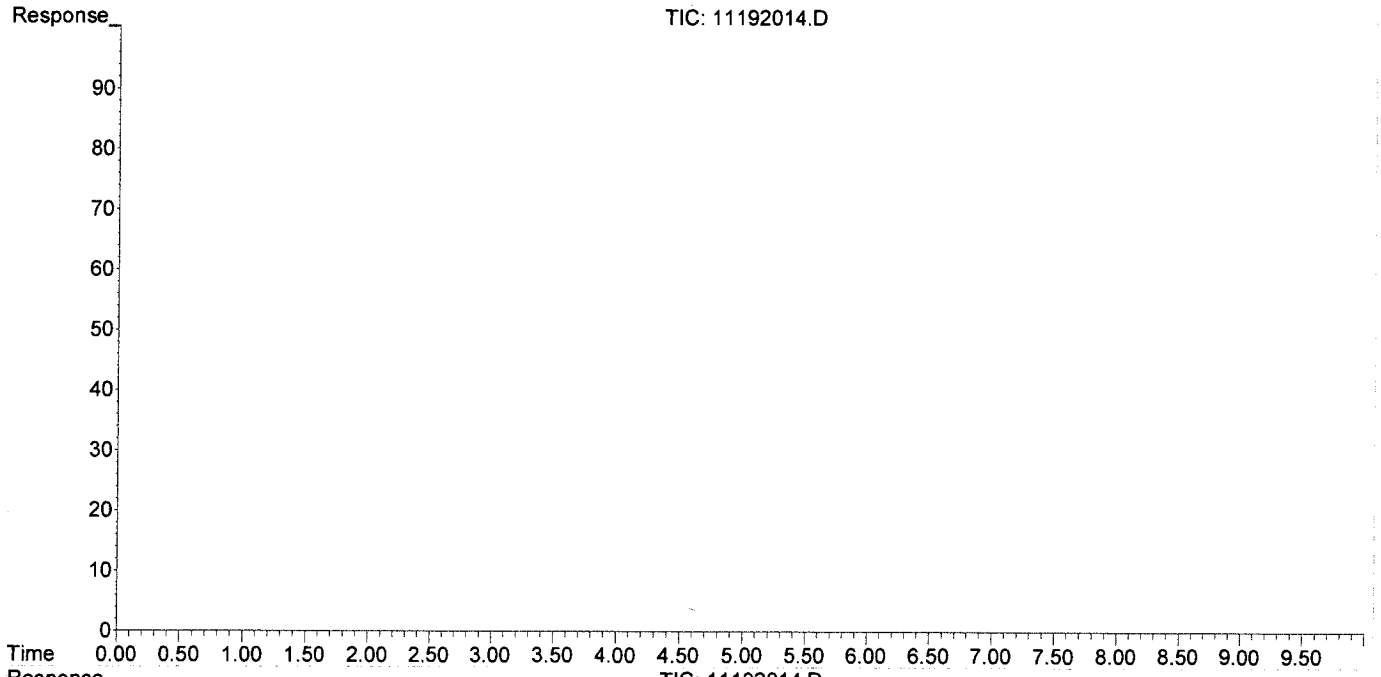
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.122	13285	1.465	ppm
7)	Ethylene	1.688	18680	1.116	ppm
8)	Ethane	1.952	21658	1.278	ppm
9)	Propylene	4.335	24506	1.046	ppm
10)	Propane	4.455	31674	1.273	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.662	41322	1.552	ppm
13)	n-Butane	6.662	41322	1.552	ppm

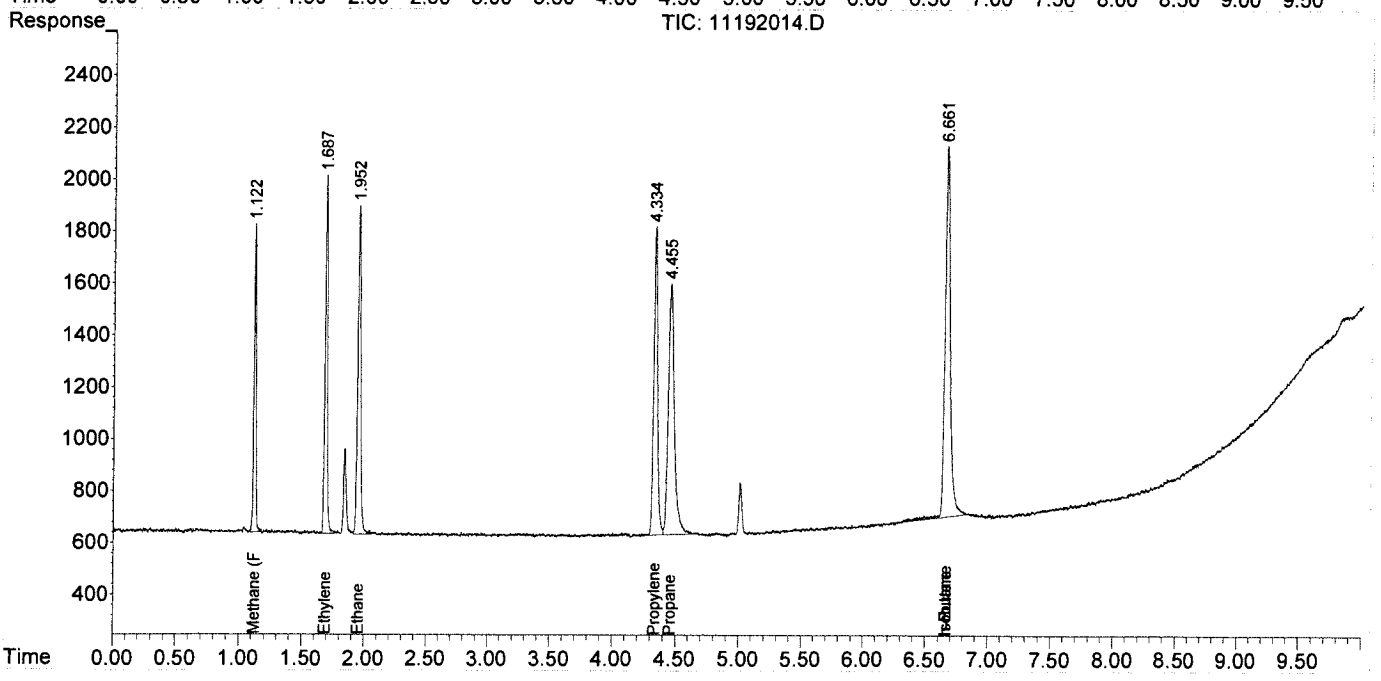
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192014.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 16:09:04
Operator : WH
Sample : lcsd fid 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 16:21:58 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1)	Oxygen/Argon	3.739		1.014			0.001	0.793 E6	189.17
2)	Carbon monoxide	3.739		1.014			0.001	0.594 E6	221.92
3)	Methane (TCD)						2.161	0.951 E2	106.37
4)	Carbon dioxide	2.365	2.569	2.558	2.361	2.459	2.314	2.438 E2	4.44

Signal #2 Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg	%RSD
6)	Methane (FID)		1.180	0.975	0.908	0.870	0.868	0.907 E4	11.66
7)	Ethylene	1.736	1.638	1.780	1.720	1.628	1.670	1.673 E4	3.90
8)	Ethane	1.781	1.676	1.784	1.730	1.692	1.675	1.695 E4	3.83
9)	Propylene	2.505	2.296	2.592	2.480	2.346	2.252	2.343 E4	6.56
10)	Propane	2.439	2.283	2.645	2.555	2.433	2.522	2.488 E4	4.20
11)	Isobutylene							0.652 E1	138.46
12)	Isobutane	6.058	4.793	2.214	1.553	1.353		2.662 E4	86.17
13)	n-Butane	6.058	4.793	2.214	1.553	1.353		2.662 E4	86.17

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS091217_R.M Wed Sep 13 15:11:48 2017

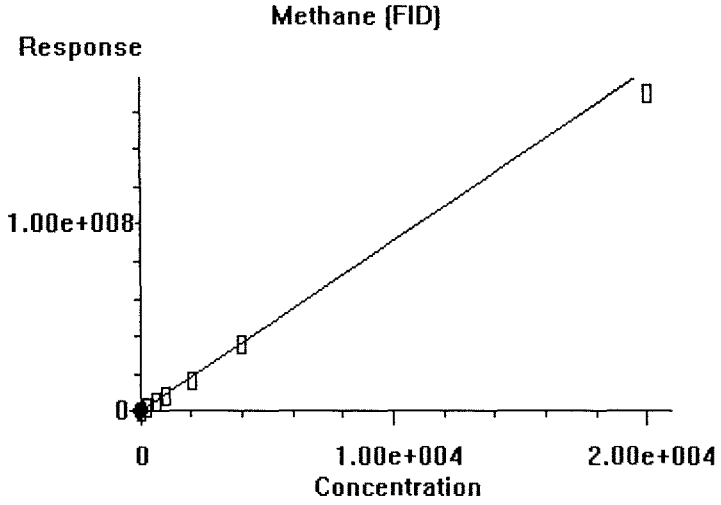
Edit Compounds -- Compound #6 -- Methane (FID)

Search by: Ret Time Name Index Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response	Lvl ID	Concentration	Response
1	0.151000		11	20000.000000	169009160.49199
2	0.302000	3564.400000			
3	1.510000	14725.268625			
4	4.530000	41128.575000			
5	10.570000	91966.784531			
6	200.000000	1735997.497500			
7	600.000000	5189848.900000			
8	1000.000000	8598533.570000			
9	2000.000000	16098209.390000			
10	4000.000000	35776839.311362			



0.000e+000	Quadratic term
9.071e+003	Linear term
0.000e+000	Constant term
11.657%	RF Rel Std Dev

OK Cancel Help Print Calibration Curve Copy Calibration Curve

Edit Compounds -- Compound #7 -- Ethylene

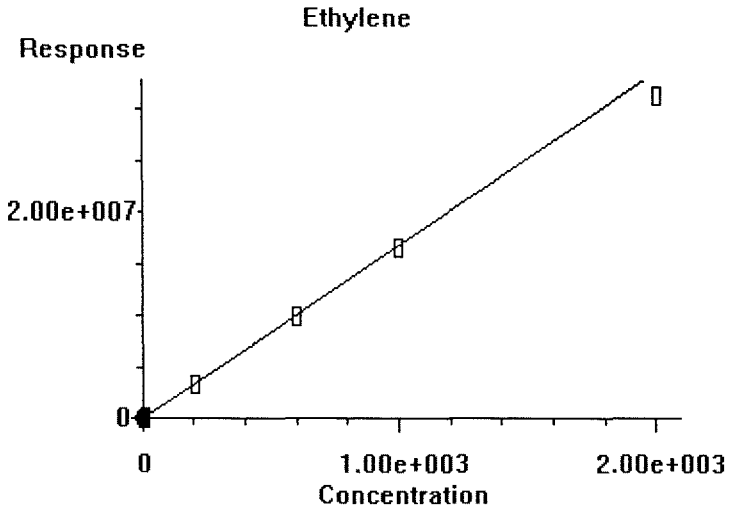
Search by: (•) Ret Time ( ) Name ( ) Index [ ] Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2621.970000
2	0.302000	4946.731301
3	1.510000	26884.746847
4	4.530000	77902.721497
5	10.570000	172085.529560
6	200.000000	3339702.313219
7	600.000000	10007758.776971
8	1000.000000	16608503.805988
9	2000.000000	31192443.898600
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
1.673e+004	Linear term
0.000e+000	Constant term
3.897%	RF Rel Std Dev

[OK] [Cancel] [Help] [Print Calibration Curve] [Copy Calibration Curve]

Edit Compounds -- Compound #8 -- Ethane

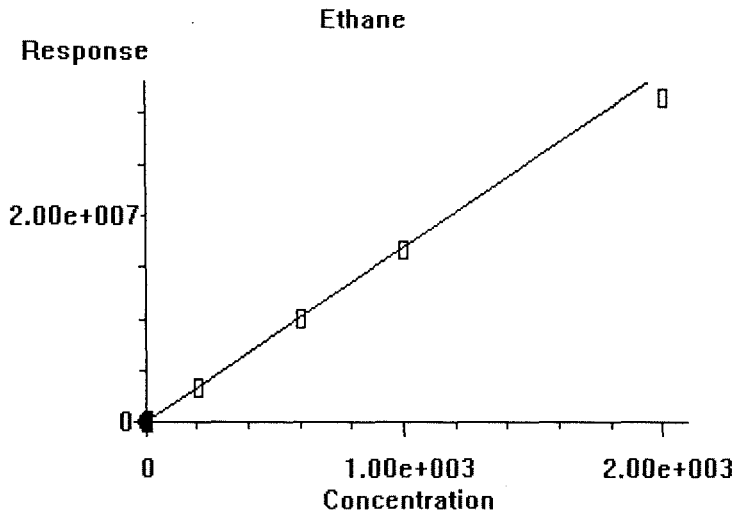
Search by: Ret Time Name Index Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2689.928008
2	0.302000	5060.331943
3	1.510000	26943.667500
4	4.530000	78353.525045
5	10.570000	178840.731148
6	200.000000	3350442.319129
7	600.000000	10048964.218029
8	1000.000000	16709164.879012
9	2000.000000	31424217.938900
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
1.695e+004	Linear term
0.000e+000	Constant term
3.831%	RF Rel Std Dev

OK Cancel Help Print Calibration Curve Copy Calibration Curve

Edit Compounds -- Compound #9 -- Propylene

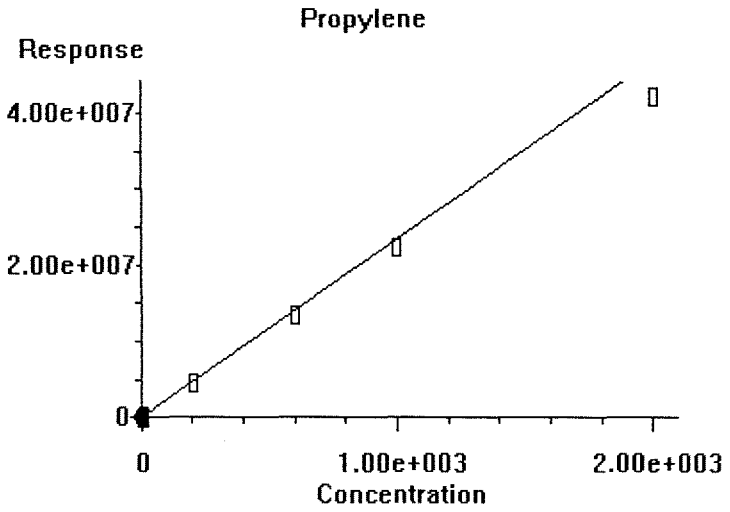
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	3782.537646
2	0.302000	6933.285530
3	1.510000	39139.518208
4	4.530000	112341.896872
5	10.570000	248003.903623
6	200.000000	4504060.086084
7	600.000000	13569342.761419
8	1000.000000	22494887.720990
9	2000.000000	42124689.656800
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
2.343e+004	Linear term
0.000e+000	Constant term
6.559%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #10 -- Propane

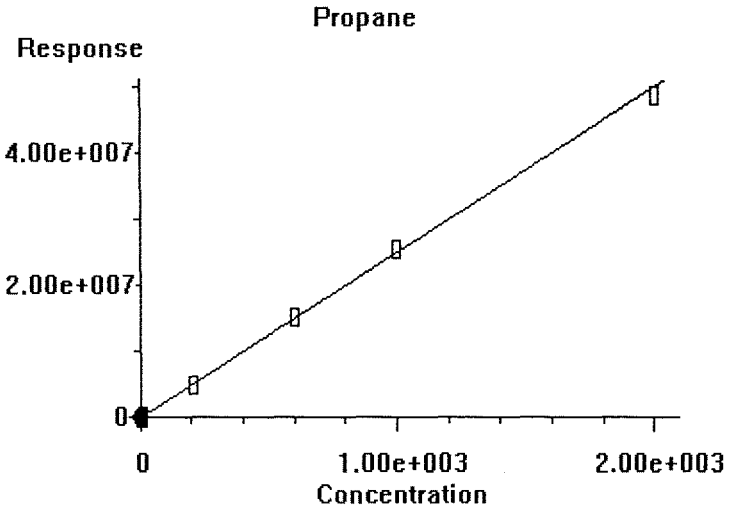
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	3682.897354
2	0.302000	6894.237803
3	1.510000	39934.166792
4	4.530000	115723.428128
5	10.570000	257124.432806
6	200.000000	5043035.663916
7	600.000000	15251325.797404
8	1000.000000	25459410.657938
9	2000.000000	48583085.287451
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
2.488e+004	Linear term
0.000e+000	Constant term
4.200%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121702.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121703.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121704.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121705.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121706.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121707.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121711.D
11	11	20000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121712.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 13 11:04 2017	Sep 12 15:03 2017	12-Sep-2017, 10:52
2	2	Sep 13 11:05 2017	Sep 13 11:05 2017	12-Sep-2017, 11:05
3	3	Sep 13 11:06 2017	Sep 13 11:05 2017	12-Sep-2017, 11:45
4	4	Sep 13 11:09 2017	Sep 13 11:06 2017	12-Sep-2017, 12:09
5	5	Sep 13 11:09 2017	Sep 13 11:09 2017	12-Sep-2017, 12:30
6	6	Sep 13 11:10 2017	Sep 13 11:10 2017	12-Sep-2017, 12:47
7	7	Sep 13 11:11 2017	Sep 13 11:10 2017	12-Sep-2017, 13:00
8	8	Sep 13 11:12 2017	Sep 13 11:11 2017	12-Sep-2017, 13:47
9	9	Sep 13 11:12 2017	Sep 13 11:12 2017	12-Sep-2017, 14:07
10	10	Sep 13 11:14 2017	Sep 13 11:13 2017	12-Sep-2017, 14:48
11	11	Sep 13 11:14 2017	Sep 13 11:14 2017	12-Sep-2017, 15:21

RS091217_R.M Wed Sep 13 15:11:22 2017

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.767	373920	0.128	ppm	
2)	Carbon monoxide	1.767	373920	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	1.595	2622	0.156	ppm	
8)	Ethane	1.848	2690	0.156	ppm	
9)	Propylene	4.222	3783	0.154	ppm	
10)	Propane	4.348	3683	0.139	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.582f	6058	NoCal	ppm	
13)	n-Butane	6.582f	6058	NoCal	ppm	

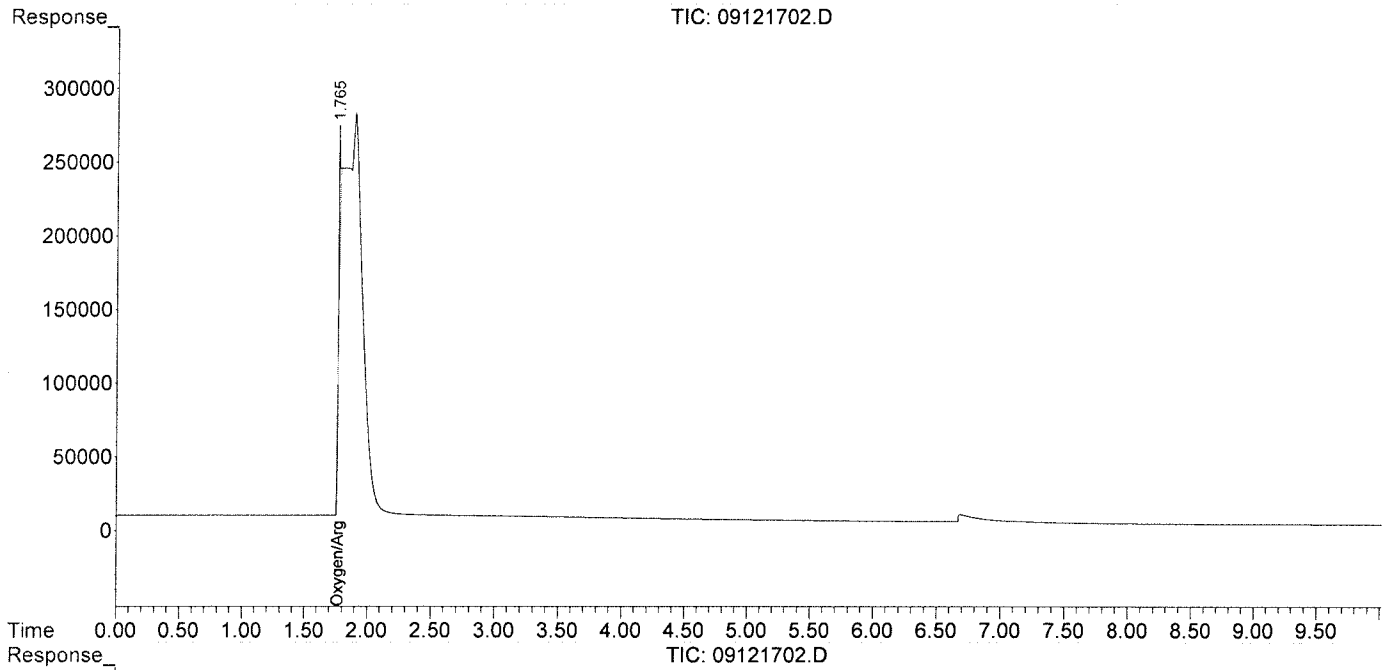
(f)=RT Delta > 1/2 Window (m)=manual int.

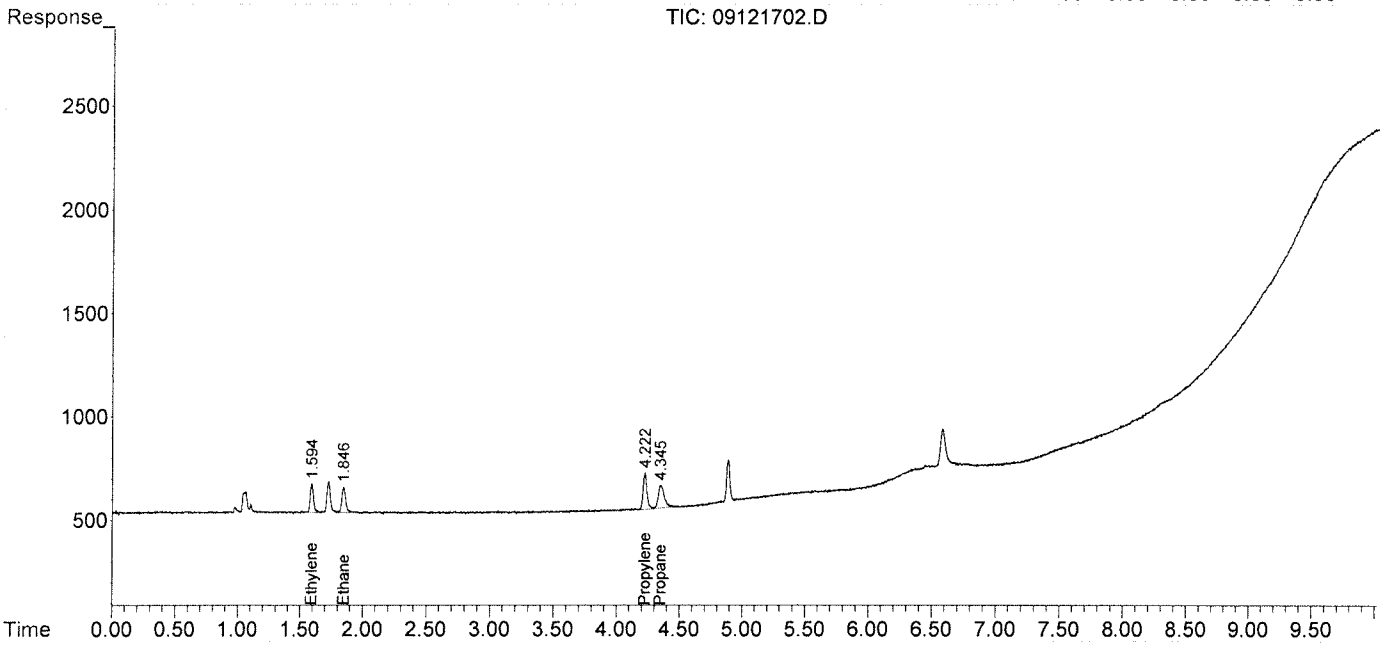
9/13/17

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

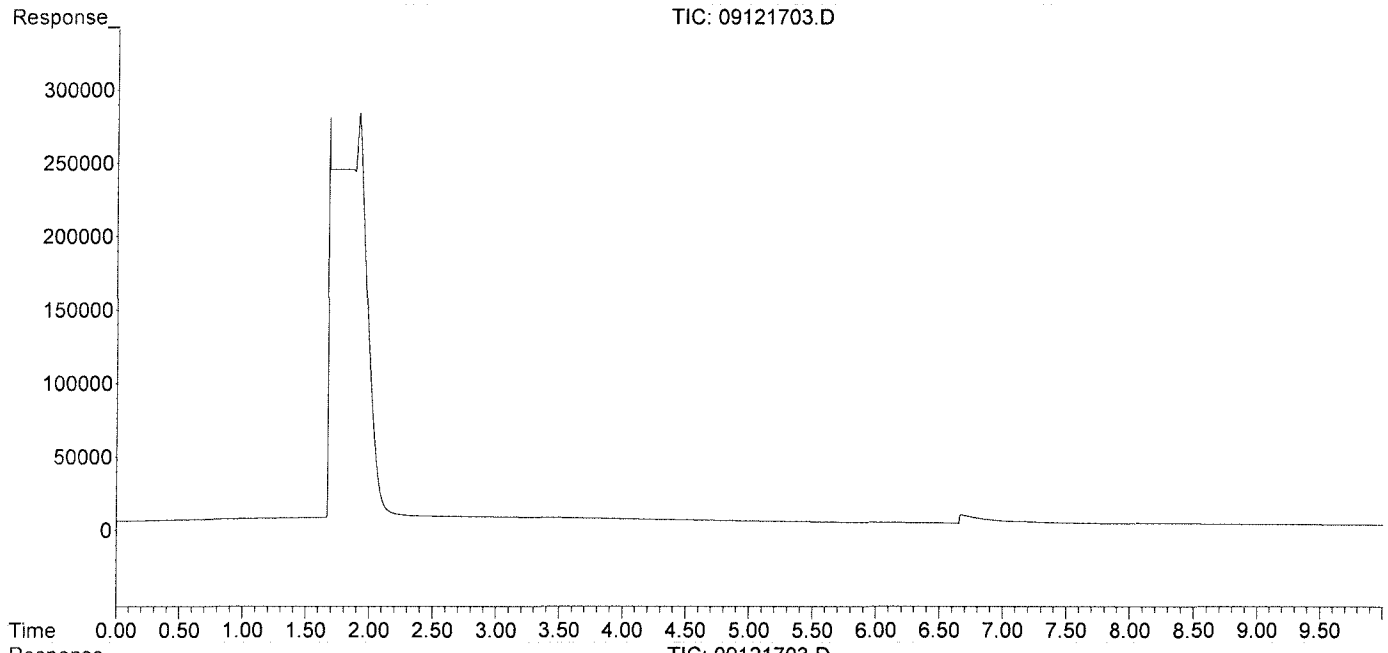
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.913f	-25181981	N.D.	ppm	
2)	Carbon monoxide	1.913f	-25181981	1.089	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.049	3564	0.391	ppm	m
7)	Ethylene	1.577	4947	0.292	ppm	
8)	Ethane	1.828	5060	0.293	ppm	
9)	Propylene	4.207	6933	0.281	ppm	
10)	Propane	4.337	6894	0.268	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	9587	0.158	ppm	
13)	n-Butane	6.579f	9587	0.158	ppm	

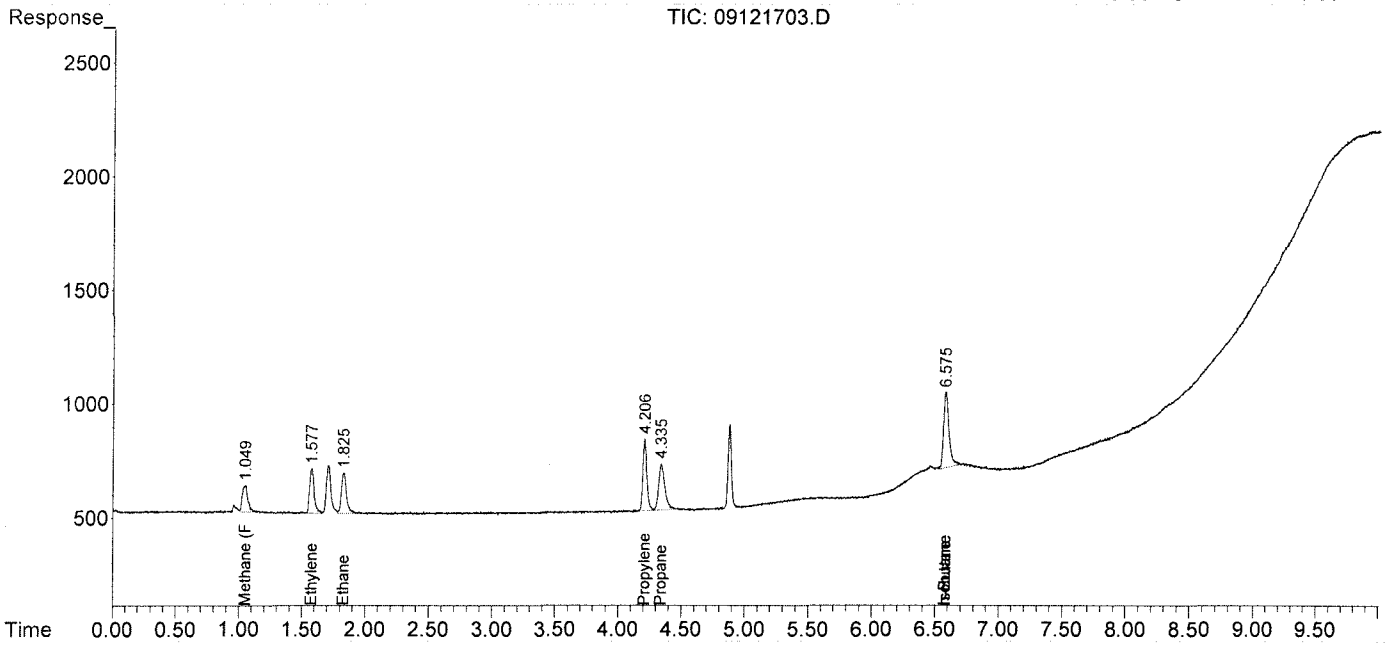
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

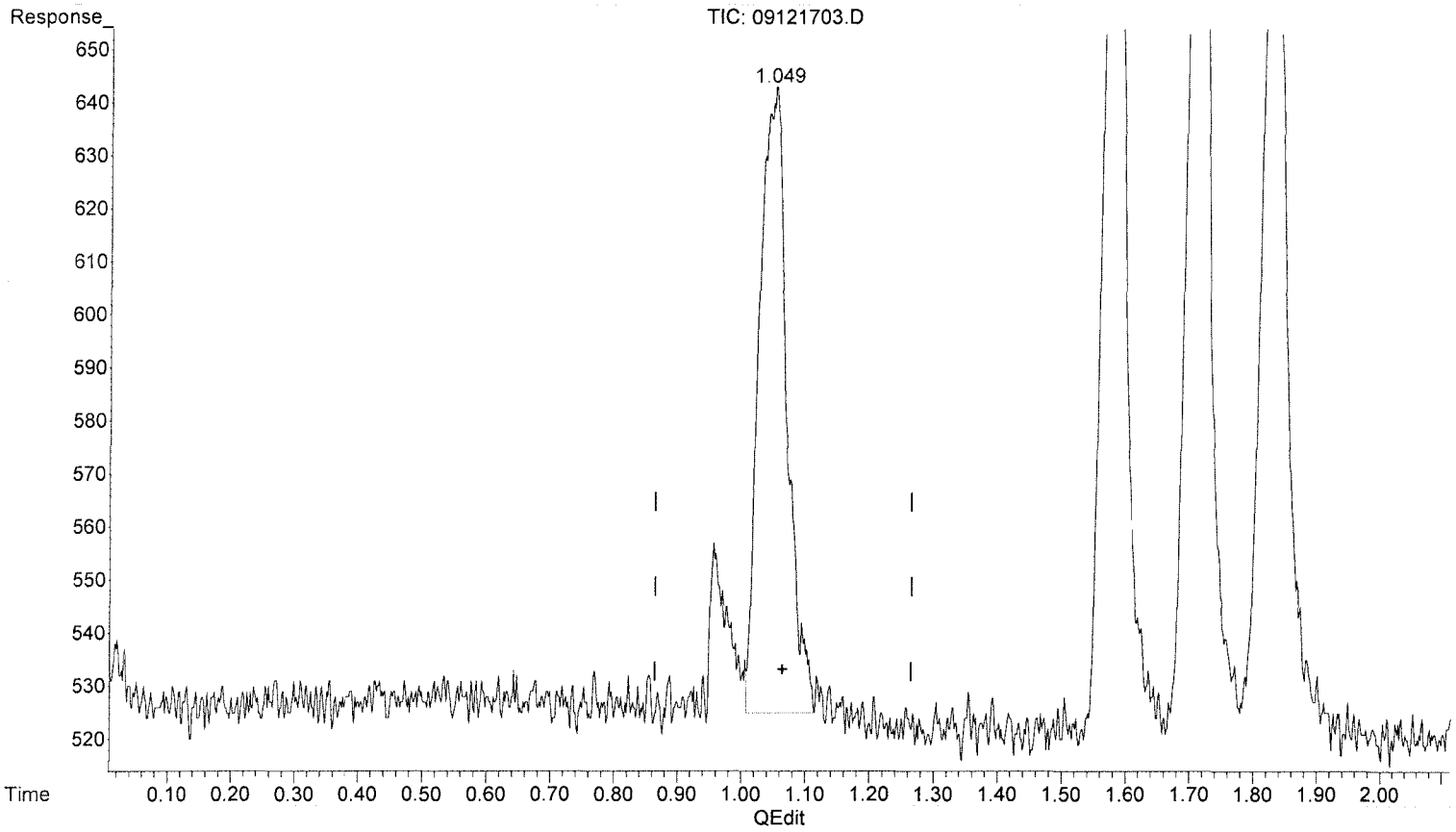




Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(6) Methane (FID)

1.049min 0.391 ppm m

response 3564

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

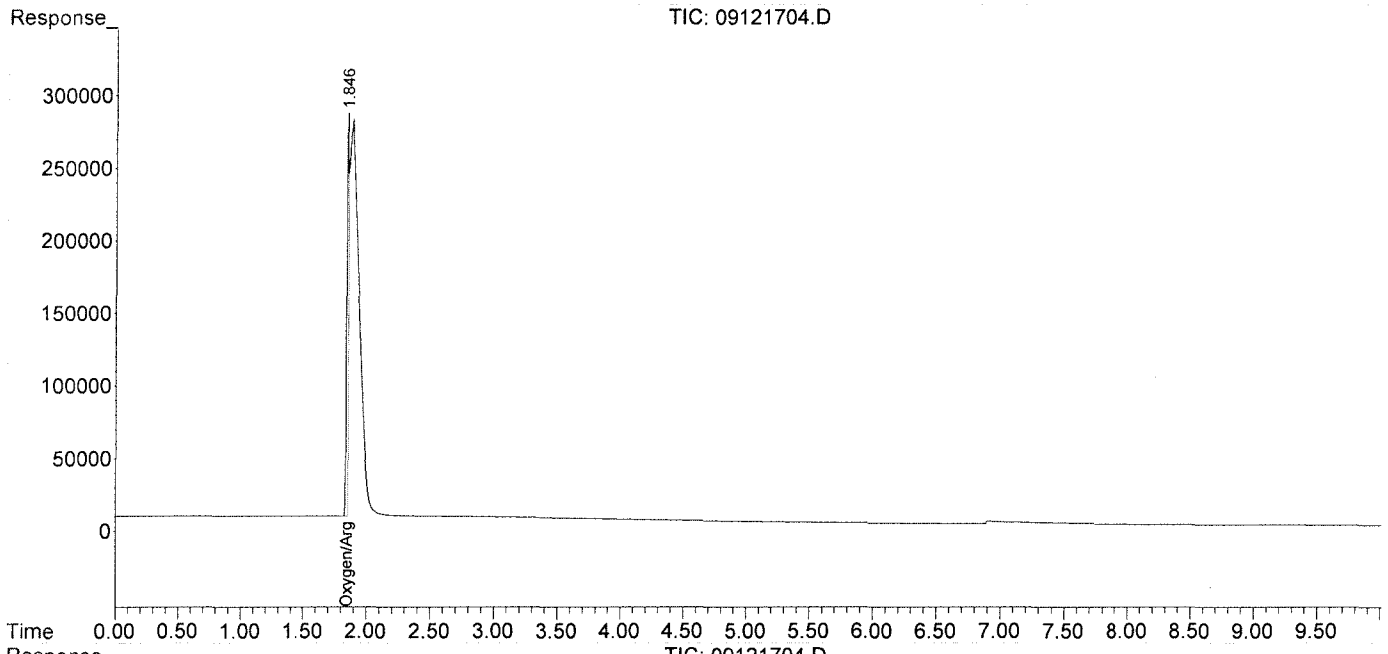
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.847	2536230	1.056	ppm
2)	Carbon monoxide	1.847	2536230	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.064	14725	1.613	ppm
7)	Ethylene	1.598	26885	1.582	ppm
8)	Ethane	1.851	26944	1.555	ppm
9)	Propylene	4.220	39140	1.589	ppm
10)	Propane	4.349	39934	1.596	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	55348	1.020	ppm
13)	n-Butane	6.578f	55348	1.020	ppm

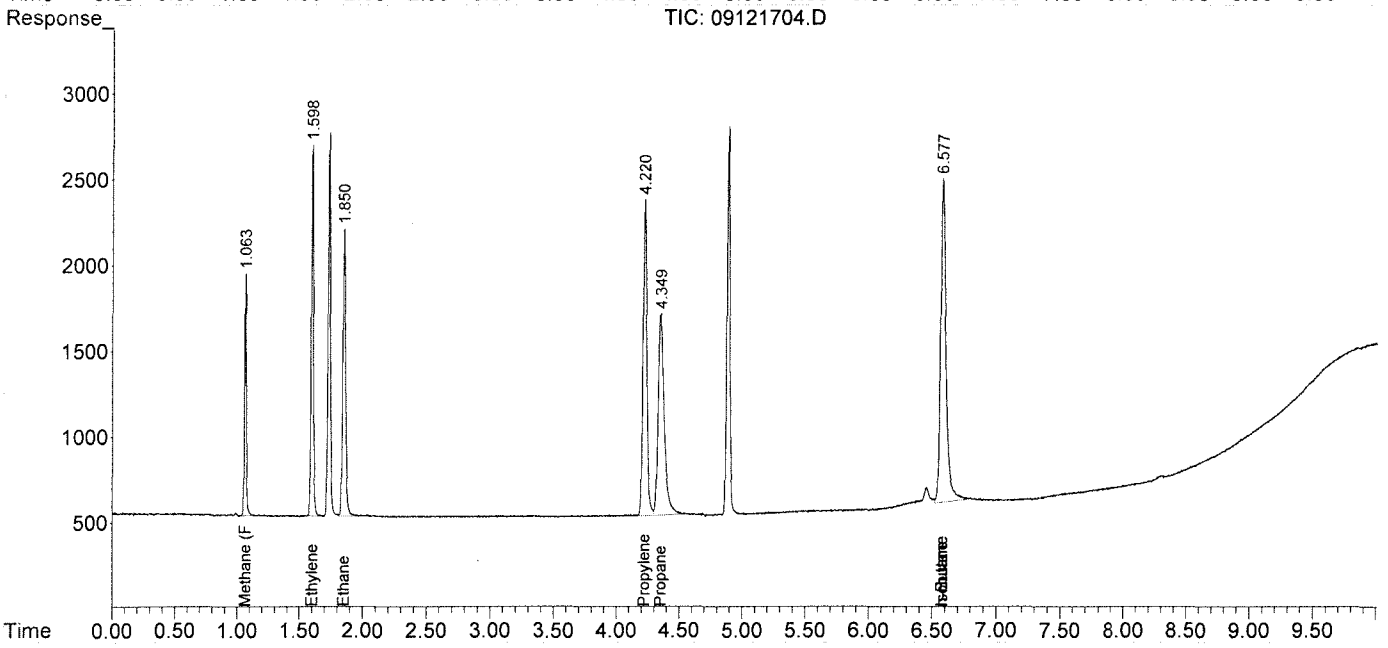
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

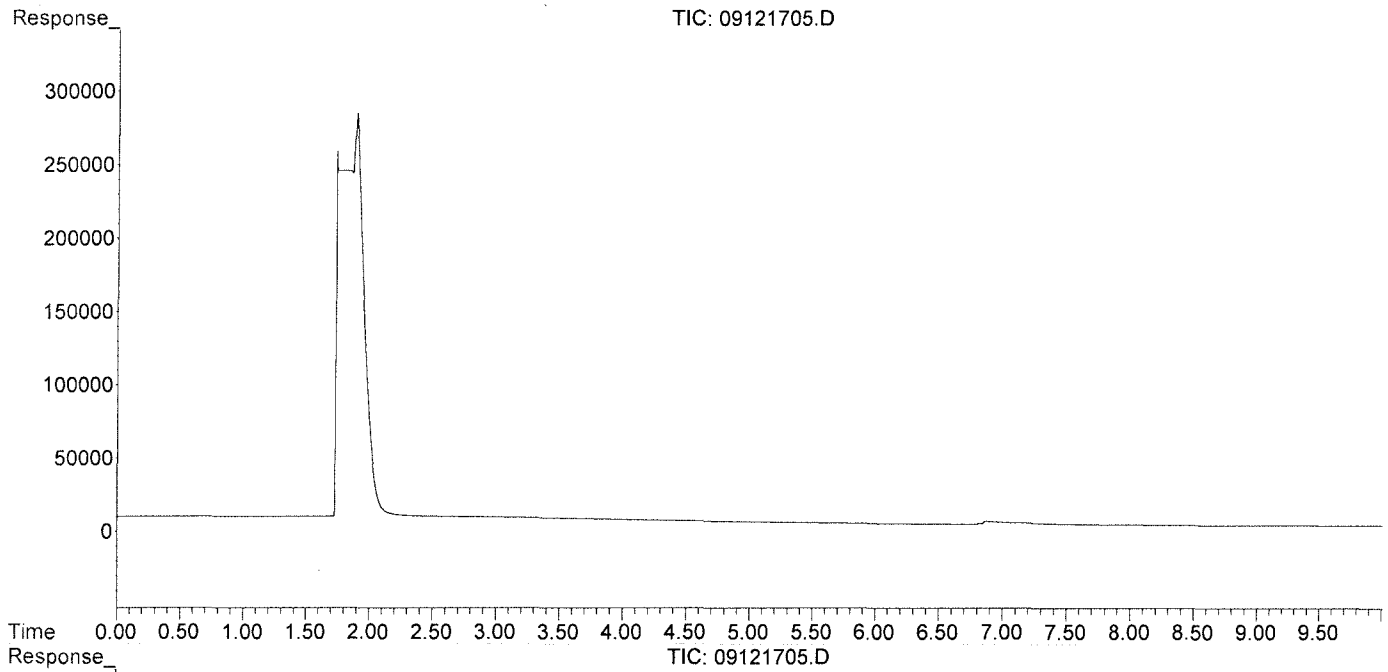
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.738	-331216	N.D.	ppm
2)	Carbon monoxide	1.738	-331216	0.019	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.052	41129	4.522	ppm
7)	Ethylene	1.586	77903	4.637	ppm
8)	Ethane	1.838	78354	4.558	ppm
9)	Propylene	4.218	112342	4.614	ppm
10)	Propane	4.347	115723	4.680	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.580f	155256	3.565	ppm
13)	n-Butane	6.580f	155256	3.565	ppm

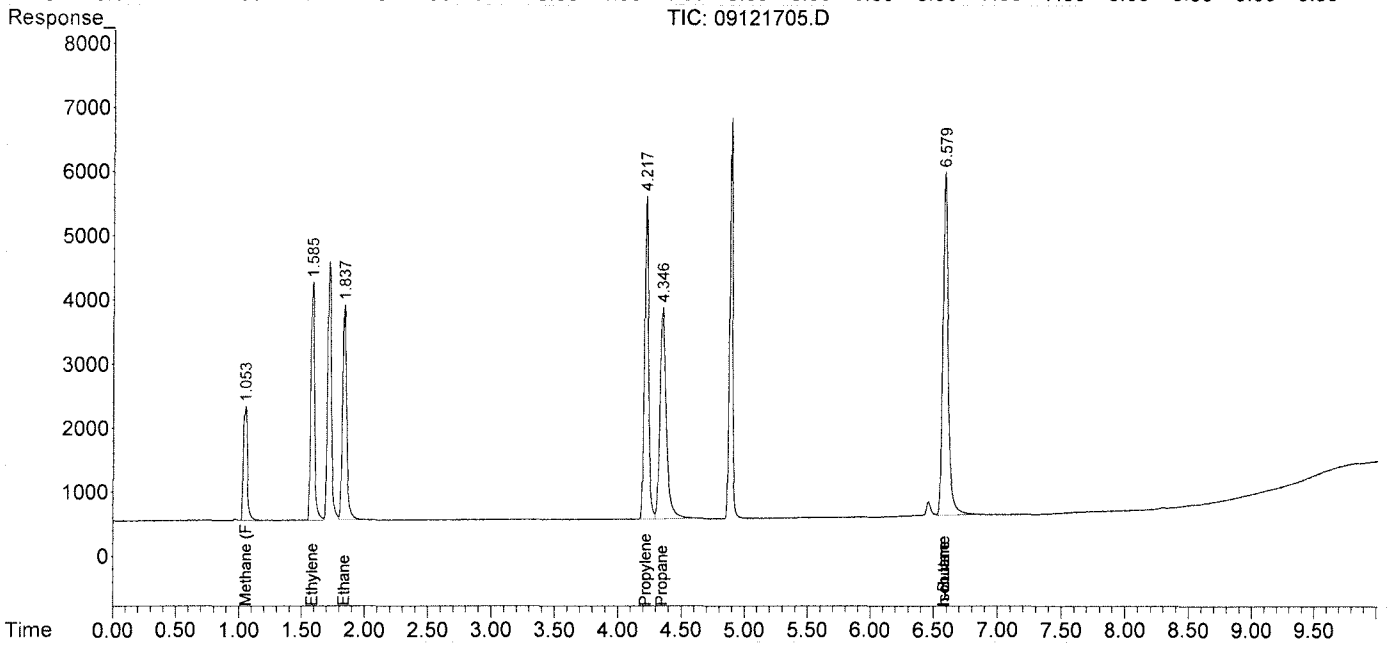
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

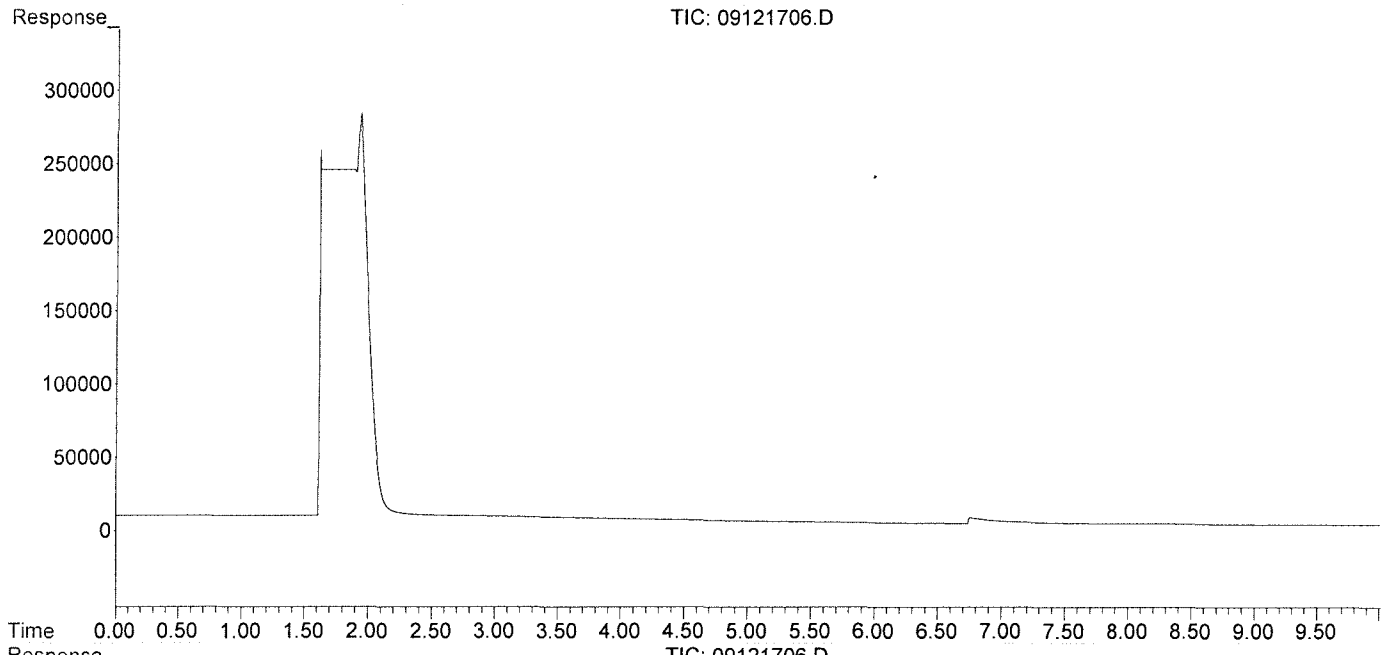
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.929f	-31871242	N.D.	ppm
2)	Carbon monoxide	1.929f	-31871242	1.818	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.025	91967	10.135	ppm
7)	Ethylene	1.568	172086	10.273	ppm
8)	Ethane	1.822	178841	10.441	ppm
9)	Propylene	4.214	248004	10.236	ppm
10)	Propane	4.344	257124	10.458	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	338181	9.254	ppm
13)	n-Butane	6.578f	338181	9.254	ppm

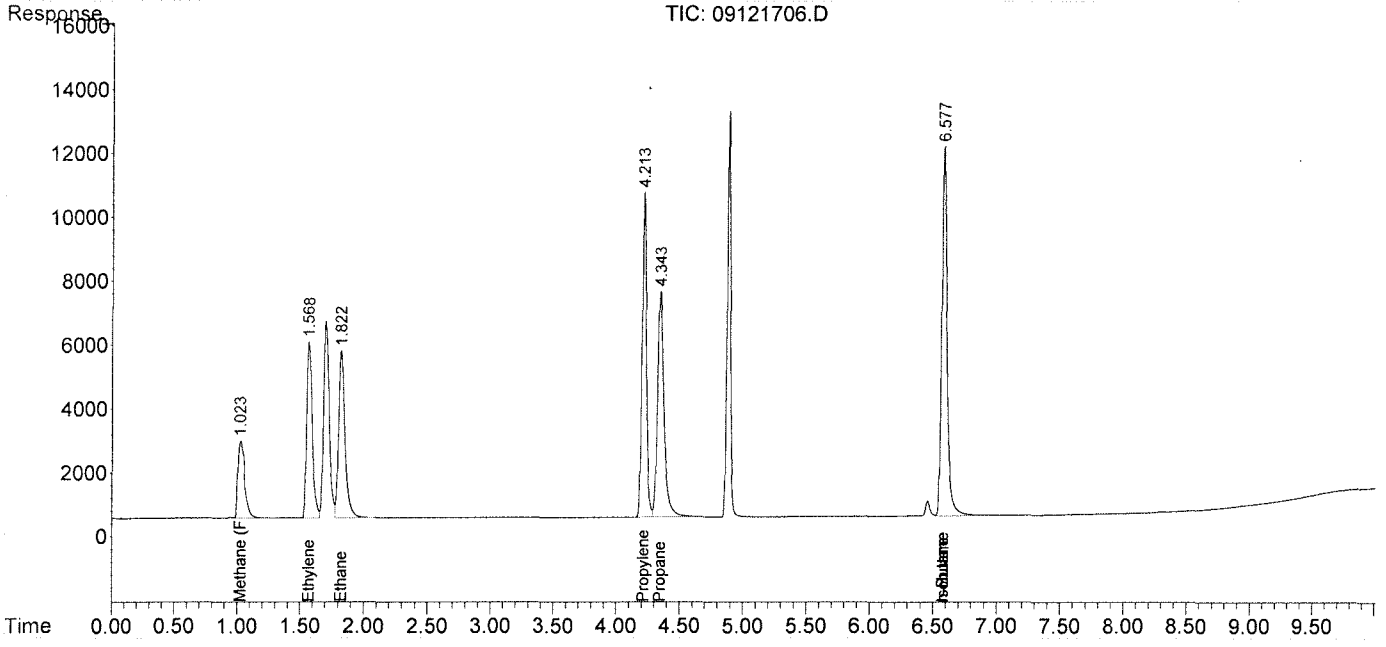
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

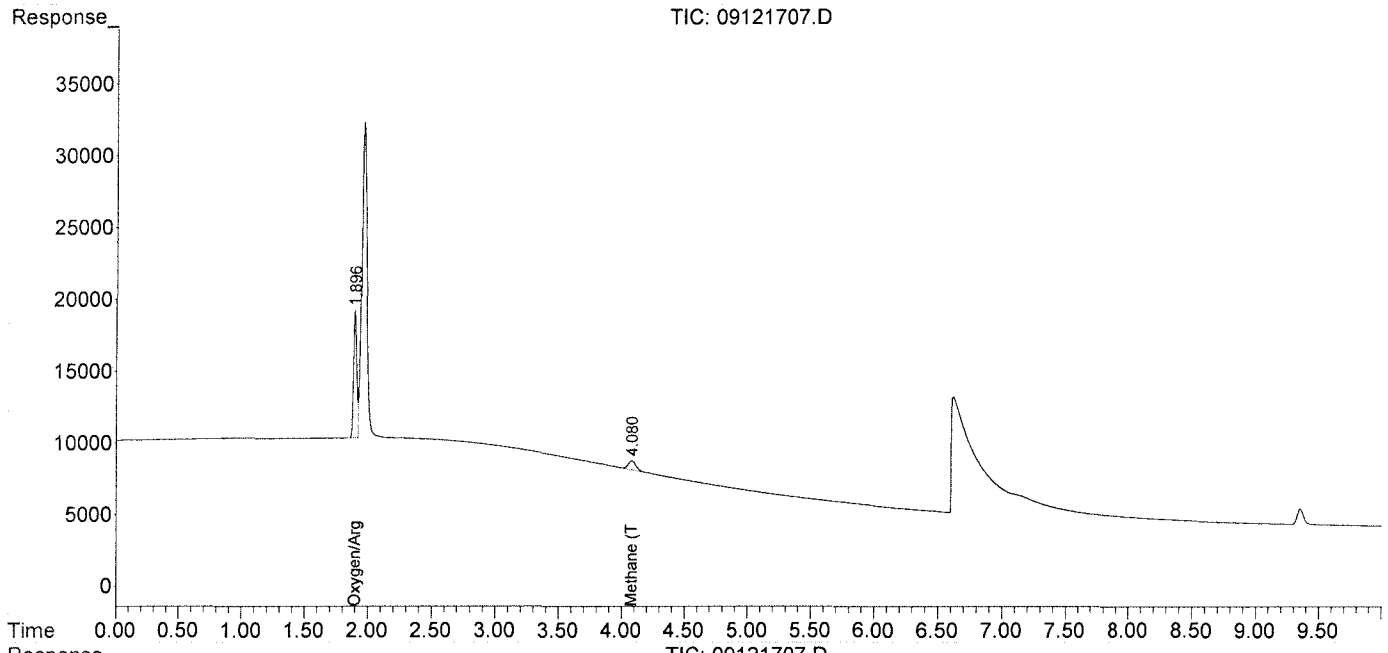
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.897	155286	0.065	ppm
2)	Carbon monoxide	1.897	155286	N.D.	ppm
3)	Methane (TCD)	4.079f	27015	2856.472	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.063	1735997	190.792	ppm
7)	Ethylene	1.597	3339702	198.758	ppm
8)	Ethane	1.849	3350442	194.597	ppm
9)	Propylene	4.201	4504060	185.706	ppm
10)	Propane	4.333	5043036	204.809	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

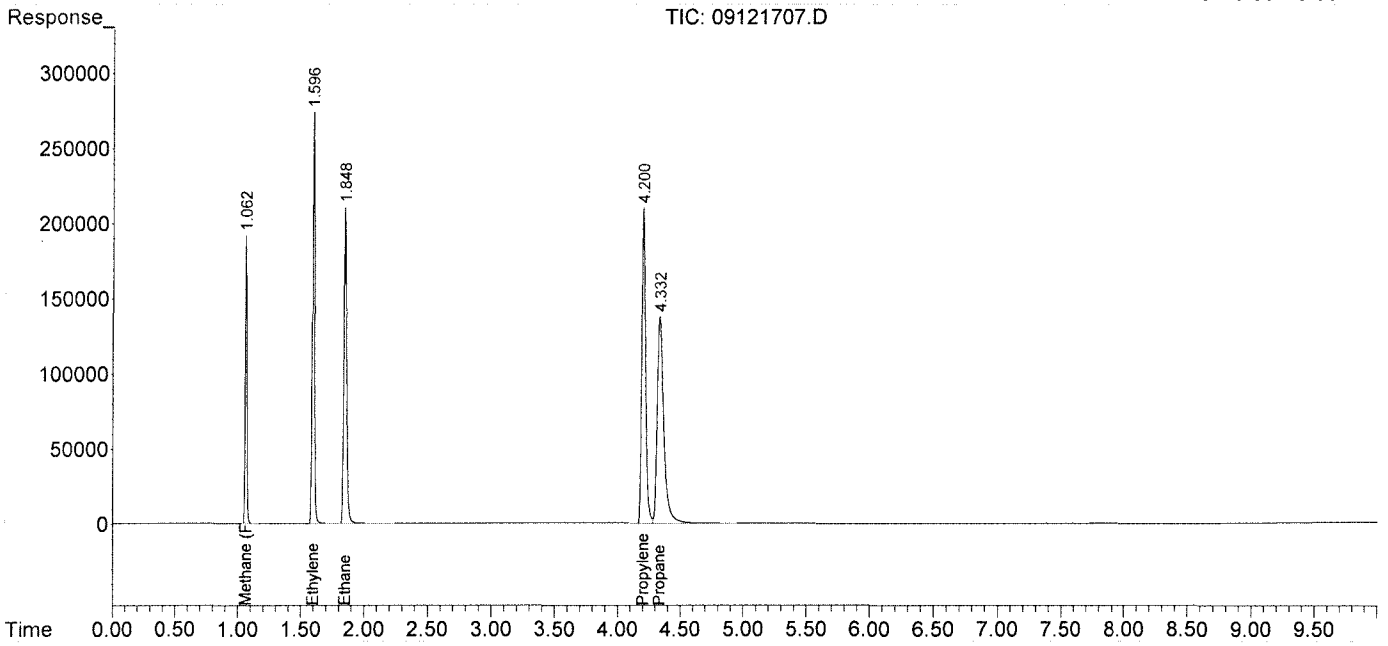
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

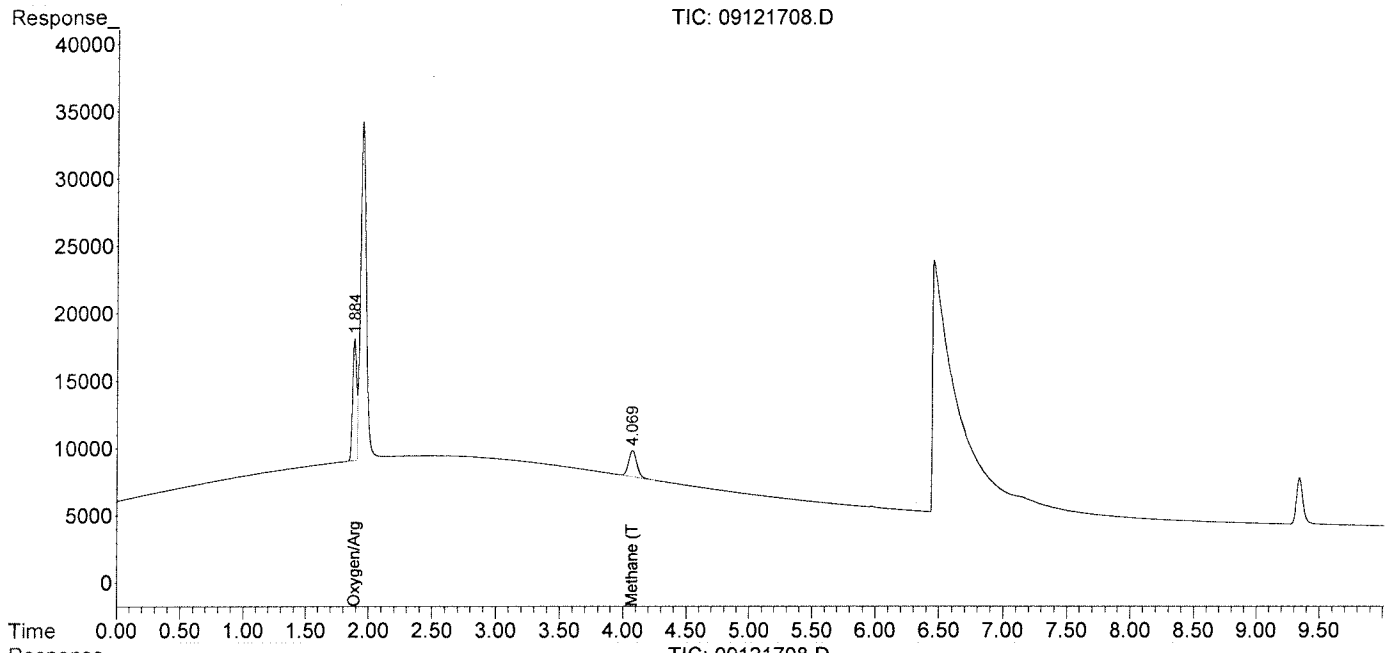
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.884	196022	0.124	ppm
2)	Carbon monoxide	1.884	196022	N.D.	ppm
3)	Methane (TCD)	4.070f	88282	782.730	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.044	5189849	539.759	ppm
7)	Ethylene	1.573	10007759	590.286	ppm
8)	Ethane	1.822	10048964	583.213	ppm
9)	Propylene	4.160	13569343	562.612	ppm
10)	Propane	4.300	15251326	615.171	ppm
11)	Isobutylene	6.143	9815	NoCal	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

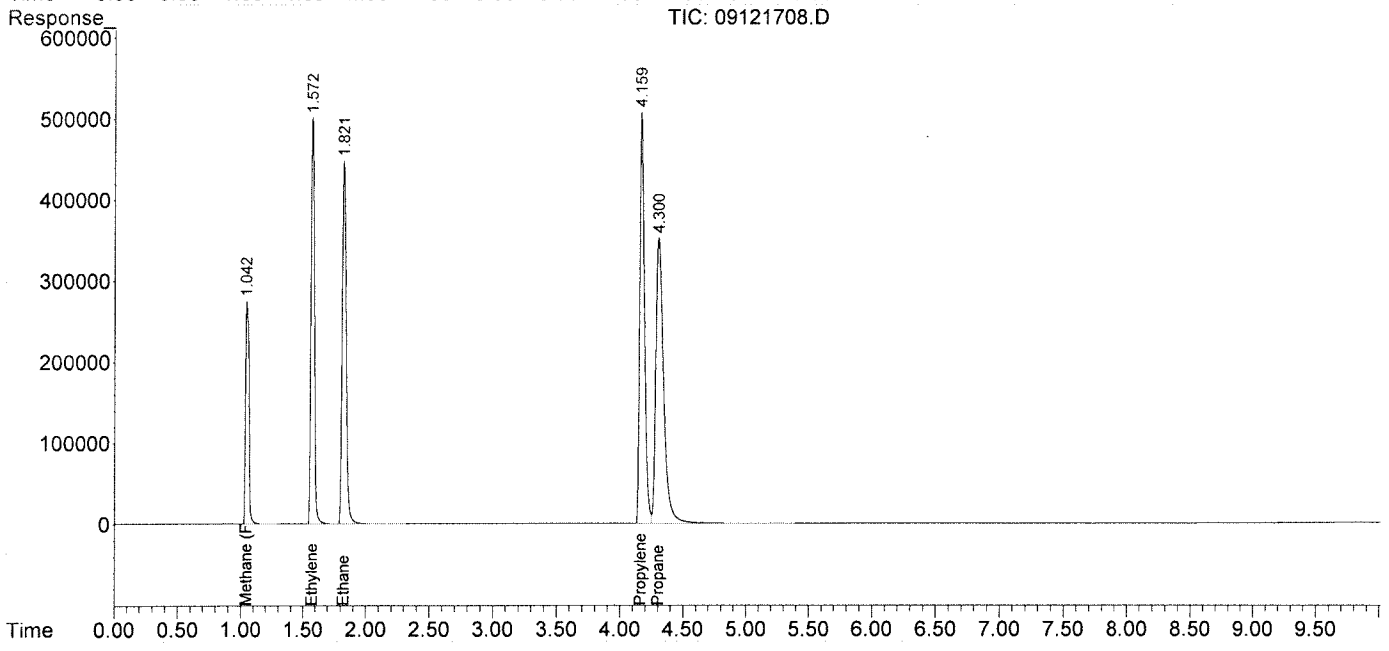
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

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

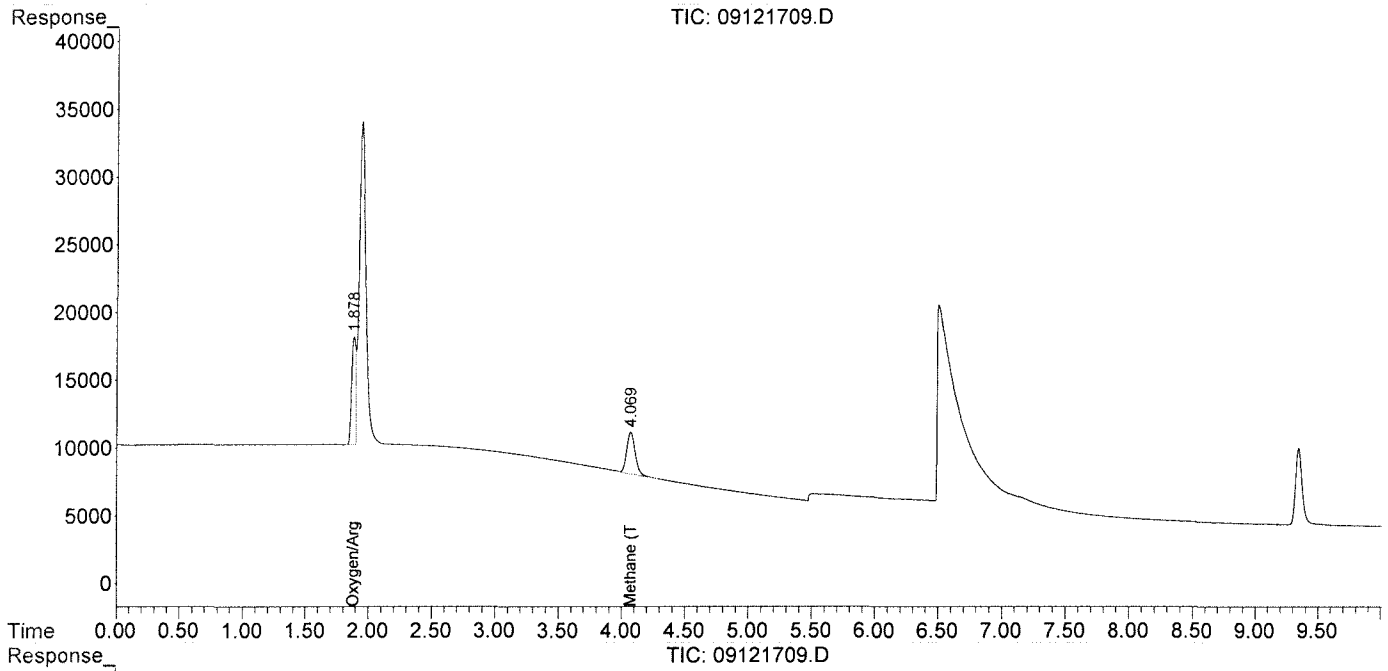
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.879	192611	0.162	ppm
2)	Carbon monoxide	1.879	192611	N.D.	ppm
3)	Methane (TCD)	4.070f	145492	1244.729	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.039	8598534	945.644	ppm
7)	Ethylene	1.576	16608504	981.887	ppm
8)	Ethane	1.827	16709165	973.644	ppm
9)	Propylene	4.161	22494888	941.060	ppm
10)	Propane	4.298	25459411	1023.223	ppm
11)	Isobutylene	6.138	16970	8645.243	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

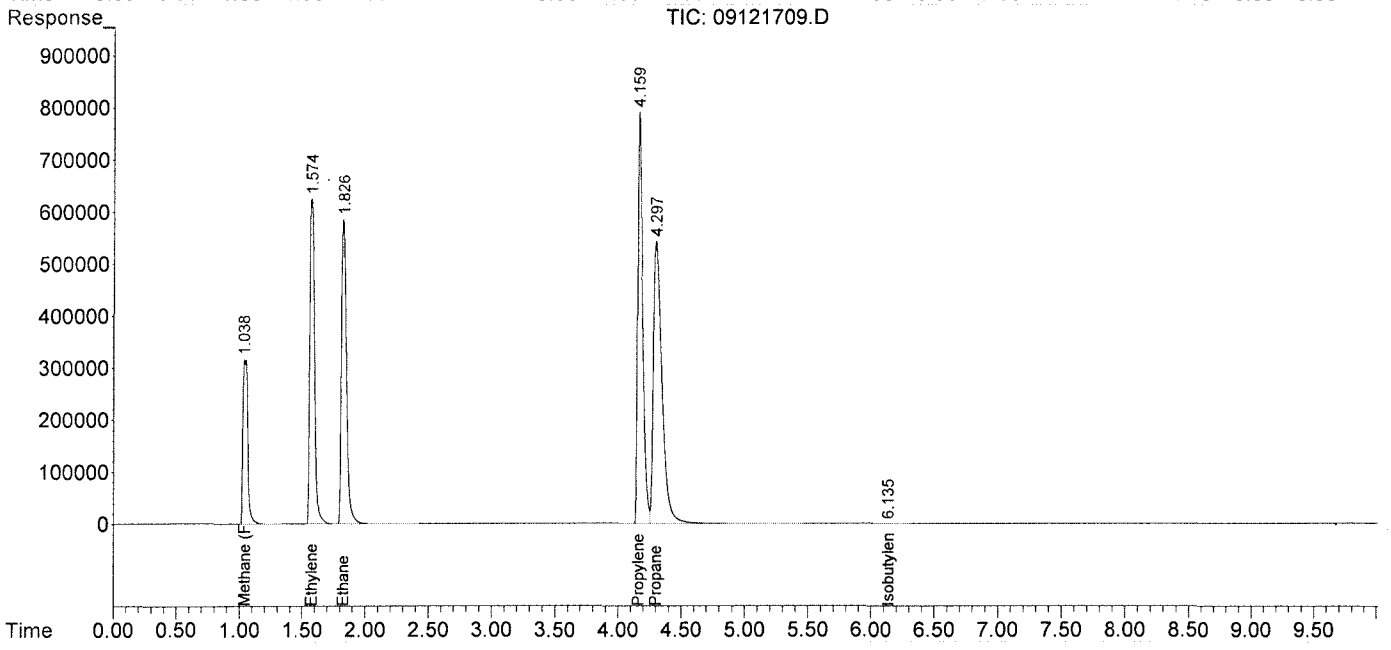
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

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

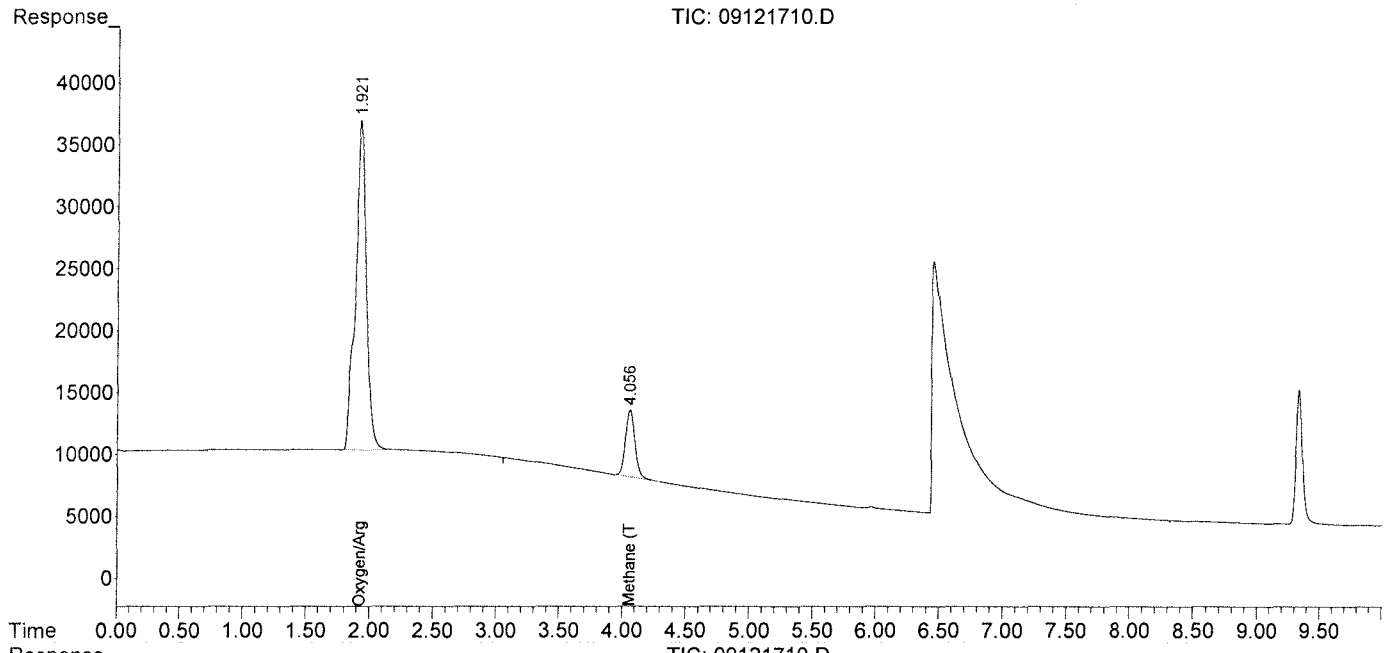
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.922f	1578147	1.659	ppm	
2)	Carbon monoxide	1.922f	1578147	N.D.	ppm	
3)	Methane (TCD)	4.057f	281651	3526.607	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.016	16098209	1763.622	ppm	
7)	Ethylene	1.552	31192444	1848.268	ppm	
8)	Ethane	1.801	31424218	1837.143	ppm	
9)	Propylene	4.129	42124690	1775.341	ppm	m
10)	Propane	4.269	48583085	1946.921	ppm	
11)	Isobutylene	6.136	33832	25613.603	ppm	
12)	Isobutane	6.576f	3845	0.120	ppm	
13)	n-Butane	6.576f	3845	0.120	ppm	

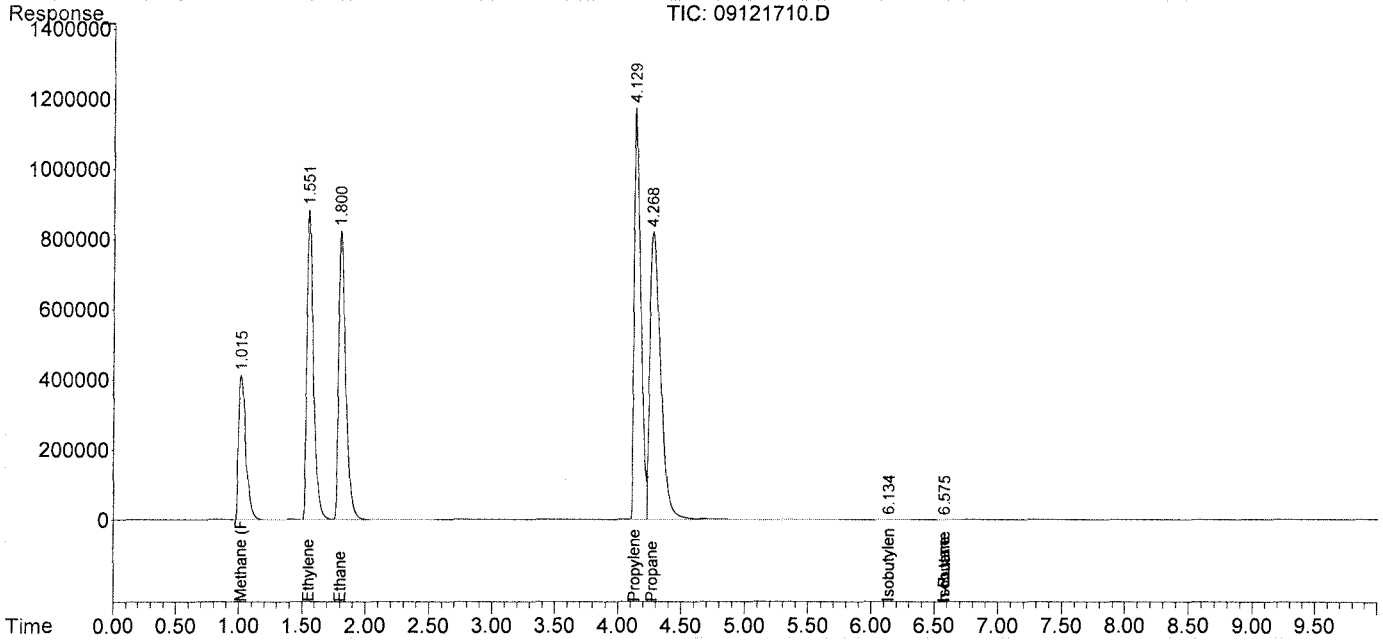
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

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

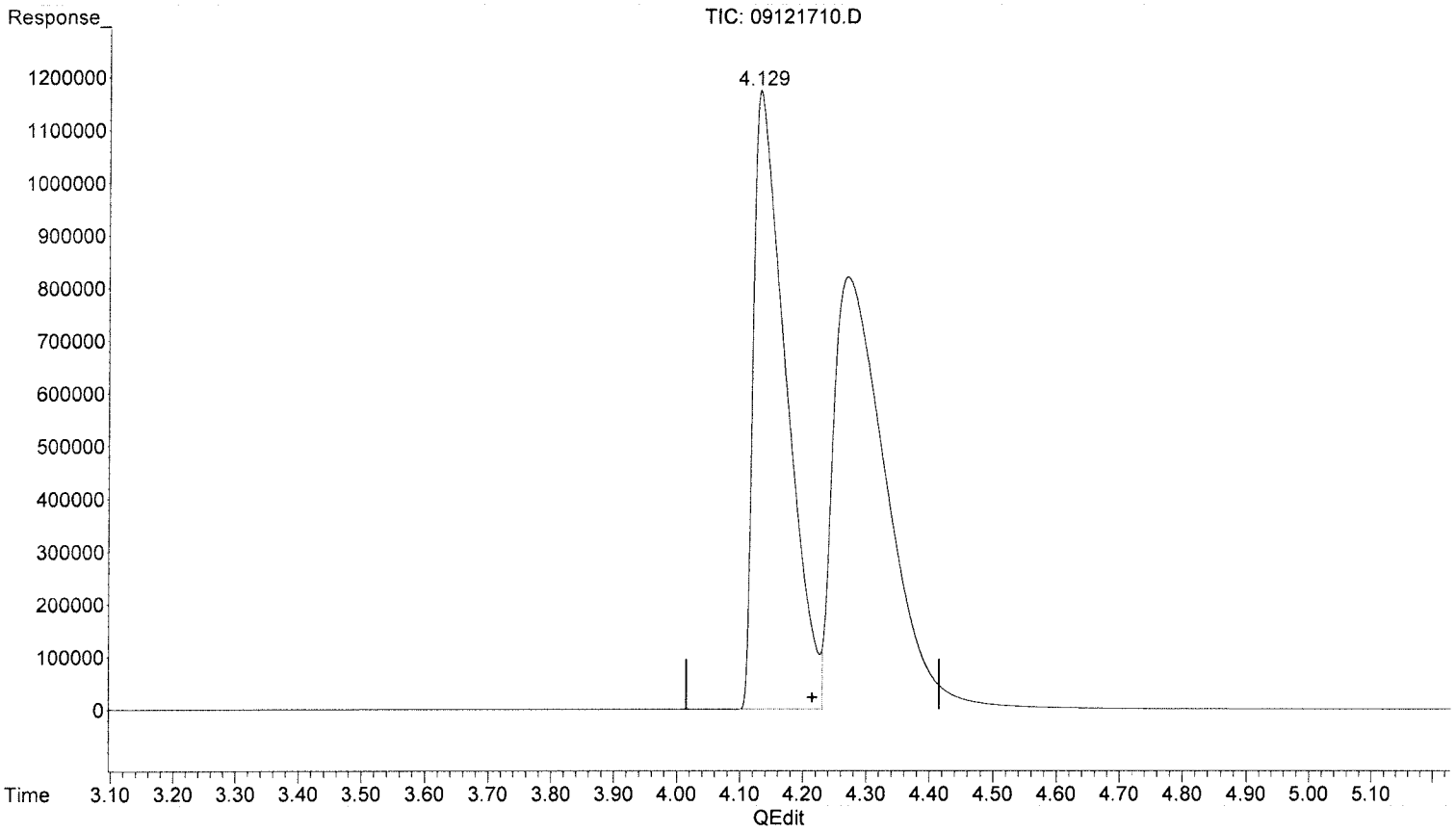




Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(9) Propylene

4.129min 1775.341 ppm m

response 42124690

(+) = Expected Retention Time

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

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

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

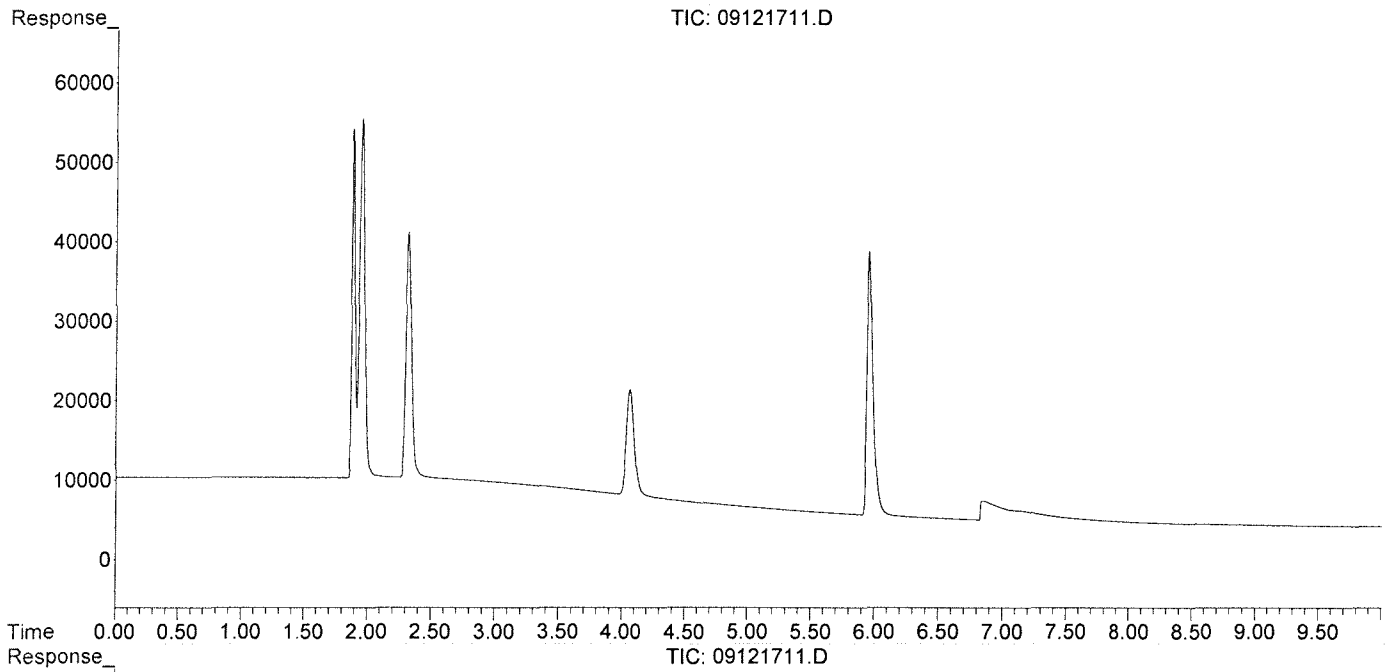
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.059	35776839	3925.122	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

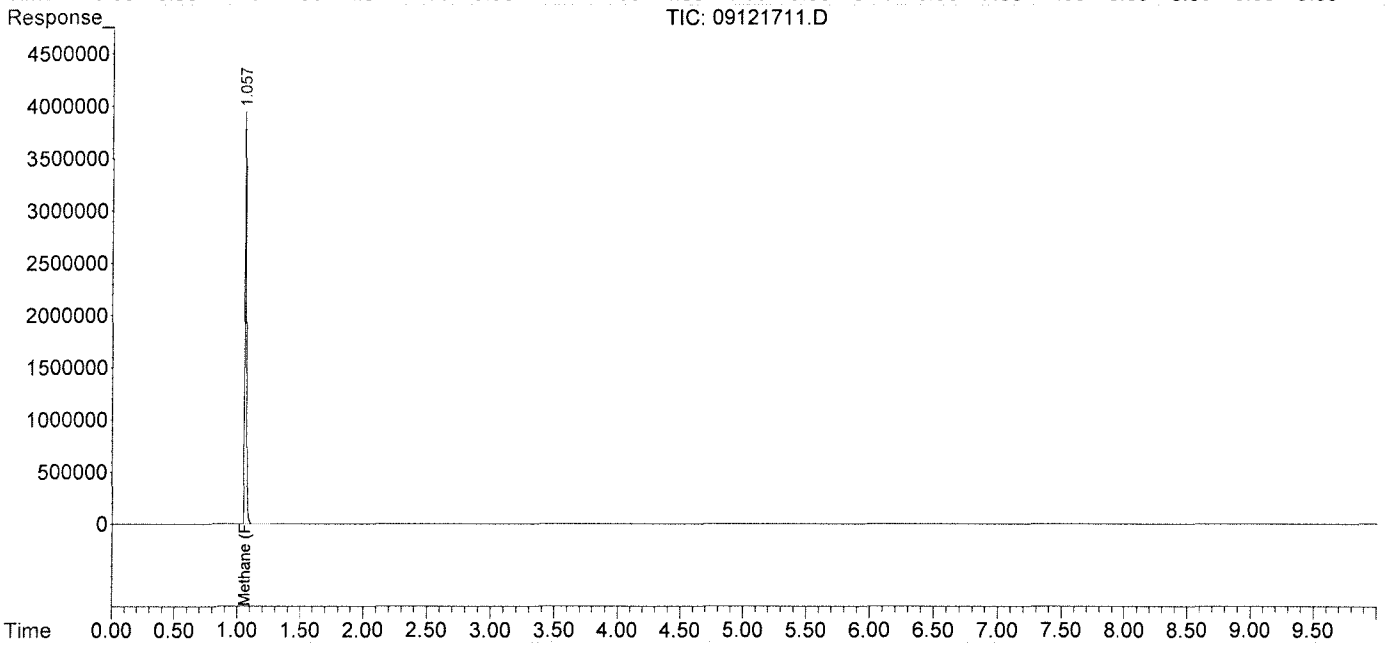
(f)=RT Delta > 1/2 Window (m)=manual int.

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

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

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





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

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

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

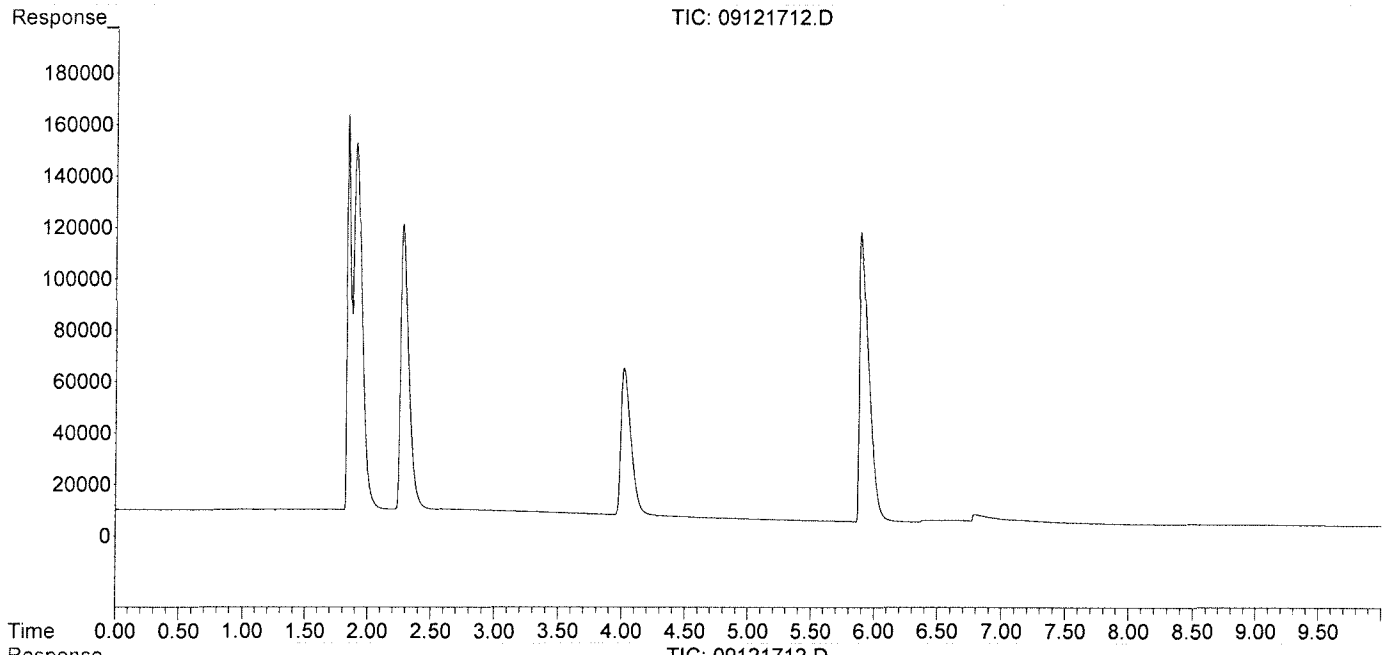
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.836	3190788	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.034	169009160	18492.064	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000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

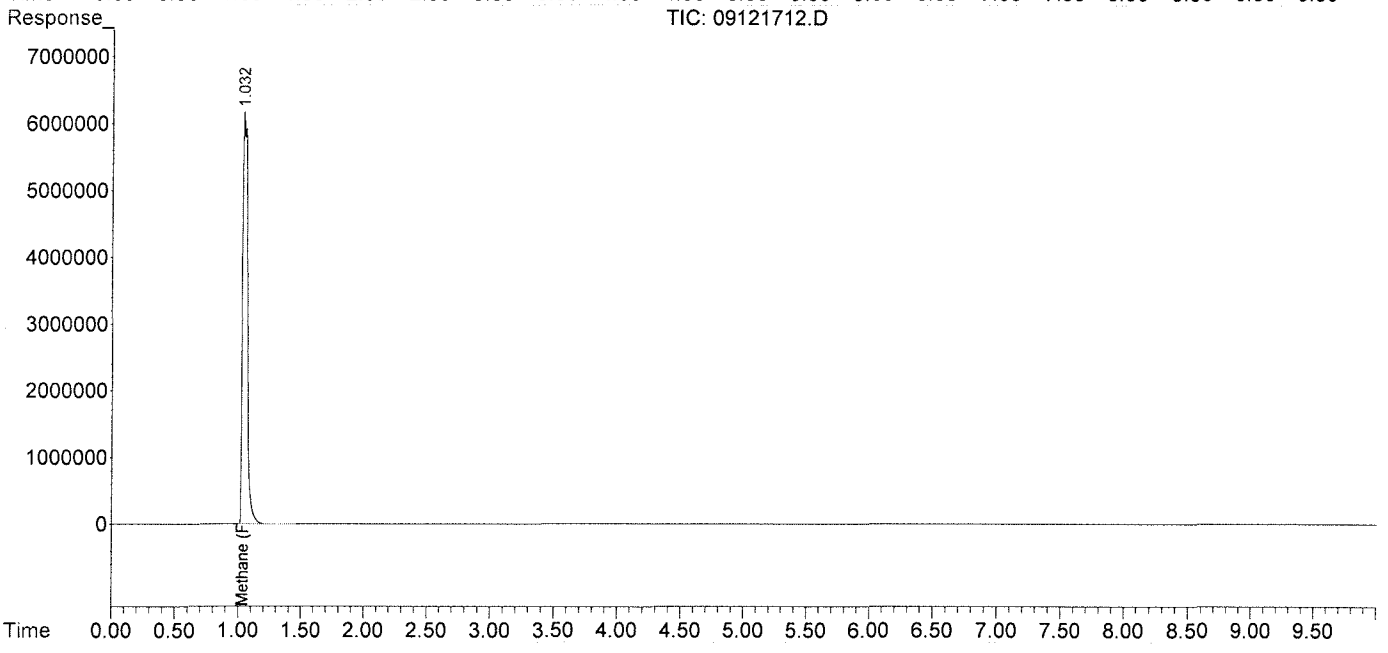
(f)=RT Delta > 1/2 Window (m)=manual int.

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

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

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





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

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

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

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.843	2922459	3.687	ppm	
2)	Carbon monoxide	1.843	2922459	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	actual %D
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.063	13748	1.516	ppm	~~1570~~ 1.50 101.1
7)	Ethylene	1.598	24153	1.443	ppm	~~1570~~ 1.50 96.2
8)	Ethane	1.850	24488	1.445	ppm	~~1570~~ 1.50 96.3
9)	Propylene	4.221	36004	1.537	ppm	~~1570~~ 1.50 102.5
10)	Propane	4.350	37738	1.517	ppm	~~1571~~ 1.51 100.5
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	48019	1.804	ppm	9/14/17
13)	n-Butane	6.579f	48019	1.804	ppm	

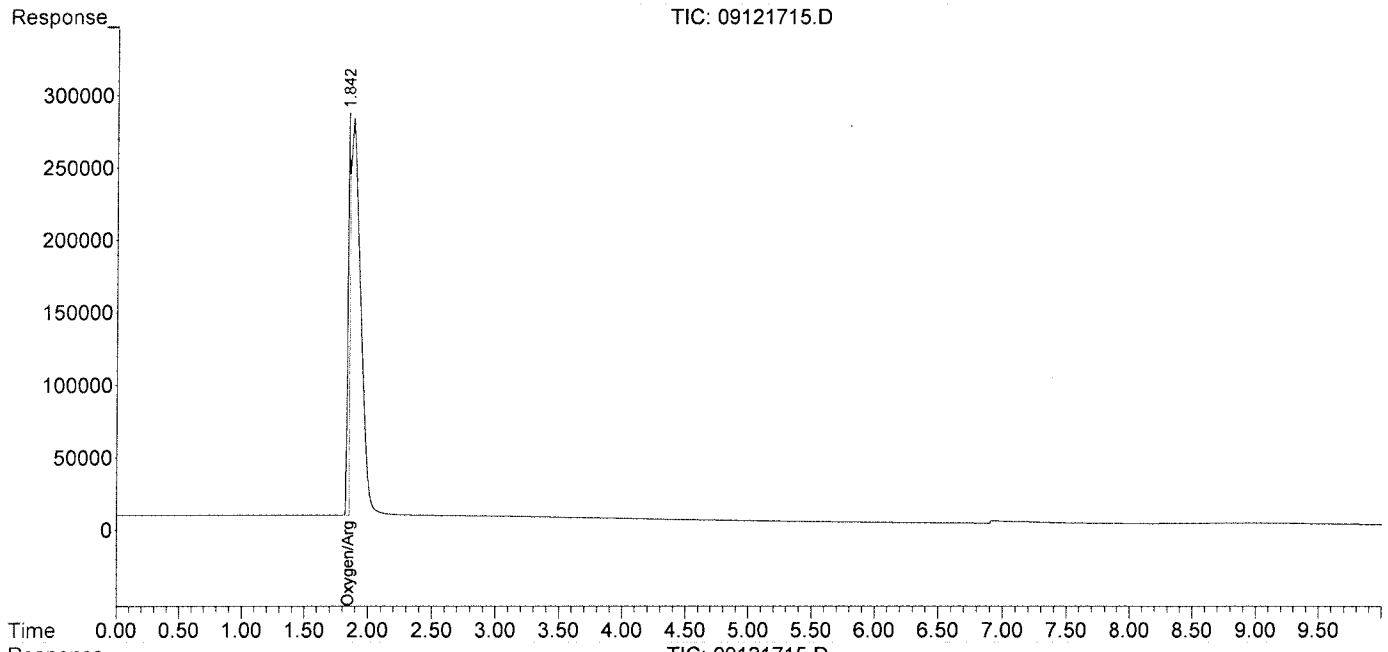
(f)=RT Delta > 1/2 Window (m)=manual int.

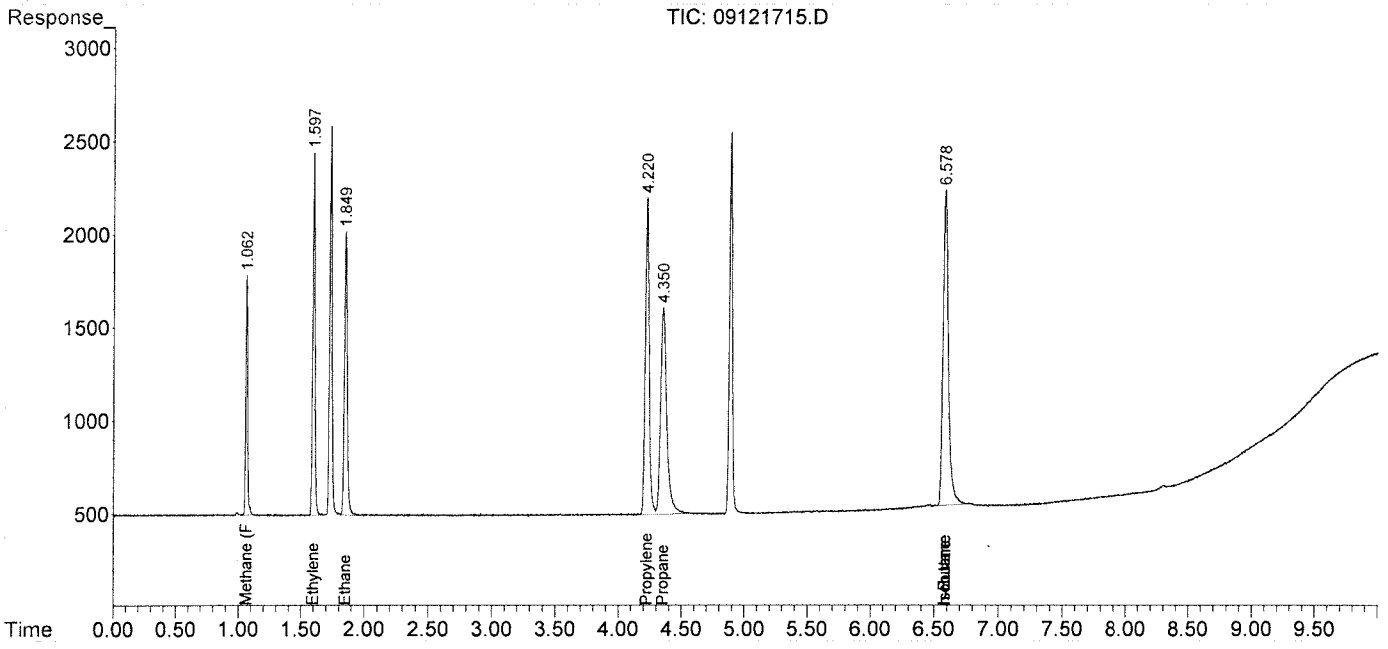
9/14/17

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

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

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





Dissolved Gases by RSK175

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Laboratory Group
Service Request: P2006450
Sample Vol. (ml) : 32.00 ml
Analyst : WH
Date Analysis : 11/19/20
Head Space Vol.(ml) : 8.00 ml
Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Methane	Ethylene	Ethane
std s32-05221901	0.100	96.386	102.435	101.891
ACTUAL		101.50	100.90	101.40
%Difference		5.0%	1.5%	0.5%
MCS 0.1ml	0.100	0.123	0.000	0.000
rb 0.1ml	0.100	0.000	0.000	0.000
lcs fid 0.1ml	0.100	1.357	1.113	1.285
lcsd fid 0.1ml	0.100	1.465	1.116	1.278
P2006450-001 0.1mL	0.100	0.184	0.000	0.000
P2006450-002 0.1mL	0.100	0.000	0.000	0.000
P2006450-003 0.1mL	0.100	0.102	0.000	0.000
P2006450-004 0.1mL	0.100	0.147	0.000	0.000

FINAL HEAD SPACE RESULT (ppm)

	Methane	Ethylene	Ethane
WWt.	16.04	28.05	30.07
HENRY'S CONSTANT	3.76E+04	1.02E+04	2.63E+04
RL	1.30	1.00	0.60
MCS 0.1ml	1.230	0.000	0.000
lcs fid 0.1ml	13.570	11.130	12.850
lcsd fid 0.1ml	14.650	11.160	12.780
P2006450-001 0.1mL	1.840	0.000	0.000
P2006450-002 0.1mL	0.000	0.000	0.000
P2006450-003 0.1mL	1.020	0.000	0.000
P2006450-004 0.1mL	1.470	0.000	0.000

REV01

std s32-05221901	98.553	104.797	104.085
ACTUAL	101.50	100.90	101.40
%Difference	2.9%	3.9%	2.6%

Data Path : J:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 12:04:00
Operator : WH
Sample : std s32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 12:32:34 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

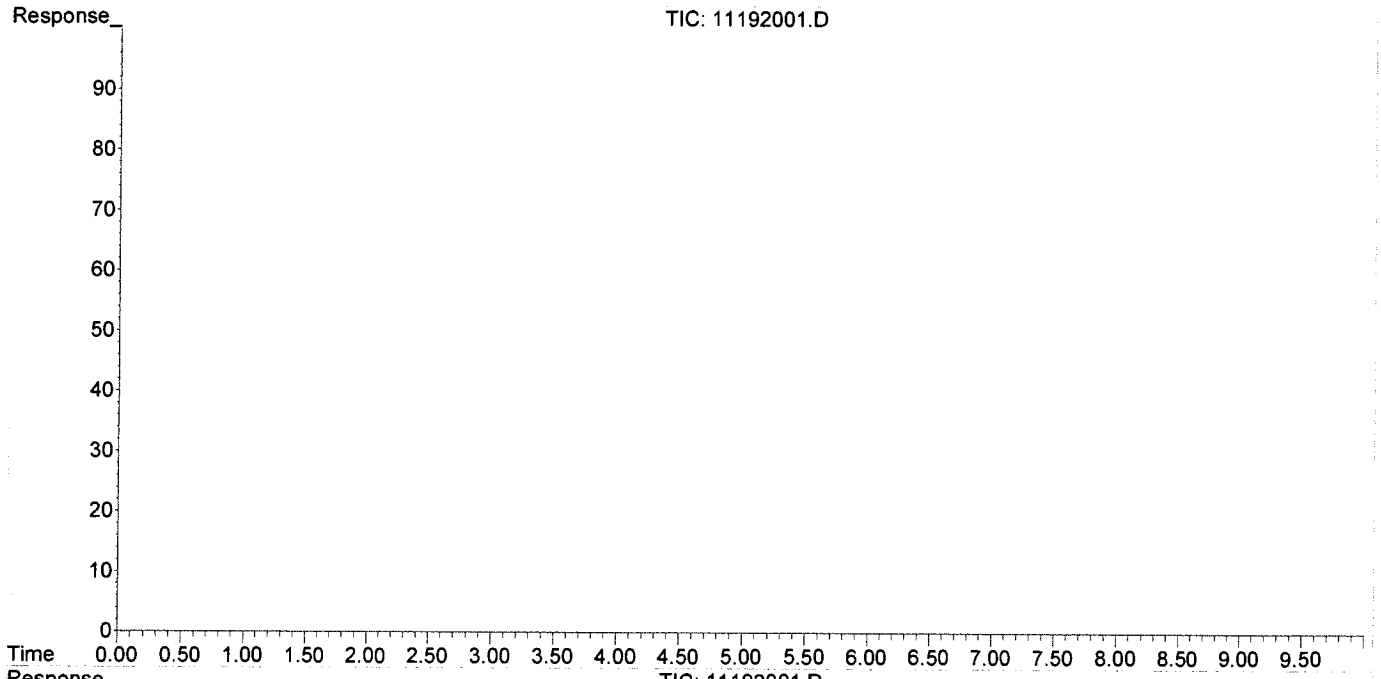
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.121	874284	96.386	ppm
7)	Ethylene	1.691	1714183	102.435	ppm
8)	Ethane	1.954	1727072	101.891	ppm
9)	Propylene	4.322	2522103	107.637	ppm
10)	Propane	4.443	2597822	104.413	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

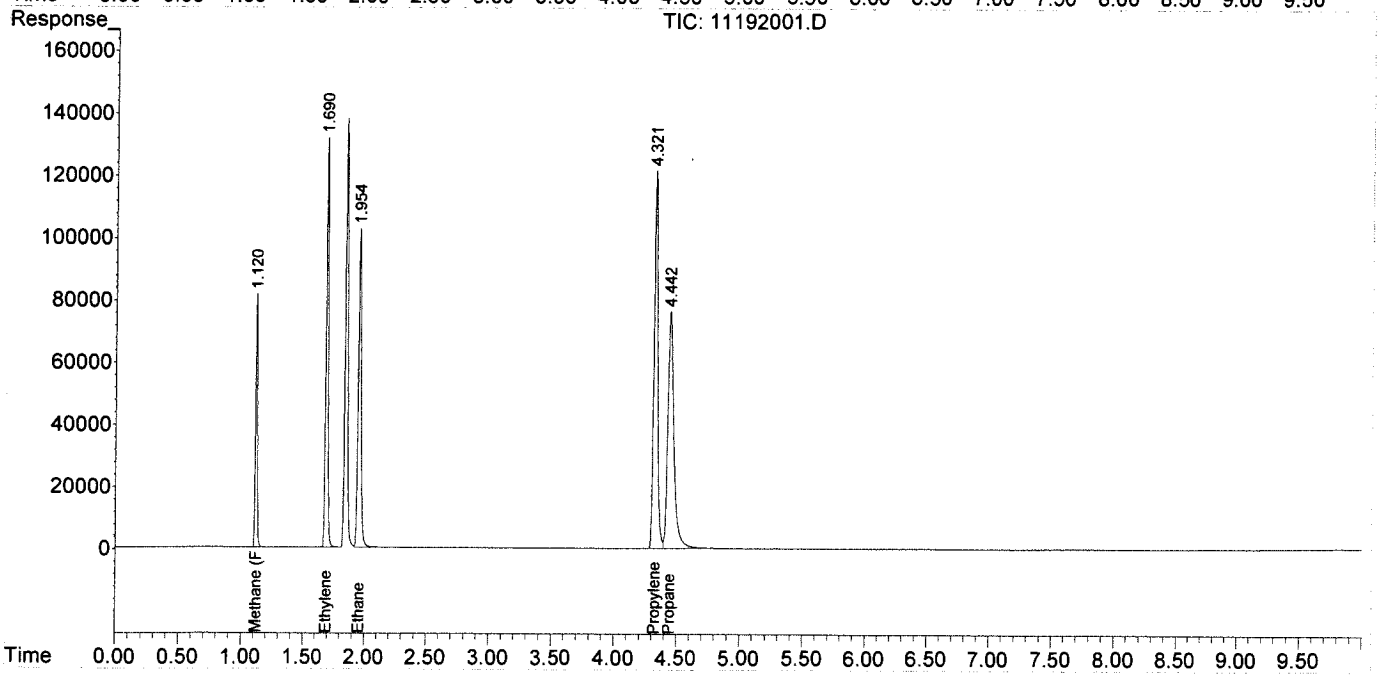
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 12:04:00
Operator : WH
Sample : std s32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 12:32:34 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192016.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 16:46:37
Operator : WH
Sample : std s32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 17:04:37 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

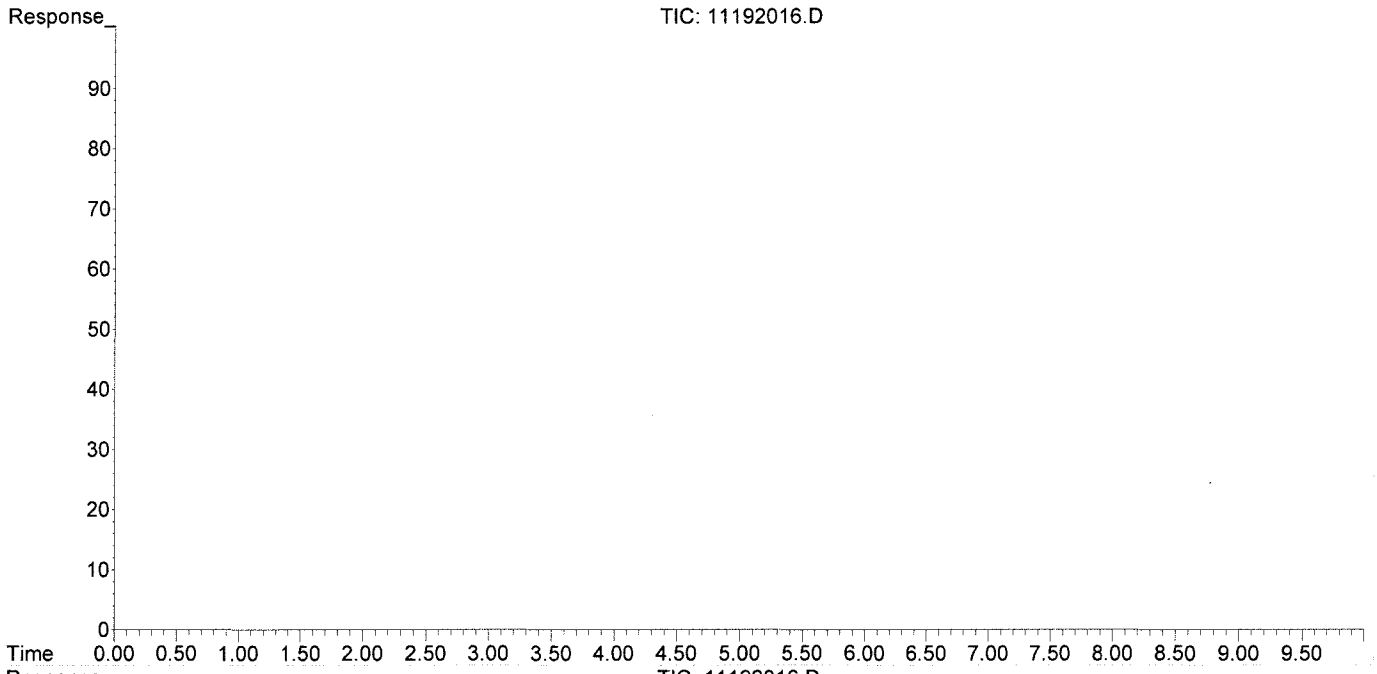
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.124	893936	98.553	ppm
7)	Ethylene	1.694	1753713	104.797	ppm
8)	Ethane	1.959	1764252	104.085	ppm
9)	Propylene	4.327	2583010	110.237	ppm
10)	Propane	4.448	2654268	106.682	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

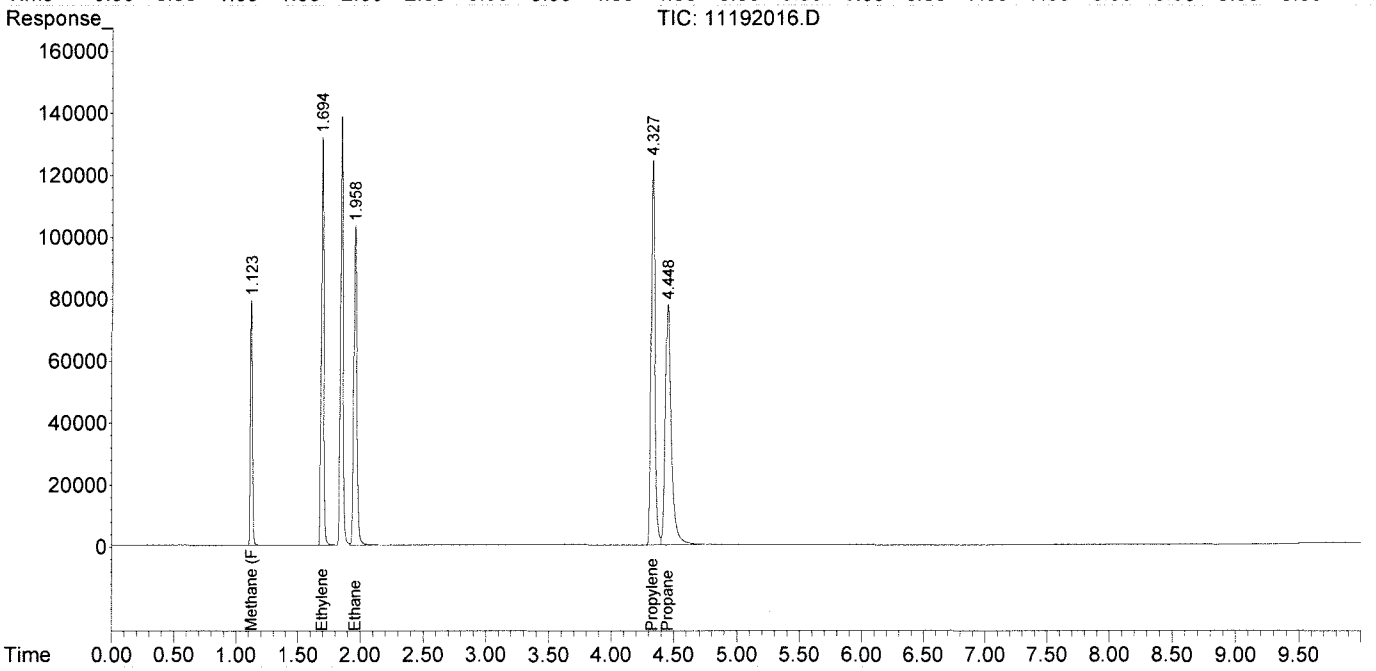
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\19\
Data File : 11192016.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 19-Nov-2020, 16:46:37
Operator : WH
Sample : std s32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 19 17:04:37 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Injection Log

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

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

Injection Log

Directory: I:\GC10\DATA\RSK_FID\2020_11\19\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	19-Nov-20, 12:04:00	11192001.D	std s32-05221901		WH	RSKBOTH.M	Pass
2	19-Nov-20, 12:34:43	11192002.D	rb 0.1ml		WH	RSKBOTH.M	Pass
3	19-Nov-20, 12:58:30	11192003.D	MCS 0.1ml		WH	RSKBOTH.M	Pass
4	19-Nov-20, 13:26:29	11192004.D	P2006450-001 0.1mL		WH	RSKBOTH.M	
5	19-Nov-20, 13:45:03	11192005.D	P2006450-002 0.1mL		WH	RSKBOTH.M	
6	19-Nov-20, 14:03:12	11192006.D	P2006450-003 0.1mL		WH	RSKBOTH.M	
7	19-Nov-20, 14:15:47	11192007.D	P2006450-004 0.1mL		WH	RSKBOTH.M	
8	19-Nov-20, 14:37:36	11192008.D	K2010516-001 0.1ml		WH	RSKBOTH.M	
9	19-Nov-20, 14:51:21	11192009.D	K2010516-002 0.1ml		WH	RSKBOTH.M	
10	19-Nov-20, 15:06:44	11192010.D	K2010516-003 0.1ml		WH	RSKBOTH.M	
11	19-Nov-20, 15:22:12	11192011.D	K2010390-001 0.1ml		WH	RSKBOTH.M	
12	19-Nov-20, 15:40:16	11192012.D	K2010390-001 0.1		WH	RSKBOTH.M	
13	19-Nov-20, 15:55:59	11192013.D	lcs fid 0.1ml		WH	RSKBOTH.M	Pass
14	19-Nov-20, 16:09:04	11192014.D	lcsd fid 0.1ml		WH	RSKBOTH.M	Pass
15	19-Nov-20, 16:22:54	11192015.D	xlcs fid 0.1ml		WH	RSKBOTH.M	
16	19-Nov-20, 16:46:37	11192016.D	std s32-05221901		WH	RSKBOTH.M	Pass

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WorkOrder: HS20110674

Longhorn Army Ammunition Plant 37

Aptim Environmental & Infrastucture, Inc.

Susan Huang
2500 City West Blvd., Suite 1700
Houston TX 77042

19-Dec-2020

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ALS Group USA, Corp
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LABORATORY REPORT

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ALS WO# HS20110674

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December 01, 2020

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

Work Order: **HS20110674**

Laboratory Results for: **Longhorn Army Ammunition Plant 37**

Dear Susan Huang,

ALS Environmental received 8 sample(s) on Nov 12, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Work Order: HS20110674

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20110674-01	35BWW08-201111	Groundwater		11-Nov-2020 07:10	12-Nov-2020 10:15	☐
HS20110674-02	35BWW08-201111-FD	Groundwater		11-Nov-2020 07:10	12-Nov-2020 10:15	☐
HS20110674-03	35BWW12-201111	Groundwater		11-Nov-2020 08:05	12-Nov-2020 10:15	☐
HS20110674-04	35BWW07-201111	Groundwater		11-Nov-2020 09:05	12-Nov-2020 10:15	☐
HS20110674-05	35BWW13-201111	Groundwater		11-Nov-2020 09:45	12-Nov-2020 10:15	☐
HS20110674-06	35BWW16-201111	Groundwater		11-Nov-2020 10:30	12-Nov-2020 10:15	☐
HS20110674-07	35BWW17-201111	Groundwater		11-Nov-2020 11:10	12-Nov-2020 10:15	☐
HS20110674-08	Trip Blank-201111	Groundwater		11-Nov-2020 00:00	12-Nov-2020 10:15	☐

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: Longhorn Army Ammunition Plant 37
Work Order: HS20110674

Work Order Comments

- The analysis for Methane, Methene, Ethane and CO2 by RSK175 was subcontracted to ALS Simi Valley, CA. Final report attached.
- The analysis for TOC was subcontracted to ALS Kelso, WA. Final report attached.

GCMS Volatiles by Method SW8260

Batch ID: R373373

Sample ID: CCV

- Naphthalene exceeded % D limits for CCV. Samples are ND for this compound.

Sample ID: VLCSW-201124

- 1,2,3-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, Naphthalene exceeded QC limits for LCS. Samples are ND for these compounds.

Sample ID: 35BWW12-201111 (HS20110674-03MS)D

- The recovery of the the Matrix Spike Duplicate (MSD) was outside of the established control limit. 1,2,3-Trichlorobenzene, Naphthalene

WetChemistry by Method SW9056

Batch ID: R372810

Sample ID: 35BWW08-201111 (HS20110674-01)

- Sample was analyzed outside of the holding time at the request of the client. Results should be considered estimated.

Sample ID: 35BWW08-201111-FD (HS20110674-02)

- Sample was analyzed outside of the holding time at the request of the client. Results should be considered estimated.

Sample ID: 35BWW12-201111 (HS20110674-03)

- Sample was analyzed outside of the holding time at the request of the client. Results should be considered estimated.

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW08-201111
Collection Date: 11-Nov-2020 07:10

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:27
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:27
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 17:27
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	24-Nov-2020 17:27
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:27
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	24-Nov-2020 17:27
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 17:27
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:27
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:27
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:27
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	24-Nov-2020 17:27
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:27
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:27

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW08-201111
Collection Date: 11-Nov-2020 07:10

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	24-Nov-2020 17:27
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 17:27
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 17:27
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:27
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:27
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:27
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:27
Surr: 1,2-Dichloroethane-d4	*86.8*			**0**	*81-118*	*%REC*	*1*	*24-Nov-2020 17:27*
Surr: 4-Bromofluorobenzene	*93.0*			**0**	*85-114*	*%REC*	*1*	*24-Nov-2020 17:27*
Surr: Dibromofluoromethane	*89.0*			**0**	*80-119*	*%REC*	*1*	*24-Nov-2020 17:27*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*24-Nov-2020 17:27*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**4.56**		**0.200**	**0.500**	**0.500**	**mg/L**	1	13-Nov-2020 12:59
Nitrogen, Nitrate (As N)	**0.215**	H	**0.0300**	**0.100**	**0.100**	**mg/L**	1	13-Nov-2020 12:59
Sulfate	**24.7**		**0.200**	**0.500**	**0.500**	**mg/L**	1	13-Nov-2020 12:59
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	29-Nov-2020 11:41
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	01-Dec-2020 09:19

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW08-201111-FD
Collection Date: 11-Nov-2020 07:10

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:48
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:48
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:48
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:48
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:48
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:48
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:48
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:48
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:48
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:48
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 17:48
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	24-Nov-2020 17:48
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:48
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	24-Nov-2020 17:48
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 17:48
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:48
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:48
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:48
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	24-Nov-2020 17:48
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:48
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:48
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW08-201111-FD
Collection Date: 11-Nov-2020 07:10

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:48
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	24-Nov-2020 17:48
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 17:48
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 17:48
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:48
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:48
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:48
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:48
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:48
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:48
Surr: 1,2-Dichloroethane-d4	*90.7*			**0**	*81-118*	*%REC*	*1*	*24-Nov-2020 17:48*
Surr: 4-Bromofluorobenzene	*89.9*			**0**	*85-114*	*%REC*	*1*	*24-Nov-2020 17:48*
Surr: Dibromofluoromethane	*92.6*			**0**	*80-119*	*%REC*	*1*	*24-Nov-2020 17:48*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*24-Nov-2020 17:48*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**4.72**		**0.200**	**0.500**	**0.500**	**mg/L**	1	13-Nov-2020 13:17
Nitrogen, Nitrate (As N)	**0.226**	H	**0.0300**	**0.100**	**0.100**	**mg/L**	1	13-Nov-2020 13:17
Sulfate	**24.9**		**0.200**	**0.500**	**0.500**	**mg/L**	1	13-Nov-2020 13:17
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	29-Nov-2020 11:41
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	01-Dec-2020 09:19

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW12-201111
Collection Date: 11-Nov-2020 08:05

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 13:35
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 13:35
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 13:35
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	24-Nov-2020 13:35
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 13:35
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	24-Nov-2020 13:35
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 13:35
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 13:35
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 13:35
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 13:35
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	24-Nov-2020 13:35
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 13:35
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 13:35

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW12-201111
Collection Date: 11-Nov-2020 08:05

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	24-Nov-2020 13:35
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 13:35
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 13:35
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	24-Nov-2020 13:35
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 13:35
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 13:35
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 13:35
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 13:35
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 13:35
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 13:35
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 13:35
Tetrachloroethene	**3.1**		**0.30**	**0.50**	**1.0**	**UG/L**	1	24-Nov-2020 13:35
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 13:35
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 13:35
Surr: 1,2-Dichloroethane-d4	*83.6*			**0**	*81-118*	*%REC*	*1*	*24-Nov-2020 13:35*
Surr: 4-Bromofluorobenzene	*90.0*			**0**	*85-114*	*%REC*	*1*	*24-Nov-2020 13:35*
Surr: Dibromofluoromethane	*87.5*			**0**	*80-119*	*%REC*	*1*	*24-Nov-2020 13:35*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*24-Nov-2020 13:35*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**6.25**		**0.200**	**0.500**	**0.500**	**mg/L**	1	13-Nov-2020 13:35
Nitrogen, Nitrate (As N)	**0.0318**	JH	**0.0300**	**0.100**	**0.100**	**mg/L**	1	13-Nov-2020 13:35
Sulfate	**35.9**		**0.200**	**0.500**	**0.500**	**mg/L**	1	13-Nov-2020 13:35
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	29-Nov-2020 11:41
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	01-Dec-2020 09:19

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW07-201111
Collection Date: 11-Nov-2020 09:05

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:09
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:09
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 18:09
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:09
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	24-Nov-2020 18:09
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:09
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	24-Nov-2020 18:09
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 18:09
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:09
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:09
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:09
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	24-Nov-2020 18:09
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:09
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW07-201111
Collection Date: 11-Nov-2020 09:05

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	24-Nov-2020 18:09
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:09
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 18:09
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 18:09
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:09
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:09
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:09
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:09
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:09
Surr: 1,2-Dichloroethane-d4	*88.4*			**0**	*81-118*	*%REC*	*1*	*24-Nov-2020 18:09*
Surr: 4-Bromofluorobenzene	*86.6*			**0**	*85-114*	*%REC*	*1*	*24-Nov-2020 18:09*
Surr: Dibromofluoromethane	*89.1*			**0**	*80-119*	*%REC*	*1*	*24-Nov-2020 18:09*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*24-Nov-2020 18:09*

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW13-201111
Collection Date: 11-Nov-2020 09:45

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:30
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:30
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:30
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:30
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:30
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:30
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:30
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:30
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:30
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:30
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:30
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:30
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:30
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:30
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:30
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 18:30
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:30
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	24-Nov-2020 18:30
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:30
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:30
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	24-Nov-2020 18:30
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 18:30
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:30
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:30
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:30
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	24-Nov-2020 18:30
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:30
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:30
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:30

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW13-201111
Collection Date: 11-Nov-2020 09:45

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	24-Nov-2020 18:30
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:30
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:30
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:30
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	24-Nov-2020 18:30
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:30
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 18:30
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 18:30
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:30
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:30
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:30
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:30
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:30
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:30
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:30
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:30
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:30
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:30
Surr: 1,2-Dichloroethane-d4	*87.7*			**0**	*81-118*	*%REC*	*1*	*24-Nov-2020 18:30*
Surr: 4-Bromofluorobenzene	*88.6*			**0**	*85-114*	*%REC*	*1*	*24-Nov-2020 18:30*
Surr: Dibromofluoromethane	*89.7*			**0**	*80-119*	*%REC*	*1*	*24-Nov-2020 18:30*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*24-Nov-2020 18:30*

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc. **ANALYTICAL REPORT**
Project: Longhorn Army Ammunition Plant 37 WorkOrder:HS20110674
Sample ID: 35BWW16-201111 Lab ID:HS20110674-06
Collection Date: 11-Nov-2020 10:30 Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:51
1,1,2-Trichlor-1,2,2-trifluoroethane	**3.7**		**0.50**	**1.0**	**1.0**	**UG/L**	1	24-Nov-2020 18:51
1,1,2-Trichloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:51
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:51
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:51
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:51
1,2,4-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:51
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:51
1,3,5-Trimethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:51
1,3-Dichloropropane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:51
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 18:51
2-Chlorotoluene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	24-Nov-2020 18:51
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:51
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	24-Nov-2020 18:51
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 18:51
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:51
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:51
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:51
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	24-Nov-2020 18:51
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 18:51
Chlorobenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW16-201111
Collection Date: 11-Nov-2020 10:30

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:51
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	24-Nov-2020 18:51
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:51
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:51
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:51
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	24-Nov-2020 18:51
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 18:51
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 18:51
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 18:51
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 18:51
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
Tetrachloroethene	**4.4**		**0.30**	**0.50**	**1.0**	**UG/L**	1	24-Nov-2020 18:51
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
Trichloroethene	**1.8**		**0.20**	**0.50**	**1.0**	**UG/L**	1	24-Nov-2020 18:51
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 18:51
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 18:51
Surr: 1,2-Dichloroethane-d4	*85.8*			**0**	*81-118*	*%REC*	*1*	*24-Nov-2020 18:51*
Surr: 4-Bromofluorobenzene	*93.2*			**0**	*85-114*	*%REC*	*1*	*24-Nov-2020 18:51*
Surr: Dibromofluoromethane	*91.8*			**0**	*80-119*	*%REC*	*1*	*24-Nov-2020 18:51*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*24-Nov-2020 18:51*

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW17-201111
Collection Date: 11-Nov-2020 11:10

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 19:12
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 19:12
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 19:12
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	24-Nov-2020 19:12
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 19:12
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	24-Nov-2020 19:12
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 19:12
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 19:12
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 19:12
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 19:12
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	24-Nov-2020 19:12
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 19:12
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 19:12

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: 35BWW17-201111
Collection Date: 11-Nov-2020 11:10

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-07
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	24-Nov-2020 19:12
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 19:12
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 19:12
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 19:12
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	24-Nov-2020 19:12
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 19:12
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 19:12
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 19:12
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 19:12
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 19:12
Surr: 1,2-Dichloroethane-d4	*87.2*			**0**	*81-118*	*%REC*	*1*	*24-Nov-2020 19:12*
Surr: 4-Bromofluorobenzene	*87.0*			**0**	*85-114*	*%REC*	*1*	*24-Nov-2020 19:12*
Surr: Dibromofluoromethane	*86.5*			**0**	*80-119*	*%REC*	*1*	*24-Nov-2020 19:12*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*24-Nov-2020 19:12*

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: Trip Blank-201111
Collection Date: 11-Nov-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:06
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:06
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:06
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 17:06
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:06
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	24-Nov-2020 17:06
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:06
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:06
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	24-Nov-2020 17:06
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 17:06
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:06
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:06
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:06
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	24-Nov-2020 17:06
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	24-Nov-2020 17:06
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:06
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:06

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Sample ID: Trip Blank-201111
Collection Date: 11-Nov-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20110674
Lab ID:HS20110674-08
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Ethylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	24-Nov-2020 17:06
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:06
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	24-Nov-2020 17:06
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	24-Nov-2020 17:06
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	24-Nov-2020 17:06
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	24-Nov-2020 17:06
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:06
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:06
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:06
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	24-Nov-2020 17:06
Surr: 1,2-Dichloroethane-d4	*86.5*			**0**	*81-118*	*%REC*	*1*	*24-Nov-2020 17:06*
Surr: 4-Bromofluorobenzene	*89.5*			**0**	*85-114*	*%REC*	*1*	*24-Nov-2020 17:06*
Surr: Dibromofluoromethane	*90.1*			**0**	*80-119*	*%REC*	*1*	*24-Nov-2020 17:06*
Surr: Toluene-d8	*103*			**0**	*89-112*	*%REC*	*1*	*24-Nov-2020 17:06*

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

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R372810 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS20110674-01	35BWW08-201111	11 Nov 2020 07:10			13 Nov 2020 12:59	1
HS20110674-02	35BWW08-201111-FD	11 Nov 2020 07:10			13 Nov 2020 13:17	1
HS20110674-03	35BWW12-201111	11 Nov 2020 08:05			13 Nov 2020 13:35	1
Batch ID: R373373 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS20110674-01	35BWW08-201111	11 Nov 2020 07:10			24 Nov 2020 17:27	1
HS20110674-02	35BWW08-201111-FD	11 Nov 2020 07:10			24 Nov 2020 17:48	1
HS20110674-03	35BWW12-201111	11 Nov 2020 08:05			24 Nov 2020 13:35	1
HS20110674-04	35BWW07-201111	11 Nov 2020 09:05			24 Nov 2020 18:09	1
HS20110674-05	35BWW13-201111	11 Nov 2020 09:45			24 Nov 2020 18:30	1
HS20110674-06	35BWW16-201111	11 Nov 2020 10:30			24 Nov 2020 18:51	1
HS20110674-07	35BWW17-201111	11 Nov 2020 11:10			24 Nov 2020 19:12	1
HS20110674-08	Trip Blank-201111	11 Nov 2020 00:00			24 Nov 2020 17:06	1
Batch ID: R373534 (0)	**Test Name :** SUBCONTRACT ANALYSIS - RSK				**Matrix:** Groundwater	
HS20110674-01	35BWW08-201111	11 Nov 2020 07:10			29 Nov 2020 11:41	1
HS20110674-02	35BWW08-201111-FD	11 Nov 2020 07:10			29 Nov 2020 11:41	1
HS20110674-03	35BWW12-201111	11 Nov 2020 08:05			29 Nov 2020 11:41	1
Batch ID: R373645 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Groundwater	
HS20110674-01	35BWW08-201111	11 Nov 2020 07:10			01 Dec 2020 09:19	1
HS20110674-02	35BWW08-201111-FD	11 Nov 2020 07:10			01 Dec 2020 09:19	1
HS20110674-03	35BWW12-201111	11 Nov 2020 08:05			01 Dec 2020 09:19	1

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R373373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201124** Units: **UG/L** Analysis Date: **24-Nov-2020 12:53**
Client ID: Run ID: **VOA6_373373** SeqNo: **5850864** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	0.50	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R373373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201124** Units: **UG/L** Analysis Date: **24-Nov-2020 12:53**
Client ID: Run ID: **VOA6_373373** SeqNo: **5850864** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	1.0	1.0								U
Carbon disulfide	2.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	0.50	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	0.50	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	0.50	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	0.50	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	0.50	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	0.50	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	0.50	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*43.29*	*1.0*	*50*	*0*	*86.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*44.06*	*1.0*	*50*	*0*	*88.1*	*85 - 114*				
Surr: Dibromofluoromethane	*44.69*	*1.0*	*50*	*0*	*89.4*	*80 - 119*				

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R373373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201124** Units: **UG/L** Analysis Date: **24-Nov-2020 12:53**
Client ID: Run ID: **VOA6_373373** SeqNo: **5850864** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*51.44*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R373373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201124** Units: **UG/L** Analysis Date: **24-Nov-2020 11:50**
Client ID: Run ID: **VOA6_373373** SeqNo: **5850863** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.25	1.0	20	0	96.2	78 - 124				
1,1,1-Trichloroethane	19.91	1.0	20	0	99.6	74 - 131				
1,1,2,2-Tetrachloroethane	23.07	1.0	20	0	115	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	16.91	1.0	20	0	84.6	70 - 136				
1,1,2-Trichloroethane	20.73	1.0	20	0	104	80 - 119				
1,1-Dichloroethane	19.52	1.0	20	0	97.6	77 - 125				
1,1-Dichloroethene	18.84	1.0	20	0	94.2	71 - 131				
1,1-Dichloropropene	19.4	1.0	20	0	97.0	78 - 125				
1,2,3-Trichlorobenzene	28.45	1.0	20	0	142	69 - 129				S
1,2,3-Trichloropropane	22.94	1.0	20	0	115	73 - 122				
1,2,4-Trichlorobenzene	23.29	1.0	20	0	116	69 - 130				
1,2,4-Trimethylbenzene	19.11	1.0	20	0	95.5	76 - 124				
1,2-Dibromo-3-chloropropane	27.54	1.0	20	0	138	62 - 128				S
1,2-Dibromoethane	21.11	1.0	20	0	106	77 - 121				
1,2-Dichlorobenzene	20.07	1.0	20	0	100	80 - 119				
1,2-Dichloroethane	20.48	1.0	20	0	102	73 - 128				
1,2-Dichloropropane	19.5	1.0	20	0	97.5	78 - 122				
1,3,5-Trimethylbenzene	17.84	1.0	20	0	89.2	75 - 124				
1,3-Dichlorobenzene	20.11	1.0	20	0	101	80 - 119				
1,3-Dichloropropane	21.48	1.0	20	0	107	80 - 119				
1,4-Dichlorobenzene	20.29	1.0	20	0	101	79 - 118				
2,2-Dichloropropane	18.92	1.0	20	0	94.6	60 - 139				
2-Butanone	46.81	2.0	40	0	117	56 - 143				
2-Chlorotoluene	19.26	1.0	20	0	96.3	79 - 122				
2-Hexanone	44.77	2.0	40	0	112	57 - 139				
4-Chlorotoluene	18.11	1.0	20	0	90.6	78 - 122				
4-Isopropyltoluene	17.65	1.0	20	0	88.2	77 - 127				
4-Methyl-2-pentanone	42.29	2.0	40	0	106	67 - 130				
Acetone	55.38	2.0	40	0	138	39 - 160				
Benzene	20.13	1.0	20	0	101	79 - 120				
Bromobenzene	20.56	1.0	20	0	103	80 - 120				
Bromochloromethane	19.94	1.0	20	0	99.7	78 - 123				
Bromodichloromethane	20.39	1.0	20	0	102	79 - 125				
Bromoform	20.41	1.0	20	0	102	66 - 130				

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R373373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201124** Units: **UG/L** Analysis Date: **24-Nov-2020 11:50**
Client ID: Run ID: **VOA6_373373** SeqNo: **5850863** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	21.82	1.0	20	0	109	53 - 141				
Carbon disulfide	37.63	2.0	40	0	94.1	64 - 133				
Carbon tetrachloride	18.37	1.0	20	0	91.9	72 - 136				
Chlorobenzene	18.4	1.0	20	0	92.0	82 - 118				
Chloroethane	19.49	1.0	20	0	97.4	60 - 138				
Chloroform	18.8	1.0	20	0	94.0	79 - 124				
Chloromethane	18.15	1.0	20	0	90.7	50 - 139				
cis-1,2-Dichloroethene	18.75	1.0	20	0	93.8	78 - 123				
cis-1,3-Dichloropropene	20.39	1.0	20	0	102	75 - 124				
Dibromochloromethane	21.74	1.0	20	0	109	74 - 126				
Dibromomethane	20.07	1.0	20	0	100	79 - 123				
Dichlorodifluoromethane	19.07	1.0	20	0	95.4	32 - 152				
Ethylbenzene	18.46	1.0	20	0	92.3	79 - 121				
Hexachlorobutadiene	24.39	1.0	20	0	122	66 - 134				
Isopropylbenzene	17.23	1.0	20	0	86.1	72 - 131				
m,p-Xylene	36.58	2.0	40	0	91.4	80 - 121				
Methylene chloride	19.23	2.0	20	0	96.1	74 - 124				
Naphthalene	28.68	1.0	20	0	143	61 - 128				S
n-Butylbenzene	18.44	1.0	20	0	92.2	75 - 128				
n-Propylbenzene	18.22	1.0	20	0	91.1	76 - 126				
o-Xylene	18.39	1.0	20	0	91.9	78 - 122				
sec-Butylbenzene	17.17	1.0	20	0	85.9	77 - 126				
Styrene	18.2	1.0	20	0	91.0	78 - 123				
tert-Butylbenzene	18.27	1.0	20	0	91.3	78 - 124				
Tetrachloroethene	19.2	1.0	20	0	96.0	74 - 129				
Toluene	19.39	1.0	20	0	96.9	80 - 121				
trans-1,2-Dichloroethene	20.2	1.0	20	0	101	75 - 124				
trans-1,3-Dichloropropene	21.1	1.0	20	0	106	73 - 127				
Trichloroethene	19.91	1.0	20	0	99.6	79 - 123				
Trichlorofluoromethane	18.45	1.0	20	0	92.2	65 - 141				
Vinyl chloride	18.29	1.0	20	0	91.5	58 - 137				
Surr: 1,2-Dichloroethane-d4	*50.55*	*1.0*	*50*	*0*	*101*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.64*	*1.0*	*50*	*0*	*97.3*	*85 - 114*				
Surr: Dibromofluoromethane	*50.36*	*1.0*	*50*	*0*	*101*	*80 - 119*				

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R373373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201124** Units: **UG/L** Analysis Date: **24-Nov-2020 11:50**
Client ID: Run ID: **VOA6_373373** SeqNo: **5850863** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*50.28*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R373373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20110674-03MS** Units: **UG/L** Analysis Date: **24-Nov-2020 14:39**
Client ID: **35BWW12-201111** Run ID: **VOA6_373373** SeqNo: **5850867** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.95	1.0	20	0	94.8	78 - 124				
1,1,1-Trichloroethane	17.94	1.0	20	0	89.7	74 - 131				
1,1,2,2-Tetrachloroethane	21.24	1.0	20	0	106	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	18.3	1.0	20	0	91.5	70 - 136				
1,1,2-Trichloroethane	18.49	1.0	20	0	92.5	80 - 119				
1,1-Dichloroethane	17.24	1.0	20	0	86.2	77 - 125				
1,1-Dichloroethene	16.74	1.0	20	0	83.7	71 - 131				
1,1-Dichloropropene	18.46	1.0	20	0	92.3	78 - 125				
1,2,3-Trichlorobenzene	22.75	1.0	20	0	114	69 - 129				
1,2,3-Trichloropropane	20.52	1.0	20	0	103	73 - 122				
1,2,4-Trichlorobenzene	21.33	1.0	20	0	107	69 - 130				
1,2,4-Trimethylbenzene	21.86	1.0	20	0	109	76 - 124				
1,2-Dibromo-3-chloropropane	22.39	1.0	20	0	112	62 - 128				
1,2-Dibromoethane	18.29	1.0	20	0	91.4	77 - 121				
1,2-Dichlorobenzene	19.86	1.0	20	0	99.3	80 - 119				
1,2-Dichloroethane	18.22	1.0	20	0	91.1	73 - 128				
1,2-Dichloropropane	17.59	1.0	20	0	88.0	78 - 122				
1,3,5-Trimethylbenzene	19.49	1.0	20	0	97.5	75 - 124				
1,3-Dichlorobenzene	20.6	1.0	20	0	103	80 - 119				
1,3-Dichloropropane	19.47	1.0	20	0	97.3	80 - 119				
1,4-Dichlorobenzene	21.34	1.0	20	0	107	79 - 118				
2,2-Dichloropropane	17.28	1.0	20	0	86.4	60 - 139				
2-Butanone	31.5	2.0	40	0	78.8	56 - 143				
2-Chlorotoluene	20.33	1.0	20	0	102	79 - 122				
2-Hexanone	37.17	2.0	40	0	92.9	57 - 139				
4-Chlorotoluene	19.47	1.0	20	0	97.3	78 - 122				
4-Isopropyltoluene	21.22	1.0	20	0	106	77 - 127				
4-Methyl-2-pentanone	36.82	2.0	40	0	92.1	67 - 130				
Acetone	27.97	2.0	40	0	69.9	39 - 160				
Benzene	18.66	1.0	20	0	93.3	79 - 120				
Bromobenzene	21.61	1.0	20	0	108	80 - 120				
Bromochloromethane	16.08	1.0	20	0	80.4	78 - 123				
Bromodichloromethane	18.69	1.0	20	0	93.5	79 - 125				
Bromoform	18.55	1.0	20	0	92.7	66 - 130				

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R373373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20110674-03MS** Units: **UG/L** Analysis Date: **24-Nov-2020 14:39**
Client ID: **35BWW12-201111** Run ID: **VOA6_373373** SeqNo: **5850867** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	18.64	1.0	20	0	93.2	53 - 141				
Carbon disulfide	31.29	2.0	40	0	78.2	64 - 133				
Carbon tetrachloride	19.16	1.0	20	0	95.8	72 - 136				
Chlorobenzene	18.4	1.0	20	0	92.0	82 - 118				
Chloroethane	16.35	1.0	20	0	81.8	60 - 138				
Chloroform	16.96	1.0	20	0	84.8	79 - 124				
Chloromethane	14.72	1.0	20	0	73.6	50 - 139				
cis-1,2-Dichloroethene	16.76	1.0	20	0	83.8	78 - 123				
cis-1,3-Dichloropropene	17.34	1.0	20	0	86.7	75 - 124				
Dibromochloromethane	19.1	1.0	20	0	95.5	74 - 126				
Dibromomethane	18.71	1.0	20	0	93.5	79 - 123				
Dichlorodifluoromethane	13.47	1.0	20	0	67.4	32 - 152				
Ethylbenzene	19.68	1.0	20	0	98.4	79 - 121				
Hexachlorobutadiene	19.28	1.0	20	0	96.4	66 - 134				
Isopropylbenzene	19.77	1.0	20	0	98.8	72 - 131				
m,p-Xylene	37.01	2.0	40	0	92.5	80 - 121				
Methylene chloride	15.69	2.0	20	0	78.4	74 - 124				
Naphthalene	21.96	1.0	20	0	110	61 - 128				
n-Butylbenzene	20.03	1.0	20	0	100	75 - 128				
n-Propylbenzene	21.15	1.0	20	0	106	76 - 126				
o-Xylene	19.17	1.0	20	0	95.8	78 - 122				
sec-Butylbenzene	20.42	1.0	20	0	102	77 - 126				
Styrene	18.32	1.0	20	0	91.6	78 - 123				
tert-Butylbenzene	20.52	1.0	20	0	103	78 - 124				
Tetrachloroethene	23.46	1.0	20	3.15	102	74 - 129				
Toluene	20.11	1.0	20	0	101	80 - 121				
trans-1,2-Dichloroethene	16.66	1.0	20	0	83.3	75 - 124				
trans-1,3-Dichloropropene	17.93	1.0	20	0	89.6	73 - 127				
Trichloroethene	19.02	1.0	20	0	95.1	79 - 123				
Trichlorofluoromethane	16.92	1.0	20	0	84.6	65 - 141				
Vinyl chloride	15.37	1.0	20	0	76.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.07*	*1.0*	*50*	*0*	*90.1*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46.62*	*1.0*	*50*	*0*	*93.2*	*85 - 114*				
Surr: Dibromofluoromethane	*45.29*	*1.0*	*50*	*0*	*90.6*	*80 - 119*				

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R373373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20110674-03MS** Units: **UG/L** Analysis Date: **24-Nov-2020 14:39**
Client ID: **35BWW12-201111** Run ID: **VOA6_373373** SeqNo: **5850867** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*51.08*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R373373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20110674-03MSD** Units: **UG/L** Analysis Date: **24-Nov-2020 15:00**
Client ID: **35BWW12-201111** Run ID: **VOA6_373373** SeqNo: **5850868** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.7	1.0	20	0	93.5	78 - 124	18.95	1.37	20	
1,1,1-Trichloroethane	17.95	1.0	20	0	89.8	74 - 131	17.94	0.057	20	
1,1,2,2-Tetrachloroethane	21.65	1.0	20	0	108	71 - 121	21.24	1.91	20	
1,1,2-Trichlor-1,2,2-trifluoroethane	17.35	1.0	20	0	86.8	70 - 136	18.3	5.33	20	
1,1,2-Trichloroethane	18.87	1.0	20	0	94.3	80 - 119	18.49	2	20	
1,1-Dichloroethane	16.97	1.0	20	0	84.8	77 - 125	17.24	1.59	20	
1,1-Dichloroethene	16.48	1.0	20	0	82.4	71 - 131	16.74	1.57	20	
1,1-Dichloropropene	18.64	1.0	20	0	93.2	78 - 125	18.46	0.986	20	
1,2,3-Trichlorobenzene	26.8	1.0	20	0	134	69 - 129	22.75	16.4	20	S
1,2,3-Trichloropropane	20.89	1.0	20	0	104	73 - 122	20.52	1.77	20	
1,2,4-Trichlorobenzene	24.42	1.0	20	0	122	69 - 130	21.33	13.5	20	
1,2,4-Trimethylbenzene	20.75	1.0	20	0	104	76 - 124	21.86	5.22	20	
1,2-Dibromo-3-chloropropane	24.06	1.0	20	0	120	62 - 128	22.39	7.19	20	
1,2-Dibromoethane	19.45	1.0	20	0	97.2	77 - 121	18.29	6.14	20	
1,2-Dichlorobenzene	19.85	1.0	20	0	99.2	80 - 119	19.86	0.0863	20	
1,2-Dichloroethane	18.44	1.0	20	0	92.2	73 - 128	18.22	1.19	20	
1,2-Dichloropropane	17.17	1.0	20	0	85.8	78 - 122	17.59	2.45	20	
1,3,5-Trimethylbenzene	19.36	1.0	20	0	96.8	75 - 124	19.49	0.698	20	
1,3-Dichlorobenzene	20.35	1.0	20	0	102	80 - 119	20.6	1.19	20	
1,3-Dichloropropane	19.39	1.0	20	0	97.0	80 - 119	19.47	0.374	20	
1,4-Dichlorobenzene	21.23	1.0	20	0	106	79 - 118	21.34	0.496	20	
2,2-Dichloropropane	16.47	1.0	20	0	82.4	60 - 139	17.28	4.75	20	
2-Butanone	31.88	2.0	40	0	79.7	56 - 143	31.5	1.19	20	
2-Chlorotoluene	20.22	1.0	20	0	101	79 - 122	20.33	0.561	20	
2-Hexanone	38.94	2.0	40	0	97.4	57 - 139	37.17	4.65	20	
4-Chlorotoluene	18.7	1.0	20	0	93.5	78 - 122	19.47	4.02	20	
4-Isopropyltoluene	20.59	1.0	20	0	103	77 - 127	21.22	3.02	20	
4-Methyl-2-pentanone	40.32	2.0	40	0	101	67 - 130	36.82	9.06	20	
Acetone	28.87	2.0	40	0	72.2	39 - 160	27.97	3.17	20	
Benzene	18.4	1.0	20	0	92.0	79 - 120	18.66	1.42	20	
Bromobenzene	21.23	1.0	20	0	106	80 - 120	21.61	1.8	20	
Bromochloromethane	16.05	1.0	20	0	80.2	78 - 123	16.08	0.21	20	
Bromodichloromethane	18.19	1.0	20	0	91.0	79 - 125	18.69	2.71	20	
Bromoform	20.11	1.0	20	0	101	66 - 130	18.55	8.1	20	

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R373373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20110674-03MSD** Units: **UG/L** Analysis Date: **24-Nov-2020 15:00**
Client ID: **35BWW12-201111** Run ID: **VOA6_373373** SeqNo: **5850868** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Bromomethane	17.38	1.0	20	0	86.9	53 - 141	18.64	7.02	20	
Carbon disulfide	29.73	2.0	40	0	74.3	64 - 133	31.29	5.11	20	
Carbon tetrachloride	18.7	1.0	20	0	93.5	72 - 136	19.16	2.42	20	
Chlorobenzene	18.76	1.0	20	0	93.8	82 - 118	18.4	1.93	20	
Chloroethane	15.62	1.0	20	0	78.1	60 - 138	16.35	4.58	20	
Chloroform	16.51	1.0	20	0	82.5	79 - 124	16.96	2.67	20	
Chloromethane	14.24	1.0	20	0	71.2	50 - 139	14.72	3.32	20	
cis-1,2-Dichloroethene	16.7	1.0	20	0	83.5	78 - 123	16.76	0.391	20	
cis-1,3-Dichloropropene	16.85	1.0	20	0	84.3	75 - 124	17.34	2.84	20	
Dibromochloromethane	19.3	1.0	20	0	96.5	74 - 126	19.1	1.08	20	
Dibromomethane	18.17	1.0	20	0	90.9	79 - 123	18.71	2.9	20	
Dichlorodifluoromethane	13.38	1.0	20	0	66.9	32 - 152	13.47	0.675	20	
Ethylbenzene	20.29	1.0	20	0	101	79 - 121	19.68	3.06	20	
Hexachlorobutadiene	20.95	1.0	20	0	105	66 - 134	19.28	8.33	20	
Isopropylbenzene	20.07	1.0	20	0	100	72 - 131	19.77	1.54	20	
m,p-Xylene	37.17	2.0	40	0	92.9	80 - 121	37.01	0.431	20	
Methylene chloride	16.08	2.0	20	0	80.4	74 - 124	15.69	2.48	20	
Naphthalene	26.5	1.0	20	0	133	61 - 128	21.96	18.7	20	S
n-Butylbenzene	19.91	1.0	20	0	99.6	75 - 128	20.03	0.609	20	
n-Propylbenzene	20.33	1.0	20	0	102	76 - 126	21.15	3.95	20	
o-Xylene	18.81	1.0	20	0	94.0	78 - 122	19.17	1.88	20	
sec-Butylbenzene	19.81	1.0	20	0	99.0	77 - 126	20.42	3.05	20	
Styrene	18.33	1.0	20	0	91.6	78 - 123	18.32	0.0497	20	
tert-Butylbenzene	19.98	1.0	20	0	99.9	78 - 124	20.52	2.68	20	
Tetrachloroethene	23.41	1.0	20	3.15	101	74 - 129	23.46	0.236	20	
Toluene	19.97	1.0	20	0	99.9	80 - 121	20.11	0.658	20	
trans-1,2-Dichloroethene	16.4	1.0	20	0	82.0	75 - 124	16.66	1.57	20	
trans-1,3-Dichloropropene	18.27	1.0	20	0	91.3	73 - 127	17.93	1.9	20	
Trichloroethene	18.55	1.0	20	0	92.8	79 - 123	19.02	2.5	20	
Trichlorofluoromethane	16.52	1.0	20	0	82.6	65 - 141	16.92	2.39	20	
Vinyl chloride	14.59	1.0	20	0	72.9	58 - 137	15.37	5.25	20	
Surr: 1,2-Dichloroethane-d4	*45.06*	*1.0*	*50*	*0*	*90.1*	*81 - 118*	*45.07*	*0.0411*	*20*	
Surr: 4-Bromofluorobenzene	*46.47*	*1.0*	*50*	*0*	*92.9*	*85 - 114*	*46.62*	*0.324*	*20*	
Surr: Dibromofluoromethane	*45.29*	*1.0*	*50*	*0*	*90.6*	*80 - 119*	*45.29*	*0.00174*	*20*	

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R373373 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20110674-03MSD** Units: **UG/L** Analysis Date: **24-Nov-2020 15:00**
Client ID: **35BWW12-201111** Run ID: **VOA6_373373** SeqNo: **5850868** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*51.65*	*1.0*	*50*	*0*	*103*	*89 - 112*	*51.08*	*1.13*	*20*	

The following samples were analyzed in this batch:

HS20110674-01	HS20110674-02	HS20110674-03	HS20110674-04
HS20110674-05	HS20110674-06	HS20110674-07	HS20110674-08

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R372810 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-111220** Units: **mg/L** Analysis Date: **14-Nov-2020 23:54**
Client ID: Run ID: **ICS-Integrion_372810** SeqNo: **5836846** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-111220** Units: **mg/L** Analysis Date: **15-Nov-2020 00:12**
Client ID: Run ID: **ICS-Integrion_372810** SeqNo: **5836847** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20	0.500	20	0	100	80 - 120				
Nitrogen, Nitrate (As N)	4.012	0.100	4	0	100	80 - 120				
Sulfate	20.1	0.500	20	0	100	80 - 120				

MS Sample ID: **HS20110674-03MS** Units: **mg/L** Analysis Date: **14-Nov-2020 09:27**
Client ID: **35BWW12-201111** Run ID: **ICS-Integrion_372810** SeqNo: **5836898** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	16.29	0.500	10	6.252	100	80 - 120				
Nitrogen, Nitrate (As N)	2.048	0.100	2	0.0318	101	80 - 120				
Sulfate	45.29	0.500	10	35.85	94.4	80 - 120				

MS Sample ID: **HS20110671-12MS** Units: **mg/L** Analysis Date: **13-Nov-2020 22:19**
Client ID: Run ID: **ICS-Integrion_372810** SeqNo: **5836840** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	27.39	0.500	10	17.58	98.1	80 - 120				
Nitrogen, Nitrate (As N)	2.615	0.100	2	0.6795	96.8	80 - 120				
Sulfate	84.69	0.500	10	76.52	81.7	80 - 120				O

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: HS20110674

QC BATCH REPORT

Batch ID: R372810 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

MSD Sample ID: **HS20110674-03MSD** Units: **mg/L** Analysis Date: **14-Nov-2020 09:45**
Client ID: **35BWW12-201111** Run ID: **ICS-Integrion_372810** SeqNo: **5836899** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	16.2	0.500	10	6.252	99.4	80 - 120	16.29	0.566	20	
Nitrogen, Nitrate (As N)	2.036	0.100	2	0.0318	100	80 - 120	2.048	0.592	20	
Sulfate	45.05	0.500	10	35.85	92.0	80 - 120	45.29	0.519	20	

MSD Sample ID: **HS20110671-12MSD** Units: **mg/L** Analysis Date: **13-Nov-2020 22:37**
Client ID: Run ID: **ICS-Integrion_372810** SeqNo: **5836841** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	27.64	0.500	10	17.58	101	80 - 120	27.39	0.883	20	
Nitrogen, Nitrate (As N)	2.648	0.100	2	0.6795	98.4	80 - 120	2.615	1.24	20	
Sulfate	86.42	0.500	10	76.52	99.0	80 - 120	84.69	2.02	20	O

The following samples were analyzed in this batch: HS20110674-01 HS20110674-02 HS20110674-03

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
WorkOrder: **HS20110674**

QUALIFIERS, ACRONYMS, UNITS

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

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 01-Dec-20

Client: Aptim Environmental & Infrastucture, Inc.
Project: Longhorn Army Ammunition Plant 37
Work Order: HS20110674

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20110674-01	35BWW08-201111	Login	11/13/2020 10:58:20 AM	PMG	WET280
HS20110674-01	35BWW08-201111	Login	11/13/2020 10:58:20 AM	PMG	VOA072
HS20110674-01	35BWW08-201111	Login	11/13/2020 10:58:20 AM	PMG	Sub
HS20110674-01	35BWW08-201111	Login	11/13/2020 10:58:20 AM	PMG	Sub

ALS Houston, US Date: 01-Dec-20

Sample Receipt Checklist

Work Order ID: HS20110674 **Date/Time Received:** **12-Nov-2020 10:15**

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

Completed By:	/S/ Paresh M. Giga	13-Nov-2020 11:08	**Reviewed by:**	/S/ RJ Modashia	16-Nov-2020 10:08
	eSignature	Date/Time		eSignature	Date/Time

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

Shipping container/cooler in good condition?	Yes	☑	No	☐	Not Present	☐
Custody seals intact on shipping container/cooler?	Yes	☑	No	☐	Not Present	☐
Custody seals intact on sample bottles?	Yes	☐	No	☐	Not Present	☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes	☐	No	☐	Not Present	☑
Chain of custody present?	Yes	☑	No	☐	2 Page(s)	
Chain of custody signed when relinquished and received?	Yes	☑	No	☐	COC IDs:None	
Samplers name present on COC?	Yes	☐	No	☑		
Chain of custody agrees with sample labels?	Yes	☑	No	☐		
Samples in proper container/bottle?	Yes	☑	No	☐		
Sample containers intact?	Yes	☐	No	☑		
Sufficient sample volume for indicated test?	Yes	☑	No	☐		
All samples received within holding time?	Yes	☑	No	☐		
Container/Temp Blank temperature in compliance?	Yes	☑	No	☐		

Temperature(s)/Thermometer(s):	0.3C U/c	IR25
Cooler(s)/Kit(s):	4968	
Date/Time sample(s) sent to storage:	11/12/2020 18:00	

Water - VOA vials have zero headspace?	Yes	☑	No	☐	No VOA vials submitted	☐
Water - pH acceptable upon receipt?	Yes	☐	No	☐	N/A	☑
pH adjusted?	Yes	☐	No	☐	N/A	☑

pH adjusted by:

Login Notes: Nitrates missed by login
Proceed per C/G.
1 x Trip Blank vial received broken

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 37 November 2020

Prepared By: Scott Beesinger

P.O. Number

HS20110674
Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant 37

Field Sample I.D. / Time	Sample Matrix	Date /	MS / MSD	No. OF CONTAINERS	Analyses: VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Carbon Dioxide by RSK 175	Anions (Chloride, Sulfate, and Nitrate) by SW9056	Remarks (Preservatives, etc.)	Lab I.D.#
35BWW08-201111	WG	11/4/20 0710		12	X	X	X	X	X		
35BWW08-201111-FD	WG	11/4/20 0710		12	X	X	X	X	X		
35BWW12-201111	WG	11/4/20 0805		12	X	X	X	X	X		
35BWW12-201111-MS	WG	11/4/20 0805		12	X	X	X	X	X		
35BWW12-201111-MSD	WG	11/4/20 0805		12	X	X	X	X	X		
35BWW07-201111	WG	11/11/20 0905		3	X						
35BWW13-201111	WG	11/11/20 0945		3	X						
35BWW16-201111	WG	11/11/20 1030		3	X						

Additional Remarks: Standard TAT on all parameters. Please email results to Susan.Huang@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	11/11/20	1430	JM PM	11-12-20	10:15						

For Lab Use Only

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

Remarks:

4968 0.3C IR25 CFO

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

CHAIN OF CUSTODY

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

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

Project No.
501032

Job:
LHAAP 37 November 2020

Prepared By:
Scott Beesinger

P.O. Number

HS20110674
Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant 37

Field Sample I.D. / Time	Sample Matrix	Date /	MS / MSD	No. OF CONTAINERS	VOC by SW 8260B	TOC by SM5310C	MEE by RSK 175	Carbon Dioxide by RSK 175	Anions (Chloride, Sulfate, and Nitrate) by SW9056					Remarks (Preservatives, etc.)	Lab I.D.#
					Analyses										
35BWW17-20111	WG	11/11/20/1110		3	X										
TRIP BLANK-20111	W	11/11/20		2	X										

Additional Remarks: Standard TAT on all parameters. Please email results to Susan.Huang@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	11/11/20	1430	JM PM	11/12/20	10:15						

For Lab Use Only

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

Remarks:

1146 03C 1R25 CF0

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

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

4968

CUSTODY SEAL

Date: 11/11/20 Time: 1430
Name: Scott Beesinger
Company: BAMA

Seal Broken By: SM
Date: 11/12/20

4968 NOV 12 20

103 – 1 10.30 A 9513 11.12

Must Deliver Next Business Day
Time and Tempature Sensitive!

4968

ORIGIN ID:SGRA (903) 930-6193
SCOTT BEESINGER
APTIM
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 23OCT20
ACTWGT: 1.00 LB MAN
CAD: 3001130/CAFE3211
DIMS: 18x16x13 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: LHAAP-37-BO 74610-RJ

RMA:

FedEx Express

FedEx 0221 1891 8881 9513

THU 12 NOV AA
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

FID: 5090757 11Nov7078 CGCA 56005/BA09/05A2

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
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www.alsglobal.com

November 30, 2020

Analytical Report for Service Request No: K2010645

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

RE: HS20110674

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 17, 2020
For your reference, these analyses have been assigned our service request number **K2010645.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
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www.alsglobal.com

Table of Contents

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20110674
Sample Matrix: Ground Water

Service Request: K2010645
Date Received: 11/17/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

Three ground water samples were received for analysis at ALS Environmental on 11/17/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 11/30/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

K2010645

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:** **15161**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110674
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110674-01**	**35BWW08-201111**	**Groundwater**	**11 Nov 2020 07:10**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			30 Nov 2020
2.	**HS20110674-02**	**35BWW08-201111-FD**	**Groundwater**	**11 Nov 2020 07:10**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			30 Nov 2020
3.	**HS20110674-03**	**35BWW12-201111**	**Groundwater**	**11 Nov 2020 08:05**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			30 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.
HS20110674-03 = MS/MSD

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 11/16/2020 1800

Received By: _____ Date/Time: 11/17/2020 1000

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

PM KL

Cooler Receipt and Preservation Form

Client ALS HOUSTON Service Request K20 10645

Received: NOV 17 2020 Opened: NOV 17 2020 By: CG Unloaded: NOV 17 2020 By: CG

1. Samples were received via? *USPS* ~~*Fed Ex*~~ *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
0.6	—	IR01	15161	—	—	1891 8882 8460	

6. Packing material: *Inserts* (*Baggies*) ~~*Bubble Wrap*~~ *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2010645
Project:	HS20110674	**Date Collected:**	11/11/20
Sample Matrix:	Ground Water	**Date Received:**	11/17/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
35BWW08-201111	K2010645-001	**0.99**	0.50	0.20	0.07	1	11/19/20 17:48	
35BWW08-201111-FD	K2010645-002	**0.74**	0.50	0.20	0.07	1	11/19/20 17:48	
35BWW12-201111	K2010645-003	**0.93**	0.50	0.20	0.07	1	11/19/20 17:48	
Method Blank	K2010645-MB	ND U	0.50	0.20	0.07	1	11/19/20 17:48	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010645
Project	HS20110674	**Date Collected:**	11/11/20
Sample Matrix:	Ground Water	**Date Received:**	11/17/20
		Date Analyzed:	11/19/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	35BWW12-201111	**Units:**	mg/L
Lab Code:	K2010645-003	**Basis:**	NA

Analyte Name	Analysis Method	LOQ	LOD	MDL	Sample Result	Duplicate Sample K2010645-003DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic	SM 5310 C	0.50	0.20	0.07	0.93	0.83	0.882	11 #	10

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

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010645
Project:	HS20110674	**Date Collected:**	11/11/20
Sample Matrix:	Ground Water	**Date Received:**	11/17/20
		Date Analyzed:	11/19/20
		Date Extracted:	NA

Matrix Spike Summary
Carbon, Total Organic

Sample Name:	35BWW12-201111	**Units:**	mg/L
Lab Code:	K2010645-003	**Basis:**	NA
Analysis Method:	SM 5310 C		
Prep Method:	None		

Matrix Spike
K2010645-003MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic	0.93	27.3	25.0	106	83-117

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

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

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

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010645
Project:	HS20110674	**Date Analyzed:**	11/19/20
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	704227

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2010645-LCS	24.3	25.0	97	83-117

LABORATORY REPORT

November 25, 2020

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

RE: HS20110674

Dear RJ:

Enclosed are the results of the samples submitted to our laboratory on November 18, 2020. For your reference, these analyses have been assigned our service request number P2006524.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental



By Hayden Akers at 3:27 pm, Nov 25, 2020

Hayden Akers
Project Manager

Client: ALS Laboratory Group Service Request No: P2006524
Project: HS20110674

CASE NARRATIVE

The samples were received intact under chain of custody on November 18, 2020 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175 as described in laboratory SOP VOA-DISGAS. This analyte is included on the laboratory's NELAP and DoD-ELAP scope of accreditation.

Manual integrations were performed on the following samples and analyte. Refer to the raw data for additional information.

Sample Identification(s)	Analyte(s)
P2006524-001	Carbon Dioxide
P2006524-002	Carbon Dioxide
P2006524-003	Carbon Dioxide
P2006524-003 MS	Carbon Dioxide
P2006524-003 MSD	Carbon Dioxide

The recoveries for carbon dioxide for the matrix spike and its duplicate were outside of the DoD quality control limits. However all quality control parameters were met with the laboratory control sample and its duplicate.

Client: ALS Laboratory Group Service Request No: P2006524
Project: HS20110674

Methane, Ethene and Ethane Analysis

The samples were analyzed for methane, ethene, and ethane using a gas chromatograph equipped with a flame ionization detector (FID). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least two hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (methane, ethene and ethane) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP accreditation.

The recoveries for methane for the matrix spike and its duplicate were outside of the DoD quality control limits. However all quality control parameters were met with the laboratory control sample and its duplicate.

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

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

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-007
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Laboratory Group
Service Request: P2006524
Project ID: HS20110674

Date Received: 11/18/2020
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
35BWW08-201111	P2006524-001	Water	11/11/2020	07:10	X	X
35BWW08-201111-FD	P2006524-002	Water	11/11/2020	07:10	X	X
35BWW12-201111	P2006524-003	Water	11/11/2020	08:05	X	X

P2006524

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:** **15162**

SUBCONTRACT TO:

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065 **Phone:** +1 805 526 7161

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS20110674
TSR: Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110674-01**	**35BWW08-201111**	**Groundwater**	**11 Nov 2020 07:10**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	30 Nov 2020
2.	**HS20110674-02**	**35BWW08-201111-FD**	**Groundwater**	**11 Nov 2020 07:10**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	30 Nov 2020
3.	**HS20110674-03**	**35BWW12-201111**	**Groundwater**	**11 Nov 2020 08:05**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	30 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.
3 x Neat & 3 x HCL vials.
HS20110674-03 = MS/MSD

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 11/16/2020 1800

Received By: _____ Date/Time: 11-17-20 0930 1° COC

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

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2006524

Project: HS20110674

Sample(s) received on: 11/18/2020 Date opened: 11/18/2020 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: ° C Blank Temperature: 1° C	Wet Ice		
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? Cooler lid. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2006524-001.01	40mL VOA NP				A	
P2006524-001.02	40mL VOA NP				A	
P2006524-001.03	40mL VOA NP				A	
P2006524-001.04	40ml VOA HCL		1		A	wh 11/20/20
P2006524-001.05	40ml VOA HCL				A	
P2006524-001.06	40ml VOA HCL				A	
P2006524-002.01	40mL VOA NP				A	
P2006524-002.02	40mL VOA NP				A	
P2006524-002.03	40mL VOA NP				A	
P2006524-002.04	40ml VOA HCL		1		A	wh 11/20/20
P2006524-002.05	40ml VOA HCL				A	
P2006524-002.06	40ml VOA HCL				A	
P2006524-003.01	40mL VOA NP				A	
P2006524-003.02	40mL VOA NP				A	
P2006524-003.03	40mL VOA NP				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2006524

Project: HS20110674

Sample(s) received on: 11/18/2020 Date opened: 11/18/2020 by: ADAVID

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2006524-003.04	40ml VOA HCL		1		A	wh 11/20/20
P2006524-003.05	40ml VOA HCL		1		A	wh 11/20/20
P2006524-003.06	40ml VOA HCL		1		A	wh 11/20/20
P2006524-003.07	40mL VOA NP				A	
P2006524-003.08	40mL VOA NP				A	
P2006524-003.09	40mL VOA NP				A	
P2006524-003.10	40mL VOA NP				A	
P2006524-003.11	40mL VOA NP				A	
P2006524-003.12	40mL VOA NP				A	
P2006524-003.13	40ml VOA HCL				A	
P2006524-003.14	40ml VOA HCL				A	
P2006524-003.15	40ml VOA HCL				A	
P2006524-003.16	40ml VOA HCL				A	
P2006524-003.17	40ml VOA HCL				A	
P2006524-003.18	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW08-201111**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P2006524-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/11/20
Date Received: 11/18/20
Date Analyzed: 11/20/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW08-201111-FD**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P2006524-002

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/11/20
Date Received: 11/18/20
Date Analyzed: 11/20/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW12-201111**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P2006524-003

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/11/20
Date Received: 11/18/20
Date Analyzed: 11/20/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **Method Control Sample**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P201120-MB

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 11/20/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

MATRIX SPIKE / DUPLICATE MATRIX SPIKE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW12-201111**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P2006524-003MS
P2006524-003DMS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/11/20
Date Received: 11/18/20
Date Analyzed: 11/20/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount MS / DMS µg/L	Sample Amount µg/L	Result MS µg/L	Result DMS µg/L	% Recovery MS	% Recovery DMS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	169	ND	120	120	**71**	**71**	73-125	0	30	**N**
74-85-1	Ethene	294	ND	245	251	**83**	**85**	72-133	2	30	
74-84-0	Ethane	317	ND	240	242	**76**	**76**	74-131	0	30	

N = The matrix spike recovery is not within control limits. See case narrative.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P201120-LCS
P201120-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 11/20/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result$_1$ LCS µg/L	Result$_1$ DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	2.89	2.87	**115**	**114**	73-125	0.9	26	
74-85-1	Ethene	4.40	5.23	5.22	**119**	**119**	72-133	0	11	
74-84-0	Ethane	4.72	5.11	5.02	**108**	**106**	74-131	2	10	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Project ID: **HS20110674** ALS Project ID: P2006524

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date(s) Collected: 11/11/20
Date Received: 11/18/20
Date Analyzed: 11/24/20

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
35BWW08-201111	P2006524-001	0.10	**590,000**	1,000	860	370	**E**
35BWW08-201111-FD	P2006524-002	0.10	**470,000**	1,000	860	370	
35BWW12-201111	P2006524-003	0.050	**600,000**	2,000	1,700	740	
Method Control Sample	P201124-MB	0.10	860	1,000	860	370	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
E = Estimated; concentration exceeded calibration range.

ALS ENVIRONMENTAL

MATRIX SPIKE / DUPLICATE MATRIX SPIKE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW12-201111**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P2006524-003MS
P2006524-003DMS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: #######
Date Received: #######
Date Analyzed: #######
Volume(s) Analyzed: 0.050 ml(s)

CAS #	Compound	Spike Amount MS / DMS ug/L	Sample Amount ug/L	Result MS ug/L	Result DMS ug/L	% Recovery MS	% Recovery DMS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	45,800	595,000	653,000	498,000	**127**	**0**	80-122	200	30	**N, R**

N = The matrix spike sample recovery is not within control limits. See case narrative.
R = Duplicate precision not met.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P201124-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 11/24/20
Volume(s) Analyzed: NA ml(s)

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result[1] LCS ug/L	Result[1] DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	19,900	18,700	**87**	**82**	80-122	6	12	

[1] = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

HS20110674 8260_W_DOD Raw Data

ALS WO# HS20110674

MSVOA06 -Logbook

Batch: 42731 **Analyst:** Devak Giga

Date: 11-22-2020 **Reviewer:**

Method: 8260_W **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	11-22-2020 03:22 pm	1.00	0.00 mL	0.00 mL	Y112201.D	Liquid	Y	NA
2	VSTD000.25	ICAL1	11-22-2020 03:43 pm	1.00	5.00 mL	0.00 mL	Y112202.D	Liquid	Y	NA
3	VSTD000.5	ICAL2	11-22-2020 04:25 pm	1.00	5.00 mL	0.00 mL	Y112203.D	Liquid	Y	NA
4	VSTD001	ICAL3	11-22-2020 04:46 pm	1.00	5.00 mL	0.00 mL	Y112204.D	Liquid	Y	NA
5	VSTD002	ICAL4	11-22-2020 05:07 pm	1.00	5.00 mL	0.00 mL	Y112205.D	Liquid	Y	NA
6	VSTD005	ICAL5	11-22-2020 05:28 pm	1.00	5.00 mL	0.00 mL	Y112206.D	Liquid	Y	NA
7	VSTD020	ICAL6	11-22-2020 05:48 pm	1.00	5.00 mL	0.00 mL	Y112207.D	Liquid	Y	NA
8	VSTD050	ICAL7	11-22-2020 06:09 pm	1.00	5.00 mL	0.00 mL	Y112208.D	Liquid	Y	NA
9	VSTD100	ICAL8	11-22-2020 06:30 pm	1.00	5.00 mL	0.00 mL	Y112209.D	Liquid	Y	NA
10	VSTD150	ICAL9	11-22-2020 06:51 pm	1.00	5.00 mL	0.00 mL	Y112210.D	Liquid	Y	NA
11	VSTD200	ICAL	11-22-2020 07:12 pm	1.00	5.00 mL	0.00 mL	Y112211.D	Liquid	Y	NA
12	BLANK	SAMP	11-22-2020 07:33 pm	1.00	5.00 mL	0.00 mL	Y112212.D	Liquid	Y	NA
13	ICV	ICV	11-22-2020 07:54 pm	1.00	5.00 mL	0.00 mL	Y112213.D	Liquid	Y	NA
14	BLANK	SAMP	11-22-2020 08:15 pm	1.00	5.00 mL	0.00 mL	Y112214.D	Liquid	Y	NA
15	BLANK	SAMP	11-22-2020 08:36 pm	1.00	5.00 mL	0.00 mL	Y112215.D	Liquid	Y	NA
16	VLCSW-201122	LCS	11-22-2020 08:57 pm	1.00	5.00 mL	0.00 mL	Y112216.D	Liquid	Y	NA
17	BLANK	SAMP	11-22-2020 09:18 pm	1.00	5.00 mL	0.00 mL	Y112217.D	Liquid	Y	NA
18	VBLKW-201122	MBLK	11-22-2020 09:39 pm	1.00	5.00 mL	0.00 mL	Y112218.D	Liquid	Y	NA
19	HS20110527-04	SAMP	11-22-2020 10:00 pm	1.00	5.00 mL	0.00 mL	Y112219.D	Liquid	Y	NA
20	HS20110527-01	SAMP	11-22-2020 10:21 pm	1.00	5.00 mL	0.00 mL	Y112220.D	Liquid	Y	NA
21	HS20110527-02	SAMP	11-22-2020 10:42 pm	1.00	5.00 mL	0.00 mL	Y112221.D	Liquid	Y	NA
22	HS20110527-03	SAMP	11-22-2020 11:04 pm	1.00	5.00 mL	0.00 mL	Y112222.D	Liquid	Y	NA
23	HS20110527-05	SAMP	11-22-2020 11:25 pm	1.00	5.00 mL	0.00 mL	Y112223.D	Liquid	Y	NA
24	HS20110527-06	SAMP	11-22-2020 11:46 pm	1.00	5.00 mL	0.00 mL	Y112224.D	Liquid	Y	NA
25	HS20110527-07	SAMP	11-23-2020 12:07 am	1.00	5.00 mL	0.00 mL	Y112225.D	Liquid	Y	NA
26	HS20110527-08	SAMP	11-23-2020 12:28 am	1.00	5.00 mL	0.00 mL	Y112226.D	Liquid	Y	NA
27	HS20110527-09	SAMP	11-23-2020 12:49 am	1.00	5.00 mL	0.00 mL	Y112227.D	Liquid	Y	NA
28	HS20110527-10	SAMP	11-23-2020 01:10 am	1.00	5.00 mL	0.00 mL	Y112228.D	Liquid	Y	NA
29	HS20110527-04MS	MS	11-23-2020 01:31 am	1.00	5.00 mL	0.00 mL	Y112229.D	Liquid	Y	NA
30	HS20110527-04MSD	MSD	11-23-2020 01:52 am	1.00	5.00 mL	0.00 mL	Y112230.D	Liquid	Y	NA
31	CCV-END	CCV	11-23-2020 02:13 am	1.00	5.00 mL	0.00 mL	Y112231.D	Liquid	Y	NA
32	BLNK	SAMP	11-23-2020 02:34 am	1.00	5.00 mL	0.00 mL	Y112232.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-55-06
IS ID	31106-55-06
CAL STD ID	31106-55-01/02
BFB ID	31106-*55-06
pH Paper	634-64-10

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110674

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	49.61	99	80-120
trans-1,3-Dichloroprope	50.00	49.96	100	80-120
1,3-Dichlorobenzene	50.00	45.98	92	80-120
2,2-Dichloropropane	50.00	44.82	90	80-120
1,1-Dichloropropene	50.00	46.92	94	80-120
Dibromomethane	50.00	49.46	99	80-120
1,2-Dibromoethane	50.00	47.14	94	80-120
trans-1,2-Dichloroethen	50.00	46.15	92	80-120
1,1,1,2-Tetrachloroetha	50.00	44.49	89	80-120
1,1,1-Trichloroethane	50.00	47.13	94	80-120
1,1,2,2-Tetrachloroetha	50.00	51.73	103	80-120
Toluene	50.00	45.59	91	80-120
1,1,2-Trichloroethane	50.00	47.69	95	80-120
1,1-Dichloroethane	50.00	46.82	94	80-120
1,1-Dichloroethene	50.00	43.78	88	80-120
Trichlorofluoromethane	50.00	42.95	86	80-120
1,2,3-Trichlorobenzene	50.00	59.80	120	80-120
Tetrachloroethene	50.00	43.54	87	80-120
1,2,4-Trichlorobenzene	50.00	55.38	111	80-120
1,2,4-Trimethylbenzene	50.00	45.30	91	80-120
tert-Butylbenzene	50.00	44.82	90	80-120
Trichloroethene	50.00	47.98	96	80-120
1,2-Dichlorobenzene	50.00	47.33	95	80-120
1,2-Dichloroethane	50.00	51.23	102	80-120
1,2-Dichloropropane	50.00	46.38	93	80-120
1,3,5-Trimethylbenzene	50.00	44.86	90	80-120
1,3-Dichloropropane	50.00	49.97	100	80-120
1,4-Dichlorobenzene	50.00	46.20	92	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110674

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Butanone	100.00	92.29	92	80-120
2-Chlorotoluene	50.00	45.05	90	80-120
2-Hexanone	100.00	92.58	92	80-120
4-Chlorotoluene	50.00	45.83	92	80-120
Styrene	50.00	46.71	93	80-120
4-Methyl-2-Pentanone	100.00	94.57	94	80-120
Acetone	100.00	90.56	90	80-120
Benzene	50.00	48.22	96	80-120
Bromobenzene	50.00	48.16	96	80-120
Bromochloromethane	50.00	45.36	91	80-120
Bromodichloromethane	50.00	48.34	97	80-120
Bromoform	50.00	46.18	92	80-120
Bromomethane	50.00	45.34	91	80-120
Carbon Disulfide	100.00	86.79	87	80-120
Carbon Tetrachloride	50.00	47.21	94	80-120
Chlorobenzene	50.00	44.98	90	80-120
Chloroethane	50.00	43.37	87	80-120
Chloroform	50.00	45.54	91	80-120
Chloromethane	50.00	43.35	87	80-120
cis-1,2-Dichloroethene	50.00	44.93	90	80-120
Dibromochloromethane	50.00	51.45	103	80-120
Dichlorodifluoromethane	50.00	41.33	83	80-120
Ethylbenzene	50.00	44.50	89	80-120
Hexachlorobutadiene	50.00	49.41	99	80-120
Isopropylbenzene	50.00	44.05	88	80-120
m,p-Xylenes	100.00	82.01	82	80-120
Methylene Chloride	50.00	46.25	92	80-120
n-Butylbenzene	50.00	41.91	84	80-120

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

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110674

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
n-Propylbenzene	50.00	45.43	91	80-120
Naphthalene	50.00	59.57	119	80-120
o-Xylene	50.00	41.96	84	80-120
sec-Butylbenzene	50.00	45.05	90	80-120
Vinyl Chloride	50.00	43.06	86	80-120
1,2,3-Trichloropropane	50.00	49.25	98	80-120
p-Isopropyltoluene	50.00	43.93	88	80-120
1,2-Dibromo-3-Chloropro	50.00	49.75	100	80-120
Freon TF	50.00	43.27	86	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: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110674

Lab File ID: Y112201 BFB Injection Date: 11/22/20

Instrument ID: VOA6 BFB Injection Time: 1522

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	28.3
75	30.0 - 60.0% of mass 95	58.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	1.2 (1.5)1
174	Greater than 50.0% of mass 95	79.6
175	5.0 - 9.0% of mass 174	6.1 (7.6)1
176	95.0 - 101.0% of mass 174	76.8 (96.4)1
177	5.0 - 9.0% of mass 176	4.6 (5.9)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	Y112202	11/22/20	1543
02	VSTD000.5	VSTD000.5	Y112203	11/22/20	1625
03	VSTD001	VSTD001	Y112204	11/22/20	1646
04	VSTD002	VSTD002	Y112205	11/22/20	1707
05	VSTD005	VSTD005	Y112206	11/22/20	1728
06	VSTD020	VSTD020	Y112207	11/22/20	1748
07	VSTD050	VSTD050	Y112208	11/22/20	1809
08	VSTD100	VSTD100	Y112209	11/22/20	1830
09	VSTD150	VSTD150	Y112210	11/22/20	1851
10	VSTD200	VSTD200	Y112211	11/22/20	1912
11	ICV	ICV	Y112213	11/22/20	1954
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110674

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1912

LAB FILE ID: RF0.25: Y112202 RF0.5: Y112203 RF1: Y112204
RF2: Y112205 RF5: Y112206 RF20: Y112207

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.763	0.546	0.570	0.603	0.626
trans-1,3-Dichloropropene		0.606	0.472	0.486	0.551	0.529
1,3-Dichlorobenzene		1.528	1.810	1.458	1.399	1.450
2,2-Dichloropropane		1.131	1.107	1.044	1.037	0.968
1,1-Dichloropropene		0.529	0.485	0.541	0.487	0.485
Dibromomethane		0.294	0.240	0.259	0.264	0.256
1,2-Dibromoethane		0.431	0.322	0.377	0.362	0.386
trans-1,2-Dichloroethene		0.604	0.584	0.550	0.542	0.564
1,1,1,2-Tetrachloroethane		0.462	0.362	0.350	0.362	0.339
1,1,1-Trichloroethane		0.719	0.933	0.992	1.029	0.993
1,1,2,2-Tetrachloroethane		2074	2422	4021	13385	49795
Toluene		1.570	1.581	1.501	1.512	1.517
1,1,2-Trichloroethane		0.379	0.344	0.334	0.314	0.320
1,1-Dichloroethane		1.393	0.933	1.186	1.183	1.133
1,1-Dichloroethene		1.143	0.944	0.881	0.968	0.920
Trichlorofluoromethane		2.158	2.046	1.863	1.765	1.693
1,2,3-Trichlorobenzene		196	456	837	2811	9456
Tetrachloroethene		0.368	0.306	0.266	0.297	0.287
1,2,4-Trichlorobenzene		0.427	0.476	0.325	0.328	0.368
1,2,4-Trimethylbenzene		3.234	2.677	2.681	2.644	2.789
tert-Butylbenzene		2.520	2.430	2.105	2.163	2.252
Trichloroethene		0.378	0.372	0.302	0.351	0.338
1,2-Dichlorobenzene		1.463	1.304	1.405	1.382	1.361
1,2-Dichloroethane		0.532	0.538	0.526	0.586	0.552
1,2-Dichloropropane		0.482	0.423	0.403	0.378	0.380
1,3,5-Trimethylbenzene		3.673	2.636	2.748	2.642	2.794
1,3-Dichloropropane		0.668	0.550	0.619	0.632	0.609
1,4-Dichlorobenzene		1819	5321	7531	17906	75689
2-Butanone		0.265	0.238	0.184	0.240	0.234
2-Chlorotoluene		3.084	2.470	2.398	2.333	2.356
2-Hexanone		4116	2772	4326	13798	55536
4-Chlorotoluene		3.720	2.590	2.704	2.709	2.849
Styrene		1.320	0.991	0.968	0.989	1.060
4-Methyl-2-Pentanone		6158	3914	7417	22685	82310
Acetone		3440	4436	5270	13349	38625
Benzene		1.485	1.377	1.272	1.364	1.324
Bromobenzene		0.919	0.748	0.794	0.895	0.870
Bromochloromethane		0.340	0.314	0.333	0.384	0.331
Bromodichloromethane		0.649	0.453	0.521	0.512	0.512
Bromoform		838	847	1868	5740	23645
Bromomethane		1988	3745	7308	17502	64649
Carbon Disulfide		2.026	1.780	1.799	1.832	1.756
Carbon Tetrachloride		0.457	0.432	0.399	0.382	0.392
Chlorobenzene		1.164	1.085	0.976	0.994	0.990

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011067

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1912

LAB FILE ID: RF0.25: Y112202 RF0.5: Y112203 RF1: Y112204
RF2: Y112205 RF5: Y112206 RF20: Y112207

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroethane		0.857	0.653	0.794	0.848	0.740
Chloroform		1.512	1.262	1.284	1.215	1.244
Chloromethane		0.950	1.108	0.954	0.945	0.874
cis-1,2-Dichloroethene		0.779	0.737	0.727	0.681	0.682
Dibromochloromethane		0.343	0.328	0.390	0.379	0.396
Dichlorodifluoromethane		1188	2576	5142	11080	46575
Ethylbenzene		0.603	0.560	0.477	0.502	0.506
Hexachlorobutadiene		275	832	1496	3007	14061
Isopropylbenzene		1.883	1.441	1.473	1.469	1.546
m,p-Xylenes		2934	6329	12685	33759	144807
Methylene Chloride		0.846	0.668	0.705	0.587	0.627
n-Butylbenzene		4479	8864	12843	30916	139828
n-Propylbenzene		4.655	4.103	4.027	3.928	4.068
Naphthalene		738	1209	2518	6815	28651
o-Xylene		2162	3459	6359	16651	68365
sec-Butylbenzene		4853	8872	15802	37742	169406
Vinyl Chloride		1.220	1.307	1.222	1.223	1.140
1,2,3-Trichloropropane		0.873	0.795	0.661	0.828	0.794
p-Isopropyltoluene		5121	8283	13477	31739	143079
1,2-Dibromo-3-Chloropropane			0.064	0.066	0.051	0.067
Freon TF		0.987	1.037	0.845	0.874	0.895
4-Bromofluorobenzene		1745	2833	5029	10135	49820
Dibromofluoromethane		1088	2622	3765	9677	44529
Toluene-d8		1.548	1.378	1.293	1.084	1.307
1,2-Dichloroethane-d4		1561	2846	5030	10956	51848

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011067

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1912

LAB FILE ID: RF50: Y112208 RF100: Y112209 RF150: Y112210
RF200: Y112211

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.633	0.651	0.654	0.662
trans-1,3-Dichloropropene	0.539	0.565	0.587	0.579
1,3-Dichlorobenzene	1.399	1.442	1.518	1.530
2,2-Dichloropropane	0.956	1.092	1.074	1.132
1,1-Dichloropropene	0.455	0.495	0.496	0.502
Dibromomethane	0.254	0.262	0.258	0.264
1,2-Dibromoethane	0.377	0.395	0.388	0.402
trans-1,2-Dichloroethene	0.588	0.667	0.686	0.762
1,1,1,2-Tetrachloroethane	0.353	0.387	0.378	0.388
1,1,1-Trichloroethane	1.002	1.126	1.142	1.210
1,1,2,2-Tetrachloroethane	134845	274263	416268	599923
Toluene	1.548	1.734	1.780	1.781
1,1,2-Trichloroethane	0.314	0.316	0.320	0.314
1,1-Dichloroethane	1.153	1.294	1.251	1.328
1,1-Dichloroethene	0.892	0.993	0.949	1.036
Trichlorofluoromethane	1.663	1.933	1.889	1.899
1,2,3-Trichlorobenzene	25528	52660	86282	133285
Tetrachloroethene	0.274	0.322	0.320	0.333
1,2,4-Trichlorobenzene	0.367	0.343	0.376	0.381
1,2,4-Trimethylbenzene	2.600	2.893	2.921	2.966
tert-Butylbenzene	2.134	2.391	2.408	2.454
Trichloroethene	0.332	0.346	0.354	0.358
1,2-Dichlorobenzene	1.339	1.396	1.511	1.573
1,2-Dichloroethane	0.544	0.560	0.565	0.541
1,2-Dichloropropane	0.378	0.383	0.383	0.379
1,3,5-Trimethylbenzene	2.676	2.960	3.194	3.366
1,3-Dichloropropane	0.608	0.624	0.631	0.606
1,4-Dichlorobenzene	204187	485254	753555	1081362
2-Butanone	0.233	0.253	0.256	0.250
2-Chlorotoluene	2.235	2.322	2.439	2.381
2-Hexanone	147583	322138	512600	706390
4-Chlorotoluene	2.754	2.983	3.220	3.410
Styrene	1.083	1.282	1.343	1.397
4-Methyl-2-Pentanone	217806	481706	770447	1057100
Acetone	97000	190183	318811	376097
Benzene	1.315	1.393	1.368	1.392
Bromobenzene	0.835	0.827	0.875	0.839
Bromochloromethane	0.342	0.373	0.365	0.397
Bromodichloromethane	0.522	0.538	0.519	0.539
Bromoform	65866	149375	240352	347273
Bromomethane	151605	329972	546087	
Carbon Disulfide	1.699	1.864	1.948	2.073
Carbon Tetrachloride	0.410	0.466	0.461	0.479
Chlorobenzene	0.967	1.116	1.143	1.184

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011067

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1912

LAB FILE ID: RF50: Y112208 RF100: Y112209 RF150: Y112210
RF200: Y112211

COMPOUND	RF50	RF100	RF150	RF200
Chloroethane	0.736	0.772	0.751	0.820
Chloroform	1.236	1.334	1.295	1.384
Chloromethane	0.828	0.838	0.858	0.905
cis-1,2-Dichloroethene	0.687	0.741	0.756	0.794
Dibromochloromethane	0.403	0.411	0.421	0.418
Dichlorodifluoromethane	121103	288930	448171	619478
Ethylbenzene	0.506	0.565	0.571	0.561
Hexachlorobutadiene	31828	77817	129006	187663
Isopropylbenzene	1.477	1.750	1.771	1.828
m,p-Xylenes	385580	984046	1602438	2341187
Methylene Chloride	0.624	0.675	0.708	0.740
n-Butylbenzene	364568	941862	1548790	2327830
n-Propylbenzene	3.864	4.227	4.412	4.359
Naphthalene	79104	162905	261811	402230
o-Xylene	183424	464311	741860	1073818
sec-Butylbenzene	430230	1137305	1736245	2518787
Vinyl Chloride	1.108	1.208	1.186	1.213
1,2,3-Trichloropropane	0.781	0.688	0.701	0.665
p-Isopropyltoluene	360596	963171	1468165	2148410
1,2-Dibromo-3-Chloropropane	0.063	0.057	0.056	0.062
Freon TF	0.840	0.979	0.943	0.993
4-Bromofluorobenzene	135731	300964	486561	656990
Dibromofluoromethane	113804	241210	376878	532354
Toluene-d8	1.300	1.397	1.380	1.457
1,2-Dichloroethane-d4	142247	308941	451276	632979

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011067

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1912

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.63426981		9.788	15.000
trans-1,3-Dichloropropene	AVRG		0.54593500		8.208	15.000
1,3-Dichlorobenzene	AVRG		1.50389382		8.339	15.000
2,2-Dichloropropane	AVRG		1.06012927		6.136	15.000
1,1-Dichloropropene	AVRG		0.49719123		5.089	15.000
Dibromomethane	AVRG		0.26131887		5.477	15.000
1,2-Dibromoethane	AVRG		0.38225220		7.765	15.000
trans-1,2-Dichloroethene	AVRG		0.61635688		11.956	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.37571580		9.698	15.000
1,1,1-Trichloroethane	AVRG		1.01619587		14.019	15.000
1,1,2,2-Tetrachloroethane	LINR	-3.03e-002	1.17732598		0.9991314	0.9900000
Toluene	AVRG		1.61391693		7.274	15.000
1,1,2-Trichloroethane	AVRG		0.32853452		6.621	15.000
1,1-Dichloroethane	AVRG		1.20603287		11.092	15.000
1,1-Dichloroethene	AVRG		0.96960591		8.343	15.000
Trichlorofluoromethane	AVRG		1.87898218		8.495	15.000
1,2,3-Trichlorobenzene	LINR	2.411e-002	5.42659259		0.9953344	0.9900000
Tetrachloroethene	AVRG		0.30827486		10.246	15.000
1,2,4-Trichlorobenzene	AVRG		0.37672776		12.849	15.000
1,2,4-Trimethylbenzene	AVRG		2.82277561		7.173	15.000
tert-Butylbenzene	AVRG		2.31758314		6.698	15.000
Trichloroethene	AVRG		0.34781060		6.501	15.000
1,2-Dichlorobenzene	AVRG		1.41492314		6.075	15.000
1,2-Dichloroethane	AVRG		0.54937658		3.369	15.000
1,2-Dichloropropane	AVRG		0.39889177		8.730	15.000
1,3,5-Trimethylbenzene	AVRG		2.96564624		12.426	15.000
1,3-Dichloropropane	AVRG		0.61639649		5.058	15.000
1,4-Dichlorobenzene	LINR	1.176e-002	0.64917938		0.9997754	0.9900000
2-Butanone	AVRG		0.23912782		9.709	15.000
2-Chlorotoluene	AVRG		2.44639650		10.165	15.000
2-Hexanone	LINR	1.788e-002	3.85935698		0.9998284	0.9900000
4-Chlorotoluene	AVRG		2.99338049		12.708	15.000
Styrene	AVRG		1.15946429		14.955	15.000
4-Methyl-2-Pentanone	LINR	1.833e-002	2.57659190		0.9997038	0.9900000
Acetone	LINR	-6.38e-002	3.64155334		0.9962917	0.9900000
Benzene	AVRG		1.36560754		4.406	15.000
Bromobenzene	AVRG		0.84468750		6.214	15.000
Bromochloromethane	AVRG		0.35327683		7.857	15.000
Bromodichloromethane	AVRG		0.52952736		9.722	15.000
Bromoform	LINR	4.286e-002	3.97501569		0.9985814	0.9900000
Bromomethane	LINR	1.837e-002	1.00484910		0.9969905	0.9900000
Carbon Disulfide	AVRG		1.86424846		6.790	15.000
Carbon Tetrachloride	AVRG		0.43110146		8.387	15.000
Chlorobenzene	AVRG		1.06885365		8.166	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011067

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1912

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroethane	AVRG		0.77482377		8.238	15.000
Chloroform	AVRG		1.30752005		7.081	15.000
Chloromethane	AVRG		0.91798239		9.381	15.000
cis-1,2-Dichloroethene	AVRG		0.73163069		5.701	15.000
Dibromochloromethane	AVRG		0.38766103		8.425	15.000
Dichlorodifluoromethane	LINR	5.204e-002	1.15073605		0.9973516	0.9900000
Ethylbenzene	AVRG		0.53901151		7.775	15.000
Hexachlorobutadiene	LINR	3.047e-002	3.77438560		0.9974581	0.9900000
Isopropylbenzene	AVRG		1.62650005		10.962	15.000
m,p-Xylenes	LINR	0.13870147	1.17896330		0.9963998	0.9900000
Methylene Chloride	AVRG		0.68678566		11.172	15.000
n-Butylbenzene	LINR	6.129e-002	0.30554446		0.9958588	0.9900000
n-Propylbenzene	AVRG		4.18264463		6.086	15.000
Naphthalene	LINR	2.14e-002	1.79146413		0.9964702	0.9900000
o-Xylene	LINR	5.772e-002	1.28180608		0.9974120	0.9900000
sec-Butylbenzene	2ORDR	9.947e-003	0.29999072	-1.64e-003	0.9994495	0.9900000
Vinyl Chloride	AVRG		1.20297979		4.666	15.000
1,2,3-Trichloropropane	AVRG		0.75417826		10.203	15.000
p-Isopropyltoluene	LINR	3.157e-002	0.32744508		0.9987184	0.9900000
1,2-Dibromo-3-Chloropropane	AVRG		6.093e-002		8.981	15.000
Freon TF	AVRG		0.93255246		7.679	15.000
4-Bromofluorobenzene	2ORDR	1.573e-002	2.07098745	-8.9e-003	0.9994872	0.9900000
Dibromofluoromethane	2ORDR	-6.03e-003	1.59518464	-8.79e-002	0.9998175	0.9900000
Toluene-d8	AVRG		1.34932510		9.547	15.000
1,2-Dichloroethane-d4	2ORDR	2.46e-003	1.23660632	-3.28e-002	0.9990605	0.9900000

FORM VI VOA

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112201.D

Date : 22-NOV-2020 15:22

Client ID: BFB

Instrument: voa6.i

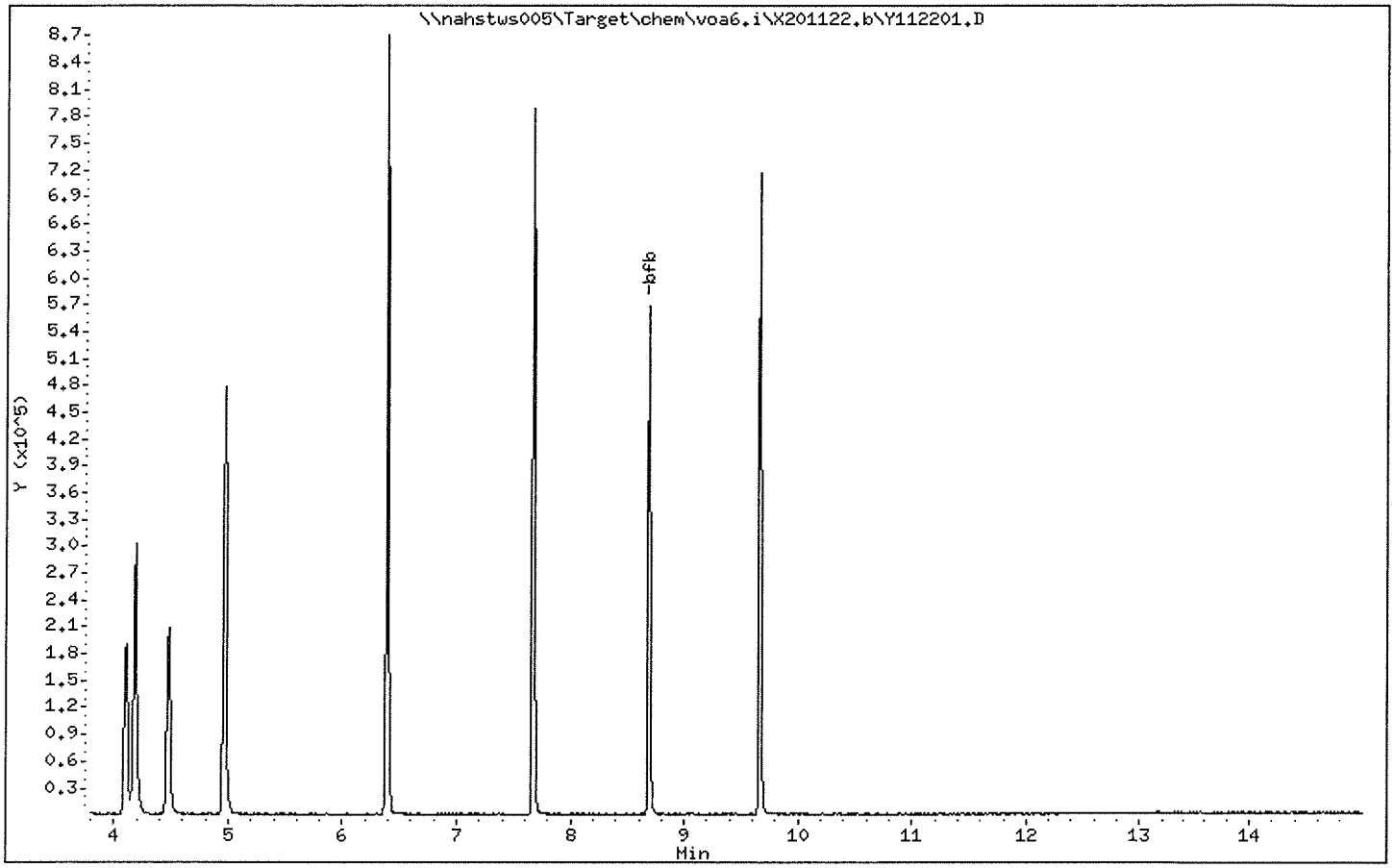
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112201.D

Date : 22-NOV-2020 15:22

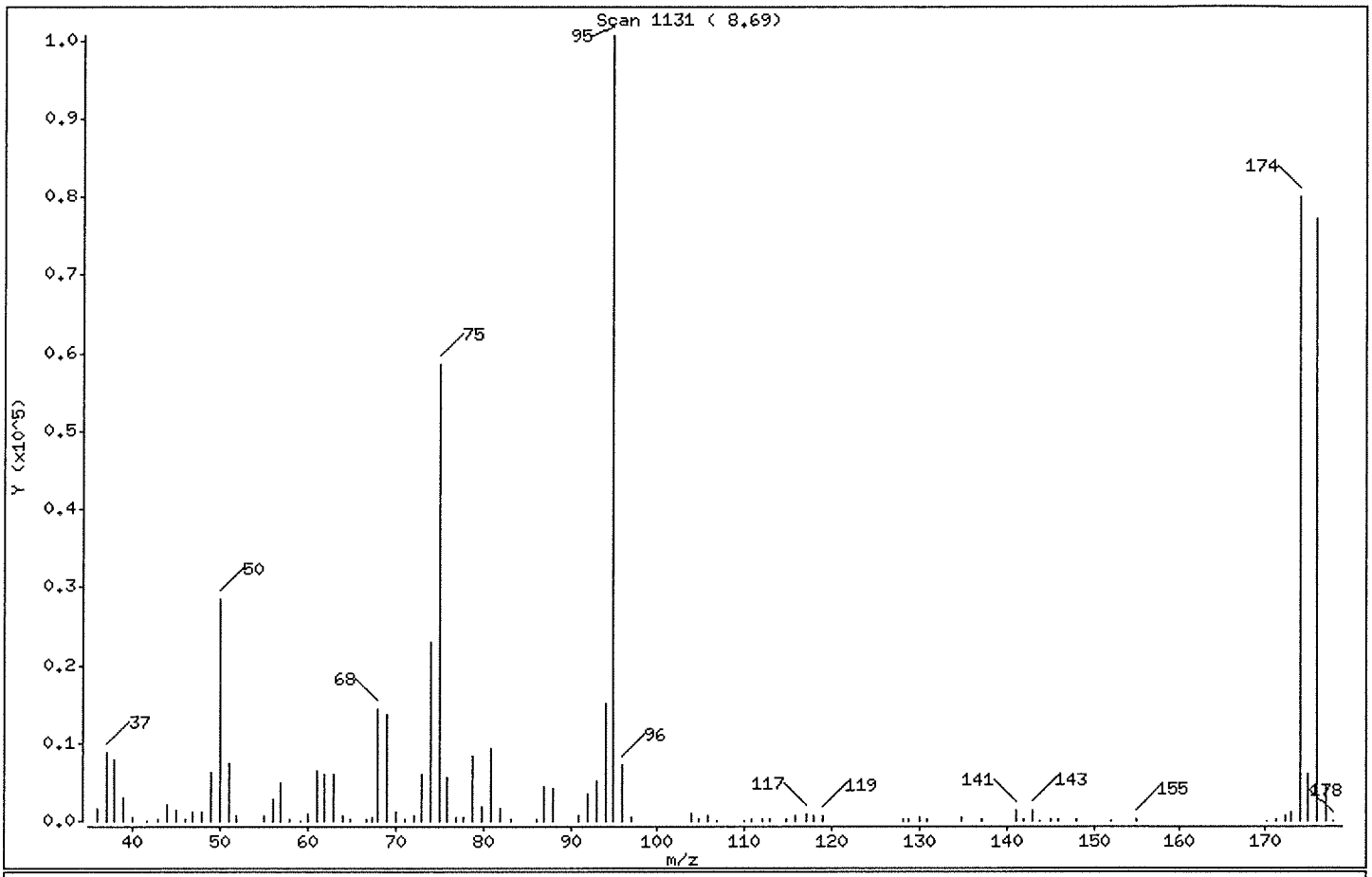
Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	28.32
75	30.00 - 60.00% of mass 95	58.07
96	5.00 - 9.00% of mass 95	7.19
173	Less than 2.00% of mass 174	1.18 (1.49)
174	Greater than 50.00% of mass 95	79.62
175	5.00 - 9.00% of mass 174	6.06 (7.61)
176	95.00 - 101.00% of mass 174	76.76 (96.42)
177	5.00 - 9.00% of mass 176	4.55 (5.93)

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112201.D

Date : 22-NOV-2020 15:22

Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

Data File: Y112201.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 92

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1708	63.00	5933	91.00	731	134.80	380
37.00	8777	64.10	597	92.00	3407	137.10	209
38.00	7920	64.80	143	93.00	5204	141.00	1417
39.00	3029	66.80	154	94.00	14944	141.90	126
40.00	488	67.30	388	95.00	100632	142.90	1327
41.70	52	68.00	14372	96.00	7231	143.80	55
42.90	158	69.00	13751	97.00	356	144.90	128
44.00	2019	70.10	1045	103.90	985	145.90	216
45.00	1305	71.10	199	104.70	197	147.90	121
46.00	186	72.10	768	105.80	724	151.90	91
47.00	1048	73.00	5903	106.80	69	154.90	265
48.00	1210	74.00	22856	110.00	75	170.30	94
49.00	6173	75.00	58432	110.80	126	171.30	167
50.00	28504	76.00	5478	112.00	120	172.30	781
51.00	7345	76.90	412	112.80	133	173.00	1192
52.00	633	77.80	472	114.80	122	173.90	80120
55.00	799	78.90	8219	115.80	606	174.90	6100
56.10	2854	79.90	1803	117.00	835	175.90	77248
57.00	4757	80.90	9308	117.80	637	176.90	4580
58.00	180	81.90	1639	118.90	613	177.80	99
59.20	105	83.20	184	128.10	314		
60.00	915	86.10	310	128.80	139		
61.00	6578	86.90	4414	129.90	365		
62.00	6041	88.00	4276	130.70	261		

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112202.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112202.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 22-NOV-2020 15:43
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 17:48 Cal File: Y112207.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	158135	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	300295	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	277858	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	115702	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	1555	0.25000	0.73(Ta)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	2866	0.25000	1.85(a)
$ 30 Dibromofluoromethane	113	4.089	4.089	(0.978)	796	0.25000	0.09(a)
$ 48 Toluene-d8	98	6.396	6.396	(0.834)	3339	0.25000	0.44(Ta)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	618	0.25000	0.29(aM)
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	1009	0.25000	0.31(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	874	0.25000	(aM)
138 Freon TF	101	1.919	1.919	(0.459)	1113	0.25000	0.37(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	548	0.25000	0.30(aM)
22 1,1-Dichloroethane	63	2.936	2.936	(0.702)	1487	0.25000	0.38(aM)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	1263	0.25000	0.41(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	1046	0.25000	0.35(aM)
71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	597	0.25000	0.34(aM)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	258	0.25000	0.29(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	1898	0.25000	0.29(a)
57 1,2-Dibromoethane	107	7.277	7.277	(0.949)	518	0.25000	0.24(aM)
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	1014	0.25000	0.30(a)
33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	924	0.25000	0.28(aM)

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112202.D Page 2
Report Date: 18-Dec-2020 11:14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	543	0.25000	0.22(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	1981	0.25000	0.28(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	1042	0.25000	0.29(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	939	0.25000	0.27(aM)
84	1,4-Dichlorobenzene	146	9.691	9.691	(1.003)	1392	0.25000	0.97(a)
26	2,2-Dichloropropane	77	3.495	3.495	(0.836)	752	0.25000	0.22(aM)
24	2-Butanone	43	3.595	3.595	(0.860)	544	0.50000	0.71(aM)
76	2-Chlorotoluene	91	8.967	8.967	(0.928)	1769	0.25000	0.31(a)
52	2-Hexanone	43	7.098	7.098	(0.925)	745	0.50000	1.41(Ta)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1993	0.25000	0.28(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2087	0.25000	1.87(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	740	0.50000	1.25(aM)
10	Acetone	43	1.976	1.976	(0.473)	717	0.50000	(aM)
37	Benzene	78	4.512	4.512	(0.908)	2787	0.25000	0.33(Ta)
74	Bromobenzene	156	8.809	8.809	(0.912)	565	0.25000	0.28(aM)
29	Bromochloromethane	128	3.817	3.817	(0.913)	182	0.25000	0.16(aM)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	801	0.25000	0.25(aM)
66	Bromoform	173	8.416	8.416	(1.097)	77	0.25000	2.19(aM)
6	Bromomethane	94	1.338	1.338	(0.320)	1552	0.25000	1.41(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	3897	0.50000	0.66(aM)
34	Carbon Tetrachloride	117	4.254	4.254	(0.856)	789	0.25000	0.30(aH)
59	Chlorobenzene	112	7.692	7.692	(1.003)	1529	0.25000	0.25(a)
7	Chloroethane	64	1.403	1.403	(0.336)	1130	0.25000	0.46(a)
28	Chloroform	83	3.903	3.903	(0.933)	1255	0.25000	0.30(a)
3	Chloromethane	50	1.081	1.081	(0.258)	1078	0.25000	0.37(aM)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	456	0.25000	0.19(aM)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	921	0.25000	0.24(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	679	0.25000	0.31(aM)
44	Dibromomethane	93	5.550	5.550	(1.117)	585	0.25000	0.37(aM)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	525	0.25000	2.79(aM)
61	Ethylbenzene	106	7.799	7.799	(1.017)	747	0.25000	0.24(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2624	0.25000	0.29(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	2064	0.50000	7.37
17	Methylene Chloride	84	2.298	2.298	(0.550)	932	0.25000	0.42(aM)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	1666	0.25000	3.28(a)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	3165	0.25000	0.32(a)
92	Naphthalene	128	11.553	11.553	(1.196)	443	0.25000	1.41(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	1039	0.25000	3.12(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	1973	0.25000	0.75(a)
64	Styrene	104	8.265	8.265	(1.078)	1876	0.25000	0.29(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	1693	0.25000	0.31(a)
56	Tetrachloroethene	164	6.926	6.926	(0.903)	707	0.25000	0.41(aM)
50	Toluene	91	6.453	6.453	(0.841)	2775	0.25000	0.30(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	566	0.25000	0.29(aM)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	936	0.25000	0.28(aM)
38	Trichloroethene	130	5.199	5.199	(1.046)	684	0.25000	0.32(aM)
8	Trichlorofluoromethane	101	1.553	1.553	(0.371)	1834	0.25000	0.30(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	1172	0.25000	0.30(aM)

QC Flag Legend

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

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112203.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112203.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 22-NOV-2020 16:25
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 15:43 Cal File: Y112202.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	157934	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	297661	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	279271	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	116515	50.0000	
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	1561	0.50000	0.73(TaM)
$ 69	4-Bromofluorobenzene	95	8.695	8.695	(1.134)	1745	0.50000	1.43(aM)
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.981)	1088	0.50000	0.24(a)
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	4323	0.50000	0.57(Ta)
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1290	0.50000	0.61(aM)
31	1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	1136	0.50000	0.35(aM)
68	1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	2074	0.50000	(aM)
138	Freon TF	101	1.926	1.926	(0.461)	1559	0.50000	0.52(aM)
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	1059	0.50000	0.57(aM)
22	1,1-Dichloroethane	63	2.929	2.929	(0.700)	2200	0.50000	0.57(Ta)
11	1,1-Dichloroethene	96	1.912	1.912	(0.457)	1805	0.50000	0.58(aM)
32	1,1-Dichloropropene	75	4.283	4.283	(0.862)	1574	0.50000	0.53(aM)
93	1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	196	0.50000	1.66(aM)
71	1,2,3-Trichloropropane	75	8.860	8.860	(0.917)	1017	0.50000	0.57(aMH)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	498	0.50000	0.56(aM)
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	3768	0.50000	0.57(aM)
89	1,2-Dibromo-3-Chloropropane	155	10.650	10.650	(1.102)	125	0.50000	0.88(aM)
57	1,2-Dibromoethane	107	7.270	7.270	(0.948)	1204	0.50000	0.56(aM)

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112203.D Page 2
Report Date: 18-Dec-2020 11:14

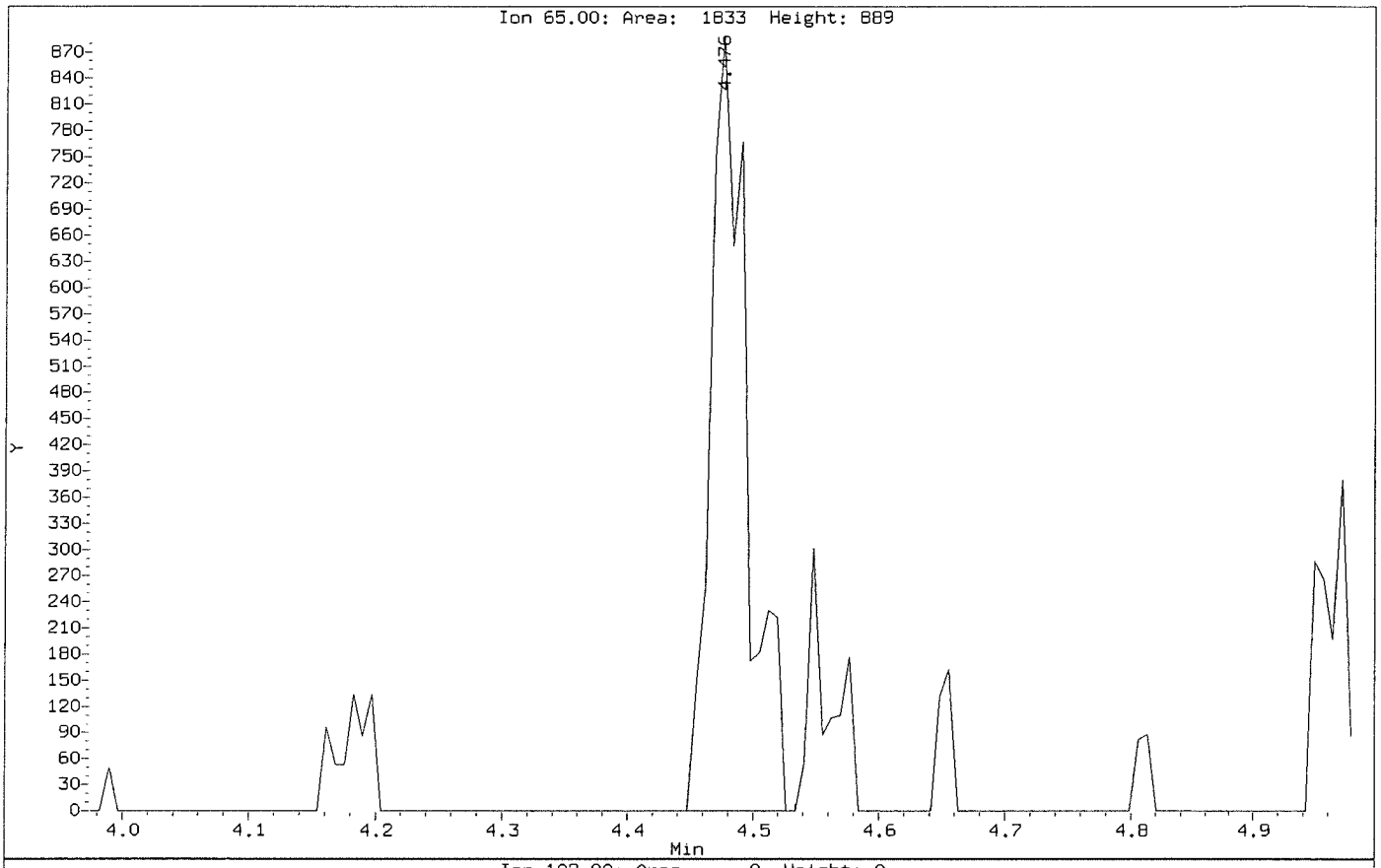
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	1705	0.50000	0.51(aM)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	1584	0.50000	0.48(aM)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	1436	0.50000	0.60(aM)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	4280	0.50000	0.61(aM)
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	1781	0.50000	0.50(aM)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	1866	0.50000	0.54(aM)
84	1,4-Dichlorobenzene	146	9.676	9.676	(1.001)	1819	0.50000	1.09(aM)
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	1787	0.50000	0.53(aM)
24	2-Butanone	43	3.602	3.602	(0.861)	837	1.00000	1.10(aM)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	3593	0.50000	0.63(aM)
52	2-Hexanone	43	7.090	7.090	(0.924)	4116	1.00000	3.73(aM)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	4334	0.50000	0.62(aM)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	5121	0.50000	2.29(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	6158	1.00000	3.75(a)
10	Acetone	43	1.969	1.969	(0.471)	3440	1.00000	0.77(aM)
37	Benzene	78	4.519	4.519	(0.909)	4421	0.50000	0.54(a)
74	Bromobenzene	156	8.802	8.802	(0.911)	1071	0.50000	0.54(aM)
29	Bromochloromethane	128	3.795	3.795	(0.908)	537	0.50000	0.48(aM)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	1933	0.50000	0.61(aM)
66	Bromoform	173	8.408	8.408	(1.096)	838	0.50000	2.73(aM)
6	Bromomethane	94	1.339	1.339	(0.320)	1988	0.50000	1.55(aM)
19	Carbon Disulfide	76	2.076	2.076	(0.497)	6400	1.00000	1.08(aM)
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	1361	0.50000	0.53(aH)
59	Chlorobenzene	112	7.692	7.692	(1.003)	3250	0.50000	0.54(aM)
7	Chloroethane	64	1.410	1.410	(0.337)	1354	0.50000	0.55(aM)
28	Chloroform	83	3.910	3.910	(0.935)	2388	0.50000	0.57(a)
3	Chloromethane	50	1.081	1.081	(0.258)	1501	0.50000	0.51(aM)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	1231	0.50000	0.53(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	2270	0.50000	0.60(aM)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	958	0.50000	0.44(aM)
44	Dibromomethane	93	5.565	5.565	(1.120)	876	0.50000	0.56(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	1188	0.50000	3.03(aM)
61	Ethylbenzene	106	7.800	7.800	(1.017)	1683	0.50000	0.55(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	275	0.50000	1.96(aM)
67	Isopropylbenzene	105	8.559	8.559	(1.116)	5260	0.50000	0.57(aM)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	2934	1.00000	7.55(M)
17	Methylene Chloride	84	2.298	2.298	(0.550)	1337	0.50000	0.61(a)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	4479	0.50000	3.65(aM)
73	n-Propylbenzene	91	8.910	8.910	(0.922)	5424	0.50000	0.55(aM)
92	Naphthalene	128	11.539	11.539	(1.194)	738	0.50000	1.63(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	2162	0.50000	3.38(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	4853	0.50000	1.12(aM)
64	Styrene	104	8.265	8.265	(1.078)	3686	0.50000	0.56(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	2936	0.50000	0.54(aM)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	1028	0.50000	0.59(a)
50	Toluene	91	6.446	6.446	(0.840)	4384	0.50000	0.48(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	954	0.50000	0.49(aM)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	1803	0.50000	0.55(aM)
38	Trichloroethene	130	5.214	5.214	(1.049)	1126	0.50000	0.54(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	3409	0.50000	0.57(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	1927	0.50000	0.50(a)

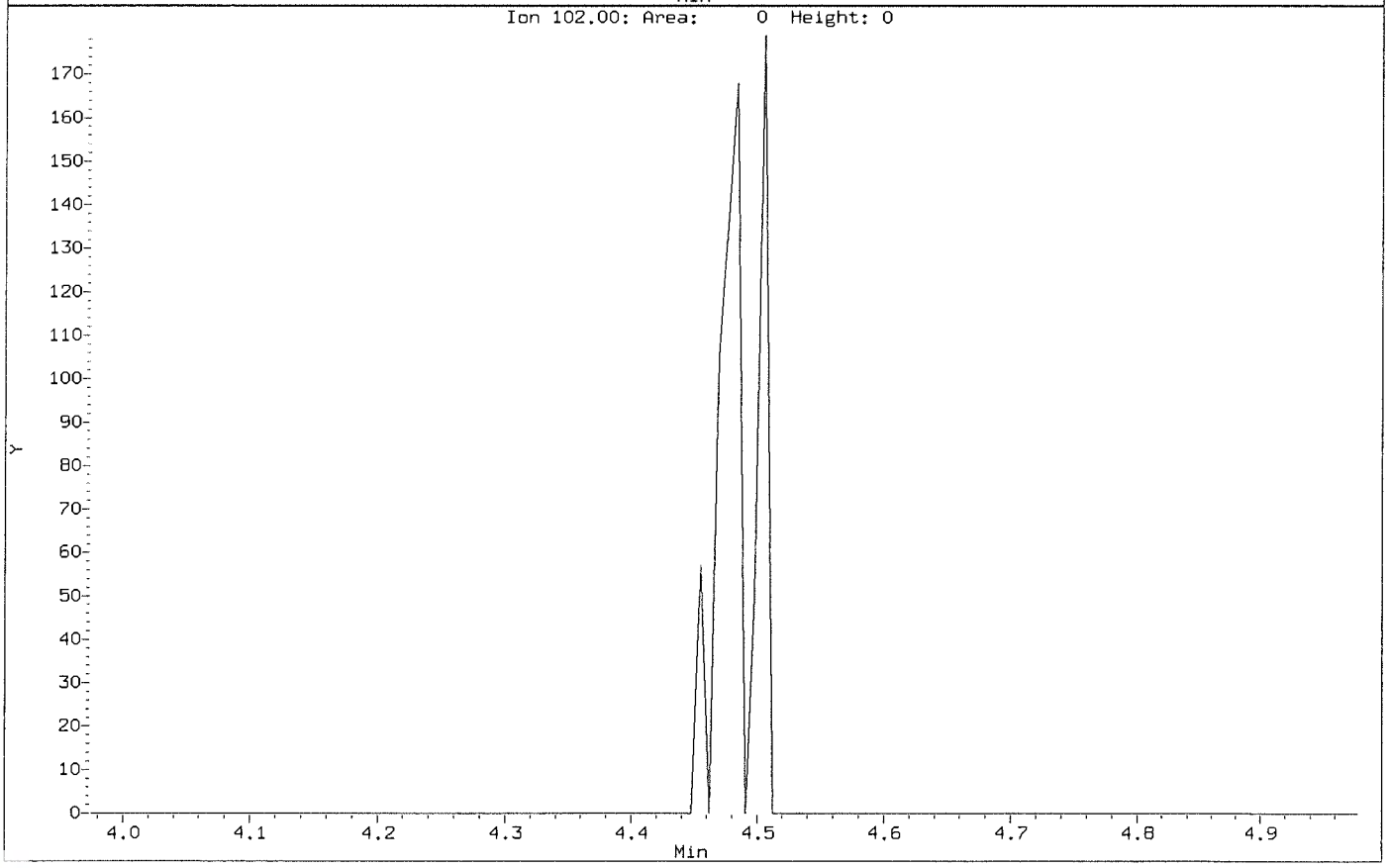
QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112203.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

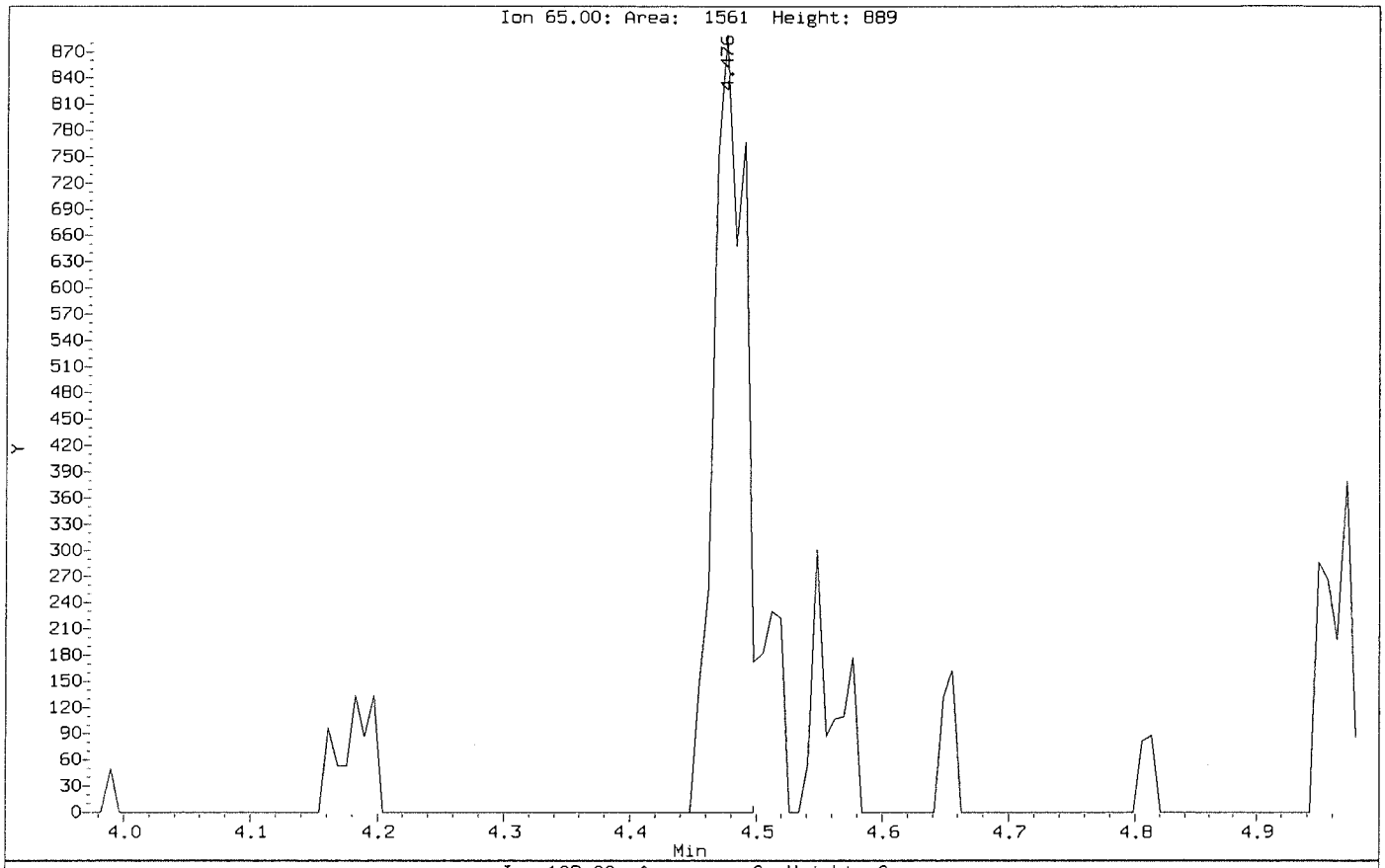
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0

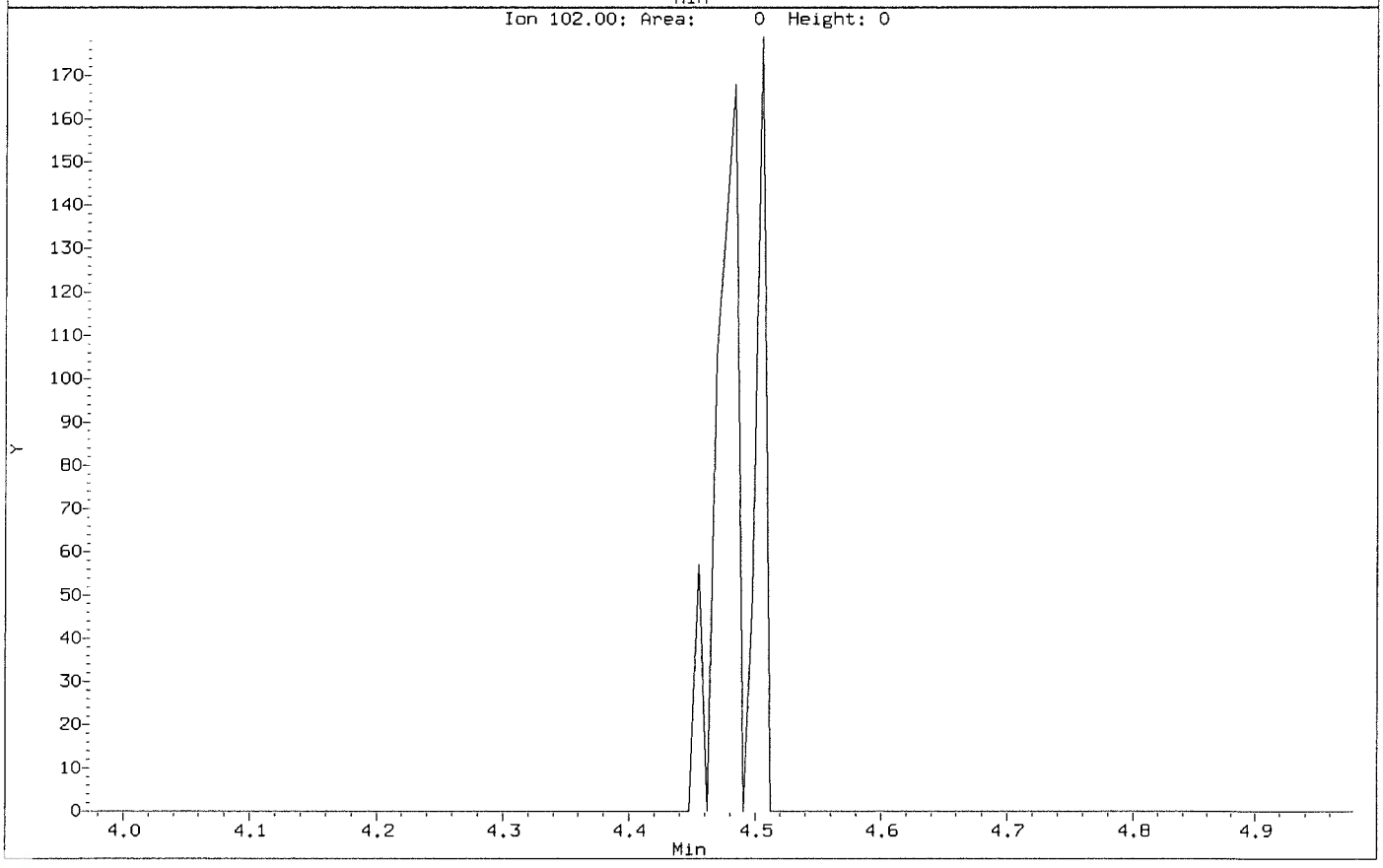




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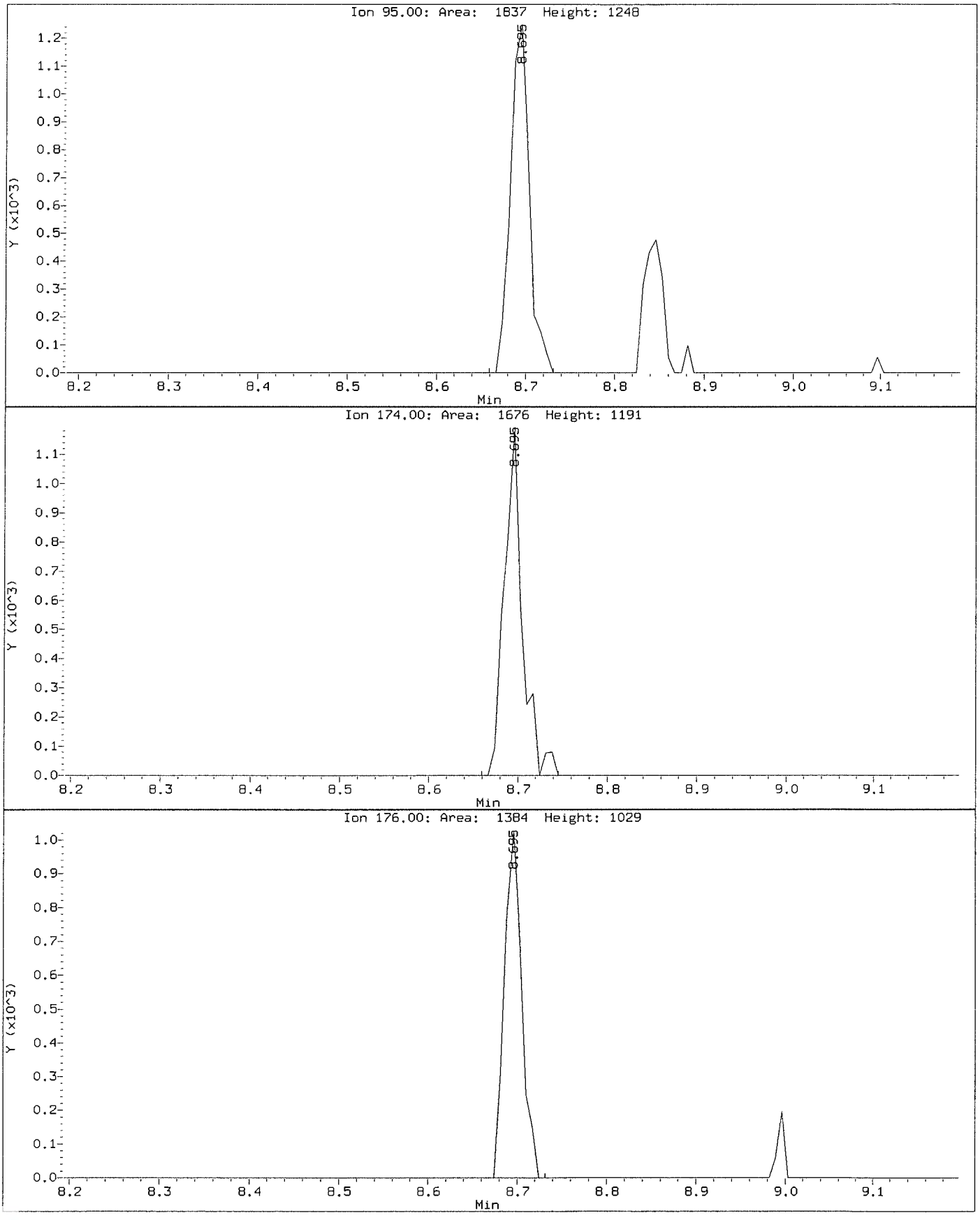
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0





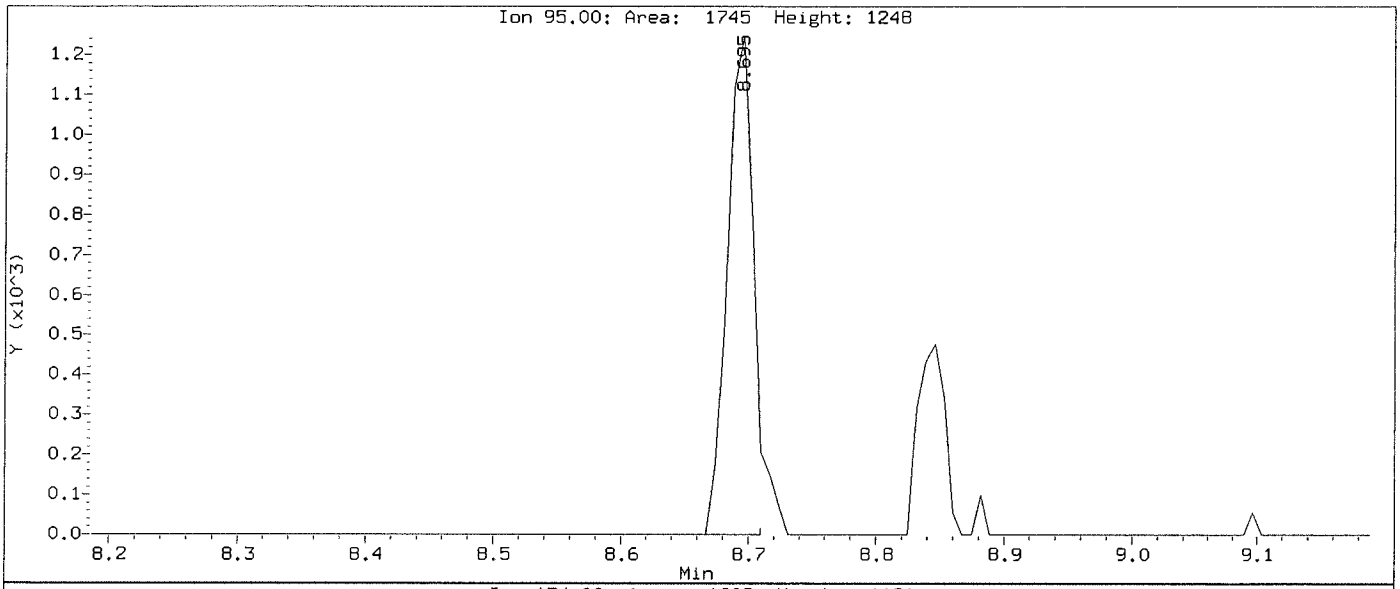
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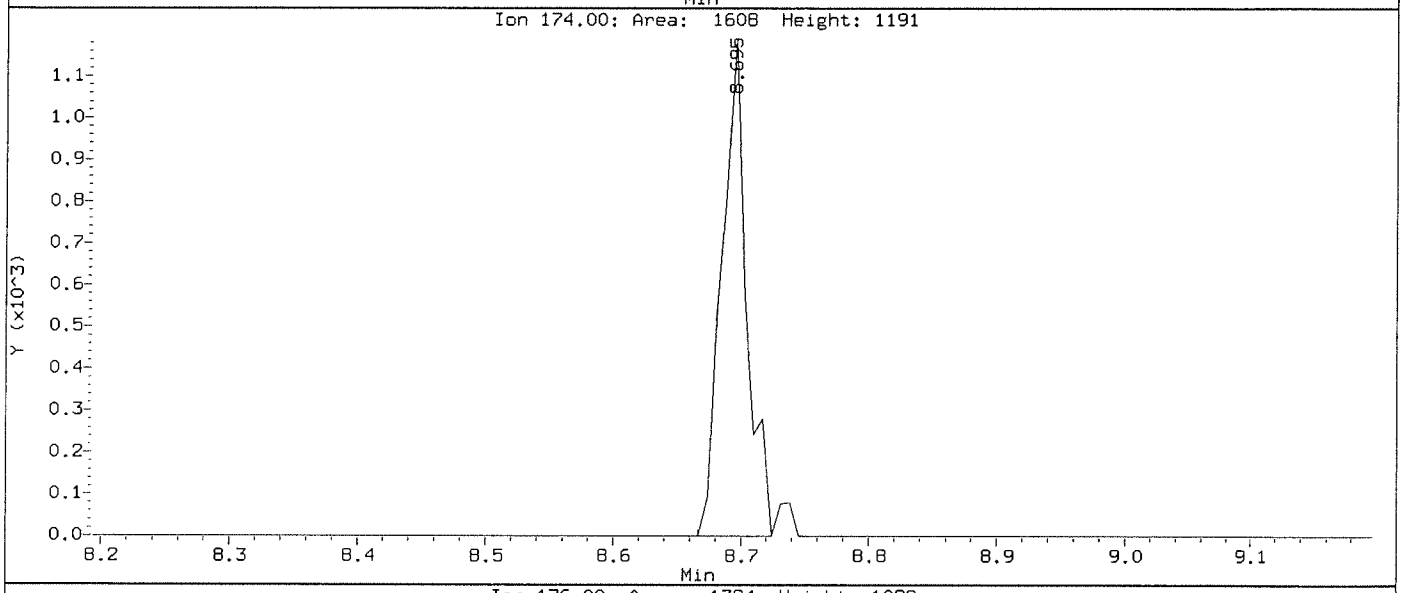
Compound: 4-Bromofluorobenzene
CAS Number: 460-00-4

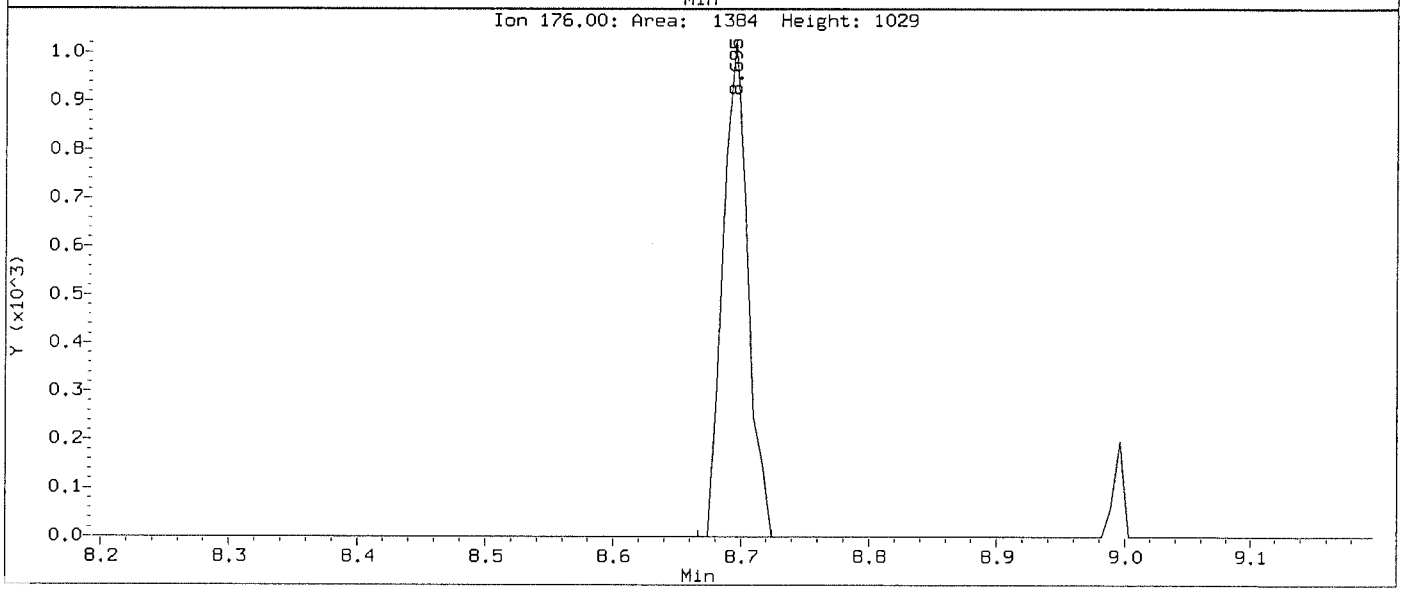


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Instrument: voa6.i
Client Sample ID: VSTD000.5

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

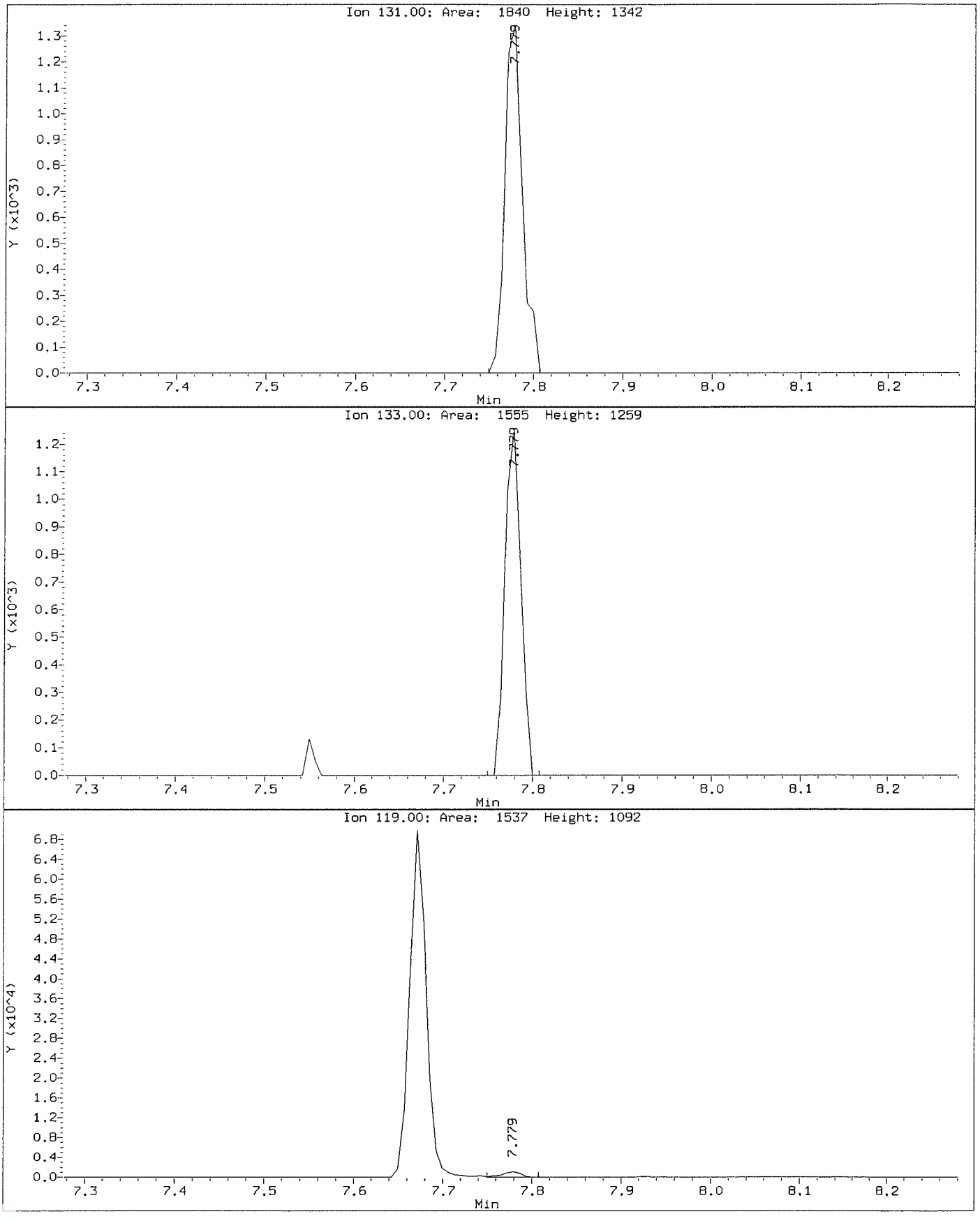






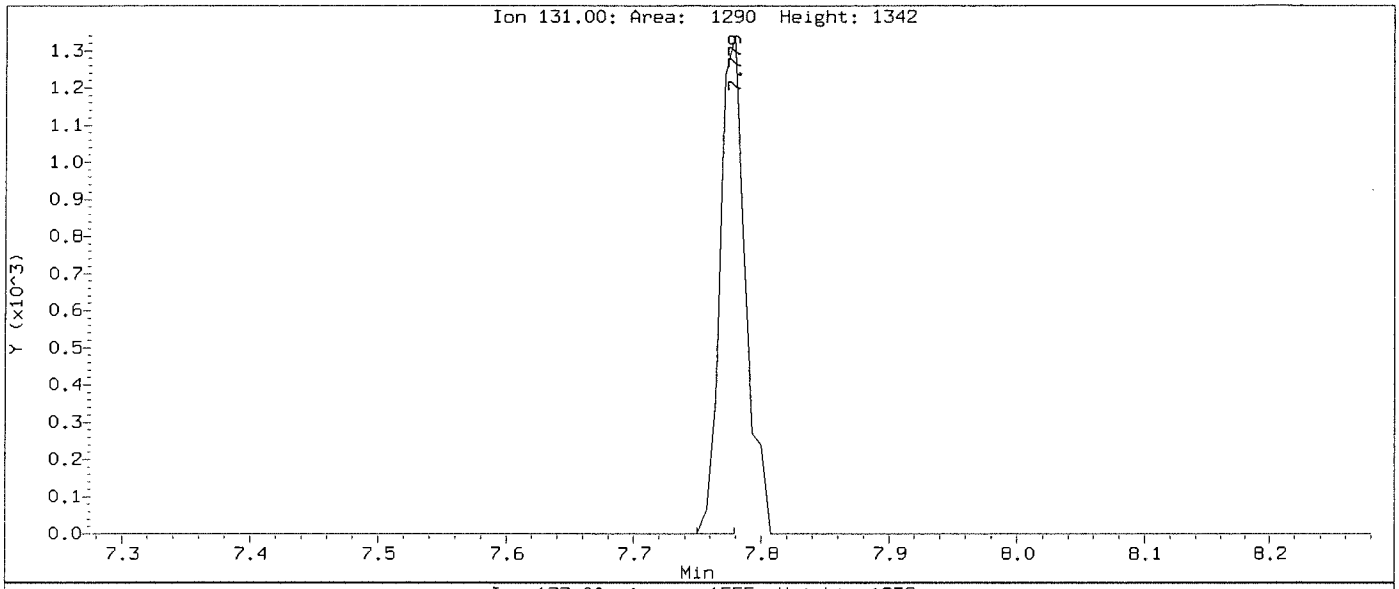
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Instrument: voa6.i
Client Sample ID: VSTD000.5

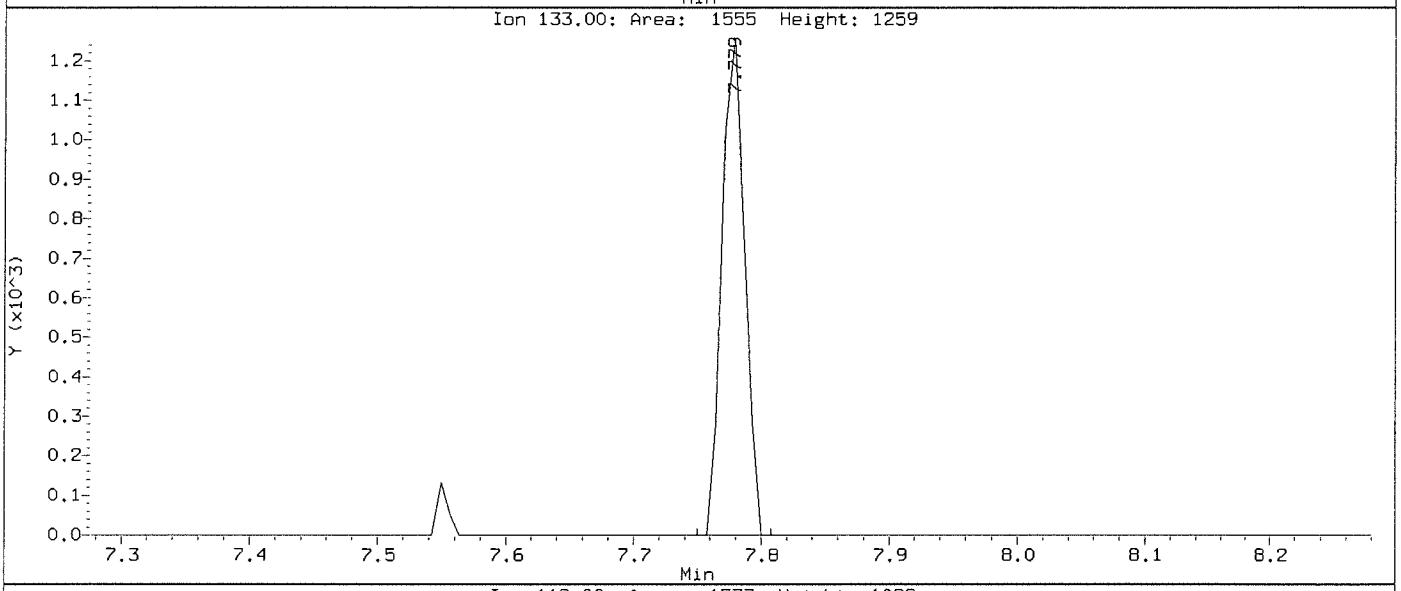
Compound: 1,1,1,2-Tetrachloroethane
CAS Number: 630-20-6

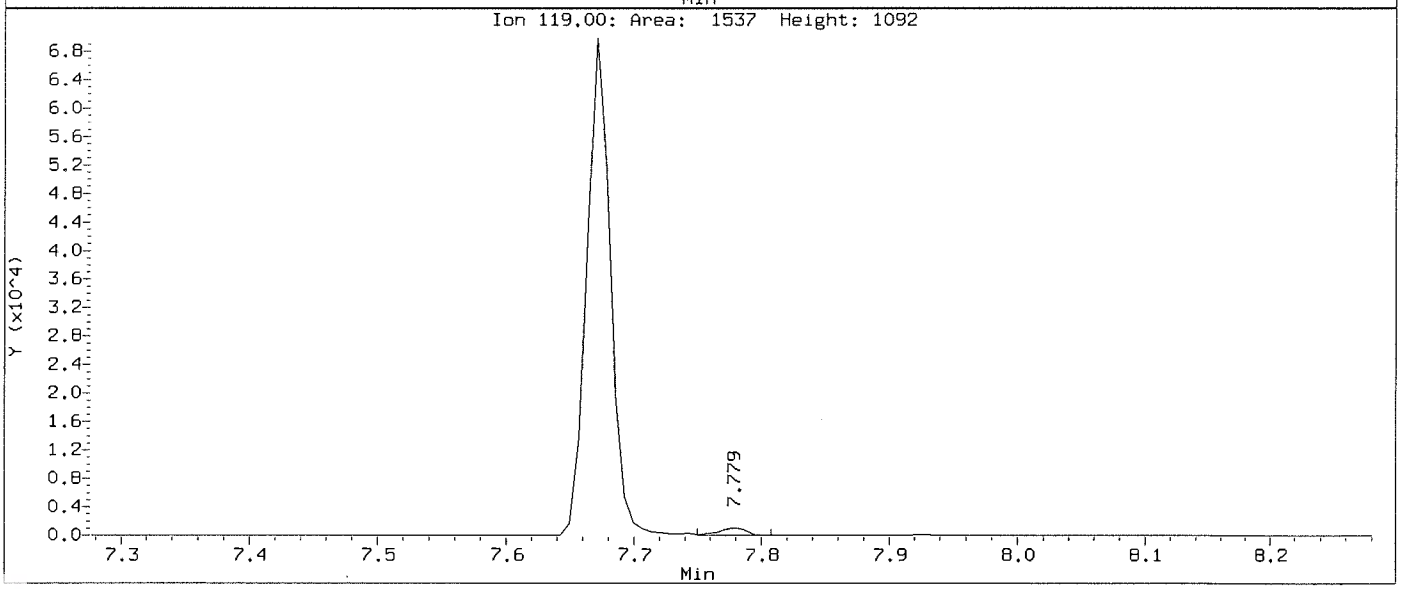


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,1,2-Tetrachloroethane
CAS Number: 630-20-6

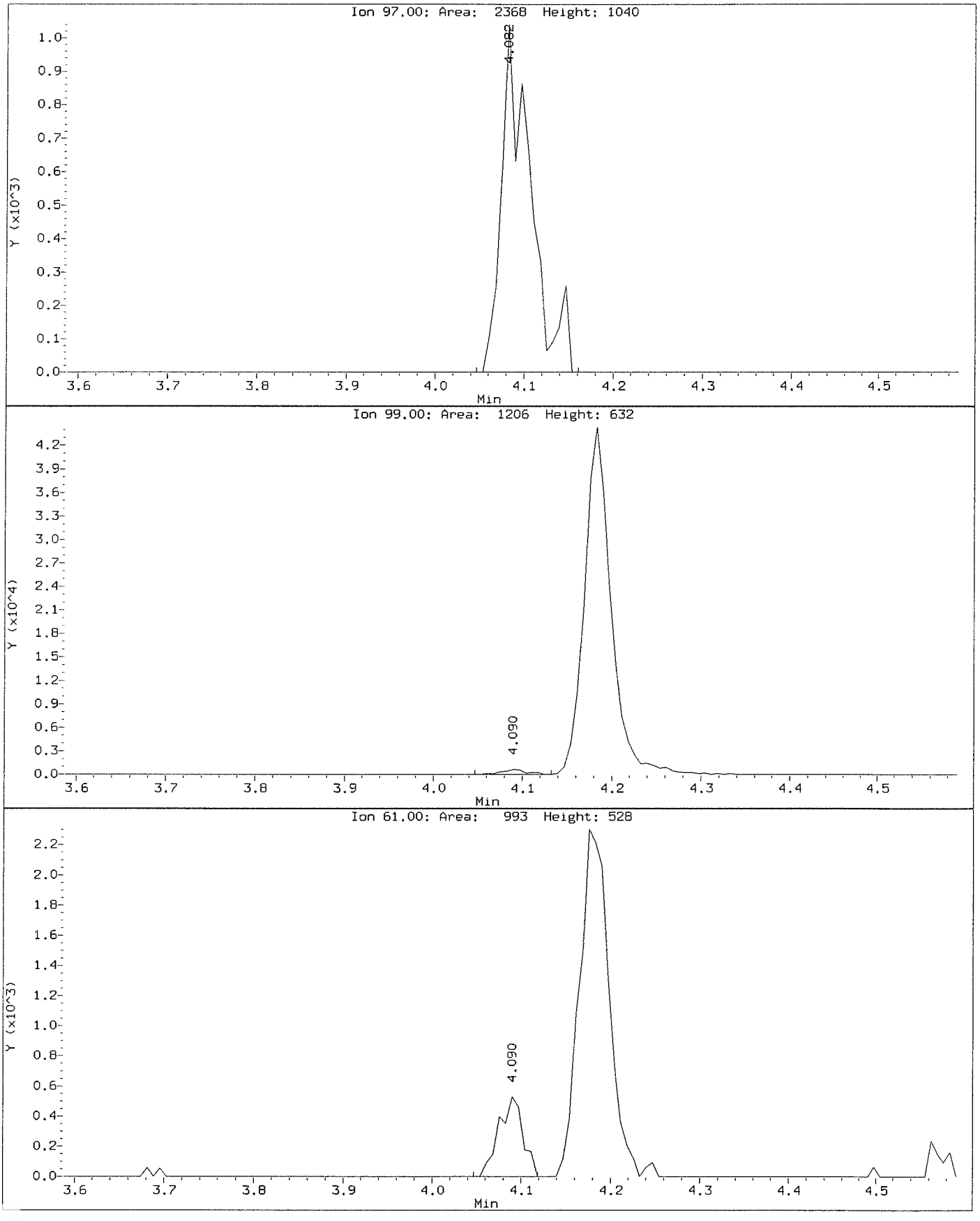






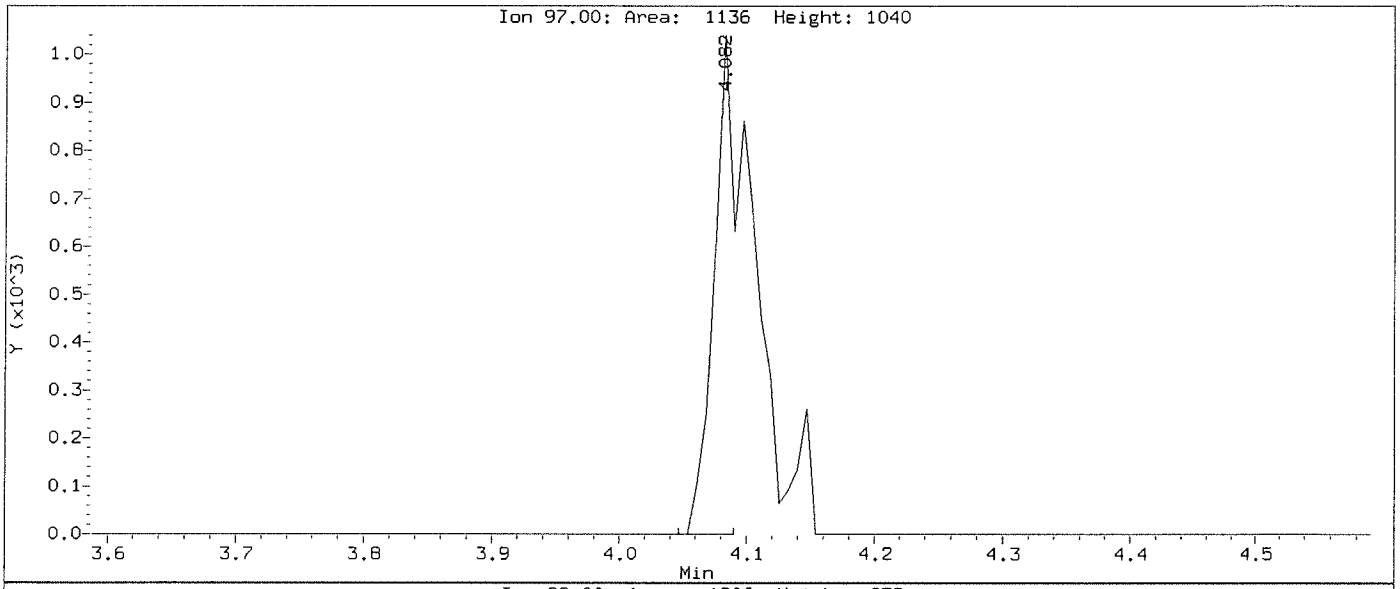
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Instrument: voa6.i
Client Sample ID: VSTD000.5

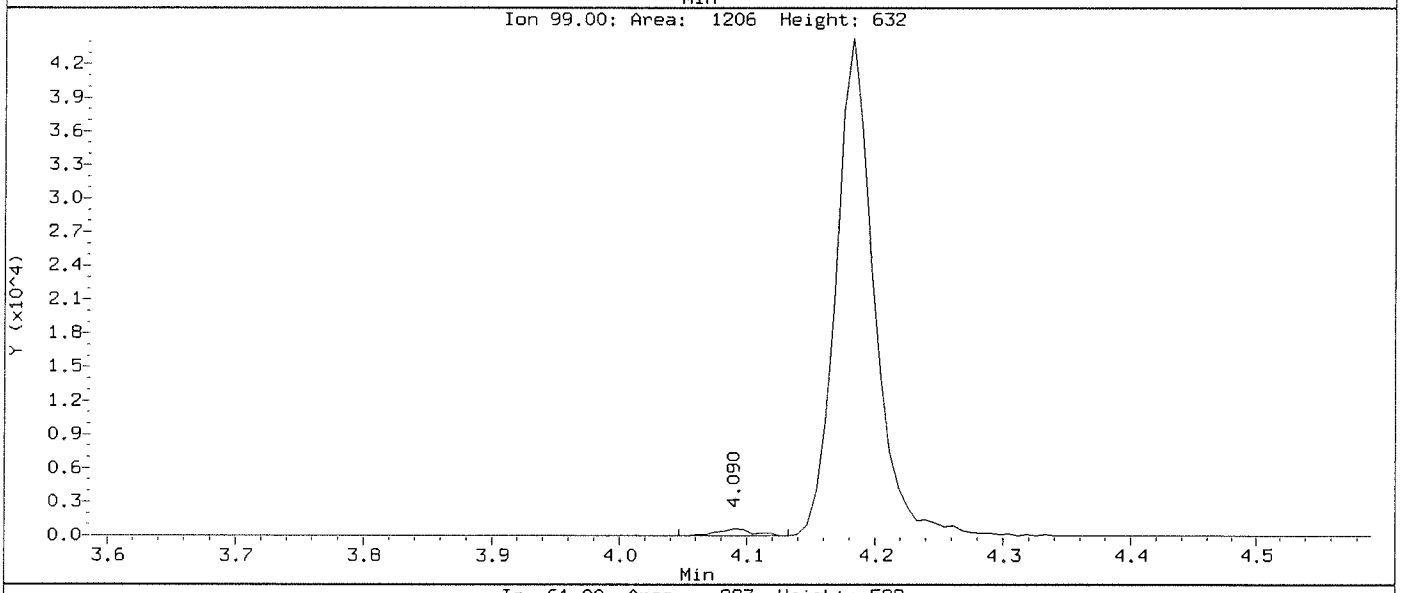
Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6

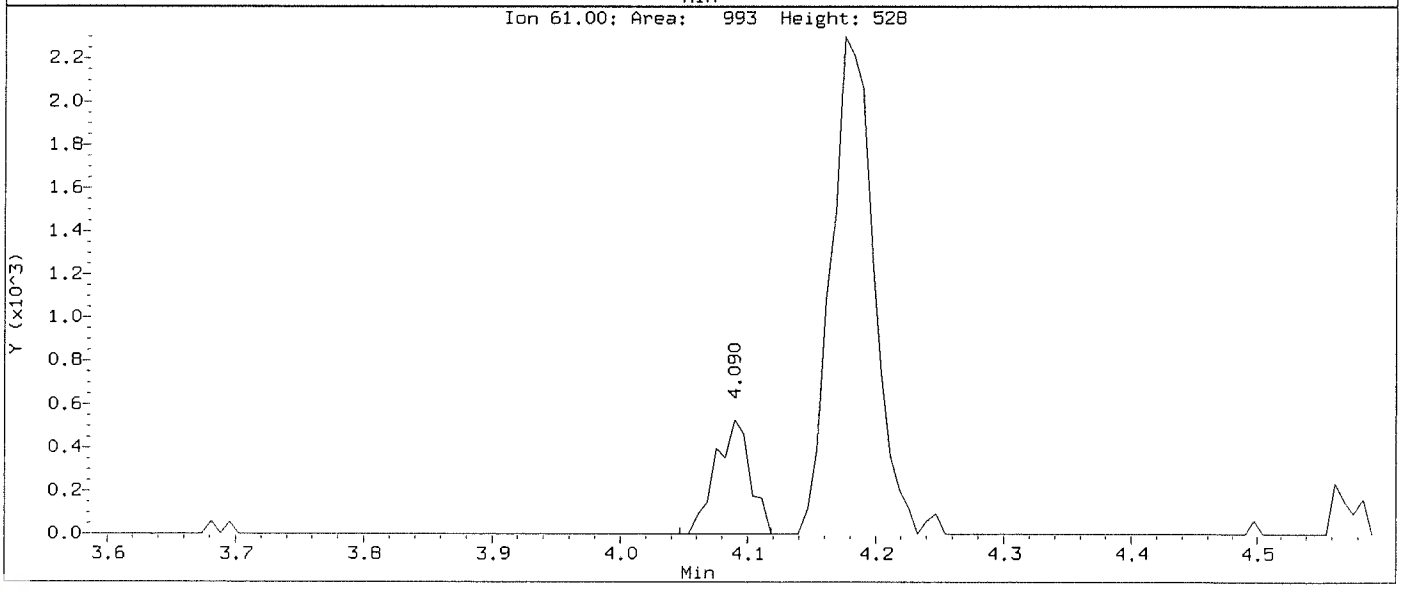


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Instrument: voa6.i
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Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6

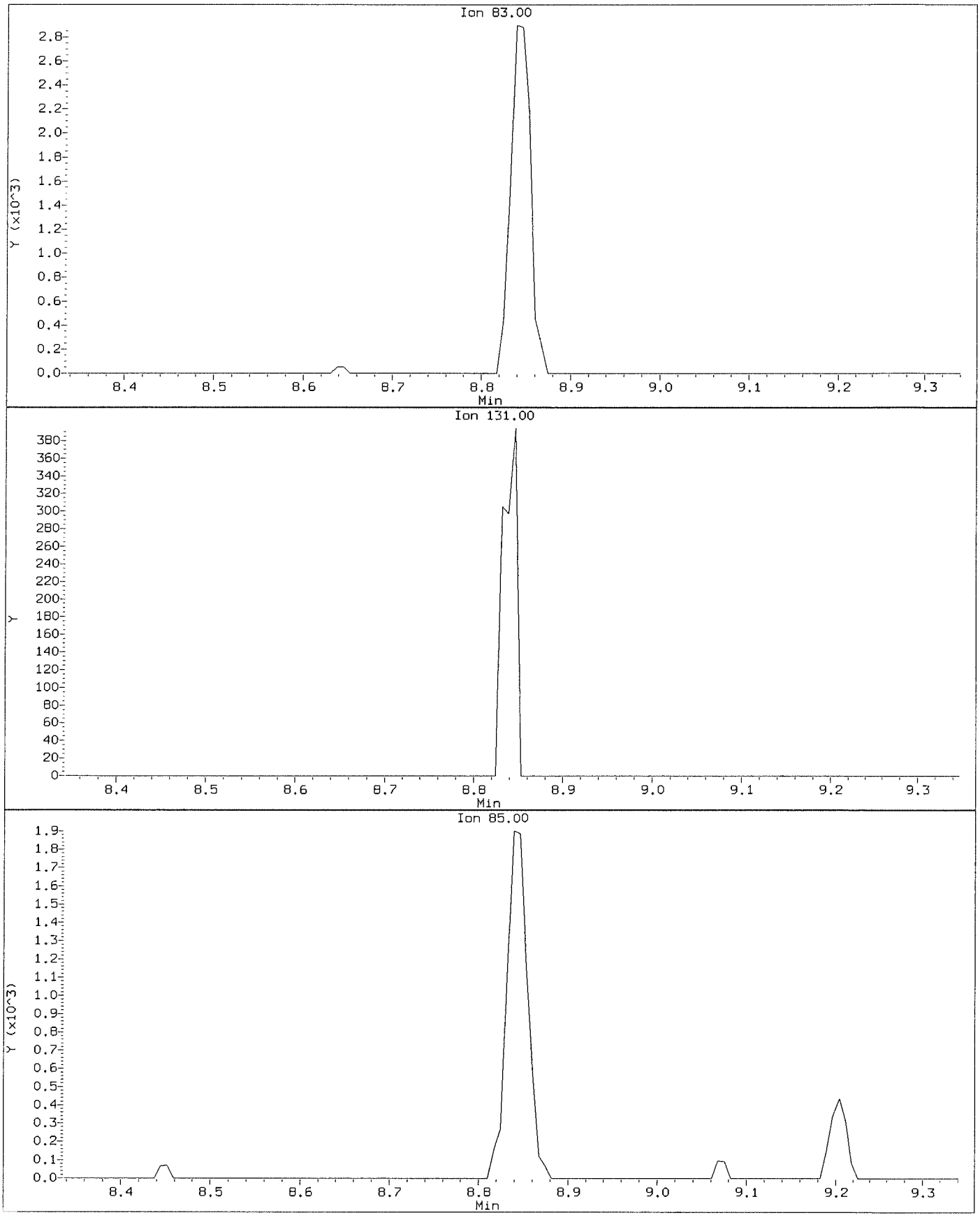






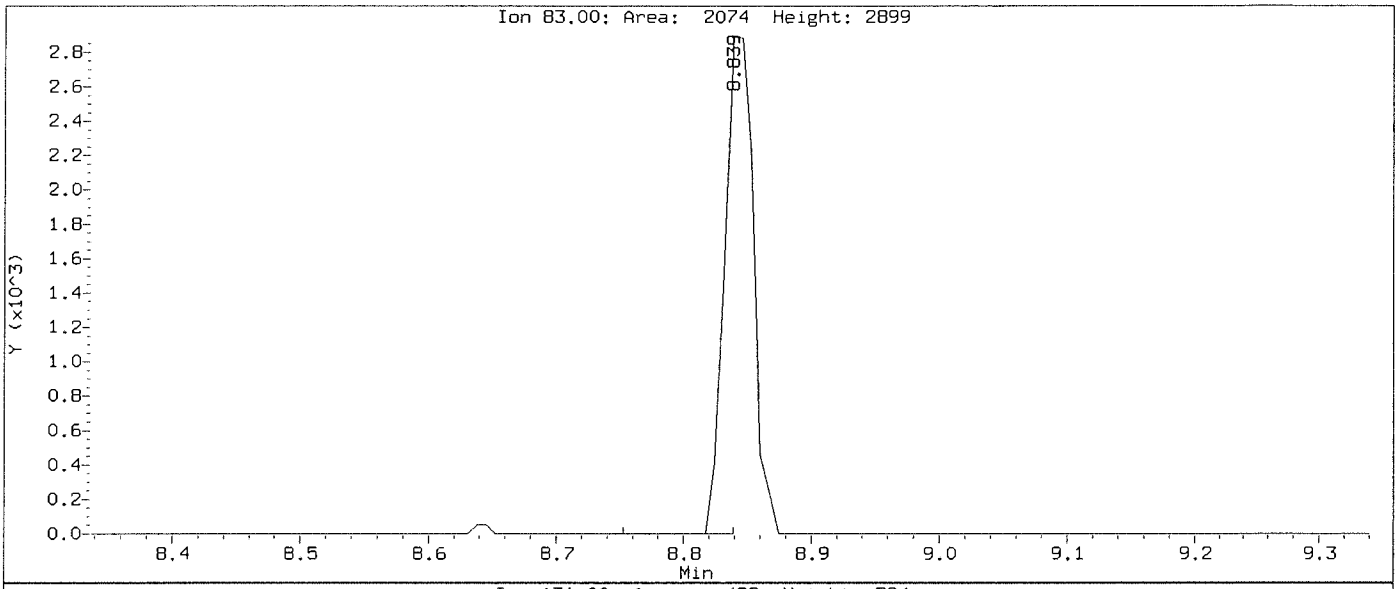
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Instrument: voa6.i
Client Sample ID: VSTD000.5

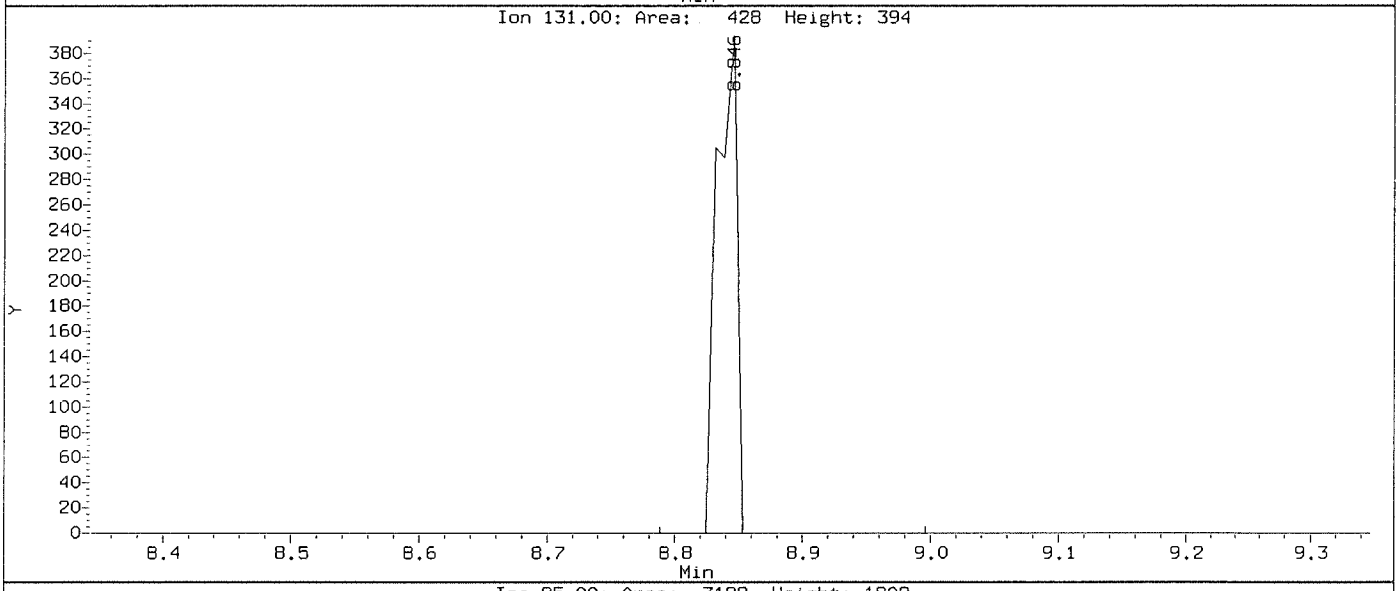
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

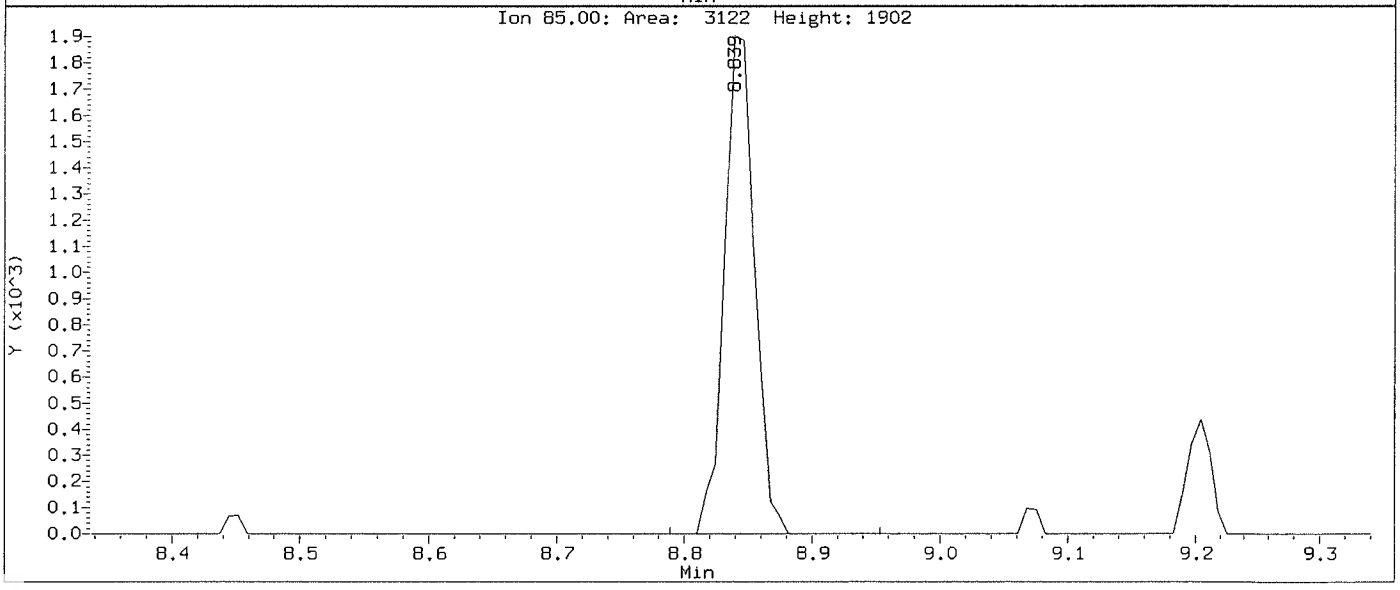


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

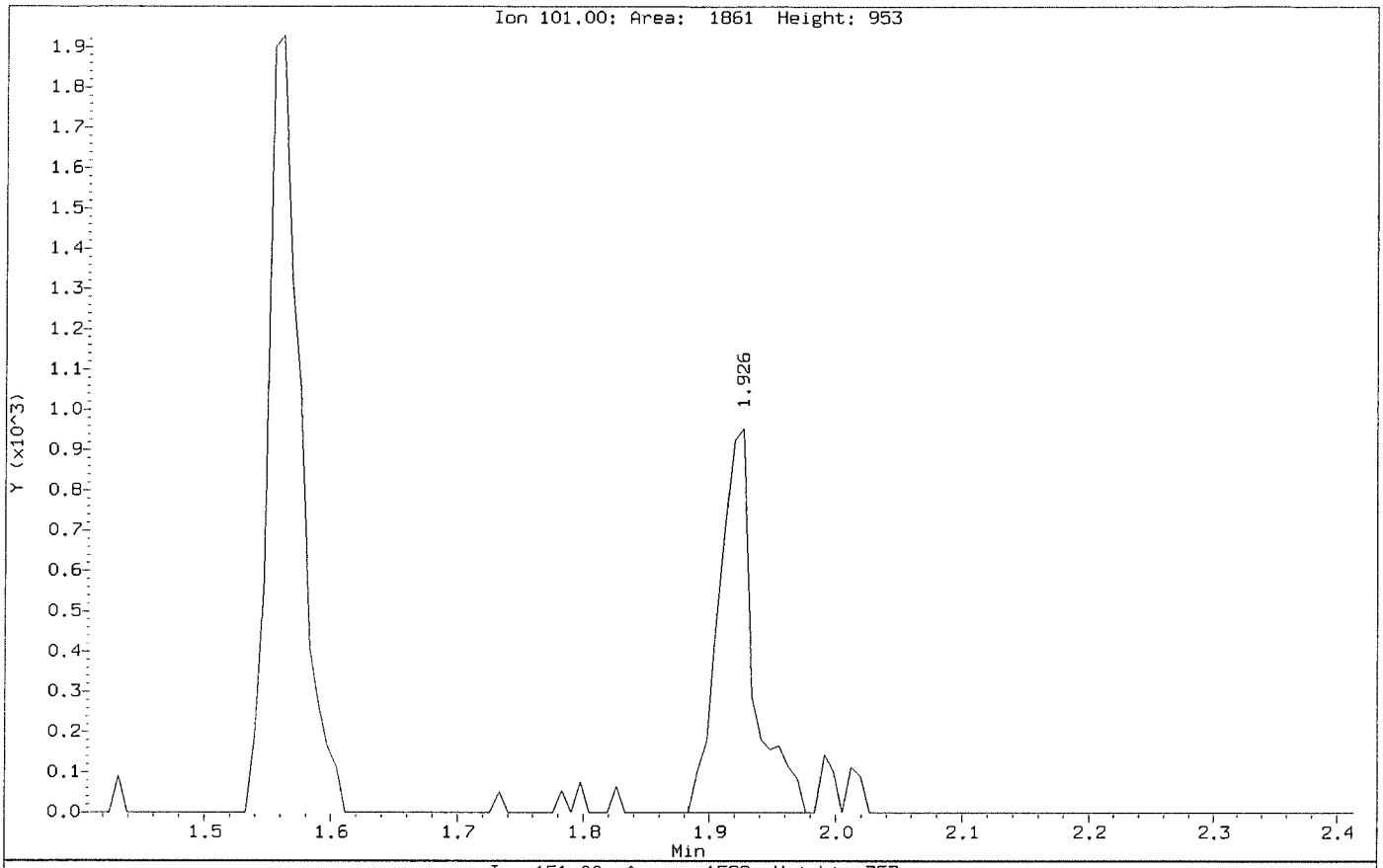


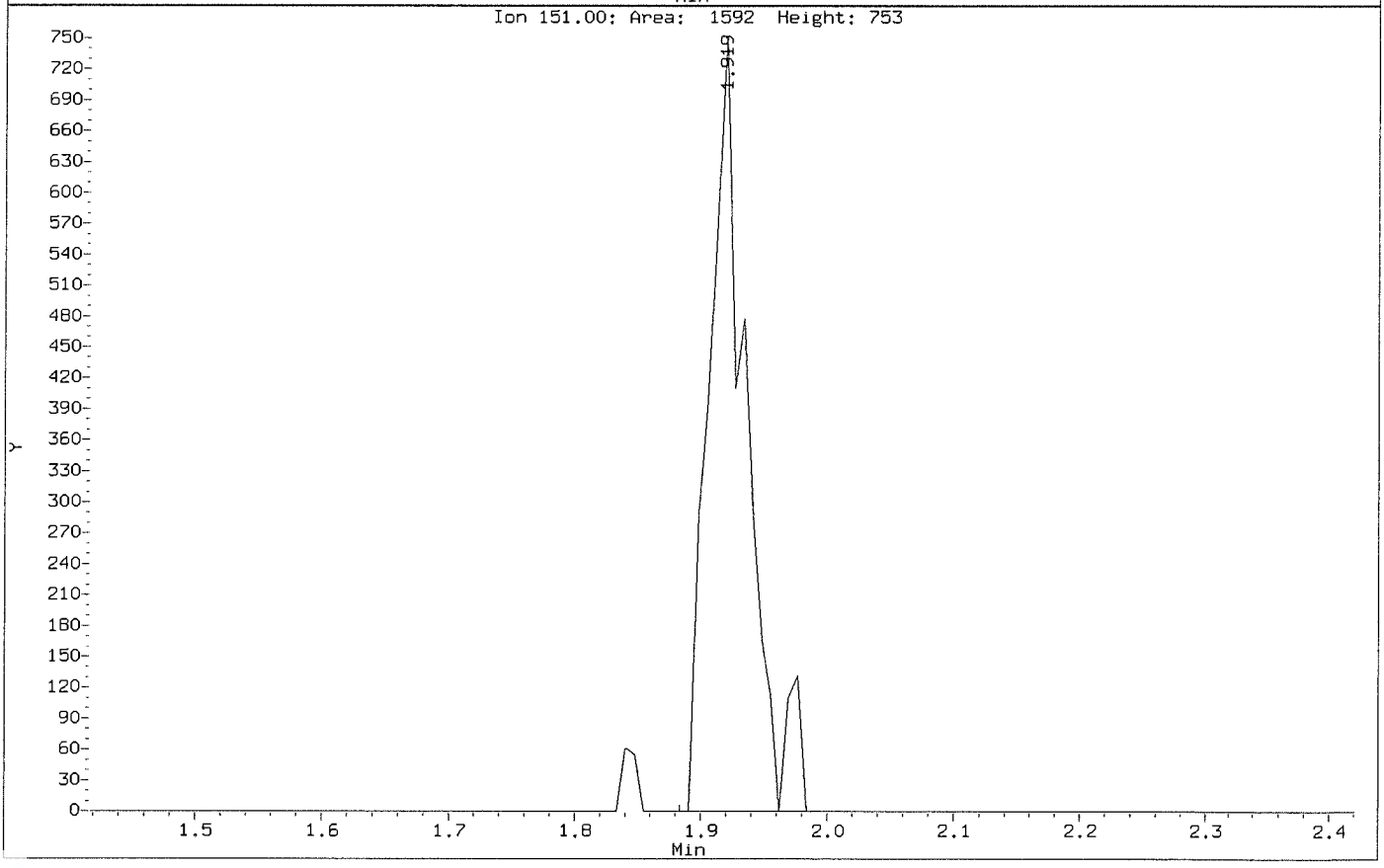




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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

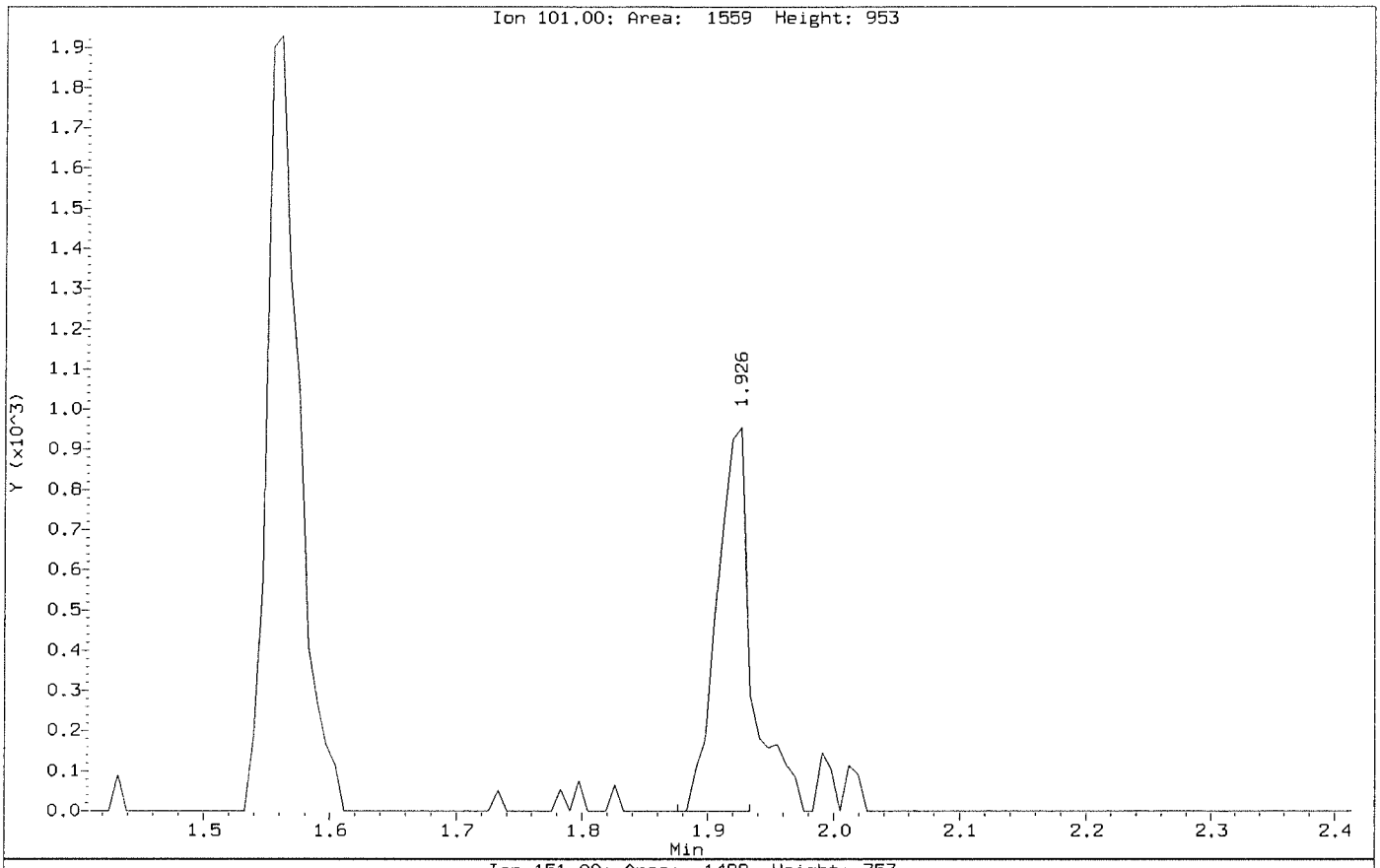
Compound: Freon TF
CAS Number: 76-13-1

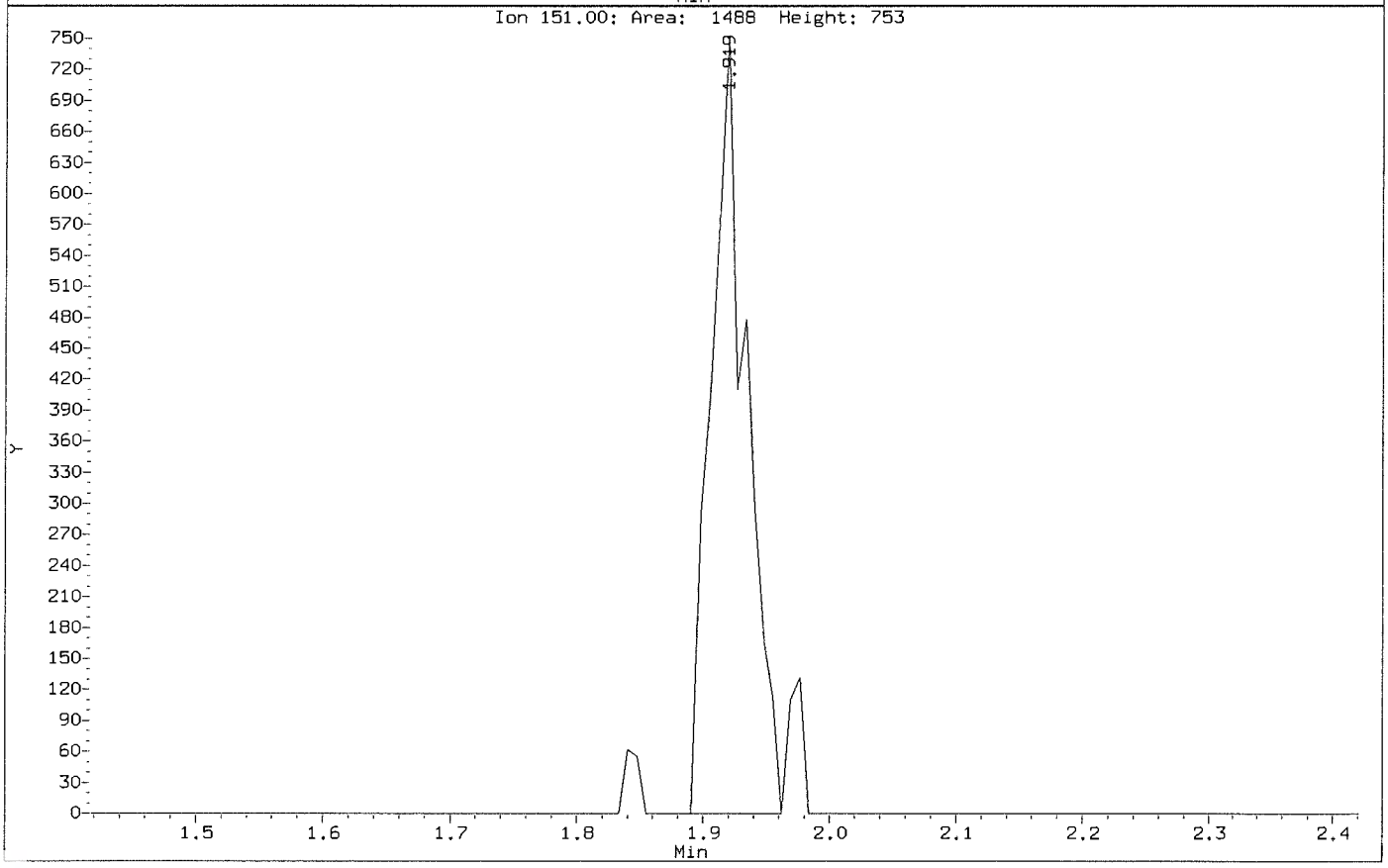




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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

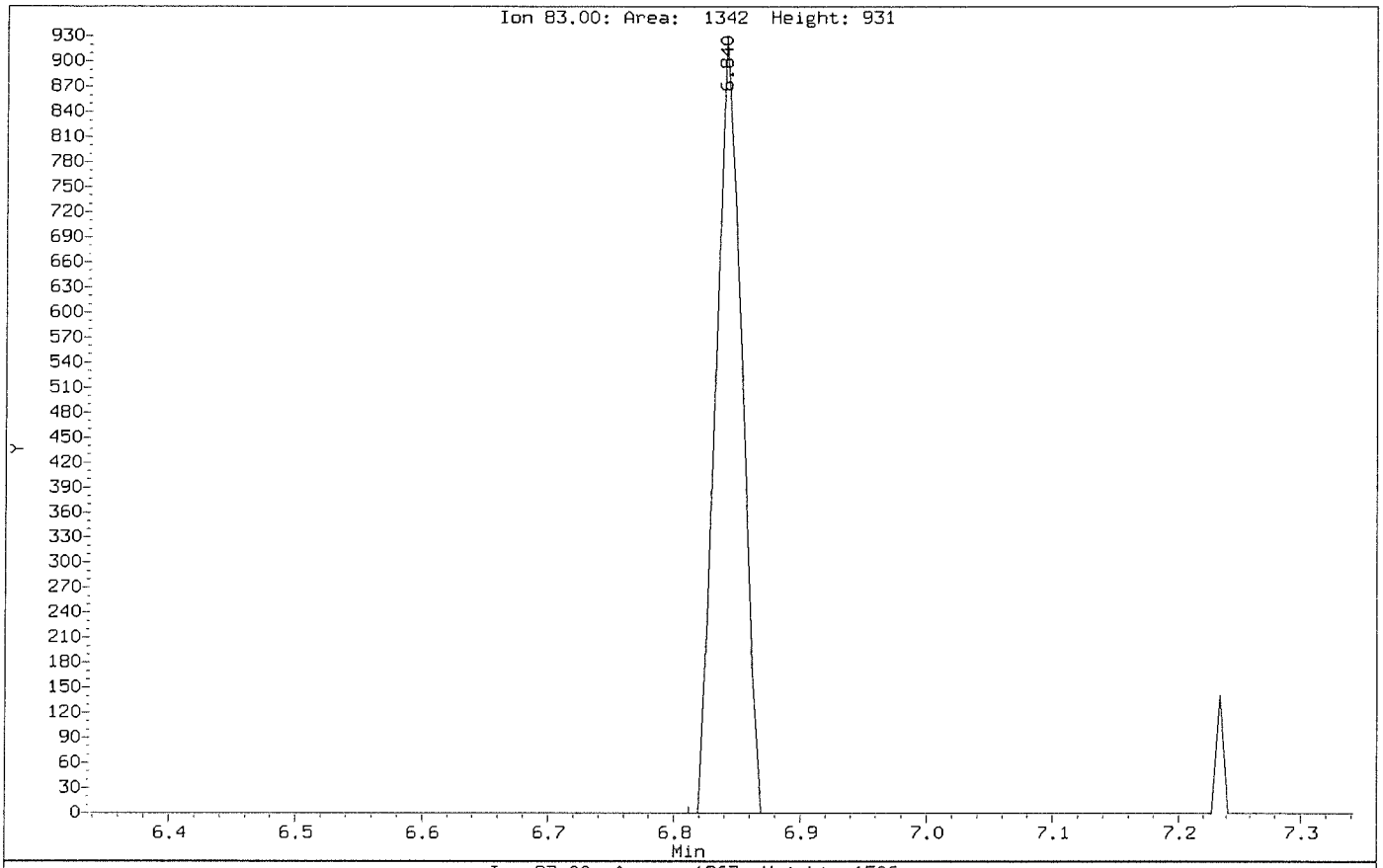
Compound: Freon TF
CAS Number: 76-13-1

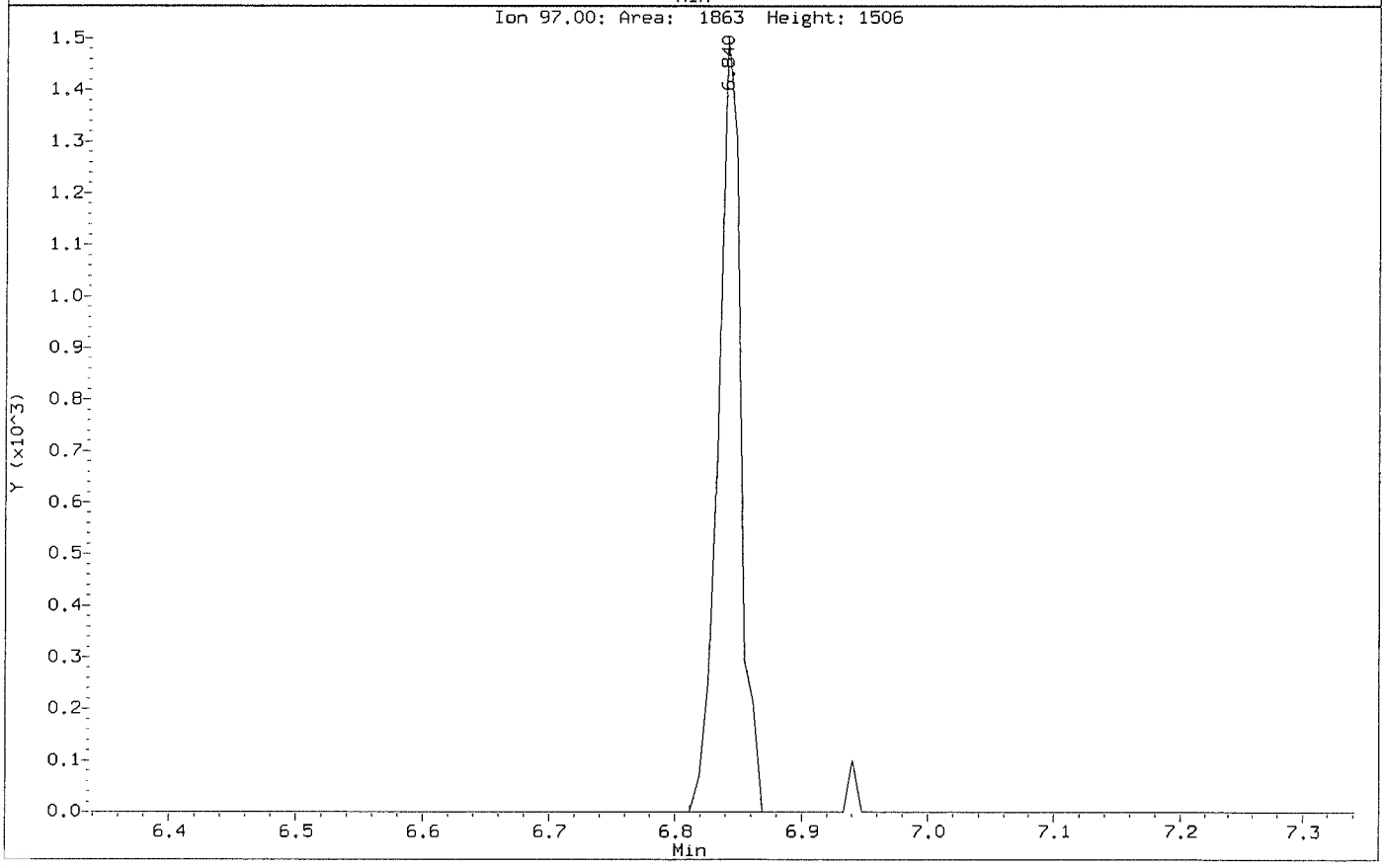




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Instrument: voa6.i
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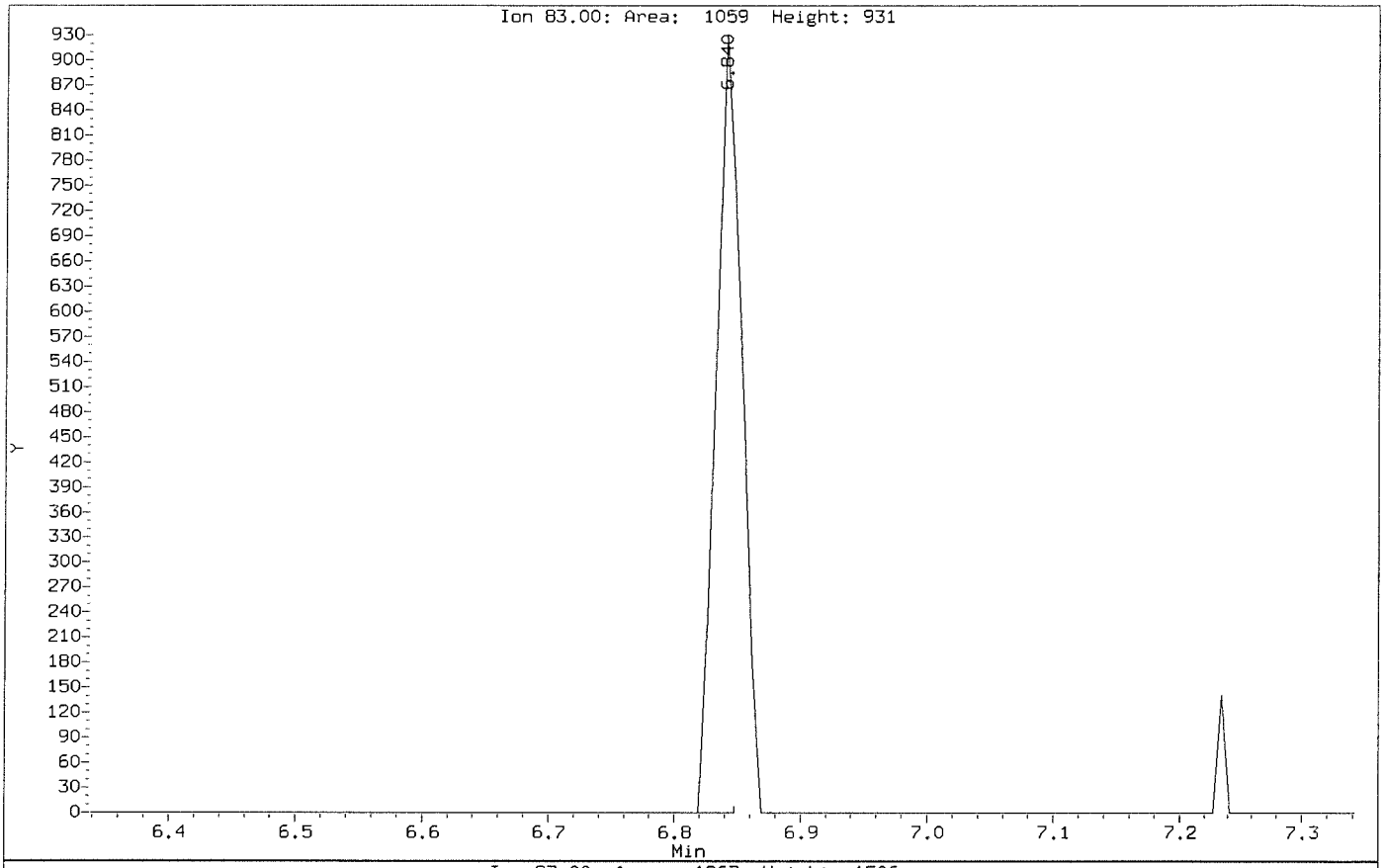
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5

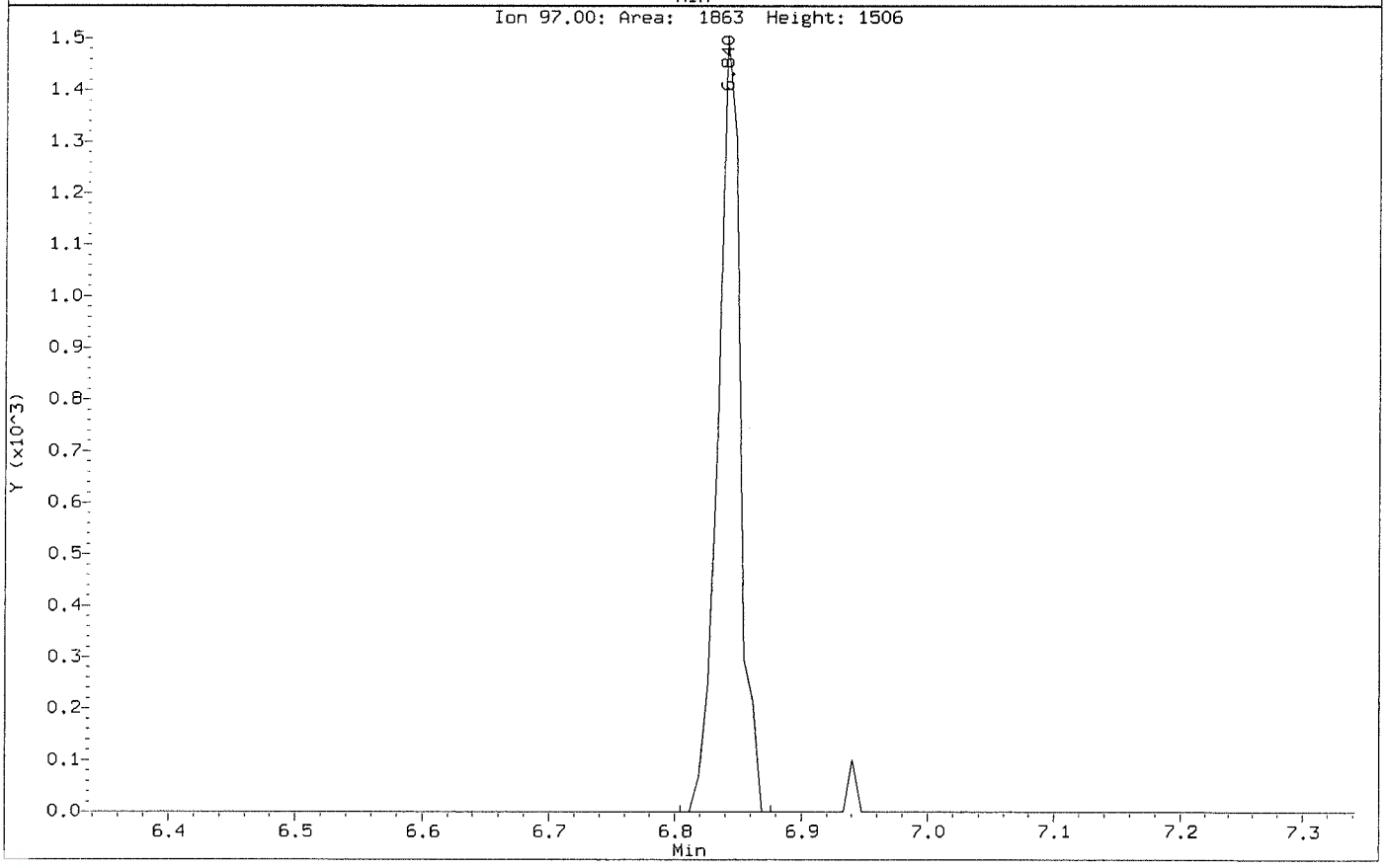




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Instrument: voa6.i
Client Sample ID: VSTD000.5

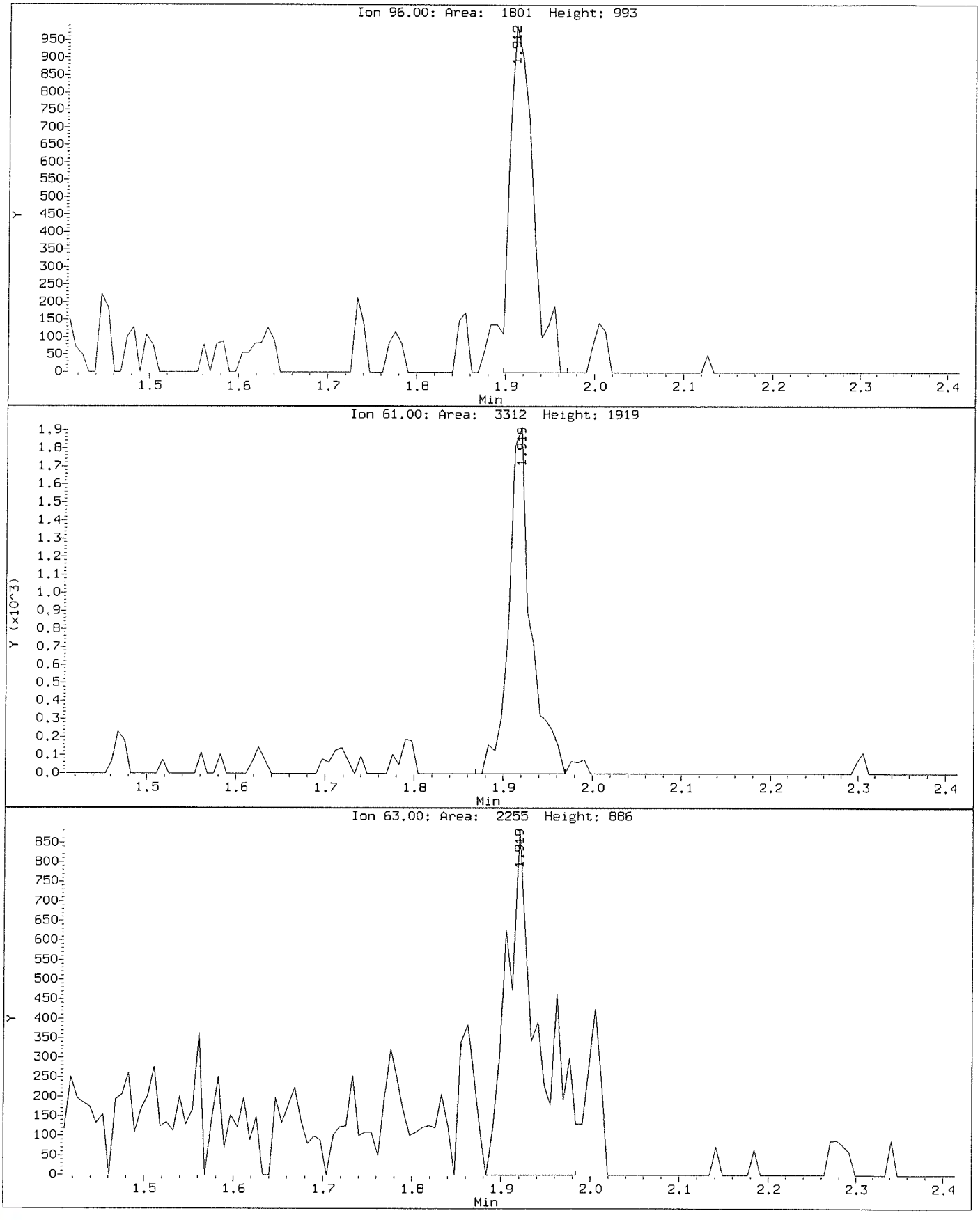
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5





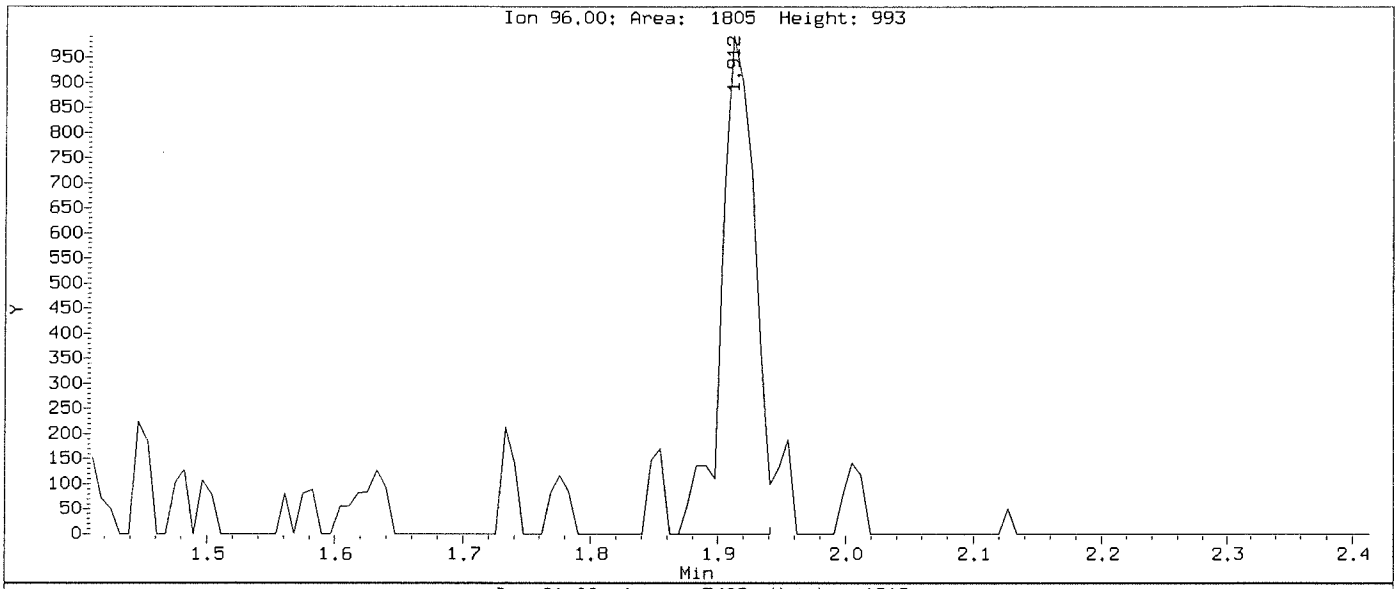
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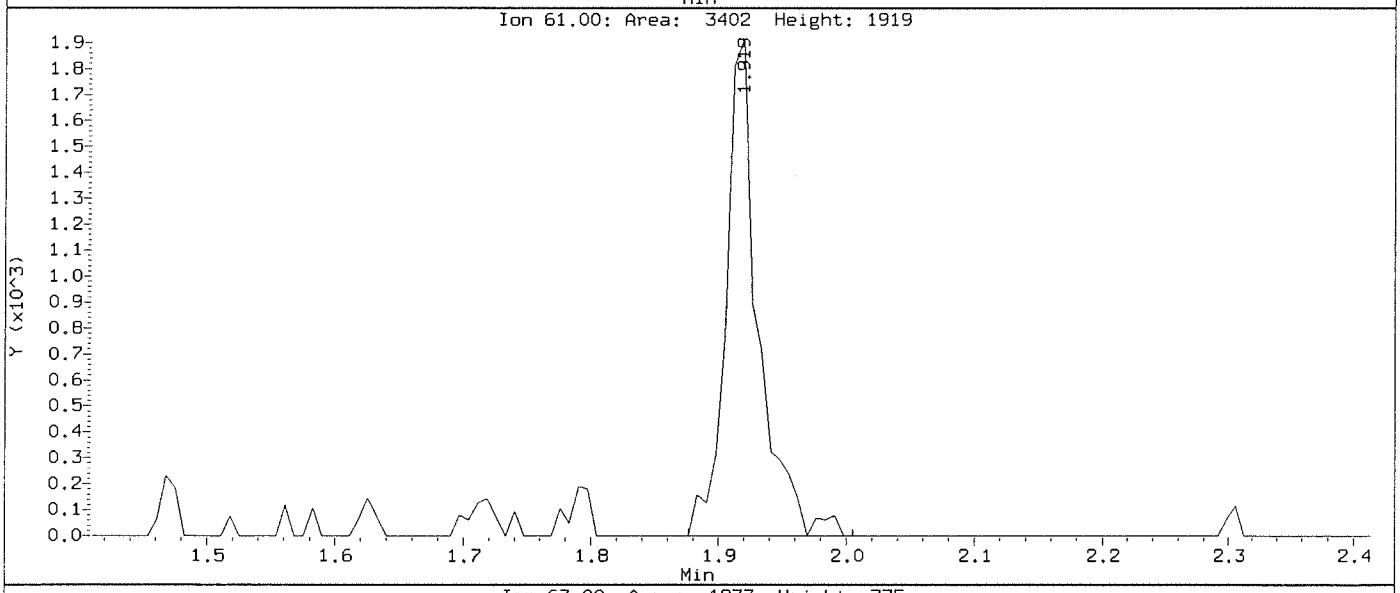
Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

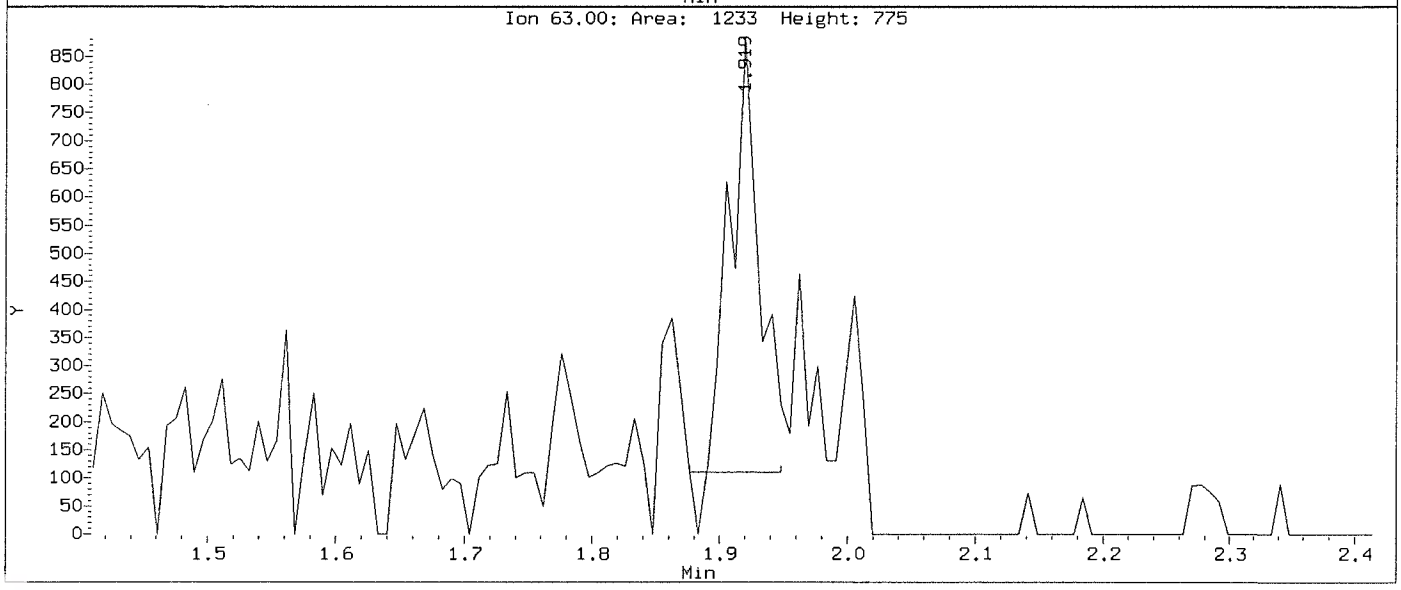


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

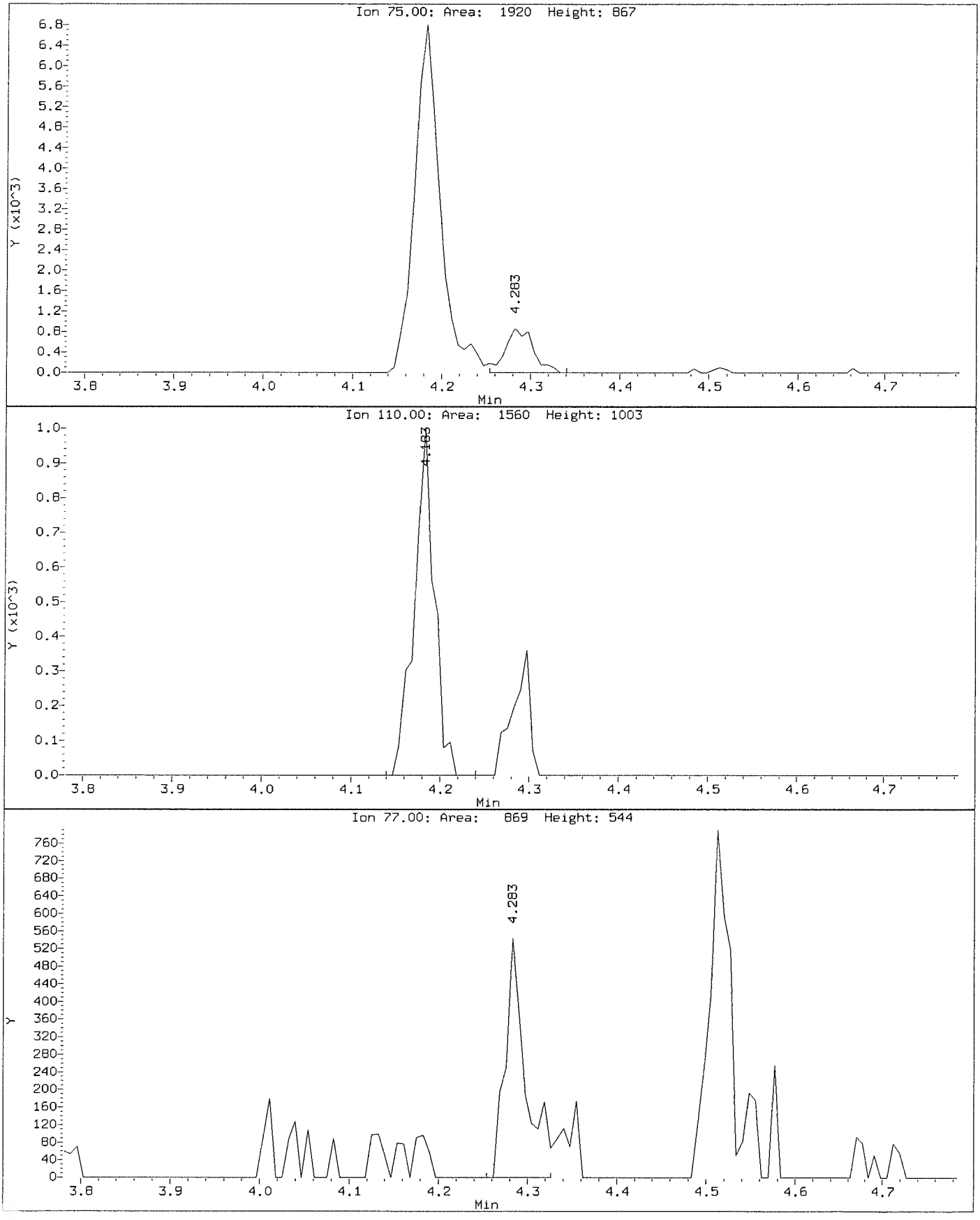






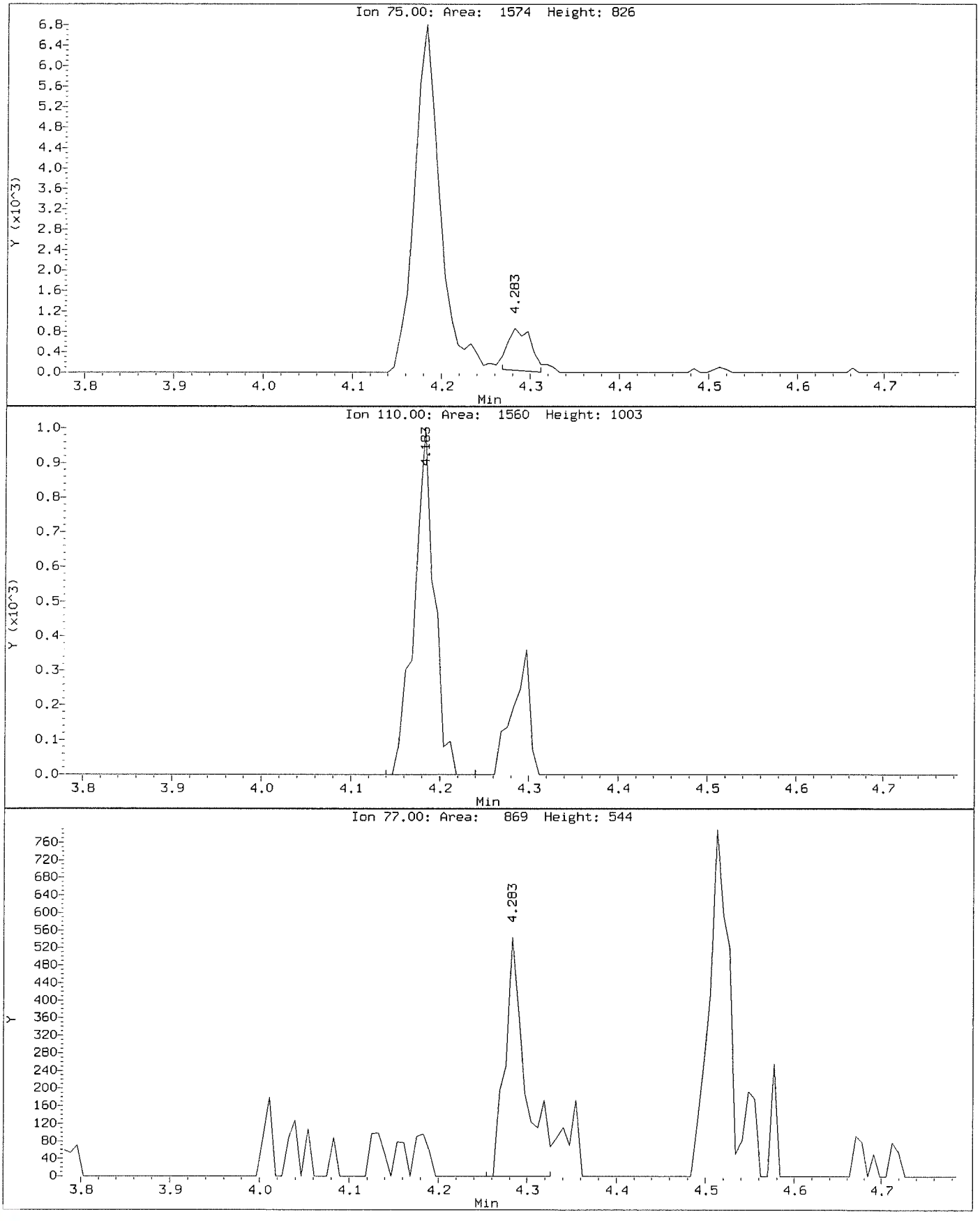
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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



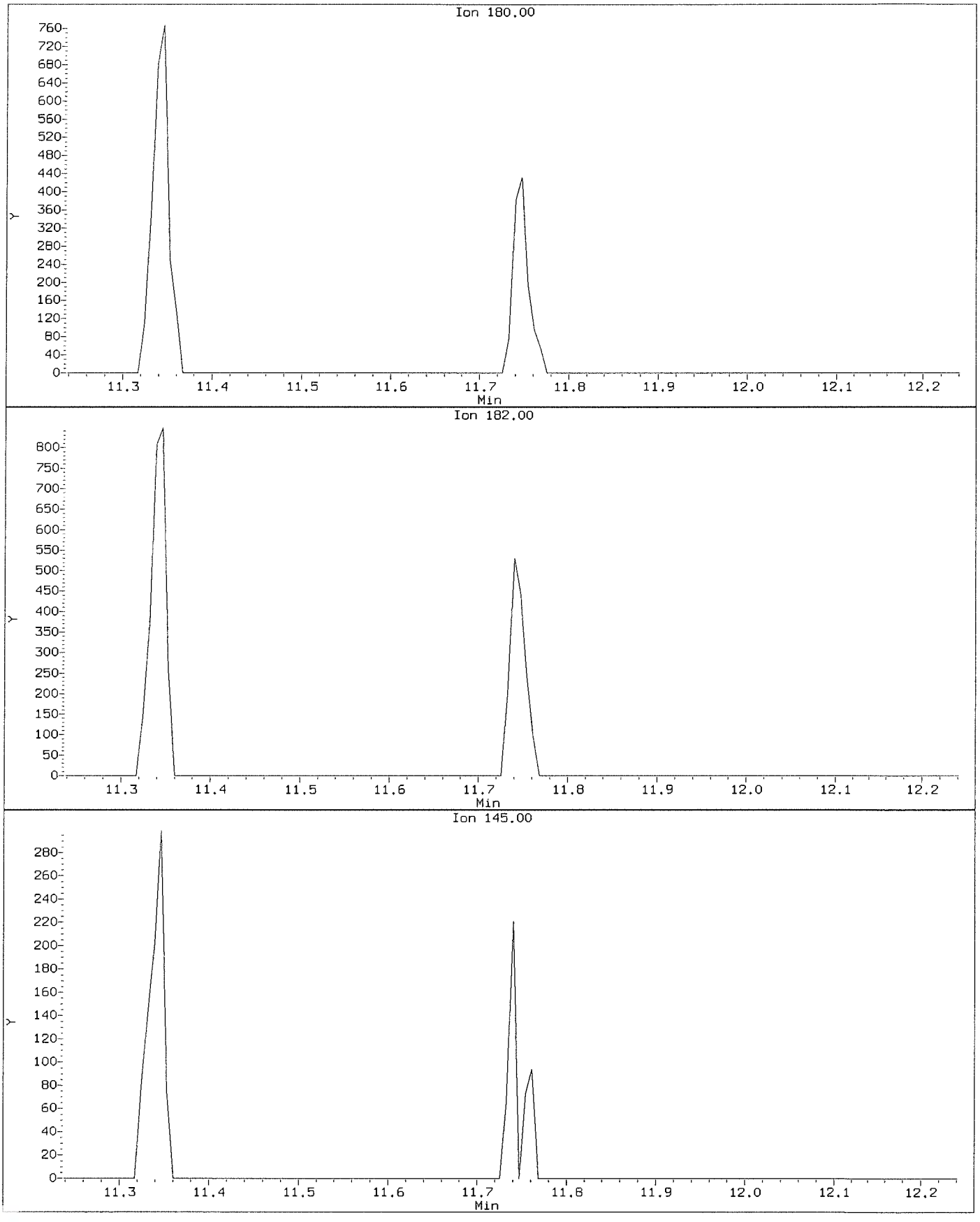
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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



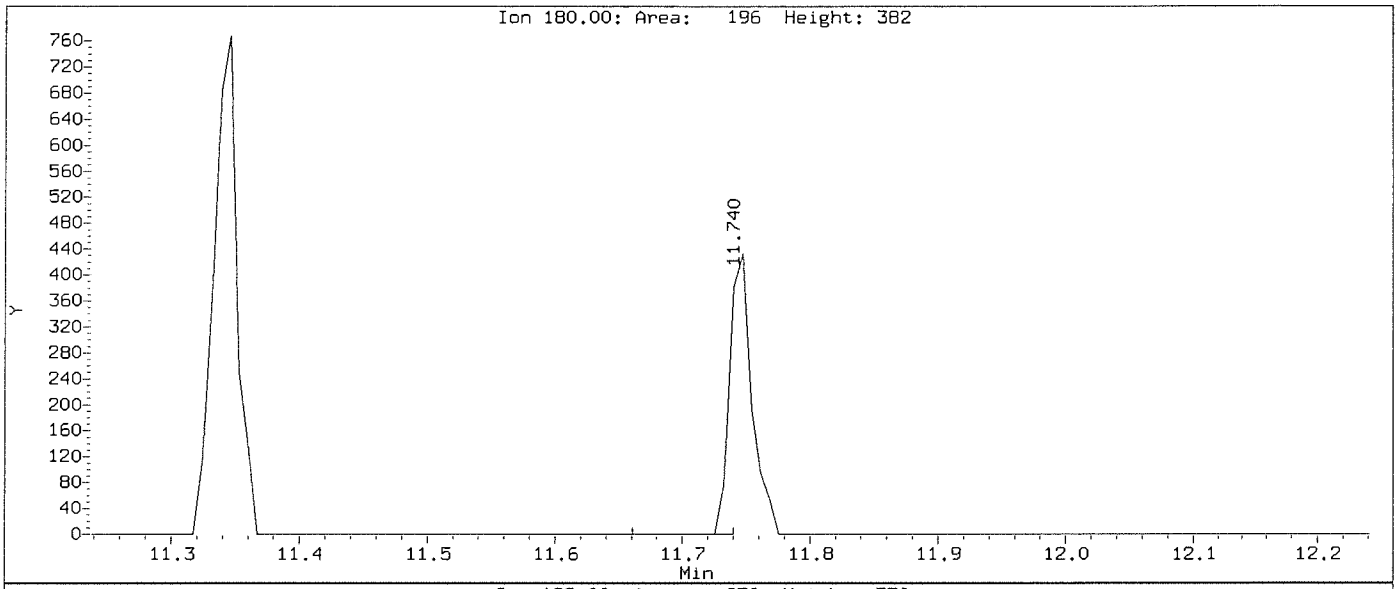
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Instrument: voa6.i
Client Sample ID: VSTD000.5

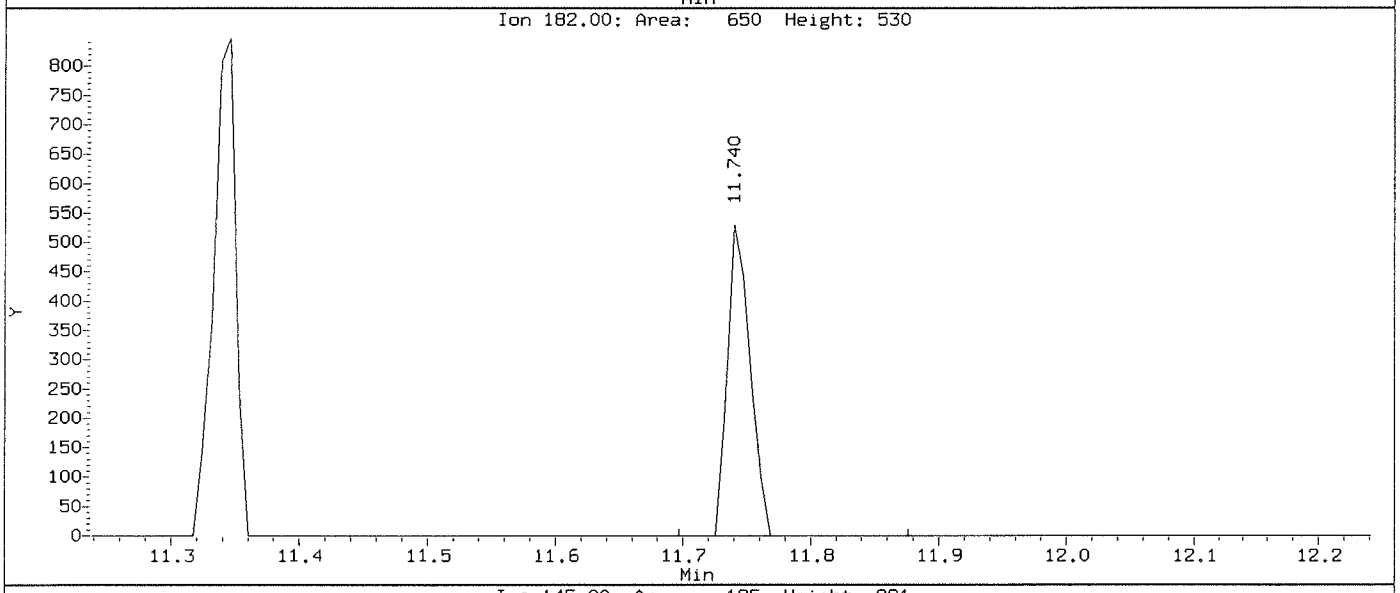
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

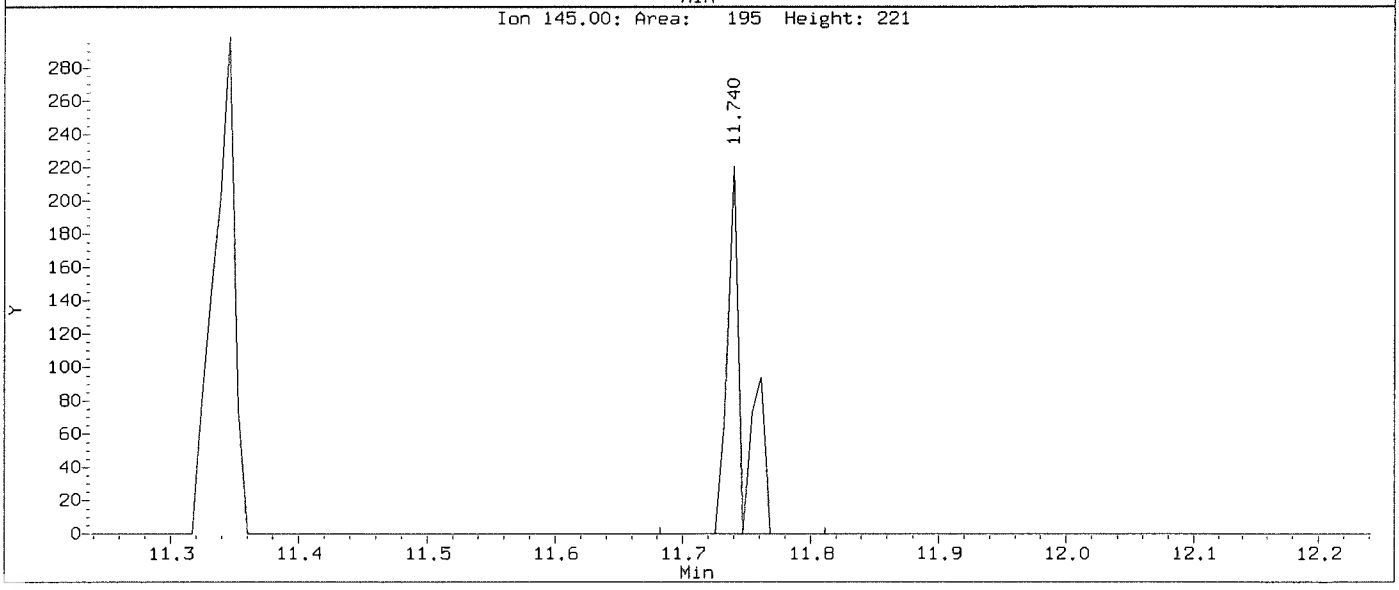


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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

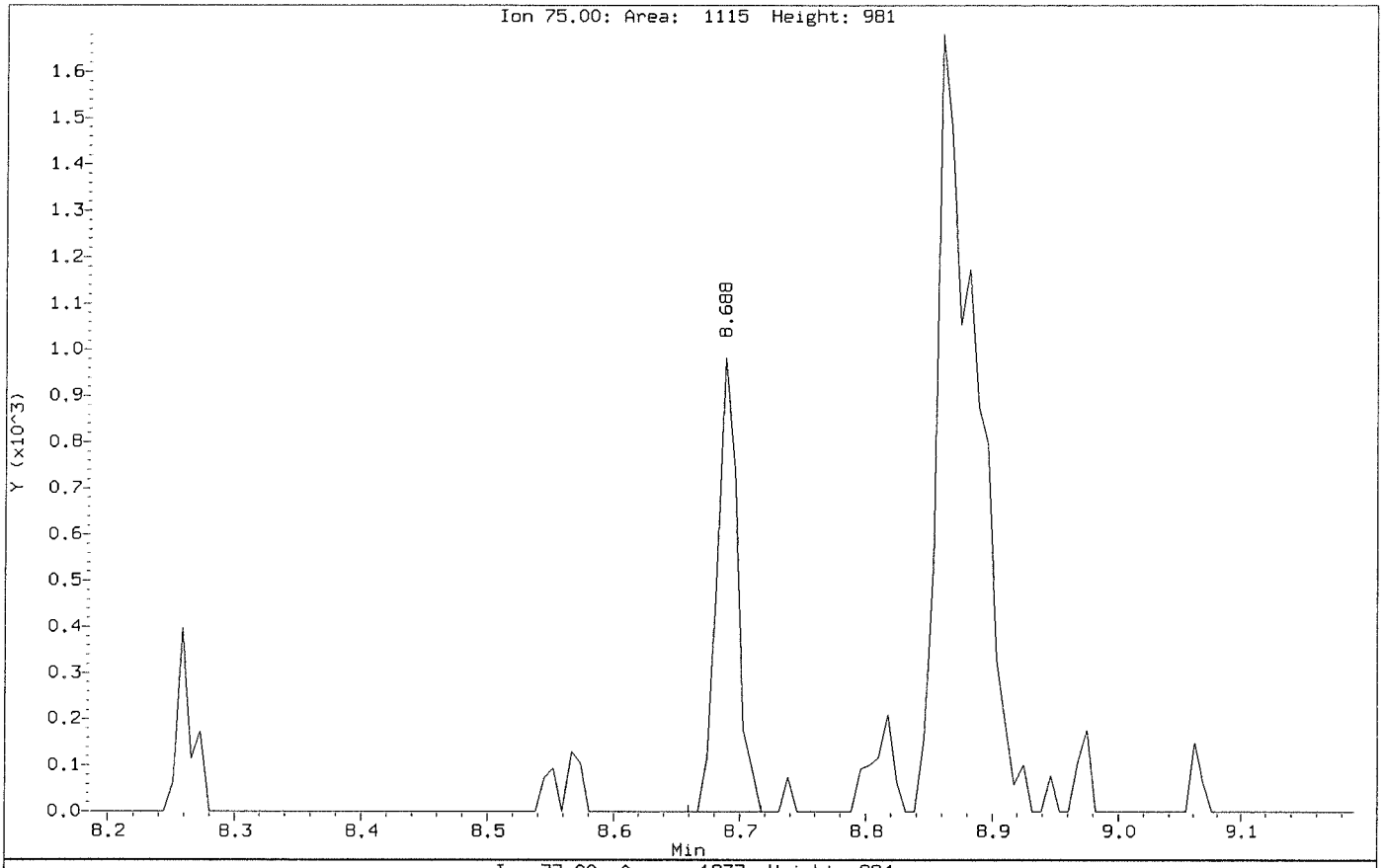


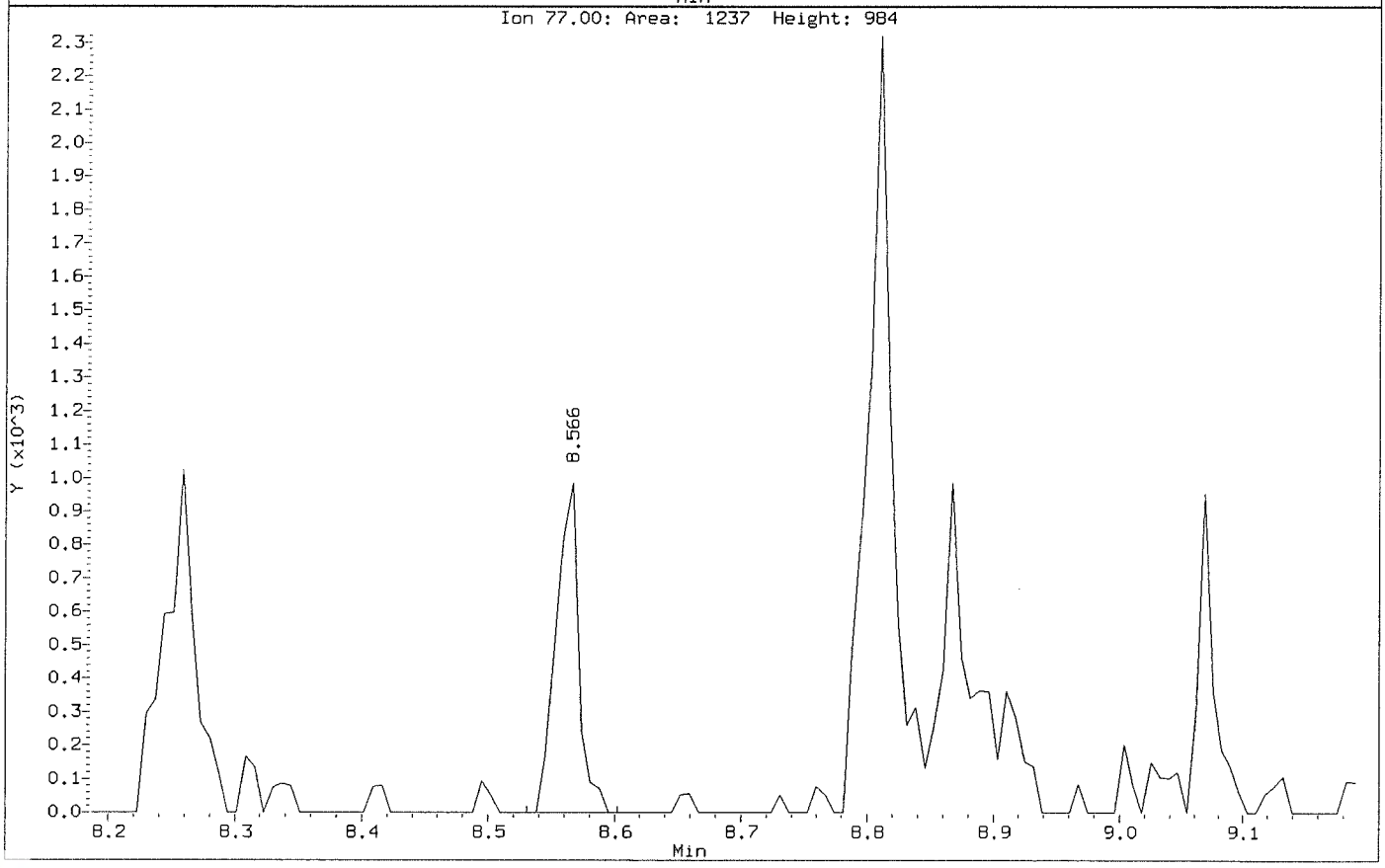




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Client Sample ID: VSTD000.5

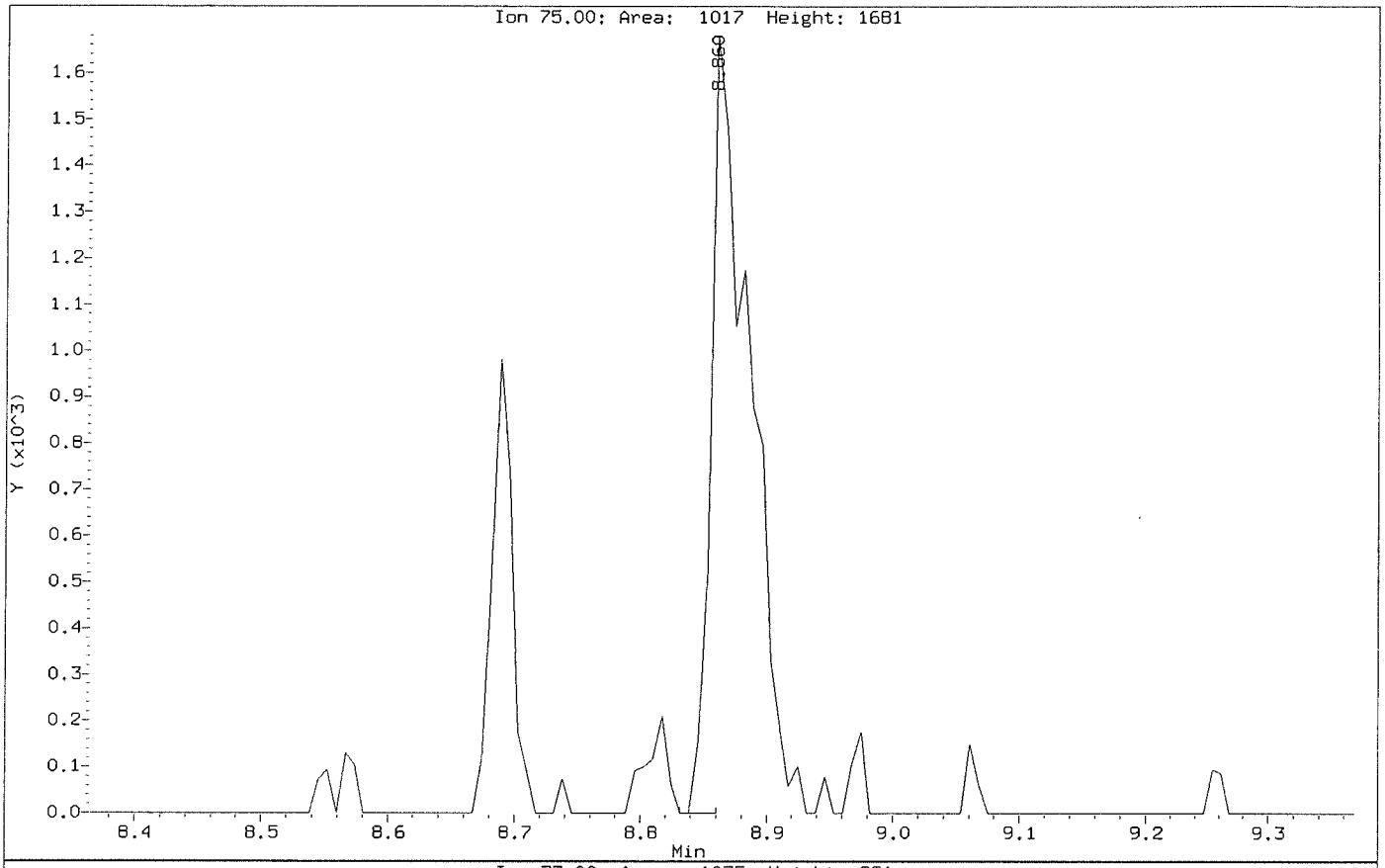
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

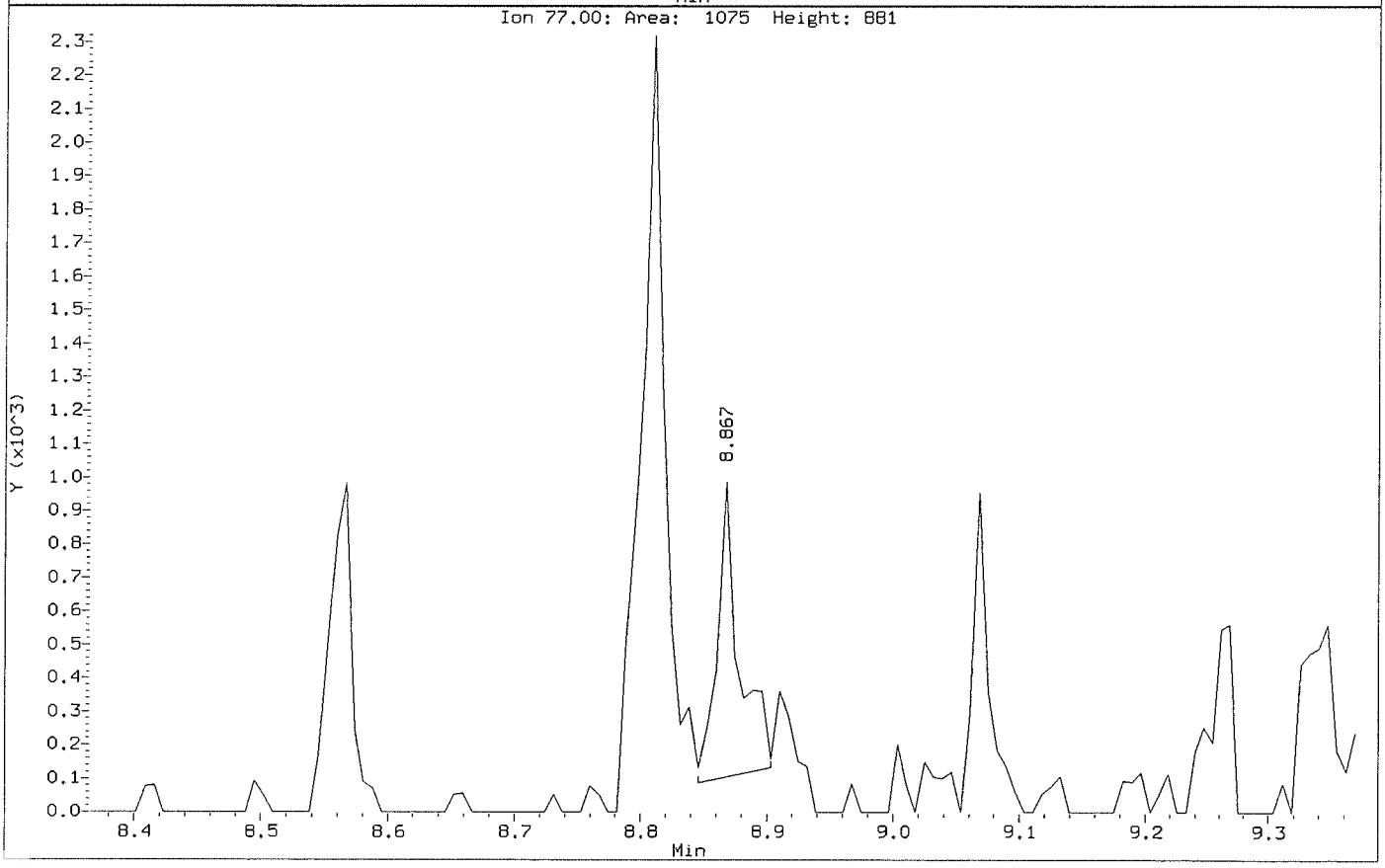




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Client Sample ID: VSTD000.5

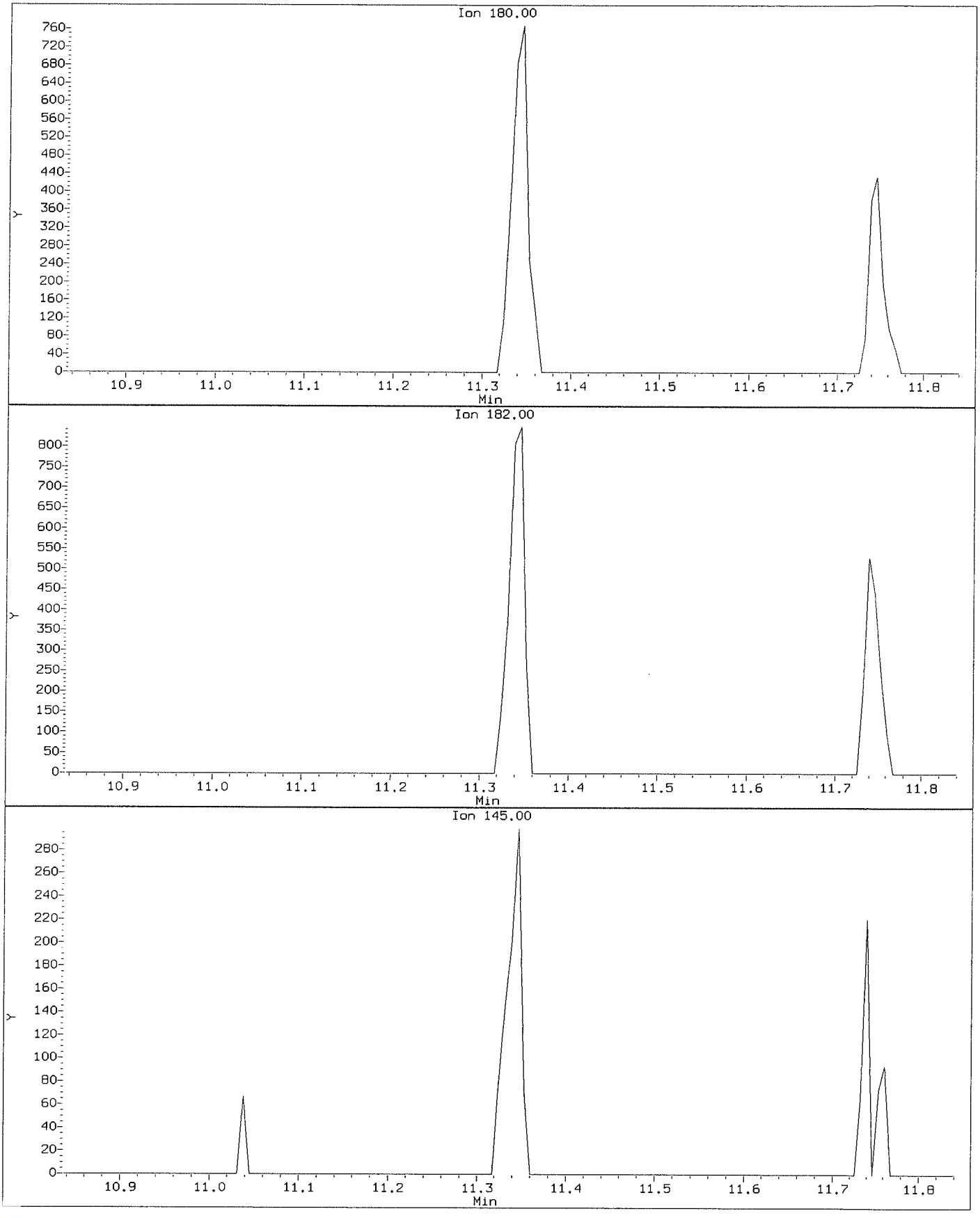
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





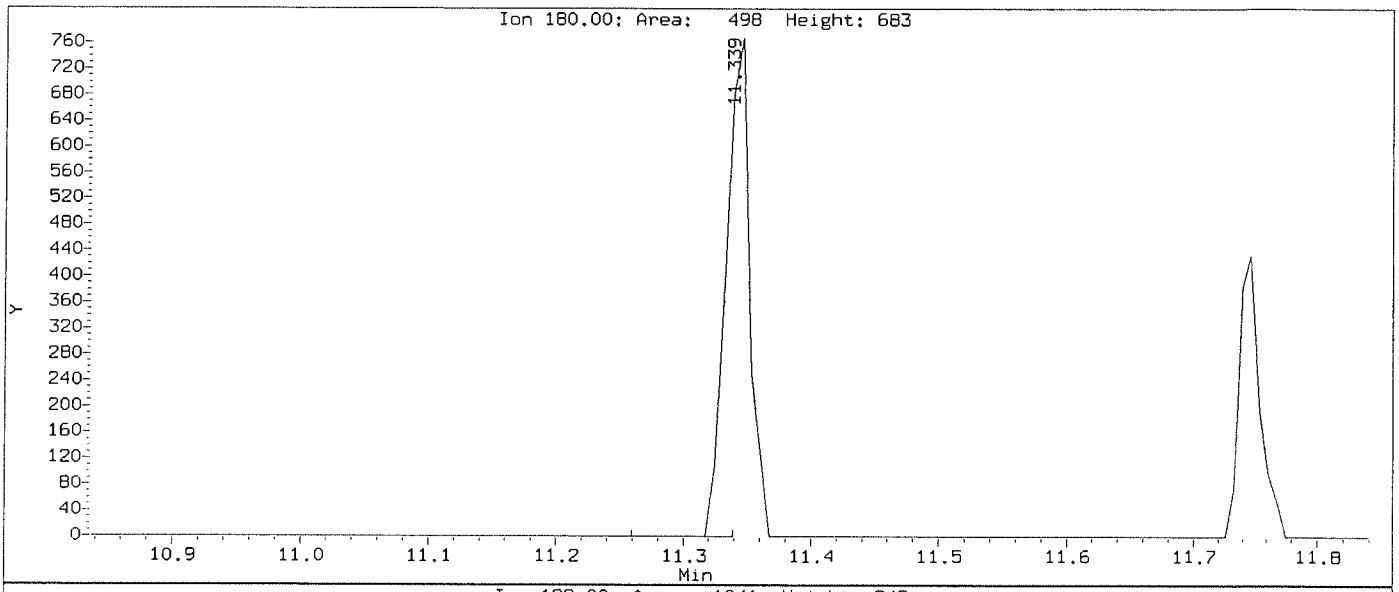
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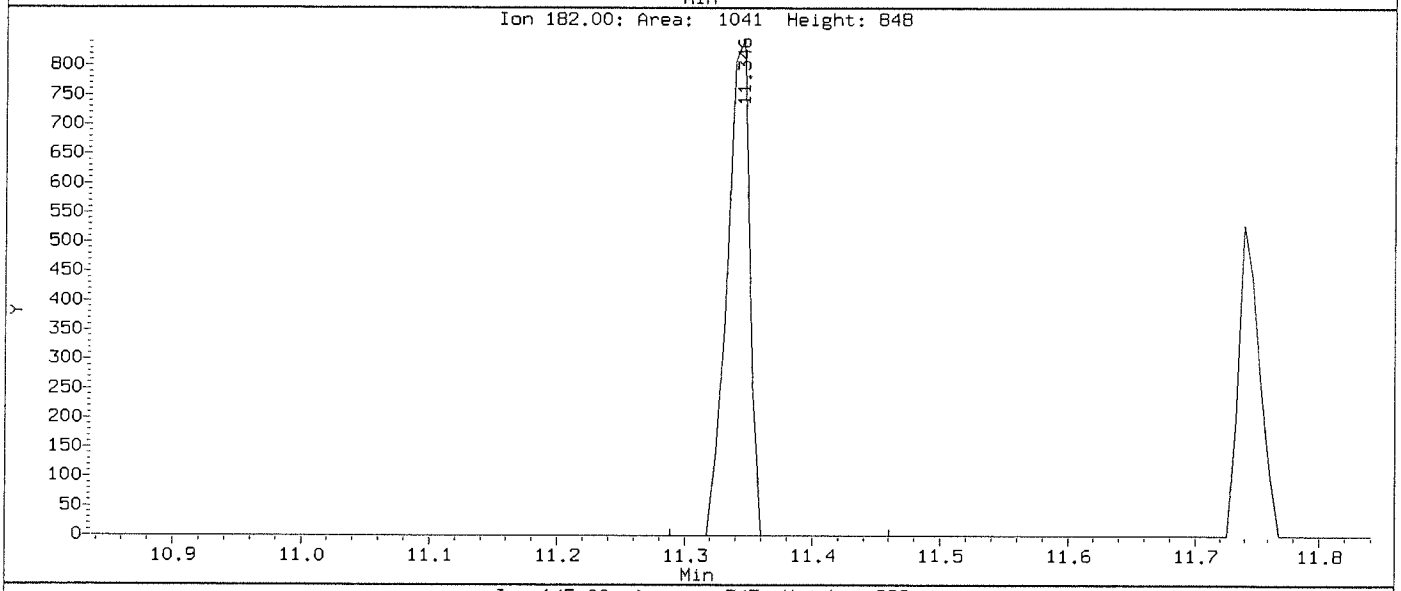
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1

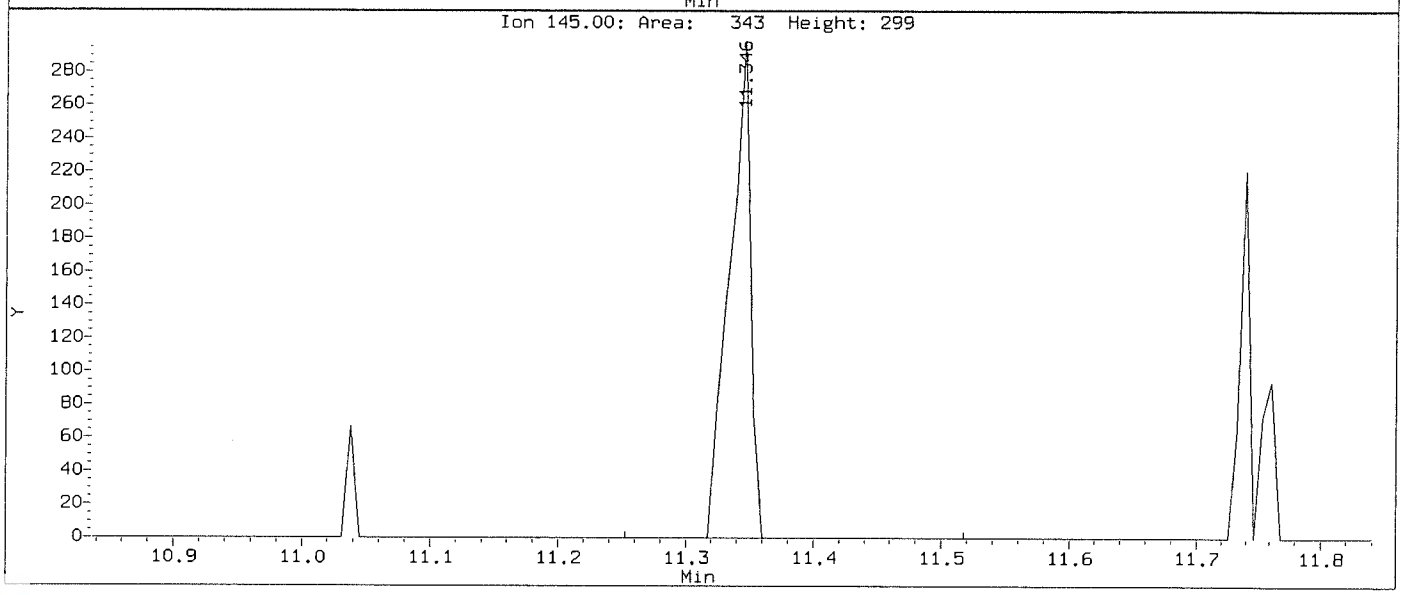


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

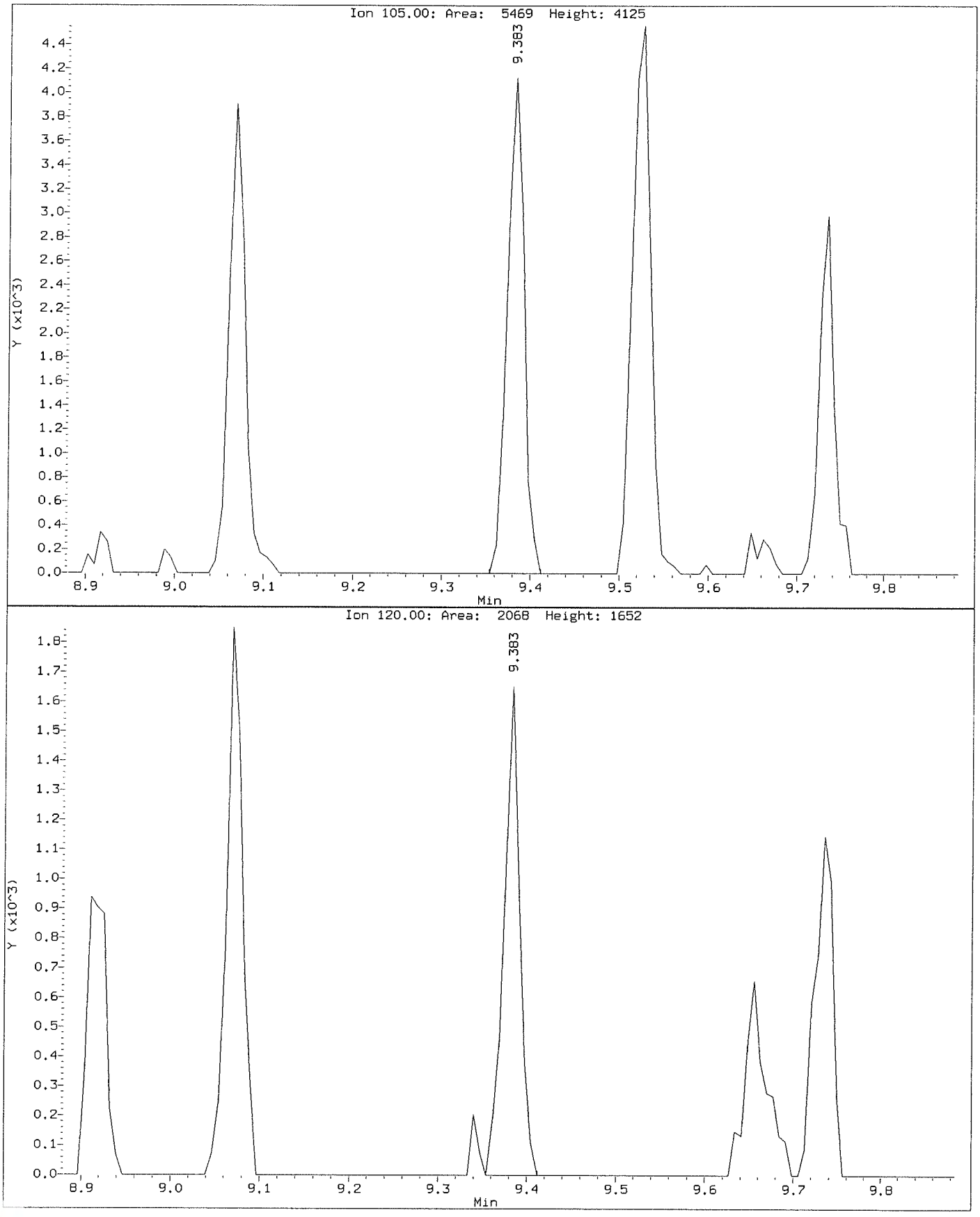






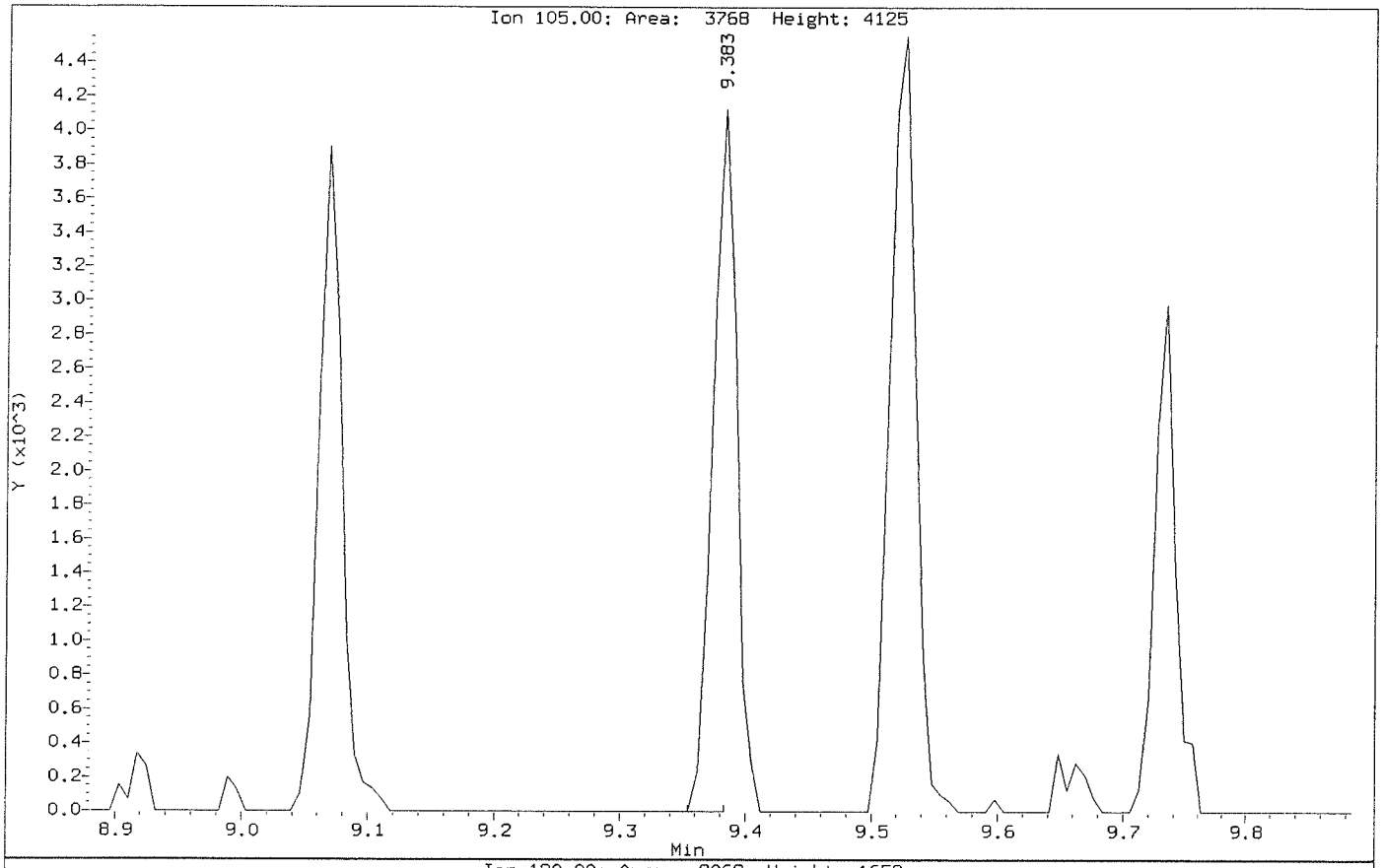
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Injection Date: 22-NOV-2020 16:25
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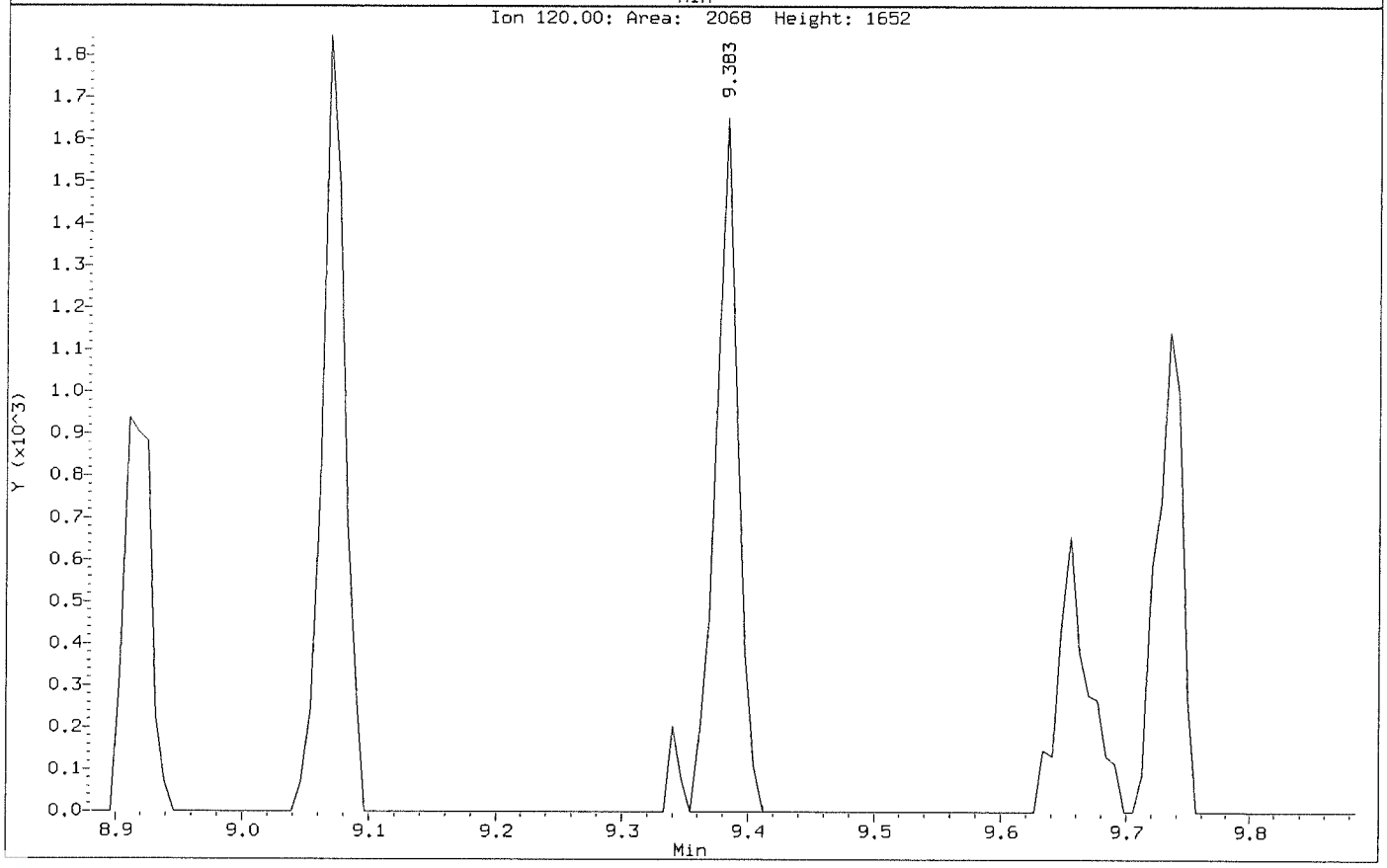
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112203.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

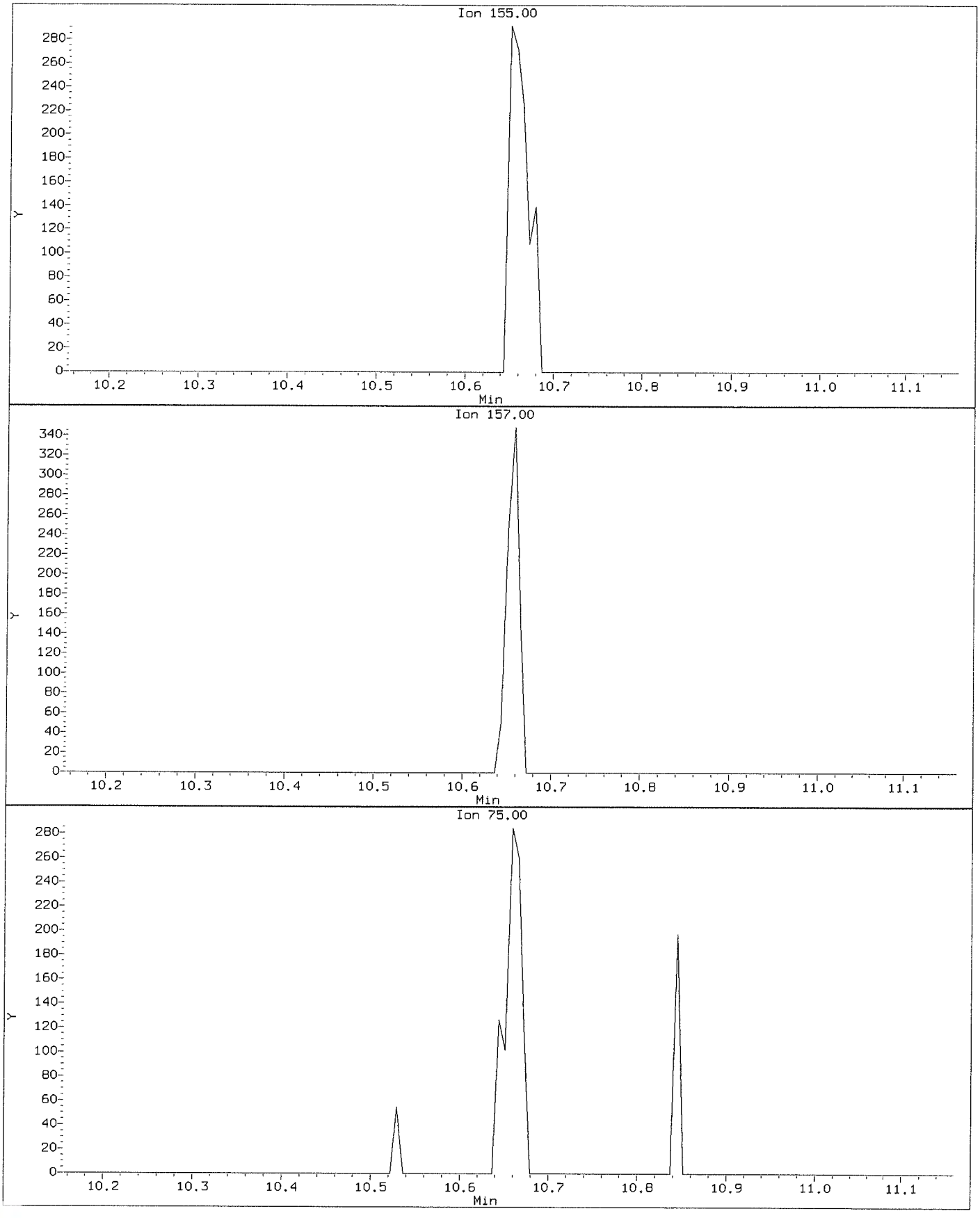
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6





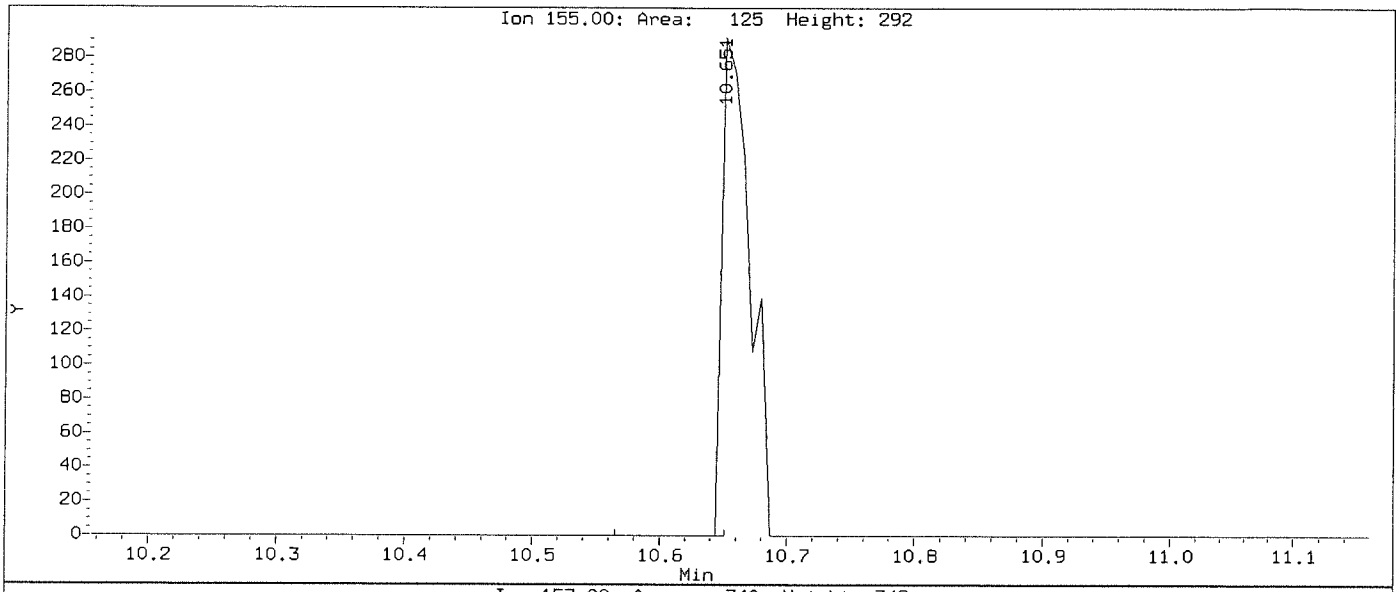
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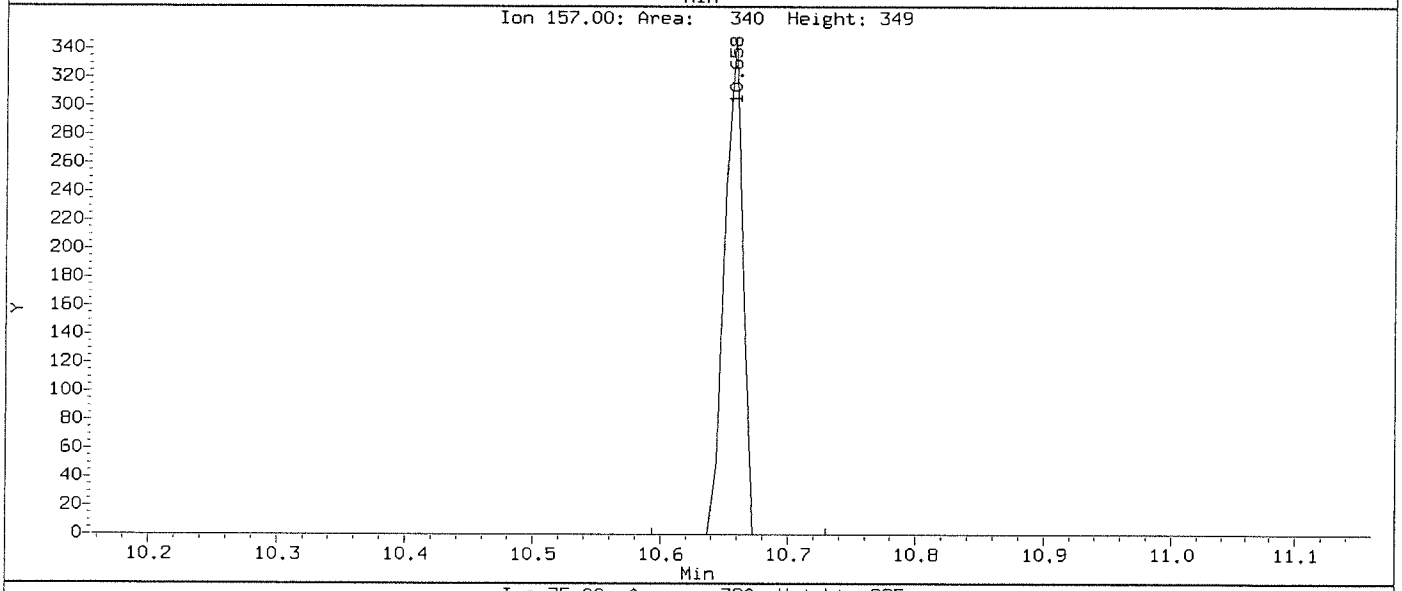
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

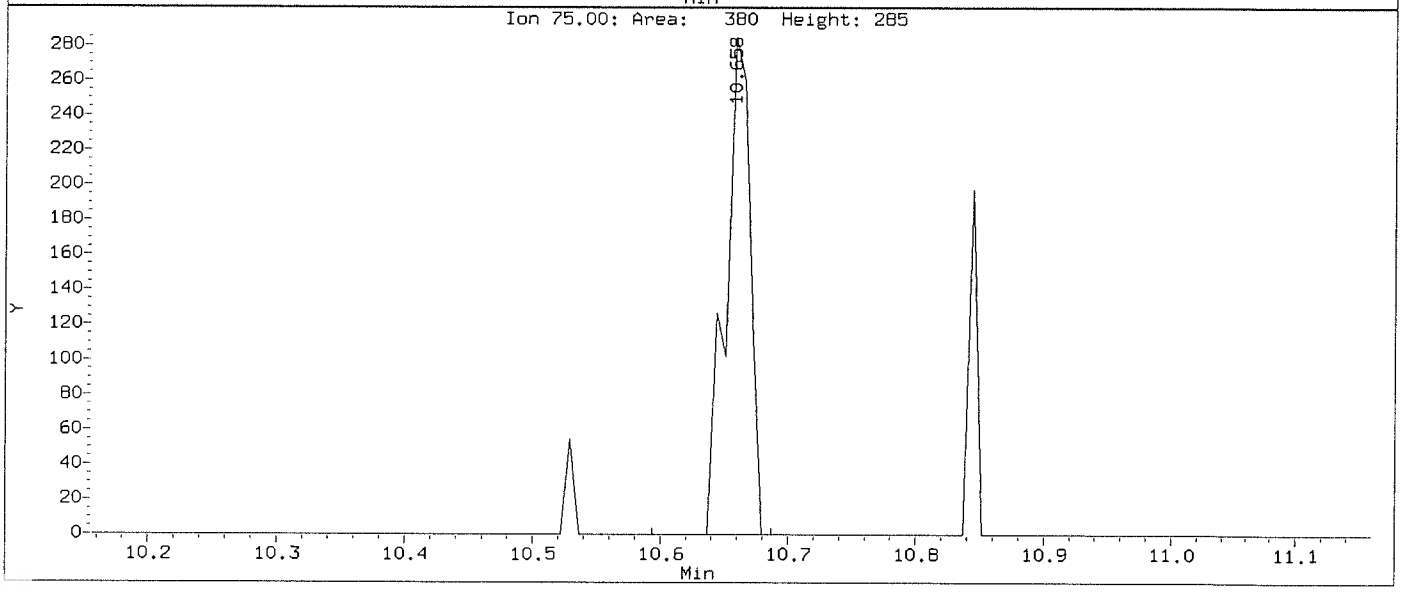


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

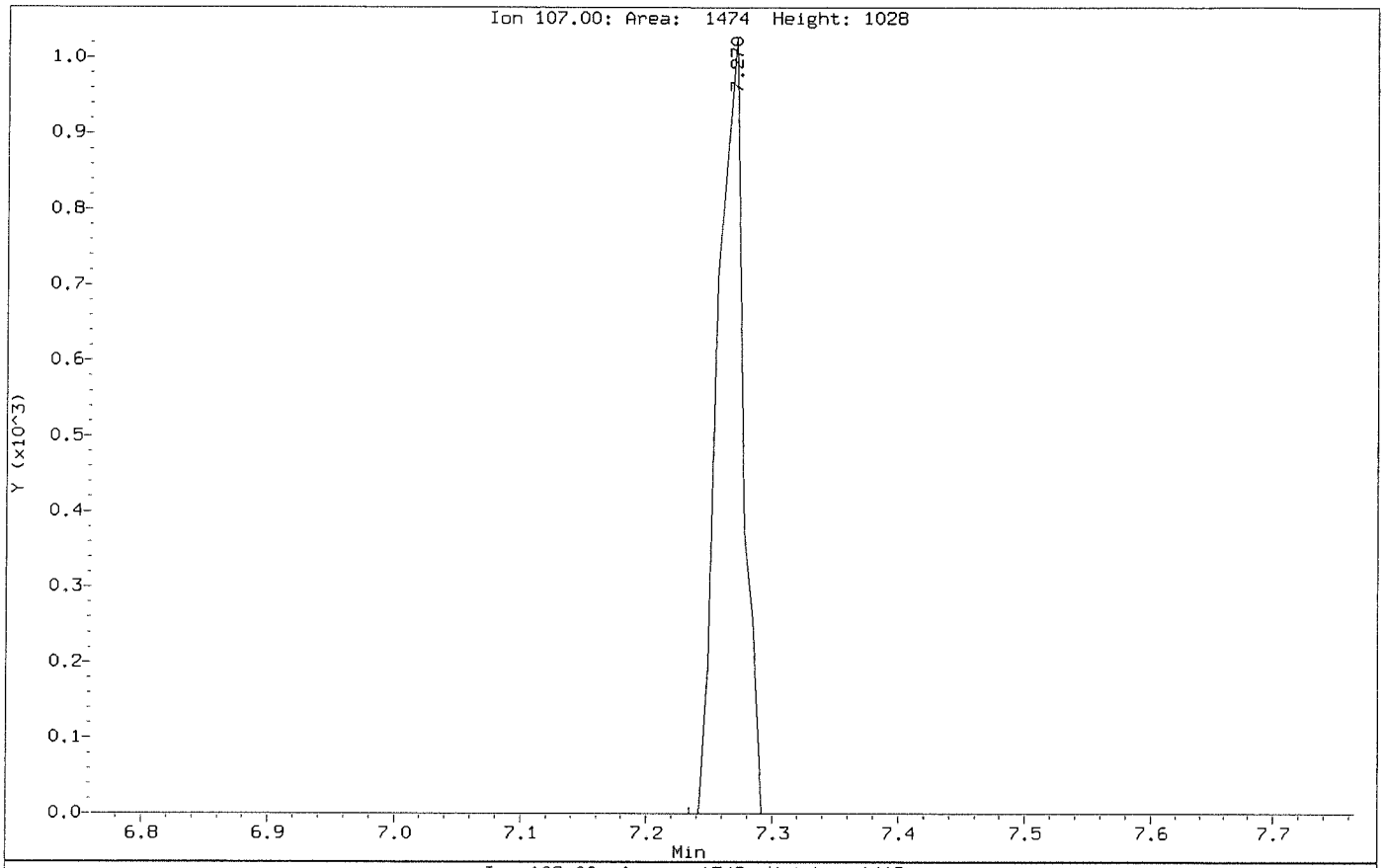


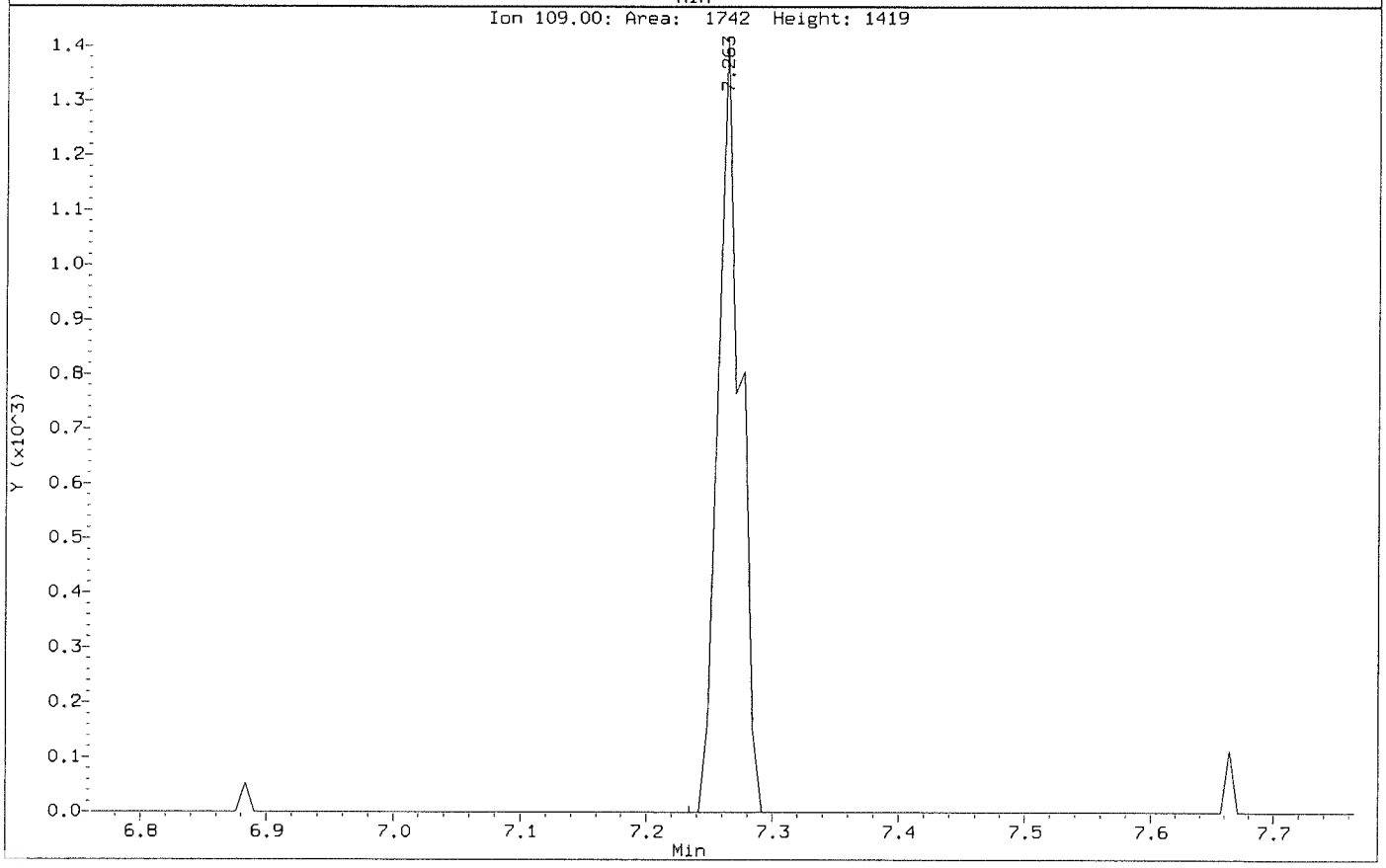




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Client Sample ID: VSTD000.5

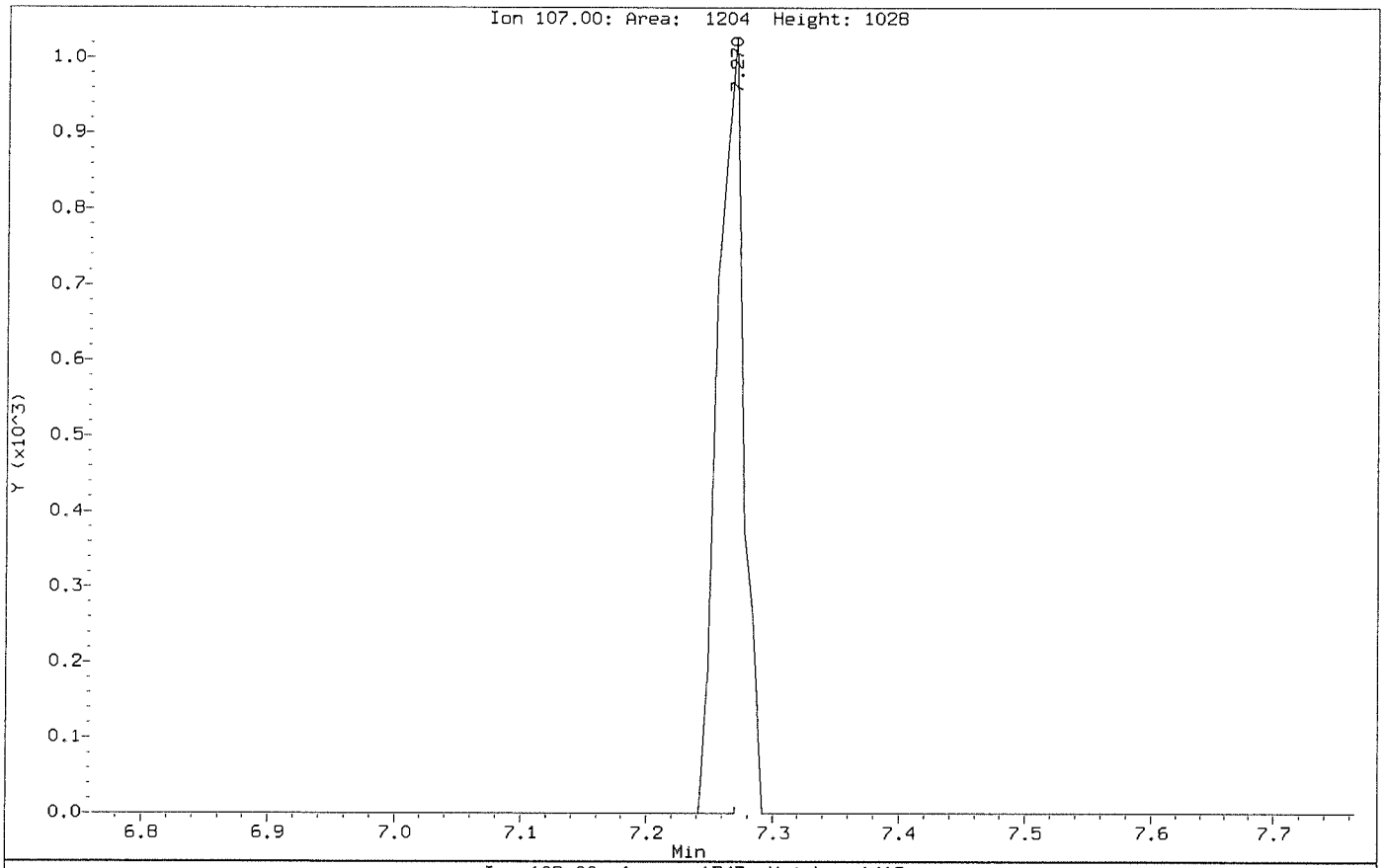
Compound: 1,2-Dibromoethane
CAS Number: 106-93-4

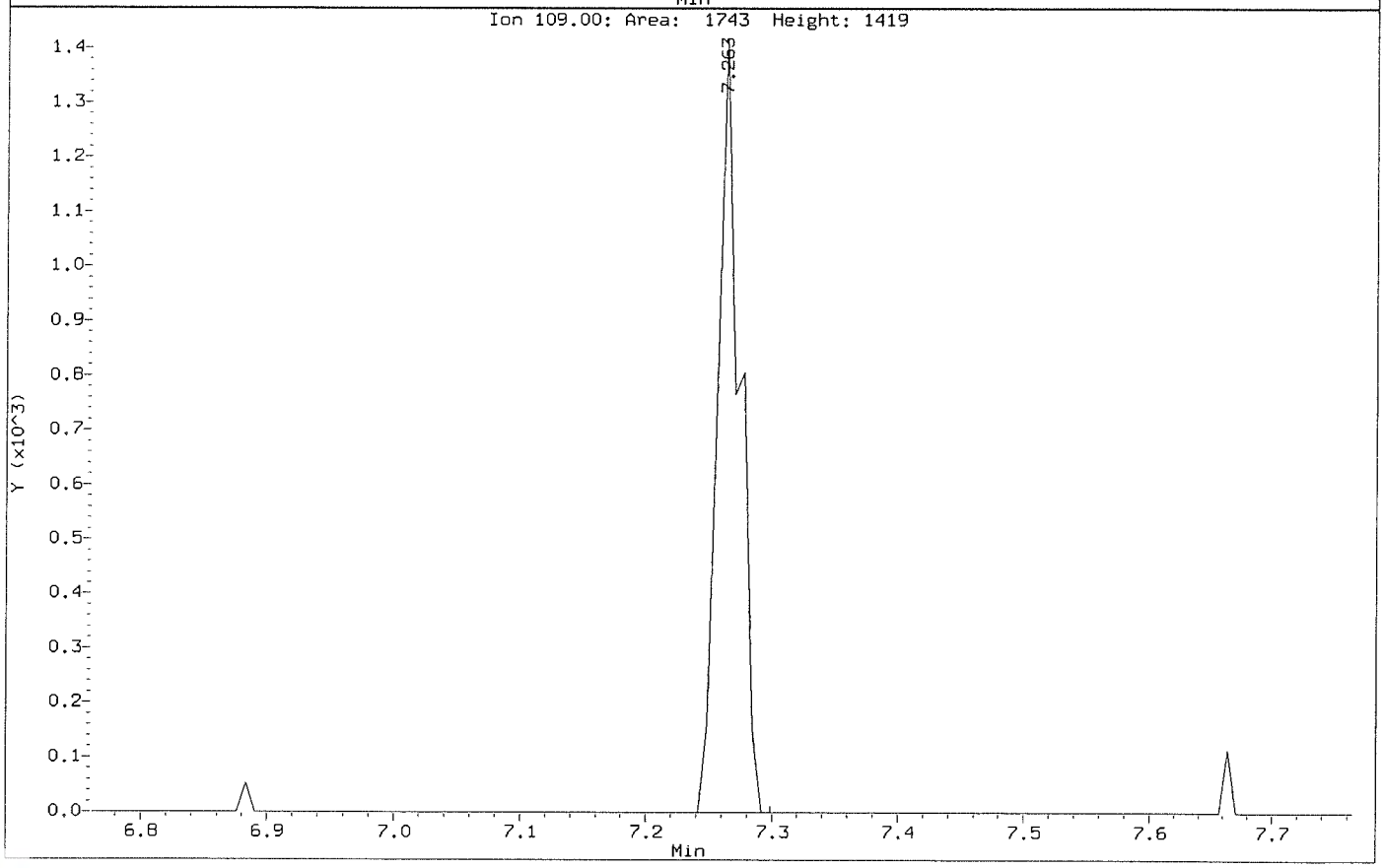




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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

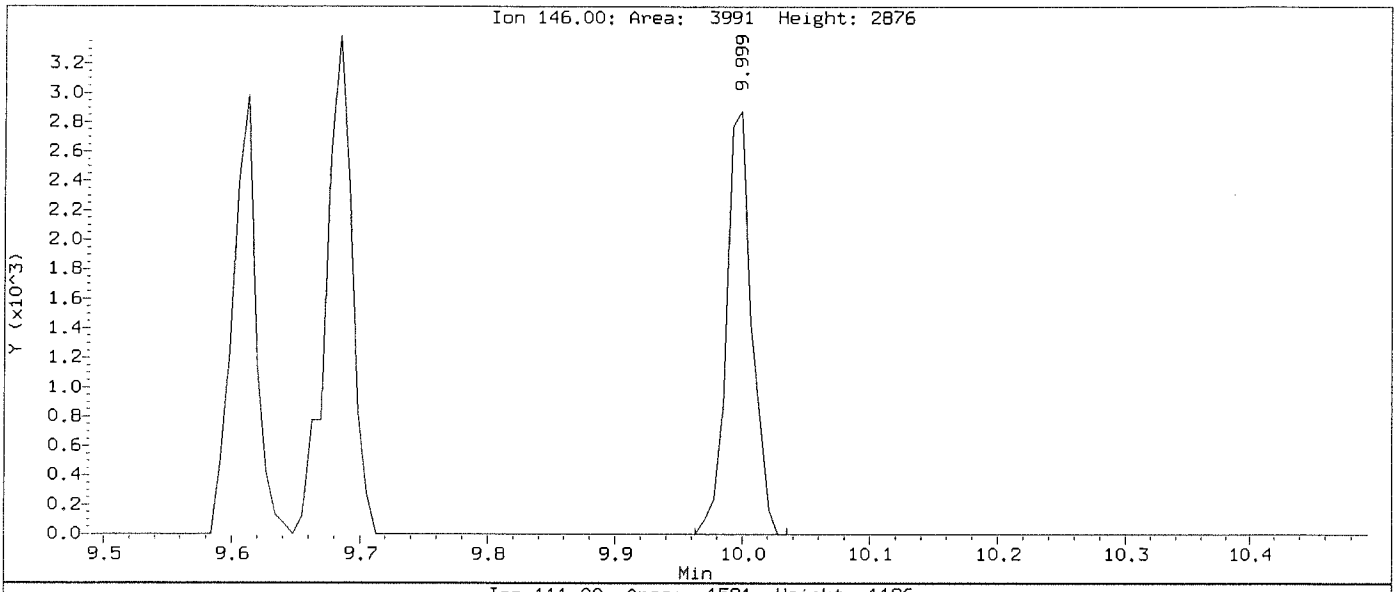
Compound: 1,2-Dibromoethane
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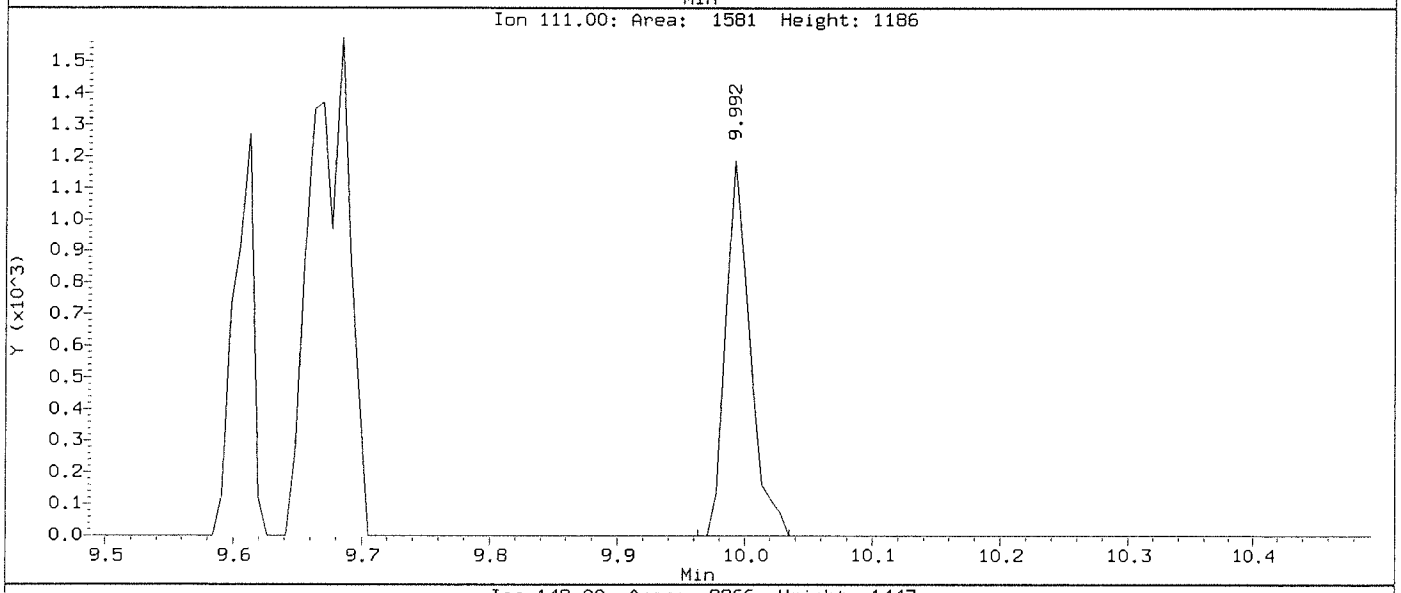


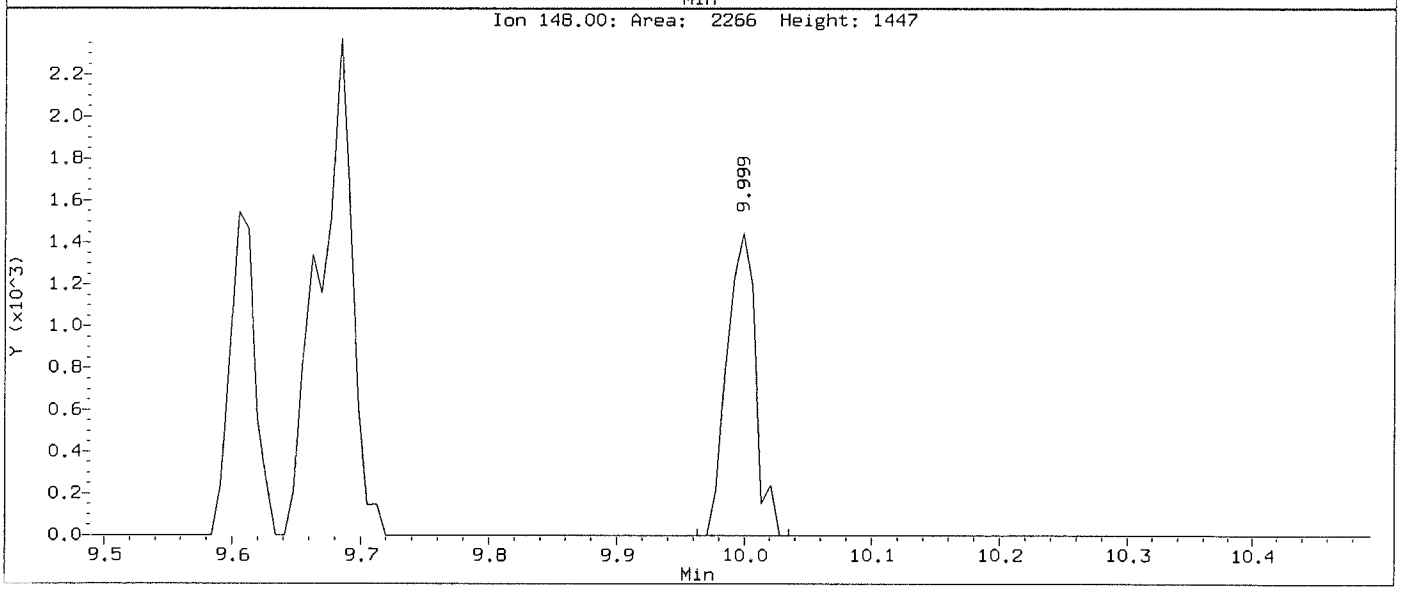


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dichlorobenzene
CAS Number: 95-50-1

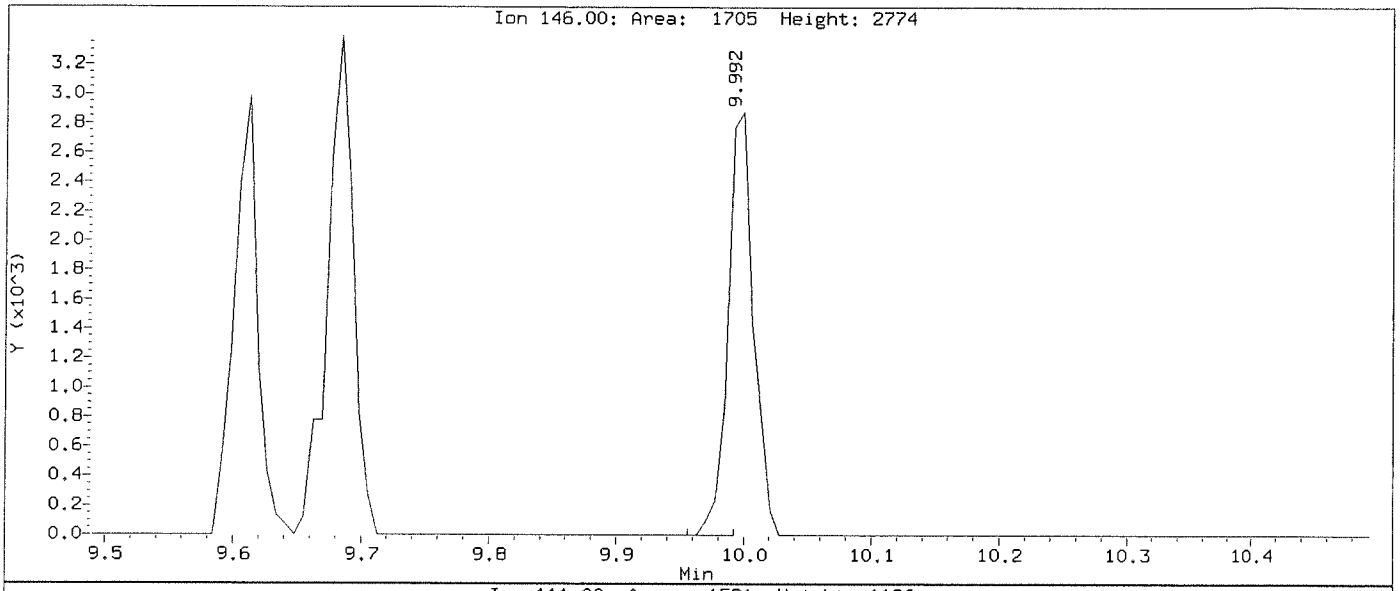


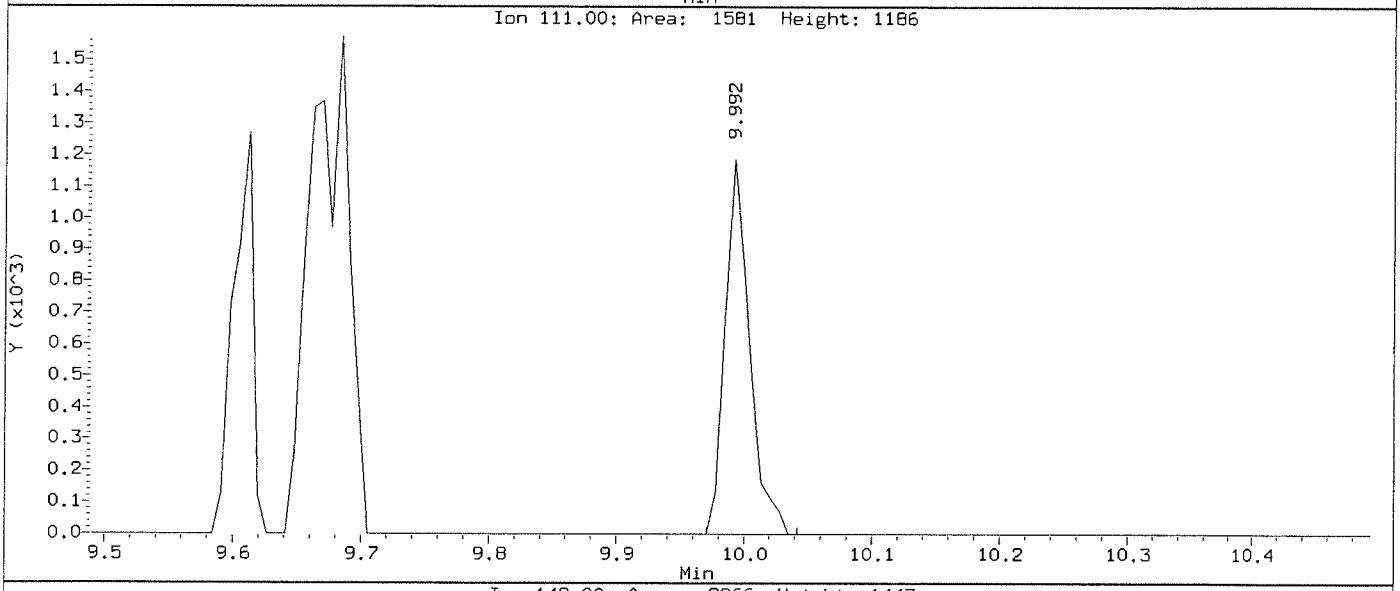


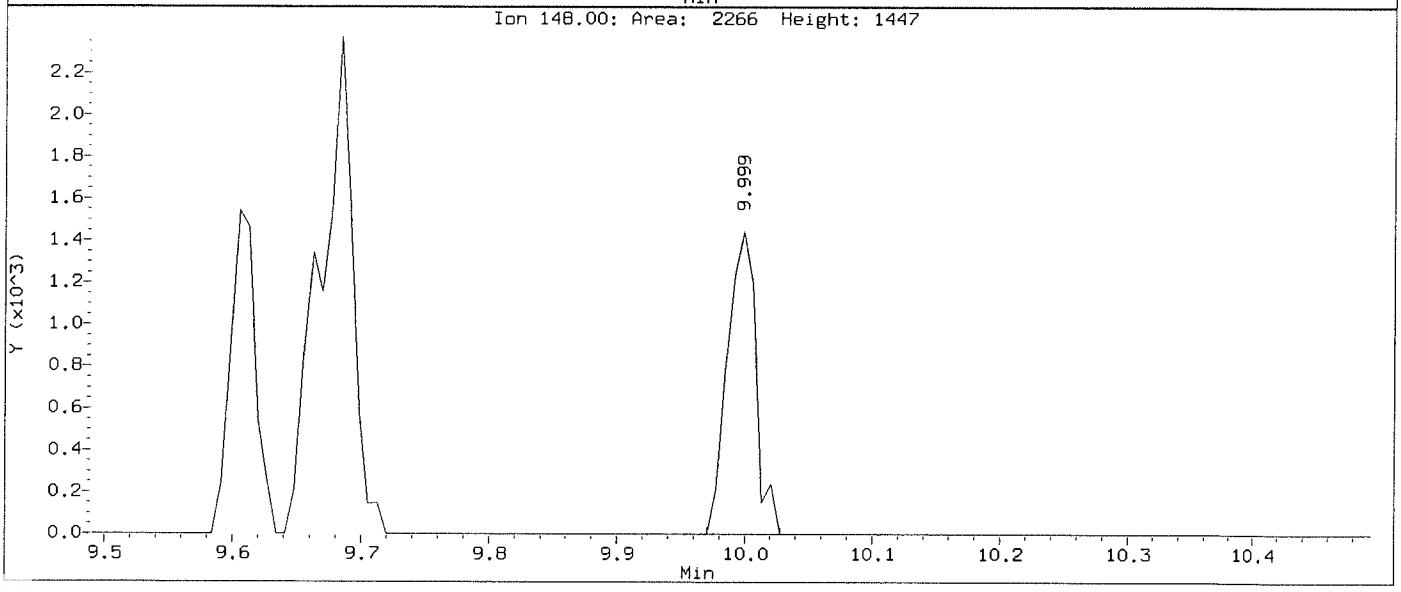


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dichlorobenzene
CAS Number: 95-50-1

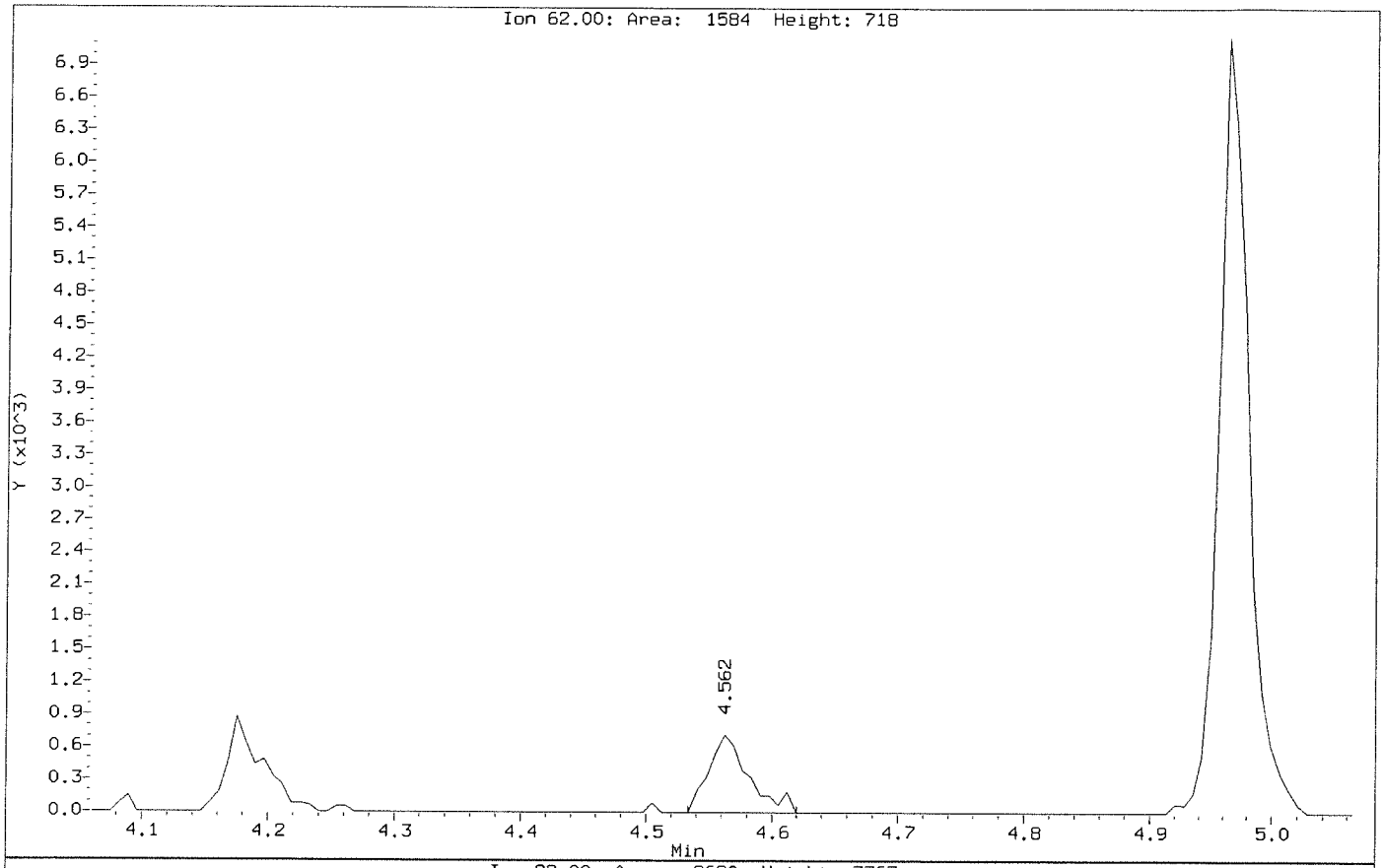


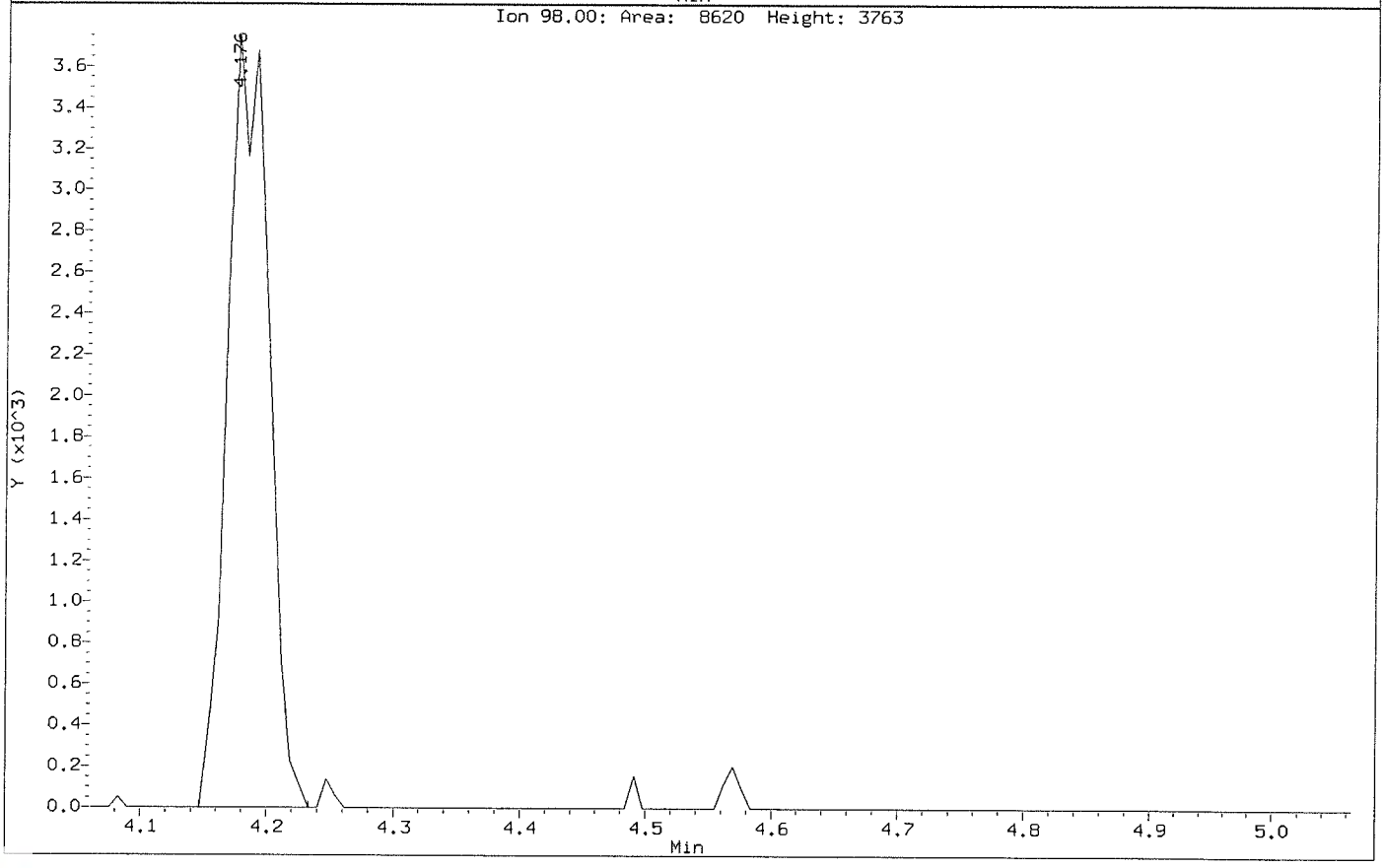




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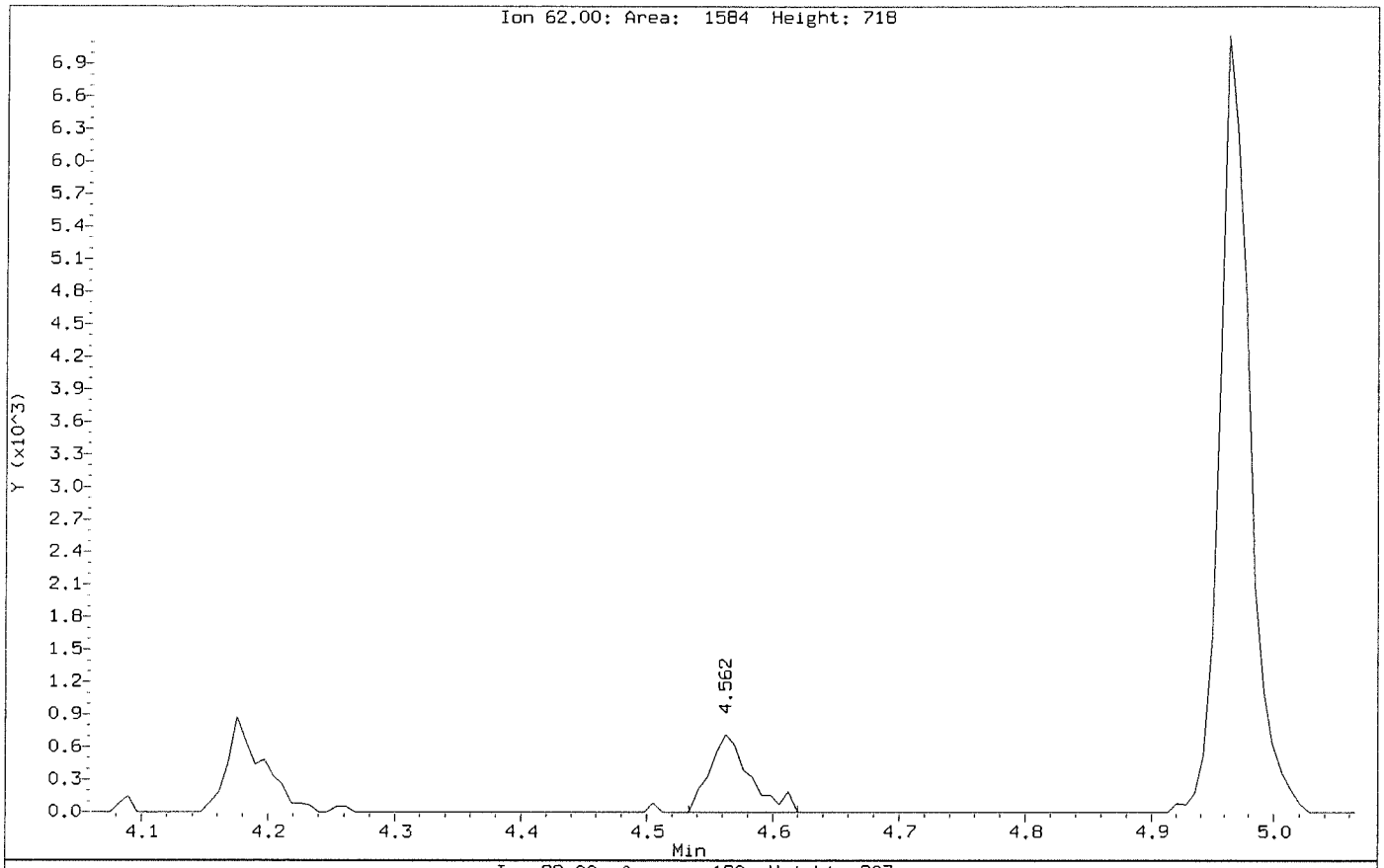
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

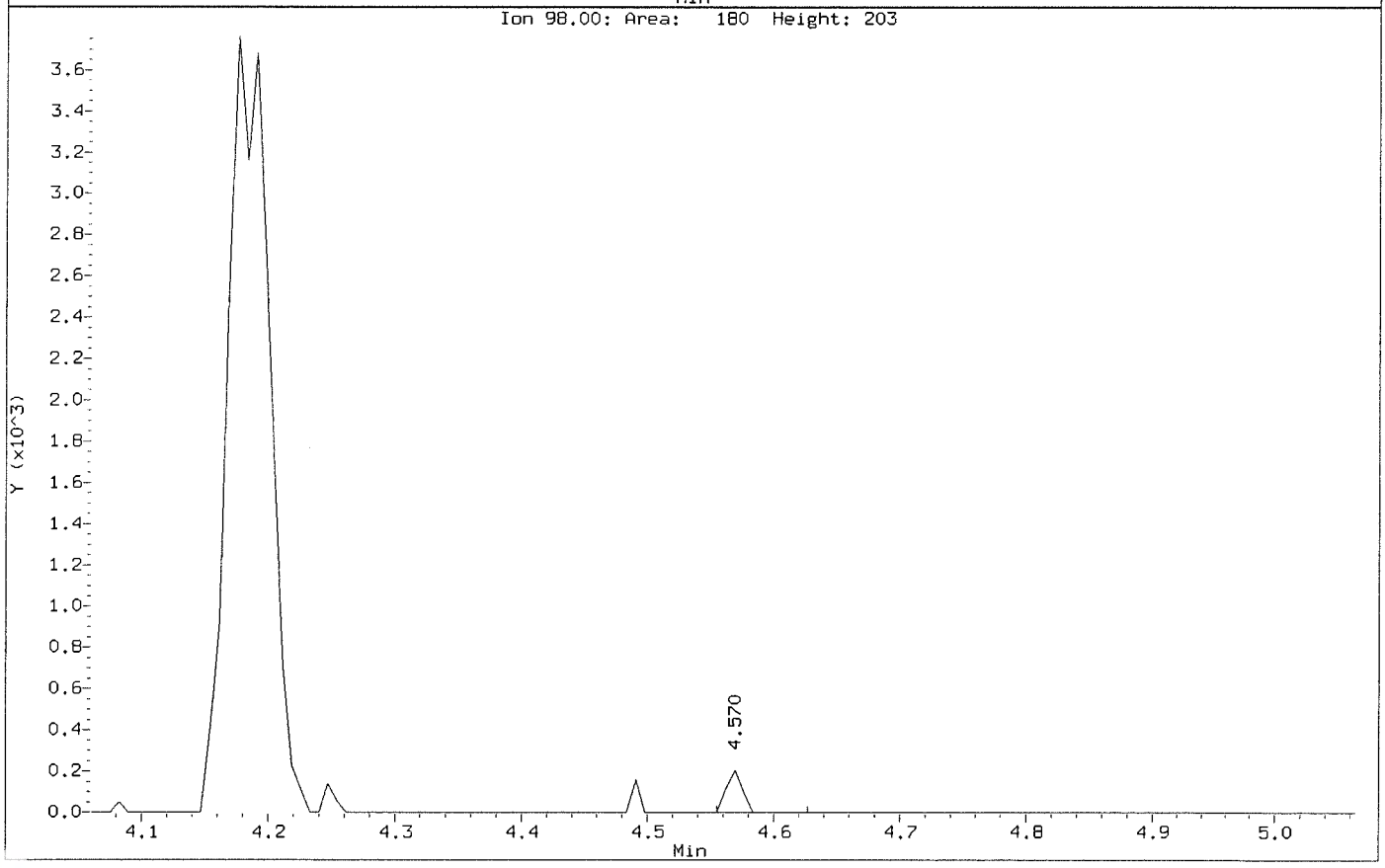




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Instrument: voa6.i
Client Sample ID: VSTD000.5

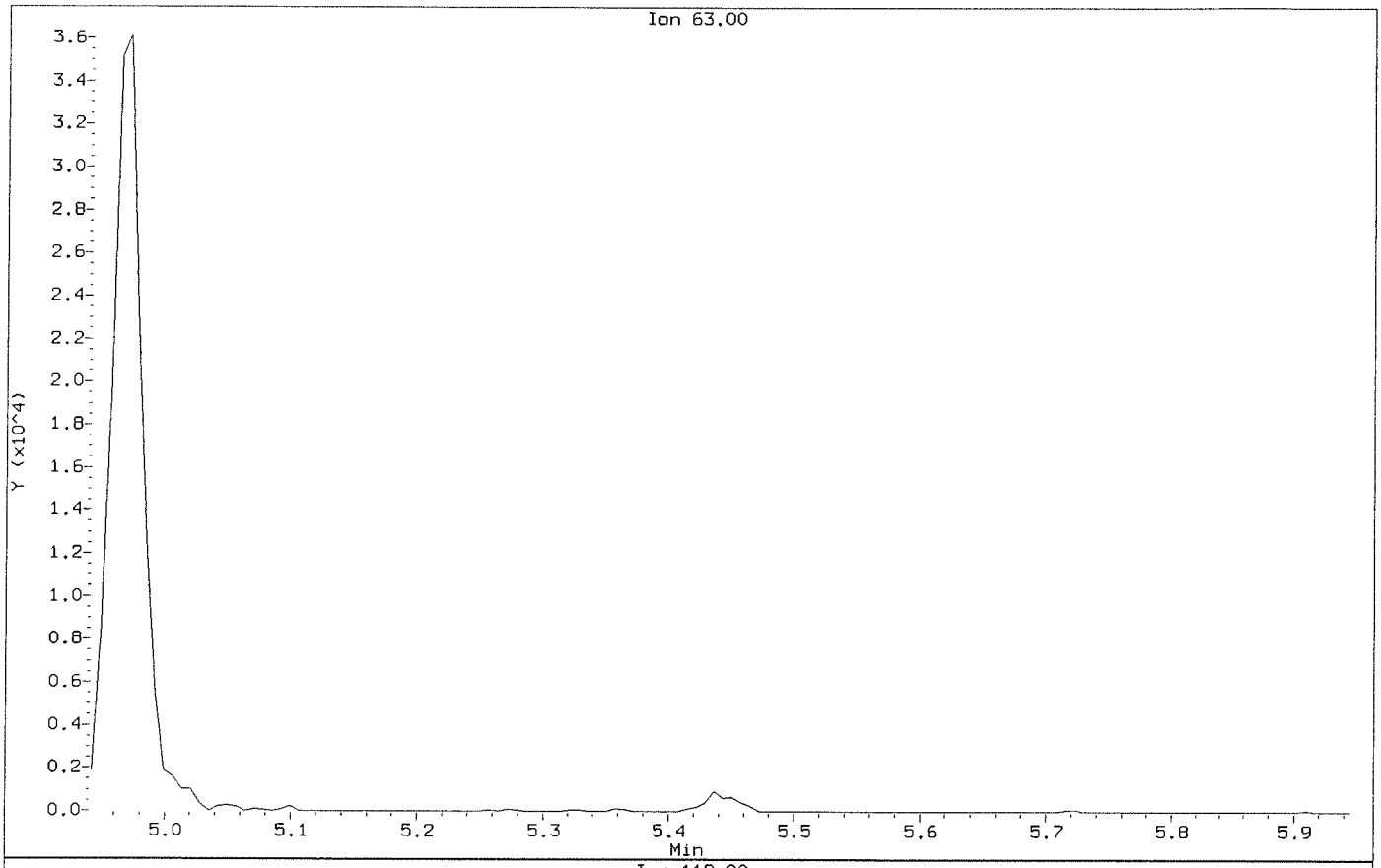
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

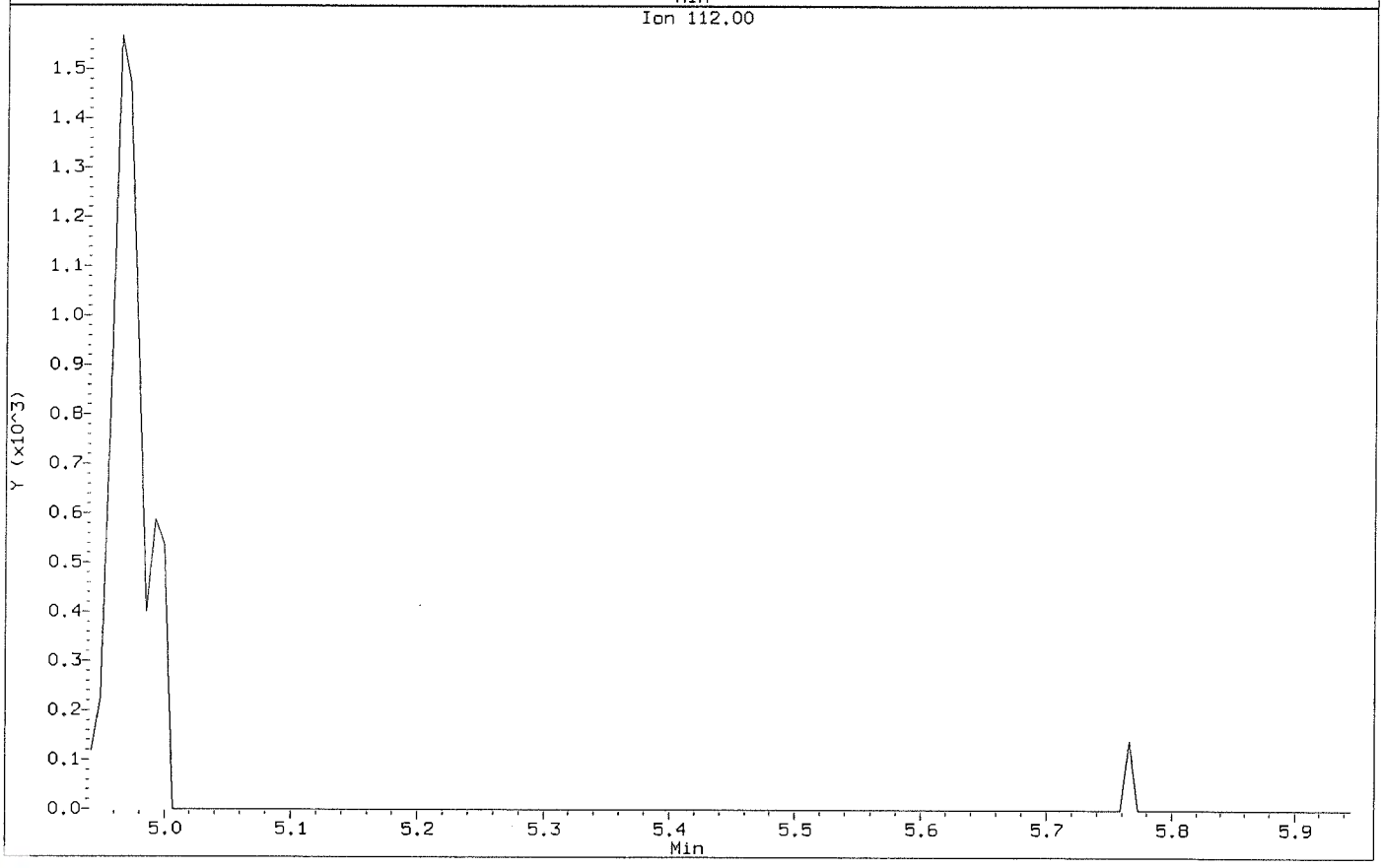




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Client Sample ID: VSTD000.5

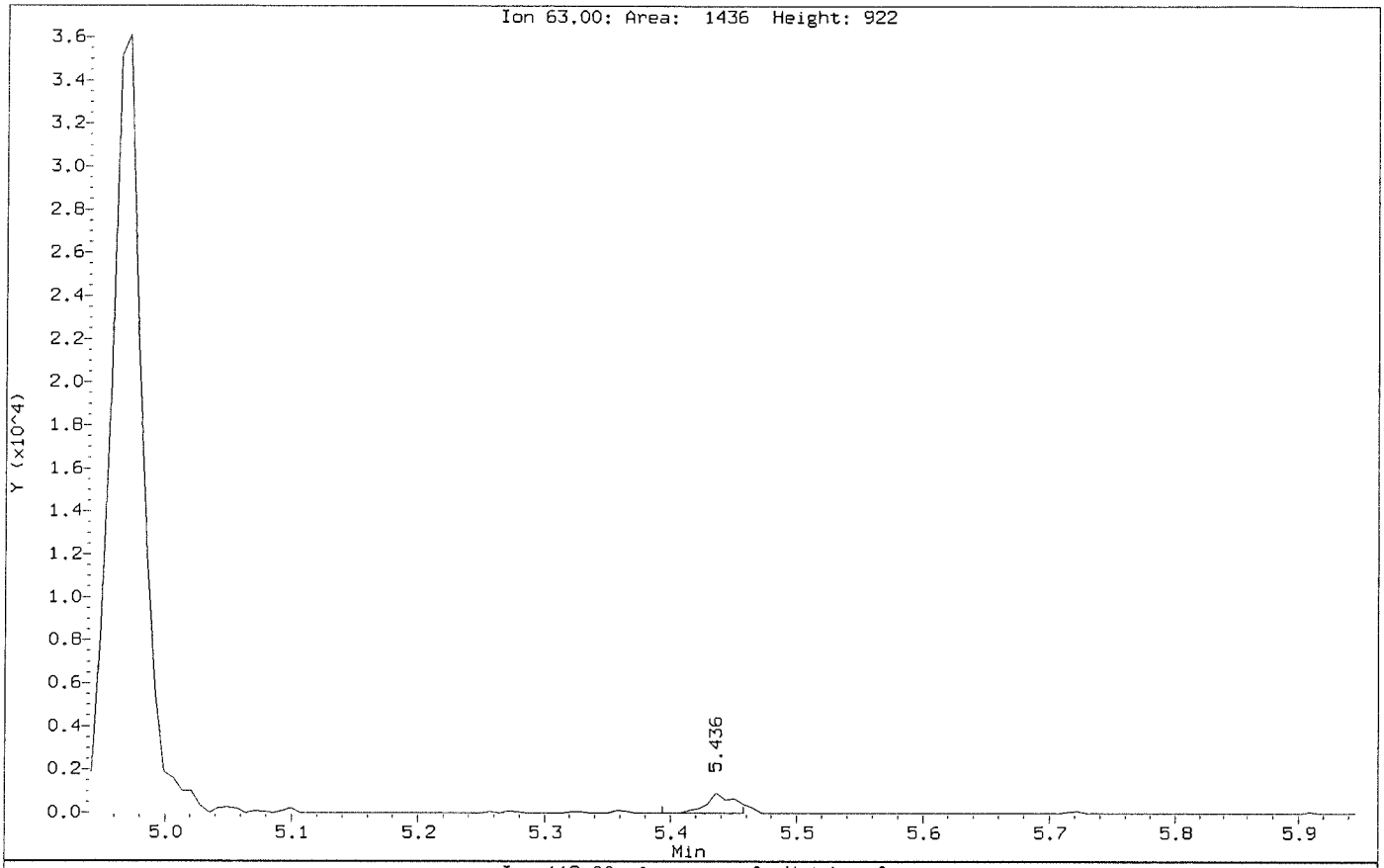
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

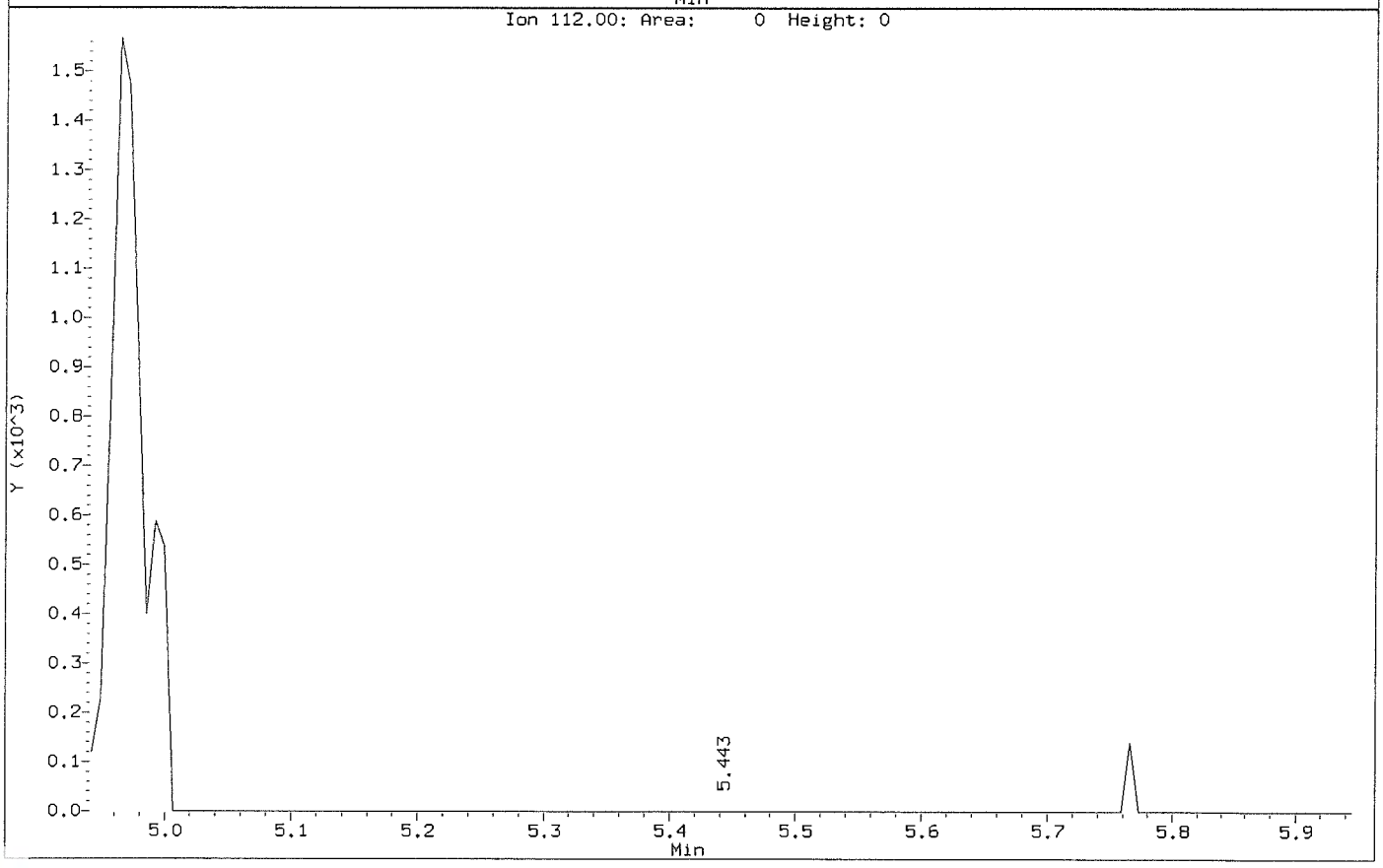




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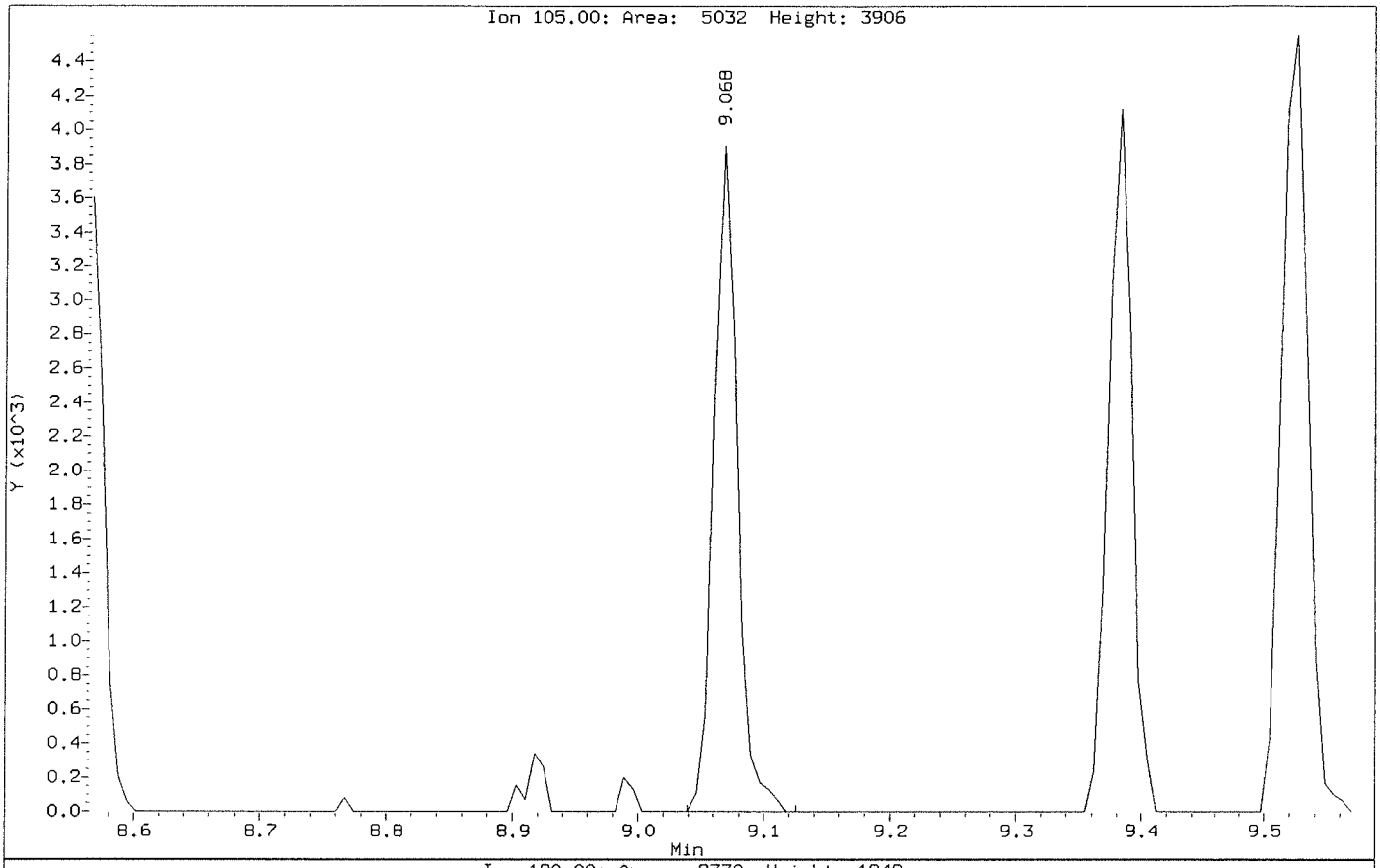
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

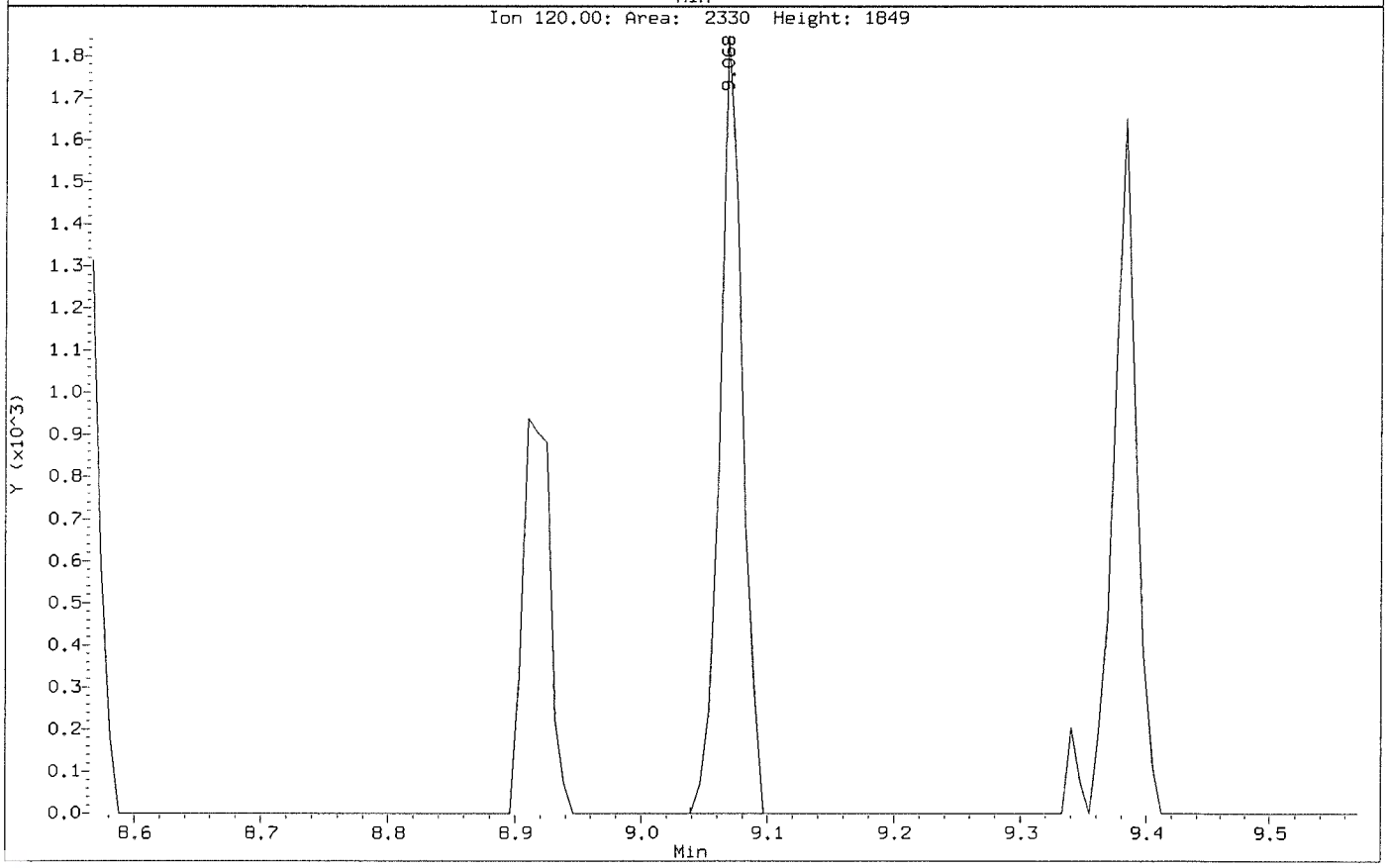




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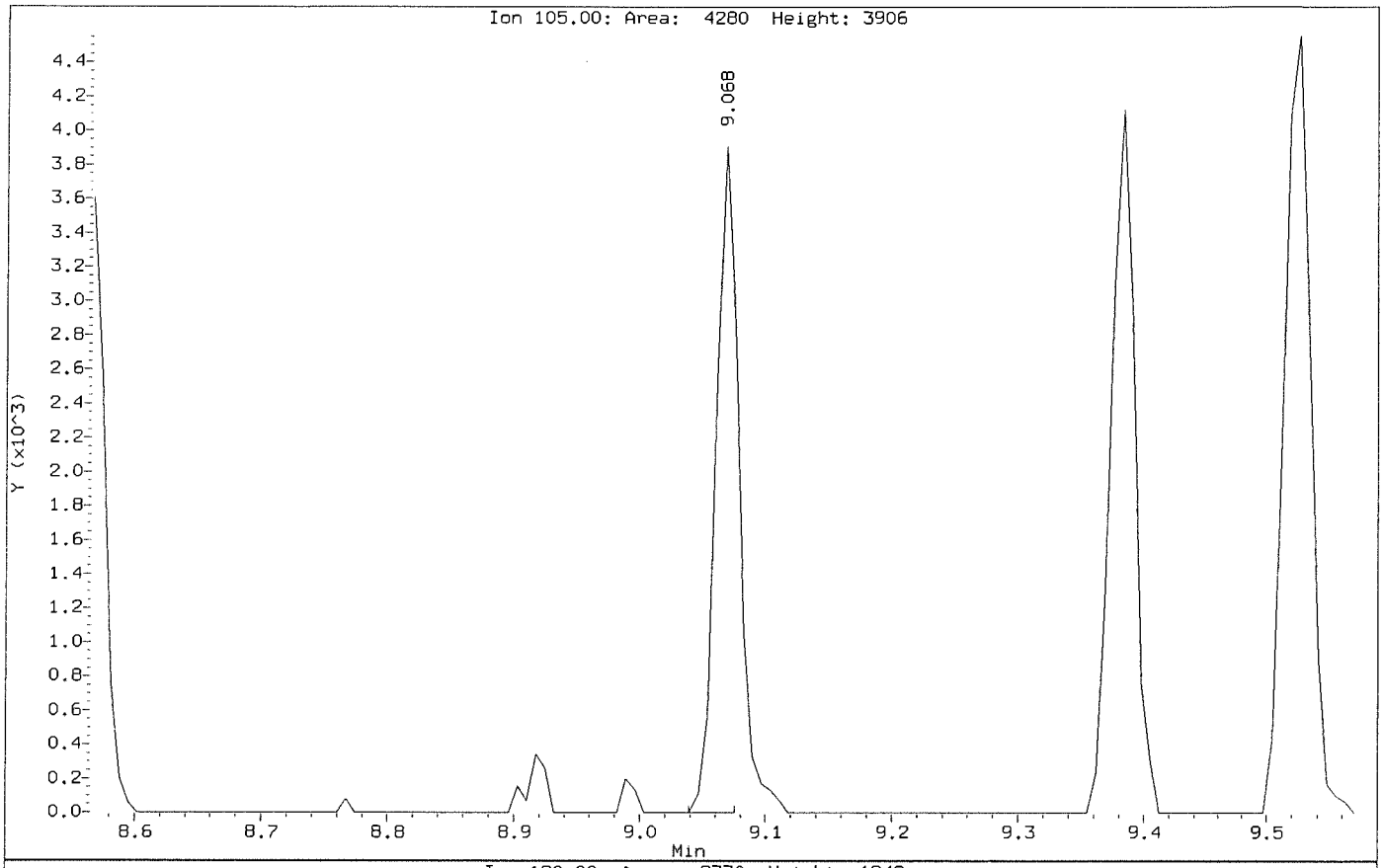
Compound: 1,3,5-Trimethylbenzene
CAS Number: 108-67-8

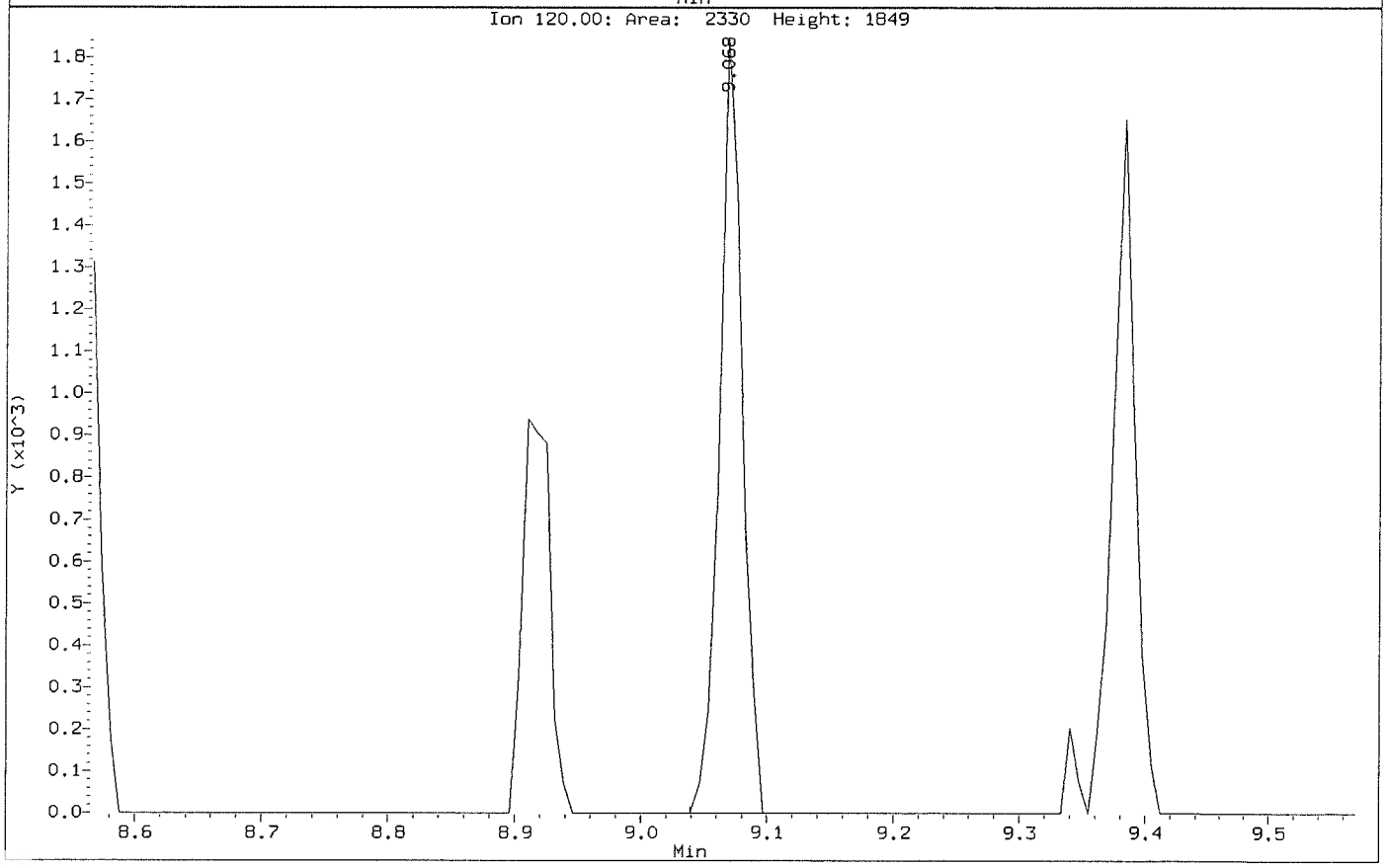




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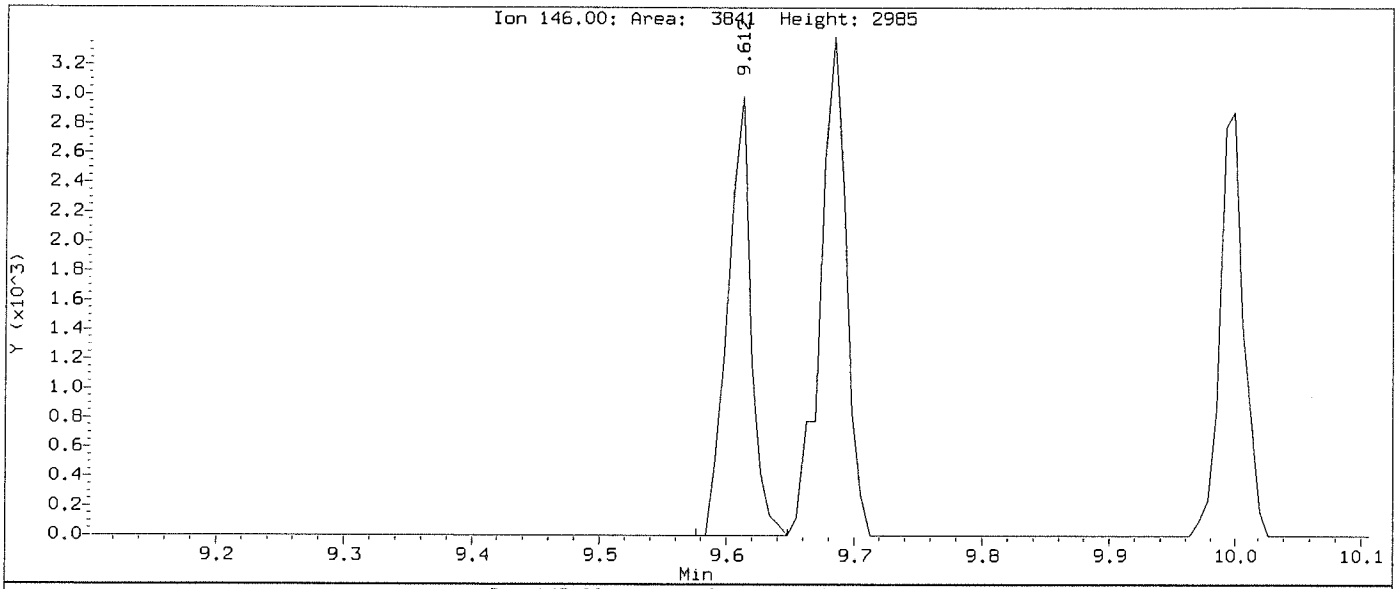
Compound: 1,3,5-Trimethylbenzene
CAS Number: 108-67-8

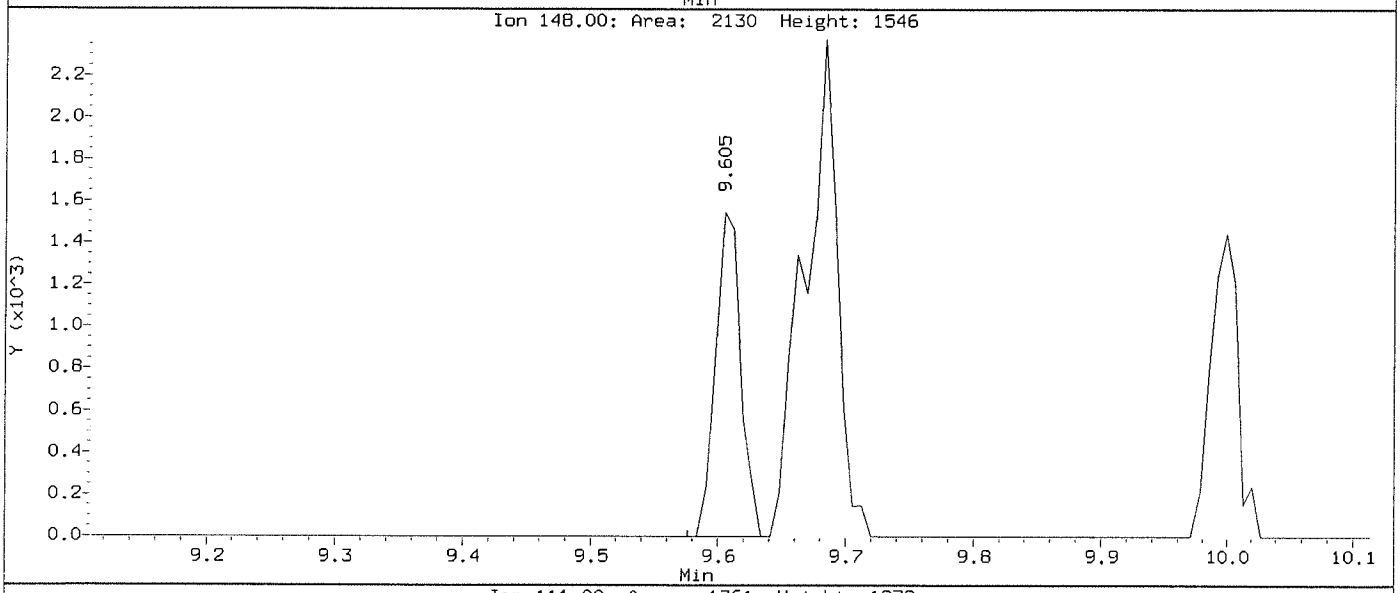


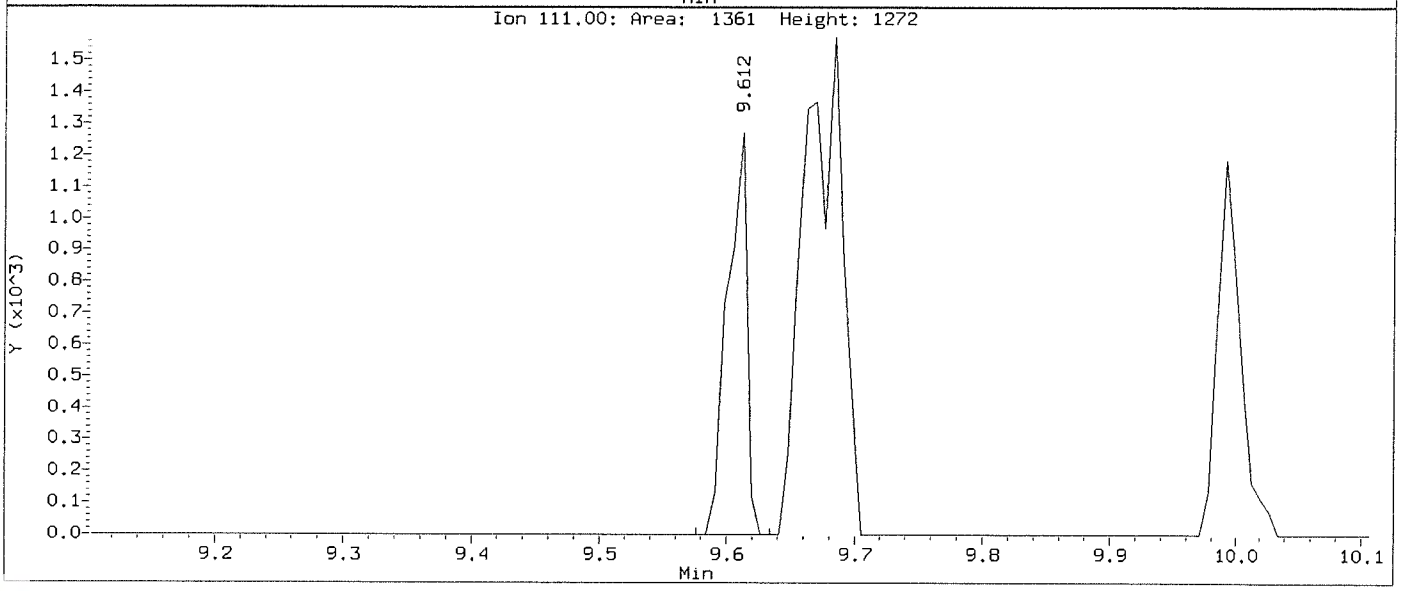


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1

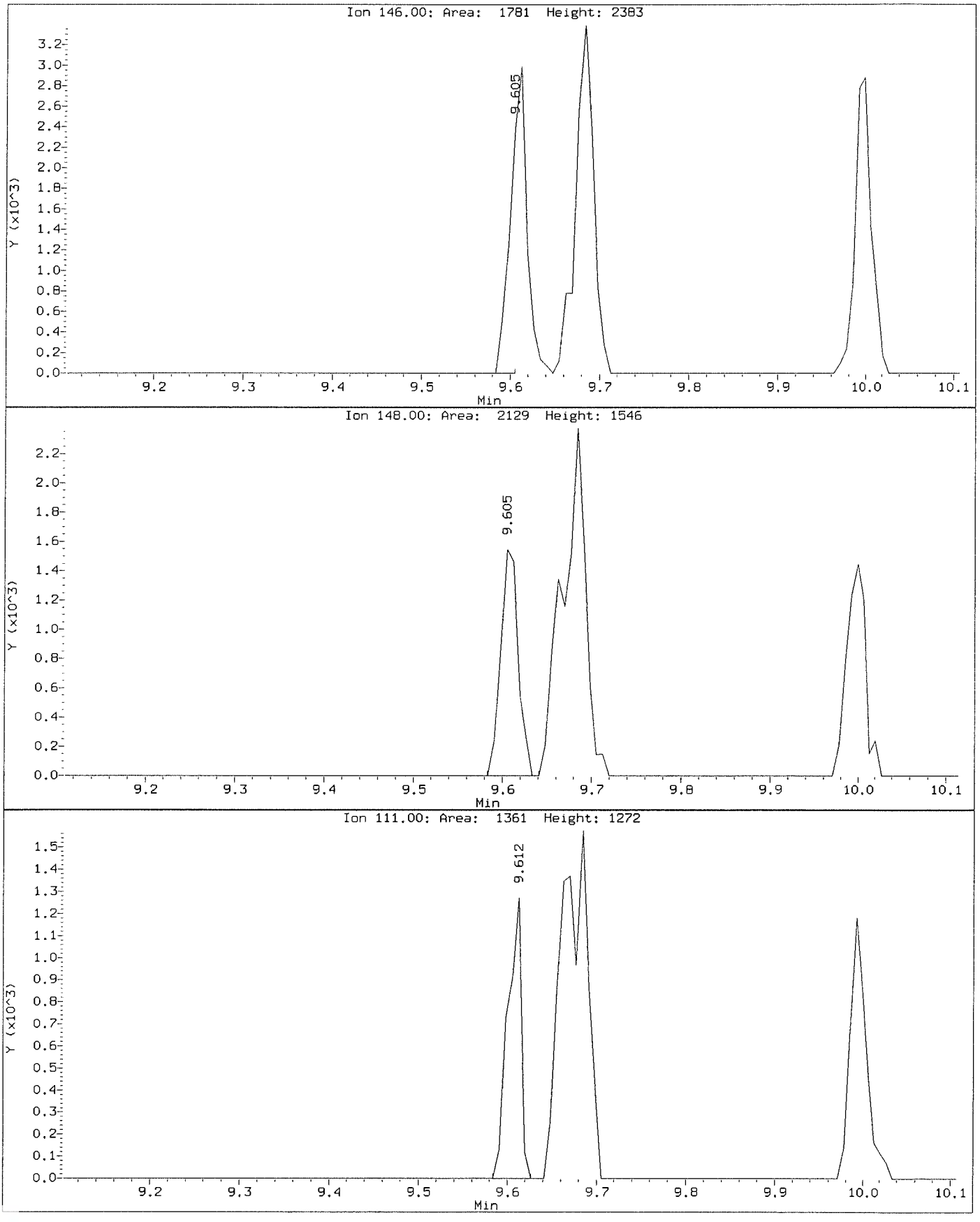






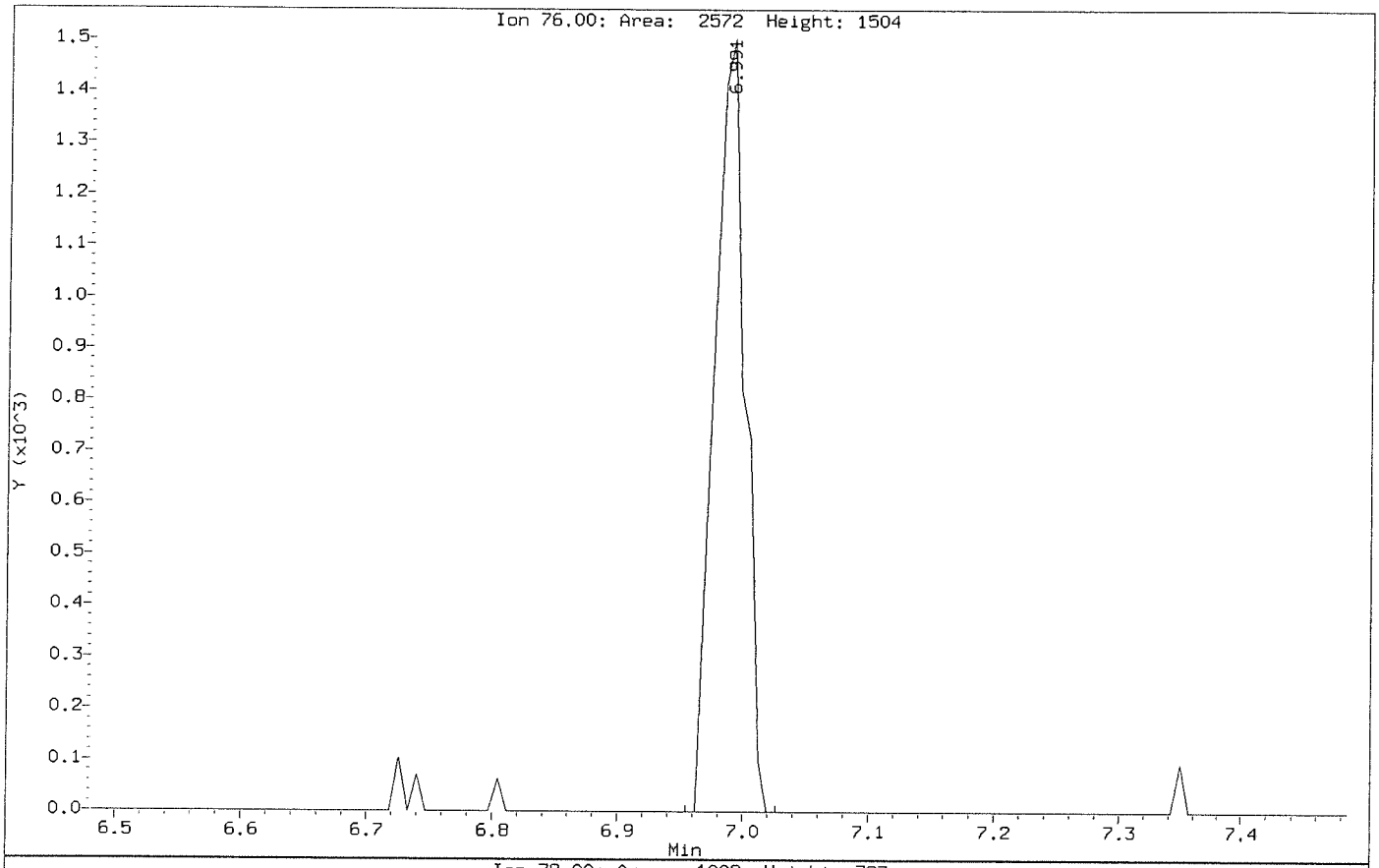
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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
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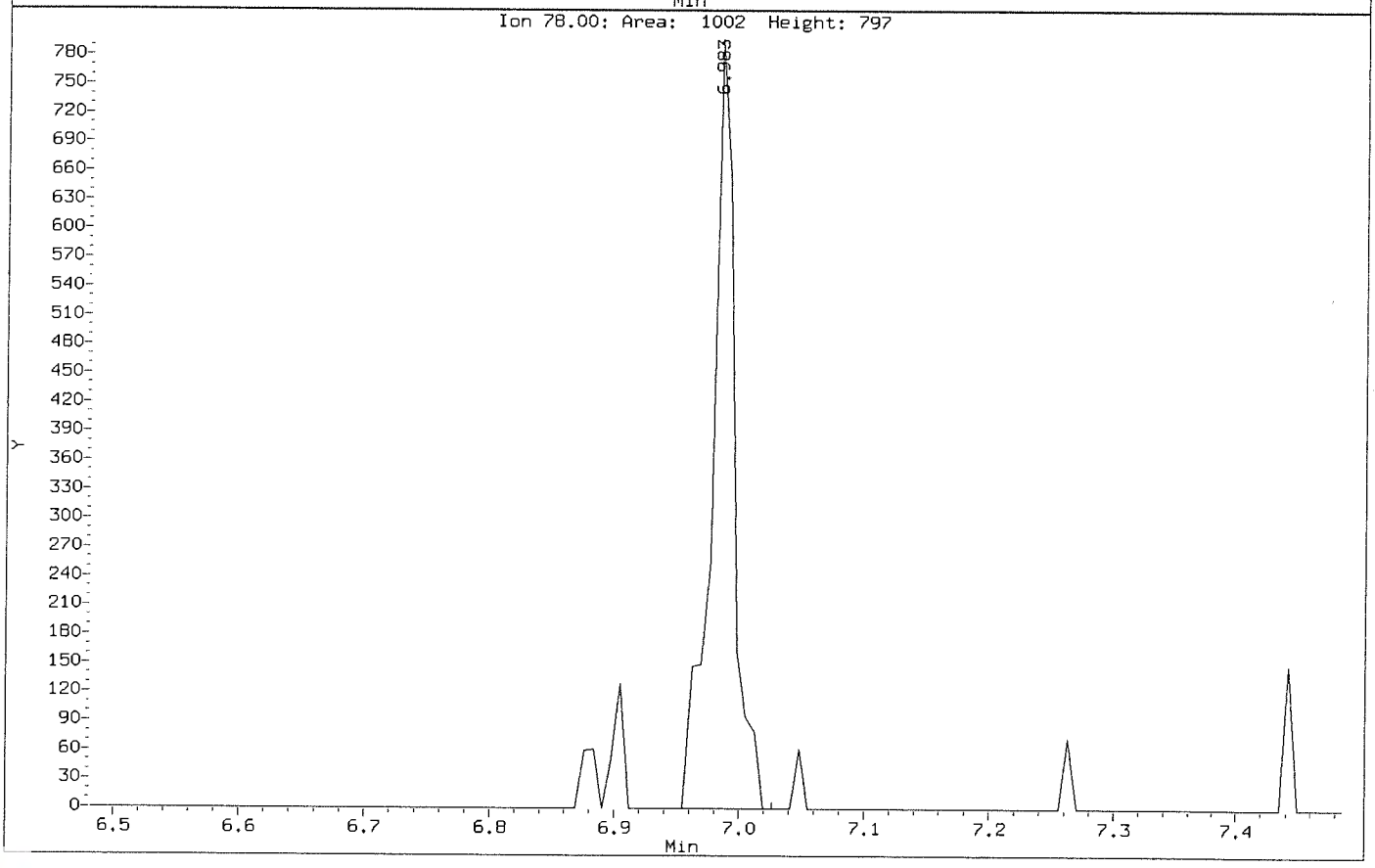
Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1



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

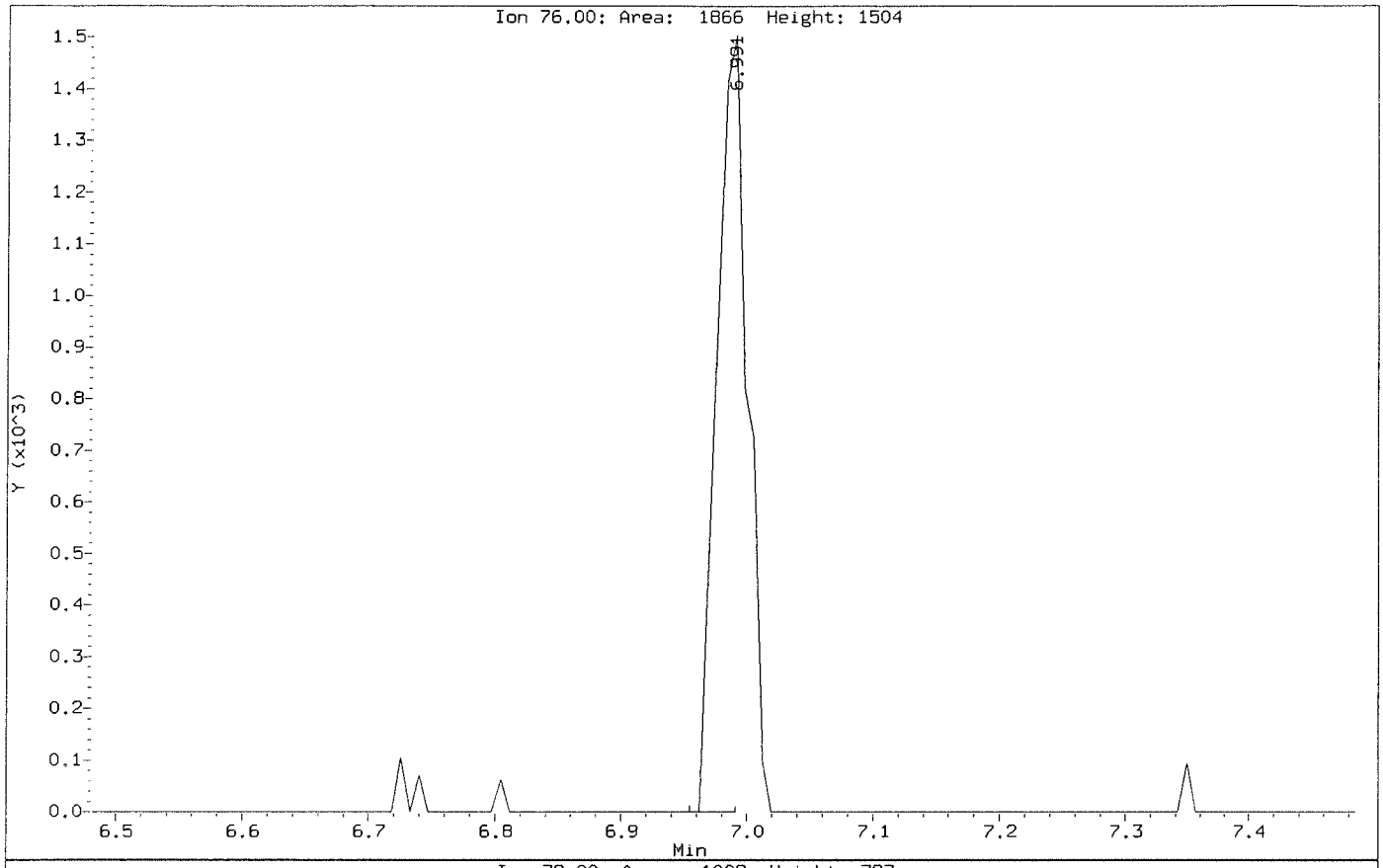
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

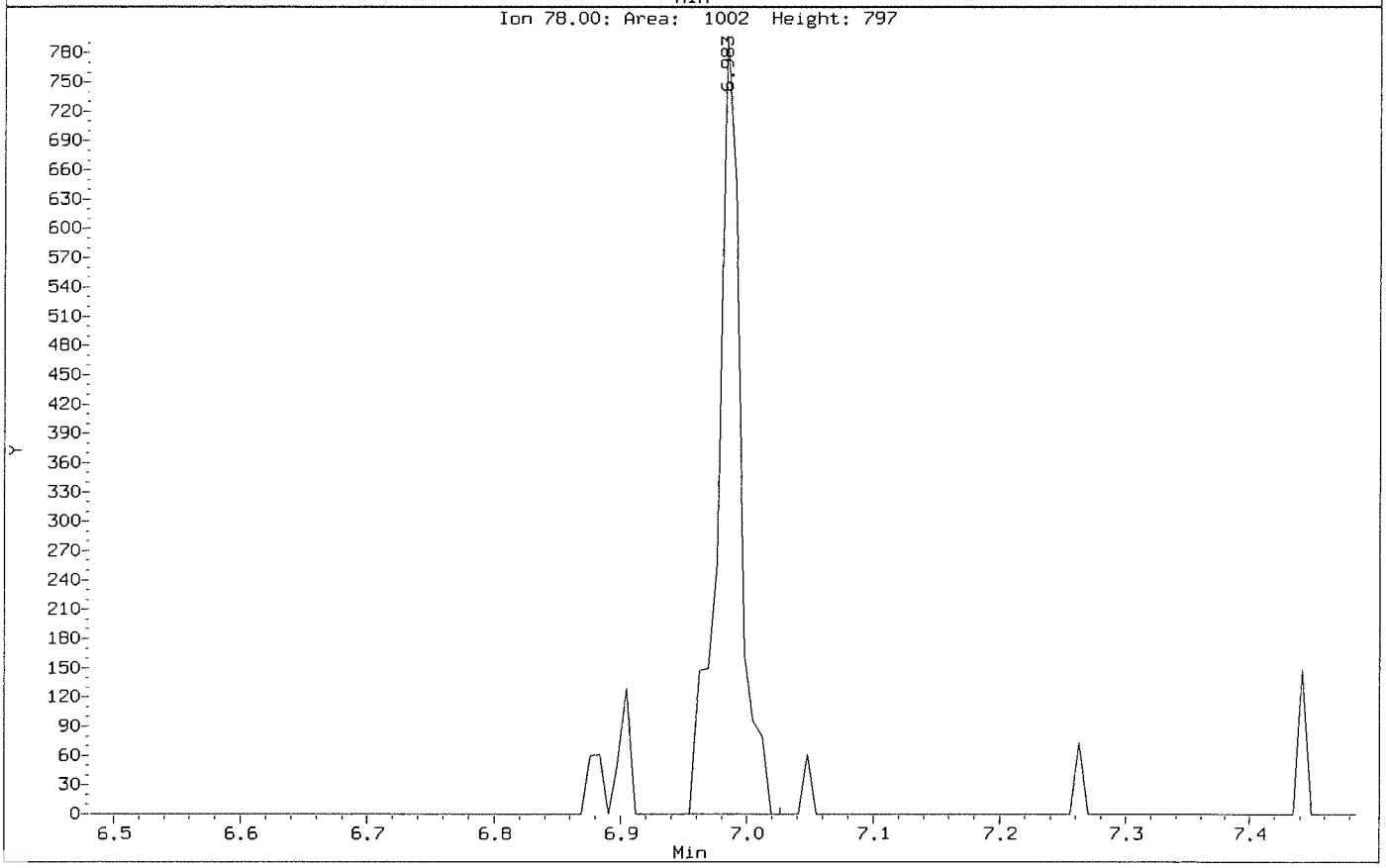




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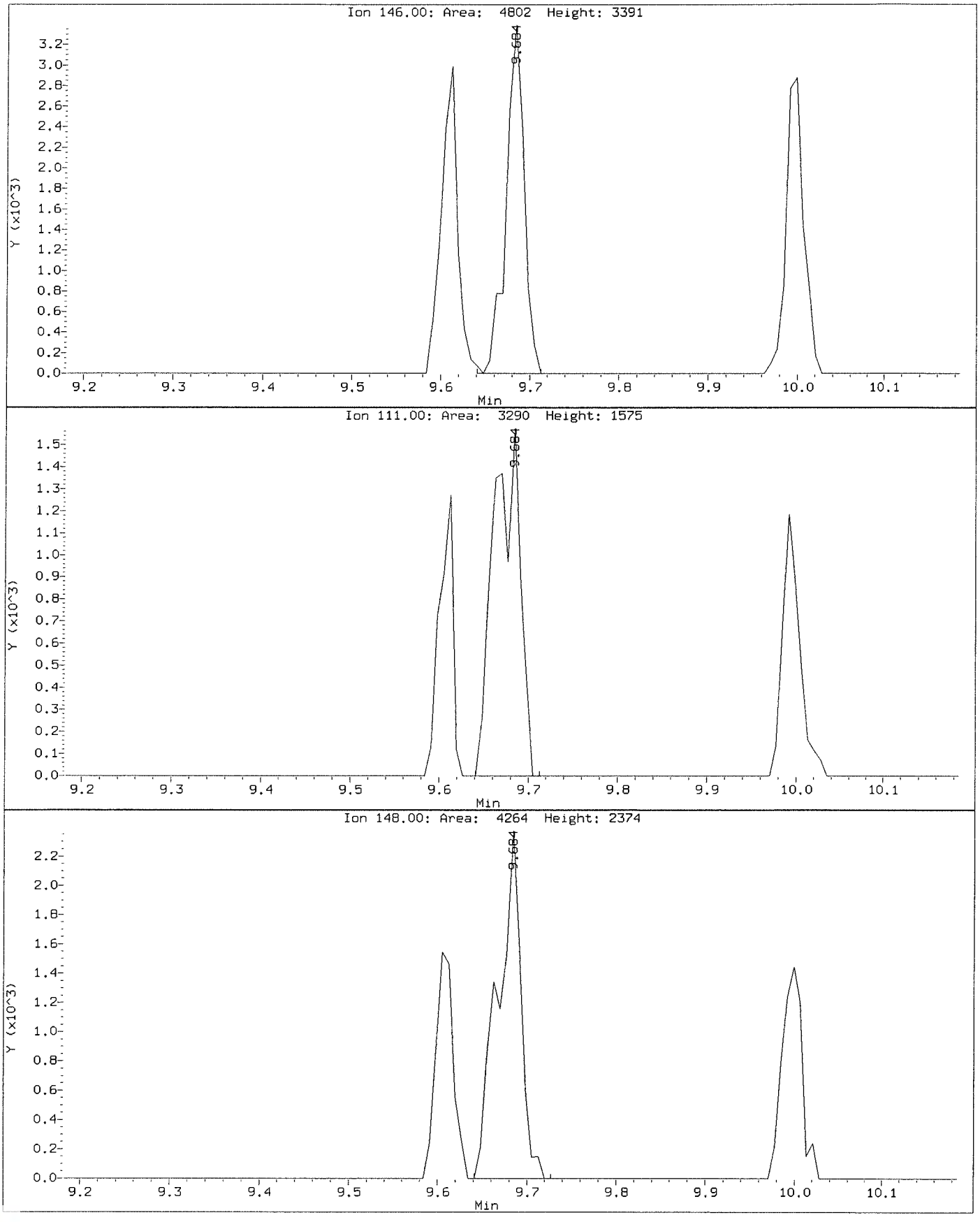
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9





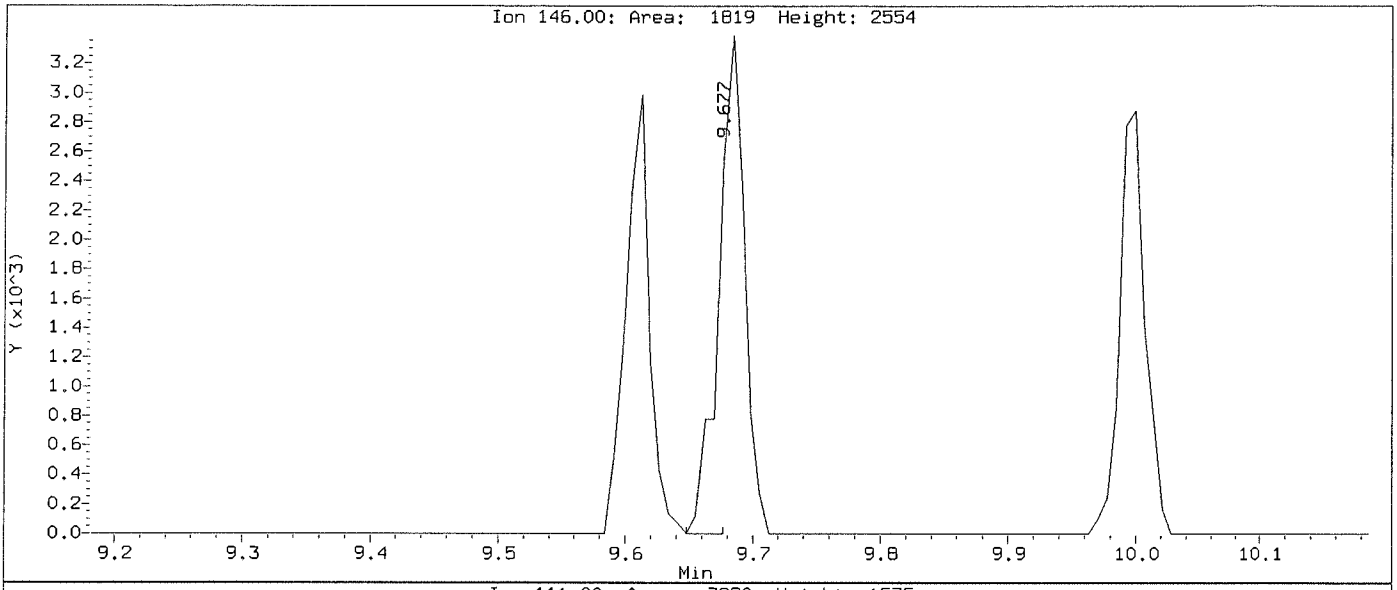
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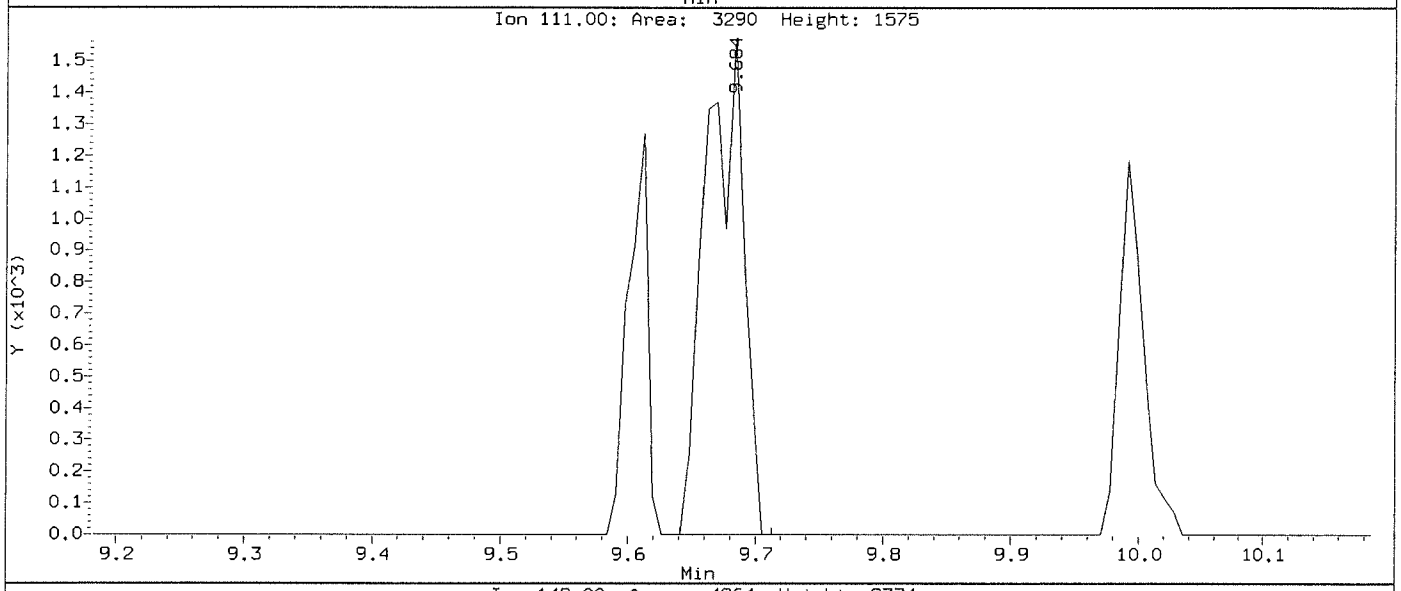
Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

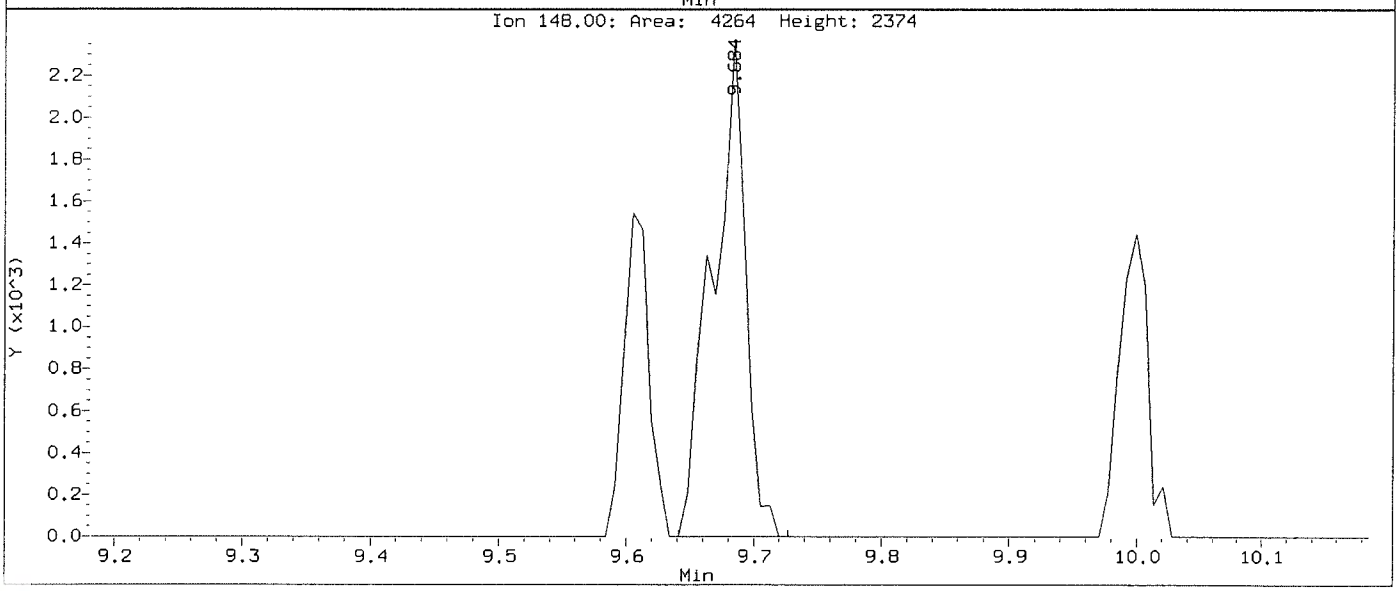


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

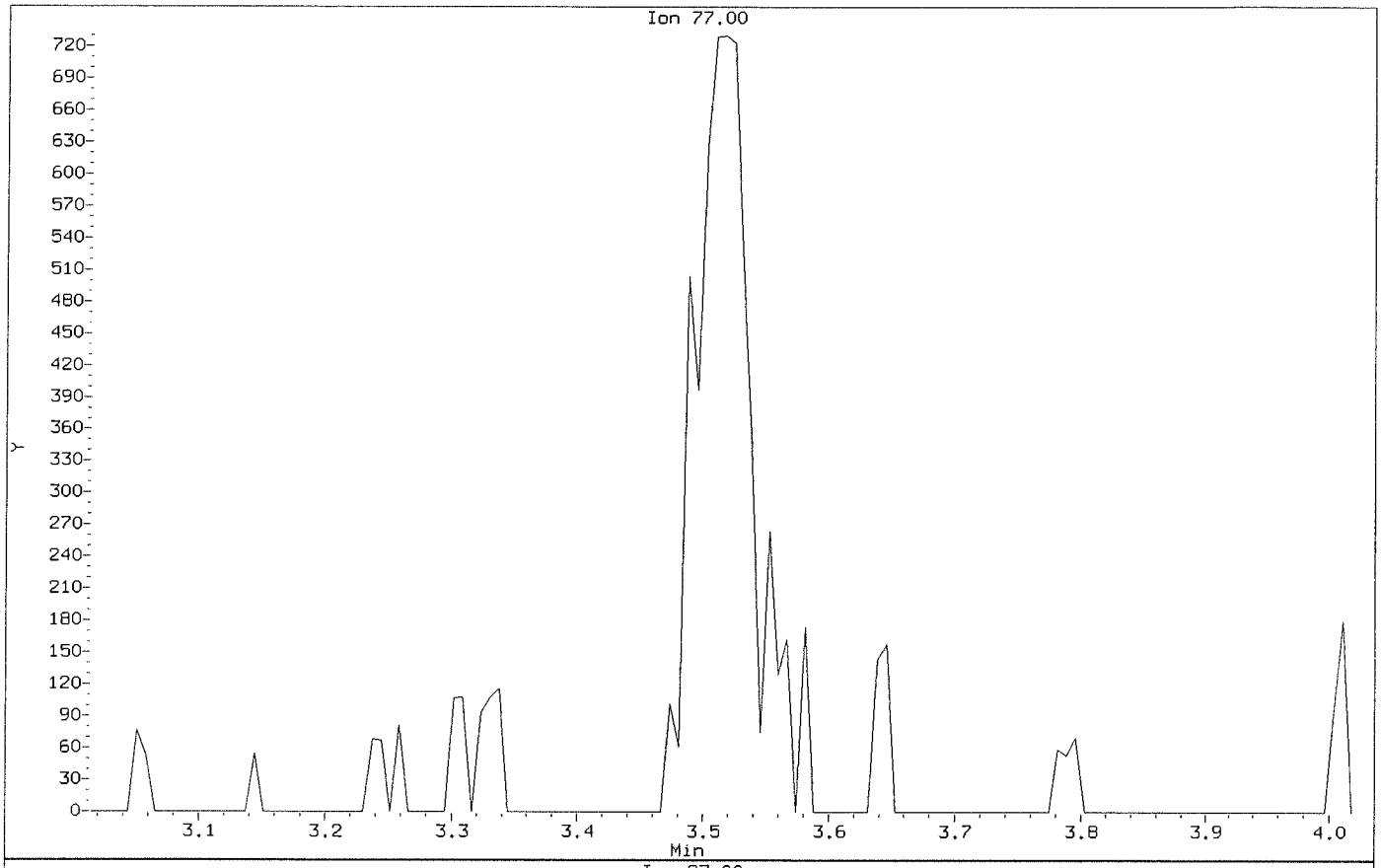


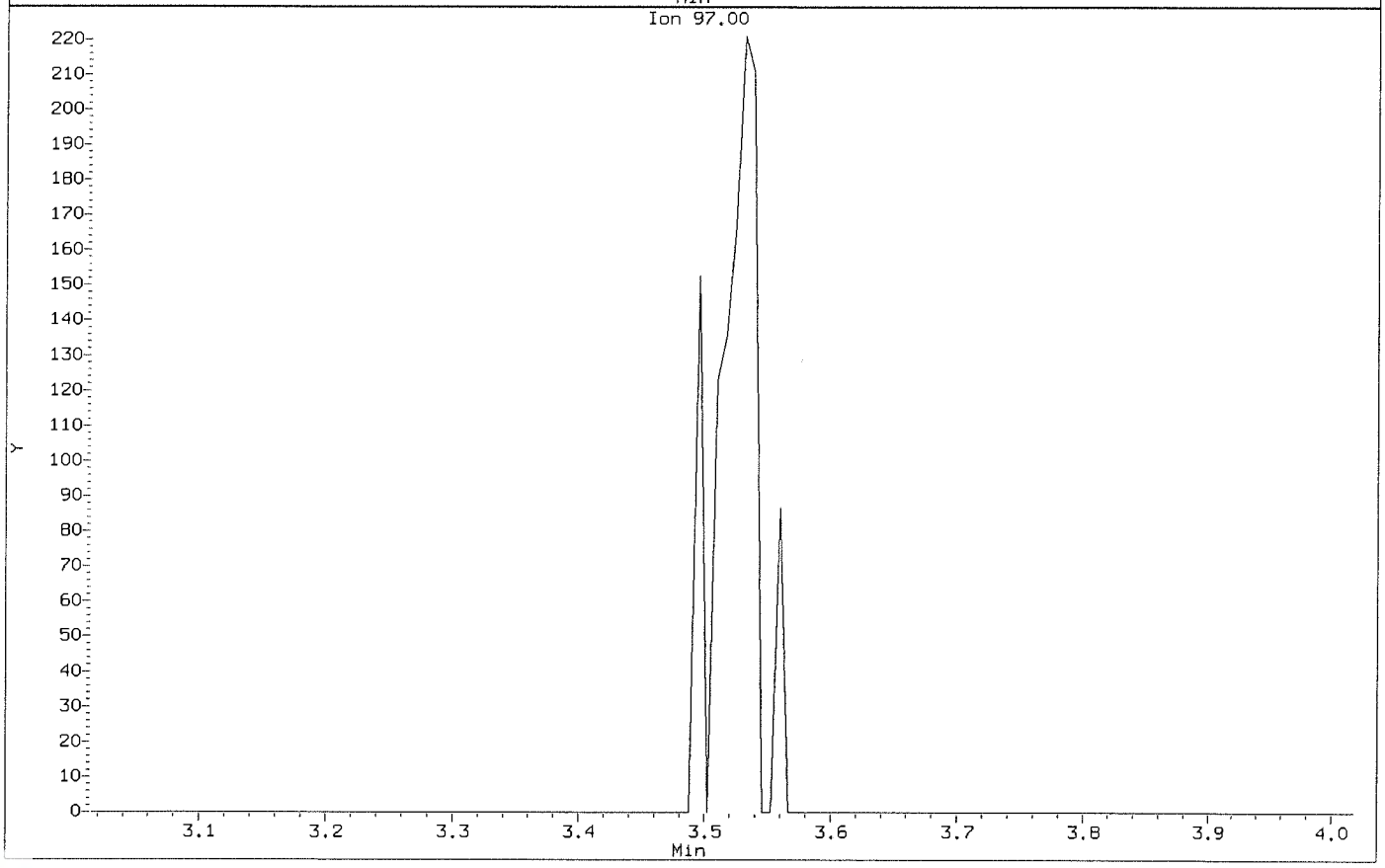




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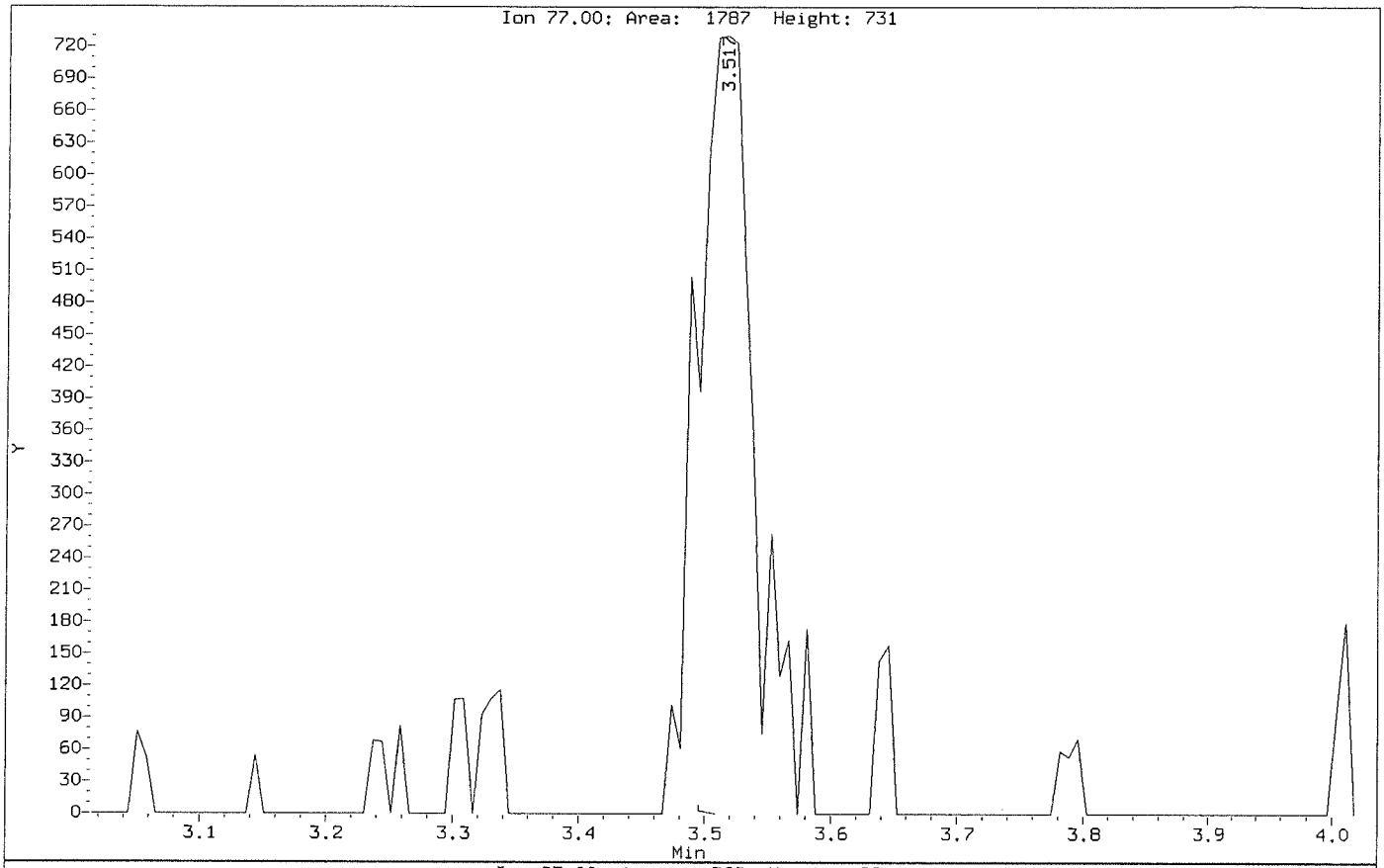
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

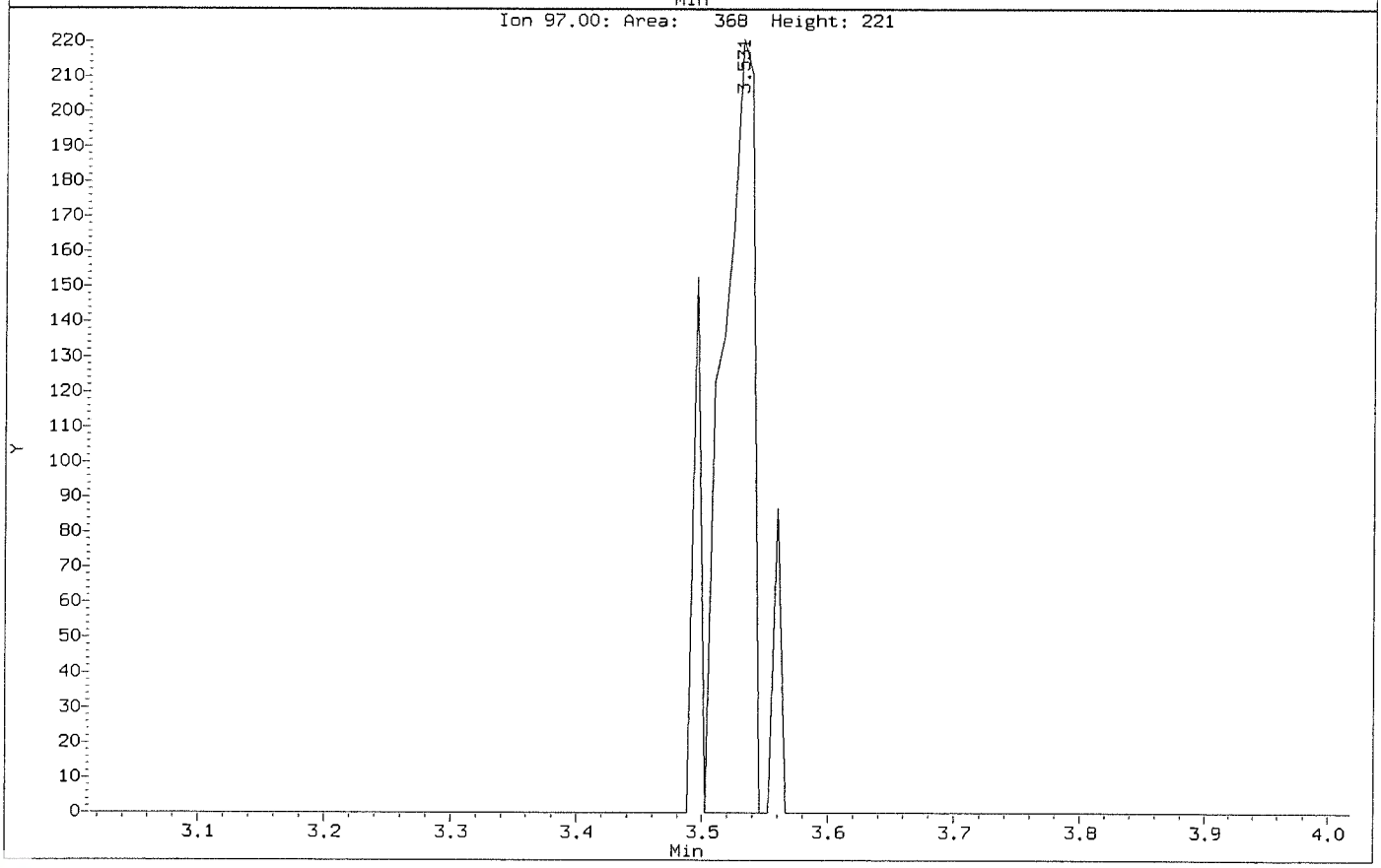




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Instrument: voa6.i
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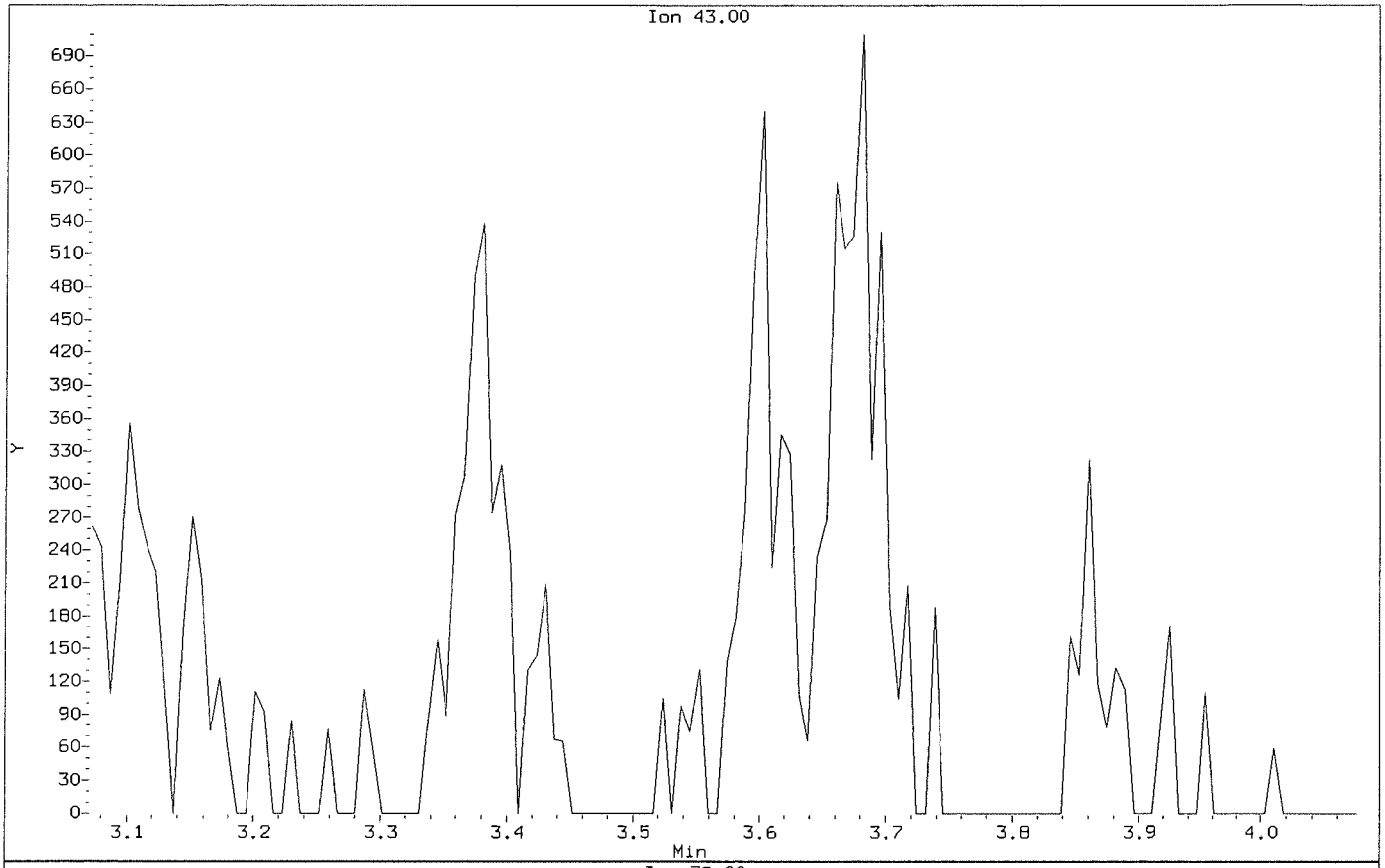
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

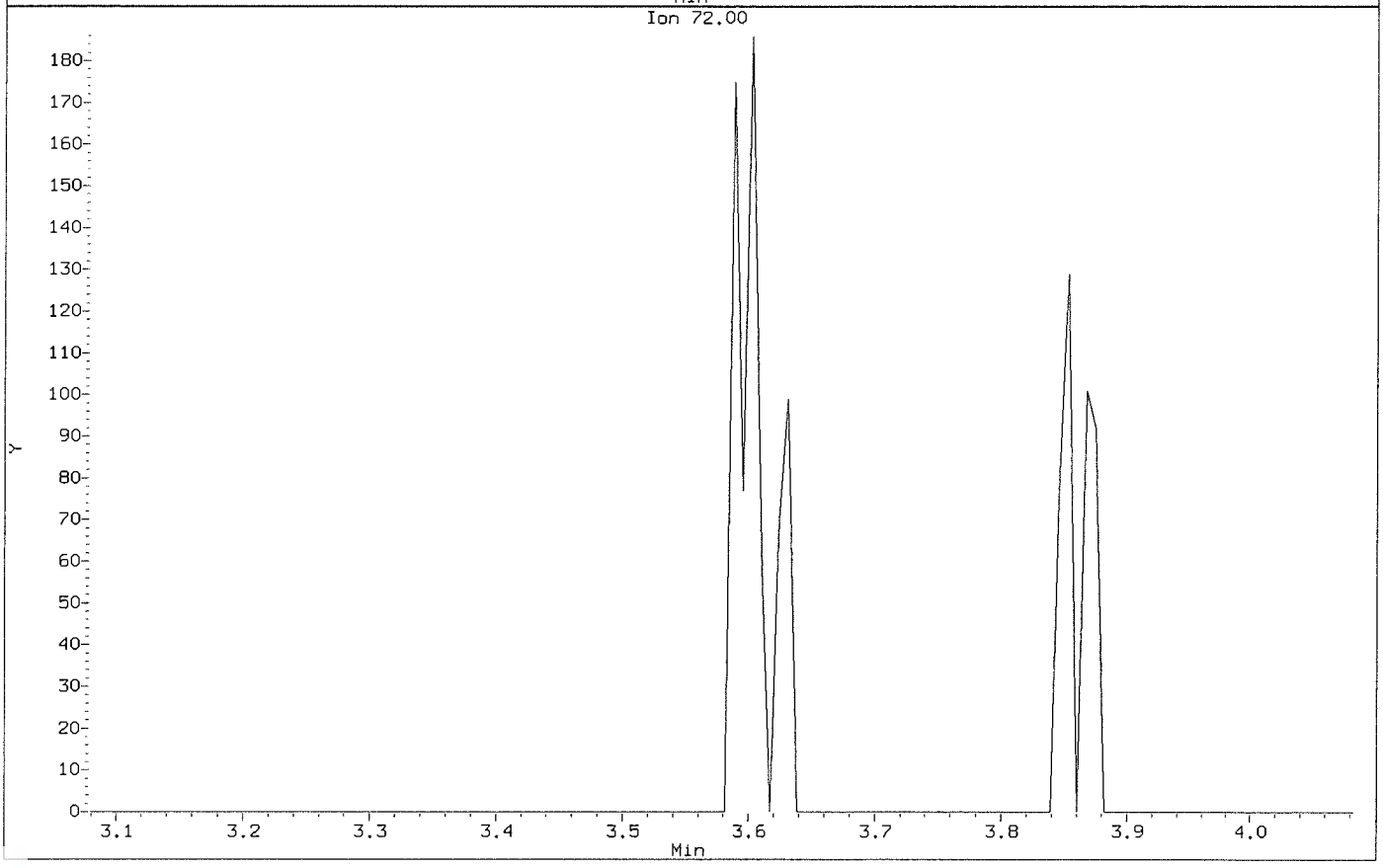




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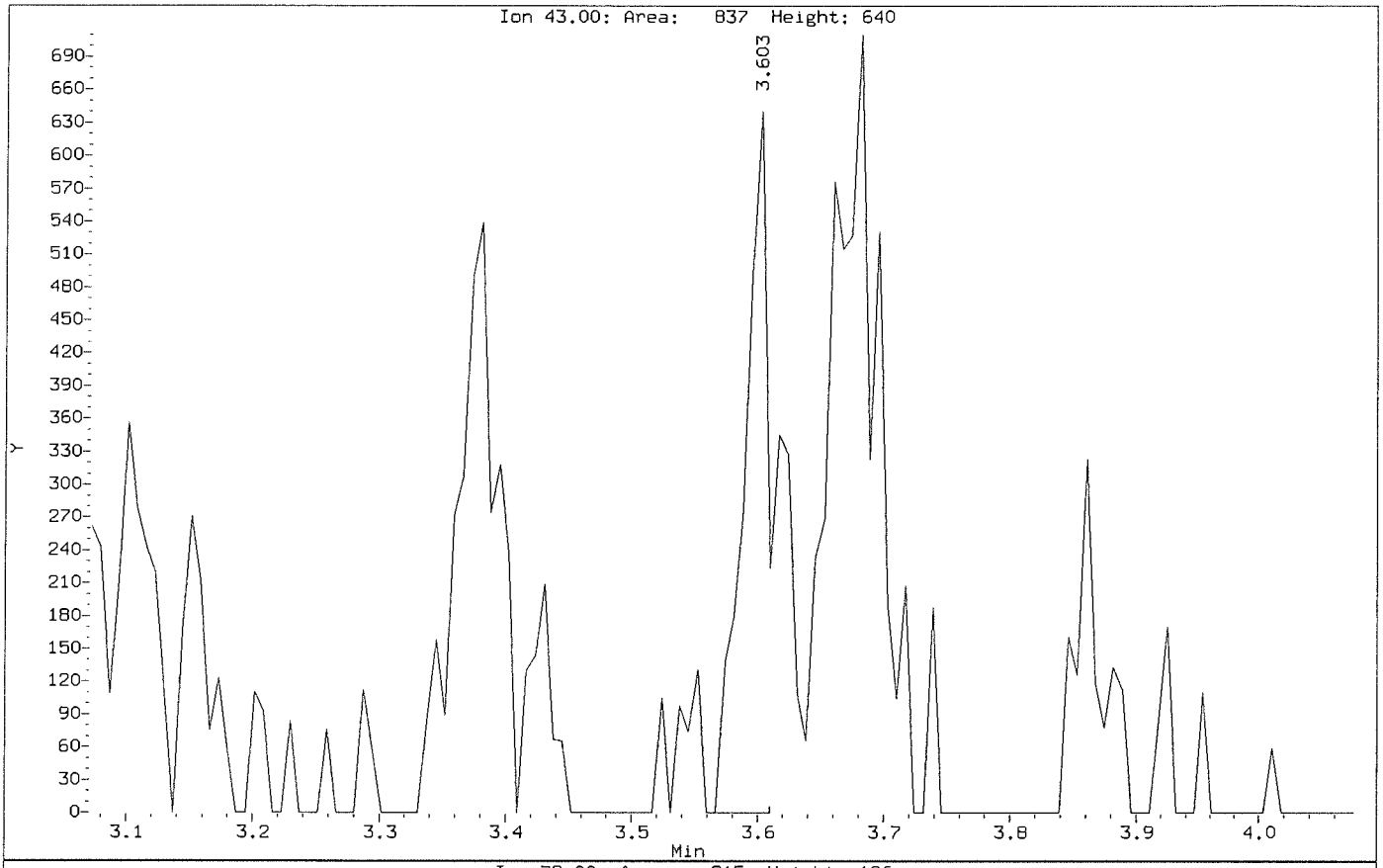
Compound: 2-Butanone
CAS Number: 78-93-3

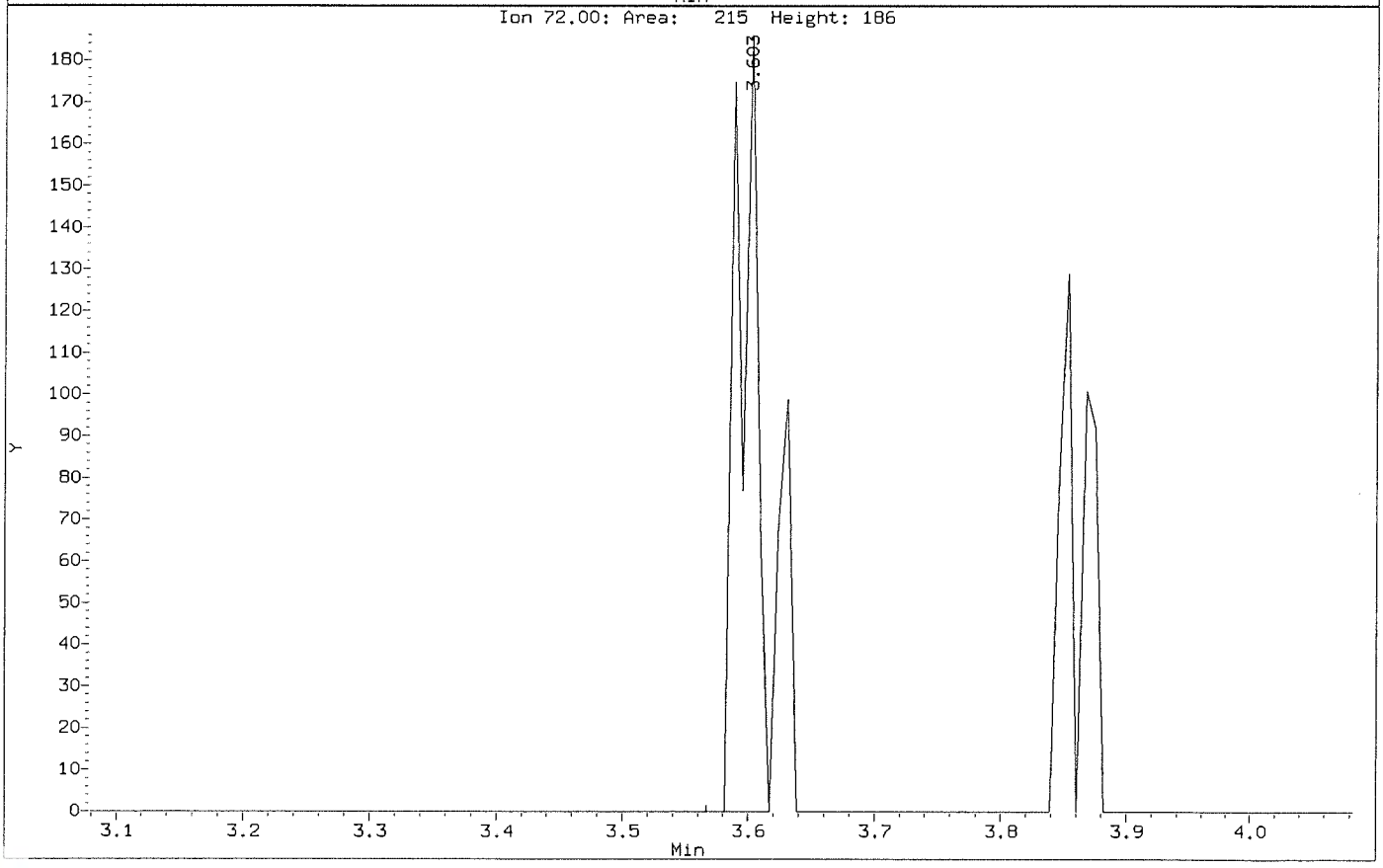




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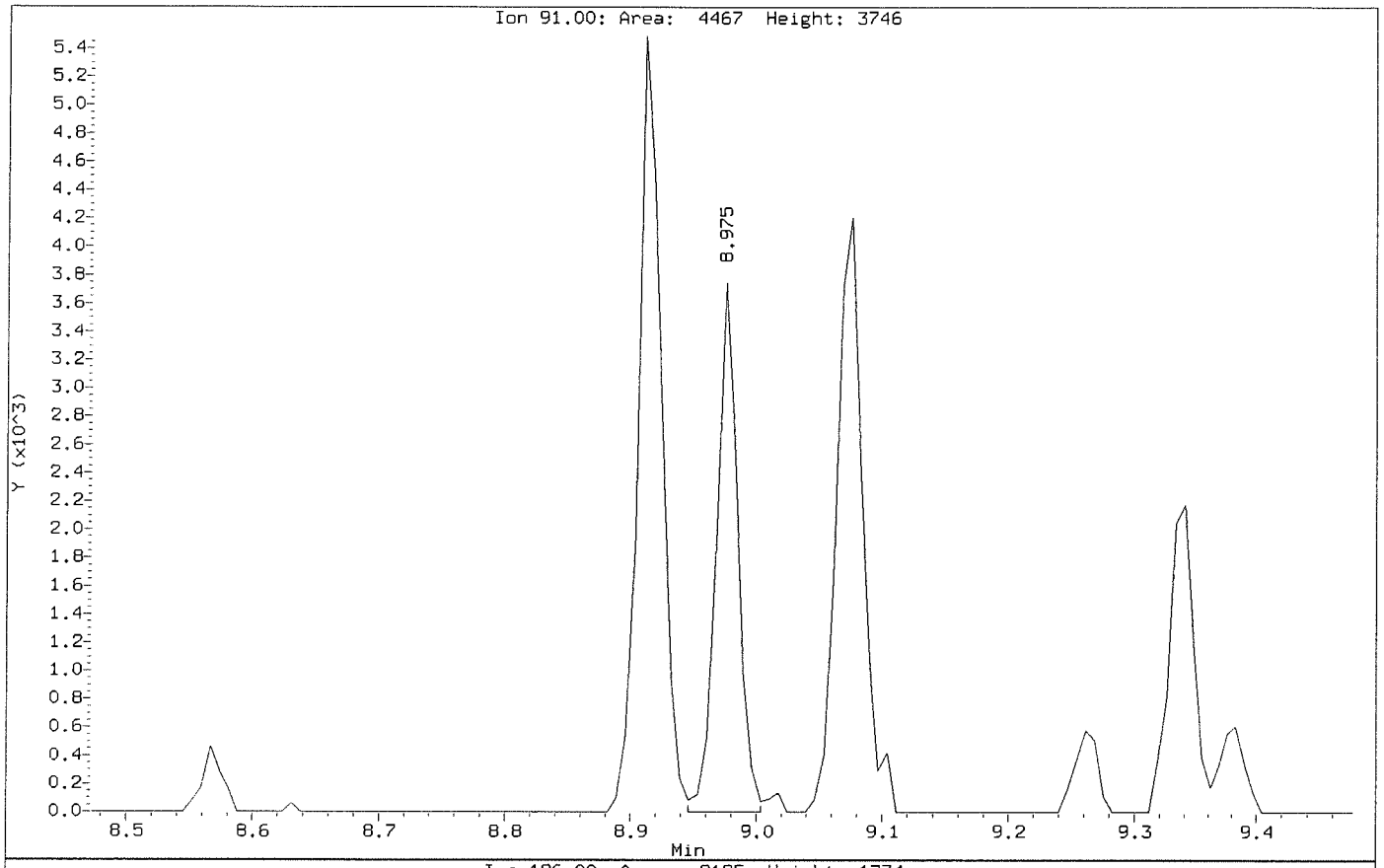
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CAS Number: 78-93-3

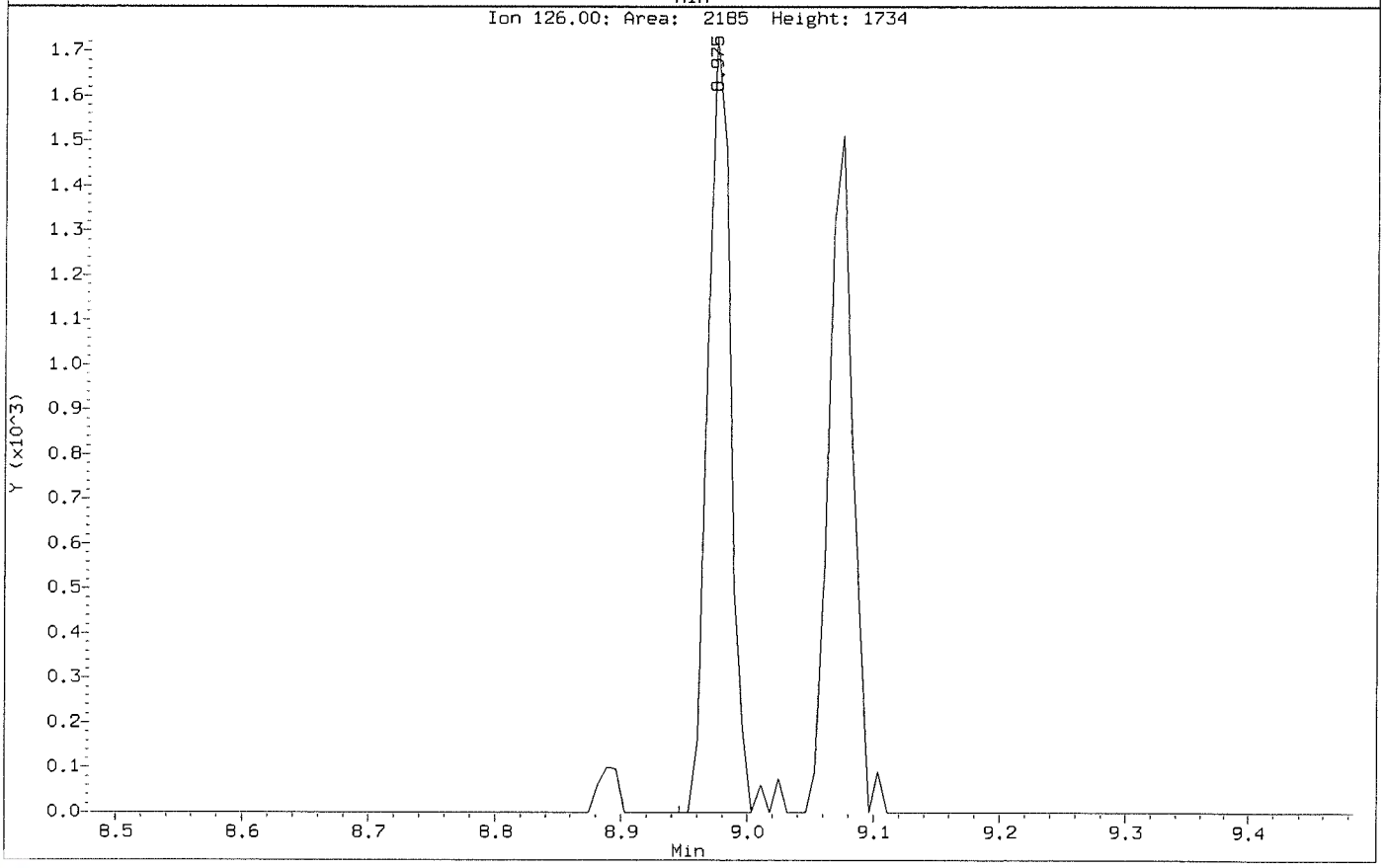




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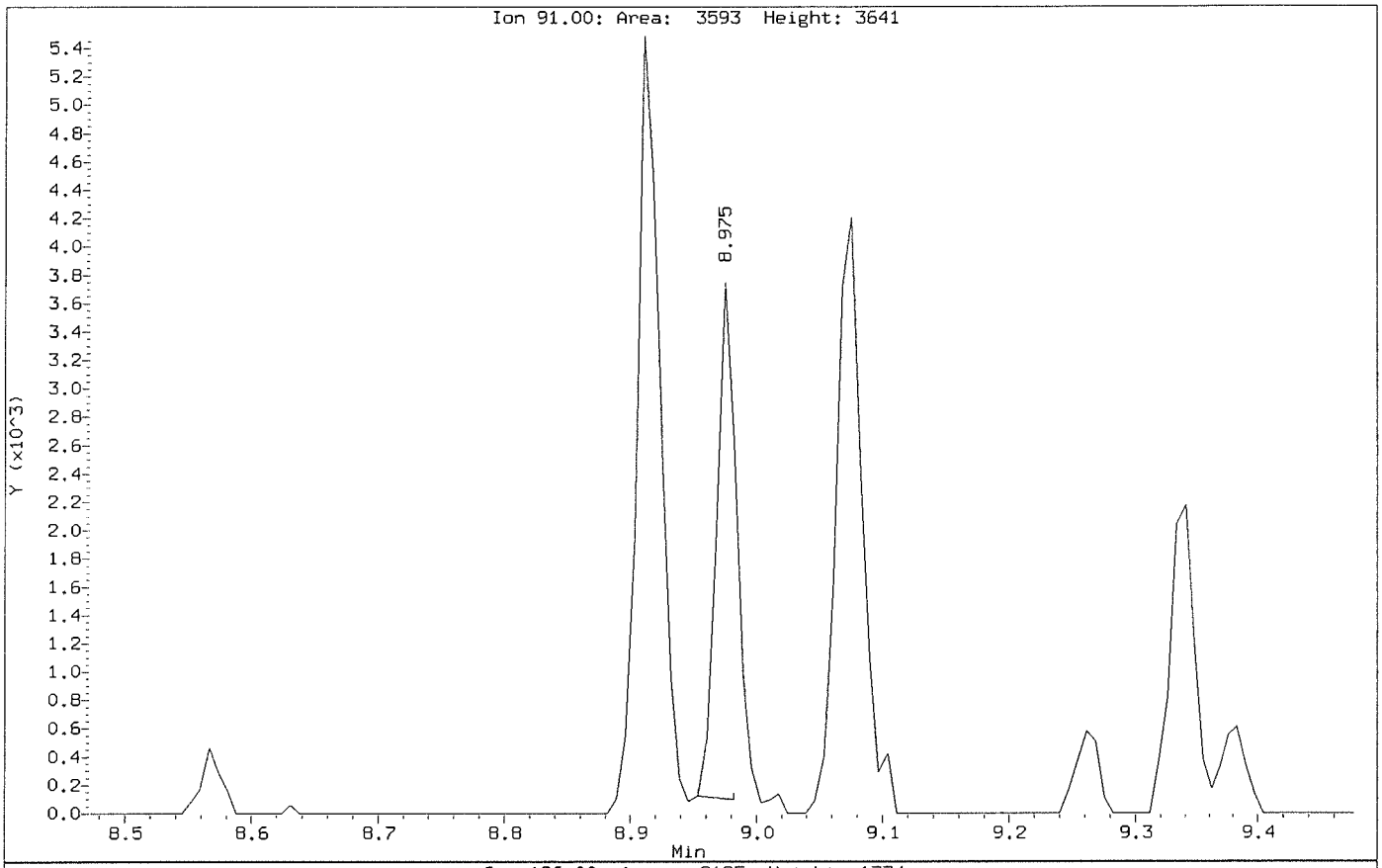
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

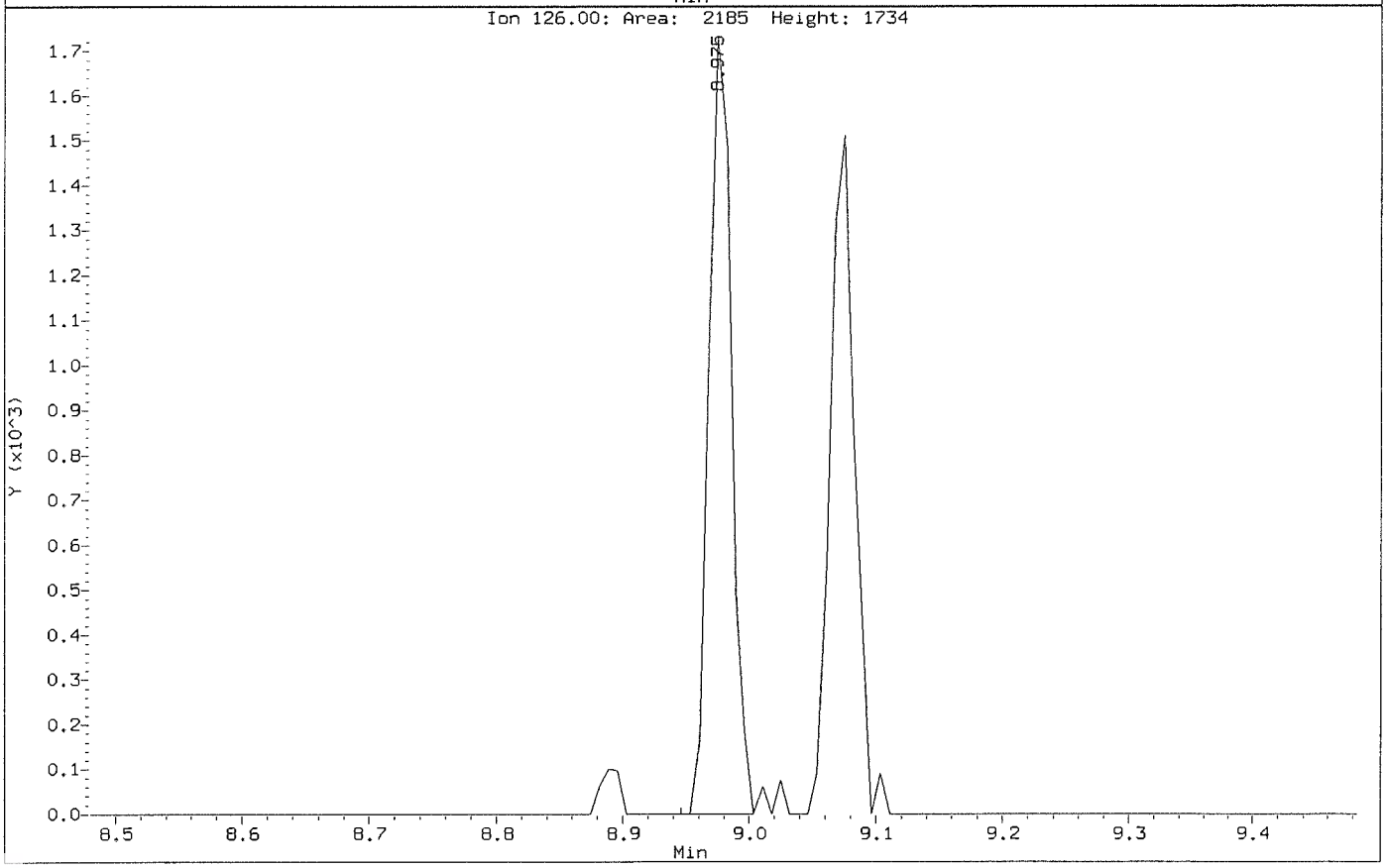




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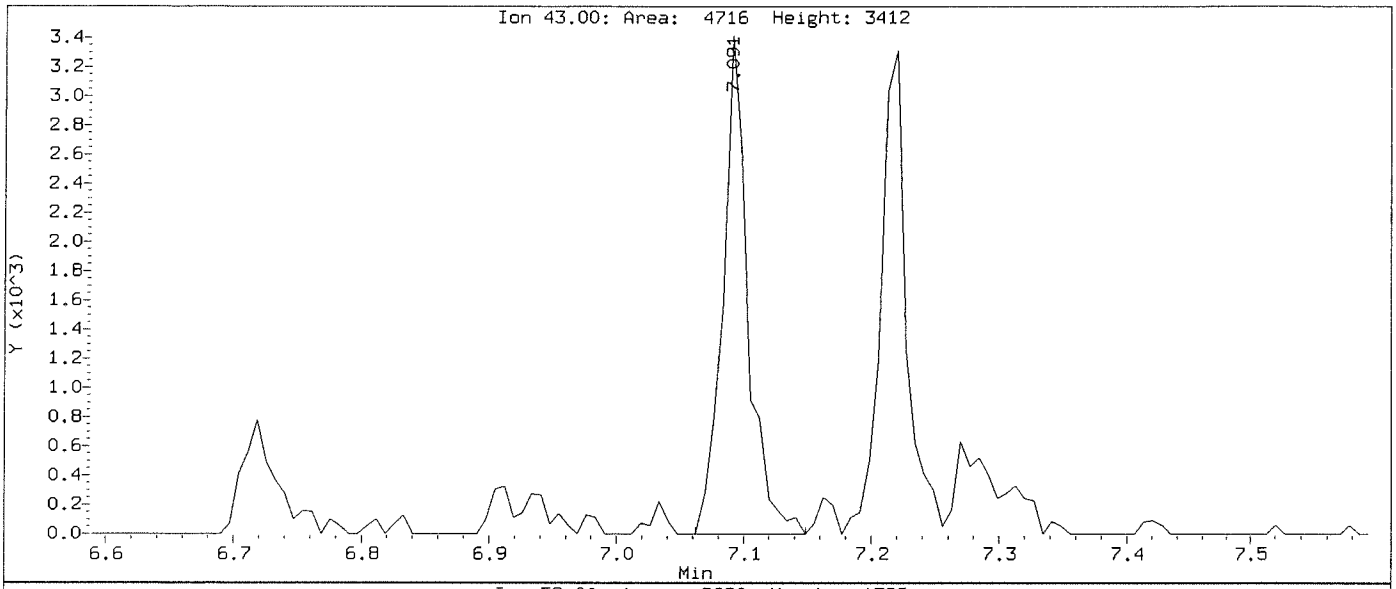
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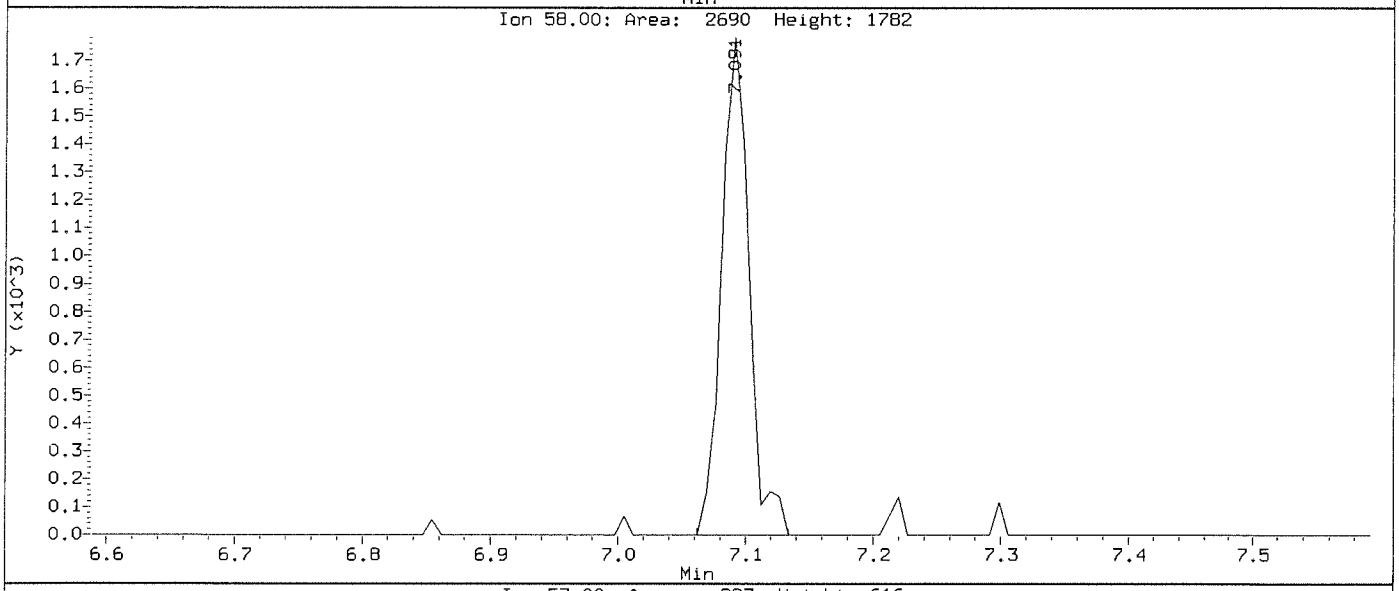


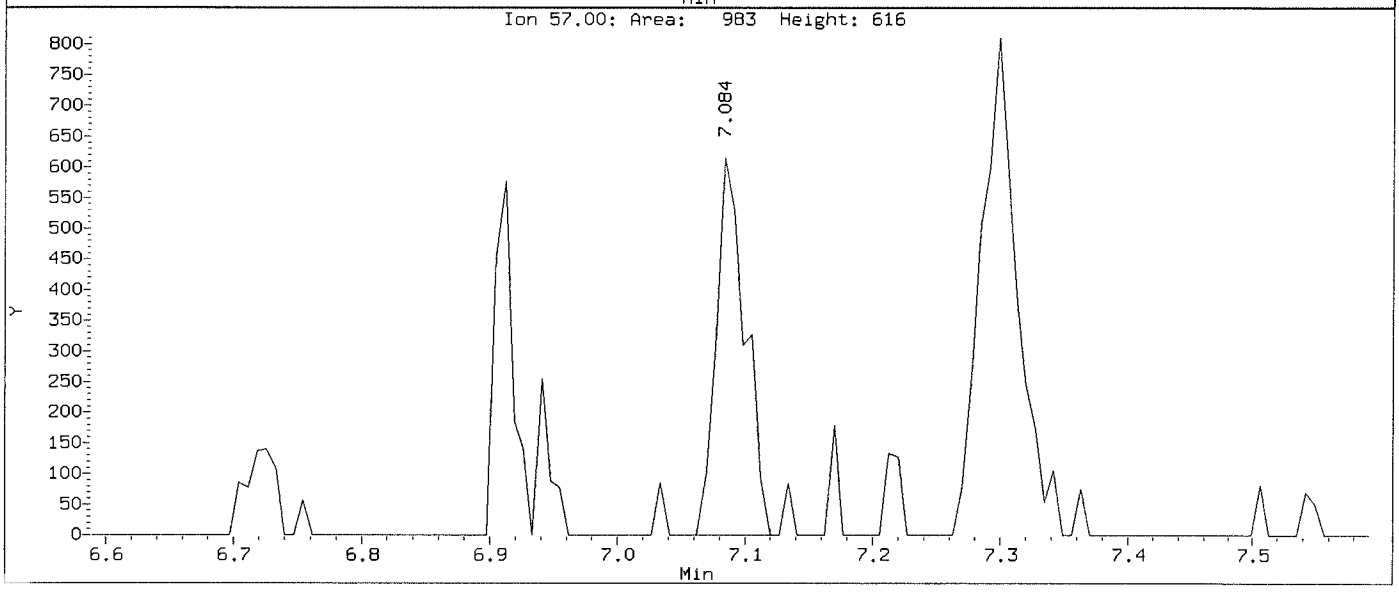


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6

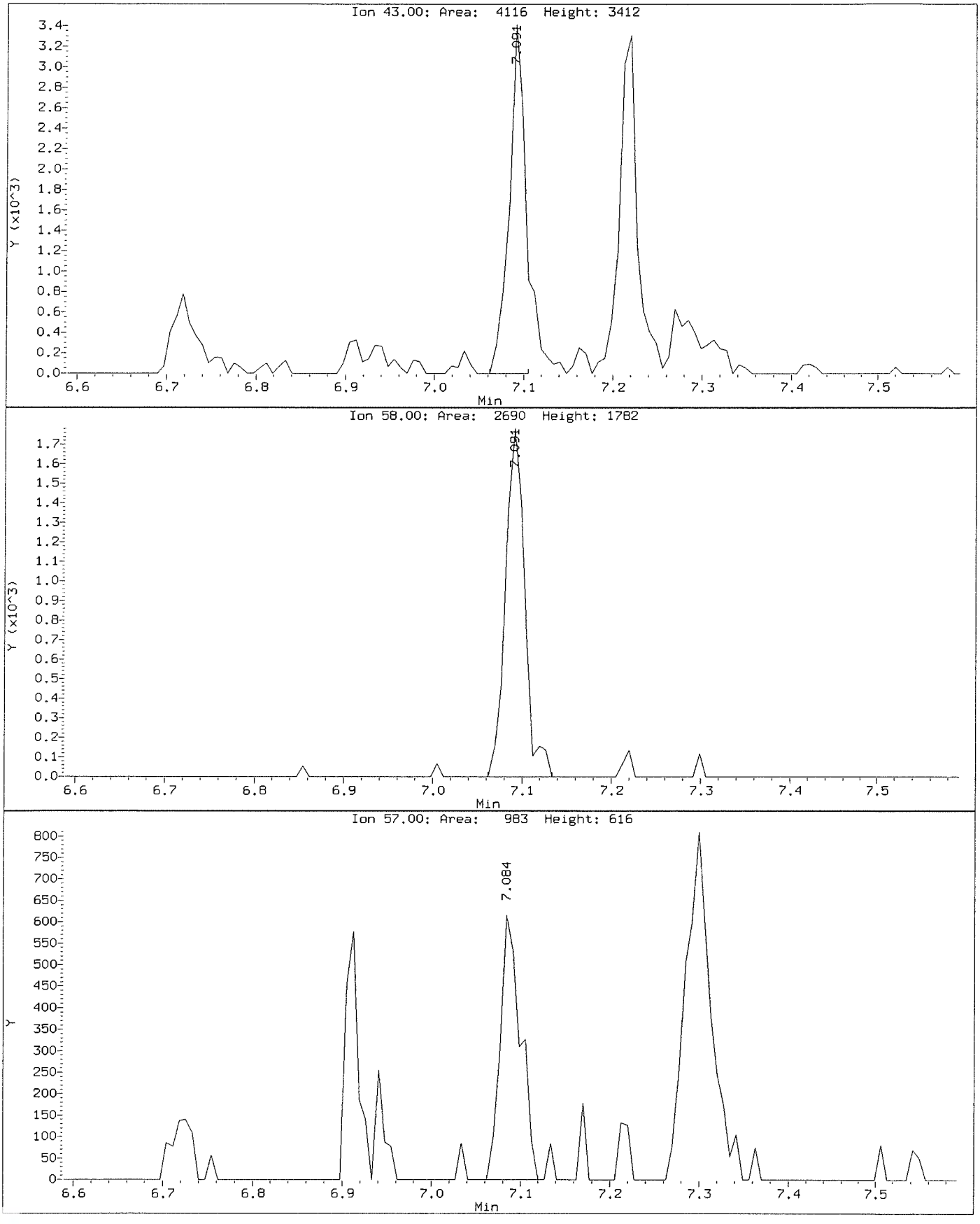






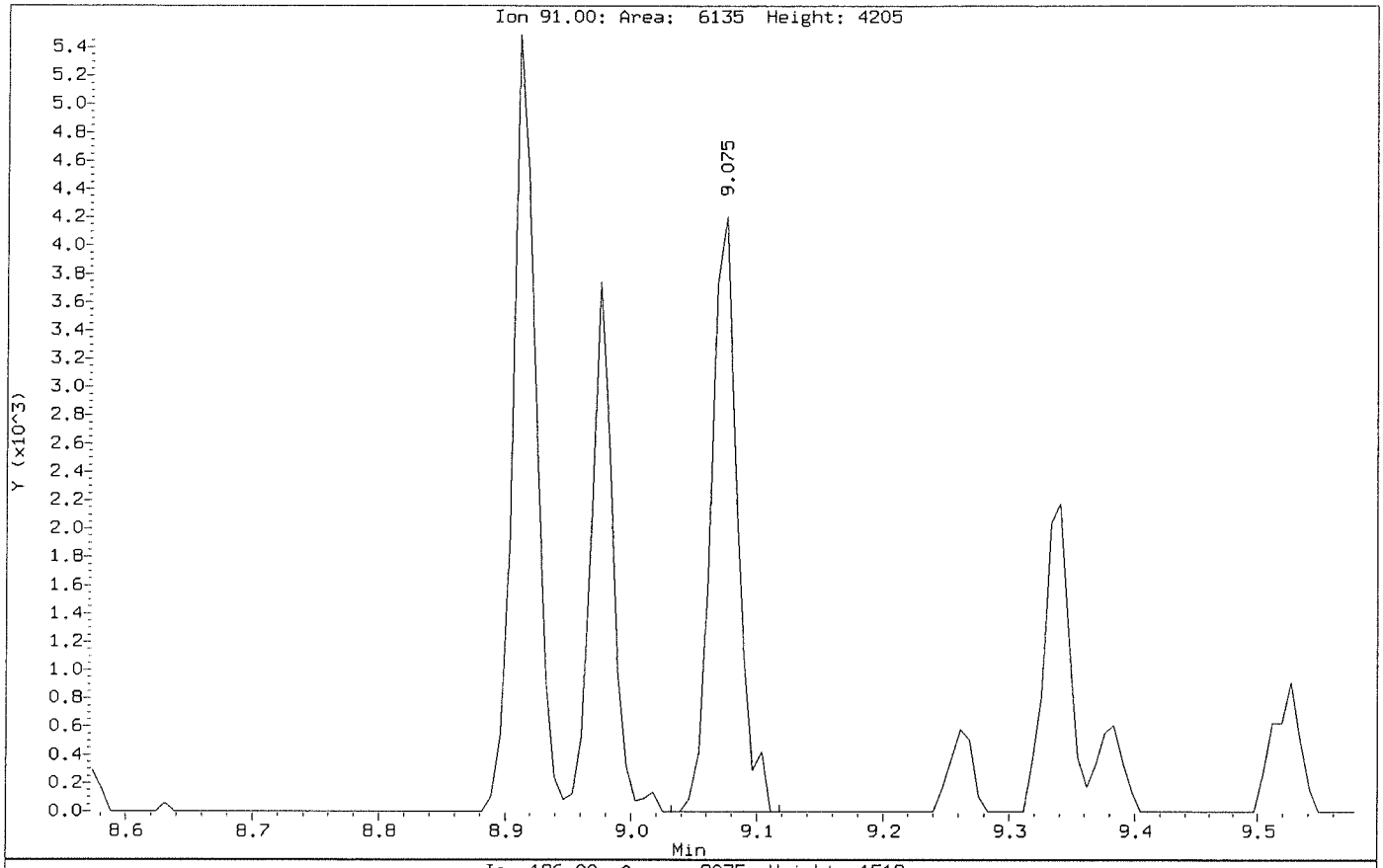
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Client Sample ID: VSTD000.5

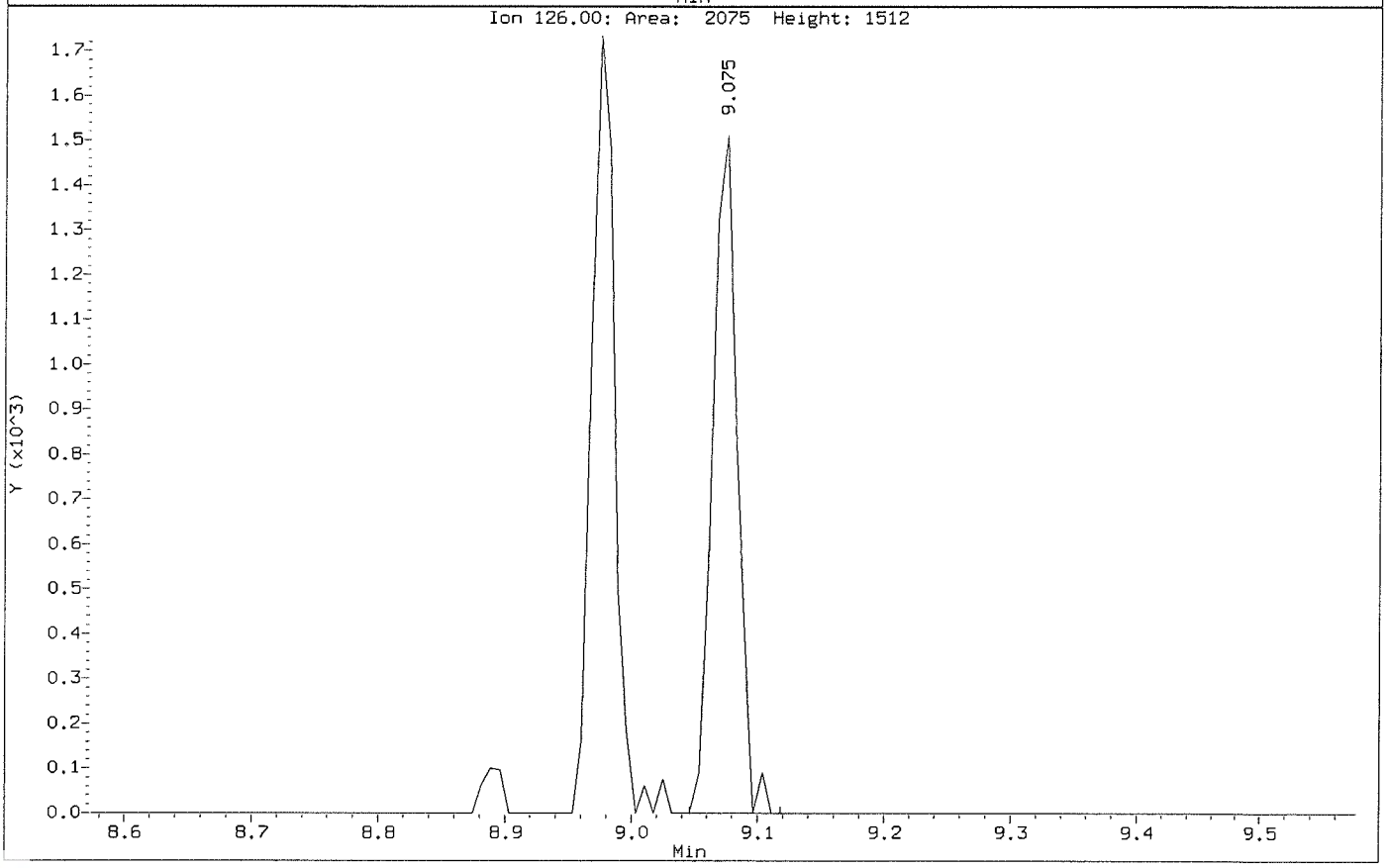
Compound: 2-Hexanone
CAS Number: 591-78-6



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112203.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

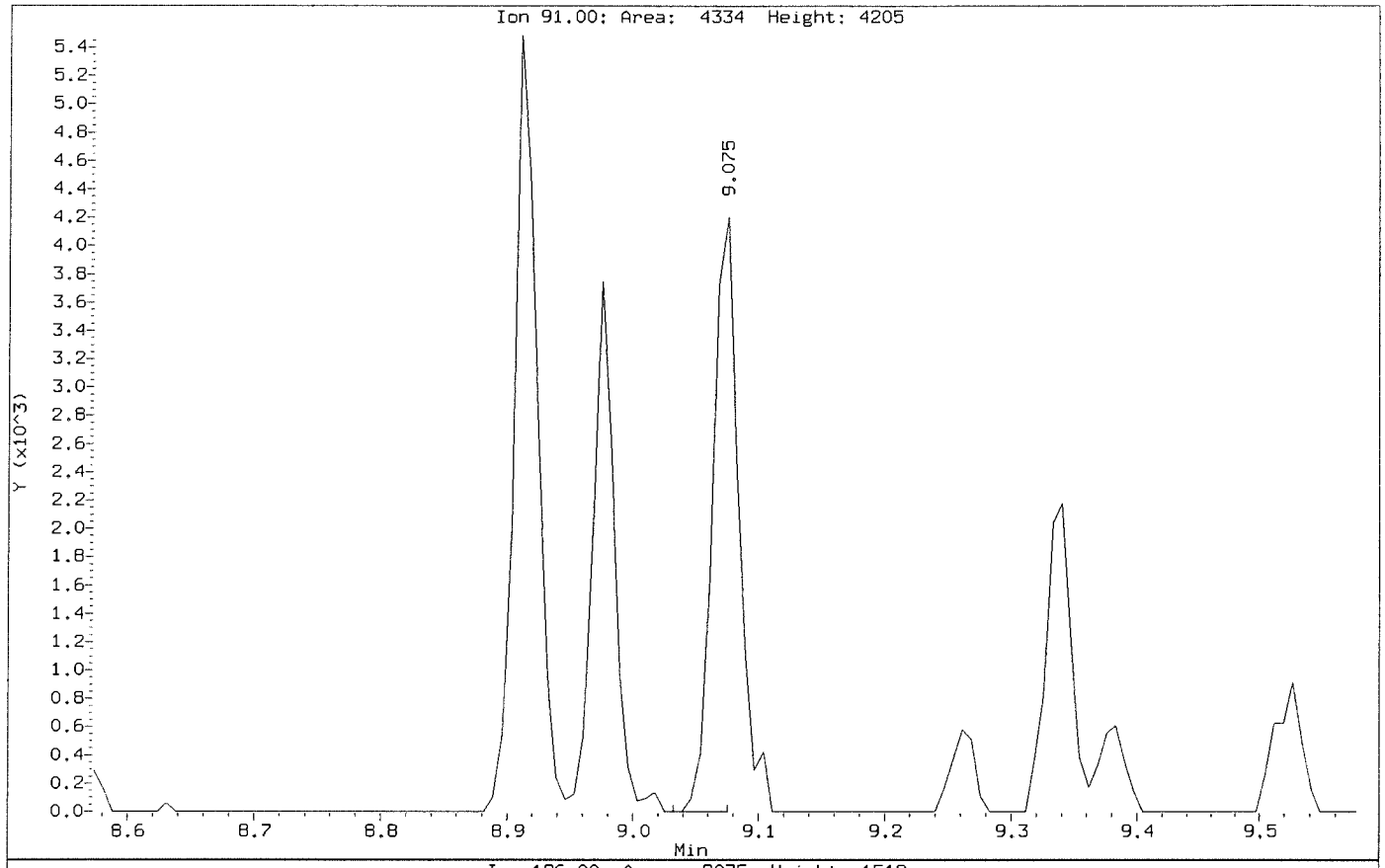
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

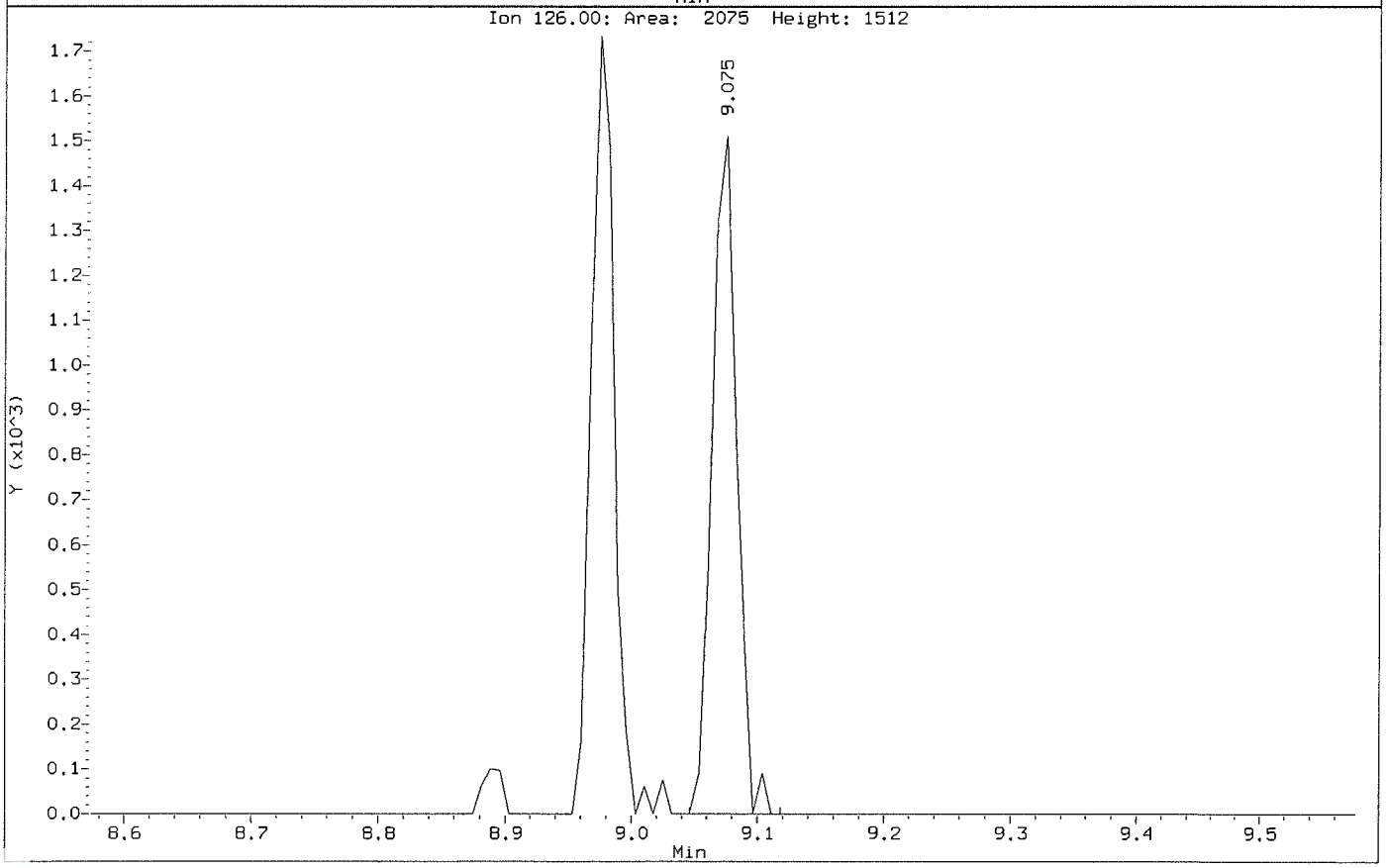




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Instrument: voa6.i
Client Sample ID: VSTD000.5

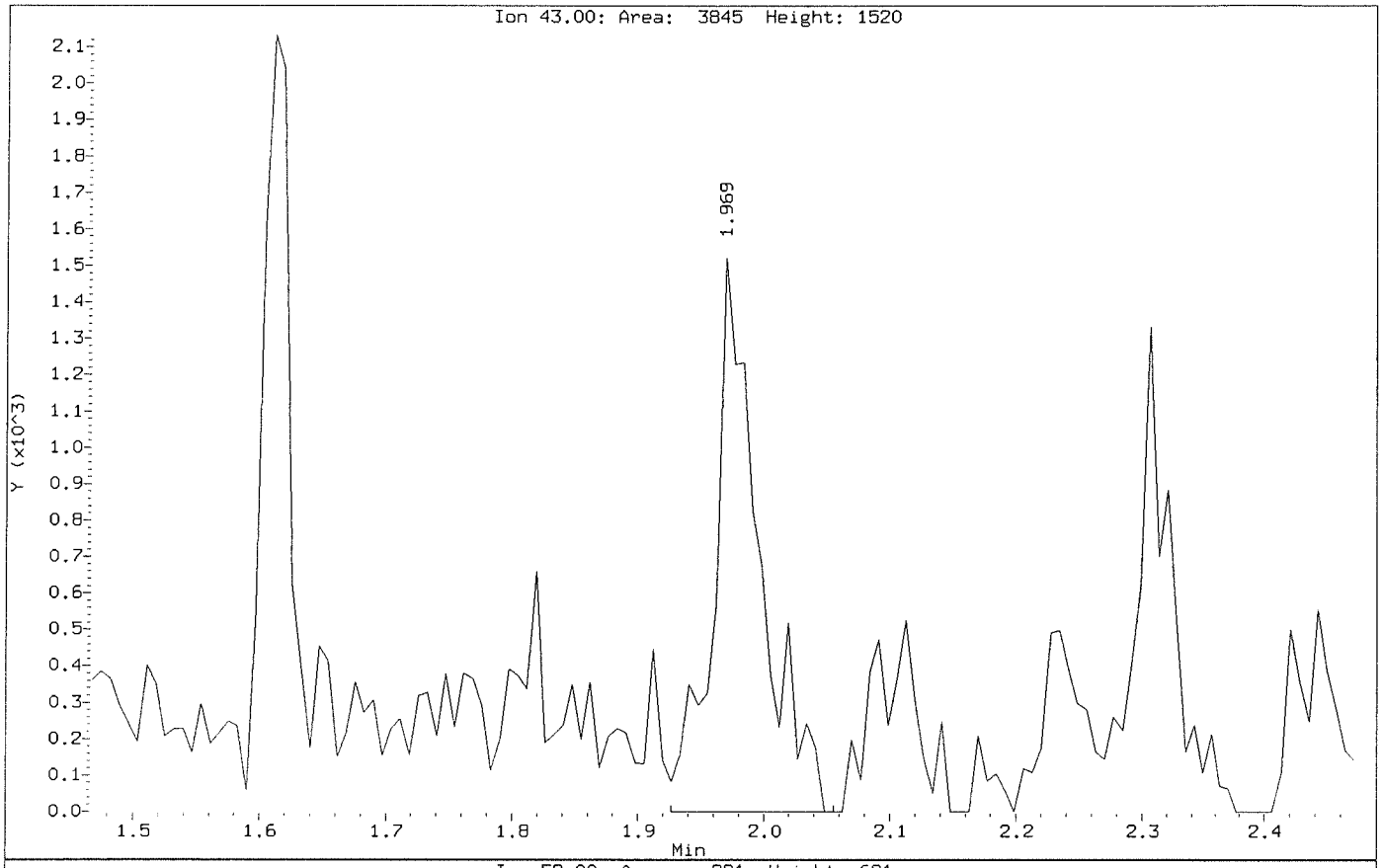
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

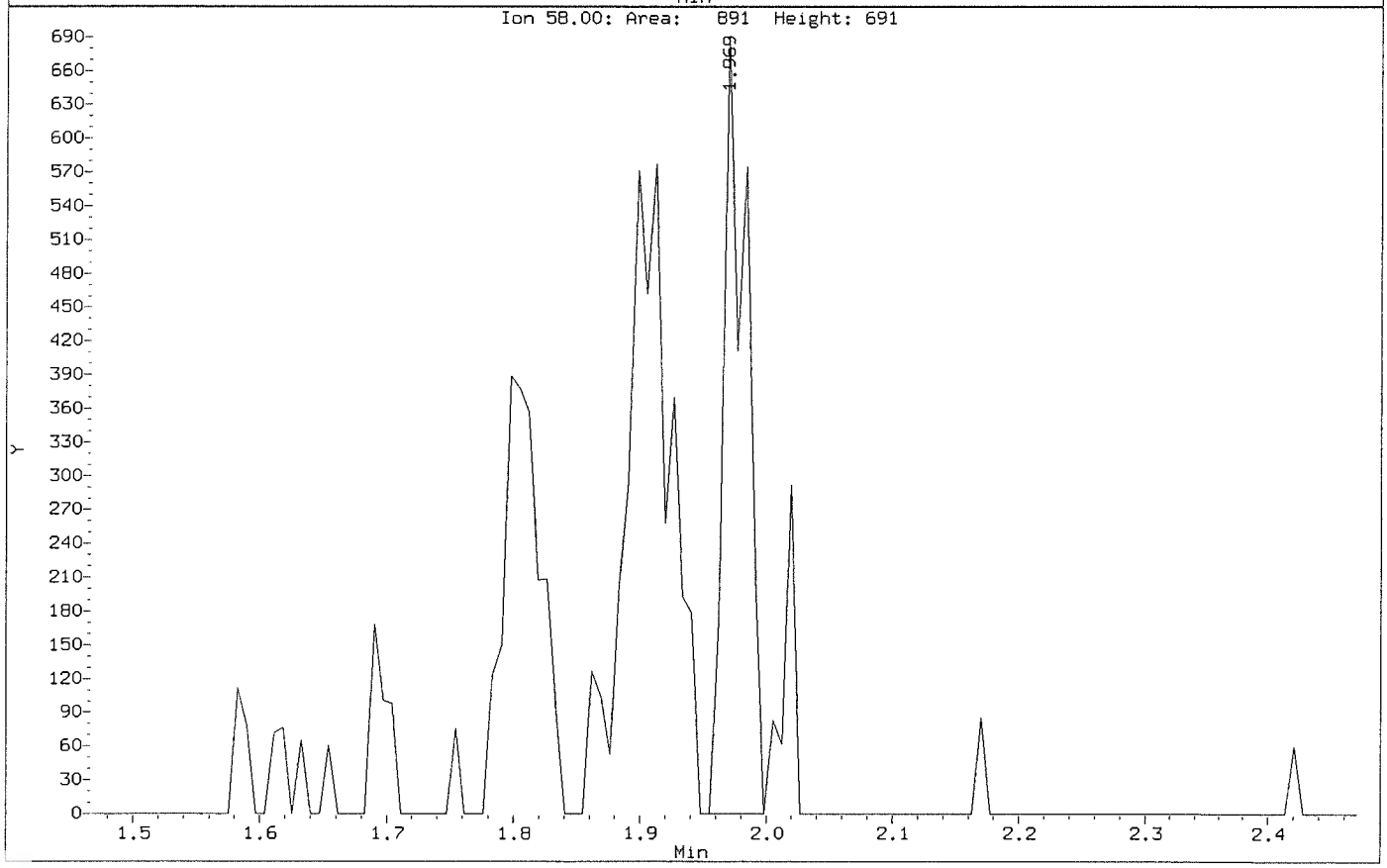




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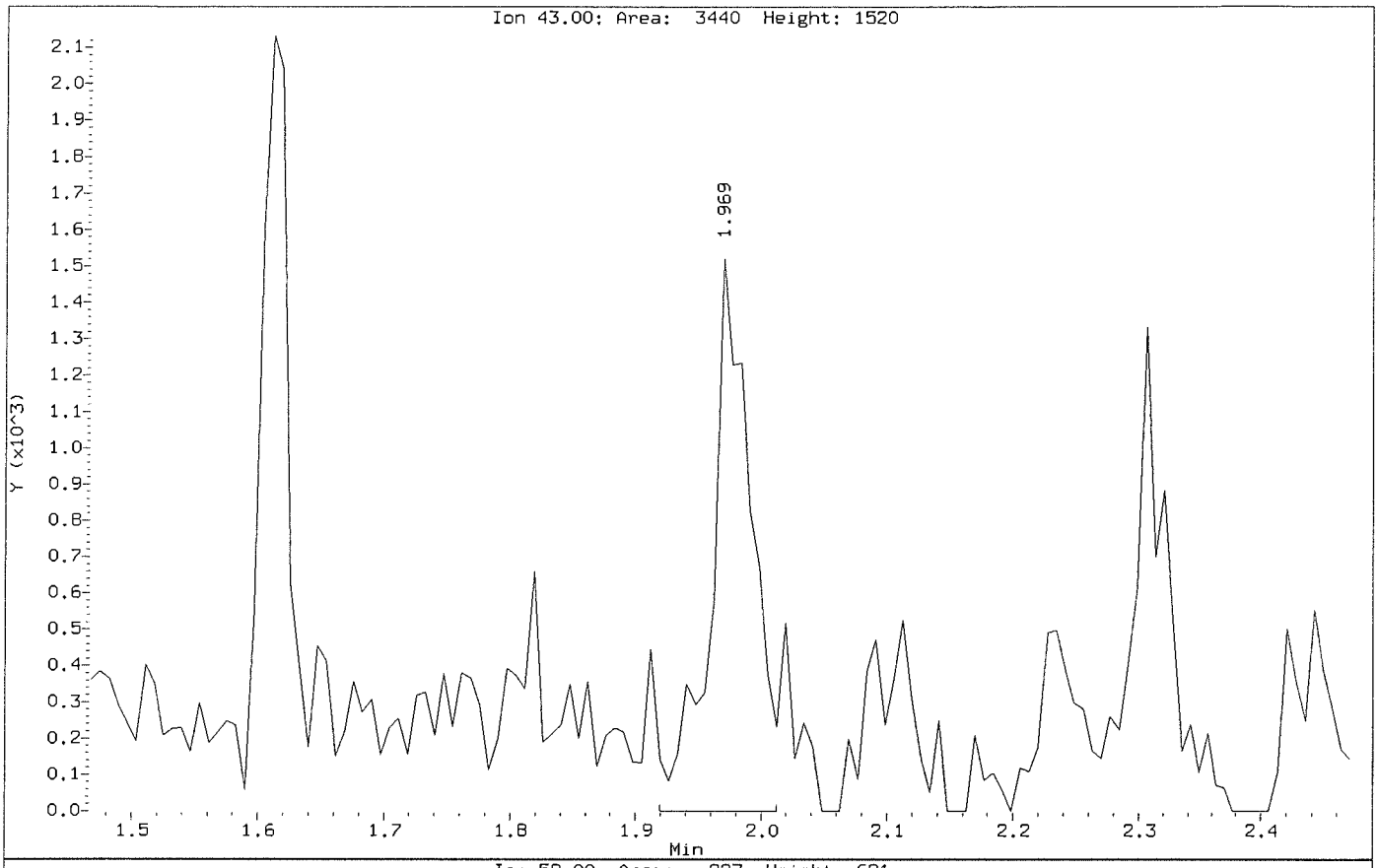
Compound: Acetone
CAS Number: 67-64-1

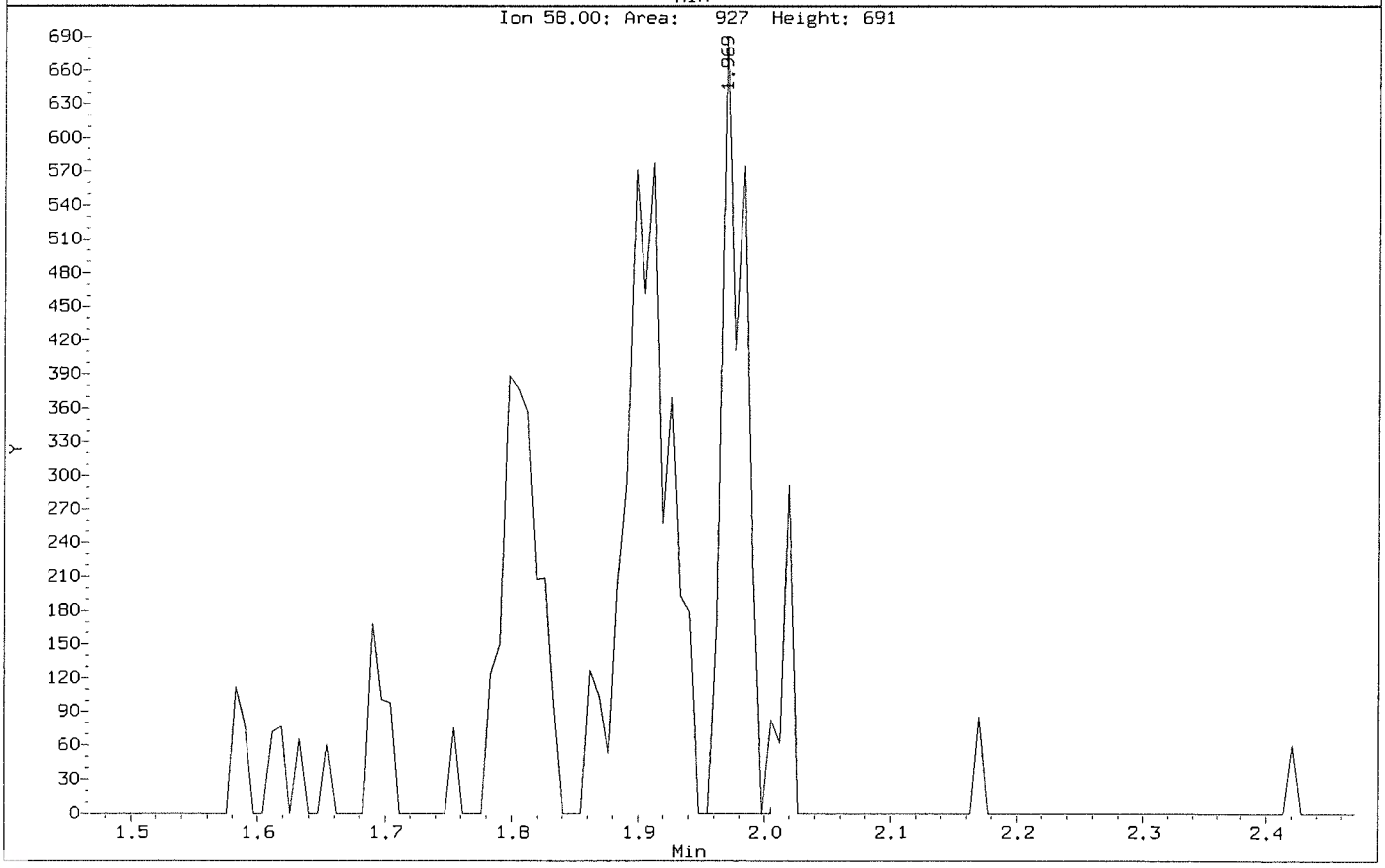




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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

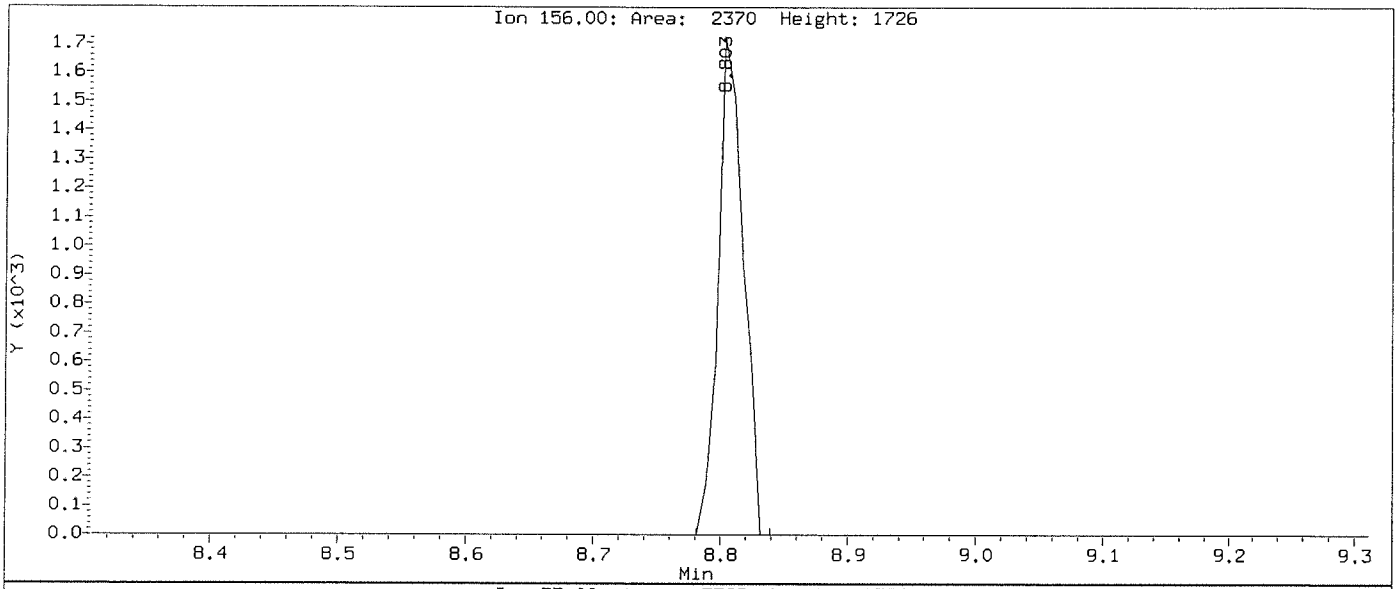
Compound: Acetone
CAS Number: 67-64-1

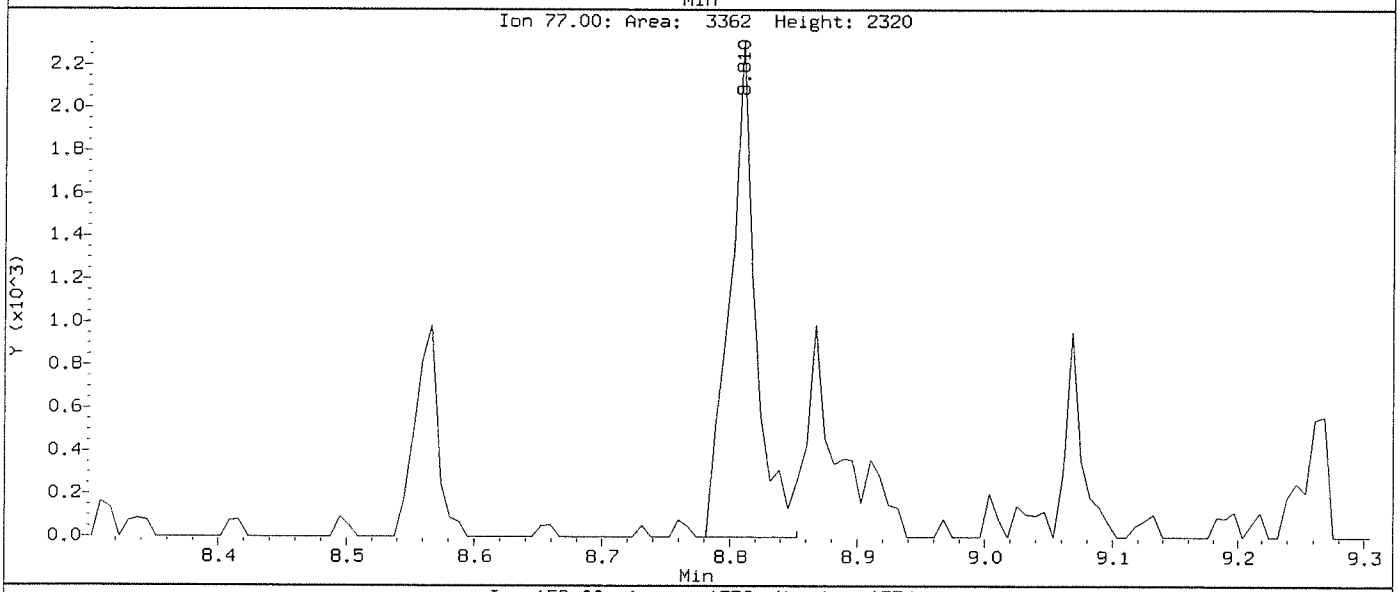


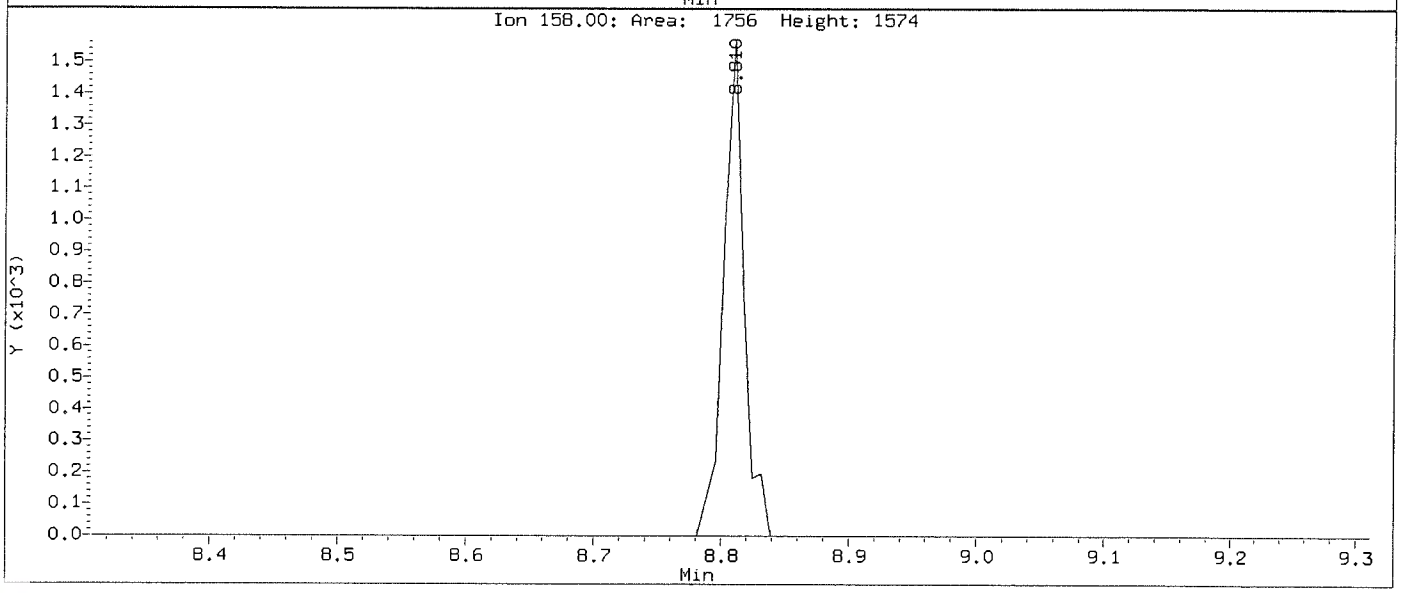


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromobenzene
CAS Number: 108-86-1

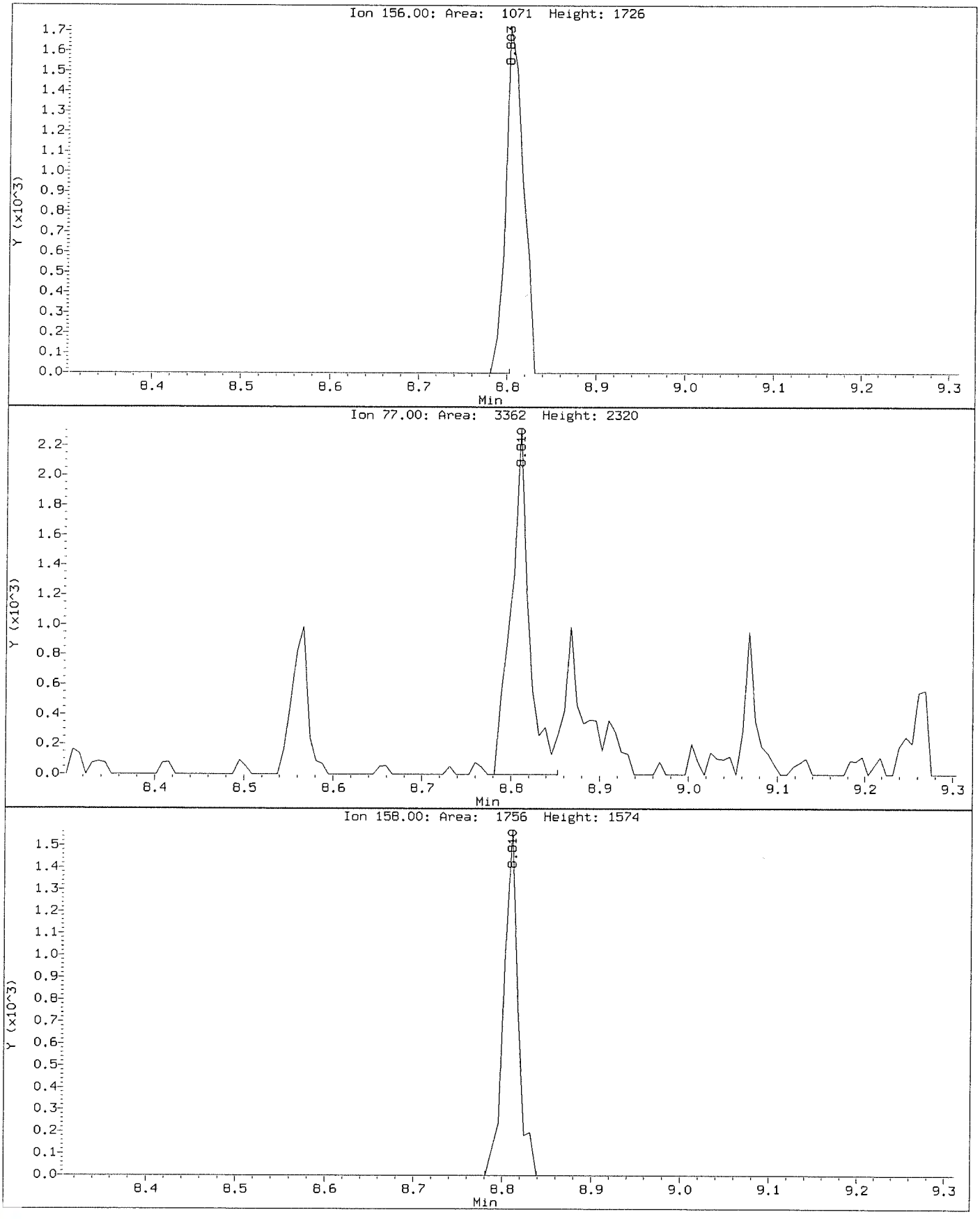






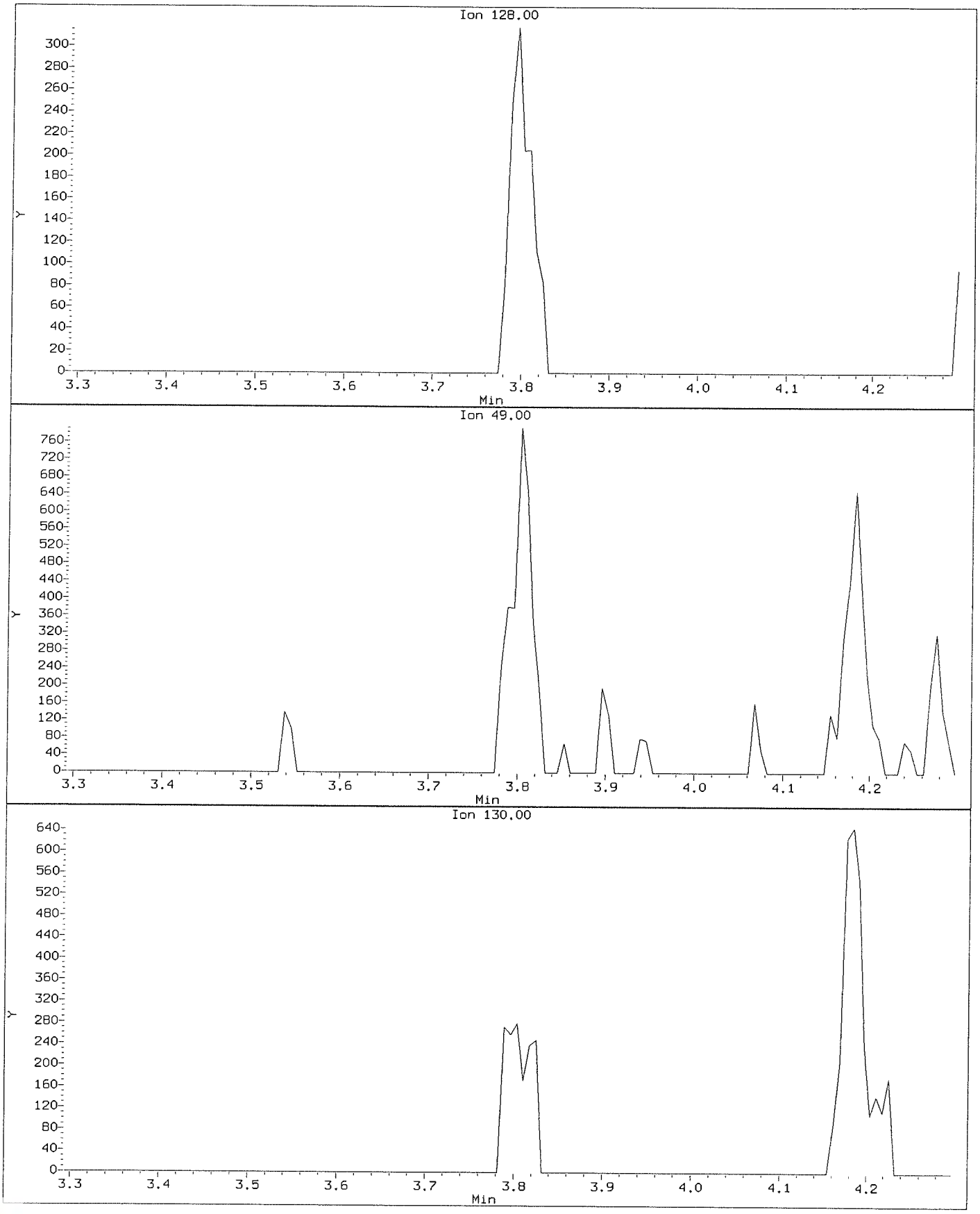
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromobenzene
CAS Number: 108-86-1



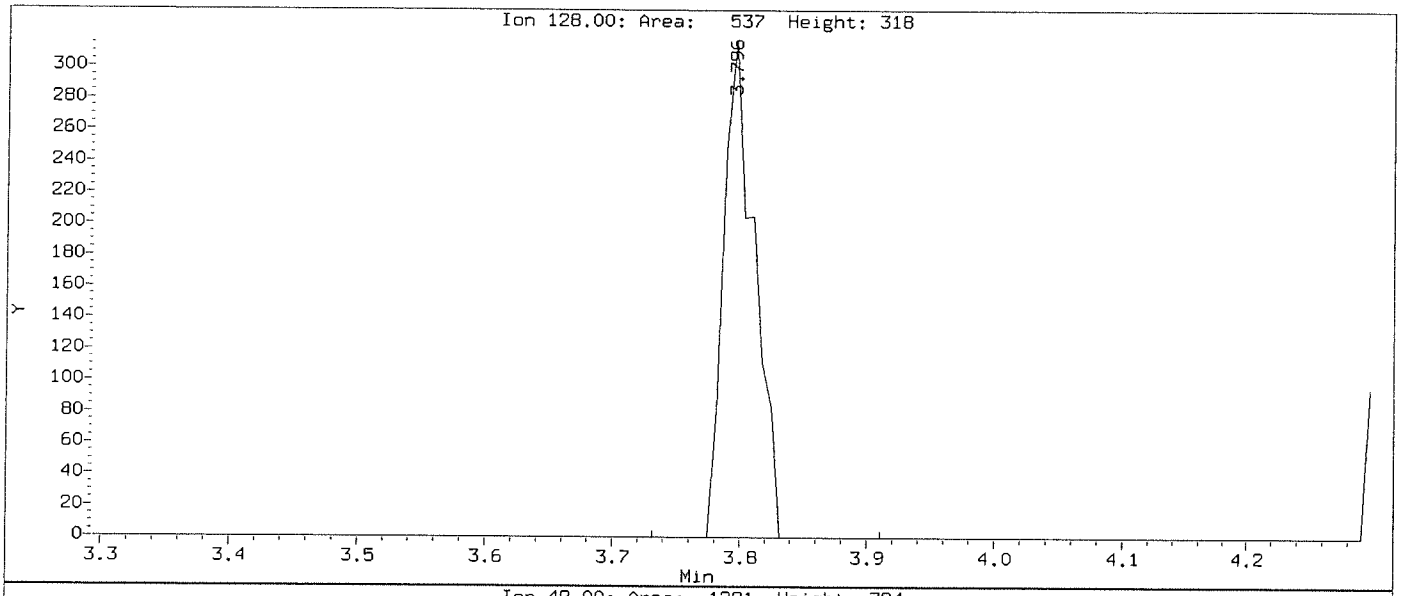
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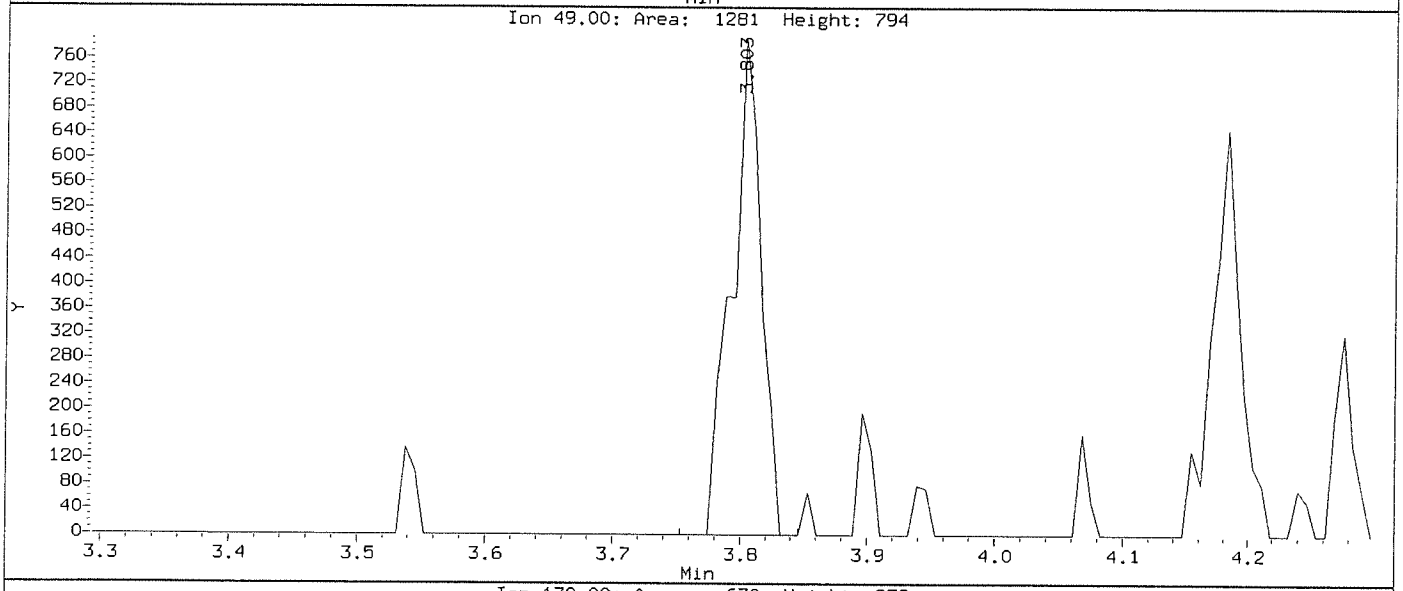
Compound: Bromochloromethane
CAS Number: 74-97-5

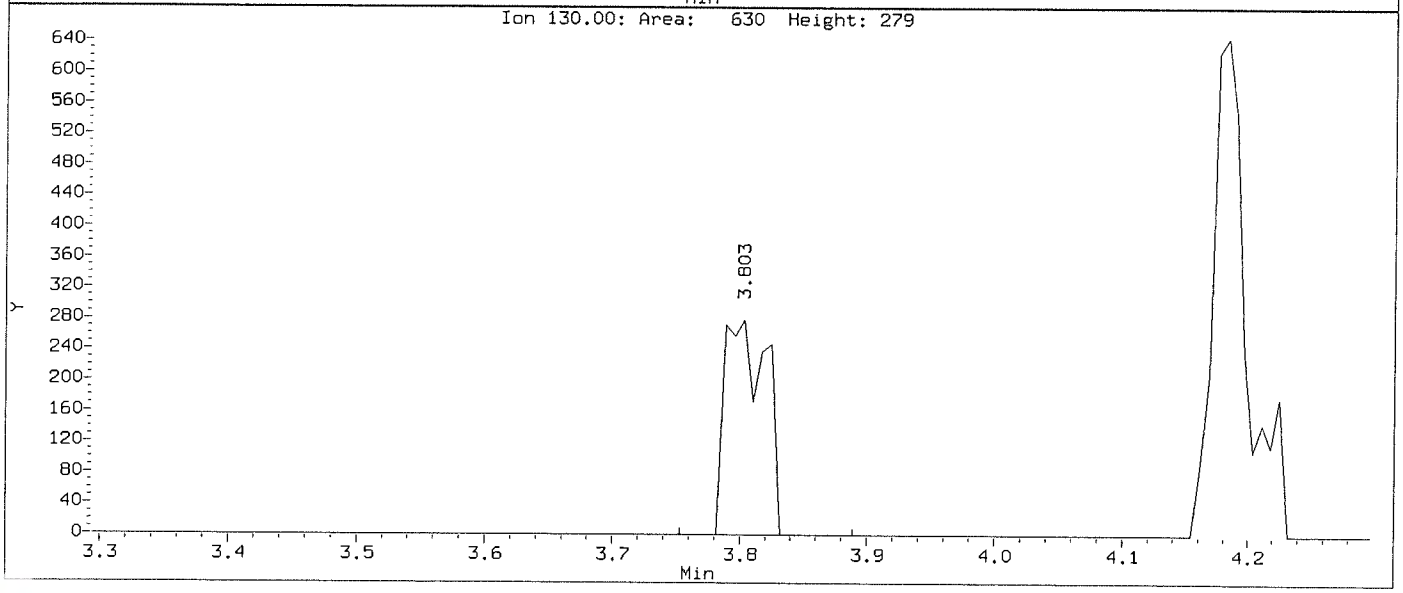


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

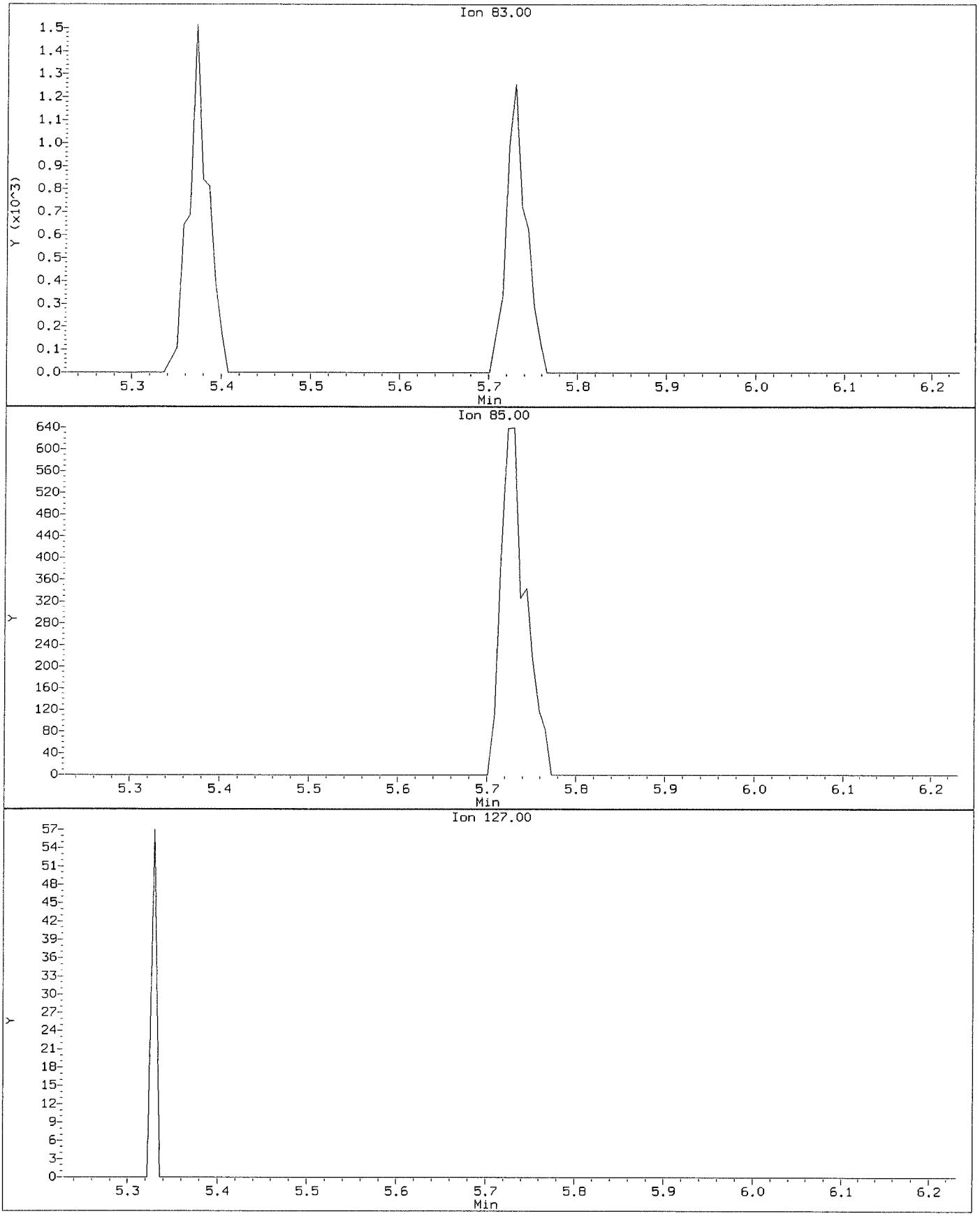






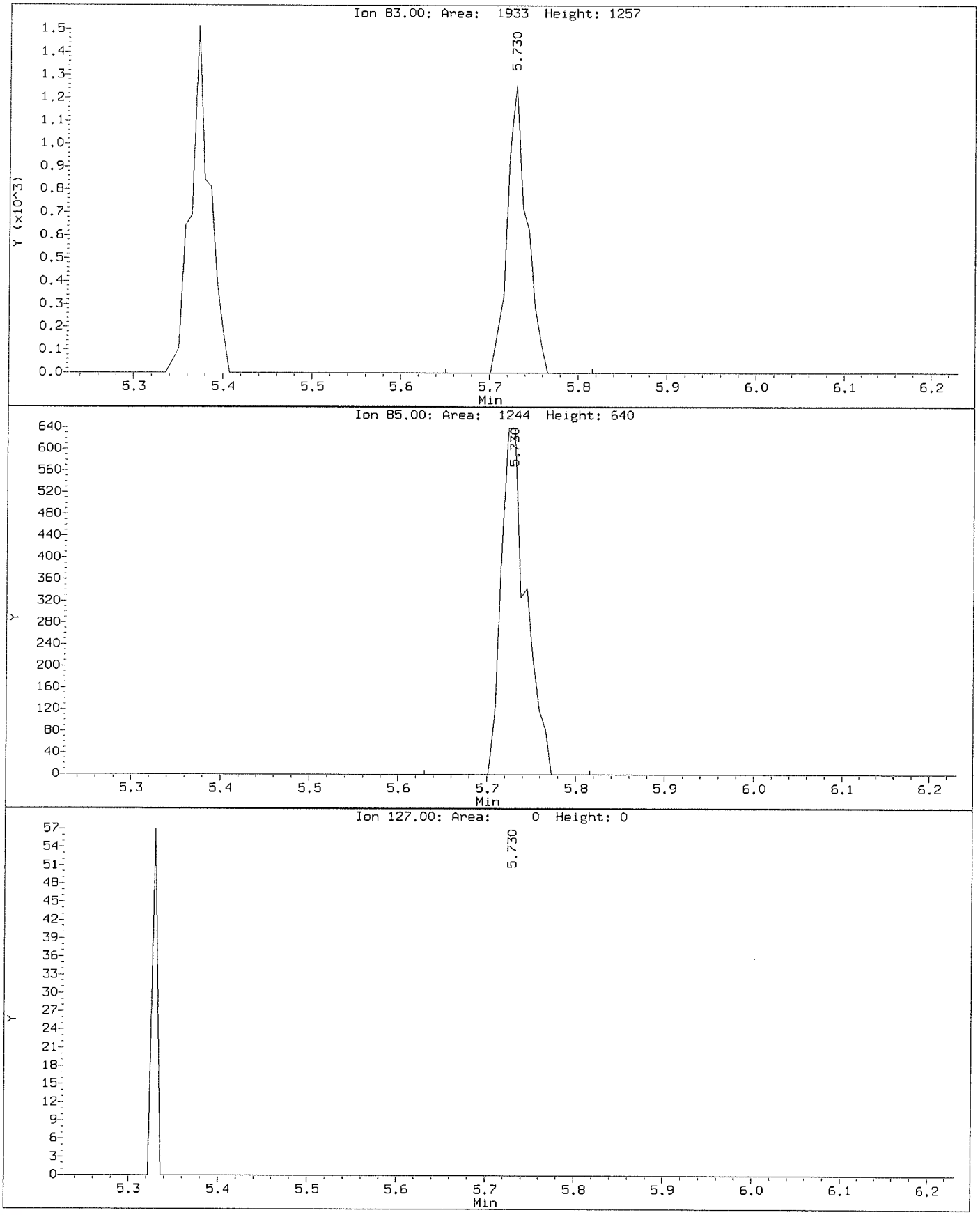
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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



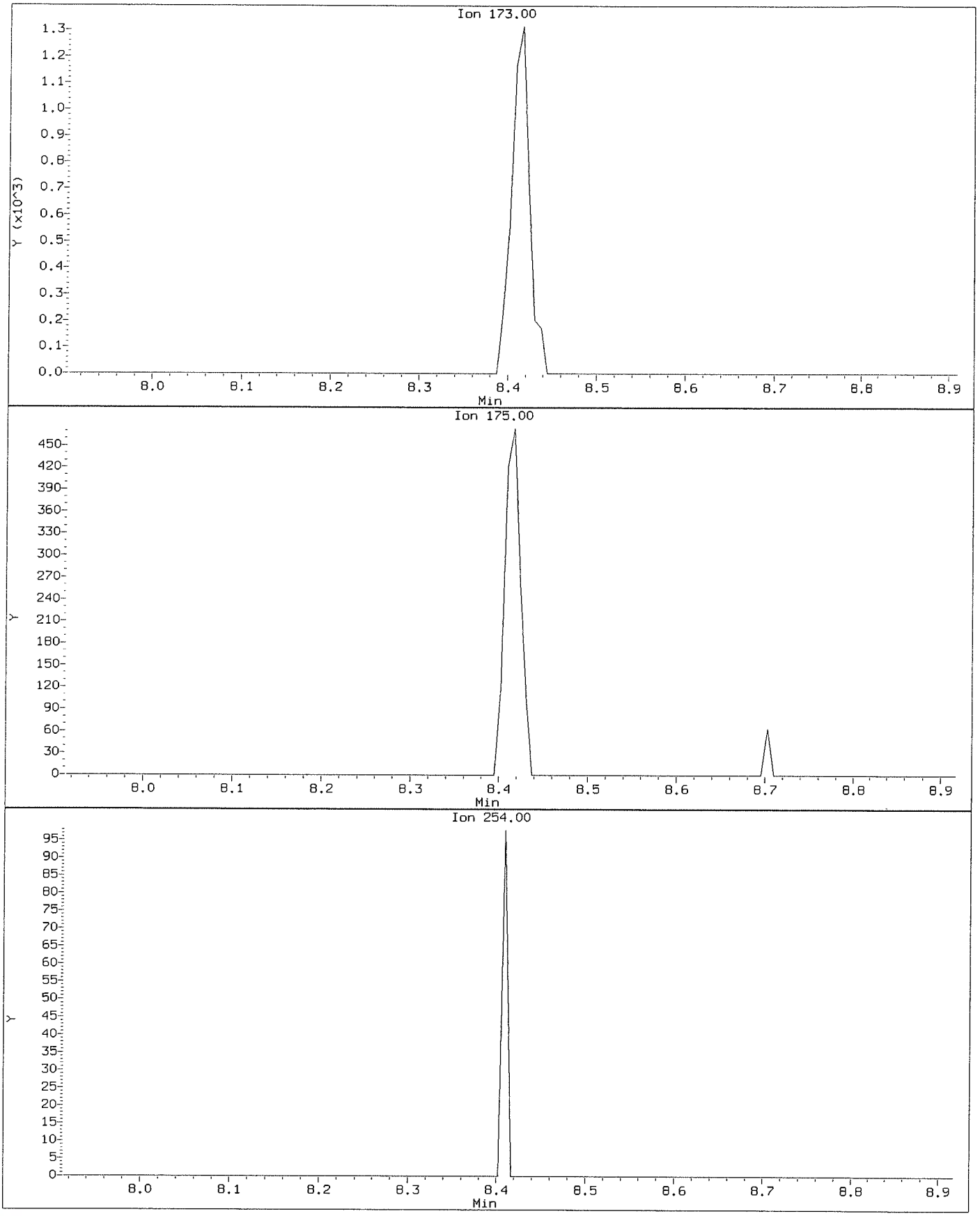
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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



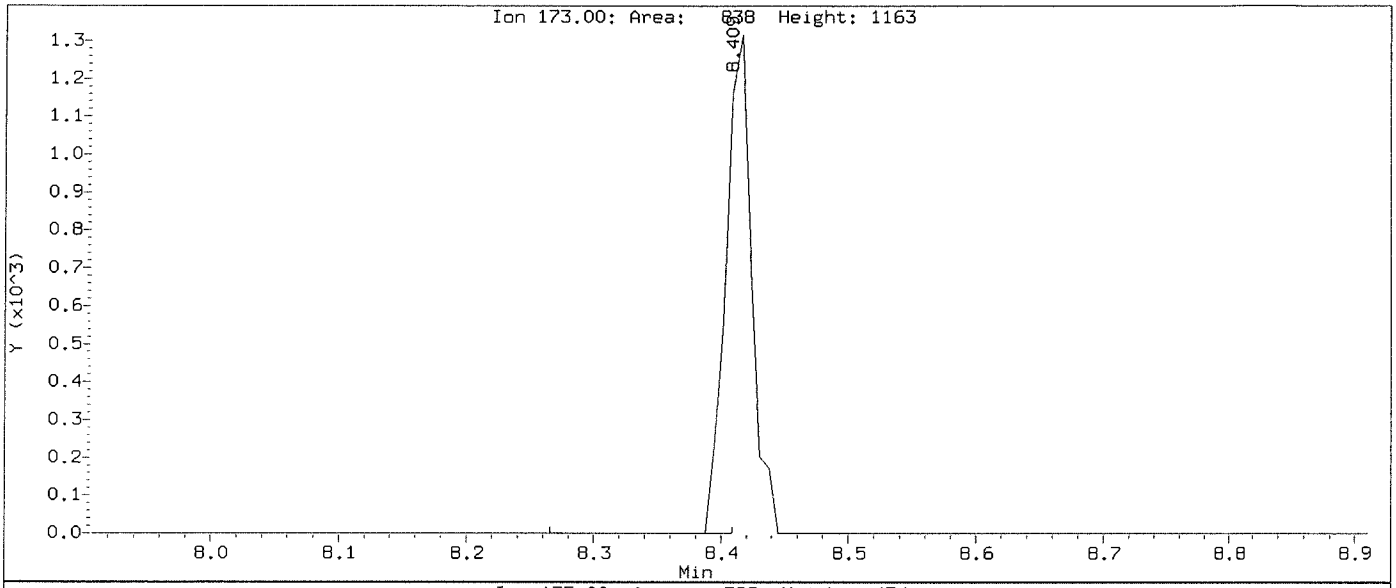
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Client Sample ID: VSTD000.5

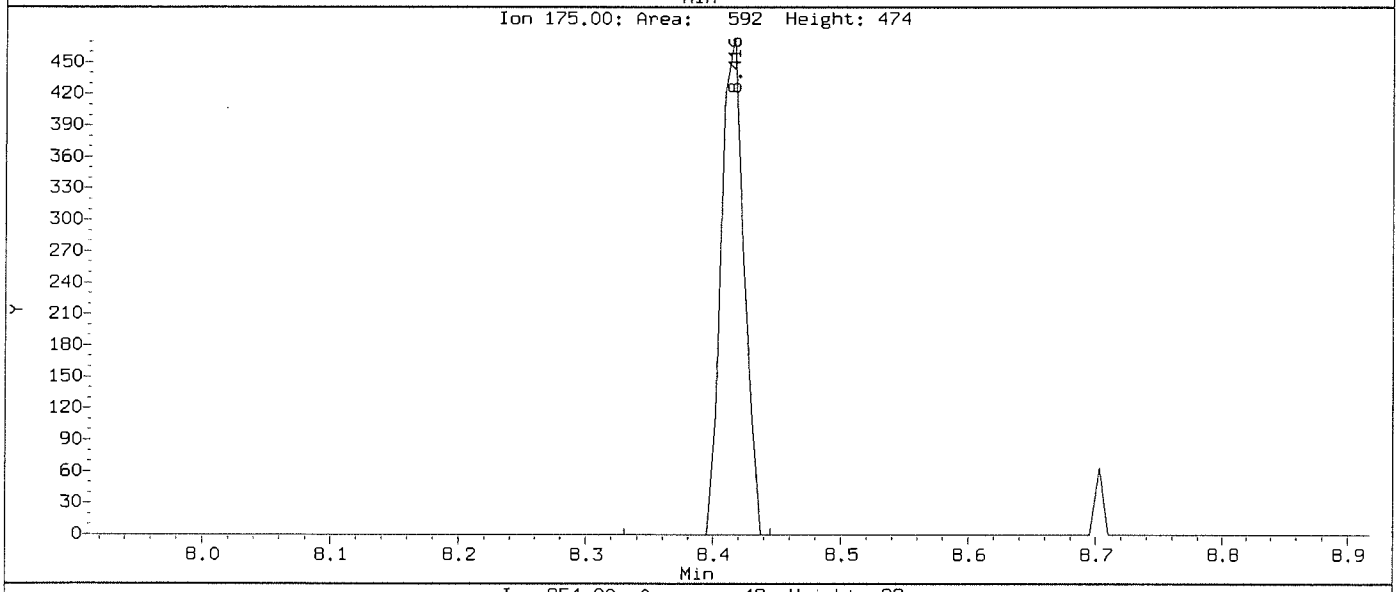
Compound: Bromoform
CAS Number: 75-25-2

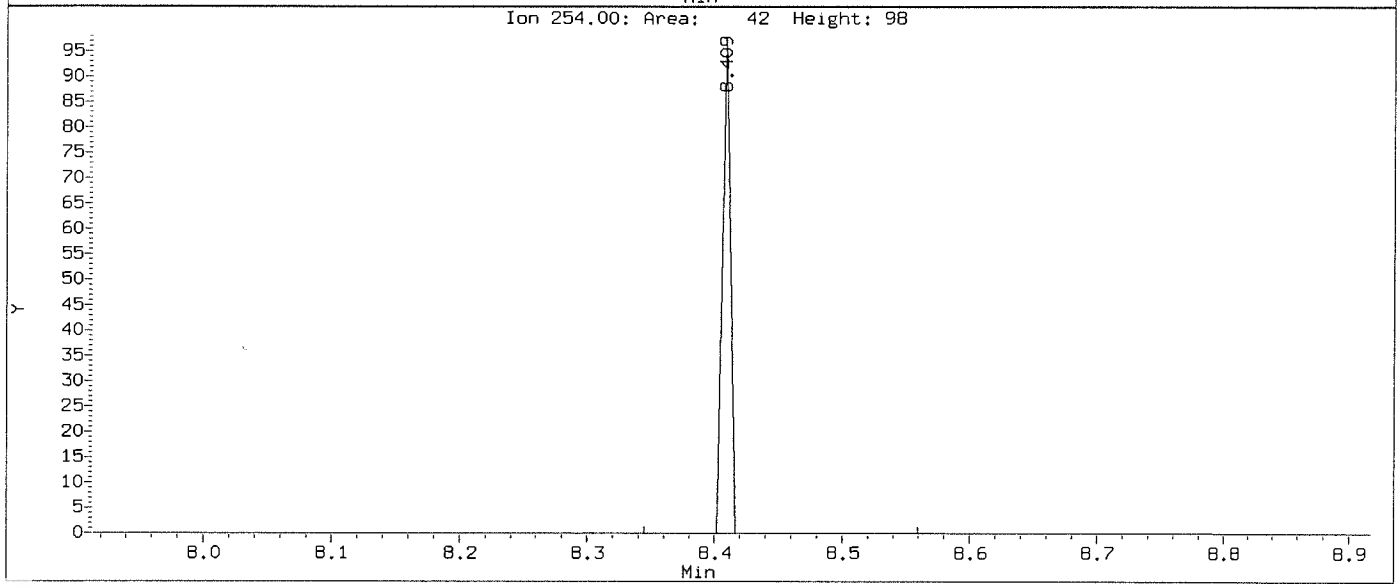


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Injection Date: 22-NOV-2020 16:25
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Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2

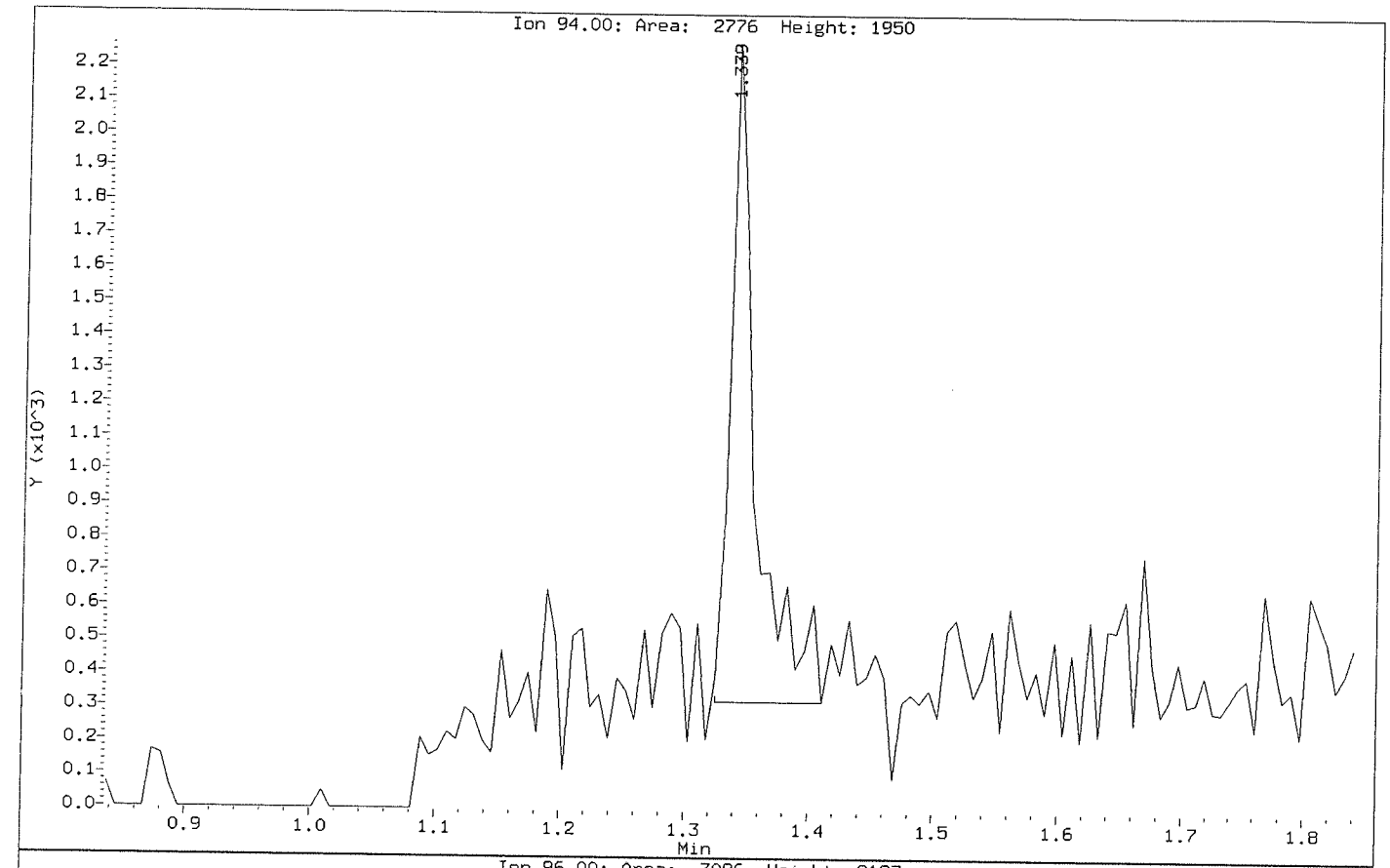


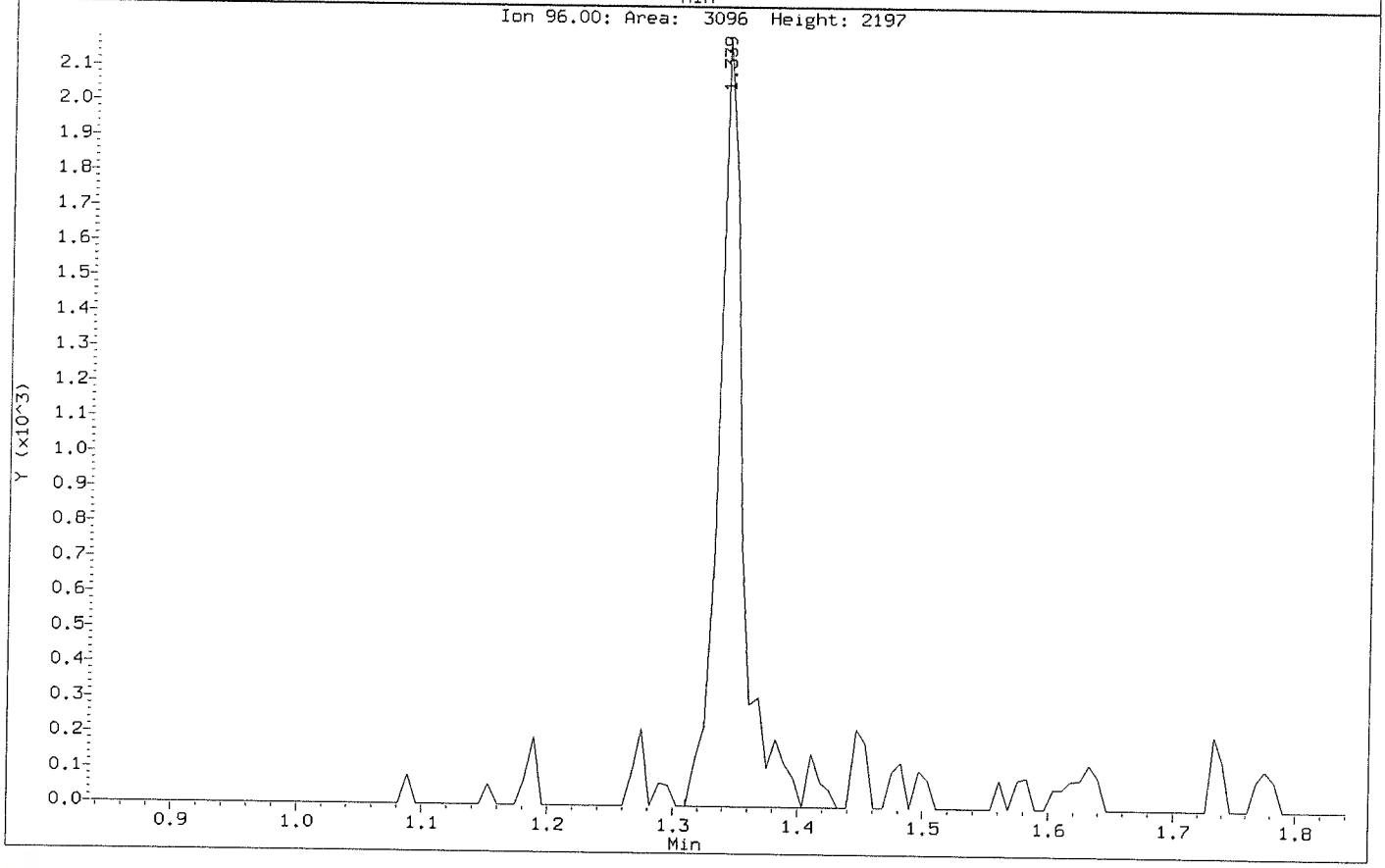




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Client Sample ID: VSTD000.5

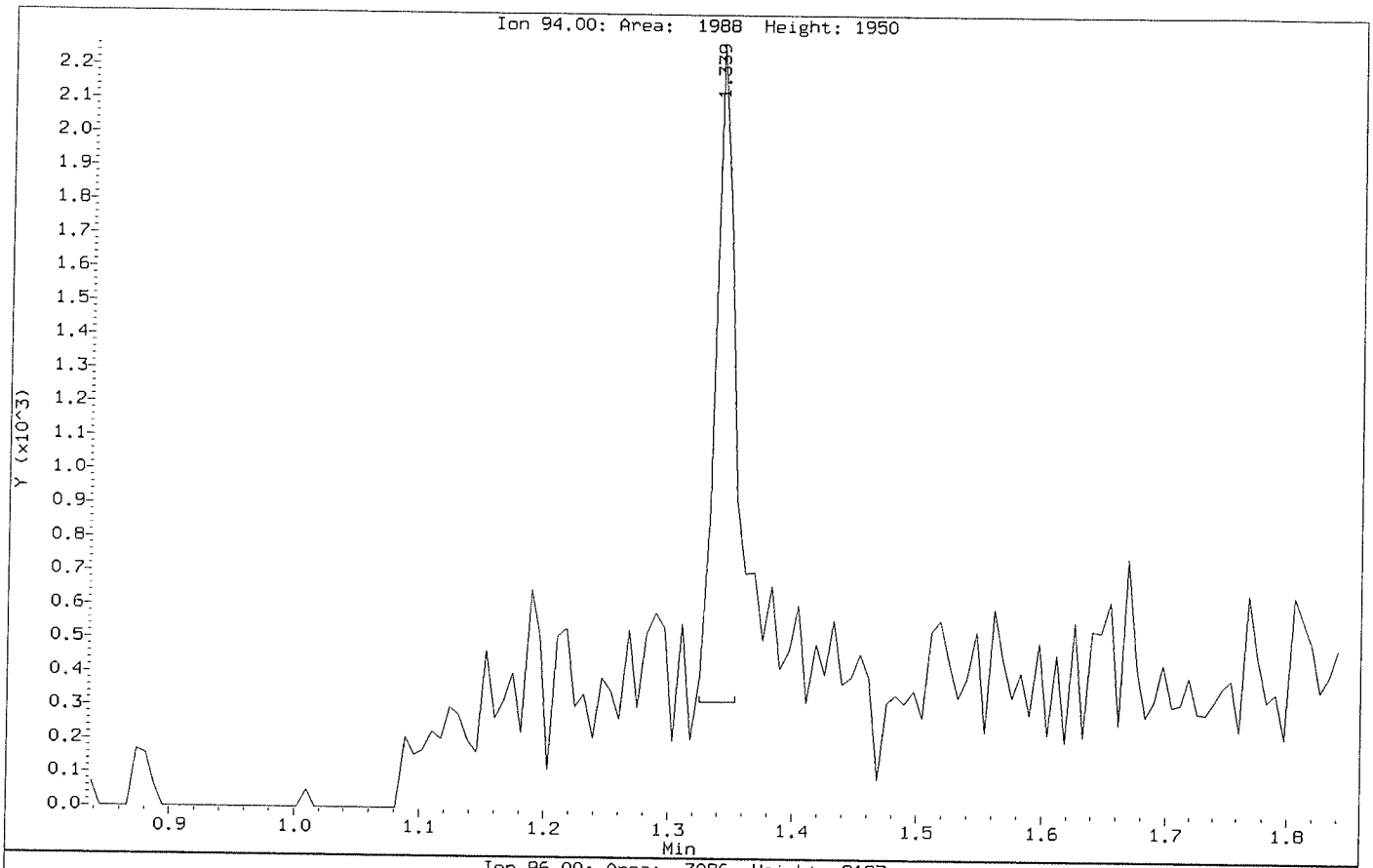
Compound: Bromomethane
CAS Number: 74-83-9

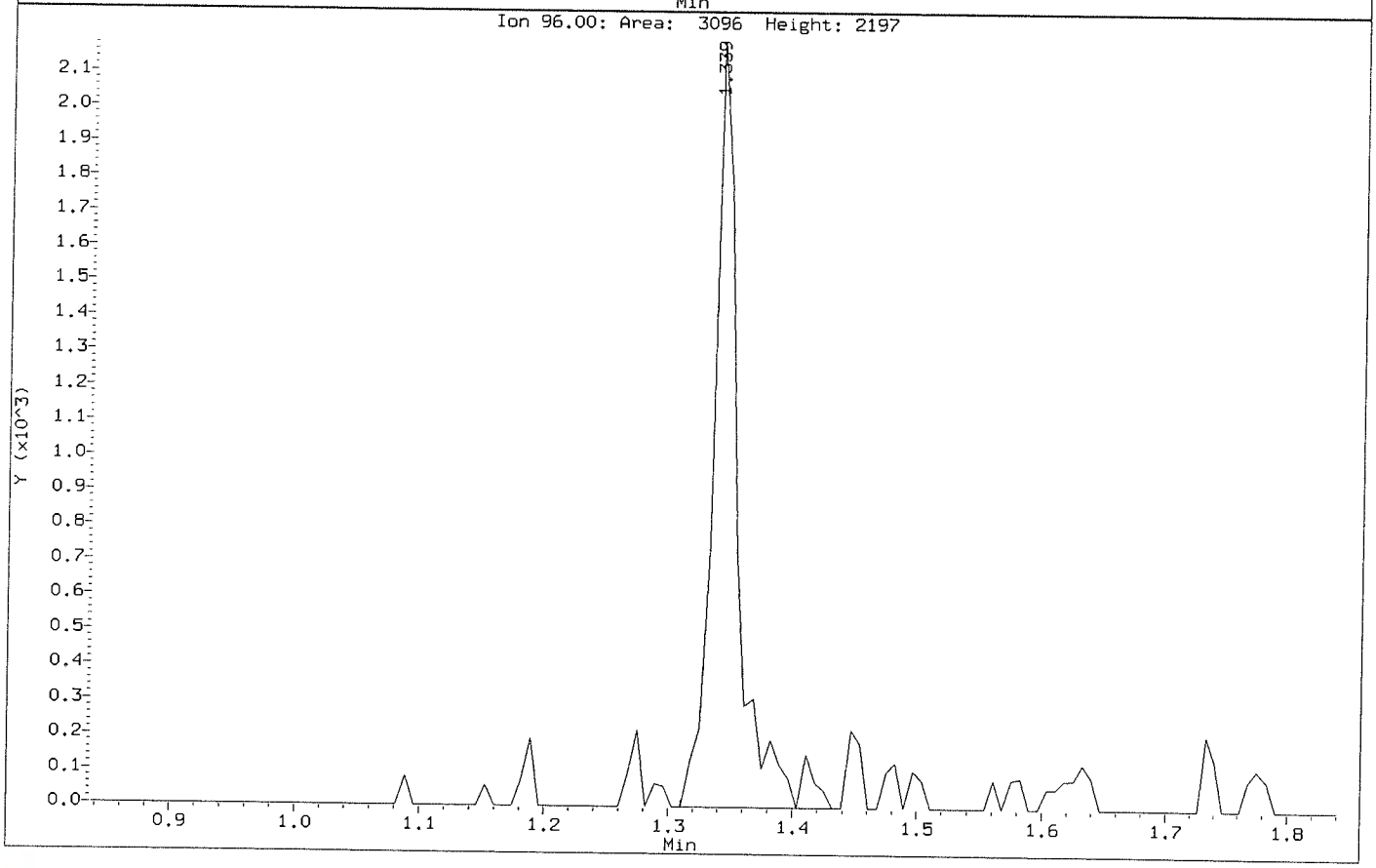




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Client Sample ID: VSTD000.5

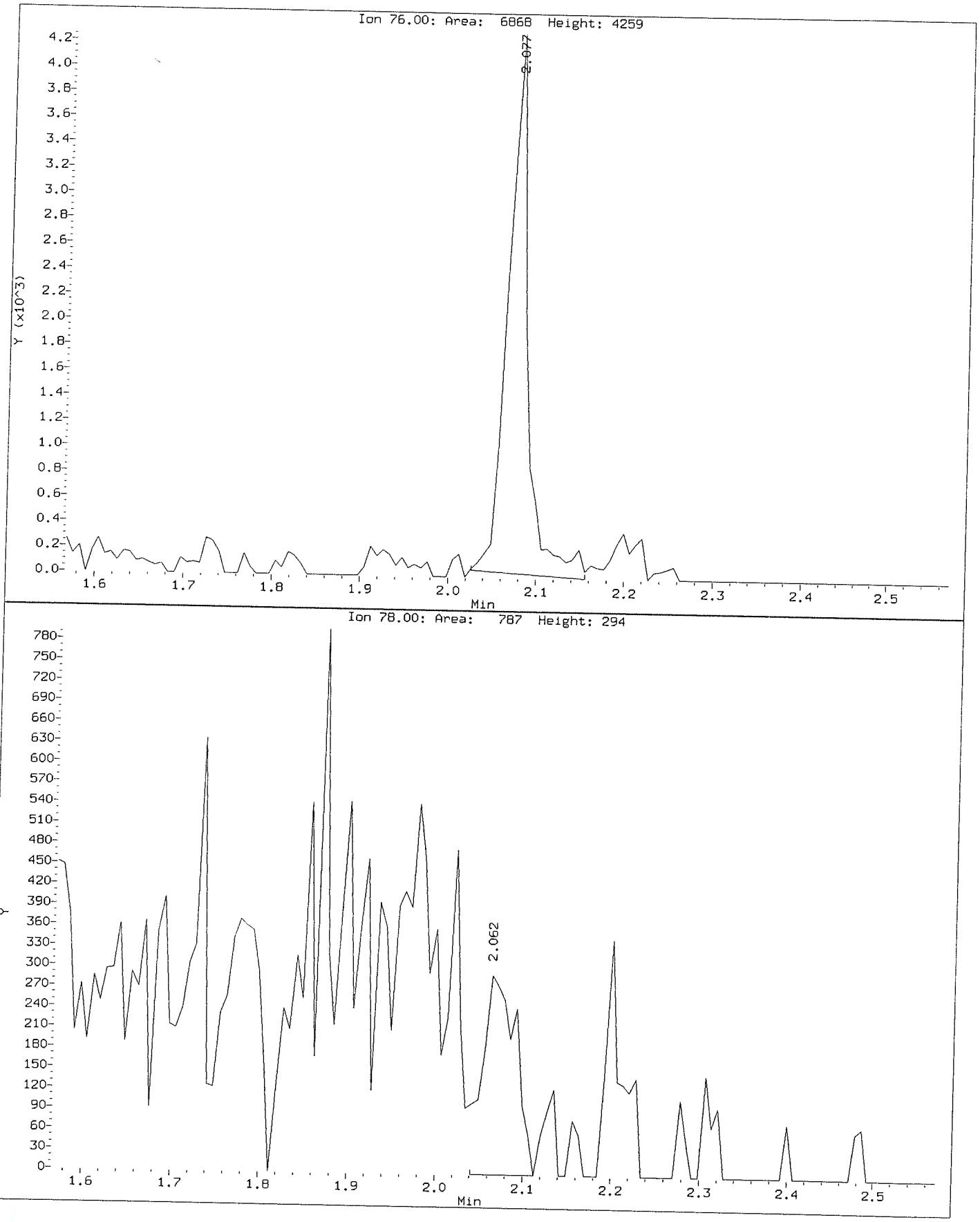
Compound: Bromomethane
CAS Number: 74-83-9





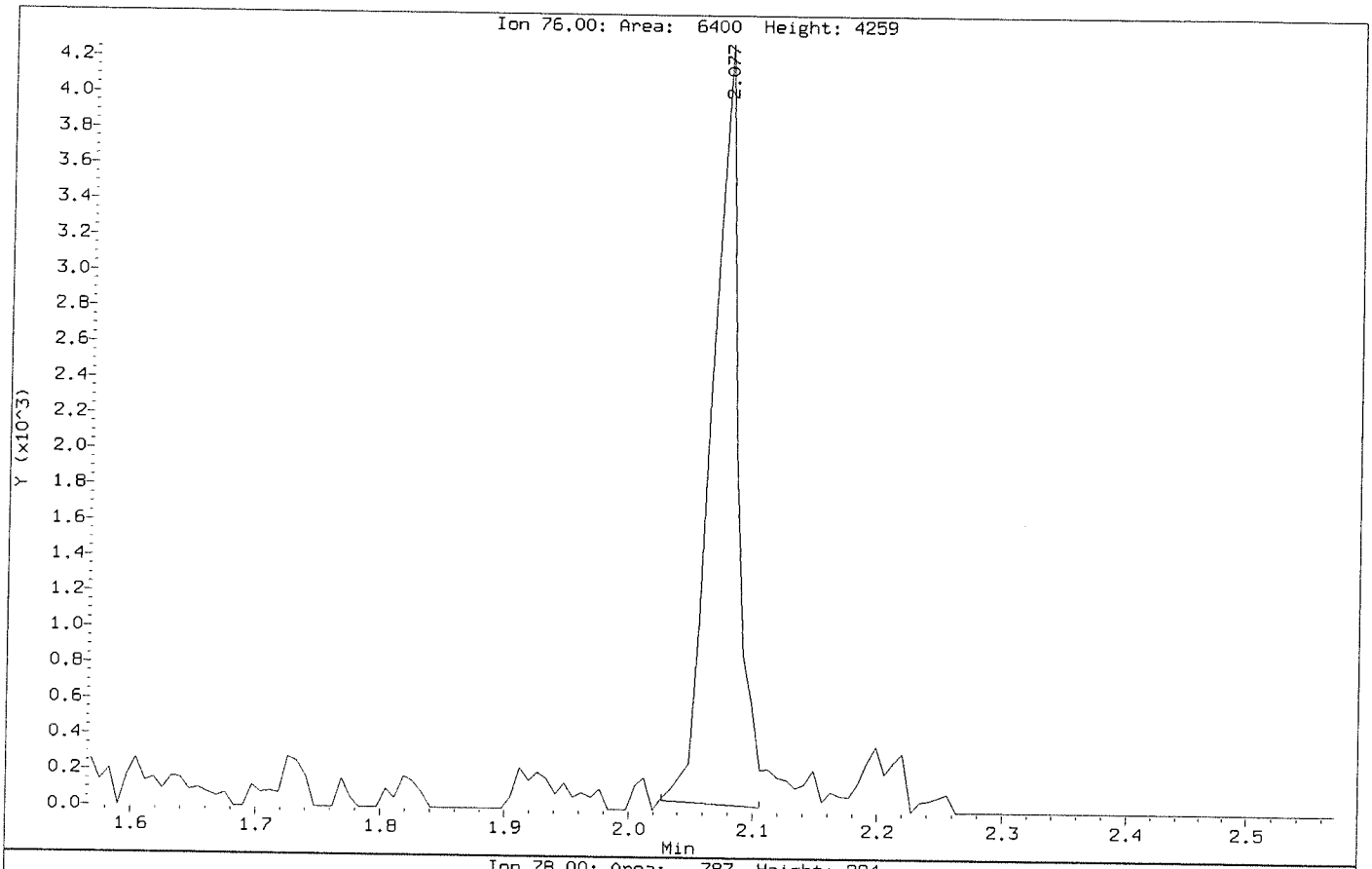
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Client Sample ID: VSTD000.5

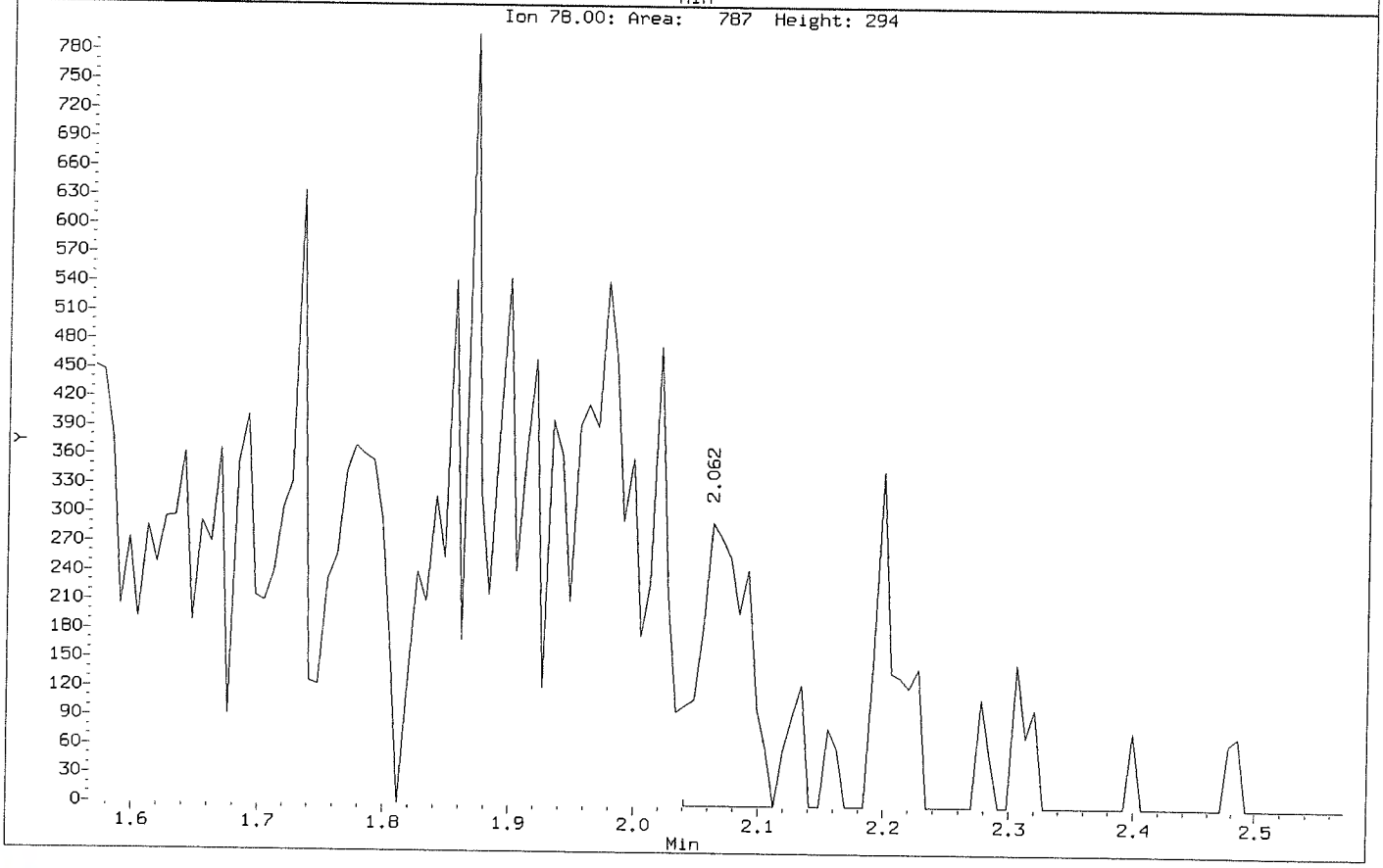
Compound: Carbon Disulfide
CAS Number: 75-15-0



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

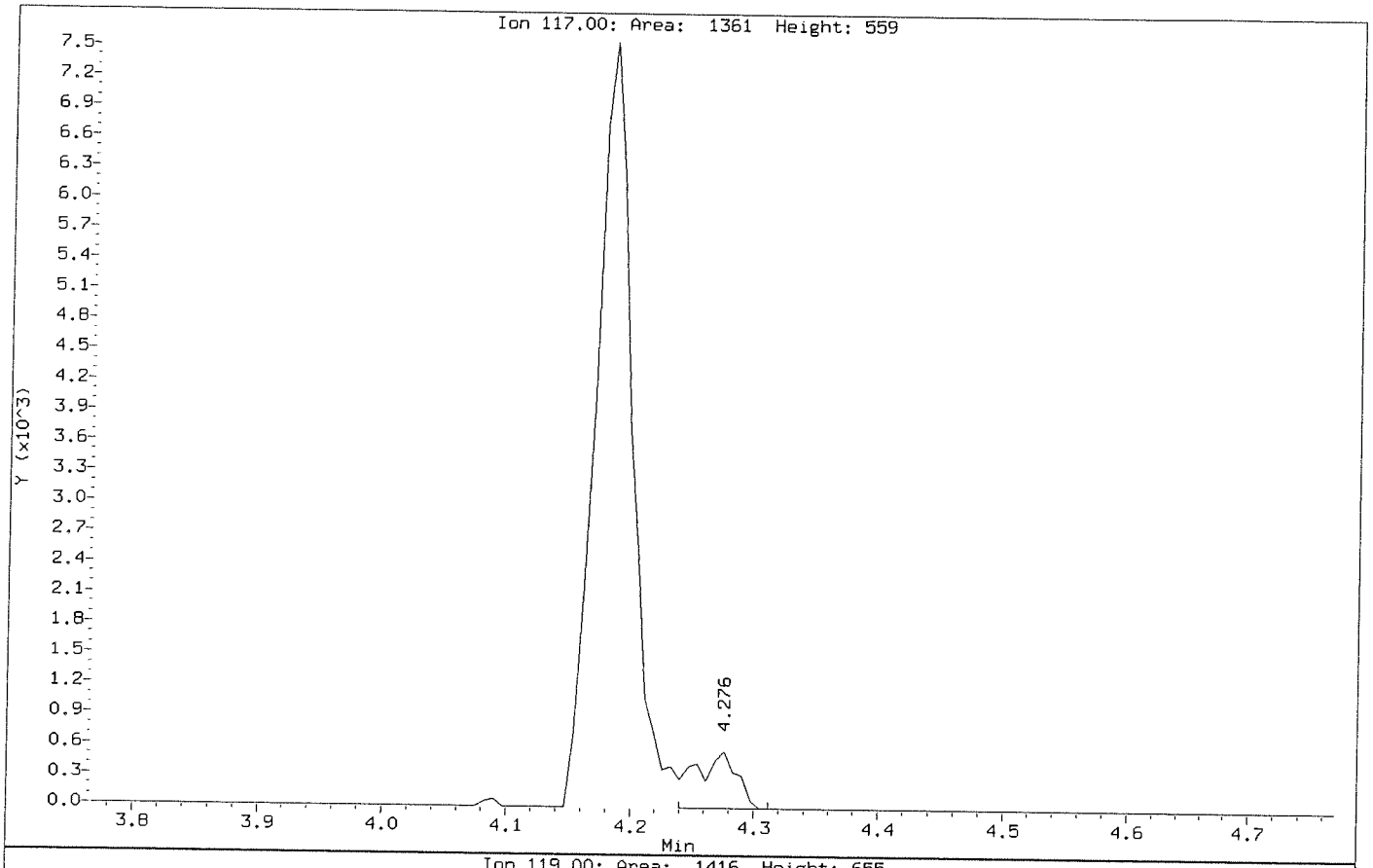
Compound: Carbon Disulfide
CAS Number: 75-15-0

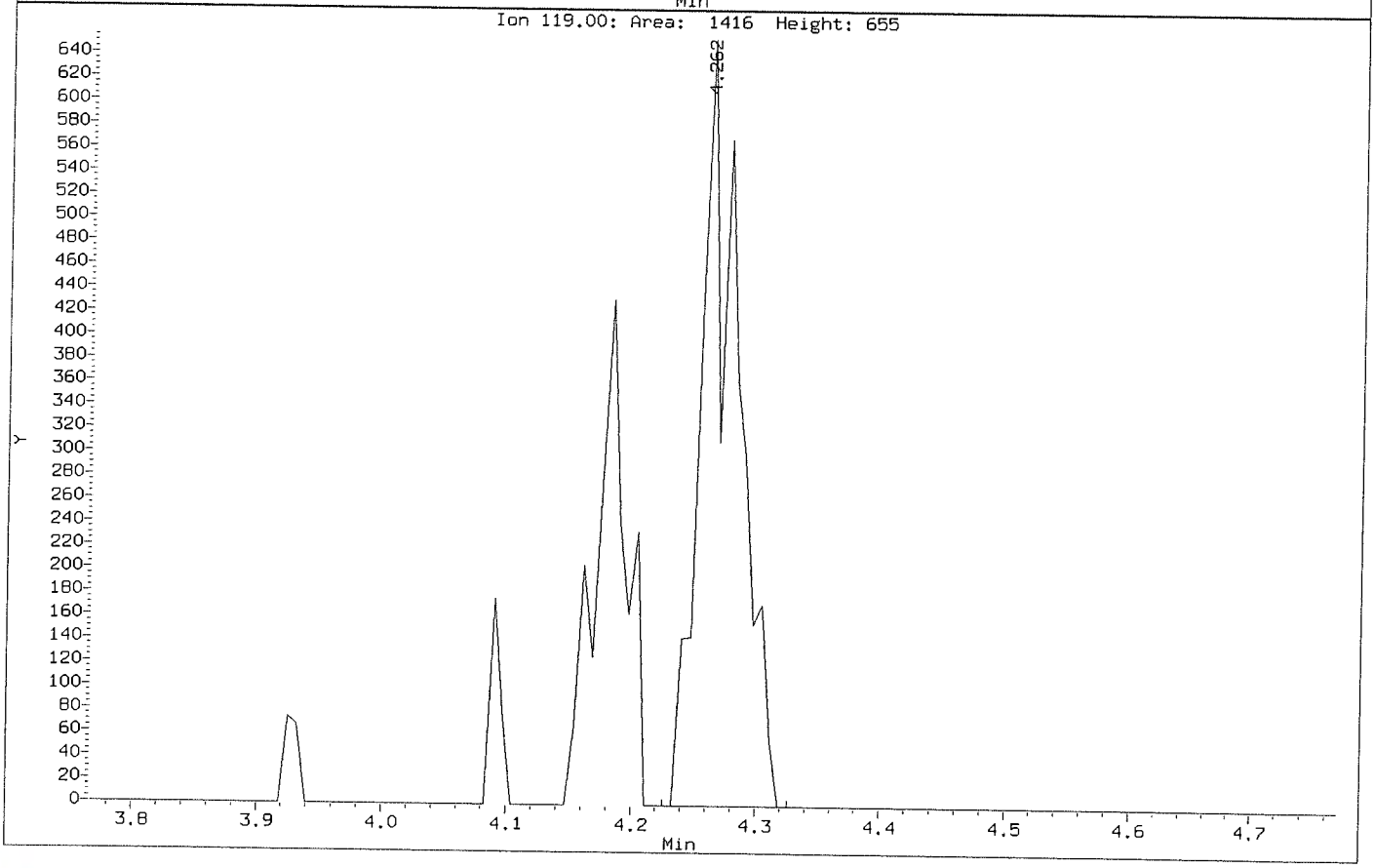




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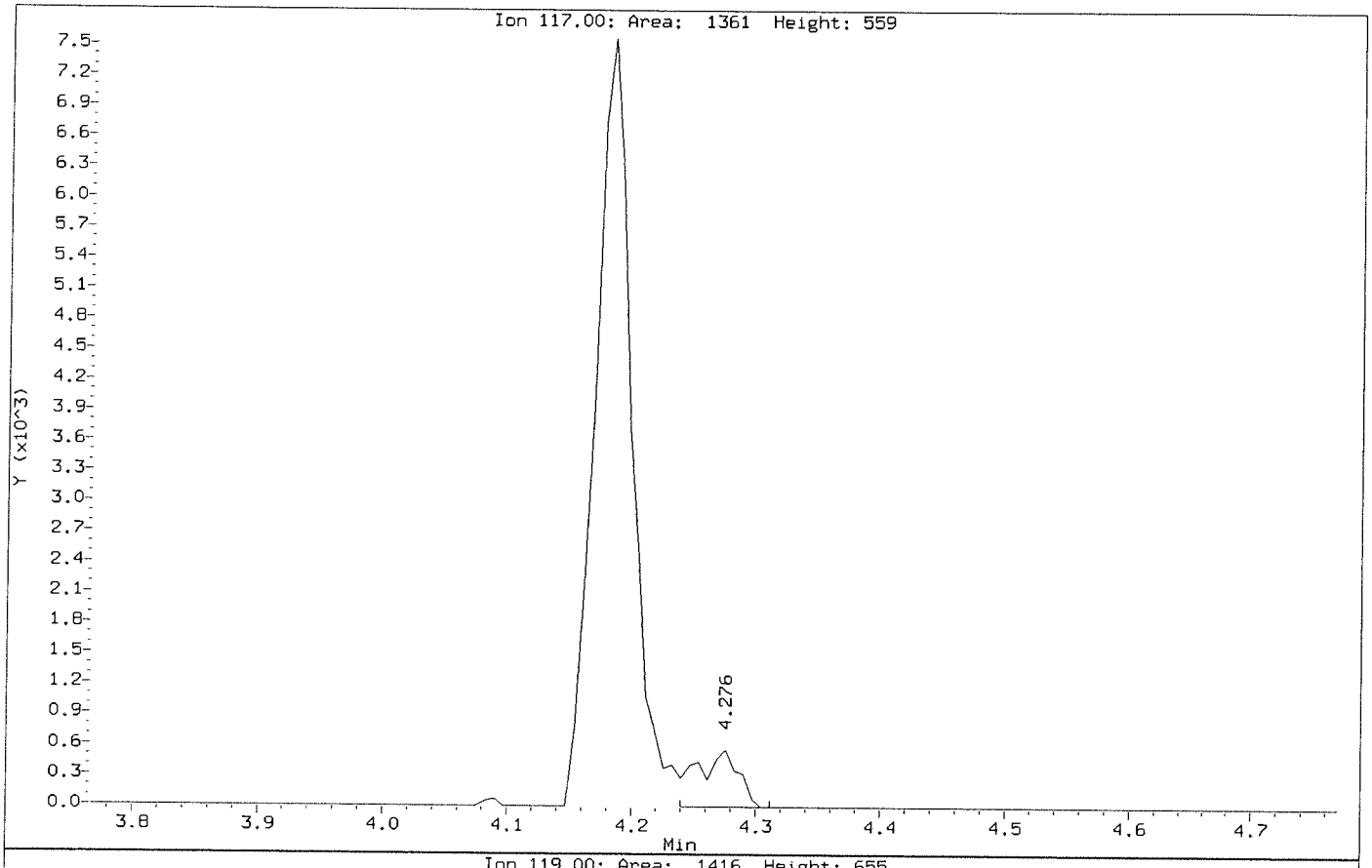
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

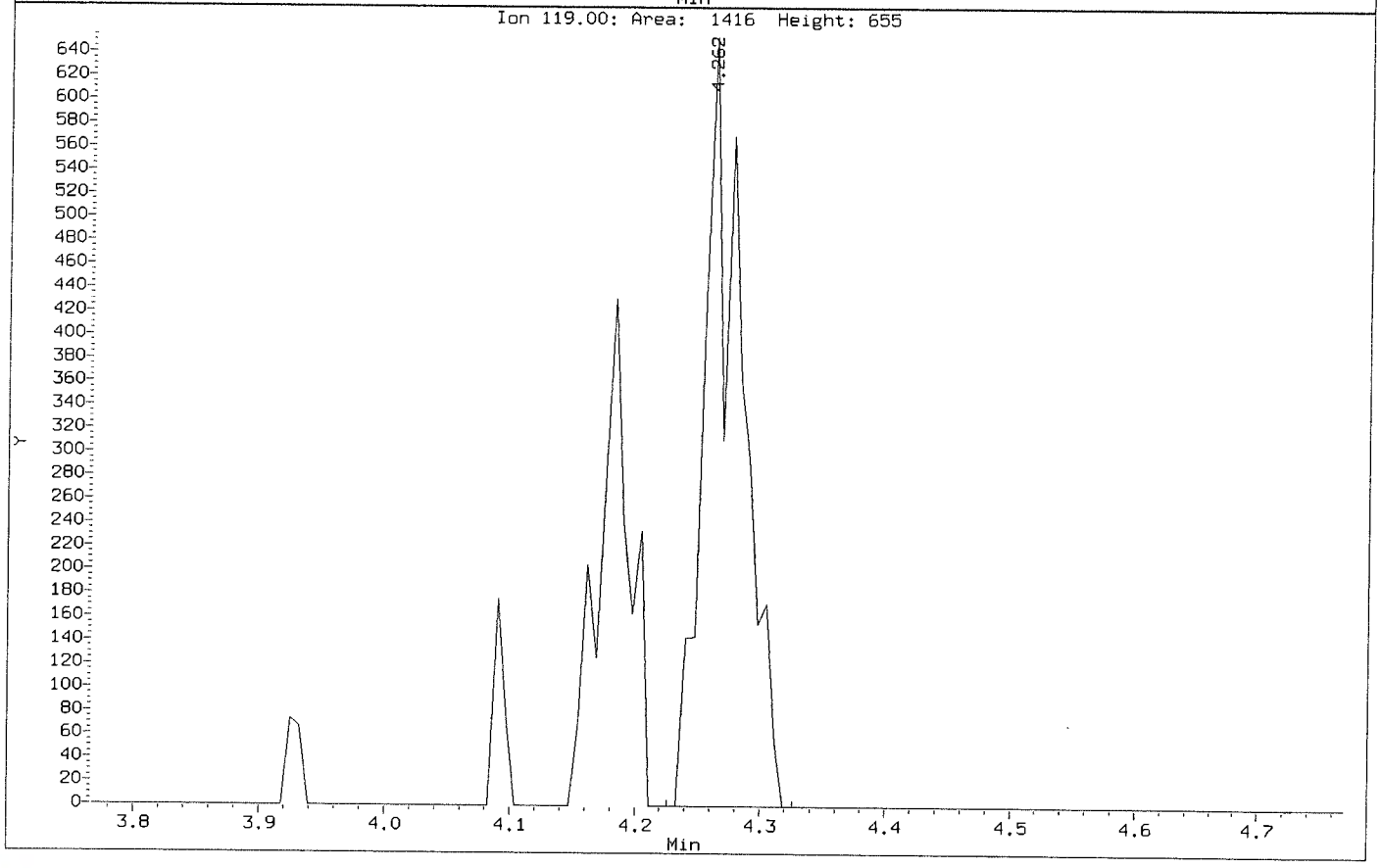




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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

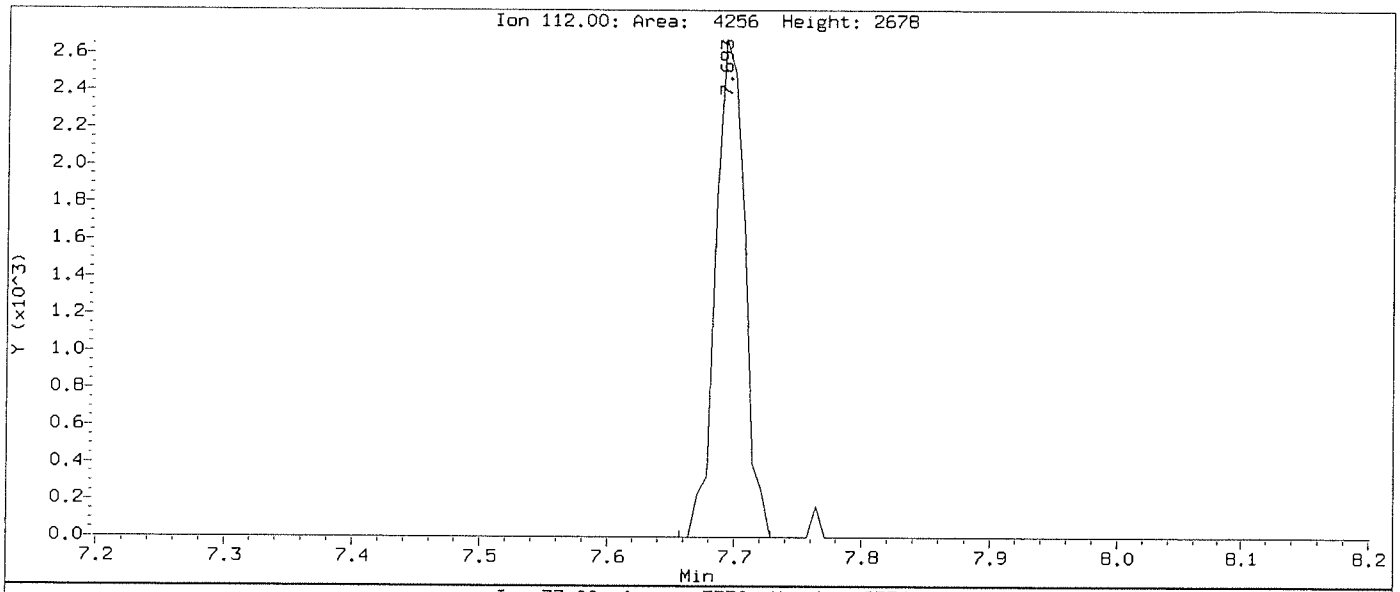
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

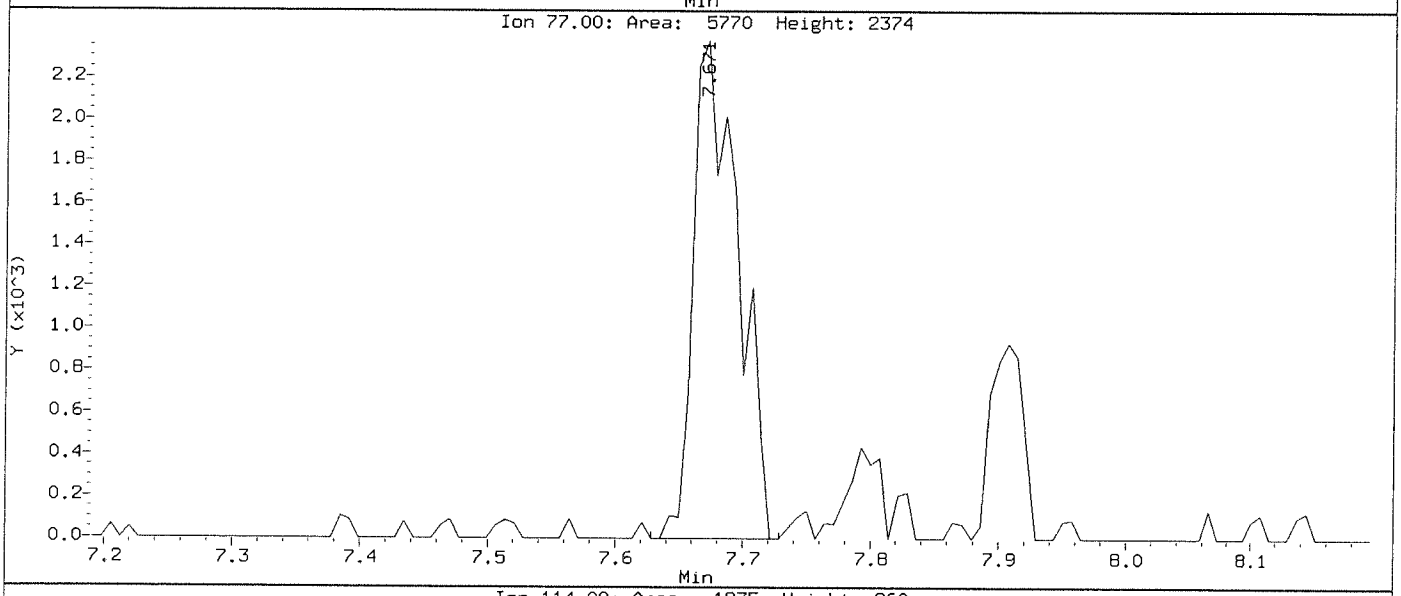


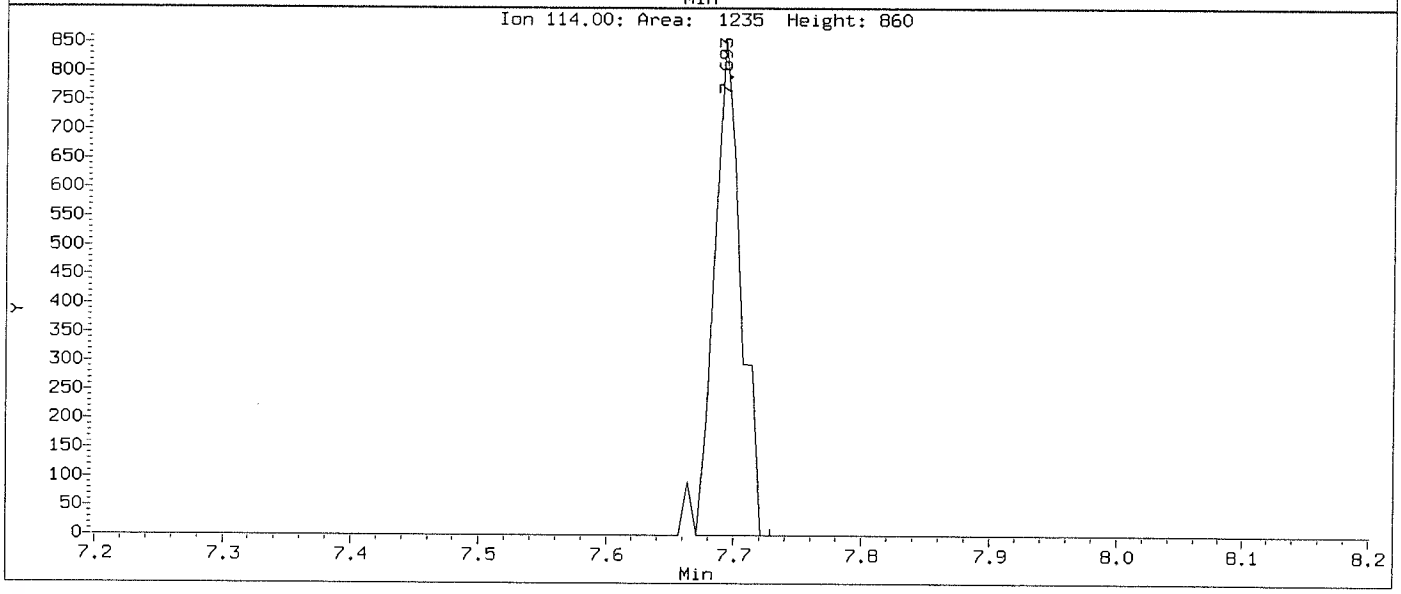


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Chlorobenzene
CAS Number: 108-90-7

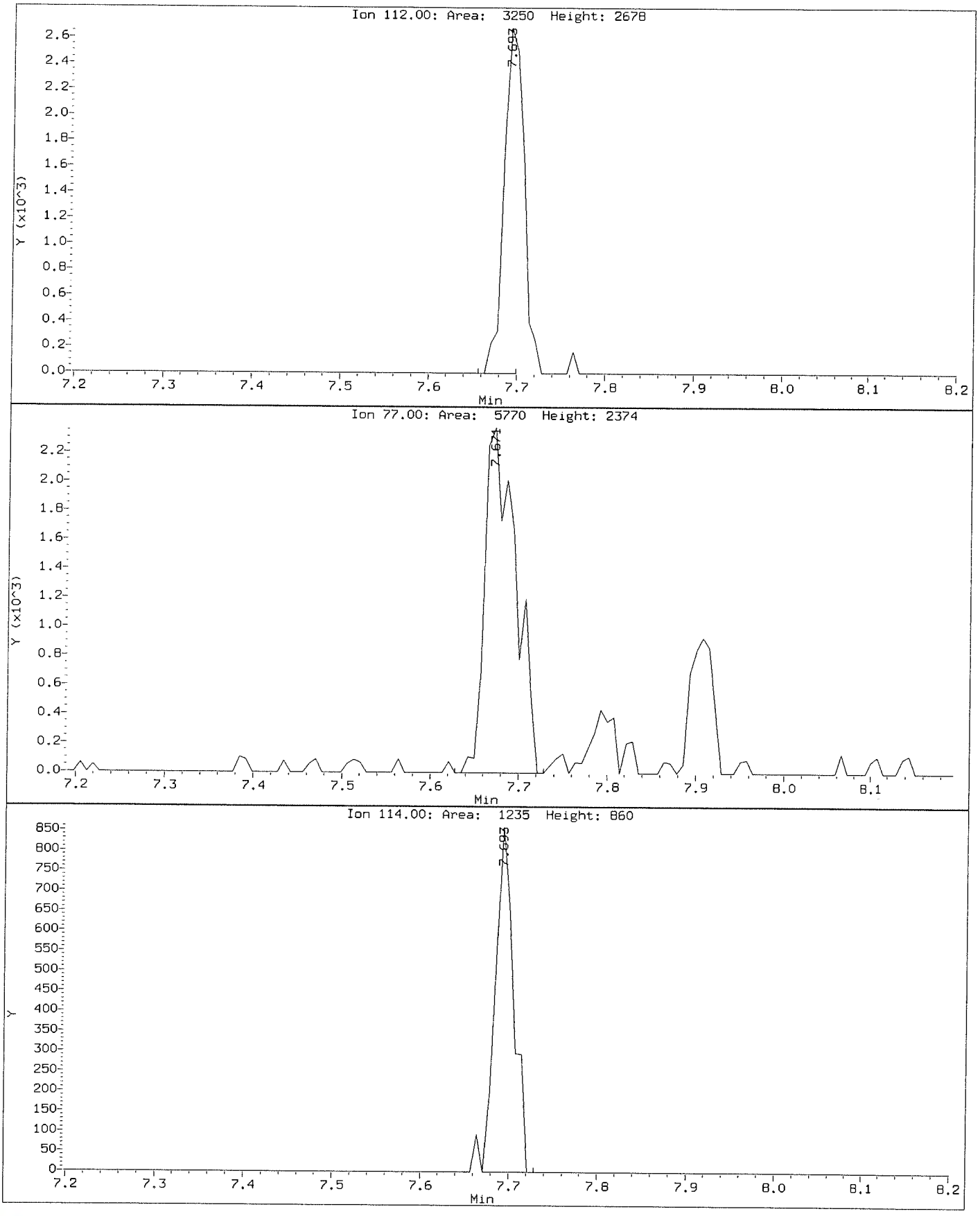






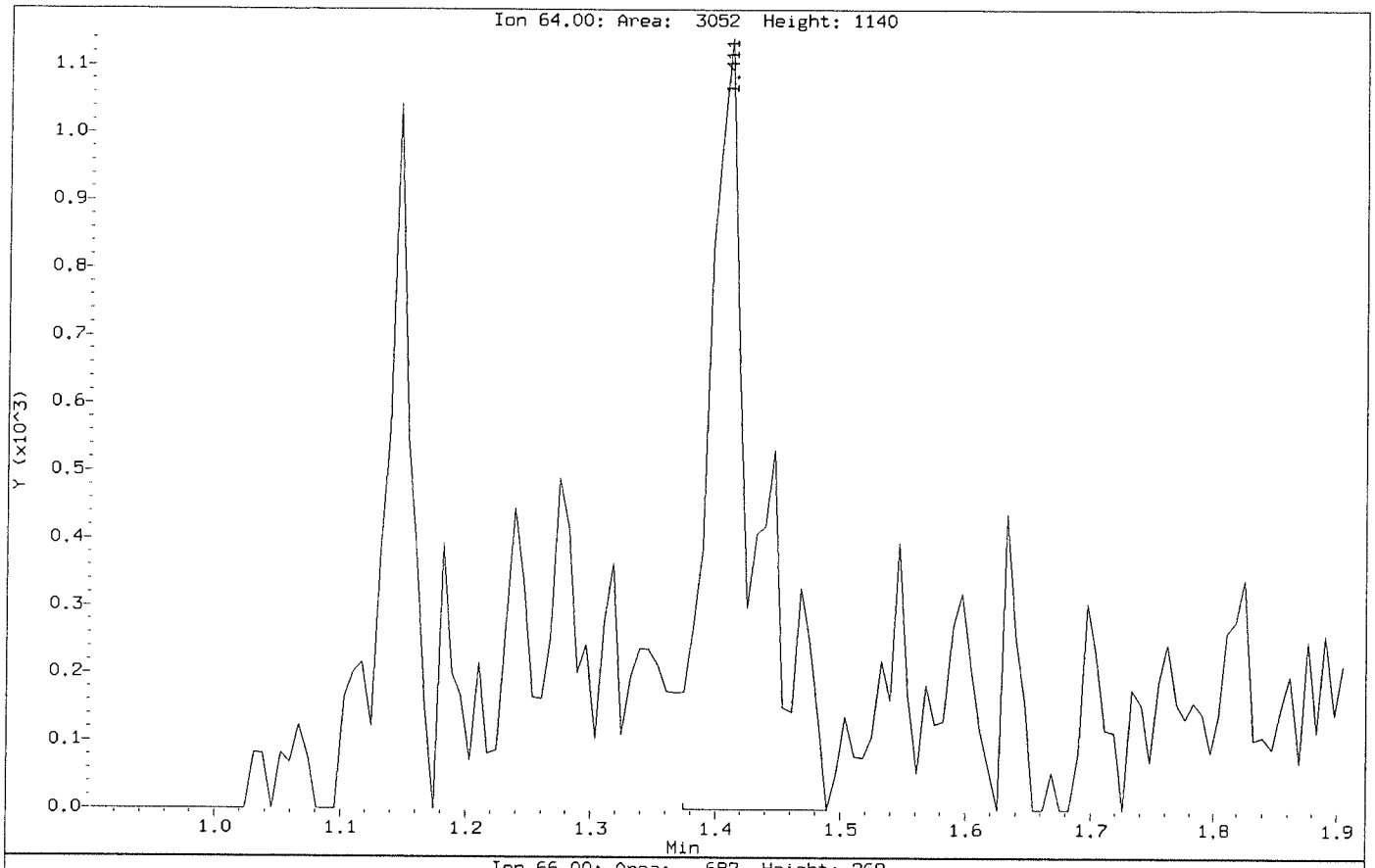
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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

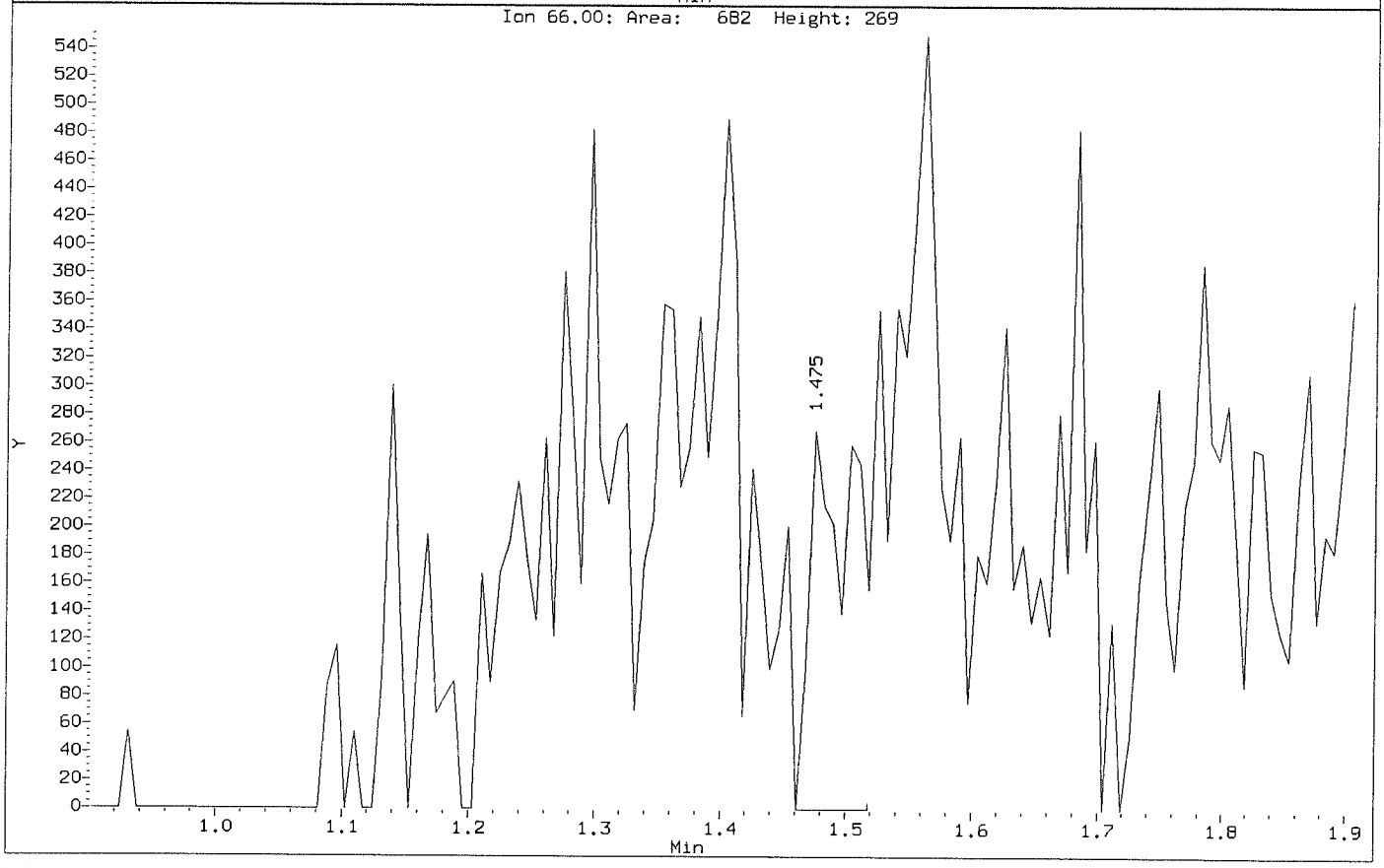
Compound: Chlorobenzene
CAS Number: 108-90-7



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112203.D
Injection Date: 22-NOV-2020 16:25
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Client Sample ID: VSTD000.5

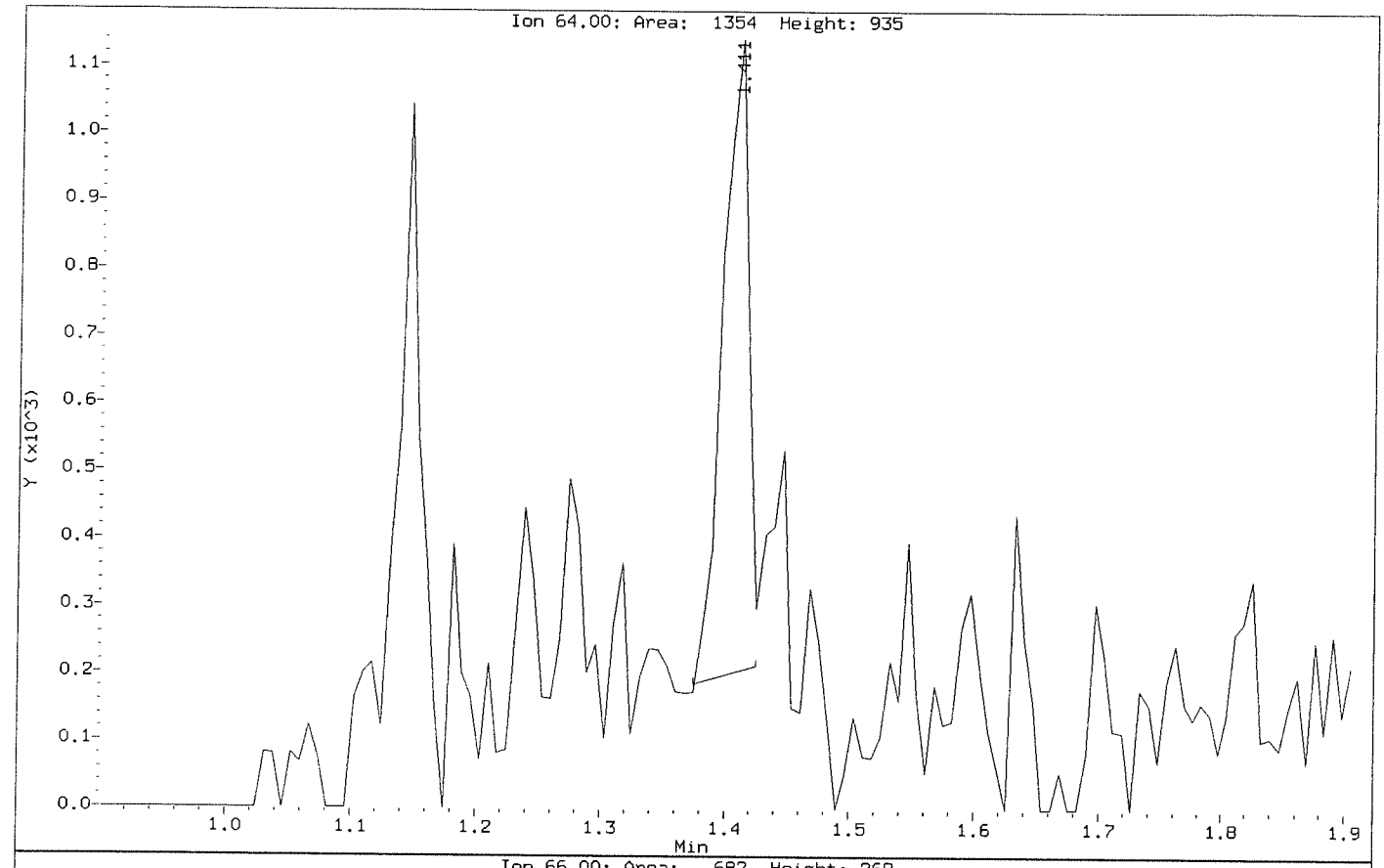
Compound: Chloroethane
CAS Number: 75-00-3

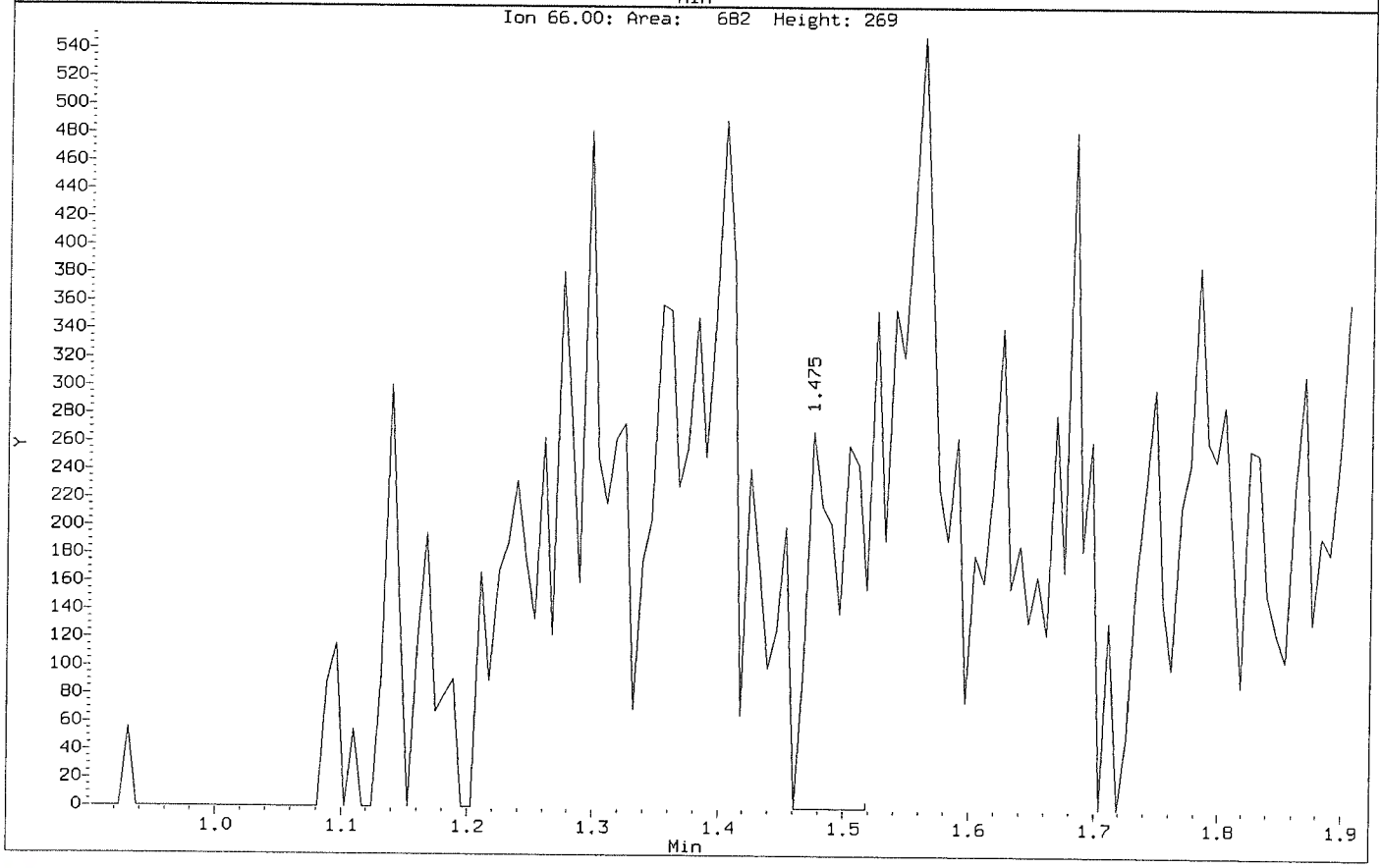




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Instrument: voa6.i
Client Sample ID: VSTD000.5

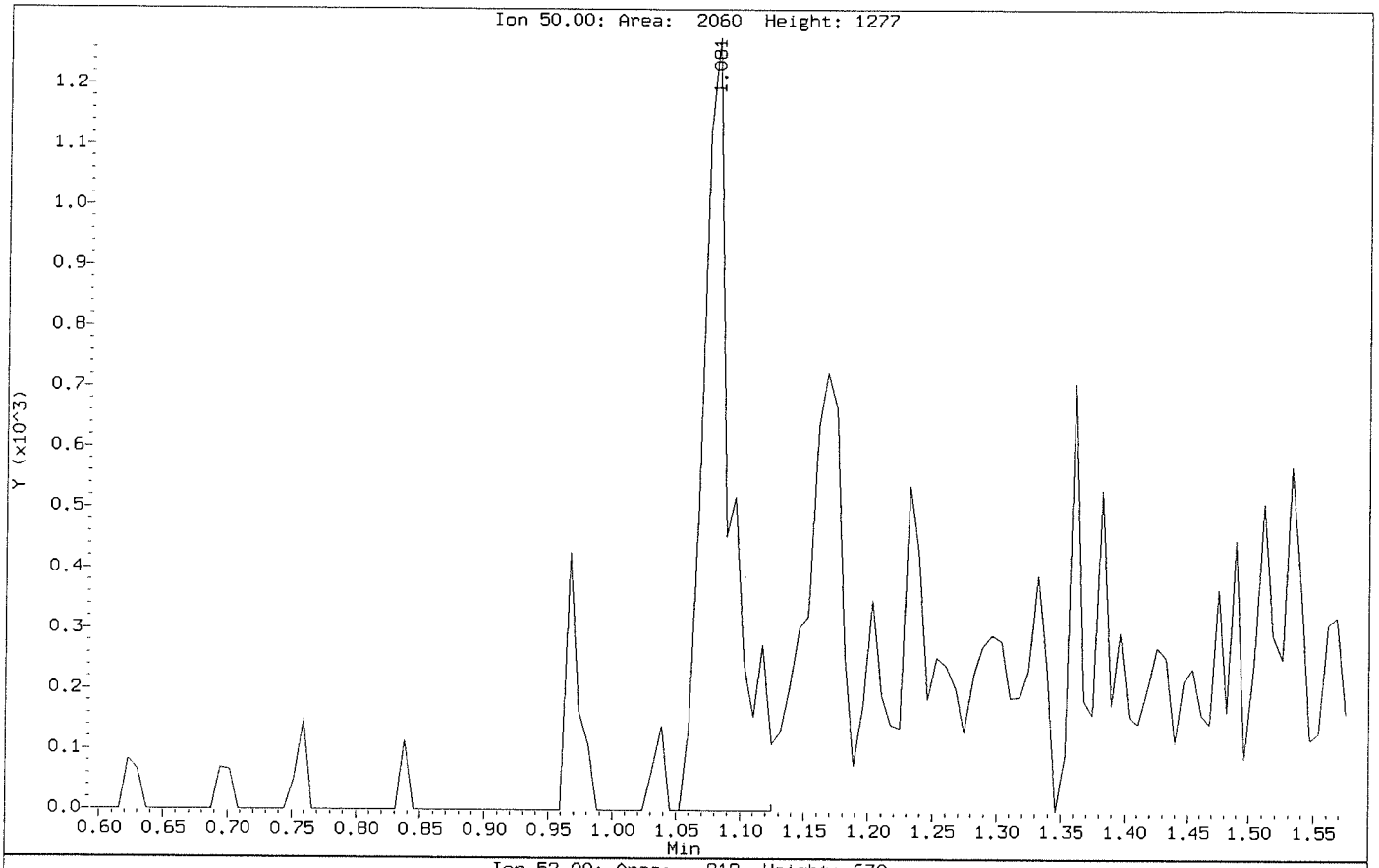
Compound: Chloroethane
CAS Number: 75-00-3

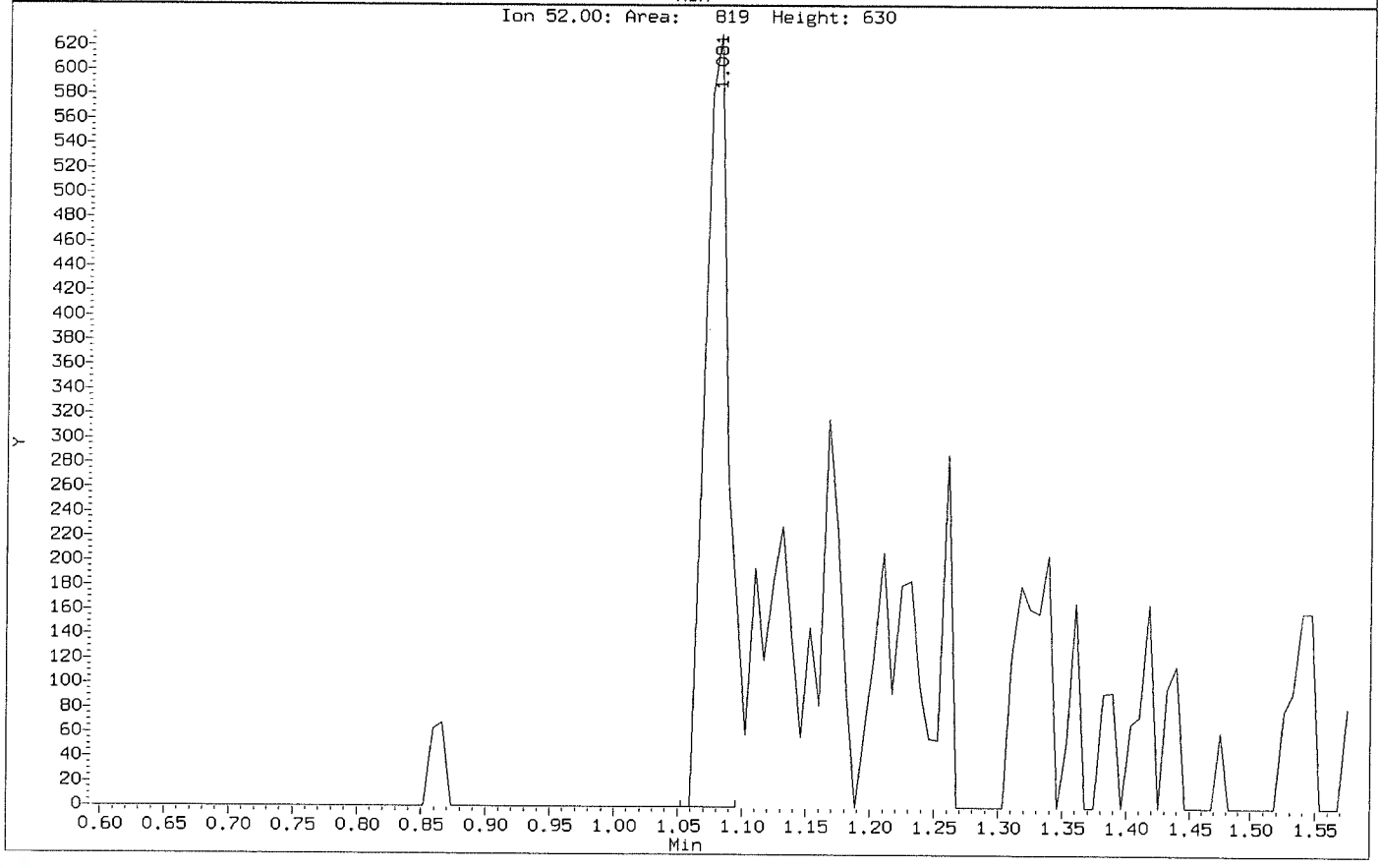




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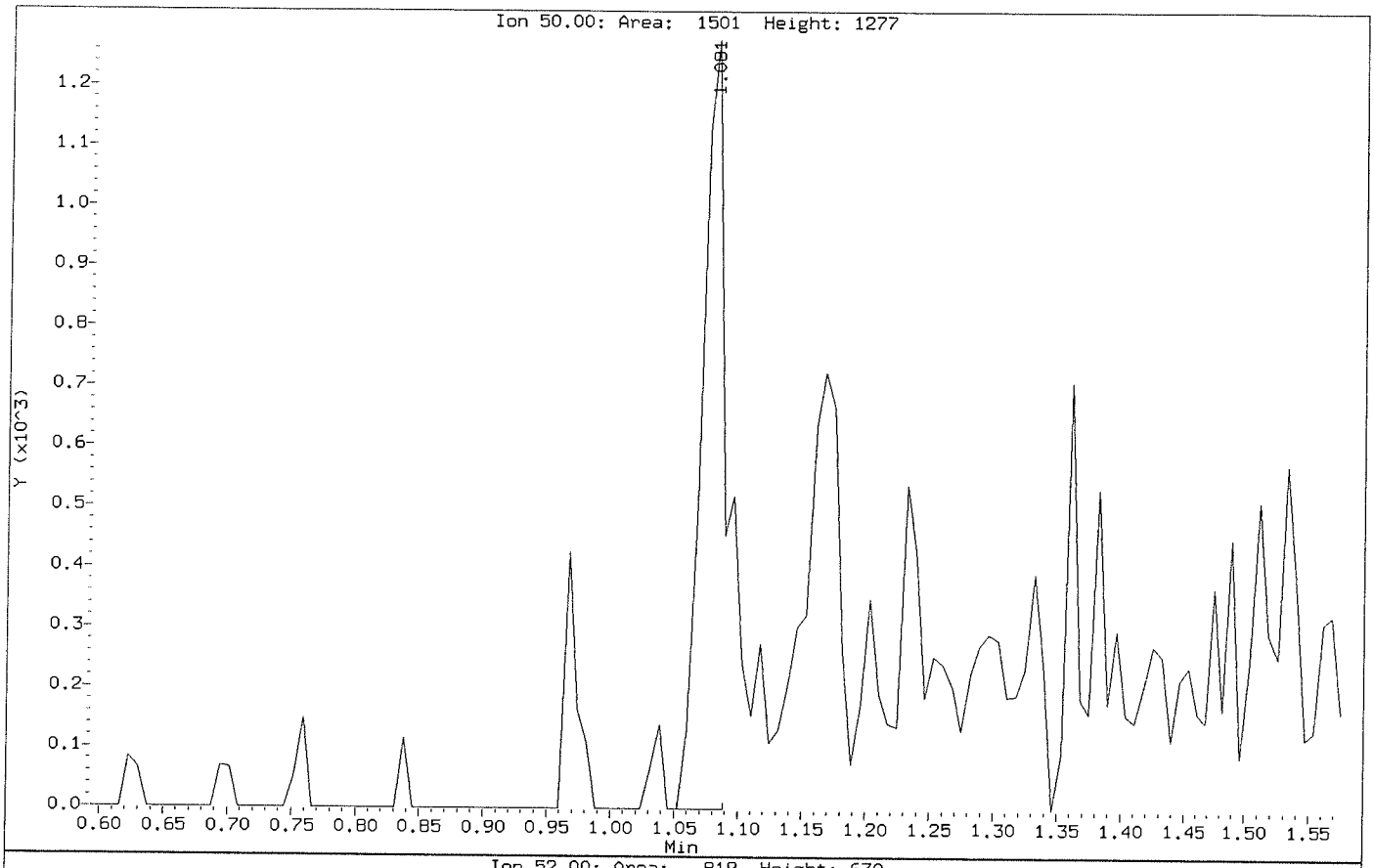
Compound: Chloromethane
CAS Number: 74-87-3

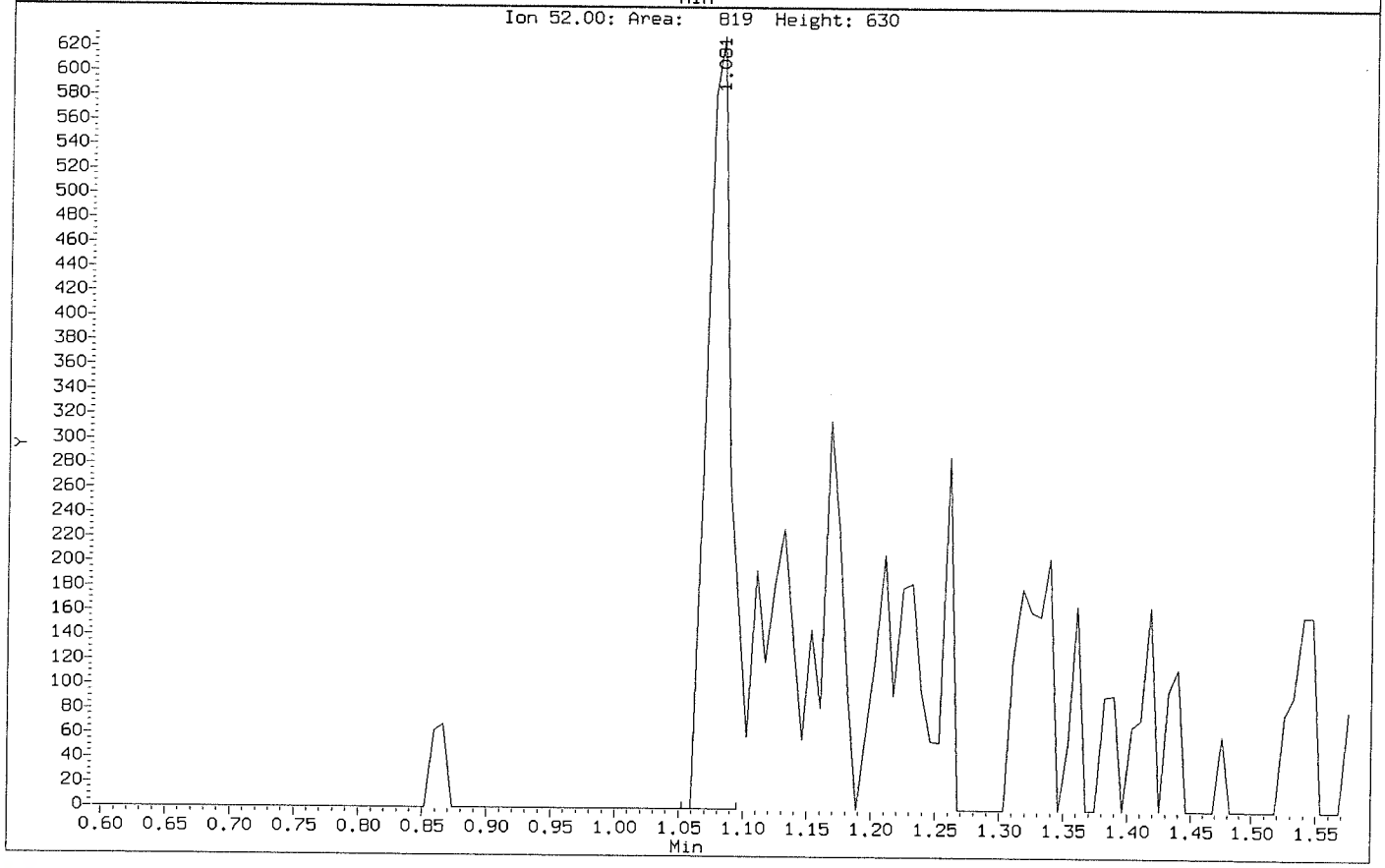




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Instrument: voa6.i
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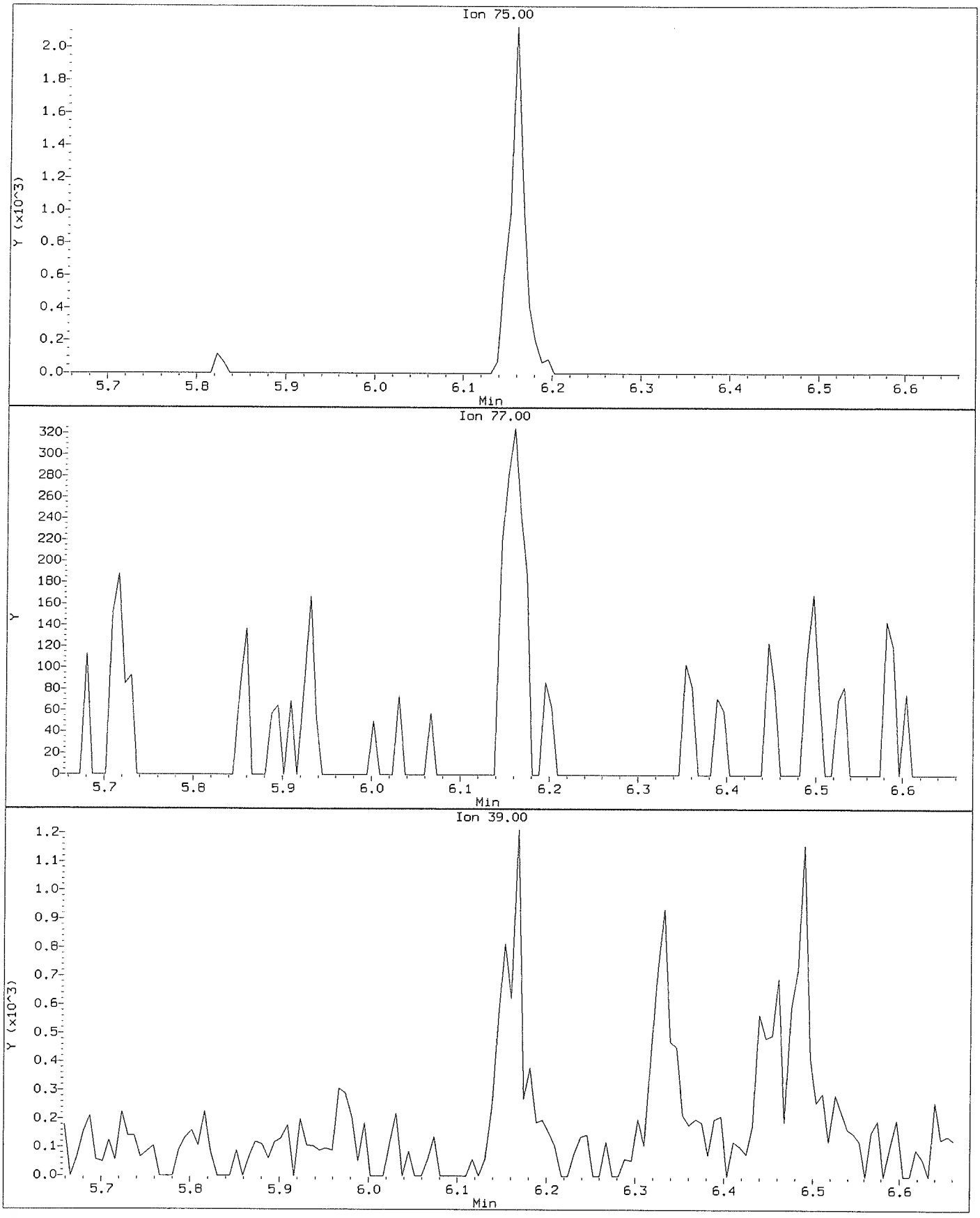
Compound: Chloromethane
CAS Number: 74-87-3





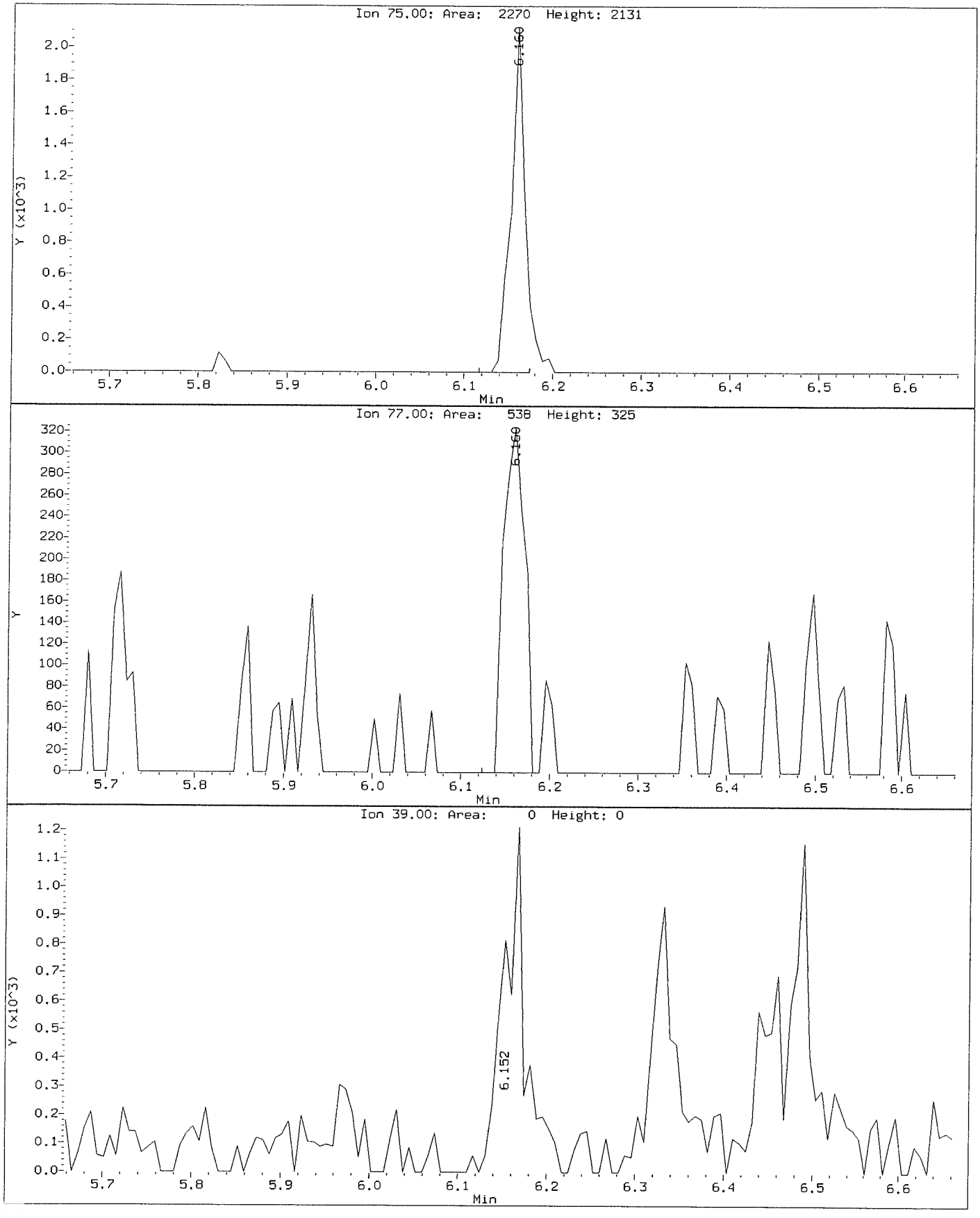
Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112203.D
Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,3-Dichloropropene
CAS Number: 10061-01-5



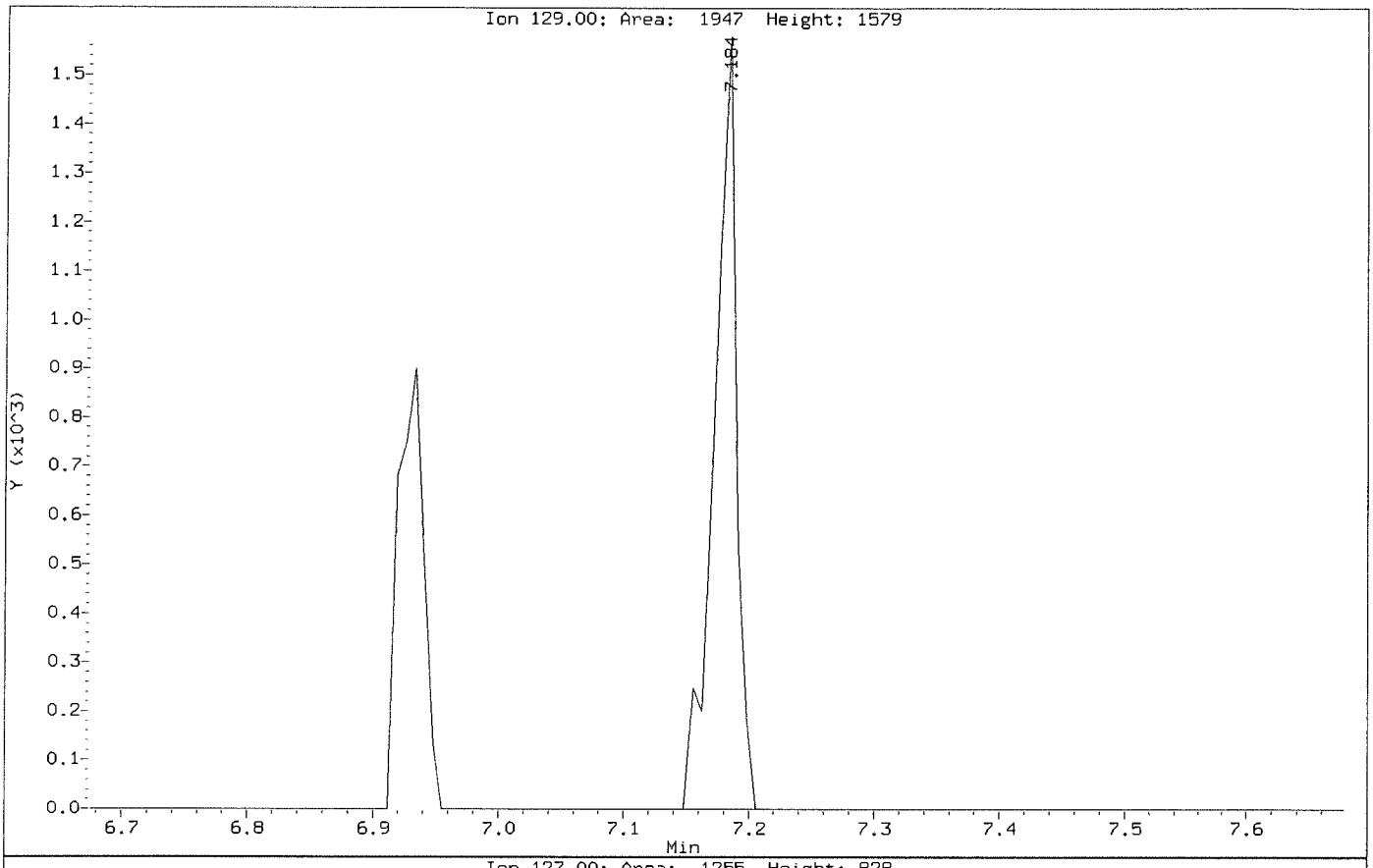
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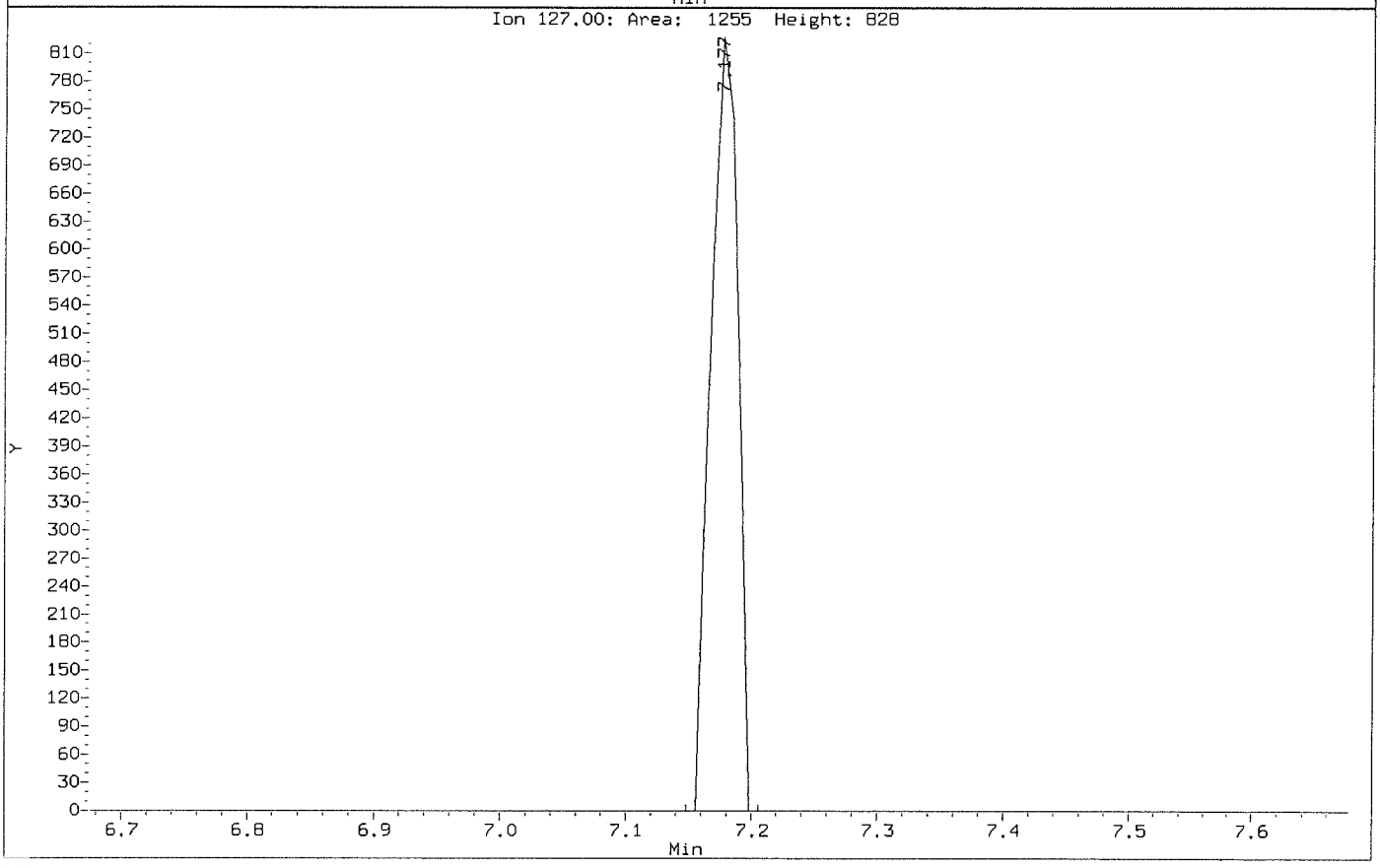
Compound: cis-1,3-Dichloropropene
CAS Number: 10061-01-5



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112203.D
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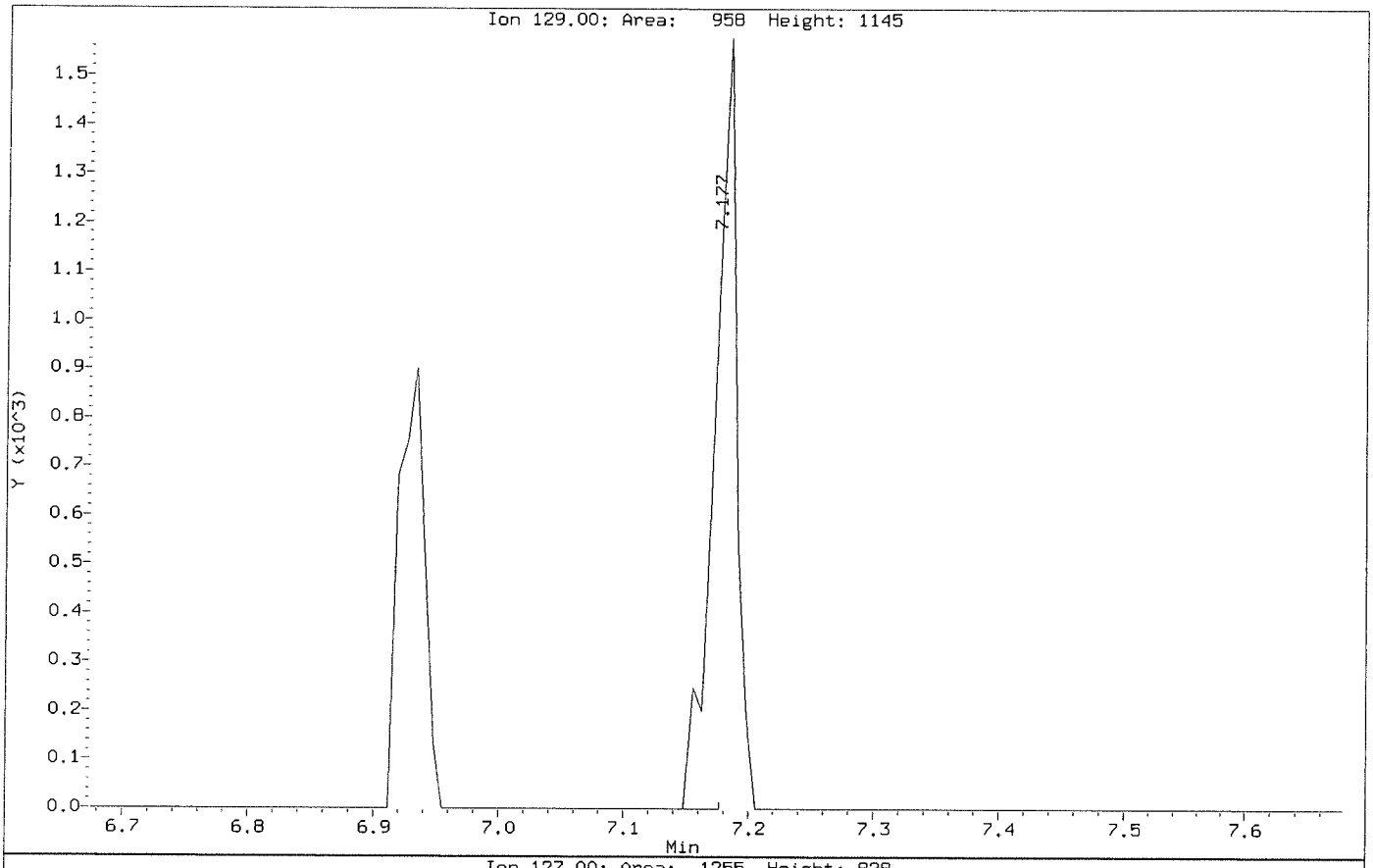
Compound: Dibromochloromethane
CAS Number: 124-48-1

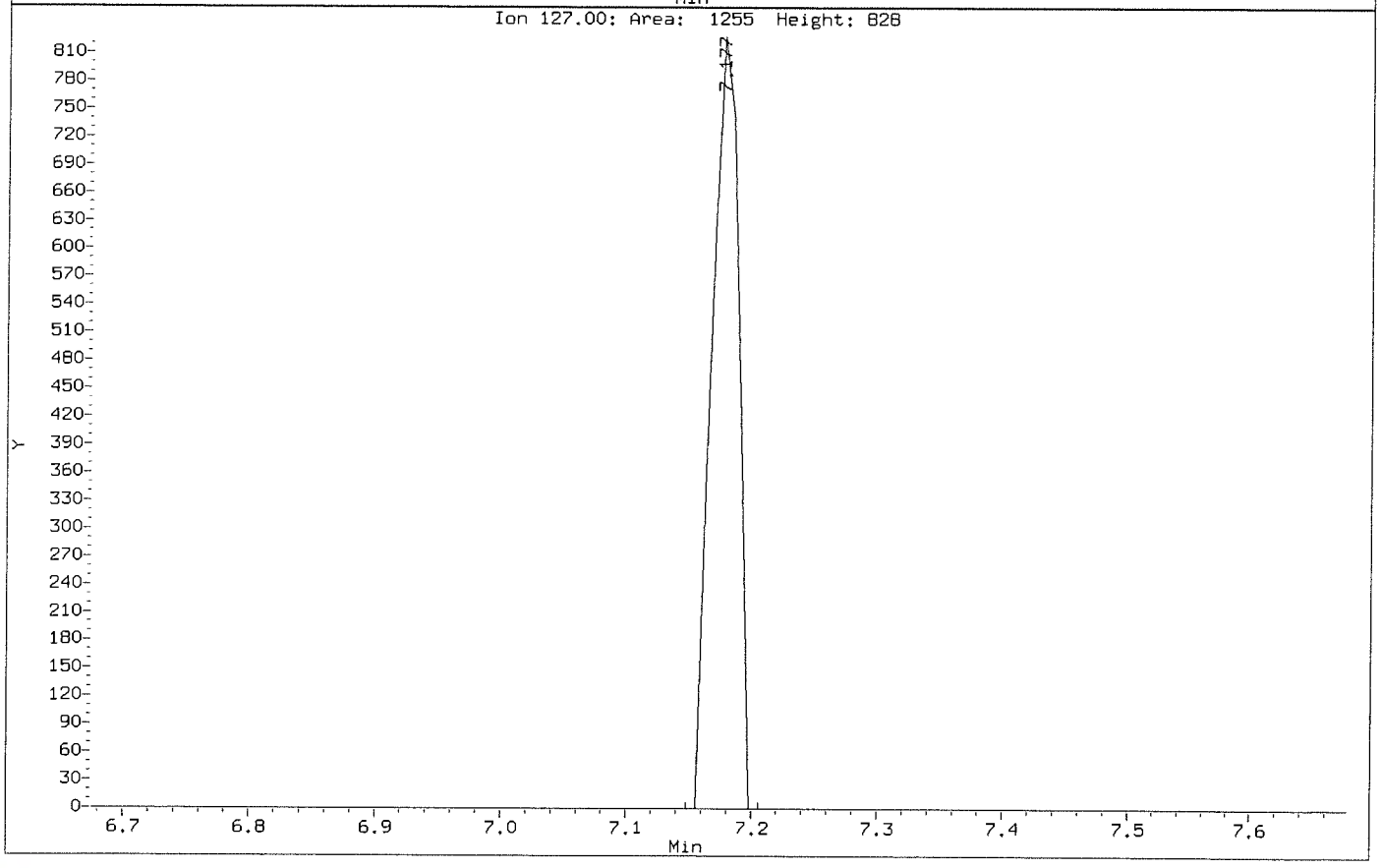




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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

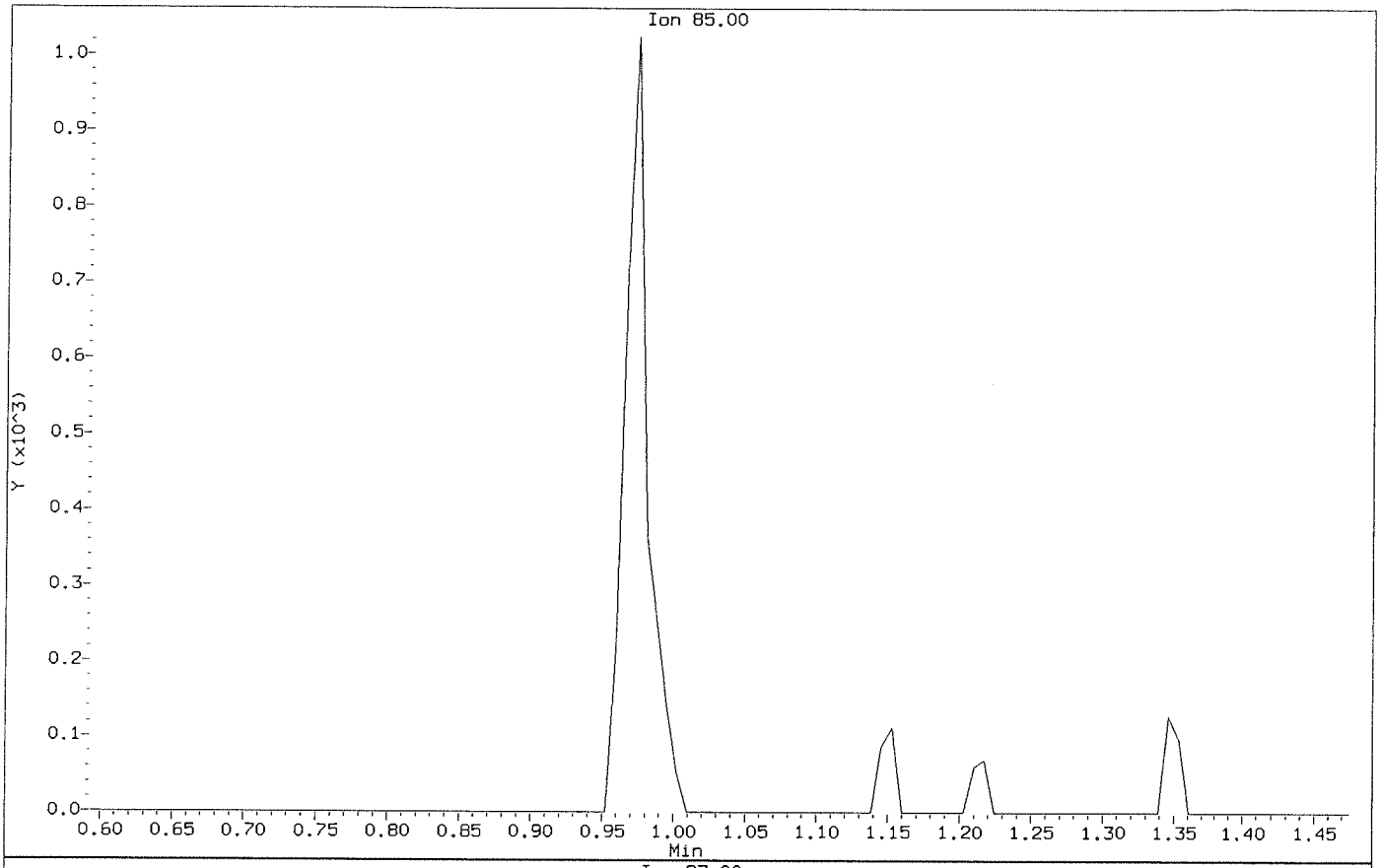
Compound: Dibromochloromethane
CAS Number: 124-48-1

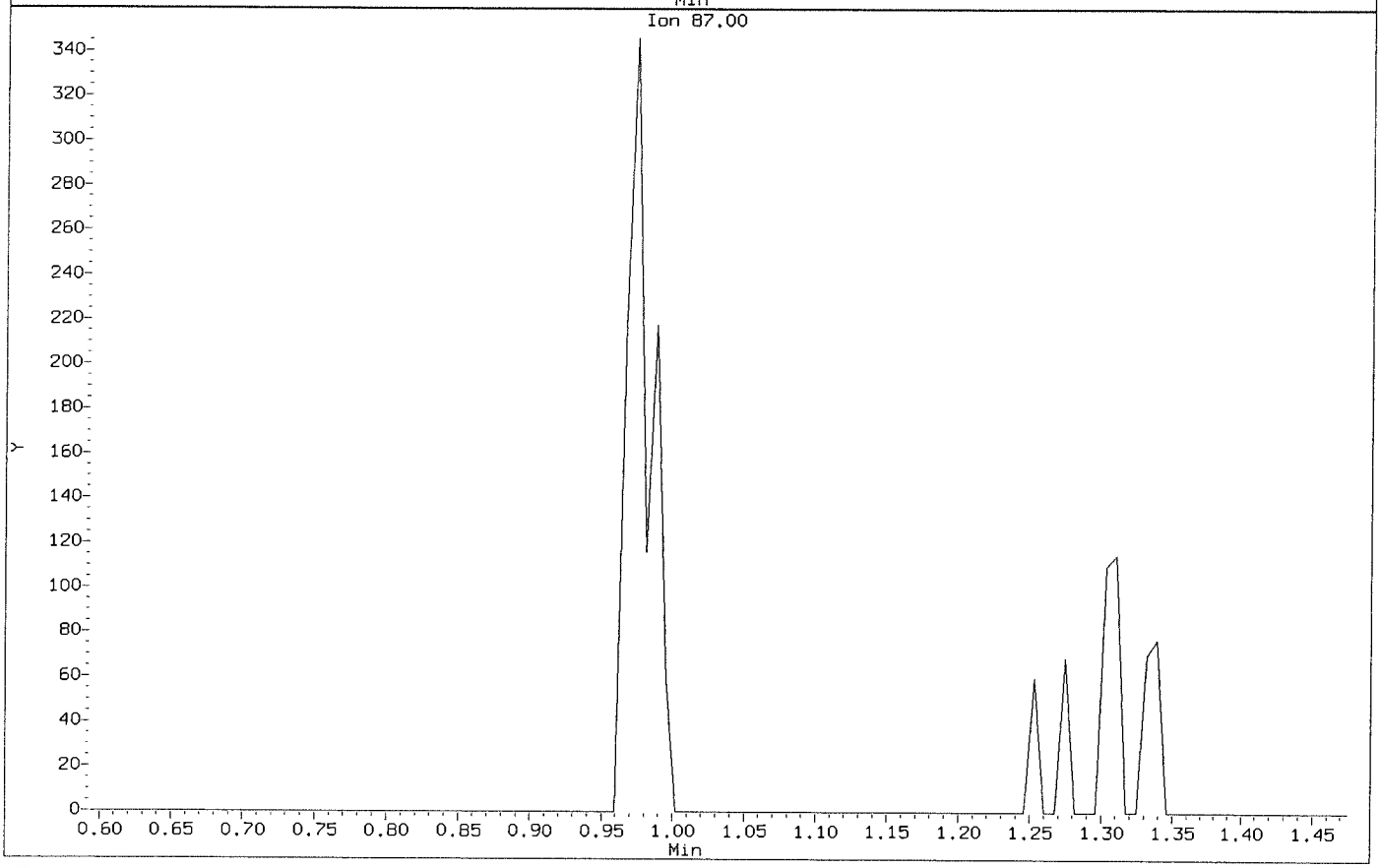




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Instrument: voa6.i
Client Sample ID: VSTD000.5

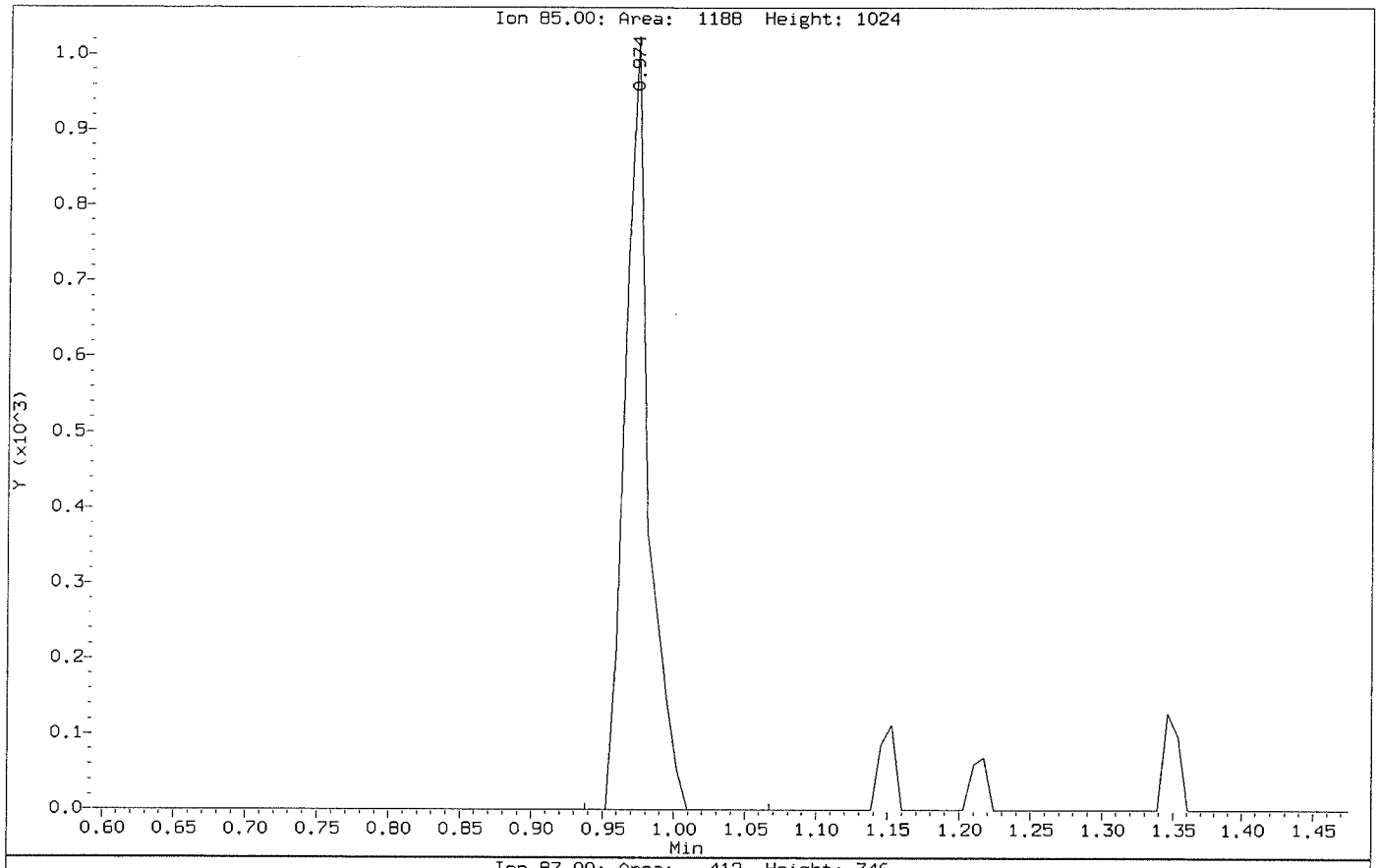
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8

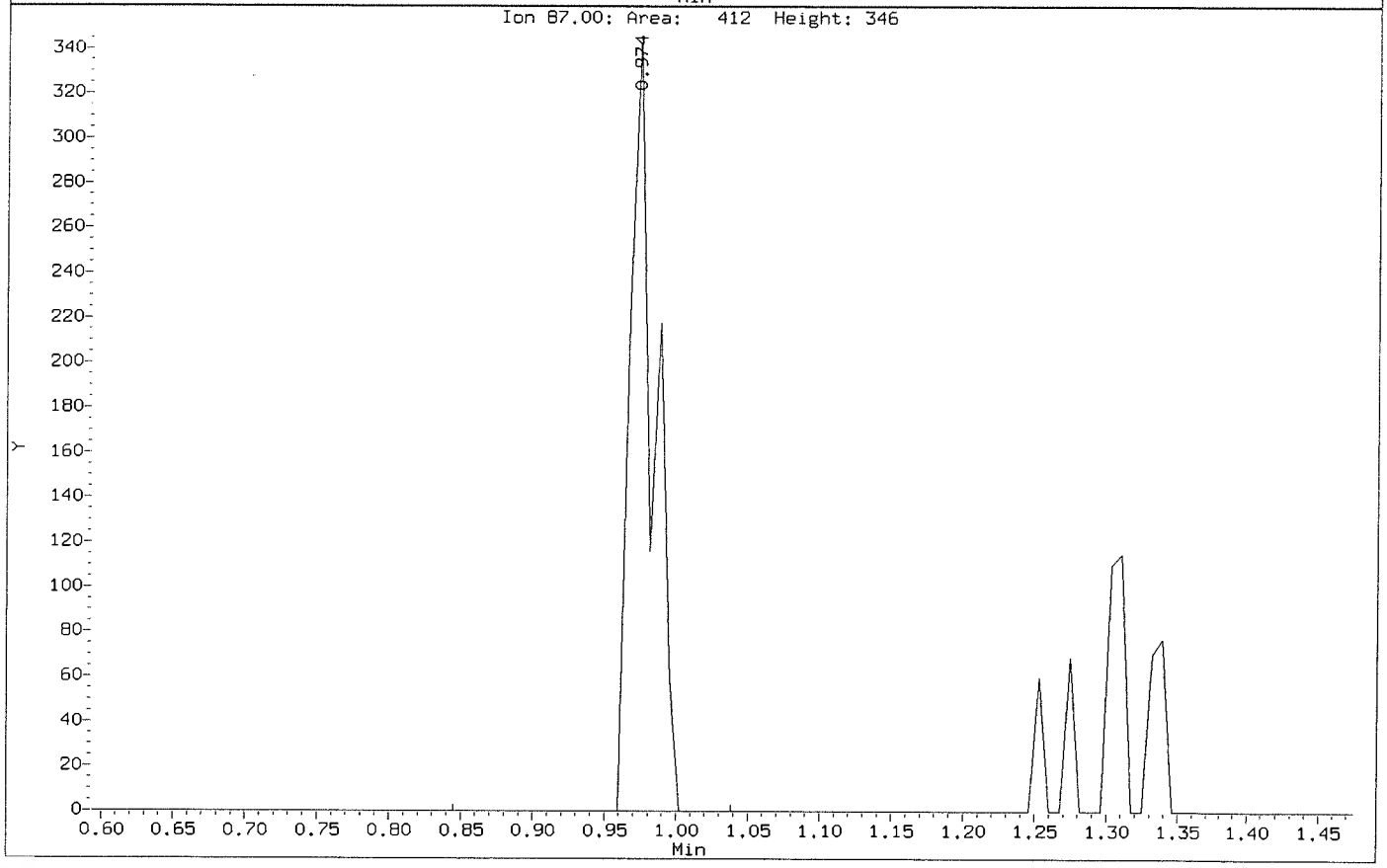




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Client Sample ID: VSTD000.5

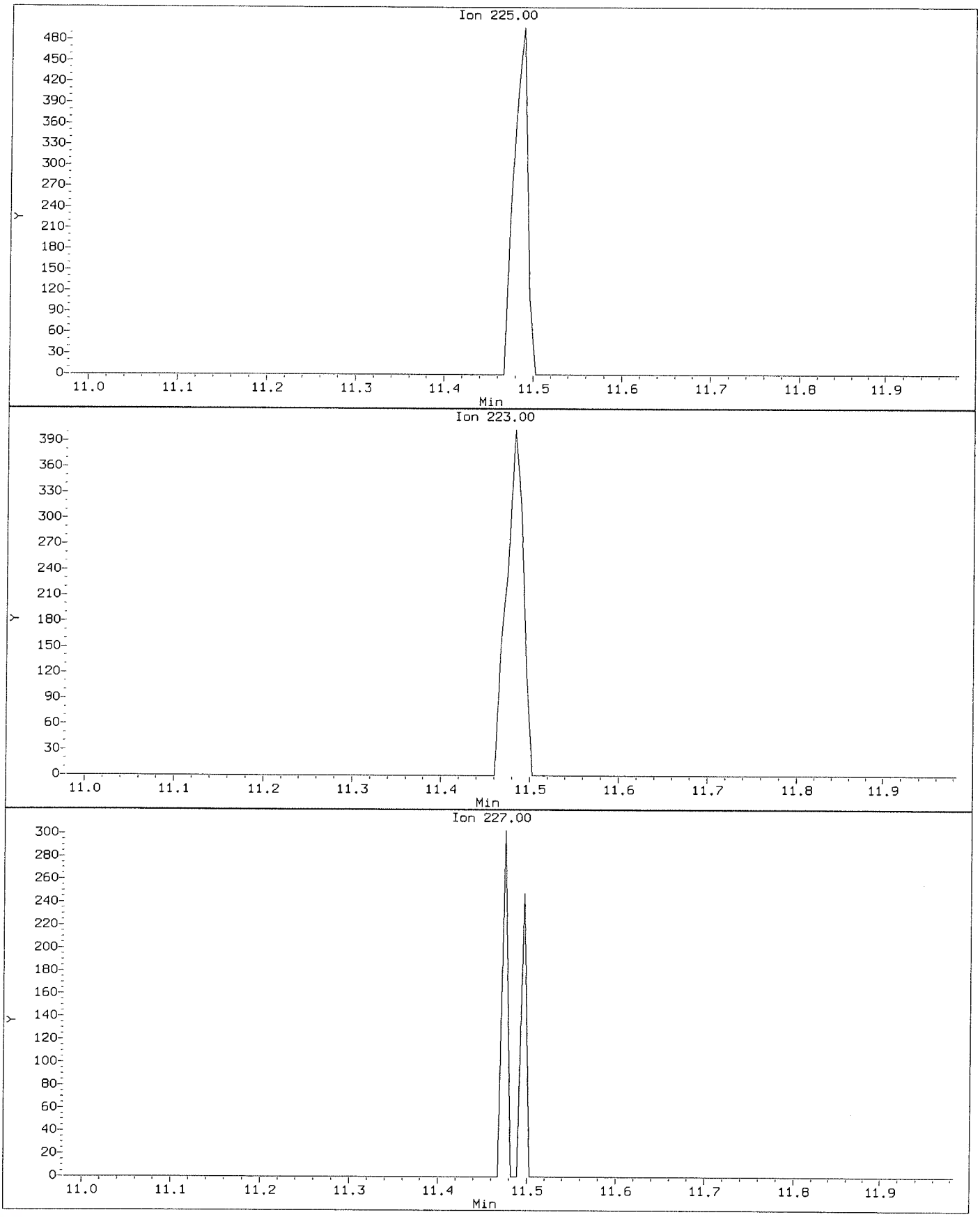
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8





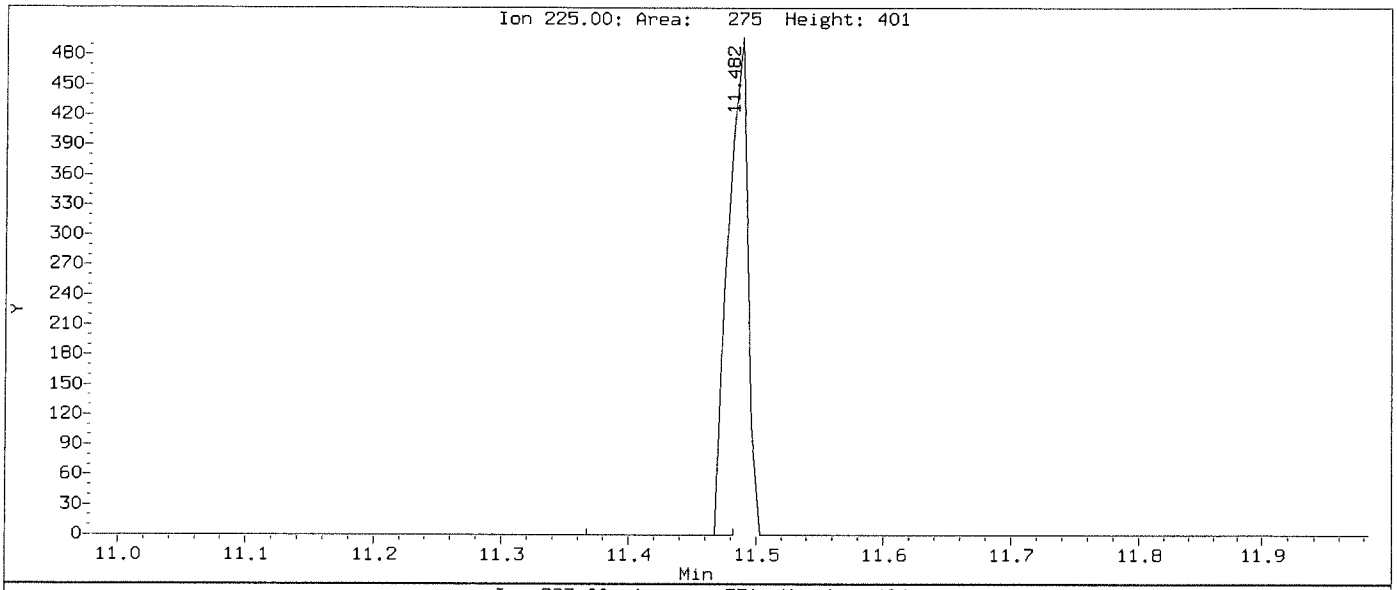
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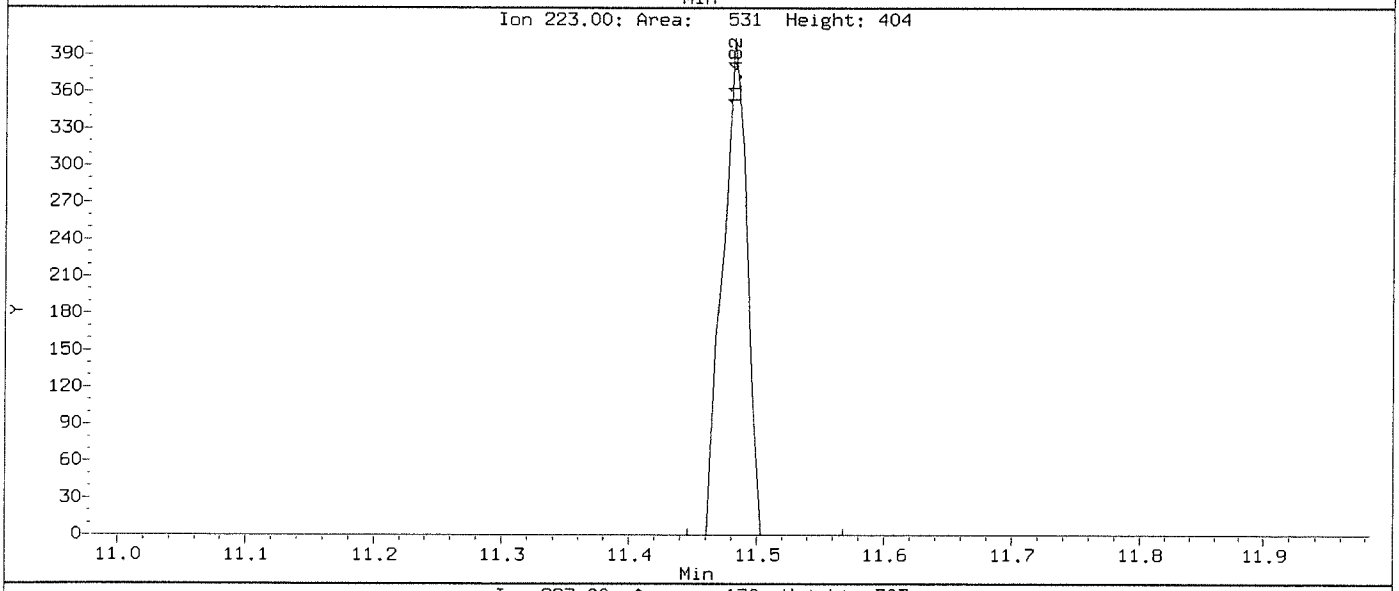
Compound: Hexachlorobutadiene
CAS Number: 87-68-3

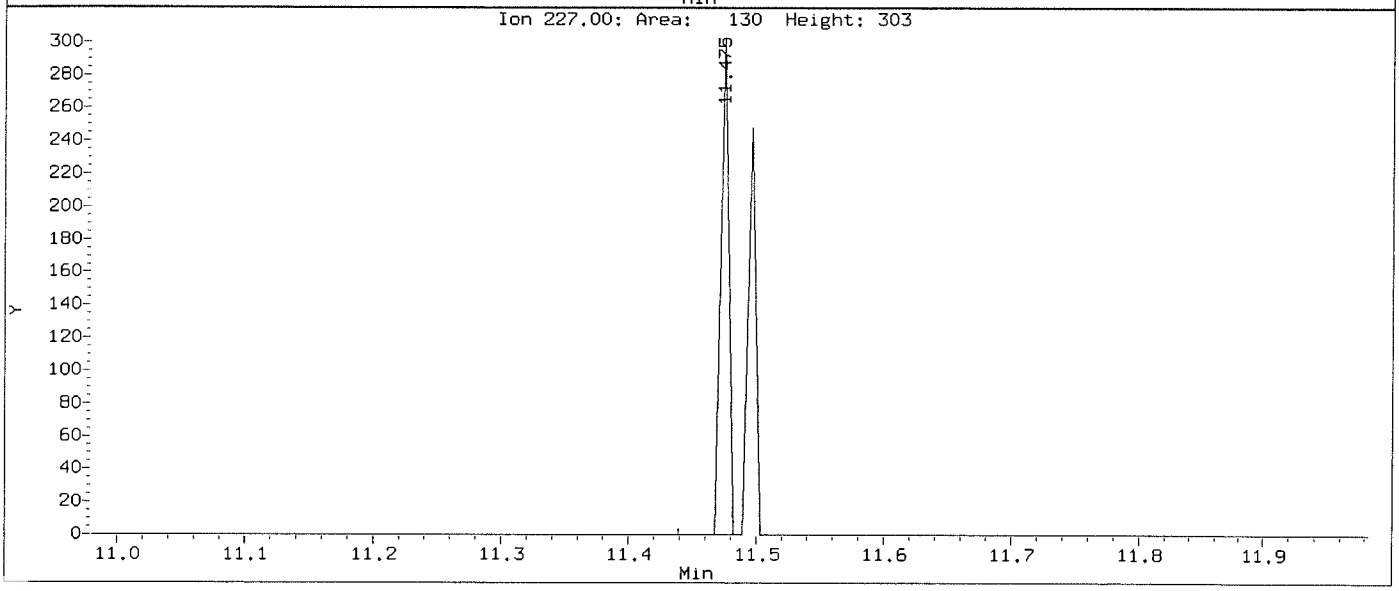


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

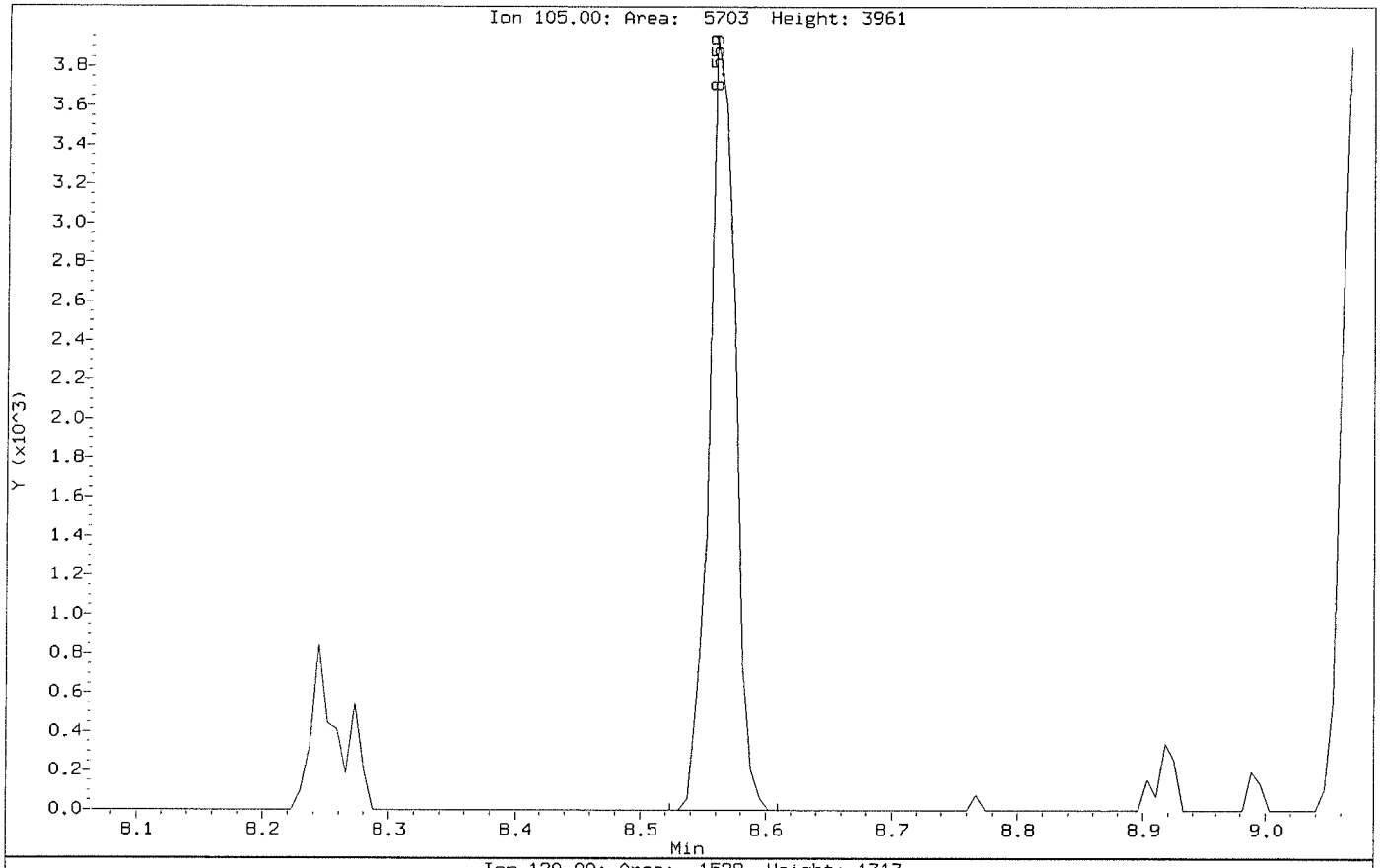


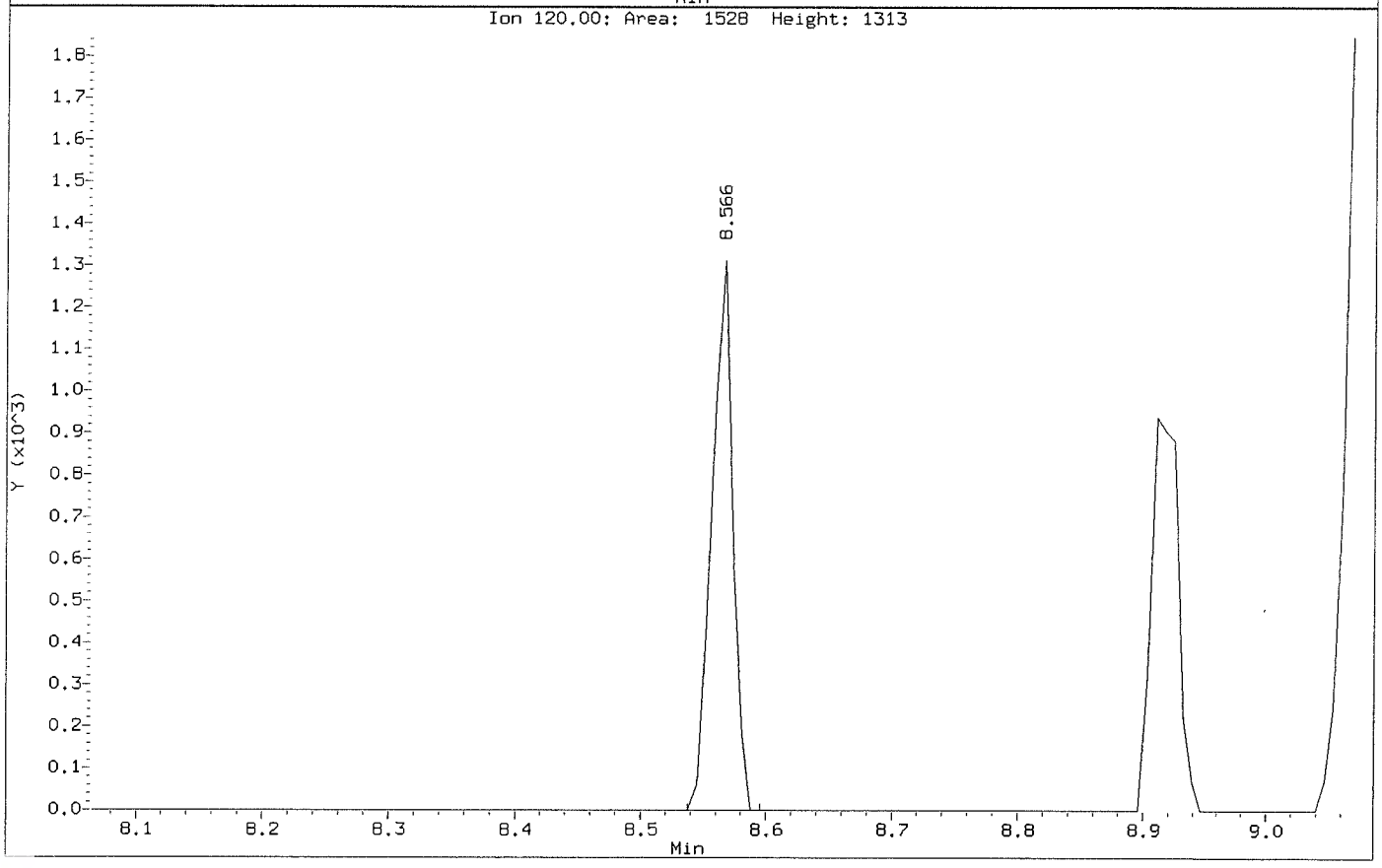




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Client Sample ID: VSTD000.5

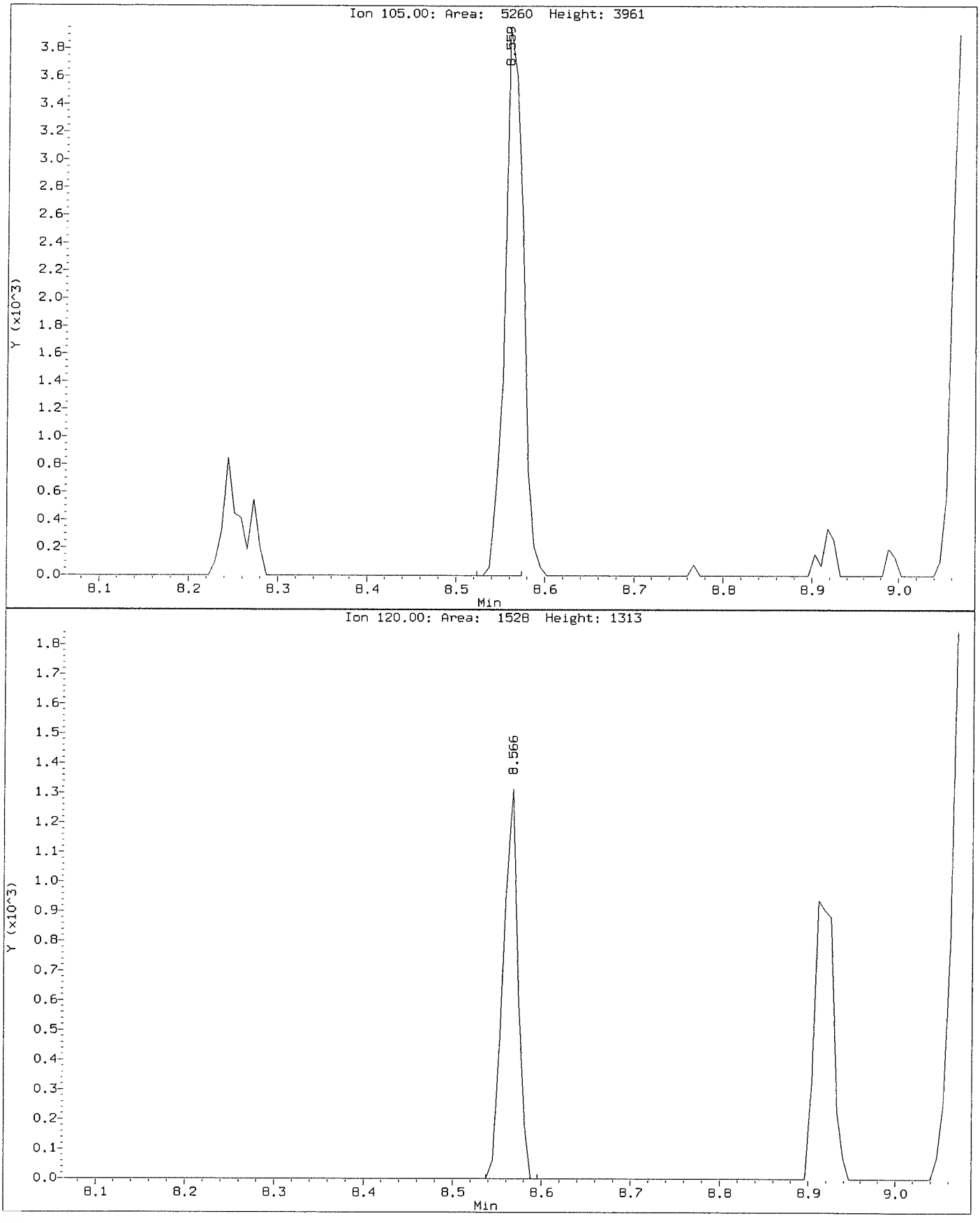
Compound: Isopropylbenzene
CAS Number: 98-82-8





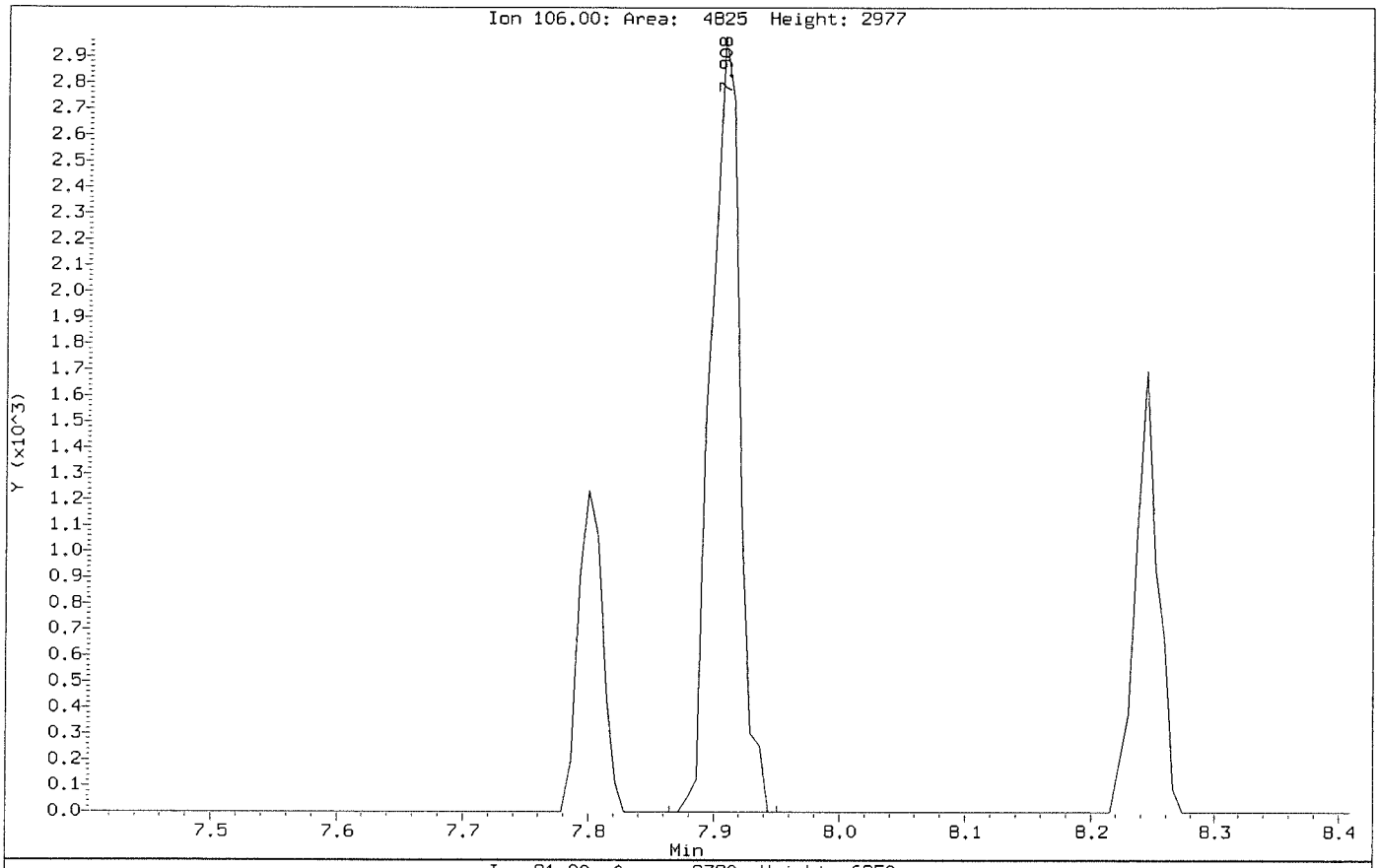
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Client Sample ID: VSTD000.5

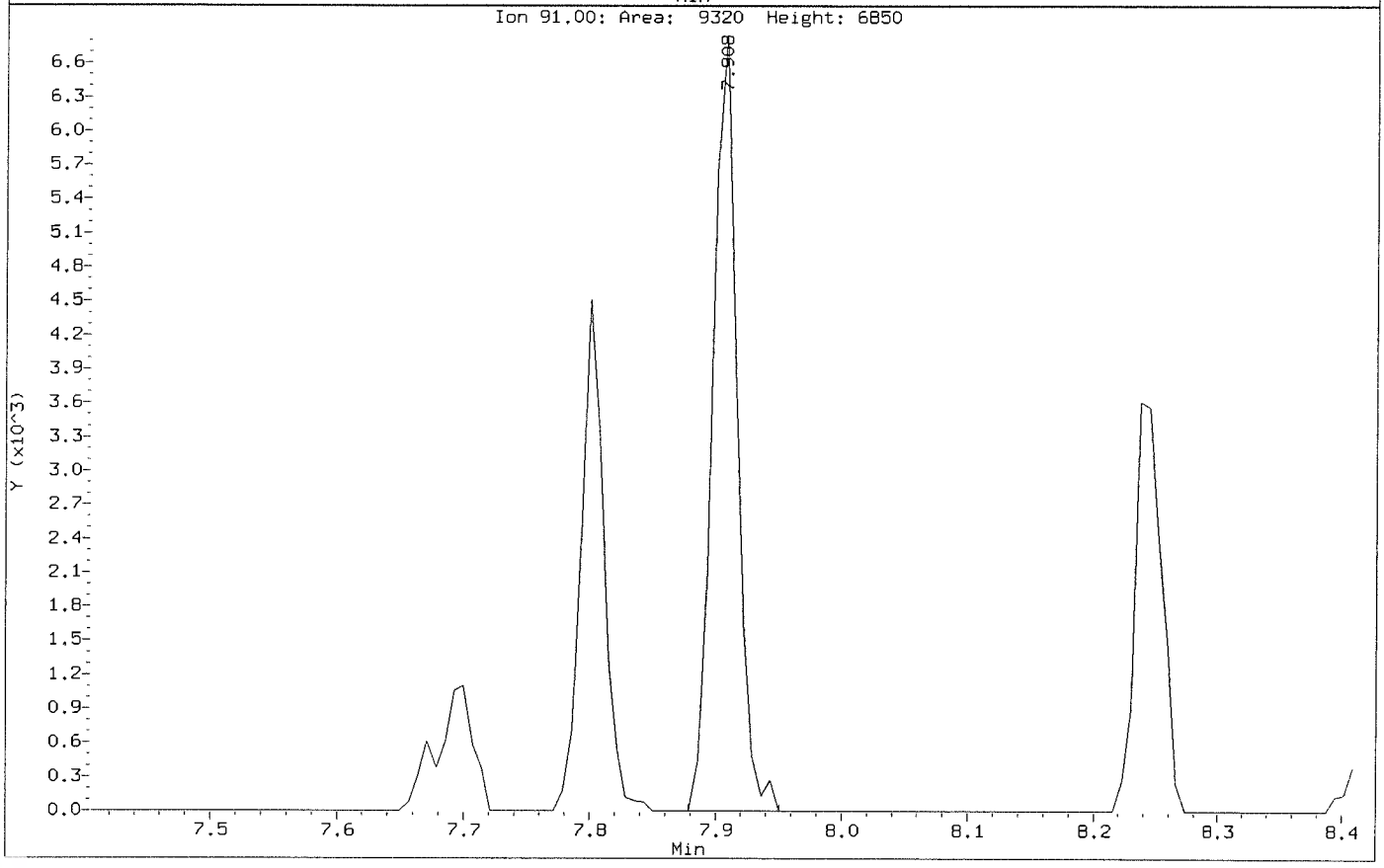
Compound: Isopropylbenzene
CAS Number: 98-82-8



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

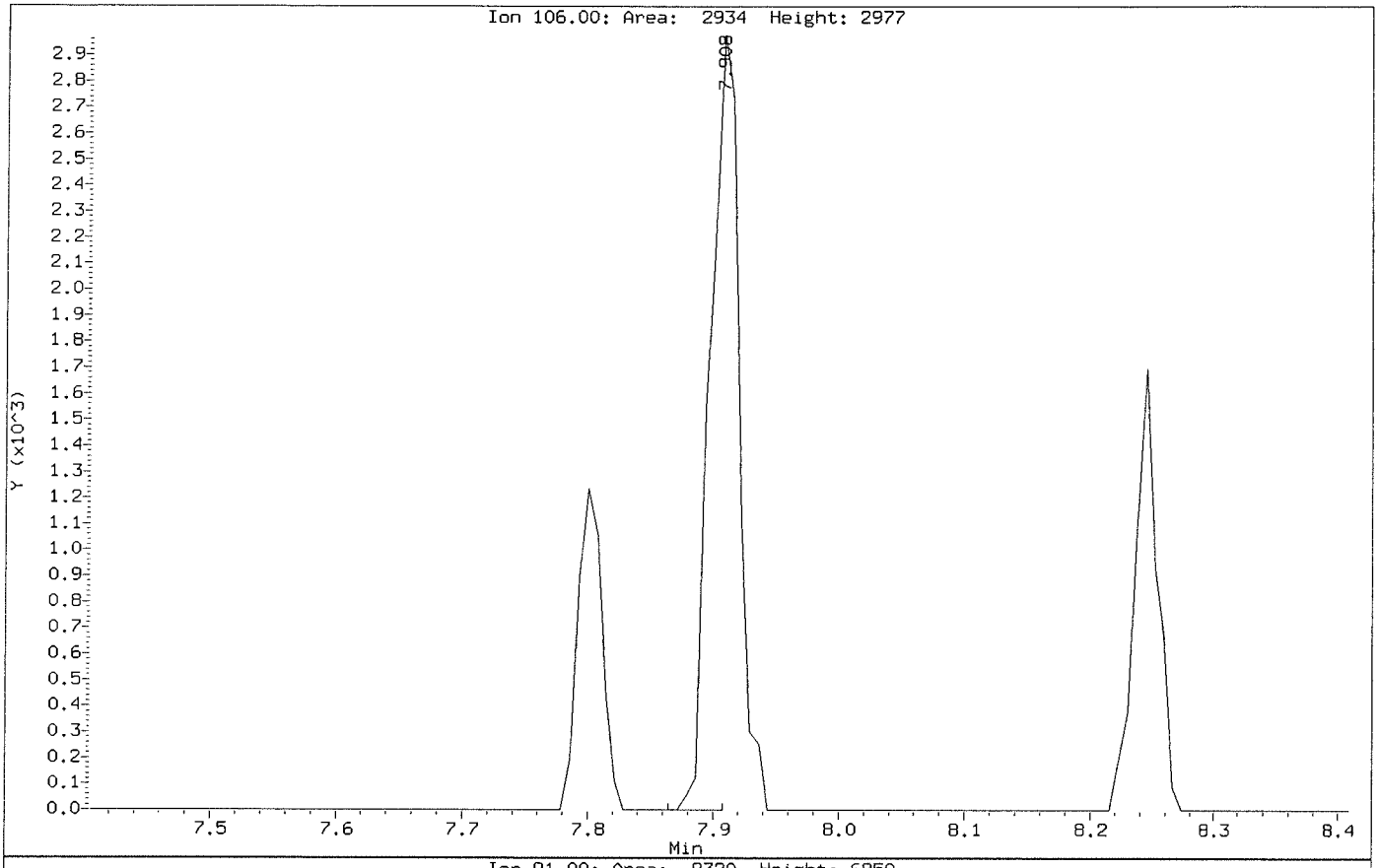
Compound: m,p-Xylenes
CAS Number:

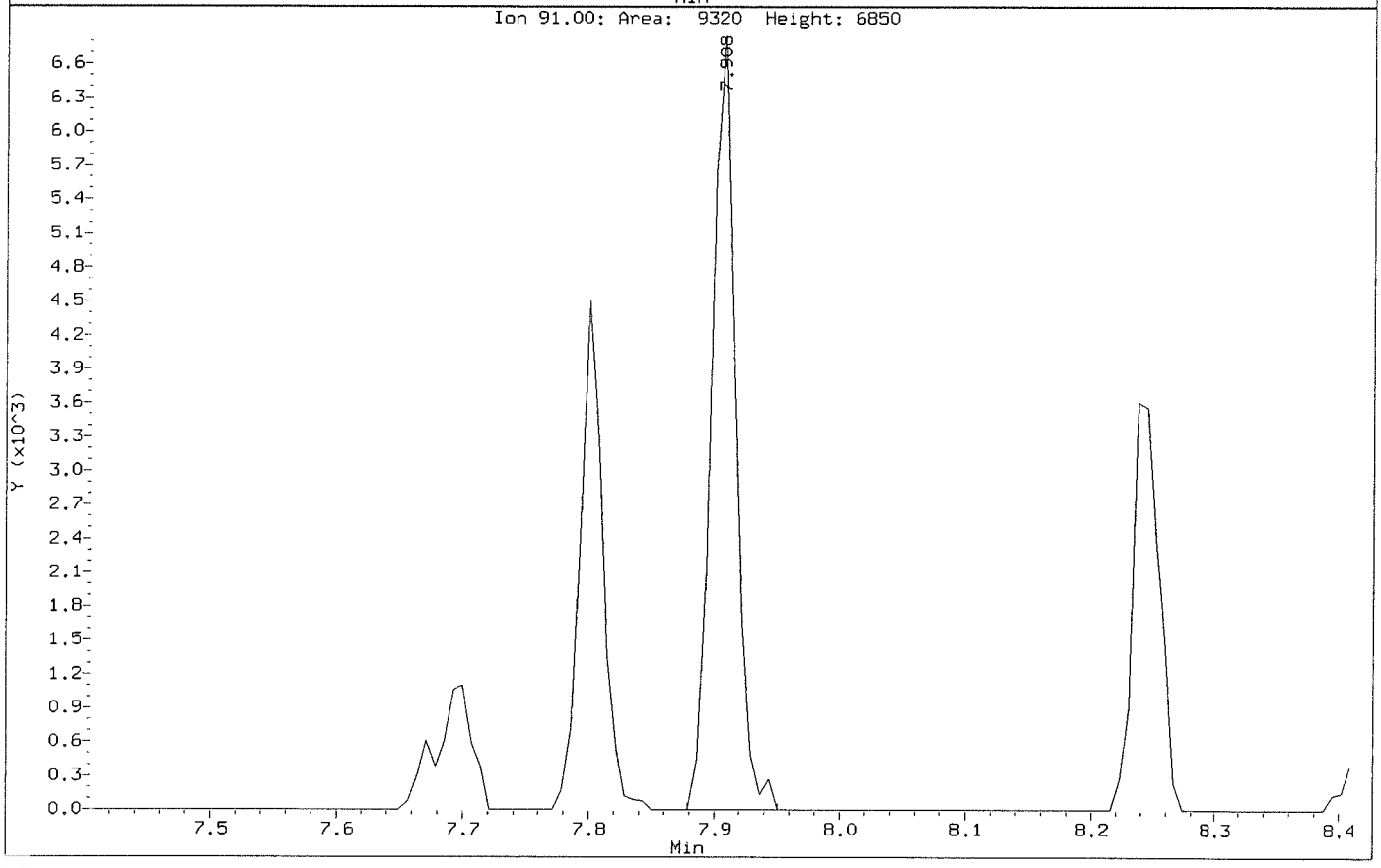




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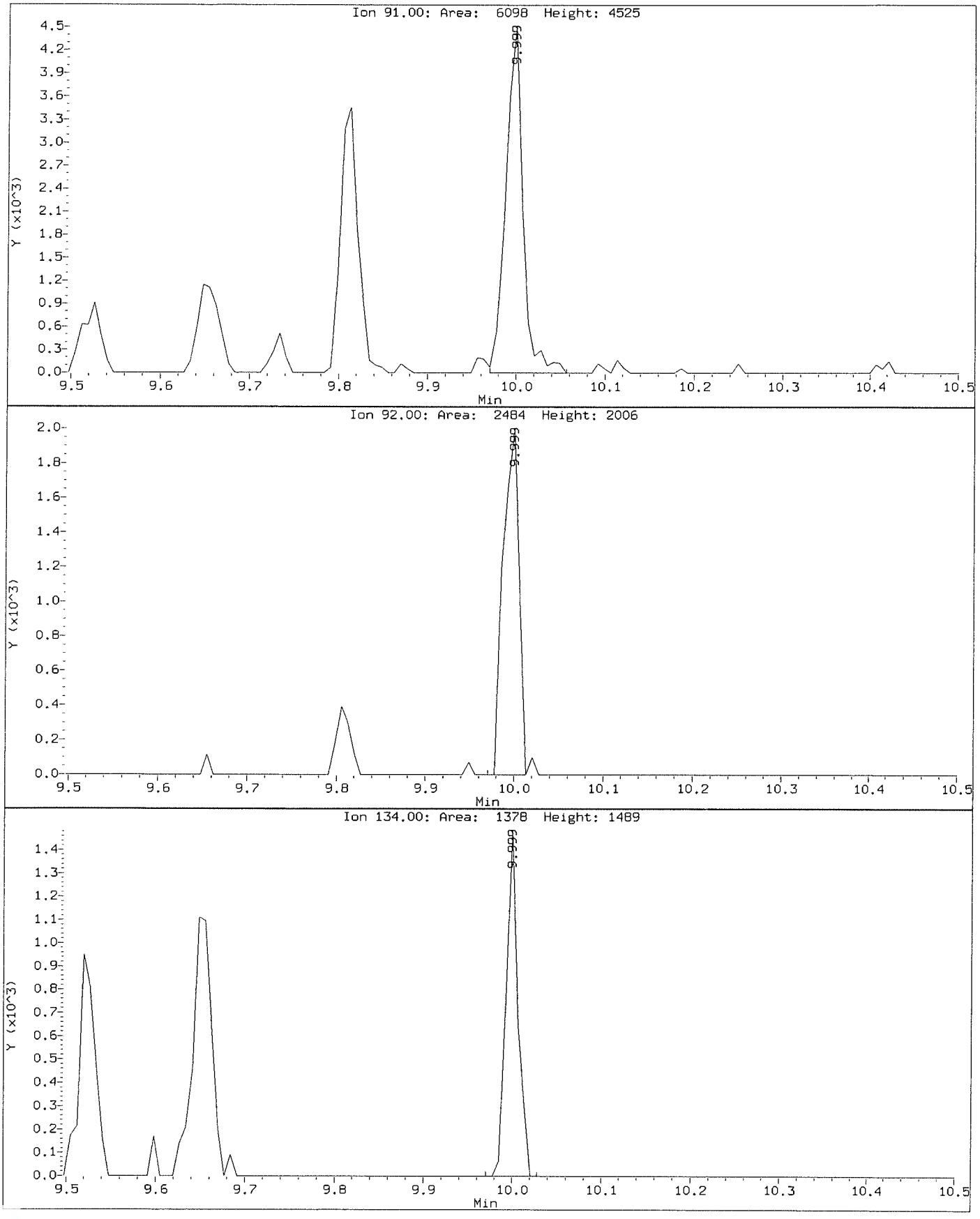
Compound: m,p-Xylenes
CAS Number:





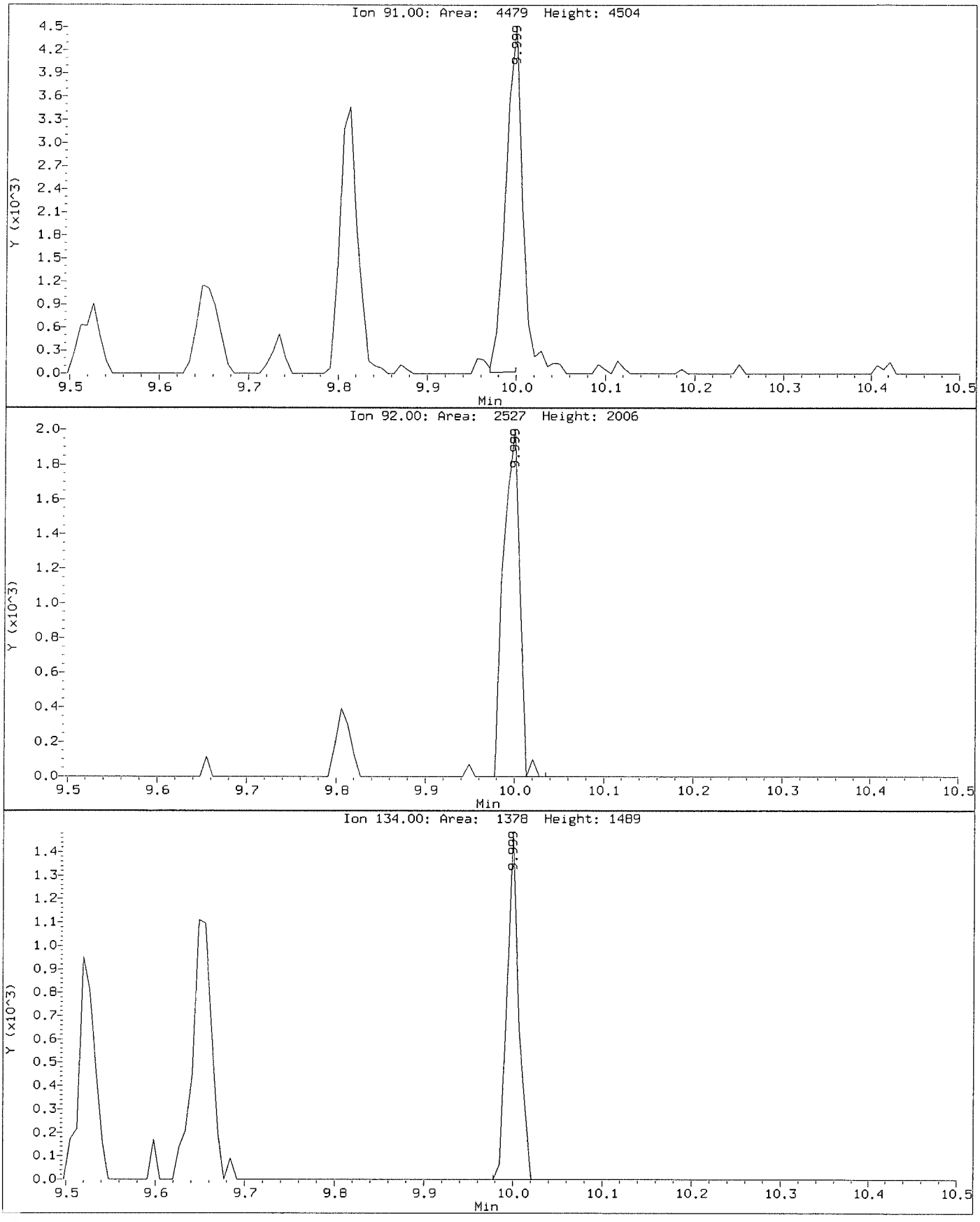
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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



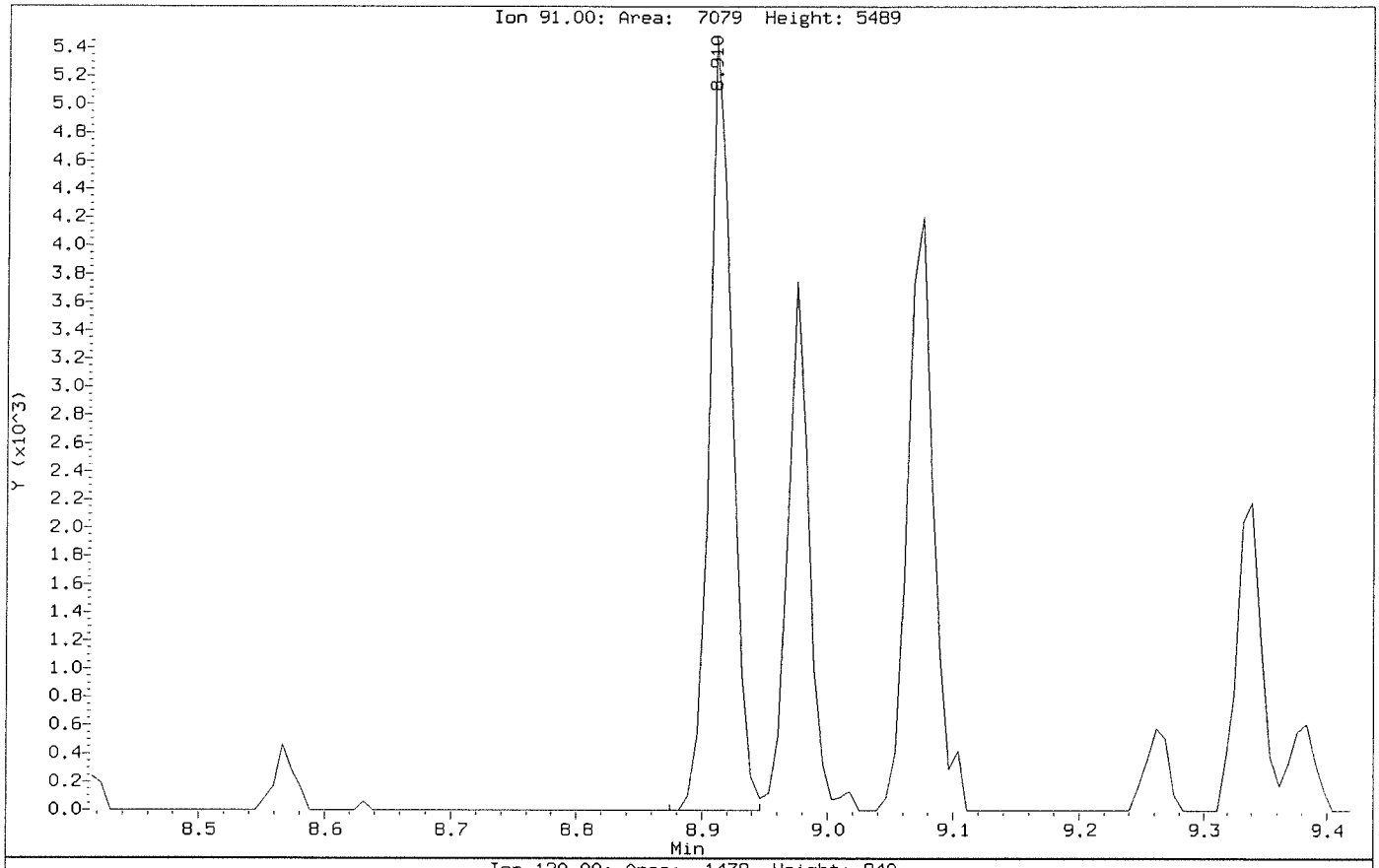
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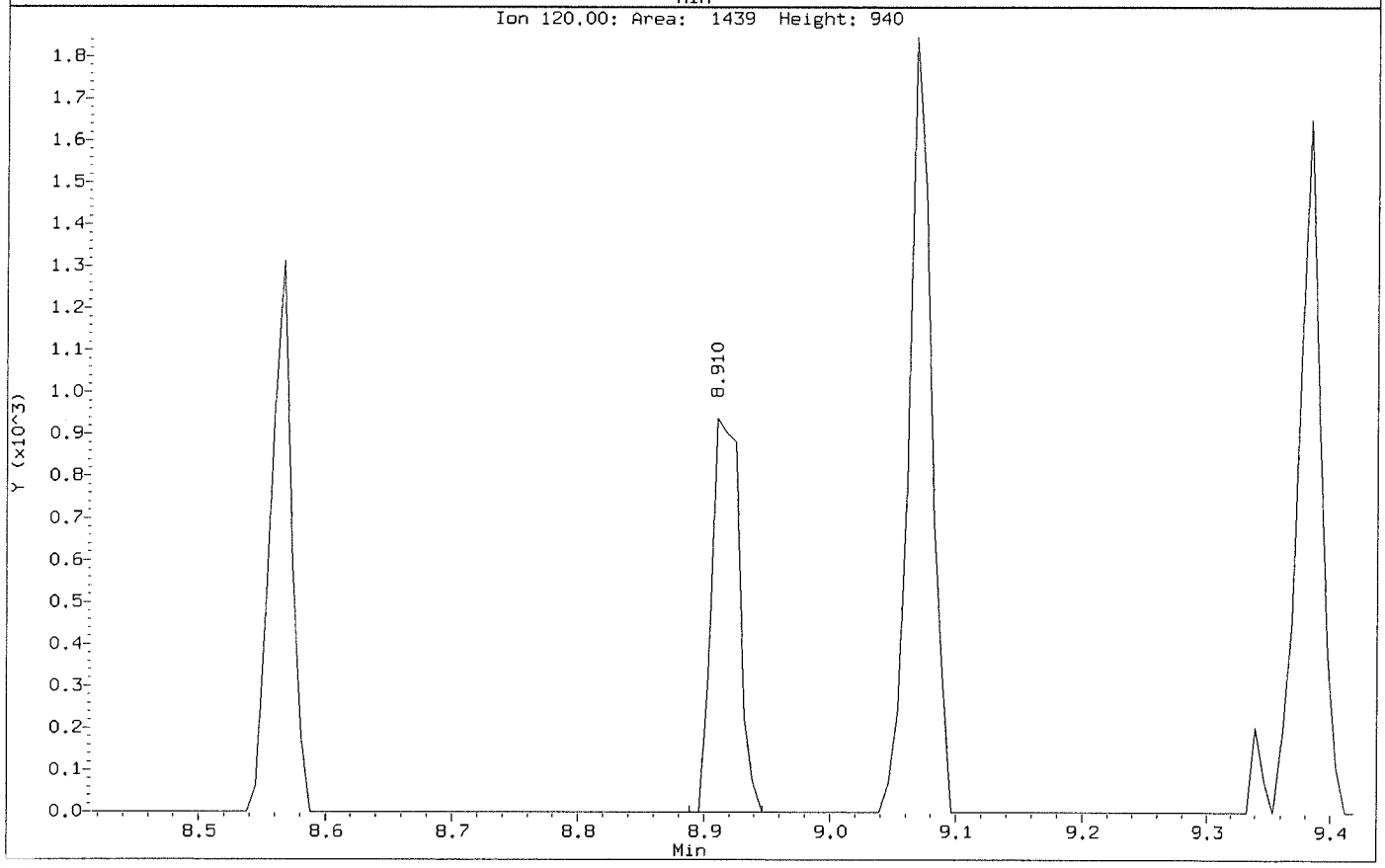
Compound: n-Butylbenzene
CAS Number: 104-51-8



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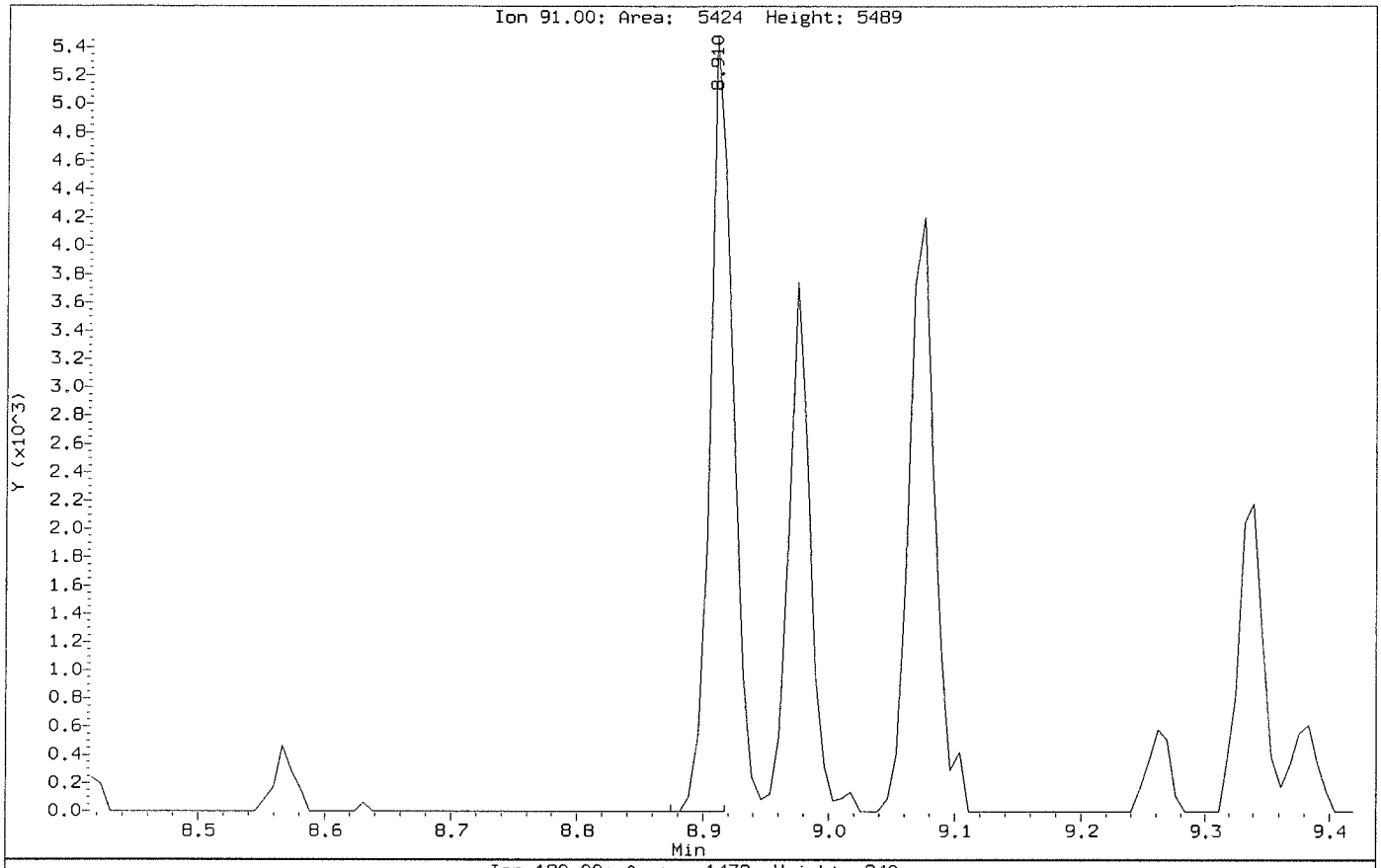
Compound: n-Propylbenzene
CAS Number: 106-65-1

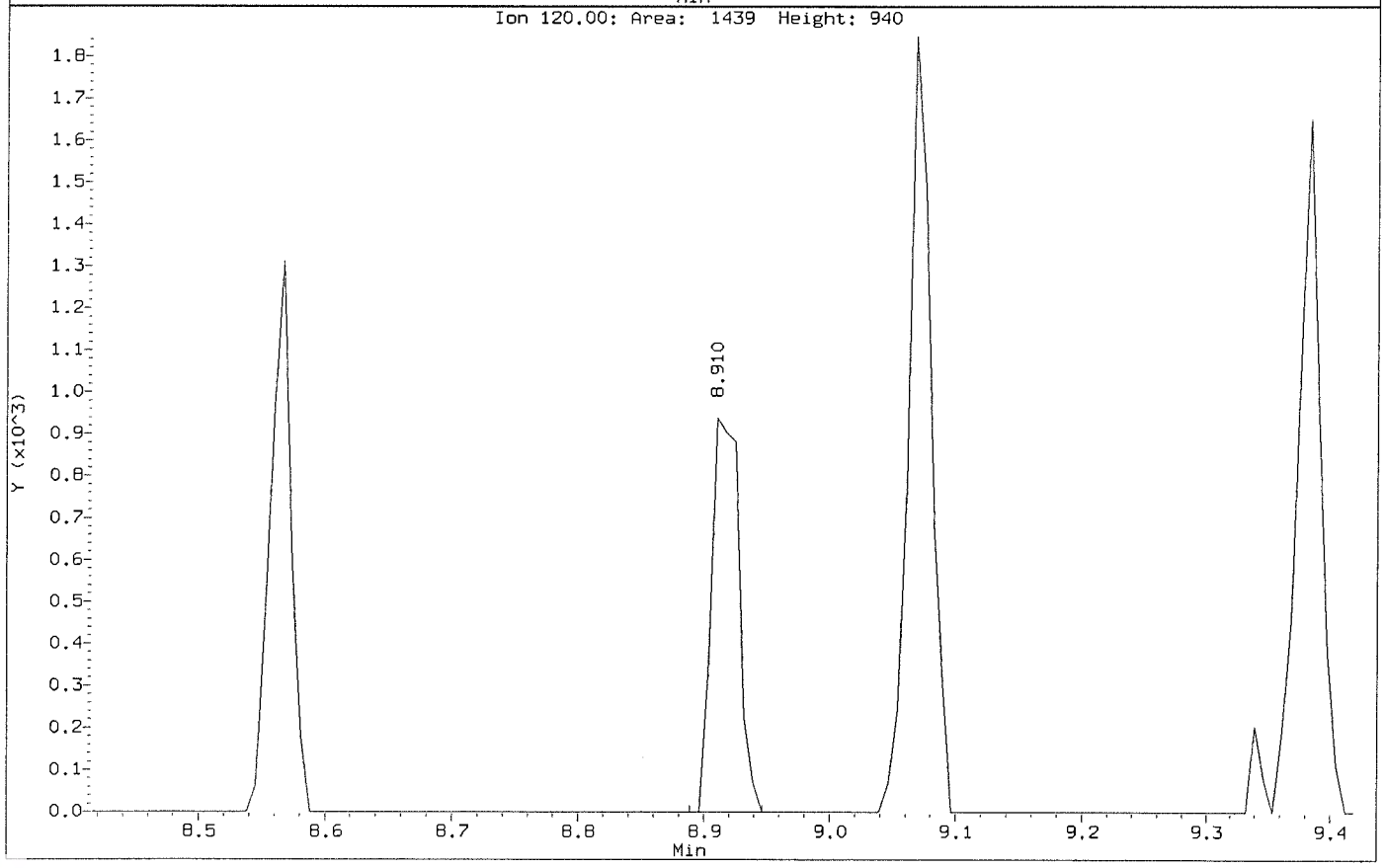




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Client Sample ID: VSTD000.5

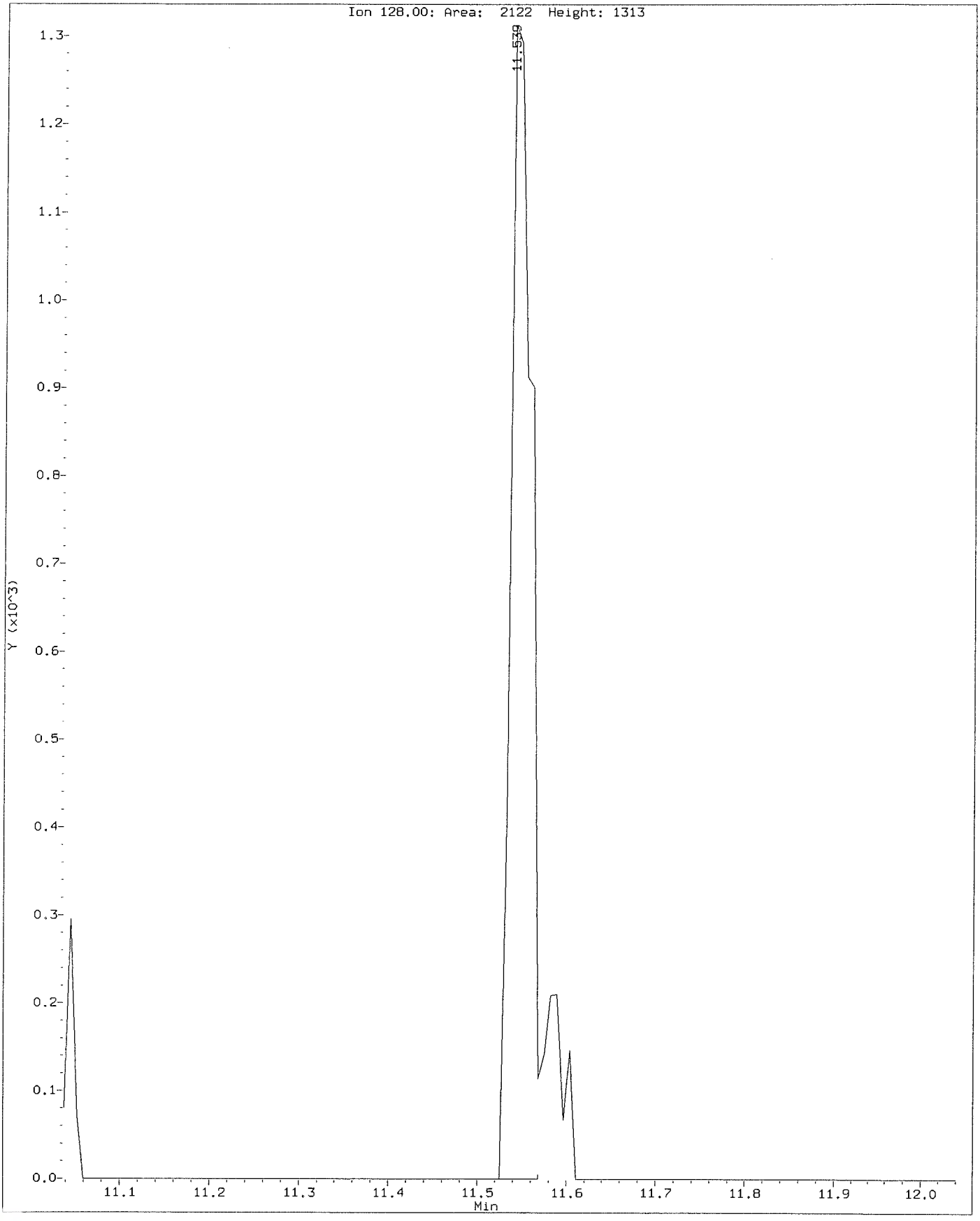
Compound: n-Propylbenzene
CAS Number: 106-65-1





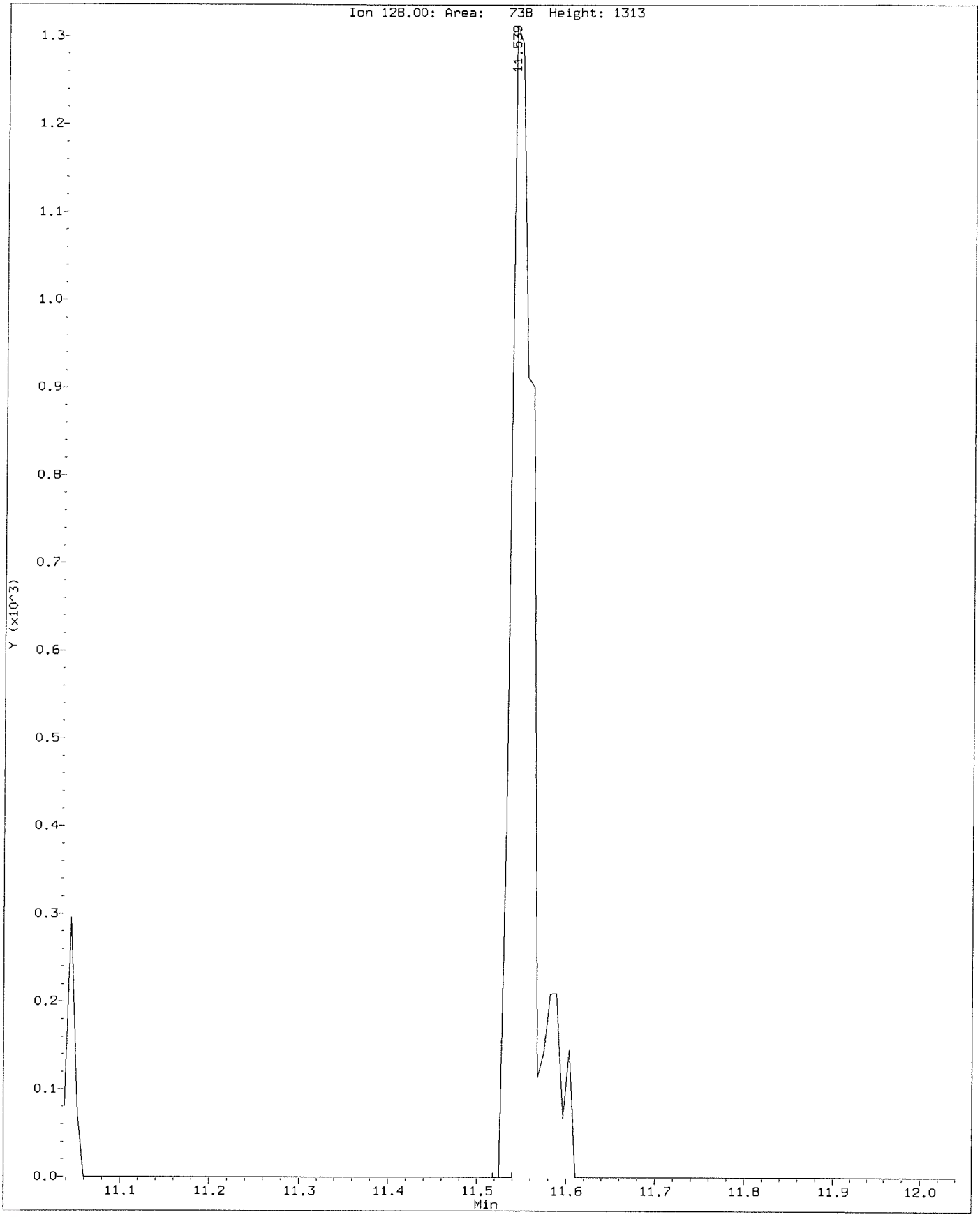
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



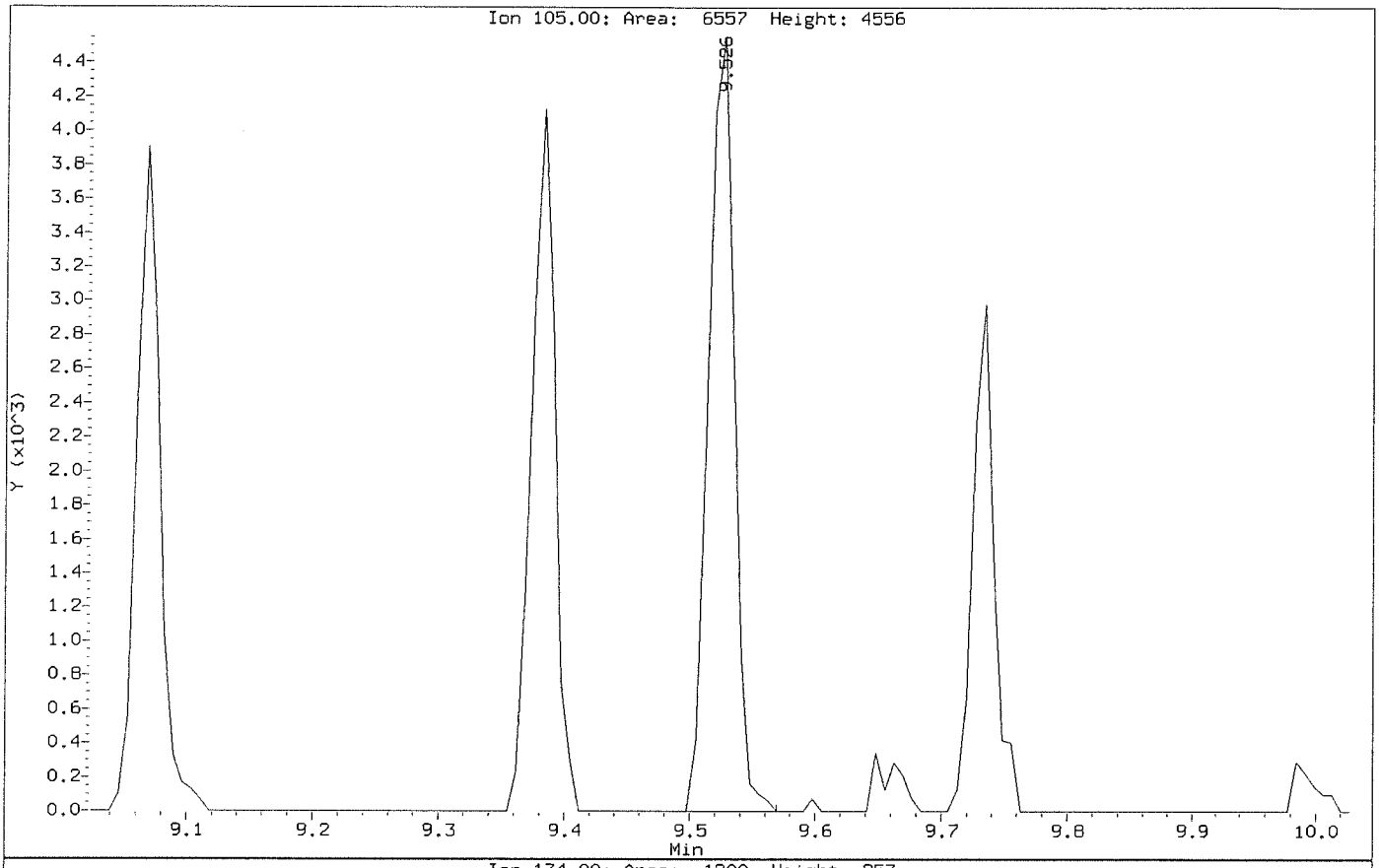
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Instrument: voa6.i
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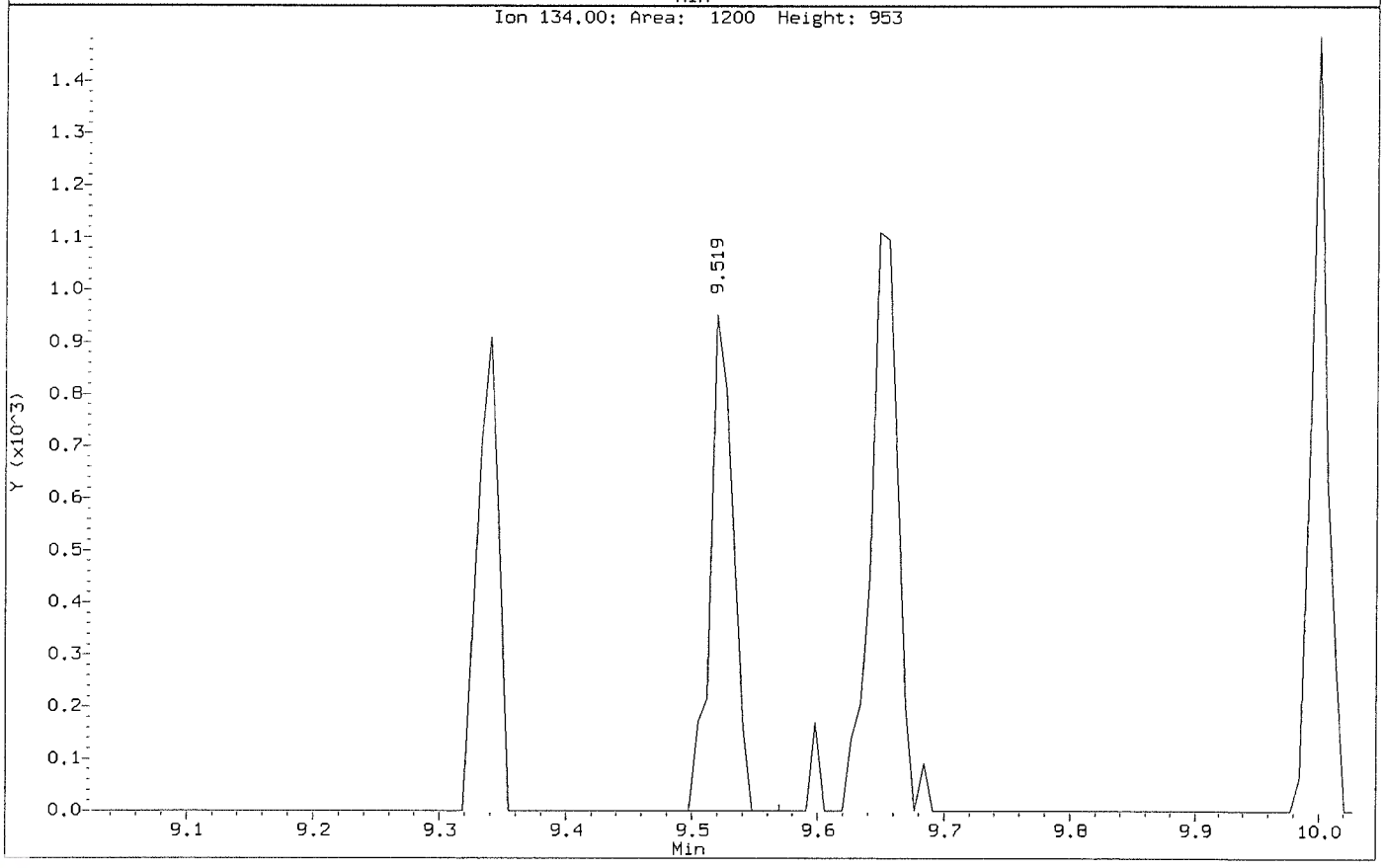
Compound: Naphthalene
CAS Number: 91-20-3



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

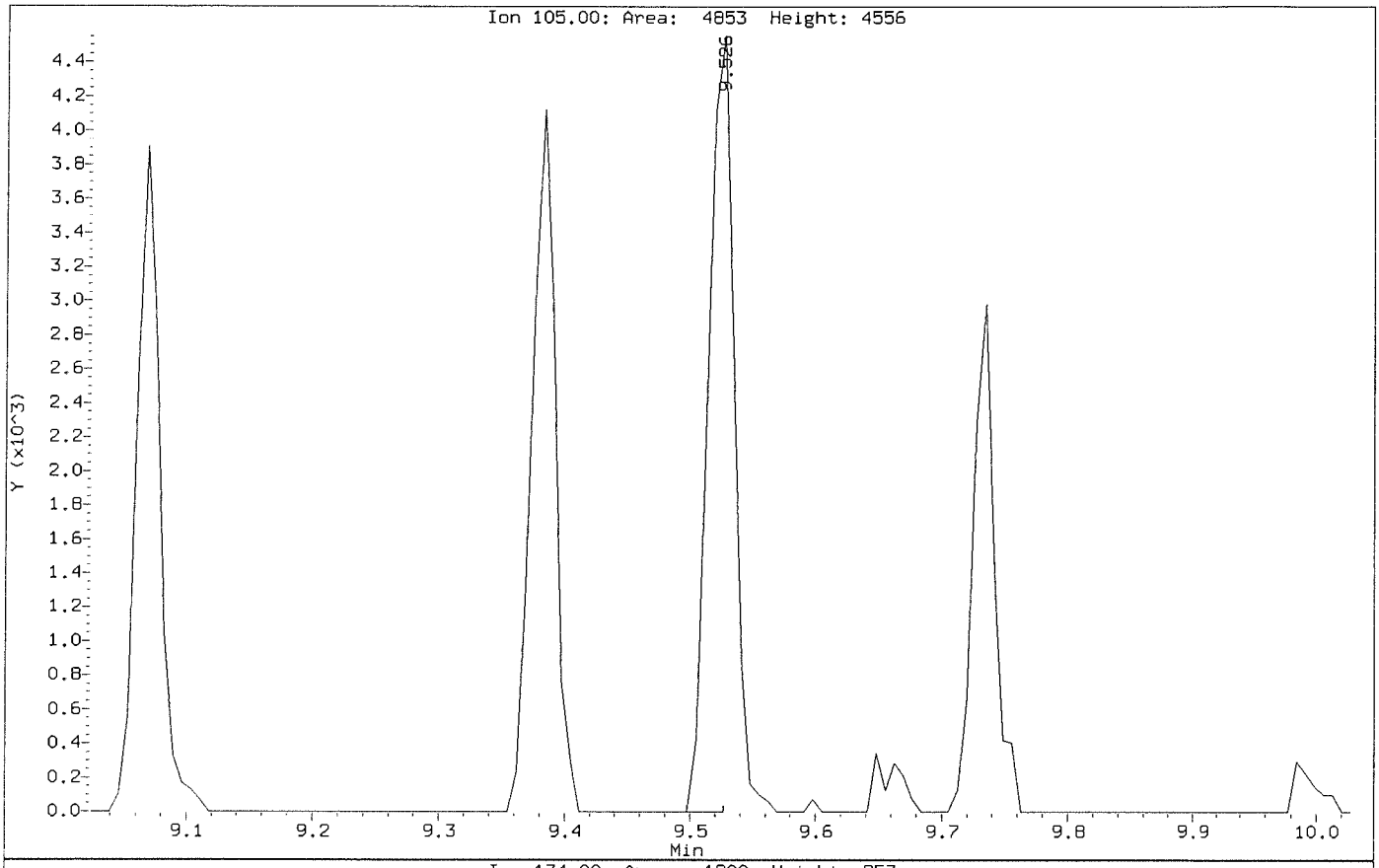
Compound: sec-Butylbenzene
CAS Number: 135-98-8

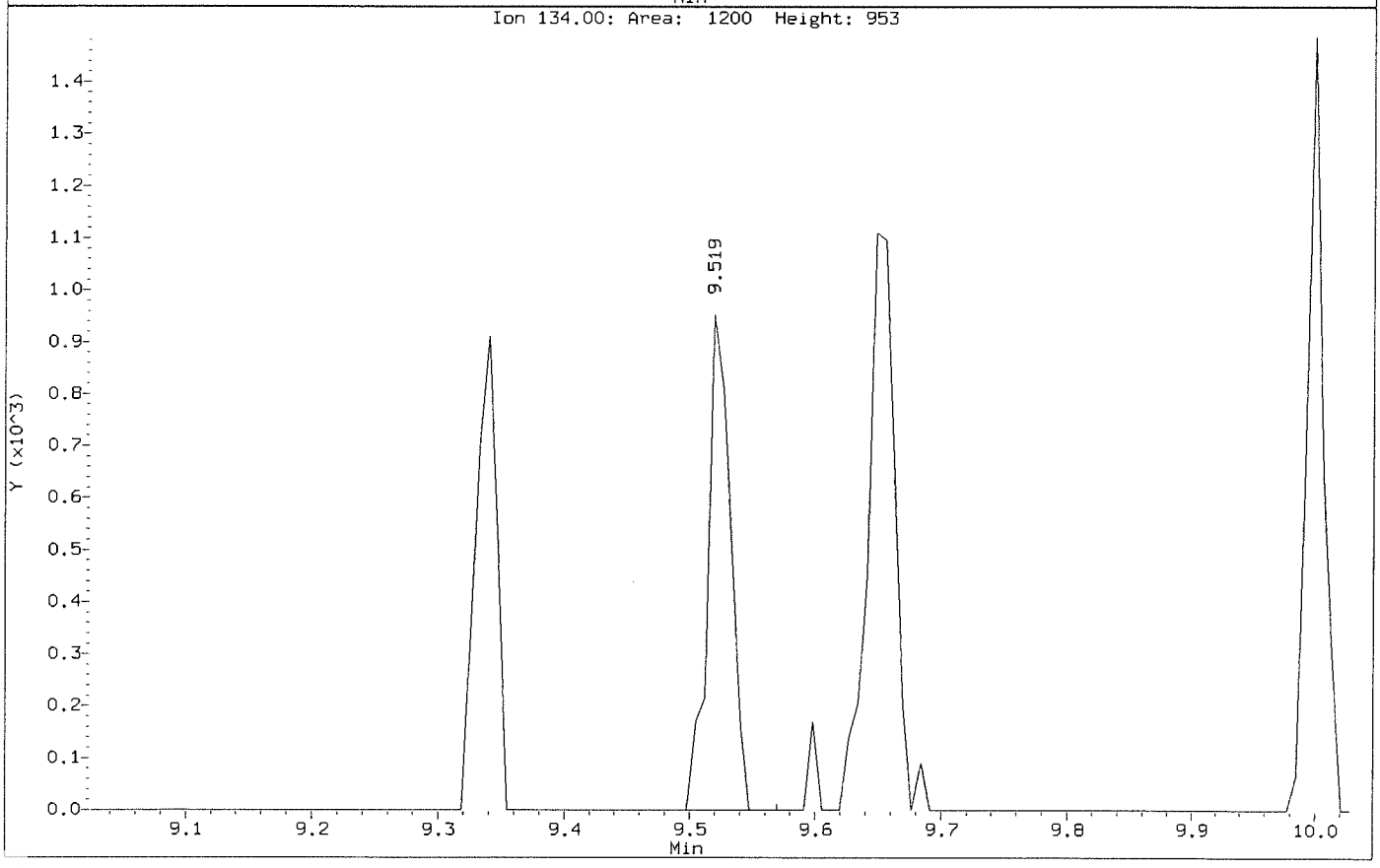




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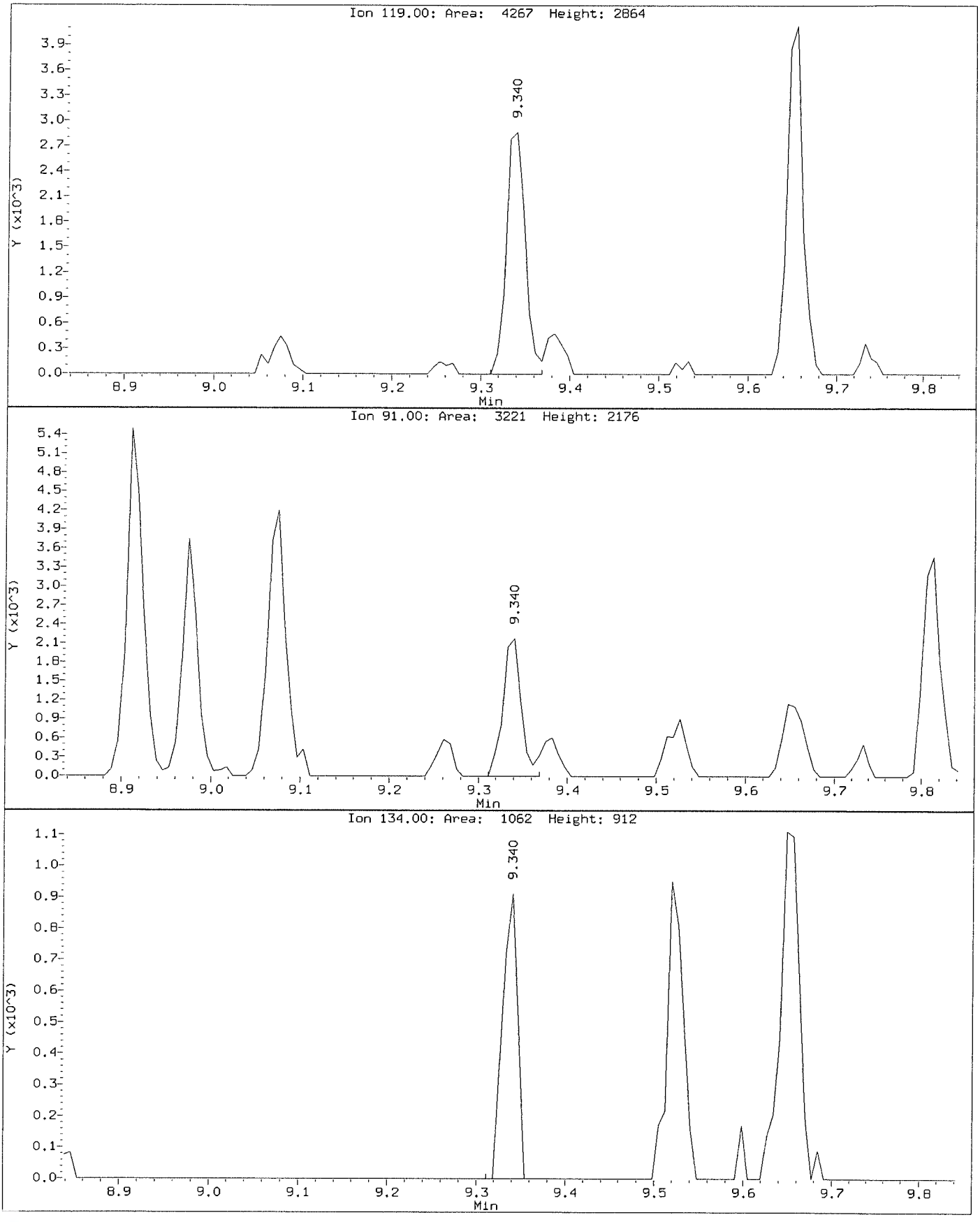
Compound: sec-Butylbenzene
CAS Number: 135-98-8





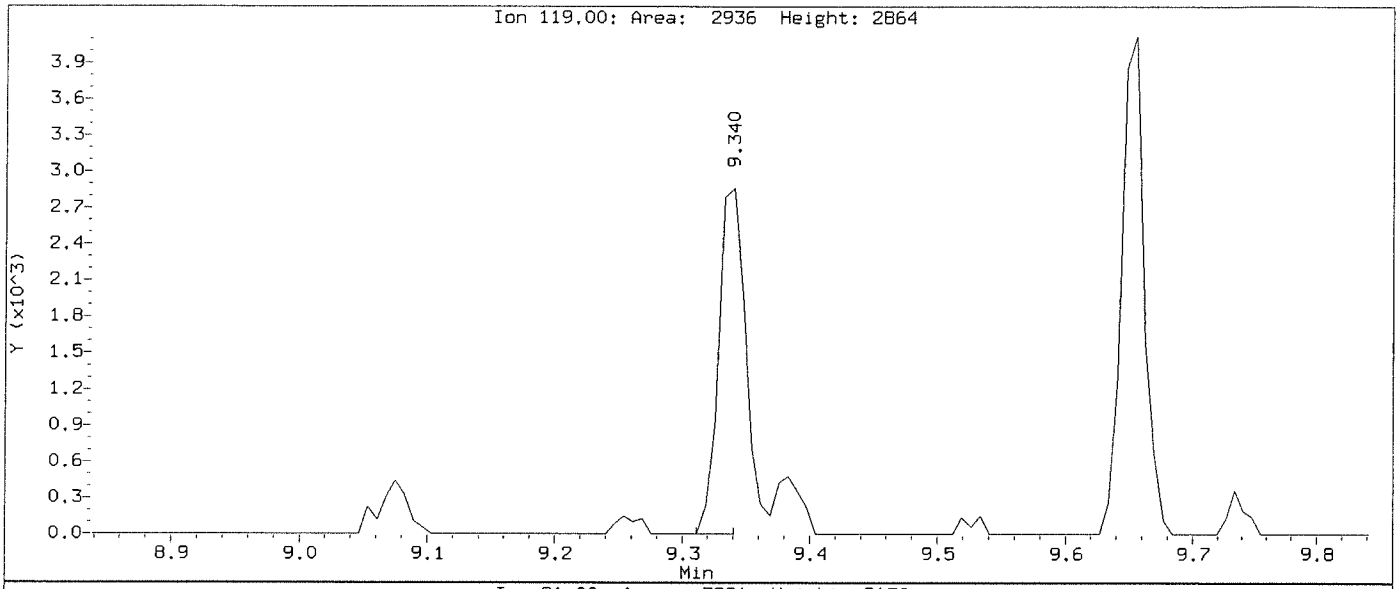
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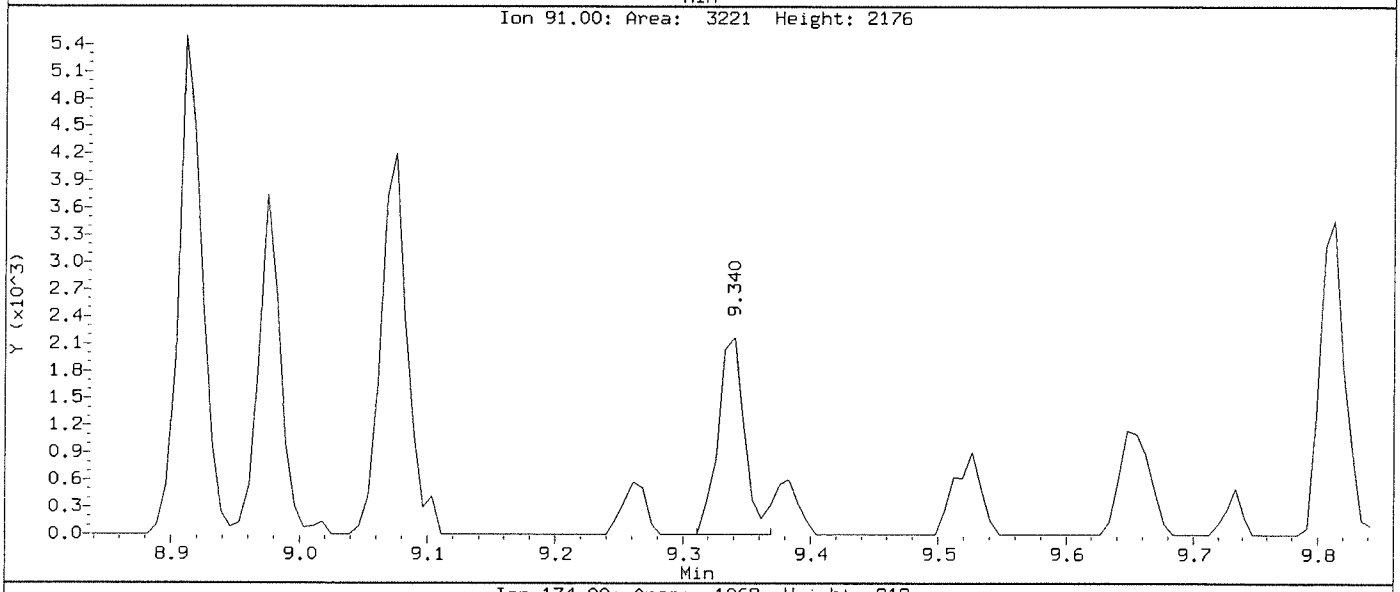
Compound: tert-Butylbenzene
CAS Number: 98-06-6

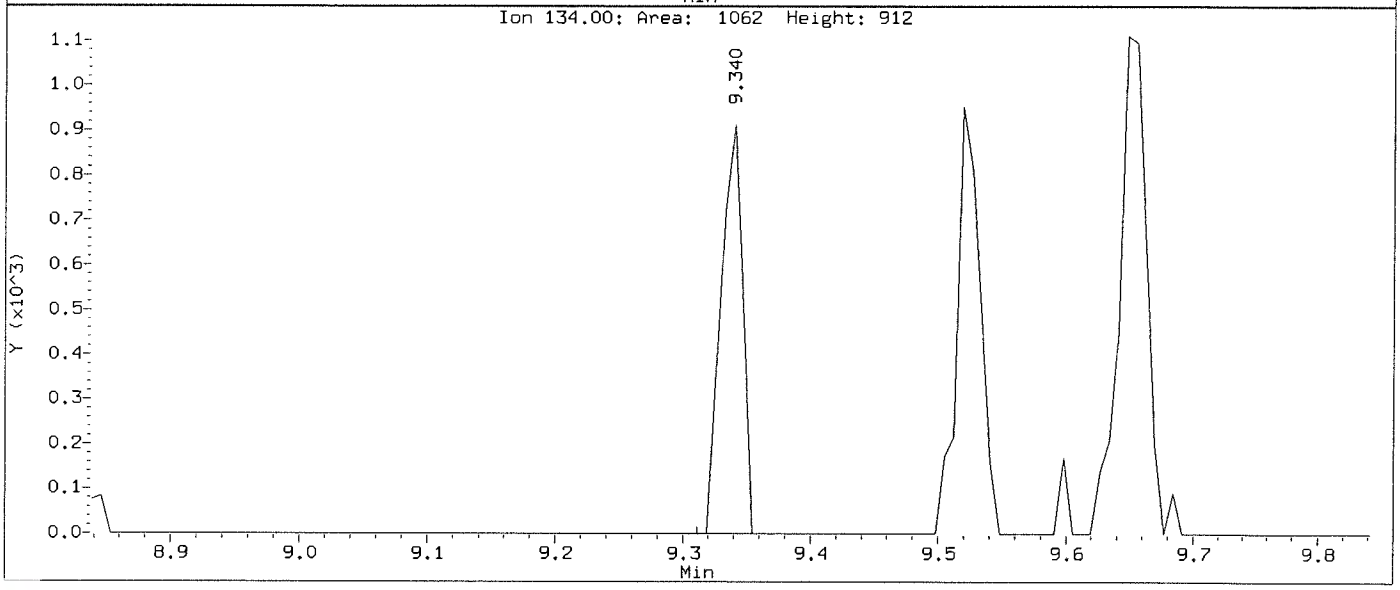


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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: tert-Butylbenzene
CAS Number: 98-06-6

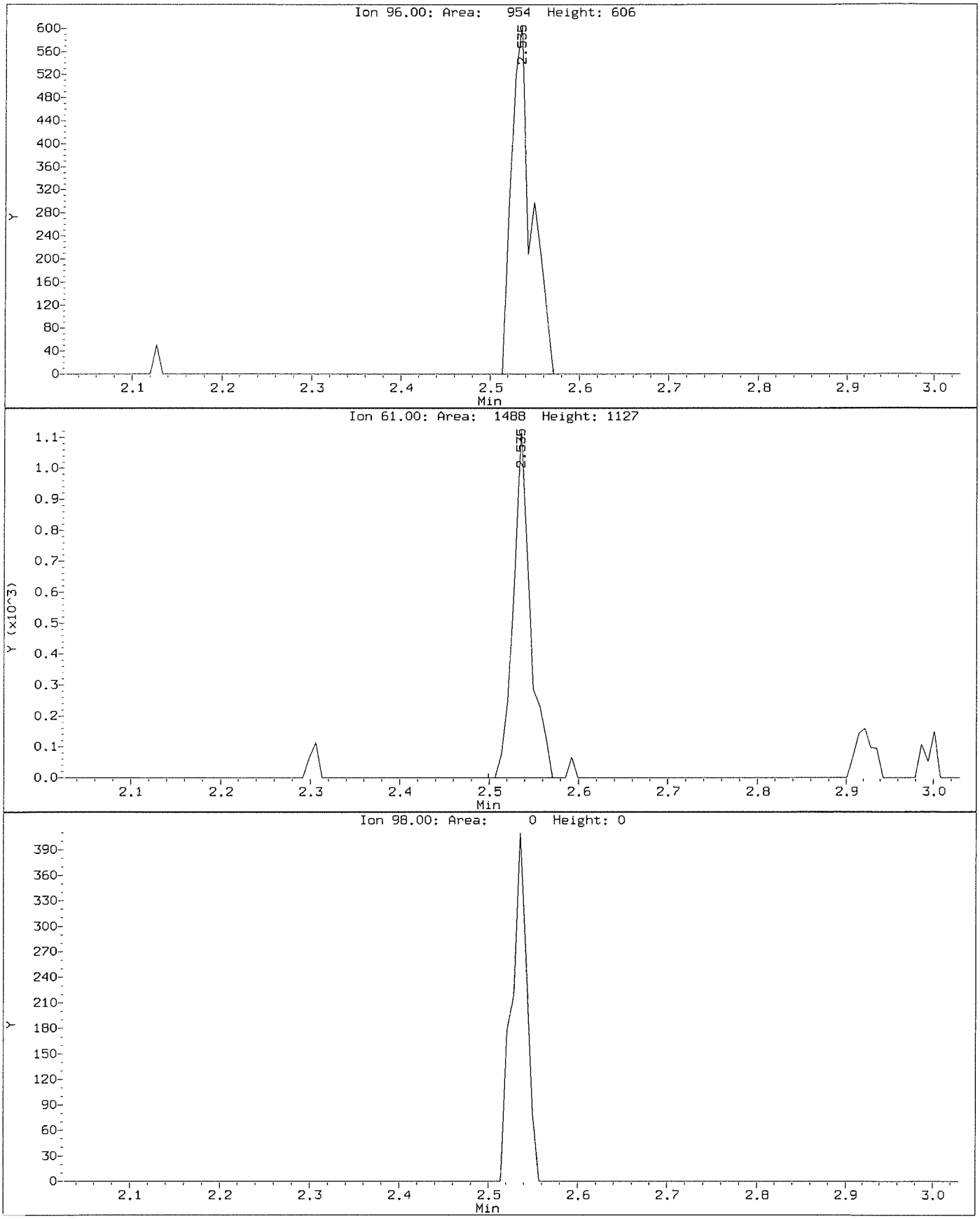






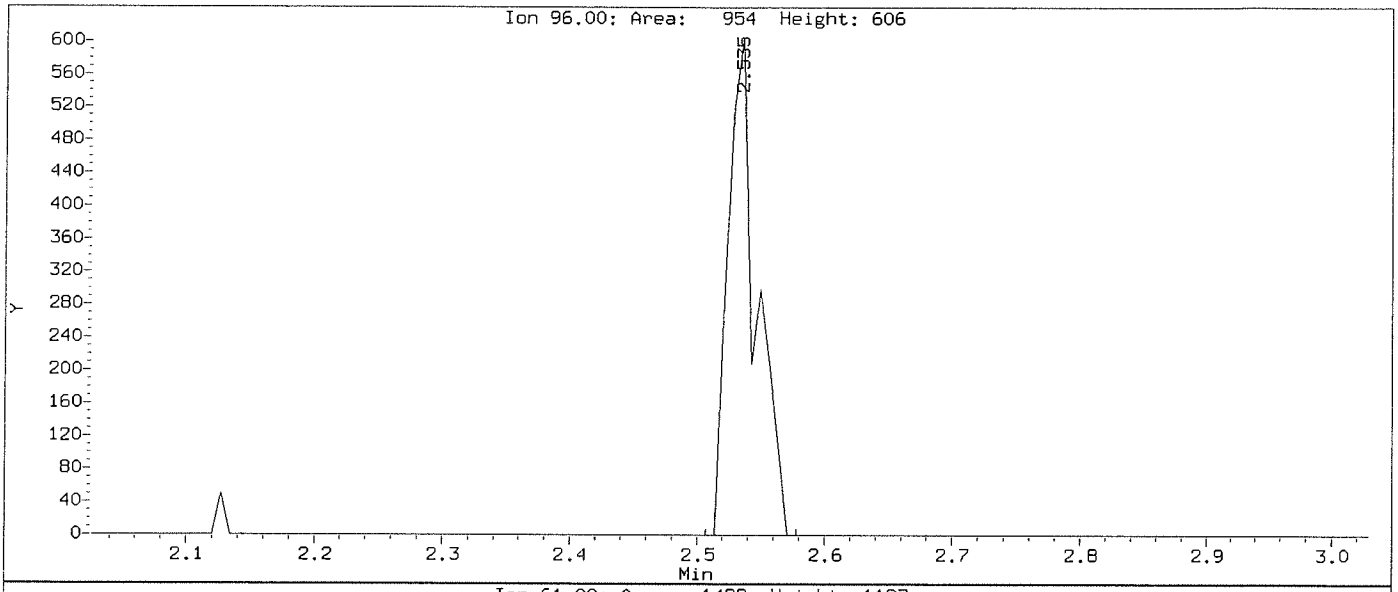
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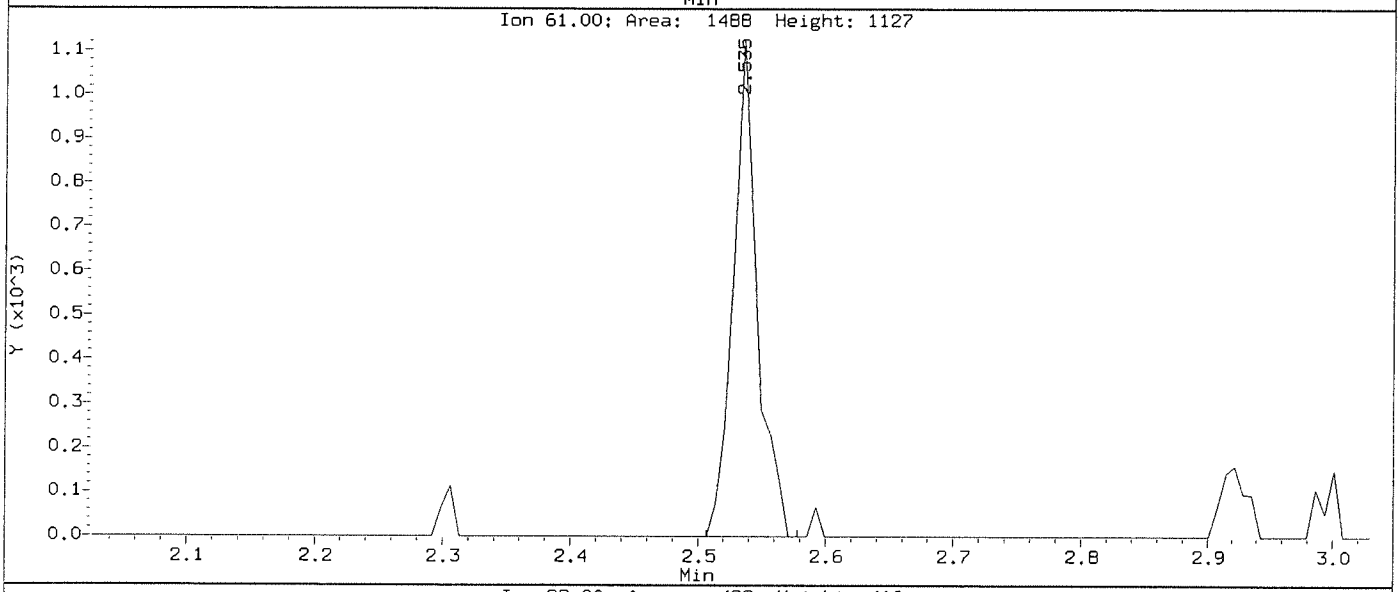
Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5

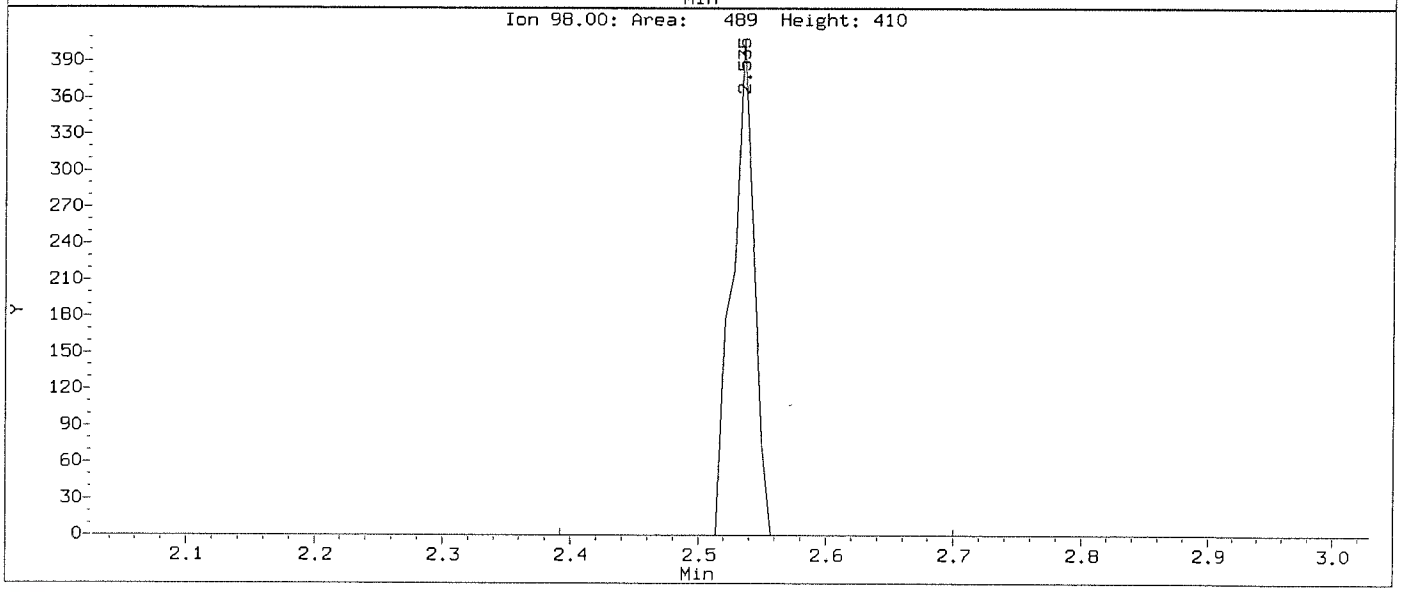


Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112203.D
Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5

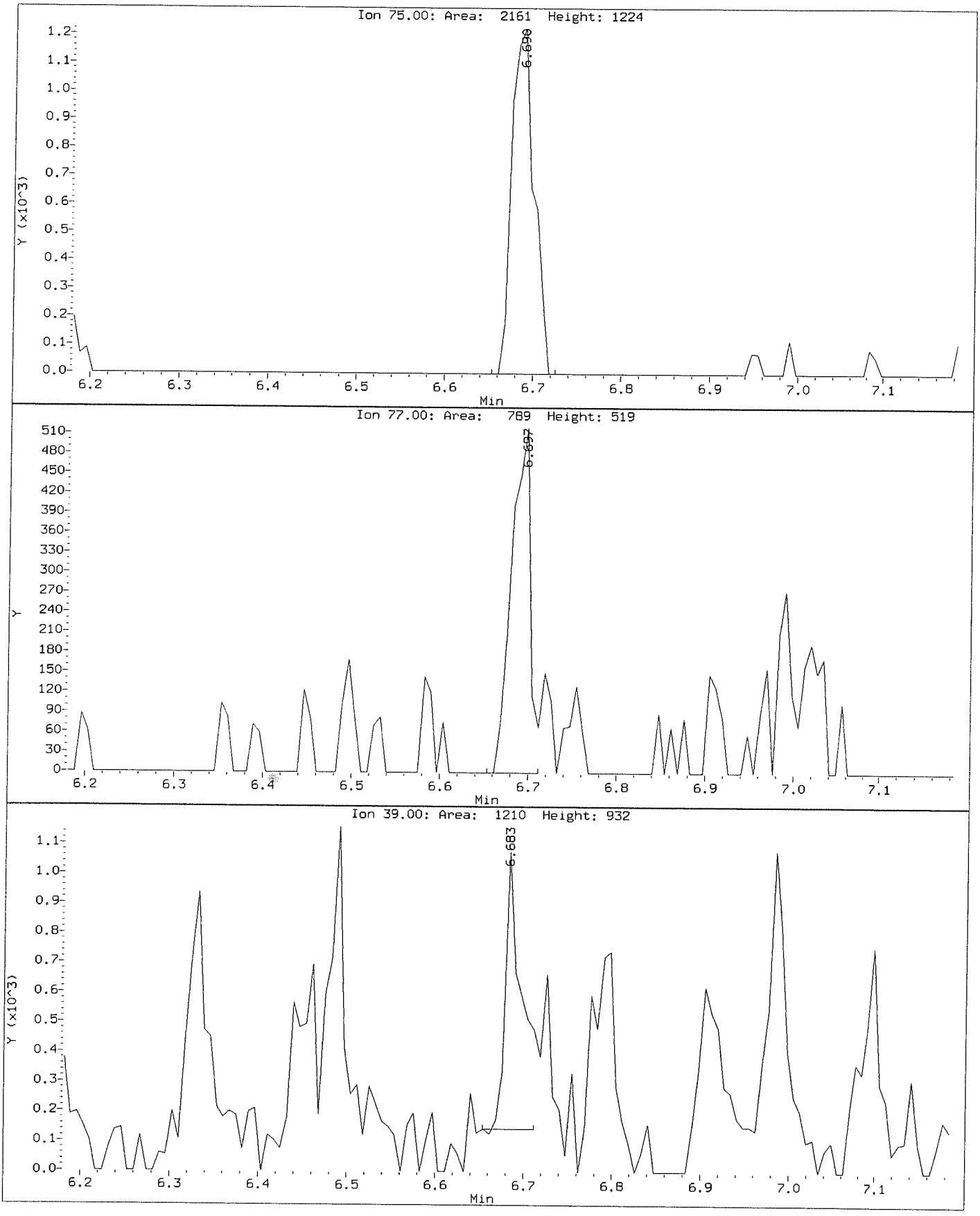






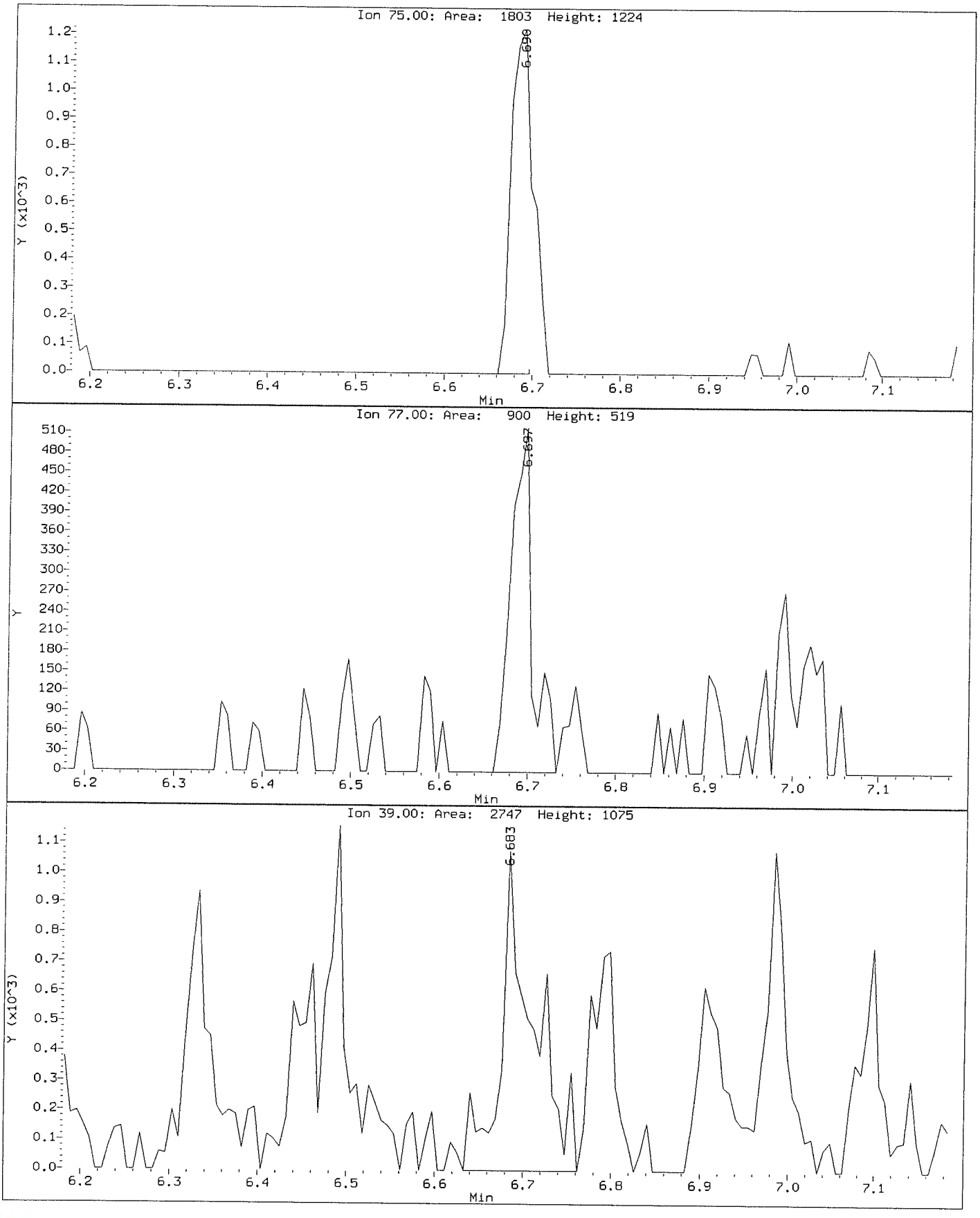
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Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,3-Dichloropropene
CAS Number: 10061-02-6



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112203.D
Injection Date: 22-NOV-2020 16:25
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,3-Dichloropropene
CAS Number: 10061-02-6



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112204.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112204.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 22-NOV-2020 16:46
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 16:25 Cal File: Y112203.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	157389	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	290010	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	272350	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	117764	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	2846	1.00000	1.24(a)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	2833	1.00000	1.86(a)
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	2622	1.00000	1.02(a)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	7505	1.00000	1.02(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1975	1.00000	0.96(a)
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	2936	1.00000	0.91(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	2422	1.00000	(aM)
138 Freon TF	101	1.912	1.912	(0.457)	3265	1.00000	1.11(a)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1877	1.00000	1.04(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	2937	1.00000	0.77(Ta)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	2970	1.00000	0.97(a)
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	2811	1.00000	0.97(a)
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	456	1.00000	2.25(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	1873	1.00000	1.05(aMH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	1120	1.00000	1.26(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	6306	1.00000	0.94(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	150	1.00000	1.04(aM)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	1756	1.00000	0.84(a)

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112204.D Page 2
Report Date: 18-Dec-2020 11:14

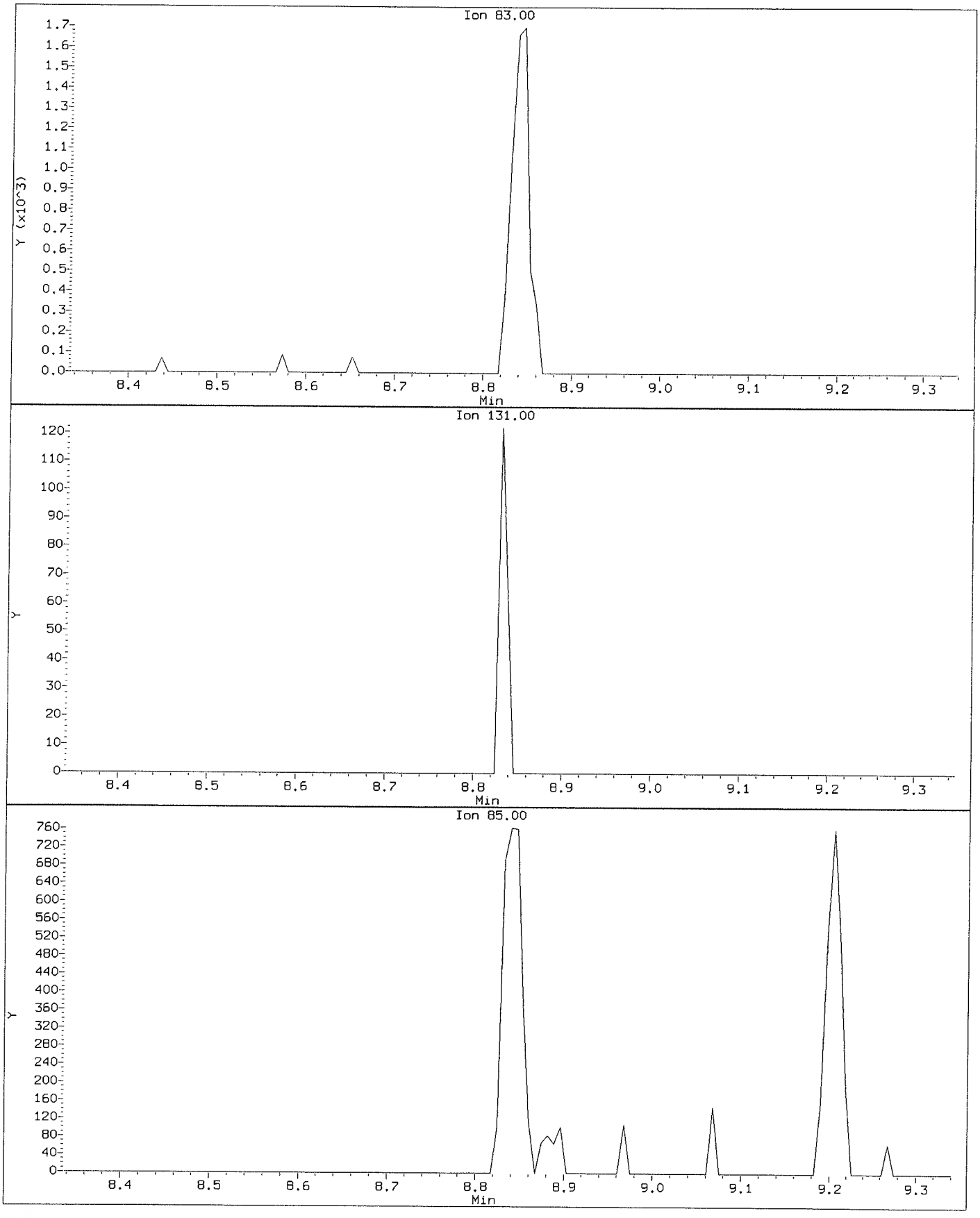
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	3072	1.00000	0.92(a)
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	3122	1.00000	0.97(aM)
42 1,2-Dichloropropane	63	5.429	5.429	(1.092)	2454	1.00000	1.06(aM)
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	6209	1.00000	0.88(a)
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	4262	1.00000	1.20(a)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	2998	1.00000	0.89(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	5321	1.00000	2.05(aM)
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	3485	1.00000	1.04(a)
24 2-Butanone	43	3.595	3.595	(0.860)	1497	2.00000	1.98(aM)
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	5818	1.00000	1.00(a)
52 2-Hexanone	43	7.090	7.090	(0.924)	2772	2.00000	2.85(a)
77 4-Chlorotoluene	91	9.067	9.067	(0.938)	6101	1.00000	0.86(a)
82 p-Isopropyltoluene	119	9.648	9.648	(0.999)	8283	1.00000	2.73(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	3914	2.00000	2.76(a)
10 Acetone	43	1.976	1.976	(0.473)	4436	2.00000	1.94(a)
37 Benzene	78	4.519	4.519	(0.909)	7987	1.00000	1.00(a)
74 Bromobenzene	156	8.810	8.810	(0.912)	1761	1.00000	0.88(a)
29 Bromochloromethane	128	3.803	3.803	(0.909)	987	1.00000	0.88(a)
39 Bromodichloromethane	83	5.737	5.737	(1.154)	2628	1.00000	0.85(aM)
66 Bromoform	173	8.408	8.408	(1.096)	847	1.00000	2.76(aM)
6 Bromomethane	94	1.339	1.339	(0.320)	3745	1.00000	2.11(aM)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	11209	2.00000	1.91(a)
34 Carbon Tetrachloride	117	4.261	4.261	(0.857)	2507	1.00000	1.00(aH)
59 Chlorobenzene	112	7.699	7.699	(1.004)	5911	1.00000	1.01(a)
7 Chloroethane	64	1.403	1.403	(0.336)	2057	1.00000	0.84(a)
28 Chloroform	83	3.910	3.910	(0.935)	3974	1.00000	0.96(a)
3 Chloromethane	50	1.081	1.081	(0.258)	3488	1.00000	1.20(aM)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	2320	1.00000	1.00(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	3169	1.00000	0.86(a)
55 Dibromochloromethane	129	7.176	7.176	(0.936)	1784	1.00000	0.84(a)
44 Dibromomethane	93	5.558	5.558	(1.118)	1394	1.00000	0.91(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	2576	1.00000	3.54(a)
61 Ethylbenzene	106	7.800	7.800	(1.017)	3051	1.00000	1.03(a)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	832	1.00000	2.85(aM)
67 Isopropylbenzene	105	8.559	8.559	(1.116)	7847	1.00000	0.88(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	6329	2.00000	8.30
17 Methylene Chloride	84	2.306	2.306	(0.551)	2103	1.00000	0.97(a)
87 n-Butylbenzene	91	9.991	9.991	(1.034)	8864	1.00000	4.21(a)
73 n-Propylbenzene	91	8.917	8.917	(0.923)	9663	1.00000	0.98(a)
92 Naphthalene	128	11.546	11.546	(1.195)	1209	1.00000	1.98(aM)
63 o-Xylene	106	8.244	8.244	(1.075)	3459	1.00000	3.69(a)
81 sec-Butylbenzene	105	9.519	9.519	(0.985)	8872	1.00000	1.62(a)
64 Styrene	104	8.265	8.265	(1.078)	5398	1.00000	0.85(a)
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	5724	1.00000	1.04(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	1668	1.00000	0.99(a)
50 Toluene	91	6.453	6.453	(0.841)	8614	1.00000	0.97(a)
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	1839	1.00000	0.94(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	2740	1.00000	0.86(a)
38 Trichloroethene	130	5.207	5.207	(1.048)	2157	1.00000	1.06(a)
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	6442	1.00000	1.08(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	4113	1.00000	1.08(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.
H - Operator selected an alternate compound hit.

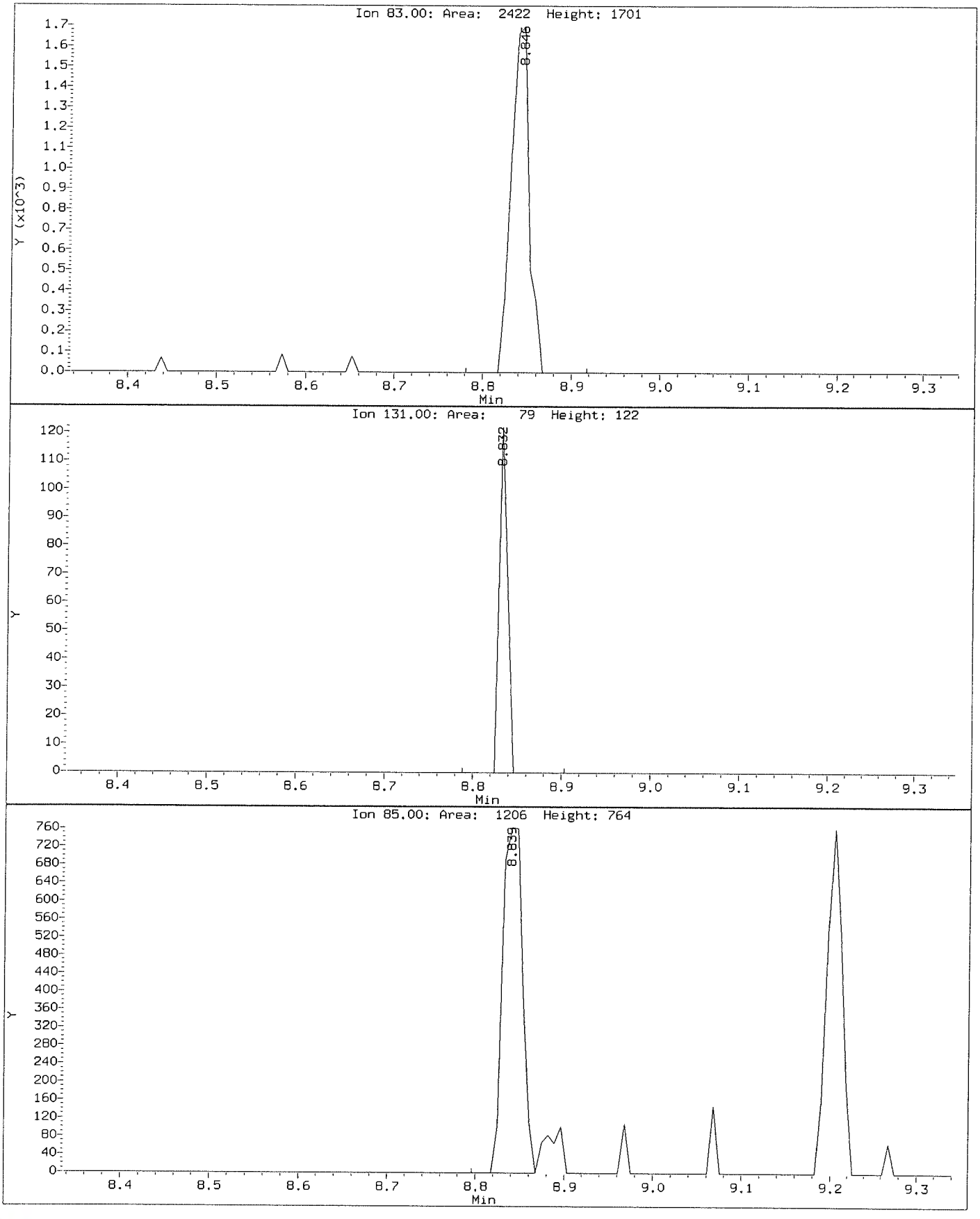
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Injection Date: 22-NOV-2020 16:46
Instrument: voa6.i
Client Sample ID: VSTD001

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



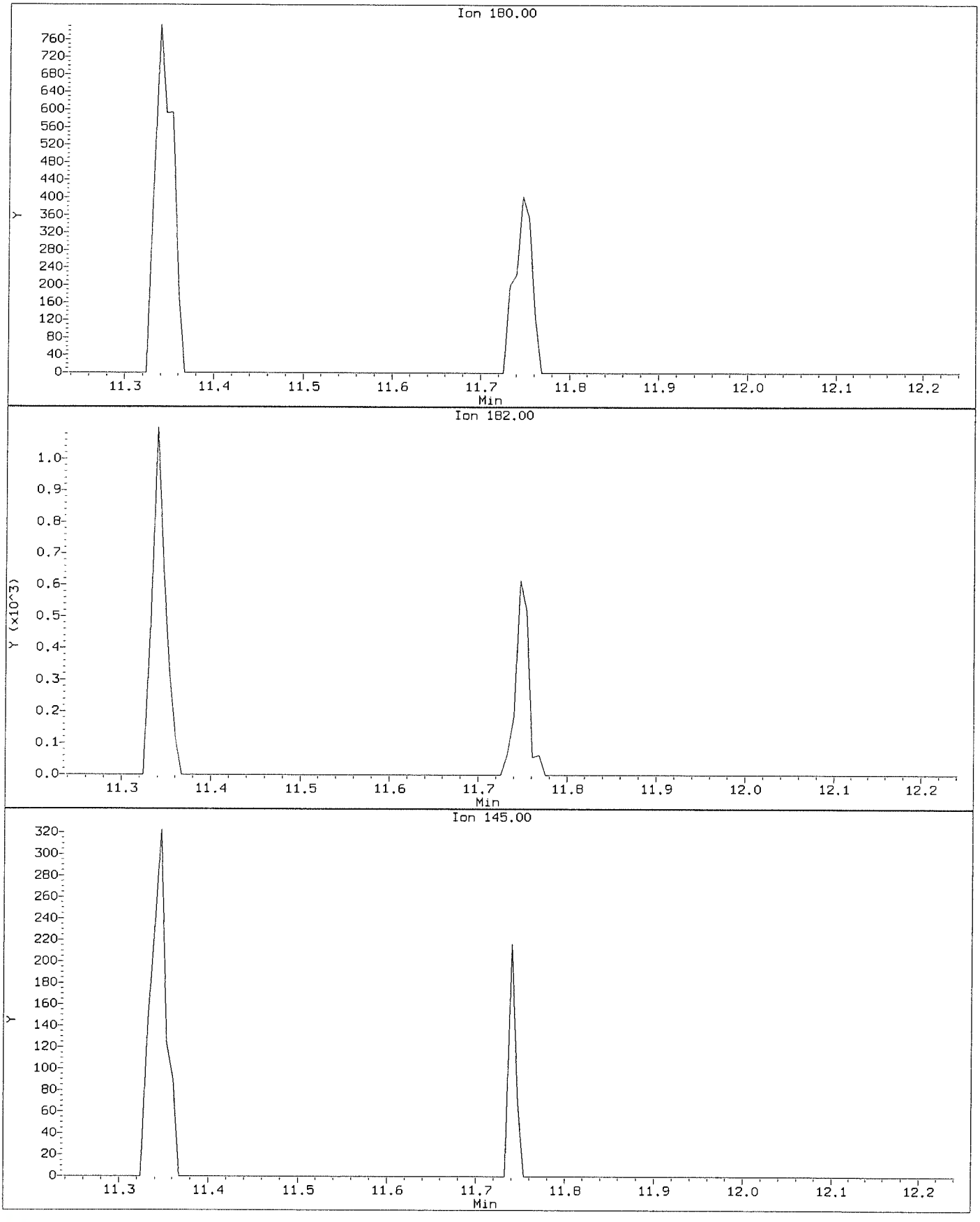
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Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



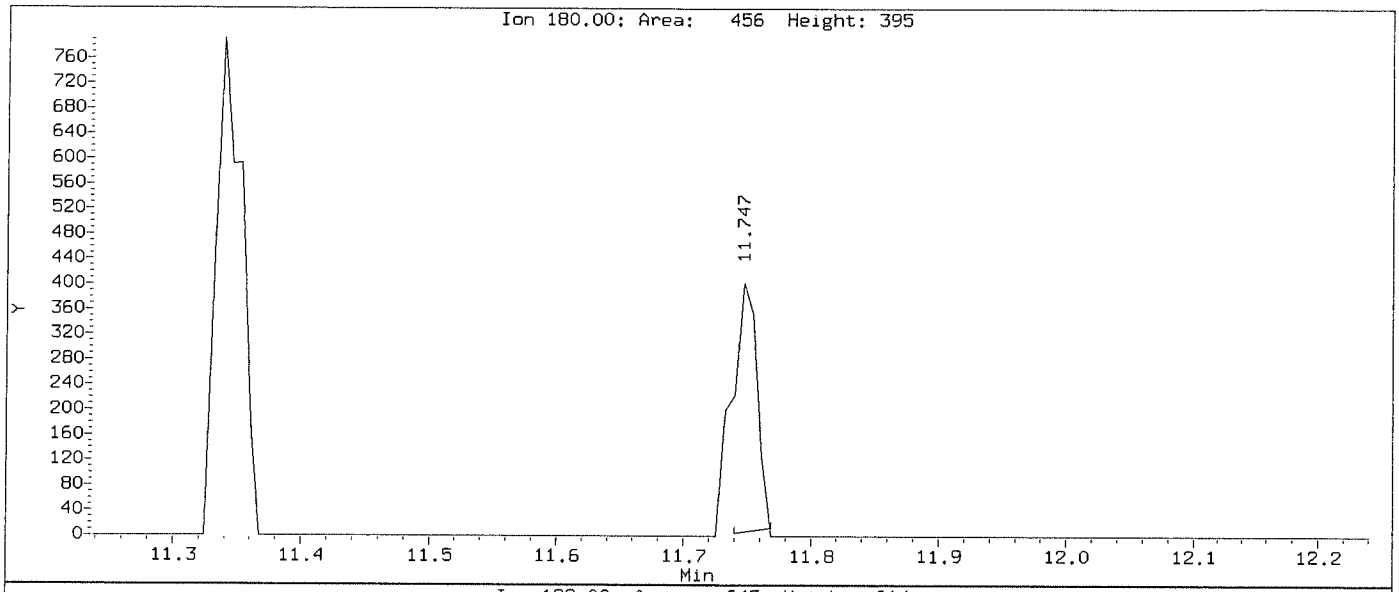
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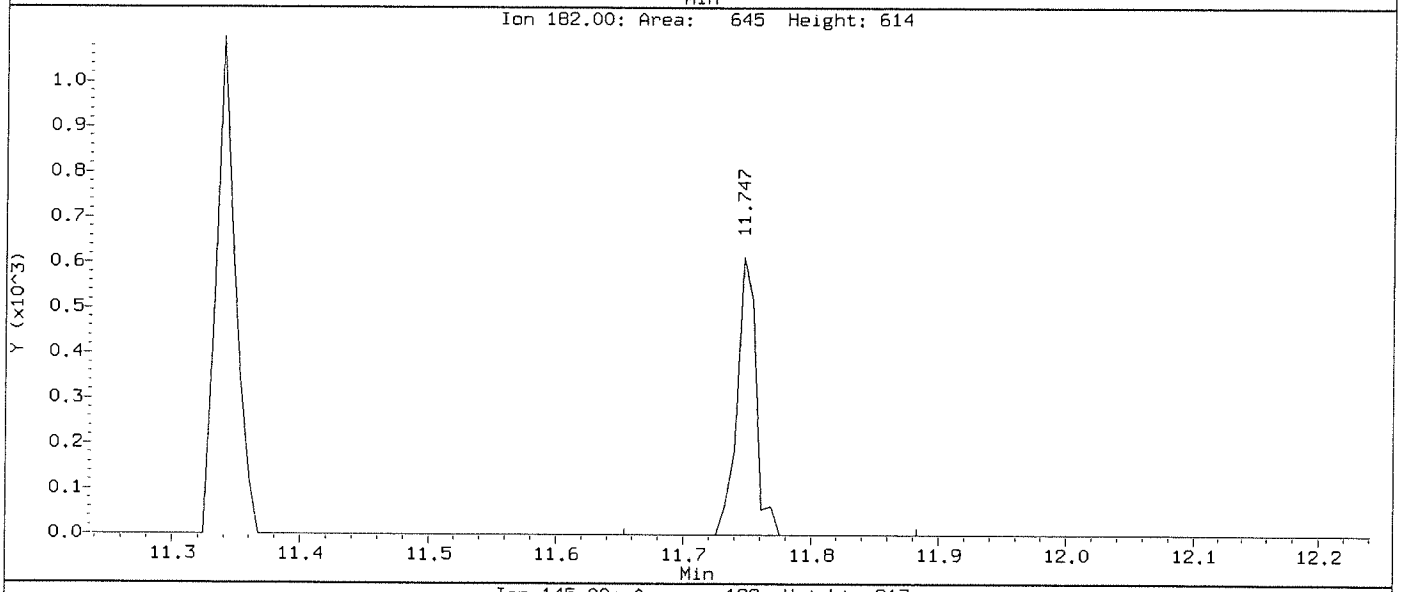
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CAS Number: 87-61-6

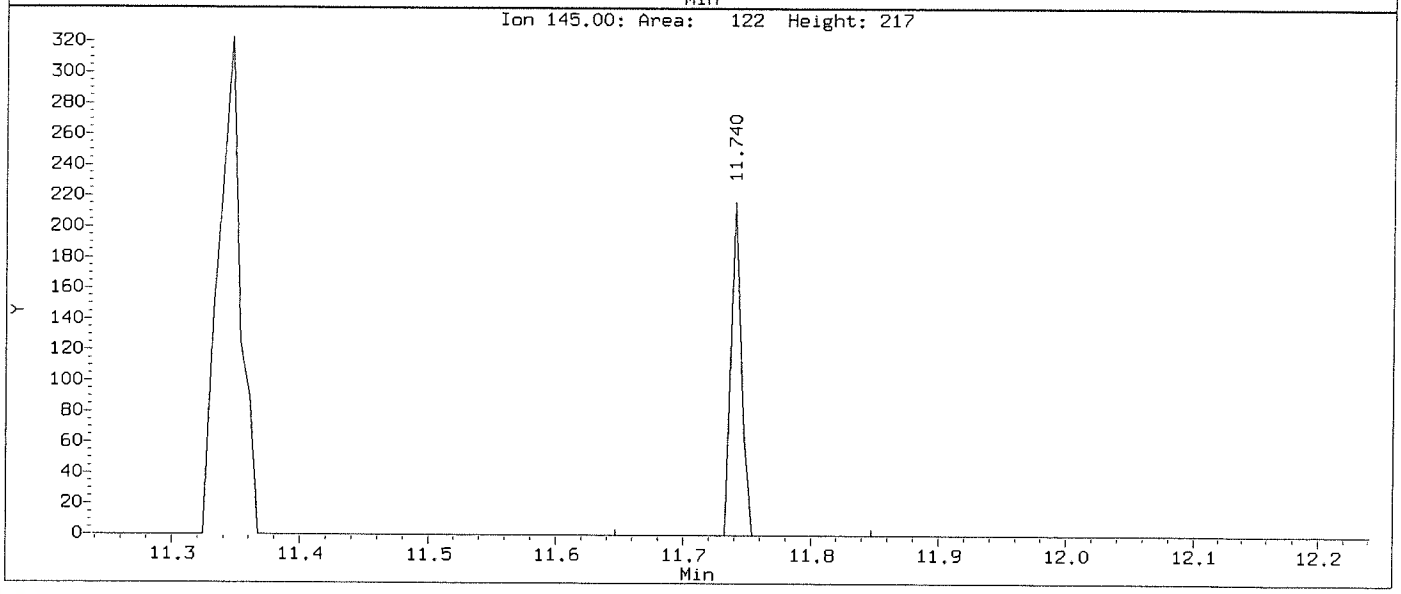


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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

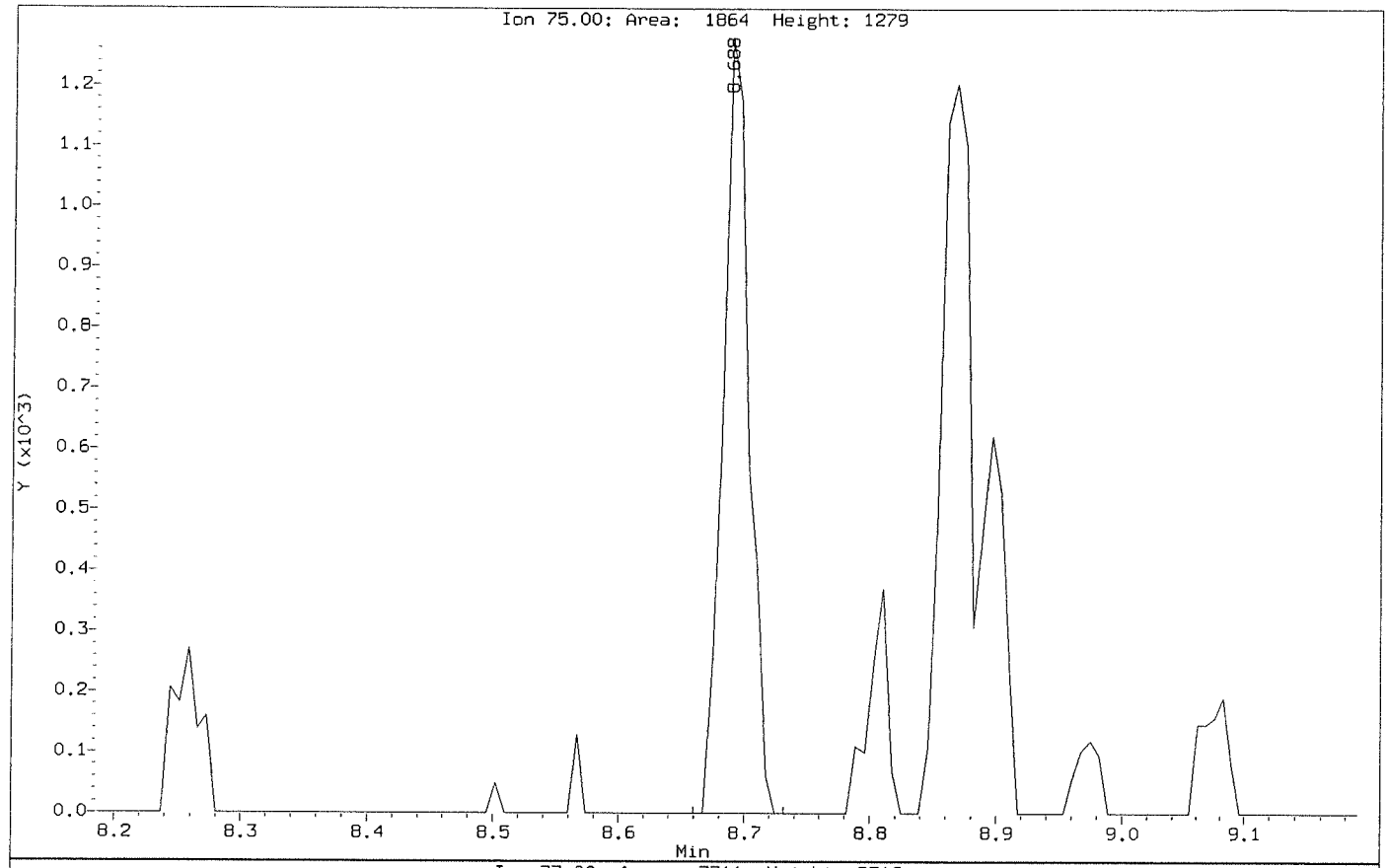


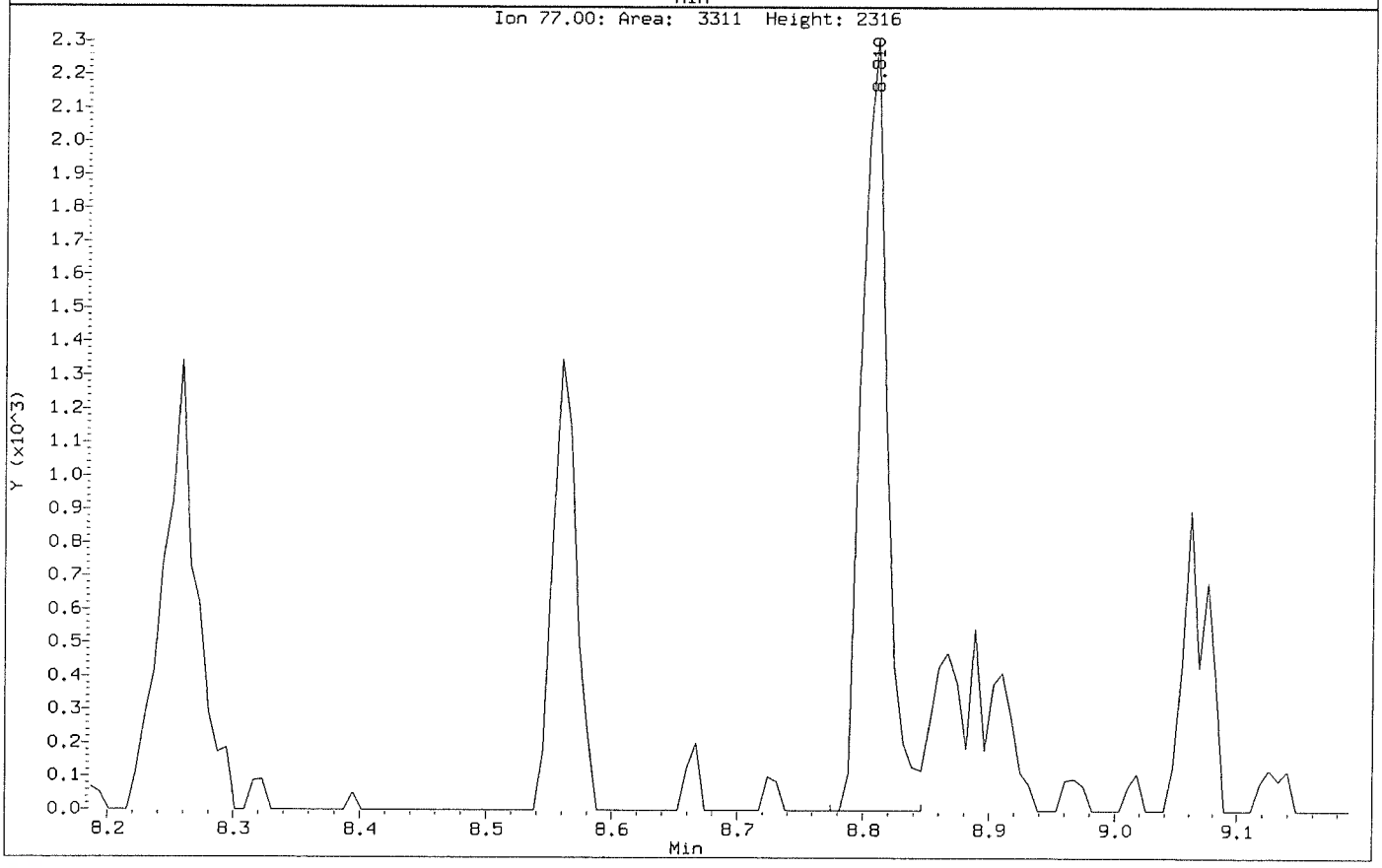




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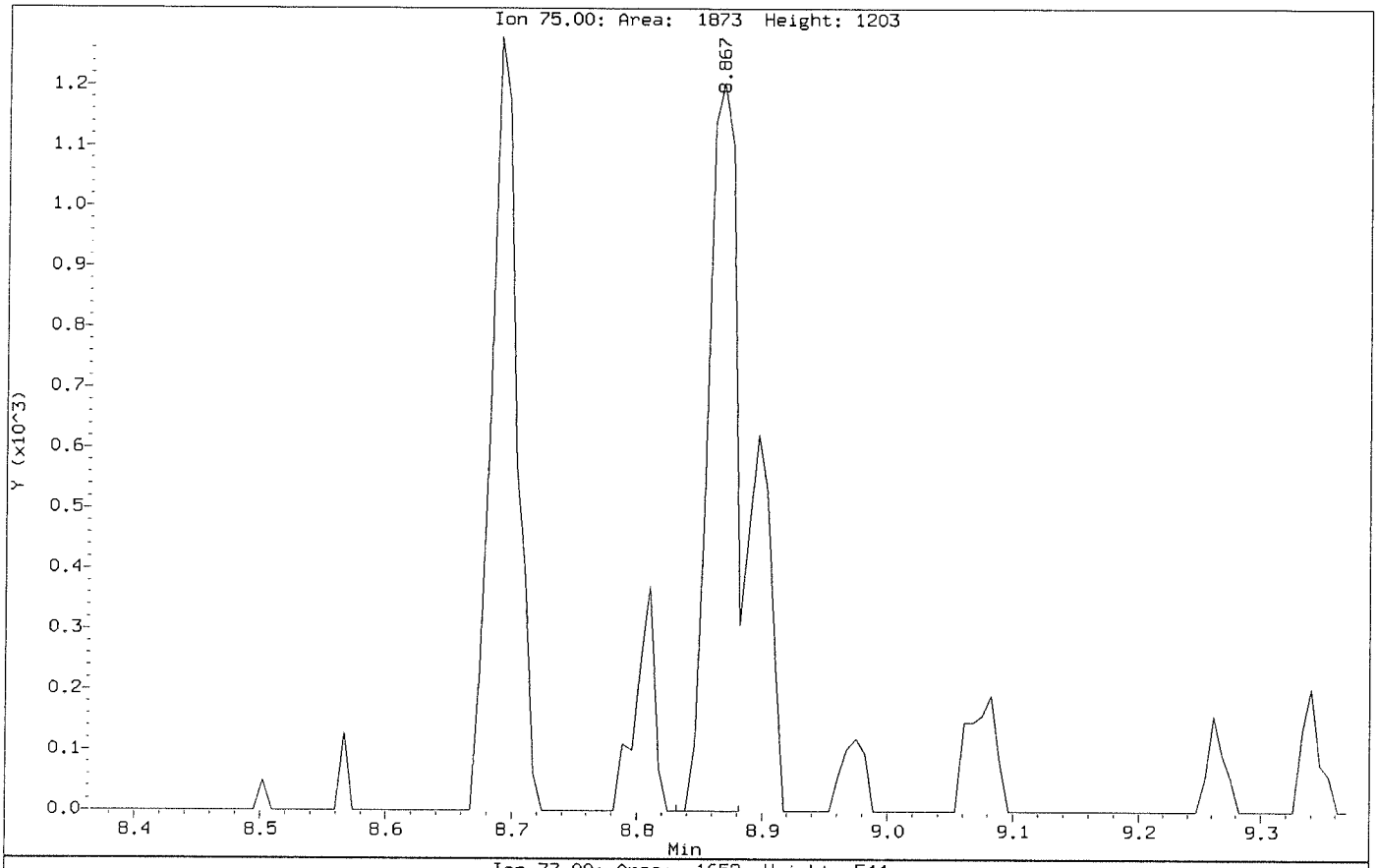
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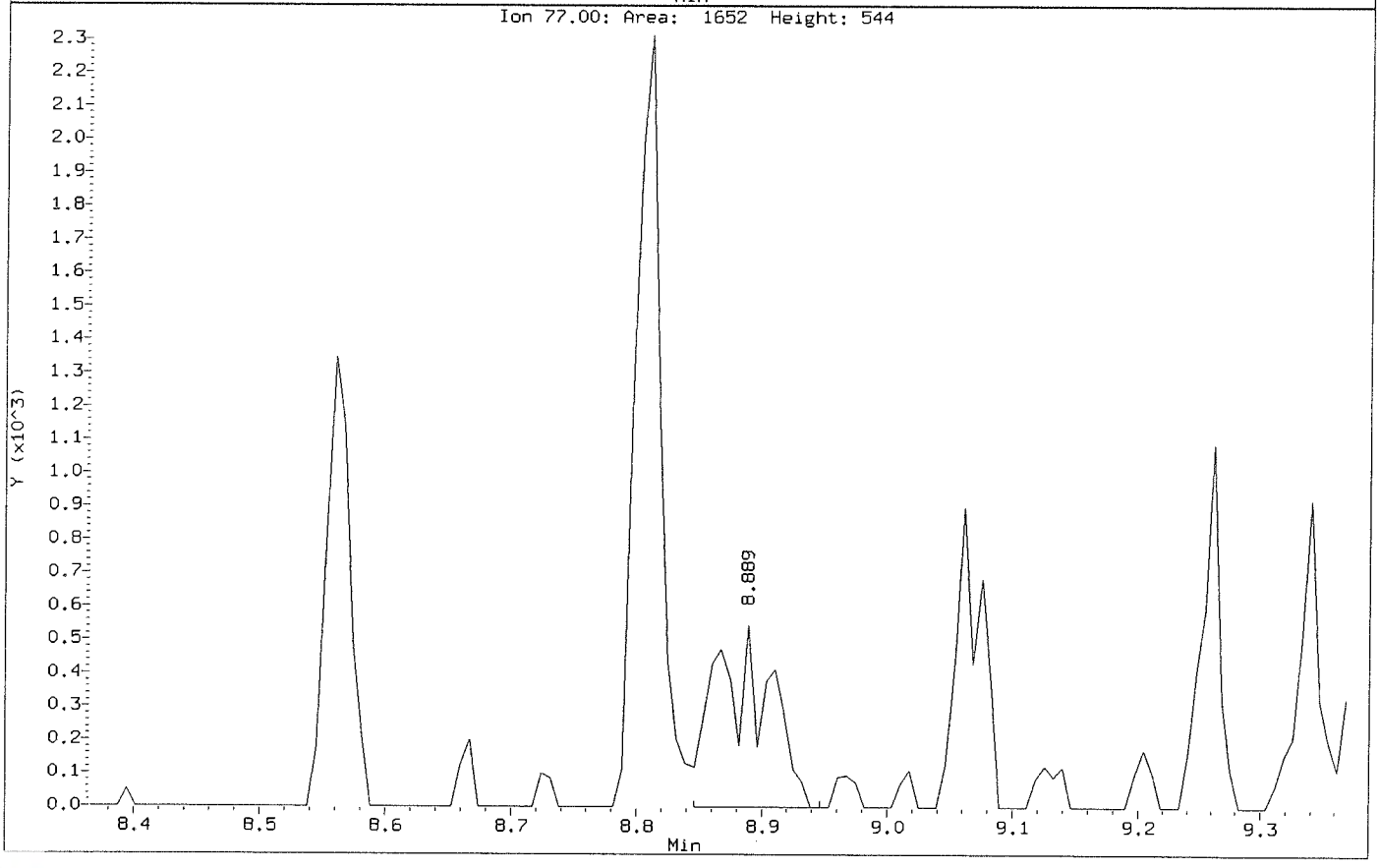




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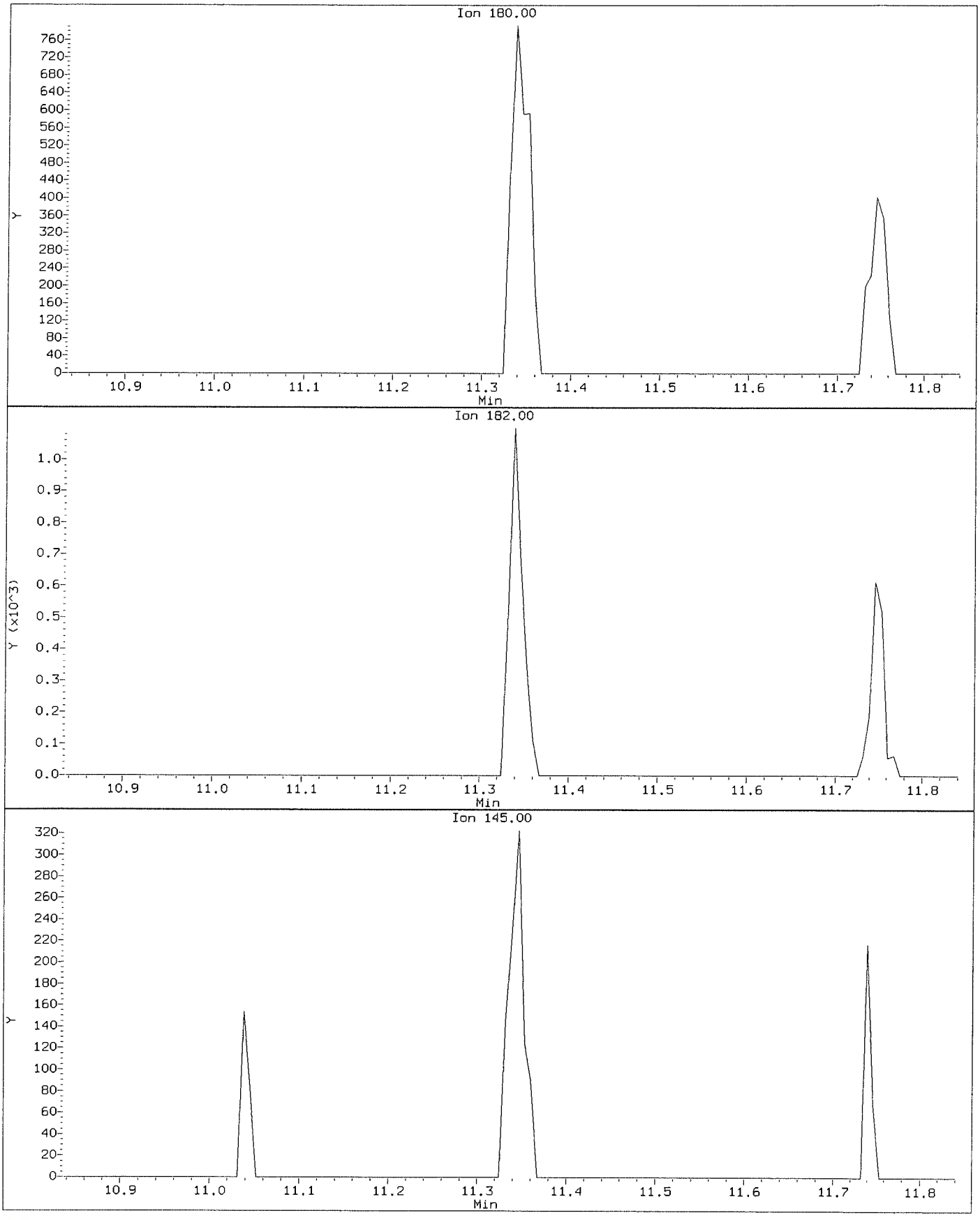
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CAS Number: 96-18-4





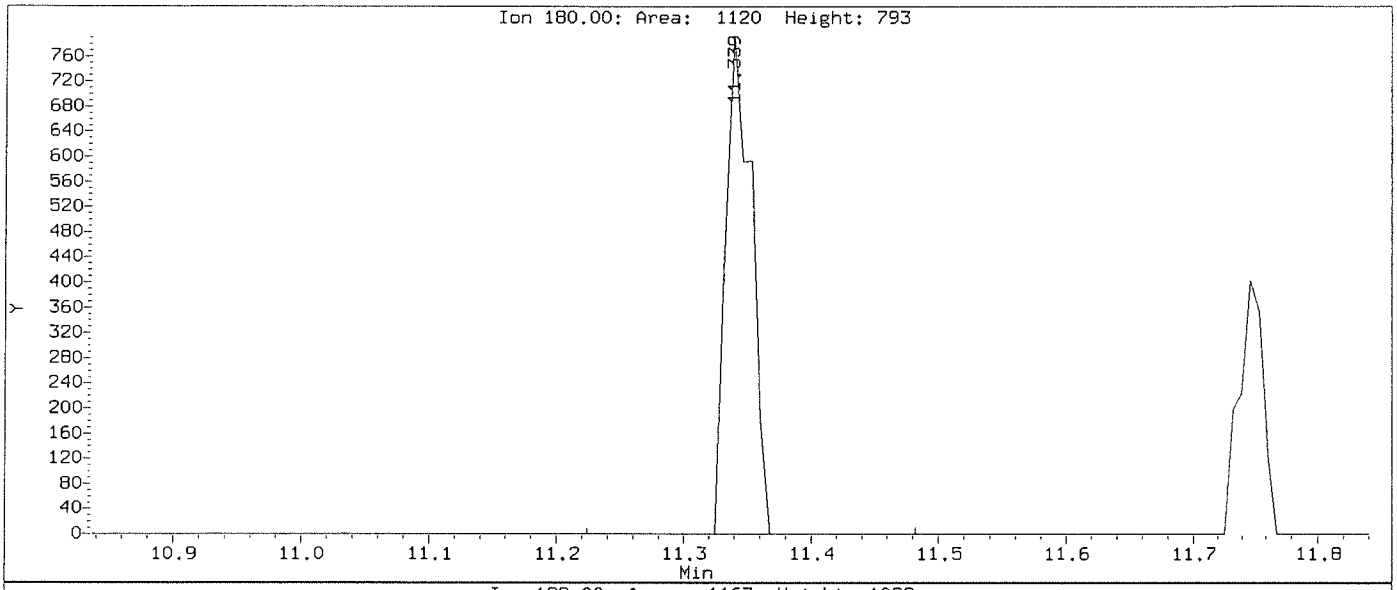
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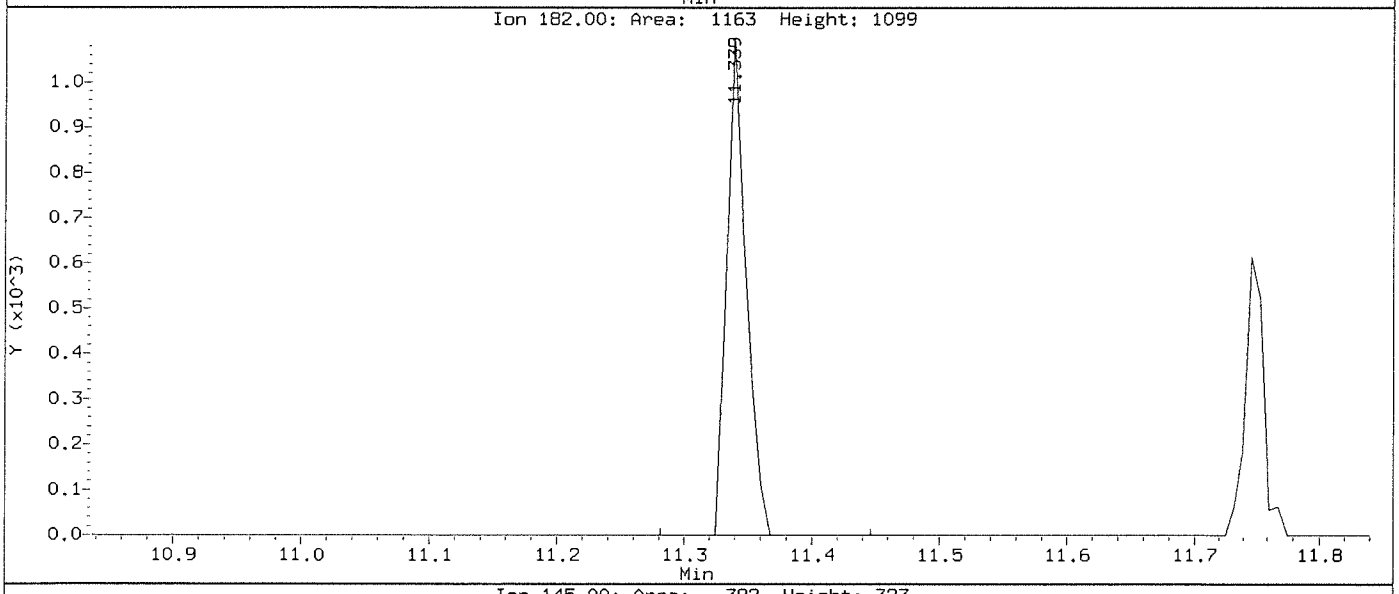
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1

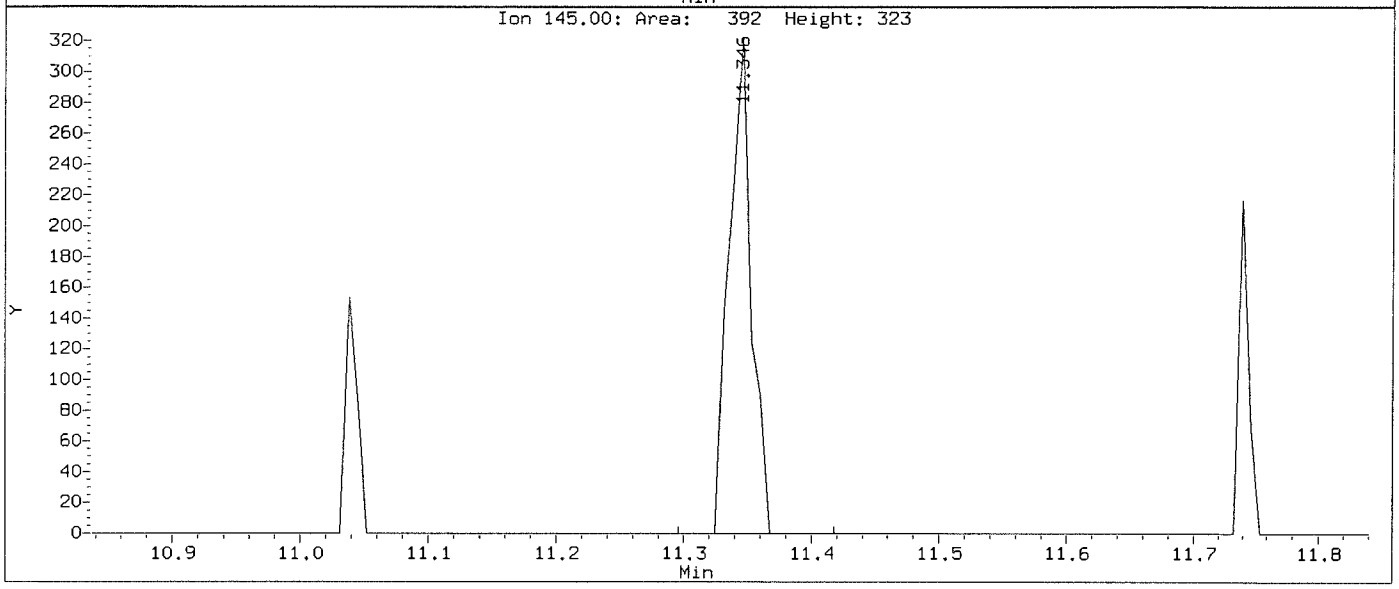


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Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1

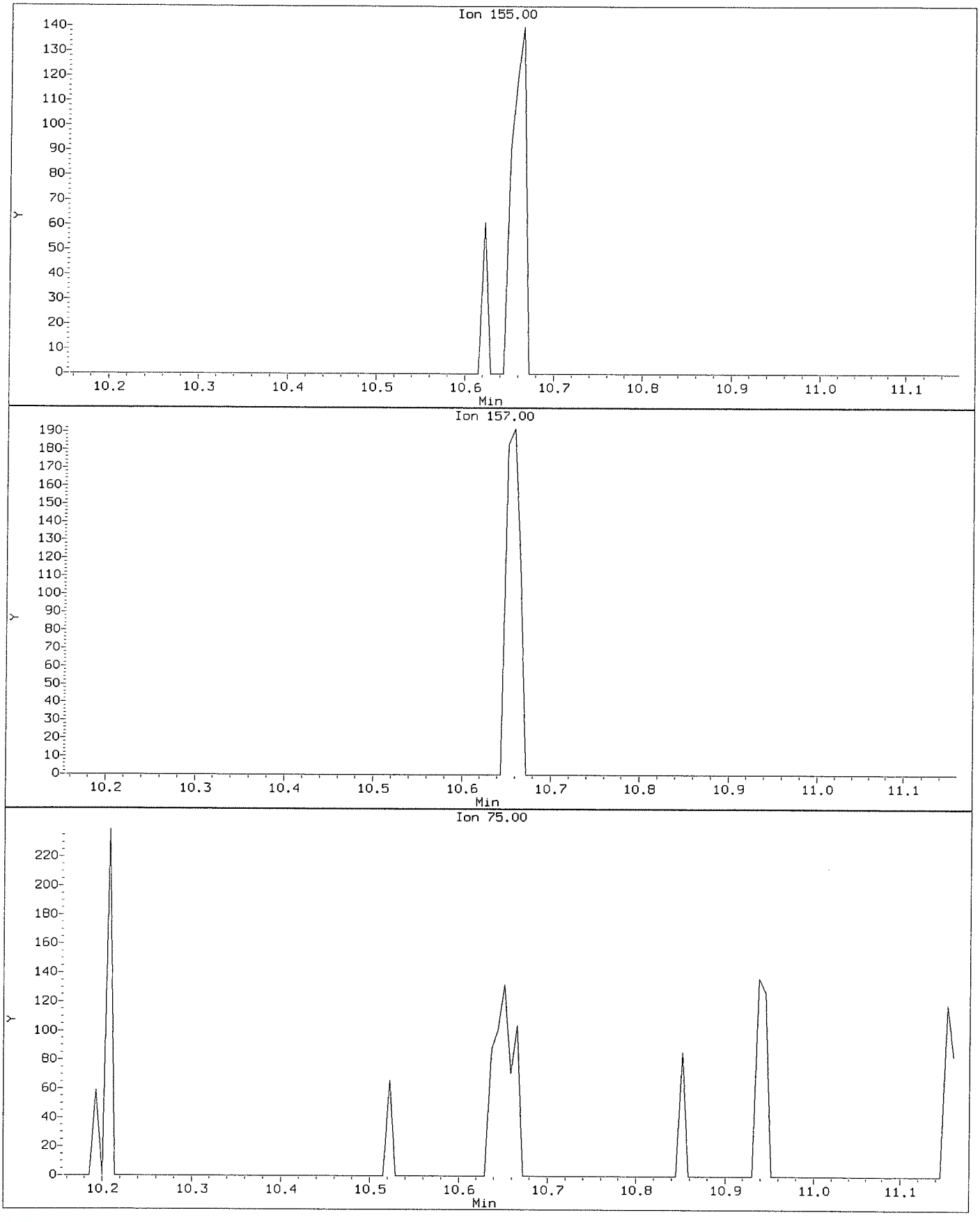






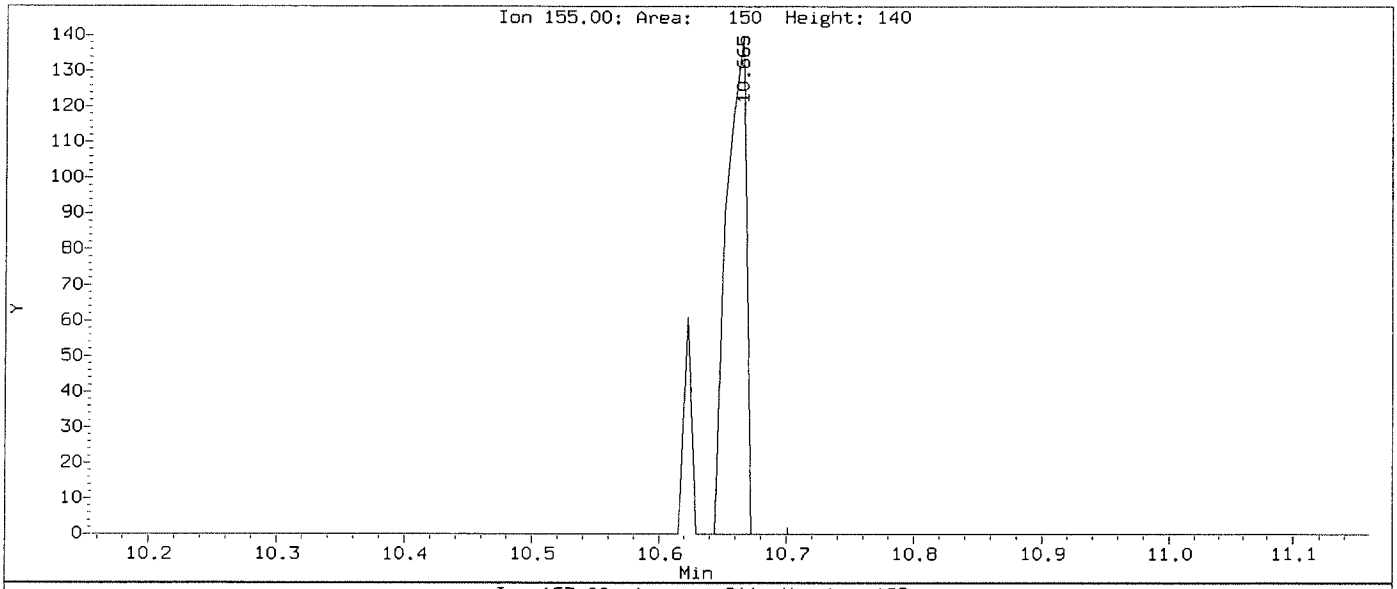
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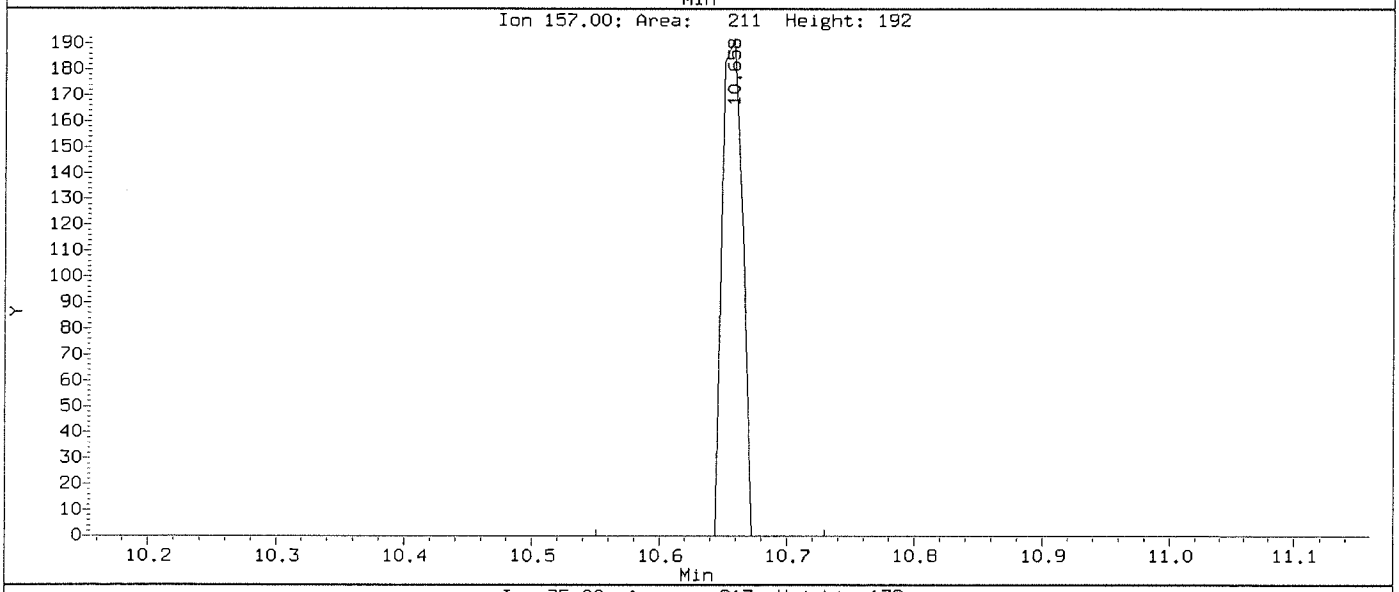
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CAS Number: 96-12-8

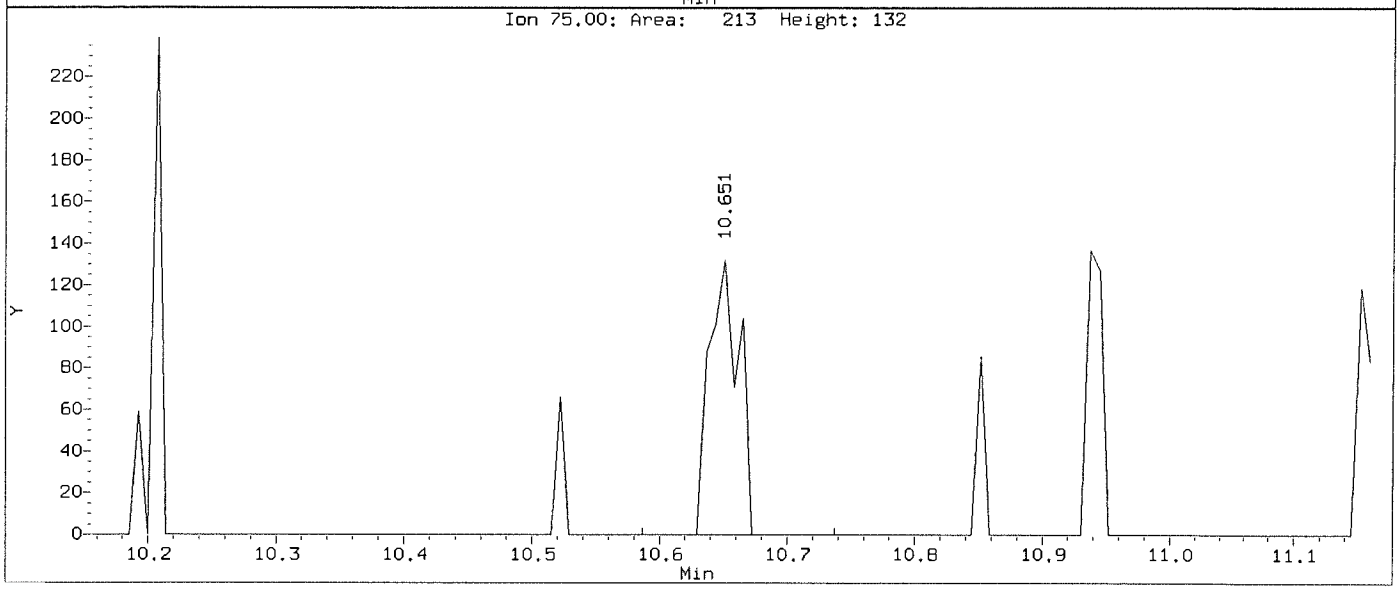


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Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

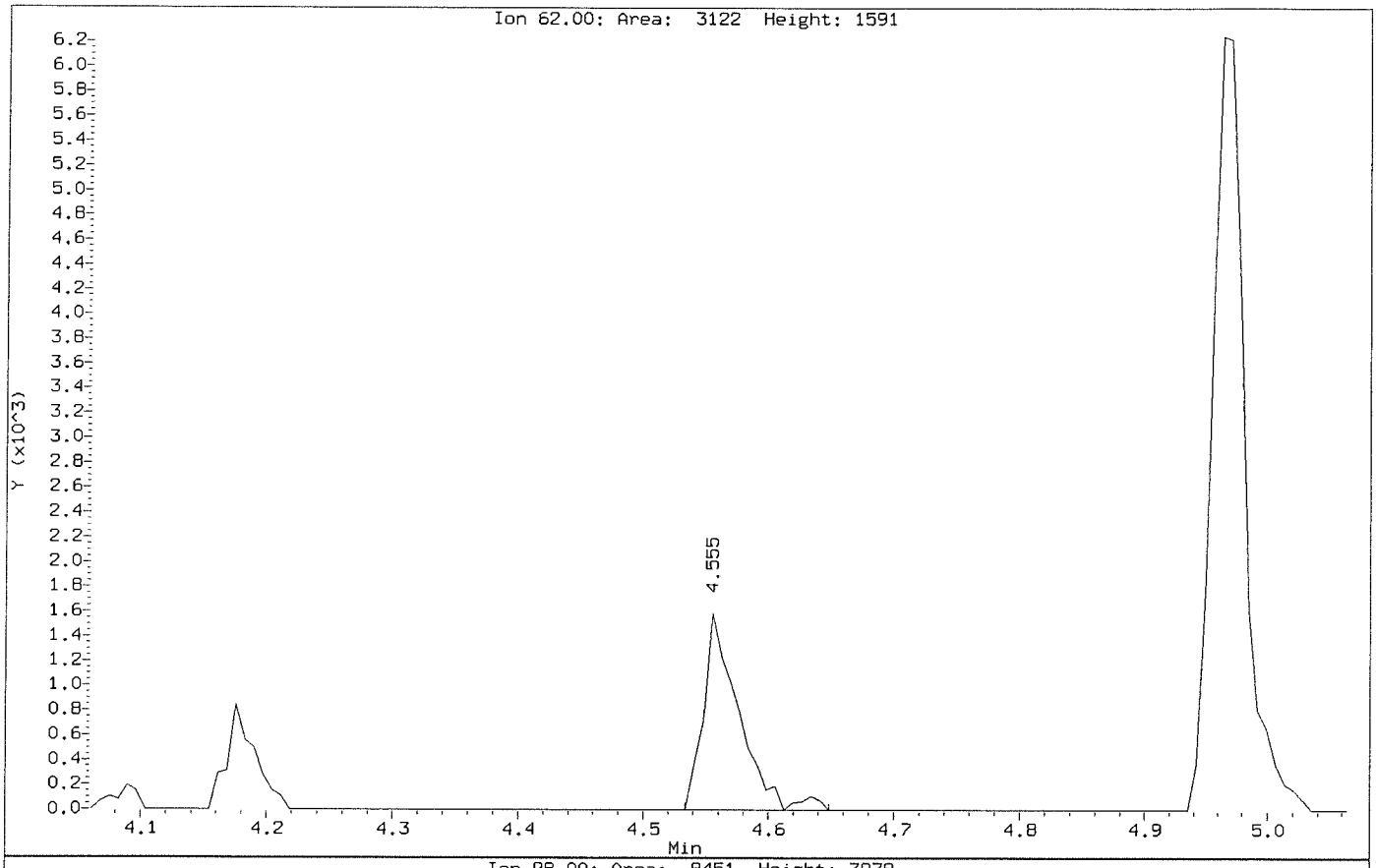


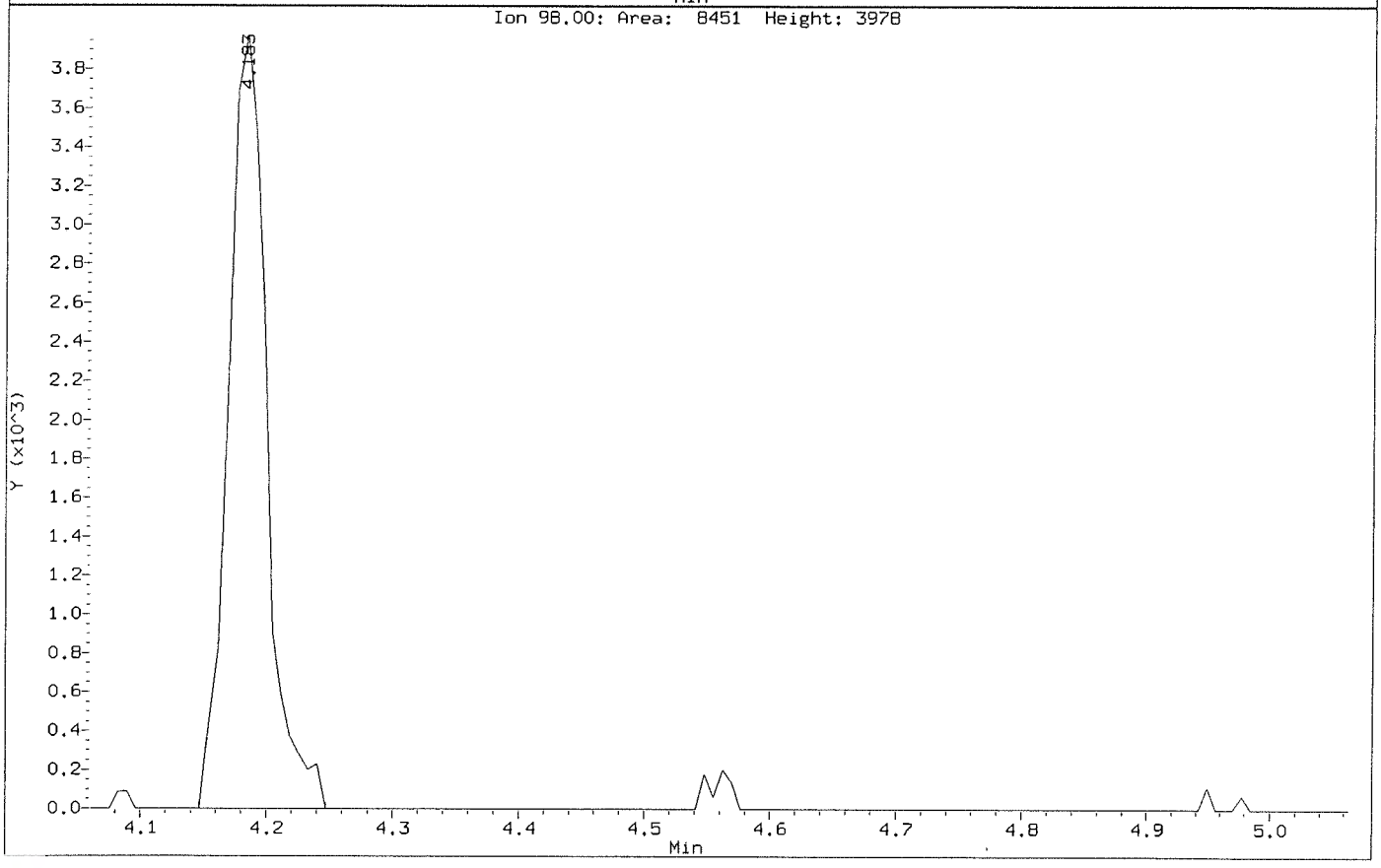




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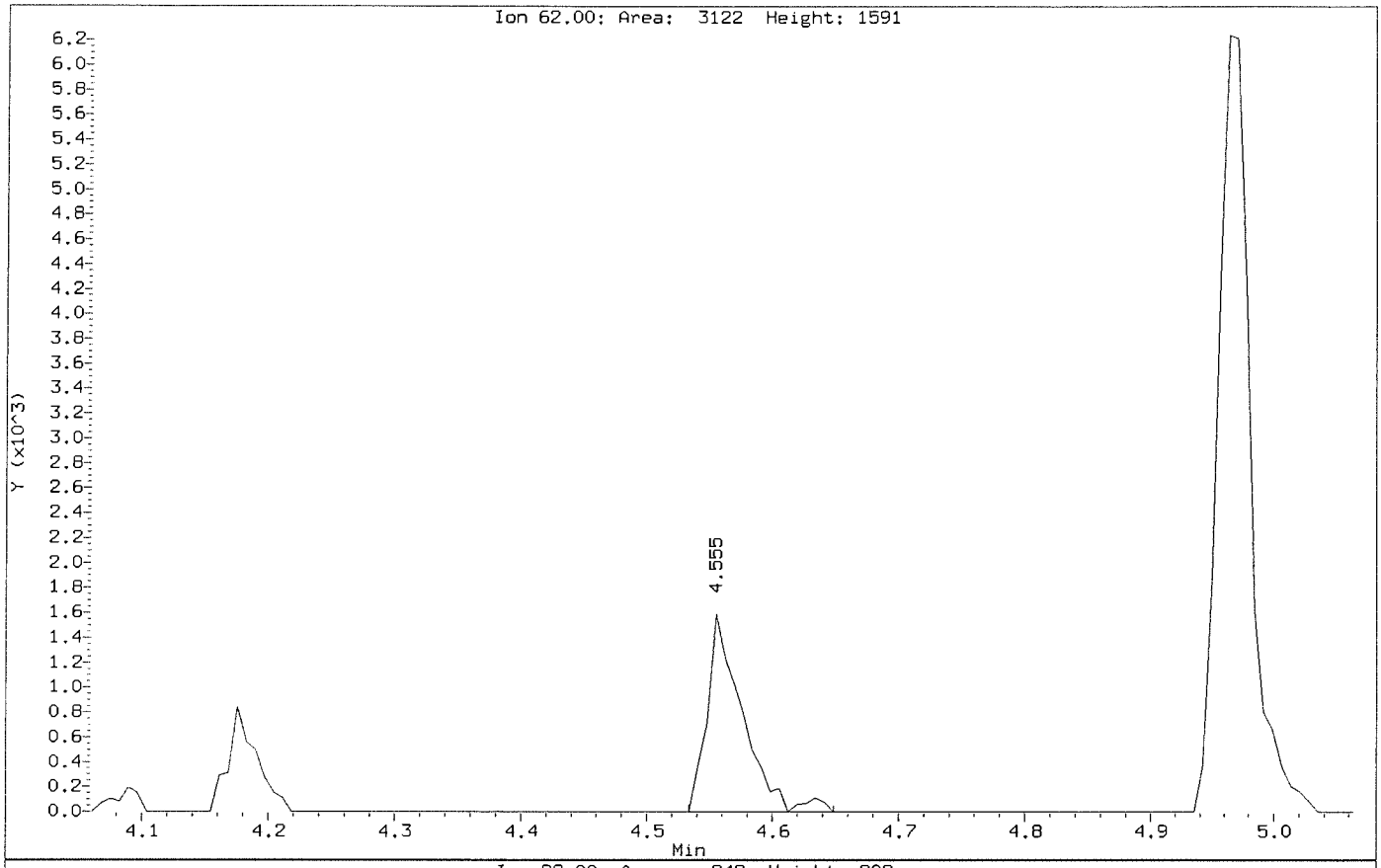
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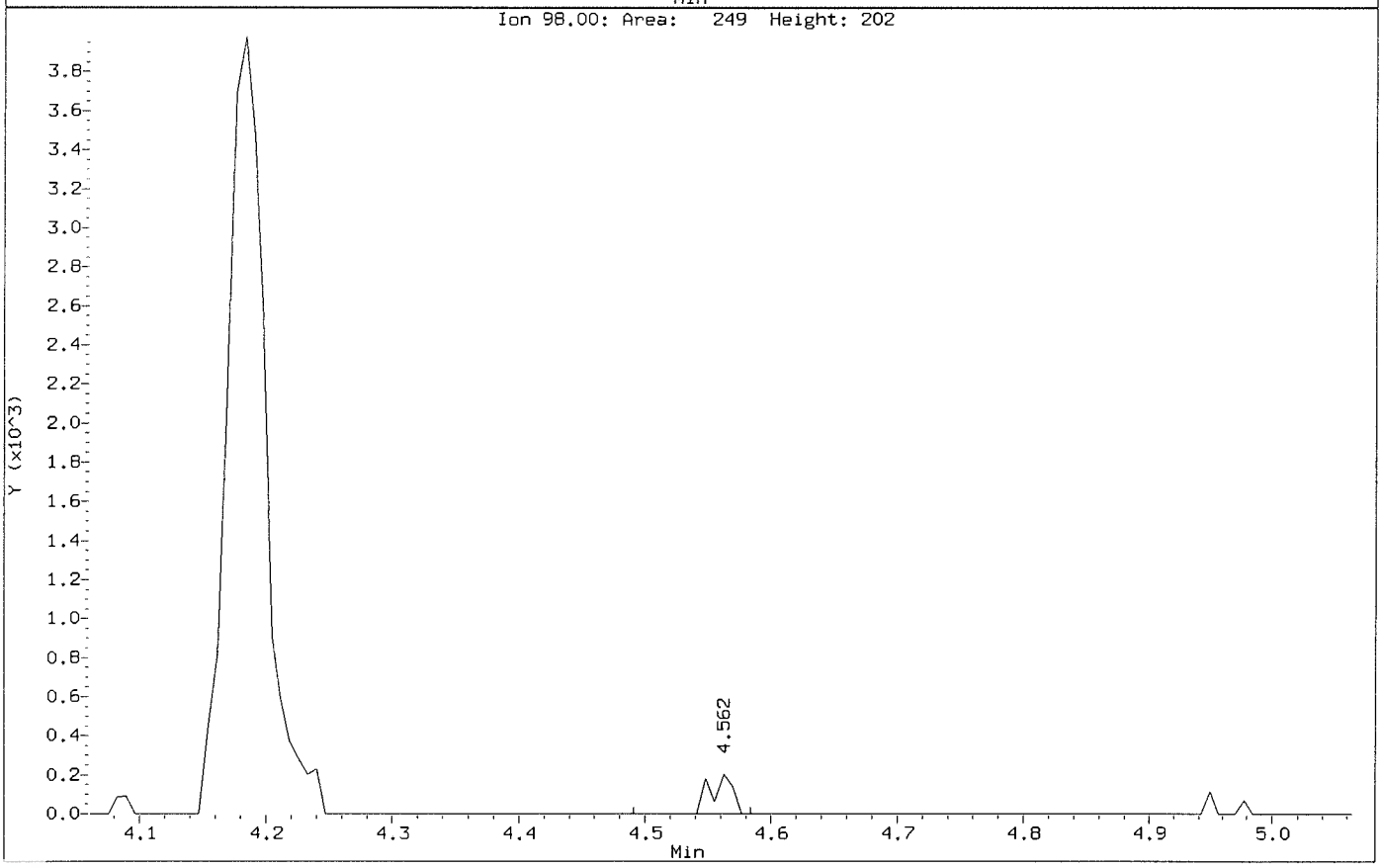




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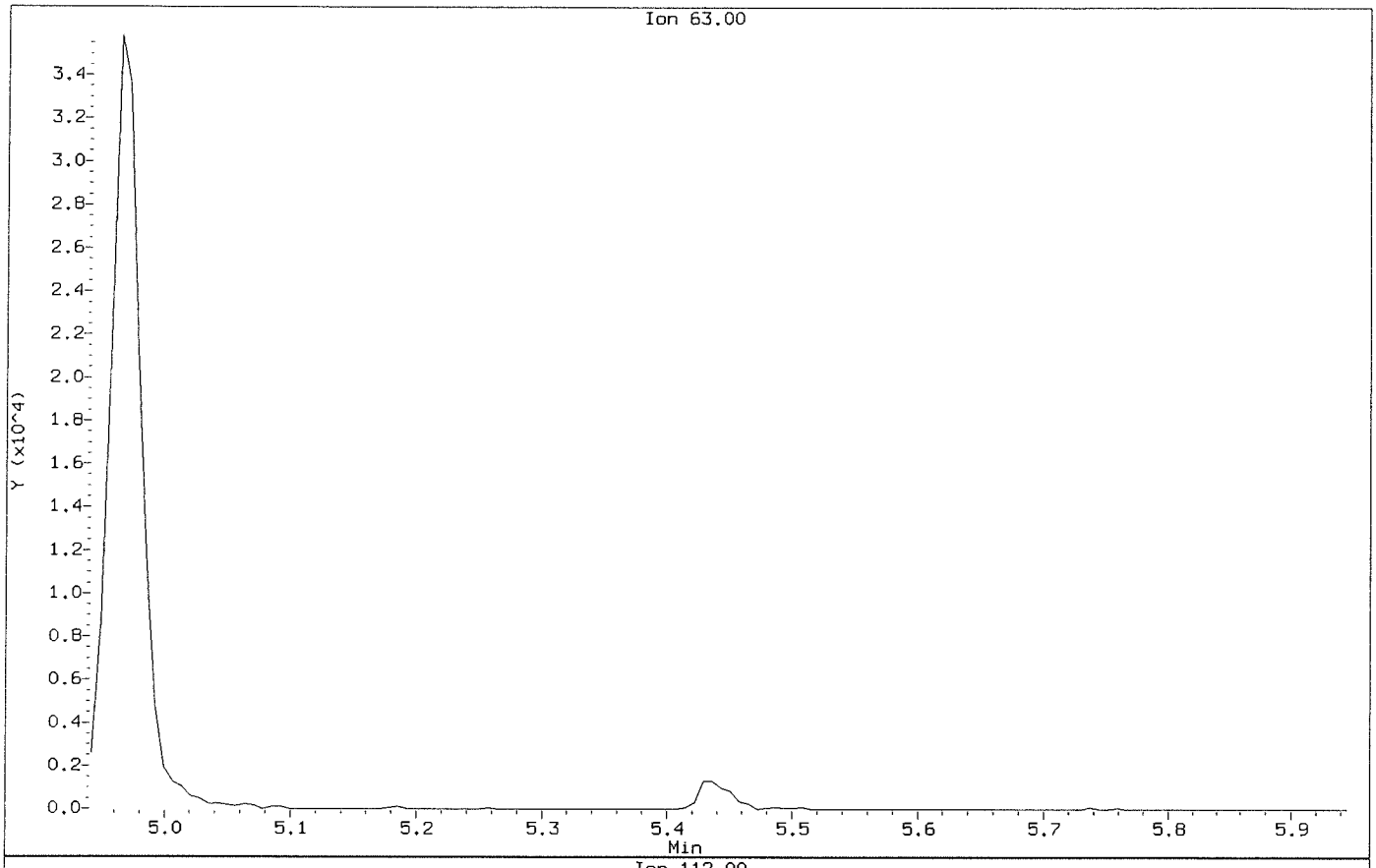
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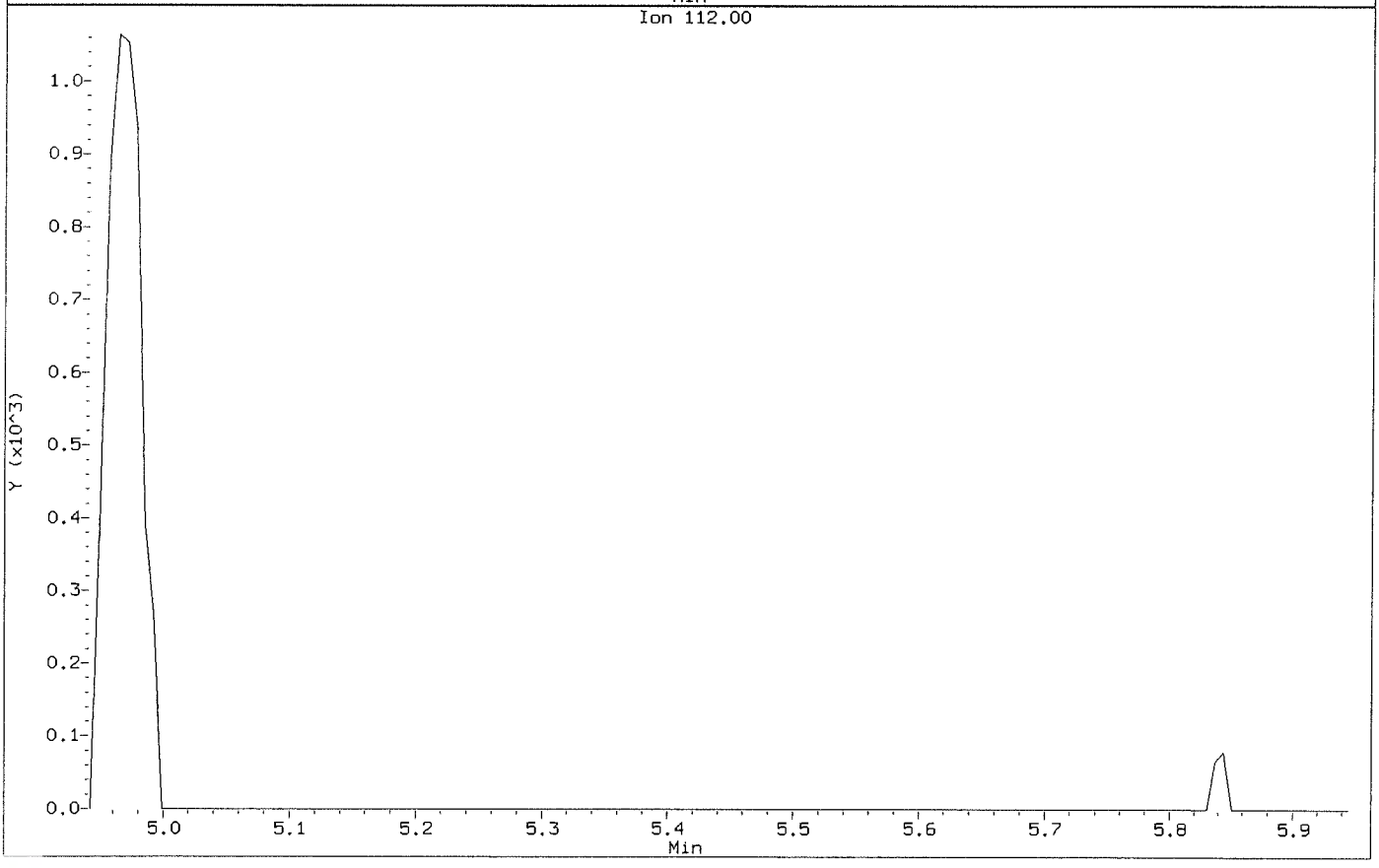




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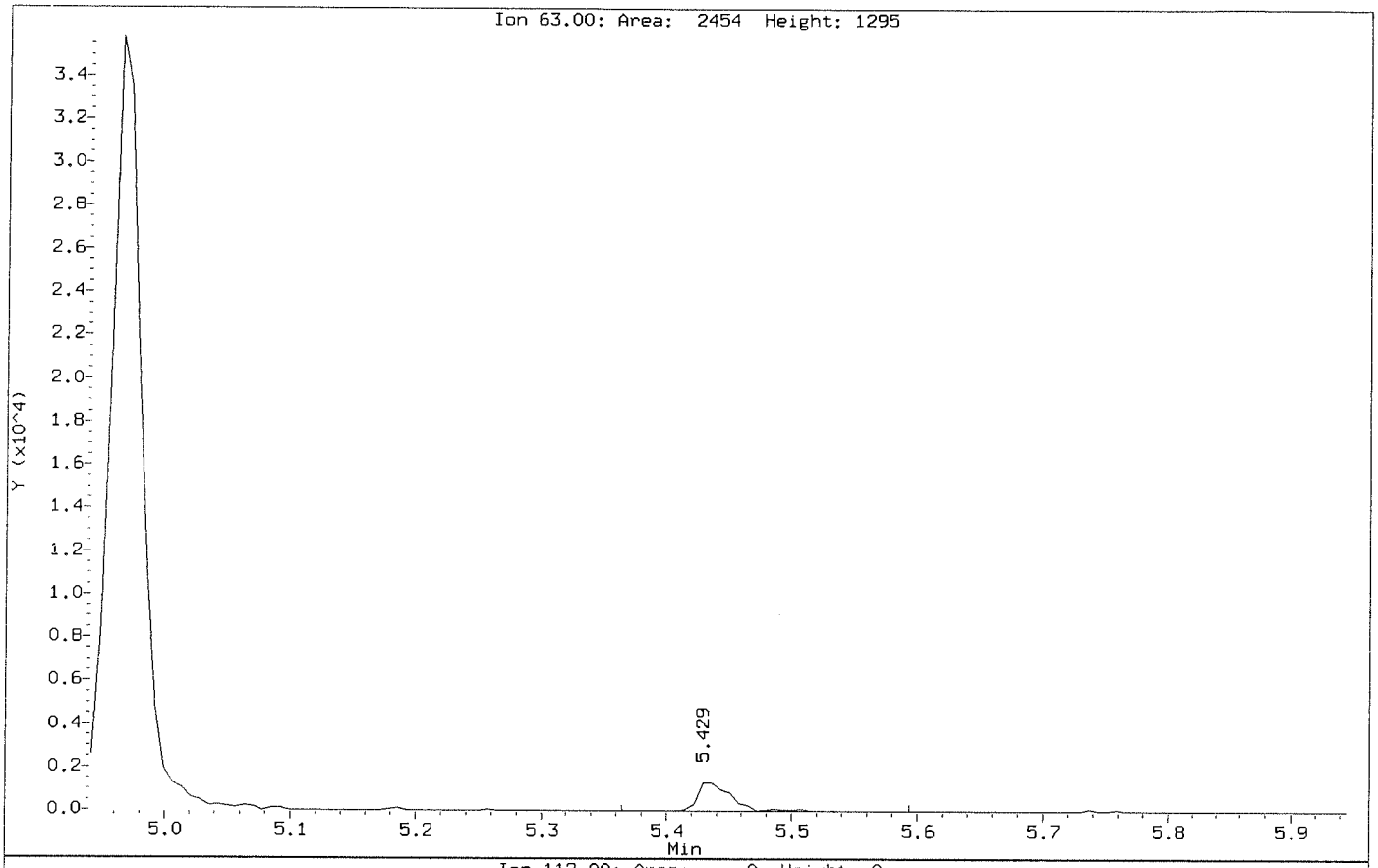
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

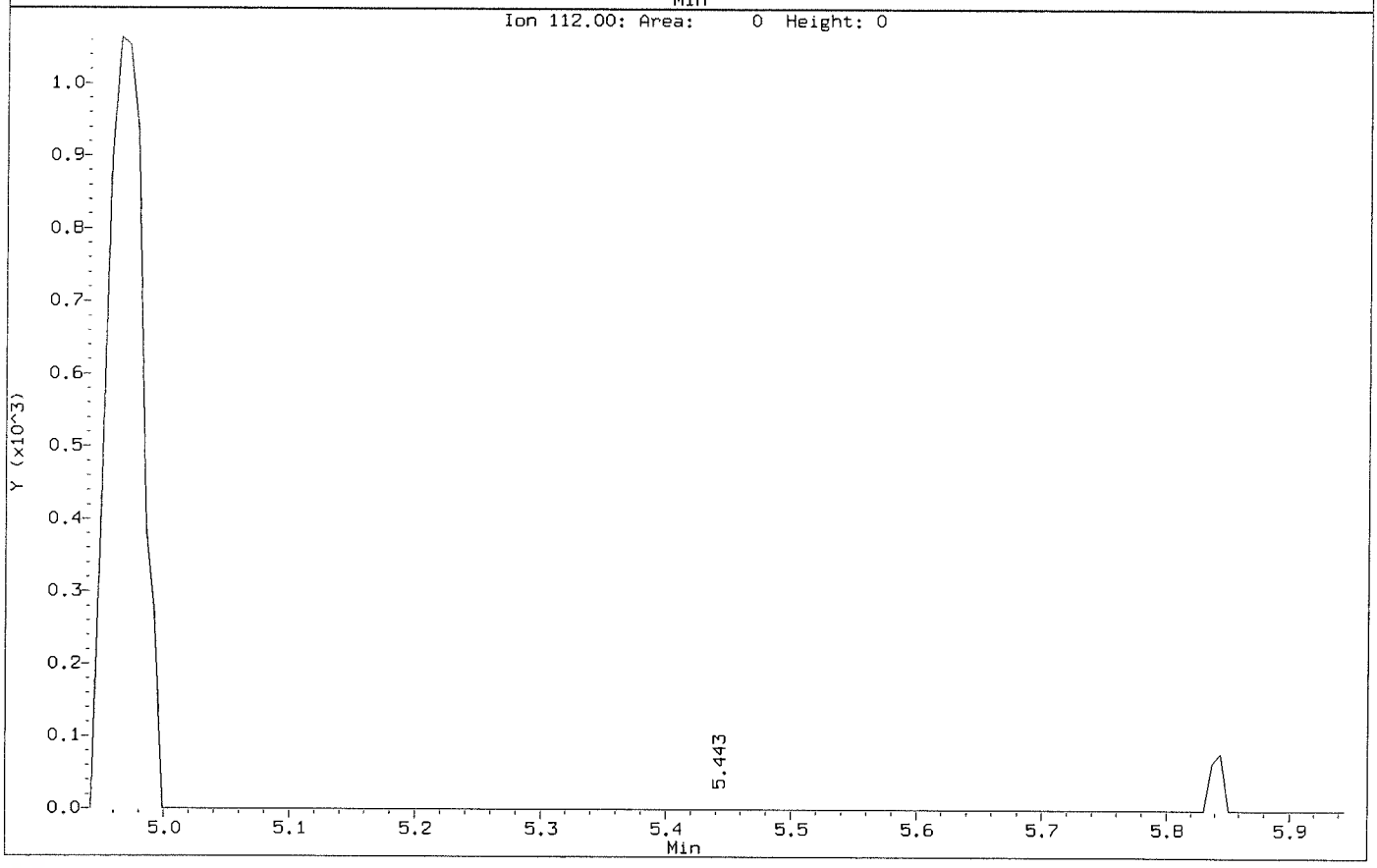




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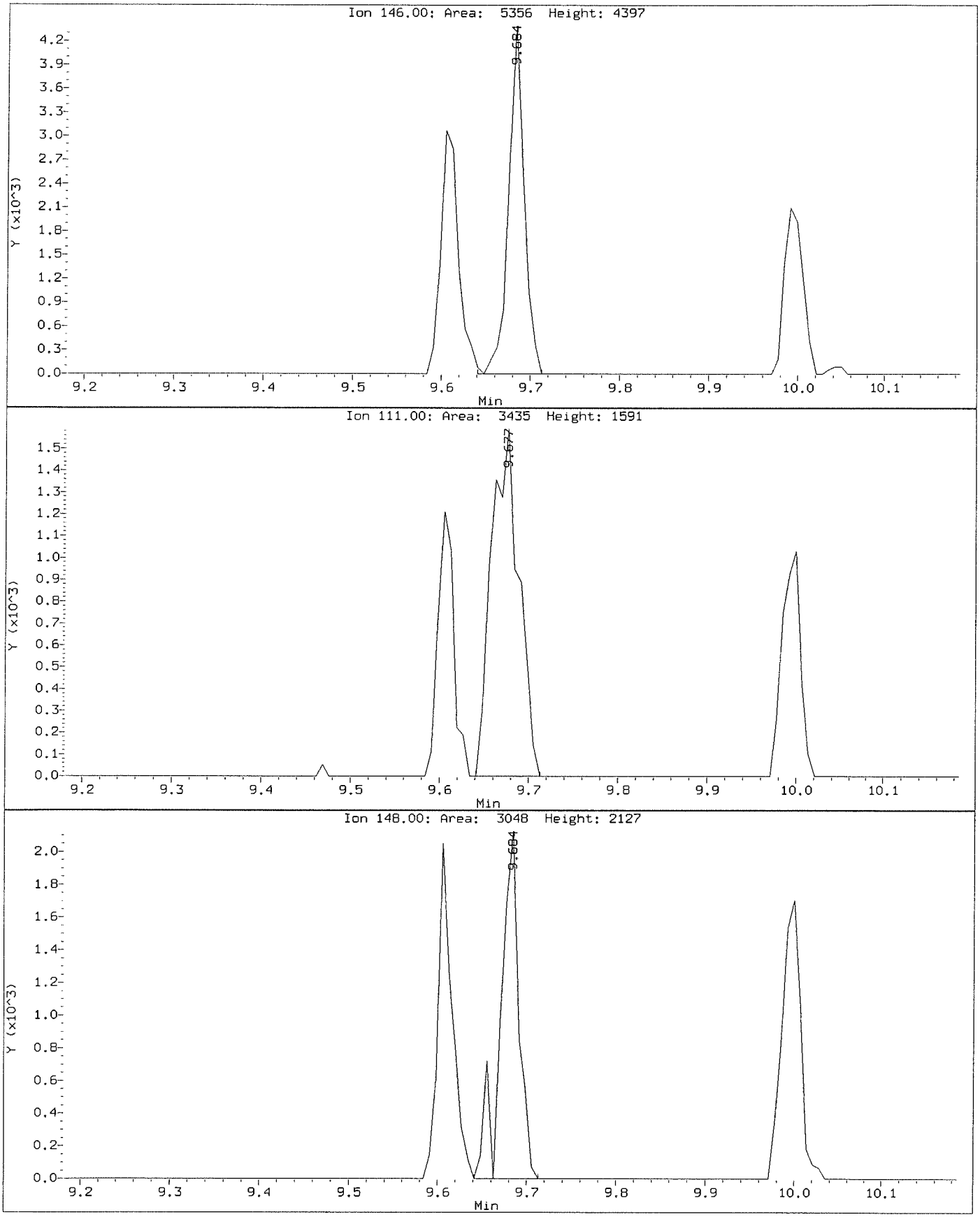
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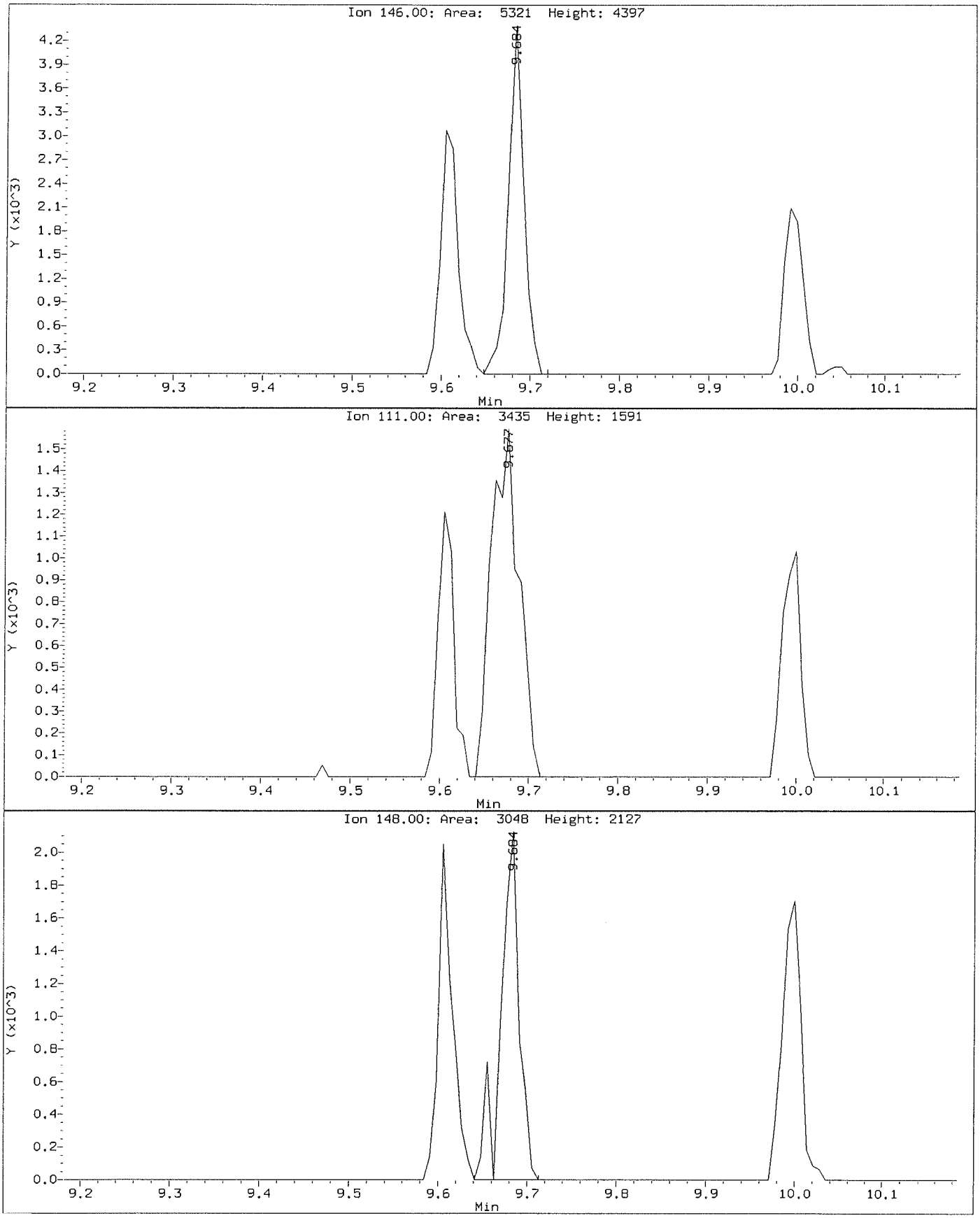
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Instrument: voa6.i
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Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



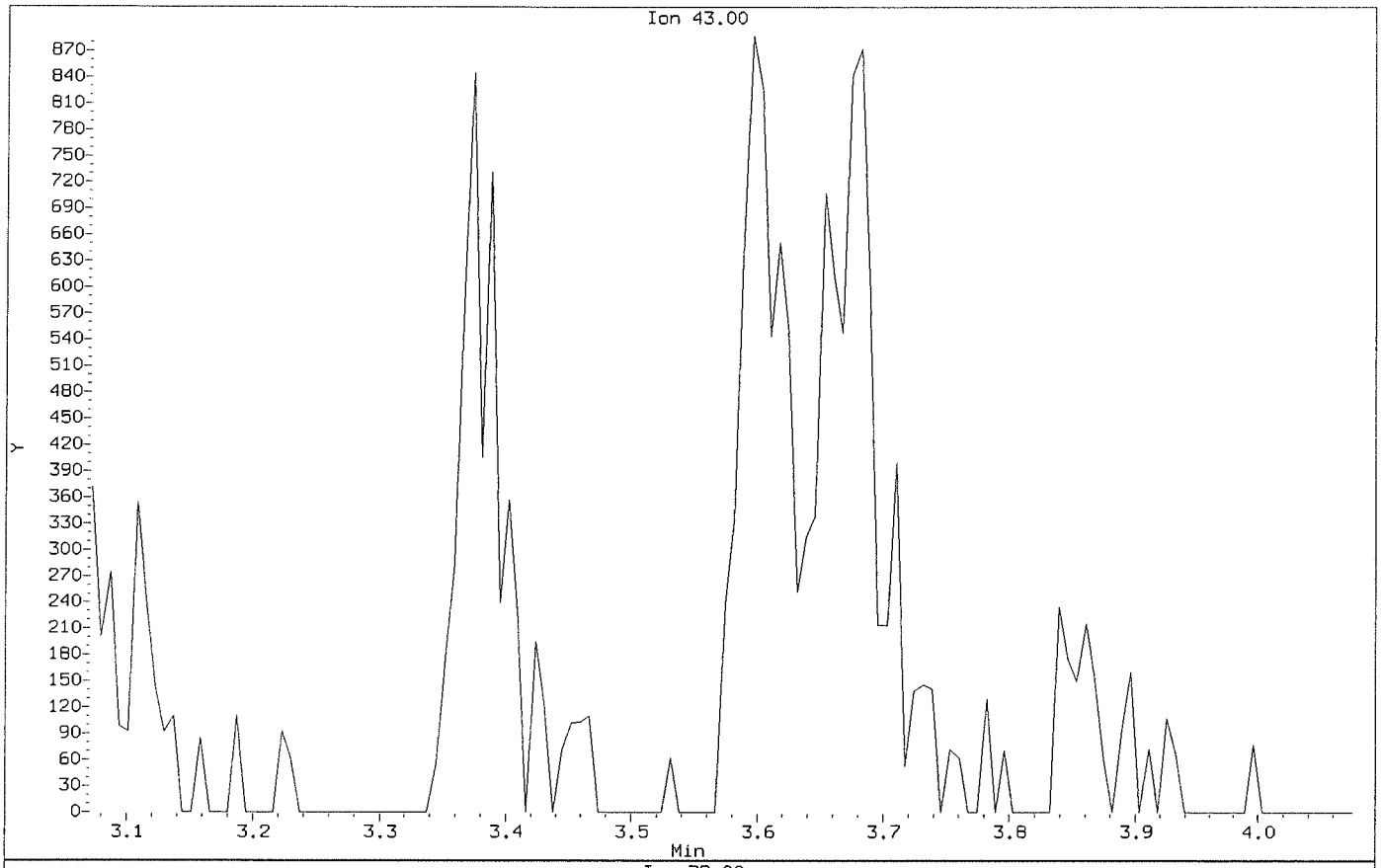
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Client Sample ID: VSTD001

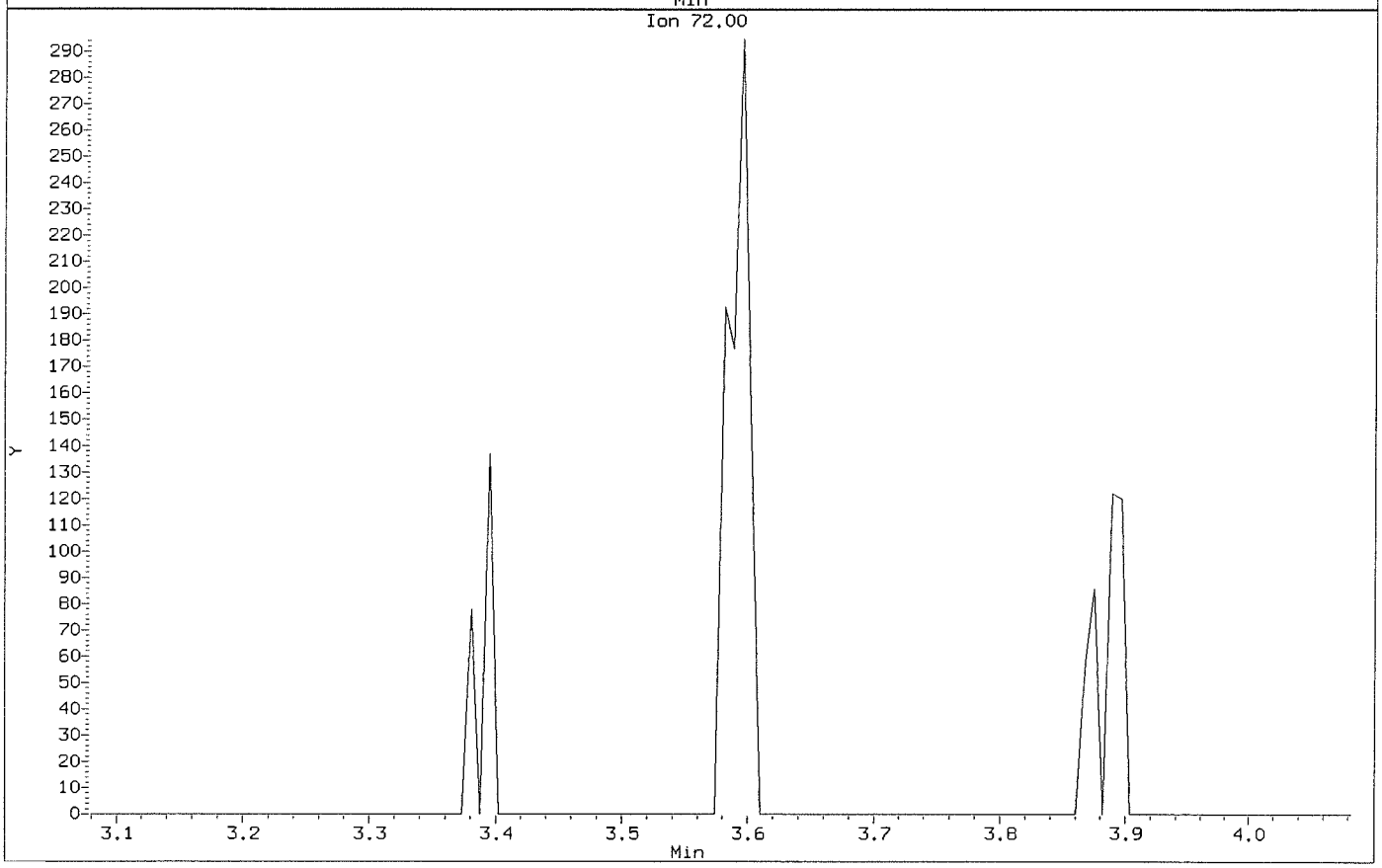
Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



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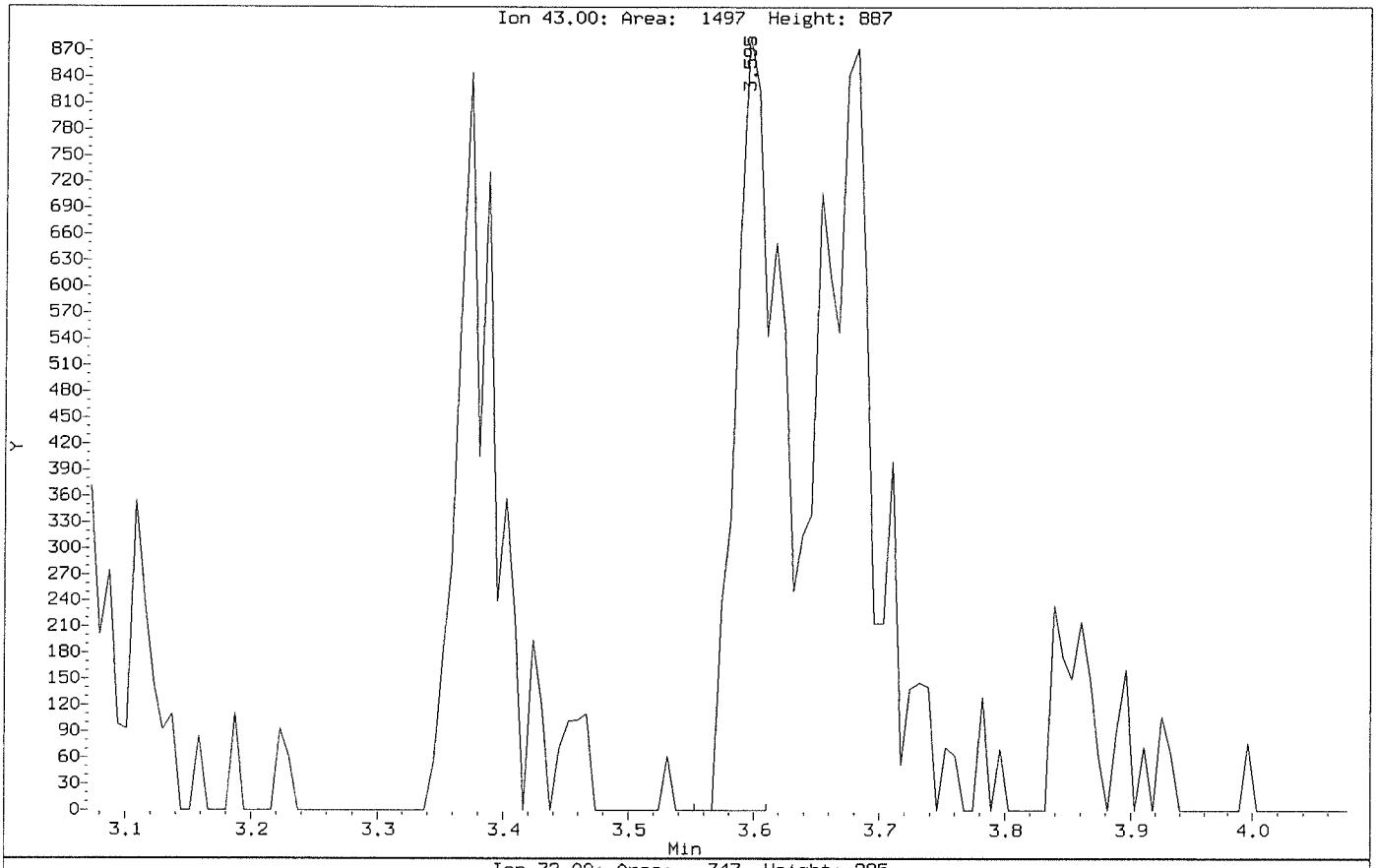
Compound: 2-Butanone
CAS Number: 78-93-3

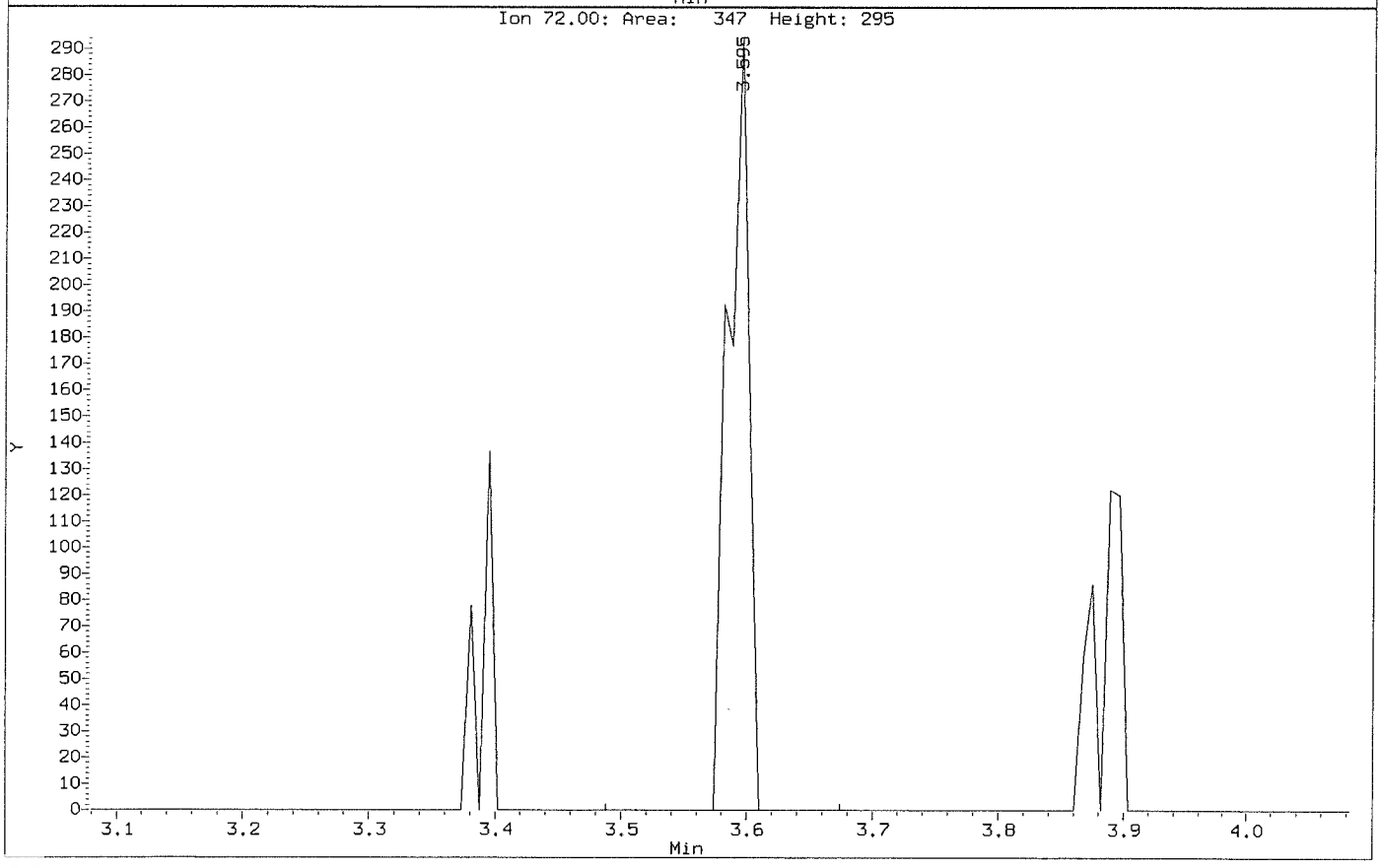




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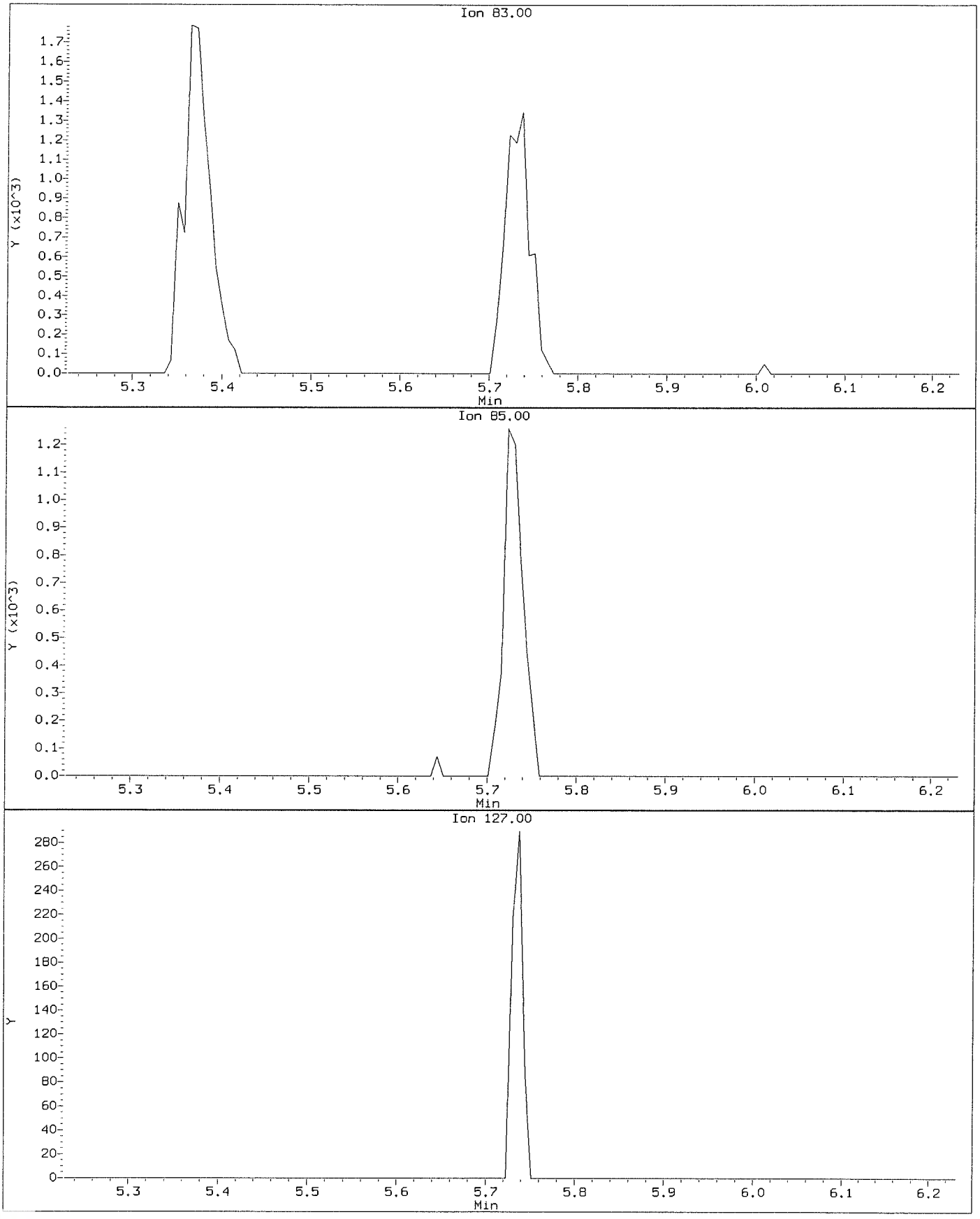
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CAS Number: 78-93-3





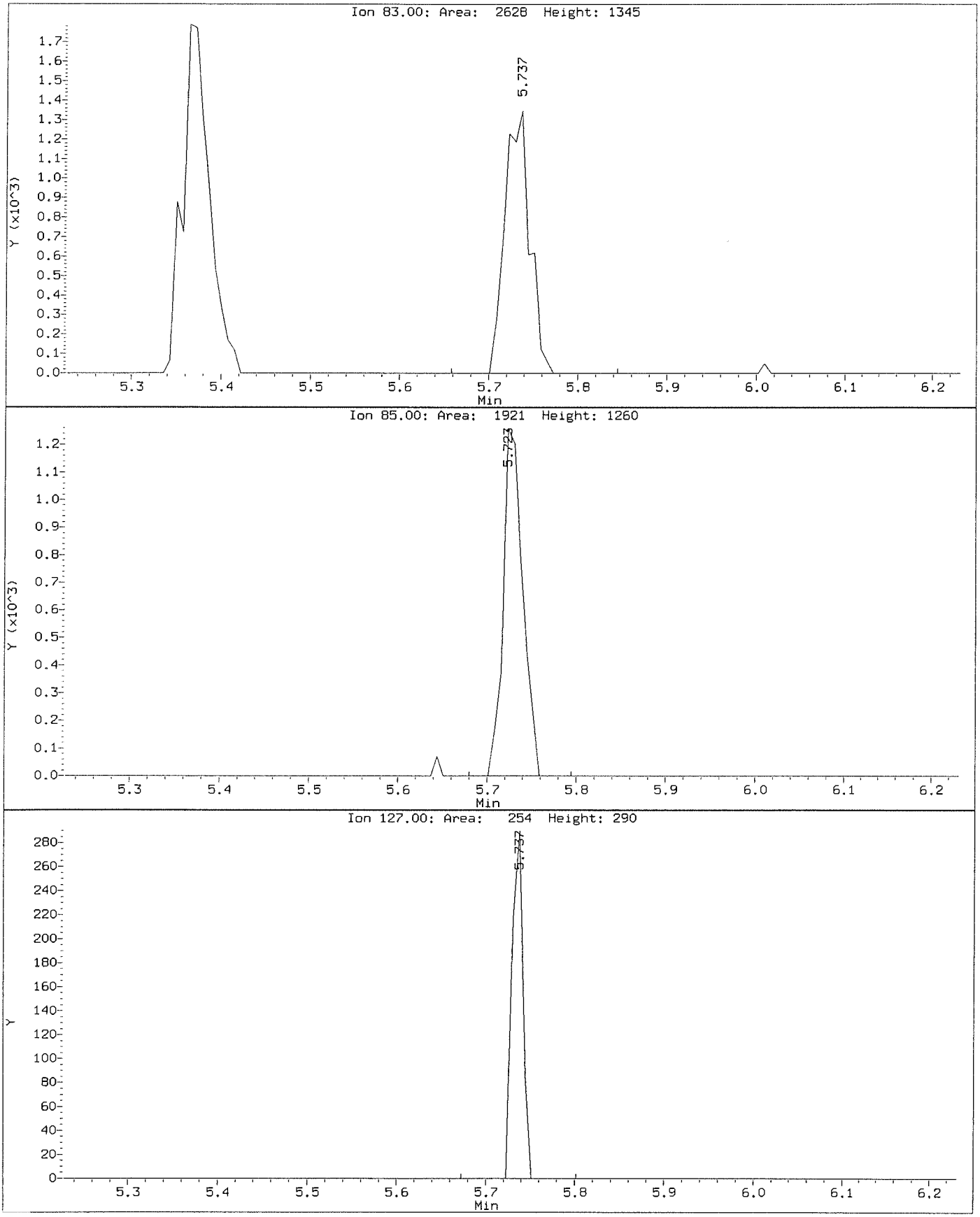
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Compound: Bromodichloromethane
CAS Number: 75-27-4



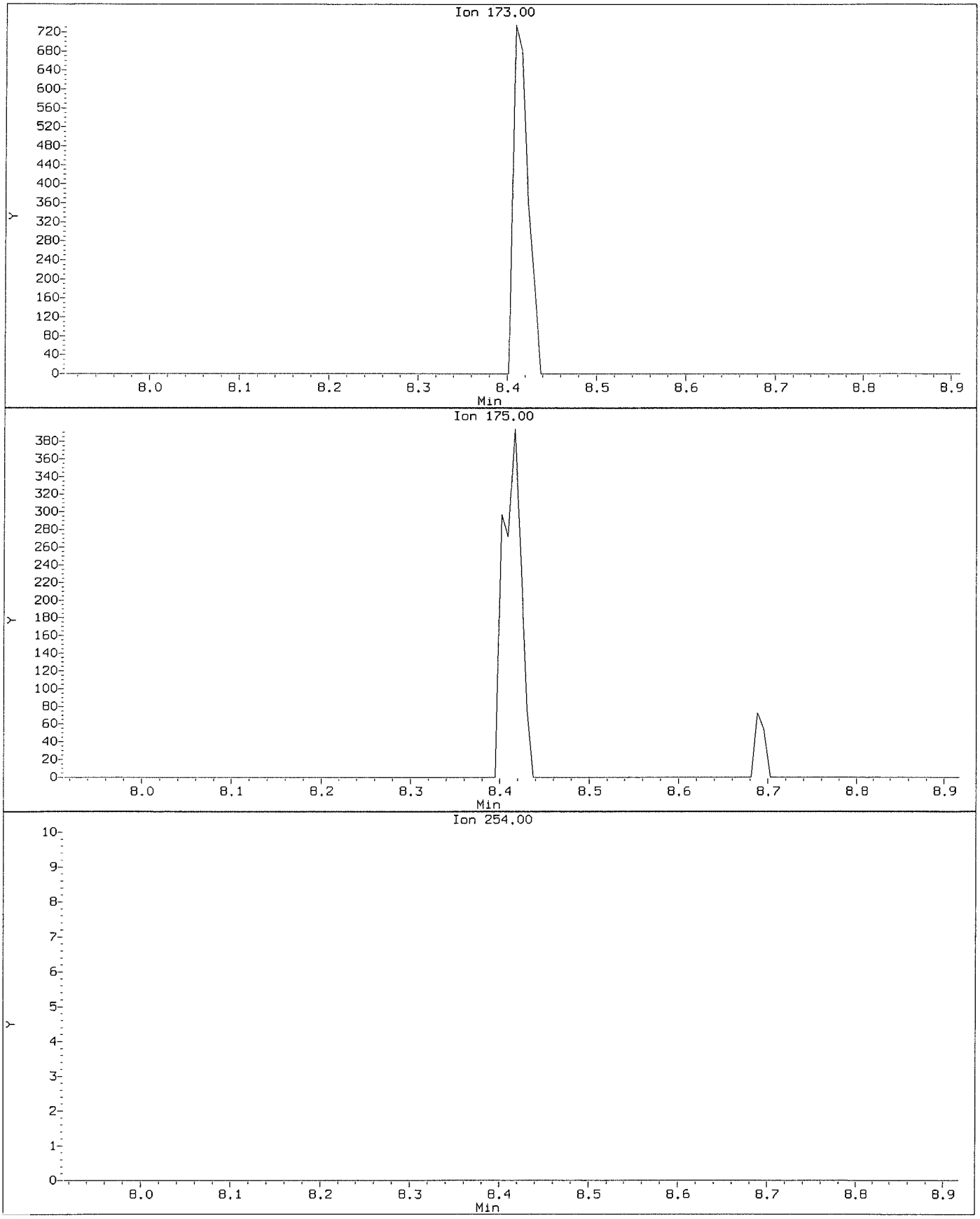
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Compound: Bromodichloromethane
CAS Number: 75-27-4



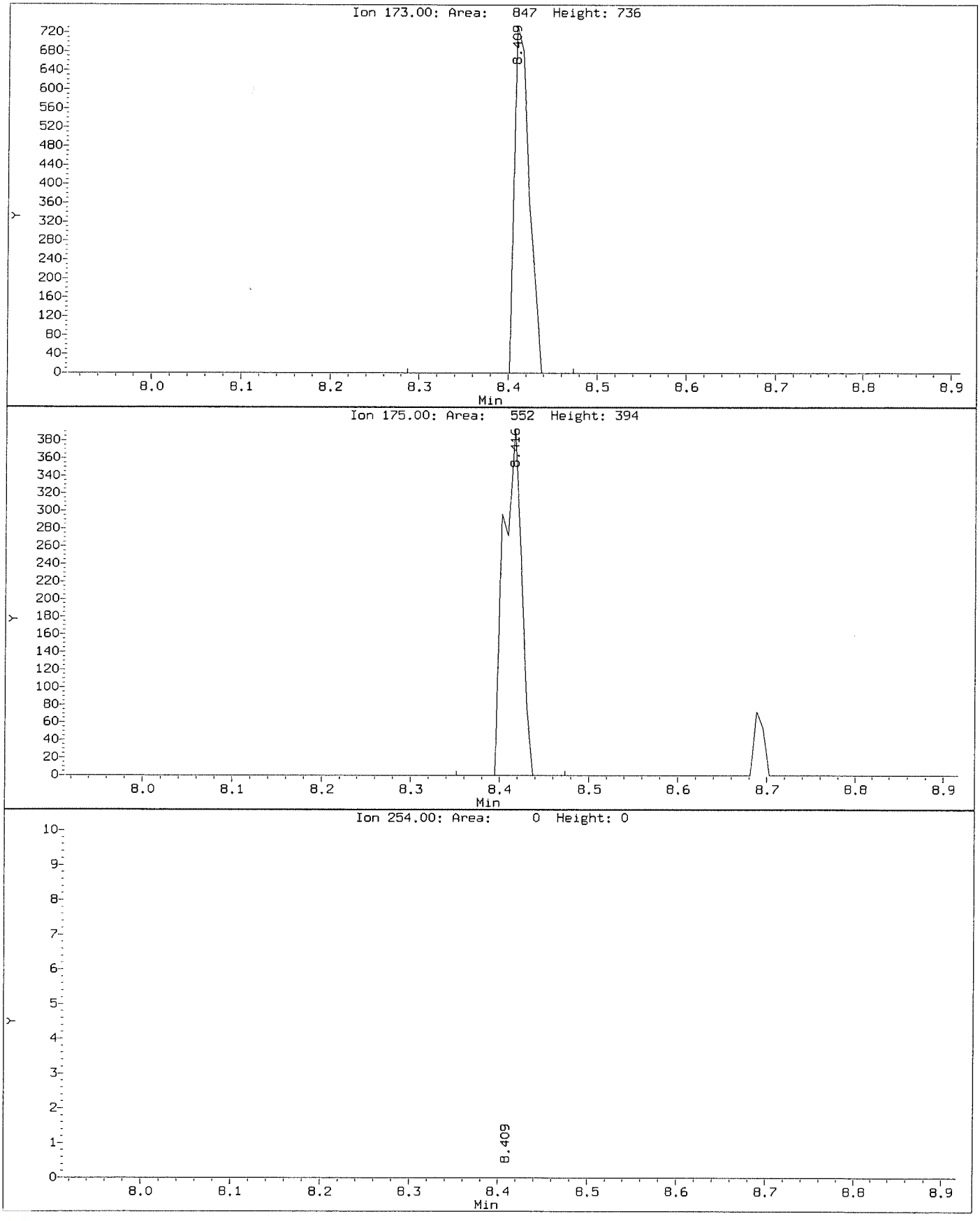
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Client Sample ID: VSTD001

Compound: Bromoform
CAS Number: 75-25-2



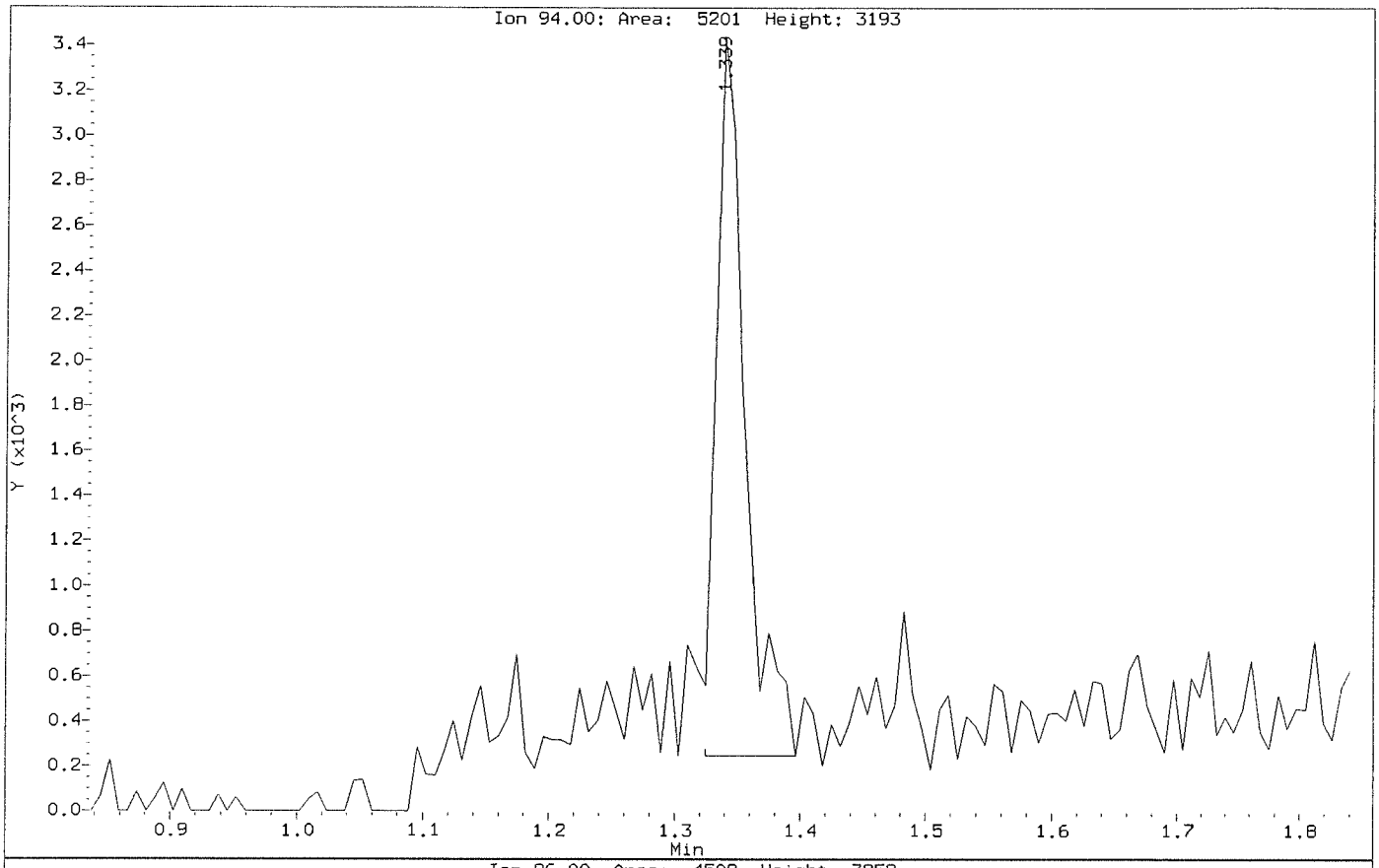
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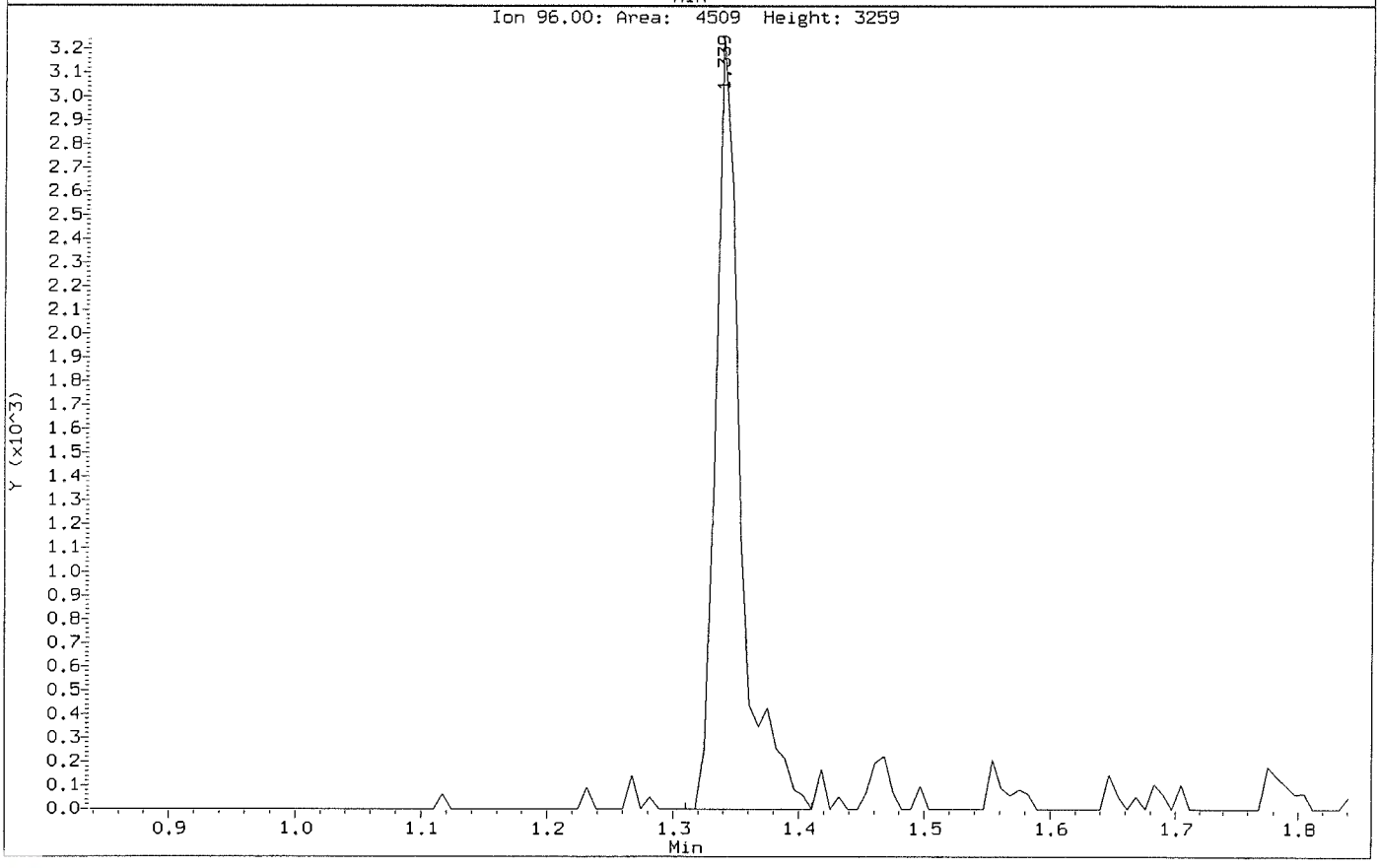
Compound: Bromoform
CAS Number: 75-25-2



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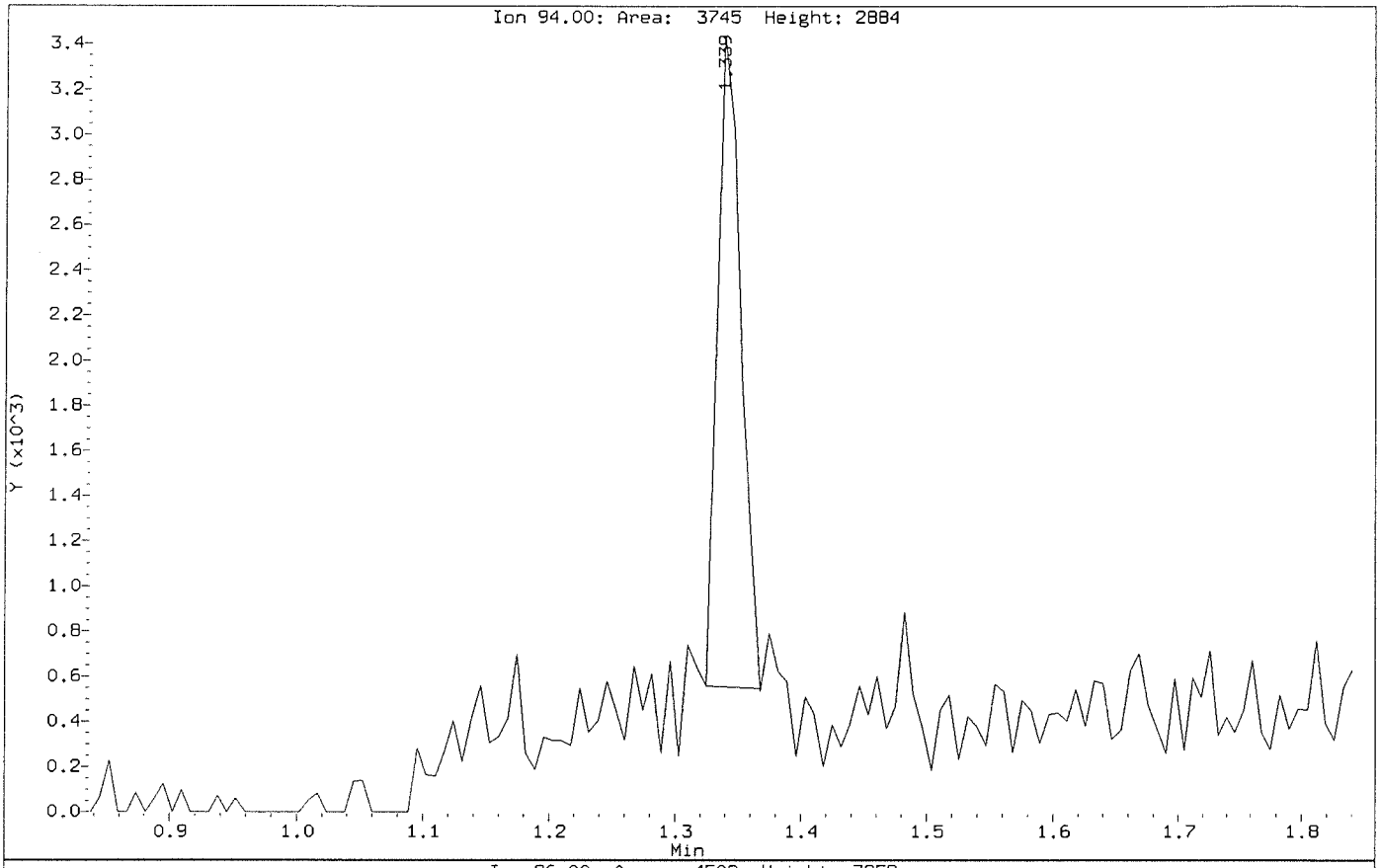
Compound: Bromomethane
CAS Number: 74-83-9

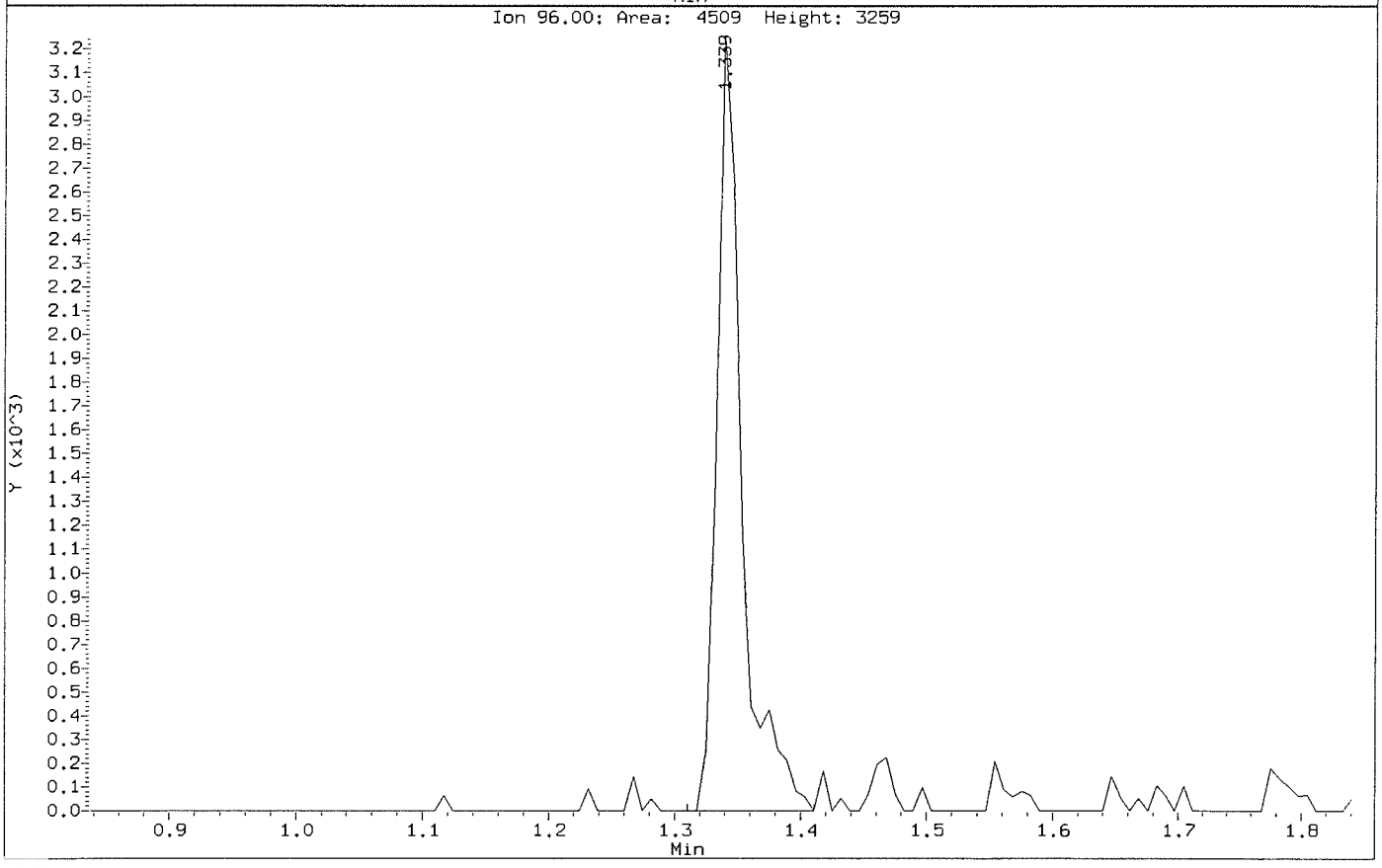




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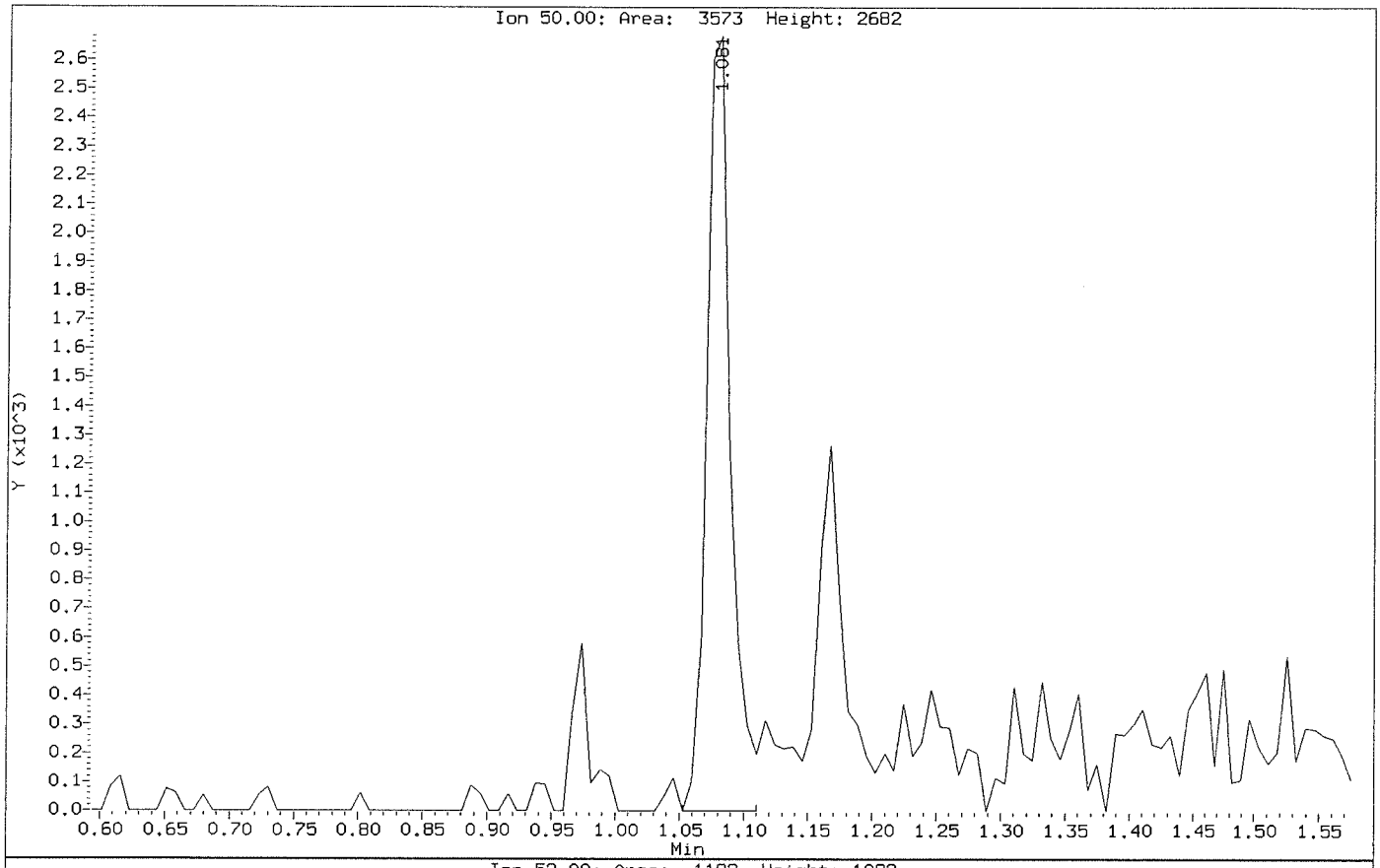
Compound: Bromomethane
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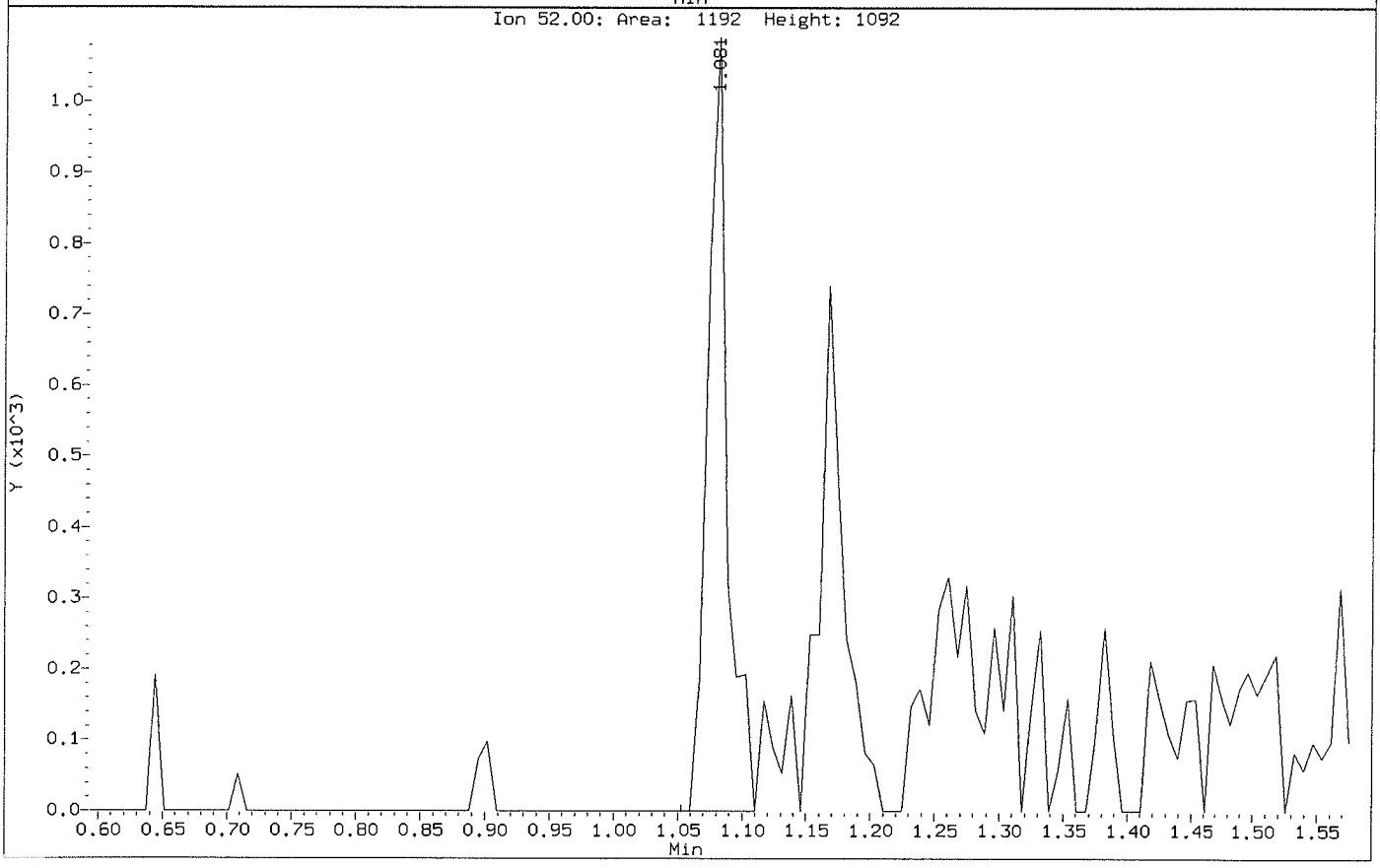




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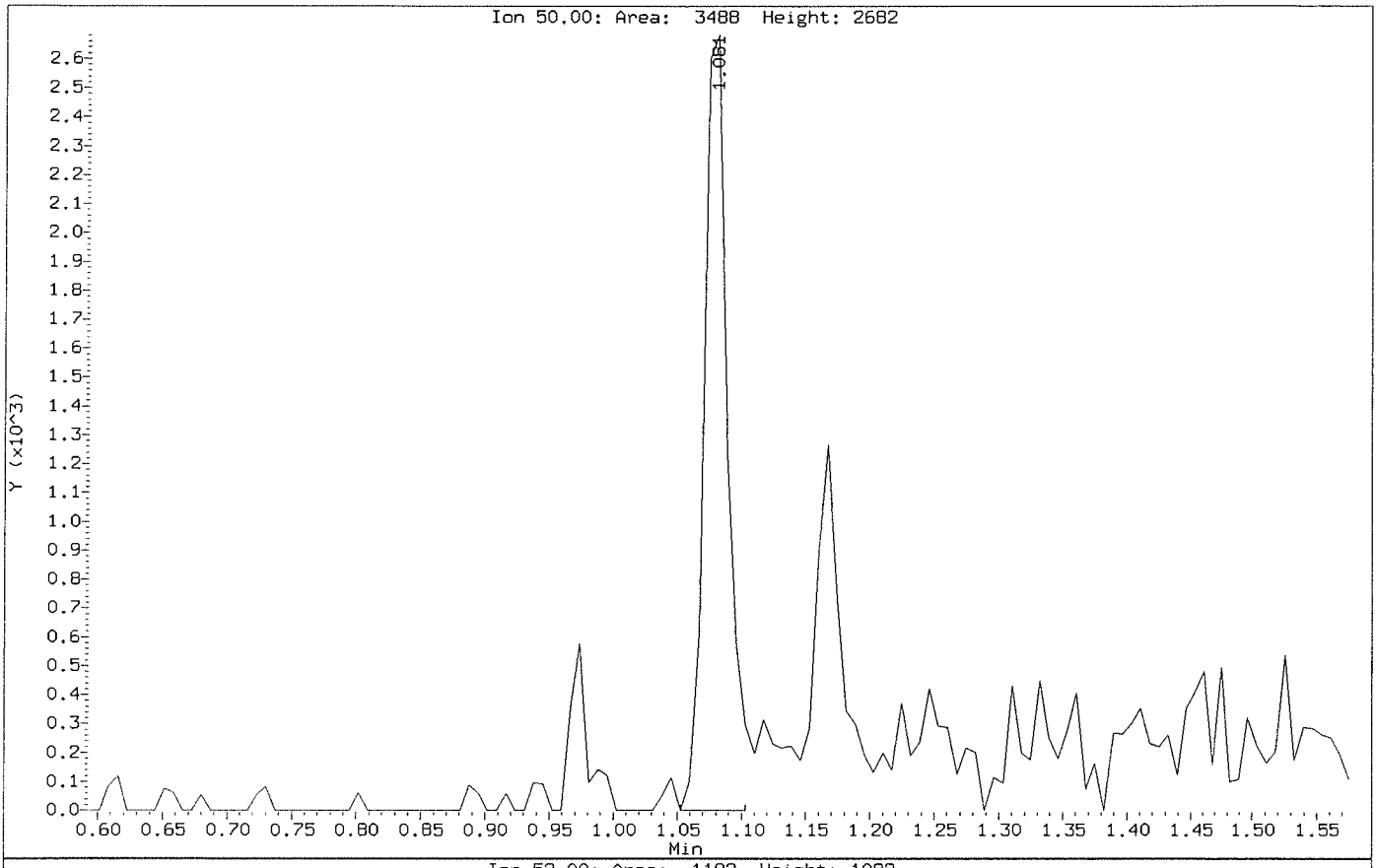
Compound: Chloromethane
CAS Number: 74-87-3

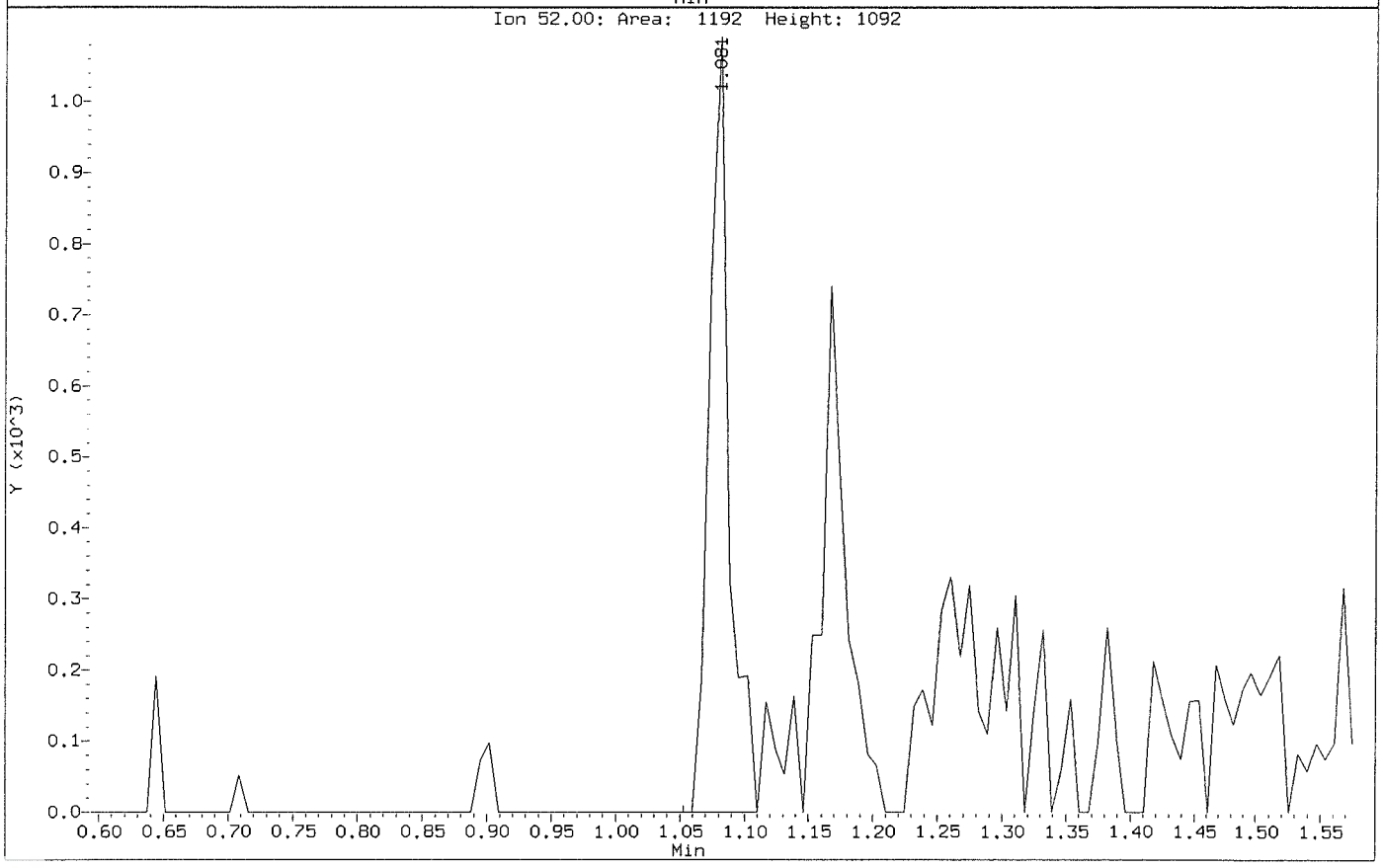




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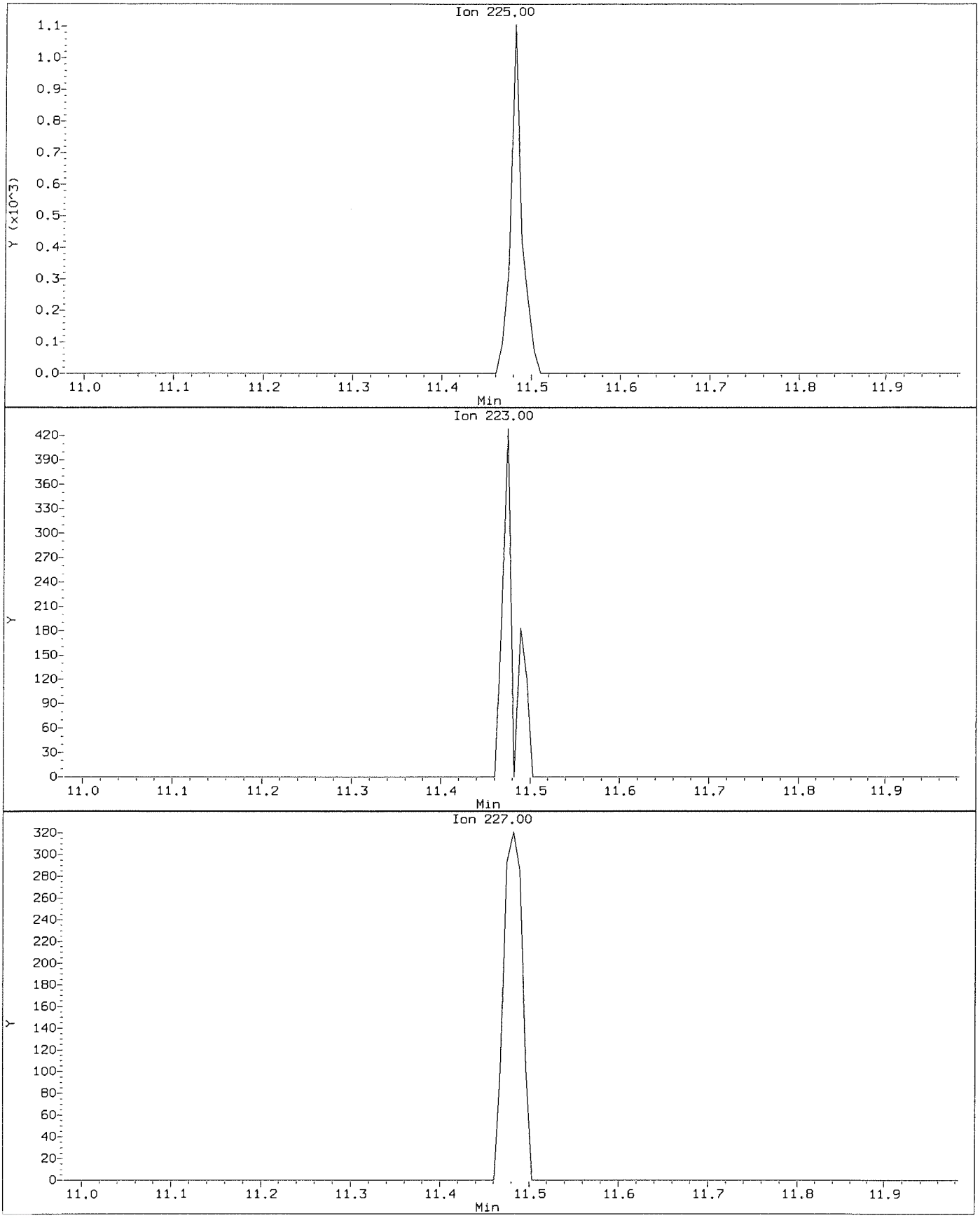
Compound: Chloromethane
CAS Number: 74-87-3





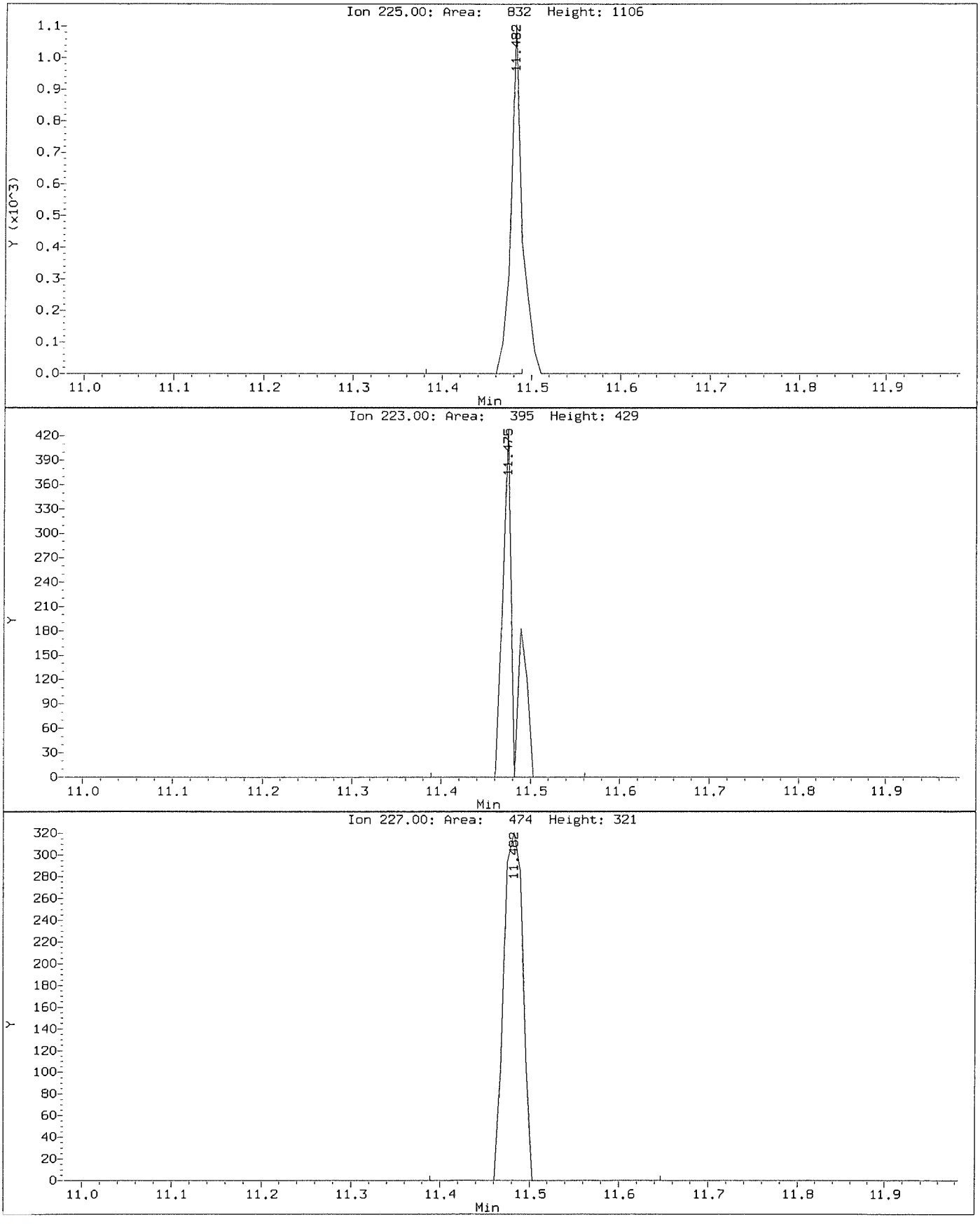
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



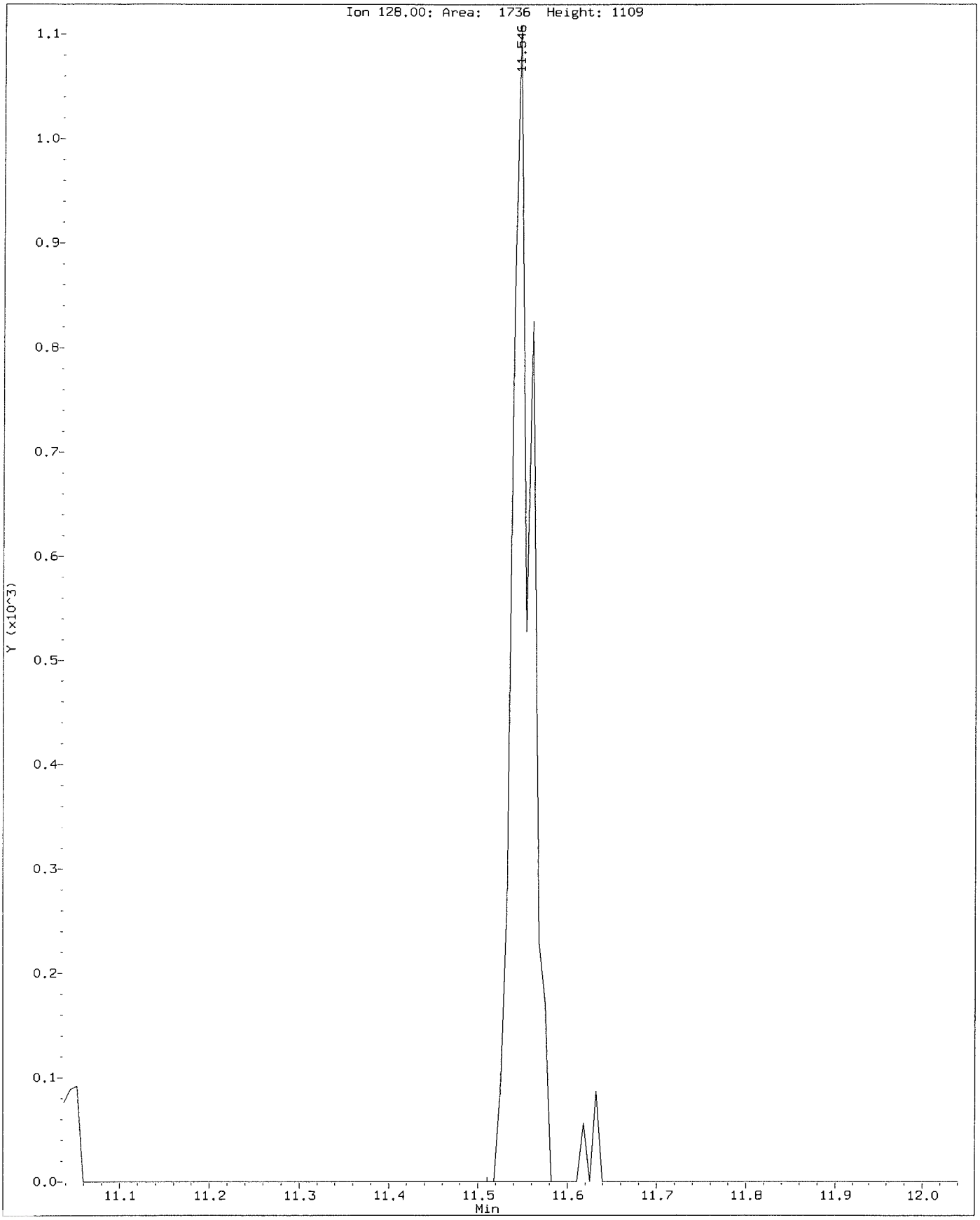
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Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



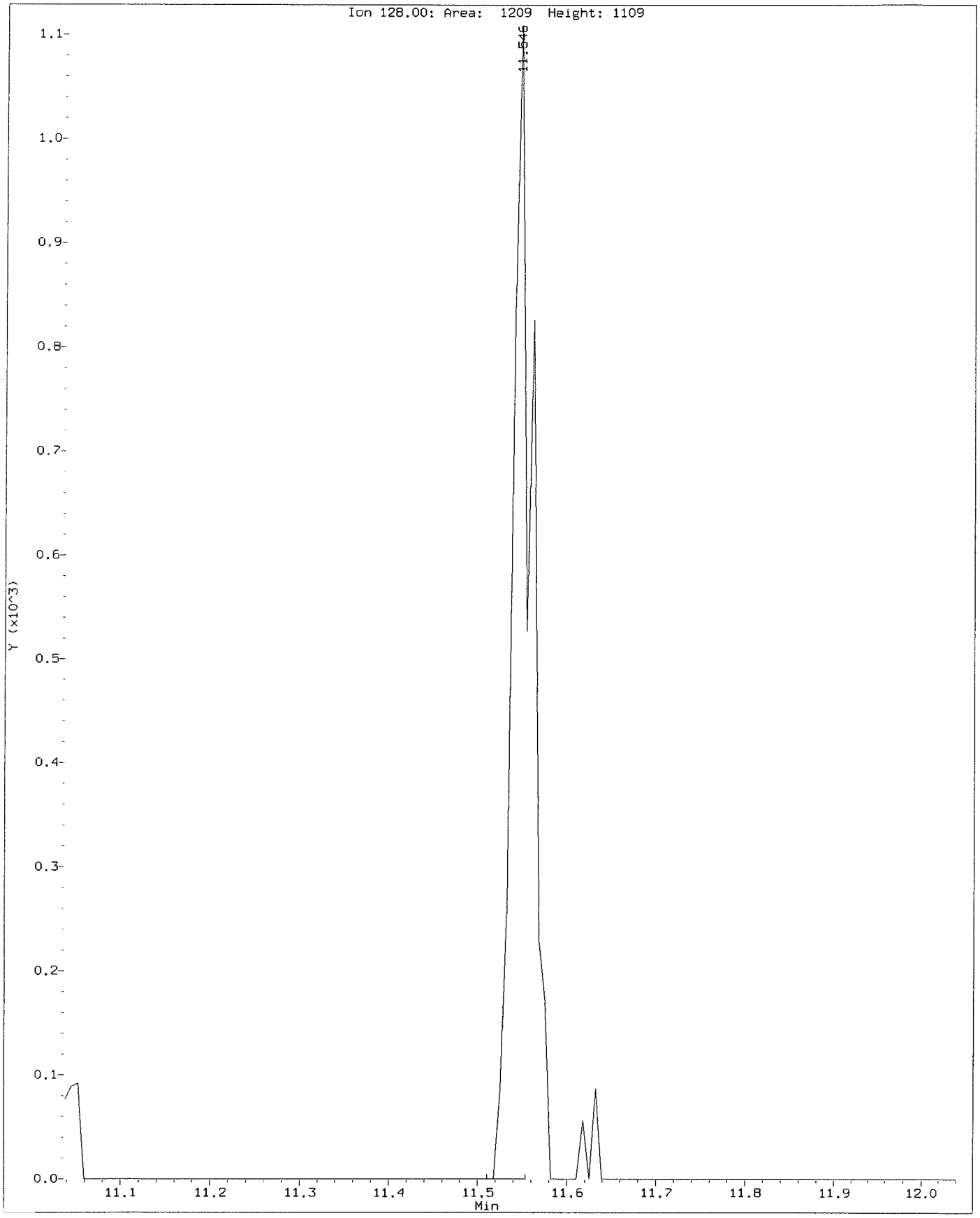
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Injection Date: 22-NOV-2020 16:46
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Naphthalene
CAS Number: 91-20-3



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Injection Date: 22-NOV-2020 16:46
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112205.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112205.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 22-NOV-2020 17:07
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 16:46 Cal File: Y112204.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	159458	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	292572	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	273935	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	117985	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	5030	2.00000	2.07(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	5029	2.00000	2.68(a)
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	3765	2.00000	1.57(a)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	14167	2.00000	1.91(a)
60 1,1,1,2-Tetrachloroethane	131	7.771	7.771	(1.013)	3837	2.00000	1.86(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	6325	2.00000	1.95(a)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	4021	2.00000	0.49(aM)
138 Freon TF	101	1.911	1.911	(0.457)	5388	2.00000	1.81(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	3664	2.00000	2.03(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	7563	2.00000	1.96(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	5621	2.00000	1.81(a)
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	6329	2.00000	2.17(a)
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	837	2.00000	3.13(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	3120	2.00000	1.75(aMH)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	1533	2.00000	1.72(aM)
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	12652	2.00000	1.89(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	311	2.00000	2.16(aM)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	4134	2.00000	1.97(a)

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112205.D Page 2
Report Date: 18-Dec-2020 11:14

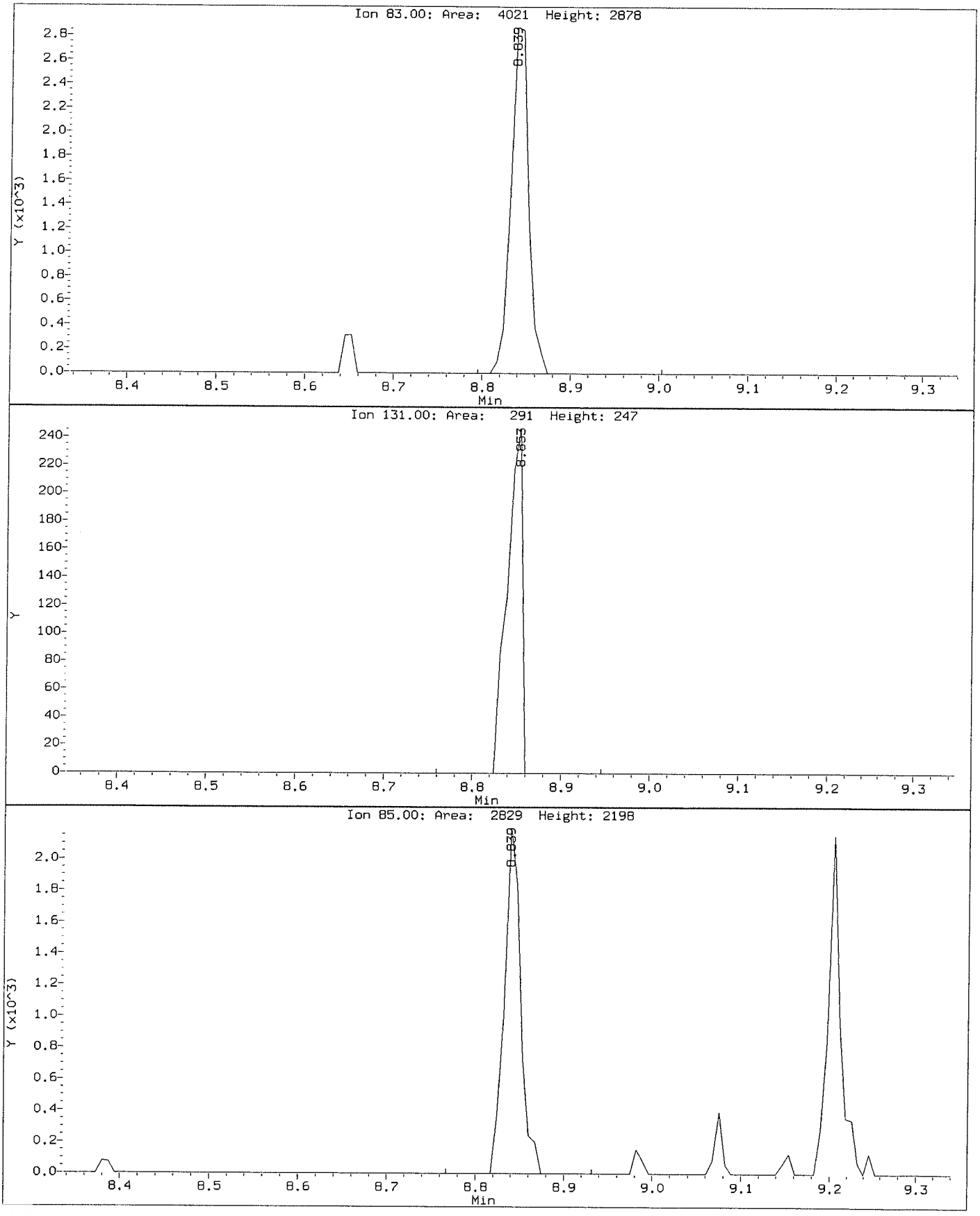
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	6630	2.00000	1.98(a)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	6161	2.00000	1.91(aM)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	4718	2.00000	2.02(aM)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	12971	2.00000	1.85(a)
83	1,3-Dichlorobenzene	146	9.604	9.604	(0.994)	6881	2.00000	1.93(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	6788	2.00000	2.01(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	7531	2.00000	2.65(a)
26	2,2-Dichloropropane	77	3.523	3.523	(0.842)	6656	2.00000	1.96(a)
24	2-Butanone	43	3.595	3.595	(0.860)	2353	4.00000	3.08(aM)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	11318	2.00000	1.96(a)
52	2-Hexanone	43	7.090	7.090	(0.924)	4326	4.00000	3.94(a)
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	12763	2.00000	1.80(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	13477	2.00000	3.44(a)
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	7417	4.00000	4.40(a)
10	Acetone	43	1.969	1.969	(0.471)	5270	4.00000	2.82(a)
37	Benzene	78	4.519	4.519	(0.909)	14884	2.00000	1.86(a)
74	Bromobenzene	156	8.802	8.802	(0.911)	3748	2.00000	1.88(a)
29	Bromochloromethane	128	3.802	3.802	(0.909)	2126	2.00000	1.88(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	6102	2.00000	1.96(aM)
66	Bromoform	173	8.415	8.415	(1.097)	1868	2.00000	3.49(Ta)
6	Bromomethane	94	1.345	1.345	(0.322)	7308	2.00000	3.22(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	22947	4.00000	3.85(a)
34	Carbon Tetrachloride	117	4.261	4.261	(0.857)	4669	2.00000	1.85(aH)
59	Chlorobenzene	112	7.699	7.699	(1.004)	10694	2.00000	1.82(a)
7	Chloroethane	64	1.403	1.403	(0.336)	5068	2.00000	2.05(a)
28	Chloroform	83	3.917	3.917	(0.937)	8193	2.00000	1.96(a)
3	Chloromethane	50	1.080	1.080	(0.258)	6087	2.00000	2.07(aM)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	4637	2.00000	1.98(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	6675	2.00000	1.79(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	4276	2.00000	2.01(a)
44	Dibromomethane	93	5.557	5.557	(1.118)	3029	2.00000	1.98(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	5142	2.00000	4.45(a)
61	Ethylbenzene	106	7.799	7.799	(1.017)	5231	2.00000	1.77(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	1496	2.00000	3.91(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	16143	2.00000	1.81(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	12685	4.00000	9.66
17	Methylene Chloride	84	2.305	2.305	(0.551)	4496	2.00000	2.05(a)
87	n-Butylbenzene	91	9.991	9.991	(1.034)	12843	2.00000	4.72(a)
73	n-Propylbenzene	91	8.910	8.910	(0.922)	19007	2.00000	1.92(a)
92	Naphthalene	128	11.546	11.546	(1.195)	2518	2.00000	2.98(aM)
63	o-Xylene	106	8.243	8.243	(1.075)	6359	2.00000	4.37(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	15802	2.00000	2.50(a)
64	Styrene	104	8.258	8.258	(1.077)	10610	2.00000	1.67(a)
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	9935	2.00000	1.81(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	2921	2.00000	1.72(a)
50	Toluene	91	6.446	6.446	(0.840)	16445	2.00000	1.85(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	3509	2.00000	1.78(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	5689	2.00000	1.78(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	3537	2.00000	1.73(a)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	11885	2.00000	1.98(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	7798	2.00000	2.03(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.
H - Operator selected an alternate compound hit.

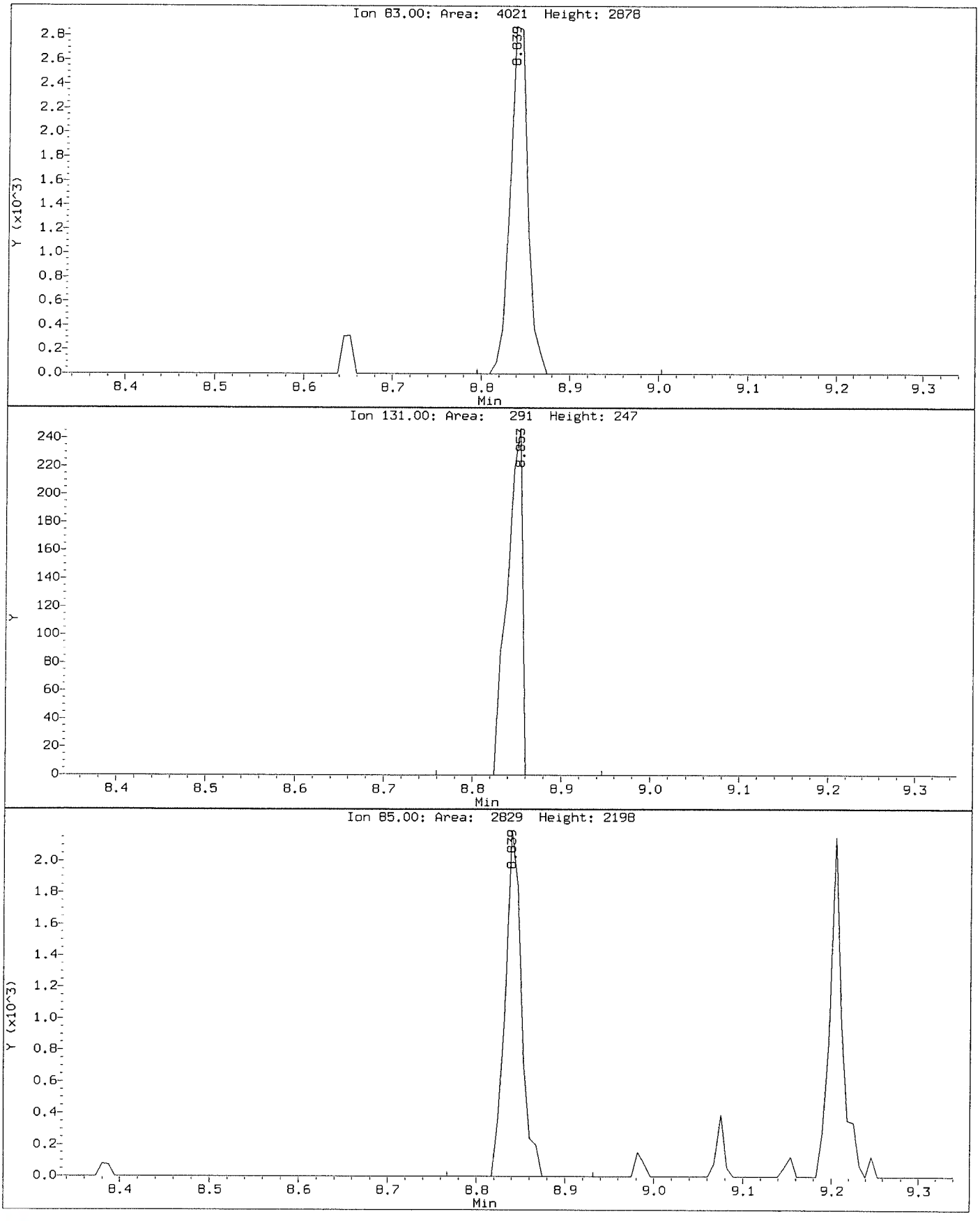
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Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

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



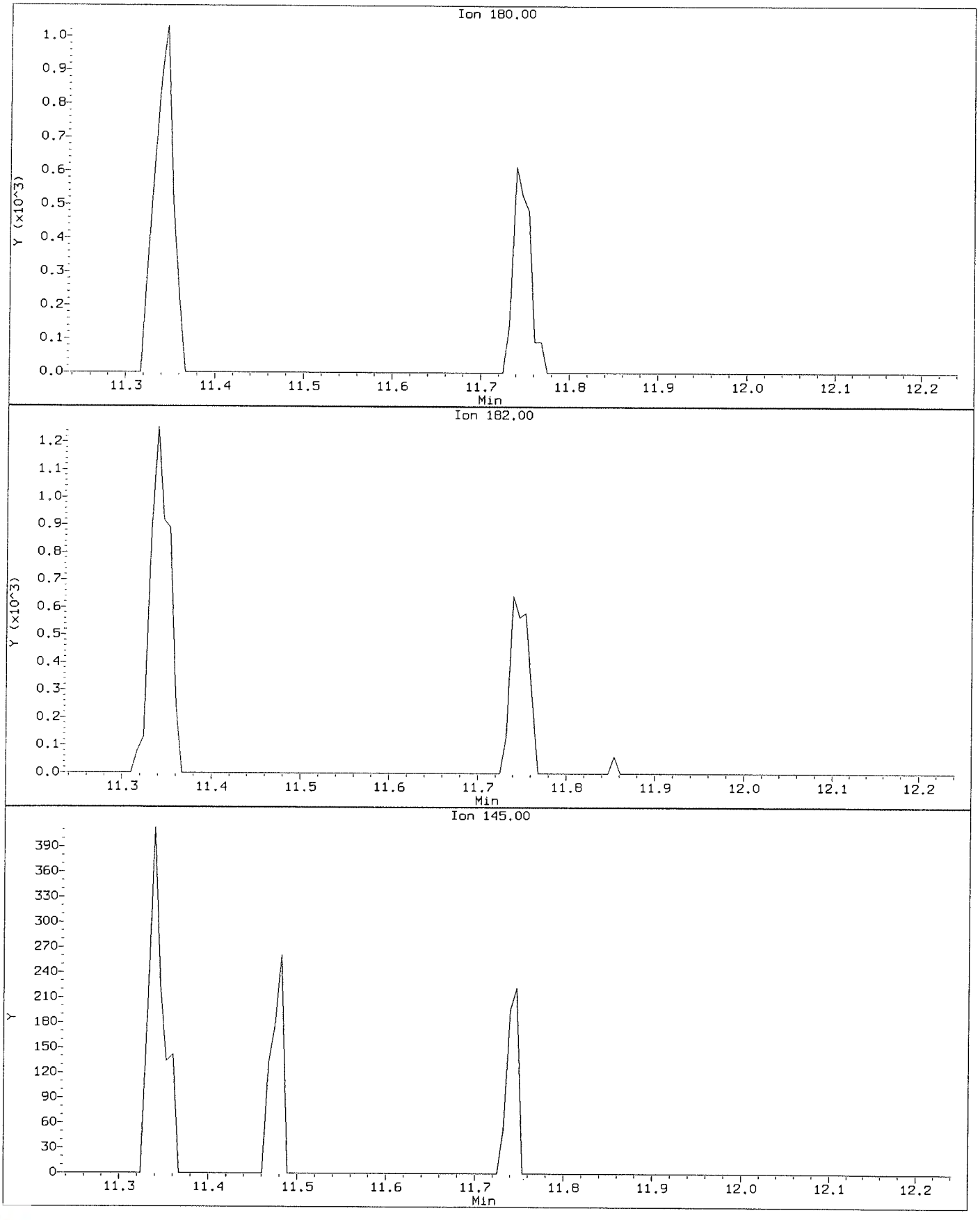
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Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

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



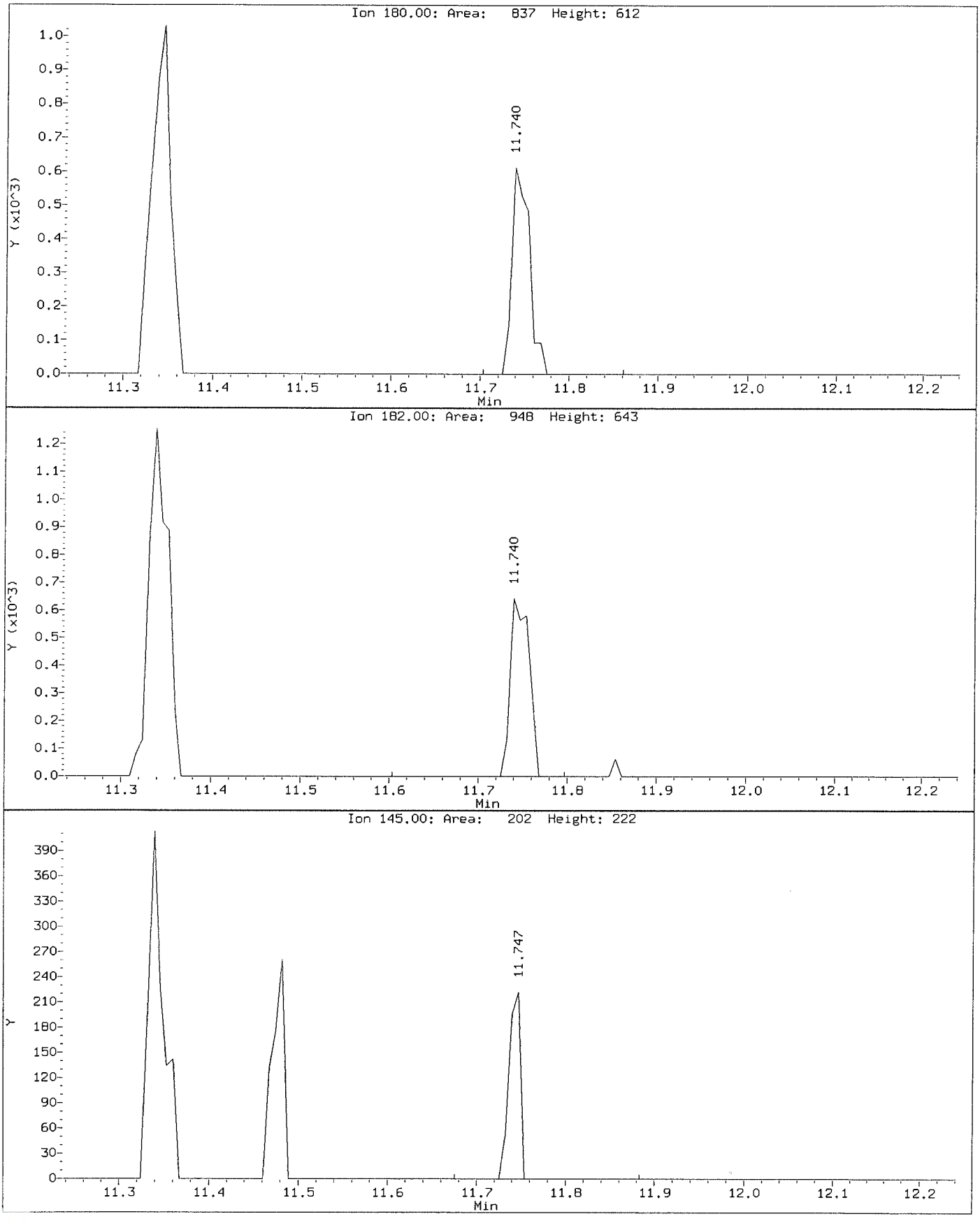
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Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

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



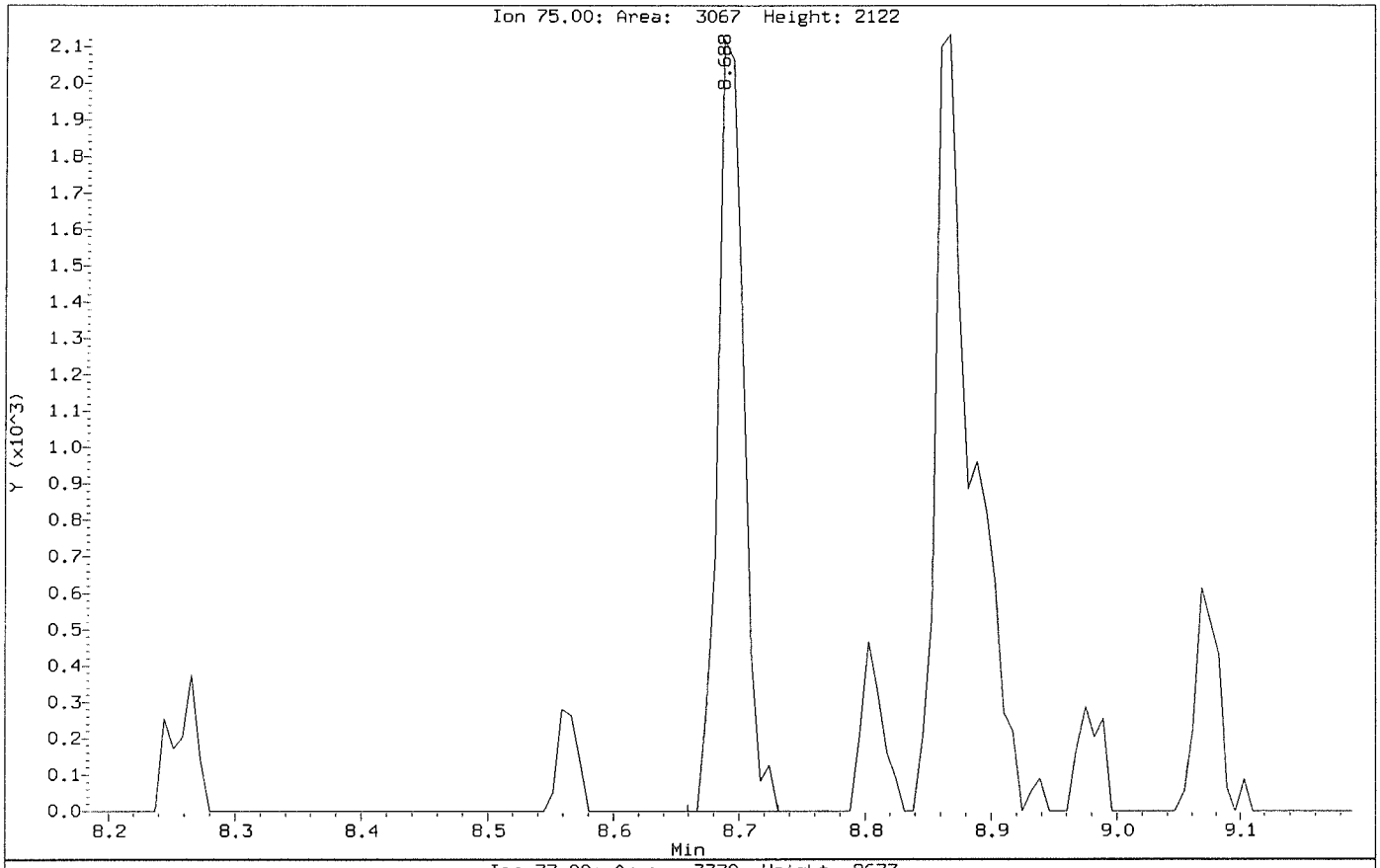
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Client Sample ID: VSTD002

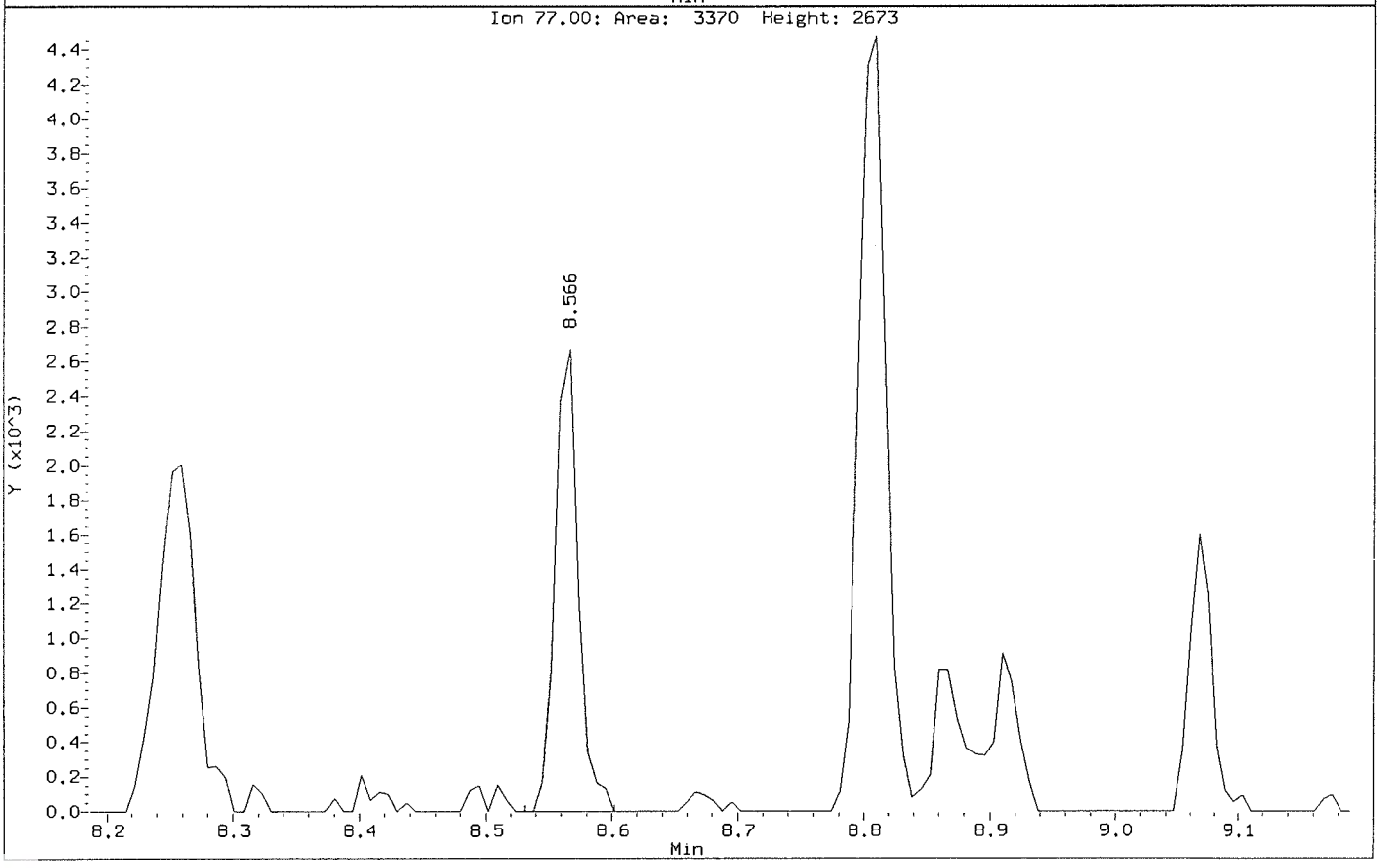
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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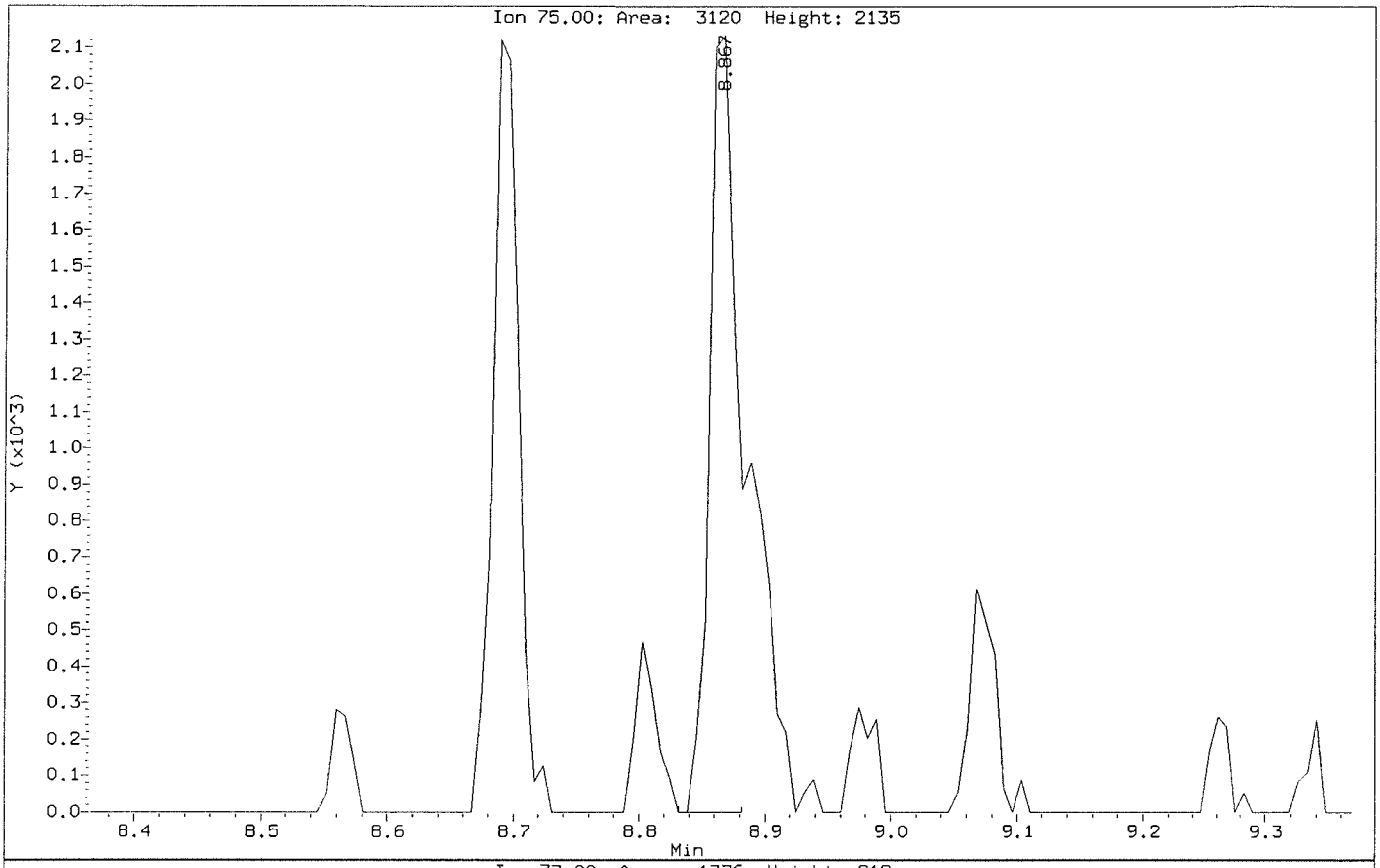
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

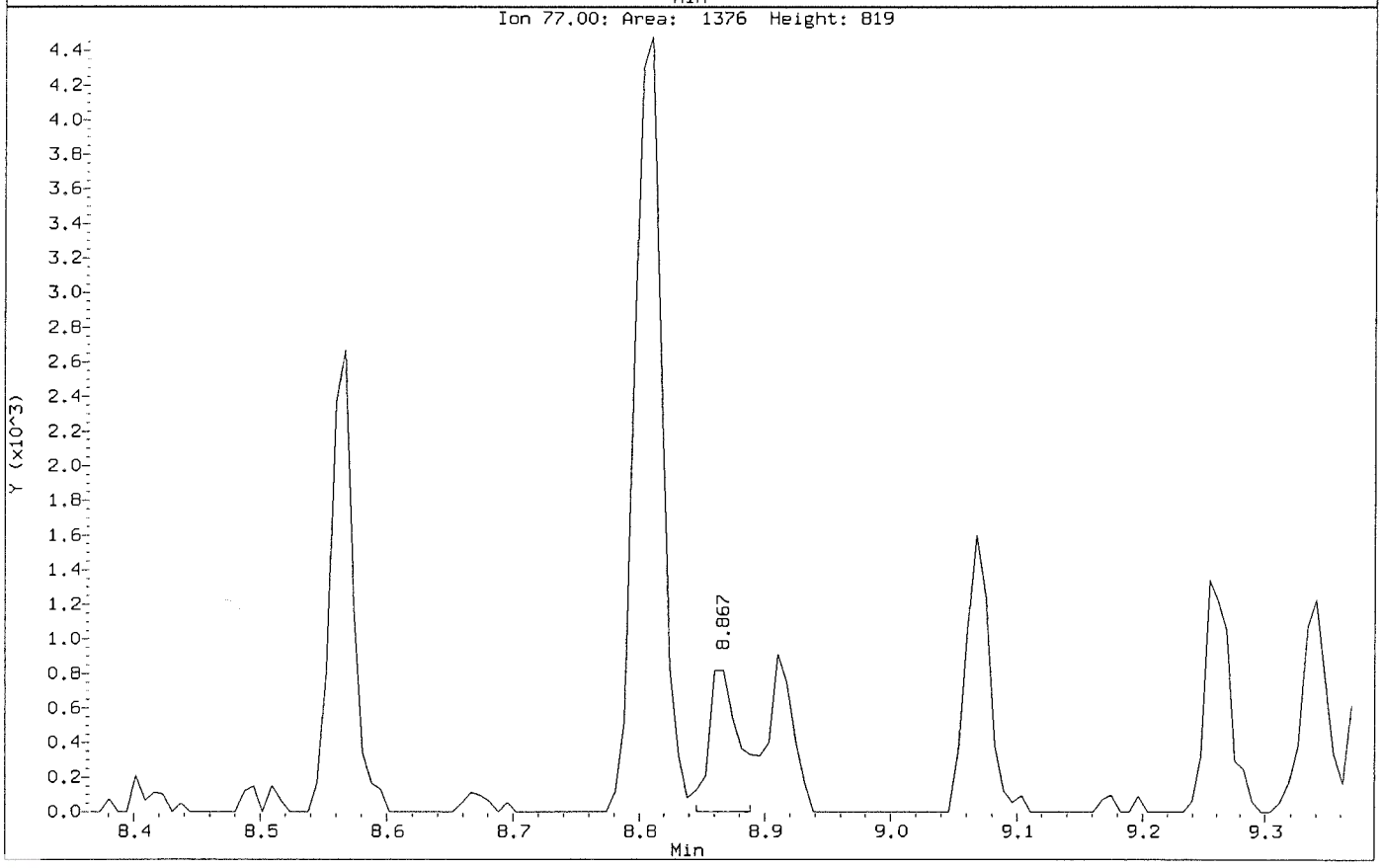




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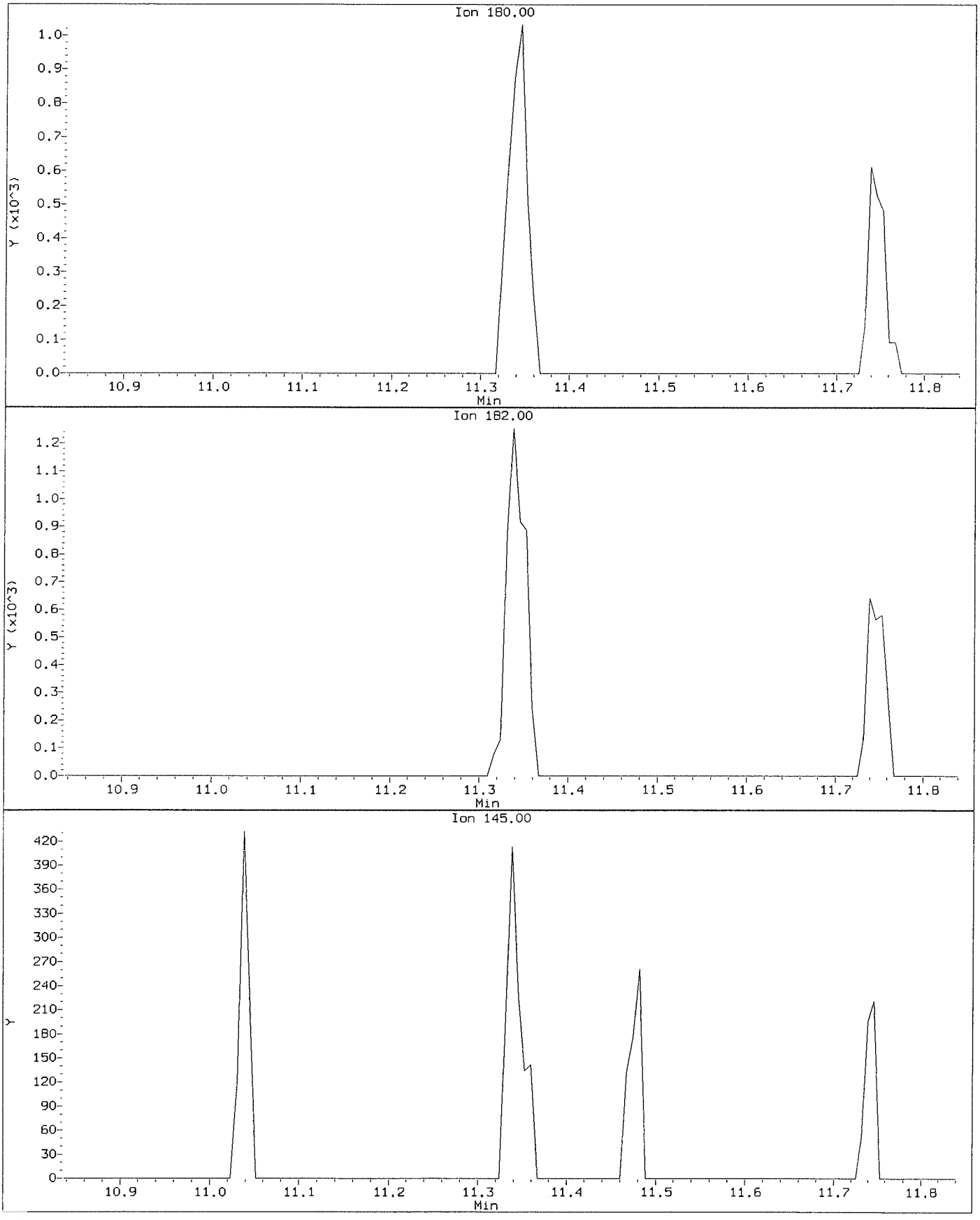
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





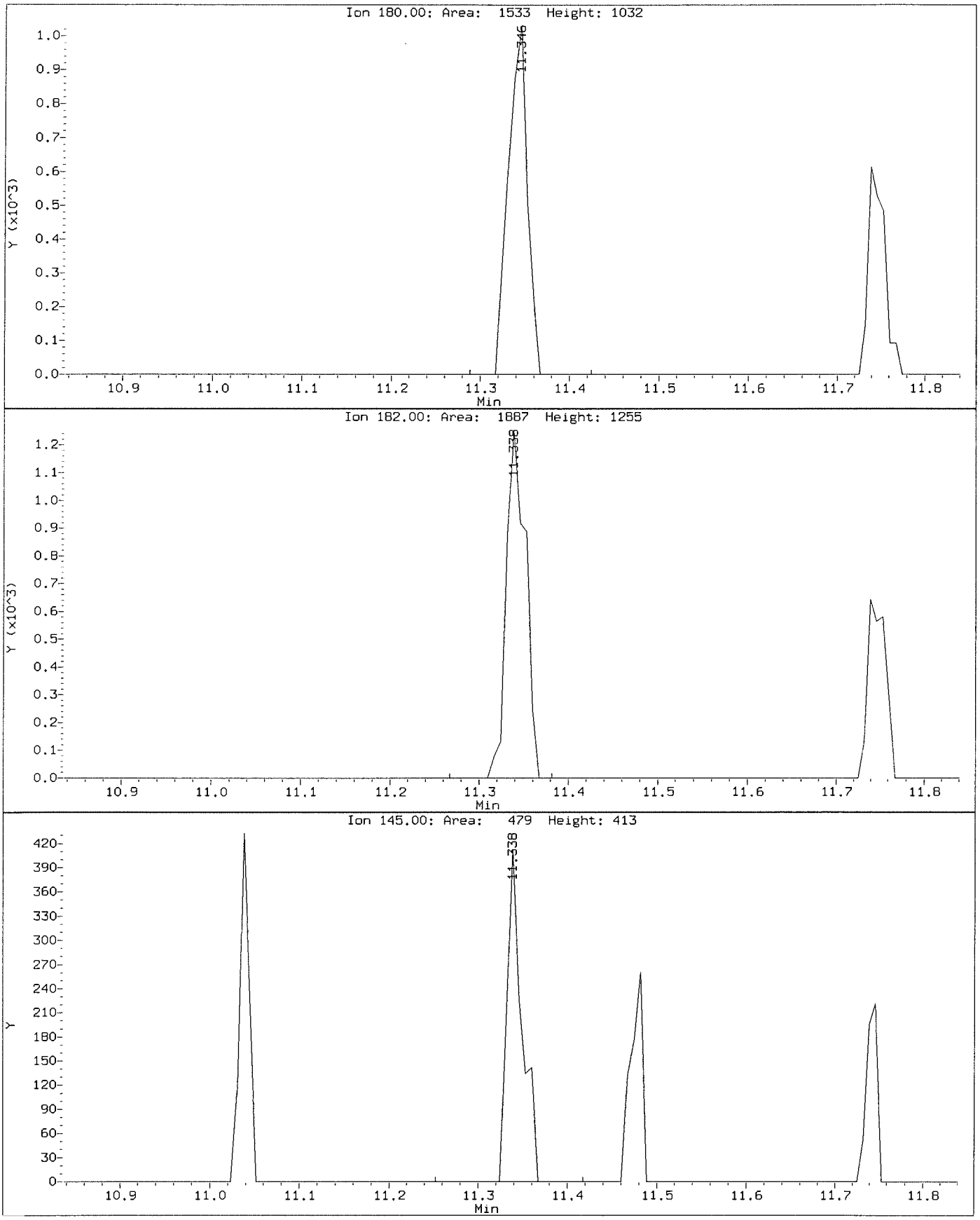
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Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

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



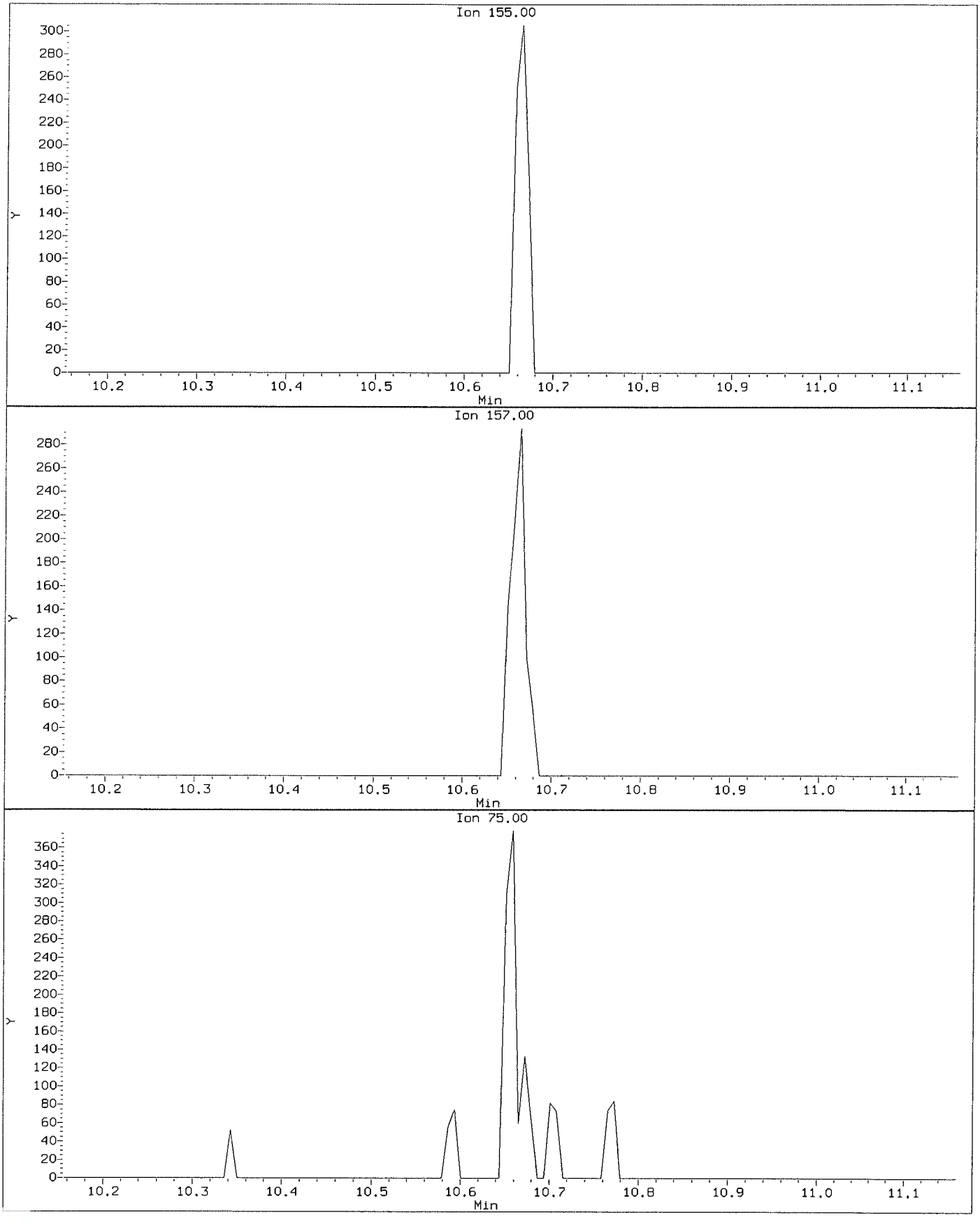
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Instrument: voa6.i
Client Sample ID: VSTD002

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



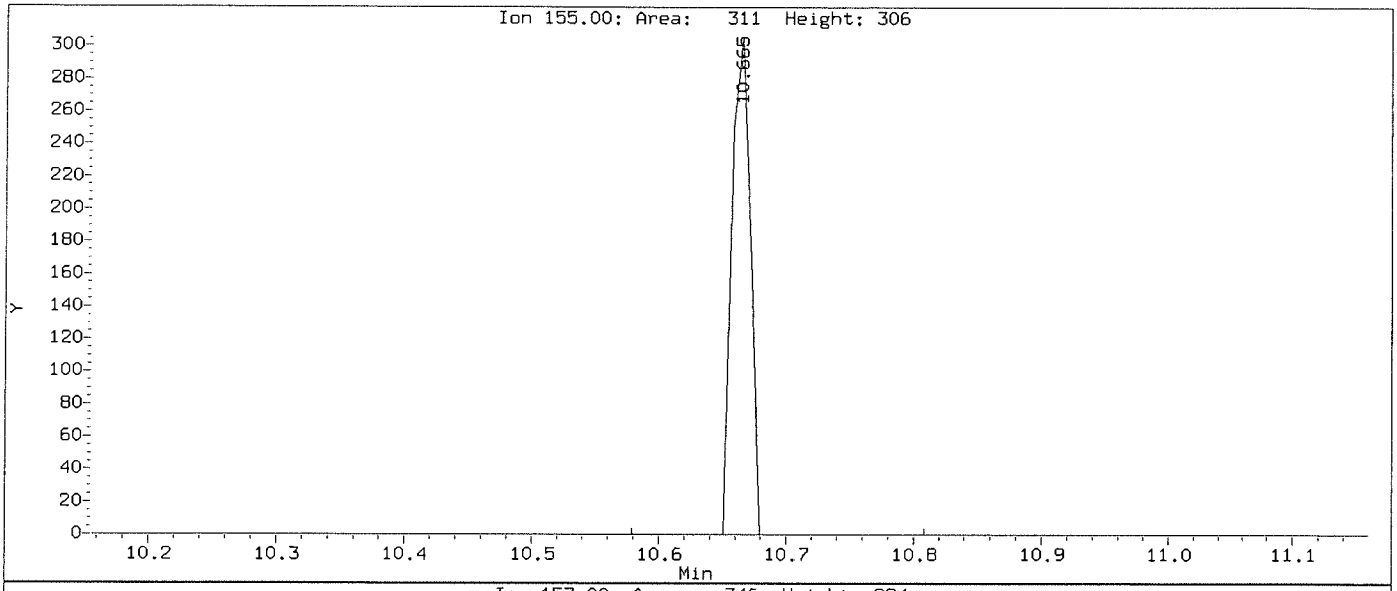
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Client Sample ID: VSTD002

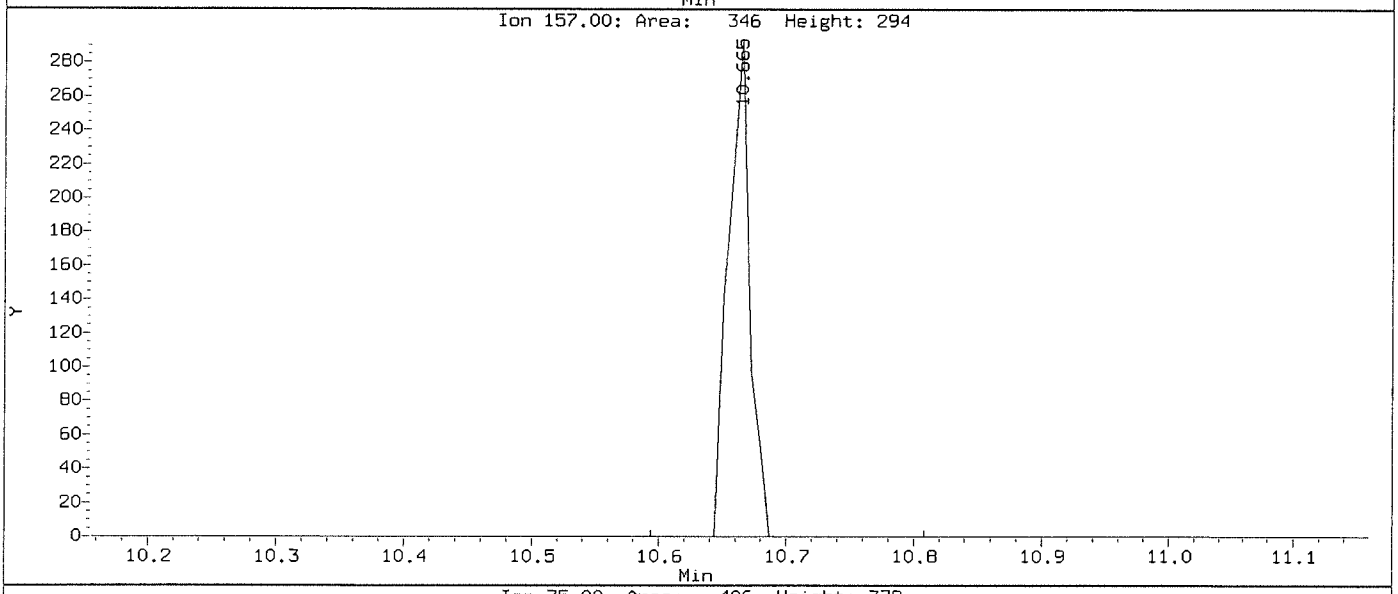
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

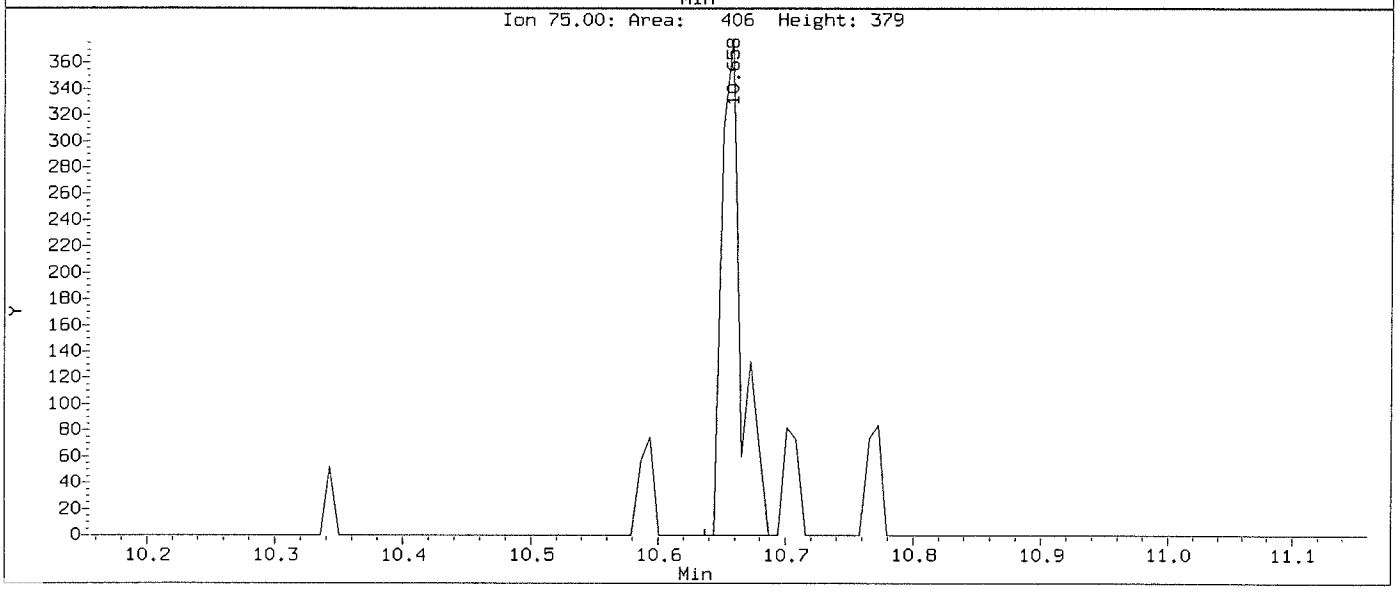


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Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

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

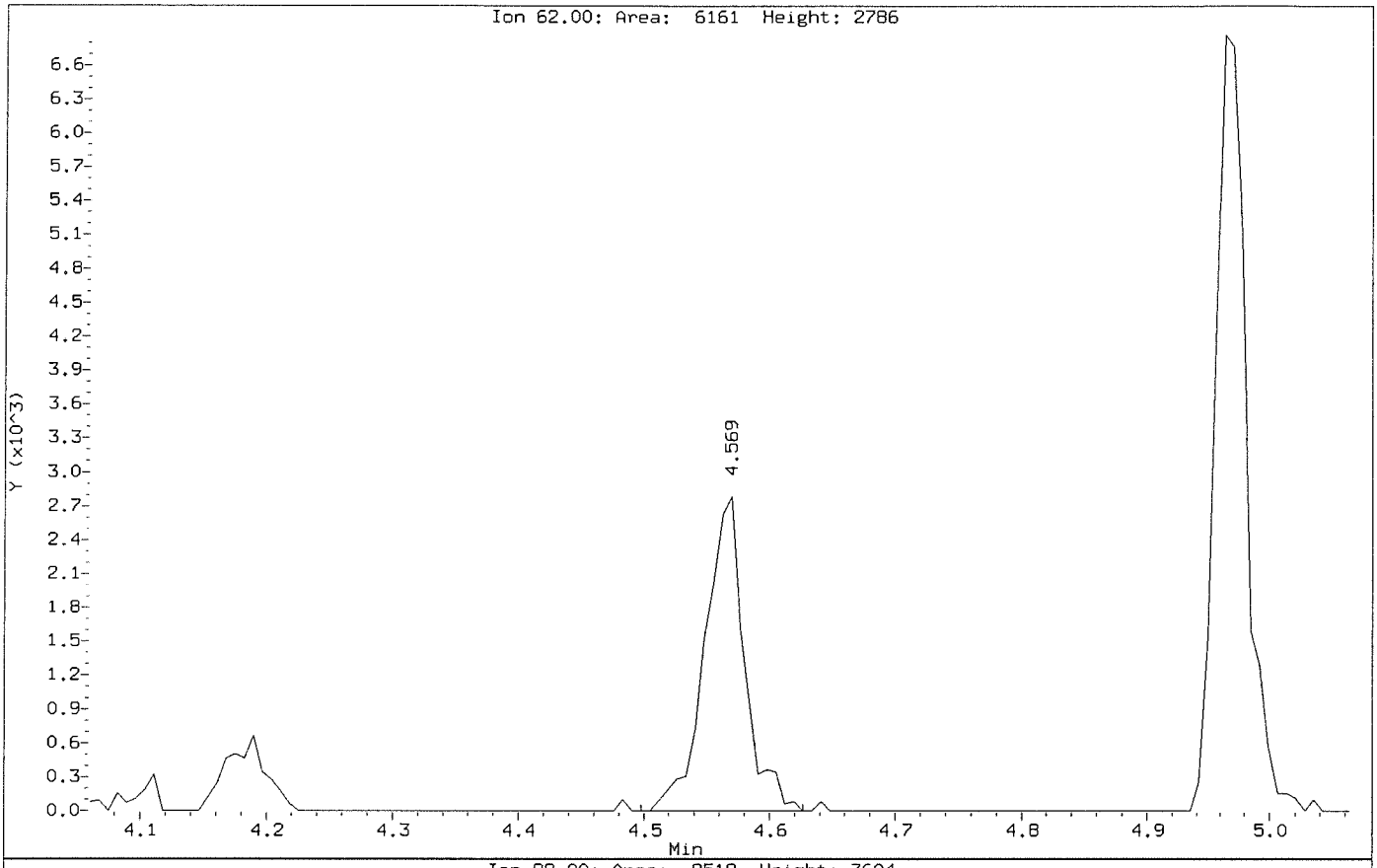


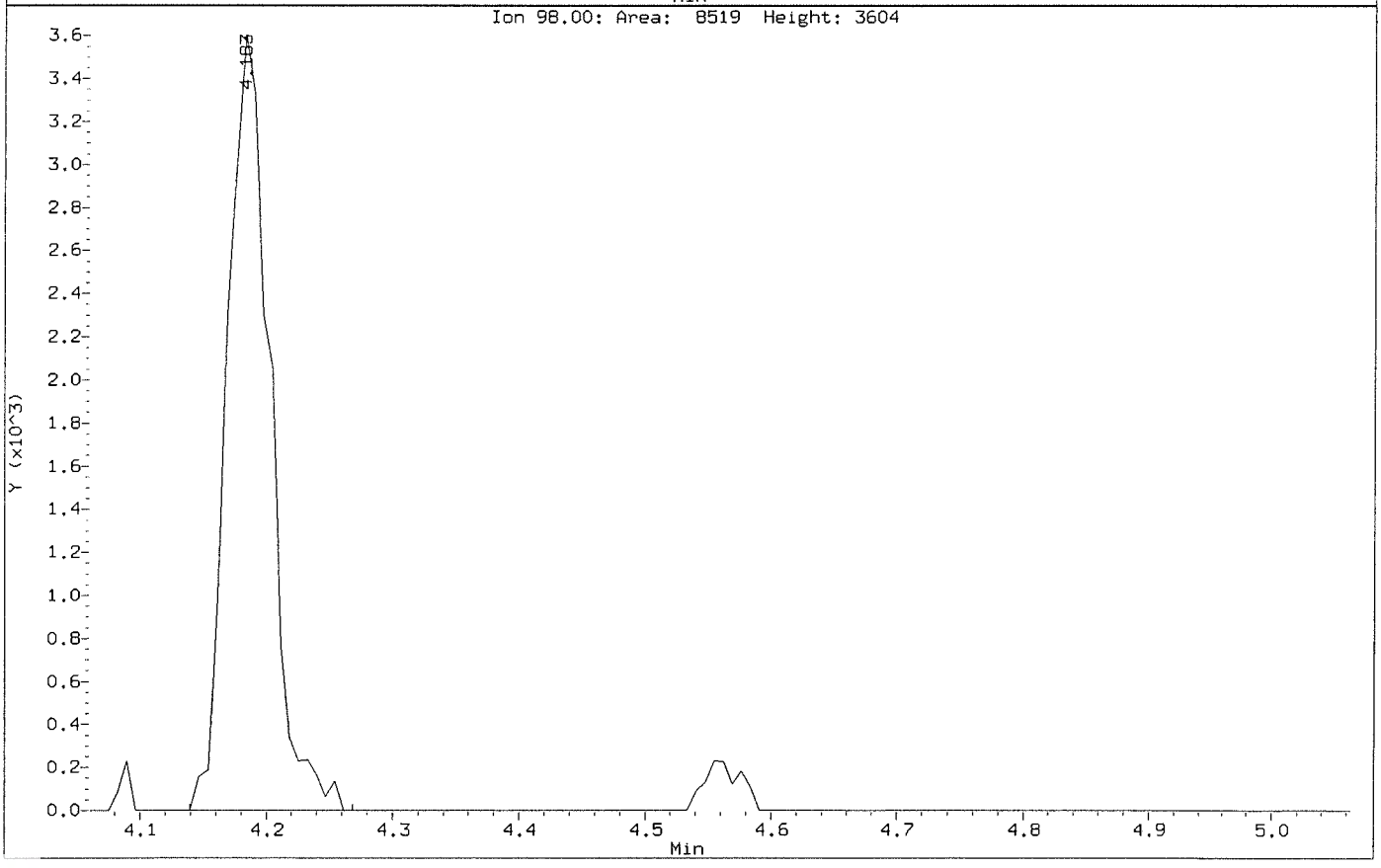




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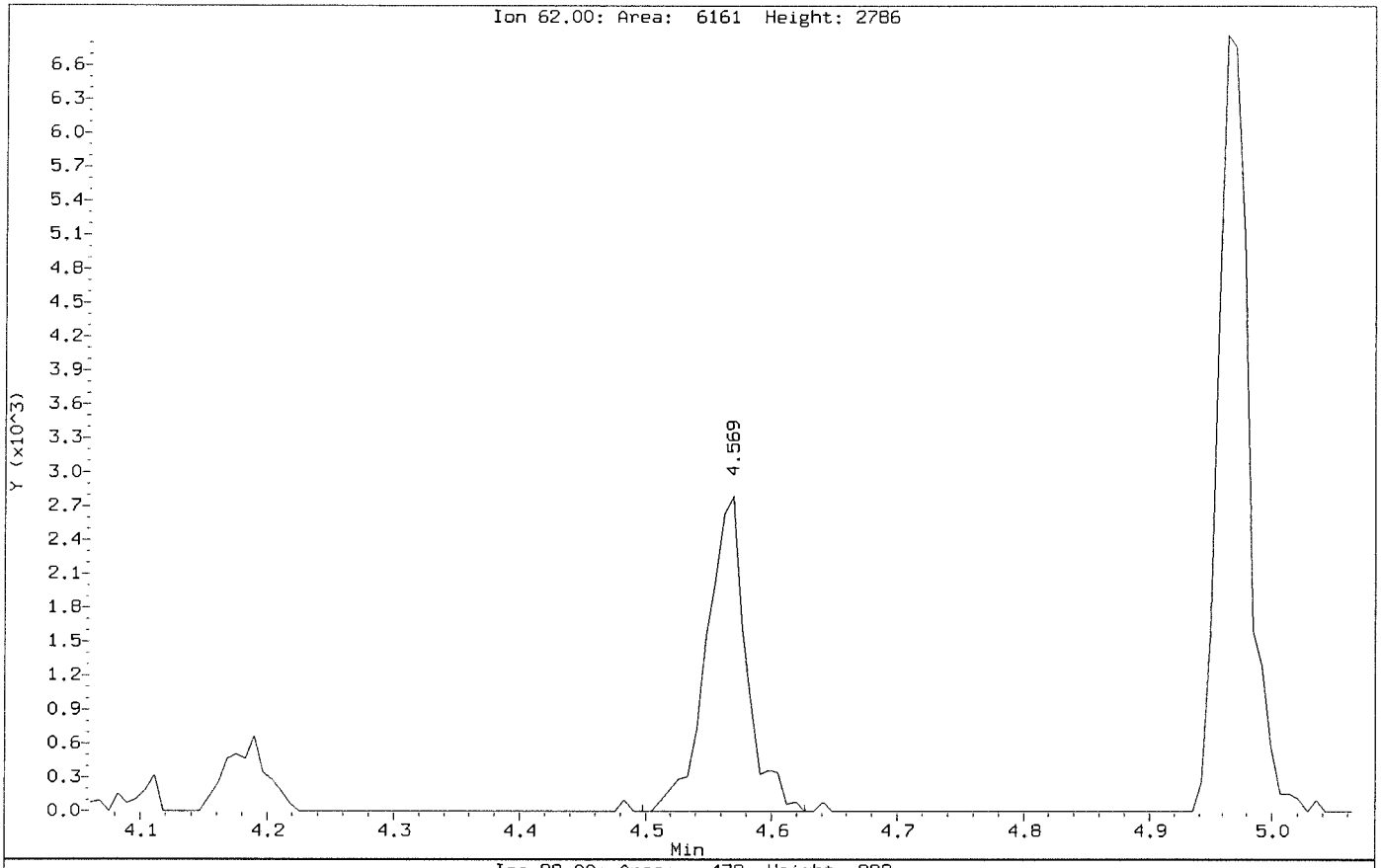
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

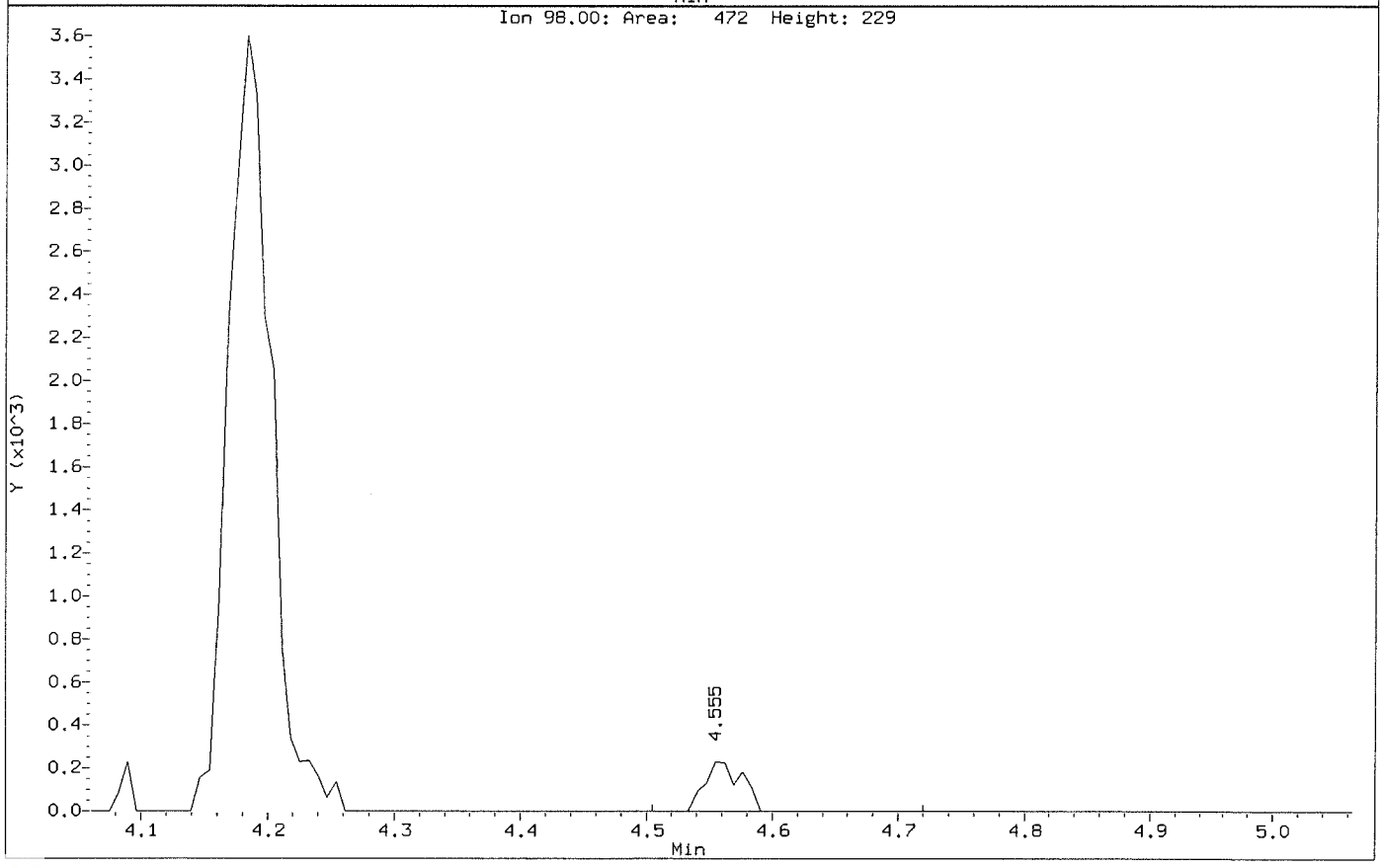




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Client Sample ID: VSTD002

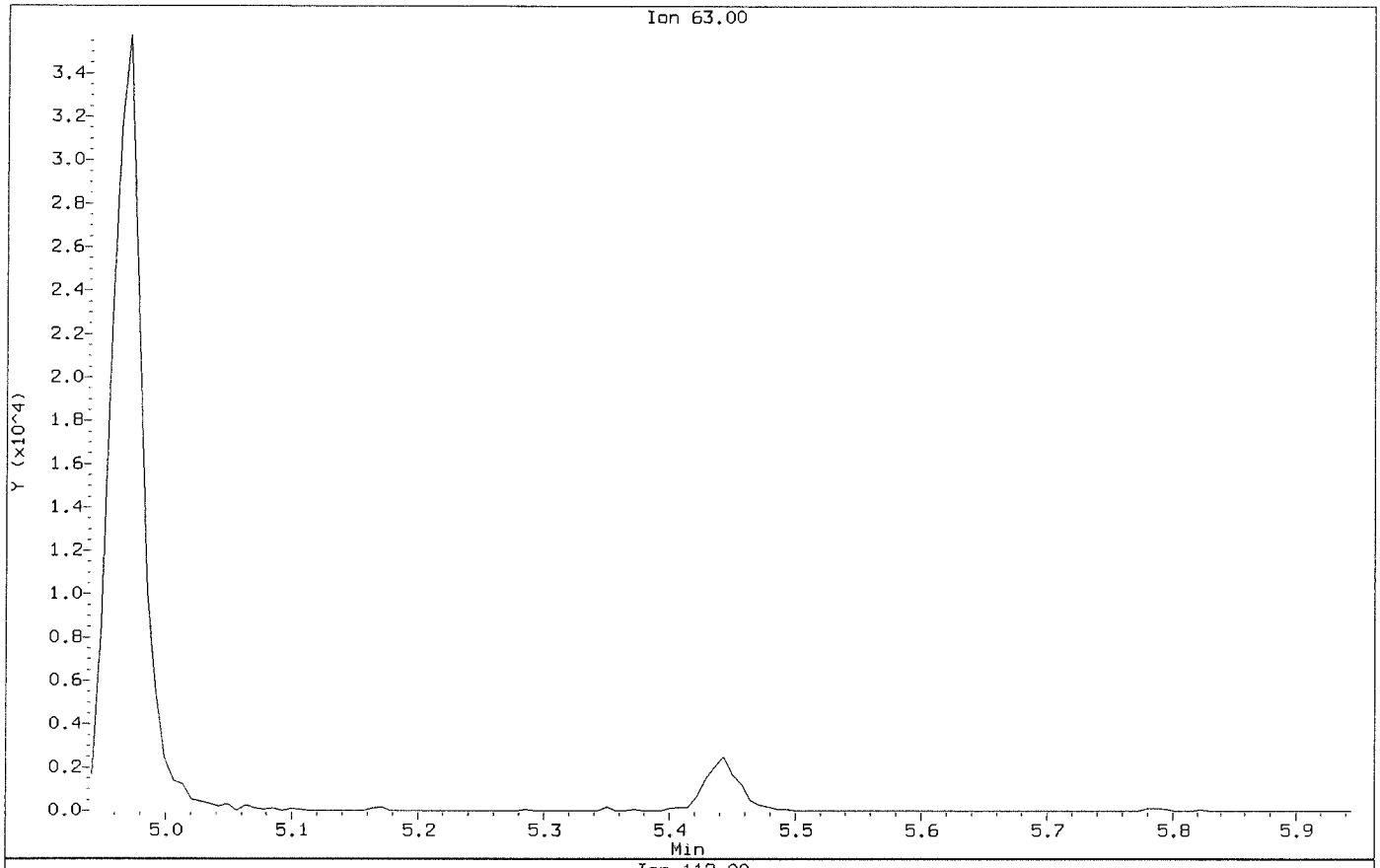
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

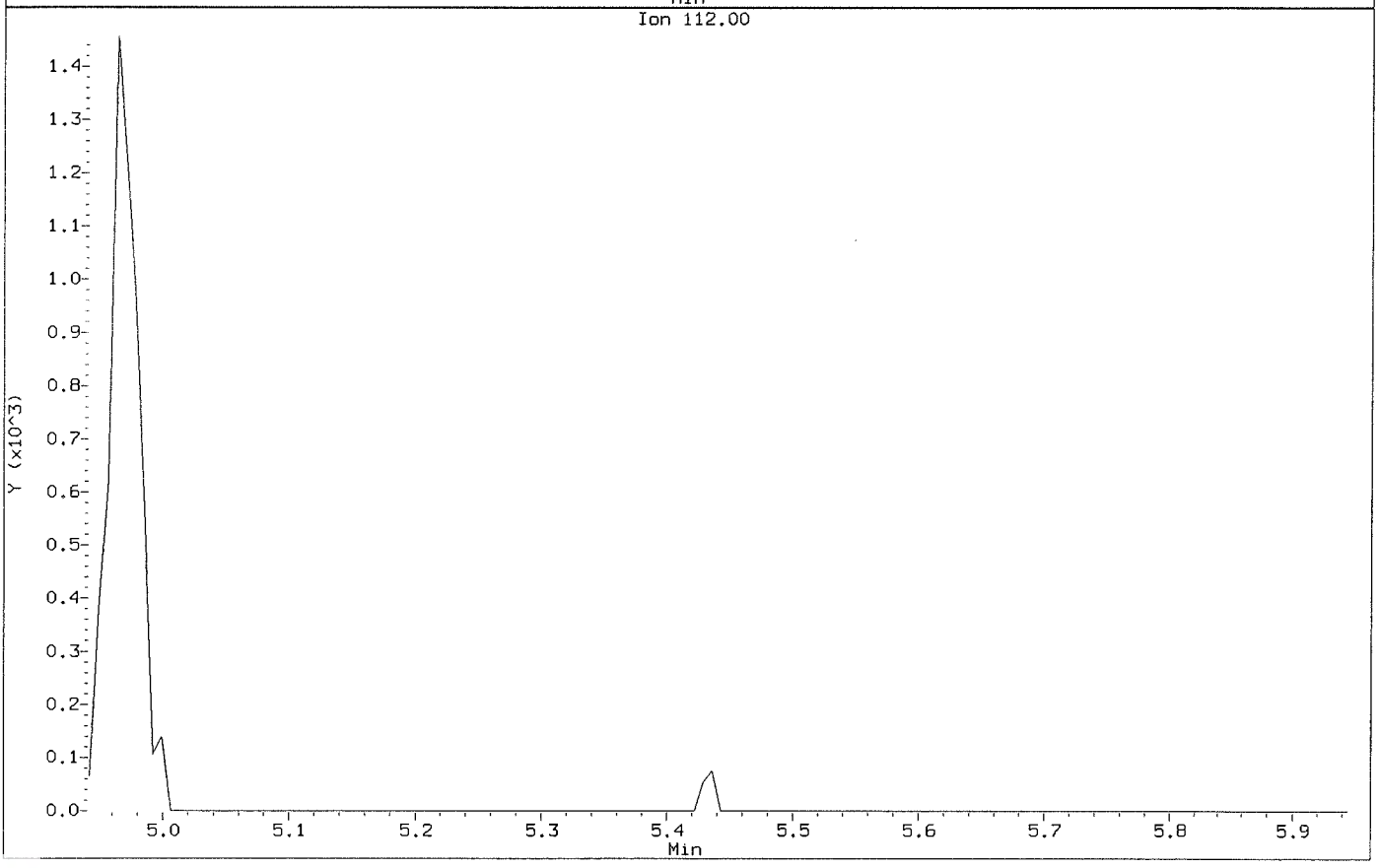




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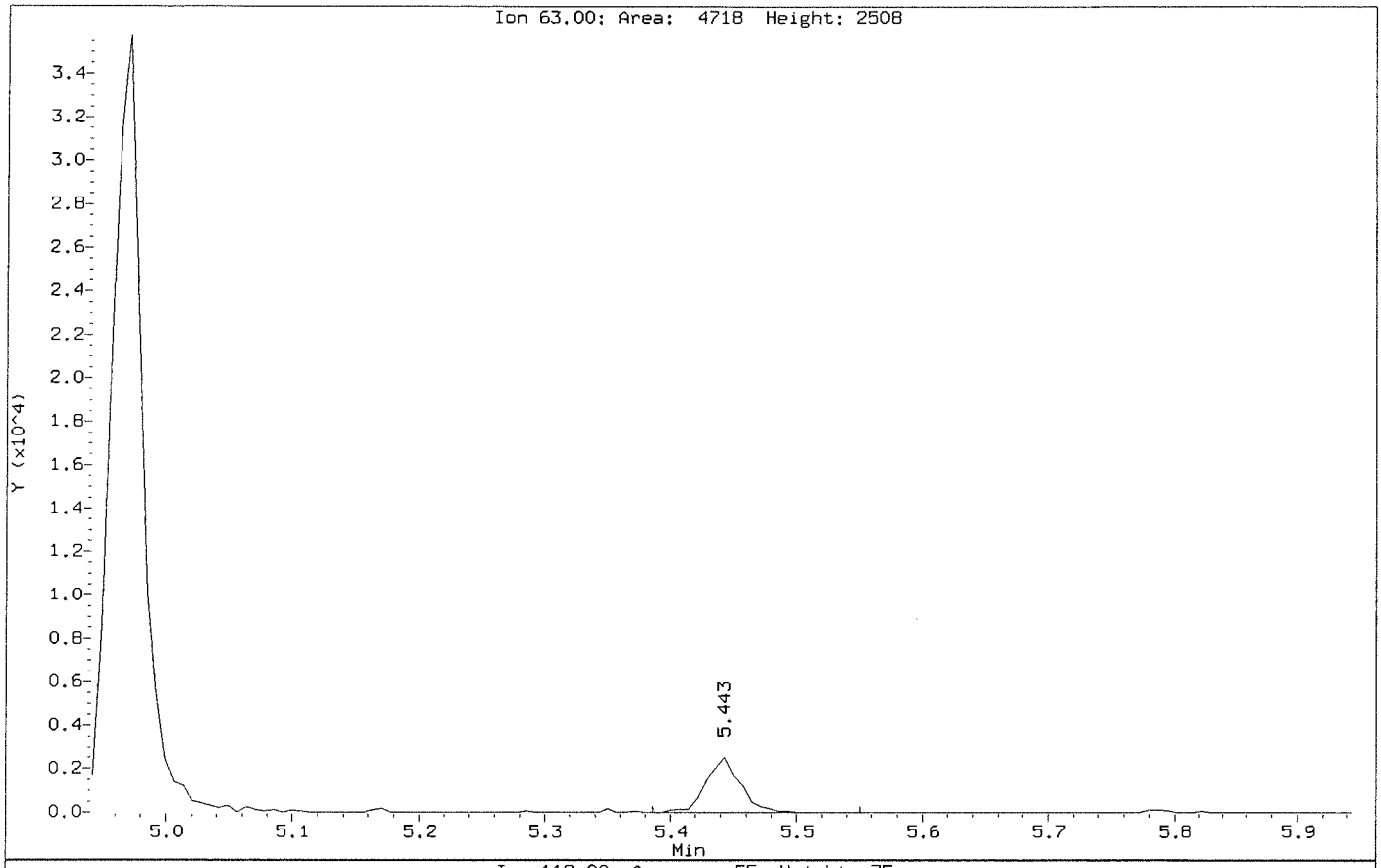
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

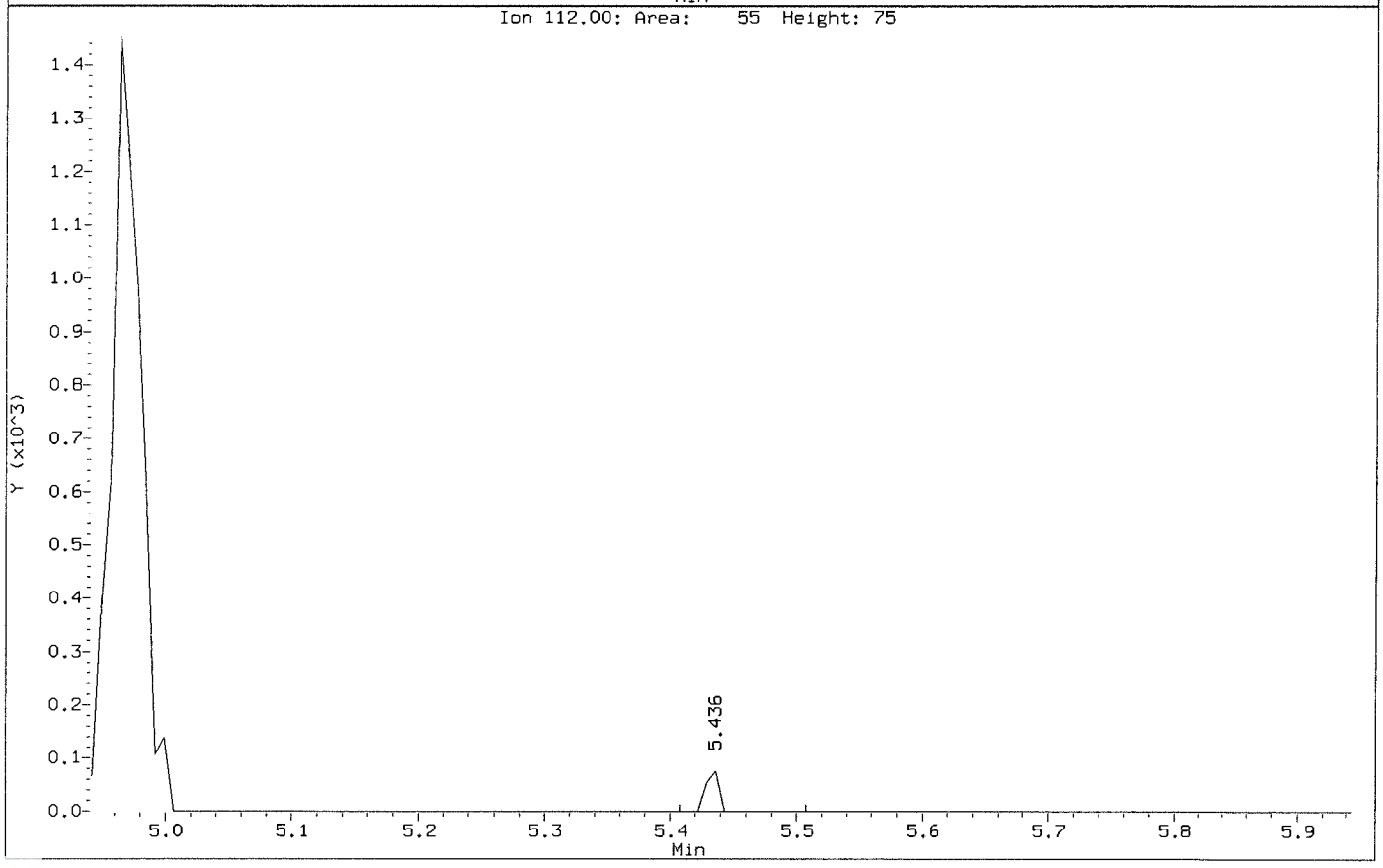




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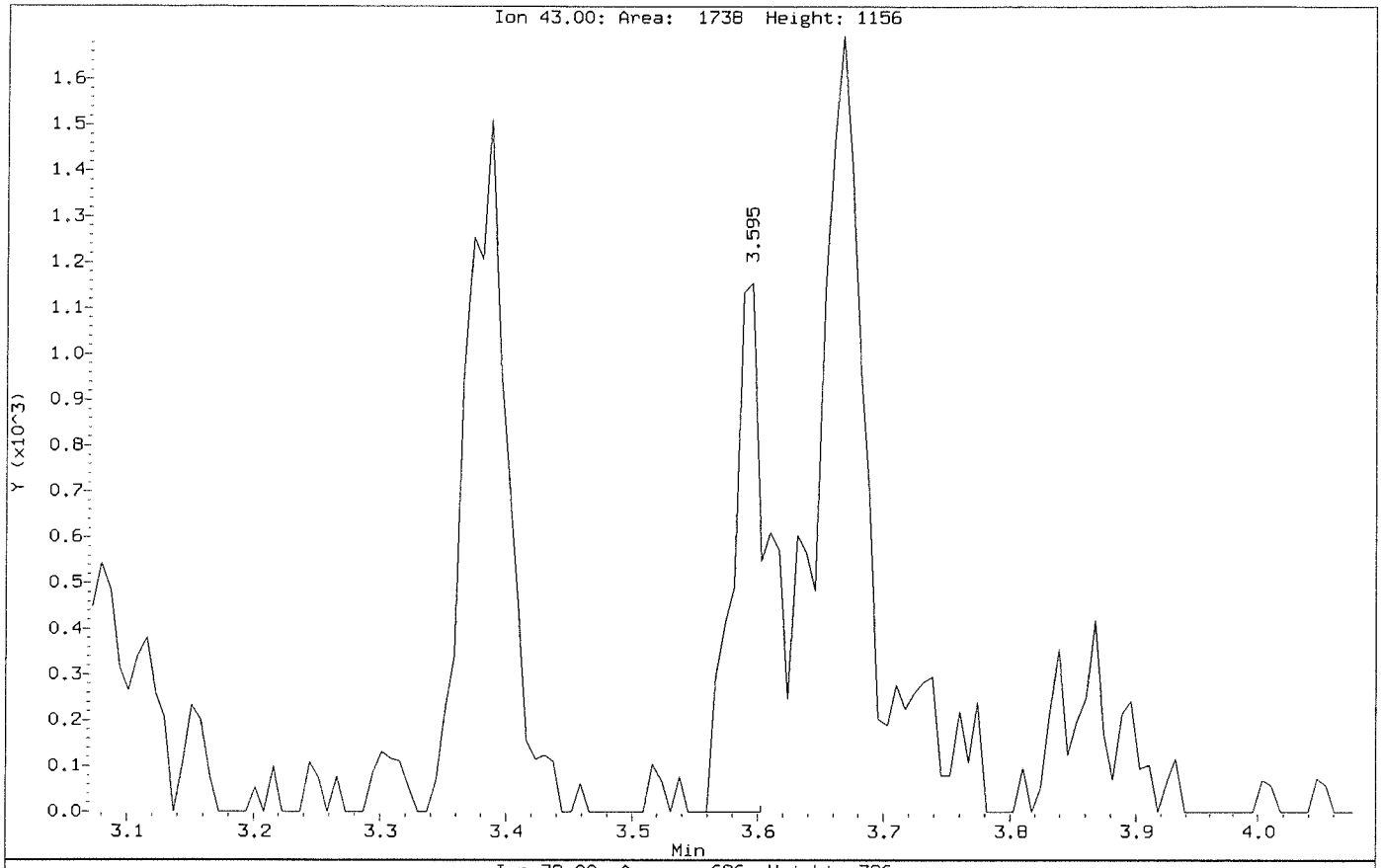
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

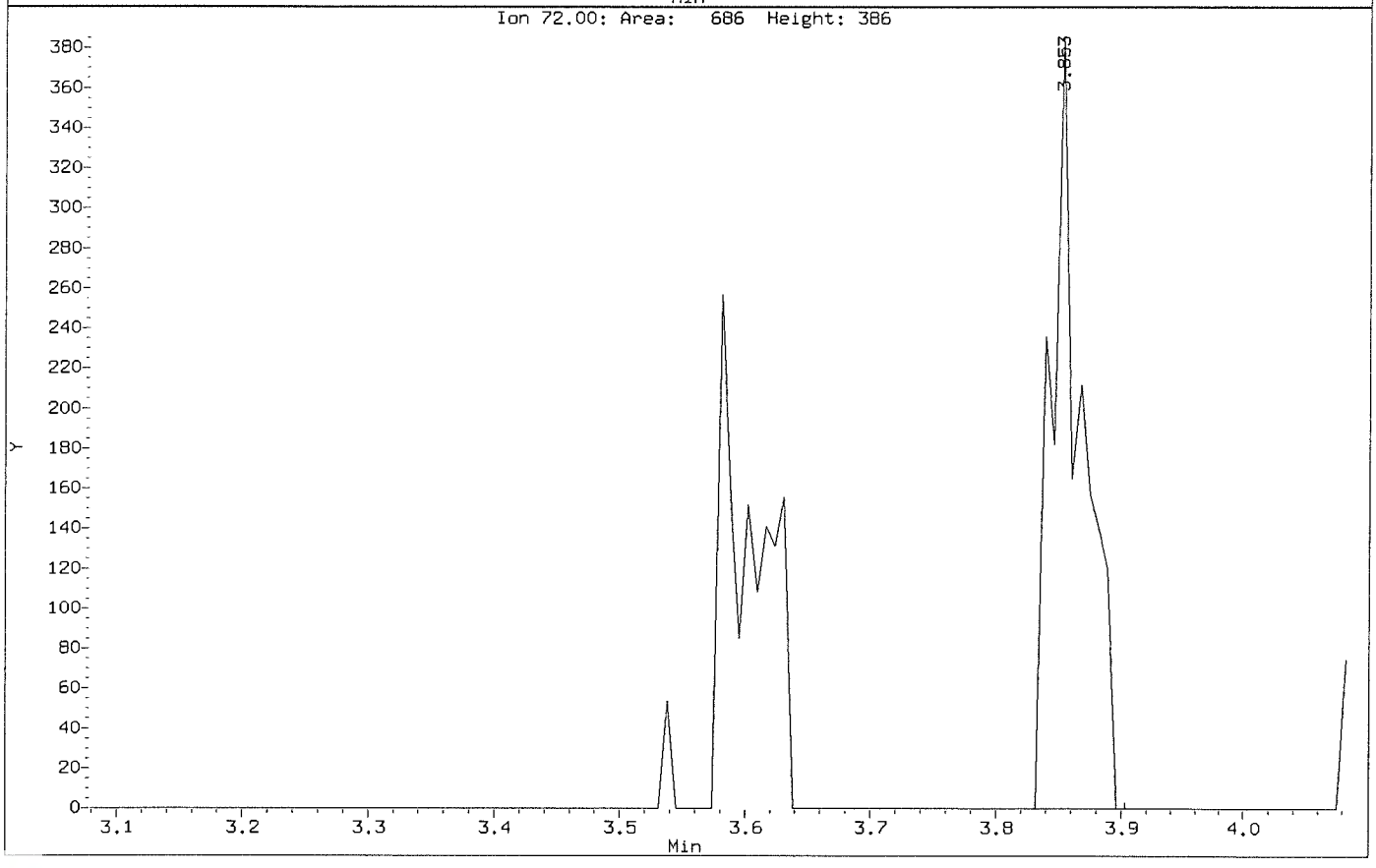




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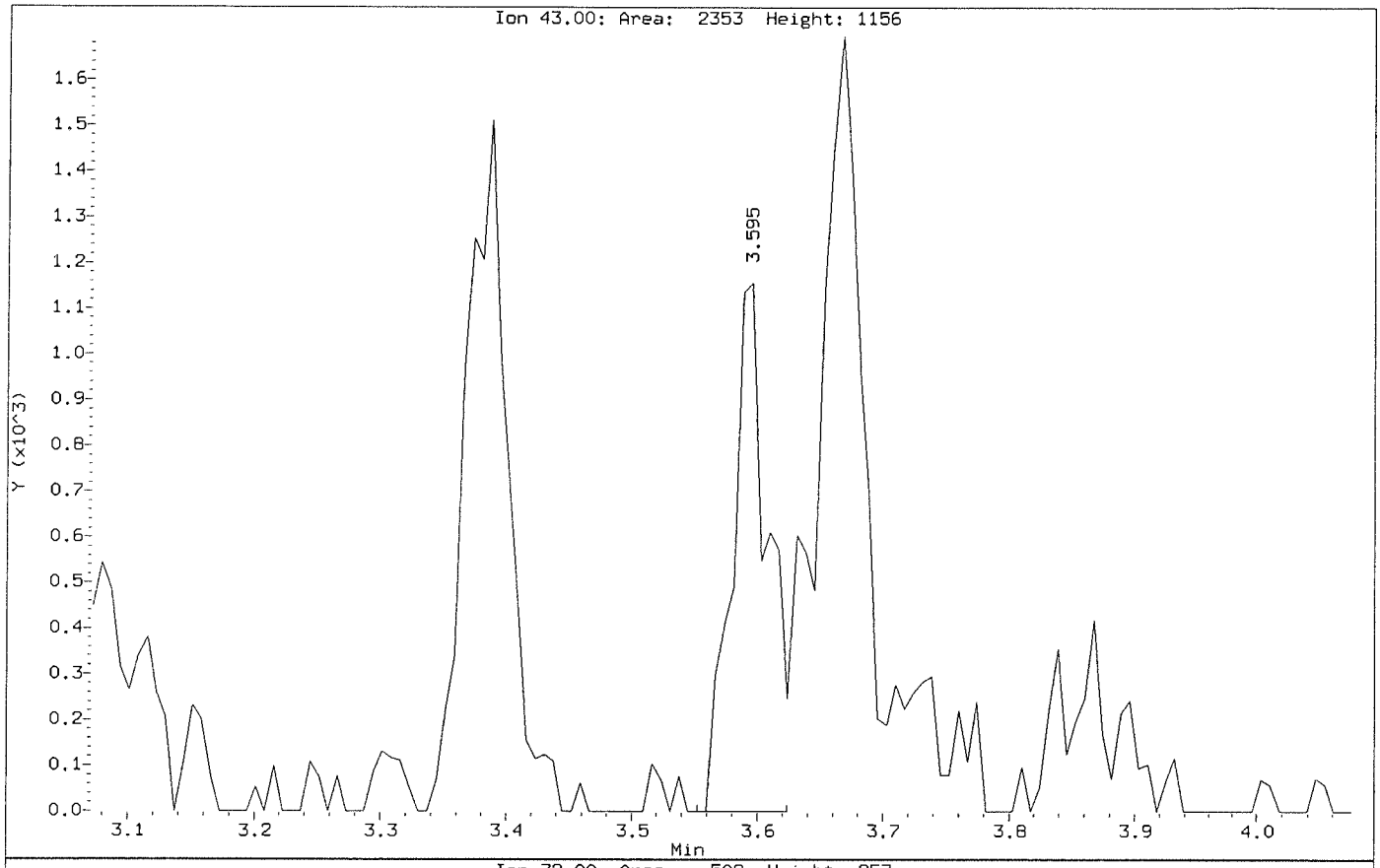
Compound: 2-Butanone
CAS Number: 78-93-3

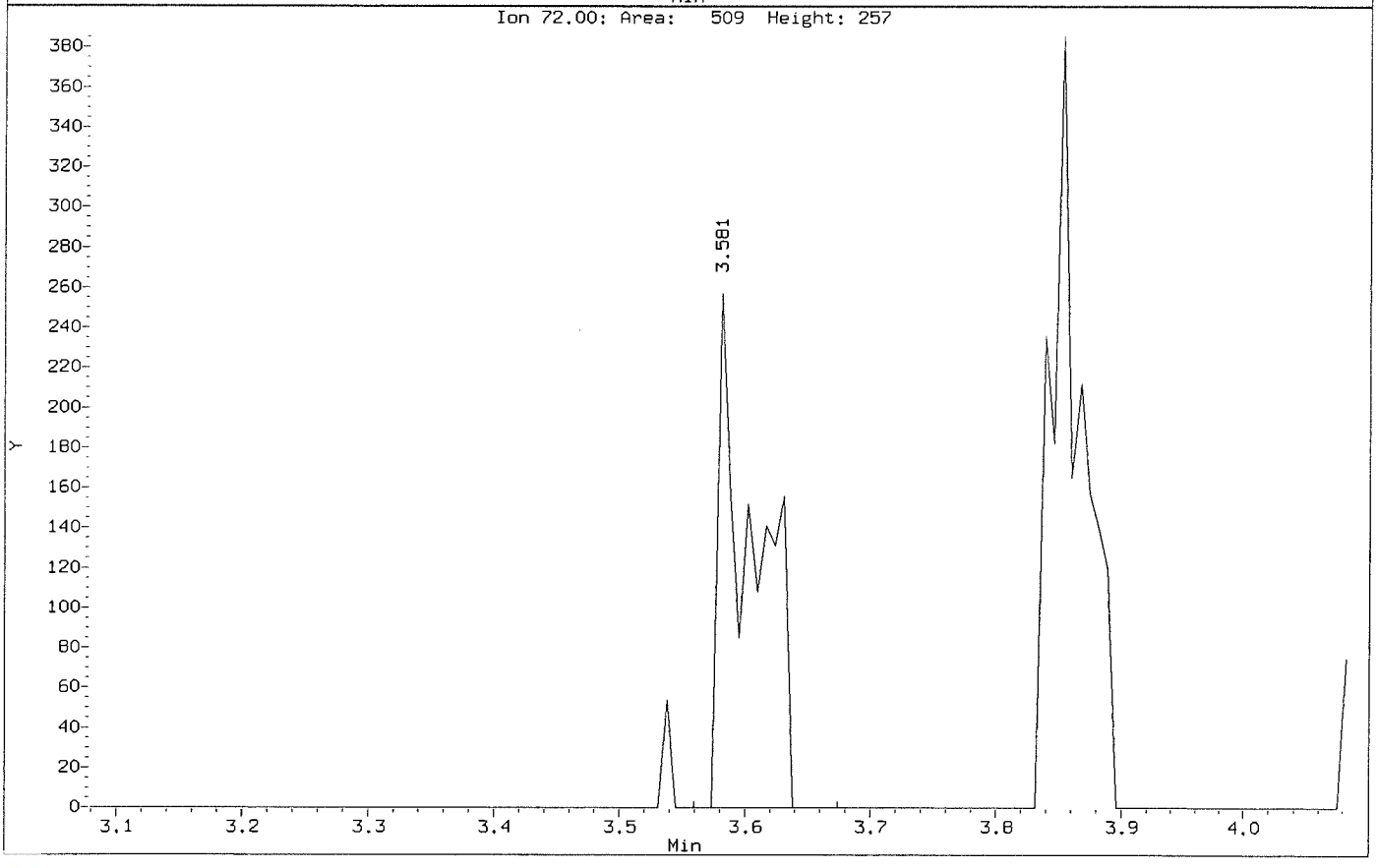




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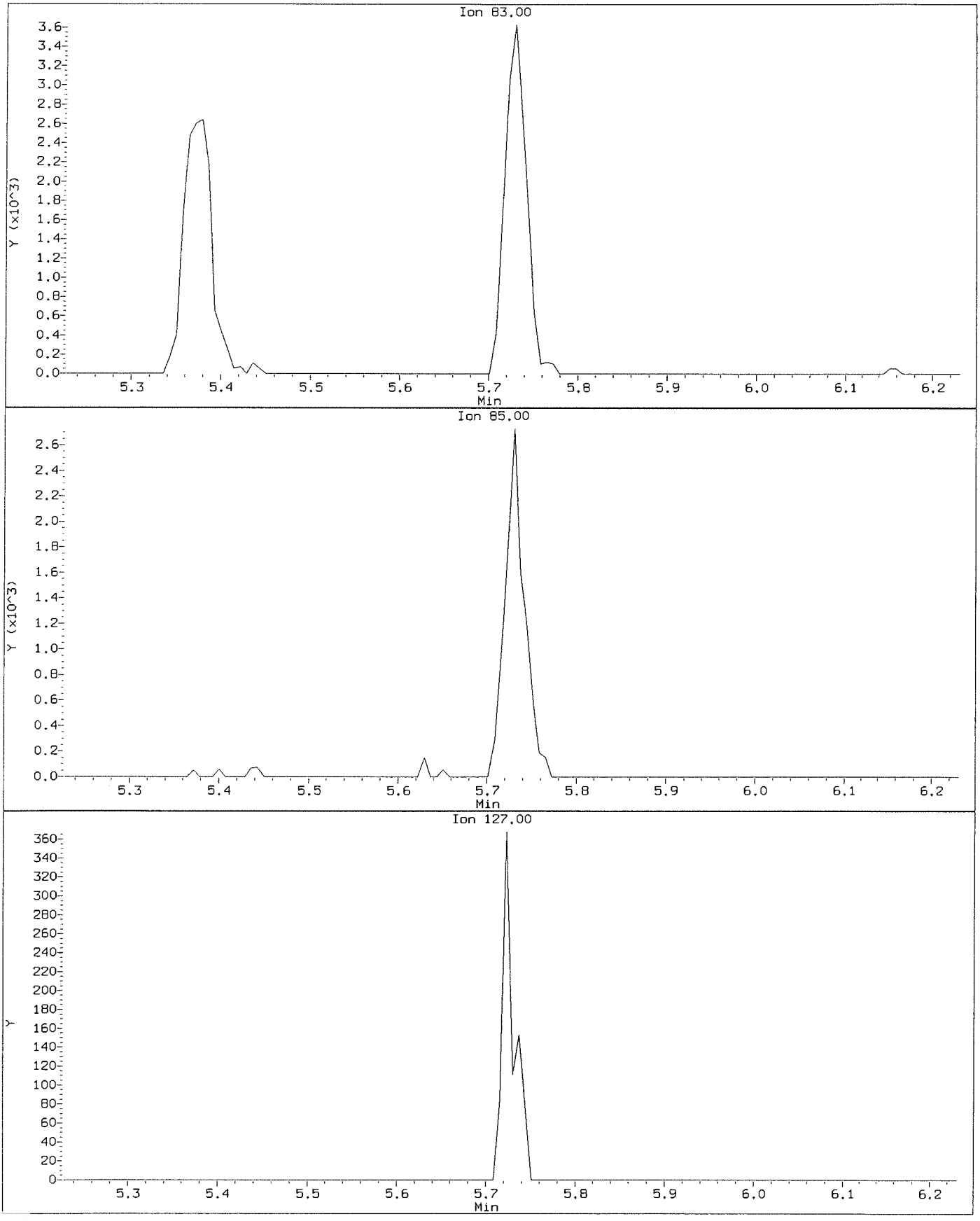
Compound: 2-Butanone
CAS Number: 78-93-3





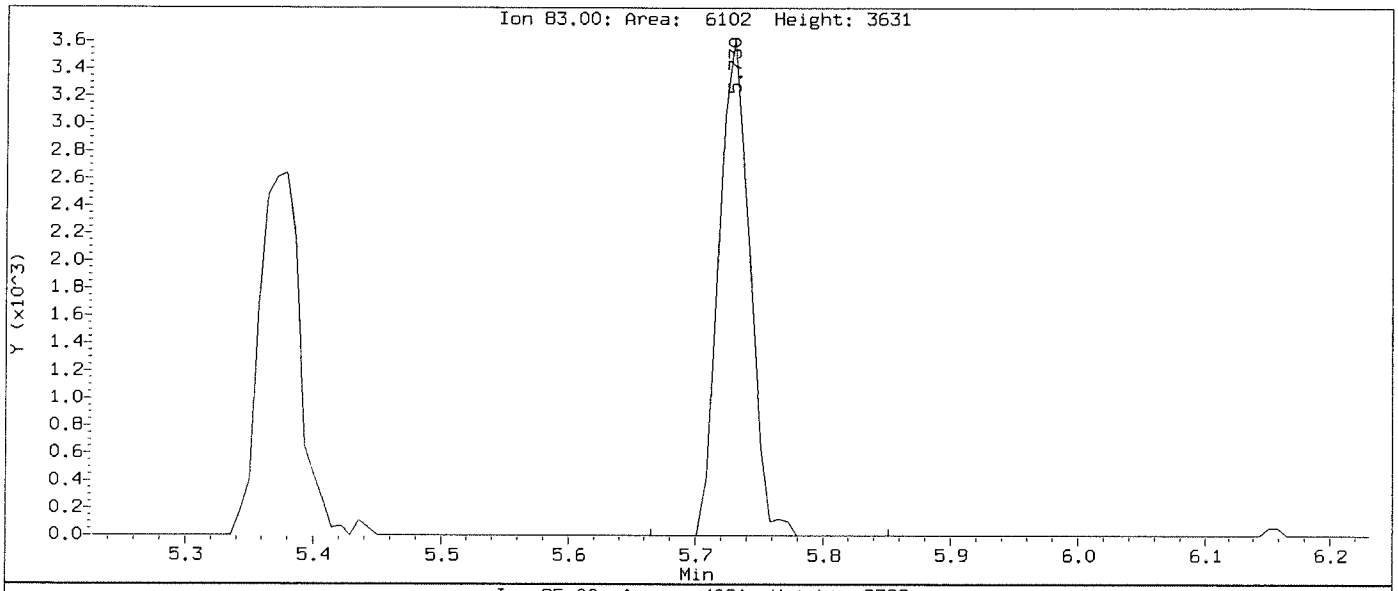
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Instrument: voa6.i
Client Sample ID: VSTD002

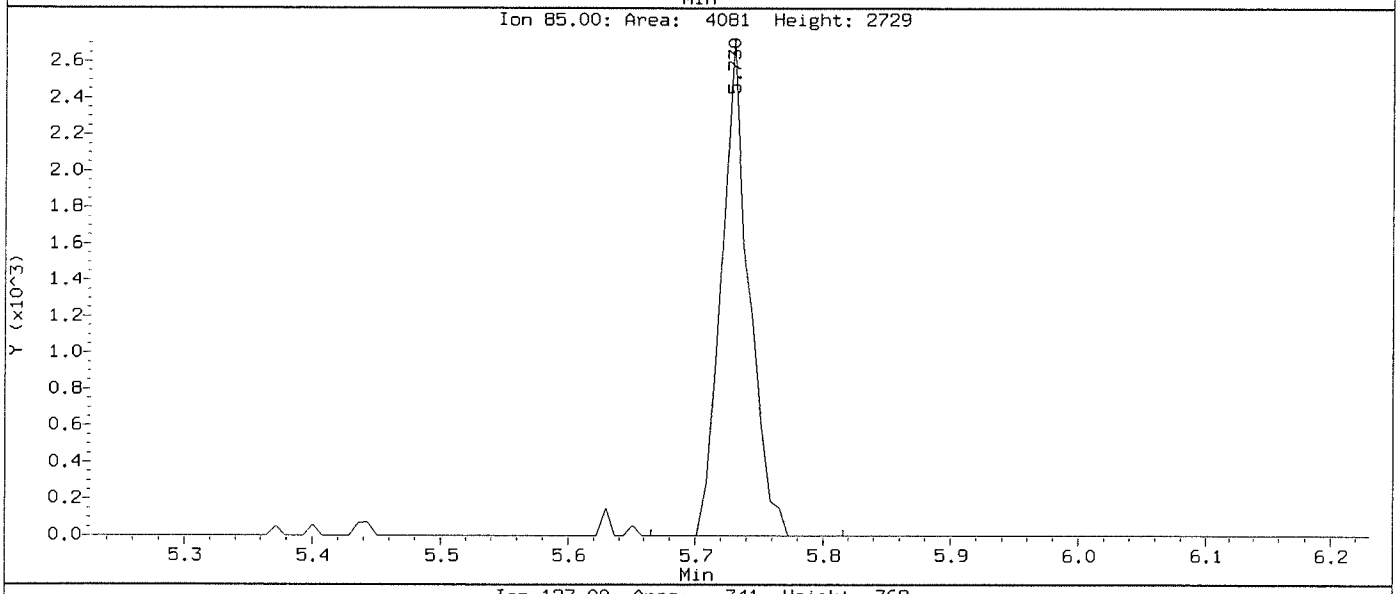
Compound: Bromodichloromethane
CAS Number: 75-27-4

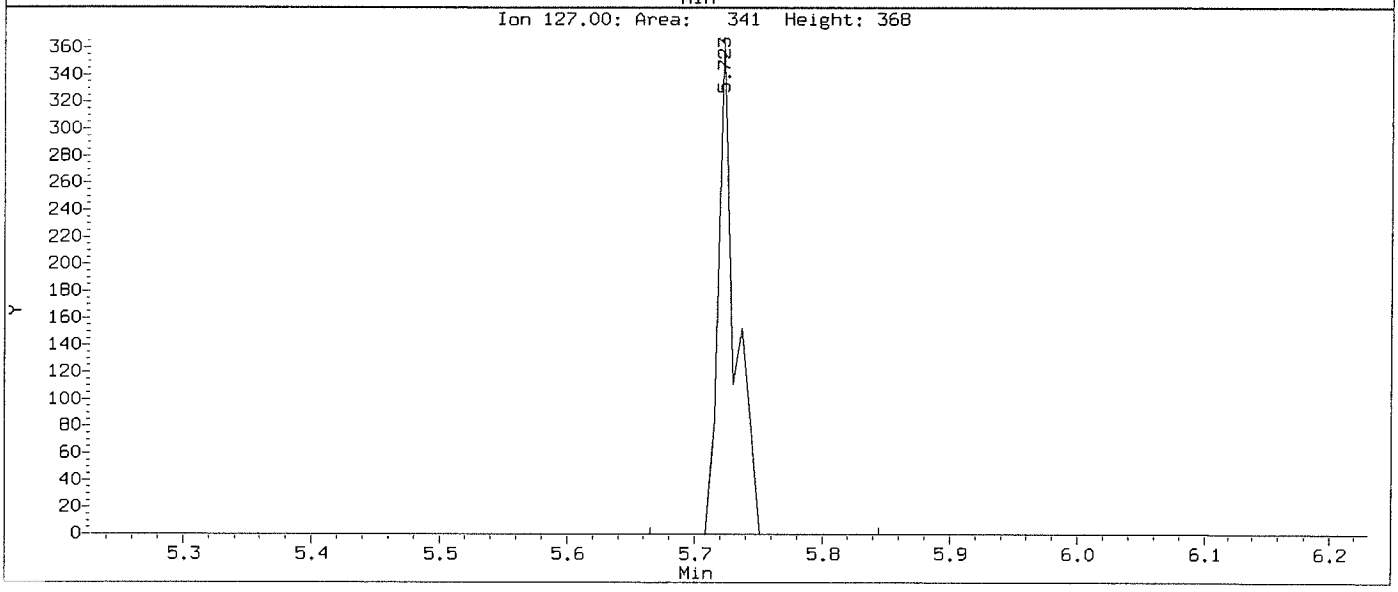


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Instrument: voa6.i
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Compound: Bromodichloromethane
CAS Number: 75-27-4

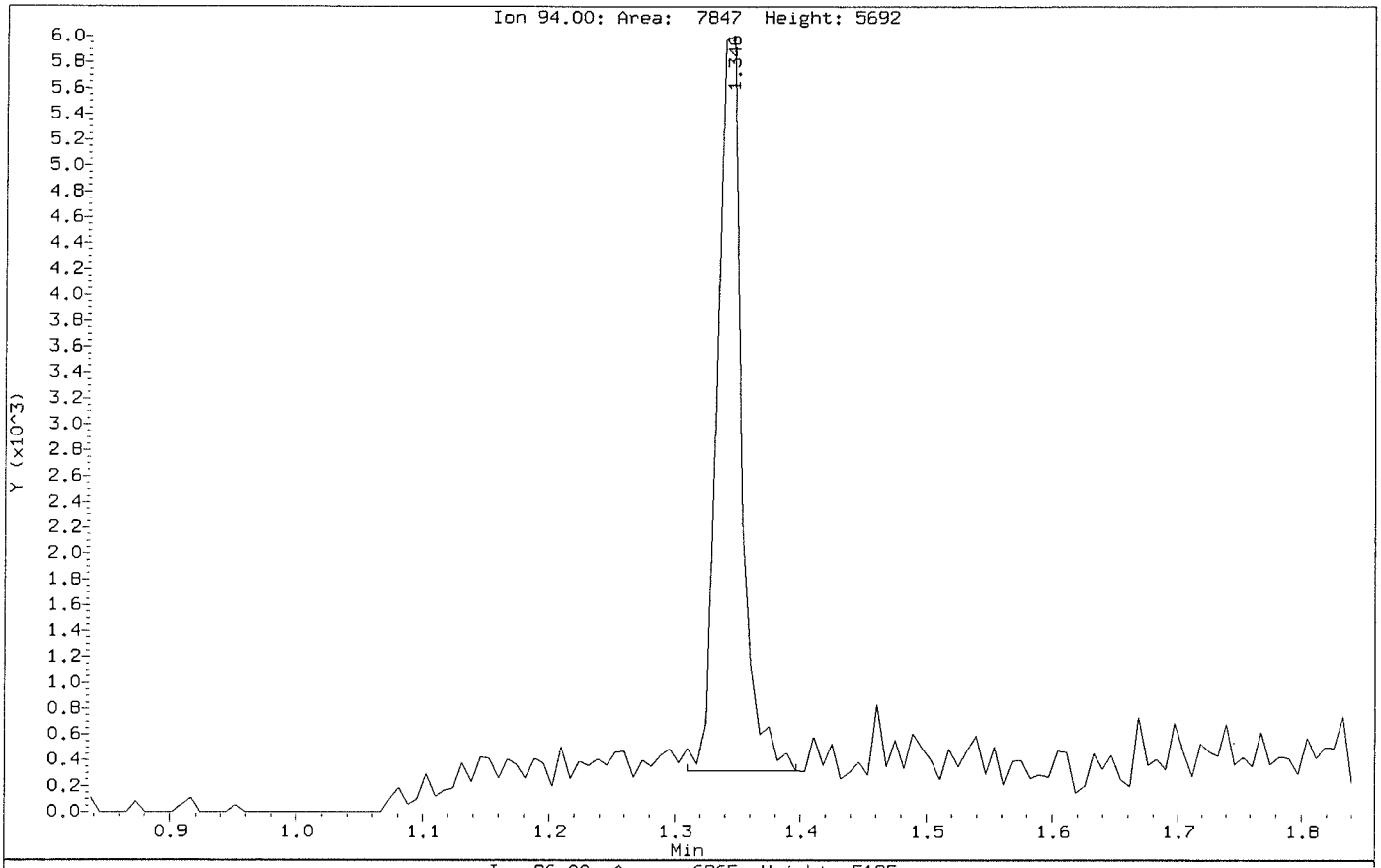


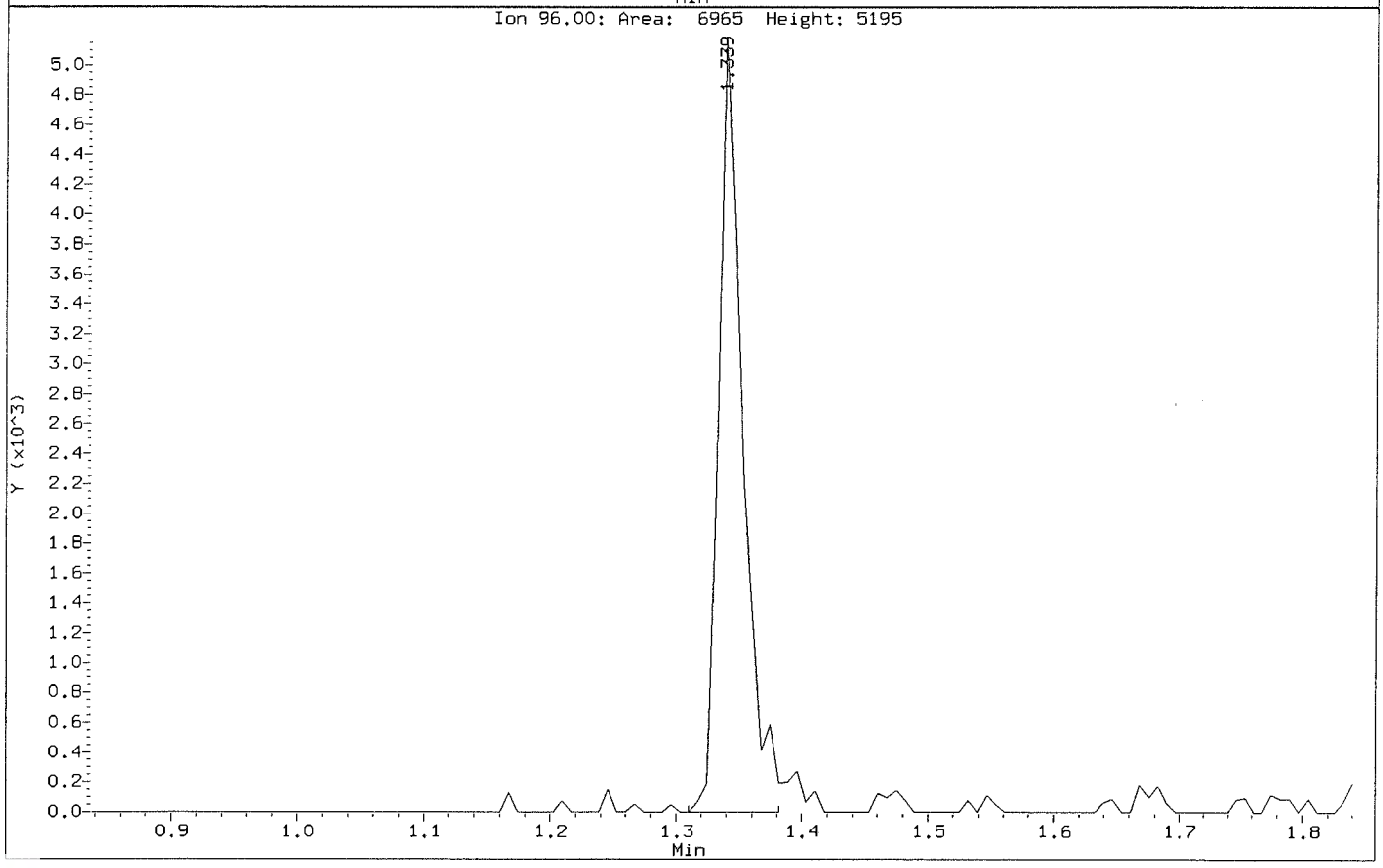




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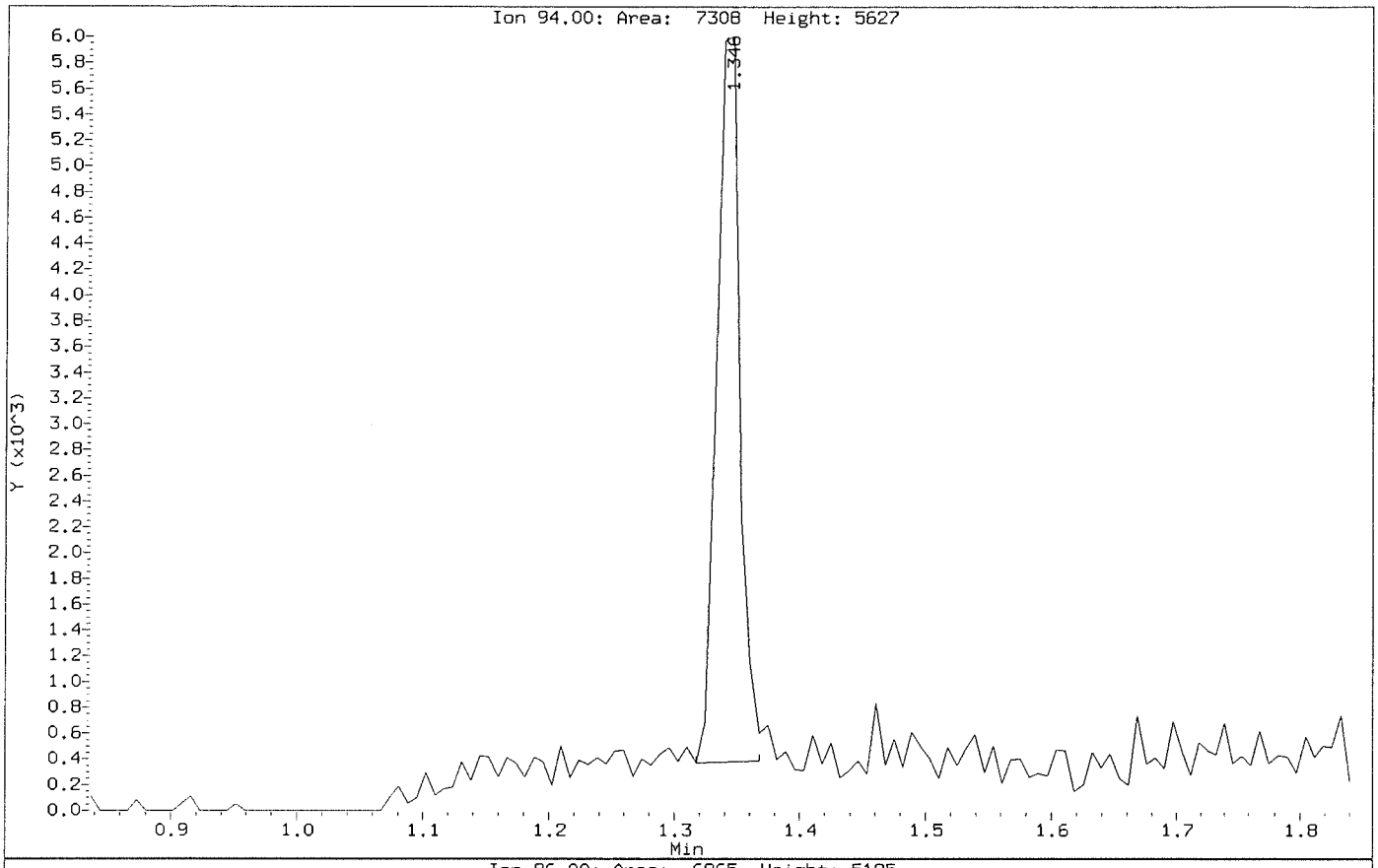
Compound: Bromomethane
CAS Number: 74-83-9

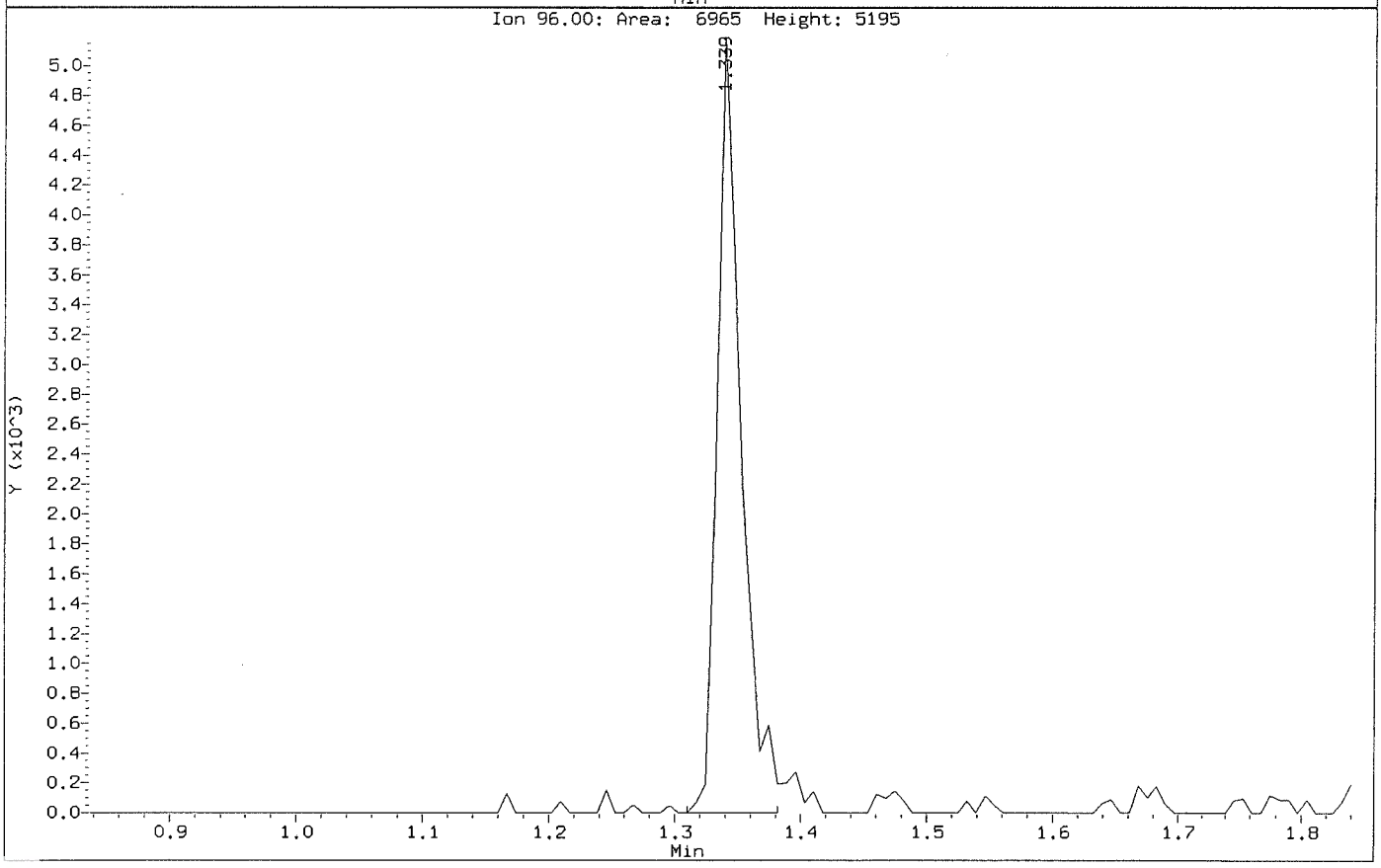




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Client Sample ID: VSTD002

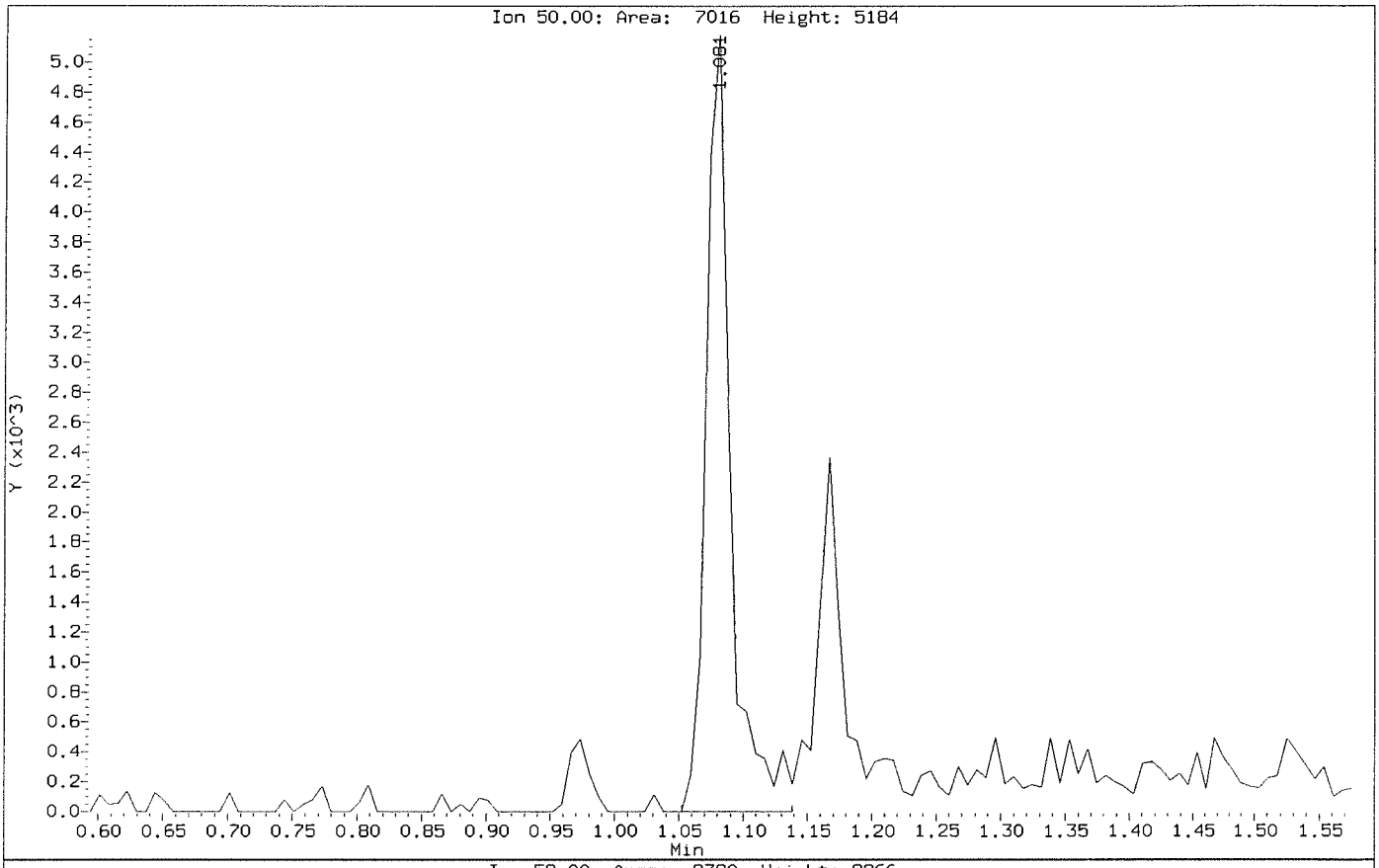
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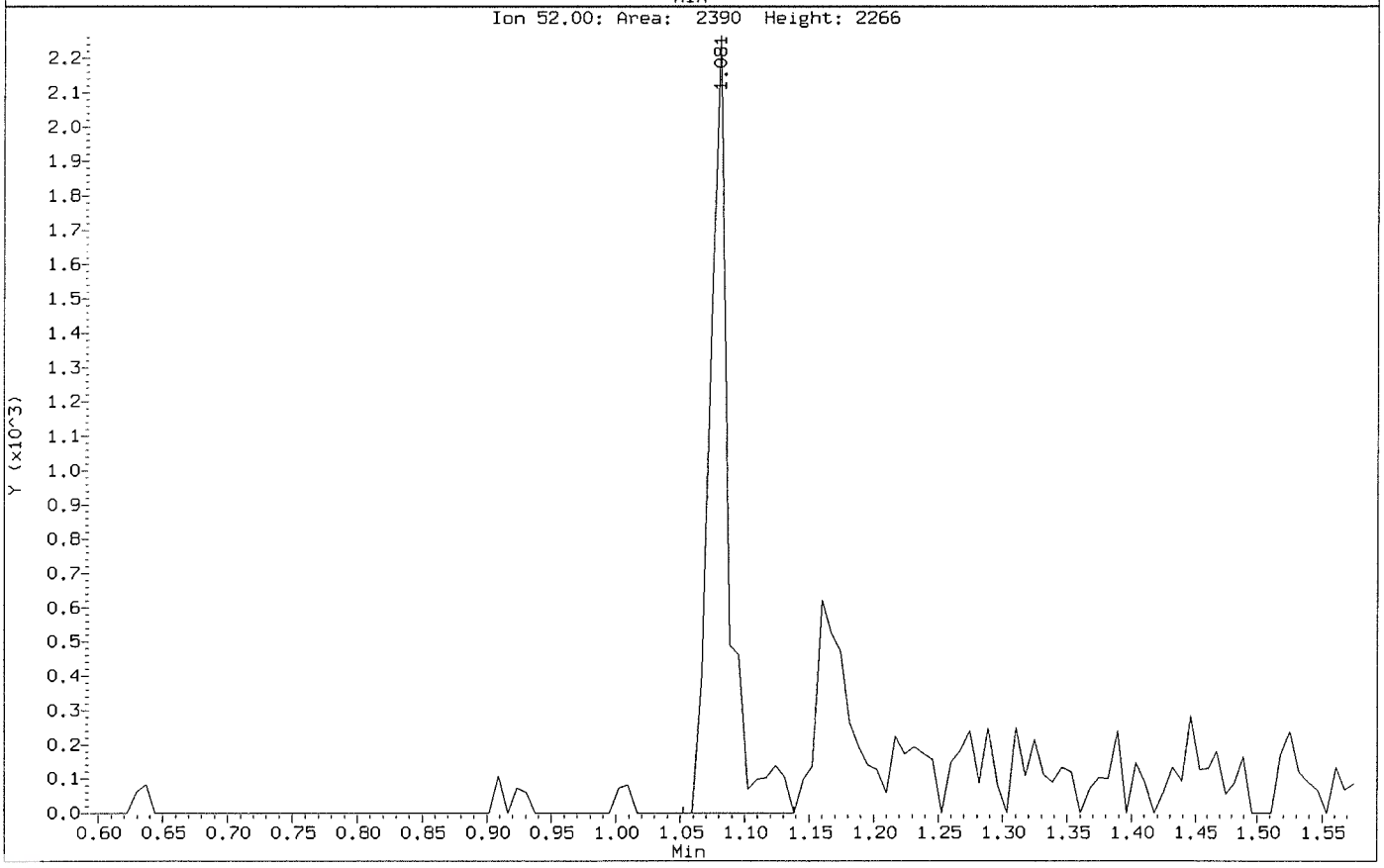




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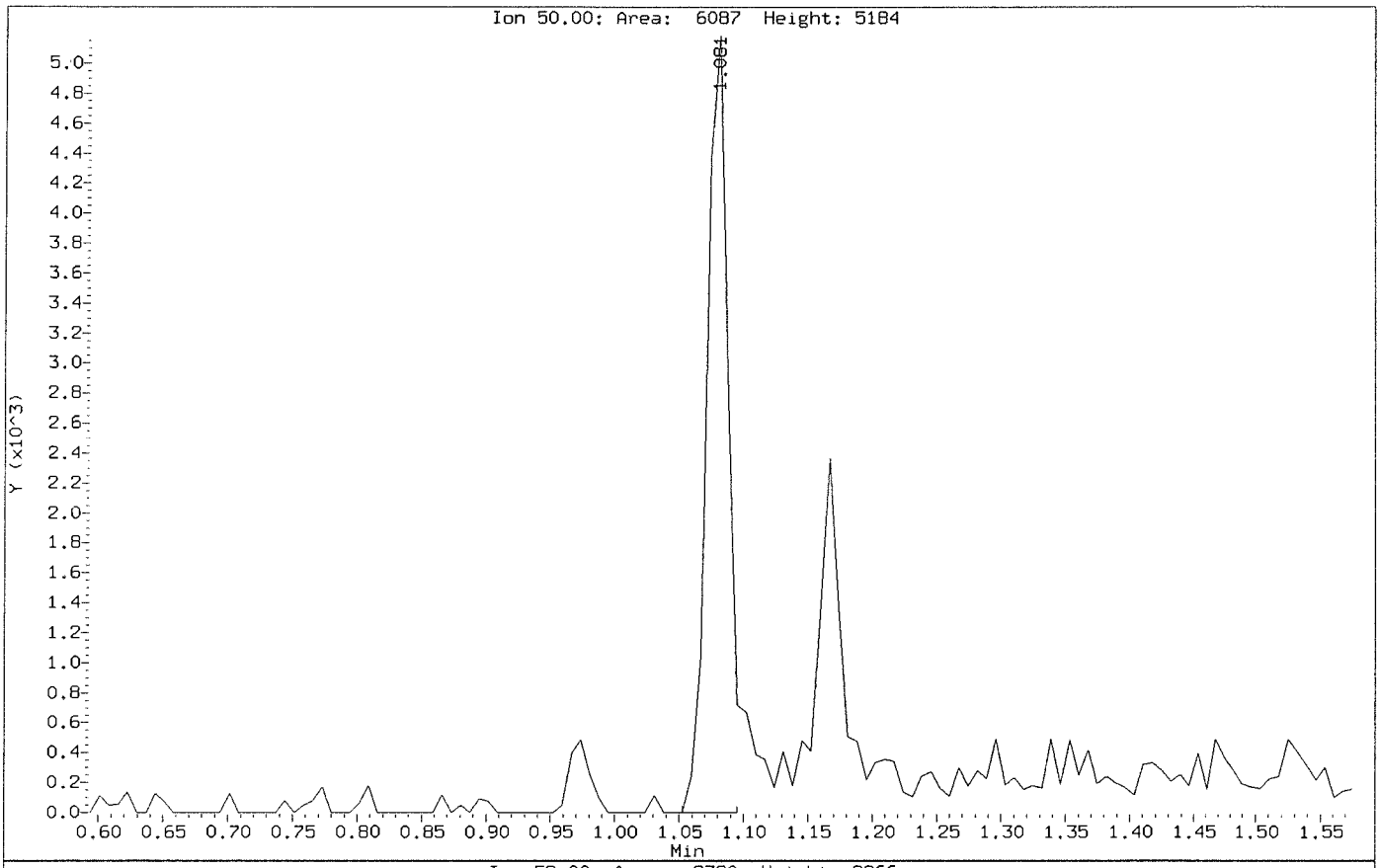
Compound: Chloromethane
CAS Number: 74-87-3

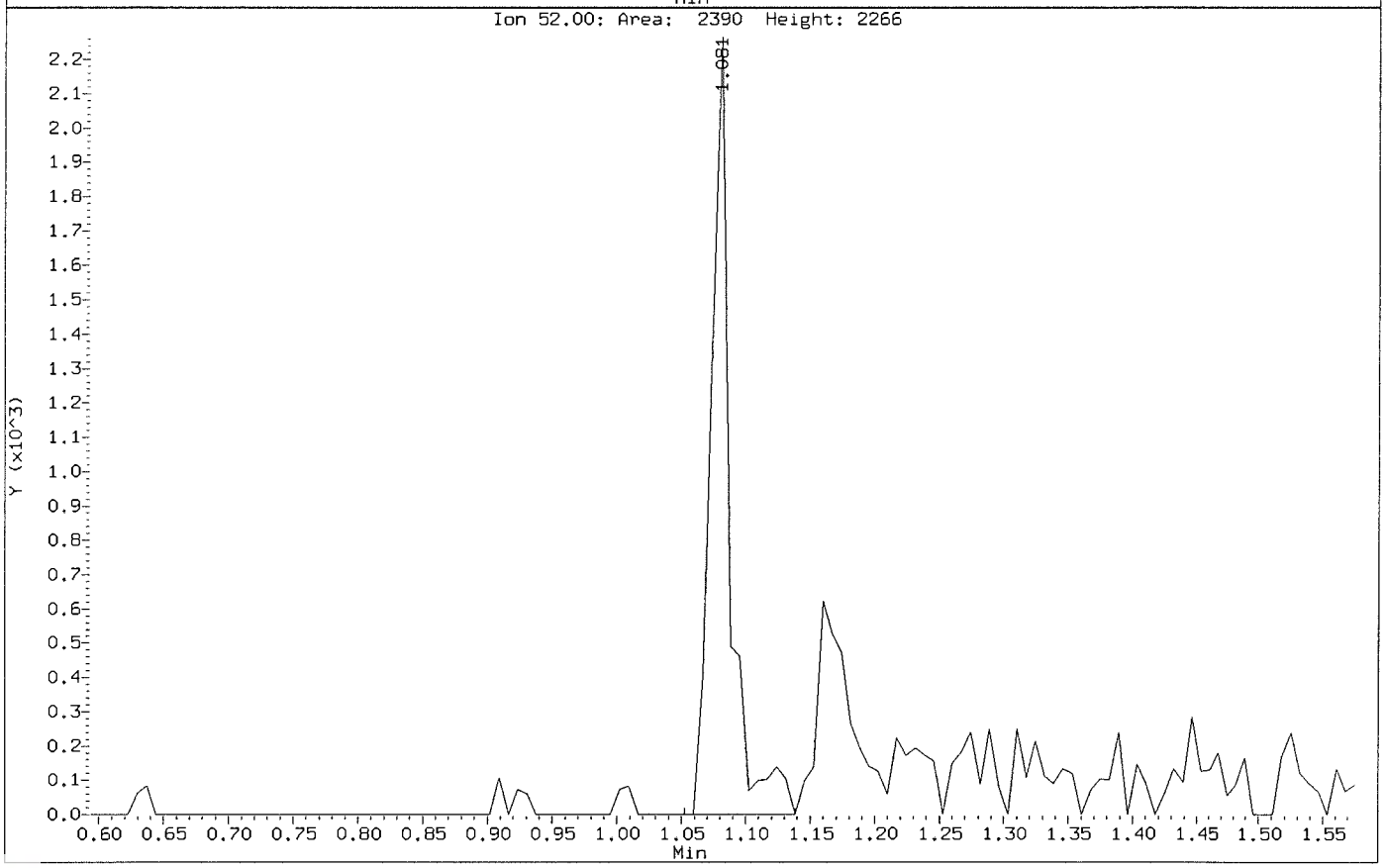




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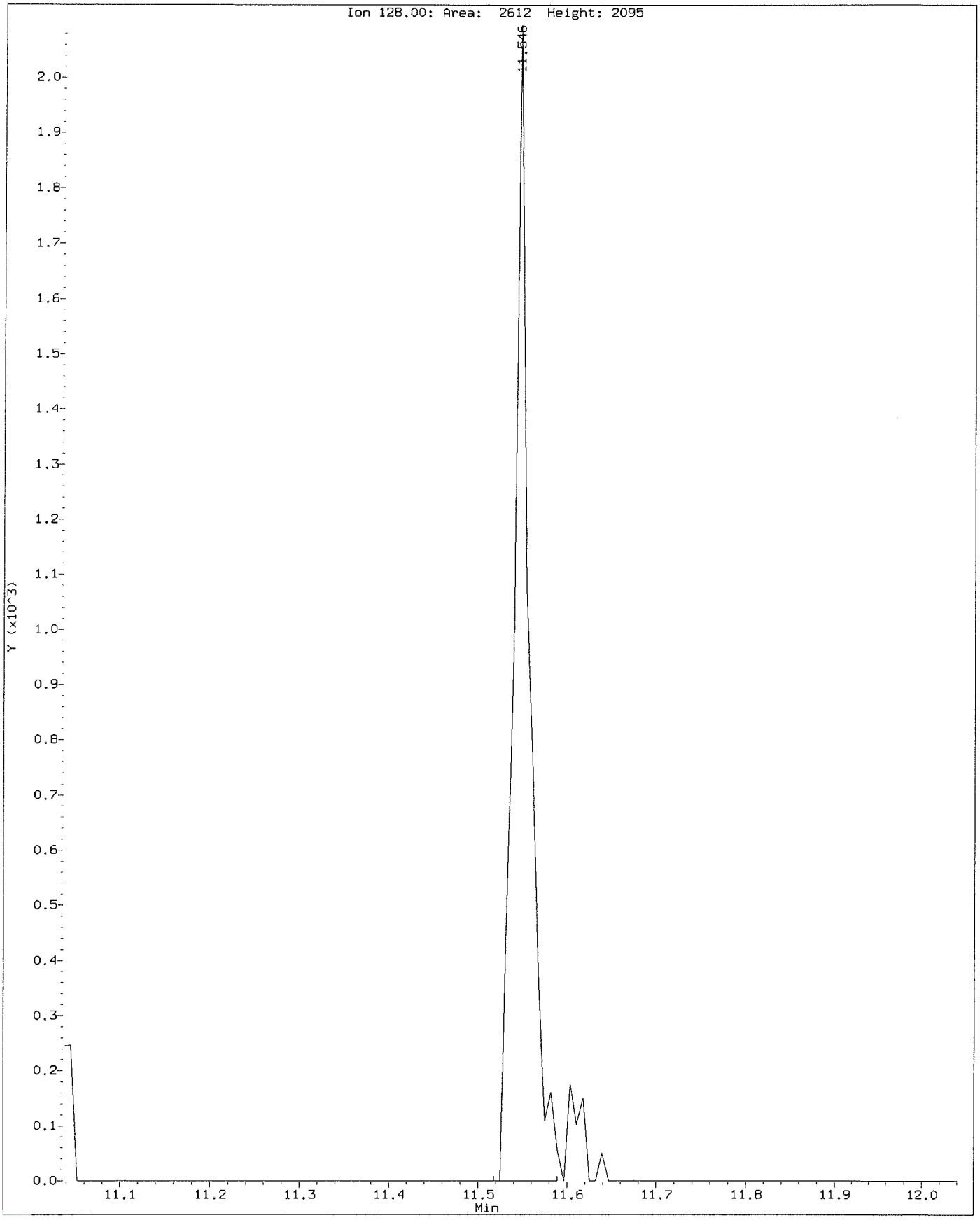
Compound: Chloromethane
CAS Number: 74-87-3





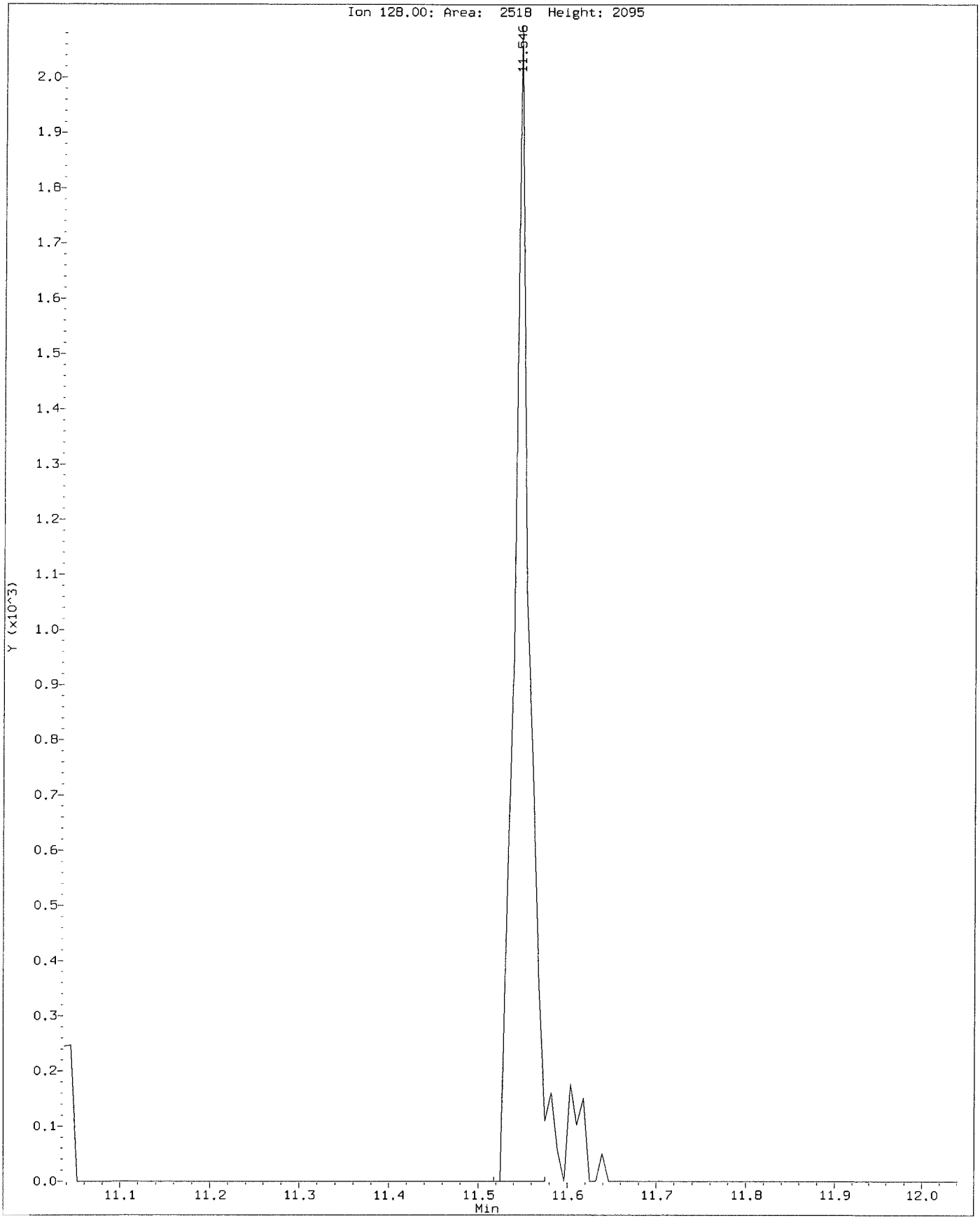
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Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112205.D
Injection Date: 22-NOV-2020 17:07
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112206.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112206.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 22-NOV-2020 17:28
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 17:07 Cal File: Y112205.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	162012	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	300318	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	278938	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	121416	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	10956	5.00000	4.29(a)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	10135	5.00000	4.54(a)
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	9677	5.00000	4.44(aM)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	30239	5.00000	4.01(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	10098	5.00000	4.81(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	16671	5.00000	5.06
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	13385	5.00000	4.97(a)
138 Freon TF	101	1.912	1.912	(0.457)	14156	5.00000	4.68(a)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	8773	5.00000	4.78(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	19172	5.00000	4.90(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	15682	5.00000	4.99(a)
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	14629	5.00000	4.89(a)
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	2811	5.00000	7.48
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	10060	5.00000	5.49(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	3981	5.00000	4.35(a)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	32104	5.00000	4.68(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	622	5.00000	4.20(a)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	10085	5.00000	4.72(a)

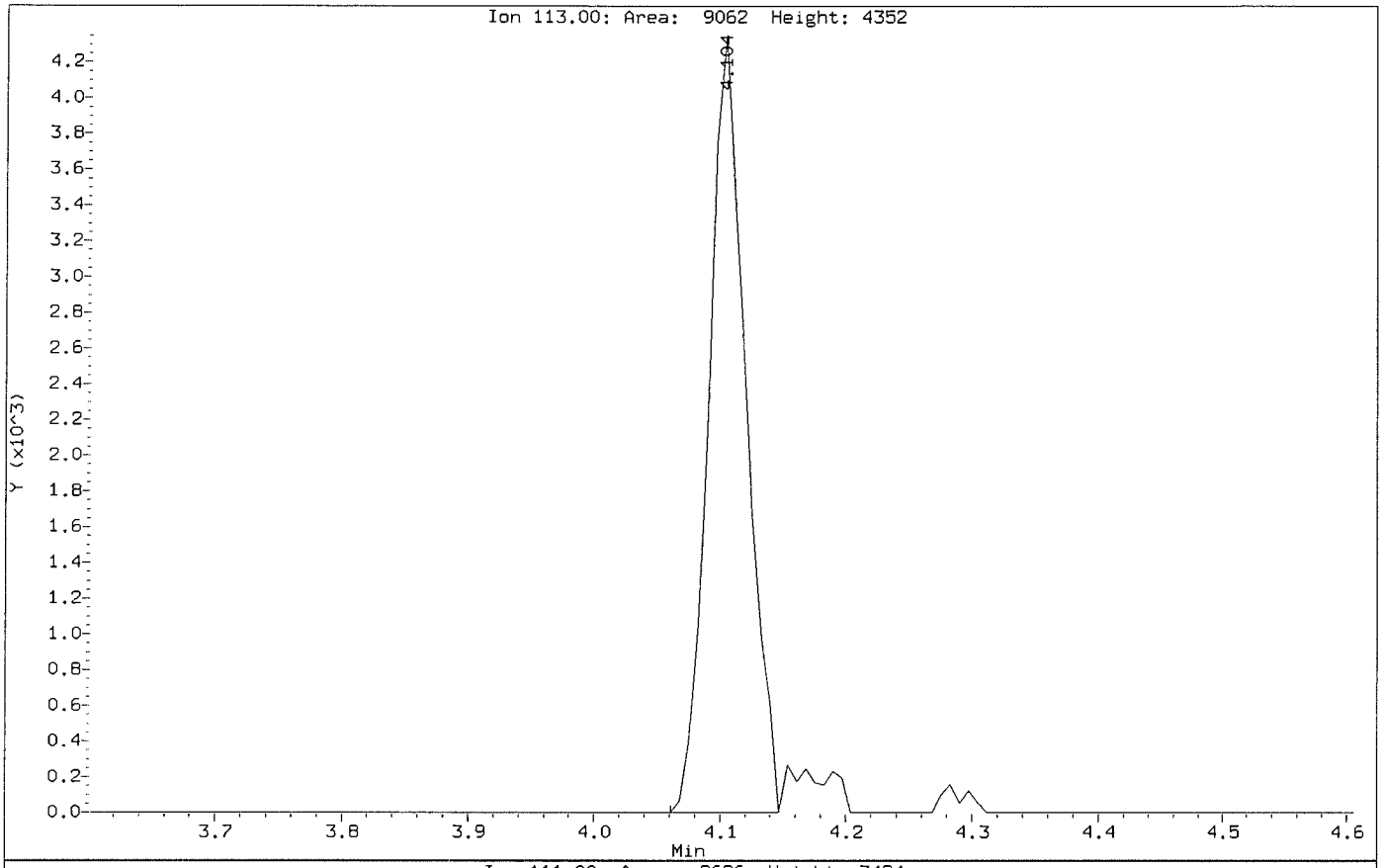
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	16776	5.00000	4.88(a)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	17594	5.00000	5.33
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	11346	5.00000	4.73(aM)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	32081	5.00000	4.45(a)
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	16983	5.00000	4.65(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	17616	5.00000	5.12
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	17906	5.00000	5.37
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	16798	5.00000	4.89(a)
24	2-Butanone	43	3.581	3.581	(0.856)	7778	10.0000	10.03
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	28324	5.00000	4.76(a)
52	2-Hexanone	43	7.090	7.090	(0.924)	13798	10.0000	10.43
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	32892	5.00000	4.52(a)
82	p-Isopropyltoluene	119	9.648	9.648	(0.999)	31739	5.00000	5.85
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	22685	10.0000	11.39
10	Acetone	43	1.976	1.976	(0.473)	13349	10.0000	11.81
37	Benzene	78	4.519	4.519	(0.909)	40967	5.00000	4.99(a)
74	Bromobenzene	156	8.802	8.802	(0.911)	10867	5.00000	5.29
29	Bromochloromethane	128	3.795	3.795	(0.908)	6230	5.00000	5.44
39	Bromodichloromethane	83	5.729	5.729	(1.153)	15385	5.00000	4.83(a)
66	Bromoform	173	8.416	8.416	(1.097)	5740	5.00000	6.23(T)
6	Bromomethane	94	1.339	1.339	(0.320)	17502	5.00000	6.34
19	Carbon Disulfide	76	2.069	2.069	(0.495)	59375	10.0000	9.82
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	11480	5.00000	4.43(aH)
59	Chlorobenzene	112	7.692	7.692	(1.003)	27725	5.00000	4.64(a)
7	Chloroethane	64	1.403	1.403	(0.336)	13742	5.00000	5.47
28	Chloroform	83	3.910	3.910	(0.935)	19691	5.00000	4.64(a)
3	Chloromethane	50	1.081	1.081	(0.258)	15313	5.00000	5.14
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	11040	5.00000	4.65(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	18099	5.00000	4.75(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	10581	5.00000	4.89(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	7923	5.00000	5.04
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	11080	5.00000	6.53
61	Ethylbenzene	106	7.800	7.800	(1.017)	13989	5.00000	4.65(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	3007	5.00000	6.19
67	Isopropylbenzene	105	8.559	8.559	(1.116)	40978	5.00000	4.51(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	33759	10.0000	14.06
17	Methylene Chloride	84	2.306	2.306	(0.551)	9518	5.00000	4.27(a)
87	n-Butylbenzene	91	9.991	9.991	(1.034)	30916	5.00000	6.95
73	n-Propylbenzene	91	8.910	8.910	(0.922)	47698	5.00000	4.69(a)
92	Naphthalene	128	11.546	11.546	(1.195)	6815	5.00000	6.09
63	o-Xylene	106	8.244	8.244	(1.075)	16651	5.00000	6.71
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	37742	5.00000	5.15
64	Styrene	104	8.258	8.258	(1.077)	27600	5.00000	4.26(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	26267	5.00000	4.66(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	8298	5.00000	4.82(a)
50	Toluene	91	6.446	6.446	(0.840)	42173	5.00000	4.68(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	8773	5.00000	4.39(a)
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	16536	5.00000	5.04
38	Trichloroethene	130	5.207	5.207	(1.048)	10544	5.00000	5.04
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	28601	5.00000	4.69(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	19810	5.00000	5.08

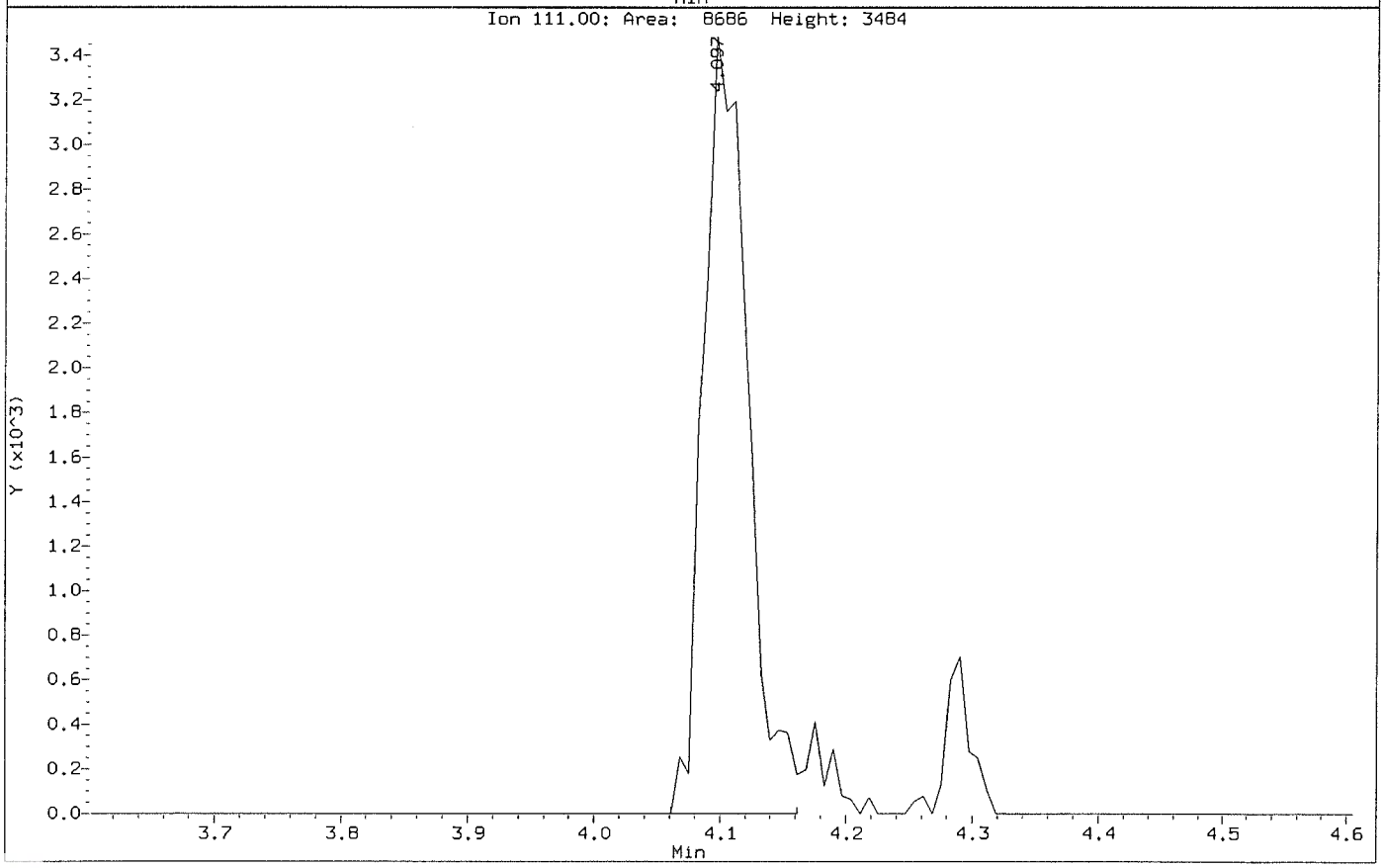
QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112206.D
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Instrument: voa6.i
Client Sample ID: VSTD005

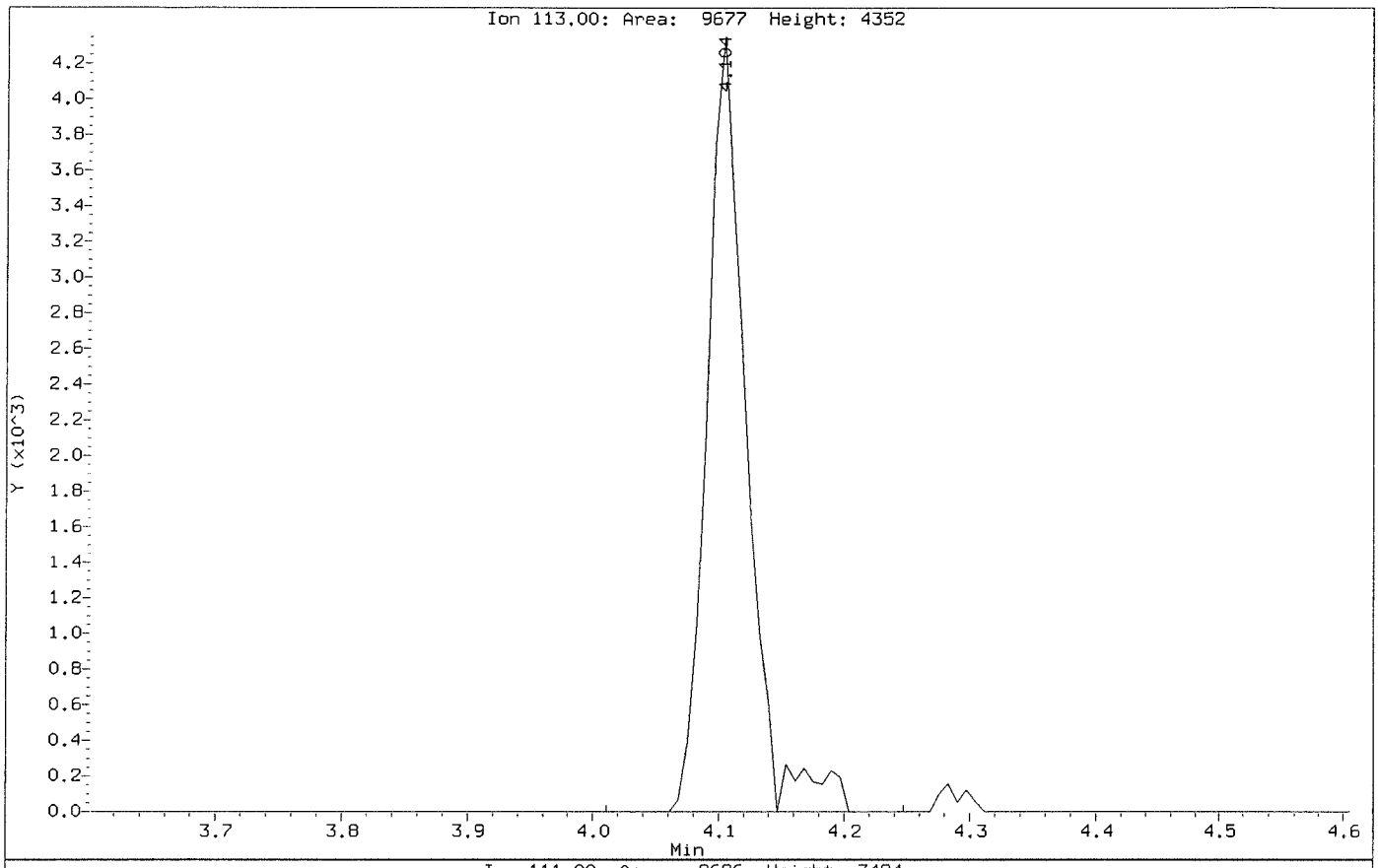
Compound: Dibromofluoromethane
CAS Number: 1868-53-7

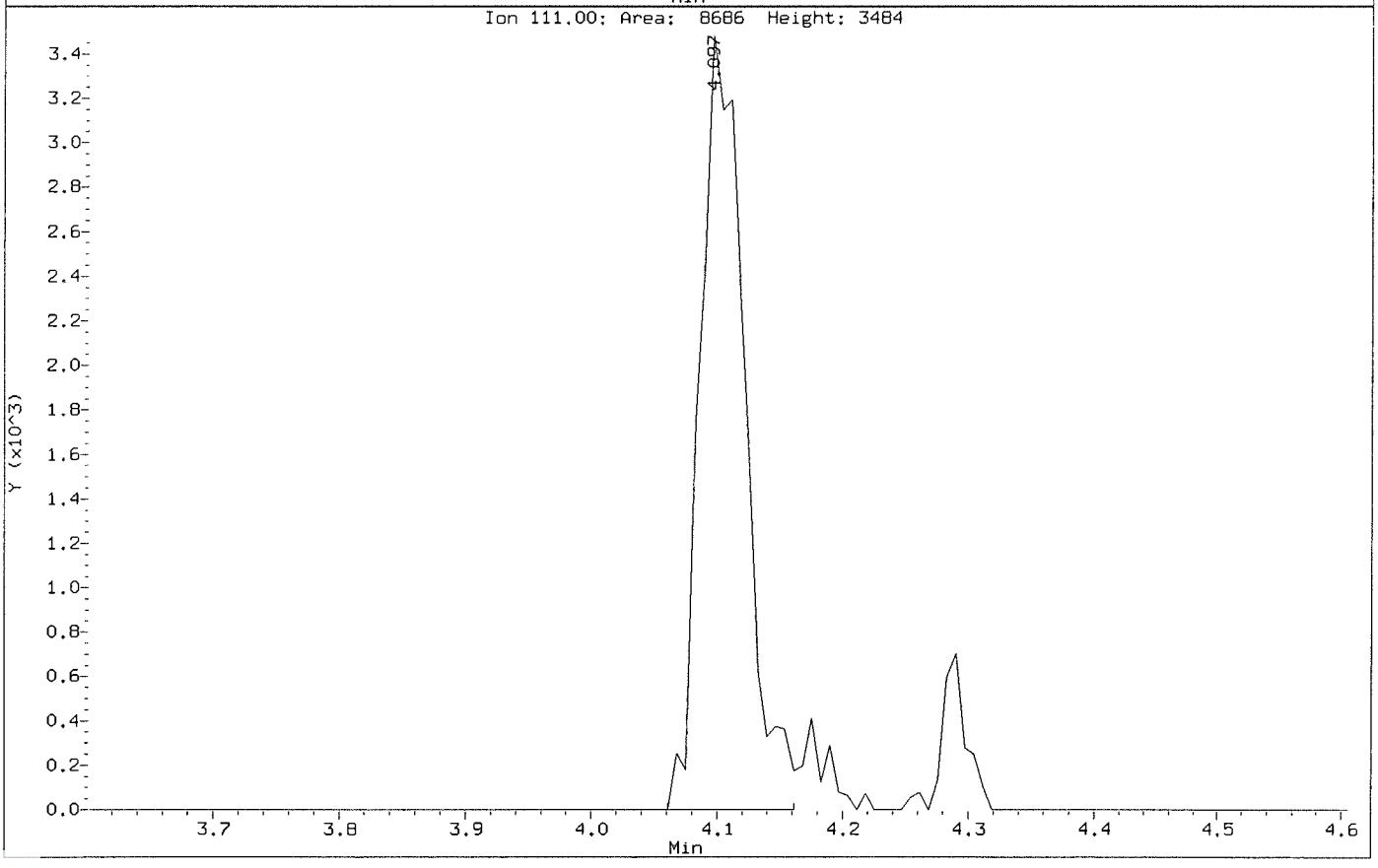




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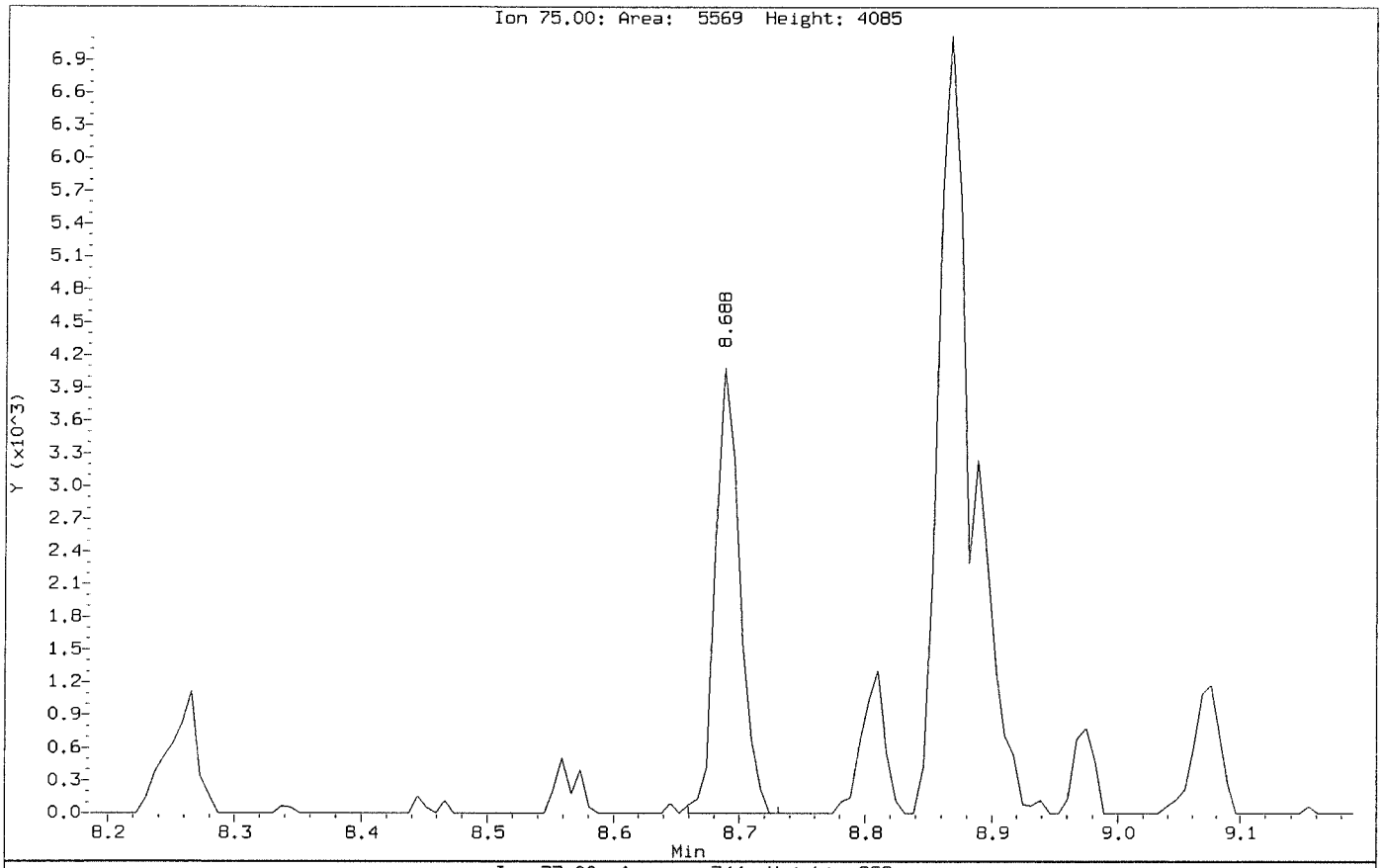
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CAS Number: 1868-53-7

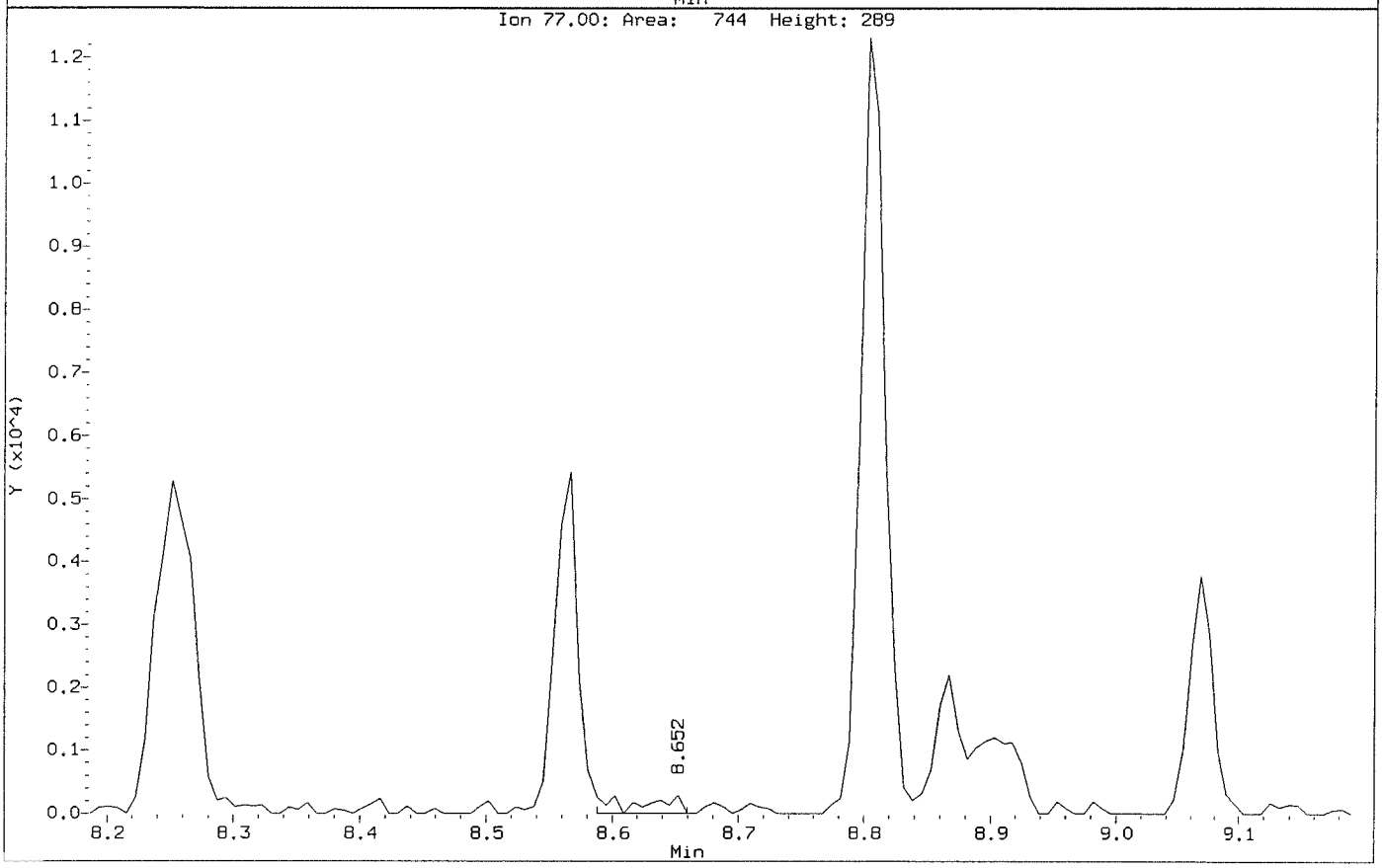




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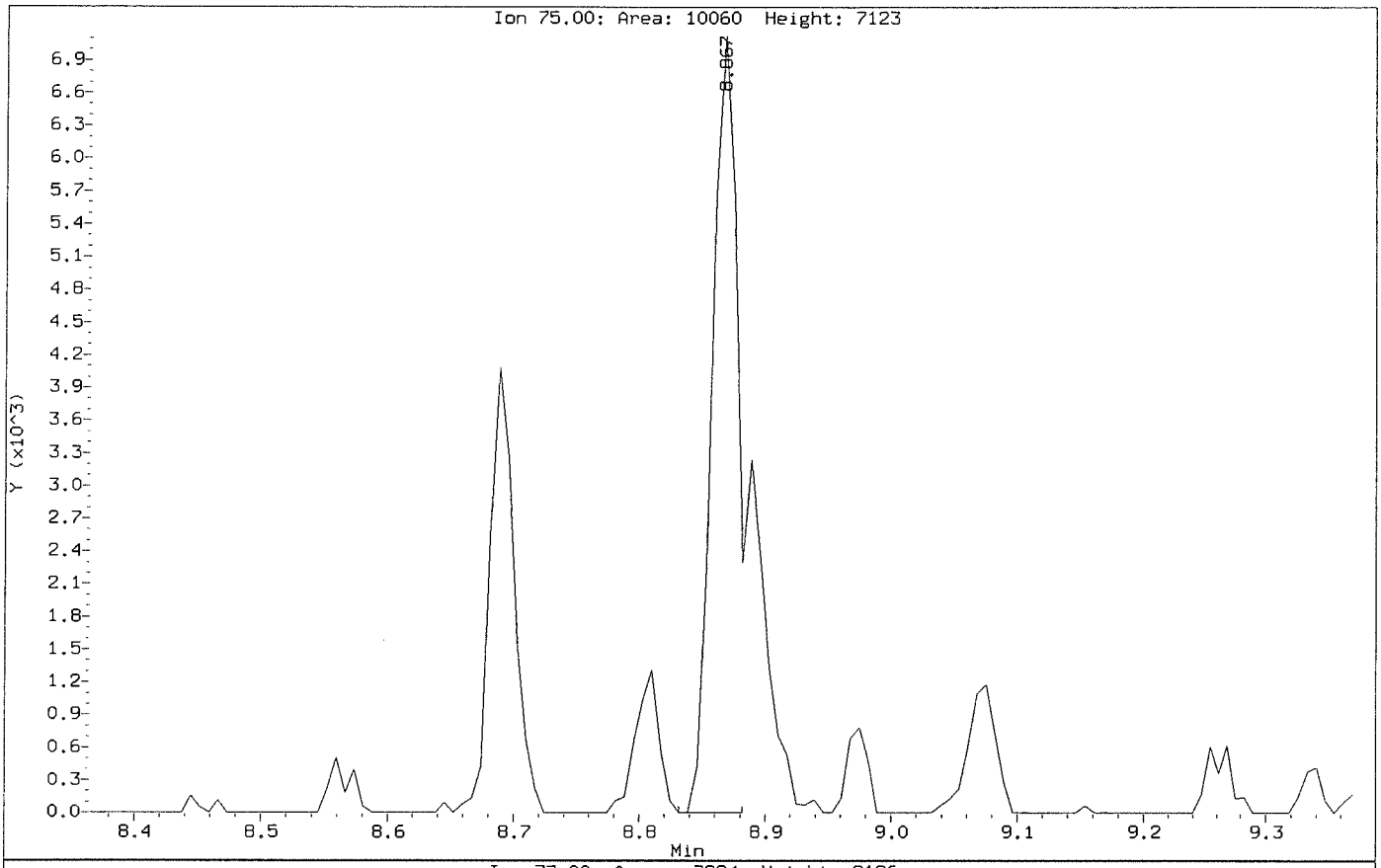
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CAS Number: 96-18-4

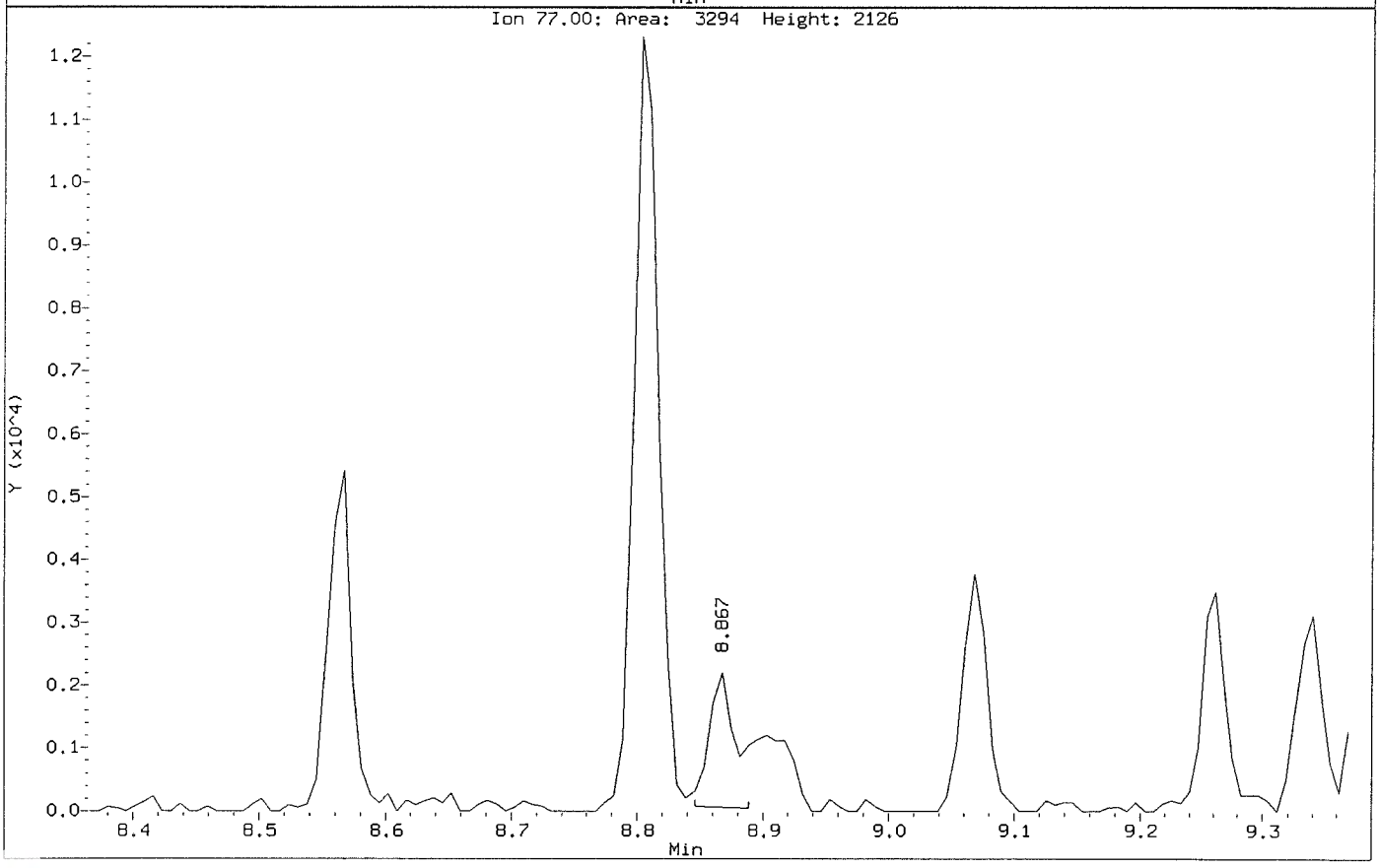




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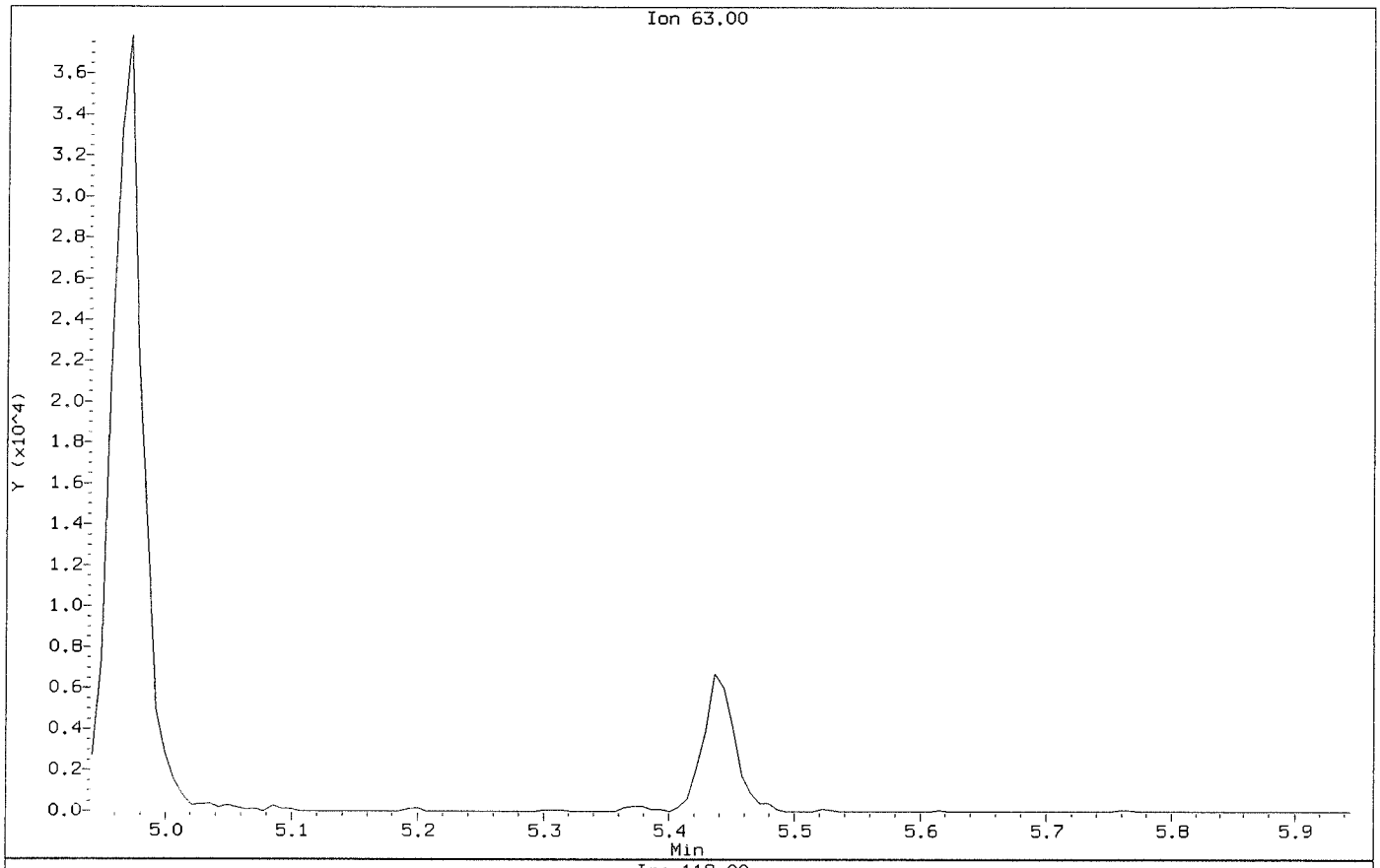
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CAS Number: 96-18-4

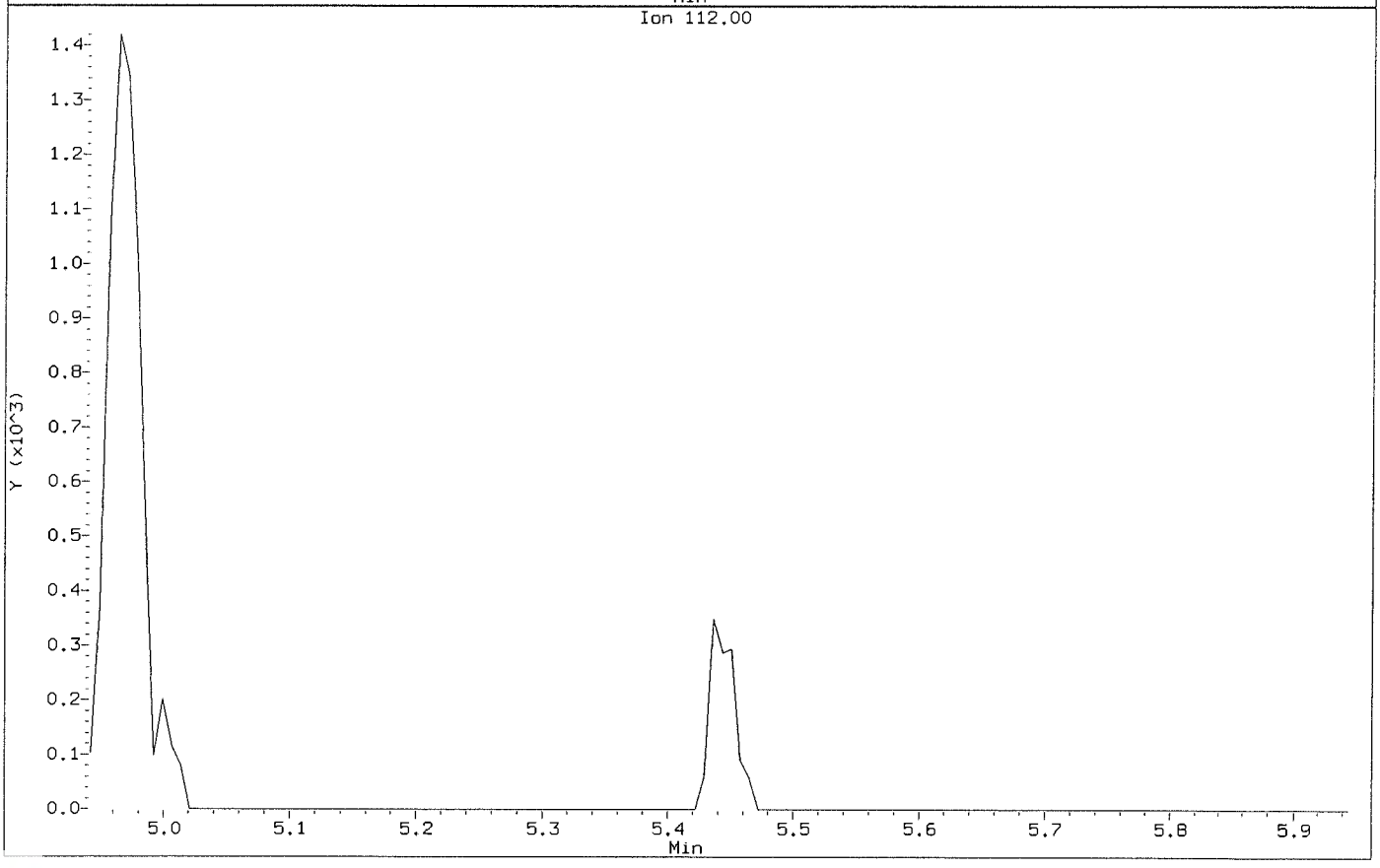




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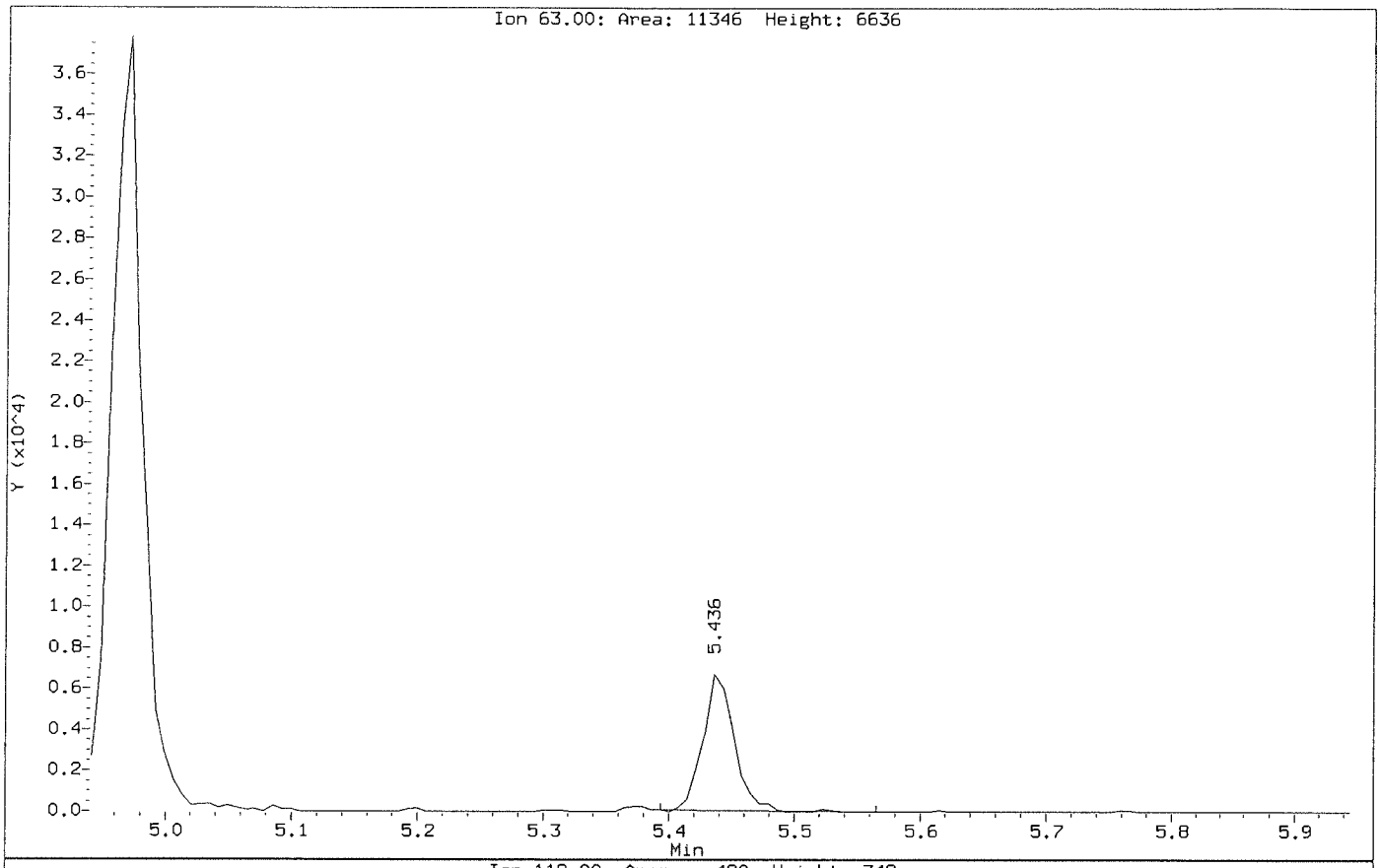
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

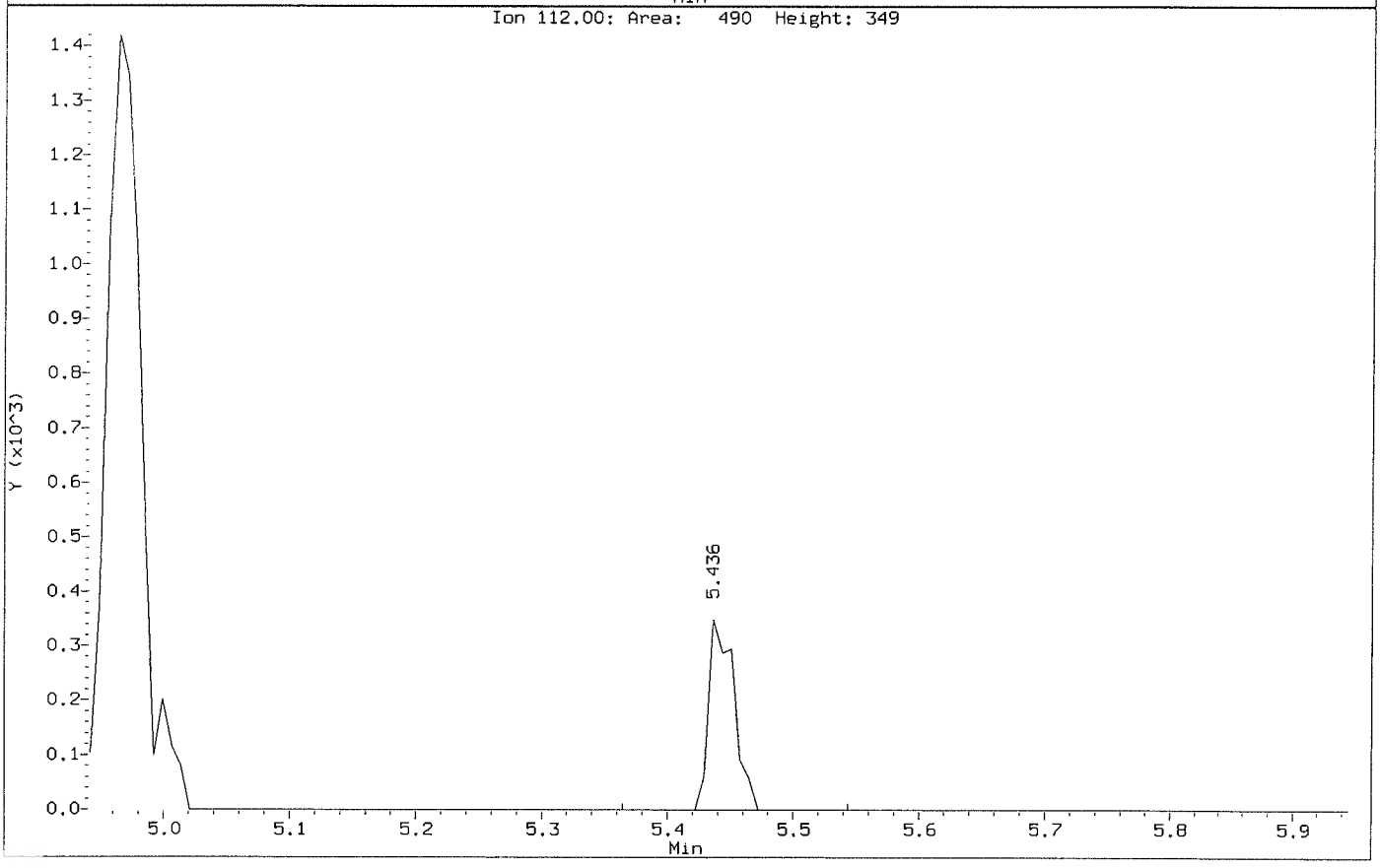




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Injection Date: 22-NOV-2020 17:28
Instrument: voa6.i
Client Sample ID: VSTD005

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112207.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112207.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 22-NOV-2020 17:48
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 17:28 Cal File: Y112206.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	164270	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	303699	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	282945	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	129202	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	51848	20.0000	19.47
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	49820	20.0000	19.00
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	44529	20.0000	20.99
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	147956	20.0000	19.37
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	38358	20.0000	18.04
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	65238	20.0000	19.54
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	49795	20.0000	21.17
138 Freon TF	101	1.919	1.919	(0.459)	58835	20.0000	19.20
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	36256	20.0000	19.50
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	74424	20.0000	18.78
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	60455	20.0000	18.97
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	58901	20.0000	19.50
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	9456	20.0000	21.06
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	41036	20.0000	21.05(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	19049	20.0000	19.56
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	144159	20.0000	19.76
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	3483	20.0000	22.12
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	43727	20.0000	20.21

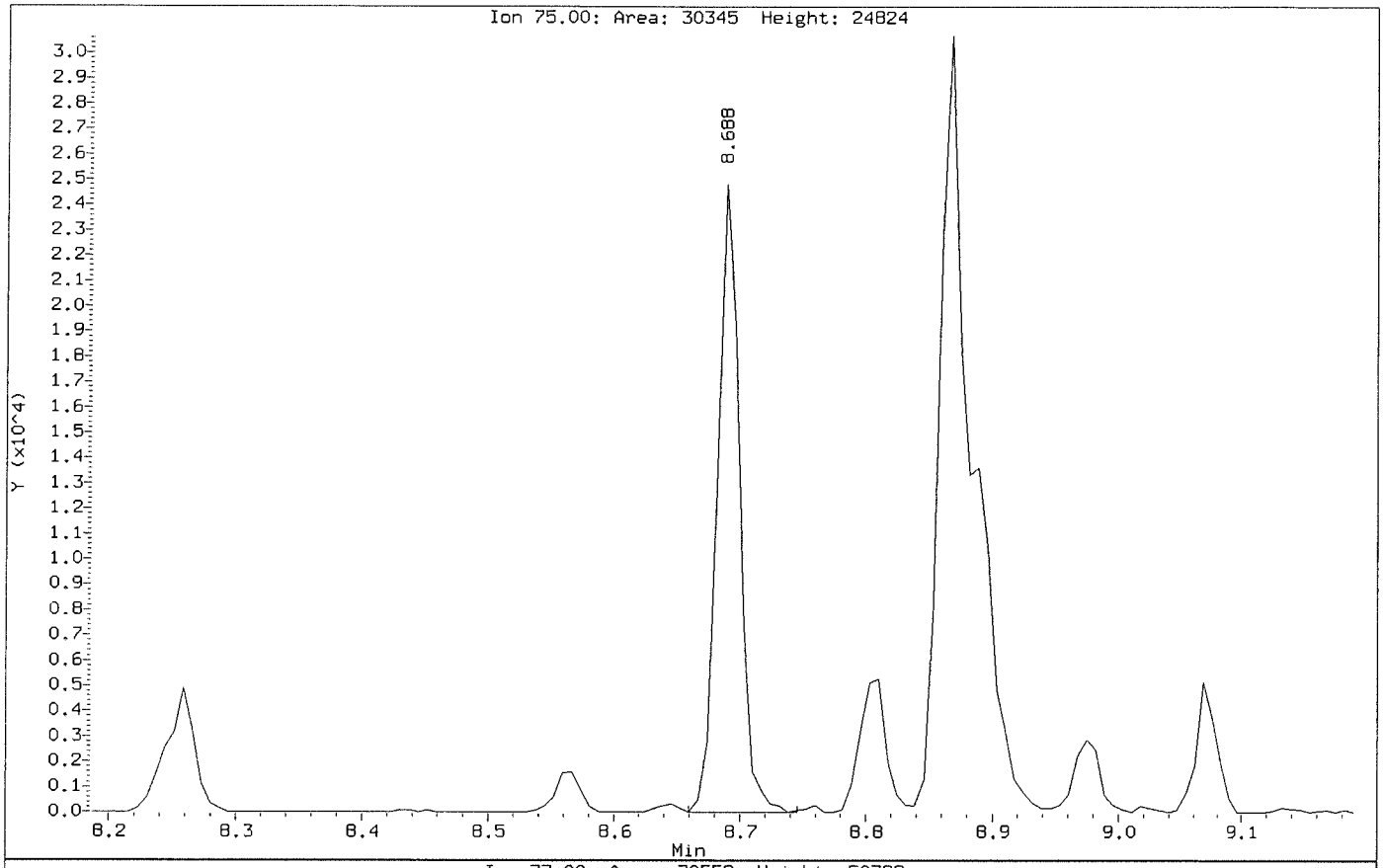
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	70332	20.0000	19.23
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	67060	20.0000	20.09
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	46188	20.0000	19.06
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	144416	20.0000	18.84
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	74965	20.0000	19.29
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	68964	20.0000	19.77
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	75689	20.0000	19.60
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	63587	20.0000	18.25
24	2-Butanone	43	3.581	3.581	(0.856)	30692	40.0000	39.06
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	121736	20.0000	19.25
52	2-Hexanone	43	7.083	7.083	(0.923)	55536	40.0000	38.76
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	147262	20.0000	19.03
82	p-Isopropyltoluene	119	9.648	9.648	(0.999)	143079	20.0000	19.70
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	82310	40.0000	38.39
10	Acetone	43	1.976	1.976	(0.473)	38625	40.0000	39.62
37	Benzene	78	4.519	4.519	(0.909)	160880	20.0000	19.39
74	Bromobenzene	156	8.810	8.810	(0.912)	44985	20.0000	20.60
29	Bromochloromethane	128	3.803	3.803	(0.909)	21762	20.0000	18.74
39	Bromodichloromethane	83	5.729	5.729	(1.153)	62244	20.0000	19.35
66	Bromoform	173	8.416	8.416	(1.097)	23645	20.0000	18.75
6	Bromomethane	94	1.338	1.338	(0.320)	64649	20.0000	20.69
19	Carbon Disulfide	76	2.069	2.069	(0.495)	230757	40.0000	37.67
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	47669	20.0000	18.20(H)
59	Chlorobenzene	112	7.692	7.692	(1.003)	112081	20.0000	18.53
7	Chloroethane	64	1.403	1.403	(0.336)	48658	20.0000	19.11
28	Chloroform	83	3.910	3.910	(0.935)	81754	20.0000	19.03
3	Chloromethane	50	1.081	1.081	(0.258)	57413	20.0000	19.03
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	44802	20.0000	18.63
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	76026	20.0000	19.73
55	Dibromochloromethane	129	7.176	7.176	(0.936)	44871	20.0000	20.45
44	Dibromomethane	93	5.550	5.550	(1.117)	31107	20.0000	19.59
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	46575	20.0000	18.91
61	Ethylbenzene	106	7.800	7.800	(1.017)	57272	20.0000	18.77
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	14061	20.0000	22.06
67	Isopropylbenzene	105	8.559	8.559	(1.116)	175025	20.0000	19.01
62	m,p-Xylenes	106	7.907	7.907	(1.031)	144807	40.0000	37.10(M)
17	Methylene Chloride	84	2.306	2.306	(0.551)	41202	20.0000	18.26
87	n-Butylbenzene	91	9.991	9.991	(1.034)	139828	20.0000	19.59
73	n-Propylbenzene	91	8.910	8.910	(0.922)	210226	20.0000	19.45
92	Naphthalene	128	11.546	11.546	(1.195)	28651	20.0000	20.93
63	o-Xylene	106	8.244	8.244	(1.075)	68365	20.0000	18.37
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	169406	20.0000	20.02
64	Styrene	104	8.258	8.258	(1.077)	120025	20.0000	18.29
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	116360	20.0000	19.42
56	Tetrachloroethene	164	6.933	6.933	(0.904)	32480	20.0000	18.61
50	Toluene	91	6.446	6.446	(0.840)	171666	20.0000	18.79
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	37078	20.0000	18.31
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	64243	20.0000	19.37
38	Trichloroethene	130	5.207	5.207	(1.048)	41000	20.0000	19.40
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	111269	20.0000	18.02
5	Vinyl Chloride	62	1.145	1.145	(0.274)	74922	20.0000	18.95

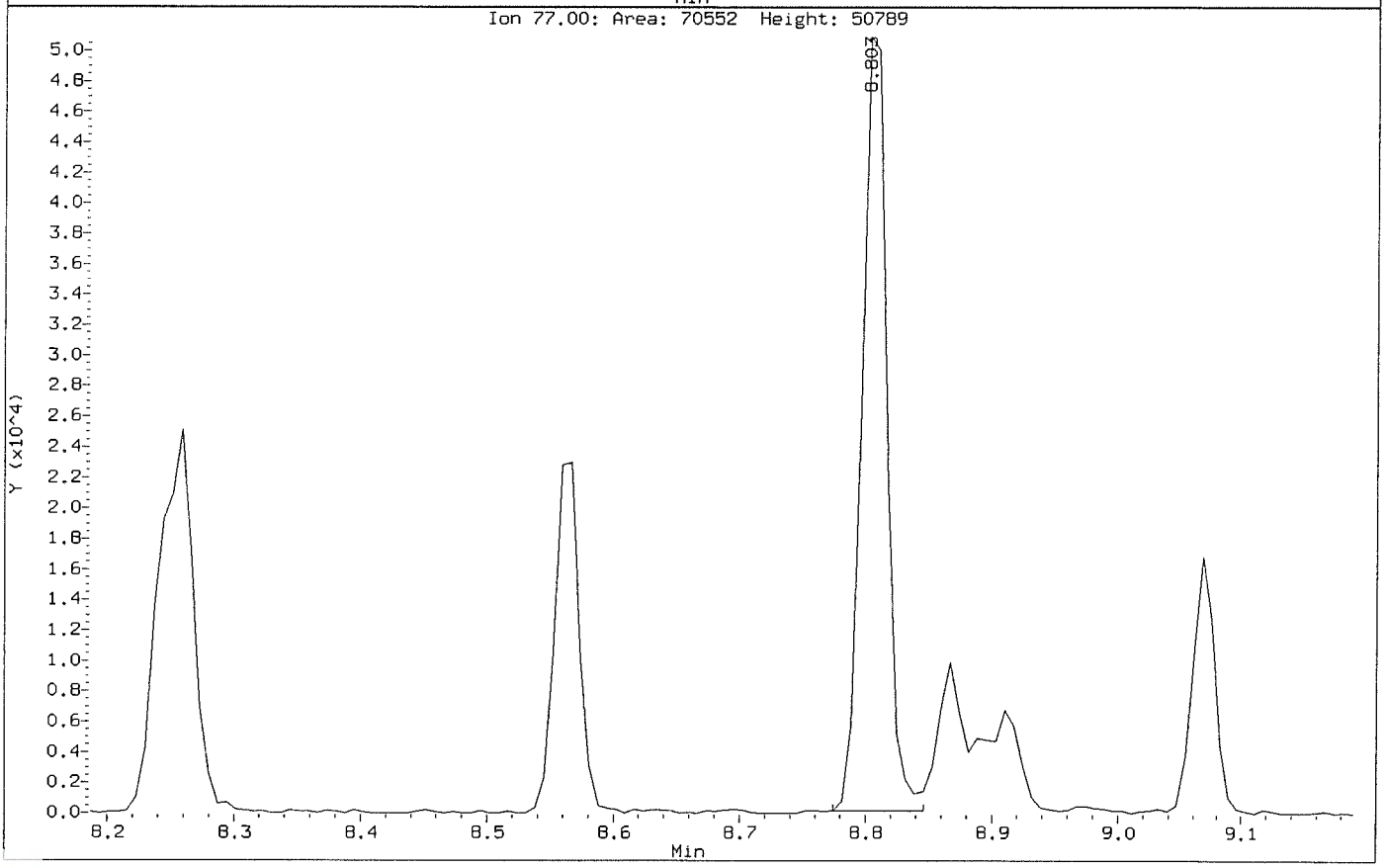
QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112207.D
Injection Date: 22-NOV-2020 17:48
Instrument: voa6.i
Client Sample ID: VSTD020

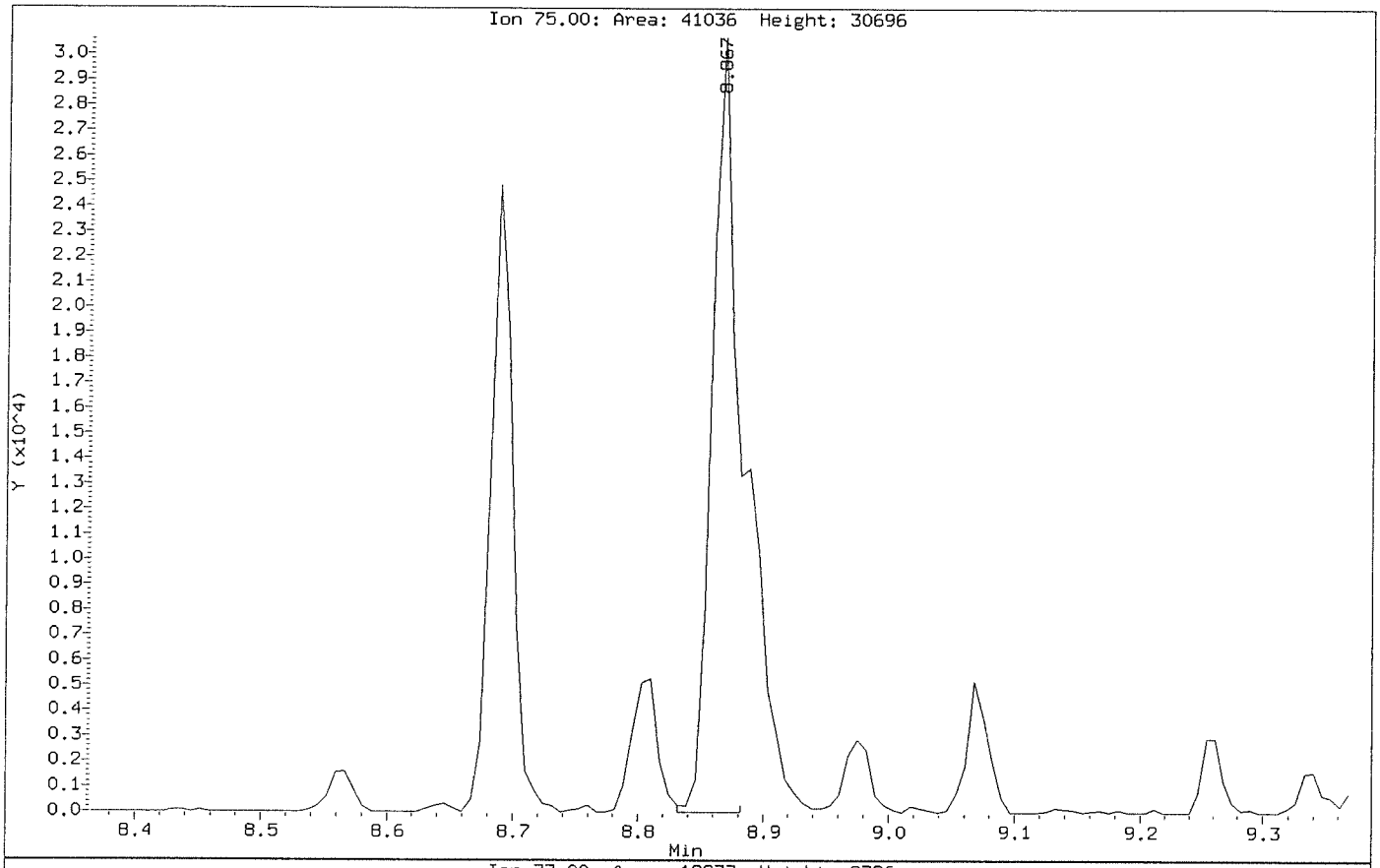
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

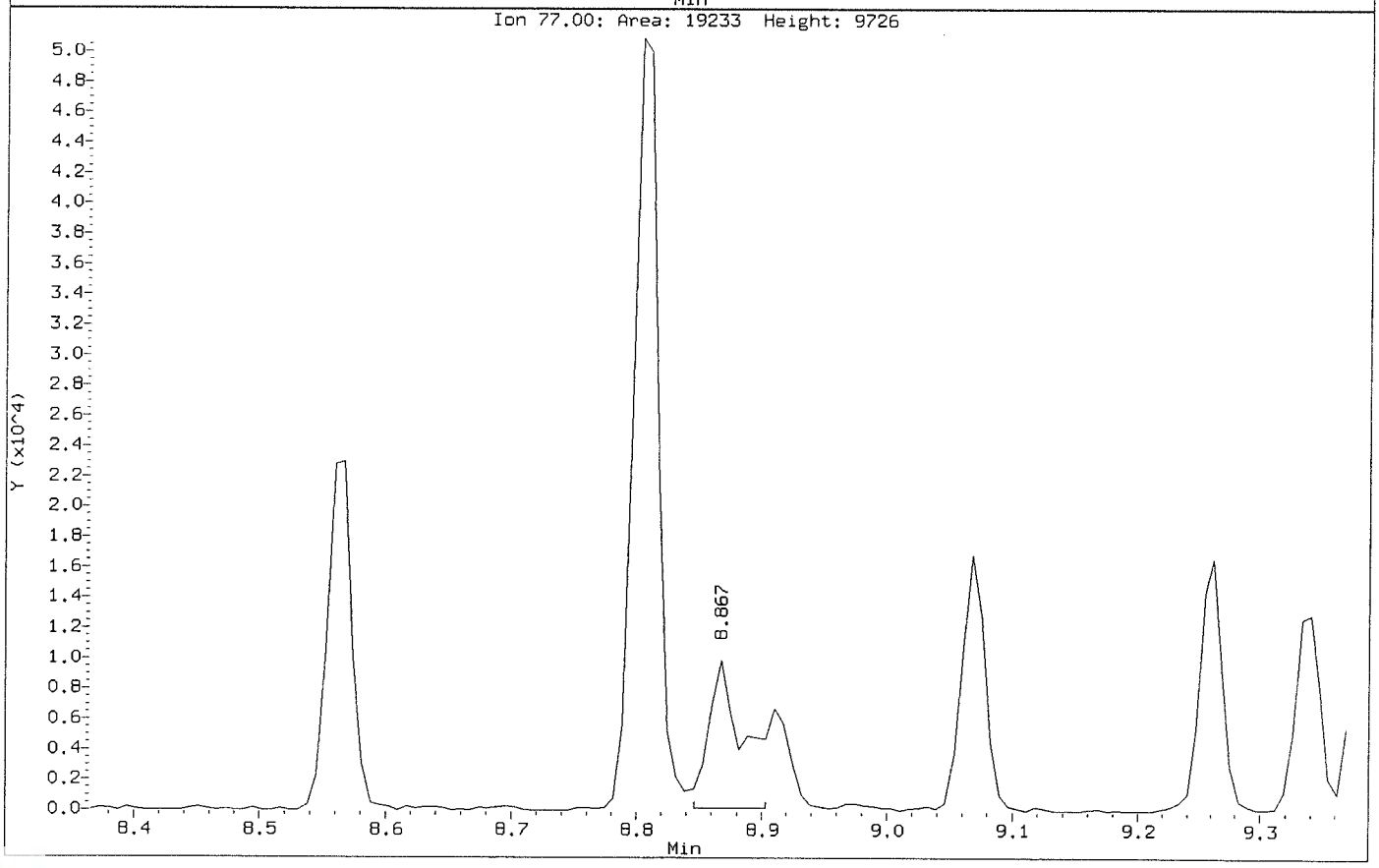




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Injection Date: 22-NOV-2020 17:48
Instrument: voa6.i
Client Sample ID: VSTD020

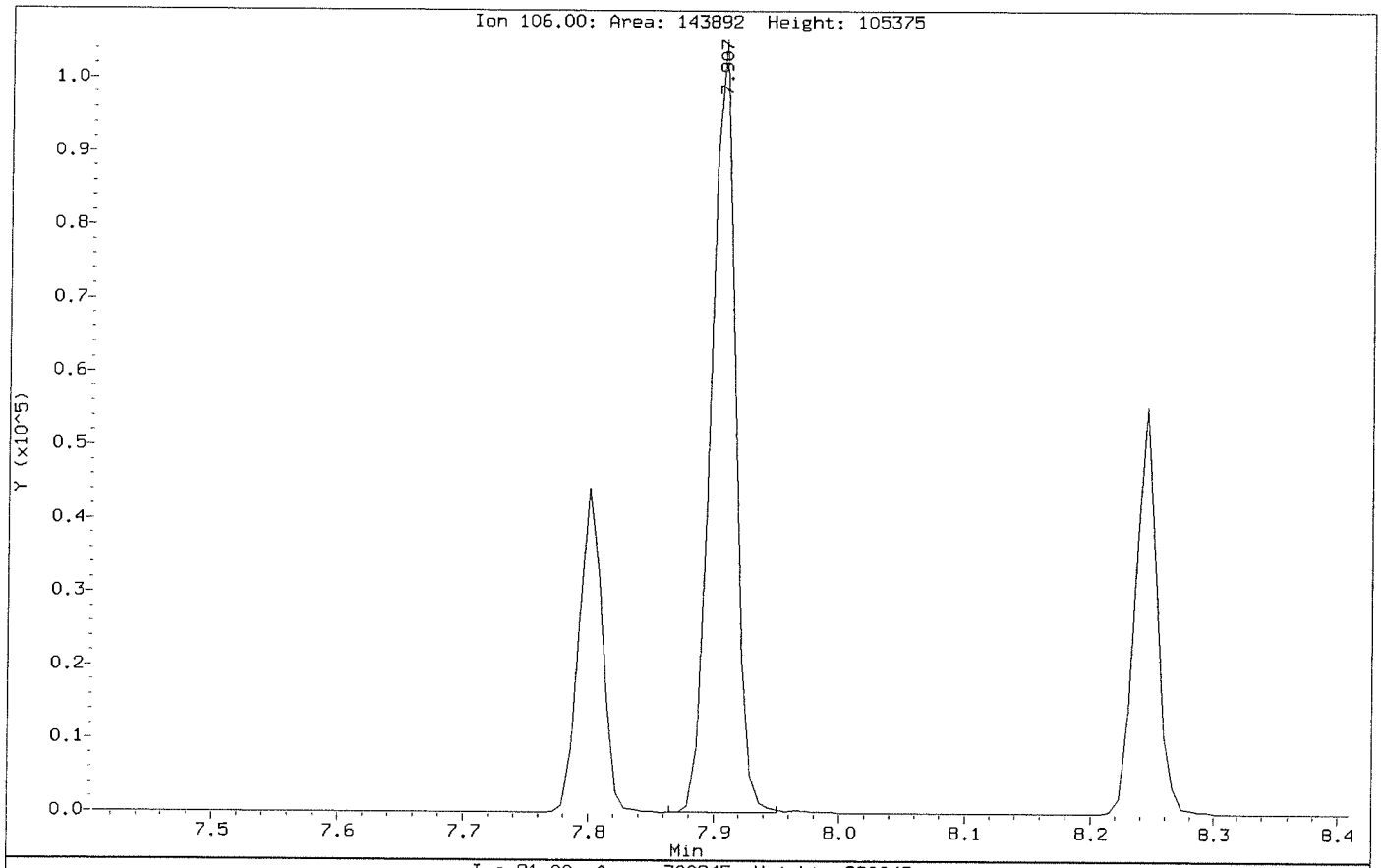
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

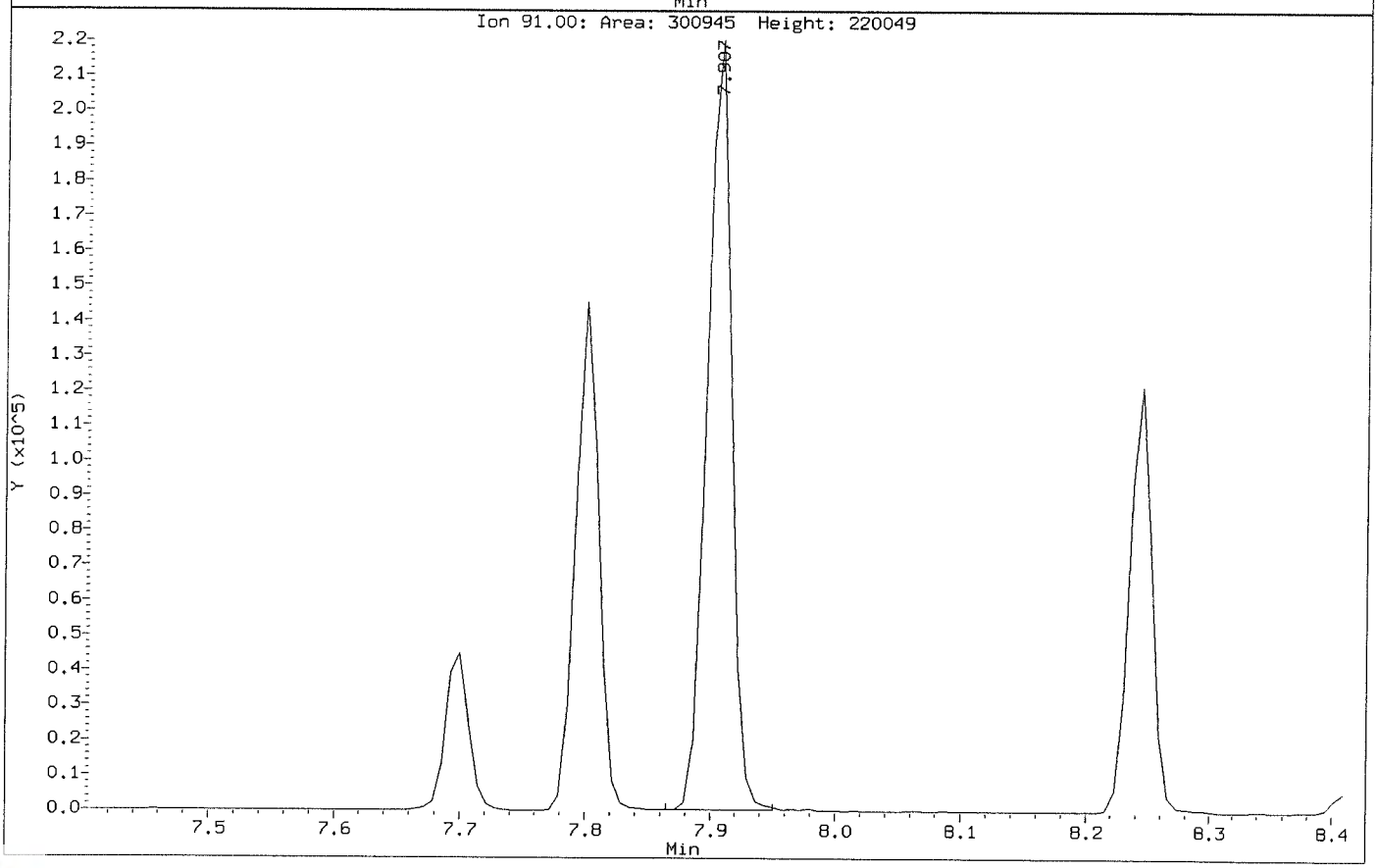




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Instrument: voa6.i
Client Sample ID: VSTD020

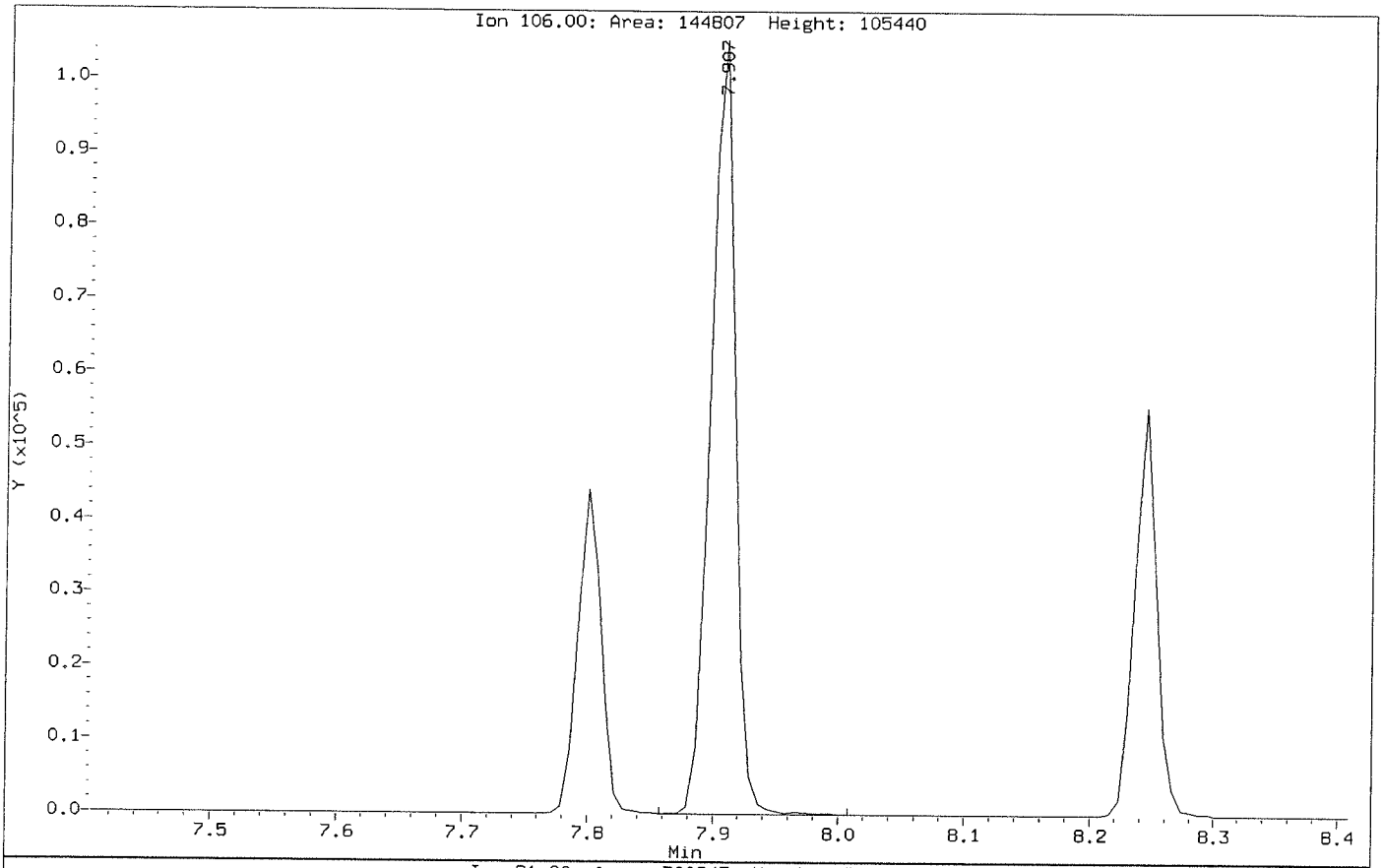
Compound: m,p-Xylenes
CAS Number:

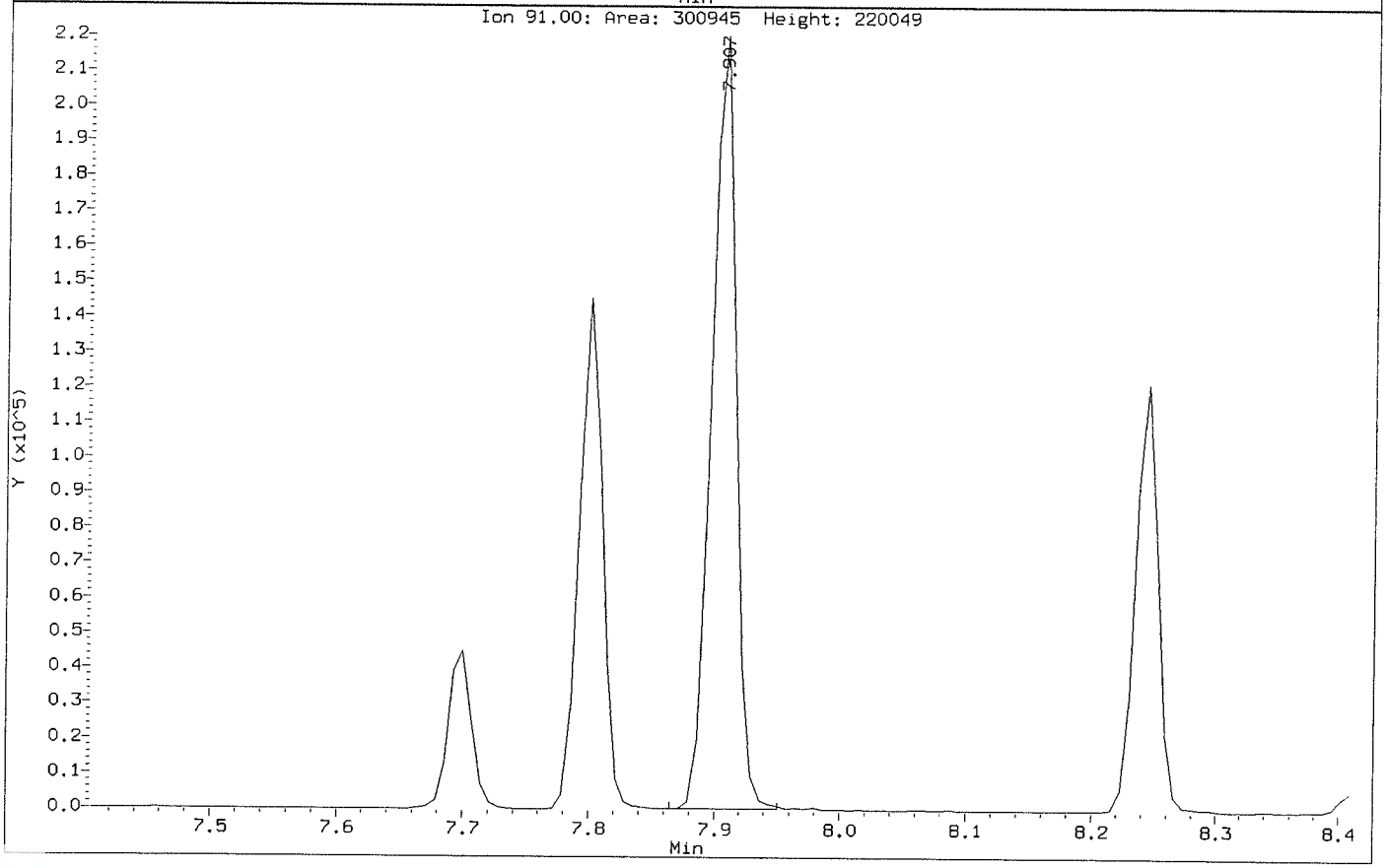




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Injection Date: 22-NOV-2020 17:48
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: m,p-Xylenes
CAS Number:





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112208.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112208.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 22-NOV-2020 18:09
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 17:48 Cal File: Y112207.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	173100	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	325305	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	297896	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	139821	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	142247	50.0000	49.82
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	135731	50.0000	47.87
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	113804	50.0000	50.23
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	387328	50.0000	48.18
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	105050	50.0000	46.92
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	173362	50.0000	49.27
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	134845	50.0000	55.25
138 Freon TF	101	1.919	1.919	(0.459)	145366	50.0000	45.02
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	93425	50.0000	47.72
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	199663	50.0000	47.82
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	154482	50.0000	46.02
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	148007	50.0000	45.75
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	25528	50.0000	50.74
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	109219	50.0000	51.78(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	51330	50.0000	48.72
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	363526	50.0000	46.05
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	8818	50.0000	51.75
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	112205	50.0000	49.26

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112208.D Page 2
Report Date: 18-Dec-2020 11:14

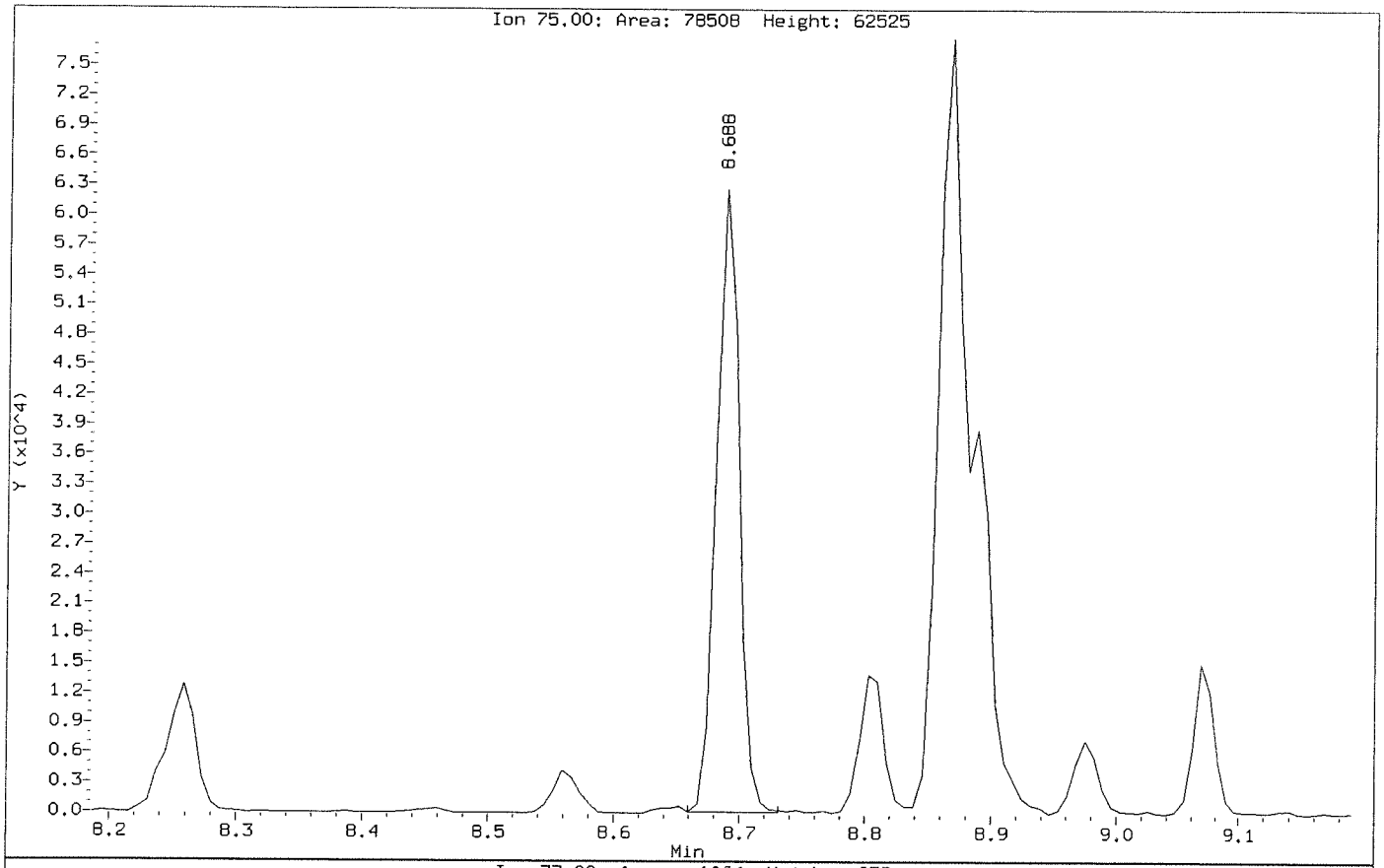
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	187258	50.0000	47.32
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	176991	50.0000	49.51
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	122893	50.0000	47.35
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	374217	50.0000	45.12
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	195589	50.0000	46.50
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	181078	50.0000	49.30
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	204187	50.0000	47.98
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	165497	50.0000	45.09
24 2-Butanone	43	3.580	3.580	(0.856)	80604	100.000	97.36
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	312498	50.0000	45.67
52 2-Hexanone	43	7.083	7.083	(0.923)	147583	100.000	96.49
77 4-Chlorotoluene	91	9.067	9.067	(0.938)	385070	50.0000	46.00
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	360596	50.0000	43.80
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	217806	100.000	95.11
10 Acetone	43	1.976	1.976	(0.473)	97000	100.000	98.83
37 Benzene	78	4.512	4.512	(0.908)	427712	50.0000	48.13
74 Bromobenzene	156	8.809	8.809	(0.912)	116730	50.0000	49.41
29 Bromochloromethane	128	3.795	3.795	(0.908)	59230	50.0000	48.42
39 Bromodichloromethane	83	5.729	5.729	(1.153)	169707	50.0000	49.25
66 Bromoform	173	8.415	8.415	(1.097)	65866	50.0000	46.08
6 Bromomethane	94	1.338	1.338	(0.320)	151605	50.0000	44.92
19 Carbon Disulfide	76	2.069	2.069	(0.495)	588240	100.000	91.14
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	133520	50.0000	47.60(H)
59 Chlorobenzene	112	7.692	7.692	(1.003)	288202	50.0000	45.25
7 Chloroethane	64	1.403	1.403	(0.336)	127505	50.0000	47.53
28 Chloroform	83	3.910	3.910	(0.935)	214032	50.0000	47.28
3 Chloromethane	50	1.073	1.073	(0.257)	143325	50.0000	45.09
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	118869	50.0000	46.92
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	205824	50.0000	49.87
55 Dibromochloromethane	129	7.176	7.176	(0.936)	120122	50.0000	52.00
44 Dibromomethane	93	5.550	5.550	(1.117)	82647	50.0000	48.61
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	121103	50.0000	42.85
61 Ethylbenzene	106	7.799	7.799	(1.017)	150802	50.0000	46.95
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	31828	50.0000	44.48
67 Isopropylbenzene	105	8.566	8.566	(1.117)	439974	50.0000	45.40
62 m,p-Xylenes	106	7.907	7.907	(1.031)	385580	100.000	83.23
17 Methylene Chloride	84	2.305	2.305	(0.551)	107950	50.0000	45.40
87 n-Butylbenzene	91	9.991	9.991	(1.034)	364568	50.0000	42.89
73 n-Propylbenzene	91	8.910	8.910	(0.922)	540327	50.0000	46.19
92 Naphthalene	128	11.546	11.546	(1.195)	79104	50.0000	51.74
63 o-Xylene	106	8.244	8.244	(1.075)	183424	50.0000	42.34
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	430230	50.0000	45.87
64 Styrene	104	8.258	8.258	(1.077)	322747	50.0000	46.72
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	298431	50.0000	46.04
56 Tetrachloroethene	164	6.933	6.933	(0.904)	81692	50.0000	44.47
50 Toluene	91	6.446	6.446	(0.840)	461215	50.0000	47.96
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	101698	50.0000	47.65
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	175301	50.0000	49.35
38 Trichloroethene	130	5.206	5.206	(1.048)	107982	50.0000	47.71
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	287876	50.0000	44.25
5 Vinyl Chloride	62	1.145	1.145	(0.274)	191764	50.0000	46.04

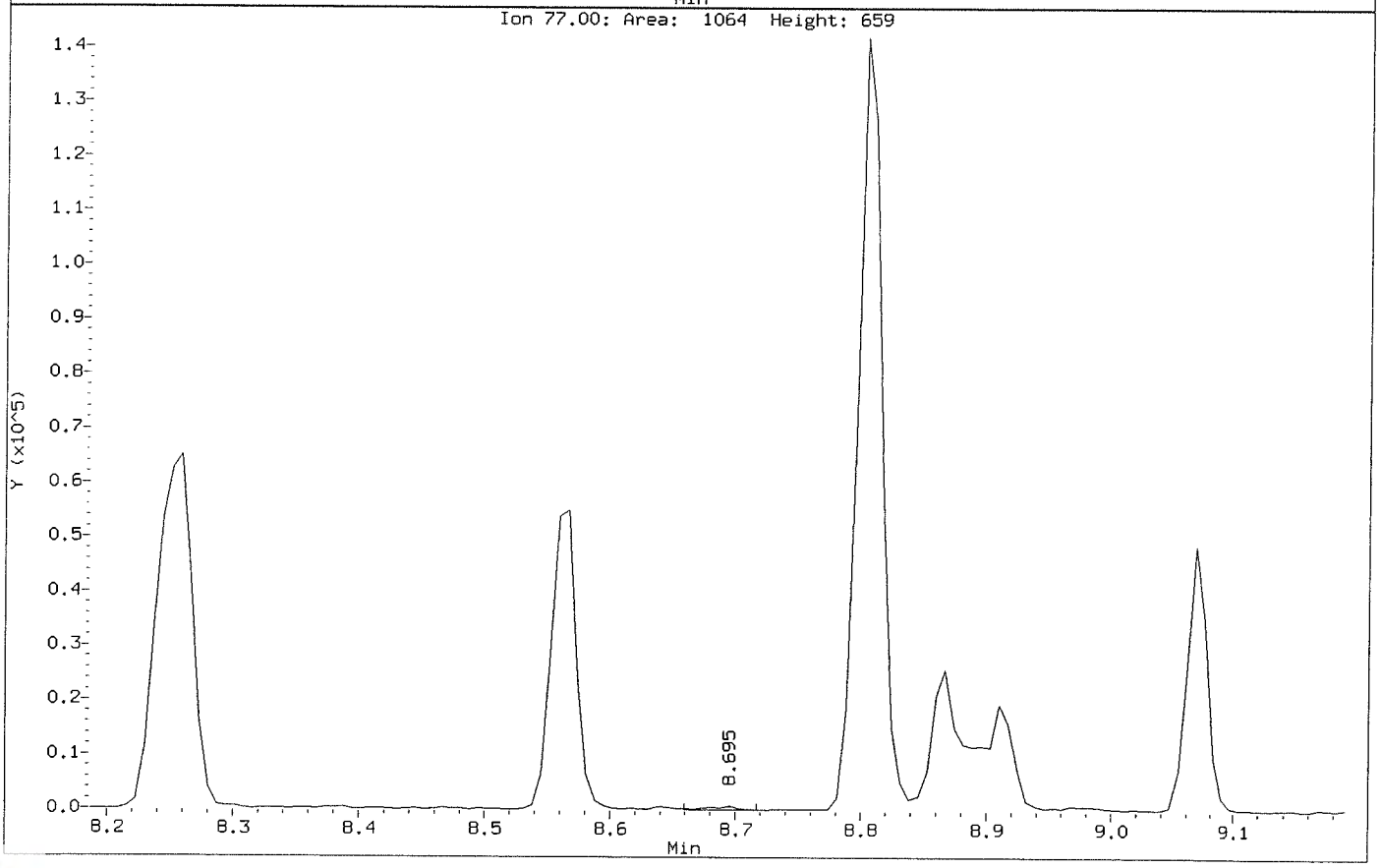
QC Flag Legend

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

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Injection Date: 22-NOV-2020 18:09
Instrument: voa6.i
Client Sample ID: VSTD050

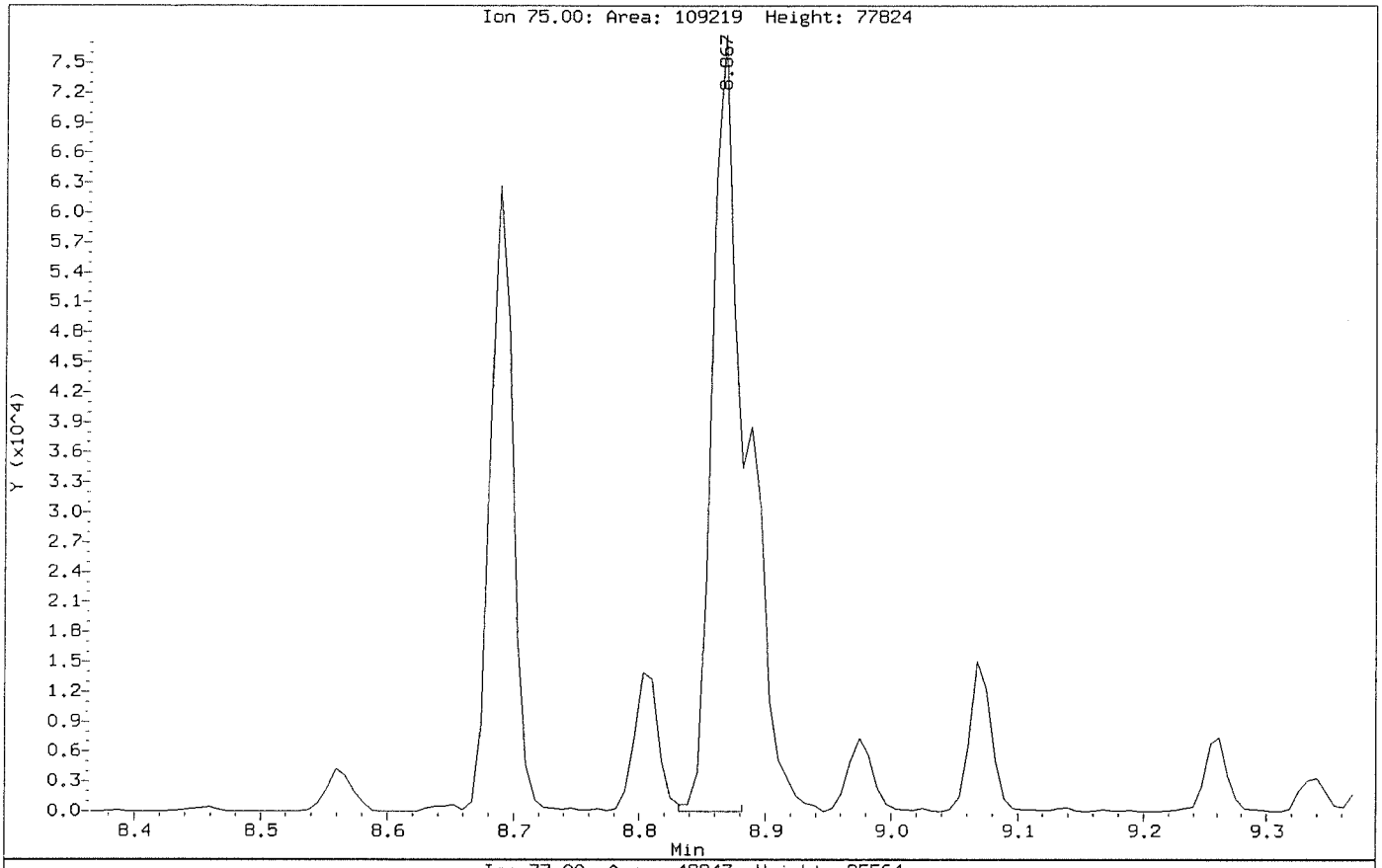
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

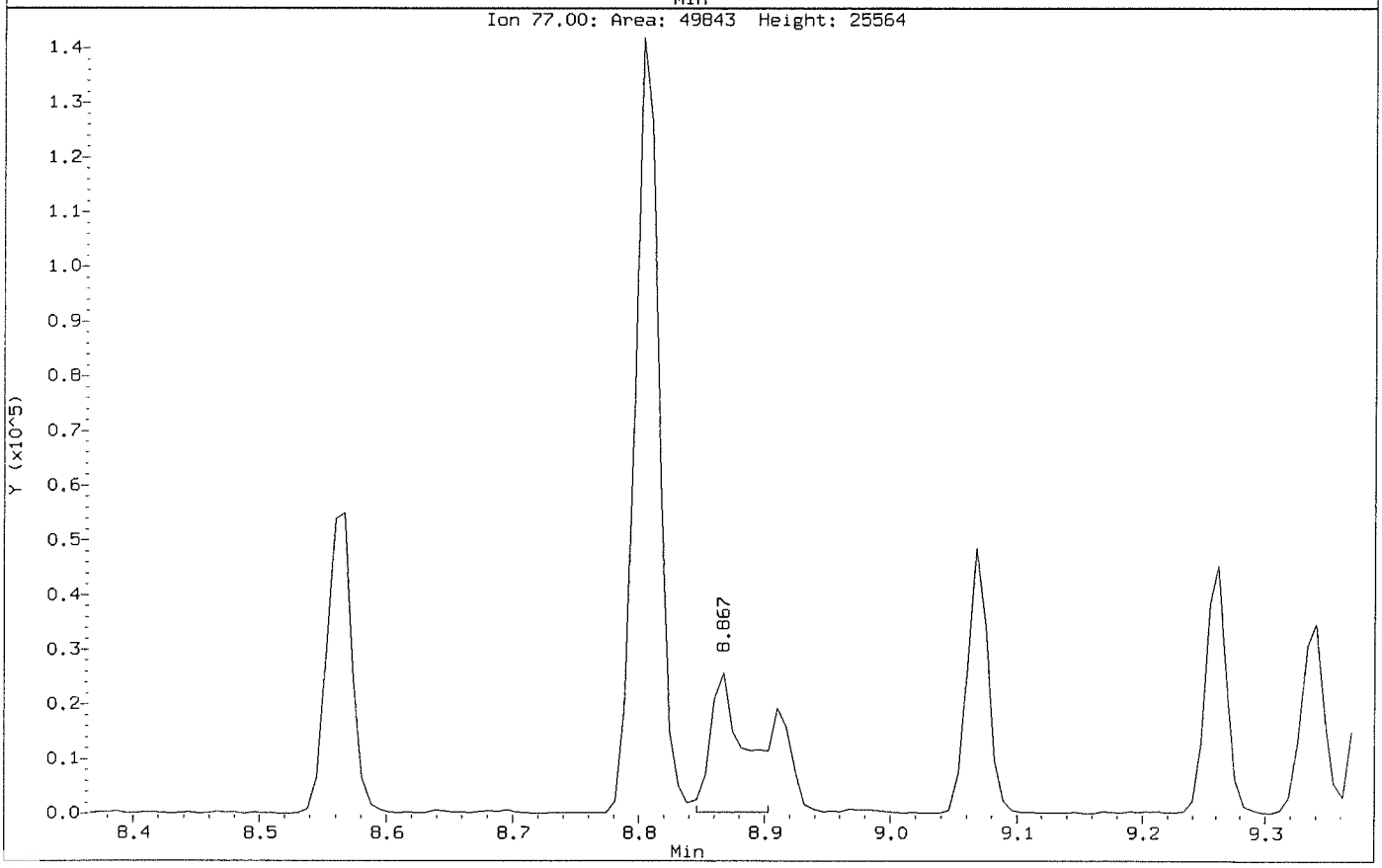




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Injection Date: 22-NOV-2020 18:09
Instrument: voa6.i
Client Sample ID: VSTD050

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112209.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112209.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 22-NOV-2020 18:30
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	174912	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	338881	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	314578	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	160899	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	308941	100.000	104.21
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	300964	100.000	99.44
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	241210	100.000	101.32
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	878888	100.000	103.52
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	243403	100.000	102.96
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	393791	100.000	110.77
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	274263	100.000	98.82
138 Freon TF	101	1.919	1.919	(0.459)	342604	100.000	105.01
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	198697	100.000	96.12
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	452692	100.000	107.29
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	347501	100.000	102.44
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	335682	100.000	99.61
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	52660	100.000	90.00
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	221584	100.000	91.30(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	110272	100.000	90.96
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	930856	100.000	102.47
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	18379	100.000	93.73
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	248466	100.000	103.31

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112209.D Page 2
Report Date: 18-Dec-2020 11:14

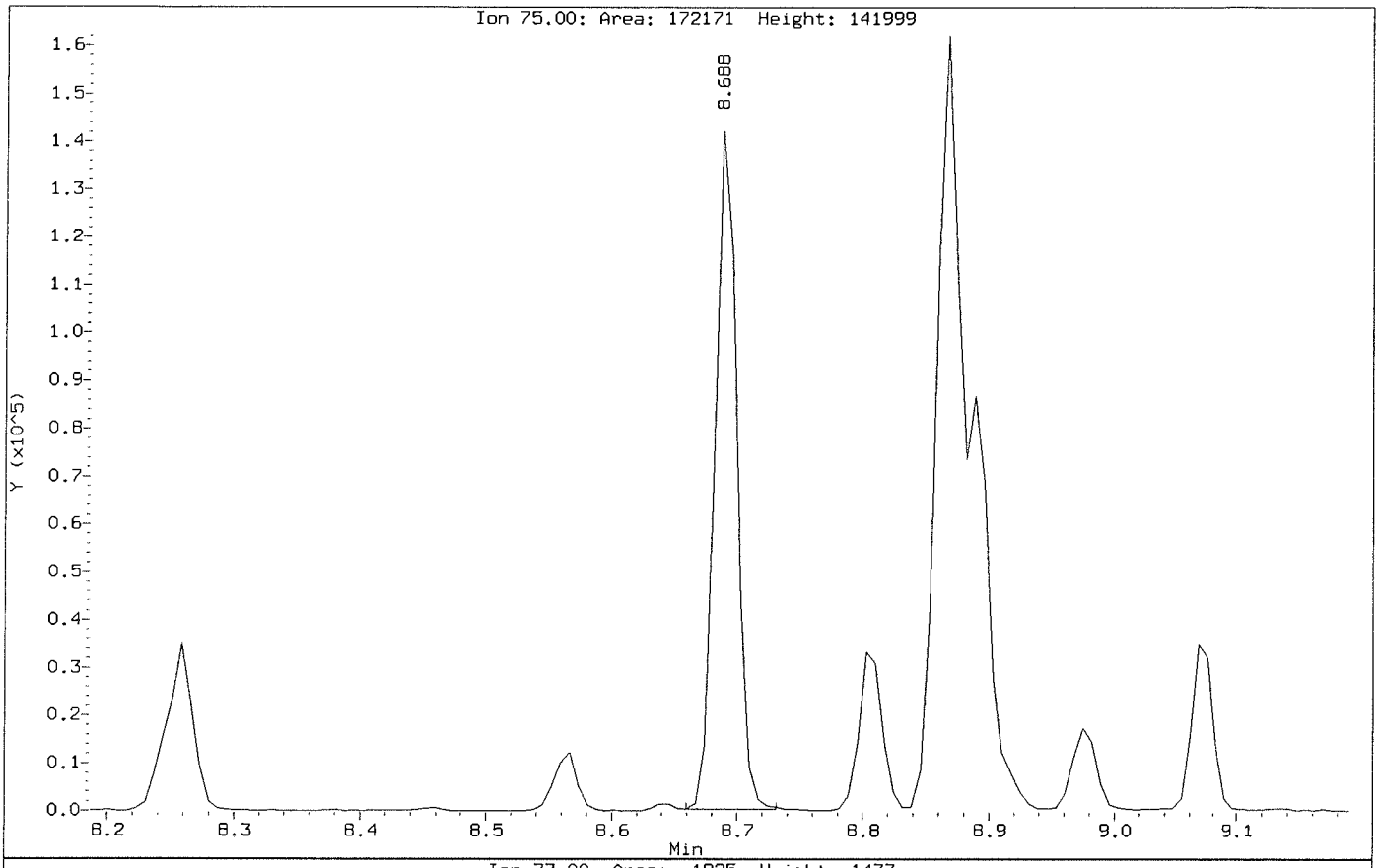
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	449150	100.000	98.64
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	379367	100.000	101.88
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	259783	100.000	96.09
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	952488	100.000	99.80
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	464020	100.000	95.88
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	392384	100.000	101.17
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	485254	100.000	98.48
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	382030	100.000	103.01
24	2-Butanone	43	3.573	3.573	(0.854)	177147	200.000	211.76(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	747259	100.000	94.92
52	2-Hexanone	43	7.090	7.090	(0.924)	322138	200.000	198.49
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	959924	100.000	99.65
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	963171	100.000	99.58
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	481706	200.000	198.19
10	Acetone	43	1.976	1.976	(0.473)	190183	200.000	194.78
37	Benzene	78	4.512	4.512	(0.908)	943951	100.000	101.98
74	Bromobenzene	156	8.809	8.809	(0.912)	266282	100.000	97.96
29	Bromochloromethane	128	3.795	3.795	(0.908)	130533	100.000	105.62
39	Bromodichloromethane	83	5.729	5.729	(1.153)	364666	100.000	101.60
66	Bromoform	173	8.408	8.408	(1.096)	149375	100.000	96.51
6	Bromomethane	94	1.338	1.338	(0.320)	329972	100.000	95.70
19	Carbon Disulfide	76	2.069	2.069	(0.495)	1304310	200.000	199.99
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	316104	100.000	108.18(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	702165	100.000	104.41
7	Chloroethane	64	1.403	1.403	(0.336)	269919	100.000	99.58
28	Chloroform	83	3.910	3.910	(0.935)	466642	100.000	102.02
3	Chloromethane	50	1.073	1.073	(0.257)	293324	100.000	91.34
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	259273	100.000	101.30
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	441422	100.000	102.68
55	Dibromochloromethane	129	7.176	7.176	(0.936)	258336	100.000	105.91
44	Dibromomethane	93	5.550	5.550	(1.117)	177903	100.000	100.44
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	288930	100.000	97.64
61	Ethylbenzene	106	7.799	7.799	(1.017)	355694	100.000	104.88
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	77817	100.000	92.79
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1100783	100.000	107.56
62	m,p-Xylenes	106	7.907	7.907	(1.031)	984046	200.000	191.33
17	Methylene Chloride	84	2.305	2.305	(0.551)	236137	100.000	98.28
87	n-Butylbenzene	91	9.999	9.999	(1.035)	941862	100.000	92.49
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1360226	100.000	101.05
92	Naphthalene	128	11.546	11.546	(1.195)	162905	100.000	91.75
63	o-Xylene	106	8.244	8.244	(1.075)	464311	100.000	97.48
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	1137305	100.000	102.41
64	Styrene	104	8.258	8.258	(1.077)	806480	100.000	110.55
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	769533	100.000	103.18
56	Tetrachloroethene	164	6.933	6.933	(0.904)	202689	100.000	104.50
50	Toluene	91	6.446	6.446	(0.840)	1091136	100.000	107.45
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	233473	100.000	108.28
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	382752	100.000	103.44
38	Trichloroethene	130	5.206	5.206	(1.048)	234410	100.000	99.43
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	676127	100.000	102.86
5	Vinyl Chloride	62	1.145	1.145	(0.274)	422452	100.000	100.38

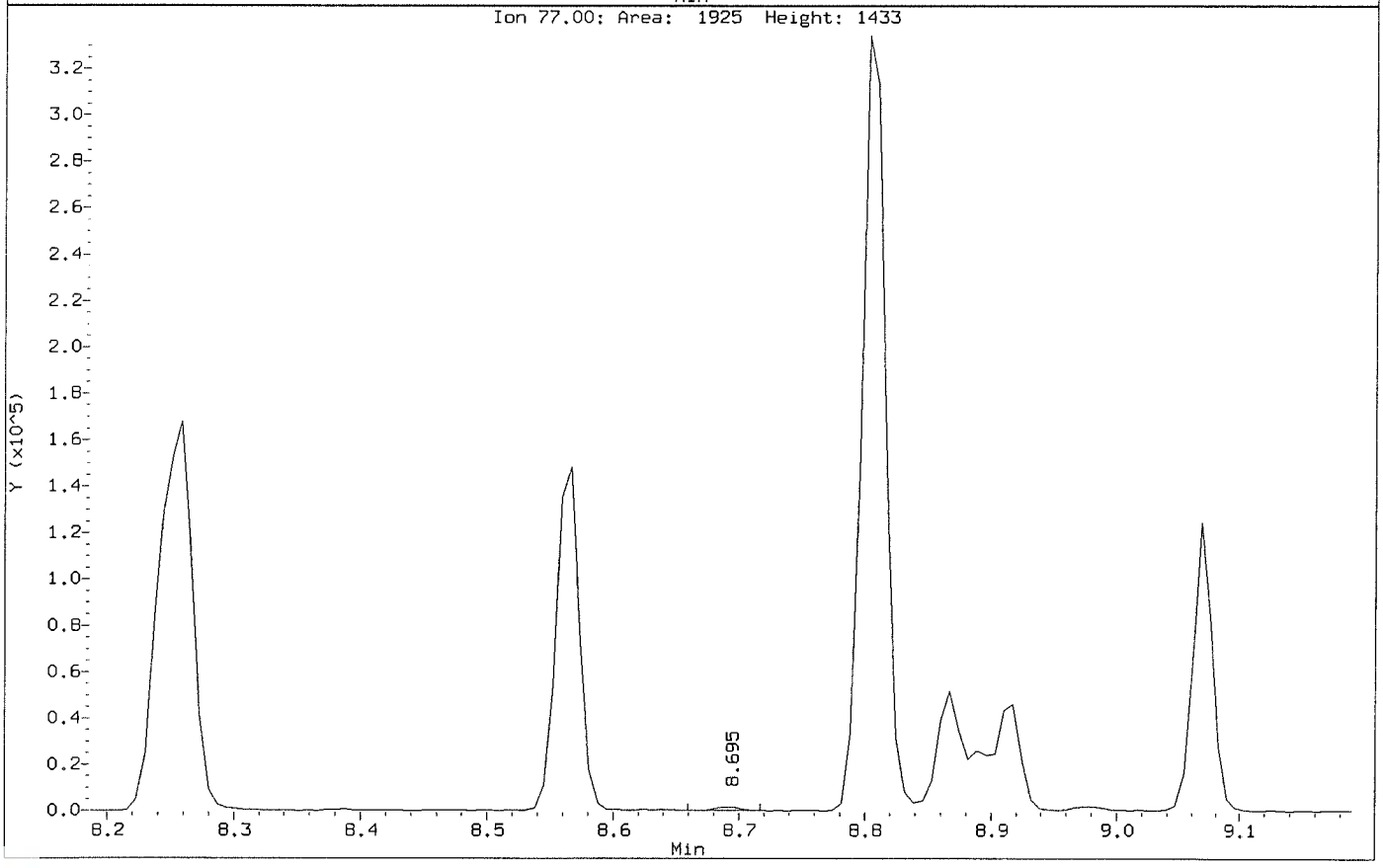
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112209.D
Injection Date: 22-NOV-2020 18:30
Instrument: voa6.i
Client Sample ID: VSTD100

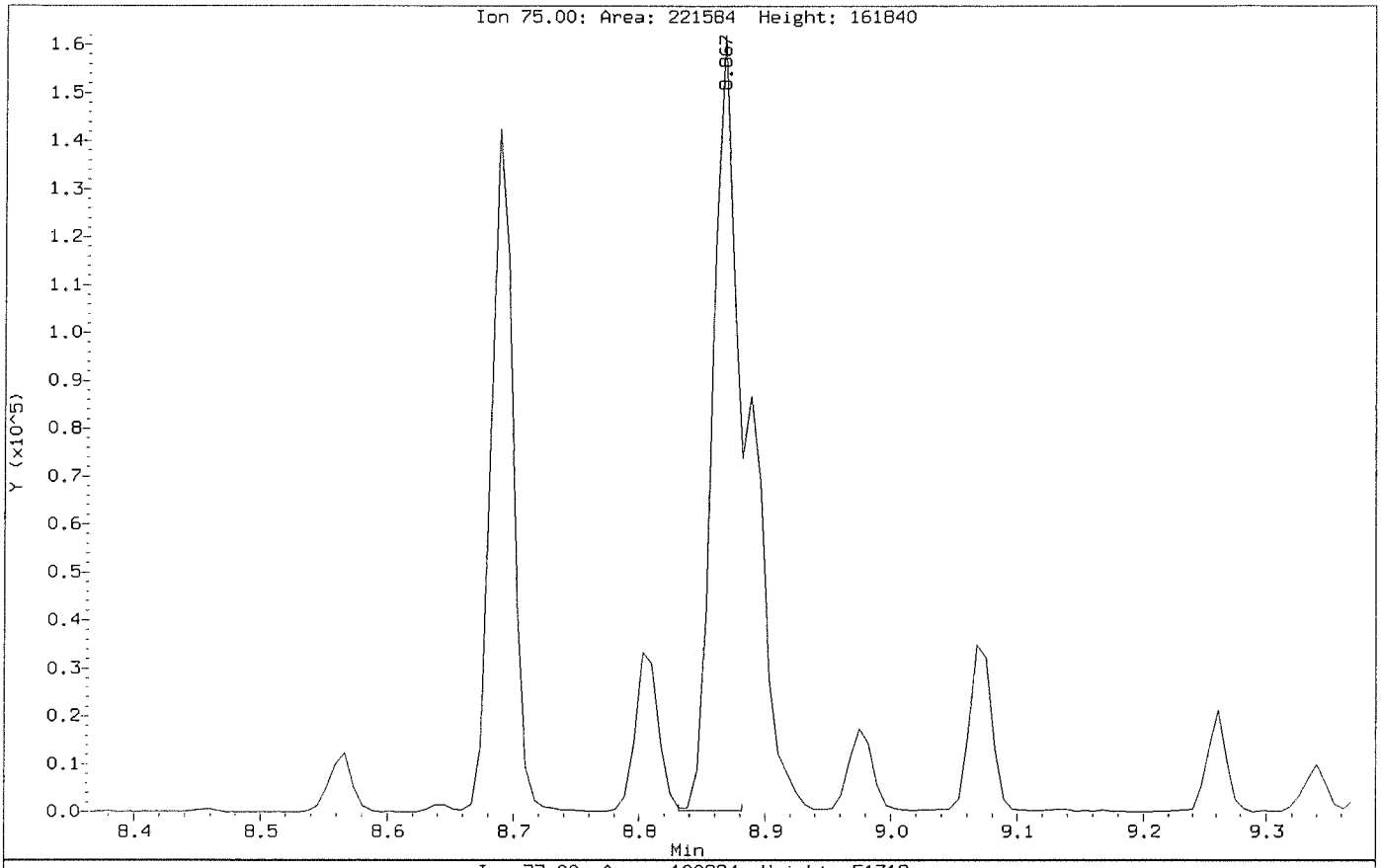
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

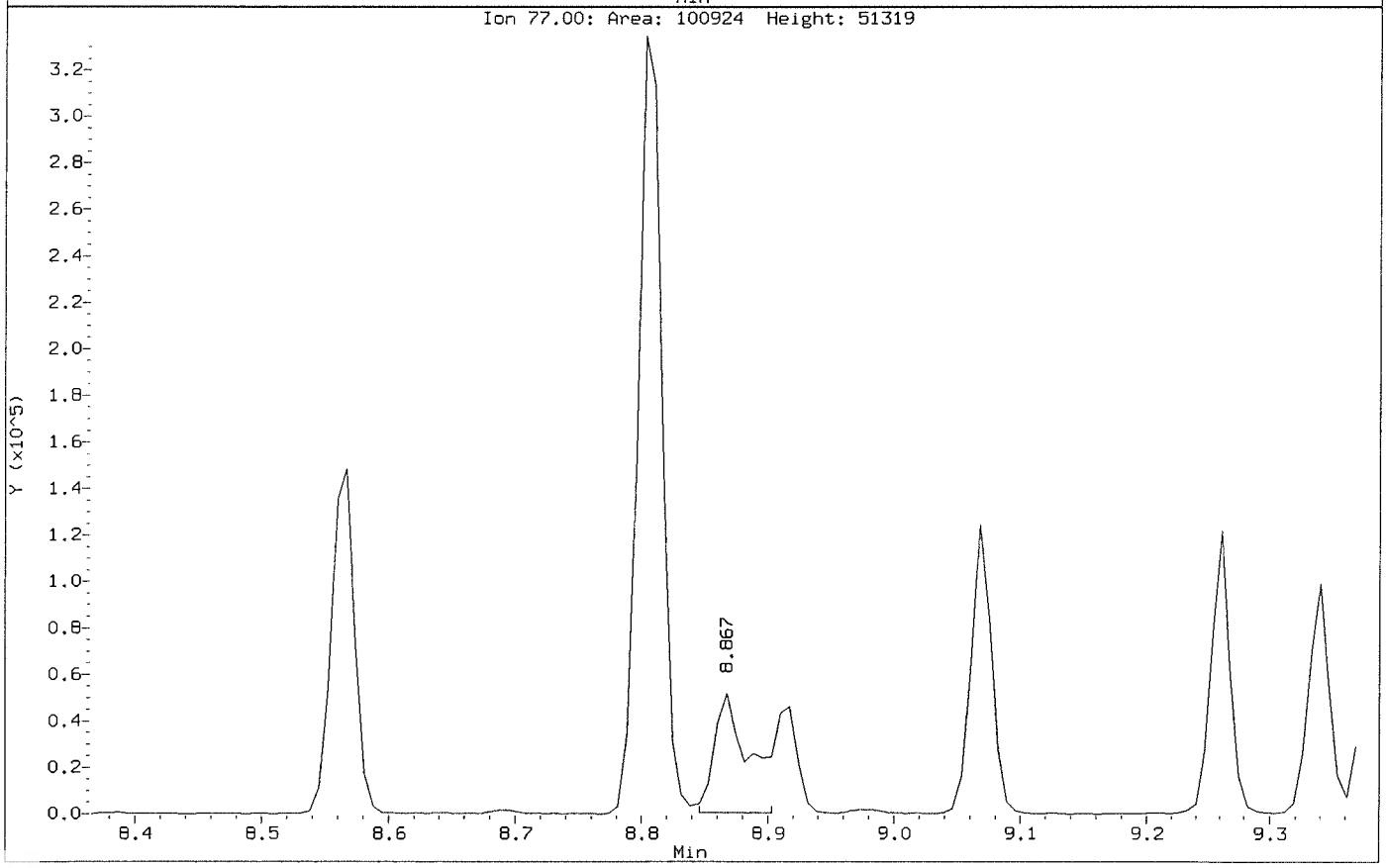




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Injection Date: 22-NOV-2020 18:30
Instrument: voa6.i
Client Sample ID: VSTD100

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112210.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112210.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 22-NOV-2020 18:51
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:30 Cal File: Y112209.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	179283	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	354977	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	328028	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	163650	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	451276	150.000	145.37
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	486561	150.000	153.40
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	376878	150.000	147.93
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1357855	150.000	153.38
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	371897	150.000	150.87
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	614514	150.000	168.64
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	416268	150.000	148.22
138 Freon TF	101	1.919	1.919	(0.459)	507034	150.000	151.63
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	315232	150.000	146.25
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	672982	150.000	155.62
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	510299	150.000	146.77
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	528428	150.000	149.70
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	86282	150.000	144.25
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	344338	150.000	139.49(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	184486	150.000	149.62
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	1434053	150.000	155.21
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	27735	150.000	139.08
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	382163	150.000	152.39

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112210.D Page 2
Report Date: 18-Dec-2020 11:14

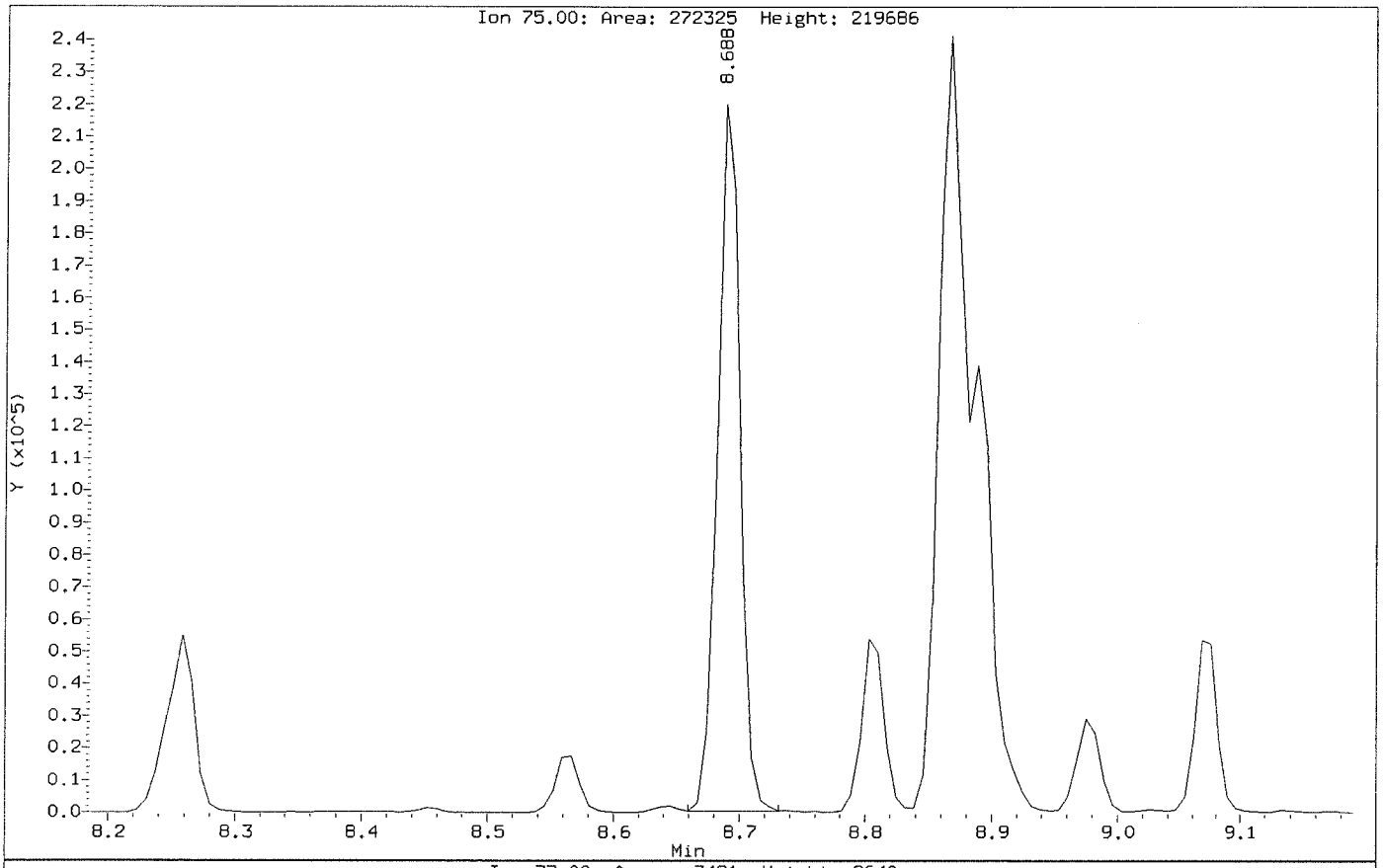
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	741724	150.000	160.16
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	601800	150.000	154.29
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	407687	150.000	143.95
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1568273	150.000	161.56
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	745436	150.000	151.44
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	621098	150.000	153.58
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	753555	150.000	150.05
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	577890	150.000	152.02
24	2-Butanone	43	3.573	3.573	(0.854)	274890	300.000	320.59(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	1197485	150.000	149.55
52	2-Hexanone	43	7.090	7.090	(0.924)	512600	300.000	302.43(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1581071	150.000	161.37
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1468165	150.000	148.46
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	770447	300.000	303.50(A)
10	Acetone	43	1.969	1.969	(0.471)	318811	300.000	320.58(A)
37	Benzene	78	4.519	4.519	(0.909)	1457449	150.000	150.32
74	Bromobenzene	156	8.809	8.809	(0.912)	429455	150.000	155.33
29	Bromochloromethane	128	3.795	3.795	(0.908)	196166	150.000	154.86
39	Bromodichloromethane	83	5.729	5.729	(1.153)	552405	150.000	146.93
66	Bromoform	173	8.416	8.416	(1.097)	240352	150.000	147.77
6	Bromomethane	94	1.338	1.338	(0.320)	546087	150.000	153.95
19	Carbon Disulfide	76	2.069	2.069	(0.495)	2095185	300.000	313.43(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	490971	150.000	160.41(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	1124894	150.000	160.41
7	Chloroethane	64	1.403	1.403	(0.336)	403836	150.000	145.35
28	Chloroform	83	3.910	3.910	(0.935)	696536	150.000	148.56
3	Chloromethane	50	1.073	1.073	(0.257)	461714	150.000	140.27
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	406757	150.000	155.05
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	696648	150.000	154.70
55	Dibromochloromethane	129	7.176	7.176	(0.936)	414295	150.000	162.89
44	Dibromomethane	93	5.557	5.557	(1.118)	274838	150.000	148.14
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	448171	150.000	146.43
61	Ethylbenzene	106	7.799	7.799	(1.017)	561801	150.000	158.87
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	129006	150.000	150.29
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1742775	150.000	163.32
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1602438	300.000	294.90(A)
17	Methylene Chloride	84	2.305	2.305	(0.551)	380674	150.000	154.58
87	n-Butylbenzene	91	9.991	9.991	(1.034)	1548790	150.000	147.64
73	n-Propylbenzene	91	8.917	8.917	(0.923)	2166010	150.000	158.22
92	Naphthalene	128	11.546	11.546	(1.195)	261811	150.000	144.37
63	o-Xylene	106	8.244	8.244	(1.075)	741860	150.000	147.83
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	1736245	150.000	150.38
64	Styrene	104	8.258	8.258	(1.077)	1322043	150.000	173.79
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	1182148	150.000	155.84
56	Tetrachloroethene	164	6.933	6.933	(0.904)	314774	150.000	155.63
50	Toluene	91	6.446	6.446	(0.840)	1752180	150.000	165.48
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	368843	150.000	166.89
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	625133	150.000	161.28
38	Trichloroethene	130	5.206	5.206	(1.048)	376921	150.000	152.64
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	1016000	150.000	150.80
5	Vinyl Chloride	62	1.138	1.138	(0.272)	638007	150.000	147.91

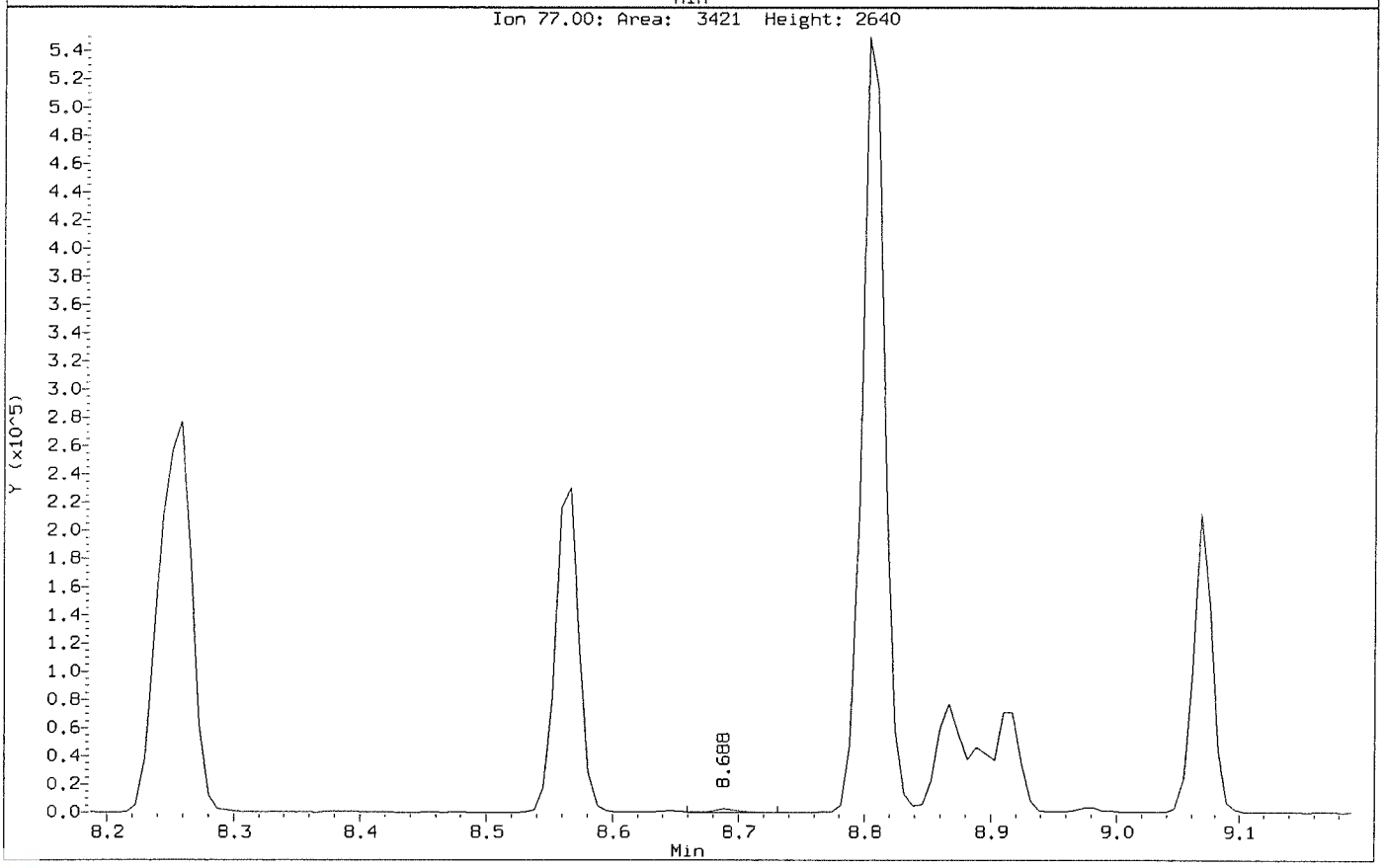
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112210.D
Injection Date: 22-NOV-2020 18:51
Instrument: voa6.i
Client Sample ID: VSTD150

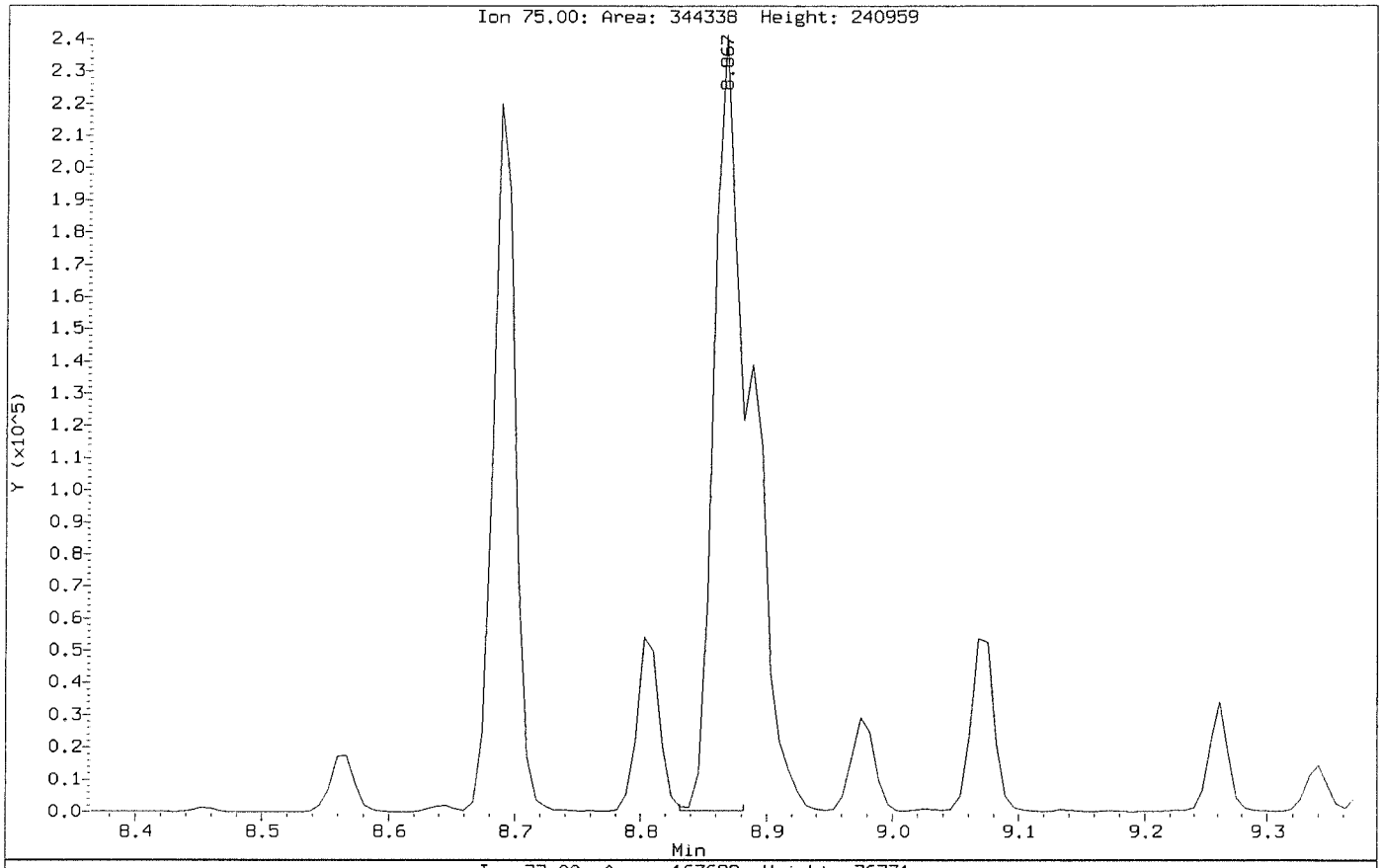
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

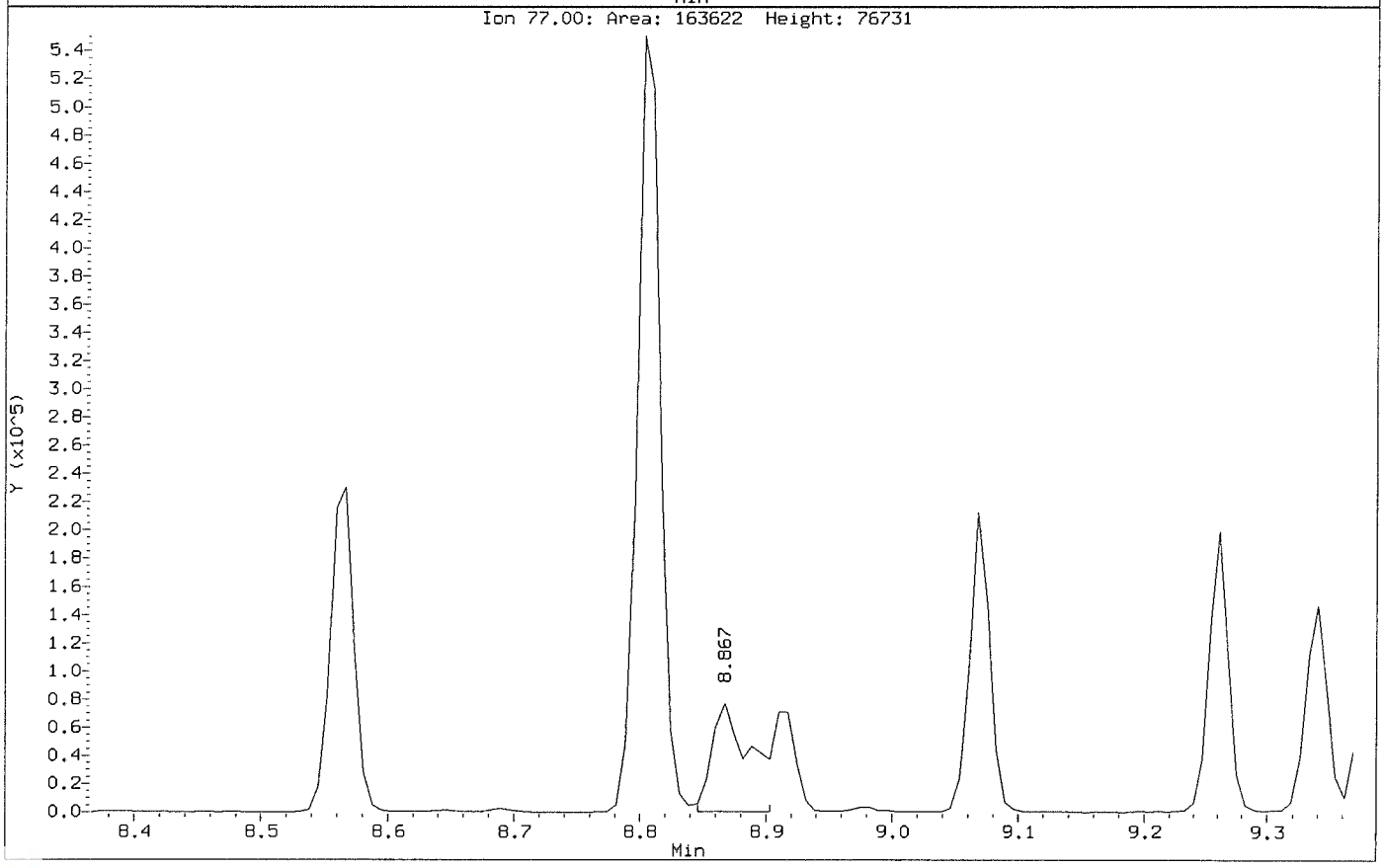




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Injection Date: 22-NOV-2020 18:51
Instrument: voa6.i
Client Sample ID: VSTD150

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112211.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112211.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 22-NOV-2020 19:12
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:51 Cal File: Y112210.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	176035	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	364342	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	341691	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	174972	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	632979	200.000	201.26(A)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	656990	200.000	198.24
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	532354	200.000	200.70(A)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1991247	200.000	215.94(A)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	530863	200.000	206.75(A)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	852384	200.000	238.24(A)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	599923	200.000	200.32(A)
138 Freon TF	101	1.912	1.912	(0.457)	699115	200.000	212.93(A)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	429176	200.000	191.15
22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	934929	200.000	220.18(A)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	729625	200.000	213.73(A)
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	731654	200.000	201.94(A)
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	133285	200.000	207.89(A)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	465250	200.000	176.28(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	266482	200.000	202.13(A)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	2075654	200.000	210.12(A)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	43773	200.000	205.30(A)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	548976	200.000	210.15(A)

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112211.D Page 2
Report Date: 18-Dec-2020 11:14

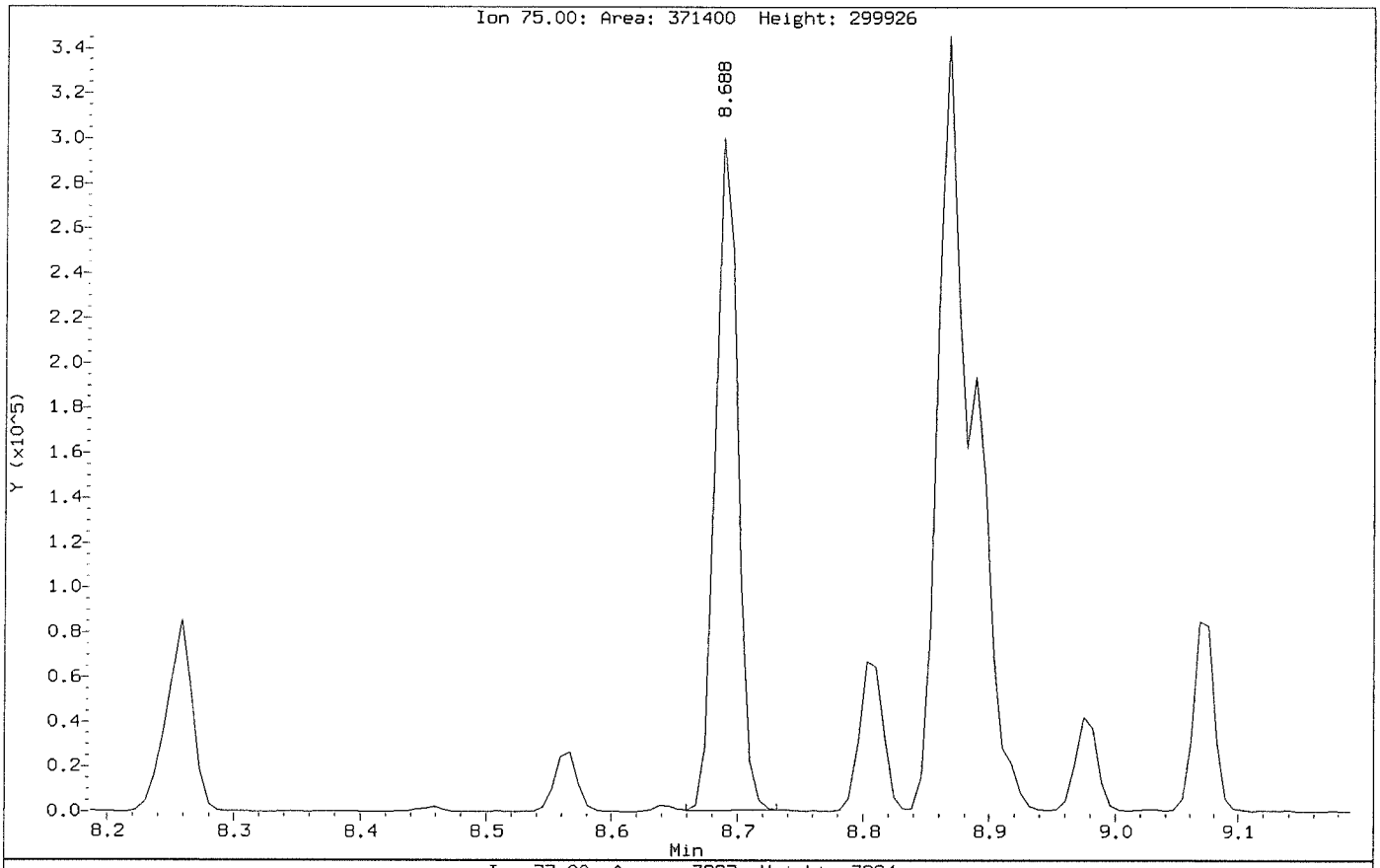
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	1101226	200.000	222.40(A)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	788057	200.000	196.85
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	552993	200.000	190.25
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	2355502	200.000	226.96(A)
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	1071150	200.000	203.53(A)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	828217	200.000	196.61
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	1081362	200.000	201.19(A)
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	796994	200.000	213.53(A)
24 2-Butanone	43	3.573	3.573	(0.854)	351745	400.000	417.80(A)
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	1666350	200.000	194.64
52 2-Hexanone	43	7.090	7.090	(0.924)	706390	400.000	399.82(A)
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	2386668	200.000	227.84(A)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	2148410	200.000	202.60(A)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1057100	400.000	399.48(A)
10 Acetone	43	1.969	1.969	(0.471)	376097	400.000	385.81(A)
37 Benzene	78	4.512	4.512	(0.908)	2028339	200.000	203.83(A)
74 Bromobenzene	156	8.810	8.810	(0.912)	586928	200.000	198.55
29 Bromochloromethane	128	3.795	3.795	(0.908)	279430	200.000	224.66(A)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	785121	200.000	203.47(A)
66 Bromoform	173	8.408	8.408	(1.096)	347273	200.000	204.14(A)
6 Bromomethane	94	1.339	1.339	(0.320)	856434	200.000	245.35(A)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	2919808	400.000	444.85(A)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	698012	200.000	222.20(AH)
59 Chlorobenzene	112	7.699	7.699	(1.004)	1618178	200.000	221.53(A)
7 Chloroethane	64	1.403	1.403	(0.336)	577610	200.000	211.73(A)
28 Chloroform	83	3.910	3.910	(0.935)	974268	200.000	211.64(A)
3 Chloromethane	50	1.073	1.073	(0.257)	637369	200.000	197.20
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	558963	200.000	217.00(A)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	965378	200.000	208.87(A)
55 Dibromochloromethane	129	7.176	7.176	(0.936)	570654	200.000	215.40(A)
44 Dibromomethane	93	5.558	5.558	(1.118)	384598	200.000	201.97(A)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	619478	200.000	205.07(A)
61 Ethylbenzene	106	7.800	7.800	(1.017)	766670	200.000	208.13(A)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	187663	200.000	203.93(A)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	2498604	200.000	224.79(A)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	2341187	400.000	410.83(A)
17 Methylene Chloride	84	2.306	2.306	(0.551)	521477	200.000	215.66(A)
87 n-Butylbenzene	91	9.999	9.999	(1.035)	2327830	200.000	206.31(A)
73 n-Propylbenzene	91	8.917	8.917	(0.923)	3050802	200.000	208.43(A)
92 Naphthalene	128	11.539	11.539	(1.194)	402230	200.000	206.98(A)
63 o-Xylene	106	8.244	8.244	(1.075)	1073818	200.000	204.29(A)
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	2518787	200.000	199.39
64 Styrene	104	8.258	8.258	(1.077)	1909859	200.000	241.03(A)
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	1717849	200.000	211.81(A)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	454926	200.000	215.94(A)
50 Toluene	91	6.446	6.446	(0.840)	2434863	200.000	220.76(A)
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	536782	200.000	247.36(A)
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	843951	200.000	212.14(A)
38 Trichloroethene	130	5.207	5.207	(1.048)	521092	200.000	205.60(A)
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	1337090	200.000	202.11(A)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	854012	200.000	201.63(A)

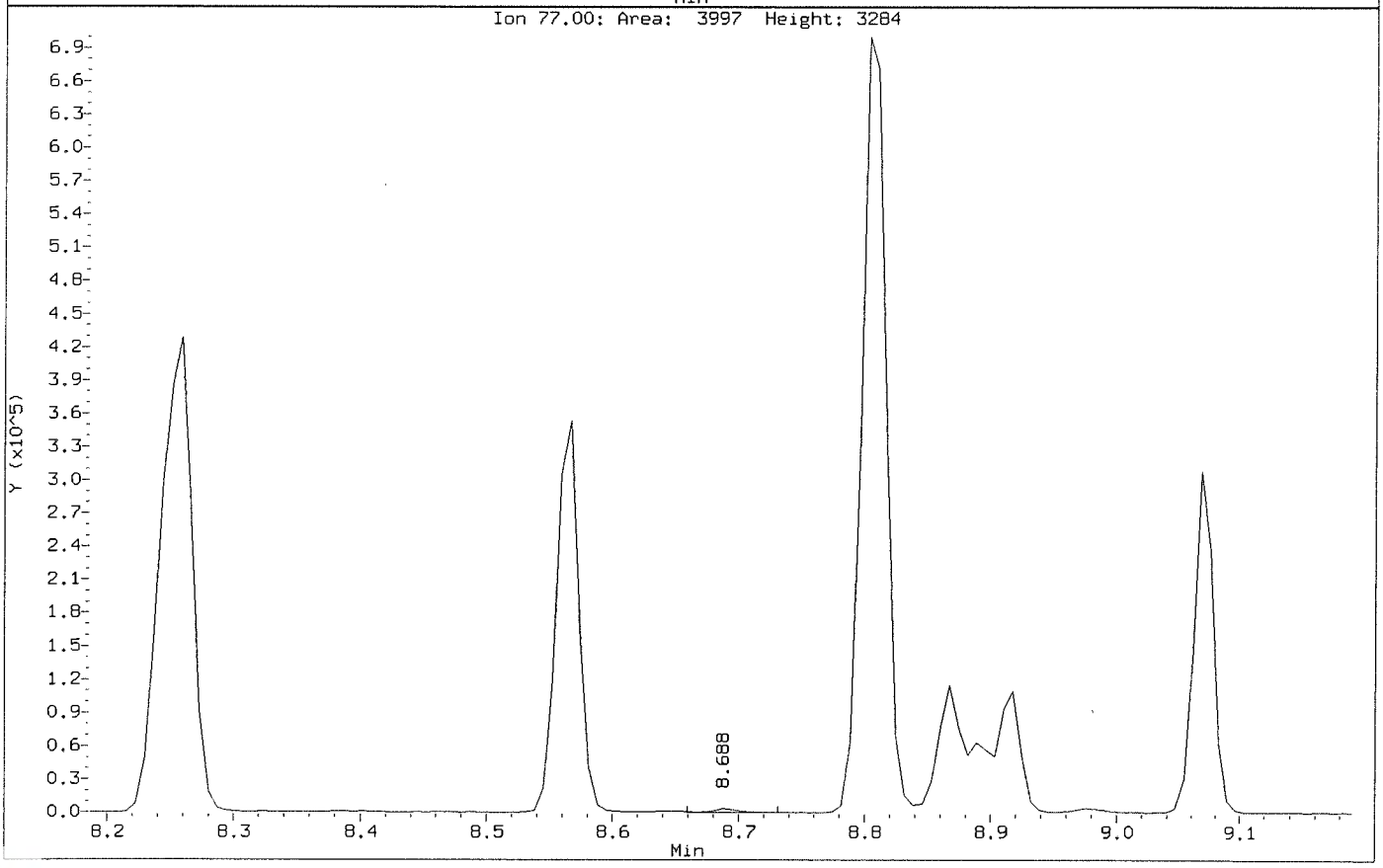
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112211.D
Injection Date: 22-NOV-2020 19:12
Instrument: voa6.i
Client Sample ID: VSTD200

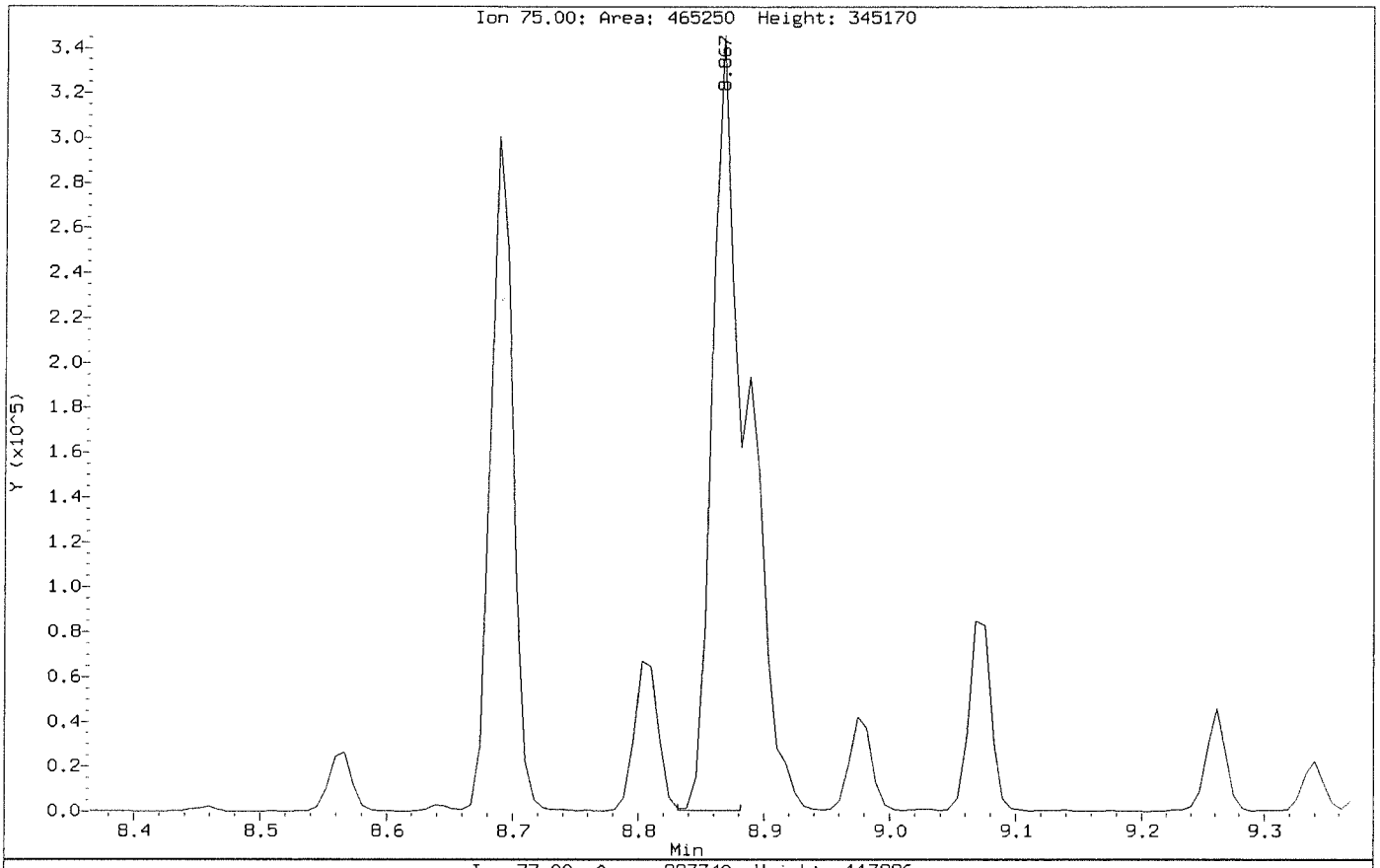
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

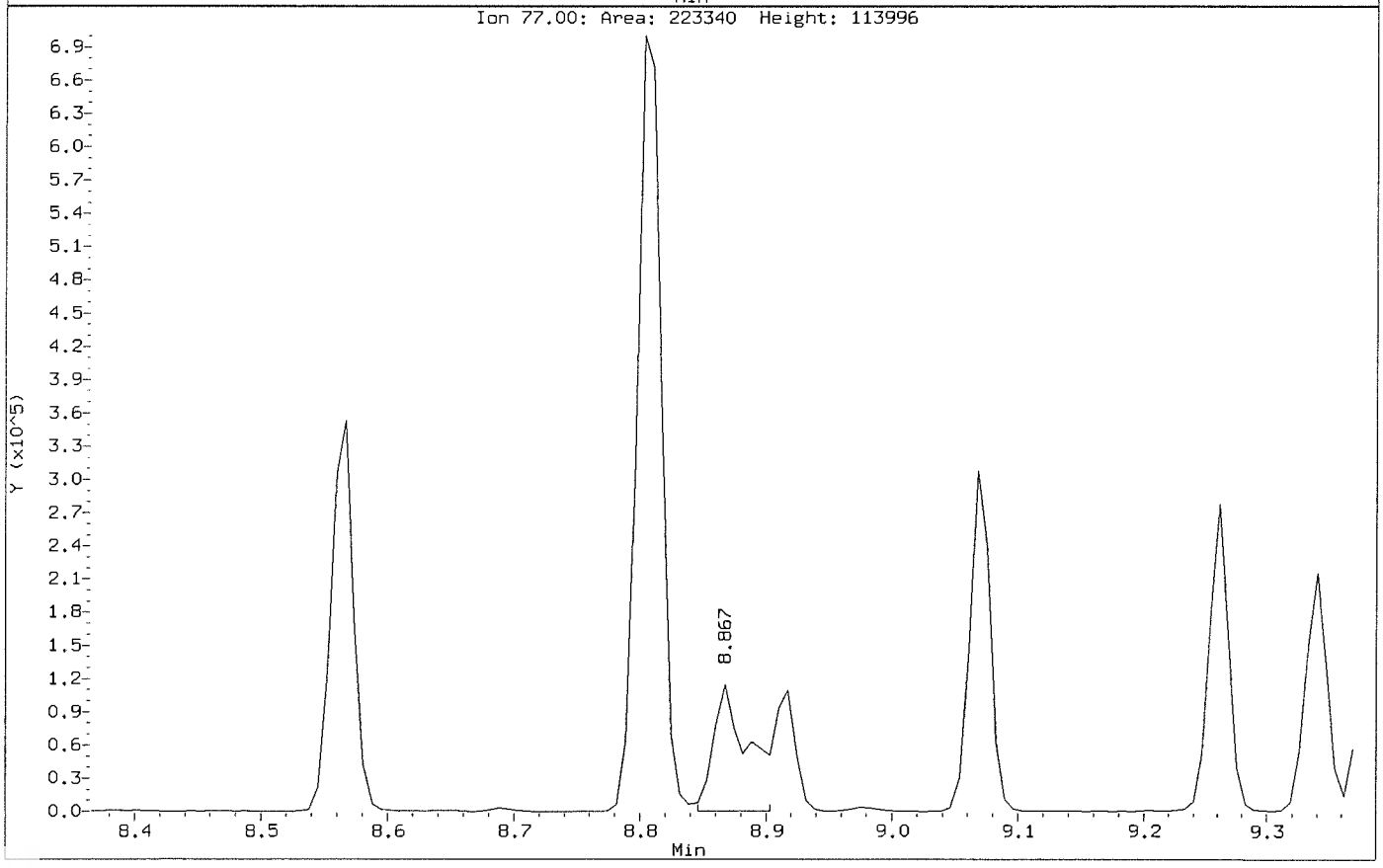




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Injection Date: 22-NOV-2020 19:12
Instrument: voa6.i
Client Sample ID: VSTD200

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





Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112213.D Page 1
Report Date: 18-Dec-2020 11:14

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201122.b\Y112213.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 22-NOV-2020 19:54
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\X201122.b\8260W.m
Meth Date : 18-Dec-2020 11:14 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 19:12 Cal File: Y112211.D
Als bottle: 14 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	191041	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	343524	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	317689	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	149611	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	158000	50.1387	50.13
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	145881	48.2417	48.24
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	124760	49.9107	49.91
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	423661	49.4162	49.41
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	106218	44.4945	44.49
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	183019	47.1370	47.13
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	135342	51.7383	51.73
138 Freon TF	101	1.919	1.912	(0.459)	154204	43.2779	43.27
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	99550	47.6901	47.69
22 1,1-Dichloroethane	63	2.921	2.922	(0.699)	215768	46.8243	46.82
11 1,1-Dichloroethene	96	1.919	1.912	(0.459)	162205	43.7837	43.78
32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	160298	46.9264	46.92
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	32310	59.8017	59.80(M)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	111149	49.2536	49.25(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	62438	55.3895	55.38
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	382703	45.3098	45.30
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	9070	49.7505	49.75
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	114507	47.1465	47.14

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112213.D Page 2
Report Date: 18-Dec-2020 11:14

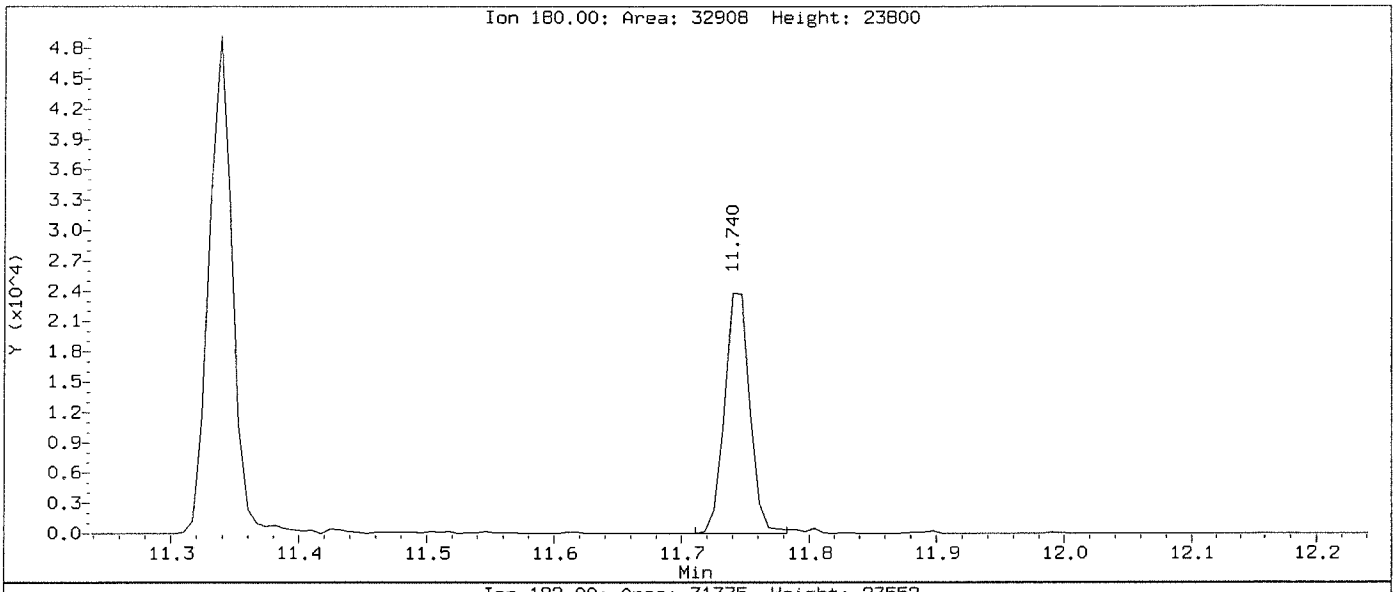
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	200417	47.3378	47.33
33	1,2-Dichloroethane	62	4.555	4.562	(0.916)	193396	51.2378	51.23
42	1,2-Dichloropropane	63	5.436	5.443	(1.094)	127112	46.3815	46.38
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	398122	44.8645	44.86
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	206919	45.9822	45.98
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	195736	49.9779	49.97
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	210237	46.2002	46.20
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	181550	44.8209	44.82
24	2-Butanone	43	3.573	3.573	(0.854)	84328	92.2965	92.29
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	329818	45.0561	45.05
52	2-Hexanone	43	7.083	7.090	(0.923)	150957	92.5868	92.58
77	4-Chlorotoluene	91	9.067	9.075	(0.938)	410501	45.8309	45.83
82	p-Isopropyltoluene	119	9.648	9.655	(0.999)	387100	43.9398	43.93
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	230958	94.5749	94.57
10	Acetone	43	1.976	1.969	(0.473)	98377	90.5699	90.56
37	Benzene	78	4.512	4.512	(0.908)	452437	48.2220	48.22
74	Bromobenzene	156	8.809	8.810	(0.912)	121737	48.1652	48.16
29	Bromochloromethane	128	3.795	3.795	(0.908)	61239	45.3687	45.36
39	Bromodichloromethane	83	5.729	5.729	(1.153)	175889	48.3463	48.34
66	Bromoform	173	8.408	8.408	(1.096)	70405	46.1892	46.18
6	Bromomethane	94	1.338	1.339	(0.320)	168935	45.3471	45.34
19	Carbon Disulfide	76	2.069	2.069	(0.495)	618211	86.7913	86.79
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	139845	47.2150	47.21(H)
59	Chlorobenzene	112	7.692	7.699	(1.003)	305522	44.9875	44.98
7	Chloroethane	64	1.403	1.403	(0.336)	128408	43.3743	43.37
28	Chloroform	83	3.910	3.910	(0.935)	227526	45.5435	45.54
3	Chloromethane	50	1.073	1.073	(0.257)	152059	43.3532	43.35
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	125624	44.9391	44.93
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	216193	49.6113	49.61
55	Dibromochloromethane	129	7.176	7.176	(0.936)	126734	51.4528	51.45
44	Dibromomethane	93	5.550	5.558	(1.117)	88806	49.4635	49.46
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	128617	41.3385	41.33
61	Ethylbenzene	106	7.800	7.800	(1.017)	152428	44.5076	44.50
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	37967	49.4149	49.41
67	Isopropylbenzene	105	8.559	8.566	(1.116)	455328	44.0594	44.05
62	m,p-Xylenes	106	7.907	7.907	(1.031)	404607	82.0111	82.01
17	Methylene Chloride	84	2.305	2.306	(0.551)	121370	46.2523	46.25
87	n-Butylbenzene	91	9.991	9.999	(1.034)	380457	41.9141	41.91
73	n-Propylbenzene	91	8.910	8.917	(0.922)	568646	45.4357	45.43
92	Naphthalene	128	11.539	11.539	(1.194)	97719	59.5751	59.57(M)
63	o-Xylene	106	8.244	8.244	(1.075)	193699	41.9626	41.96
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	451950	45.0587	45.05
64	Styrene	104	8.258	8.258	(1.077)	344151	46.7153	46.71
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	310831	44.8224	44.82
56	Tetrachloroethene	164	6.933	6.933	(0.904)	85296	43.5470	43.54
50	Toluene	91	6.446	6.446	(0.840)	467560	45.5957	45.59
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	108690	46.1531	46.15
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	187417	49.9667	49.96
38	Trichloroethene	130	5.206	5.207	(1.048)	114663	47.9837	47.98
8	Trichlorofluoromethane	101	1.560	1.561	(0.373)	308363	42.9520	42.95
5	Vinyl Chloride	62	1.145	1.138	(0.274)	197940	43.0644	43.06

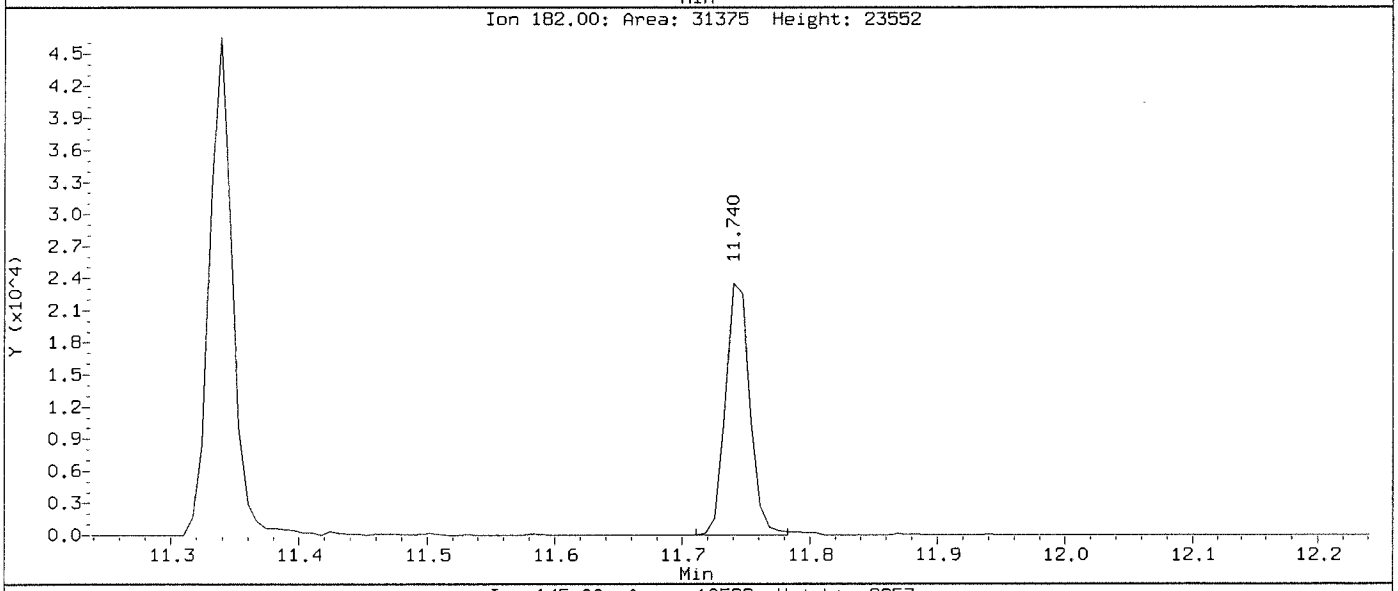
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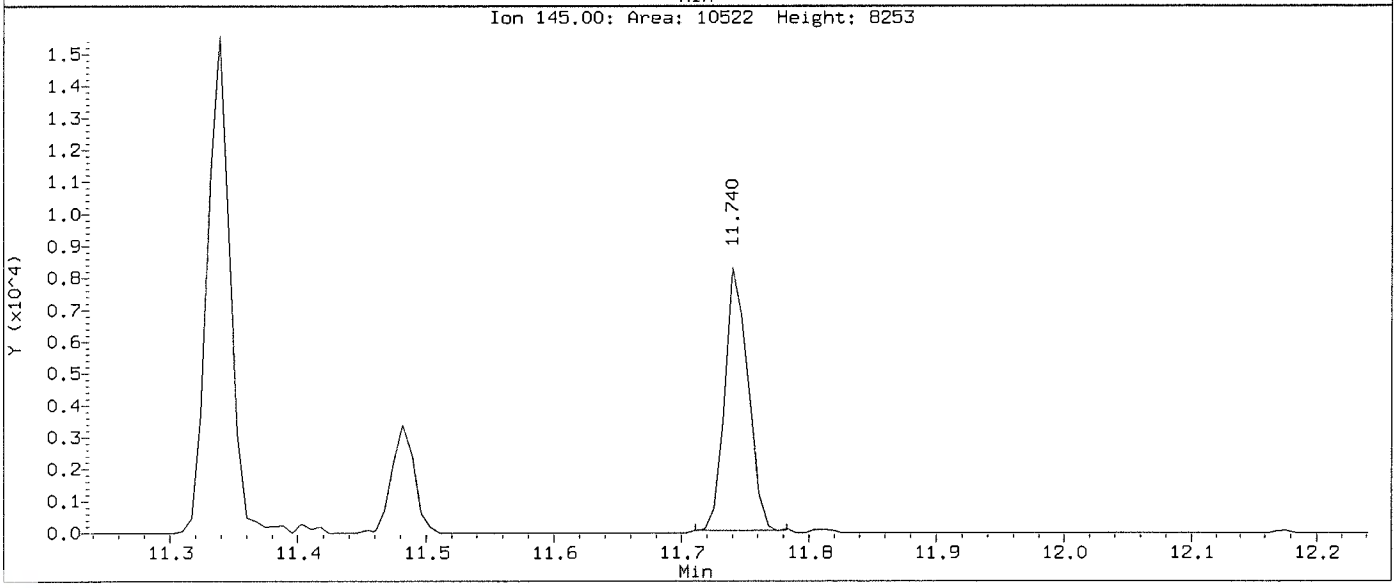
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112213.D
Injection Date: 22-NOV-2020 19:54
Instrument: voa6.i
Client Sample ID: ICV

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

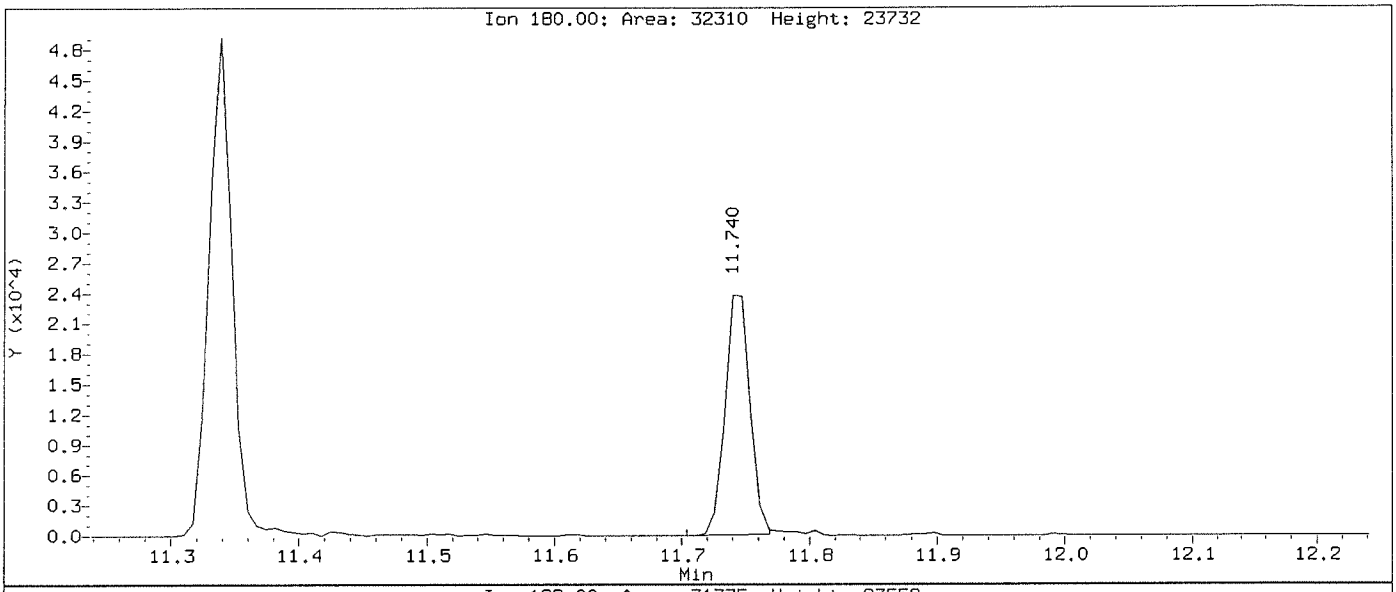


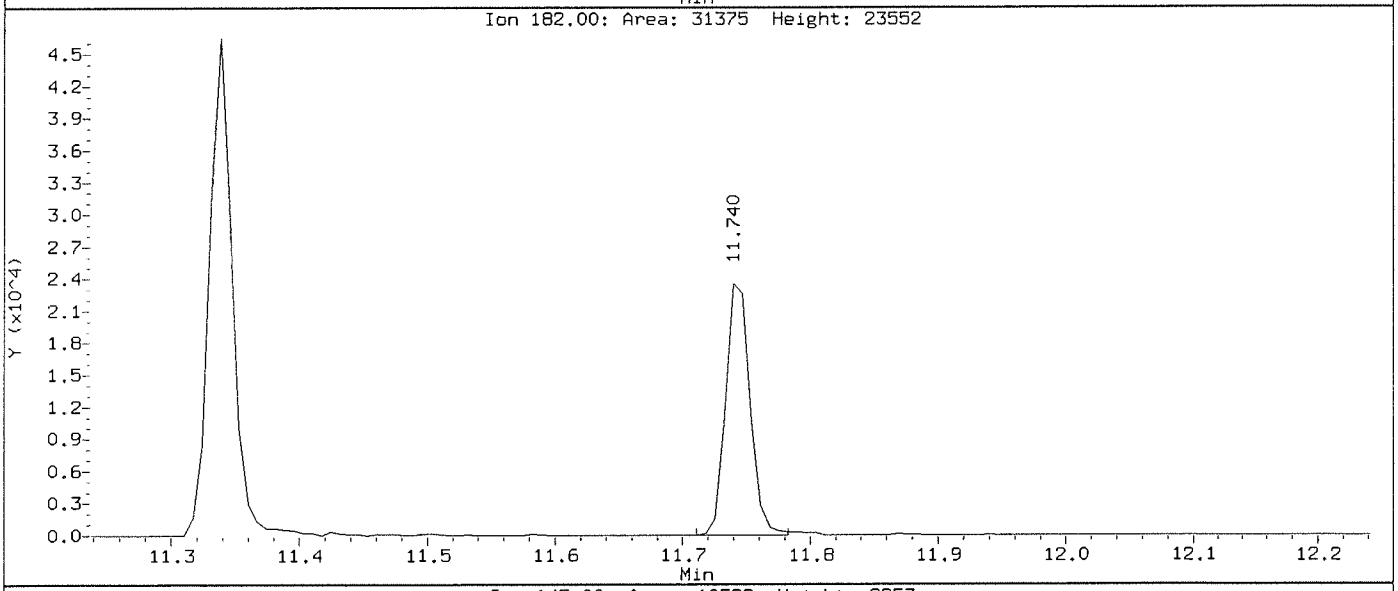


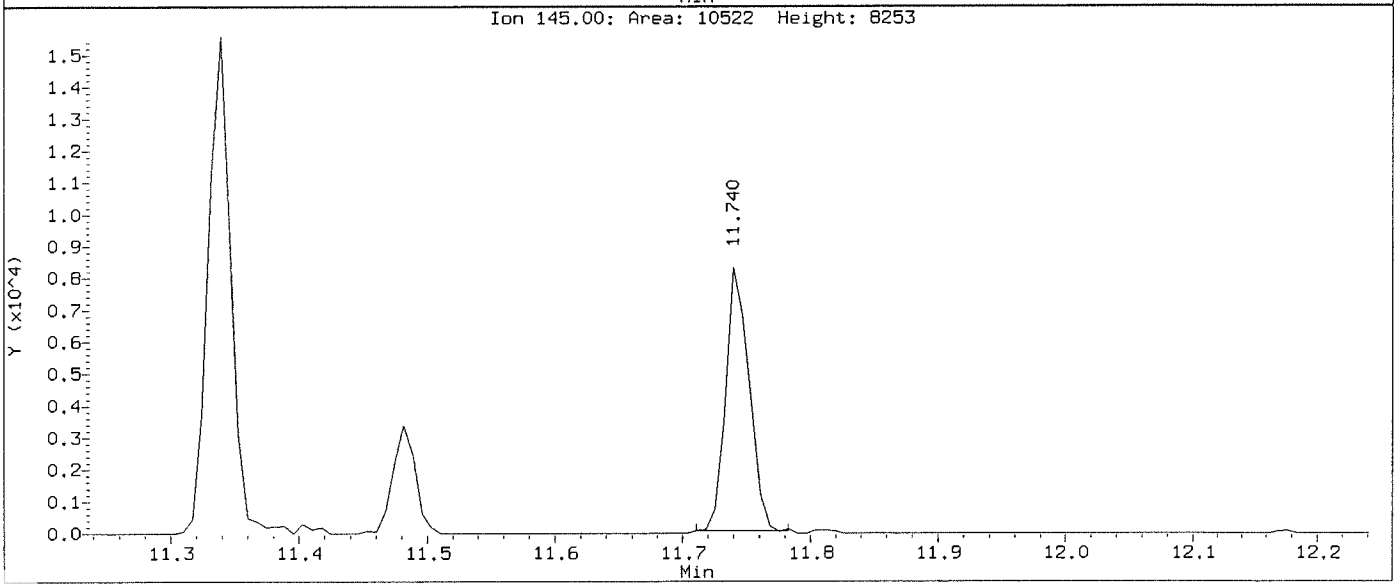


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Injection Date: 22-NOV-2020 19:54
Instrument: voa6.i
Client Sample ID: ICV

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

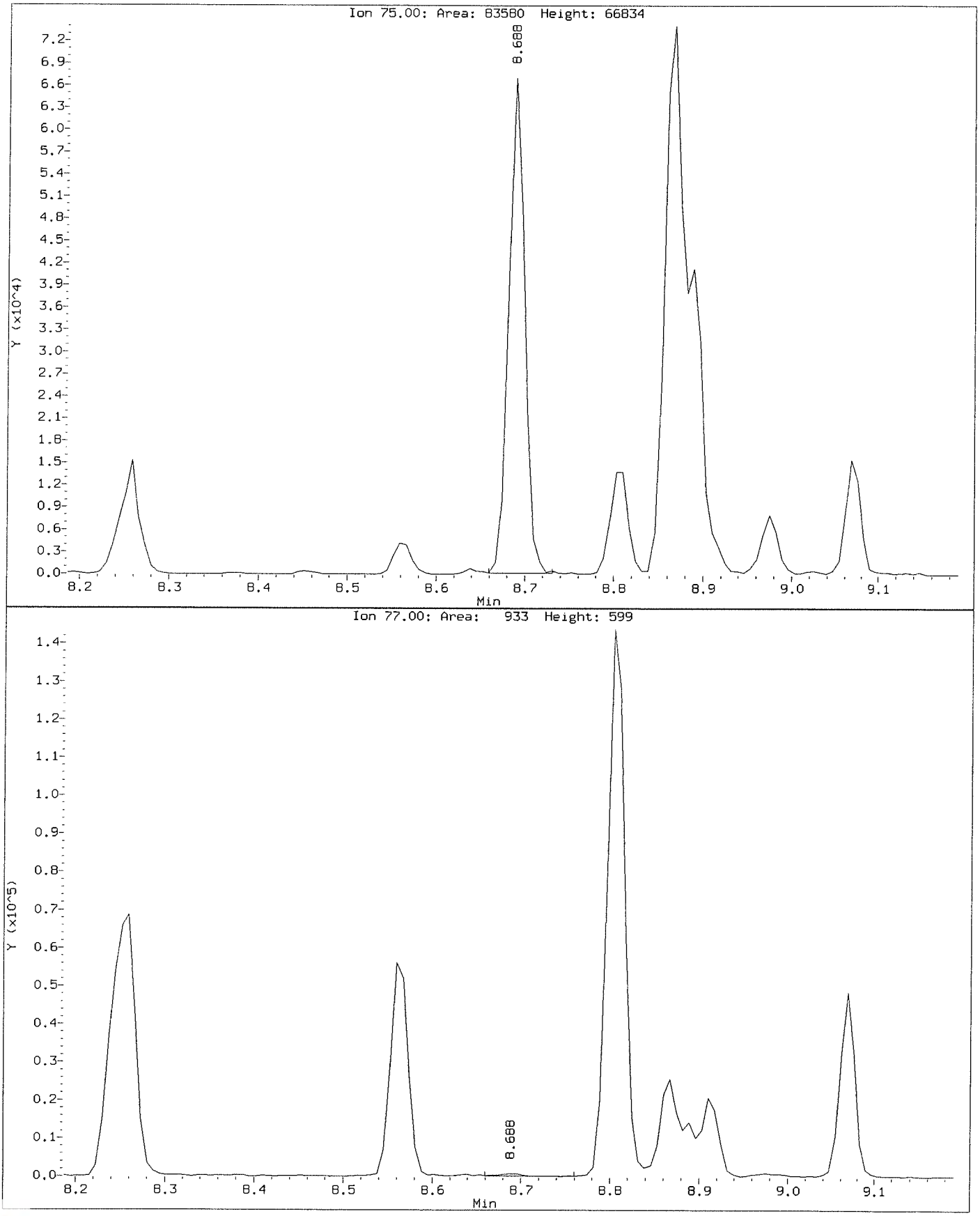






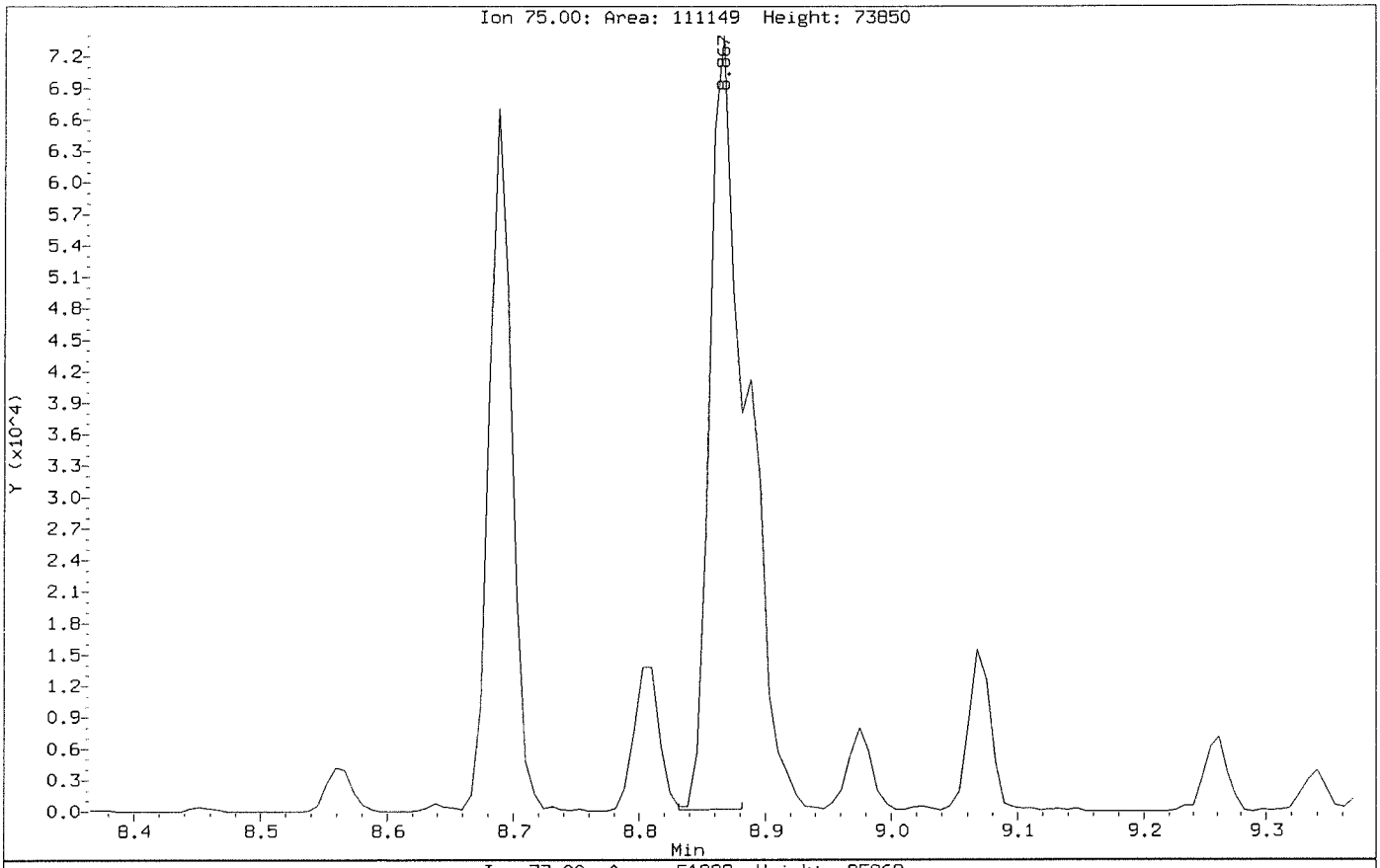
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Injection Date: 22-NOV-2020 19:54
Instrument: voa6.i
Client Sample ID: ICV

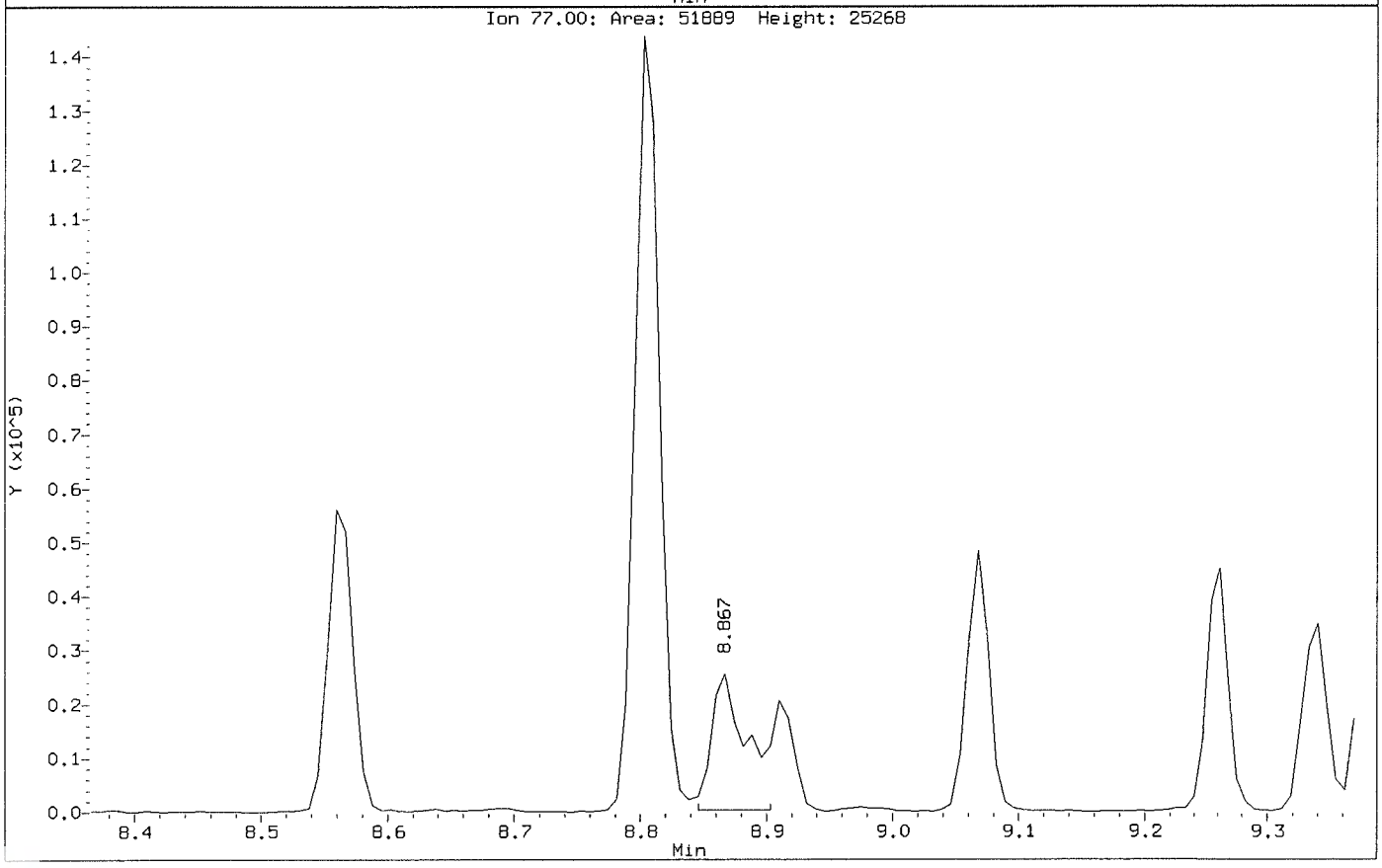
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112213.D
Injection Date: 22-NOV-2020 19:54
Instrument: voa6.i
Client Sample ID: ICV

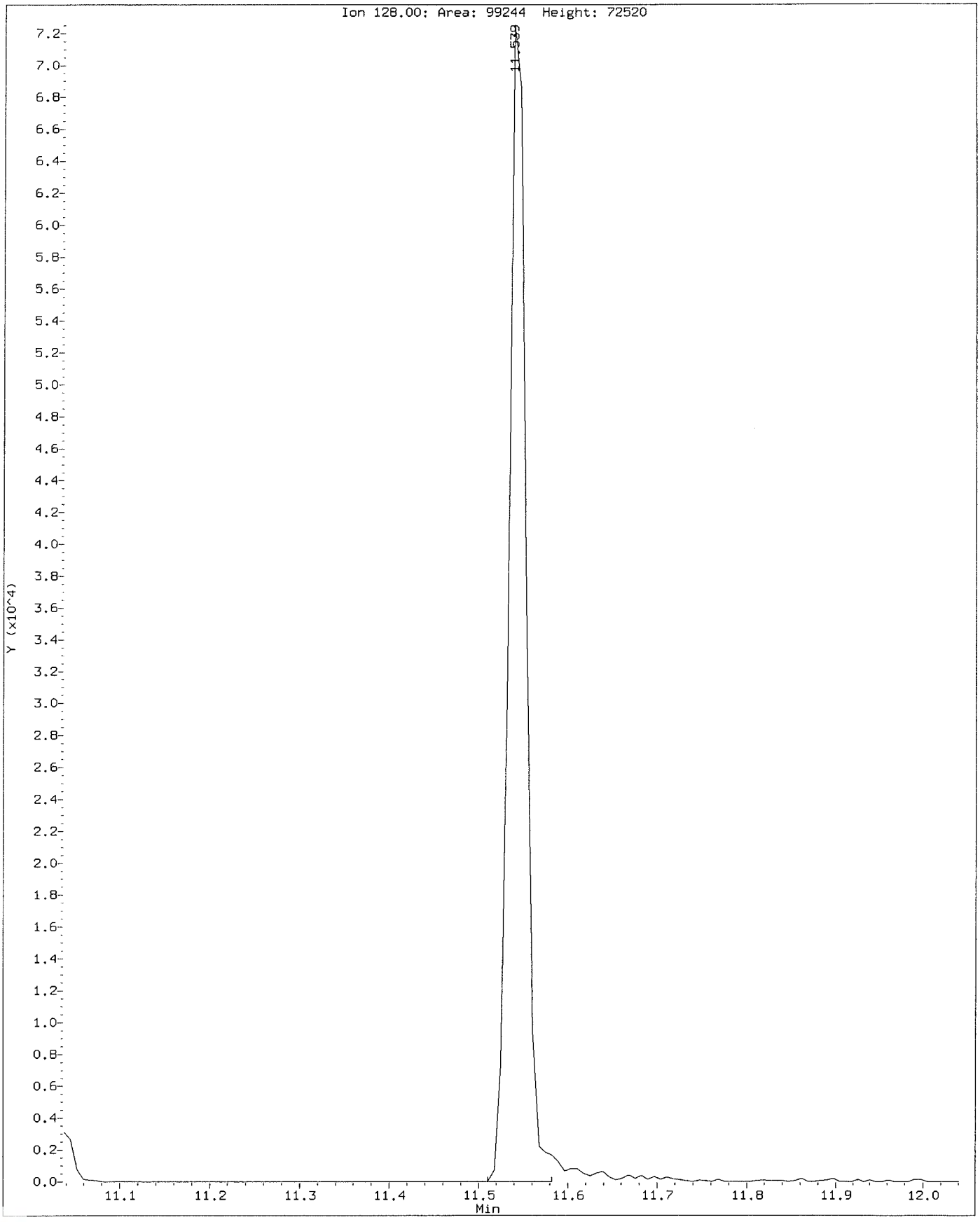
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





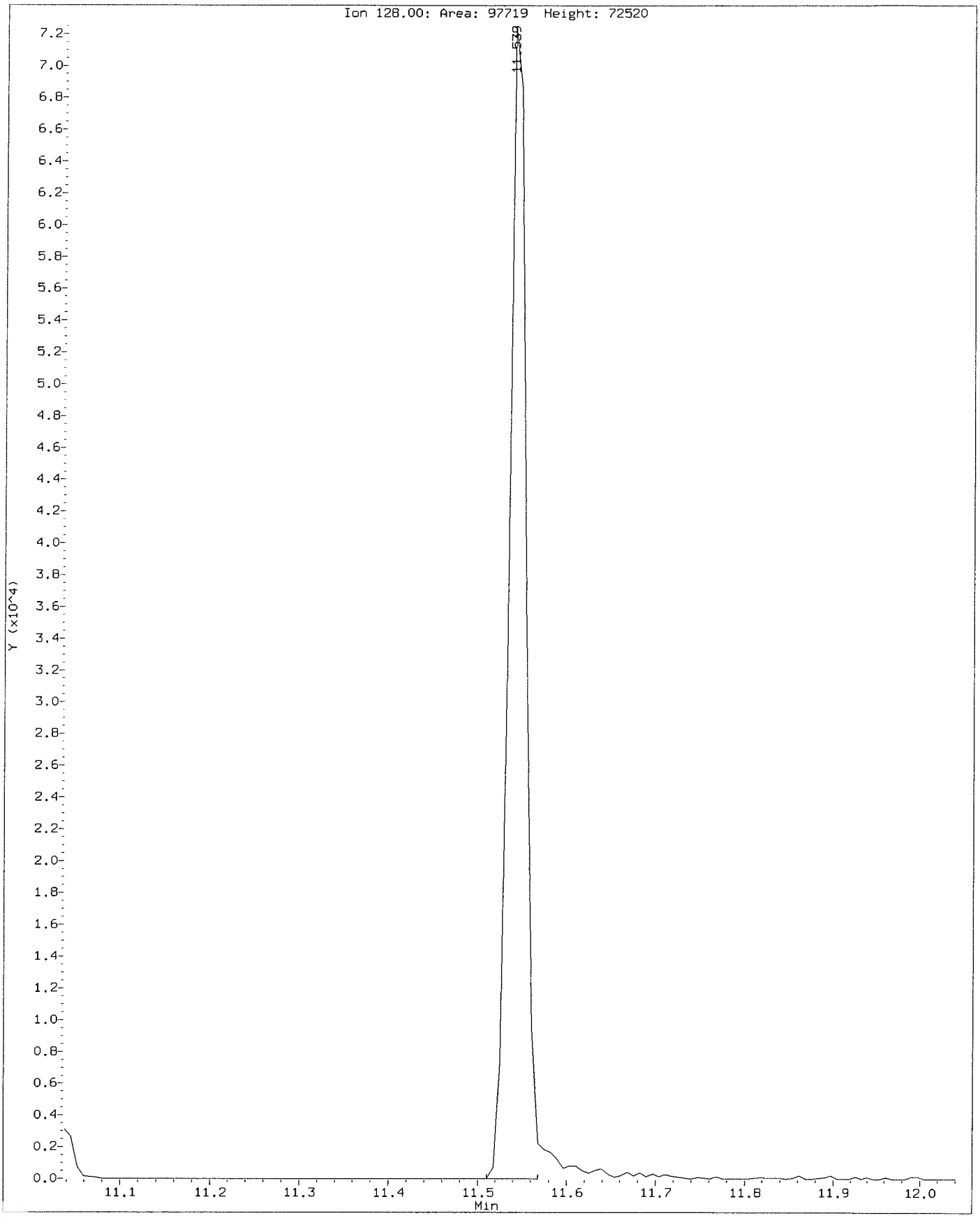
Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Before\Y112213.D
Injection Date: 22-NOV-2020 19:54
Instrument: voa6.i
Client Sample ID: ICV

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201122.b\Y112213.D
Injection Date: 22-NOV-2020 19:54
Instrument: voa6.i
Client Sample ID: ICV

Compound: Naphthalene
CAS Number: 91-20-3



MSVOA06 -Logbook

Batch: 42733 **Analyst:** Devak Giga

Date: 11-24-2020 **Reviewer:**

Method: 8260_W **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	11-24-2020 10:26 am	1.00	0.00 mL	0.00 mL	X112401.D	Liquid	Y	NA
2	CCV	CCV	11-24-2020 10:47 am	1.00	5.00 mL	0.00 mL	X112402a.D	Liquid	Y	NA
3	CCV	CCV	11-24-2020 11:08 am	1.00	5.00 mL	0.00 mL	X112403.D	Liquid	Y	NA
4	CCB	SAMP	11-24-2020 11:29 am	1.00	5.00 mL	0.00 mL	X112404.D	Liquid	Y	NA
5	VLCSW-201124	LCS	11-24-2020 11:50 am	1.00	5.00 mL	0.00 mL	X112405.D	Liquid	Y	NA
6	BLANK	SAMP	11-24-2020 12:11 pm	1.00	5.00 mL	0.00 mL	X112406.D	Liquid	Y	NA
7	VBLKM-201124	MBLK	11-24-2020 12:32 pm	50.00	5.00 mL	0.00 mL	X112407.D	Liquid	Y	NA
8	VBLKW-201124	MBLK	11-24-2020 12:53 pm	1.00	5.00 mL	0.00 mL	X112408.D	Liquid	Y	NA
9	HS20110689-09	SAMP	11-24-2020 01:14 pm	1.00	5.00 mL	0.00 mL	X112409.D	Liquid	Y	NA
10	HS20110674-03	SAMP	11-24-2020 01:35 pm	1.00	5.00 mL	0.00 mL	X112410.D	Liquid	Y	NA
11	HS20110689-05	SAMP	11-24-2020 01:56 pm	100.0(	5.00 mL	0.00 mL	X112411.D	Liquid	Y	NA
12	HS20110689-01	SAMP	11-24-2020 02:18 pm	500.0(	5.00 mL	0.00 mL	X112412.D	Liquid	Y	NA
13	HS20110674-03MS	MS	11-24-2020 02:39 pm	1.00	5.00 mL	0.00 mL	X112413.D	Liquid	Y	NA
14	HS20110674-03MSD	MSD	11-24-2020 03:00 pm	1.00	5.00 mL	0.00 mL	X112414.D	Liquid	Y	NA
15	HS20110985-03	SAMP	11-24-2020 03:21 pm	10.00	5.00 mL	0.00 mL	X112415.D	Liquid	Y	NA
16	HS20110985-10	SAMP	11-24-2020 03:42 pm	25.00	5.00 mL	0.00 mL	X112416.D	Liquid	Y	NA
17	HS20110516-01	SAMP	11-24-2020 04:03 pm	1.00	5.00 mL	0.00 mL	X112417.D	Liquid	Y	NA
18	HS20110985-25	SAMP	11-24-2020 04:24 pm	5.00	5.00 mL	0.00 mL	X112418.D	Liquid	Y	NA
19	HS20110985-29	SAMP	11-24-2020 04:45 pm	5000.0	5.00 mL	0.00 mL	X112419.D	Liquid	Y	NA
20	HS20110674-08	SAMP	11-24-2020 05:06 pm	1.00	5.00 mL	0.00 mL	X112420.D	Liquid	Y	NA
21	HS20110674-01	SAMP	11-24-2020 05:27 pm	1.00	5.00 mL	0.00 mL	X112421.D	Liquid	Y	NA
22	HS20110674-02	SAMP	11-24-2020 05:48 pm	1.00	5.00 mL	0.00 mL	X112422.D	Liquid	Y	NA
23	HS20110674-04	SAMP	11-24-2020 06:09 pm	1.00	5.00 mL	0.00 mL	X112423.D	Liquid	Y	NA
24	HS20110674-05	SAMP	11-24-2020 06:30 pm	1.00	5.00 mL	0.00 mL	X112424.D	Liquid	Y	NA
25	HS20110674-06	SAMP	11-24-2020 06:51 pm	1.00	5.00 mL	0.00 mL	X112425.D	Liquid	Y	NA
26	HS20110674-07	SAMP	11-24-2020 07:12 pm	1.00	5.00 mL	0.00 mL	X112426.D	Liquid	Y	NA
27	HS20110689-07	SAMP	11-24-2020 07:33 pm	1.00	5.00 mL	0.00 mL	X112427.D	Liquid	Y	NA
28	HS20111076-27	SAMP	11-24-2020 07:54 pm	1.00	5.00 mL	0.00 mL	X112428.D	Liquid	Y	NA
29	HS20111076-33	SAMP	11-24-2020 08:16 pm	1.00	5.00 mL	0.00 mL	X112429.D	Liquid	Y	NA
30	HS20111076-40	SAMP	11-24-2020 08:37 pm	1.00	5.00 mL	0.00 mL	X112430.D	Liquid	Y	NA
31	CCV-END	CCV	11-24-2020 08:58 pm	1.00	5.00 mL	0.00 mL	X112431.D	Liquid	Y	NA
32	BFB	TUNE	11-24-2020 09:18 pm	1.00	0.00 mL	0.00 mL	Y112401.D	Liquid	Y	NA
33	CCV	CCV	11-24-2020 09:39 pm	1.00	5.00 mL	0.00 mL	Y112402a.D	Liquid	Y	NA
34	CCV	CCV	11-24-2020 10:00 pm	1.00	5.00 mL	0.00 mL	Y112403.D	Liquid	Y	NA
35	CCB	SAMP	11-24-2020 10:21 pm	1.00	5.00 mL	0.00 mL	Y112404.D	Liquid	Y	NA
36	VLCSW-201124	LCS	11-24-2020 10:42 pm	1.00	5.00 mL	0.00 mL	Y112405.D	Liquid	Y	NA
37	BLANK	SAMP	11-24-2020 11:03 pm	1.00	5.00 mL	0.00 mL	Y112406.D	Liquid	Y	NA
38	VBLKW-201124	MBLK	11-24-2020 11:25 pm	1.00	5.00 mL	0.00 mL	Y112407.D	Liquid	Y	NA
39	HS20111076-35	SAMP	11-24-2020 11:46 pm	1.00	5.00 mL	0.00 mL	Y112408.D	Liquid	Y	NA
40	HS20111076-05	SAMP	11-25-2020 12:07 am	1.00	5.00 mL	0.00 mL	Y112409.D	Liquid	Y	NA
41	HS20111076-35MS	MS	11-25-2020 12:28 am	1.00	5.00 mL	0.00 mL	Y112410.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS20111076-35MSD	MSD	11-25-2020 12:49 am	1.00	5.00 mL	0.00 mL	Y112411.D	Liquid	Y	NA
43	HS20111076-05	SAMP	11-25-2020 01:10 am	10.00	5.00 mL	0.00 mL	Y112412.D	Liquid	Y	NA
44	HS20111076-07	SAMP	11-25-2020 01:31 am	1.00	5.00 mL	0.00 mL	Y112413.D	Liquid	Y	NA
45	HS20111076-07	SAMP	11-25-2020 01:52 am	10.00	5.00 mL	0.00 mL	Y112414.D	Liquid	Y	NA
46	HS20111076-09	SAMP	11-25-2020 02:13 am	1.00	5.00 mL	0.00 mL	Y112415.D	Liquid	Y	NA
47	HS20111076-09	SAMP	11-25-2020 02:34 am	10.00	5.00 mL	0.00 mL	Y112416.D	Liquid	Y	NA
48	HS20111076-26	SAMP	11-25-2020 02:55 am	1.00	5.00 mL	0.00 mL	Y112417.D	Liquid	Y	NA
49	HS20111076-26	SAMP	11-25-2020 03:16 am	10.00	5.00 mL	0.00 mL	Y112418.D	Liquid	Y	NA
50	HS20111076-30	SAMP	11-25-2020 03:37 am	1.00	5.00 mL	0.00 mL	Y112419.D	Liquid	Y	NA
51	HS20111076-03	SAMP	11-25-2020 03:58 am	5.00	5.00 mL	0.00 mL	Y112420.D	Liquid	Y	NA
52	HS20111076-03	SAMP	11-25-2020 04:19 am	25.00	5.00 mL	0.00 mL	Y112421.D	Liquid	Y	NA
53	HS20111076-15	SAMP	11-25-2020 04:41 am	5.00	5.00 mL	0.00 mL	Y112422.D	Liquid	Y	NA
54	HS20111076-15	SAMP	11-25-2020 05:02 am	25.00	5.00 mL	0.00 mL	Y112423.D	Liquid	Y	NA
55	HS20111076-28	SAMP	11-25-2020 05:23 am	5.00	5.00 mL	0.00 mL	Y112424.D	Liquid	Y	NA
56	HS20111076-28	SAMP	11-25-2020 05:44 am	25.00	5.00 mL	0.00 mL	Y112425.D	Liquid	Y	NA
57	HS20111076-02	SAMP	11-25-2020 06:05 am	10.00	5.00 mL	0.00 mL	Y112426.D	Liquid	Y	NA
58	HS20111076-02	SAMP	11-25-2020 06:26 am	100.0(	5.00 mL	0.00 mL	Y112427.D	Liquid	Y	NA
59	HS20111076-29	SAMP	11-25-2020 06:47 am	10.00	5.00 mL	0.00 mL	Y112428.D	Liquid	Y	NA
60	HS20111076-29	SAMP	11-25-2020 07:08 am	100.0(	5.00 mL	0.00 mL	Y112429.D	Liquid	Y	NA
61	CCV-END	CCV	11-25-2020 07:29 am	1.00	5.00 mL	0.00 mL	Y112430.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-55-06
IS ID	31106-55-06
CAL STD ID	31106-55-01/02
BFB ID	31106-*55-06
pH Paper	634-64-10

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110674

	CLIENT SAMPLE NO.	SMC1 #	SMC2 #	SMC3 (TOL) #	OTHER (DCE) #	TOT OUT
01	VLCSW-201124	97	101	100	101	0
02	VBLKW-201124	88	89	103	86	0
03	HS20110674-03	90	88	104	84	0
04	HS20110674-03	93	90	102	90	0
05	HS20110674-03	93	90	103	90	0
06	HS20110674-08	90	90	103	86	0
07	HS20110674-01	93	89	104	87	0
08	HS20110674-02	90	93	103	91	0
09	HS20110674-04	87	89	103	88	0
10	HS20110674-05	88	90	105	88	0
11	HS20110674-06	93	92	105	86	0
12	HS20110674-07	87	86	104	87	0
13						
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		QC LIMITS
SMC1	= 4-Bromofluorobenzene	(70-130)
SMC2	= Dibromofluoromethane	(70-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER(DCE)	= 1,2-Dichloroethane-d4	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-201124

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110674

Lab File ID: X112408 Lab Sample ID: VBLKW-201124

Date Analyzed: 11/24/20 Time Analyzed: 1253

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-201124	VLCSW-201124	X112405	1150
02	HS20110674-0	HS20110674-03	X112410	1335
03	HS20110674-0	HS20110674-03M	X112413	1439
04	HS20110674-0	HS20110674-03M	X112414	1500
05	HS20110674-0	HS20110674-08	X112420	1706
06	HS20110674-0	HS20110674-01	X112421	1727
07	HS20110674-0	HS20110674-02	X112422	1748
08	HS20110674-0	HS20110674-04	X112423	1809
09	HS20110674-0	HS20110674-05	X112424	1830
10	HS20110674-0	HS20110674-06	X112425	1851
11	HS20110674-0	HS20110674-07	X112426	1912
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110674

Lab File ID: X112401 BFB Injection Date: 11/24/20

Instrument ID: VOA6 BFB Injection Time: 1026

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	25.7
75	30.0 - 60.0% of mass 95	59.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0.9 (1.2)1
174	Greater than 50.0% of mass 95	75.4
175	5.0 - 9.0% of mass 174	5.2 (6.9)1
176	95.0 - 101.0% of mass 174	73.2 (97.1)1
177	5.0 - 9.0% of mass 176	4.8 (6.5)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X112403	11/24/20	1108
02	VLCSW-201124	VLCSW-201124	X112405	11/24/20	1150
03	VBLKW-201124	VBLKW-201124	X112408	11/24/20	1253
04	HS20110674-0	HS20110674-03	X112410	11/24/20	1335
05	HS20110674-0	HS20110674-03M	X112413	11/24/20	1439
06	HS20110674-0	HS20110674-03M	X112414	11/24/20	1500
07	HS20110674-0	HS20110674-08	X112420	11/24/20	1706
08	HS20110674-0	HS20110674-01	X112421	11/24/20	1727
09	HS20110674-0	HS20110674-02	X112422	11/24/20	1748
10	HS20110674-0	HS20110674-04	X112423	11/24/20	1809
11	HS20110674-0	HS20110674-05	X112424	11/24/20	1830
12	HS20110674-0	HS20110674-06	X112425	11/24/20	1851
13	HS20110674-0	HS20110674-07	X112426	11/24/20	1912
14	CCV-END	CCV-END	X112431	11/24/20	2058
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110674

Instrument ID: VOA6 Calibration Date: 11/24/20 Time: 1108

Lab File ID: X112403 Init. Calib. Date(s): 11/22/20 11/22/20

Init. Calib. Times: 1125 1912

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
cis-1,3-Dichloropropene	0.6340000	0.6372085	0.6372085	0.2	-0.51	20.00	AVRG
trans-1,3-Dichloropropene	0.5460000	0.5538524	0.5538524	0.1	-1.44	20.00	AVRG
1,3-Dichlorobenzene	1.5040000	1.4139707	1.4139707	0.6	5.98	20.00	AVRG
2,2-Dichloropropane	1.0600000	0.9829767	0.9829767	0.1	7.27	20.00	AVRG
1,1-Dichloropropene	0.4970000	0.4616118	0.4616118	0.1	7.12	20.00	AVRG
Dibromomethane	0.2610000	0.2552279	0.2552279	0.1	2.21	20.00	AVRG
1,2-Dibromoethane	0.3820000	0.3827381	0.3827381	0.1	-0.19	20.00	AVRG
trans-1,2-Dichloroethene	0.6160000	0.5726357	0.5726357	0.1	7.04	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3760000	0.3443247	0.3443247	0.1	8.42	20.00	AVRG
1,1,1-Trichloroethane	1.0160000	0.9621624	0.9621624	0.1	5.30	20.00	AVRG
1,1,2,2-Tetrachloroethane	52.309968	50.000000	0.9143374	0.3	-4.62	20.00	LINR
Toluene	1.6140000	1.4784363	1.4784363	0.4	8.40	20.00	AVRG
1,1,2-Trichloroethane	0.3280000	0.2978758	0.2978758	0.1	9.18	20.00	AVRG
1,1-Dichloroethane	1.2060000	1.1379476	1.1379476	0.2	5.64	20.00	AVRG
1,1-Dichloroethene	0.9700000	0.8580083	0.8580083	0.1	11.54	20.00	AVRG
Trichlorofluoromethane	1.8790000	1.6470764	1.6470764	0.1	12.34	20.00	AVRG
1,2,3-Trichlorobenzene	59.492403	50.000000	0.2148203	0.01	-18.98	20.00	LINR
Tetrachloroethene	0.3080000	0.2763837	0.2763837	0.2	10.26	20.00	AVRG
1,2,4-Trichlorobenzene	0.3770000	0.4014488	0.4014488	0.1	-6.48	20.00	AVRG
1,2,4-Trimethylbenzene	2.8230000	2.6035575	2.6035575	0.1	7.77	20.00	AVRG
tert-Butylbenzene	2.3170000	2.0241211	2.0241211	0.1	12.64	20.00	AVRG
Trichloroethene	0.3480000	0.3372964	0.3372964	0.2	3.08	20.00	AVRG
1,2-Dichlorobenzene	1.4150000	1.3388516	1.3388516	0.4	5.38	20.00	AVRG
1,2-Dichloroethane	0.5490000	0.5624516	0.5624516	0.1	-2.45	20.00	AVRG
1,2-Dichloropropane	0.3990000	0.3677811	0.3677811	0.1	7.82	20.00	AVRG
1,3,5-Trimethylbenzene	2.9650000	2.5772999	2.5772999	0.1	13.08	20.00	AVRG
1,3-Dichloropropane	0.6160000	0.5920857	0.5920857	0.1	3.88	20.00	AVRG
1,4-Dichlorobenzene	48.233230	50.000000	1.4678575	0.4	3.53	20.00	LINR
2-Butanone	0.2390000	0.2623091	0.2623091	0.1	-9.75	20.00	AVRG
2-Chlorotoluene	2.4460000	2.1498527	2.1498527	0.1	12.11	20.00	AVRG
2-Hexanone	99.983508	100.00000	0.2567519	0.1	0.02	20.00	LINR
4-Chlorotoluene	2.9930000	2.6731394	2.6731394	0.1	10.69	20.00	AVRG
Styrene	1.1590000	1.0911335	1.0911335	0.3	5.86	20.00	AVRG
4-Methyl-2-Pentanone	96.293401	100.00000	0.3701667	0.1	3.71	20.00	LINR
Acetone	117.63794	100.00000	0.3318071	0.1	-17.64	20.00	LINR
Benzene	1.3660000	1.3381289	1.3381289	0.5	2.04	20.00	AVRG
Bromobenzene	0.8450000	0.8087066	0.8087066	0.1	4.30	20.00	AVRG
Bromochloromethane	0.3530000	0.3414525	0.3414525	0.1	3.27	20.00	AVRG
Bromodichloromethane	0.5290000	0.5185481	0.5185481	0.2	1.98	20.00	AVRG
Bromoform	46.100107	50.000000	0.2211679	0.1	7.80	20.00	LINR
Bromomethane	42.942096	50.000000	0.8364193	0.1	14.12	20.00	LINR
Carbon Disulfide	1.8640000	1.5835670	1.5835670	0.1	15.04	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011067

Instrument ID: VOA6 Calibration Date: 11/24/20 Time: 1108

Lab File ID: X112403 Init. Calib. Date(s): 11/22/20 11/22/20

Init. Calib. Times: 1125 1912

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	
Carbon Tetrachloride	0.4310000	0.3993230	0.3993230	0.1	7.35	20.00	AVRG	
Chlorobenzene	1.0690000	0.9941280	0.9941280	0.5	7.00	20.00	AVRG	
Chloroethane	0.7740000	0.6655975	0.6655975	0.1	14.00	20.00	AVRG	
Chloroform	1.3070000	1.2157920	1.2157920	0.2	6.98	20.00	AVRG	
Chloromethane	0.9180000	0.7702113	0.7702113	0.1	16.10	20.00	AVRG	
cis-1,2-Dichloroethene	0.7320000	0.6608717	0.6608717	0.1	9.72	20.00	AVRG	
Dibromochloromethane	0.3880000	0.3970539	0.3970539	0.1	-2.33	20.00	AVRG	
Dichlorodifluoromethane	44.112142	50.000000	0.7214501	0.1	11.78	20.00	LINR	
Ethylbenzene	0.5390000	0.4792347	0.4792347	0.1	11.09	20.00	AVRG	
Hexachlorobutadiene	46.384733	50.000000	0.2377151	0.1	7.23	20.00	LINR	
Isopropylbenzene	1.6260000	1.4488142	1.4488142	0.1	10.90	20.00	AVRG	
m,p-Xylenes	83.374031	100.00000	0.6483574	0.1	16.62	20.00	LINR	
Methylene Chloride	0.6870000	0.6228017	0.6228017	0.1	9.34	20.00	AVRG	
n-Butylbenzene	40.553713	50.000000	2.4539260	0.5	18.89	20.00	LINR	
n-Propylbenzene	4.1820000	3.7140934	3.7140934	0.1	11.19	20.00	AVRG	
Naphthalene	62.183408	50.000000	0.6822733	0.2	-24.37	20.00	LINR	<-
o-Xylene	42.687239	50.000000	0.6210192	0.3	14.62	20.00	LINR	
sec-Butylbenzene	3.4900000	2.9373902	2.9373902	0.1	15.83	20.00	AVRG	
Vinyl Chloride	1.2030000	1.0156546	1.0156546	0.1	15.57	20.00	AVRG	
1,2,3-Trichloropropane	0.7540000	0.7416025	0.7416025	0.1	1.64	20.00	AVRG	
p-Isopropyltoluene	42.444435	50.000000	2.4960430	0.1	15.11	20.00	LINR	
1,2-Dibromo-3-Chloropropane	6.1e-002	7.08e-002	7.08e-002	0.05	-16.06	20.00	AVRG	
Freon TF	0.9320000	0.8005650	0.8005650	0.1	14.10	20.00	AVRG	
4-Bromofluorobenzene	47.173592	50.000000	0.4488385	0.1	5.65	20.00	2RDR	
Dibromofluoromethane	49.663611	50.000000	0.6497157	0.1	0.67	20.00	2RDR	
Toluene-d8	1.3490000	1.2742506	1.2742506	0.1	5.54	20.00	AVRG	
1,2-Dichloroethane-d4	49.807222	50.000000	0.8214413	0.1	0.38	20.00	2RDR	

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110674

Instrument ID: VOA6 Calibration Date: 11/24/20 Time: 2058

Lab File ID: X112431 Init. Calib. Date(s): 11/22/20 11/22/20

Init. Calib. Times: 1125 1912

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
cis-1,3-Dichloropropene	0.6340000	0.6508010	0.6508010	0.2	-2.65	50.00	AVRG
trans-1,3-Dichloropropene	0.5460000	0.5476494	0.5476494	0.1	-0.30	50.00	AVRG
1,3-Dichlorobenzene	1.5040000	1.4597587	1.4597587	0.6	2.94	50.00	AVRG
2,2-Dichloropropane	1.0600000	0.9357656	0.9357656	0.1	11.72	50.00	AVRG
1,1-Dichloropropene	0.4970000	0.4898103	0.4898103	0.1	1.45	50.00	AVRG
Dibromomethane	0.2610000	0.2661470	0.2661470	0.1	-1.97	50.00	AVRG
1,2-Dibromoethane	0.3820000	0.3793235	0.3793235	0.1	0.70	50.00	AVRG
trans-1,2-Dichloroethene	0.6160000	0.6098079	0.6098079	0.1	1.00	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3760000	0.3457511	0.3457511	0.1	8.04	50.00	AVRG
1,1,1-Trichloroethane	1.0160000	1.0597173	1.0597173	0.1	-4.30	50.00	AVRG
1,1,2,2-Tetrachloroethane	50.600822	50.000000	0.8853030	0.3	-1.20	50.00	LINR
Toluene	1.6140000	1.5779422	1.5779422	0.4	2.23	50.00	AVRG
1,1,2-Trichloroethane	0.3280000	0.3156841	0.3156841	0.1	3.75	50.00	AVRG
1,1-Dichloroethane	1.2060000	1.1965607	1.1965607	0.2	0.78	50.00	AVRG
1,1-Dichloroethene	0.9700000	0.9344015	0.9344015	0.1	3.67	50.00	AVRG
Trichlorofluoromethane	1.8790000	1.7893736	1.7893736	0.1	4.77	50.00	AVRG
1,2,3-Trichlorobenzene	50.995917	50.000000	0.1835060	0.01	-1.99	50.00	LINR
Tetrachloroethene	0.3080000	0.3003707	0.3003707	0.2	2.48	50.00	AVRG
1,2,4-Trichlorobenzene	0.3770000	0.3959732	0.3959732	0.1	-5.03	50.00	AVRG
1,2,4-Trimethylbenzene	2.8230000	2.7661267	2.7661267	0.1	2.01	50.00	AVRG
tert-Butylbenzene	2.3170000	2.2971209	2.2971209	0.1	0.86	50.00	AVRG
Trichloroethene	0.3480000	0.3632475	0.3632475	0.2	-4.38	50.00	AVRG
1,2-Dichlorobenzene	1.4150000	1.3552597	1.3552597	0.4	4.22	50.00	AVRG
1,2-Dichloroethane	0.5490000	0.5936660	0.5936660	0.1	-8.14	50.00	AVRG
1,2-Dichloropropane	0.3990000	0.3852074	0.3852074	0.1	3.46	50.00	AVRG
1,3,5-Trimethylbenzene	2.9650000	2.7428843	2.7428843	0.1	7.49	50.00	AVRG
1,3-Dichloropropane	0.6160000	0.6274431	0.6274431	0.1	-1.86	50.00	AVRG
1,4-Dichlorobenzene	48.549578	50.000000	1.4776036	0.4	2.90	50.00	LINR
2-Butanone	0.2390000	0.2489490	0.2489490	0.1	-4.16	50.00	AVRG
2-Chlorotoluene	2.4460000	2.2936910	2.2936910	0.1	6.23	50.00	AVRG
2-Hexanone	94.840056	100.00000	0.2434247	0.1	5.16	50.00	LINR
4-Chlorotoluene	2.9930000	2.8041055	2.8041055	0.1	6.31	50.00	AVRG
Styrene	1.1590000	1.1607143	1.1607143	0.3	-0.15	50.00	AVRG
4-Methyl-2-Pentanone	97.769253	100.00000	0.3758946	0.1	2.23	50.00	LINR
Acetone	107.28014	100.00000	0.3033638	0.1	-7.28	50.00	LINR
Benzene	1.3660000	1.3983550	1.3983550	0.5	-2.37	50.00	AVRG
Bromobenzene	0.8450000	0.8452977	0.8452977	0.1	-0.04	50.00	AVRG
Bromochloromethane	0.3530000	0.3642412	0.3642412	0.1	-3.18	50.00	AVRG
Bromodichloromethane	0.5290000	0.5465670	0.5465670	0.2	-3.32	50.00	AVRG
Bromoform	47.213273	50.000000	0.2267687	0.1	5.57	50.00	LINR
Bromomethane	46.817844	50.000000	0.9135602	0.1	6.36	50.00	LINR
Carbon Disulfide	1.8640000	1.7521943	1.7521943	0.1	6.00	50.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011067

Instrument ID: VOA6 Calibration Date: 11/24/20 Time: 2058

Lab File ID: X112431 Init. Calib. Date(s): 11/22/20 11/22/20

Init. Calib. Times: 1125 1912

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
Carbon Tetrachloride	0.4310000	0.4434154	0.4434154	0.1	-2.88	50.00	AVRG
Chlorobenzene	1.0690000	1.0615238	1.0615238	0.5	0.70	50.00	AVRG
Chloroethane	0.7740000	0.7413907	0.7413907	0.1	4.21	50.00	AVRG
Chloroform	1.3070000	1.3092869	1.3092869	0.2	-0.17	50.00	AVRG
Chloromethane	0.9180000	0.8544467	0.8544467	0.1	6.92	50.00	AVRG
cis-1,2-Dichloroethene	0.7320000	0.7455779	0.7455779	0.1	-1.85	50.00	AVRG
Dibromochloromethane	0.3880000	0.3990177	0.3990177	0.1	-2.84	50.00	AVRG
Dichlorodifluoromethane	46.509421	50.000000	0.7631152	0.1	6.98	50.00	LINR
Ethylbenzene	0.5390000	0.5215478	0.5215478	0.1	3.24	50.00	AVRG
Hexachlorobutadiene	49.679654	50.000000	0.2551744	0.1	0.64	50.00	LINR
Isopropylbenzene	1.6260000	1.6193811	1.6193811	0.1	0.41	50.00	AVRG
m,p-Xylenes	89.206795	100.00000	0.6978311	0.1	10.79	50.00	LINR
Methylene Chloride	0.6870000	0.6723652	0.6723652	0.1	2.13	50.00	AVRG
n-Butylbenzene	43.357813	50.000000	2.6374738	0.5	13.28	50.00	LINR
n-Propylbenzene	4.1820000	3.9607686	3.9607686	0.1	5.29	50.00	AVRG
Naphthalene	52.959957	50.000000	0.5793022	0.2	-5.92	50.00	LINR
o-Xylene	45.066211	50.000000	0.6581382	0.3	9.87	50.00	LINR
sec-Butylbenzene	3.4900000	3.2618245	3.2618245	0.1	6.54	50.00	AVRG
Vinyl Chloride	1.2030000	1.1572039	1.1572039	0.1	3.81	50.00	AVRG
1,2,3-Trichloropropane	0.7540000	0.7147626	0.7147626	0.1	5.20	50.00	AVRG
p-Isopropyltoluene	46.519176	50.000000	2.7449239	0.1	6.96	50.00	LINR
1,2-Dibromo-3-Chloropropane	6.1e-002	5.97e-002	5.97e-002	0.05	2.13	50.00	AVRG
Freon TF	0.9320000	0.8723194	0.8723194	0.1	6.40	50.00	AVRG
4-Bromofluorobenzene	49.396775	50.000000	0.4703935	0.1	1.21	50.00	2RDR
Dibromofluoromethane	52.114158	50.000000	0.6828753	0.1	-4.23	50.00	2RDR
Toluene-d8	1.3490000	1.3264312	1.3264312	0.1	1.67	50.00	AVRG
1,2-Dichloroethane-d4	52.008084	50.000000	0.8586954	0.1	-4.02	50.00	2RDR

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110674

Lab File ID (Standard): X112403 Date Analyzed: 11/24/20

Instrument ID: VOA6 Time Analyzed: 1108

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

		IS1(DCB) AREA #	RT #	IS2(CBZ) AREA #	RT #	IS3(DFB) AREA #	RT #
	12 HOUR STD	158202	9.66	328167	7.67	347125	4.97
	UPPER LIMIT	316404	10.16	656334	8.17	694250	5.47
	LOWER LIMIT	79101	9.16	164084	7.17	173563	4.47
	CLIENT SAMPLE NO.						
01	VLCSW-201124	142232	9.66	315627	7.67	343858	4.97
02	VBLKW-201124	148933	9.66	355683	7.67	403932	4.97
03	HS20110674-03	140491	9.66	345033	7.67	400536	4.97
04	HS20110674-03	162567	9.66	361171	7.67	410194	4.97
05	HS20110674-03	164041	9.66	355519	7.67	410760	4.97
06	HS20110674-08	145254	9.66	344064	7.67	398816	4.97
07	HS20110674-01	153640	9.66	346330	7.67	395392	4.97
08	HS20110674-02	144098	9.66	341380	7.67	395262	4.97
09	HS20110674-04	142400	9.66	340861	7.67	390849	4.97
10	HS20110674-05	145849	9.66	341689	7.67	393892	4.97
11	HS20110674-06	146175	9.66	336881	7.67	396073	4.97
12	HS20110674-07	140386	9.66	341850	7.67	398332	4.97
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DFB) = 1,4-Difluorobenzene

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

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110674

Lab File ID (Standard): X112403 Date Analyzed: 11/24/20

Instrument ID: VOA6 Time Analyzed: 1108

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	193617	4.18				
	UPPER LIMIT	387234	4.68				
	LOWER LIMIT	96809	3.68				
	CLIENT SAMPLE NO.						
01	VLCSW-201124	189383	4.18				
02	VBLKW-201124	237731	4.18				
03	HS20110674-03	238970	4.18				
04	HS20110674-03	237557	4.18				
05	HS20110674-03	239609	4.18				
06	HS20110674-08	234912	4.18				
07	HS20110674-01	236338	4.18				
08	HS20110674-02	223459	4.18				
09	HS20110674-04	230469	4.18				
10	HS20110674-05	230652	4.18				
11	HS20110674-06	230167	4.18				
12	HS20110674-07	236154	4.18				
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

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

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

FORM VIII VOA

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112401.D Page 1

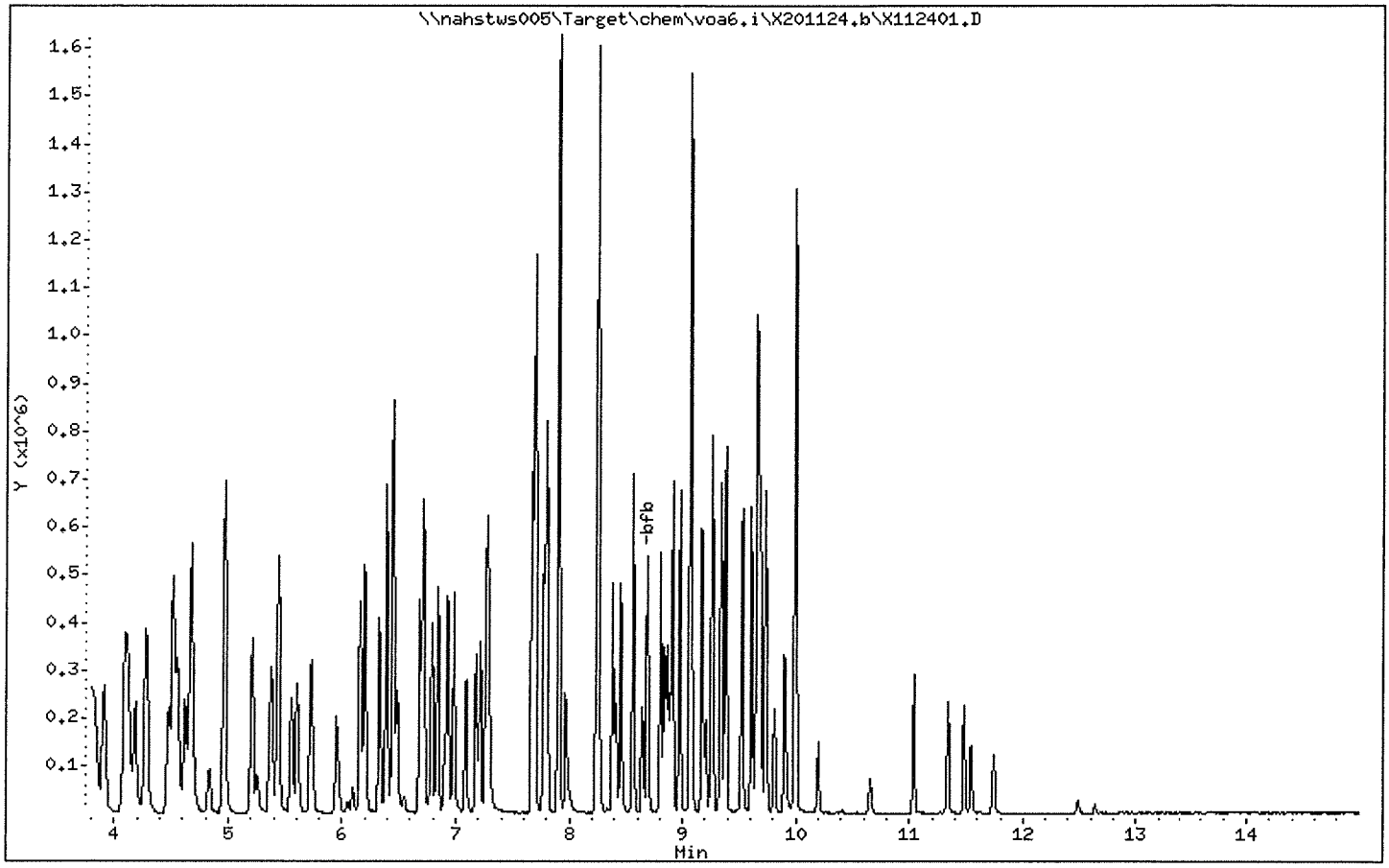
Date : 24-NOV-2020 10:26

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\X201124.b\X112401.D

Date : 24-NOV-2020 10:26

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

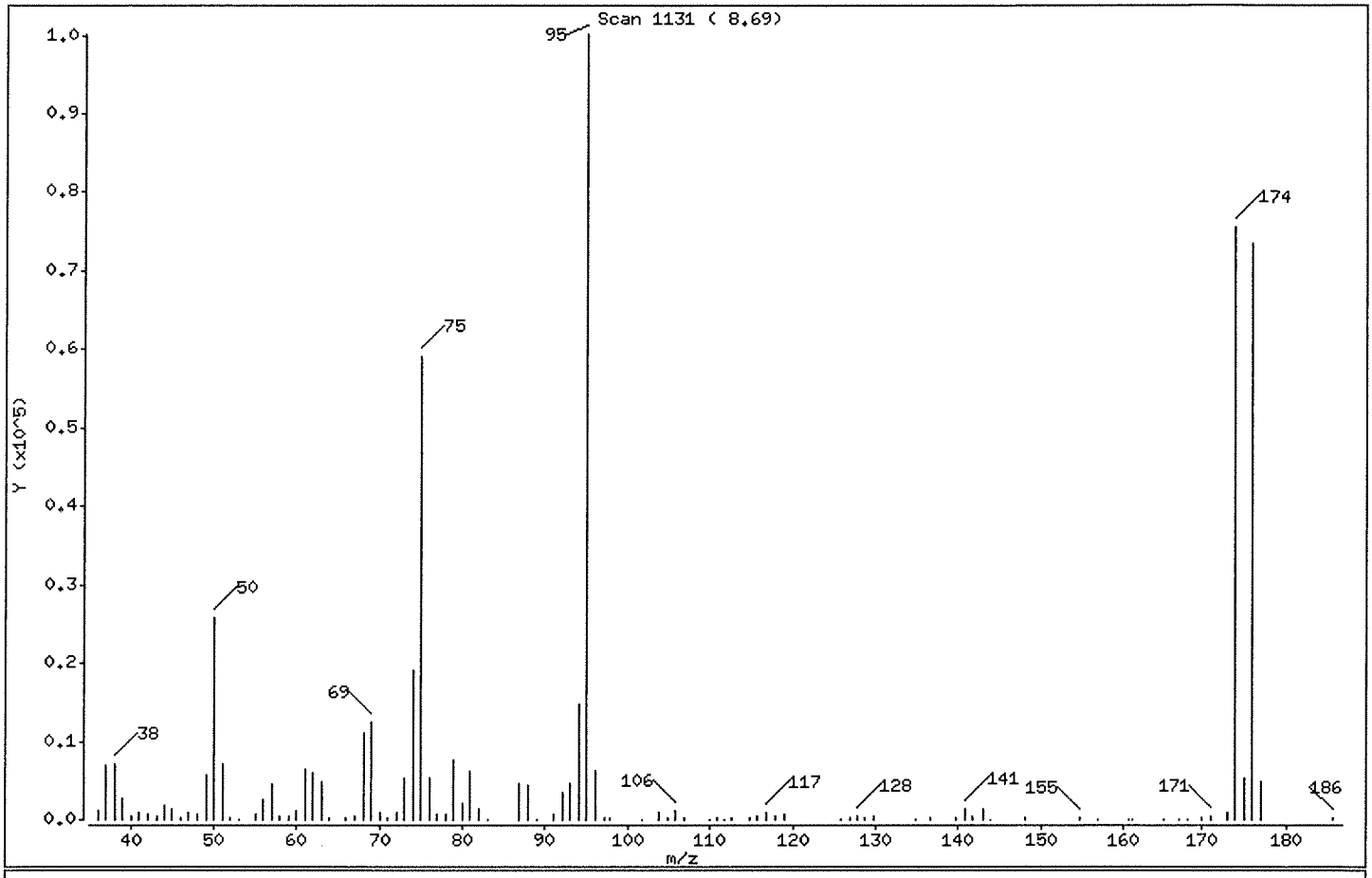
Volume Injected (uL): 2.0

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	25.67
75	30.00 - 60.00% of mass 95	59.17
96	5.00 - 9.00% of mass 95	6.20
173	Less than 2.00% of mass 174	0.90 (1.19)
174	Greater than 50.00% of mass 95	75.39
175	5.00 - 9.00% of mass 174	5.23 (6.94)
176	95.00 - 101.00% of mass 174	73.24 (97.15)
177	5.00 - 9.00% of mass 176	4.77 (6.51)

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112401.D

Date : 24-NOV-2020 10:26

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: X112401.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 99

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1249	62.00	6053	92.00	3409	129.90	454
37.00	6971	63.00	4761	93.00	4610	134.90	109
38.00	7251	63.90	266	94.00	14671	136.70	251
39.00	2813	65.90	137	95.00	100136	139.80	150
40.00	440	67.00	528	96.00	6209	140.90	1390
40.90	820	68.00	10963	97.10	211	141.80	351
42.00	577	69.00	12451	97.90	319	143.00	1370
43.10	543	70.00	890	101.90	57	143.80	101
44.00	1921	70.90	150	103.80	1015	148.00	248
45.00	1465	72.00	813	104.90	201	154.80	225
46.10	134	73.00	5337	105.80	1146	156.90	73
47.00	921	74.00	19216	106.90	141	160.60	66
48.00	723	75.00	59248	109.90	61	161.00	109
49.00	5840	76.00	5329	110.90	279	165.10	94
50.00	25704	76.90	792	111.80	55	167.00	63
51.10	7024	78.00	731	112.70	140	168.20	89
51.90	305	78.90	7522	114.90	246	169.90	138
53.10	58	79.90	1959	115.80	442	171.10	346
55.00	778	80.90	6247	116.80	950	173.00	902
56.00	2613	82.00	1416	118.00	390	173.90	75496
57.00	4710	83.10	110	118.90	692	174.90	5238
58.00	464	86.90	4527	125.90	91	175.90	73344
59.00	548	88.00	4368	127.00	191	176.90	4775
60.00	1092	89.10	95	127.90	509	185.90	119
61.00	6434	90.90	750	128.70	117		

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112403.D Page 1
Report Date: 18-Dec-2020 16:47

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112403.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 24-NOV-2020 11:08
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:47 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

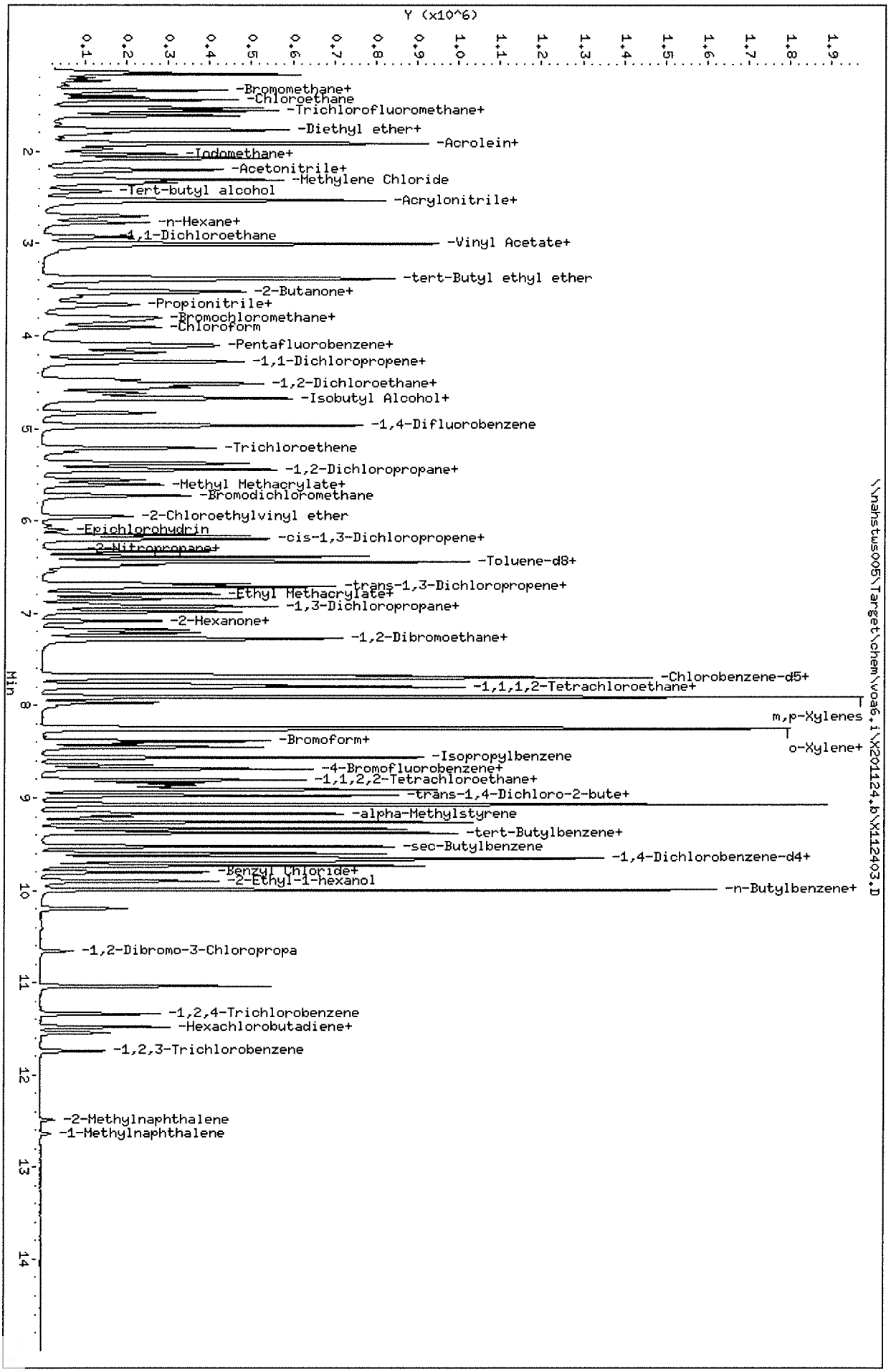
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	193617	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	347125	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	328167	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	158202	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	159045	50.0000	49.80
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	147294	50.0000	47.17
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	125796	50.0000	49.66
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	418167	50.0000	47.21
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	112996	50.0000	45.82
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	186291	50.0000	47.34
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	144650	50.0000	52.30
138 Freon TF	101	1.919	1.919	(0.459)	155003	50.0000	42.92
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	97753	50.0000	45.33
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	220326	50.0000	47.17
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	166125	50.0000	44.24
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	160237	50.0000	46.42
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	33985	50.0000	59.49
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	117323	50.0000	49.16(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	63510	50.0000	53.28
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	411888	50.0000	46.11
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	11199	50.0000	58.09
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	125602	50.0000	50.06

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112403.D Page 2
Report Date: 18-Dec-2020 16:47

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	211809	50.0000	47.31
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	195241	50.0000	51.18
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	127666	50.0000	46.10
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	407734	50.0000	43.45
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	223693	50.0000	47.01
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	194303	50.0000	48.02
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	232218	50.0000	48.23
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	190321	50.0000	46.36
24	2-Butanone	43	3.580	3.580	(0.856)	101575	100.000	109.69
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	340111	50.0000	43.93
52	2-Hexanone	43	7.083	7.083	(0.923)	168515	100.000	99.98
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	422896	50.0000	44.65
82	p-Isopropyltoluene	119	9.648	9.648	(0.999)	394879	50.0000	42.44
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	242953	100.000	96.29
10	Acetone	43	1.976	1.976	(0.473)	128487	100.000	117.63(M)
37	Benzene	78	4.512	4.512	(0.908)	464498	50.0000	48.99
74	Bromobenzene	156	8.809	8.809	(0.912)	127939	50.0000	47.87
29	Bromochloromethane	128	3.802	3.802	(0.909)	66111	50.0000	48.32
39	Bromodichloromethane	83	5.729	5.729	(1.153)	180001	50.0000	48.96
66	Bromoform	173	8.408	8.408	(1.096)	72580	50.0000	46.10
6	Bromomethane	94	1.338	1.338	(0.320)	161945	50.0000	42.94
19	Carbon Disulfide	76	2.069	2.069	(0.495)	613211	100.000	84.94
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	138615	50.0000	46.31
59	Chlorobenzene	112	7.692	7.692	(1.003)	326240	50.0000	46.50
7	Chloroethane	64	1.403	1.403	(0.336)	128871	50.0000	42.95
28	Chloroform	83	3.910	3.910	(0.935)	235398	50.0000	46.49
3	Chloromethane	50	1.081	1.081	(0.258)	149126	50.0000	41.95
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	127956	50.0000	45.16
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	221191	50.0000	50.23
55	Dibromochloromethane	129	7.176	7.176	(0.936)	130300	50.0000	51.21
44	Dibromomethane	93	5.550	5.550	(1.117)	88596	50.0000	48.83
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	139685	50.0000	44.11
61	Ethylbenzene	106	7.799	7.799	(1.017)	157269	50.0000	44.45
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	37607	50.0000	46.38
67	Isopropylbenzene	105	8.566	8.566	(1.117)	475453	50.0000	44.53
62	m,p-Xylenes	106	7.907	7.907	(1.031)	425539	100.000	83.37
17	Methylene Chloride	84	2.305	2.305	(0.551)	120585	50.0000	45.34
87	n-Butylbenzene	91	9.991	9.991	(1.034)	388216	50.0000	40.55
73	n-Propylbenzene	91	8.910	8.910	(0.922)	587577	50.0000	44.39
92	Naphthalene	128	11.546	11.546	(1.195)	107937	50.0000	62.18
63	o-Xylene	106	8.244	8.244	(1.075)	203798	50.0000	42.68
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	464701	50.0000	42.07
64	Styrene	104	8.258	8.258	(1.077)	358074	50.0000	47.05
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	320220	50.0000	43.66
56	Tetrachloroethene	164	6.933	6.933	(0.904)	90700	50.0000	44.82
50	Toluene	91	6.446	6.446	(0.840)	485174	50.0000	45.80
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	110872	50.0000	46.45
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	192256	50.0000	50.72
38	Trichloroethene	130	5.206	5.206	(1.048)	117084	50.0000	48.48
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	318902	50.0000	43.82
5	Vinyl Chloride	62	1.145	1.145	(0.274)	196648	50.0000	42.21

QC Flag Legend

M - Compound response manually integrated.

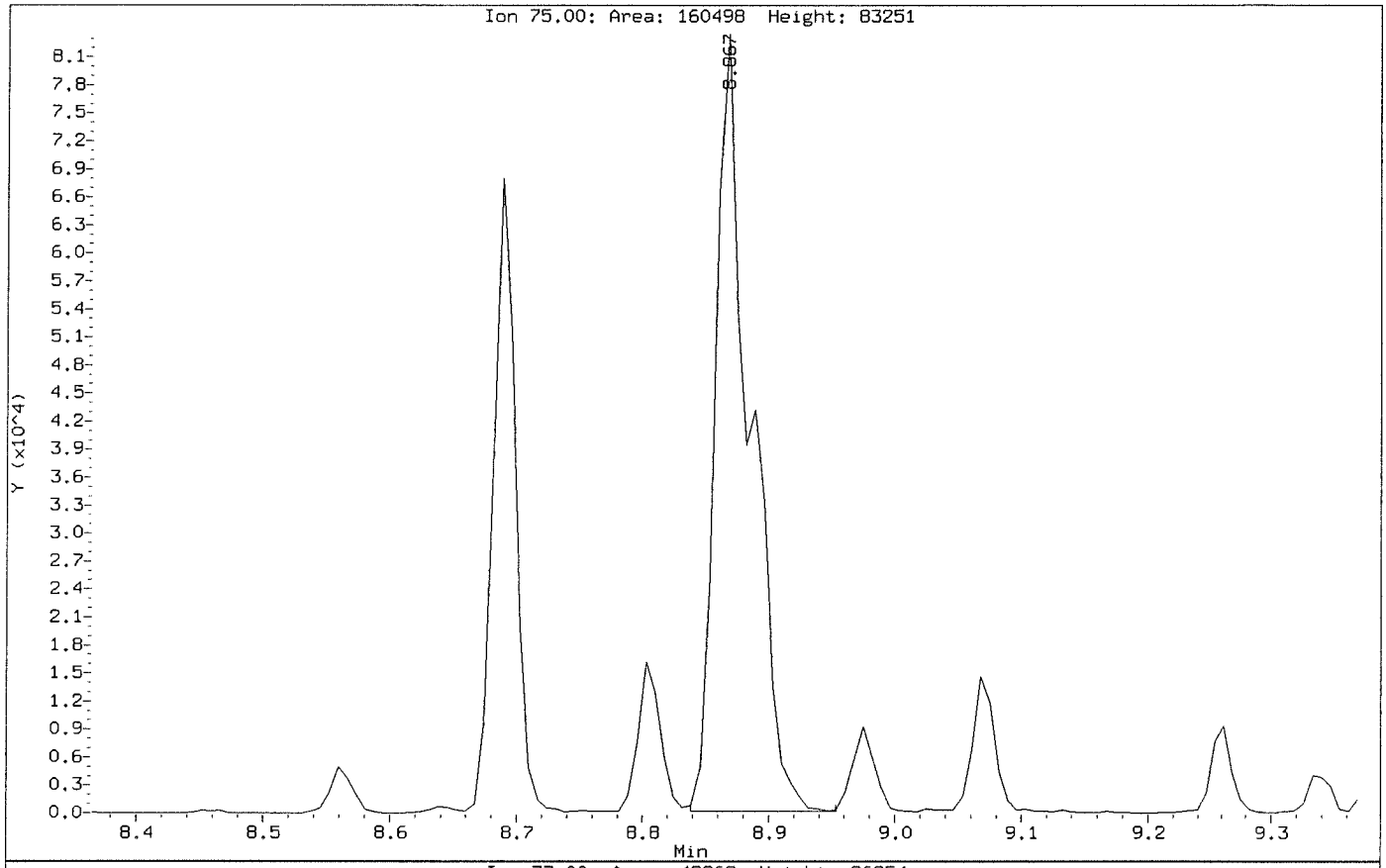


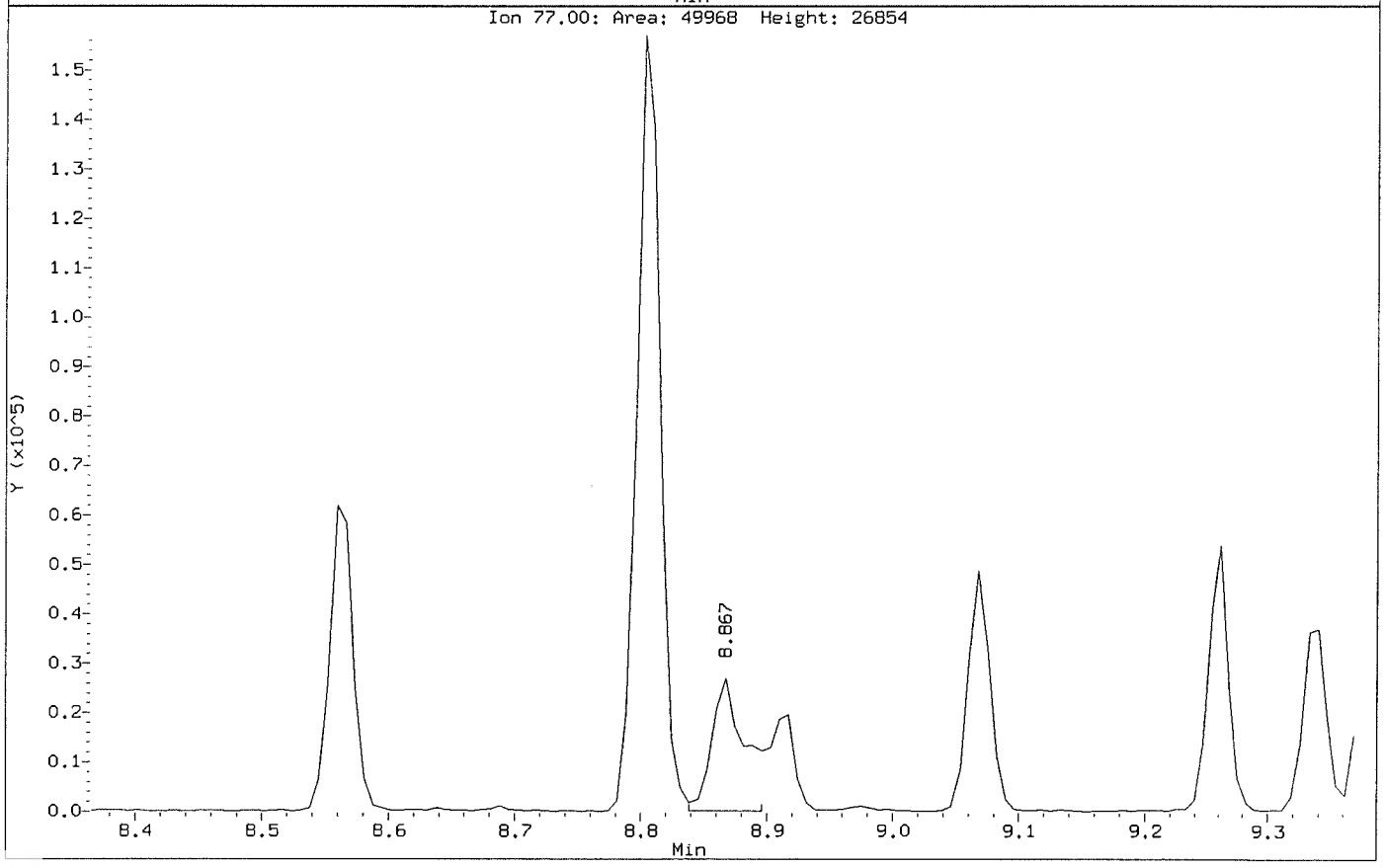
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Date : 24-NOV-2020 11:08
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\Before\X112403.D
Injection Date: 24-NOV-2020 11:08
Instrument: voa6.i
Client Sample ID: CCV

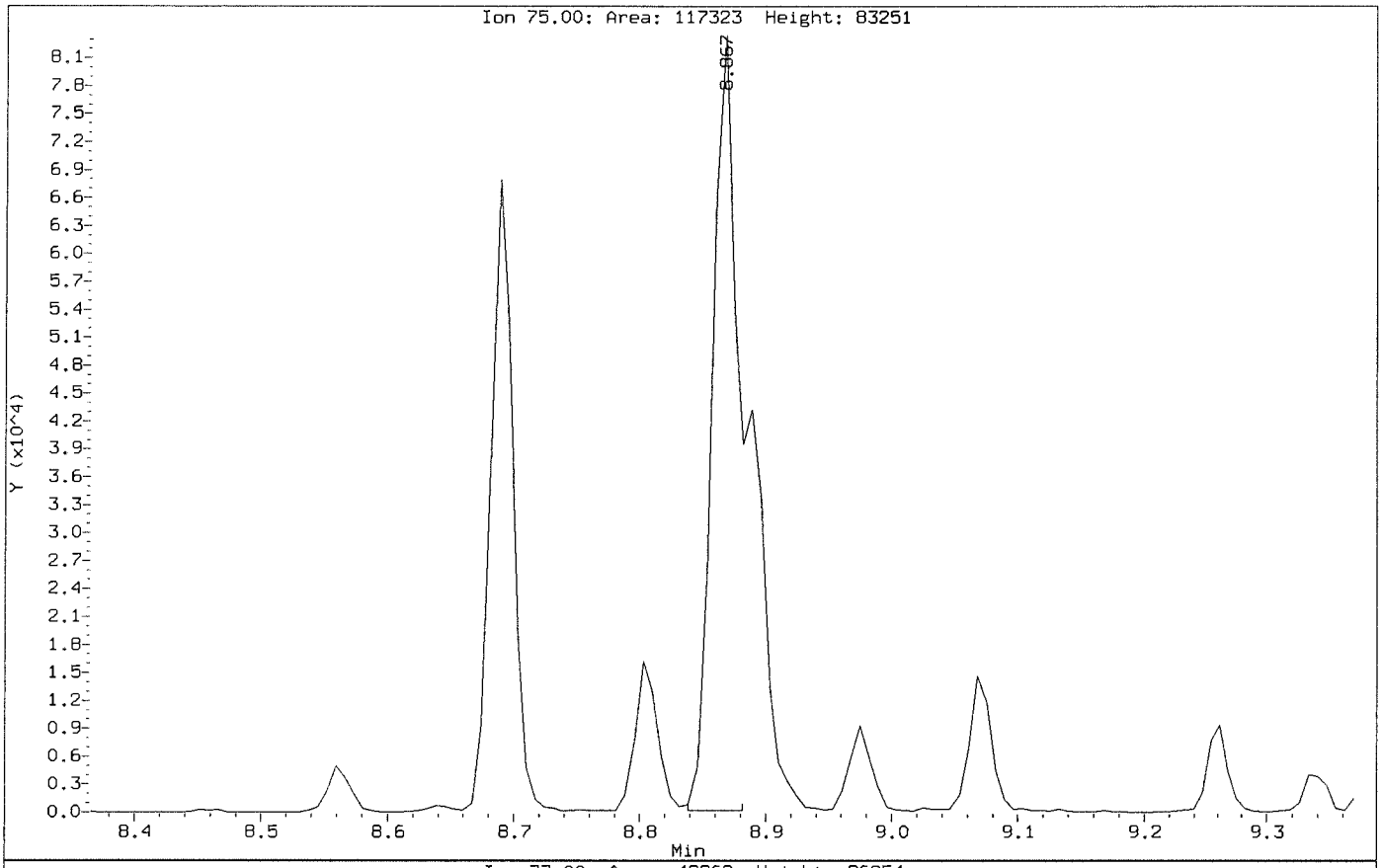
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

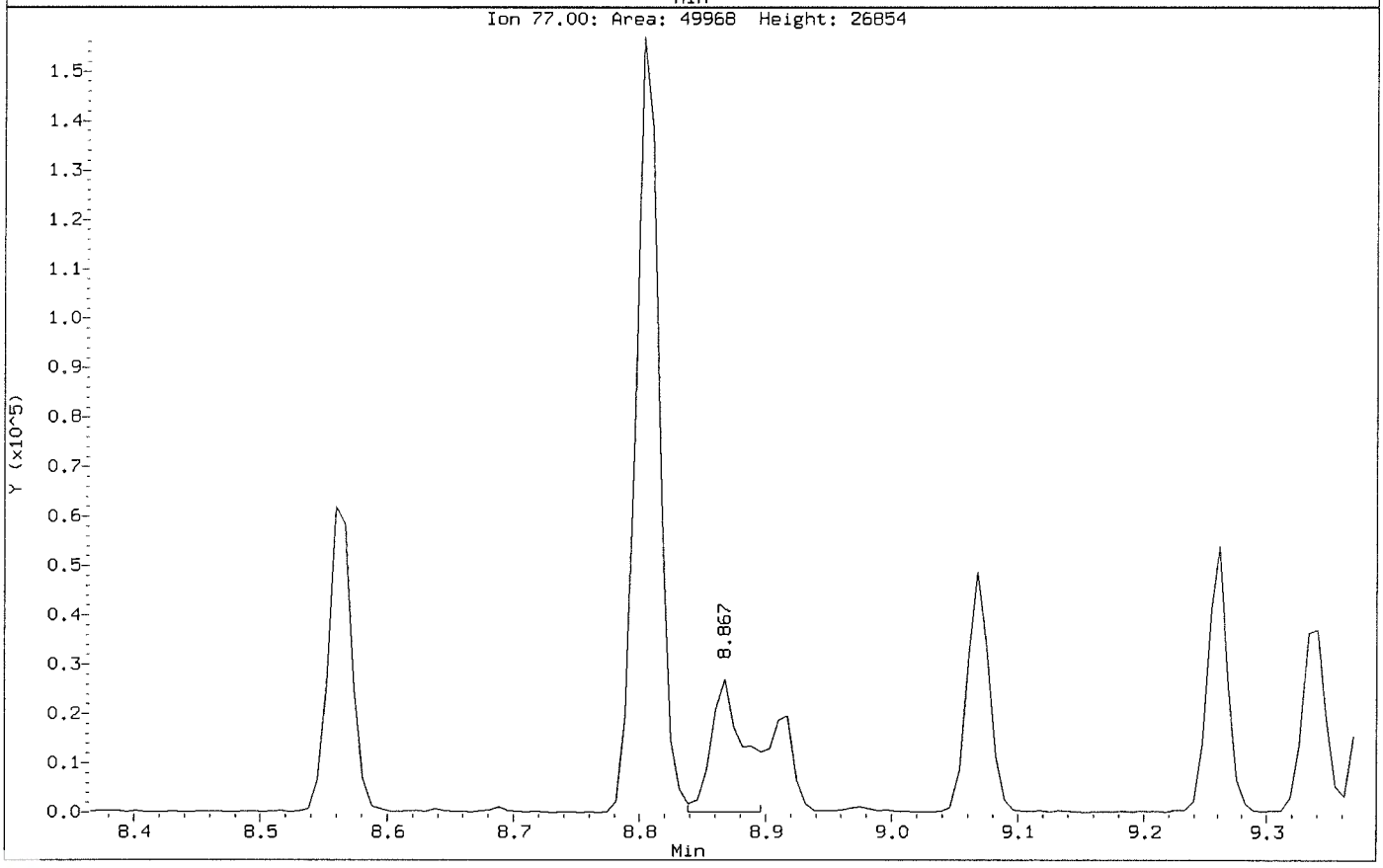




Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112403.D
Injection Date: 24-NOV-2020 11:08
Instrument: voa6.i
Client Sample ID: CCV

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





Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112405.D Page 1
Report Date: 18-Dec-2020 16:47

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112405.D
Lab Smp Id: VLCSW-201124 Client Smp ID: VLCSW-201124
Inj Date : 24-NOV-2020 11:50
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-201124;VLCSW-201124;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:47 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

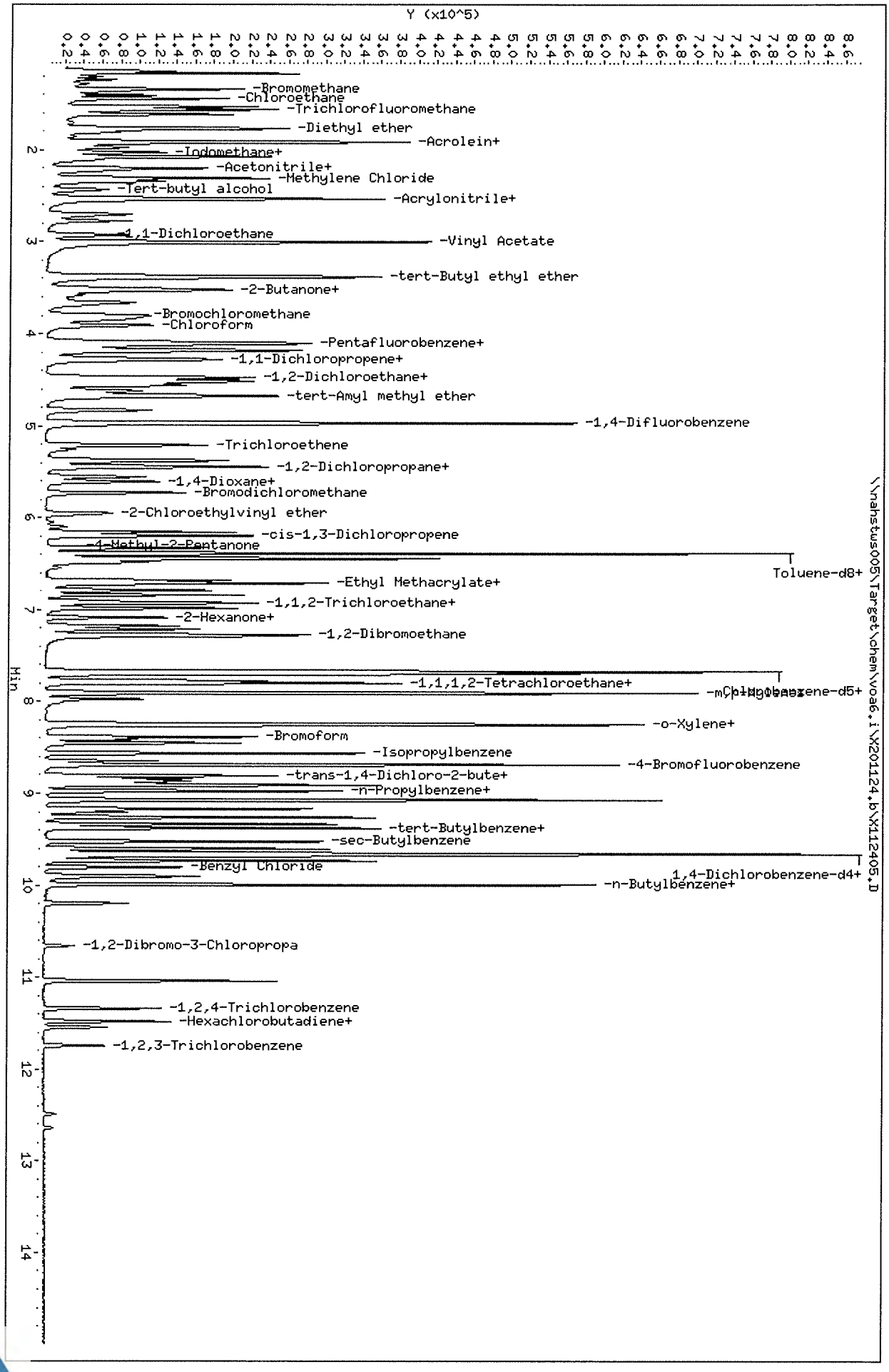
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1	Pentafluorobenzene	168	4.182	4.182	(1.000)	189383	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	343858	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	315627	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	142232	50.0000	
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	157953	50.5520	50.55
$ 69	4-Bromofluorobenzene	95	8.688	8.688	(1.133)	146140	48.6358	48.63
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.981)	124837	50.3638	50.36
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	428294	50.2830	50.28
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	45653	19.2489	19.24
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	76640	19.9116	19.91
68	1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	59394	23.0680	23.06
138	Freon TF	101	1.919	1.919	(0.459)	59740	16.9130	16.91
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	42992	20.7302	20.73
22	1,1-Dichloroethane	63	2.929	2.921	(0.700)	89168	19.5200	19.51
11	1,1-Dichloroethene	96	1.919	1.919	(0.459)	69205	18.8439	18.84
32	1,1-Dichloropropene	75	4.282	4.282	(0.862)	66332	19.3995	19.39
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	14284	28.4542	28.45
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	49220	22.9425	22.94(M)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	24955	23.2864	23.28
79	1,2,4-Trimethylbenzene	105	9.383	9.382	(0.971)	153447	19.1097	19.10
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	4774	27.5447	27.54
57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	50942	21.1116	21.11

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112405.D Page 2
Report Date: 18-Dec-2020 16:47

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	80771	20.0676	20.06
33	1,2-Dichloroethane	62	4.555	4.562	(0.916)	77366	20.4772	20.47
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	53480	19.4952	19.49
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	150492	17.8388	17.83
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	86043	20.1127	20.11
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	83572	21.4781	21.47
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	86339	20.2916	20.29
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	75982	18.9226	18.92
24	2-Butanone	43	3.580	3.580	(0.856)	42398	46.8106	46.81
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	134040	19.2611	19.26
52	2-Hexanone	43	7.090	7.083	(0.924)	71770	44.7725	44.77
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	154228	18.1123	18.11
82	p-Isopropyltoluene	119	9.648	9.648	(0.999)	139591	17.6468	17.64
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	101369	42.2924	42.29
10	Acetone	43	1.976	1.976	(0.473)	60921	55.3796	55.37
37	Benzene	78	4.519	4.512	(0.909)	189032	20.1280	20.12
74	Bromobenzene	156	8.810	8.809	(0.912)	49403	20.5603	20.56
29	Bromochloromethane	128	3.795	3.802	(0.908)	26687	19.9441	19.94
39	Bromodichloromethane	83	5.729	5.729	(1.153)	74260	20.3919	20.39
66	Bromoform	173	8.408	8.408	(1.096)	29011	20.4111	20.41
6	Bromomethane	94	1.338	1.338	(0.320)	78791	21.8212	21.82
19	Carbon Disulfide	76	2.069	2.069	(0.495)	265743	37.6346	37.63
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	54471	18.3729	18.37
59	Chlorobenzene	112	7.692	7.692	(1.003)	124148	18.4000	18.39
7	Chloroethane	64	1.403	1.403	(0.336)	57196	19.4891	19.48
28	Chloroform	83	3.910	3.910	(0.935)	93128	18.8045	18.80
3	Chloromethane	50	1.081	1.081	(0.258)	63101	18.1481	18.14
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	51962	18.7509	18.75
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	88960	20.3944	20.39
55	Dibromochloromethane	129	7.176	7.176	(0.936)	53189	21.7353	21.73
44	Dibromomethane	93	5.557	5.550	(1.118)	36061	20.0659	20.06
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	54215	19.0734	19.07
61	Ethylbenzene	106	7.800	7.799	(1.017)	62824	18.4639	18.46
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	17235	24.3914	24.39
67	Isopropylbenzene	105	8.559	8.566	(1.116)	176903	17.2297	17.22
62	m,p-Xylenes	106	7.907	7.907	(1.031)	158703	36.5753	36.57
17	Methylene Chloride	84	2.305	2.305	(0.551)	50020	19.2288	19.22
87	n-Butylbenzene	91	9.991	9.991	(1.034)	143154	18.4408	18.44
73	n-Propylbenzene	91	8.910	8.910	(0.922)	216752	18.2173	18.21
92	Naphthalene	128	11.546	11.546	(1.195)	43847	28.6835	28.68
63	o-Xylene	106	8.244	8.244	(1.075)	76349	18.3891	18.38
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	170501	17.1723	17.17
64	Styrene	104	8.258	8.258	(1.077)	133225	18.2022	18.20
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	120446	18.2696	18.26
56	Tetrachloroethene	164	6.933	6.933	(0.904)	37371	19.2040	19.20
50	Toluene	91	6.446	6.446	(0.840)	197531	19.3888	19.38
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	47158	20.2000	20.20
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	79234	21.1038	21.10
38	Trichloroethene	130	5.207	5.206	(1.048)	47627	19.9114	19.91
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	131302	18.4492	18.44
5	Vinyl Chloride	62	1.145	1.145	(0.274)	83338	18.2900	18.29

QC Flag Legend

M - Compound response manually integrated.

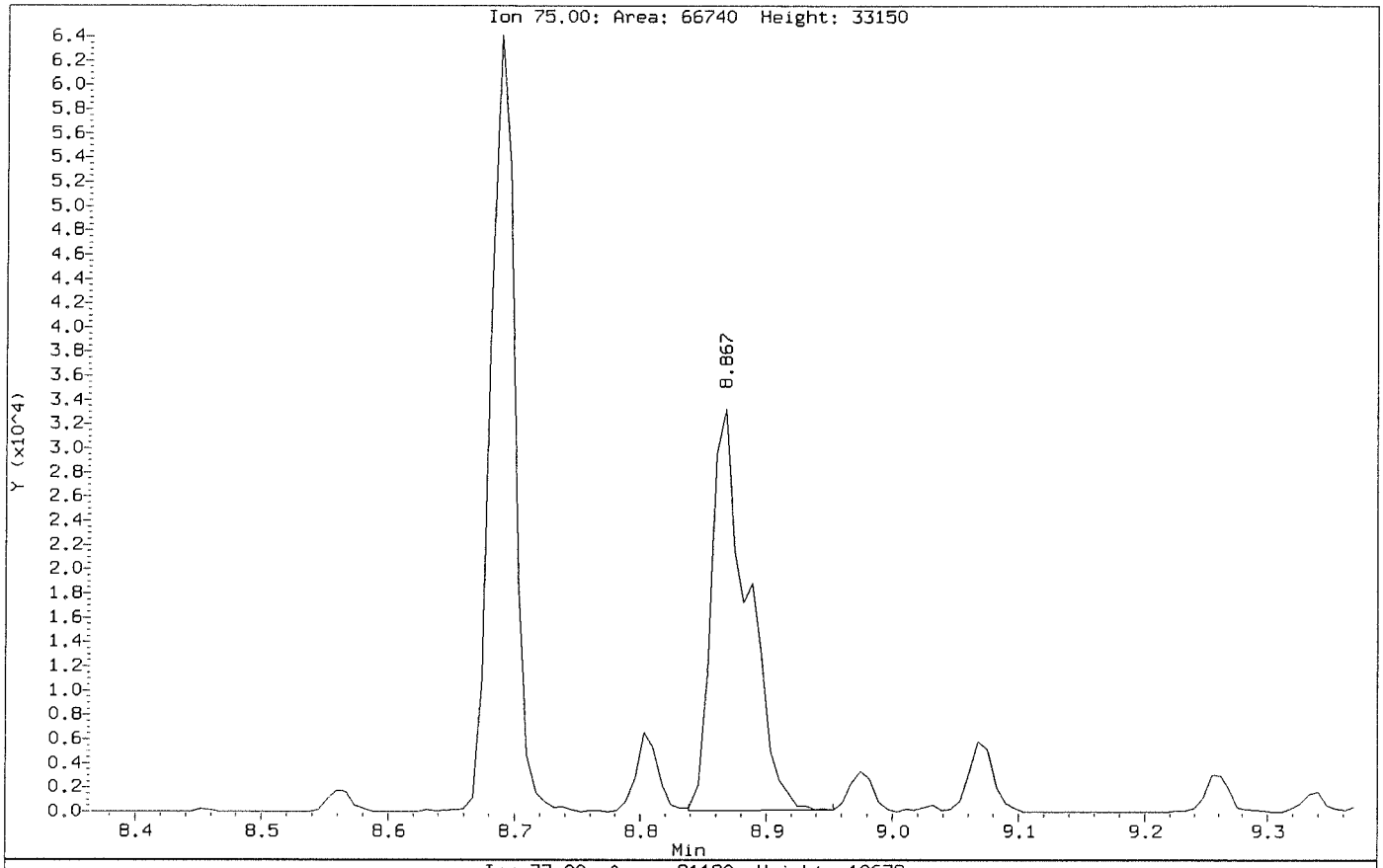


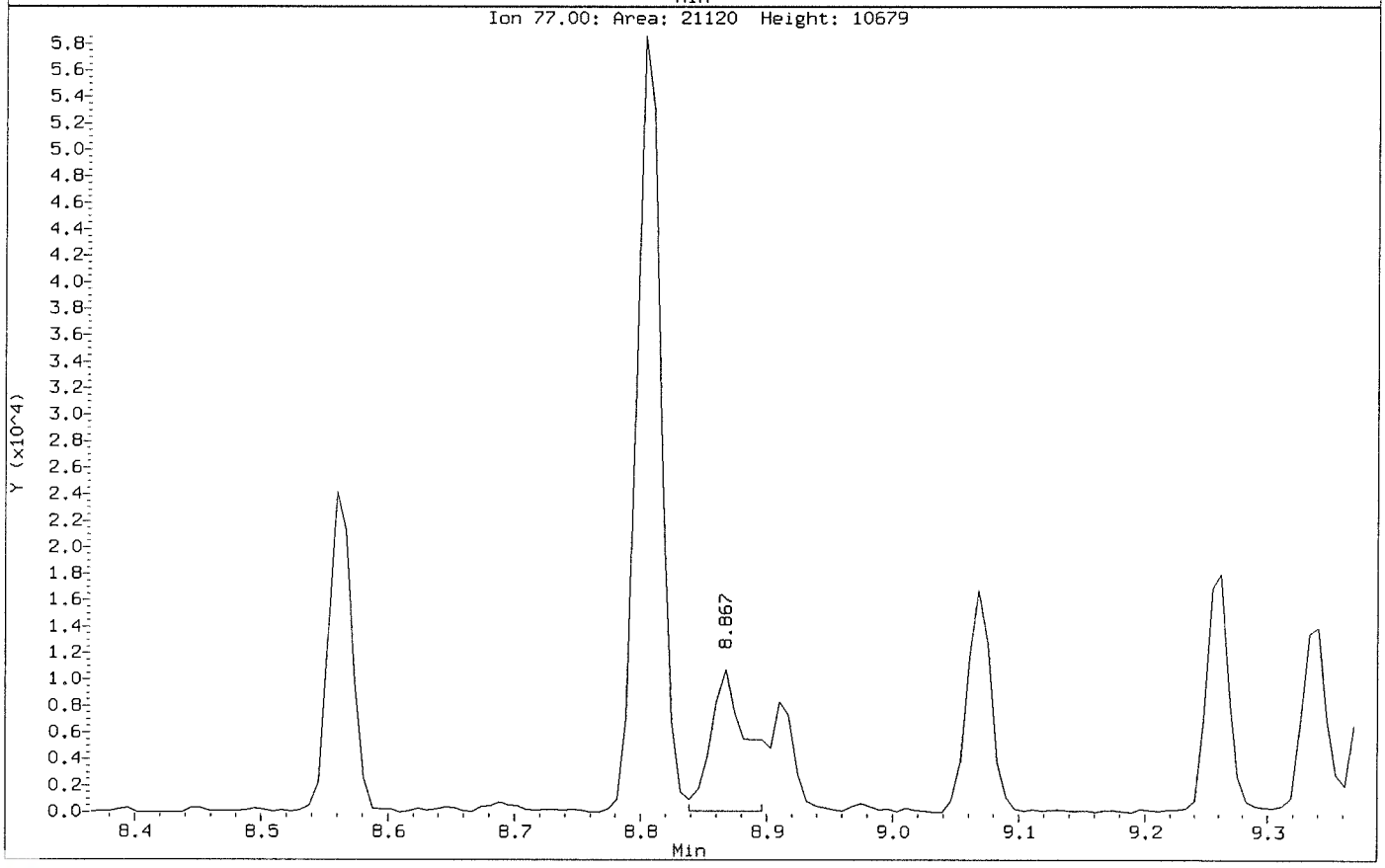
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Sample Info: VLCSW-201124;VLCSW-201124;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\Before\X112405.D
Injection Date: 24-NOV-2020 11:50
Instrument: voa6.i
Client Sample ID: VLCSW-201124

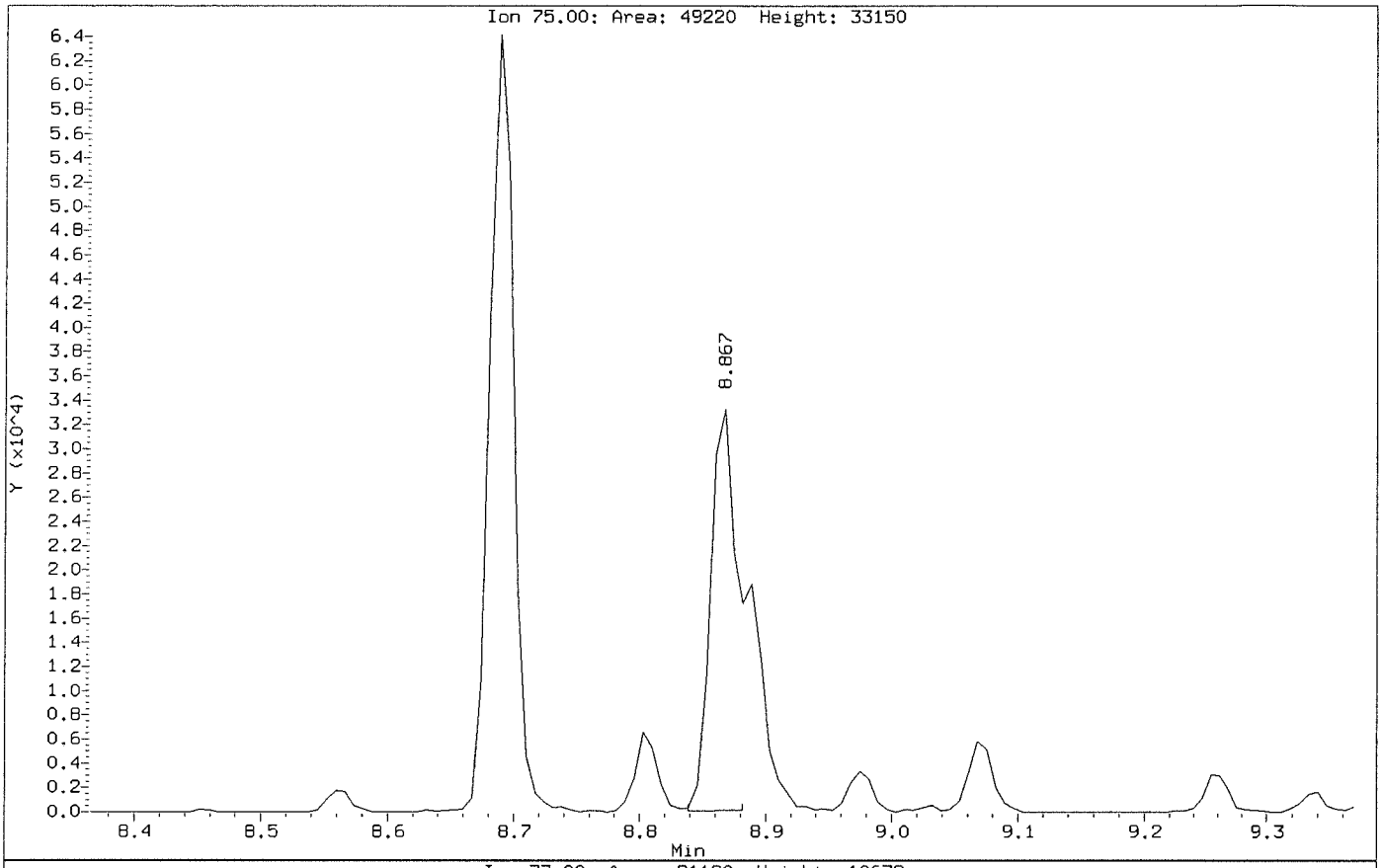
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

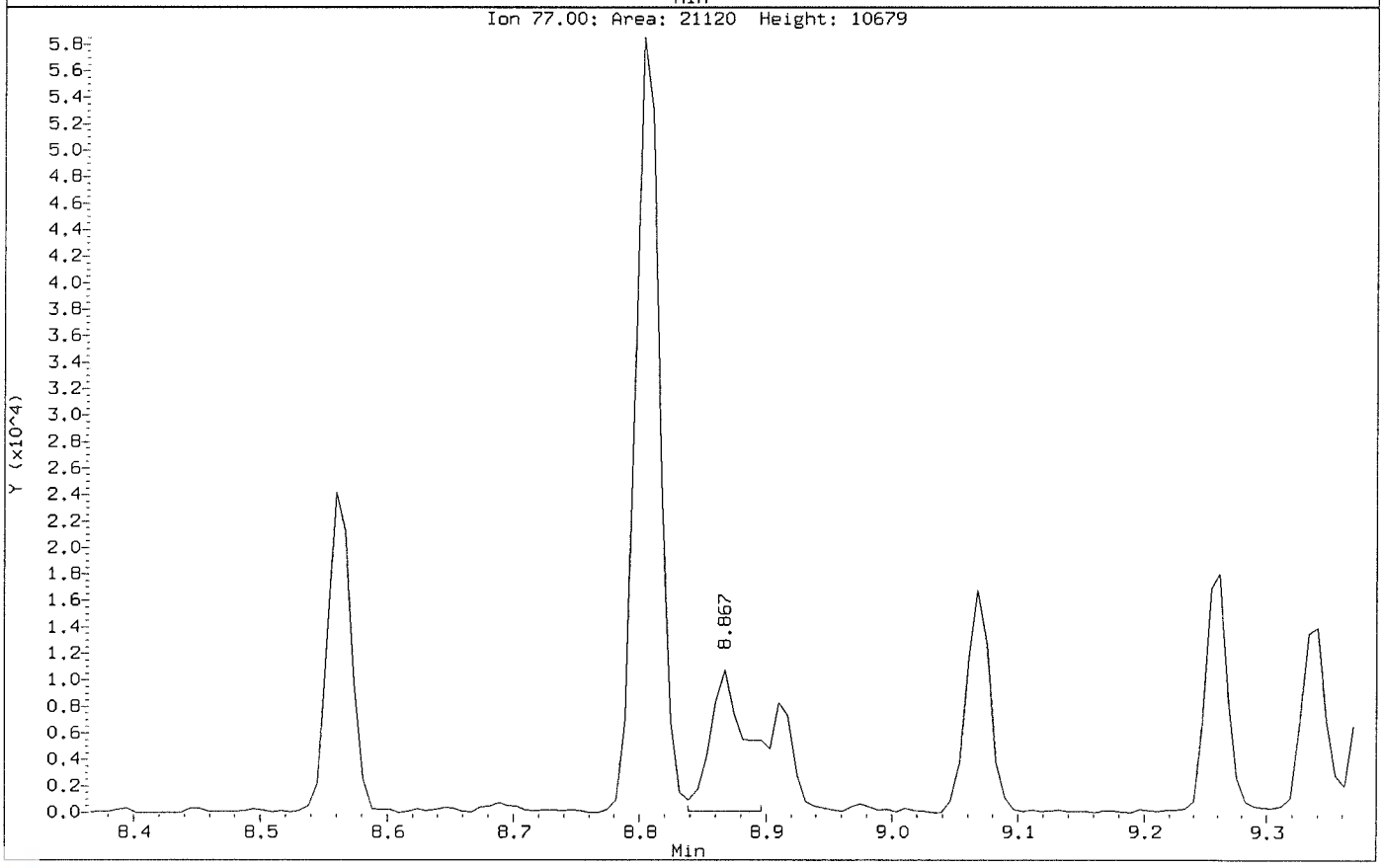




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Injection Date: 24-NOV-2020 11:50
Instrument: voa6.i
Client Sample ID: VLCSW-201124

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





Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112408.D Page 1
Report Date: 18-Dec-2020 16:47

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112408.D
Lab Smp Id: VBLKW-201124 Client Smp ID: VBLKW-201124
Inj Date : 24-NOV-2020 12:53
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-201124;VBLKW-201124;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:47 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

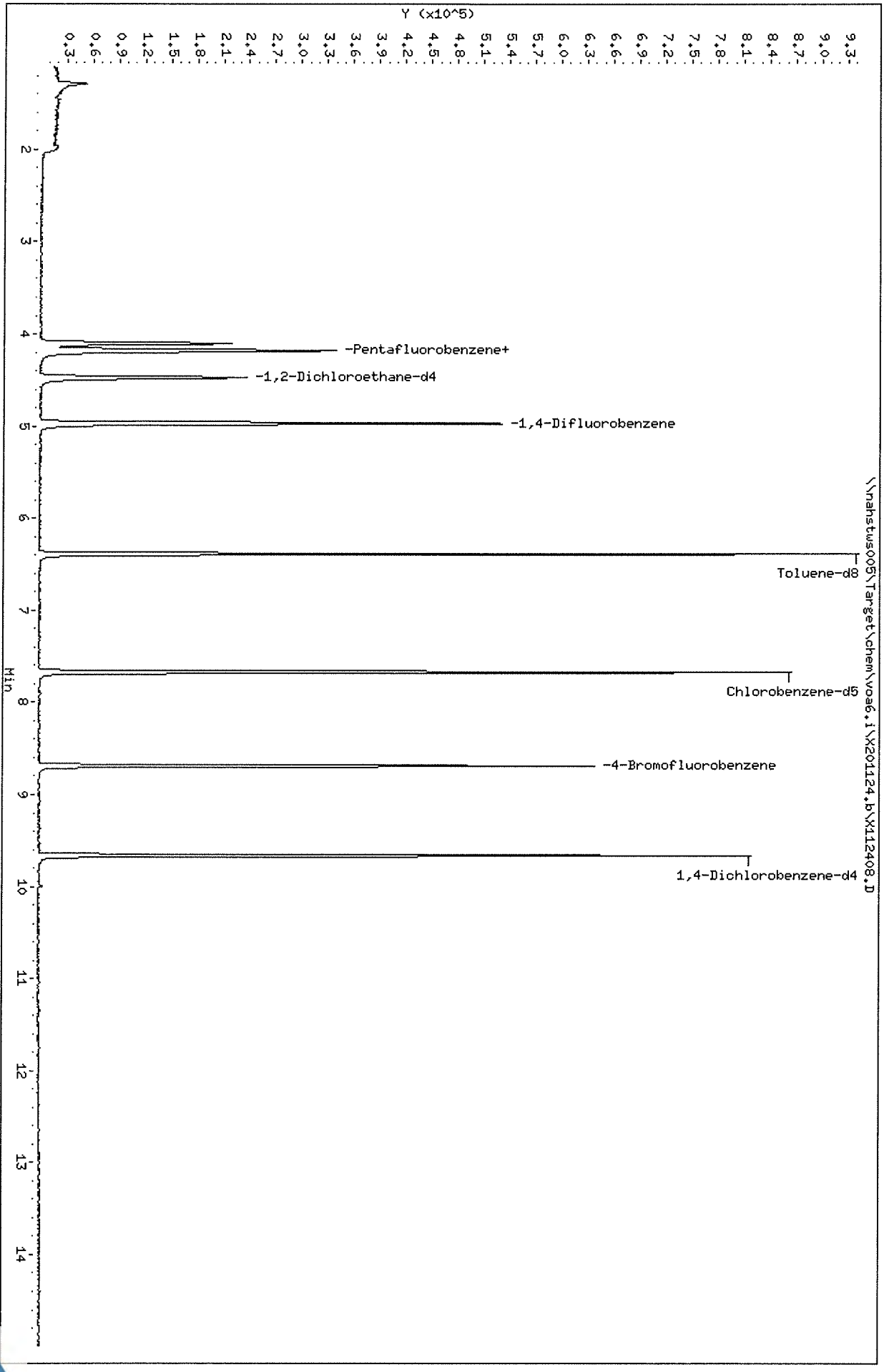
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	237731	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	403932	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	355683	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	148933	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	169178	43.2938	43.29
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	148895	44.0559	44.05
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	138546	44.6879	44.68
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	493746	51.4392	51.43

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112408.D
Date : 24-NOV-2020 12:53
Client ID: VBLKW-201124
Sample Info: VBLKW-201124;VBLKW-201124;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

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



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112410.D
Lab Smp Id: HS20110674-03 Client Smp ID: HS20110674-03
Inj Date : 24-NOV-2020 13:35
Operator : PC Inst ID: voa6.i
Smp Info : HS20110674-03;HS20110674-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:08 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

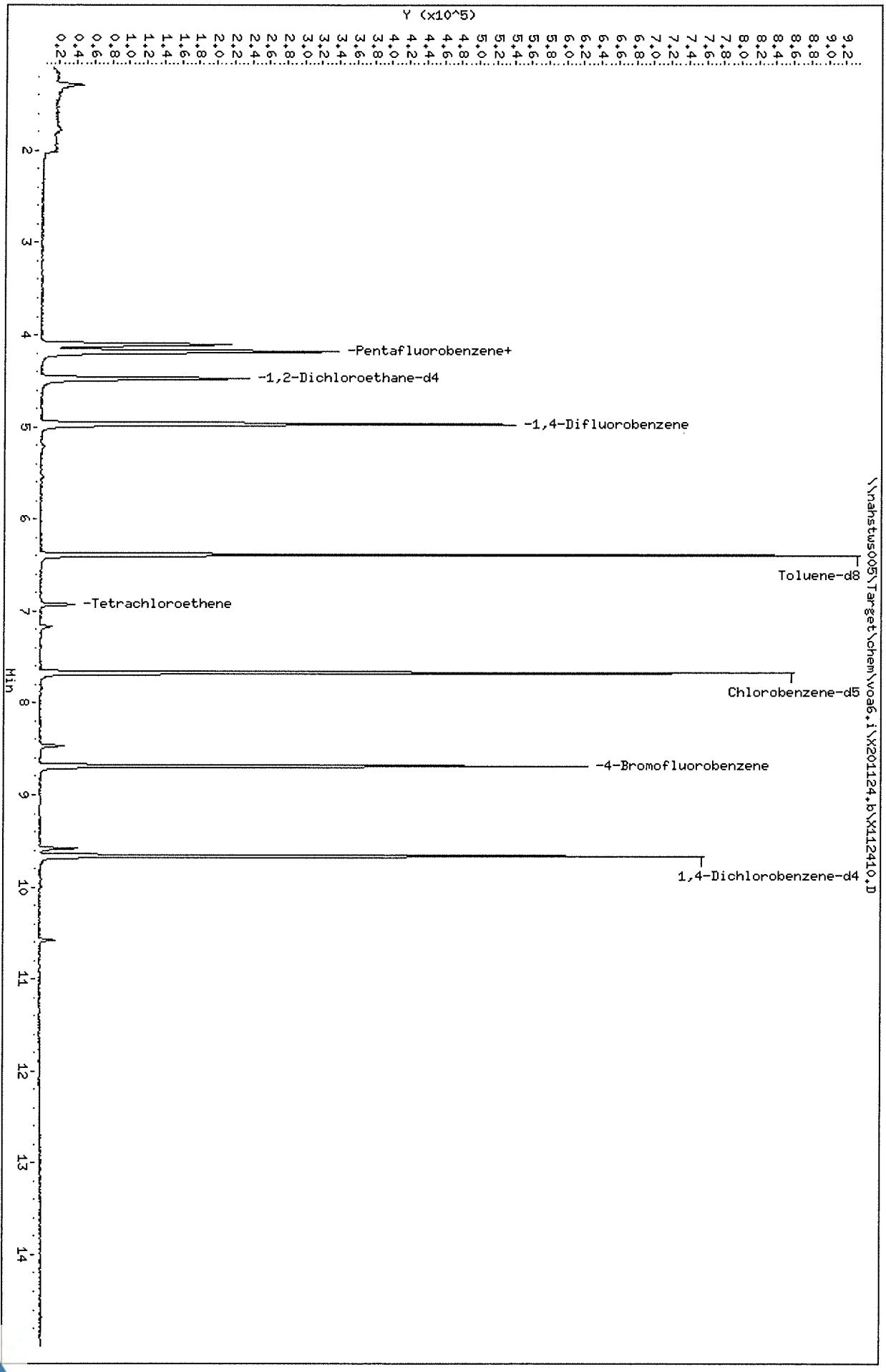
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	238970	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	400536	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	345033	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	140491	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	164008	41.7860	41.78
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	147602	45.0023	45.00
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	136320	43.7664	43.76
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	483952	51.9751	51.97
56 Tetrachloroethene	164	6.933	6.933	(0.904)	6700	3.14953	3.14(a)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6,i\X201124,b\X112410.D
Date : 24-NOV-2020 13:35
Client ID: HS20110674-03
Sample Info: HS20110674-03;HS20110674-03;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112410.D

Date : 24-NOV-2020 13:35

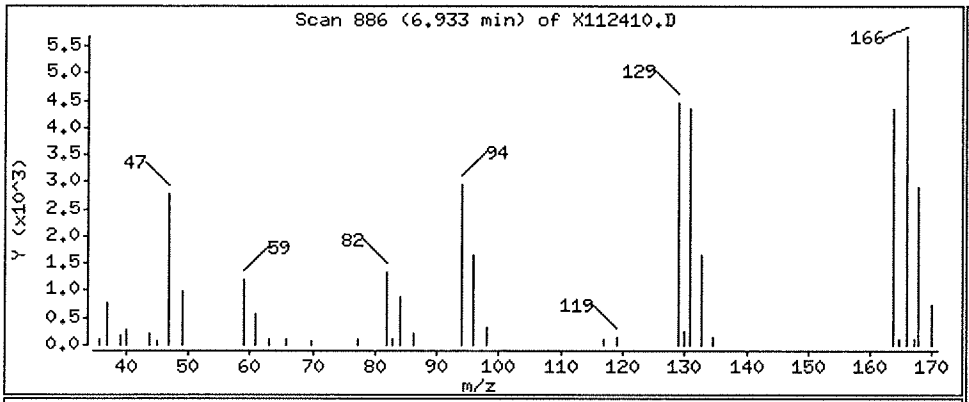
Client ID: HS20110674-03 Instrument: voa6.i

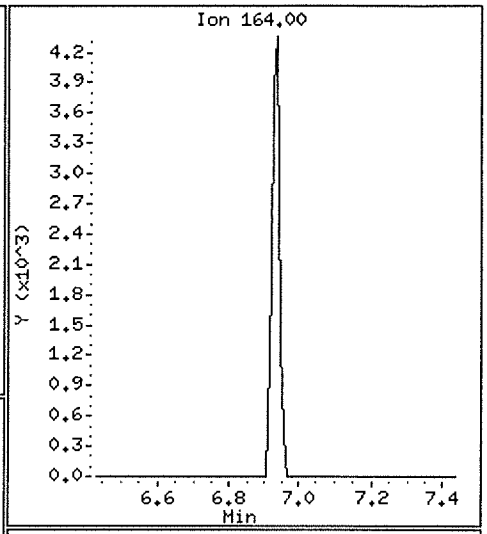
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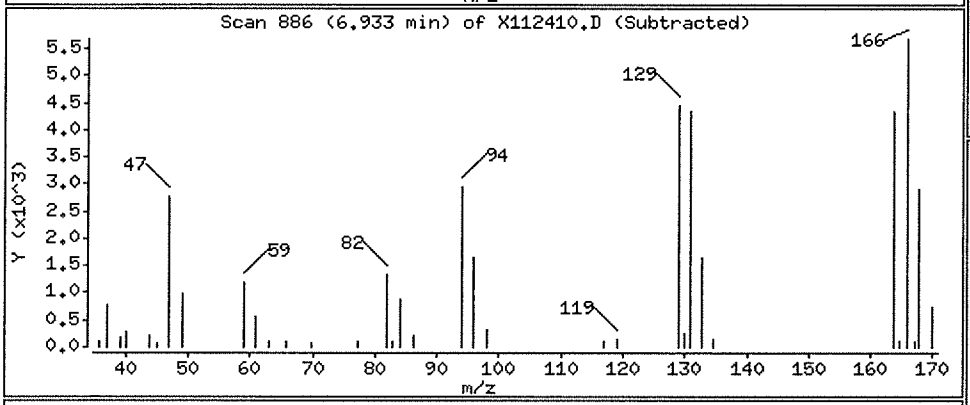
Purge Volume: 5.0 Operator: PC

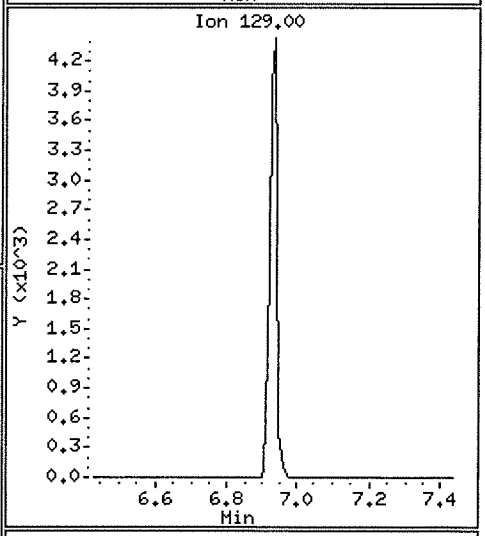
Column phase: DB624 Column diameter: 0.18

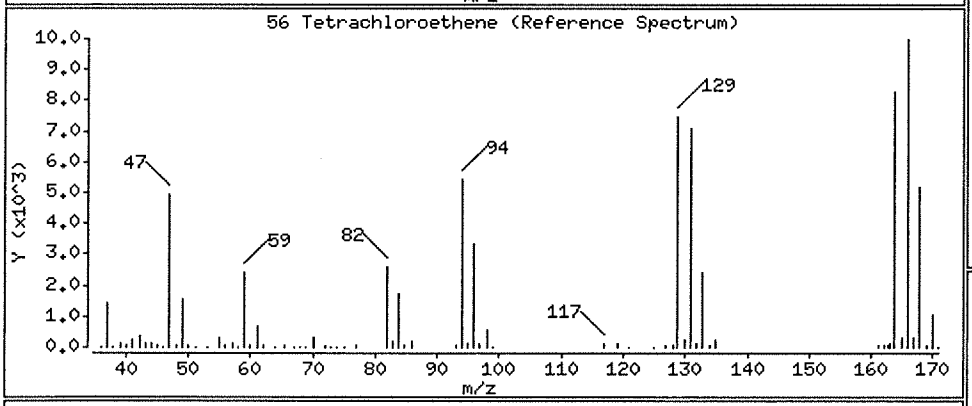
56 Tetrachloroethene Concentration: 3.14 ug/l

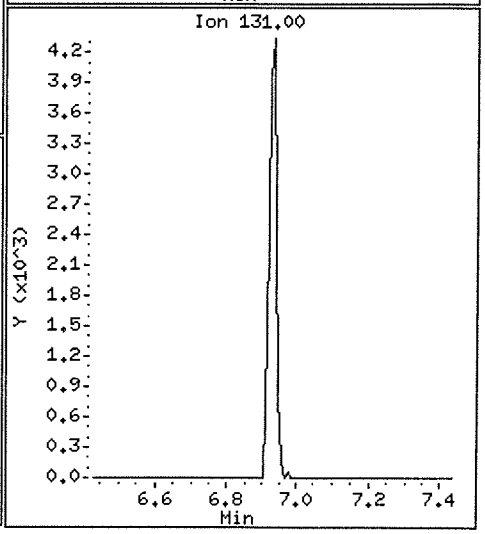


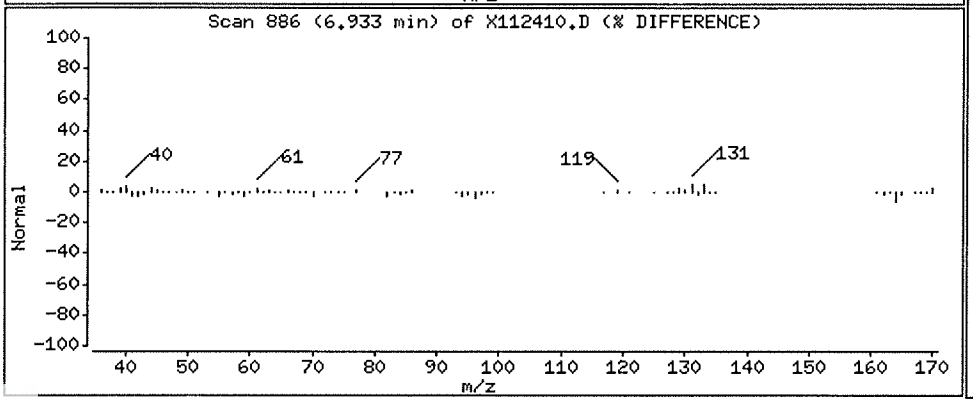












Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112413.D Page 1
Report Date: 18-Dec-2020 16:47

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112413.D
Lab Smp Id: HS20110674-03MS Client Smp ID: HS20110674-03MS
Inj Date : 24-NOV-2020 14:39
Operator : PC Inst ID: voa6.i
Smp Info : HS20110674-03MS;HS20110674-03MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:47 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

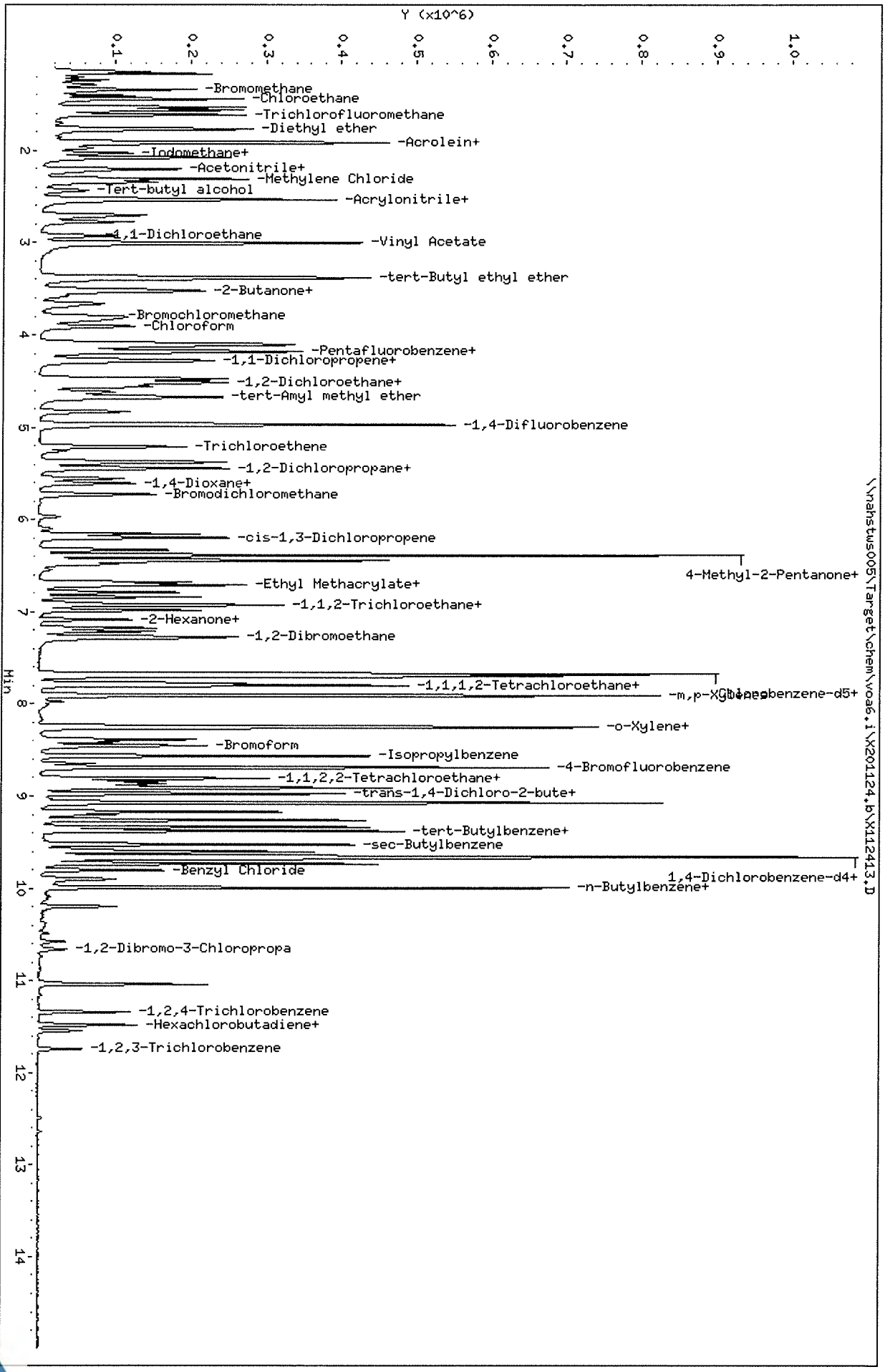
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	237557	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	410194	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	361171	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	162567	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	176169	45.0743	45.07
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	160174	46.6214	46.62
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	140365	45.2909	45.29
$	48 Toluene-d8	98	6.388	6.388	(0.833)	497823	51.0758	51.07
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	51440	18.9539	18.95
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	86616	17.9400	17.94
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	62844	21.2424	21.24
	138 Freon TF	101	1.919	1.919	(0.459)	81102	18.3046	18.30
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	43890	18.4945	18.49
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	98771	17.2374	17.23
	11 1,1-Dichloroethene	96	1.911	1.919	(0.457)	77115	16.7396	16.73
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	75288	18.4579	18.45
	93 1,2,3-Trichlorobenzene	180	11.739	11.746	(1.215)	12906	22.7458	22.74
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	50321	20.5217	20.52(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	26132	21.3345	21.33
	79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.971)	200641	21.8615	21.86
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	4435	22.3880	22.38
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	50497	18.2883	18.28

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112413.D Page 2
Report Date: 18-Dec-2020 16:47

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	91383	19.8642	19.86
33	1,2-Dichloroethane	62	4.555	4.562	(0.916)	82126	18.2218	18.22
42	1,2-Dichloropropane	63	5.443	5.436	(1.095)	57572	17.5929	17.59
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	187946	19.4918	19.49
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	100712	20.5969	20.59
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	86676	19.4669	19.46
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	103935	21.3403	21.34
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	87018	17.2764	17.27
24	2-Butanone	43	3.580	3.580	(0.856)	35793	31.5043	31.50
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	161720	20.3317	20.33
52	2-Hexanone	43	7.090	7.083	(0.924)	67905	37.1743	37.17
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	189484	19.4692	19.46
82	p-Isopropyltoluene	119	9.655	9.648	(0.999)	194998	21.2170	21.21
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	100662	36.8227	36.82
10	Acetone	43	1.976	1.976	(0.473)	40657	27.9705	27.97
37	Benzene	78	4.512	4.512	(0.908)	209065	18.6611	18.66
74	Bromobenzene	156	8.809	8.809	(0.912)	59362	21.6147	21.61
29	Bromochloromethane	128	3.795	3.802	(0.908)	26996	16.0837	16.08
39	Bromodichloromethane	83	5.729	5.729	(1.153)	81197	18.6910	18.69
66	Bromoform	173	8.408	8.408	(1.096)	29808	18.5460	18.54
6	Bromomethane	94	1.338	1.338	(0.320)	83801	18.6419	18.64
19	Carbon Disulfide	76	2.069	2.069	(0.495)	277159	31.2916	31.29
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	67754	19.1574	19.15
59	Chlorobenzene	112	7.692	7.692	(1.003)	142069	18.4009	18.40
7	Chloroethane	64	1.403	1.403	(0.336)	60190	16.3502	16.35
28	Chloroform	83	3.910	3.910	(0.935)	105338	16.9566	16.95
3	Chloromethane	50	1.081	1.081	(0.258)	64216	14.7235	14.72
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	58272	16.7637	16.76
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	90221	17.3386	17.33
55	Dibromochloromethane	129	7.176	7.176	(0.936)	53474	19.0962	19.09
44	Dibromomethane	93	5.557	5.550	(1.118)	40109	18.7091	18.70
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	44883	13.4730	13.47
61	Ethylbenzene	106	7.799	7.799	(1.017)	76626	19.6805	19.68
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	15294	19.2777	19.27
67	Isopropylbenzene	105	8.566	8.566	(1.117)	232223	19.7655	19.76
62	m,p-Xylenes	106	7.907	7.907	(1.031)	184295	37.0146	37.01
17	Methylene Chloride	84	2.305	2.305	(0.551)	51188	15.6873	15.68
87	n-Butylbenzene	91	9.991	9.991	(1.034)	180584	20.0349	20.03
73	n-Propylbenzene	91	8.910	8.910	(0.922)	287591	21.1476	21.14
92	Naphthalene	128	11.546	11.546	(1.195)	37921	21.9642	21.96
63	o-Xylene	106	8.244	8.244	(1.075)	91742	19.1657	19.16
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	231749	20.4214	20.42
64	Styrene	104	8.258	8.258	(1.077)	153434	18.3198	18.31
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	154639	20.5221	20.52
56	Tetrachloroethene	164	6.933	6.933	(0.904)	52247	23.4628	23.46
50	Toluene	91	6.446	6.446	(0.840)	234405	20.1068	20.10
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	48780	16.6576	16.65
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	80287	17.9261	17.92
38	Trichloroethene	130	5.206	5.206	(1.048)	54277	19.0219	19.02
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	151062	16.9213	16.92
5	Vinyl Chloride	62	1.145	1.145	(0.274)	87860	15.3722	15.37

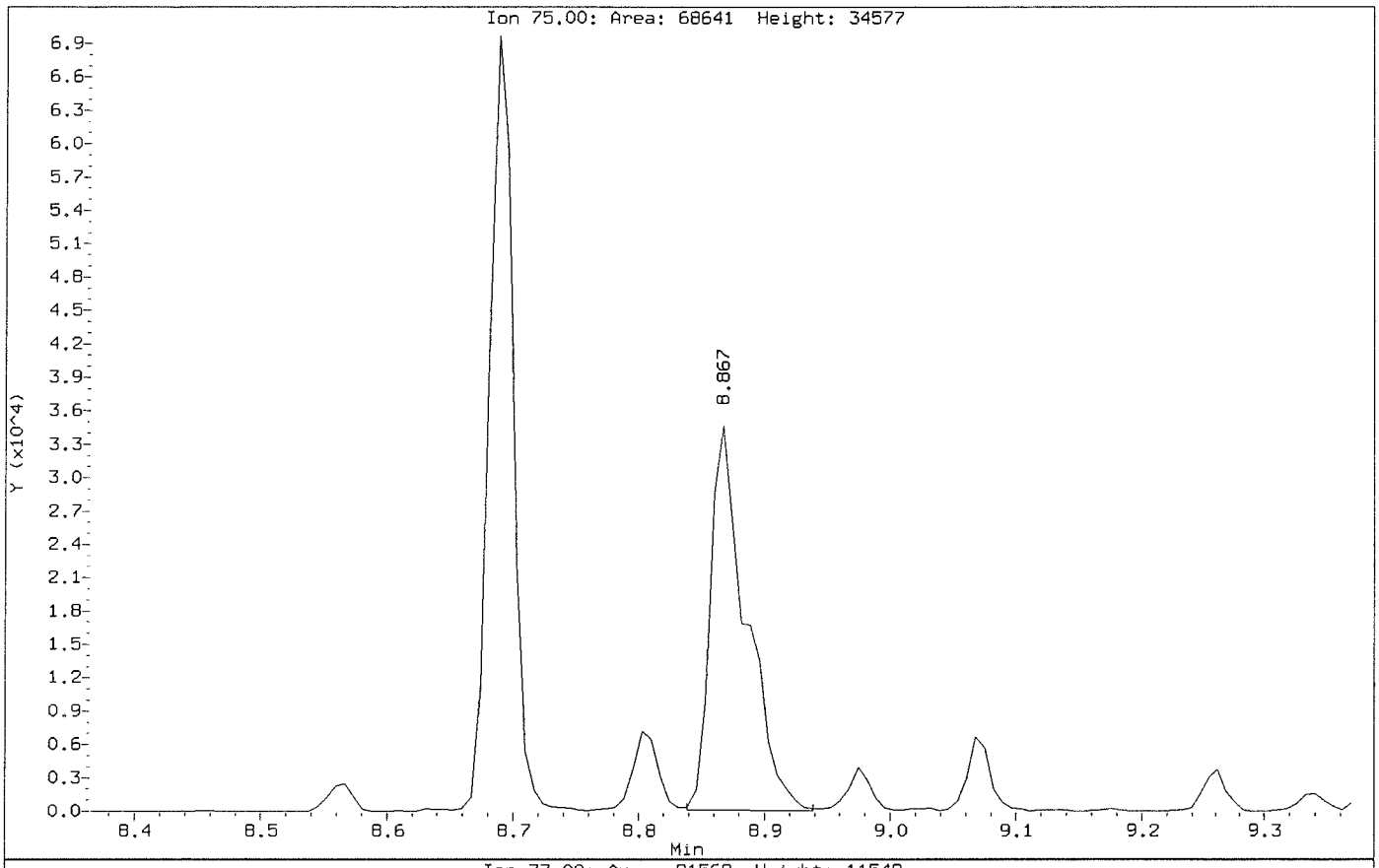
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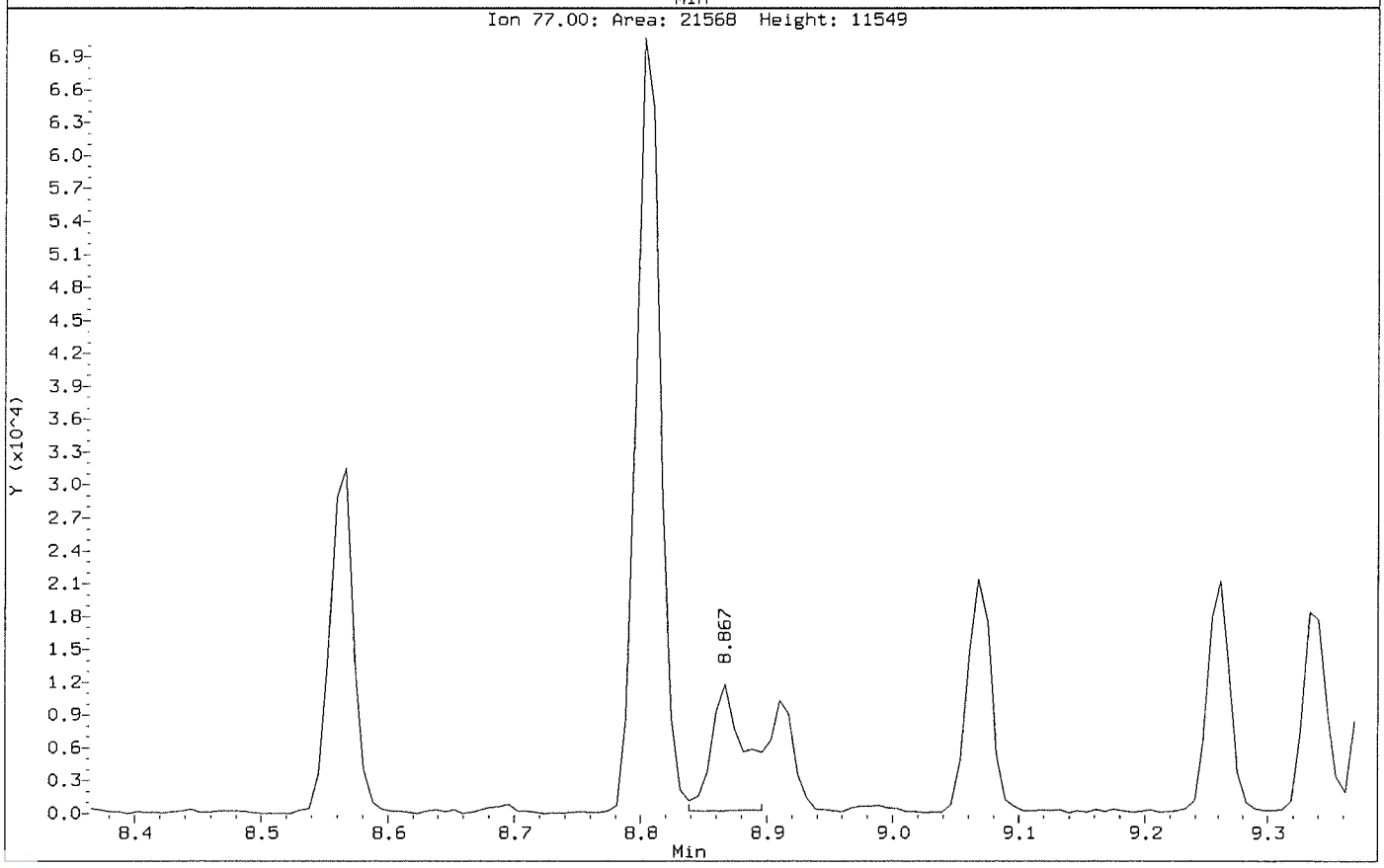
M - Compound response manually integrated.


Y (x10^6)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Min
2
3
4
5
6
7
8
9
10
11
12
13
14
-Bromomethane
-Chloroethane
-Trichlorofluoromethane
-Diethyl ether
-Acrolein+
-Iodomethane+
-Acetonitrile+
-Methylene Chloride
-Tert-butyl alcohol
-Acrylonitrile+
-1,1-Dichloroethane
-Vinyl Acetate
-tert-Butyl ethyl ether
-2-Butanone+
-Bromochloromethane
-Chloroform
-Pentafluorobenzene+
-1,1-Dichloropropene+
-1,2-Dichloroethane+
-tert-Amyl methyl ether
-1,4-Difluorobenzene
-Trichloroethene
-1,2-Dichloropropane+
-1,4-Dioxane+
-Bromodichloromethane
-cis-1,3-Dichloropropene
4-Methyl-2-Pentanone+
-Ethyl Methacrylate+
-1,1,2-Trichloroethane+
-2-Hexanone+
-1,2-Dibromoethane
-1,1,1,2-Tetrachloroethane+
-m,p-Xylenes
-o-Xylene+
-Bromoform
-Isopropylbenzene
-4-Bromofluorobenzene
-1,1,2,2-Tetrachloroethane+
-trans-1,4-Dichloro-2-bute+
-tert-Butylbenzene+
-sec-Butylbenzene
-Benzyl Chloride
1,4-Dichlorobenzene-d4+
-n-Butylbenzene+
-1,2-Dibromo-3-Chloropropa
-1,2,4-Trichlorobenzene
-Hexachlorobutadiene+
-1,2,3-Trichlorobenzene
\\nahstws005\Target\chem\voa6.i\X201124.b\X112413.D
Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112413.D
Date : 24-NOV-2020 14:39
Client ID: HS20110674-03MS
Sample Info: HS20110674-03MS;HS20110674-03MS;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\X201124.b\Before\X112413.D
Injection Date: 24-NOV-2020 14:39
Instrument: voa6.i
Client Sample ID: HS20110674-03MS

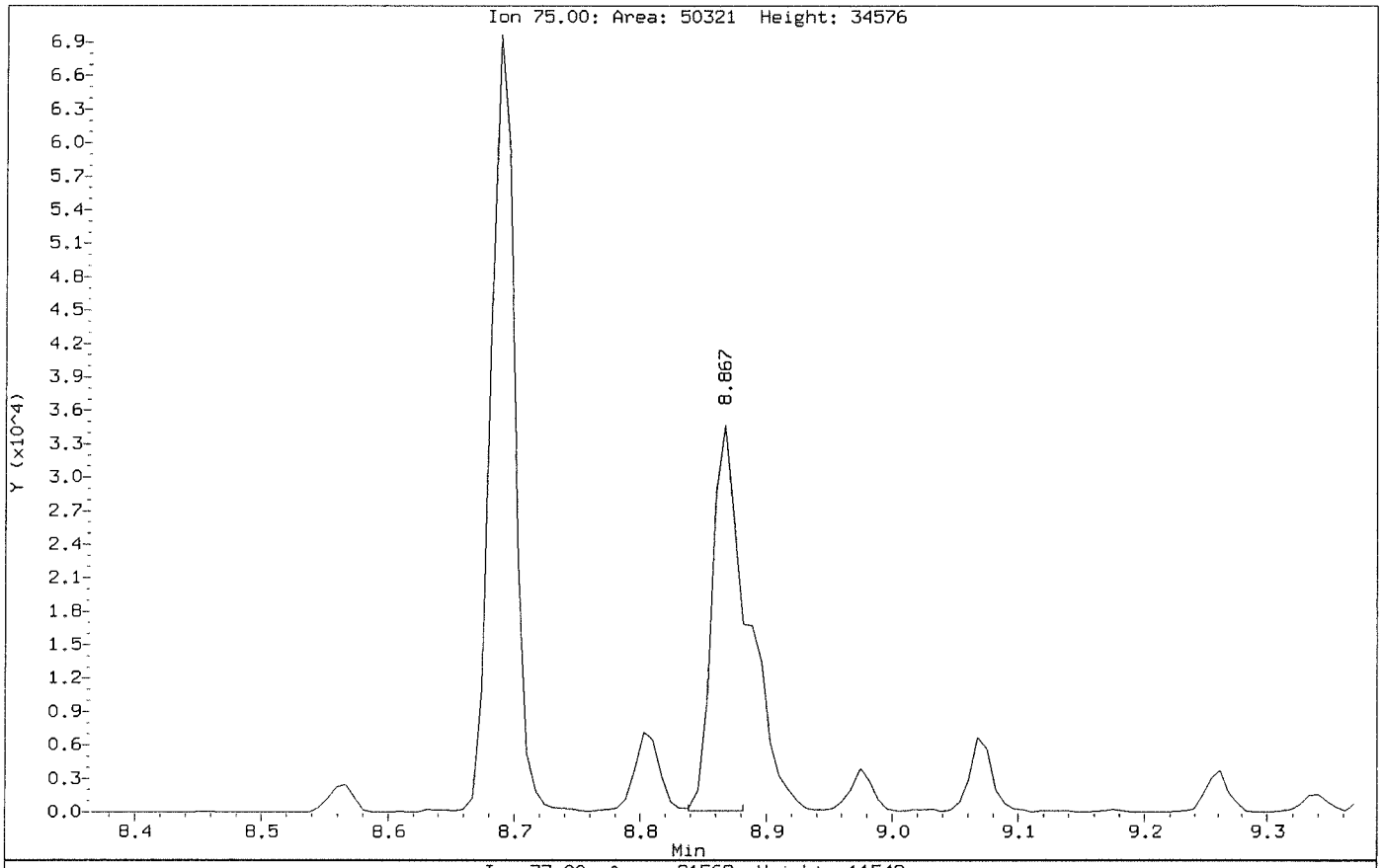
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

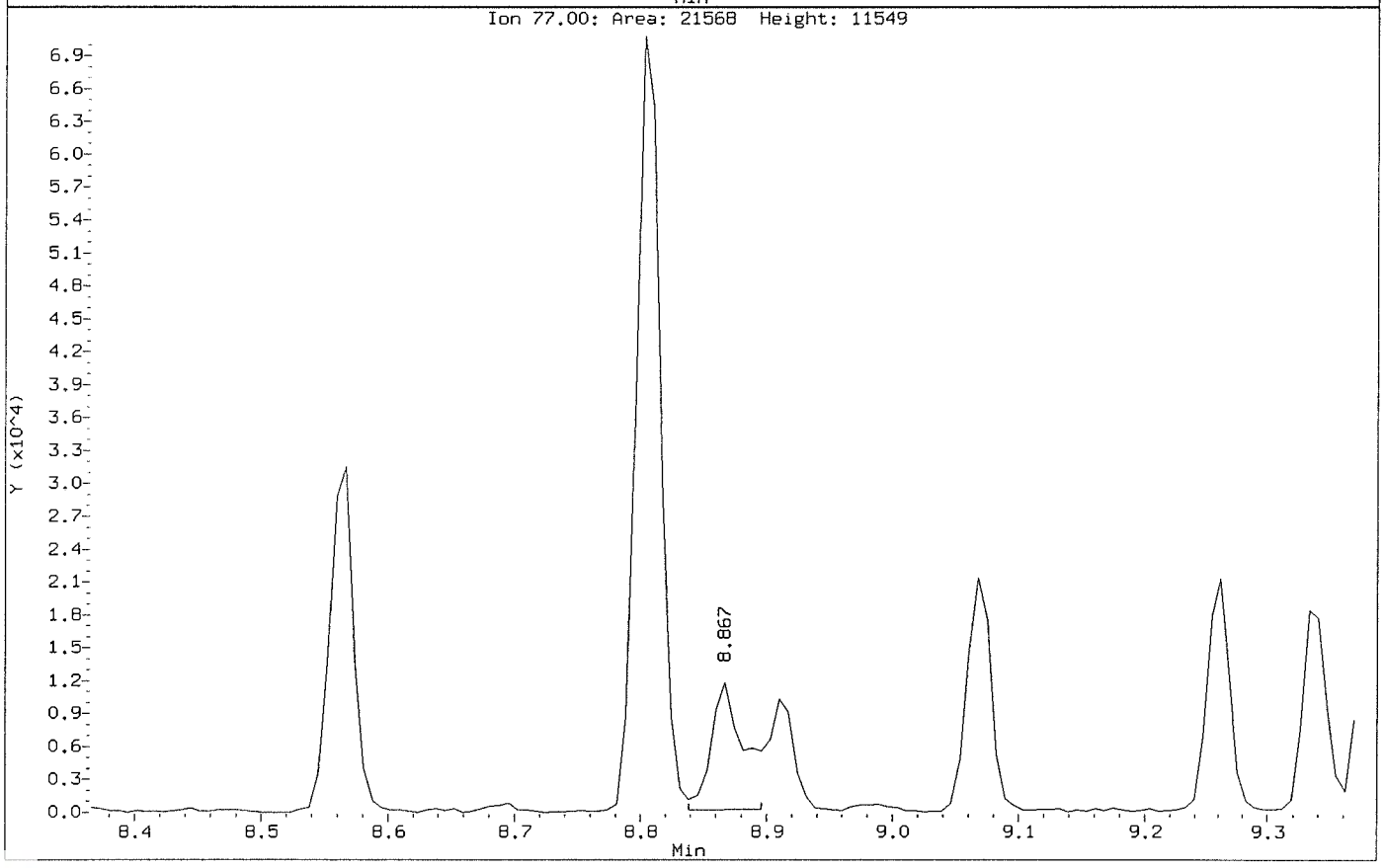




Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112413.D
Injection Date: 24-NOV-2020 14:39
Instrument: voa6.i
Client Sample ID: HS20110674-03MS

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





Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112414.D Page 1
Report Date: 18-Dec-2020 16:47

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112414.D
Lab Smp Id: HS20110674-03MSD Client Smp ID: HS20110674-03MSD
Inj Date : 24-NOV-2020 15:00
Operator : PC Inst ID: voa6.i
Smp Info : HS20110674-03MSD;HS20110674-03MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:47 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 13 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

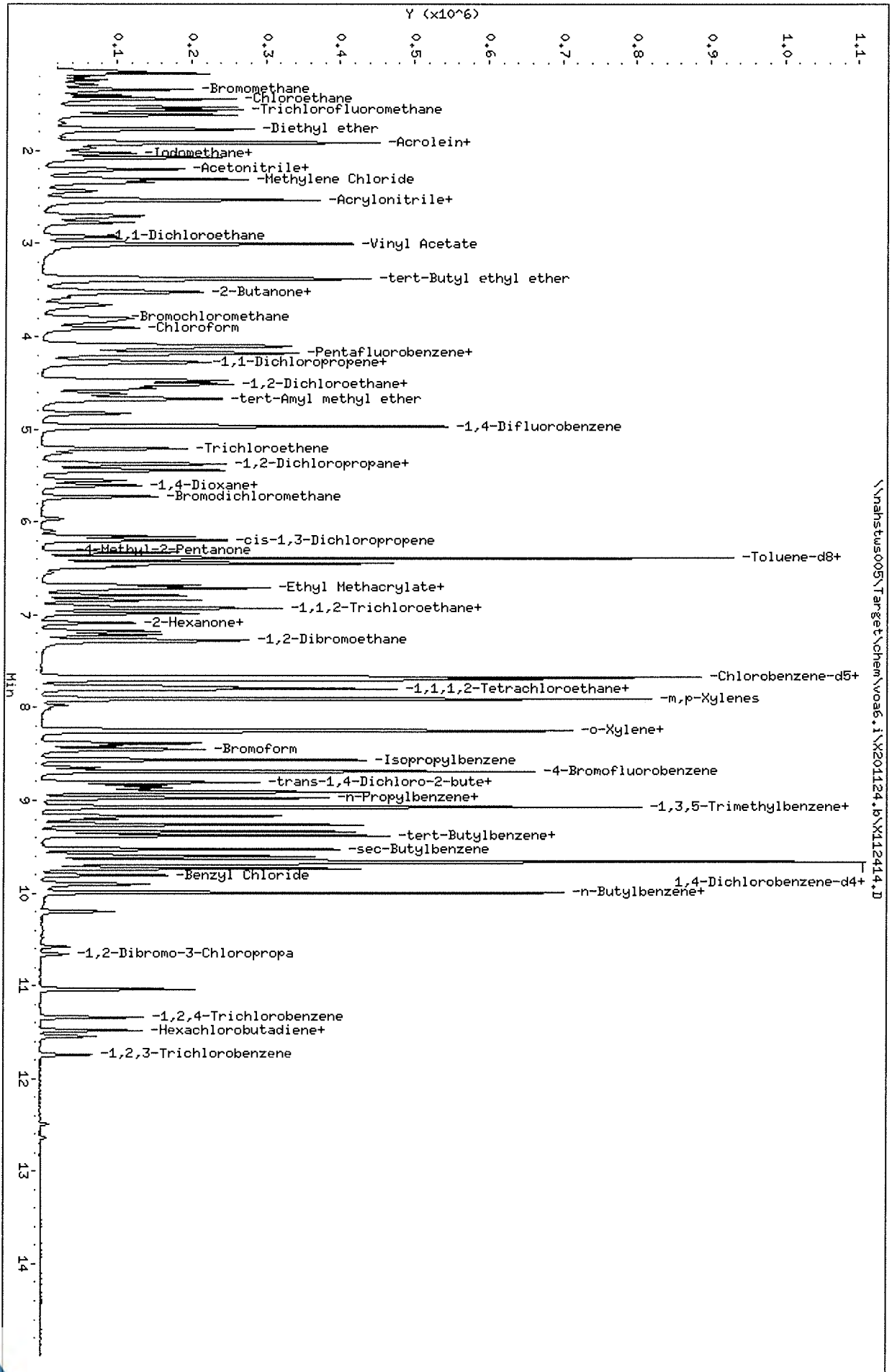
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	239609	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	410760	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	355519	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	164041	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	177616	45.0558	45.05
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	157147	46.4704	46.47
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	141580	45.2917	45.29
$	48 Toluene-d8	98	6.388	6.388	(0.833)	495583	51.6544	51.65
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	49947	18.6964	18.69
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	87414	17.9502	17.95
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	64557	21.6527	21.65
	138 Freon TF	101	1.919	1.919	(0.459)	77555	17.3542	17.35
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	44077	18.8685	18.86
	22 1,1-Dichloroethane	63	2.929	2.921	(0.700)	98053	16.9656	16.96
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	76570	16.4790	16.47
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	76139	18.6408	18.64
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	15473	26.7982	26.79
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	51685	20.8885	20.88(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	30179	24.4171	24.41
	79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.971)	192167	20.7501	20.75
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	4809	24.0578	24.05
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	52857	19.4473	19.44

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112414.D Page 2
Report Date: 18-Dec-2020 16:47

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	92132	19.8470	19.84
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	83222	18.4395	18.43
42	1,2-Dichloropropane	63	5.443	5.436	(1.095)	56258	17.1677	17.16
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	188331	19.3562	19.35
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	100421	20.3528	20.35
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	85001	19.3942	19.39
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	104344	21.2347	21.23
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	83698	16.4749	16.47
24	2-Butanone	43	3.581	3.580	(0.856)	36533	31.8803	31.88
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	162273	20.2179	20.21
52	2-Hexanone	43	7.090	7.083	(0.924)	70102	38.9436	38.94
77	4-Chlorotoluene	91	9.075	9.067	(0.939)	183661	18.7013	18.70
82	p-Isopropyltoluene	119	9.648	9.648	(0.999)	190444	20.5860	20.58
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	108732	40.3178	40.31
10	Acetone	43	1.976	1.976	(0.473)	42194	28.8716	28.87
37	Benzene	78	4.512	4.512	(0.908)	206399	18.3977	18.39
74	Bromobenzene	156	8.810	8.809	(0.912)	58833	21.2296	21.22
29	Bromochloromethane	128	3.795	3.802	(0.908)	27172	16.0499	16.04
39	Bromodichloromethane	83	5.729	5.729	(1.153)	79138	18.1919	18.19
66	Bromoform	173	8.408	8.408	(1.096)	32141	20.1111	20.11
6	Bromomethane	94	1.338	1.338	(0.320)	78499	17.3784	17.37
19	Carbon Disulfide	76	2.069	2.069	(0.495)	265629	29.7330	29.73
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	66228	18.7001	18.70
59	Chlorobenzene	112	7.692	7.692	(1.003)	142573	18.7597	18.75
7	Chloroethane	64	1.403	1.403	(0.336)	57990	15.6177	15.61
28	Chloroform	83	3.910	3.910	(0.935)	103444	16.5091	16.50
3	Chloromethane	50	1.081	1.081	(0.258)	62654	14.2423	14.24
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	58546	16.6983	16.69
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	87817	16.8534	16.85
55	Dibromochloromethane	129	7.176	7.176	(0.936)	53208	19.3033	19.30
44	Dibromomethane	93	5.558	5.550	(1.118)	39015	18.1737	18.17
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	44893	13.3823	13.38
61	Ethylbenzene	106	7.800	7.799	(1.017)	77772	20.2924	20.29
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	16890	20.9542	20.95
67	Isopropylbenzene	105	8.566	8.566	(1.117)	232134	20.0721	20.07
62	m,p-Xylenes	106	7.907	7.907	(1.031)	182375	37.1744	37.17
17	Methylene Chloride	84	2.305	2.305	(0.551)	52925	16.0808	16.08
87	n-Butylbenzene	91	9.999	9.991	(1.035)	180915	19.9132	19.91
73	n-Propylbenzene	91	8.917	8.910	(0.923)	278955	20.3283	20.32
92	Naphthalene	128	11.546	11.546	(1.195)	46576	26.5024	26.50
63	o-Xylene	106	8.244	8.244	(1.075)	88331	18.8096	18.80
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	226815	19.8070	19.80
64	Styrene	104	8.258	8.258	(1.077)	151108	18.3289	18.32
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	151908	19.9785	19.97
56	Tetrachloroethene	164	6.933	6.933	(0.904)	51308	23.4075	23.40
50	Toluene	91	6.446	6.446	(0.840)	229223	19.9749	19.97
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	48435	16.3981	16.39
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	81937	18.2693	18.26
38	Trichloroethene	130	5.207	5.206	(1.048)	53010	18.5523	18.55
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	148761	16.5209	16.52
5	Vinyl Chloride	62	1.145	1.145	(0.274)	84088	14.5862	14.58

QC Flag Legend

M - Compound response manually integrated.

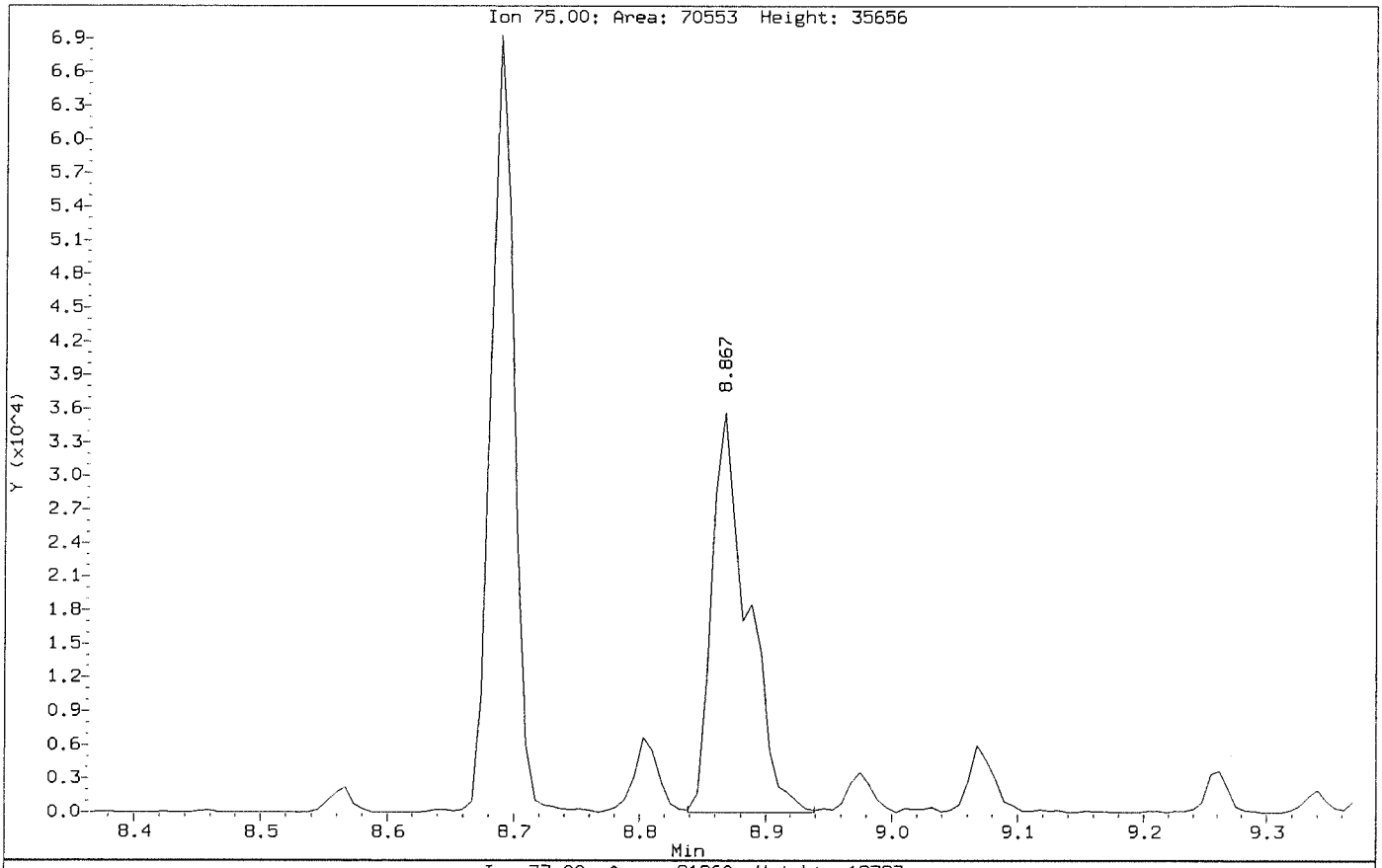


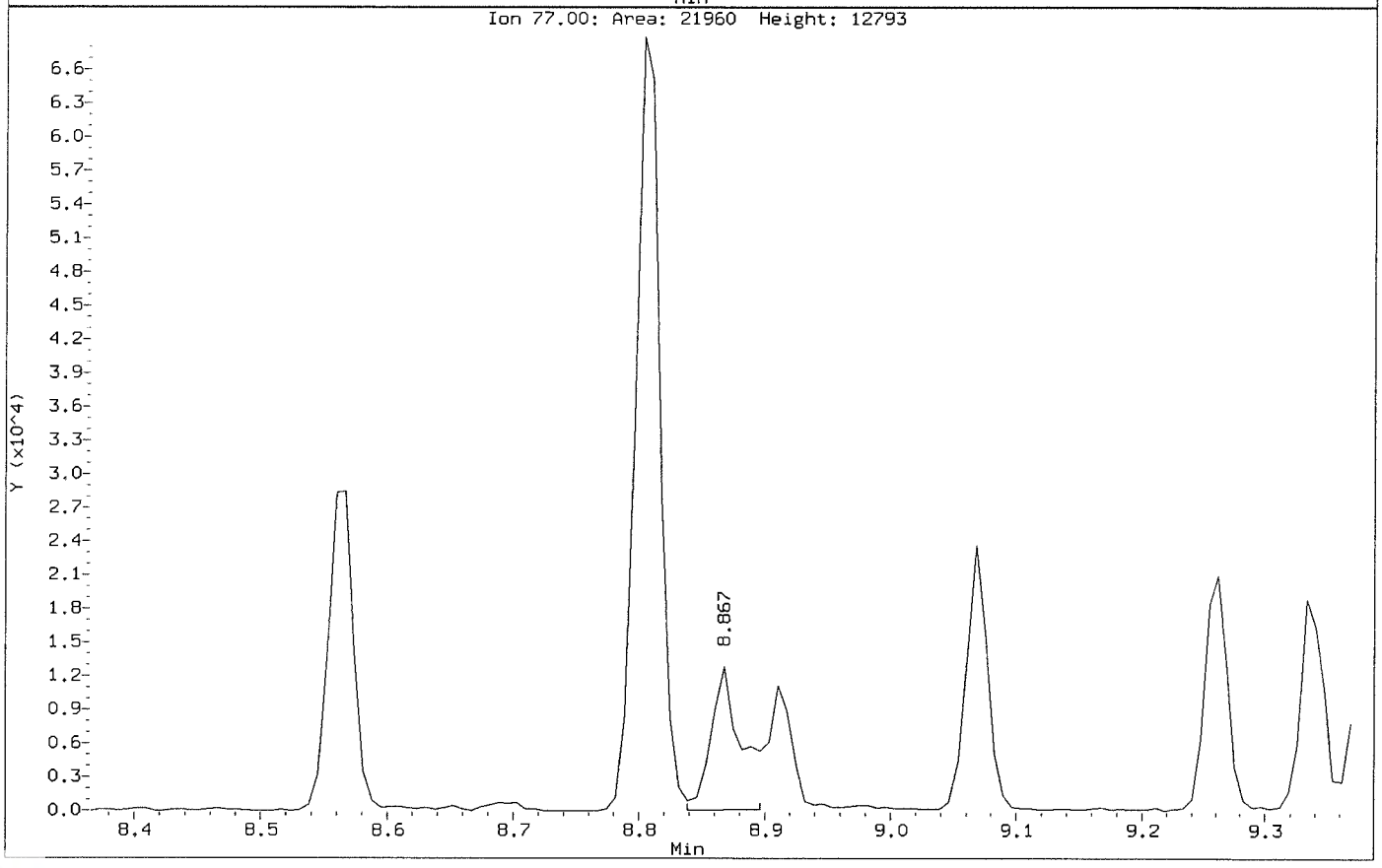
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Date : 24-NOV-2020 15:00
Client ID: HS20110674-03MSD
Sample Info: HS20110674-03MSD;HS20110674-03MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\Before\X112414.D
Injection Date: 24-NOV-2020 15:00
Instrument: voa6.i
Client Sample ID: HS20110674-03MSD

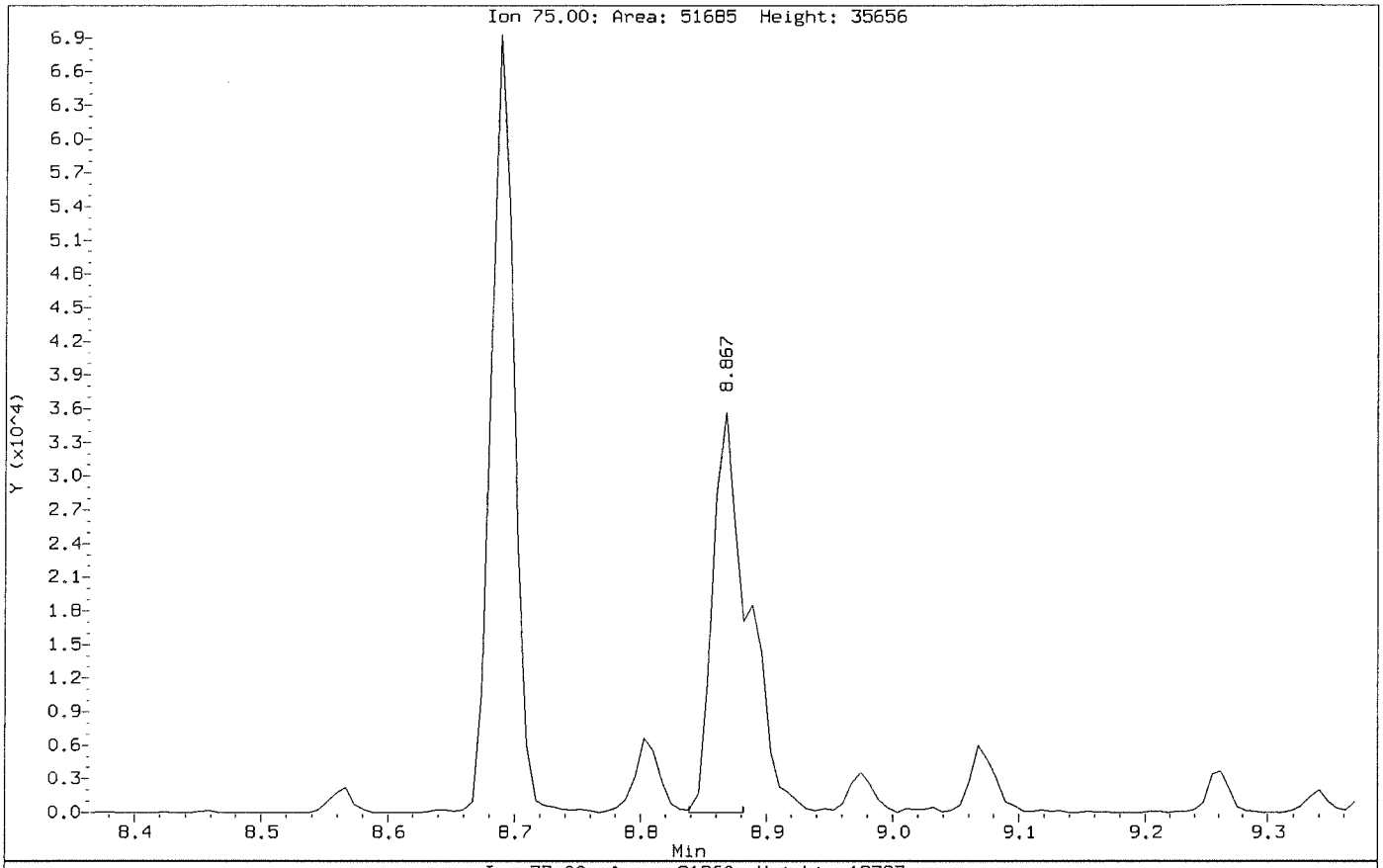
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

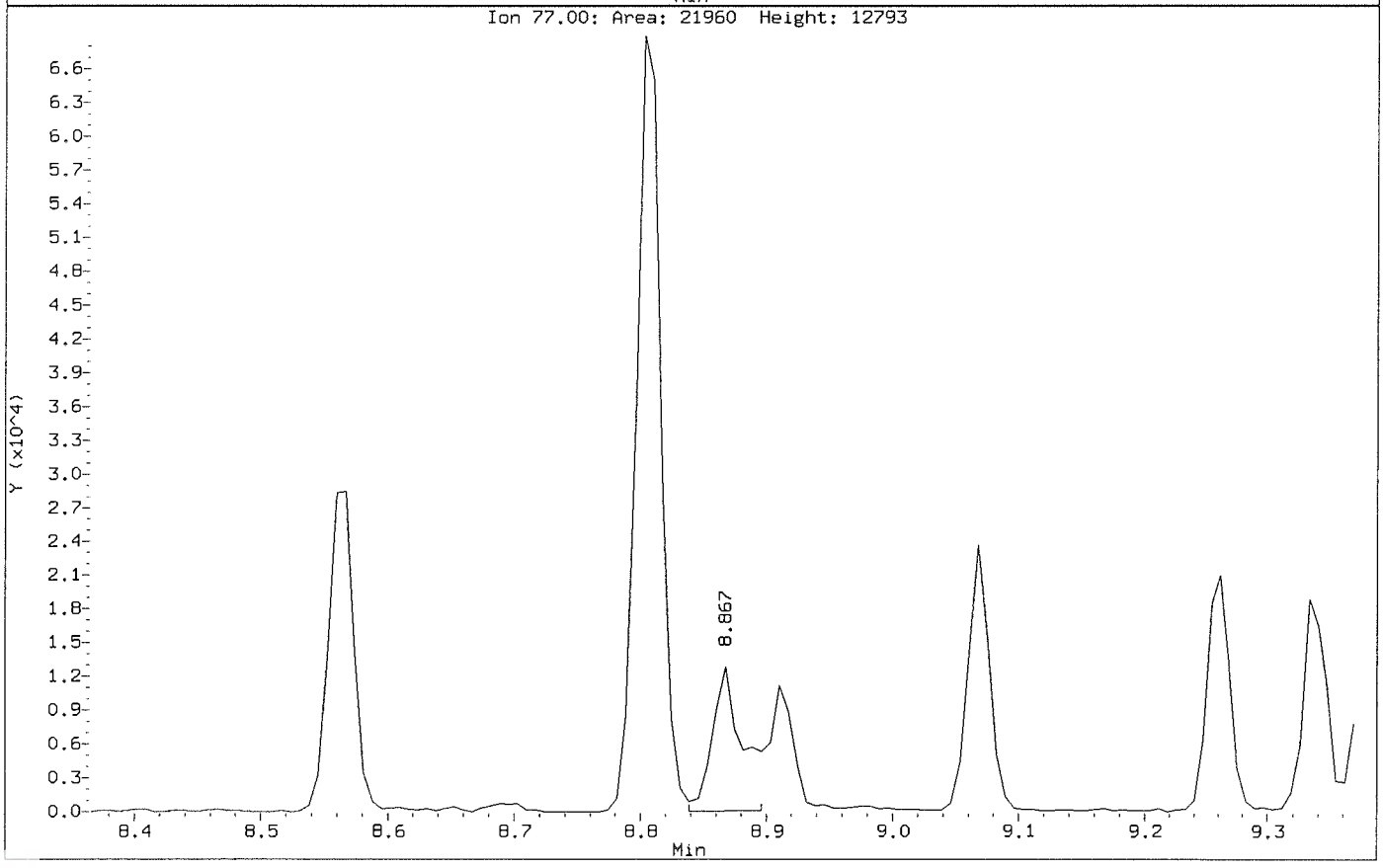




Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112414.D
Injection Date: 24-NOV-2020 15:00
Instrument: voa6.i
Client Sample ID: HS20110674-03MSD

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





Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112420.D Page 1
Report Date: 18-Dec-2020 16:19

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112420.D
Lab Smp Id: HS20110674-08 Client Smp ID: HS20110674-08
Inj Date : 24-NOV-2020 17:06
Operator : PC Inst ID: voa6.i
Smp Info : HS20110674-08;HS20110674-08;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:08 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

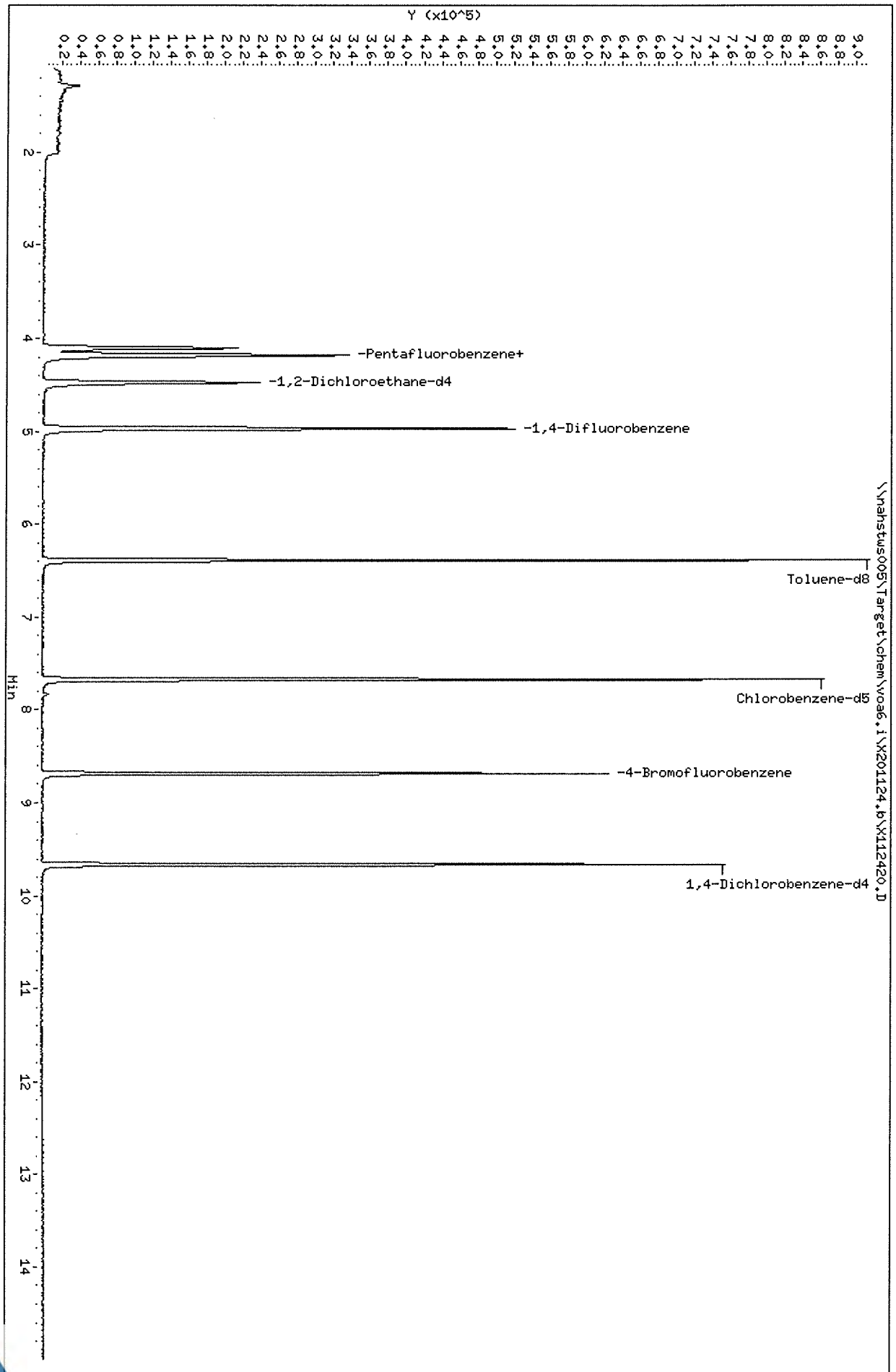
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	234912	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	398816	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	344064	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	145254	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	167055	43.2642	43.26
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	146366	44.7560	44.75
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	138043	45.0499	45.04
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	479585	51.6511	51.65

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112420.D
Date : 24-NOV-2020 17:06
Client ID: HS20110674-08
Sample Info: HS20110674-08;HS20110674-08;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112421.D Page 1
Report Date: 18-Dec-2020 16:19

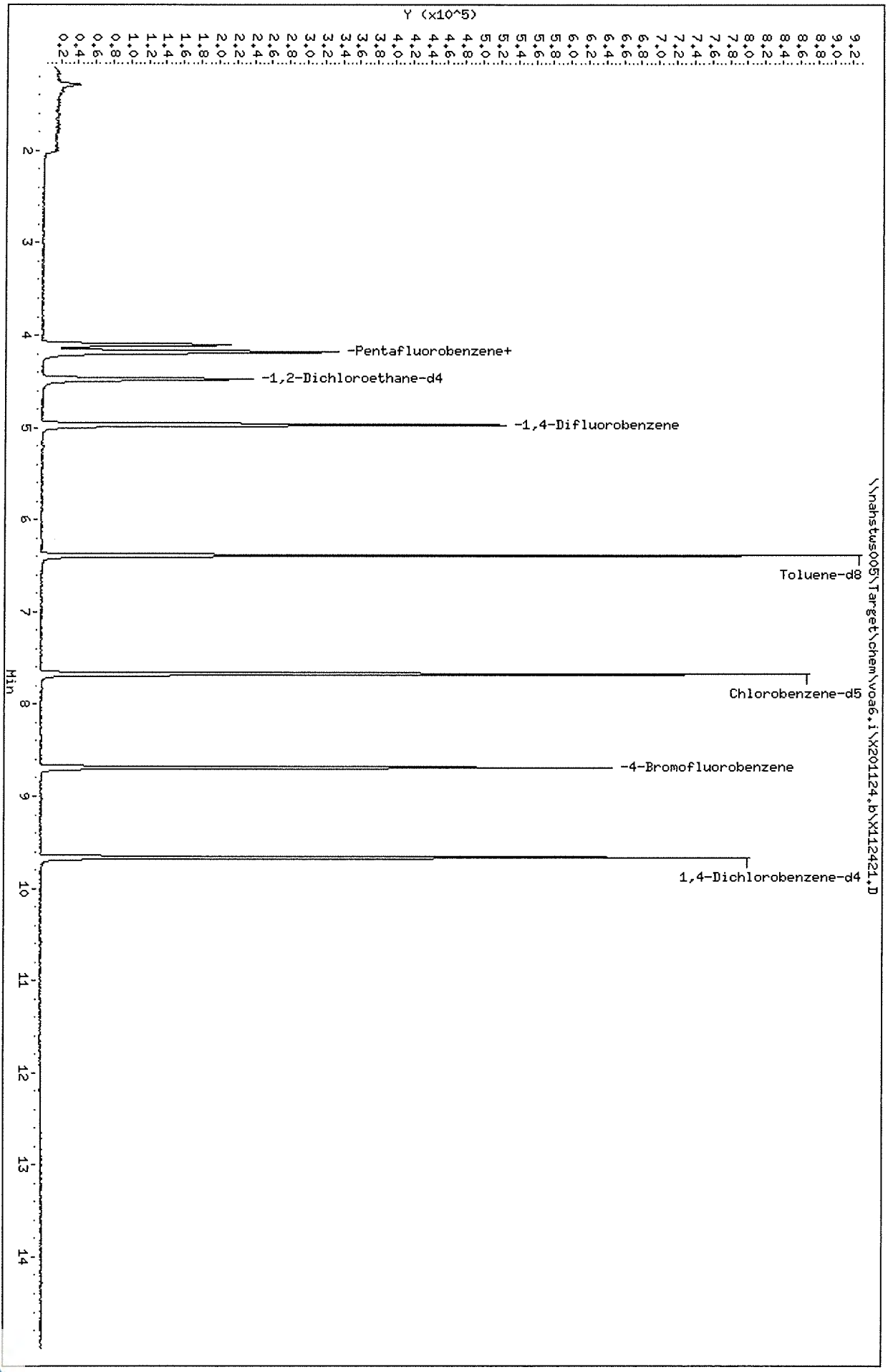
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112421.D
Lab Smp Id: HS20110674-01 Client Smp ID: HS20110674-01
Inj Date : 24-NOV-2020 17:27
Operator : PC Inst ID: voa6.i
Smp Info : HS20110674-01;HS20110674-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:08 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	236338	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	395392	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	346330	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	153640	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	168618	43.4024	43.40
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	153183	46.4995	46.49
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	137156	44.5052	44.50
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	487247	52.1330	52.13



Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112421.D
Date : 24-NOV-2020 17:27
Client ID: HS20110674-01
Sample Info: HS20110674-01;HS20110674-01;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112422.D Page 1
Report Date: 18-Dec-2020 16:19

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112422.D
Lab Smp Id: HS20110674-02 Client Smp ID: HS20110674-02
Inj Date : 24-NOV-2020 17:48
Operator : PC Inst ID: voa6.i
Smp Info : HS20110674-02;HS20110674-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:08 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

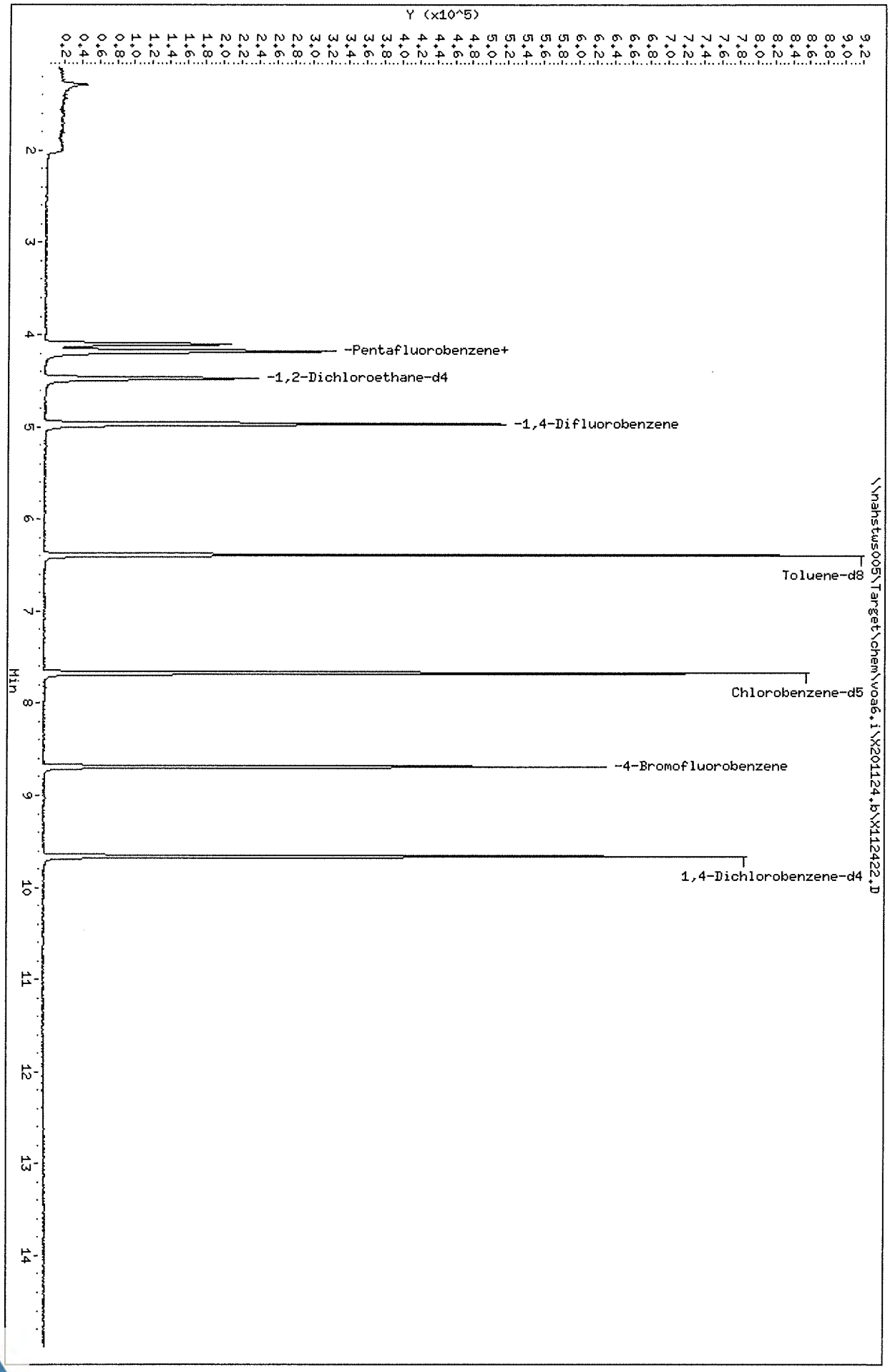
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	223459	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	395262	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	341380	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	144098	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	166774	45.3560	45.35
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	145948	44.9748	44.97
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	135089	46.3092	46.30
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	474021	51.4533	51.45

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112422.D
Date : 24-NOV-2020 17:48
Client ID: HS20110674-02
Sample Info: HS20110674-02;HS20110674-02;;;
Purge Volume: 5.0
Column phase: DB624

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



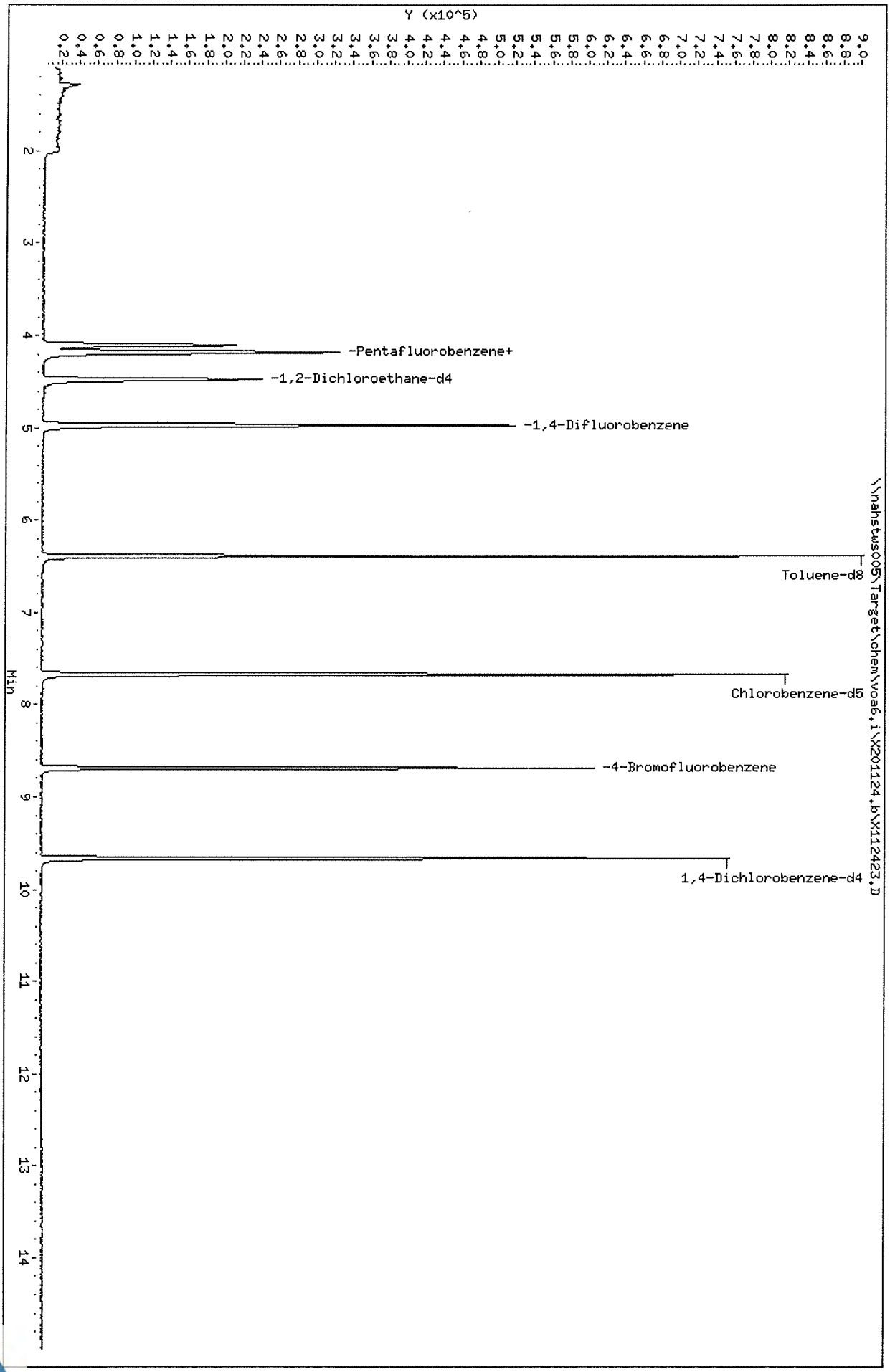
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112423.D
Lab Smp Id: HS20110674-04 Client Smp ID: HS20110674-04
Inj Date : 24-NOV-2020 18:09
Operator : PC Inst ID: voa6.i
Smp Info : HS20110674-04;HS20110674-04;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:08 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	230469	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	390849	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	340861	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	142400	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	167512	44.1975	44.19
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	140203	43.3030	43.30
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	133939	44.5665	44.56
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	472976	51.4180	51.41


Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112423.D
Date : 24-NOV-2020 18:09
Client ID: HS20110674-04
Sample Info: HS20110674-04;HS20110674-04;;;
Purge Volume: 5.0
Column phase: DB624
Instrument: voa6.i
Operator: PC
Column diameter: 0.18
Y (x10^5)
Min
-Pentafluorobenzene+
-1,2-Dichloroethane-d4
-1,4-Difluorobenzene
Toluene-d8
Chlorobenzene-d5
-4-Bromofluorobenzene
1,4-Dichlorobenzene-d4
\\nahstws005\Target\chem\voa6.i\X201124.b\X112423.D

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112423.D Page 3

Date : 24-NOV-2020 18:09

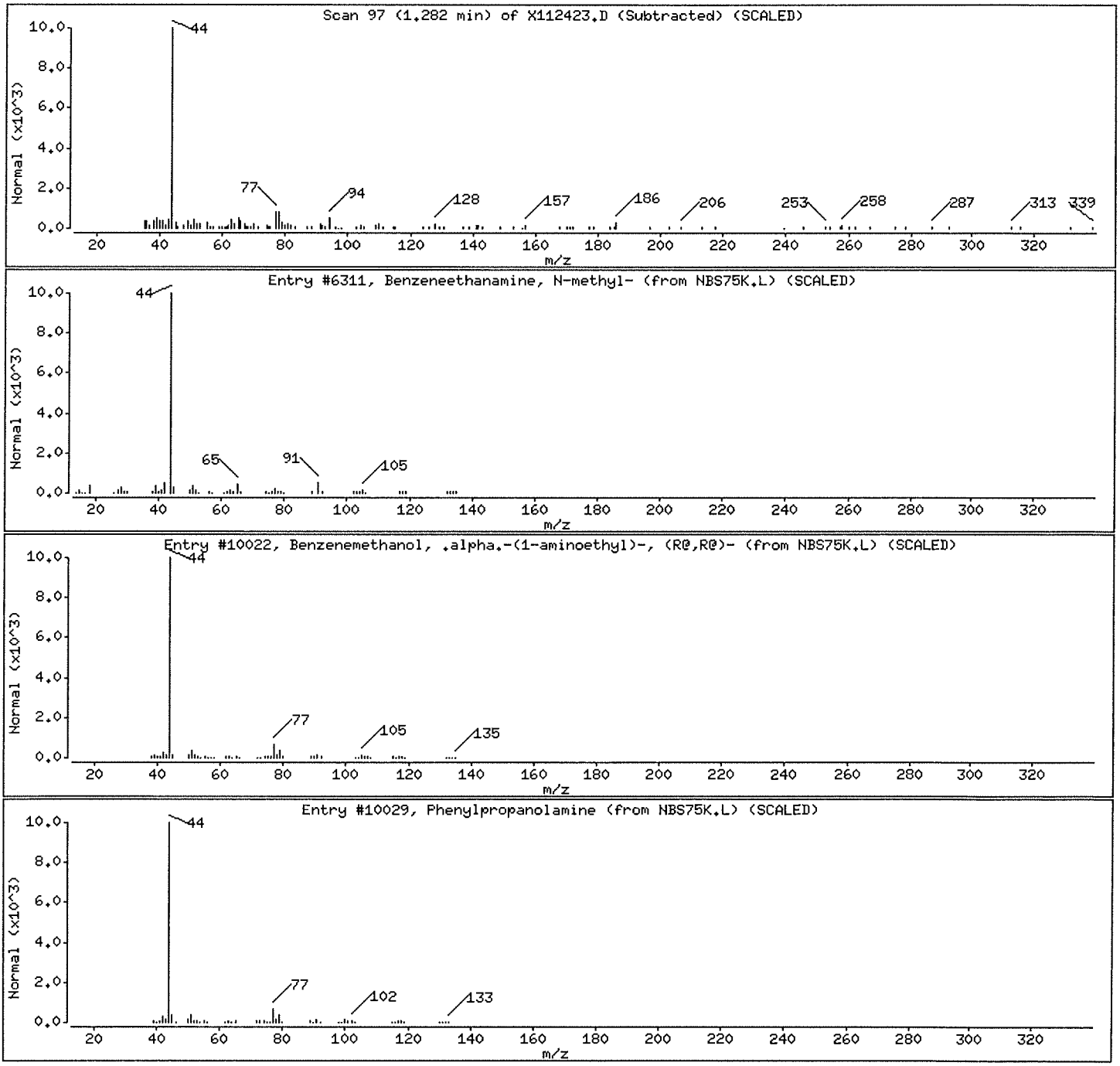
Client ID: HS20110674-04 Instrument: voa6.i

Sample Info: HS20110674-04;HS20110674-04;;;

Purge Volume: 5.0 Operator: PC

Column phase: DB624 Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzeneethanamine, N-methyl-	589-08-2	NBS75K.L	6311	42	C9H13N	135
Benzenemethanol, .alpha.-(1-aminoethyl)-	36393-56-3	NBS75K.L	10022	38	C9H13NO	151
Phenylpropanolamine	492-41-1	NBS75K.L	10029	38	C9H13NO	151



Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112424.D Page 1
Report Date: 18-Dec-2020 16:19

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112424.D
Lab Smp Id: HS20110674-05 Client Smp ID: HS20110674-05
Inj Date : 24-NOV-2020 18:30
Operator : PC Inst ID: voa6.i
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Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:08 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

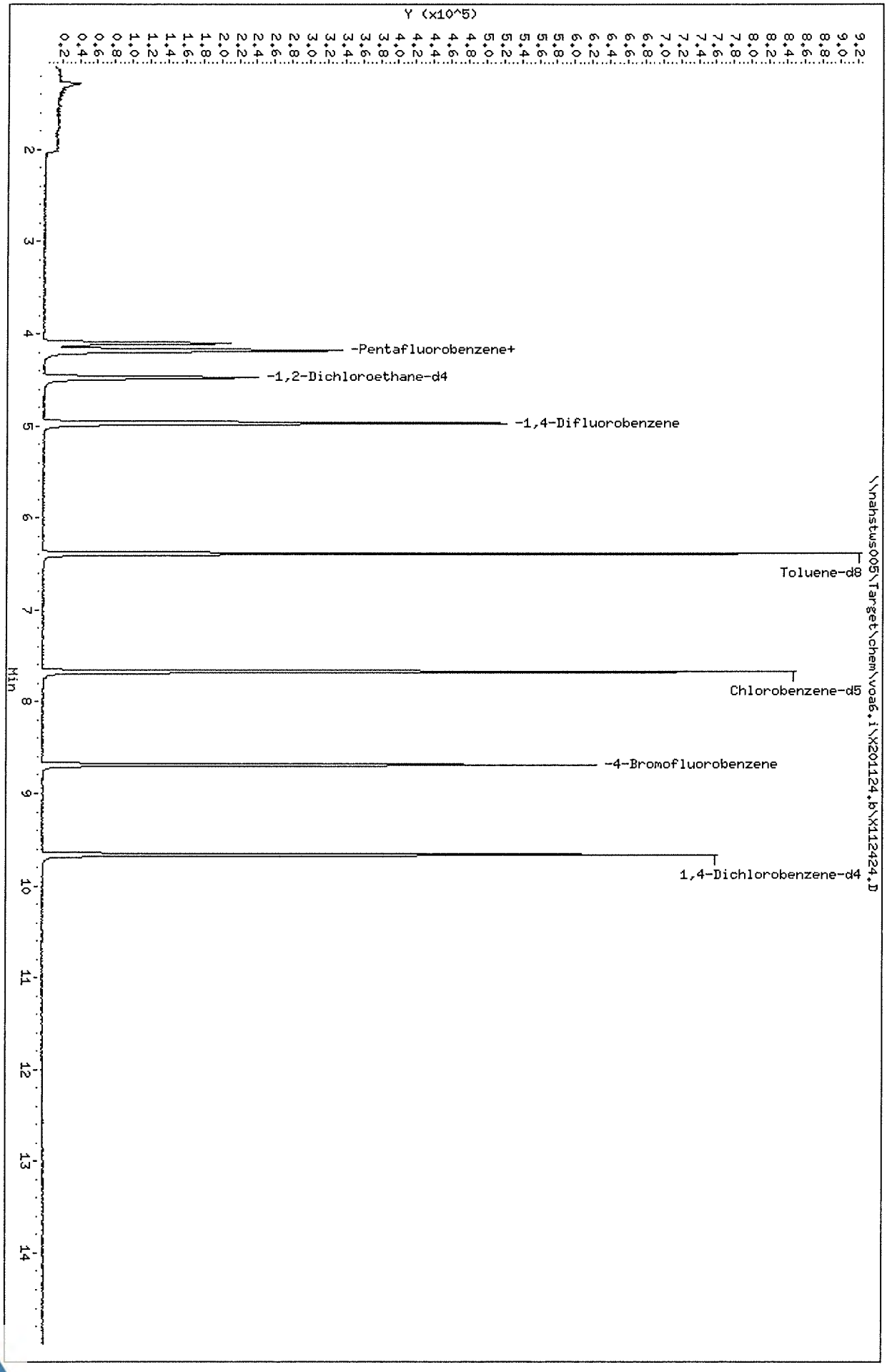
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	230652	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	393892	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	341689	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	145849	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	166341	43.8613	43.86
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	143800	44.2863	44.28
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	134883	44.8375	44.83
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	482818	52.3608	52.36

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112424.D
Date : 24-NOV-2020 18:30
Client ID: HS20110674-05
Sample Info: HS20110674-05;HS20110674-05;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112425.D Page 1
Report Date: 18-Dec-2020 16:19

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112425.D
Lab Smp Id: HS20110674-06 Client Smp ID: HS20110674-06
Inj Date : 24-NOV-2020 18:51
Operator : PC Inst ID: voa6.i
Smp Info : HS20110674-06;HS20110674-06;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:08 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

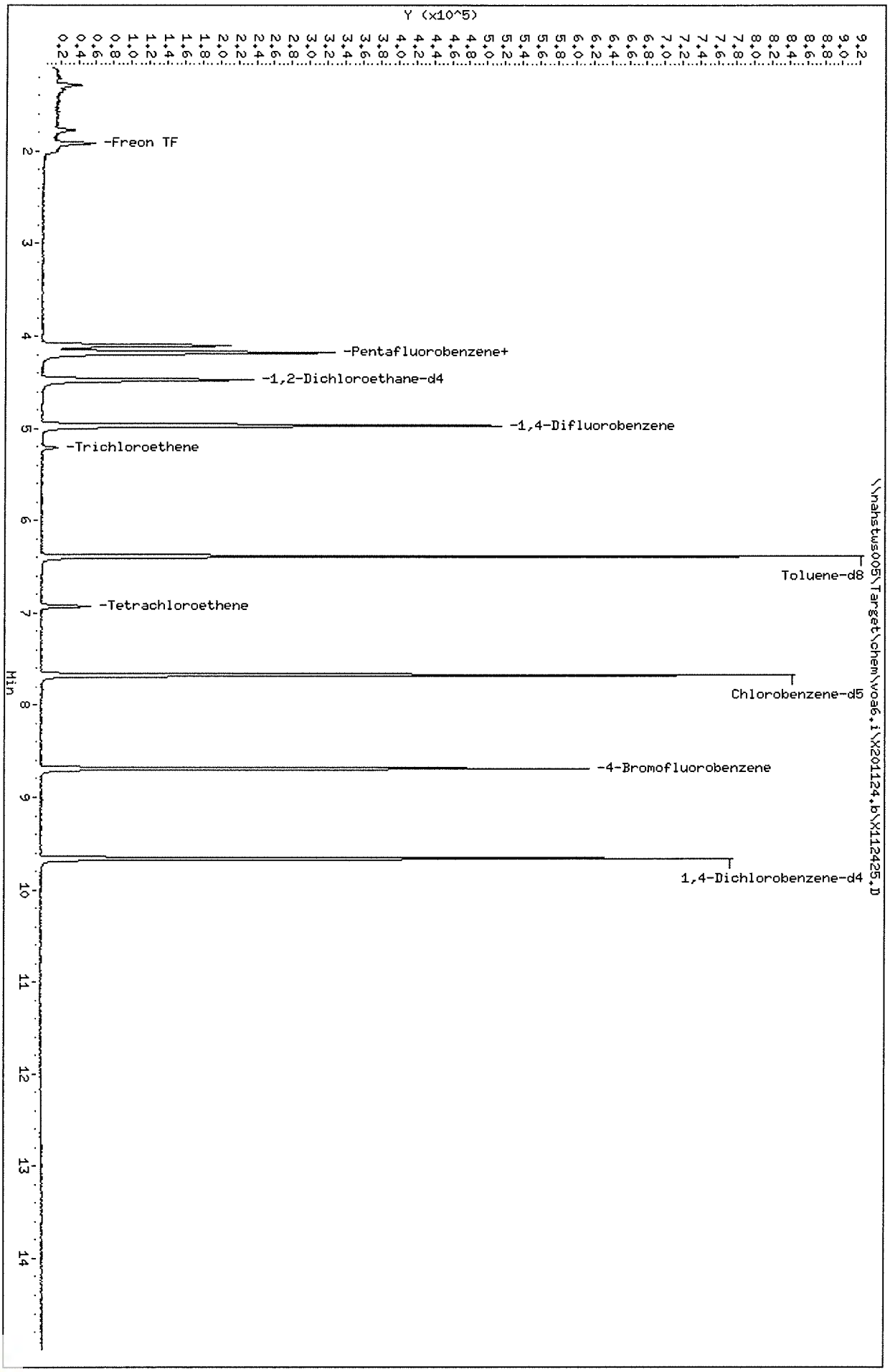
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	230167	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	396073	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	336881	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	146175	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	162235	42.8904	42.89
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	149295	46.5887	46.58
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	137822	45.8814	45.88
$	48 Toluene-d8	98	6.388	6.388	(0.833)	475557	52.3094	52.30
	138 Freon TF	101	1.919	1.919	(0.459)	15869	3.69661	3.69(a)
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	9138	4.39953	4.39(a)
	38 Trichloroethene	130	5.214	5.206	(1.049)	4976	1.80606	1.80(a)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112425.D
Date : 24-NOV-2020 18:51
Client ID: HS20110674-06
Sample Info: HS20110674-06;HS20110674-06;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112425.D

Date : 24-NOV-2020 18:51

Client ID: HS20110674-06

Instrument: voa6.i

Sample Info: HS20110674-06;HS20110674-06;;;

Purge Volume: 5.0

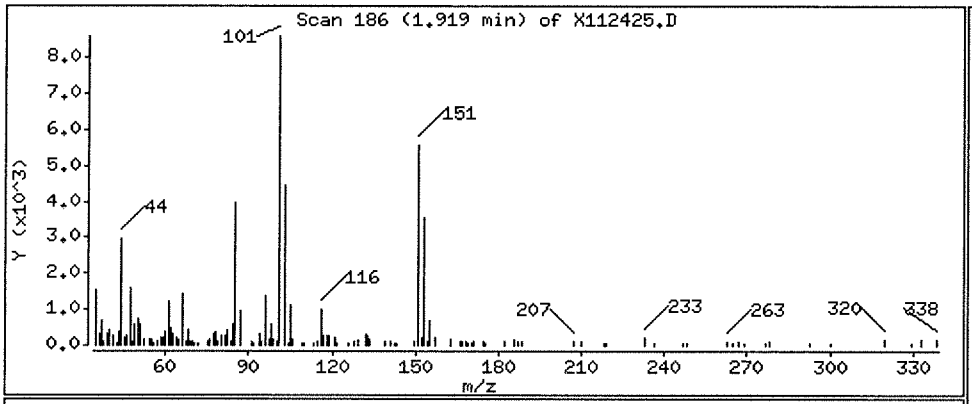
Operator: PC

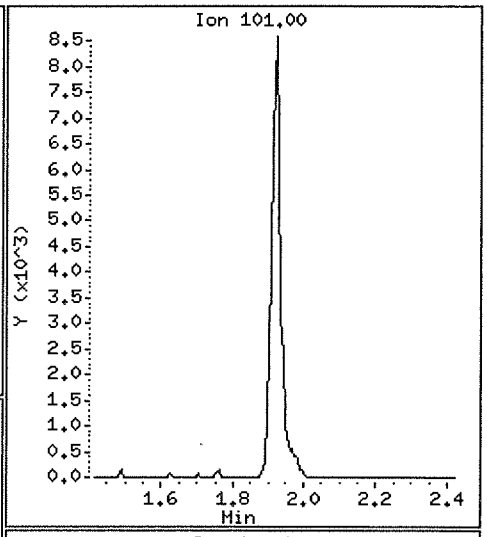
Column phase: DB624

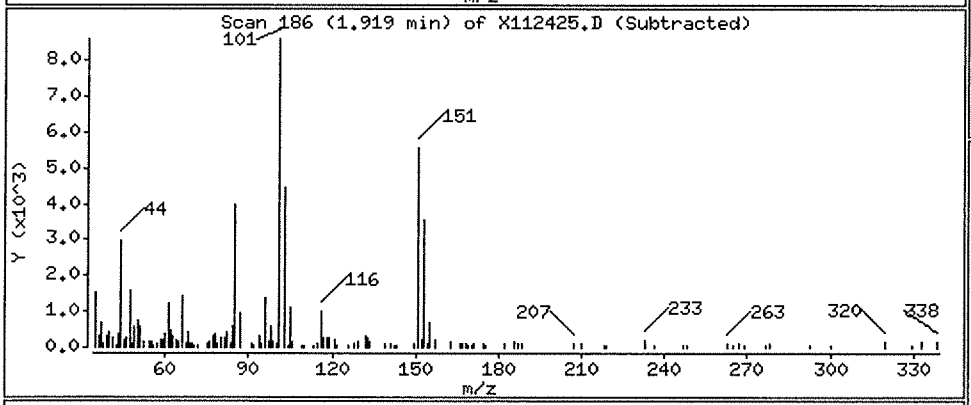
Column diameter: 0.18

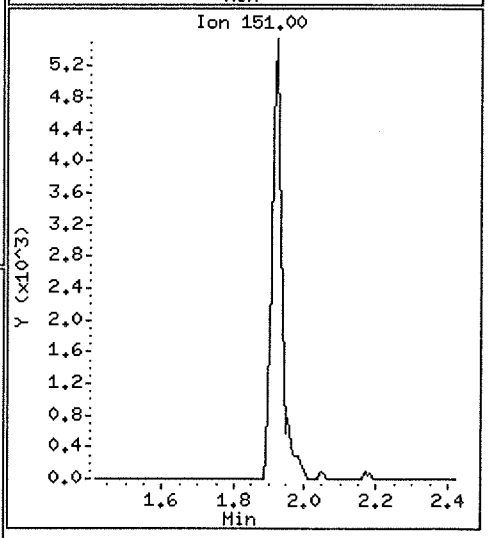
138 Freon TF

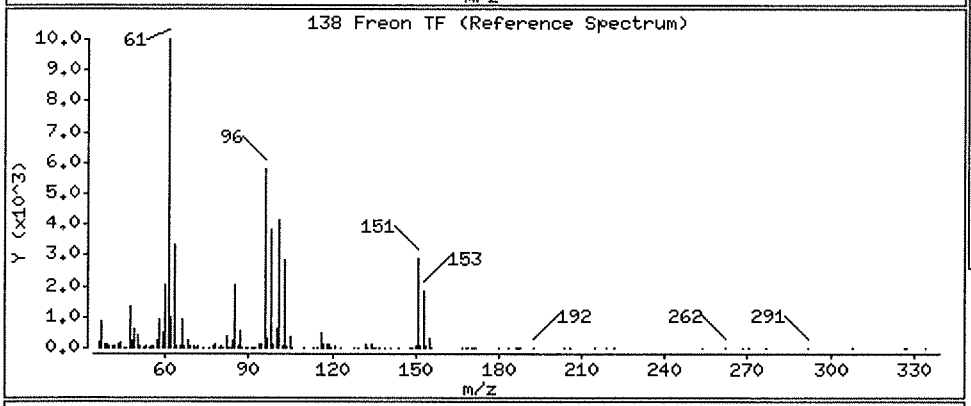
Concentration: 3.69 ug/l

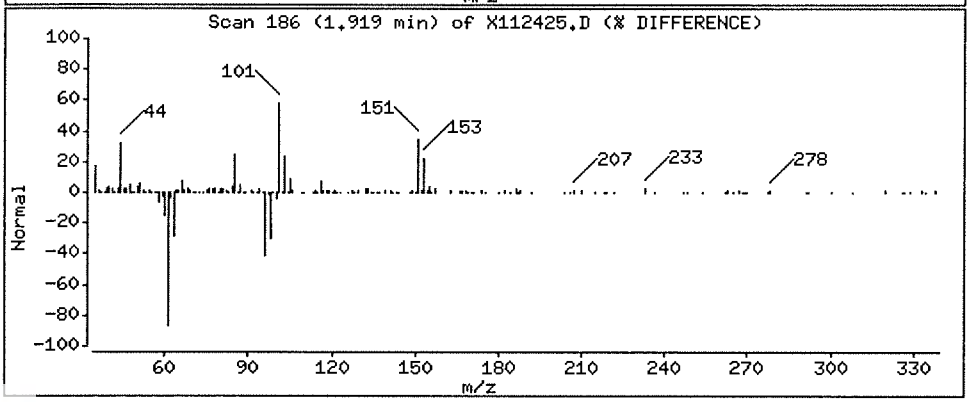












Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112425.D

Date : 24-NOV-2020 18:51

Client ID: HS20110674-06

Instrument: voa6.i

Sample Info: HS20110674-06;HS20110674-06;;;

Purge Volume: 5.0

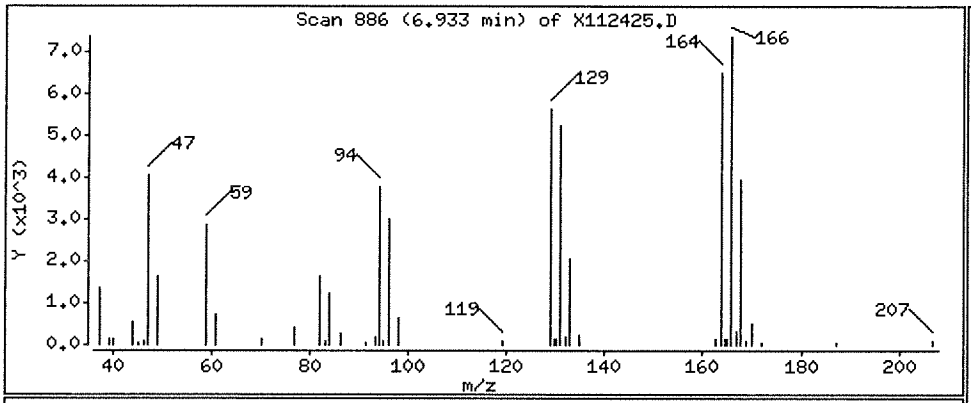
Operator: PC

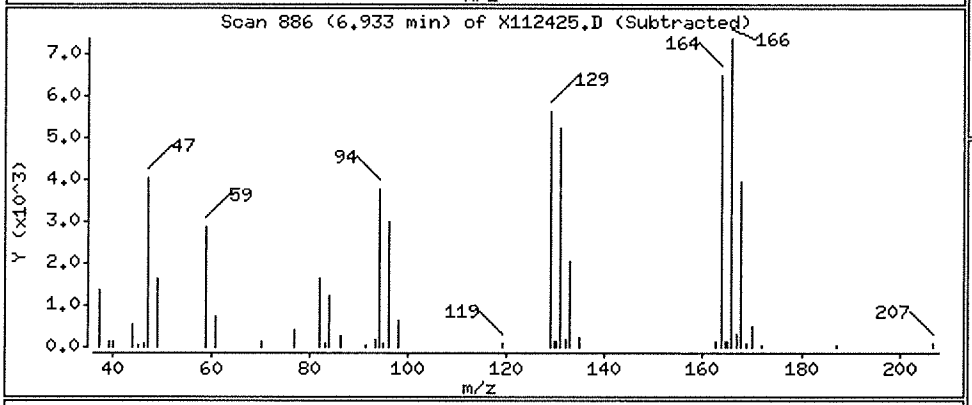
Column phase: DB624

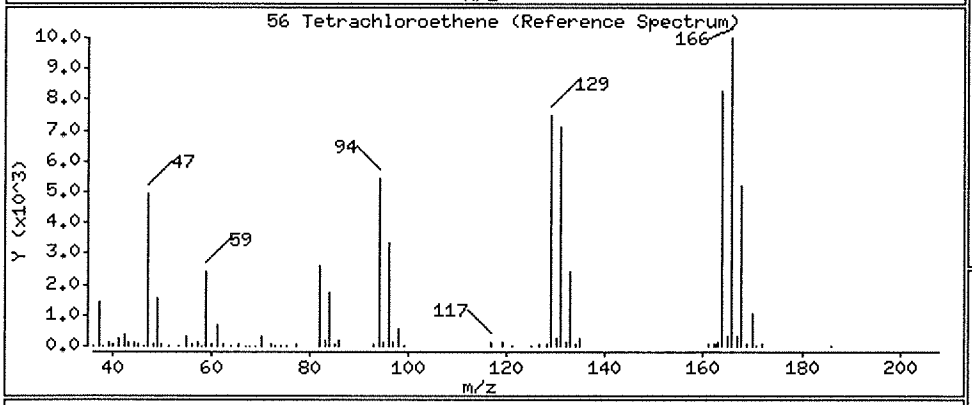
Column diameter: 0.18

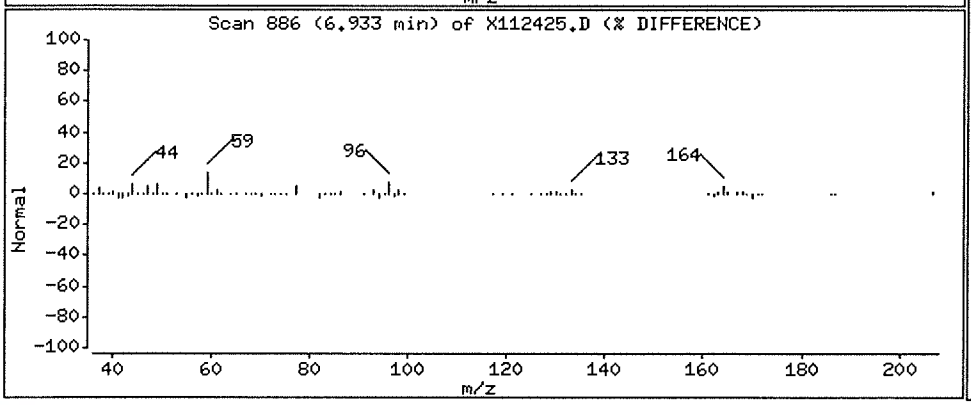
56 Tetrachloroethene

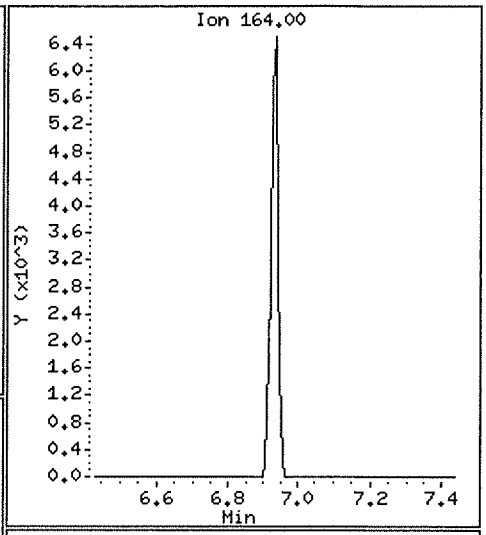
Concentration: 4.39 ug/l

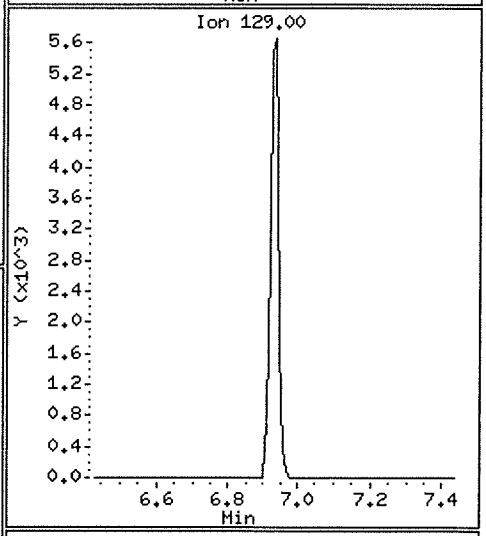


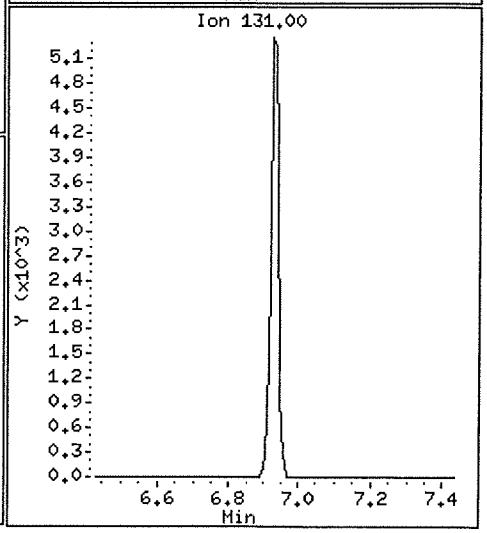












Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112425.D

Date : 24-NOV-2020 18:51

Client ID: HS20110674-06

Instrument: voa6.i

Sample Info: HS20110674-06;HS20110674-06;;;

Purge Volume: 5.0

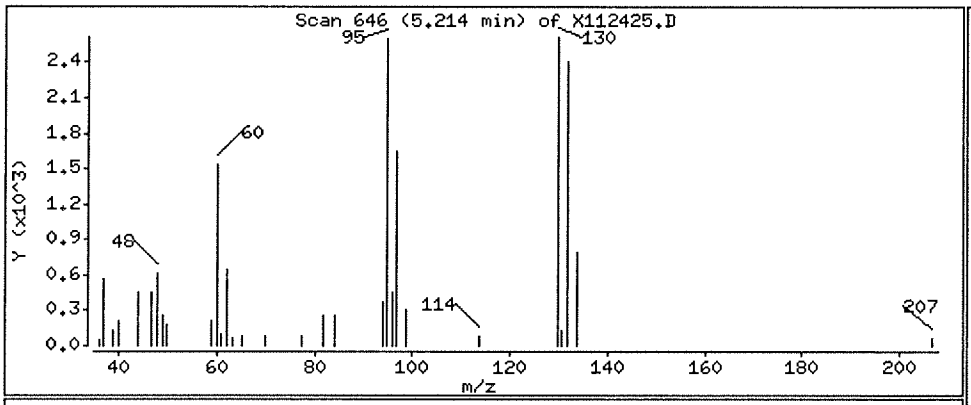
Operator: PC

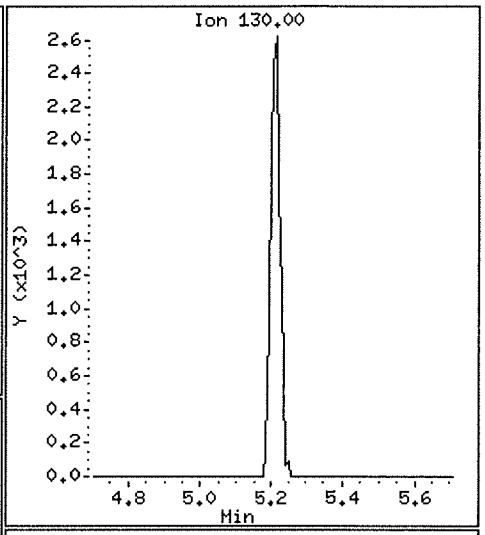
Column phase: DB624

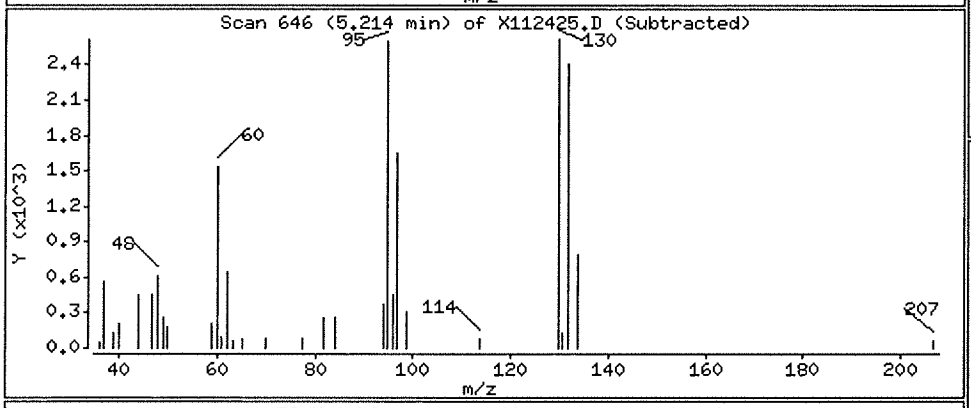
Column diameter: 0.18

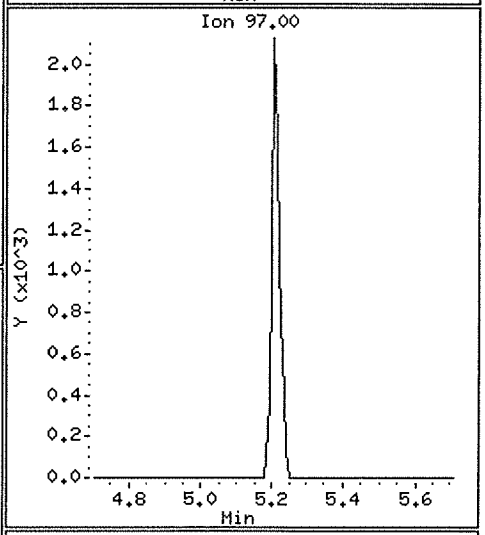
38 Trichloroethene

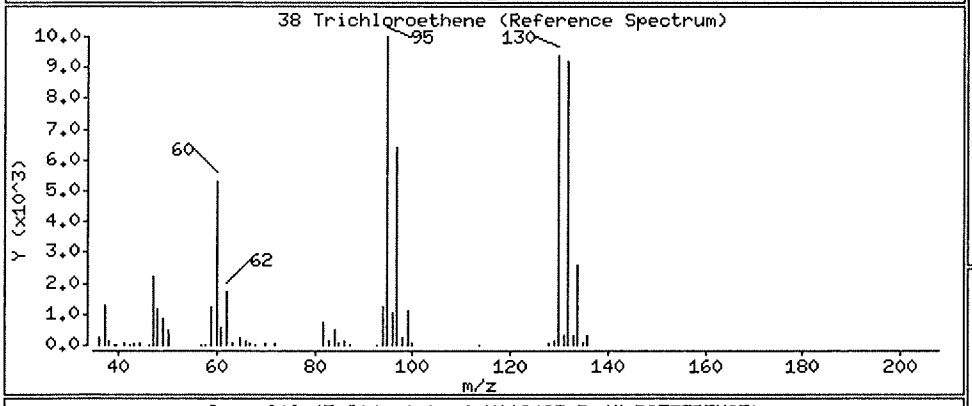
Concentration: 1.80 ug/l

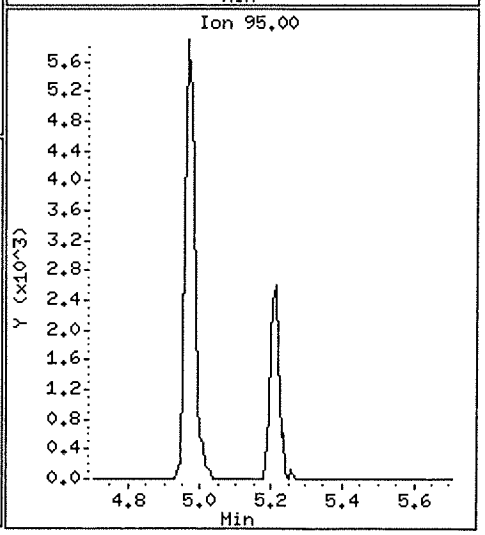


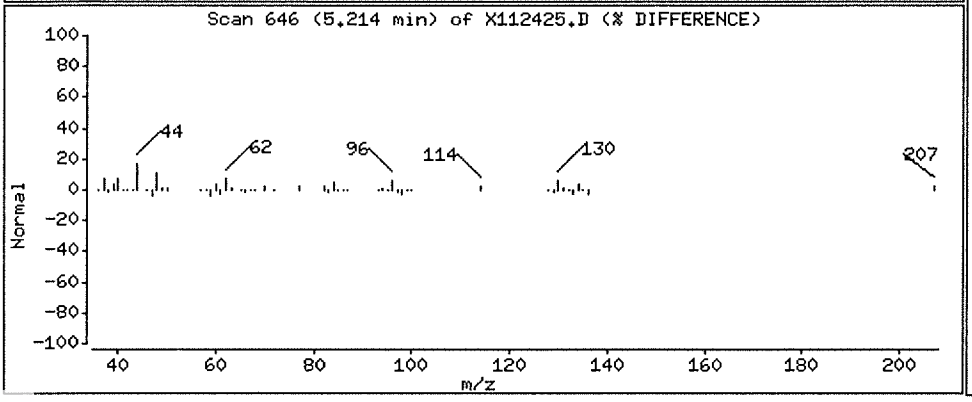












ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112426.D
Lab Smp Id: HS20110674-07 Client Smp ID: HS20110674-07
Inj Date : 24-NOV-2020 19:12
Operator : PC Inst ID: voa6.i
Smp Info : HS20110674-07;HS20110674-07;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:08 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

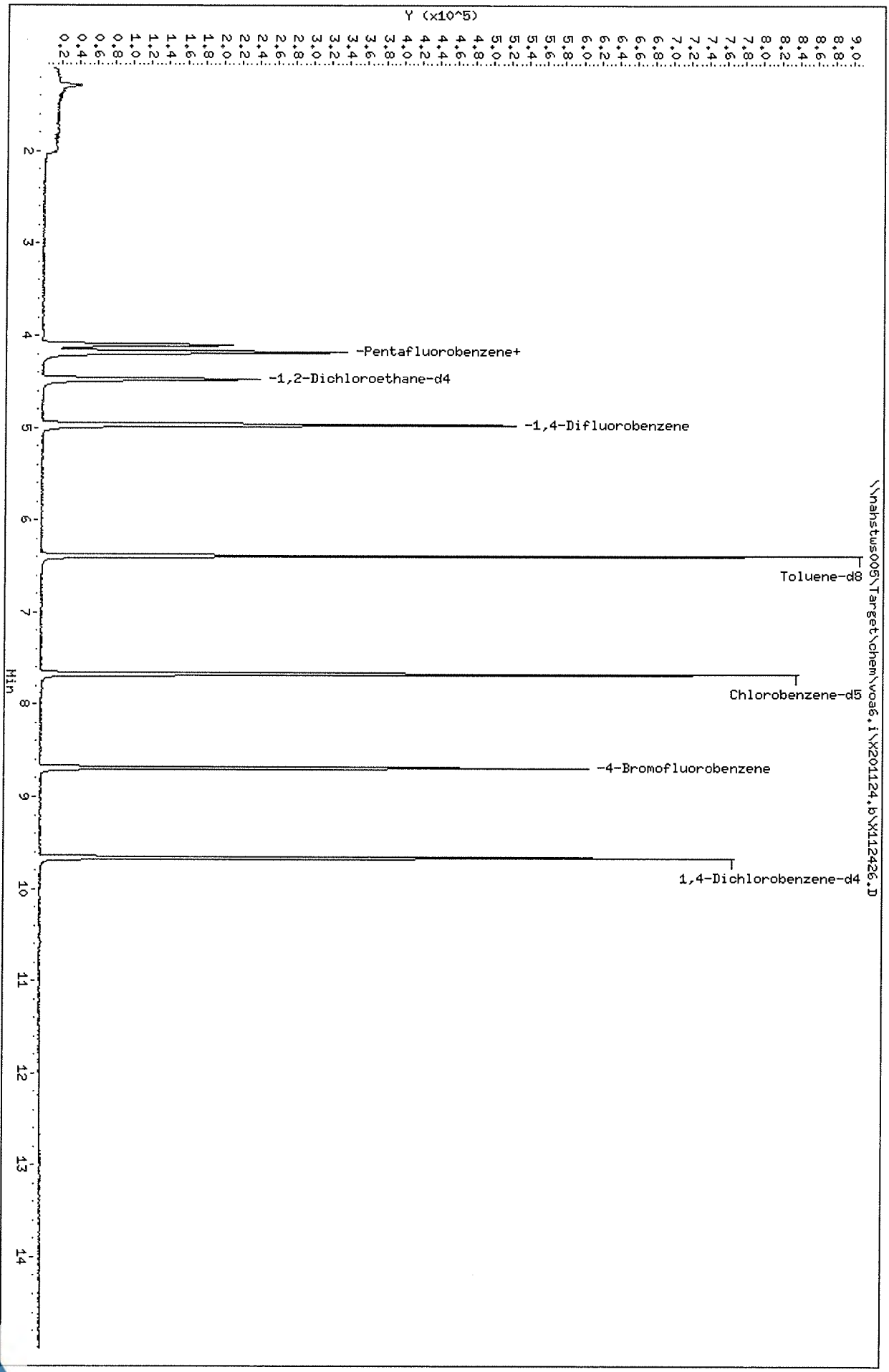
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	236154	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	398332	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	341850	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	140386	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	169259	43.5969	43.59
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	141229	43.4899	43.48
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	133050	43.2397	43.23
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	478442	51.8617	51.86

Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112426.D
Date : 24-NOV-2020 19:12
Client ID: HS20110674-07
Sample Info: HS20110674-07;HS20110674-07;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201124.b\X112431.D Page 1
Report Date: 18-Dec-2020 16:43

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201124.b\X112431.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 24-NOV-2020 20:58
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\X201124.b\8260W.m
Meth Date : 18-Dec-2020 16:43 voa6.i Quant Type: ISTD
Cal Date : 22-NOV-2020 18:09 Cal File: Y112208.D
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

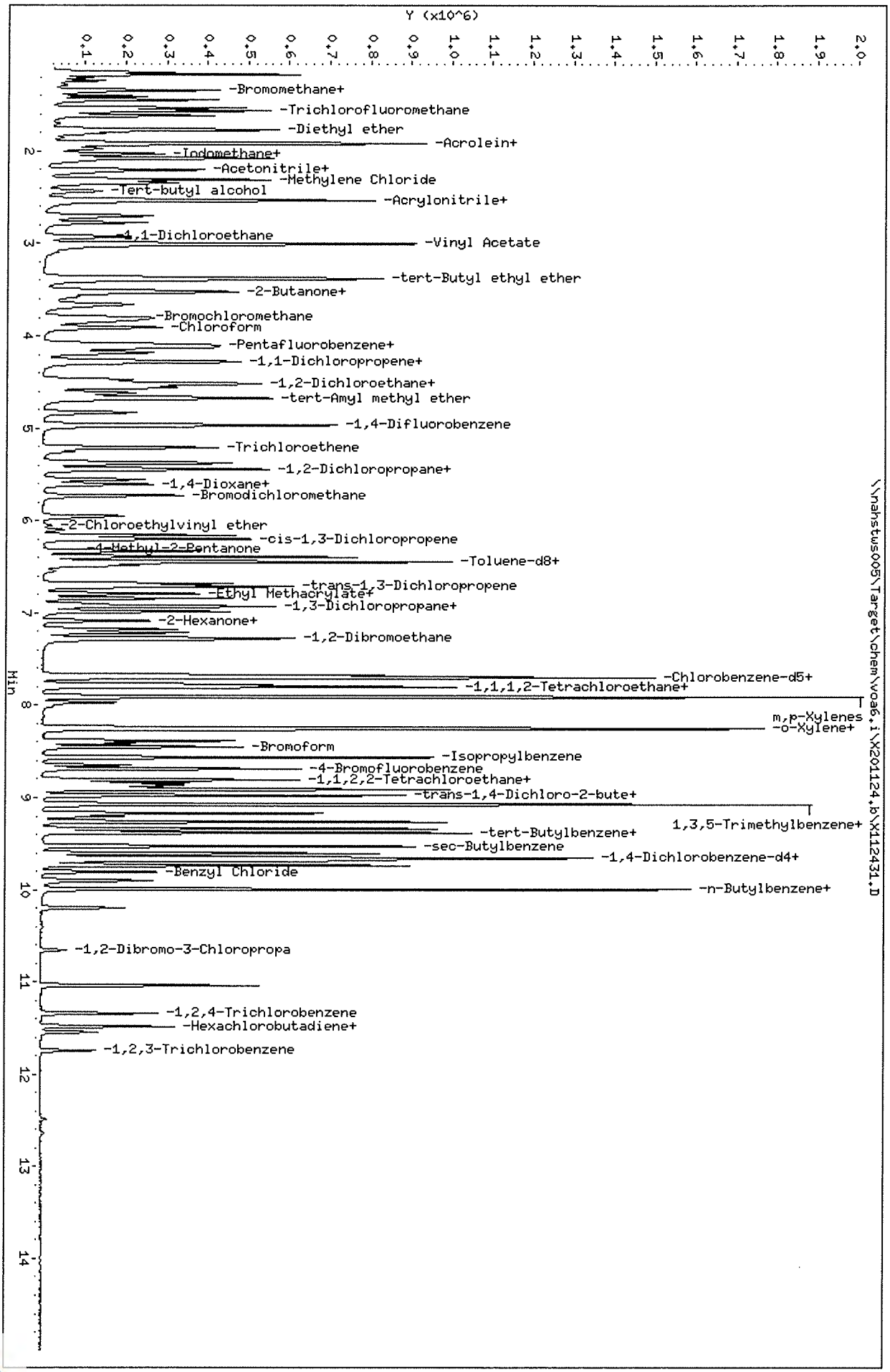
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	178876	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	325230	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	307247	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	152480	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	153600	50.0000	52.00
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	144527	50.0000	49.39
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	122150	50.0000	52.11
$	48 Toluene-d8	98	6.388	6.388	(0.833)	407542	50.0000	49.15
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	106231	50.0000	46.01
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	189558	50.0000	52.14
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	134991	50.0000	50.60
	138 Freon TF	101	1.919	1.919	(0.459)	156037	50.0000	46.77
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	96993	50.0000	48.04
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	214036	50.0000	49.60
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	167142	50.0000	48.18
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	159301	50.0000	49.25
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	27981	50.0000	50.99
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	108987	50.0000	47.38(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	60378	50.0000	52.55
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	421779	50.0000	48.99
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	9108	50.0000	49.01
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	116546	50.0000	49.61

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	206650	50.0000	47.89
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	193078	50.0000	54.03
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	125281	50.0000	48.28
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	418235	50.0000	46.24
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	222584	50.0000	48.53
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	192780	50.0000	50.89
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	225305	50.0000	48.54
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	167386	50.0000	44.13
24	2-Butanone	43	3.581	3.581	(0.856)	89062	100.000	104.10
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	349742	50.0000	46.87
52	2-Hexanone	43	7.083	7.083	(0.923)	149583	100.000	94.84
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	427570	50.0000	46.83
82	p-Isopropyltoluene	119	9.648	9.648	(0.999)	418546	50.0000	46.51
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	230985	100.000	97.76
10	Acetone	43	1.976	1.976	(0.473)	108529	100.000	107.28
37	Benzene	78	4.512	4.512	(0.908)	454787	50.0000	51.19
74	Bromobenzene	156	8.810	8.810	(0.912)	128891	50.0000	50.03
29	Bromochloromethane	128	3.795	3.795	(0.908)	65154	50.0000	51.55
39	Bromodichloromethane	83	5.729	5.729	(1.153)	177760	50.0000	51.60
66	Bromoform	173	8.408	8.408	(1.096)	69674	50.0000	47.21
6	Bromomethane	94	1.339	1.339	(0.320)	163414	50.0000	46.81
19	Carbon Disulfide	76	2.069	2.069	(0.495)	626851	100.000	93.98
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	144212	50.0000	51.42
59	Chlorobenzene	112	7.692	7.692	(1.003)	326150	50.0000	49.65
7	Chloroethane	64	1.403	1.403	(0.336)	132617	50.0000	47.84
28	Chloroform	83	3.910	3.910	(0.935)	234200	50.0000	50.06
3	Chloromethane	50	1.081	1.081	(0.258)	152840	50.0000	46.53
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	133366	50.0000	50.95
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	211660	50.0000	51.30
55	Dibromochloromethane	129	7.176	7.176	(0.936)	122597	50.0000	51.46
44	Dibromomethane	93	5.558	5.558	(1.118)	86559	50.0000	50.92
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	136503	50.0000	46.50
61	Ethylbenzene	106	7.800	7.800	(1.017)	160244	50.0000	48.38
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	38909	50.0000	49.67
67	Isopropylbenzene	105	8.566	8.566	(1.117)	497550	50.0000	49.78
62	m,p-Xylenes	106	7.907	7.907	(1.031)	428813	100.000	89.20
17	Methylene Chloride	84	2.306	2.306	(0.551)	120270	50.0000	48.95
87	n-Butylbenzene	91	9.991	9.991	(1.034)	402162	50.0000	43.35
73	n-Propylbenzene	91	8.910	8.910	(0.922)	603938	50.0000	47.34
92	Naphthalene	128	11.539	11.539	(1.194)	88332	50.0000	52.95
63	o-Xylene	106	8.244	8.244	(1.075)	202211	50.0000	45.06
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	497363	50.0000	46.72
64	Styrene	104	8.258	8.258	(1.077)	356626	50.0000	50.05
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	350265	50.0000	49.55
56	Tetrachloroethene	164	6.933	6.933	(0.904)	92288	50.0000	48.71
50	Toluene	91	6.446	6.446	(0.840)	484818	50.0000	48.88
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	109080	50.0000	49.46
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	178112	50.0000	50.15
38	Trichloroethene	130	5.207	5.207	(1.048)	118139	50.0000	52.21
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	320076	50.0000	47.61
5	Vinyl Chloride	62	1.145	1.145	(0.274)	206996	50.0000	48.09

QC Flag Legend

M - Compound response manually integrated.

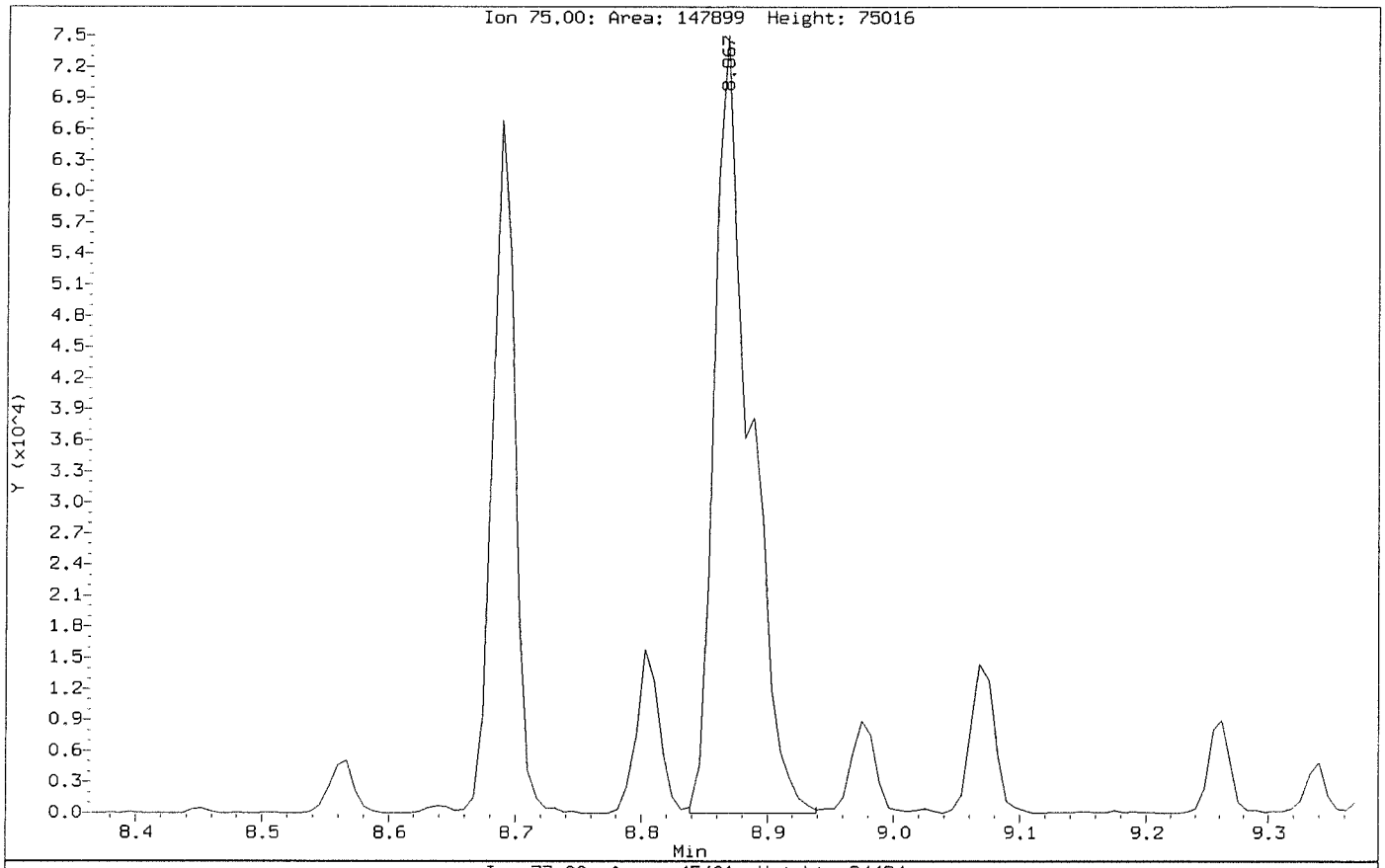


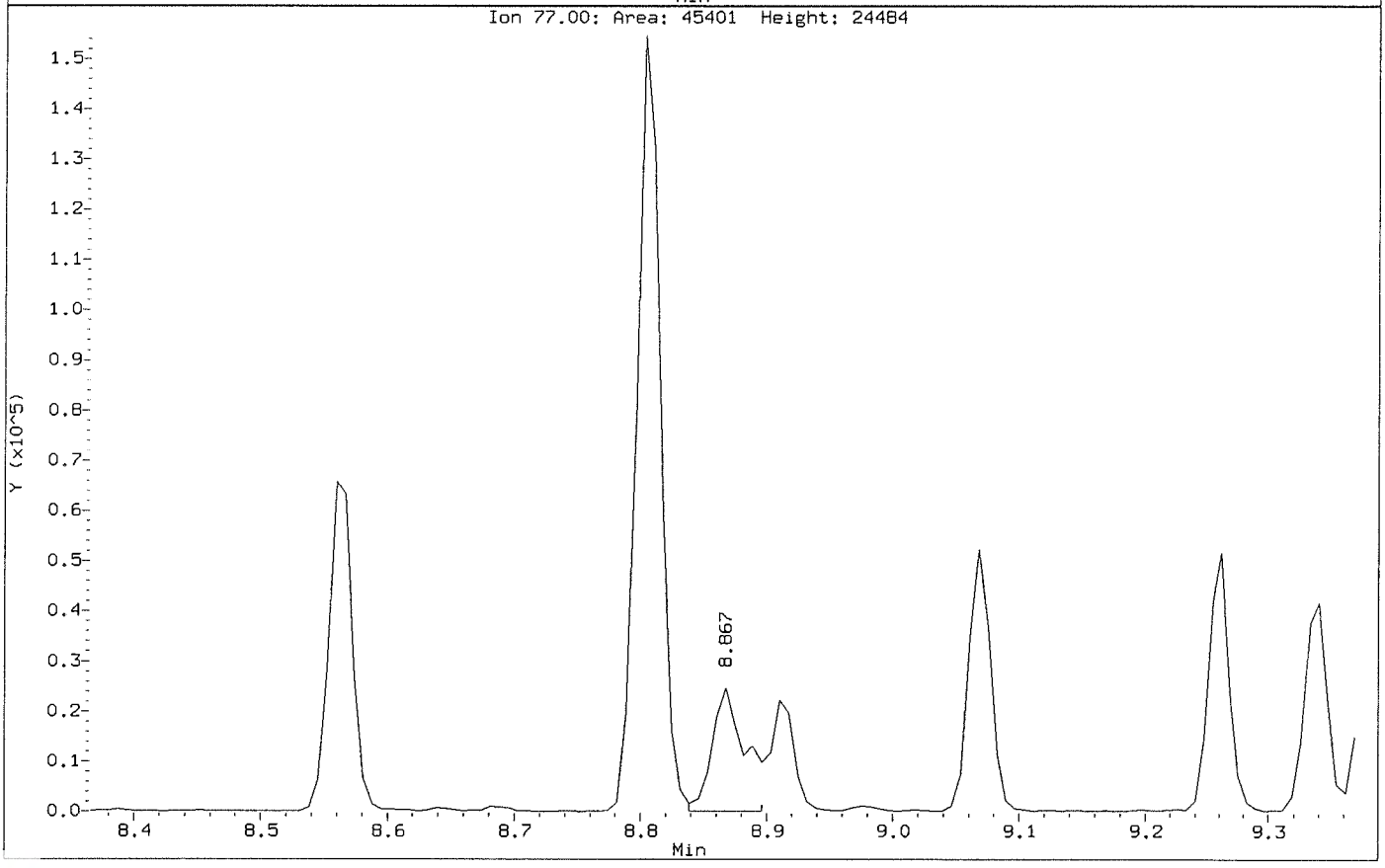
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Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

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

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Instrument: voa6.i
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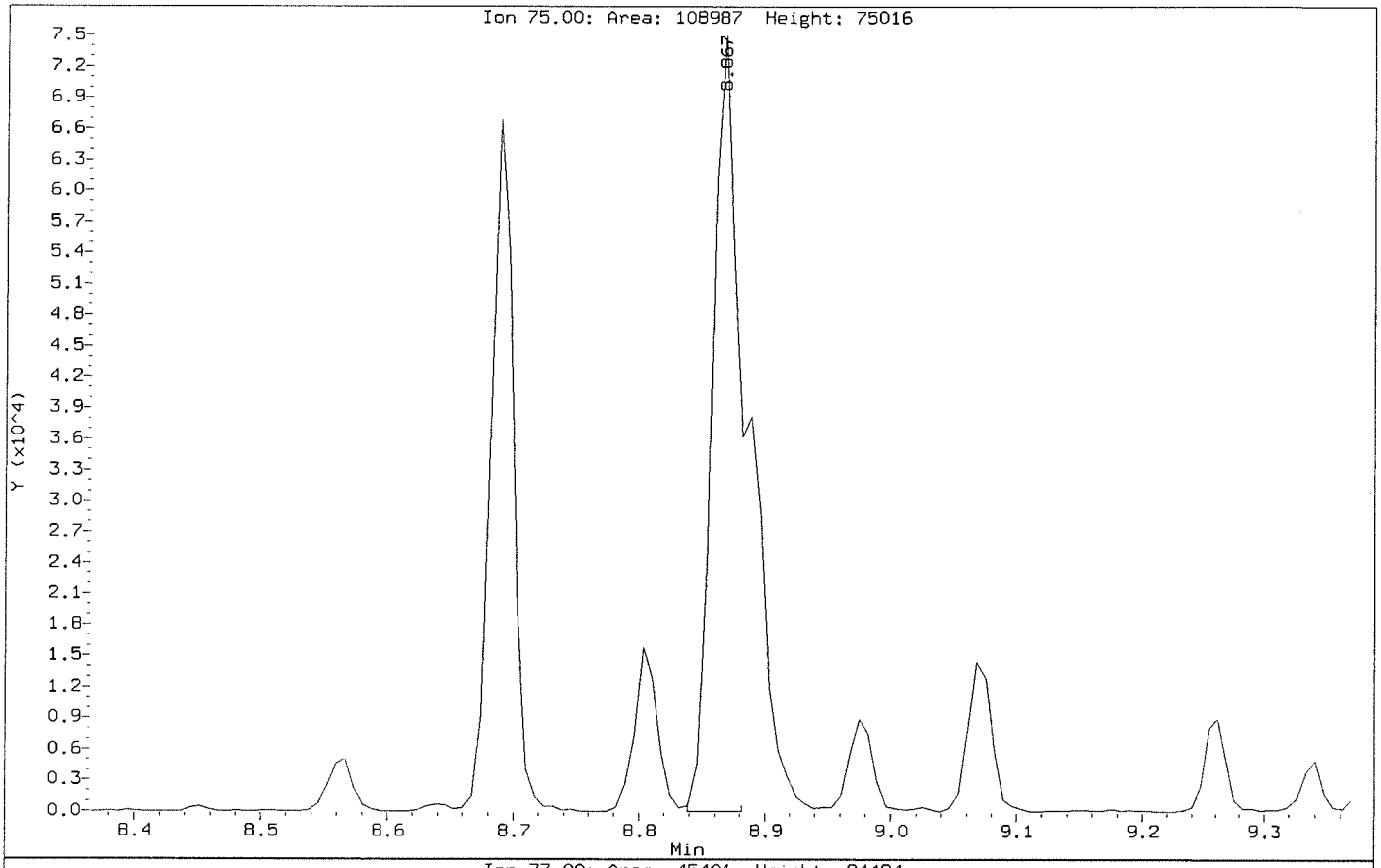
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CAS Number: 96-18-4

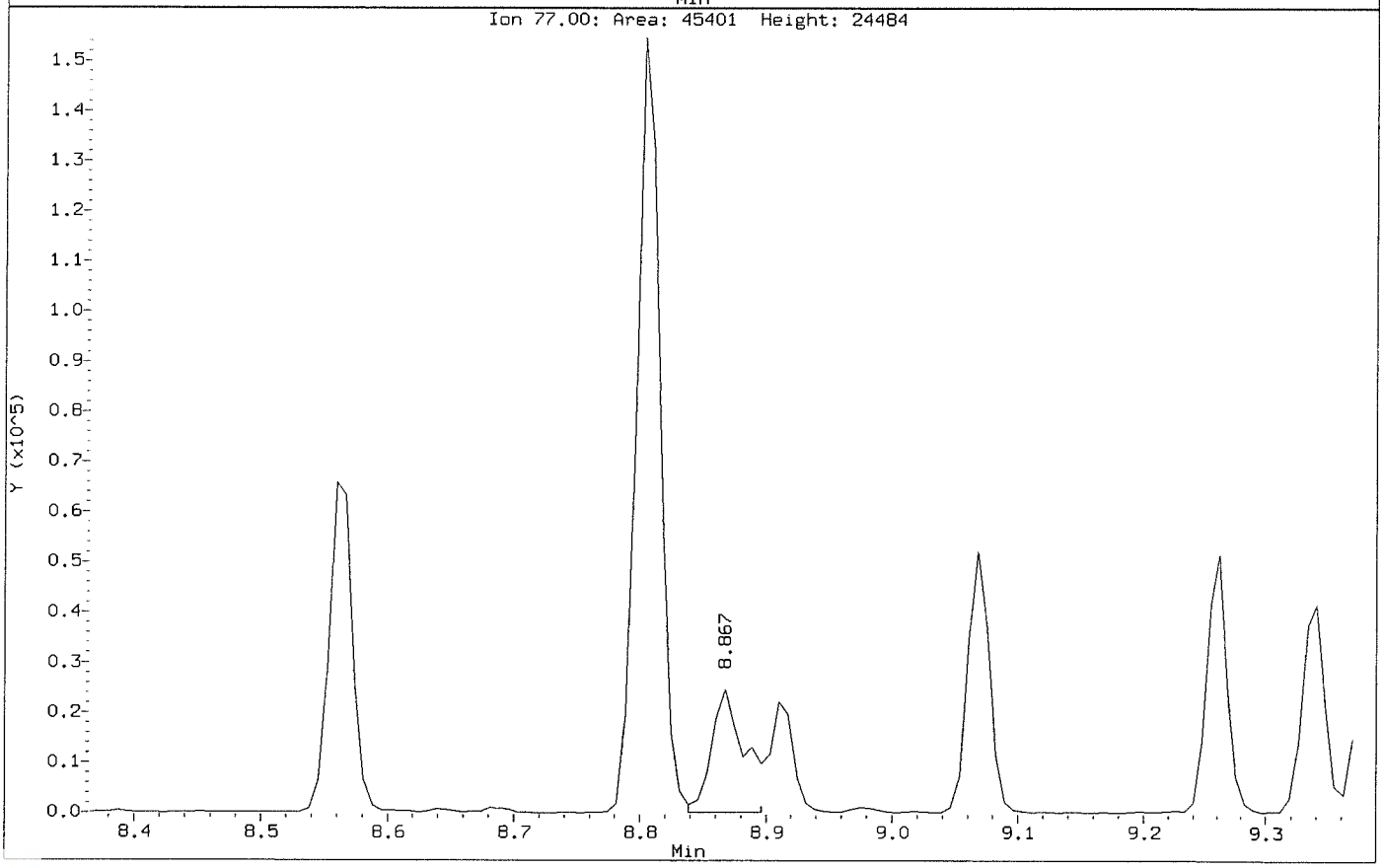




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Instrument: voa6.i
Client Sample ID: CCV-END

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

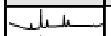
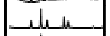
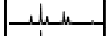
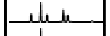
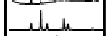
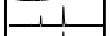
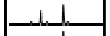
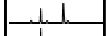




HS20110674 Wet Chem Raw Data (9056_anions_W)

ALS WO# HS20110674

Sequence: 111220
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method	me	Status
	STD1		Calibration	BE1	1.00	1	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD2		Calibration	BE2	1.00	2	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD3		Calibration	BE3	1.00	3	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD4		Calibration	BE4	1.00	4	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD5		Calibration	BE5	1.00	5	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	STD6		Calibration	BE6	1.00	6	Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	ICV		Unknown	BE7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	ICB		Unknown	BE8	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20110674-01		Unknown	GE3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20110674-02		Unknown	GE4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20110674-03		Unknown	GE5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20110671-12		Unknown	RB3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20110671-12MS		Unknown	RB7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20110671-12MSD		Unknown	RB8	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
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	HS20110674-03MS		Unknown	BC1	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20110674-03MSD		Unknown	BC2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV		Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
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	CCB		Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	MBLK-111220		Unknown	BA7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	LCS-111220		Unknown	BA8	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCV1		Unknown	BA4	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	CCB		Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished

Sequence: 111220
Last Update Operator: alshs.nouser

Inject Time
11/7/2020 12:52:05 PM -06:00
11/7/2020 1:10:04 PM -06:00
11/7/2020 1:28:04 PM -06:00
11/7/2020 1:46:04 PM -06:00
11/7/2020 2:04:05 PM -06:00
11/7/2020 2:22:05 PM -06:00
11/7/2020 2:40:04 PM -06:00
11/7/2020 2:58:04 PM -06:00
11/13/2020 10:52:56 AM -06:00
11/13/2020 11:11:01 AM -06:00
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11/13/2020 1:53:54 PM -06:00
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11/13/2020 8:49:29 PM -06:00
11/13/2020 9:07:37 PM -06:00
11/13/2020 10:19:45 PM -06:00
11/13/2020 10:37:45 PM -06:00
11/13/2020 11:32:01 PM -06:00
11/13/2020 11:50:01 PM -06:00
11/14/2020 6:45:04 AM -06:00
11/14/2020 7:03:11 AM -06:00
11/14/2020 9:27:36 AM -06:00
11/14/2020 9:45:36 AM -06:00
11/14/2020 10:03:42 AM -06:00
11/14/2020 10:21:43 AM -06:00
11/15/2020 8:56:02 AM -06:00
11/15/2020 9:14:03 AM -06:00
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11/15/2020 12:50:41 PM -06:00

Sequence: 111220
Injection #6: STD6

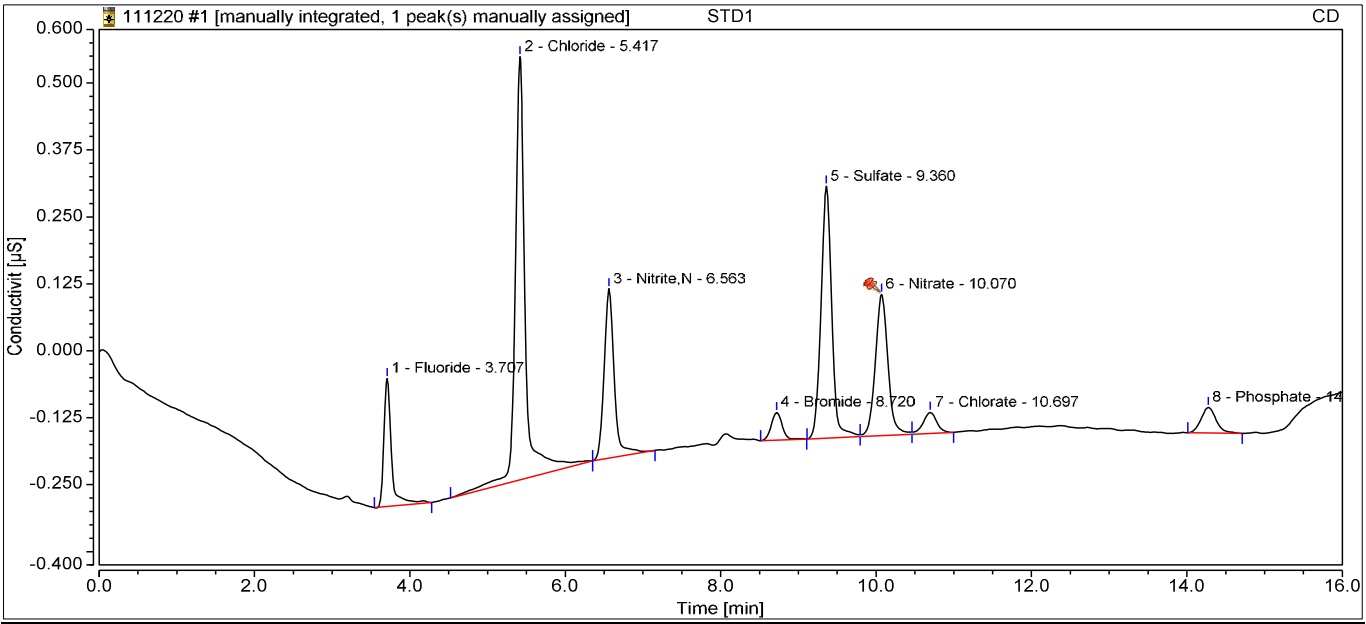
Calibration

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/A***	***Area***	***6***	***12.0978***	***0.99928***	***-0.0051***	***0.3357***	***0.0000***
2	Chloride	Lin, WithOffset, 1/A	Area	6	12.3068	0.99920	-0.0015	0.2206	0.0000
3	Nitrite,N	Lin, WithOffset, 1/A	Area	6	11.7649	0.99922	0.0073	0.4620	0.0000
5	Bromide	Lin, WithOffset, 1/A	Area	6	20.1069	0.99803	-0.0017	0.0918	0.0000
6	Sulfate	Lin, WithOffset, 1/A	Area	6	9.9698	0.99950	-0.0100	0.1628	0.0000
7	Nitrate	Lin, WithOffset, 1/A	Area	6	14.1002	0.99903	-0.0103	0.5494	0.0000
8	Chlorate	Lin, WithOffset, 1/A	Area	6	19.2245	0.99828	-0.0026	0.0930	0.0000
9	Phosphate	Lin, WithOffset, 1/A	Area	6	28.2447	0.99719	-0.0176	0.2145	0.0000
Maximum					**28.2447**	0.99950			
Minimum					9.9698	**0.99719**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**BE1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 12:52**	*Sample Weight:*	**1.0000**

Run Time:

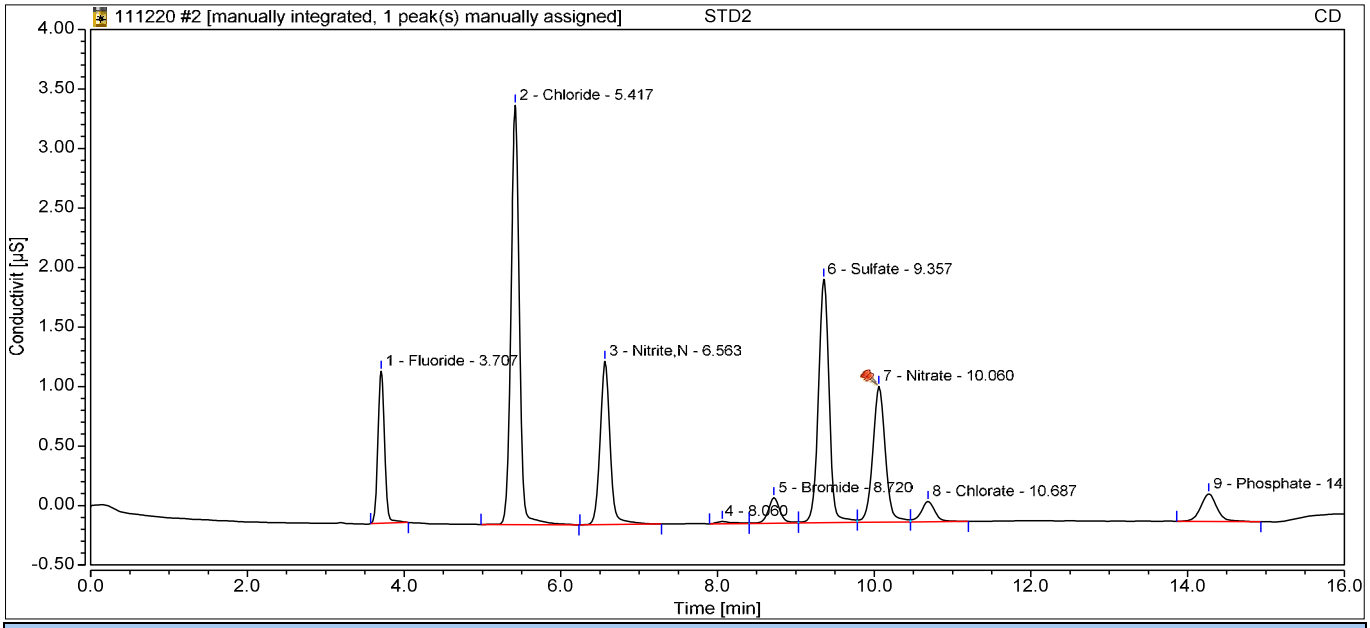


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB*	0.027	0.0951	0.0951	1.0000
2	5.42	Chloride	BMB	0.119	0.5468	0.5468	1.0000
3	6.56	Nitrite,N	BMB	0.047	0.0869	0.0869	1.0000
4	8.72	Bromide	BMB	0.008	0.1097	0.1097	1.0000
5	9.36	Sulfate	BM	0.075	0.5225	0.5225	1.0000
6	10.07	Nitrate	M ^	0.050	0.1090	0.1090	1.0000
7	10.70	Chlorate	MB	0.008	0.1141	0.1141	1.0000
8	14.28	Phosphate	BMB	0.011	0.1319	0.1319	1.0000
Total:			**0.000**	**0.345**		**1.72**	

2 STD2			
Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**BE2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 13:10**	*Sample Weight:*	**1.0000**

Run Time:



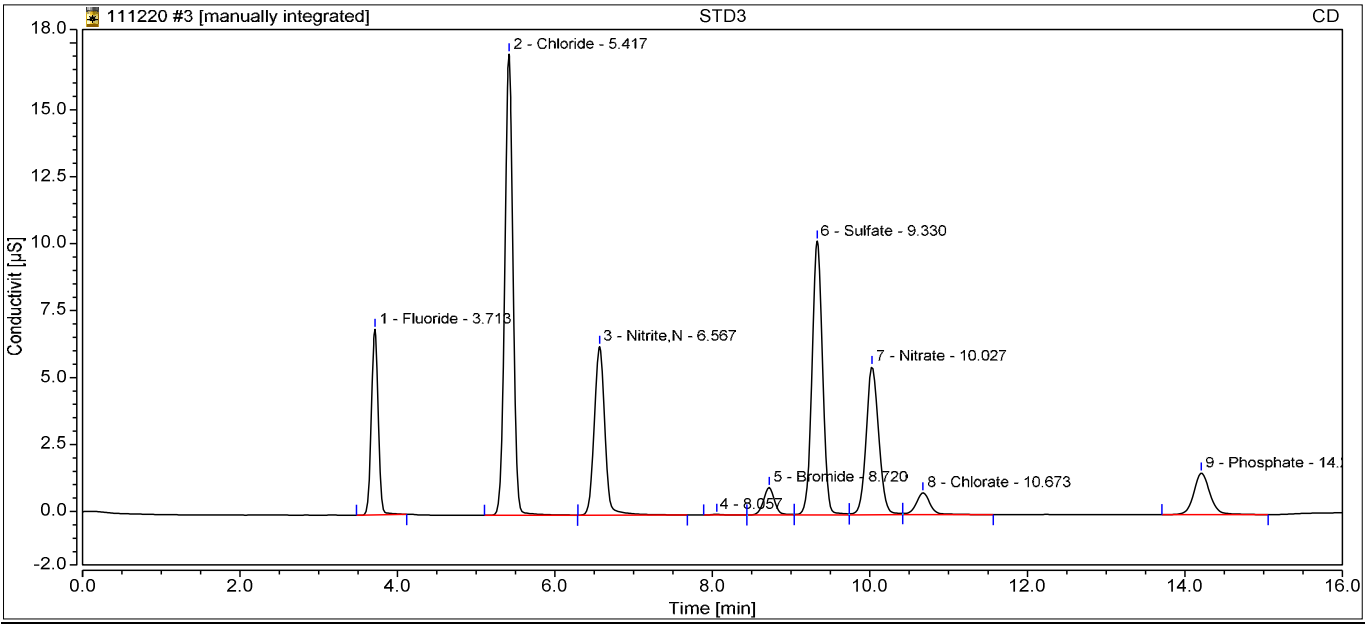
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB*	0.125	0.3869	0.3869	1.0000
2	5.42	Chloride	BMB	0.439	1.9952	1.9952	1.0000
3	6.56	Nitrite,N	BMB	0.203	0.4236	0.4236	1.0000
5	8.72	Bromide	M	0.037	0.4221	0.4221	1.0000
6	9.36	Sulfate	M	0.324	2.0502	2.0502	1.0000
7	10.06	Nitrate	M ^	0.213	0.4058	0.4058	1.0000
8	10.69	Chlorate	MB	0.035	0.3992	0.3992	1.0000
9	14.27	Phosphate	BMB	0.055	0.3401	0.3401	1.0000
Total:			**0.000**	**1.430**		**6.42**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**BE3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 13:28**	*Sample Weight:*	**1.0000**

Run Time:



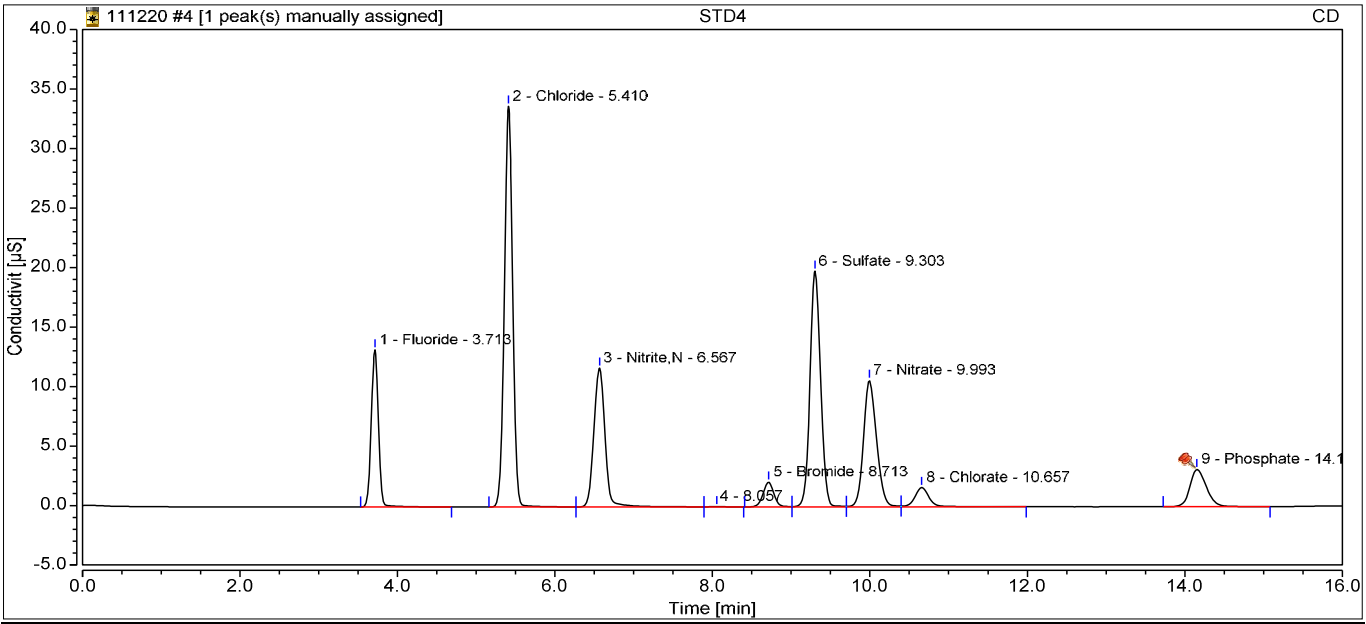
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB*	0.696	2.0869	2.0869	1.0000
2	5.42	Chloride	BMB	2.108	9.5643	9.5643	1.0000
3	6.57	Nitrite,N	BMB	0.976	2.0958	2.0958	1.0000
5	8.72	Bromide	M	0.167	1.8381	1.8381	1.0000
6	9.33	Sulfate	M	1.569	9.6977	9.6977	1.0000
7	10.03	Nitrate	M	1.029	1.8917	1.8917	1.0000
8	10.67	Chlorate	MB	0.170	1.8529	1.8529	1.0000
9	14.21	Phosphate	BMB	0.365	1.7851	1.7851	1.0000
Total:			**0.000**	**7.079**		**30.81**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**BE4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 13:46**	*Sample Weight:*	**1.0000**

Run Time:



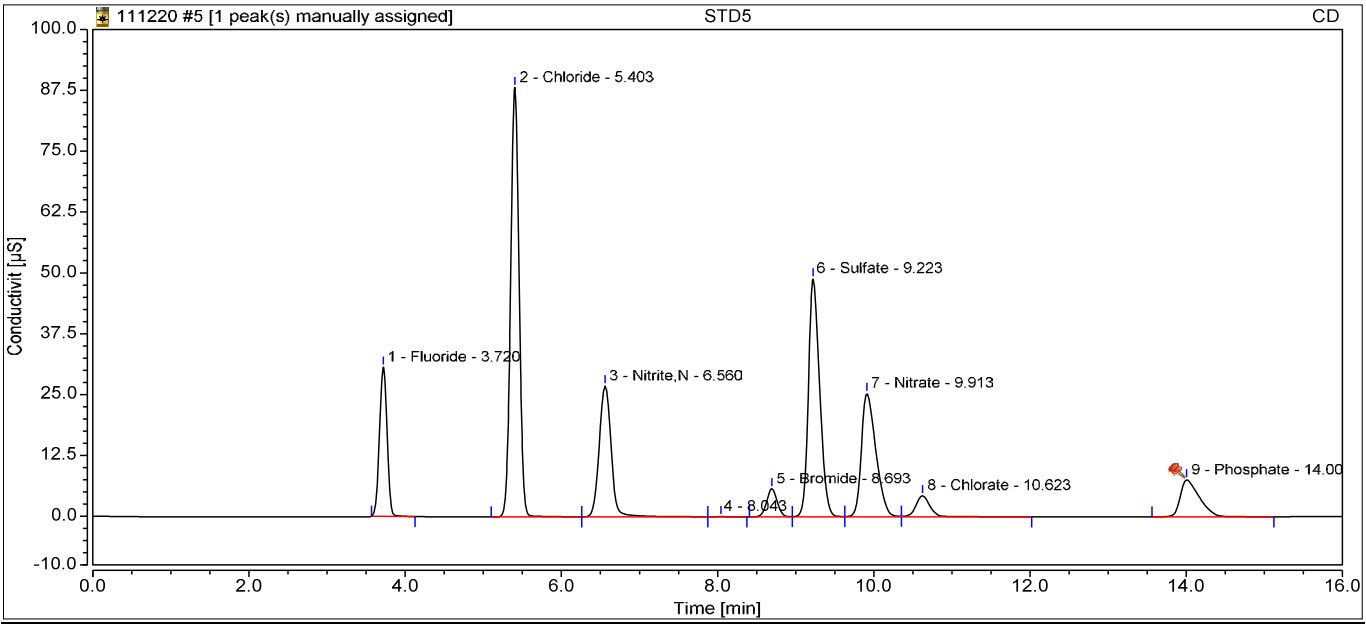
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	1.391	4.1578	4.1578	1.0000
2	5.41	Chloride	BMB	4.136	18.7555	18.7555	1.0000
3	6.57	Nitrite,N	BMB	1.893	4.0825	4.0825	1.0000
5	8.71	Bromide	BM	0.332	3.6357	3.6357	1.0000
6	9.30	Sulfate	M	3.072	18.9278	18.9278	1.0000
7	9.99	Nitrate	M	2.044	3.7386	3.7386	1.0000
8	10.66	Chlorate	MB	0.338	3.6596	3.6596	1.0000
9	14.15	Phosphate	BMB^	0.759	3.6223	3.6223	1.0000
Total:			**0.000**	**13.965**		**60.58**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**BE5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 14:04**	*Sample Weight:*	**1.0000**

Run Time:



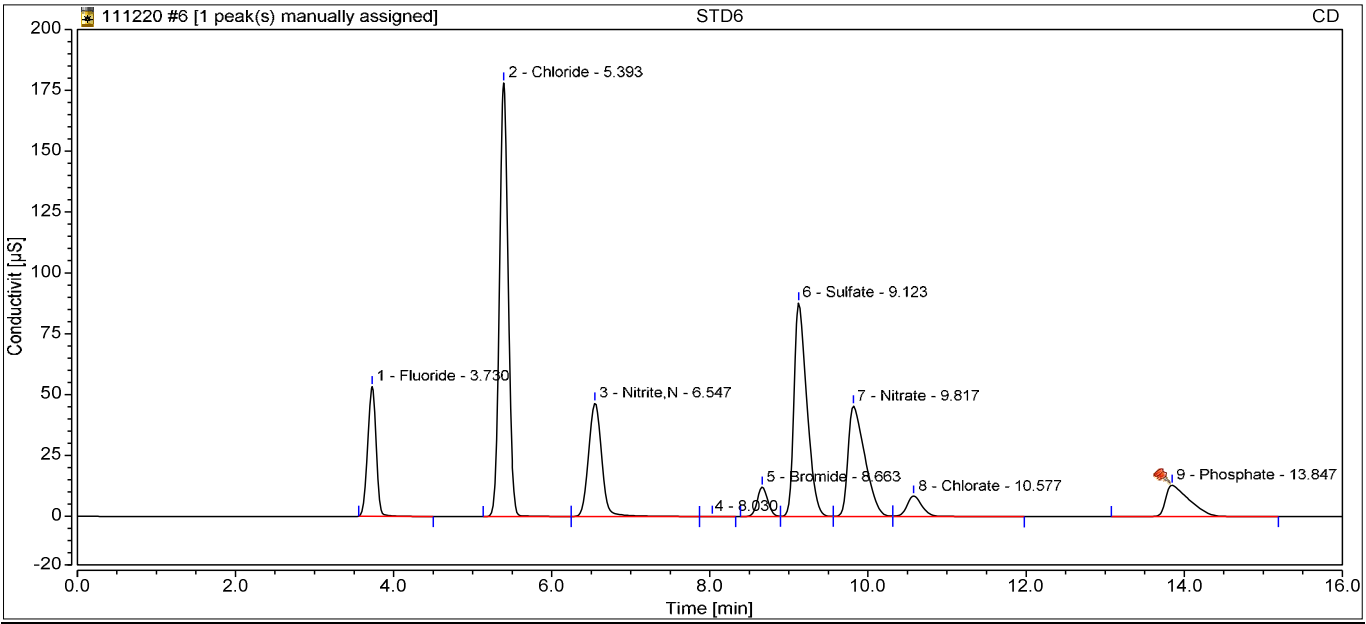
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	3.422	10.2082	10.2082	1.0000
2	5.40	Chloride	BMB	10.987	49.8141	49.8141	1.0000
3	6.56	Nitrite,N	BMB	4.749	10.2632	10.2632	1.0000
5	8.69	Bromide	BM	0.908	9.9065	9.9065	1.0000
6	9.22	Sulfate	M	8.142	50.0682	50.0682	1.0000
7	9.91	Nitrate	M	5.452	9.9421	9.9421	1.0000
8	10.62	Chlorate	MB	0.919	9.9135	9.9135	1.0000
9	14.01	Phosphate	BMB^	2.134	10.0298	10.0298	1.0000
Total:			**0.000**	**36.713**		**160.15**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**BE6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 14:22**	*Sample Weight:*	**1.0000**

Run Time:



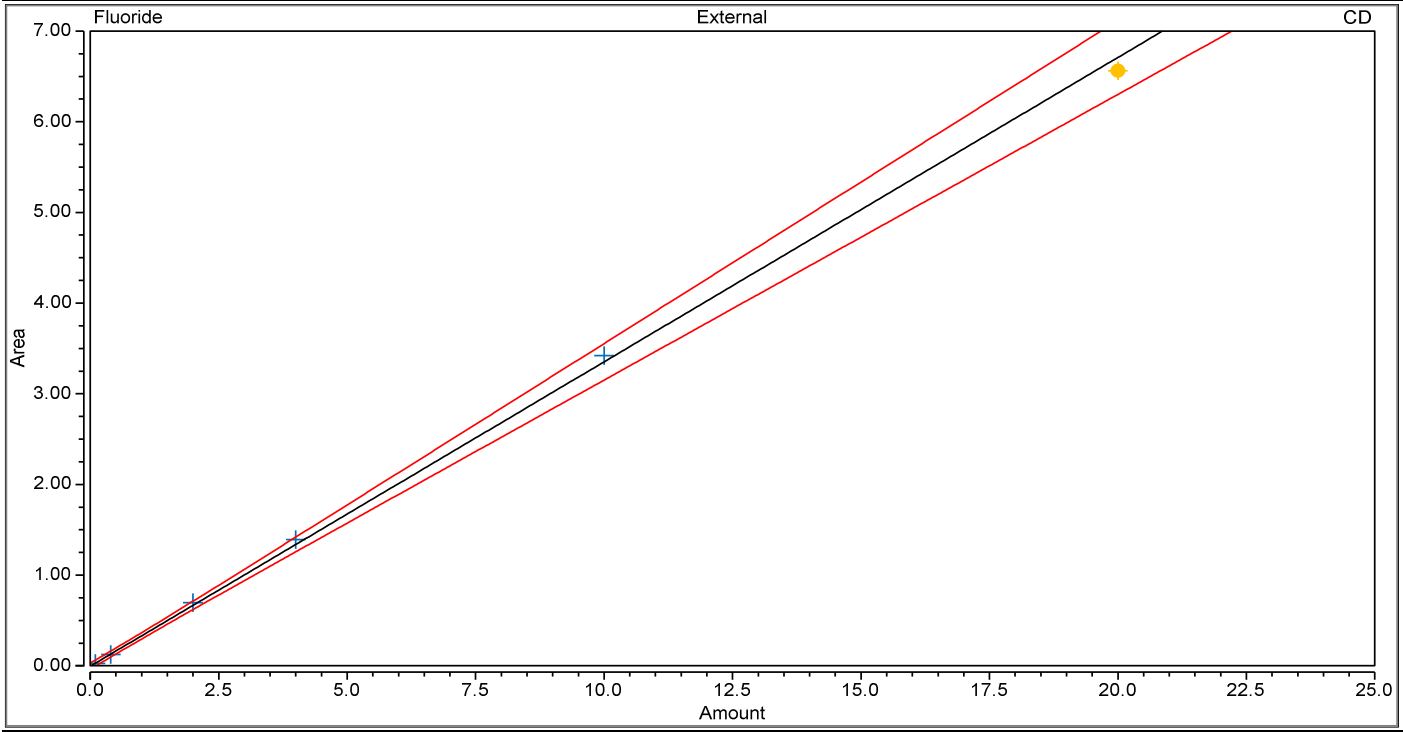
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	6.563	19.5651	19.5651	1.0000
2	5.39	Chloride	BMB	22.459	101.8240	101.8240	1.0000
3	6.55	Nitrite,N	BMB	9.038	19.5479	19.5479	1.0000
5	8.66	Bromide	BM	1.889	20.5879	20.5879	1.0000
6	9.12	Sulfate	M	16.473	101.2335	101.2335	1.0000
7	9.82	Nitrate	M	11.205	20.4127	20.4127	1.0000
8	10.58	Chlorate	MB	1.909	20.5607	20.5607	1.0000
9	13.85	Phosphate	BMB^	4.400	20.5908	20.5908	1.0000
Total:			**0.000**	**73.936**		**324.32**	

Calibration

Calibration Details	Fluoride		
Calibration Type	Lin, WithOffset, 1/A	*Offset (C0)*	-0.0051
Evaluation Type	Area	*Slope (C1)*	0.3357
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9993

Calibration Plot **Fluoride**



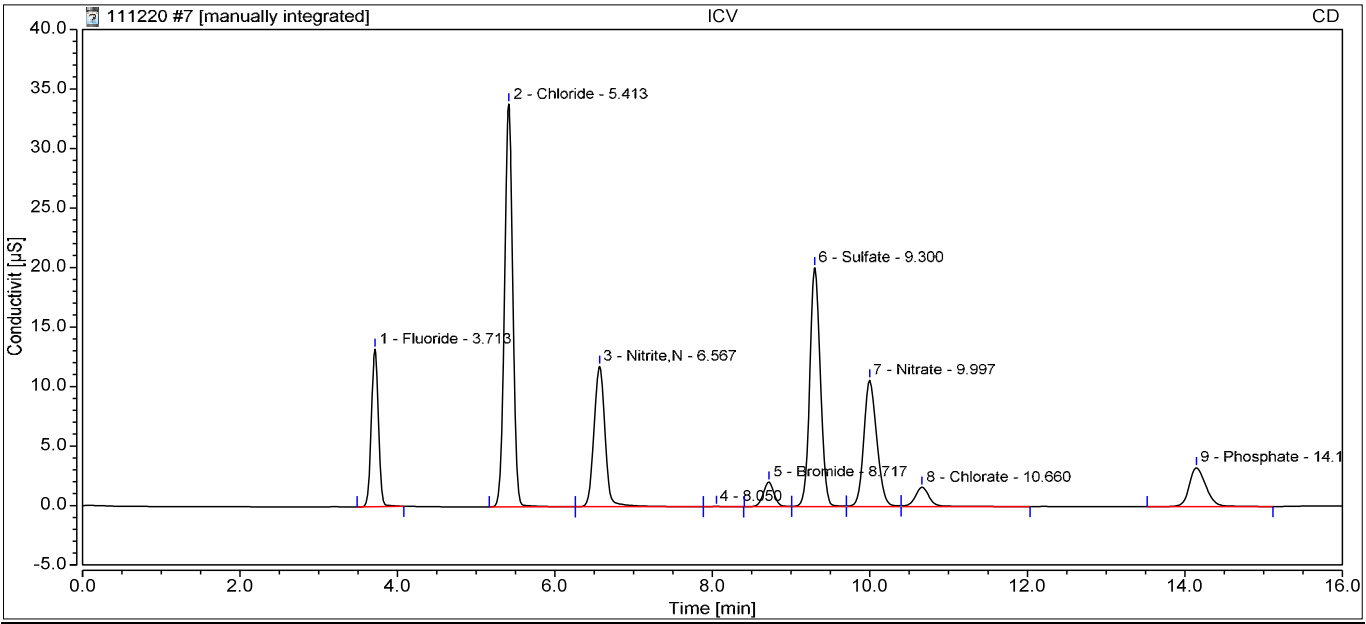
Calibration Results **Fluoride**

No.	Injection Name	Calibration Level	X Value CD Fluoride	Y Value CD Fluoride	Y Value CD Fluoride	Area µS*min CD Fluoride	Height µS CD Fluoride
1	STD1	1	0.1000	0.0268	0.0268	0.027	0.239
2	STD2	2	0.4000	0.1248	0.1248	0.125	1.277
3	STD3	3	2.0000	0.6955	0.6955	0.696	6.925
4	STD4	4	4.0000	1.3908	1.3908	1.391	13.203
5	STD5	5	10.0000	3.4221	3.4221	3.422	30.624
6	STD6	6	20.0000	6.5634	6.5634	6.563	53.254

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**BE7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 14:40**	*Sample Weight:*	**1.0000**

Run Time:



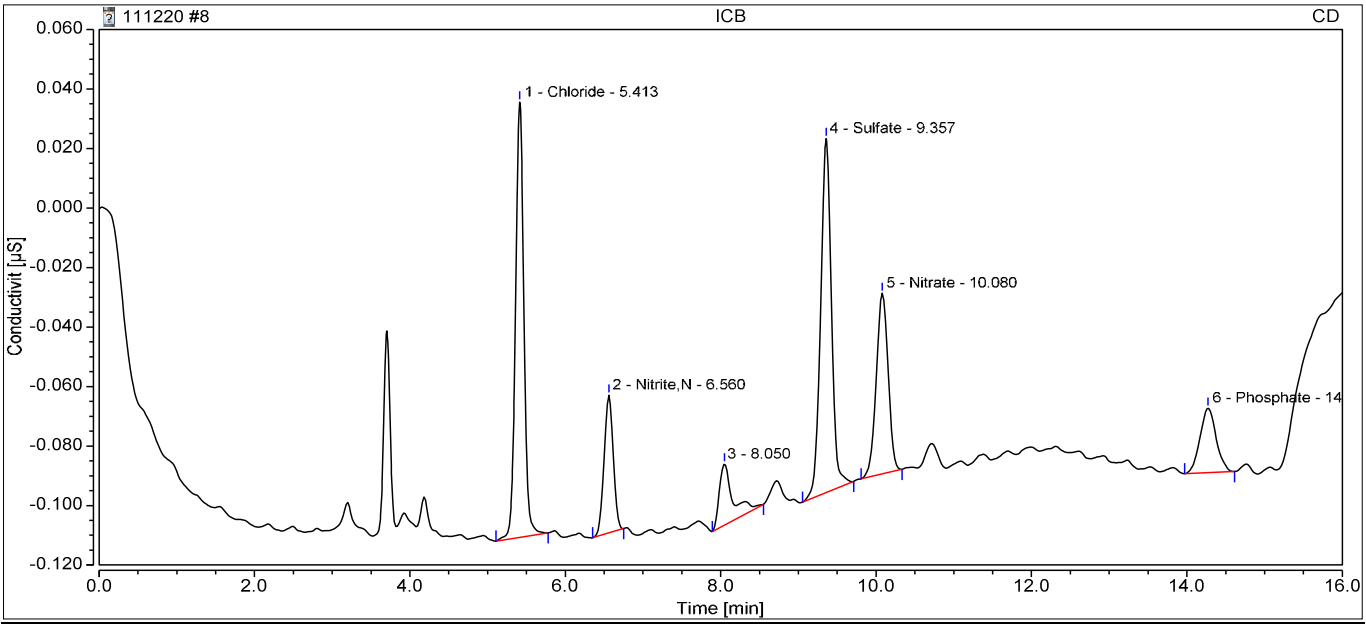
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB*	1.371	4.0986	4.0986	1.0000
2	5.41	Chloride	BMB	4.158	18.8583	18.8583	1.0000
3	6.57	Nitrite,N	BMB	1.919	4.1389	4.1389	1.0000
5	8.72	Bromide	BM	0.334	3.6542	3.6542	1.0000
6	9.30	Sulfate	M	3.120	19.2234	19.2234	1.0000
7	10.00	Nitrate	M	2.047	3.7444	3.7444	1.0000
8	10.66	Chlorate	MB	0.346	3.7490	3.7490	1.0000
9	14.15	Phosphate	BMB	0.801	3.8145	3.8145	1.0000
Total:			**0.000**	**14.096**		**61.28**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BE8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/07/2020 14:58**	*Sample Weight:*	**1.0000**

Run Time:



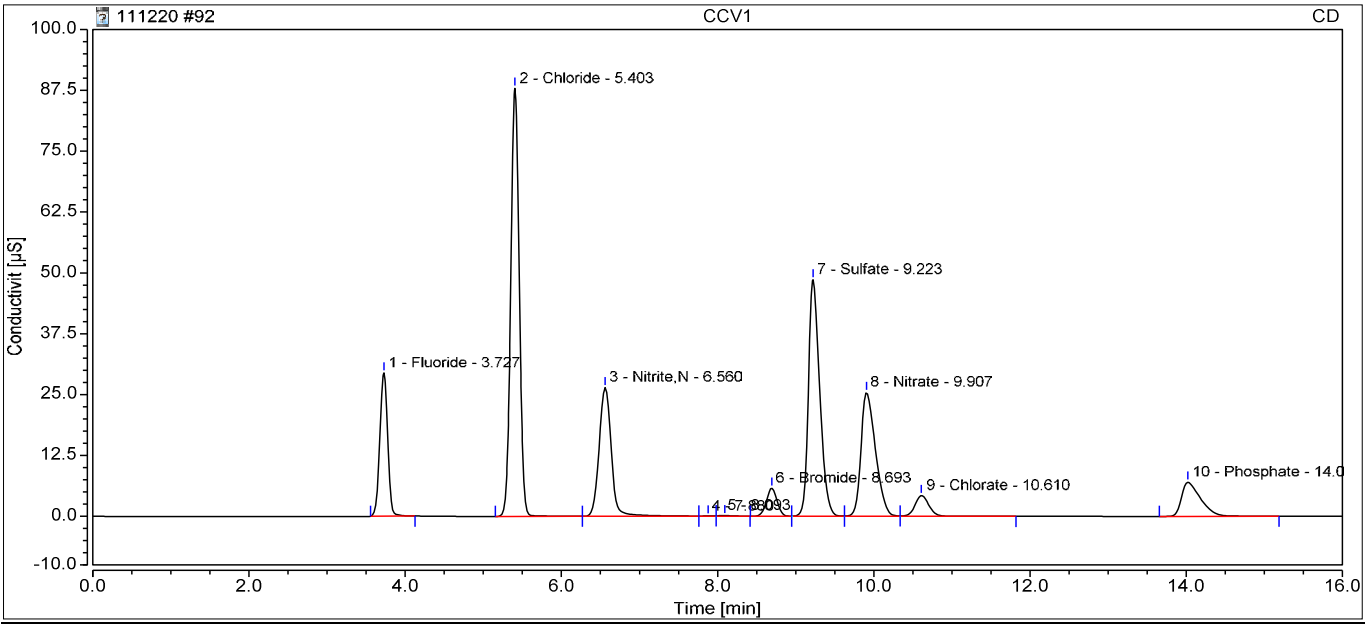
Integration Results

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	5.41	Chloride	BMB	0.018	0.0896	0.0896	1.0000
2	6.56	Nitrite,N	BMB	0.006	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
4	9.36	Sulfate	BMB	0.019	0.1785	0.1785	1.0000
5	10.08	Nitrate	BMB	0.011	0.0383	0.0383	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
6	14.27	Phosphate	BMB	0.005	0.1062	0.1062	1.0000
Total:			**0.000**	**0.060**		**0.41**	

92 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 10:52**	*Sample Weight:*	**1.0000**

Run Time:



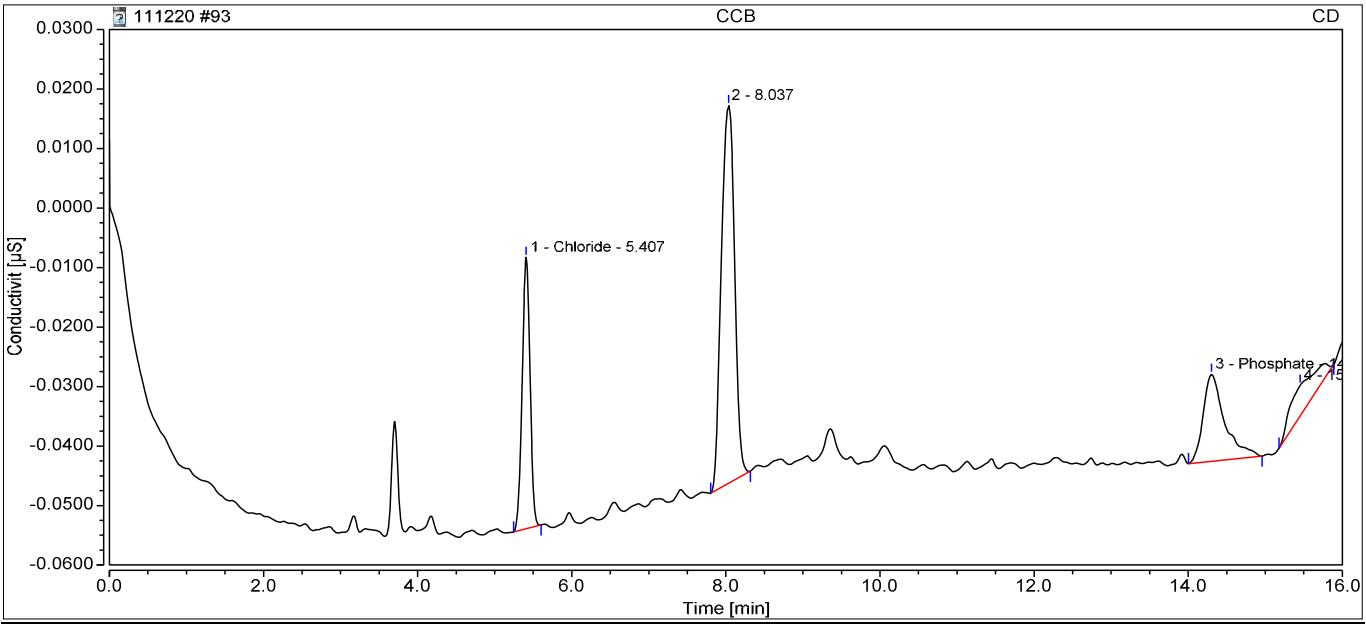
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	3.379	10.0812	10.0812	1.0000
2	5.40	Chloride	BMB	10.988	49.8186	49.8186	1.0000
3	6.56	Nitrite,N	BMB	4.742	10.2483	10.2483	1.0000
6	8.69	Bromide	BM	0.909	9.9152	9.9152	1.0000
7	9.22	Sulfate	M	8.116	49.9072	49.9072	1.0000
8	9.91	Nitrate	M	5.466	9.9681	9.9681	1.0000
9	10.61	Chlorate	MB	0.882	9.5170	9.5170	1.0000
10	14.02	Phosphate	BMB	1.988	9.3469	9.3469	1.0000
Total:			**0.000**	**36.470**		**158.80**	

93 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 11:11**	*Sample Weight:*	**1.0000**

Run Time:

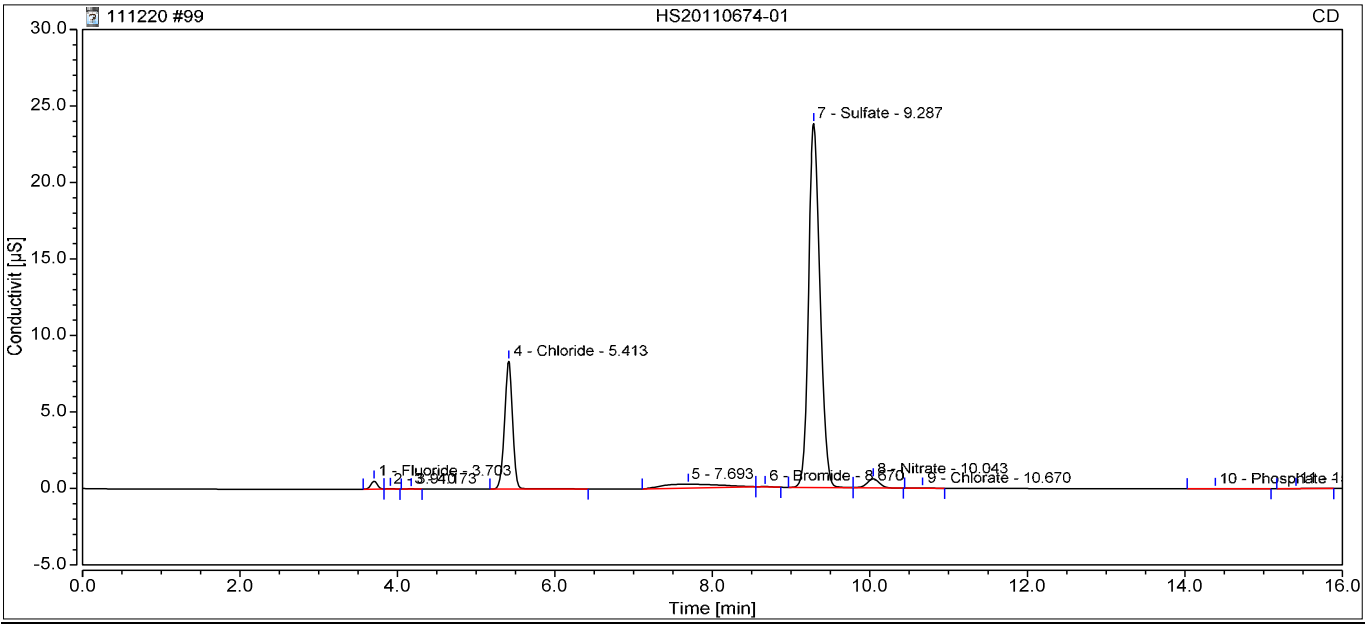


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.41	Chloride	BMB	0.005	0.0315	0.0315	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
3	14.30	Phosphate	BMB	0.005	0.1038	0.1038	1.0000
Total:			**0.000**	**0.010**		**0.14**	

99	*HS20110674-01*		
Sample Name:	**HS20110674-01**	*Injection Volume:*	**5.00**
Vial Number:	**GE3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 12:59**	*Sample Weight:*	**1.0000**

Run Time:



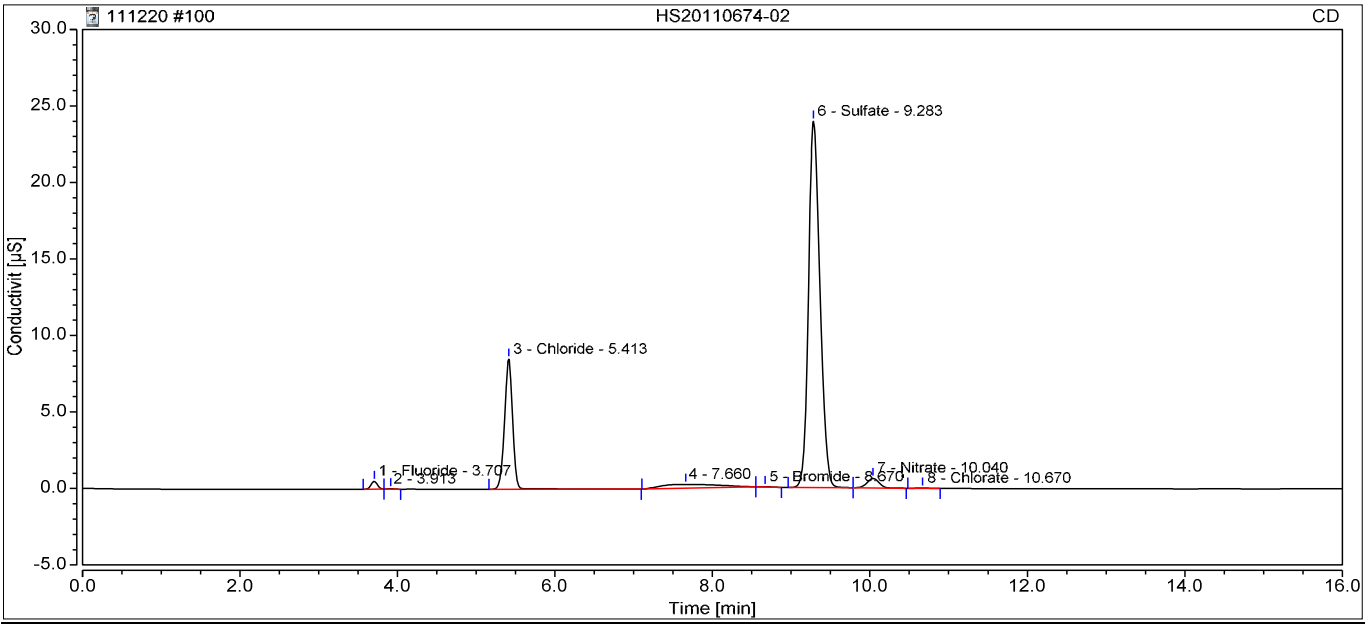
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.049	0.1600	0.1600	1.0000
4	5.41	Chloride	BMB	1.005	4.5614	4.5614	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
6	8.67	Bromide	BMB	0.003	0.0526	0.0526	1.0000
7	9.29	Sulfate	BM	4.007	24.6727	24.6727	1.0000
8	10.04	Nitrate	MB	0.108	0.2151	0.2151	1.0000
9	10.67	Chlorate	BMB	0.002	0.0541	0.0541	1.0000
10	14.39	Phosphate	BMB	0.004	0.0994	0.0994	1.0000
Total:			**0.000**	**5.178**		**29.82**	

100 HS20110674-02

Sample Name:	**HS20110674-02**	*Injection Volume:*	**5.00**
Vial Number:	**GE4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 13:17**	*Sample Weight:*	**1.0000**

Run Time:



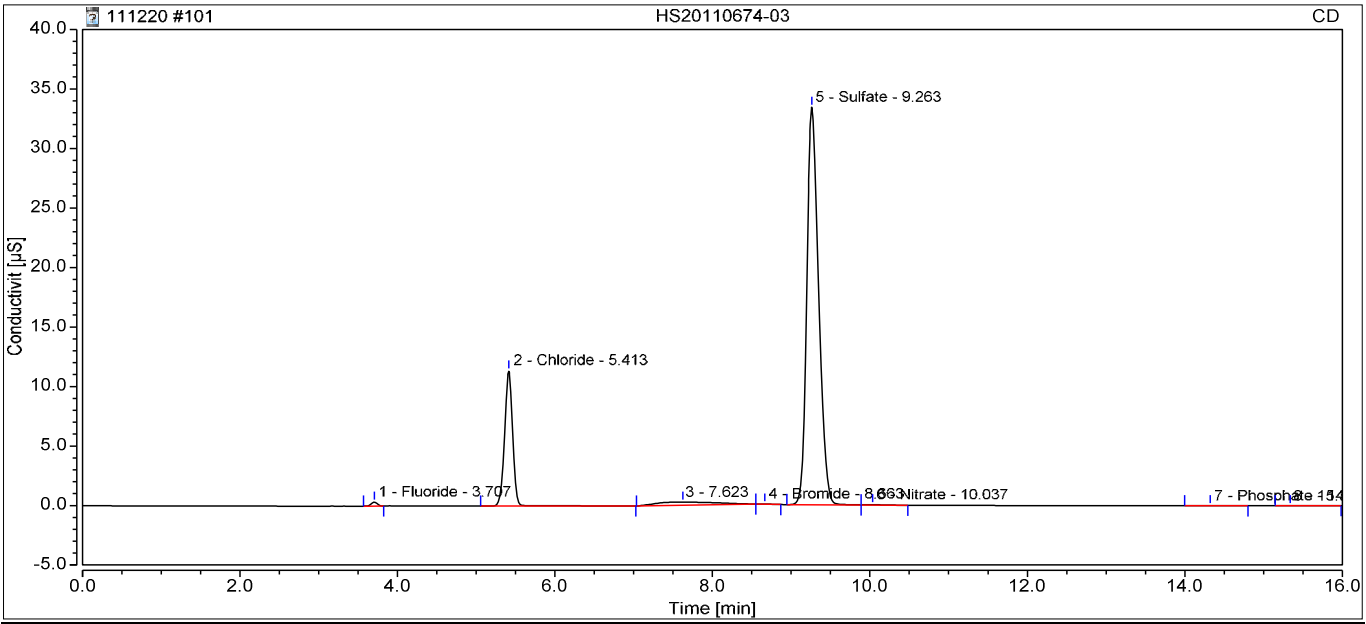
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.049	0.1609	0.1609	1.0000
3	5.41	Chloride	BMB	1.040	4.7236	4.7236	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
5	8.67	Bromide	BMB	0.003	0.0514	0.0514	1.0000
6	9.28	Sulfate	BM	4.042	24.8856	24.8856	1.0000
7	10.04	Nitrate	MB	0.114	0.2265	0.2265	1.0000
8	10.67	Chlorate	BMB	0.002	0.0520	0.0520	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**5.251**		**30.10**	

101 HS20110674-03

Sample Name:	**HS20110674-03**	*Injection Volume:*	**5.00**
Vial Number:	**GE5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 13:35**	*Sample Weight:*	**1.0000**

Run Time:



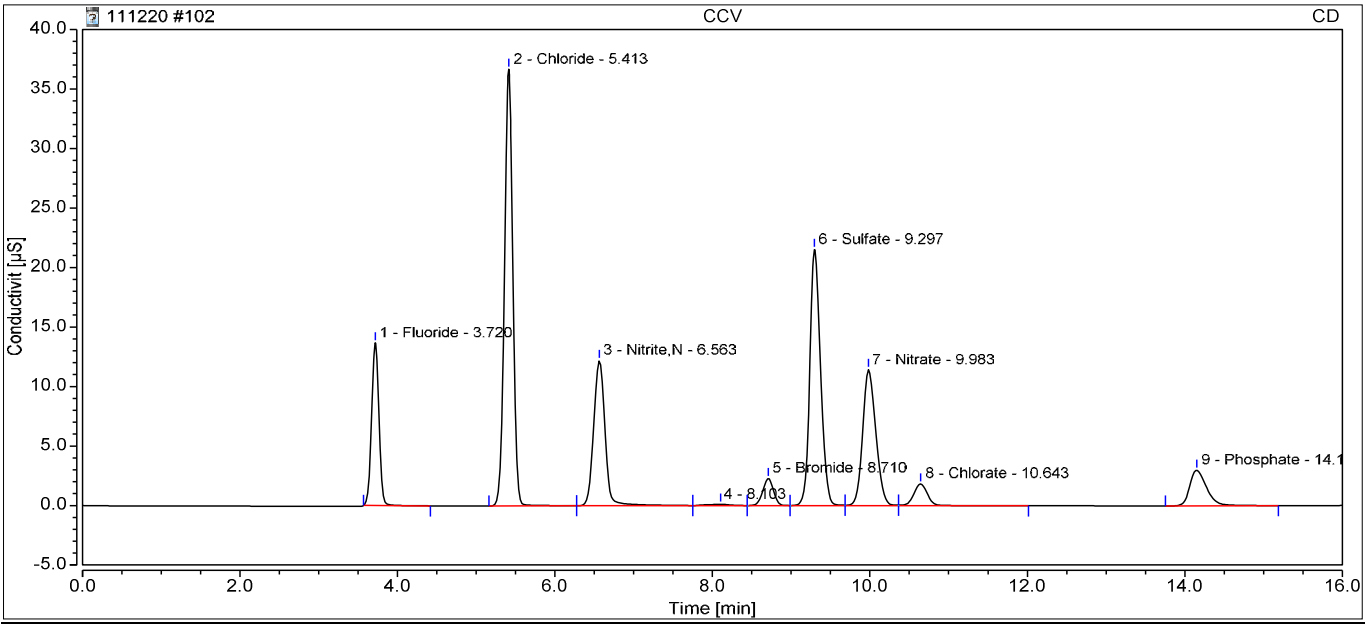
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.030	0.1048	0.1048	1.0000
2	5.41	Chloride	BMB	1.377	6.2518	6.2518	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
4	8.66	Bromide	BMB	0.003	0.0495	0.0495	1.0000
5	9.26	Sulfate	BM	5.827	35.8521	35.8521	1.0000
6	10.04	Nitrate	MB	0.007	0.0318	0.0318	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
7	14.32	Phosphate	BMB	0.002	0.0934	0.0934	1.0000
Total:			**0.000**	**7.248**		**42.38**	

102 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 13:53**	*Sample Weight:*	**1.0000**

Run Time:



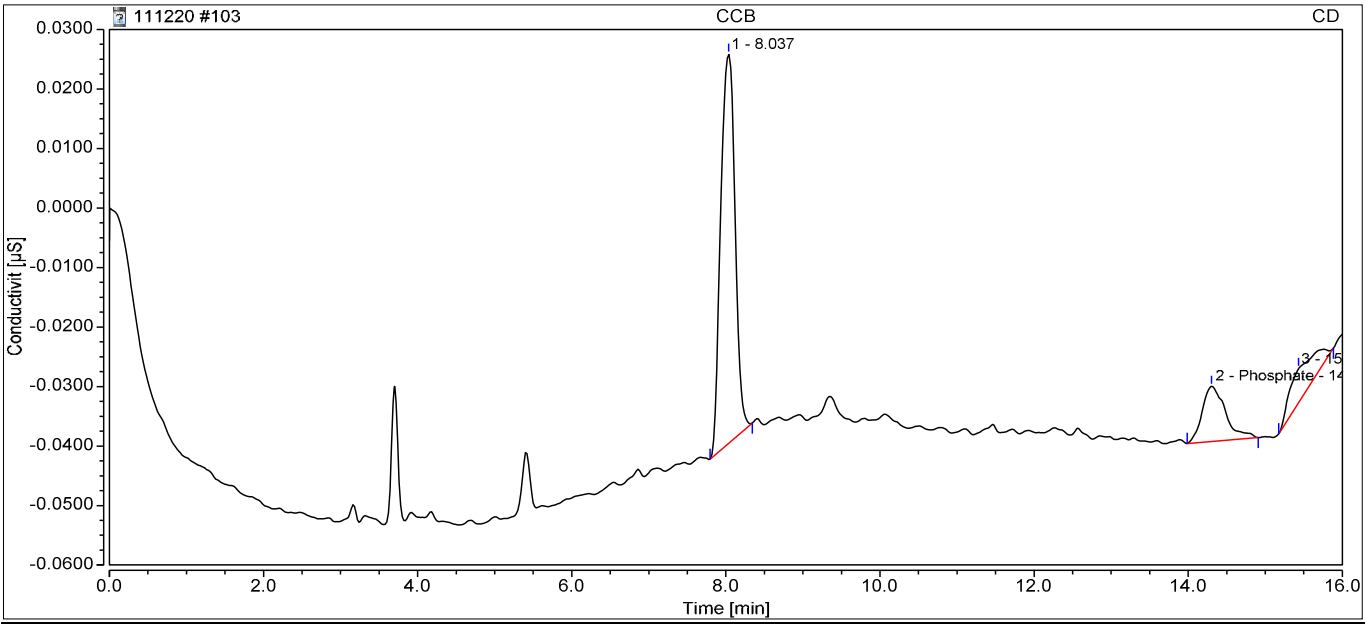
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.468	4.3878	4.3878	1.0000
2	5.41	Chloride	BMB	4.545	20.6096	20.6096	1.0000
3	6.56	Nitrite,N	BMB	2.026	4.3693	4.3693	1.0000
5	8.71	Bromide	M	0.361	3.9517	3.9517	1.0000
6	9.30	Sulfate	M	3.386	20.8545	20.8545	1.0000
7	9.98	Nitrate	M	2.223	4.0652	4.0652	1.0000
8	10.64	Chlorate	MB	0.370	4.0023	4.0023	1.0000
9	14.15	Phosphate	BMB	0.744	3.5510	3.5510	1.0000
Total:			**0.000**	**15.122**		**65.79**	

103 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 14:11**	*Sample Weight:*	**1.0000**

Run Time:



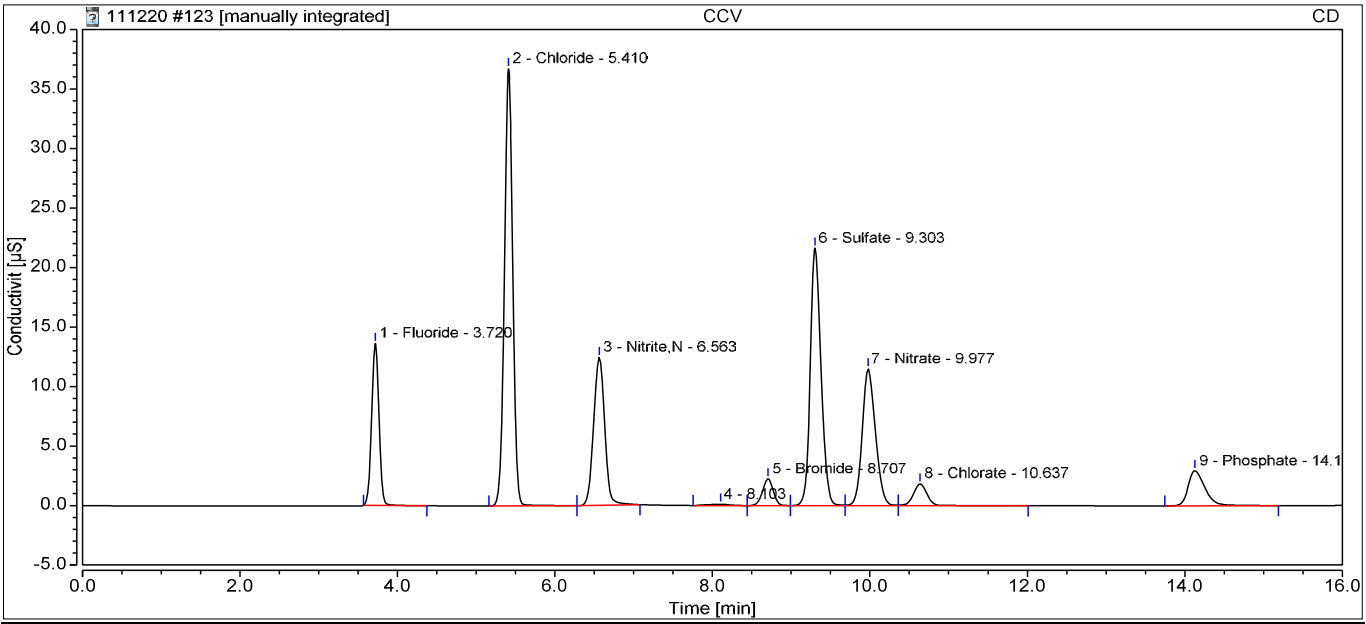
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
2	14.30	Phosphate	BMB	0.003	0.0969	0.0969	1.0000
Total:			**0.000**	**0.003**		**0.10**	

123 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 20:31**	*Sample Weight:*	**1.0000**

Run Time:



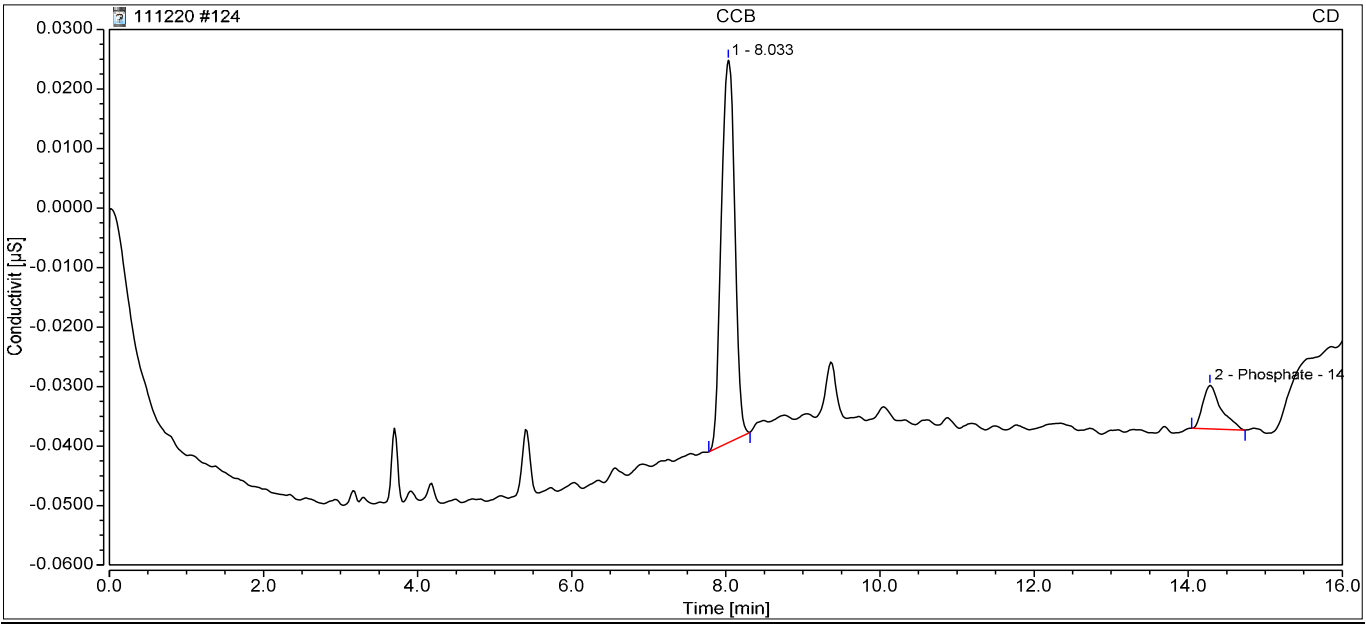
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.461	4.3677	4.3677	1.0000
2	5.41	Chloride	BMb*	4.531	20.5498	20.5498	1.0000
3	6.56	Nitrite,N	bMB*	2.014	4.3437	4.3437	1.0000
5	8.71	Bromide	M	0.355	3.8872	3.8872	1.0000
6	9.30	Sulfate	M	3.399	20.9379	20.9379	1.0000
7	9.98	Nitrate	M	2.240	4.0963	4.0963	1.0000
8	10.64	Chlorate	MB	0.370	4.0111	4.0111	1.0000
9	14.13	Phosphate	BMB	0.734	3.5053	3.5053	1.0000
Total:			**0.000**	**15.106**		**65.70**	

124 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 20:49**	*Sample Weight:*	**1.0000**

Run Time:



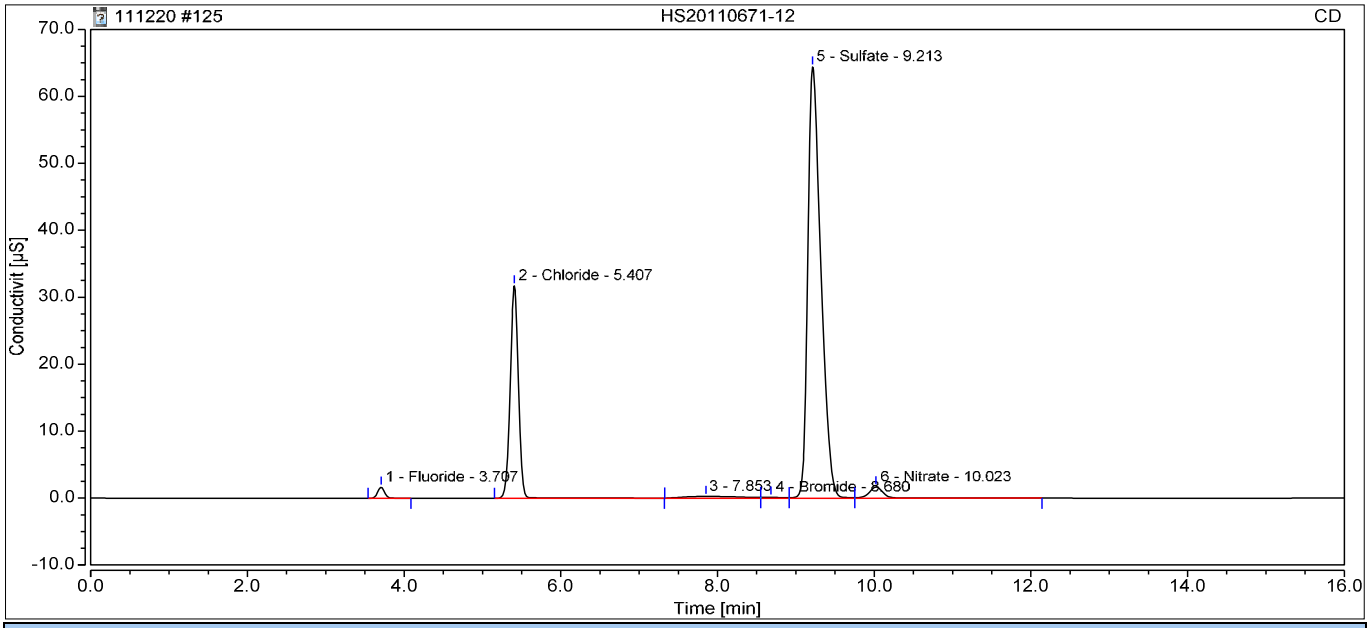
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
2	14.28	Phosphate	BMB	0.002	0.0913	0.0913	1.0000
Total:			**0.000**	**0.002**		**0.09**	

125 HS20110671-12

Sample Name:	**HS20110671-12**	*Injection Volume:*	**5.00**
Vial Number:	**RB3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 21:07**	*Sample Weight:*	**1.0000**

Run Time:



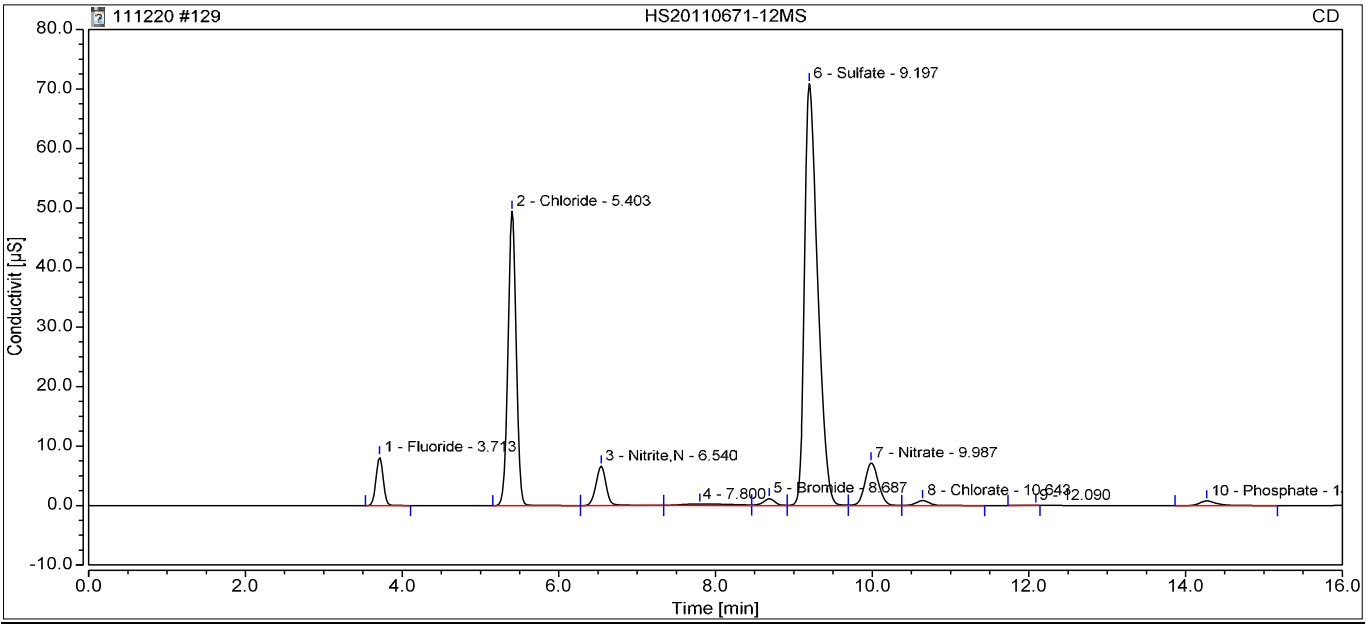
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.171	0.5247	0.5247	1.0000
2	5.41	Chloride	BMB	3.876	17.5782	17.5782	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
4	8.68	Bromide	M	0.039	0.4438	0.4438	1.0000
5	9.21	Sulfate	M	12.448	76.5157	76.5157	1.0000
6	10.02	Nitrate	MB	0.363	0.6795	0.6795	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**	**16.897**		**95.74**	

129 HS20110671-12MS

Sample Name:	**HS20110671-12MS**	*Injection Volume:*	**5.00**
Vial Number:	**RB7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 22:19**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

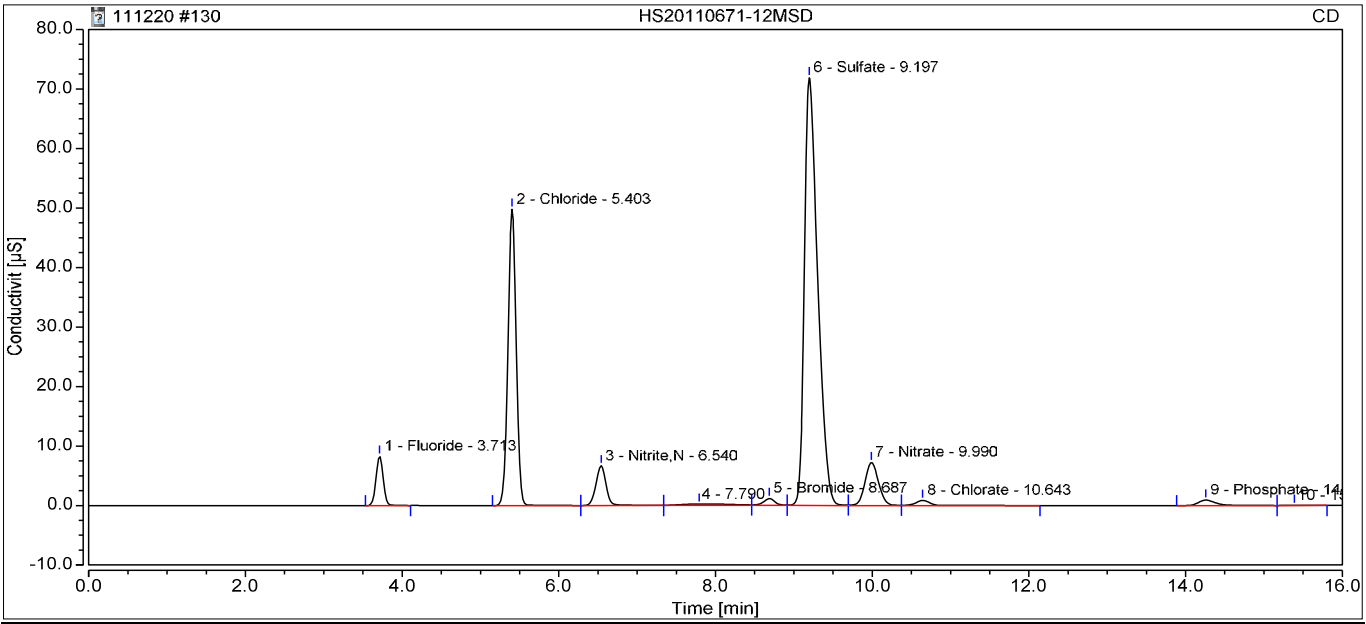
No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.878	2.6318	2.6318	1.0000
2	5.40	Chloride	BMB	6.041	27.3919	27.3919	1.0000
3	6.54	Nitrite,N	BMB	1.007	2.1648	2.1648	1.0000
5	8.69	Bromide	M	0.201	2.2107	2.2107	1.0000
6	9.20	Sulfate	M	13.779	84.6862	84.6862	1.0000
7	9.99	Nitrate	M	1.426	2.6148	2.6148	1.0000
8	10.64	Chlorate	MB	0.172	1.8730	1.8730	1.0000
10	14.27	Phosphate	BMB	0.206	1.0416	1.0416	1.0000
Total:			**0.000**	**23.710**		**124.61**	

Instrument:ICSINTEG Sequence:111220

130 HS20110671-12MSD

Sample Name:	**HS20110671-12MSD**	*Injection Volume:*	**5.00**
Vial Number:	**RB8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 22:37**	*Sample Weight:*	**1.0000**

Run Time:



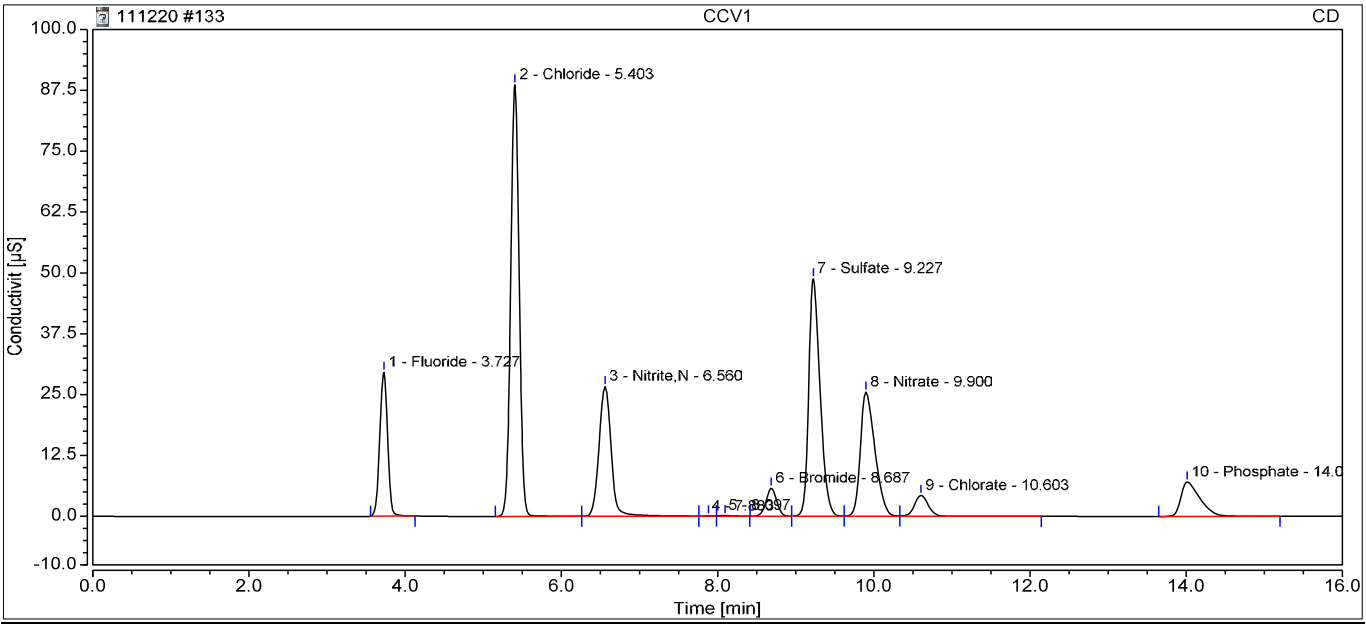
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.892	2.6707	2.6707	1.0000
2	5.40	Chloride	BMB	6.094	27.6347	27.6347	1.0000
3	6.54	Nitrite,N	BMB	1.013	2.1759	2.1759	1.0000
5	8.69	Bromide	M	0.205	2.2473	2.2473	1.0000
6	9.20	Sulfate	M	14.061	86.4175	86.4175	1.0000
7	9.99	Nitrate	M	1.444	2.6475	2.6475	1.0000
8	10.64	Chlorate	MB	0.186	2.0301	2.0301	1.0000
9	14.26	Phosphate	BMB	0.245	1.2244	1.2244	1.0000
Total:			**0.000**	**24.139**		**127.05**	

133 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 23:32**	*Sample Weight:*	**1.0000**

Run Time:



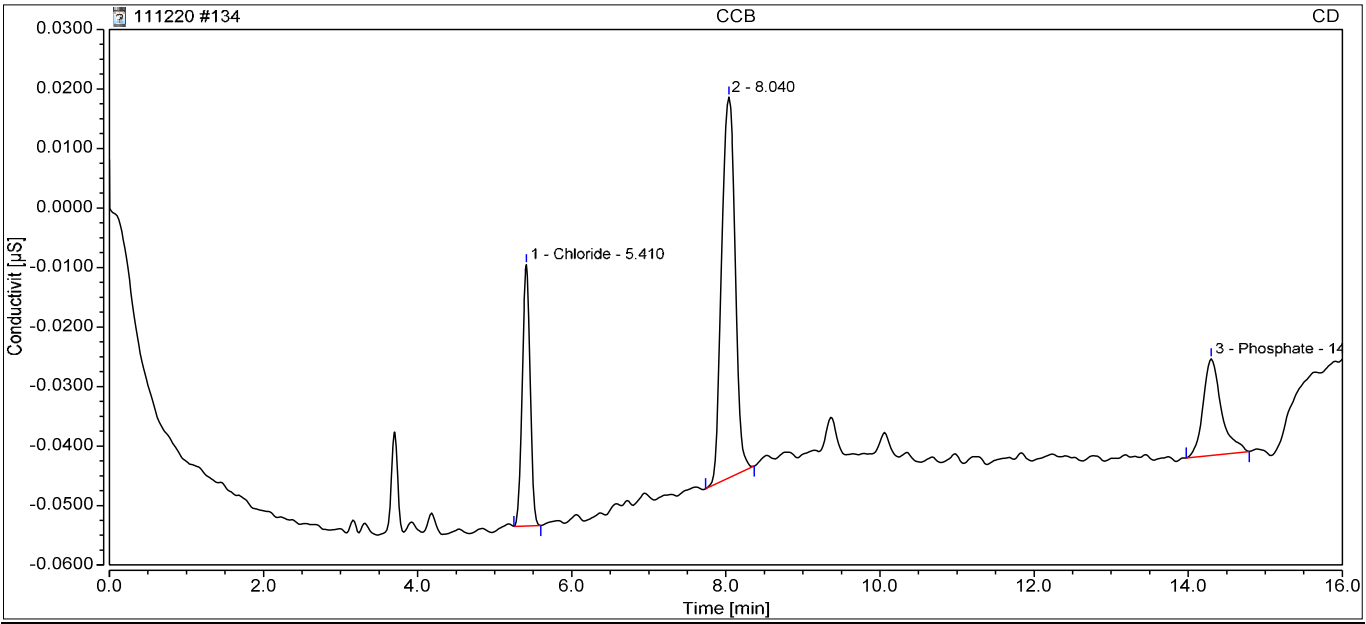
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	3.401	10.1447	10.1447	1.0000
2	5.40	Chloride	BMB	11.038	50.0468	50.0468	1.0000
3	6.56	Nitrite,N	BMB	4.781	10.3333	10.3333	1.0000
6	8.69	Bromide	BM	0.910	9.9293	9.9293	1.0000
7	9.23	Sulfate	M	8.178	50.2871	50.2871	1.0000
8	9.90	Nitrate	M	5.511	10.0493	10.0493	1.0000
9	10.60	Chlorate	MB	0.900	9.7051	9.7051	1.0000
10	14.01	Phosphate	BMB	1.999	9.4000	9.4000	1.0000
Total:			**0.000**	**36.717**		**159.90**	

134 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/13/2020 23:50**	*Sample Weight:*	**1.0000**

Run Time:

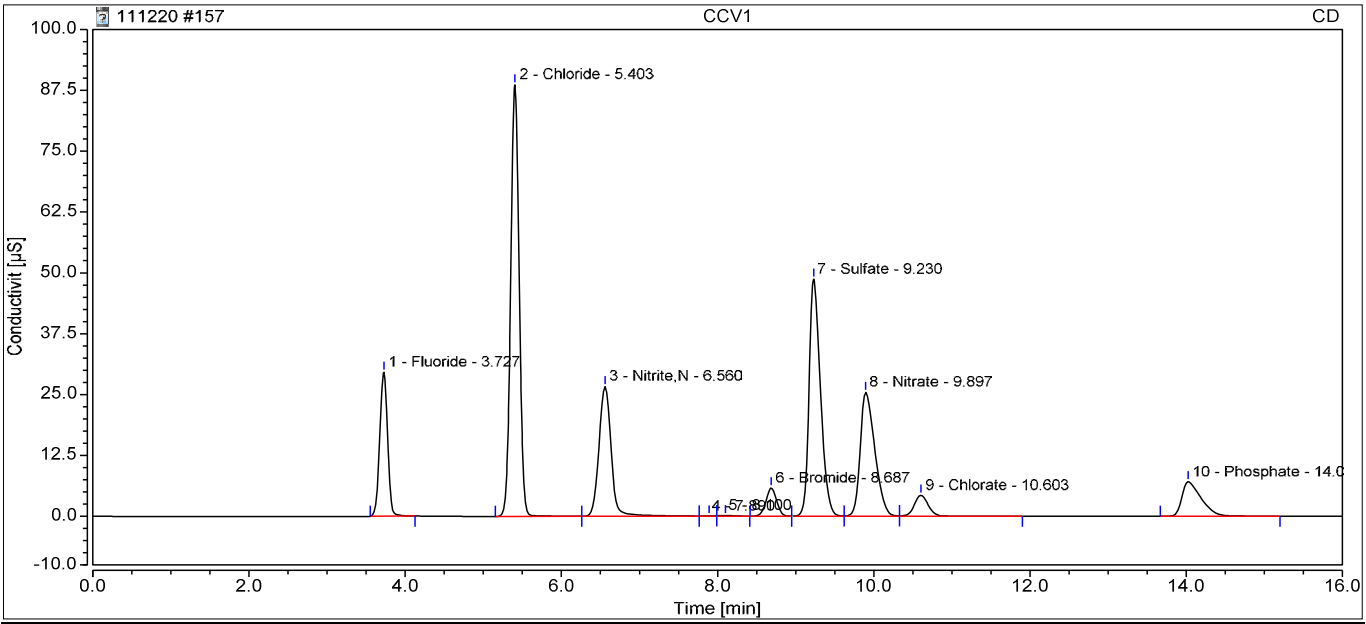


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.41	Chloride	BMB	0.005	0.0305	0.0305	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
3	14.30	Phosphate	BMB	0.004	0.1027	0.1027	1.0000
Total:			**0.000**	**0.010**		**0.13**	

157 CCV1			
Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/14/2020 06:45**	*Sample Weight:*	**1.0000**

Run Time:



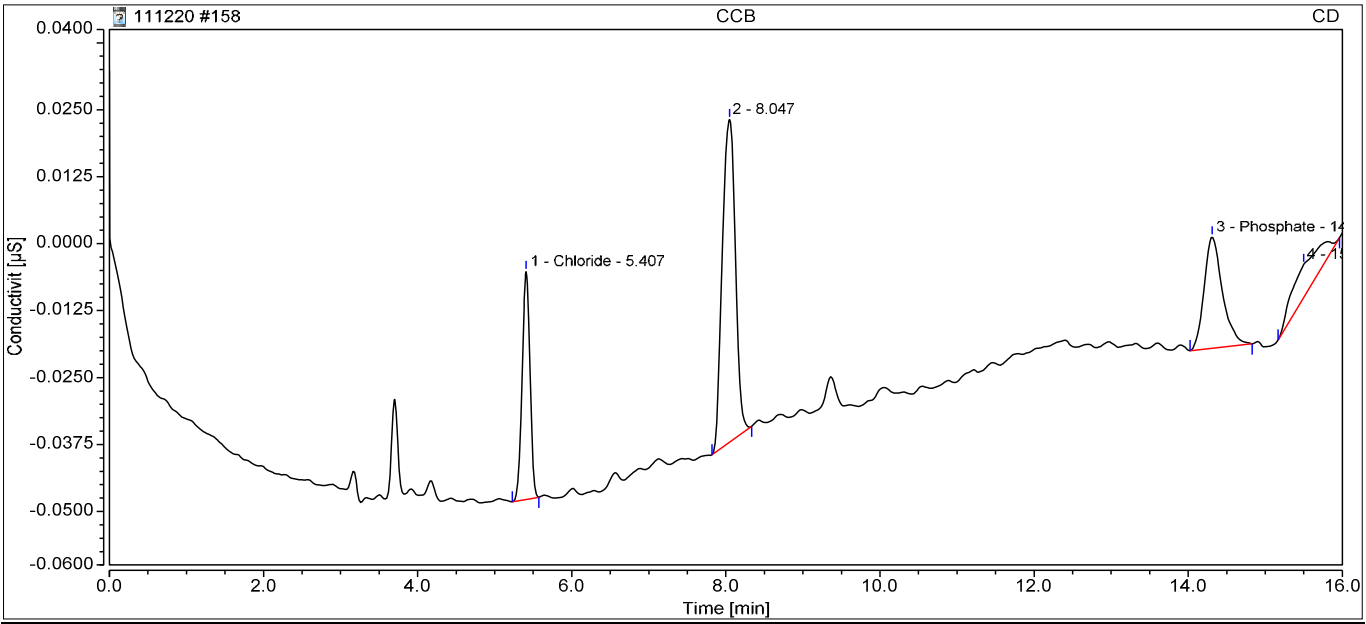
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	3.409	10.1689	10.1689	1.0000
2	5.40	Chloride	BMB	11.053	50.1139	50.1139	1.0000
3	6.56	Nitrite,N	BMB	4.786	10.3435	10.3435	1.0000
6	8.69	Bromide	BM	0.914	9.9664	9.9664	1.0000
7	9.23	Sulfate	M	8.182	50.3134	50.3134	1.0000
8	9.90	Nitrate	M	5.511	10.0489	10.0489	1.0000
9	10.60	Chlorate	MB	0.889	9.5920	9.5920	1.0000
10	14.03	Phosphate	BMB	2.032	9.5535	9.5535	1.0000
Total:			**0.000**	**36.775**		**160.10**	

158 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/14/2020 07:03**	*Sample Weight:*	**1.0000**

Run Time:



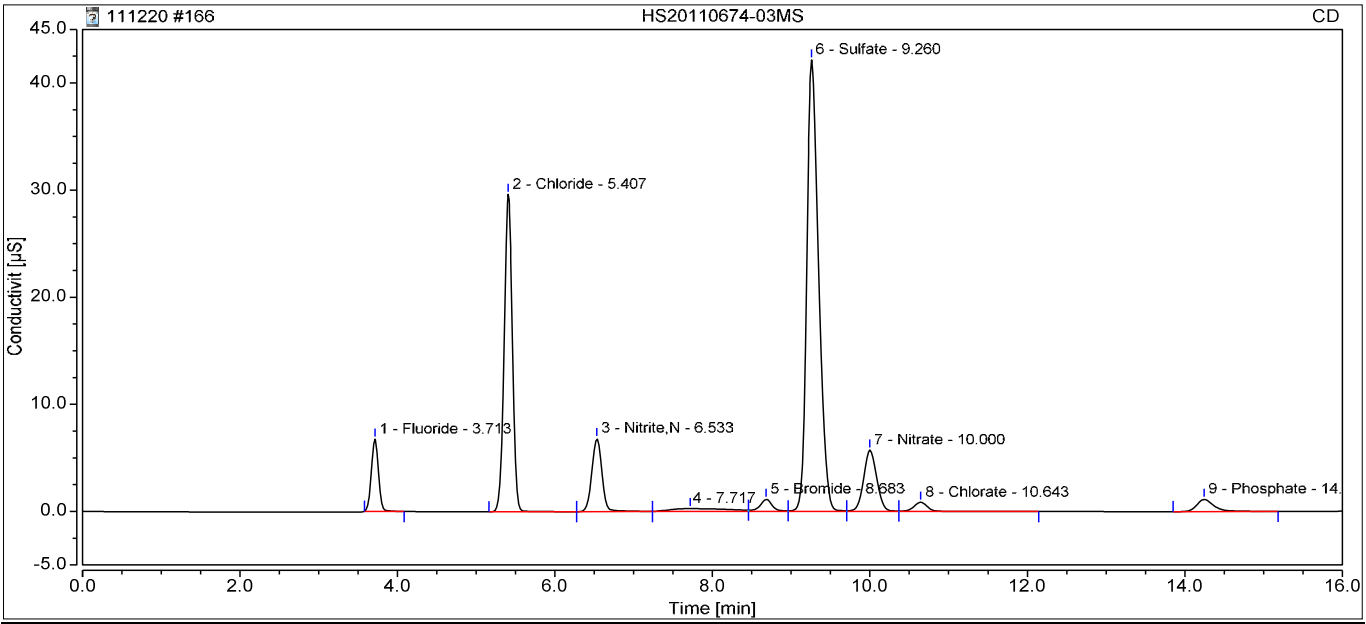
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.41	Chloride	BMB	0.005	0.0298	0.0298	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
3	14.31	Phosphate	BMB	0.006	0.1085	0.1085	1.0000
Total:			**0.000**	**0.011**		**0.14**	

166 HS20110674-03MS

Sample Name:	**HS20110674-03MS**	*Injection Volume:*	**5.00**
Vial Number:	**BC1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/14/2020 09:27**	*Sample Weight:*	**1.0000**

Run Time:



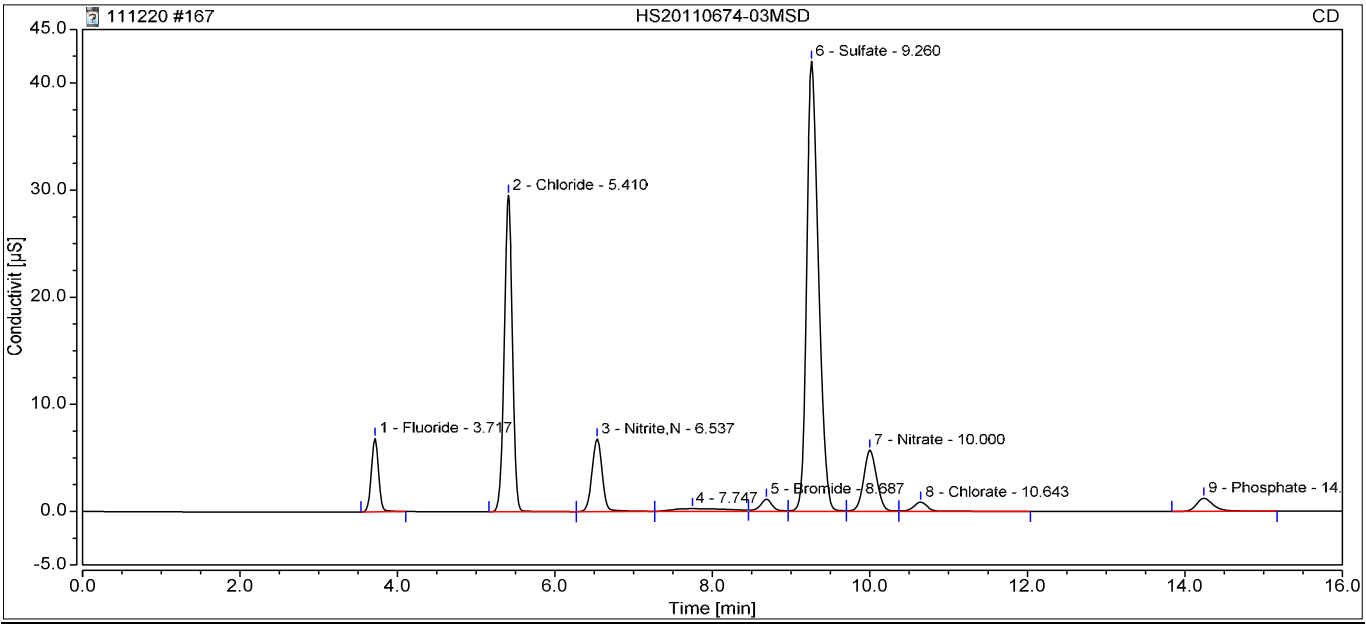
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.705	2.1153	2.1153	1.0000
2	5.41	Chloride	BMB	3.592	16.2890	16.2890	1.0000
3	6.53	Nitrite,N	BMB	1.017	2.1849	2.1849	1.0000
5	8.68	Bromide	M	0.212	2.3322	2.3322	1.0000
6	9.26	Sulfate	M	7.364	45.2875	45.2875	1.0000
7	10.00	Nitrate	M	1.115	2.0484	2.0484	1.0000
8	10.64	Chlorate	MB	0.186	2.0273	2.0273	1.0000
9	14.24	Phosphate	BMB	0.293	1.4475	1.4475	1.0000
Total:			**0.000**	**14.484**		**73.73**	

167 HS20110674-03MSD

Sample Name:	**HS20110674-03MSD**	*Injection Volume:*	**5.00**
Vial Number:	**BC2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/14/2020 09:45**	*Sample Weight:*	**1.0000**

Run Time:

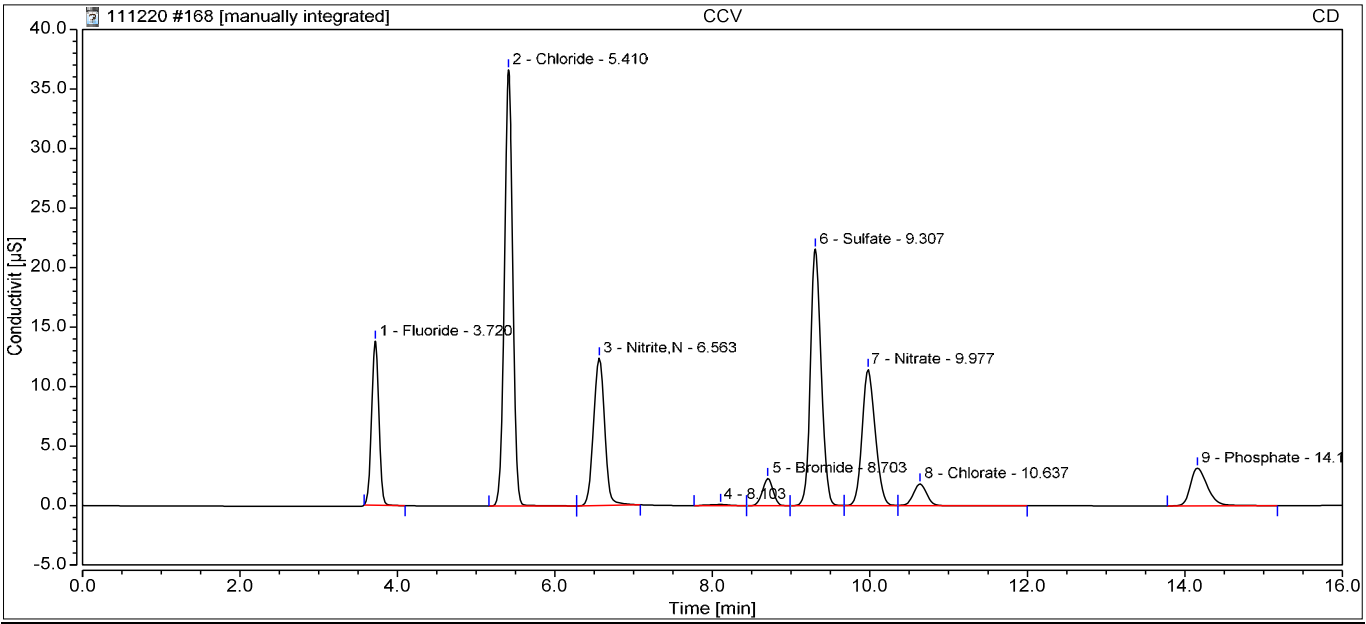


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.731	2.1915	2.1915	1.0000
2	5.41	Chloride	BMB	3.571	16.1974	16.1974	1.0000
3	6.54	Nitrite,N	BMB	1.018	2.1883	2.1883	1.0000
5	8.69	Bromide	M	0.209	2.2981	2.2981	1.0000
6	9.26	Sulfate	M	7.326	45.0529	45.0529	1.0000
7	10.00	Nitrate	M	1.109	2.0363	2.0363	1.0000
8	10.64	Chlorate	MB	0.181	1.9754	1.9754	1.0000
9	14.24	Phosphate	BMB	0.316	1.5569	1.5569	1.0000
Total:			**0.000**	**14.461**		**73.50**	

168 CCV			
Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/14/2020 10:03**	*Sample Weight:*	**1.0000**

Run Time:



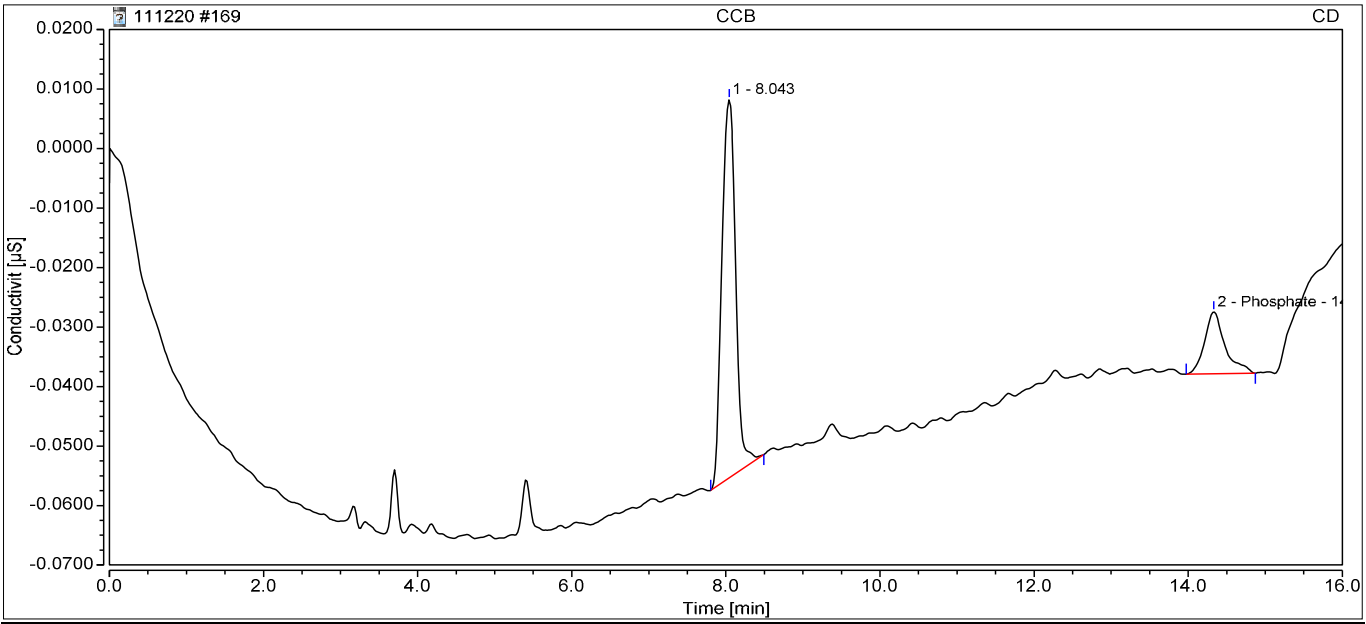
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.469	4.3902	4.3902	1.0000
2	5.41	Chloride	BMb*	4.530	20.5446	20.5446	1.0000
3	6.56	Nitrite,N	bMB*	2.018	4.3528	4.3528	1.0000
5	8.70	Bromide	M	0.361	3.9499	3.9499	1.0000
6	9.31	Sulfate	M	3.394	20.9087	20.9087	1.0000
7	9.98	Nitrate	M	2.230	4.0783	4.0783	1.0000
8	10.64	Chlorate	MB	0.367	3.9735	3.9735	1.0000
9	14.16	Phosphate	BMB	0.793	3.7803	3.7803	1.0000
Total:			**0.000**	**15.163**		**65.98**	

169 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/14/2020 10:21**	*Sample Weight:*	**1.0000**

Run Time:



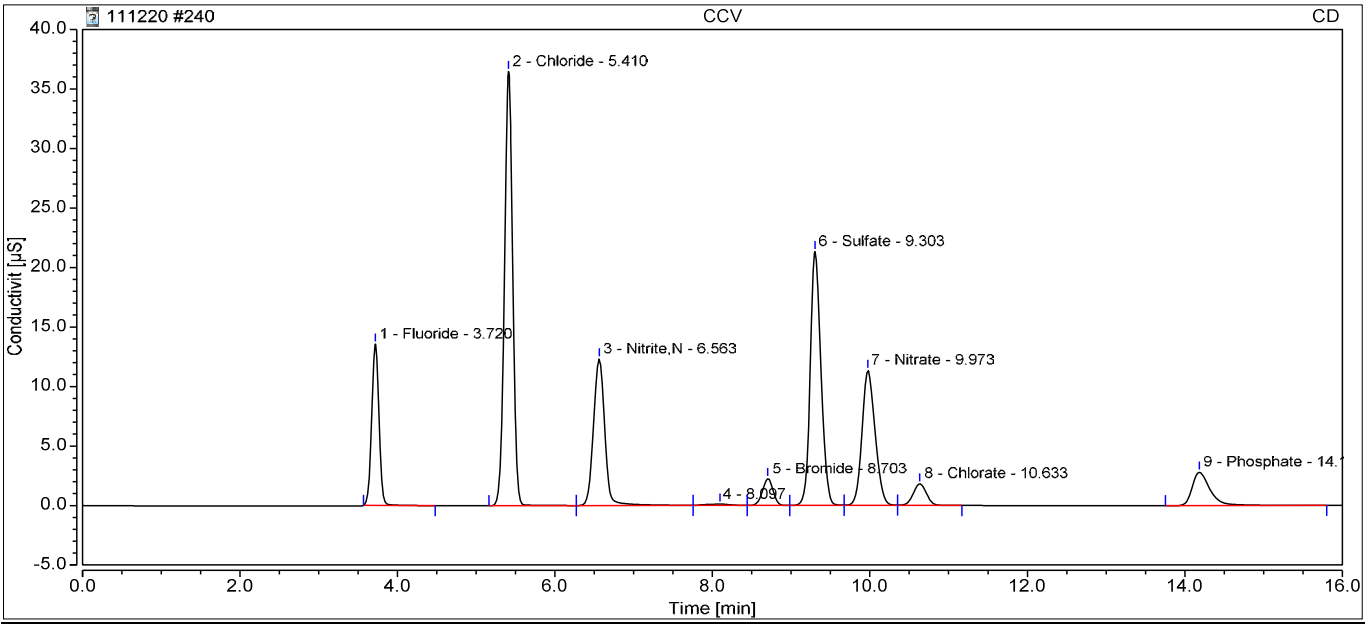
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
2	14.33	Phosphate	BMB	0.003	0.0967	0.0967	1.0000
Total:			**0.000**	**0.003**		**0.10**	

240 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/15/2020 08:56**	*Sample Weight:*	**1.0000**

Run Time:



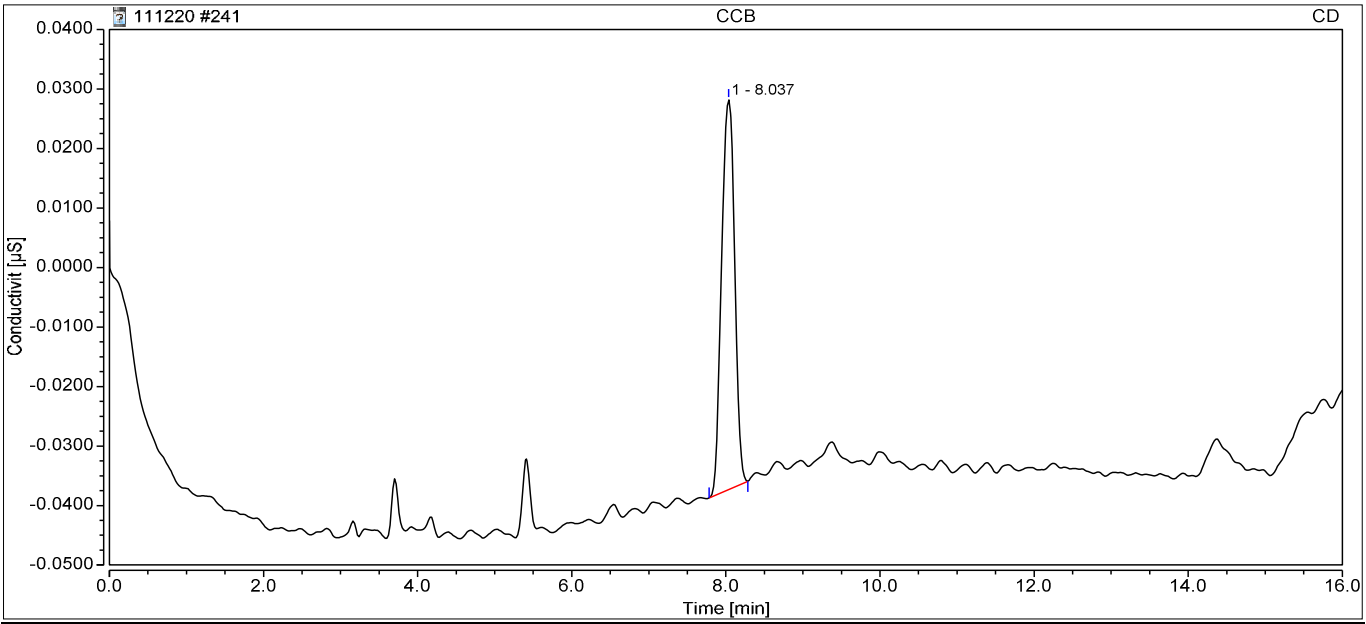
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.447	4.3256	4.3256	1.0000
2	5.41	Chloride	BMB	4.469	20.2663	20.2663	1.0000
3	6.56	Nitrite,N	BMB	2.035	4.3880	4.3880	1.0000
5	8.70	Bromide	BMB	0.354	3.8730	3.8730	1.0000
6	9.30	Sulfate	BM	3.345	20.6036	20.6036	1.0000
7	9.97	Nitrate	M	2.199	4.0215	4.0215	1.0000
8	10.63	Chlorate	MB	0.354	3.8323	3.8323	1.0000
9	14.18	Phosphate	BMB	0.753	3.5934	3.5934	1.0000
Total:			**0.000**	**14.955**		**64.90**	

241 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/15/2020 09:14**	*Sample Weight:*	**1.0000**

Run Time:



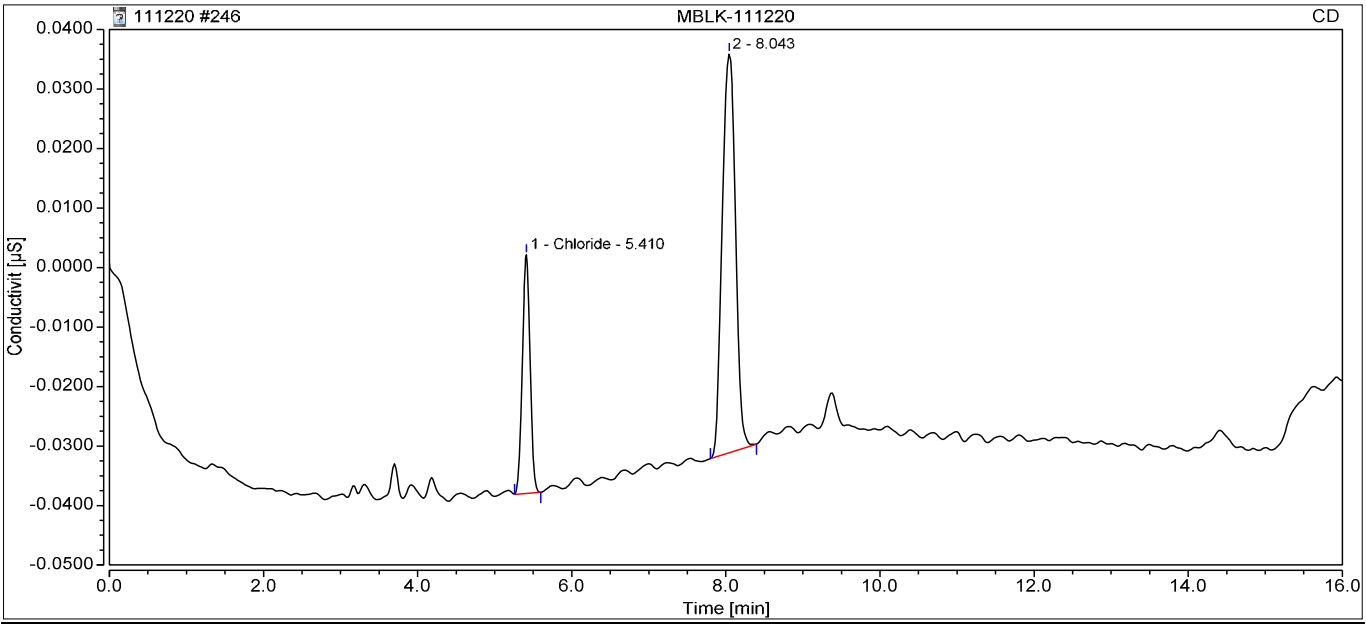
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

246 MBLK-111220

Sample Name:	**MBLK-111220**	*Injection Volume:*	**5.00**
Vial Number:	**BA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/15/2020 10:44**	*Sample Weight:*	**1.0000**

Run Time:



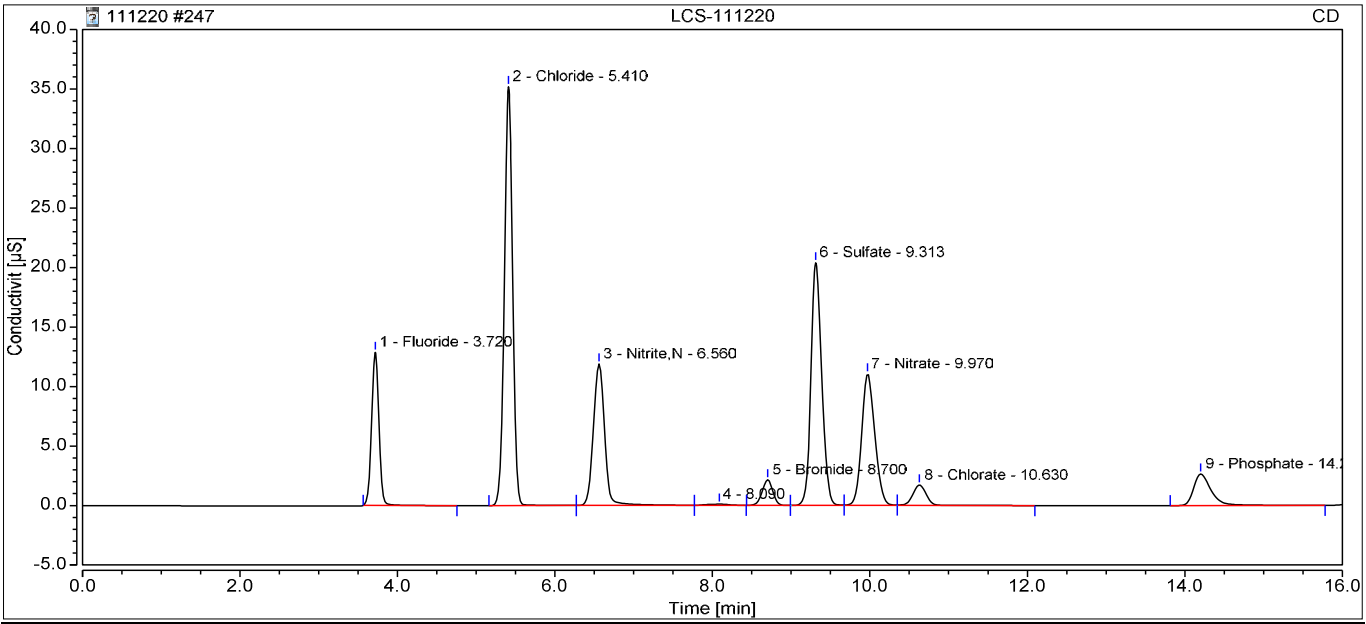
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.41	Chloride	BMB	0.005	0.0282	0.0282	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.005**		**0.03**	

247 LCS-111220

Sample Name:	**LCS-111220**	*Injection Volume:*	**5.00**
Vial Number:	**BA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/15/2020 11:02**	*Sample Weight:*	**1.0000**

Run Time:



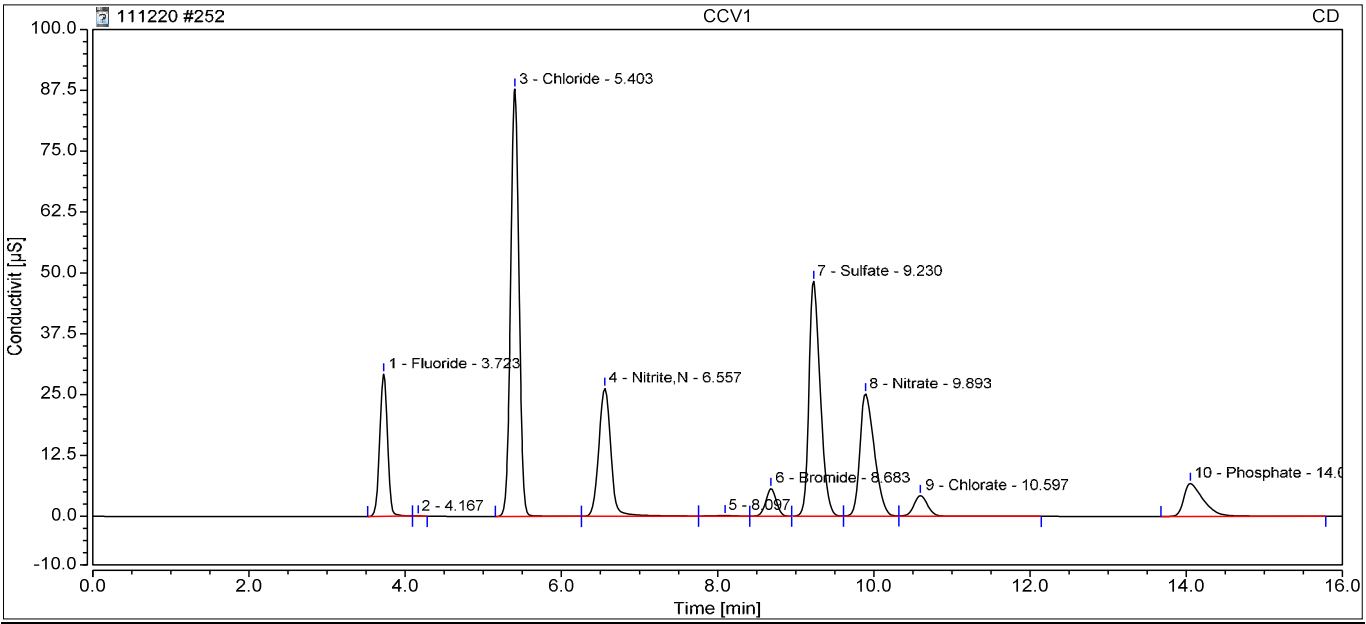
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.382	4.1302	4.1302	1.0000
2	5.41	Chloride	BMB	4.308	19.5352	19.5352	1.0000
3	6.56	Nitrite,N	BMB	1.957	4.2199	4.2199	1.0000
5	8.70	Bromide	BM	0.339	3.7111	3.7111	1.0000
6	9.31	Sulfate	M	3.205	19.7455	19.7455	1.0000
7	9.97	Nitrate	M	2.147	3.9266	3.9266	1.0000
8	10.63	Chlorate	MB	0.346	3.7533	3.7533	1.0000
9	14.20	Phosphate	BMB	0.696	3.3271	3.3271	1.0000
Total:			**0.000**	**14.380**		**62.35**	

252 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/15/2020 12:32**	*Sample Weight:*	**1.0000**

Run Time:



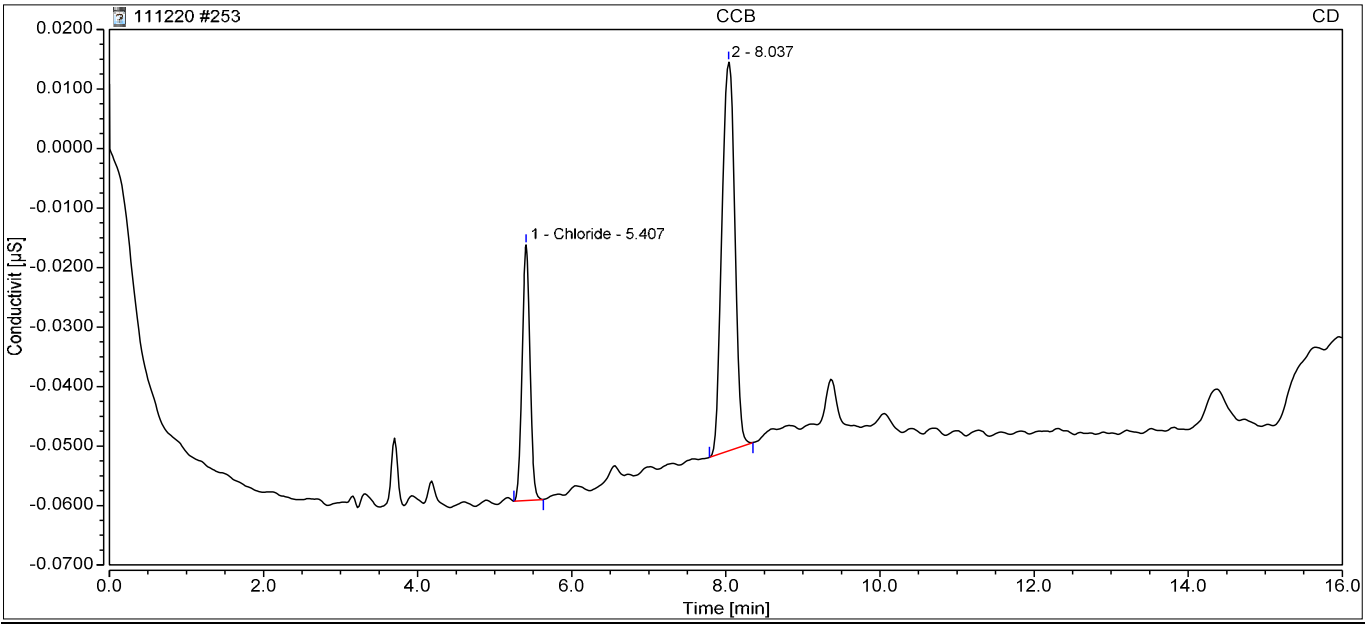
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	3.349	9.9916	9.9916	1.0000
3	5.40	Chloride	BMB	10.821	49.0638	49.0638	1.0000
4	6.56	Nitrite,N	BMB	4.693	10.1417	10.1417	1.0000
6	8.68	Bromide	BM	0.891	9.7181	9.7181	1.0000
7	9.23	Sulfate	M	8.067	49.6036	49.6036	1.0000
8	9.89	Nitrate	M	5.413	9.8712	9.8712	1.0000
9	10.60	Chlorate	MB	0.882	9.5162	9.5162	1.0000
10	14.05	Phosphate	BMB	1.973	9.2808	9.2808	1.0000
Total:			**0.000**	**36.089**		**157.19**	

253 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**11/15/2020 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
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.41	Chloride	BMB	0.005	0.0299	0.0299	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.005**		**0.03**	

HS20110674 ALS Simi Valley P2006524 Tier IV

ALS WO# HS20110674

LABORATORY REPORT

November 30, 2020

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

RE: HS20110674

Dear RJ:

Enclosed are the results of the samples submitted to our laboratory on November 18, 2020. For your reference, these analyses have been assigned our service request number P2006524.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental



By Hayden Akers at 3:06 pm, Nov 30, 2020

Hayden Akers
Project Manager

Client: ALS Laboratory Group Service Request No: P2006524
Project: HS20110674

CASE NARRATIVE

The samples were received intact under chain of custody on November 18, 2020 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175 as described in laboratory SOP VOA-DISGAS. This analyte is included on the laboratory's NELAP and DoD-ELAP scope of accreditation.

Manual integrations were performed on the following samples and analyte. Refer to the raw data for additional information.

Sample Identification(s)	Analyte(s)
P2006524-001	Carbon Dioxide
P2006524-002	Carbon Dioxide
P2006524-003	Carbon Dioxide
P2006524-003 MS	Carbon Dioxide
P2006524-003 MSD	Carbon Dioxide

The recoveries for carbon dioxide for the matrix spike and its duplicate were outside of the DoD quality control limits. However all quality control parameters were met with the laboratory control sample and its duplicate.

Client: ALS Laboratory Group Service Request No: P2006524
Project: HS20110674

Methane, Ethene and Ethane Analysis

The samples were analyzed for methane, ethene, and ethane using a gas chromatograph equipped with a flame ionization detector (FID). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least two hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (methane, ethene and ethane) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP accreditation.

The recoveries for methane for the matrix spike and its duplicate were outside of the DoD quality control limits. However all quality control parameters were met with the laboratory control sample and its duplicate.

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

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

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-007
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Laboratory Group
Project ID: HS20110674

Service Request: P2006524

Date Received: 11/18/2020
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
35BWW08-201111	P2006524-001	Water	11/11/2020	07:10	X	X
35BWW08-201111-FD	P2006524-002	Water	11/11/2020	07:10	X	X
35BWW12-201111	P2006524-003	Water	11/11/2020	08:05	X	X

P2006524

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:** **15162**

SUBCONTRACT TO:

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065 **Phone:** +1 805 526 7161

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS20110674
TSR: Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110674-01**	**35BWW08-201111**	**Groundwater**	**11 Nov 2020 07:10**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	30 Nov 2020
2.	**HS20110674-02**	**35BWW08-201111-FD**	**Groundwater**	**11 Nov 2020 07:10**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	30 Nov 2020
3.	**HS20110674-03**	**35BWW12-201111**	**Groundwater**	**11 Nov 2020 08:05**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	30 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.
3 x Neat & 3 x HCL vials.
HS20110674-03 = MS/MSD

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 11/16/2020 1800

Received By: _____ Date/Time: 11-17-20 0930 1st LOT

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

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2006524

Project: HS20110674

Sample(s) received on: 11/18/20 Date opened: 11/18/20 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: ° C Blank Temperature: 1° C	Wet Ice		
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? Cooler lid. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2006524-001.01	40mL VOA NP				A	
P2006524-001.02	40mL VOA NP				A	
P2006524-001.03	40mL VOA NP				A	
P2006524-001.04	40ml VOA HCL		1		A	wh 11/20/20
P2006524-001.05	40ml VOA HCL				A	
P2006524-001.06	40ml VOA HCL				A	
P2006524-002.01	40mL VOA NP				A	
P2006524-002.02	40mL VOA NP				A	
P2006524-002.03	40mL VOA NP				A	
P2006524-002.04	40ml VOA HCL		1		A	wh 11/20/20
P2006524-002.05	40ml VOA HCL				A	
P2006524-002.06	40ml VOA HCL				A	
P2006524-003.01	40mL VOA NP				A	
P2006524-003.02	40mL VOA NP				A	
P2006524-003.03	40mL VOA NP				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2006524

Project: HS20110674

Sample(s) received on: 11/18/20 Date opened: 11/18/20 by: ADAVID

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2006524-003.04	40ml VOA HCL		1		A	wh 11/20/20
P2006524-003.05	40ml VOA HCL		1		A	wh 11/20/20
P2006524-003.06	40ml VOA HCL		1		A	wh 11/20/20
P2006524-003.07	40mL VOA NP				A	
P2006524-003.08	40mL VOA NP				A	
P2006524-003.09	40mL VOA NP				A	
P2006524-003.10	40mL VOA NP				A	
P2006524-003.11	40mL VOA NP				A	
P2006524-003.12	40mL VOA NP				A	
P2006524-003.13	40ml VOA HCL				A	
P2006524-003.14	40ml VOA HCL				A	
P2006524-003.15	40ml VOA HCL				A	
P2006524-003.16	40ml VOA HCL				A	
P2006524-003.17	40ml VOA HCL				A	
P2006524-003.18	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Project ID: **HS20110674** ALS Project ID: P2006524

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date(s) Collected: 11/11/20
Date Received: 11/18/20
Date Analyzed: 11/24/20

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
35BWW08-201111	P2006524-001	0.10	**590,000**	1,000	860	370	**E**
35BWW08-201111-FD	P2006524-002	0.10	**470,000**	1,000	860	370	
35BWW12-201111	P2006524-003	0.050	**600,000**	2,000	1,700	740	
Method Control Sample	P201124-MB	0.10	860	1,000	860	370	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
E = Estimated; concentration exceeded calibration range.

ALS ENVIRONMENTAL

MATRIX SPIKE / DUPLICATE MATRIX SPIKE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW12-201111**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P2006524-003MS
P2006524-003DMS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/11/20
Date Received: 11/18/20
Date Analyzed: 11/24/20
Volume(s) Analyzed: 0.050 ml(s)

CAS #	Compound	Spike Amount MS / DMS ug/L	Sample Amount ug/L	Result MS ug/L	Result DMS ug/L	% Recovery MS	% Recovery DMS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	45,800	595,000	653,000	498,000	**127**	**0**	80-122	200	30	**N, R**

N = The matrix spike sample recovery is not within control limits. See case narrative.
R = Duplicate precision not met.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2006524
Client Project ID: **HS20110674** ALS Sample ID: P201124-DLCS

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/TCD Date Received: NA
Analyst: Wade Henton Date Analyzed: 11/24/20
Matrix: Water Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result$_1$ LCS ug/L	Result$_1$ DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	19,900	18,700	**87**	**82**	80-122	6	12	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW08-201111**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P2006524-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/11/20
Date Received: 11/18/20
Date Analyzed: 11/20/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW08-201111-FD**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P2006524-002

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/11/20
Date Received: 11/18/20
Date Analyzed: 11/20/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW12-201111**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P2006524-003

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/11/20
Date Received: 11/18/20
Date Analyzed: 11/20/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **Method Control Sample**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P201120-MB

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 11/20/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

MATRIX SPIKE / DUPLICATE MATRIX SPIKE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW12-201111**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P2006524-003MS
P2006524-003DMS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: 11/11/20
Date Received: 11/18/20
Date Analyzed: 11/20/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount MS / DMS µg/L	Sample Amount µg/L	Result MS µg/L	Result DMS µg/L	% Recovery MS	% Recovery DMS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	169	ND	120	120	**71**	**71**	73-125	0	30	**N**
74-85-1	Ethene	294	ND	245	251	**83**	**85**	72-133	2	30	
74-84-0	Ethane	317	ND	240	242	**76**	**76**	74-131	0	30	

N = The matrix spike recovery is not within control limits. See case narrative.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS20110674**

ALS Project ID: P2006524
ALS Sample ID: P201120-LCS
P201120-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Wade Henton
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 11/20/20
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result$_1$ LCS µg/L	Result$_1$ DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	2.89	2.87	**115**	**114**	73-125	0.9	26	
74-85-1	Ethene	4.40	5.23	5.22	**119**	**119**	72-133	0	11	
74-84-0	Ethane	4.72	5.11	5.02	**108**	**106**	74-131	2	10	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 15:07
Operator : WH
Sample : P2006524-001 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 15:15:47 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

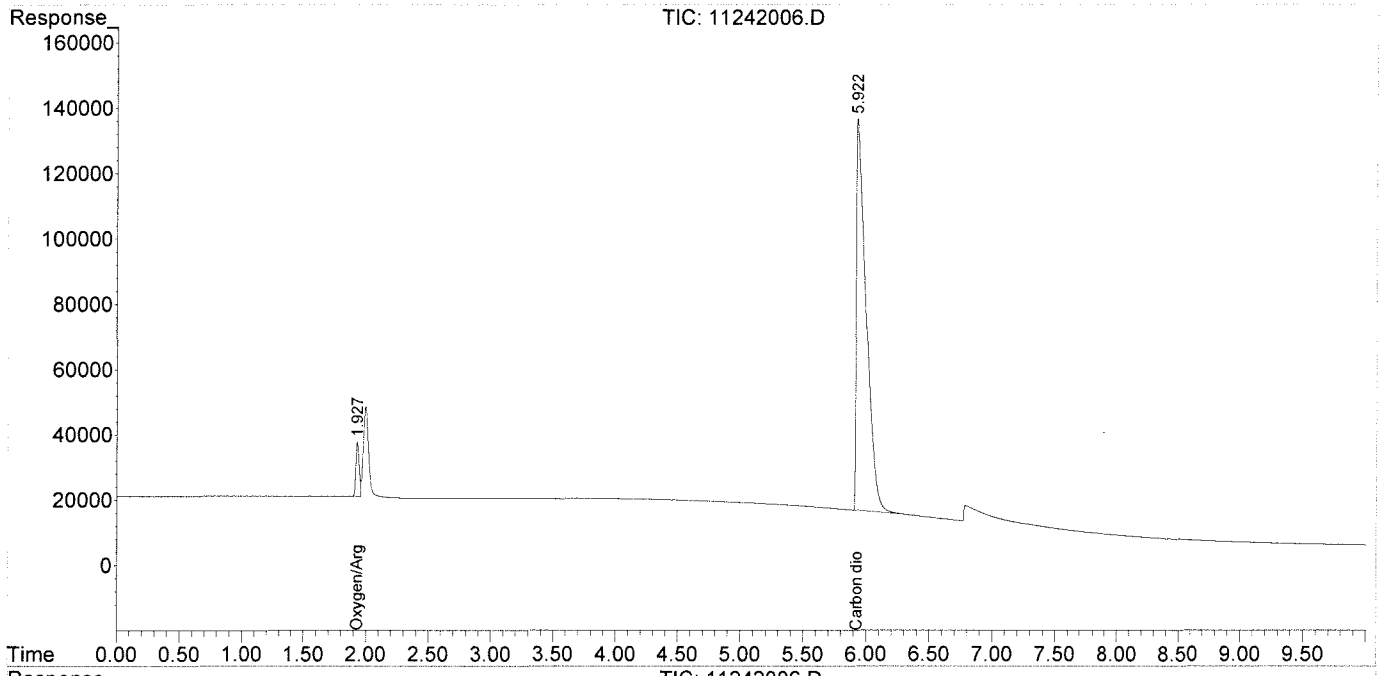
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.927f	304326	0.064	ppm	
2)	Carbon monoxide	1.927f	304326	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.922	6333728	26983.130	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

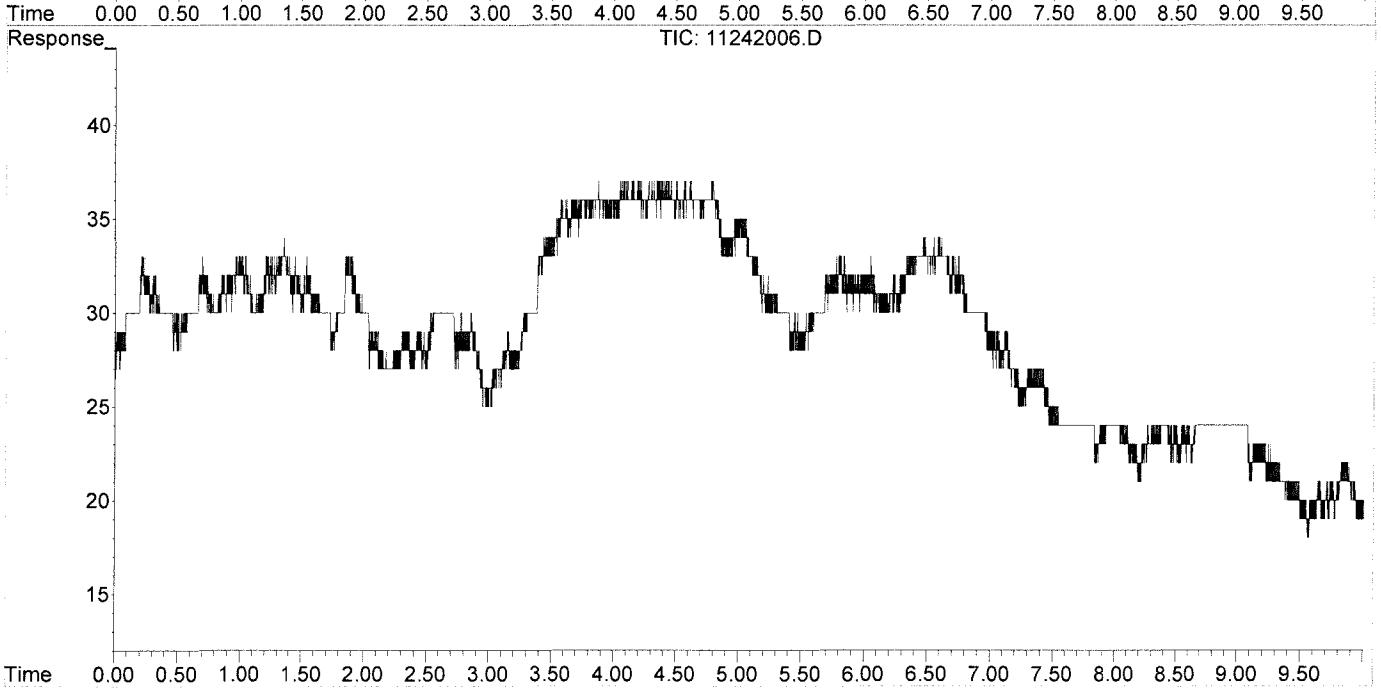
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 15:07
Operator : WH
Sample : P2006524-001 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 15:15:47 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

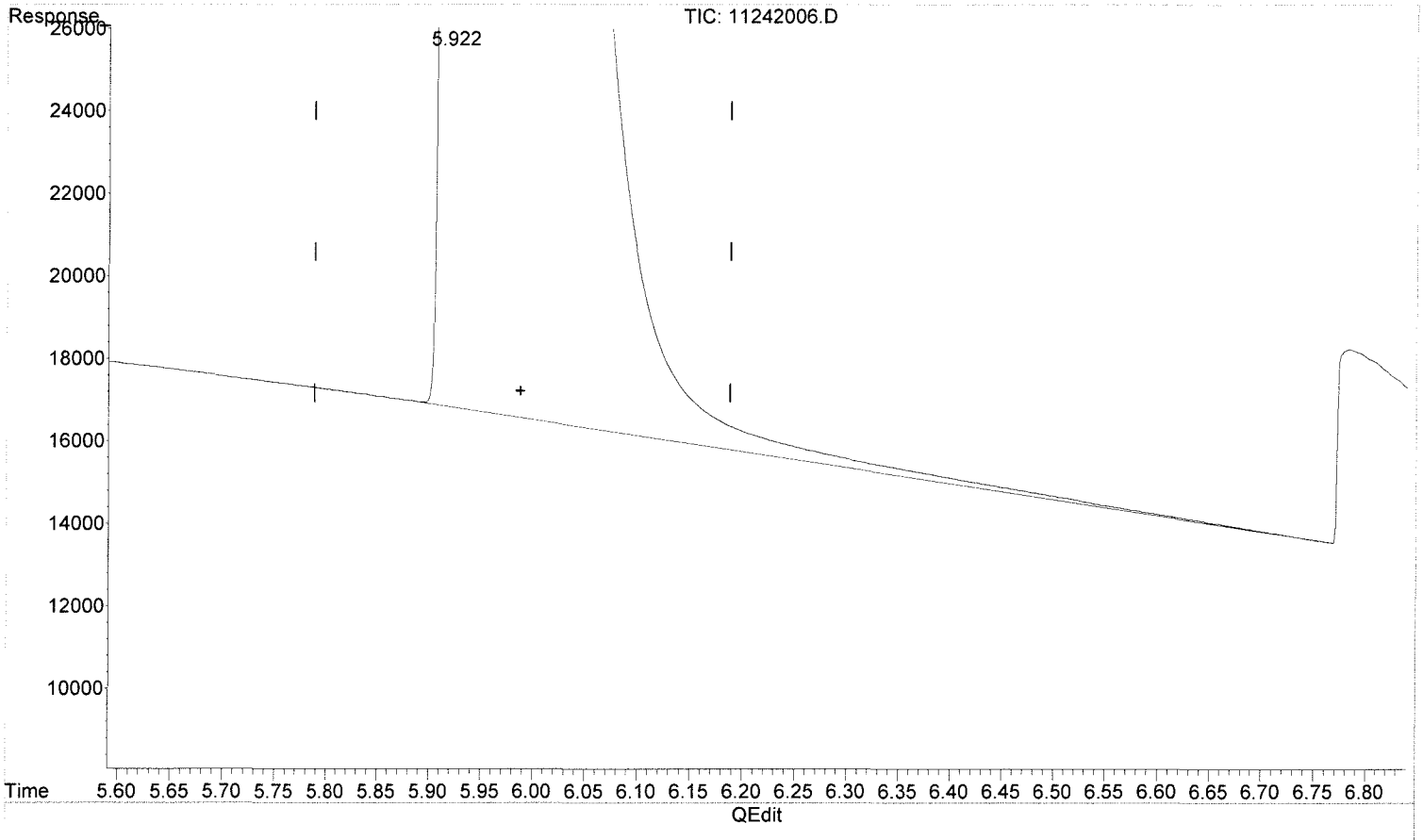




Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 15:07
Operator : WH
Sample : P2006524-001 0.1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 15:15:47 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.923min 27210.728 ppm

response 6387152

Manual Integration:

Before

11/24/20

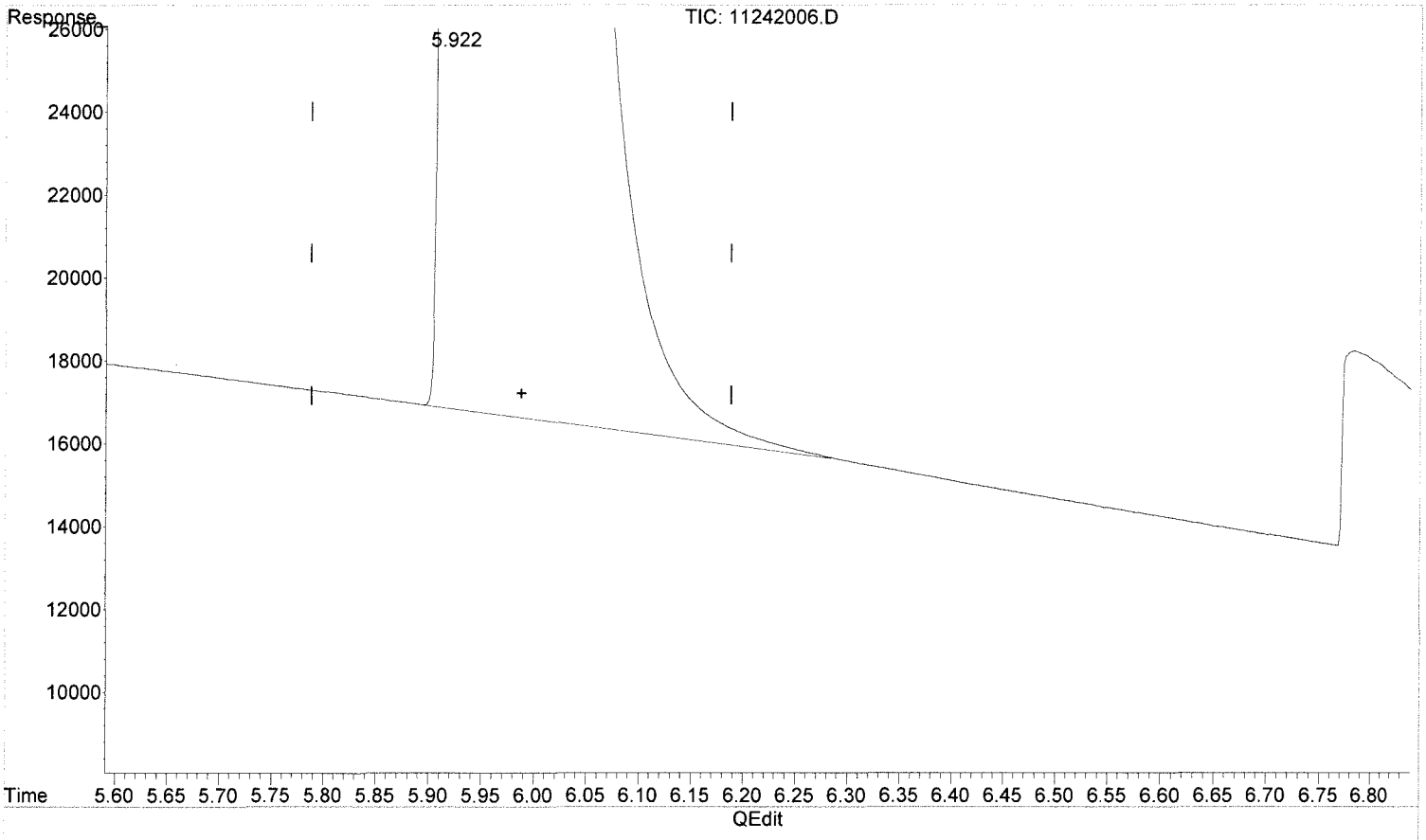
(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 15:07
Operator : WH
Sample : P2006524-001 0.1
Misc :
ALS Vial : 1 Sample Multiplier: 1

CB 11/24/20

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 15:15:47 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide
5.922min 26983.130 ppm m
response 6333728

Manual Integration:
After
BLC
11/24/20

(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 15:21
Operator : WH
Sample : P2006524-002 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 15:37:27 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

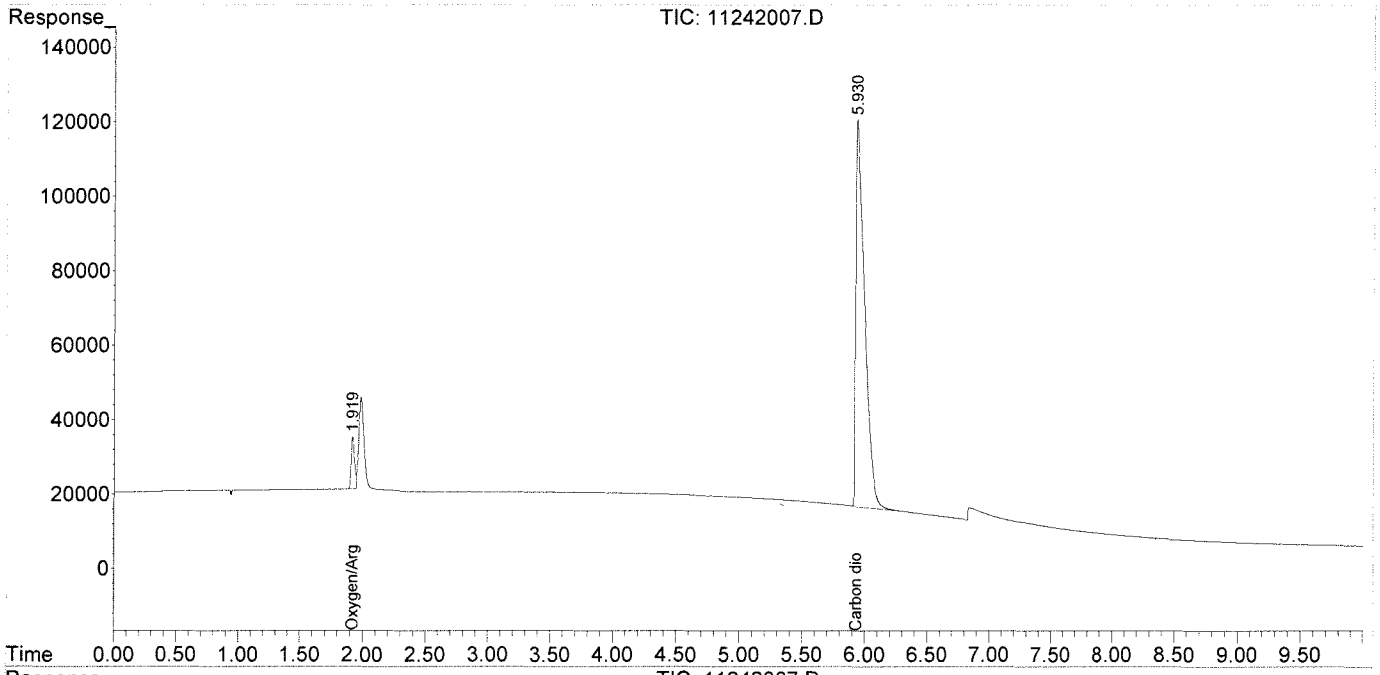
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.919f	257570	0.054	ppm	
2)	Carbon monoxide	1.919f	257570	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.930	5083784	21658.084	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

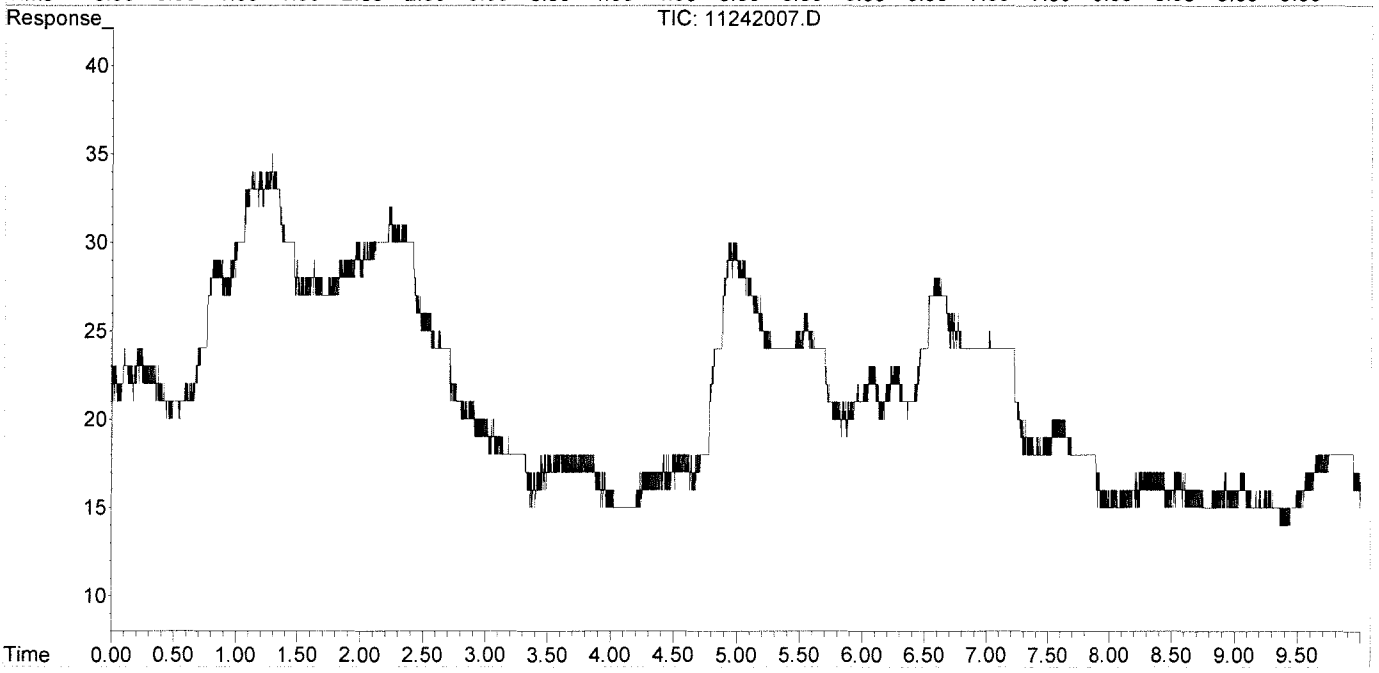
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 15:21
Operator : WH
Sample : P2006524-002 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 15:37:27 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

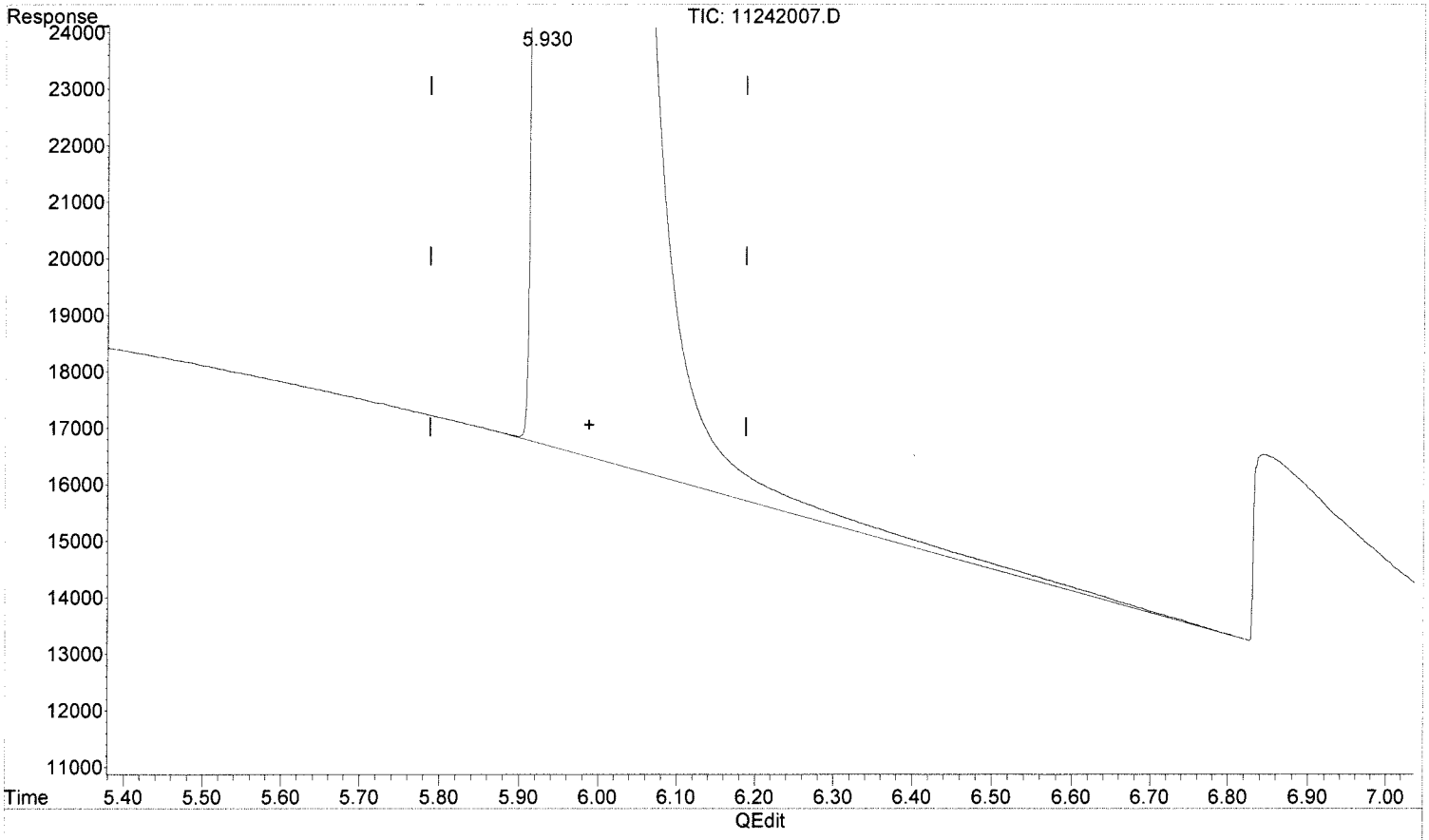




Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 15:21
Operator : WH
Sample : P2006524-002 0.1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 15:37:27 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.930min 21873.834 ppm

response 5134427

Manual Integration:

Before

11/24/20

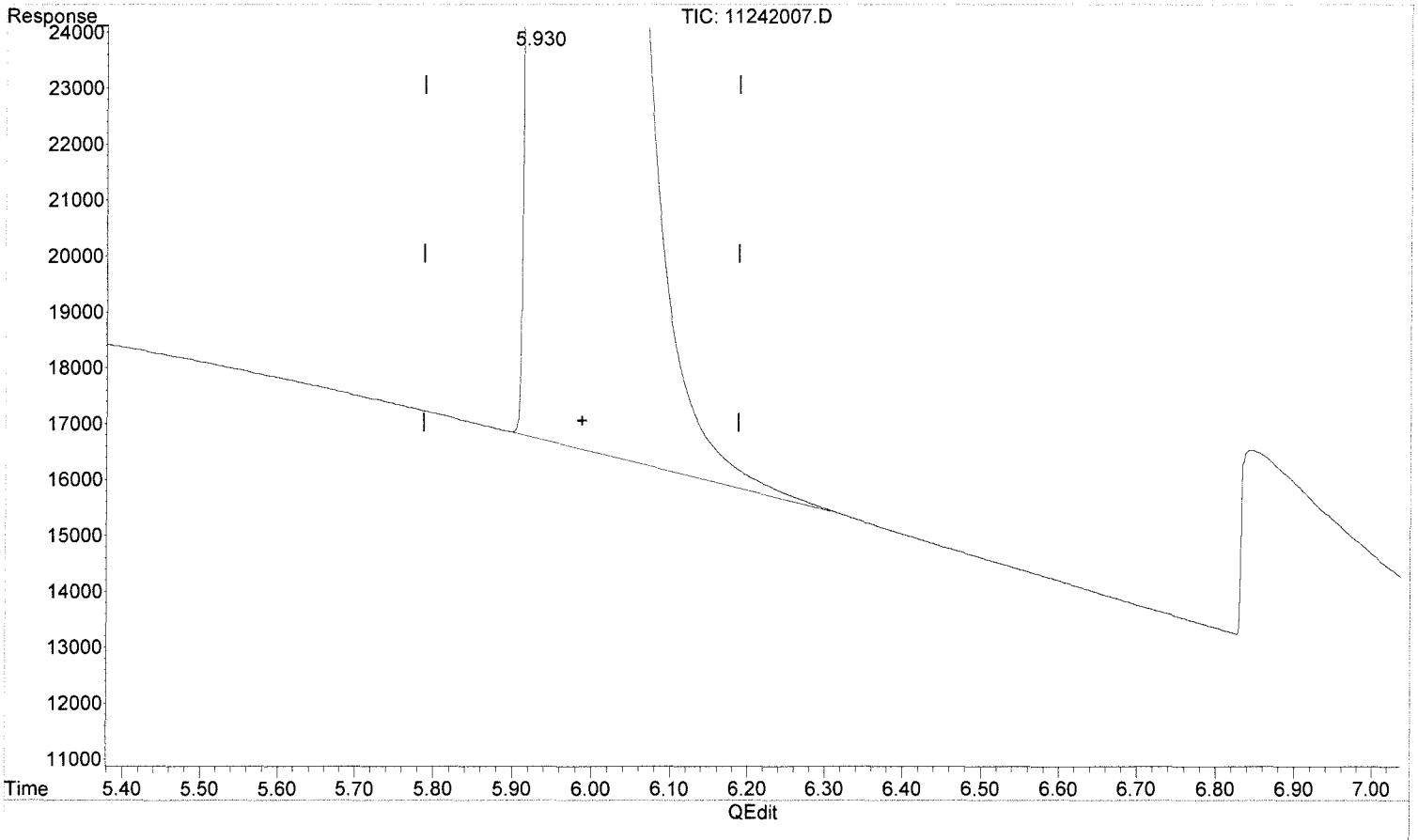
(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 15:21
Operator : WH
Sample : P2006524-002 0.1
Misc :
ALS Vial : 1 Sample Multiplier: 1

CB
11/24/20

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 15:37:27 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide
5.930min 21658.084 ppm m
response 5083784

Manual Integration:
After
BLC
11/24/20

(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242013.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 16:37
Operator : WH
Sample : P2006524-003 0.05mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 16:48:20 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

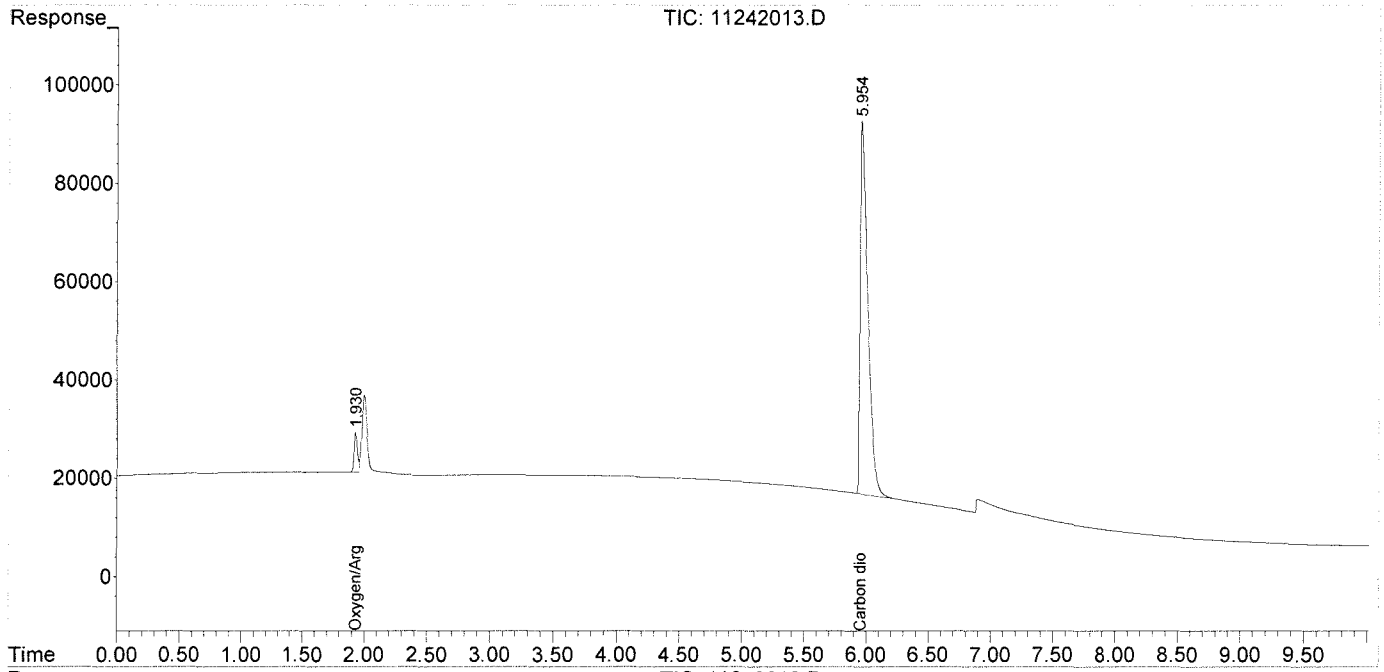
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.931f	146227	0.031	ppm	
2)	Carbon monoxide	1.931f	146227	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.954	3202091	13641.642	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

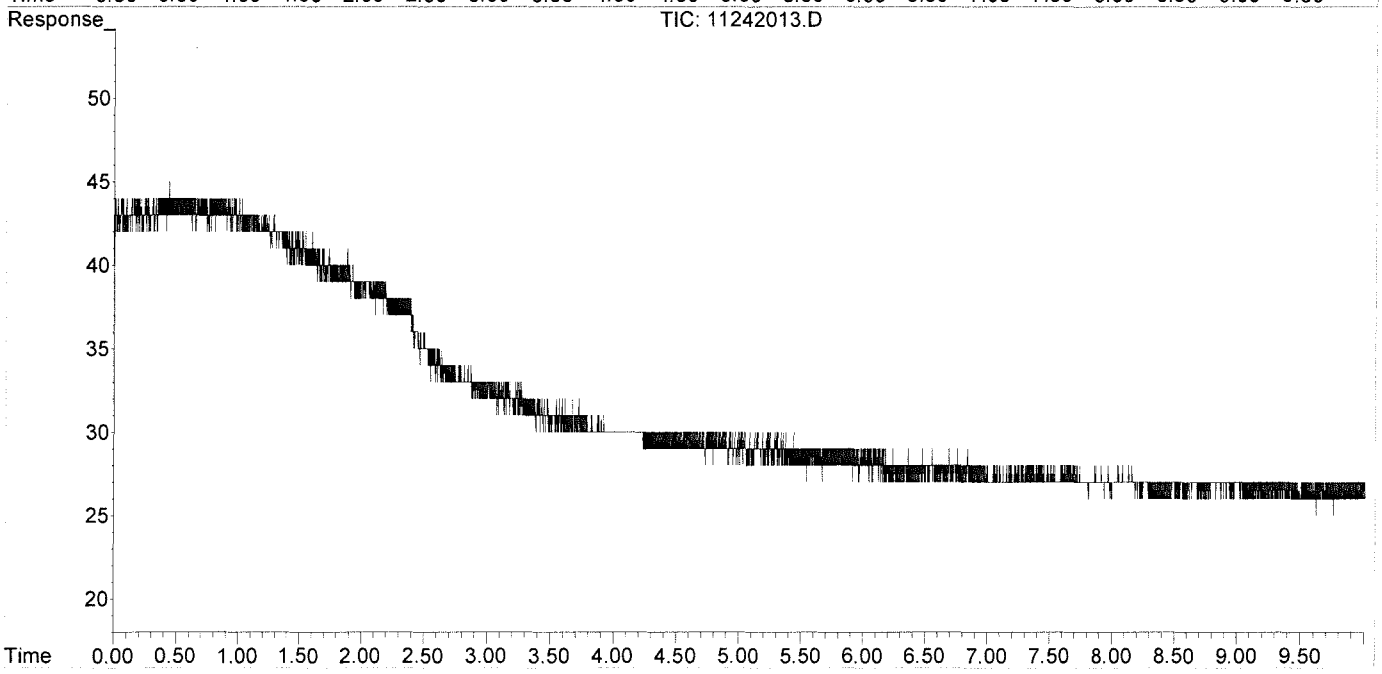
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242013.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 16:37
Operator : WH
Sample : P2006524-003 0.05mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 16:48:20 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

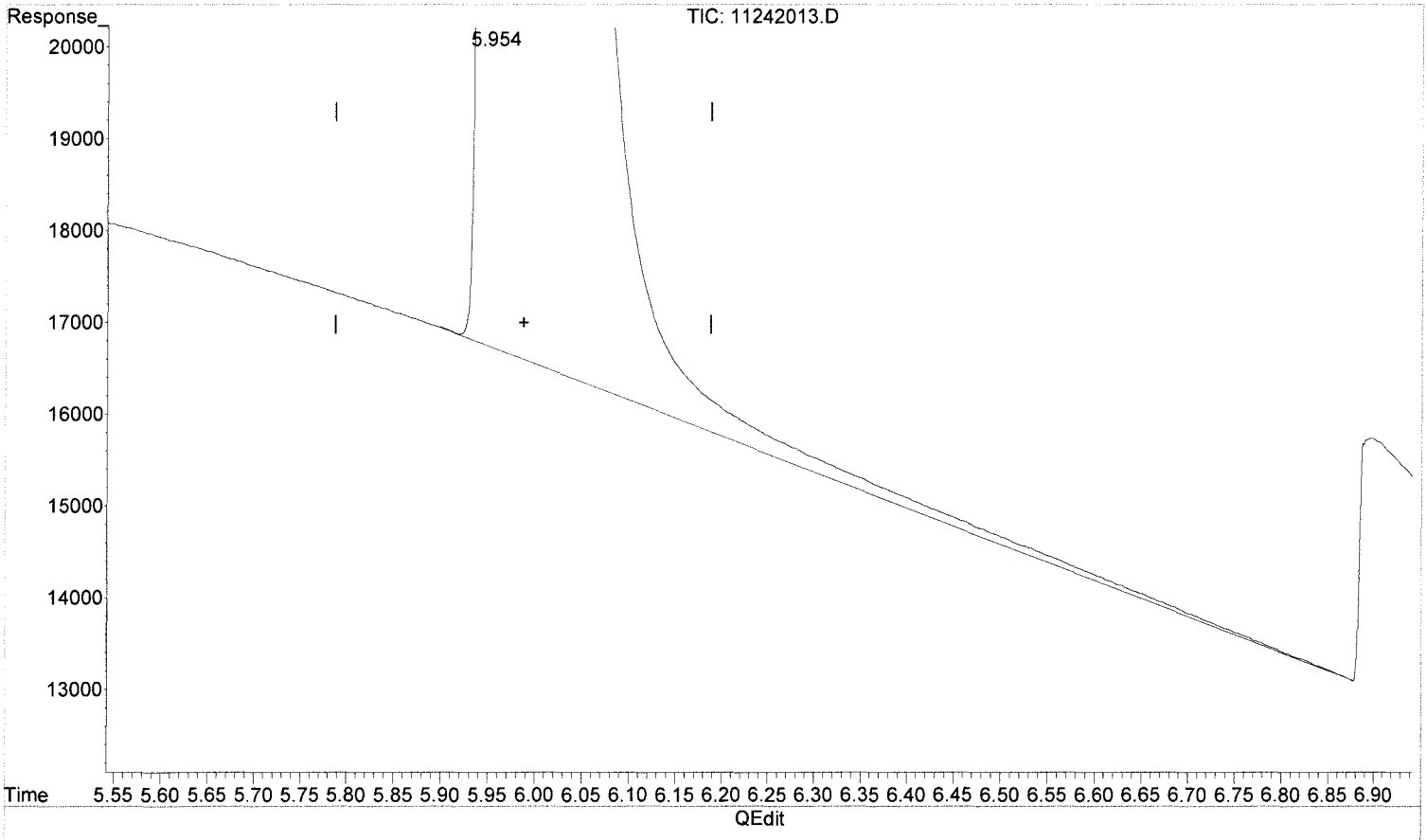




Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242013.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 16:37
Operator : WH
Sample : P2006524-003 x2
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 16:48:20 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide
5.955min 13862.415 ppm
response 3253913

Manual Integration:
Before

11/24/20

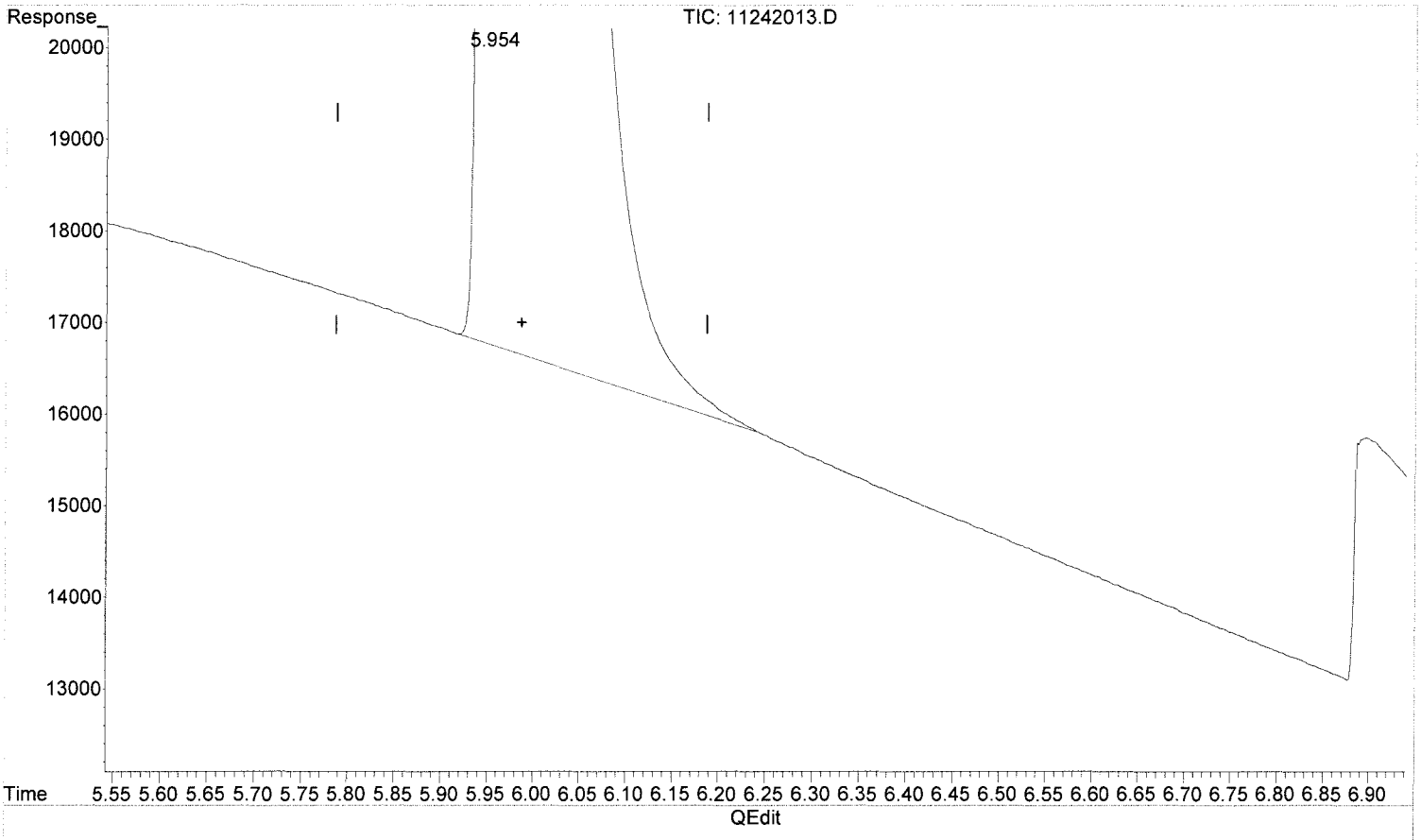
(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242013.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 16:37
Operator : WH
Sample : P2006524-003 x2
Misc :
ALS Vial : 1 Sample Multiplier: 1

CB 11/24/20

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 16:48:20 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide
5.954min 13641.642 ppm m
response 3202091

Manual Integration:
After
BLC
11/24/20

(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242014.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 16:52
Operator : WH
Sample : P2006524-003 MS 0.05mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:07:41 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

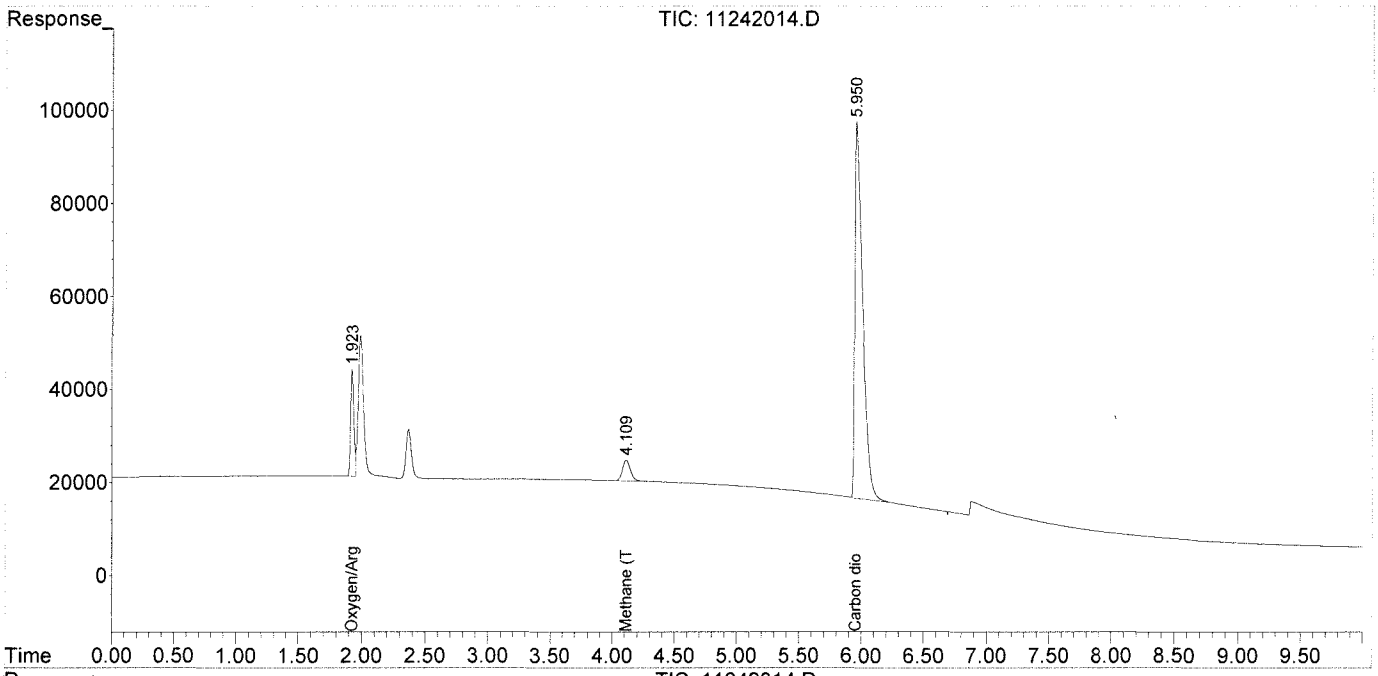
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.923f	407025	0.086	ppm	
2)	Carbon monoxide	1.923f	407025	N.D.	ppm	
3)	Methane (TCD)	4.110f	195485	20670.198	ppm	
4)	Carbon dioxide	5.950	3512868	14965.620	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

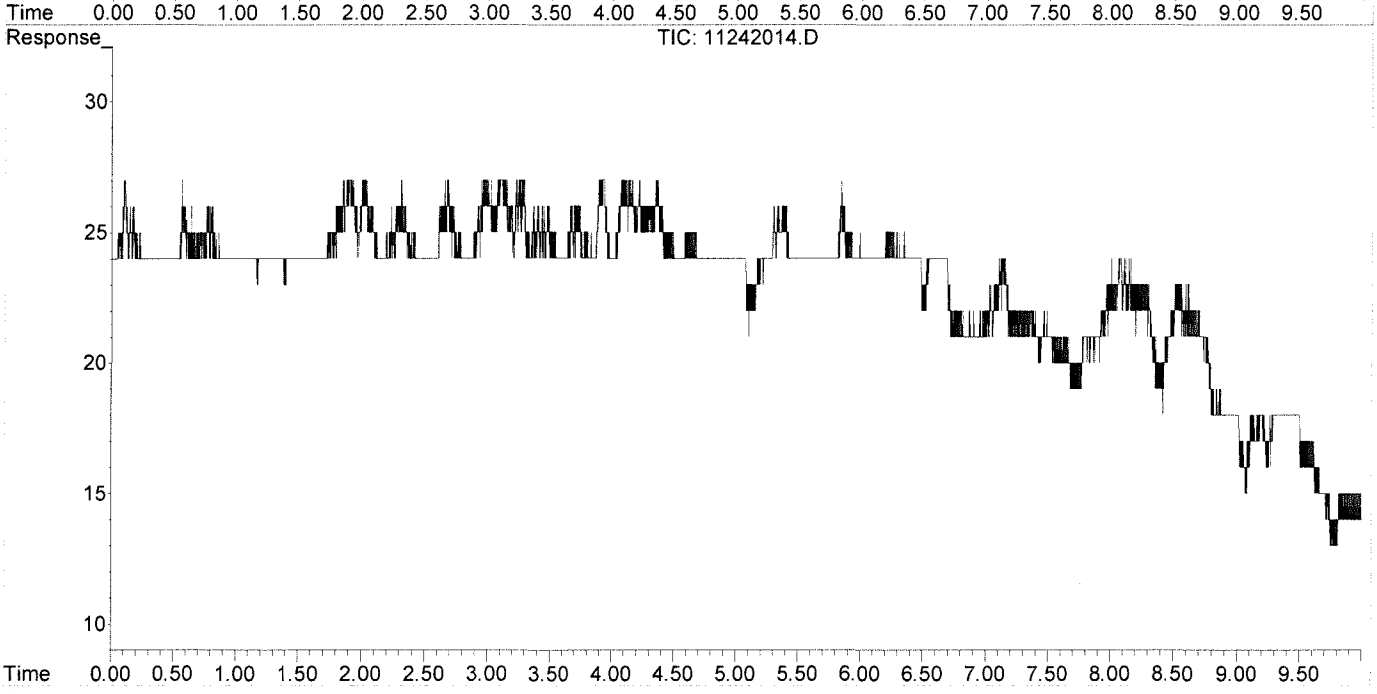
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242014.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 16:52
Operator : WH
Sample : P2006524-003 MS 0.05mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:07:41 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

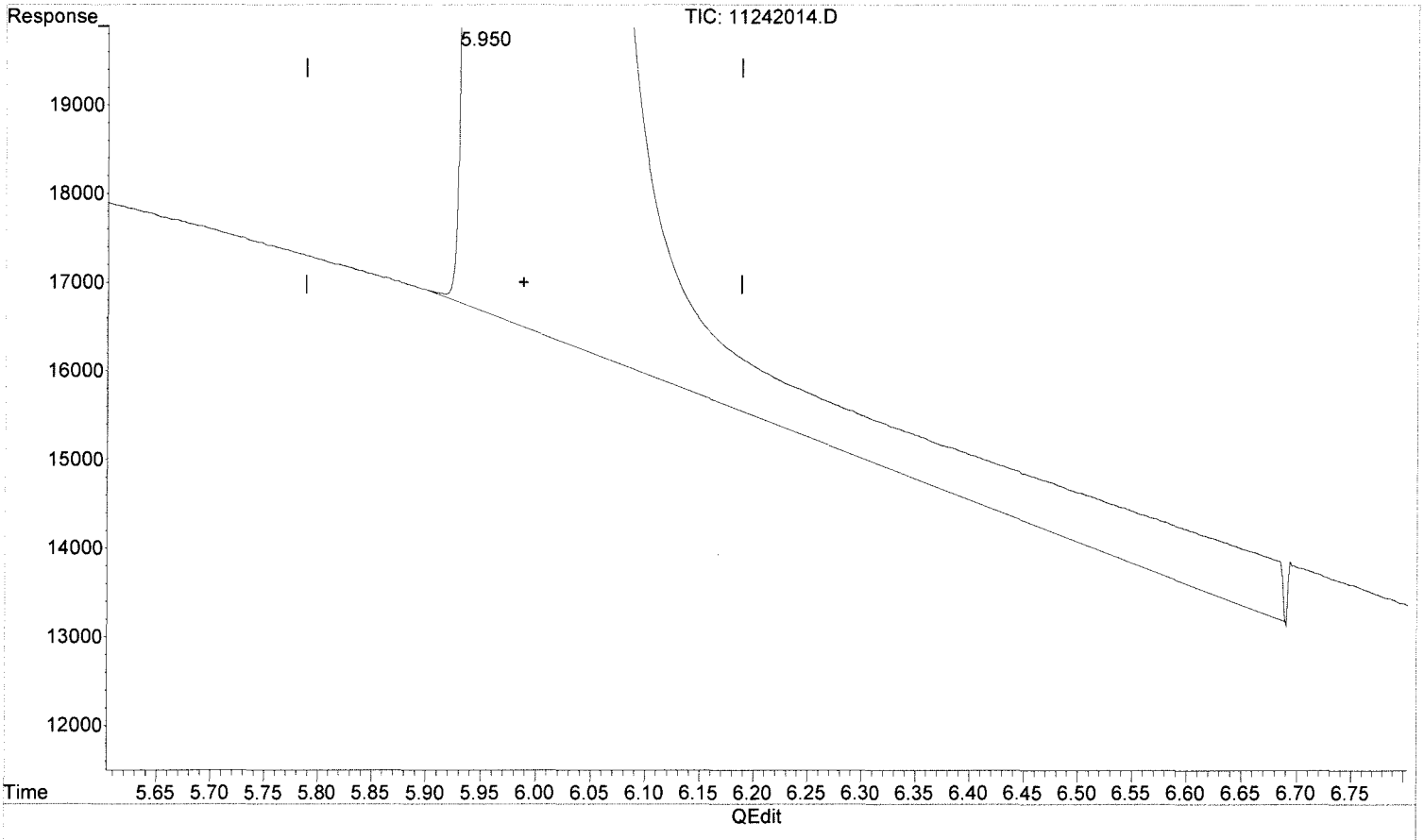




Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242014.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 16:52
Operator : WH
Sample : P2006524-003MSx2
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:07:41 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.951min 15812.277 ppm

response 3711603

Manual Integration:

Before

11/24/20

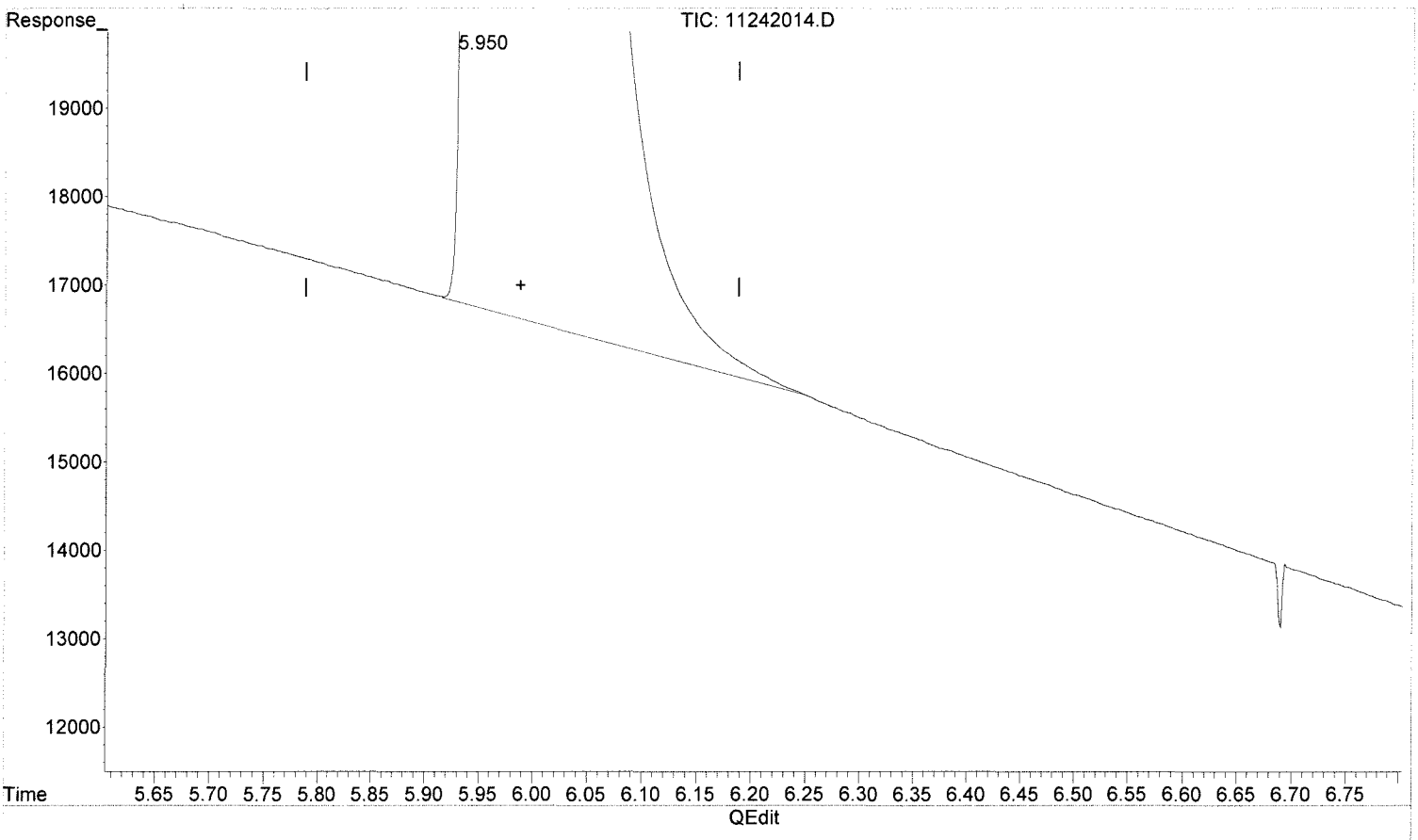
(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242014.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 16:52
Operator : WH
Sample : P2006524-003MSx2
Misc :
ALS Vial : 1 Sample Multiplier: 1

CB 11/24/20

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:07:41 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide
5.950min 14965.620 ppm m
response 3512868

Manual Integration:
After
BLC
11/24/20

(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242015.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 17:07
Operator : WH
Sample : P2006524-003 MSD 0.05mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:21:41 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

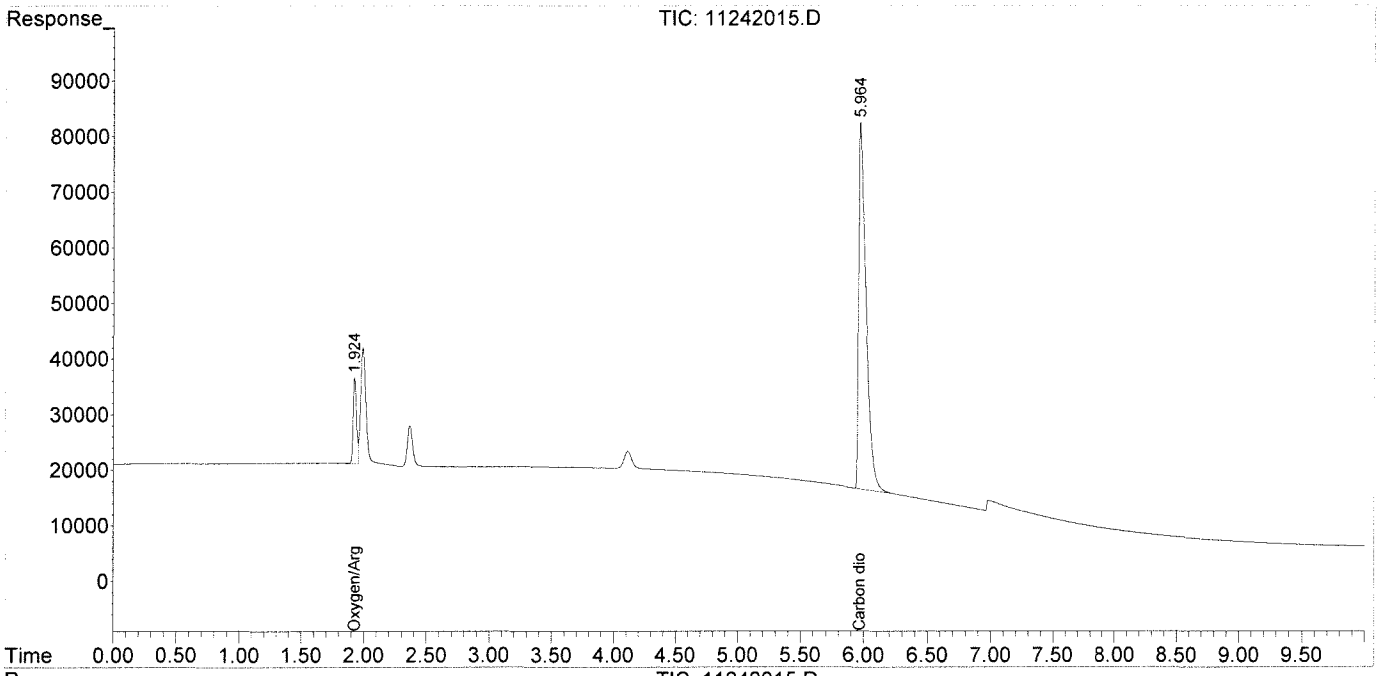
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.925f	291704	0.061	ppm	
2)	Carbon monoxide	1.925f	291704	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.964	2679745	11416.325	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

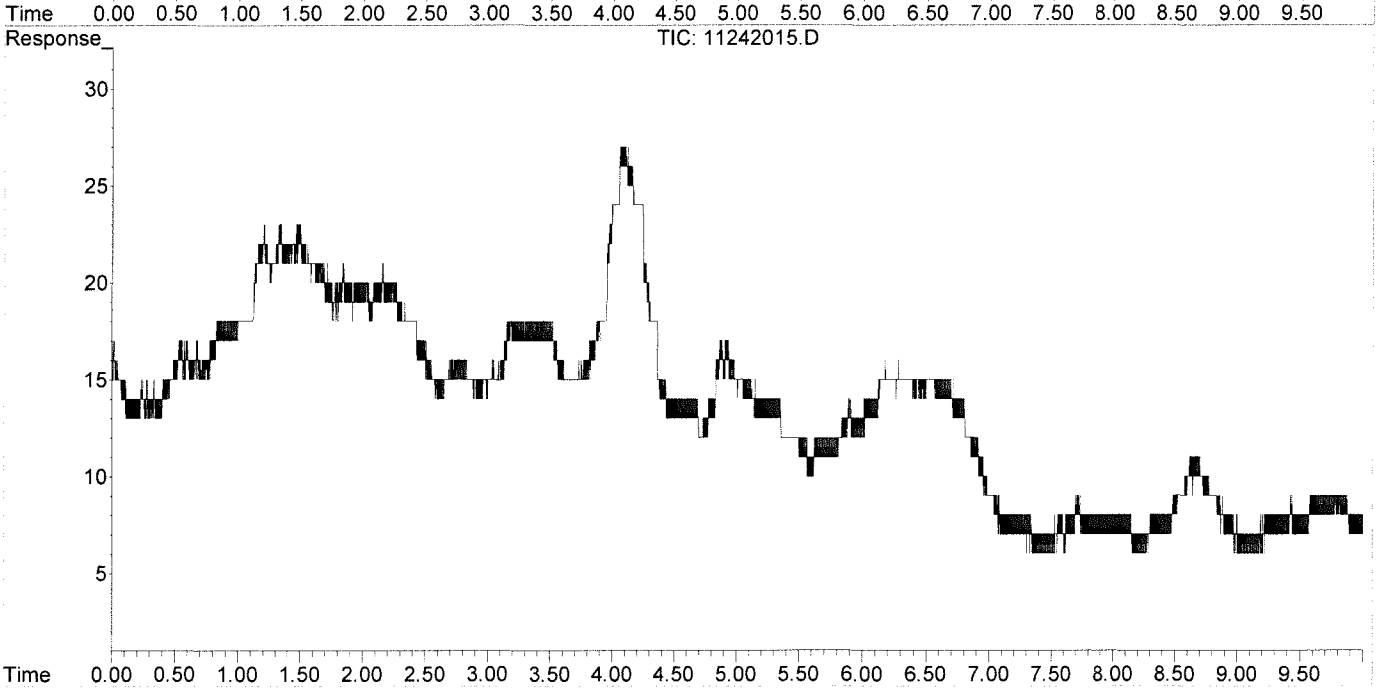
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242015.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 17:07
Operator : WH
Sample : P2006524-003 MSD 0.05mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:21:41 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

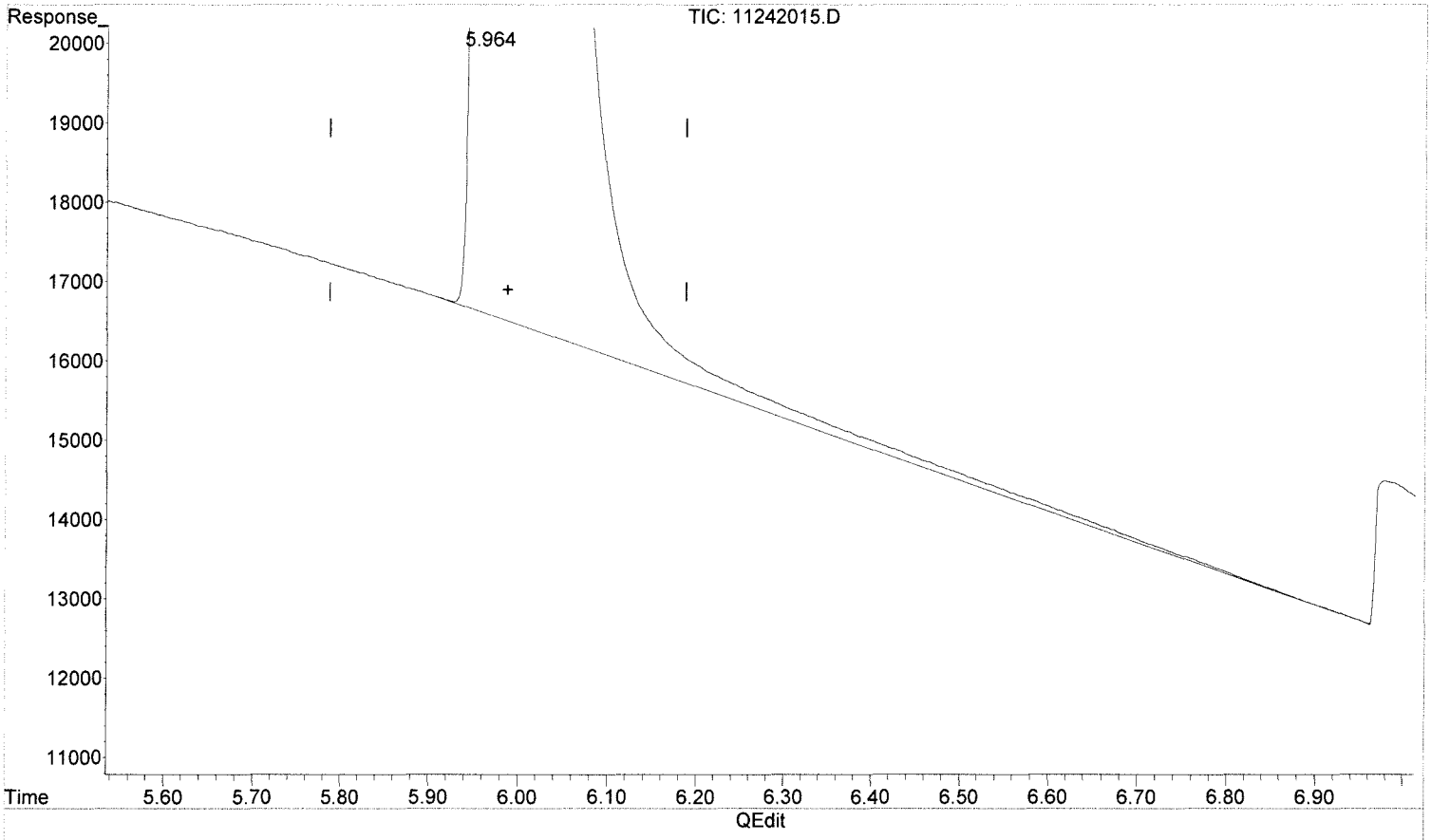




Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242015.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 17:07
Operator : WH
Sample : P2006524-003MSD2
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:21:41 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.965min 11631.206 ppm

response 2730184

Manual Integration:

Before

11/24/20

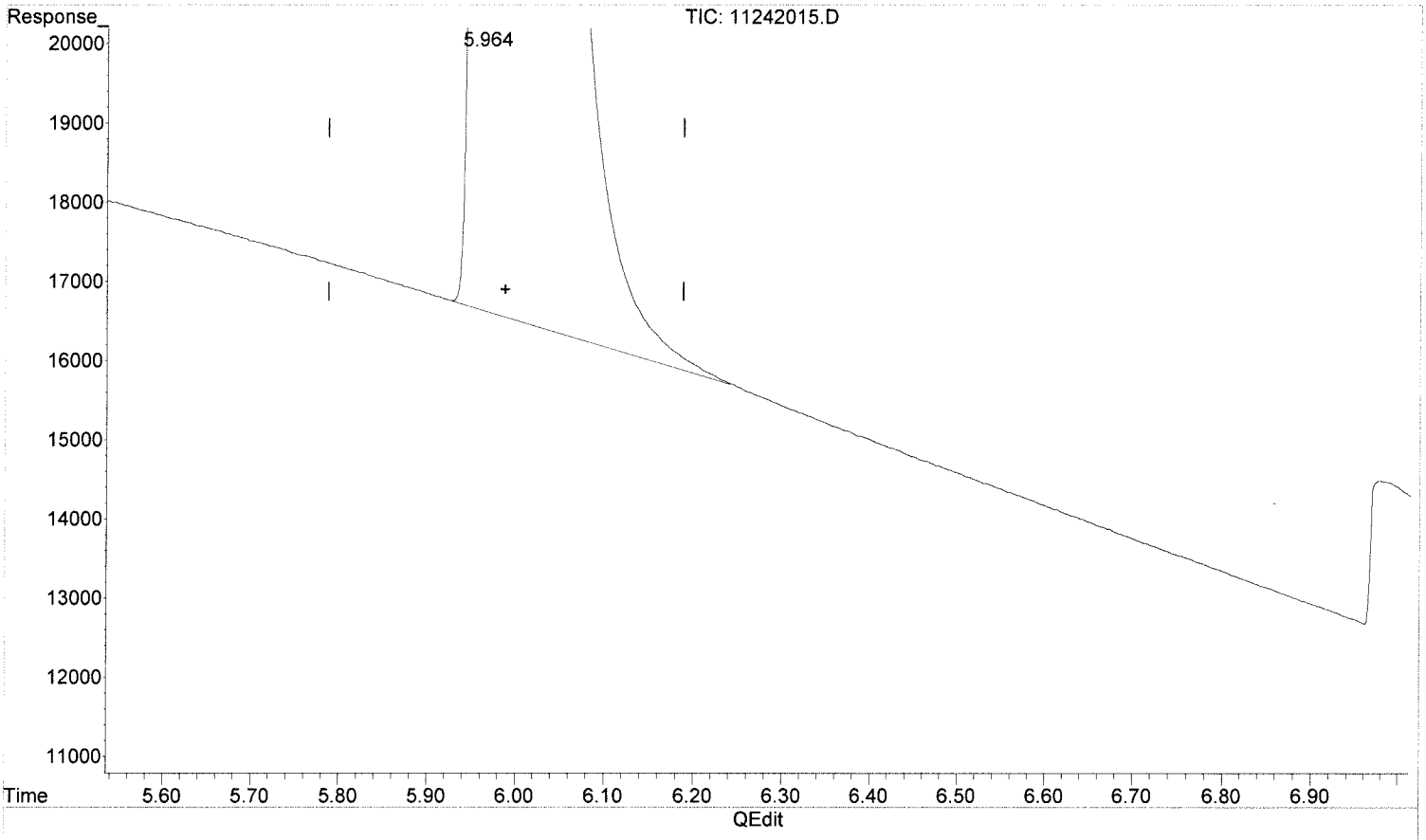
(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242015.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 17:07
Operator : WH
Sample : P2006524-003MSD2
Misc :
ALS Vial : 1 Sample Multiplier: 1

CB
11/24/20

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:21:41 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide
5.964min 11416.325 ppm m
response 2679745

Manual Integration:
After
BLC
11/24/20

(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 14:50
Operator : WH
Sample : MCS 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 15:15:08 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

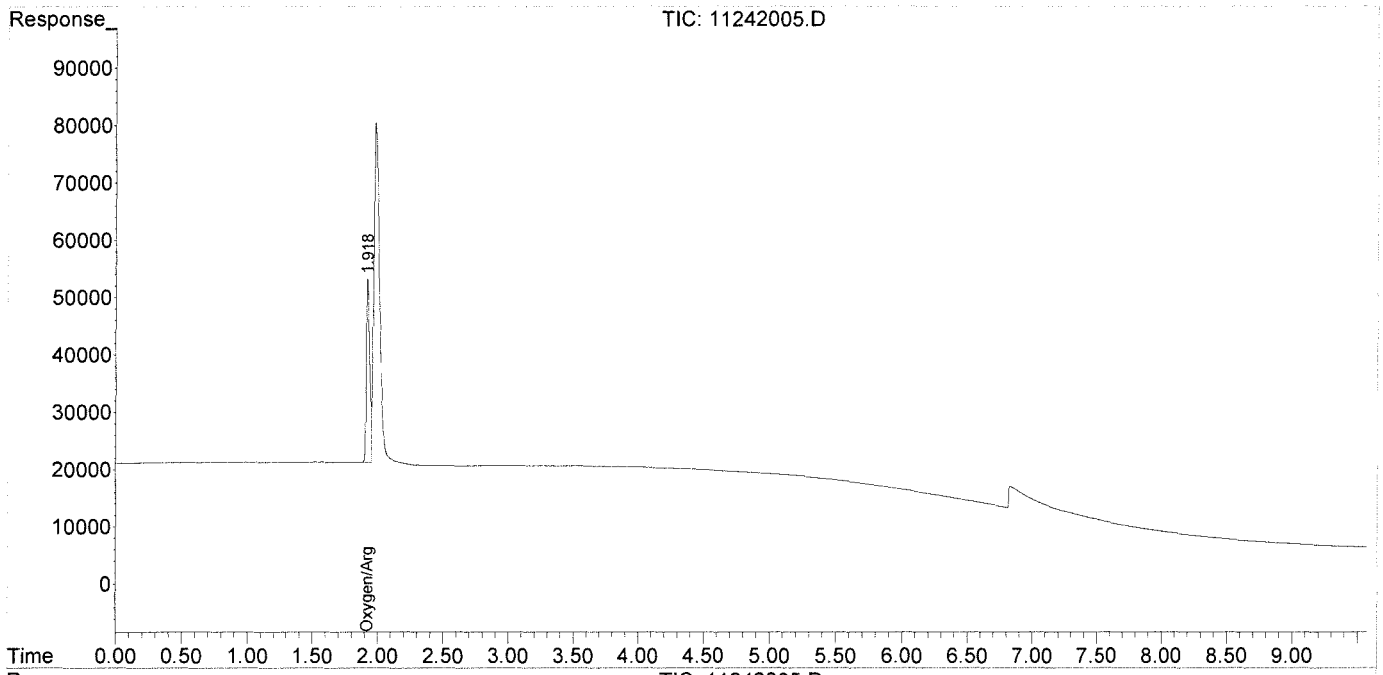
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.919f	558843	0.117	ppm
2)	Carbon monoxide	1.919f	558843	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

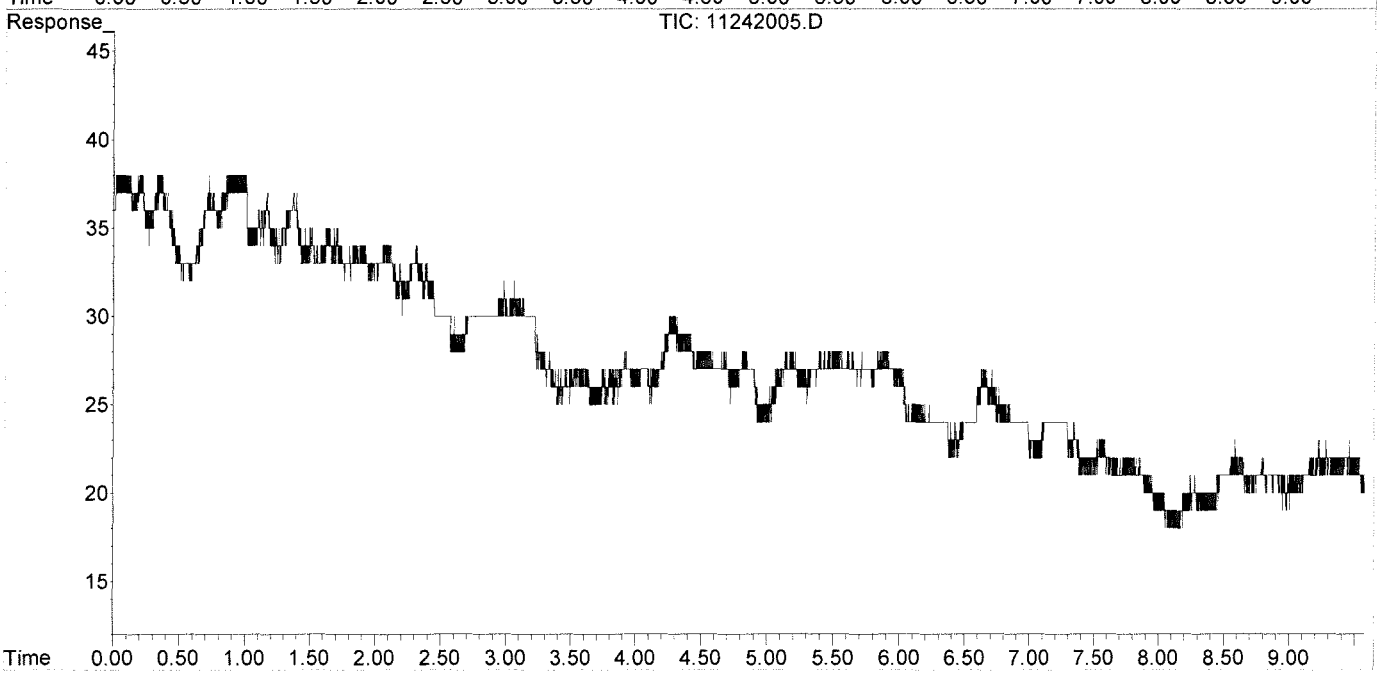
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 14:50
Operator : WH
Sample : MCS 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 15:15:08 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242016.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 17:24
Operator : WH
Sample : LCS 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:47:28 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

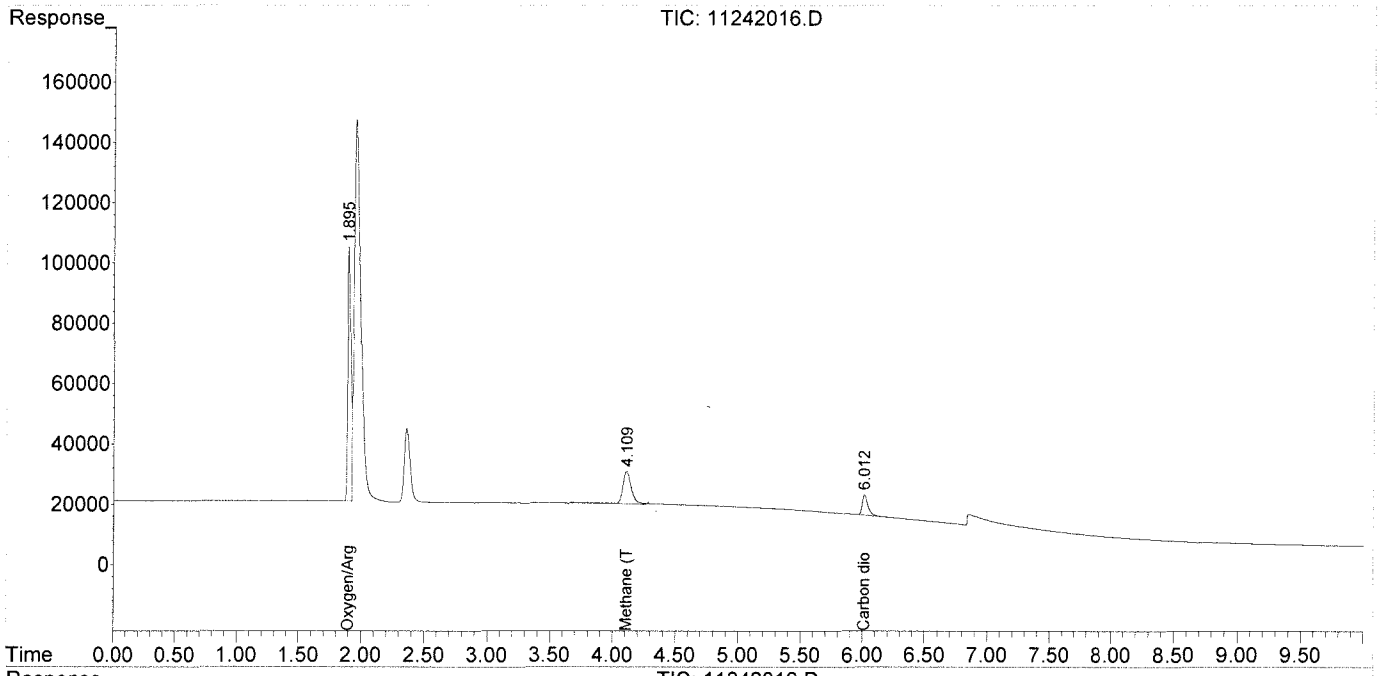
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.896	1461424	0.307	ppm	
2)	Carbon monoxide	1.896	1461424	N.D.	ppm	
3)	Methane (TCD)	4.109f	496363	52484.378	ppm	
4)	Carbon dioxide	6.012	214483	913.747	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

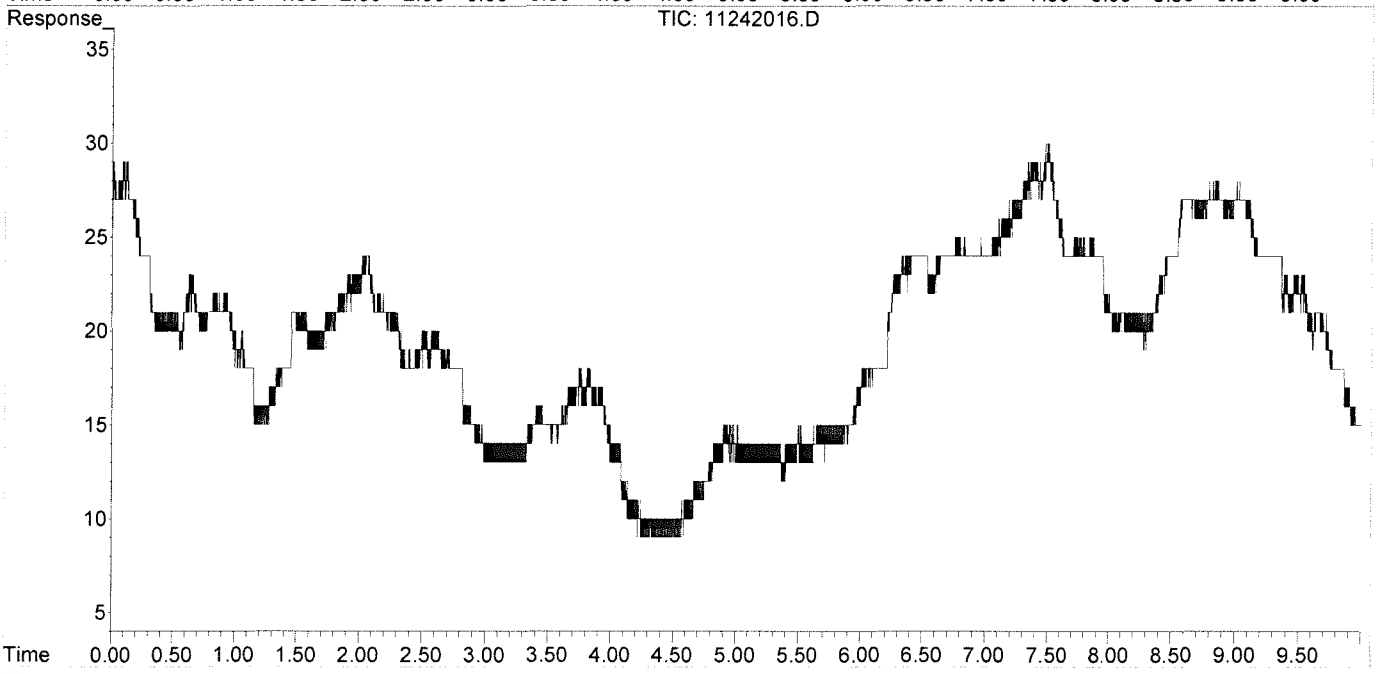
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242016.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 17:24
Operator : WH
Sample : LCS 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:47:28 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

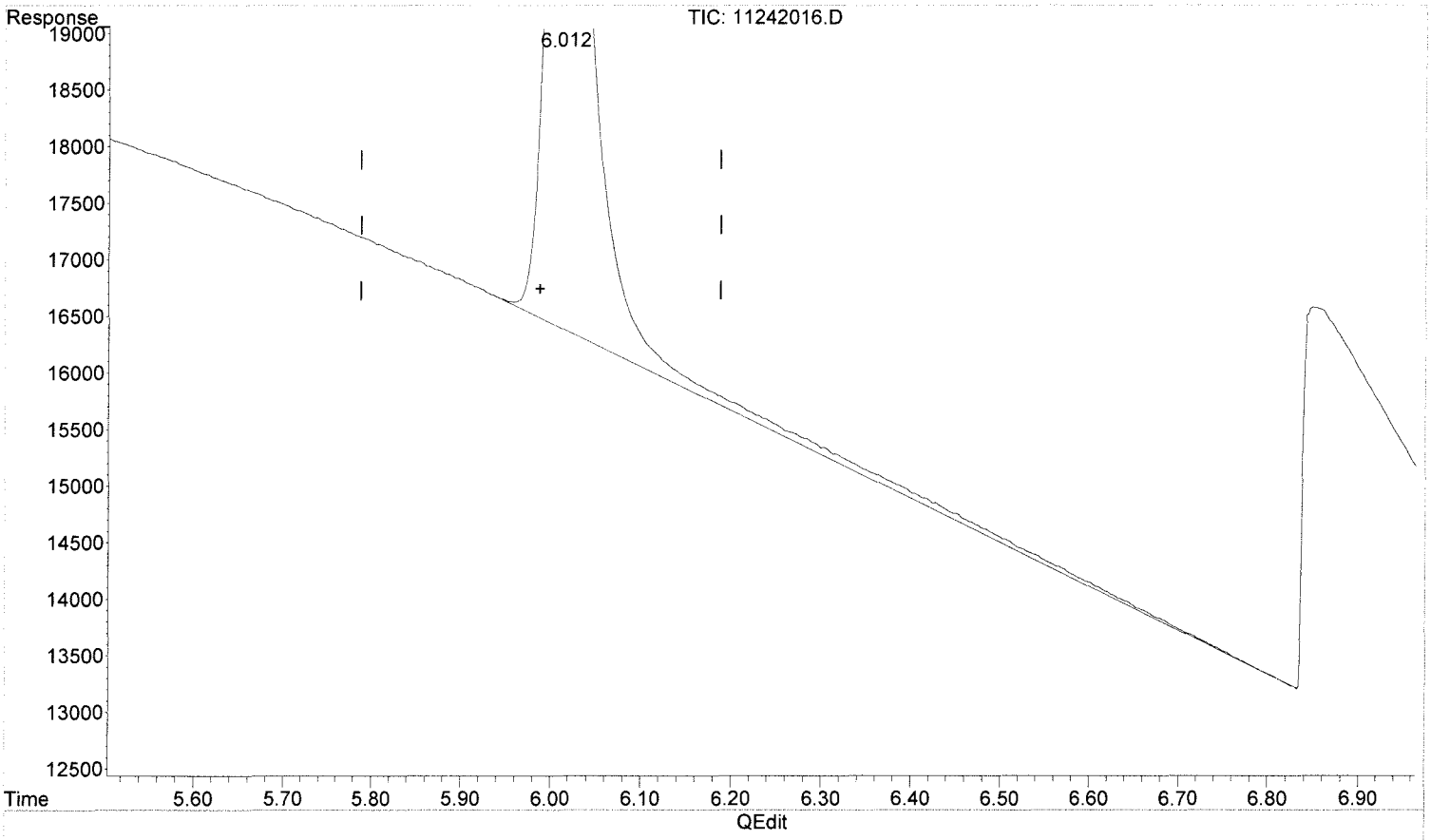




Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242016.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 17:24
Operator : WH
Sample : LCS 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:47:28 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

6.014min 1011.799 ppm

response 237499

Manual Integration:

Before

11/24/20

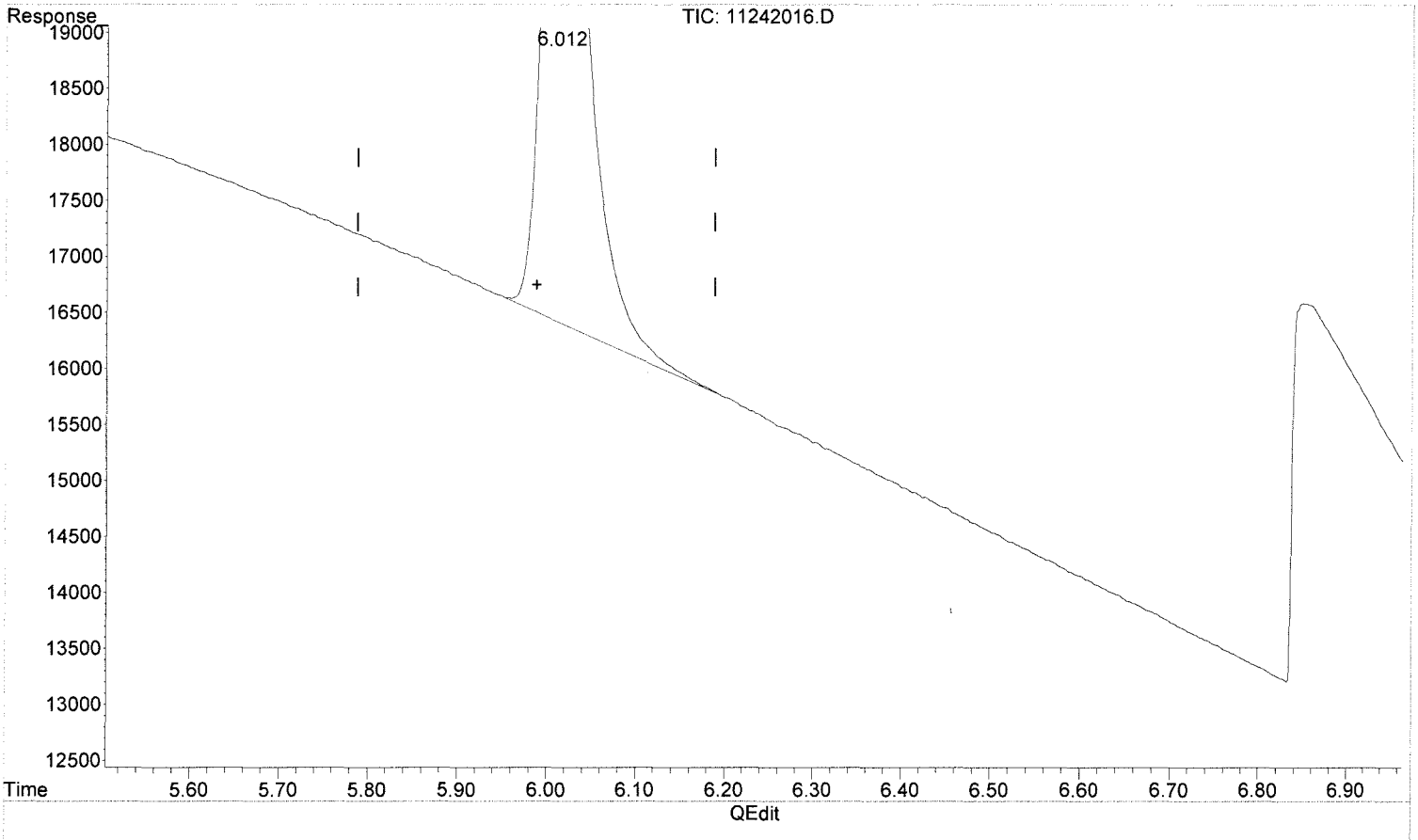
(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242016.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 17:24
Operator : WH
Sample : LCS 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

CB 11/24/20

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:47:28 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide
6.012min 913.747 ppm m
response 214483

Manual Integration:
After
BLC
11/24/20

(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242017.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 17:40
Operator : WH
Sample : LCSD 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:55:29 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

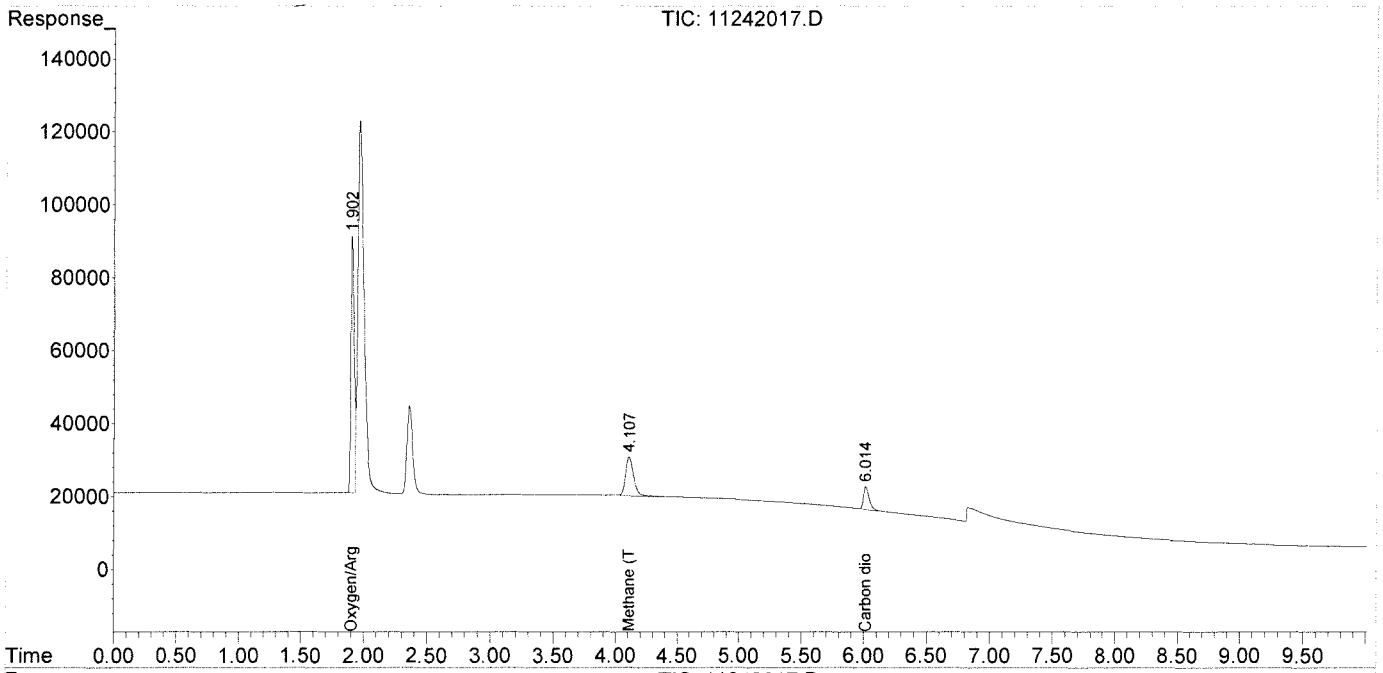
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.903	1238592	0.260	ppm	
2)	Carbon monoxide	1.903	1238592	N.D.	ppm	
3)	Methane (TCD)	4.108f	488129	51613.731	ppm	
4)	Carbon dioxide	6.014	201378	857.915	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

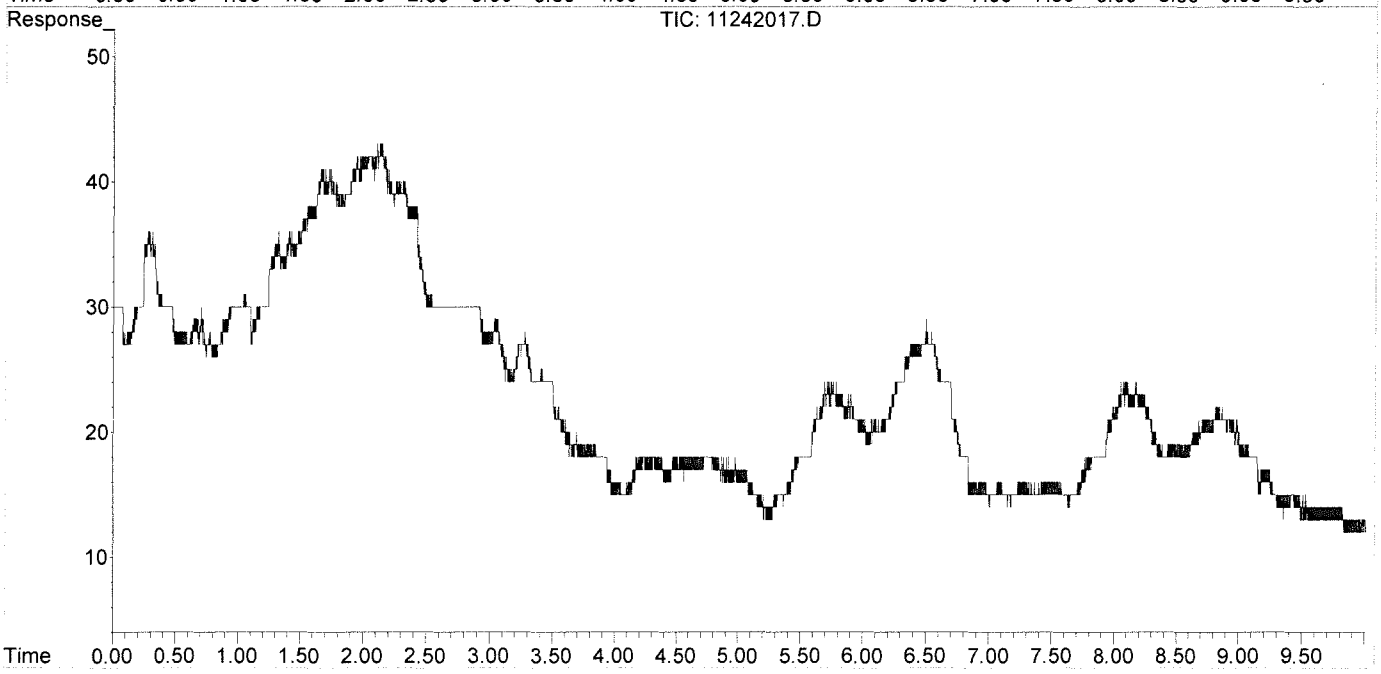
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242017.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 17:40
Operator : WH
Sample : LCSD 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:55:29 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

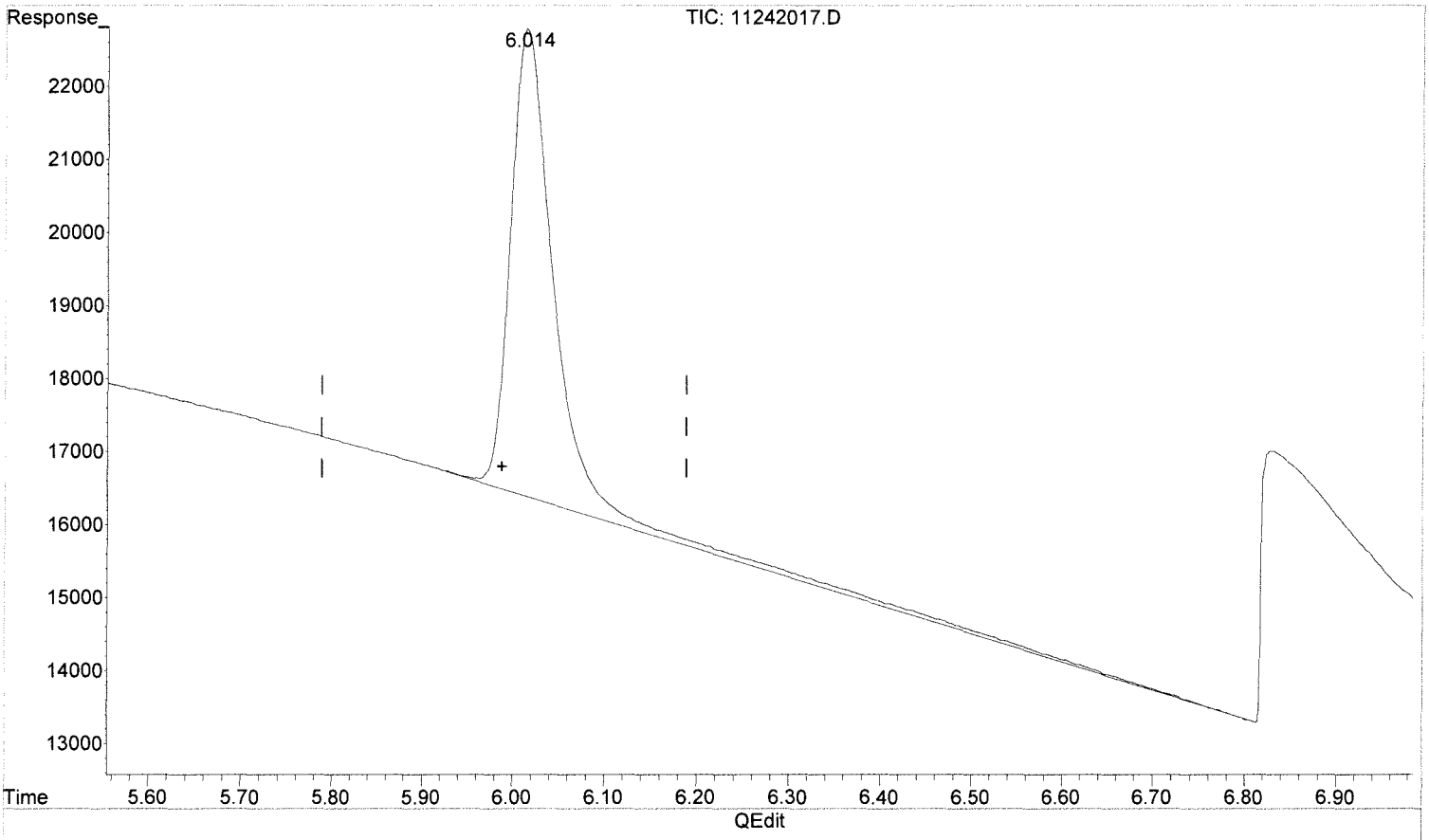




Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242017.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 17:40
Operator : WH
Sample : LCSD 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:55:29 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide
6.015min 967.033 ppm
response 226991

Manual Integration:
Before

11/24/20

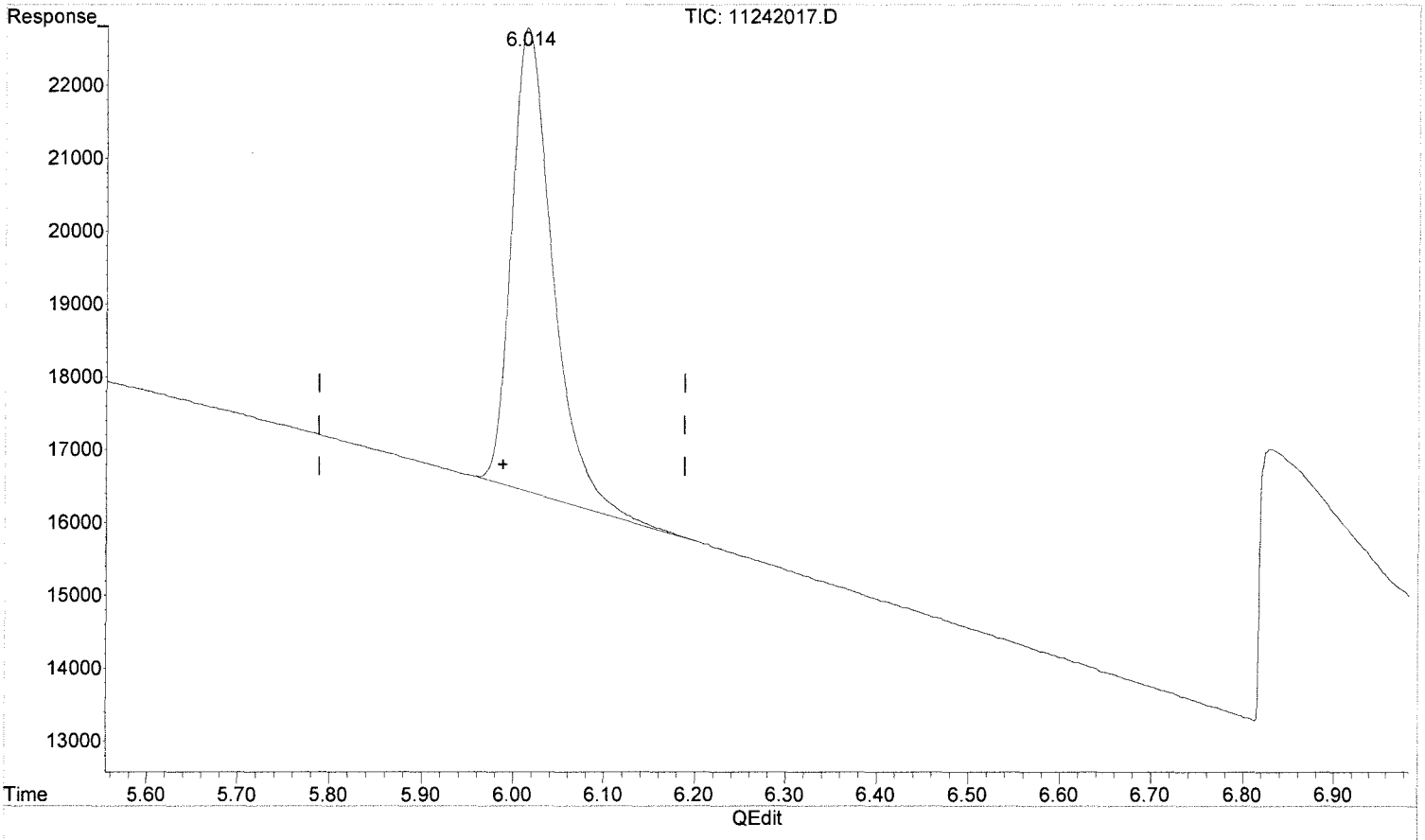
(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242017.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 17:40
Operator : WH
Sample : LCSD 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

CB
11/24/20

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 17:55:29 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide
6.014min 857.915 ppm m
response 201378

Manual Integration:
After
BLC
11/24/20

(+) = Expected Retention Time

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1)	Oxygen/Argon	4.760						4.760 E6	0.00
2)	Carbon monoxide	2.775		1.066	0.043	0.033	0.027	0.657 E6	170.12
3)	Methane (TCD)							9.457	0.00
4)	Carbon dioxide	2.717	2.193	2.338	2.272	2.265	2.298	2.347 E2	7.99

Signal #2 Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg	%RSD
6)	Methane (FID)	1.253	1.160	1.005	0.927	0.848	0.848	0.945 E4	15.85
7)	Ethylene	1.677	1.605	1.900	1.749	1.597	1.579	1.684 E4	7.30
8)	Ethane	1.769	1.631	1.866	1.767	1.639	1.667	1.723 E4	5.40
9)	Propylene	2.402	2.309	2.767	2.551	2.331	2.333	2.449 E4	7.32
10)	Propane	2.906	2.737	2.817	2.639	2.410	2.420	2.655 E4	7.75
11)	Isobutylene							0.000	-1.00
12)	Isobutane							0.000	-1.00
13)	n-Butane							0.000	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS082817_CO2.M Wed Aug 30 13:24:19 2017

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291715.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291716.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291717.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291719.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291720.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291721.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241711.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Aug 29 14:21 2017	Aug 29 14:20 2017	29-Aug-2017, 14:07
2	2	Aug 29 14:52 2017	Aug 29 14:51 2017	29-Aug-2017, 14:22
3	3	Aug 29 15:04 2017	Aug 29 15:04 2017	29-Aug-2017, 14:53
4	4	Aug 29 15:36 2017	Aug 29 15:36 2017	29-Aug-2017, 15:23
5	5	Aug 29 15:57 2017	Aug 29 15:57 2017	29-Aug-2017, 15:44
6	6	Aug 29 16:13 2017	Aug 29 16:13 2017	29-Aug-2017, 16:00
7	7	Aug 25 09:05 2017	Aug 24 16:00 2017	24-Aug-2017, 15:44
8	8	Aug 25 09:06 2017	Aug 24 16:13 2017	24-Aug-2017, 16:02
9	9	Aug 25 09:06 2017	Aug 24 16:31 2017	24-Aug-2017, 16:16
10	10	Aug 25 09:07 2017	Aug 24 16:42 2017	24-Aug-2017, 16:33

RS082817_CO2.M Wed Aug 30 13:24:30 2017

dit Compounds -- Compound #4 -- Carbon dioxide

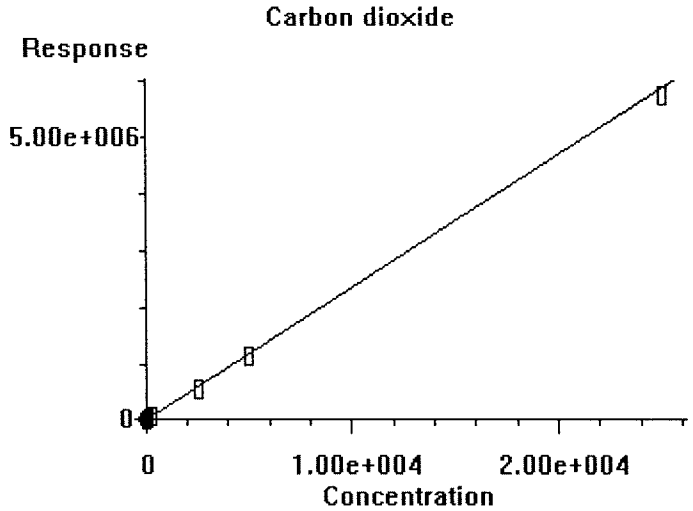
Search by: Ret Time Name Index Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	25.000000	6793.665186
2	100.000000	21932.418000
3	250.000000	58460.642510
4	2500.000000	568043.388750
5	5000.000000	1132363.215937
6	25000.000000	5744294.891563
7	25000.000000	
8	25000.000000	
9	2000.000000	
10	30000.000000	

Lvl ID	Concentration	Response



0.000e+000	Quadratic term
2.347e+002	Linear term
0.000e+000	Constant term
7.987%	RF Rel Std Dev

OK Cancel Help Print Calibration Curve Copy Calibration Curve

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

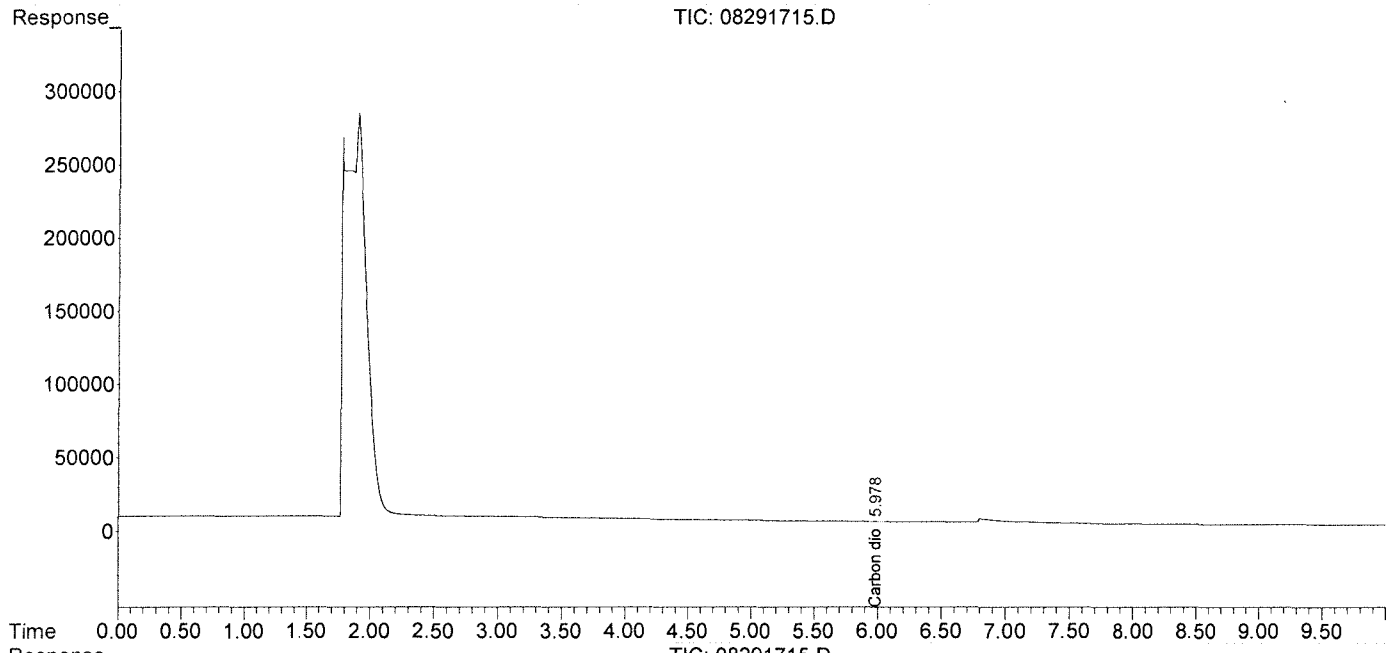
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.776	277465	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	6794	27.870	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

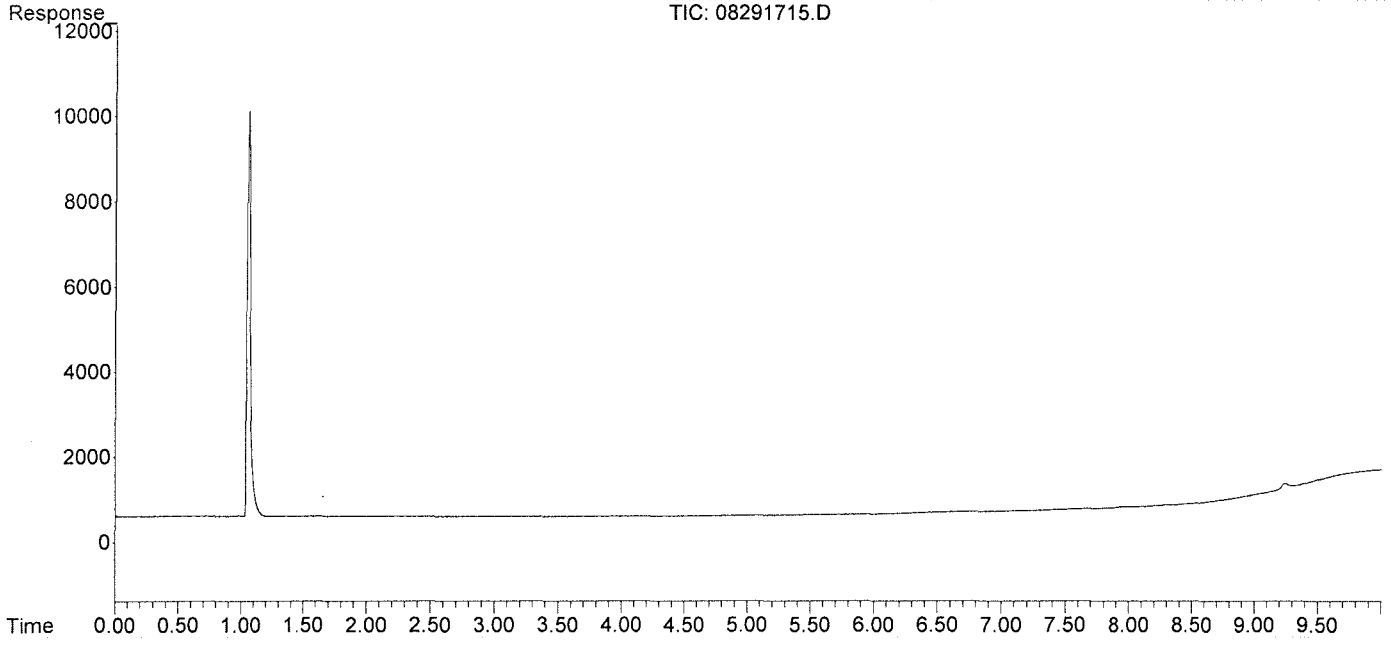
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

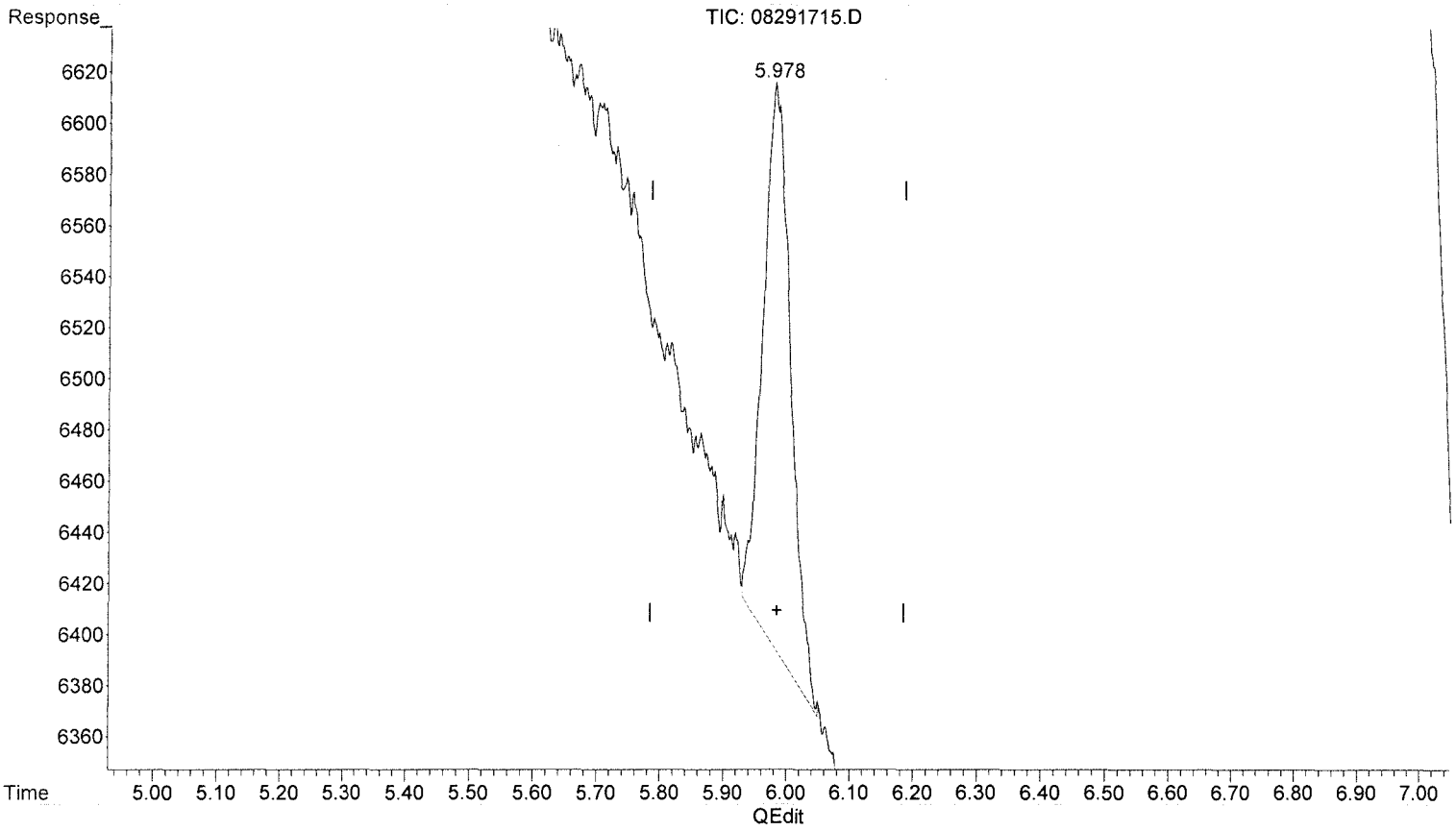




Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.978min 27.870 ppm m

response 6794

M 9/30/17
BLK
M
PEER REVIEW

9/4/17

(+) = Expected Retention Time

RS082817_CO2.M Wed Aug 30 13:17:47 2017

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

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

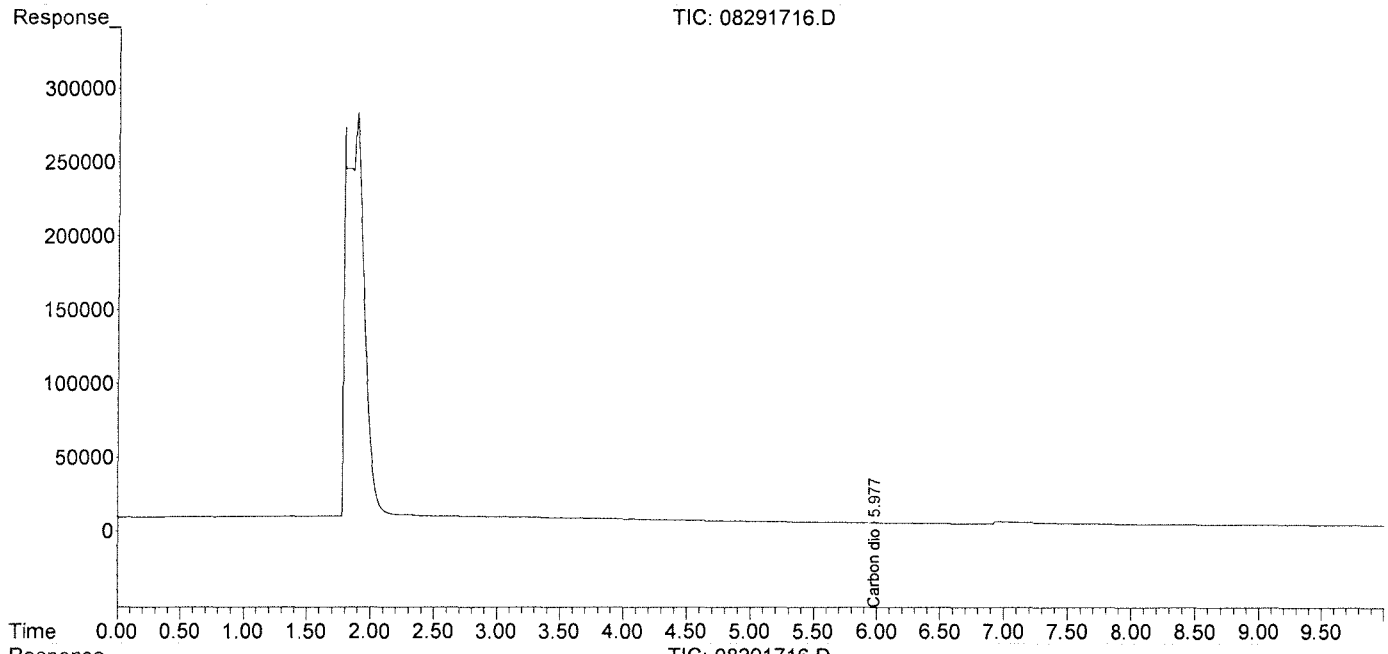
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.790	-598962	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	21932	87.858	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

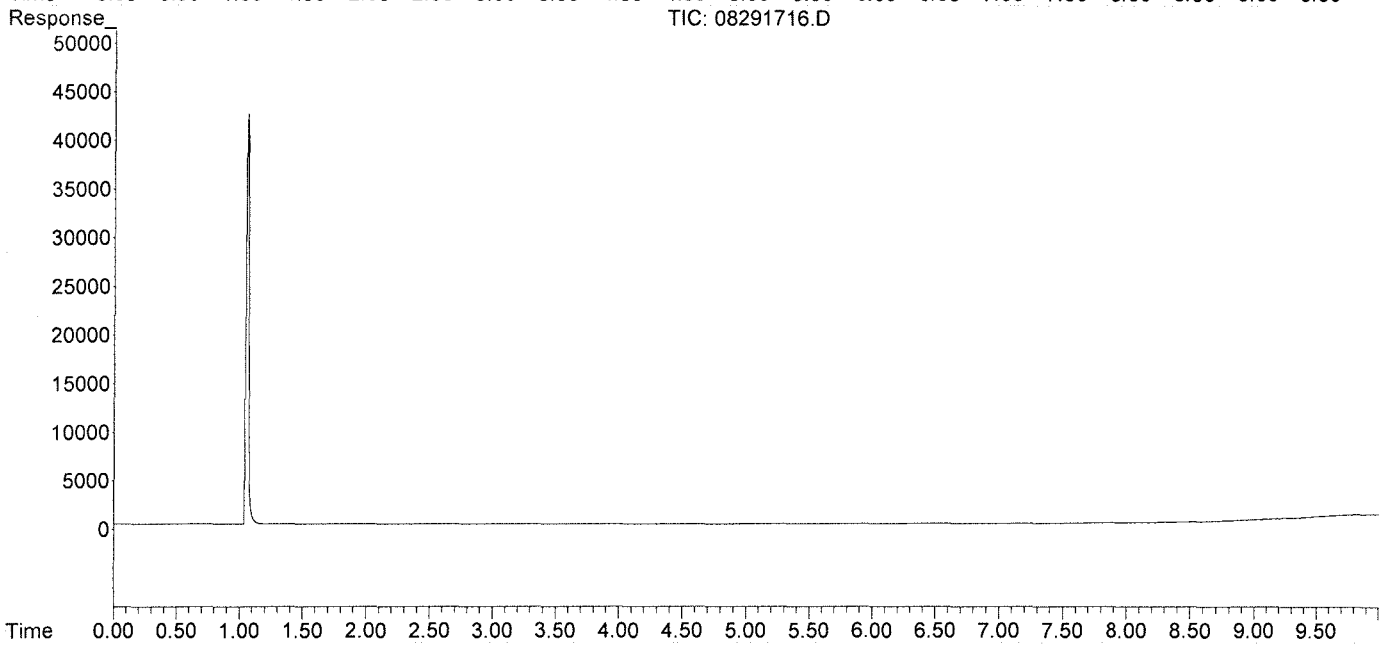
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

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

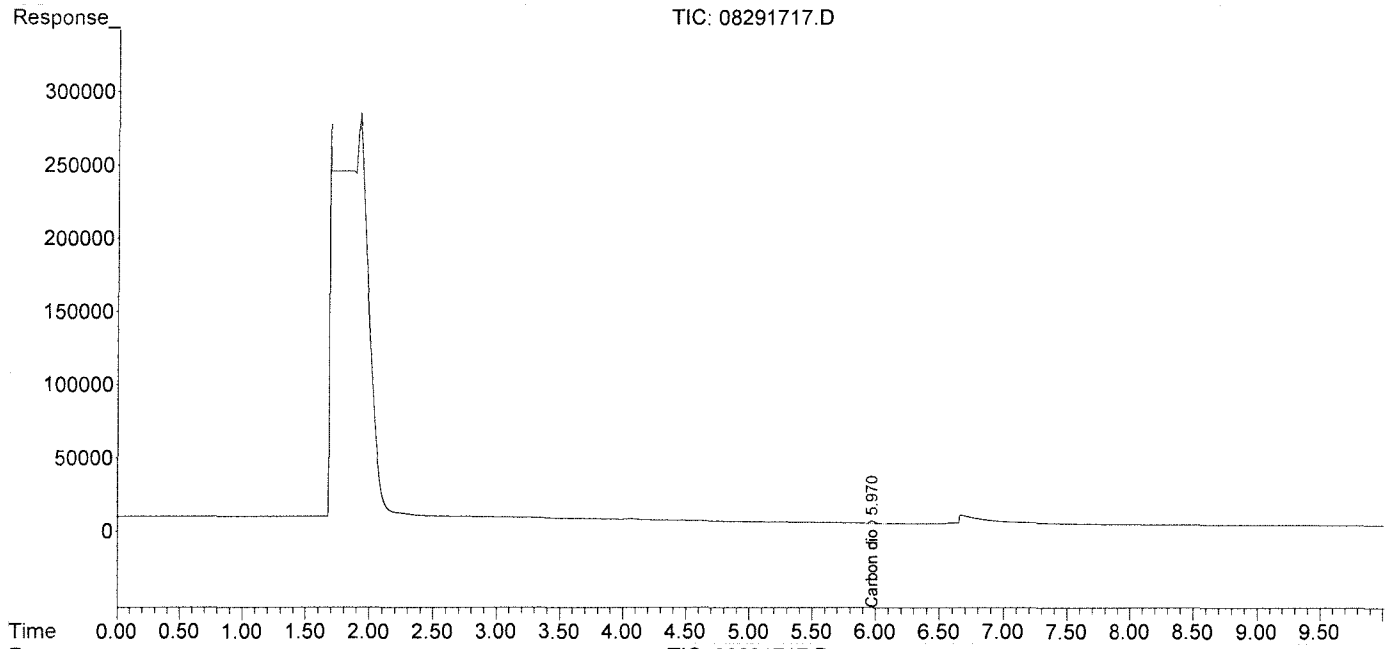
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.920f	-30716454	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.970	58461	240.204	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

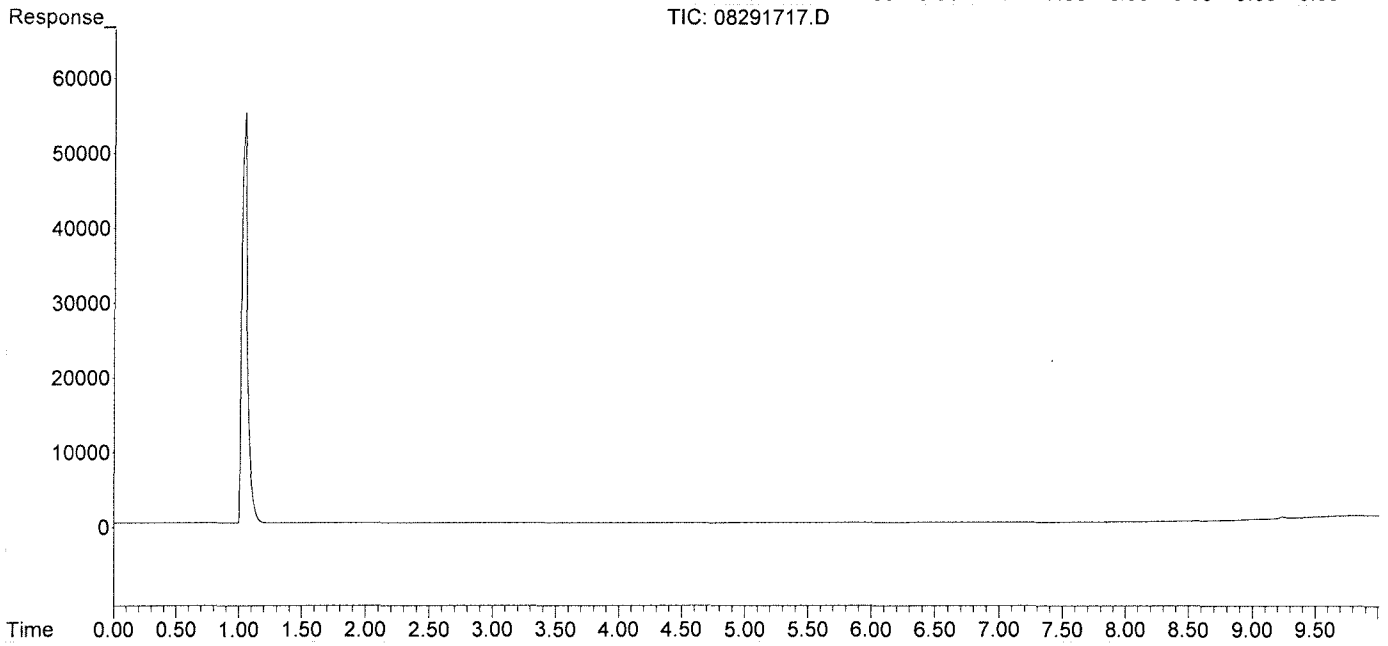
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

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

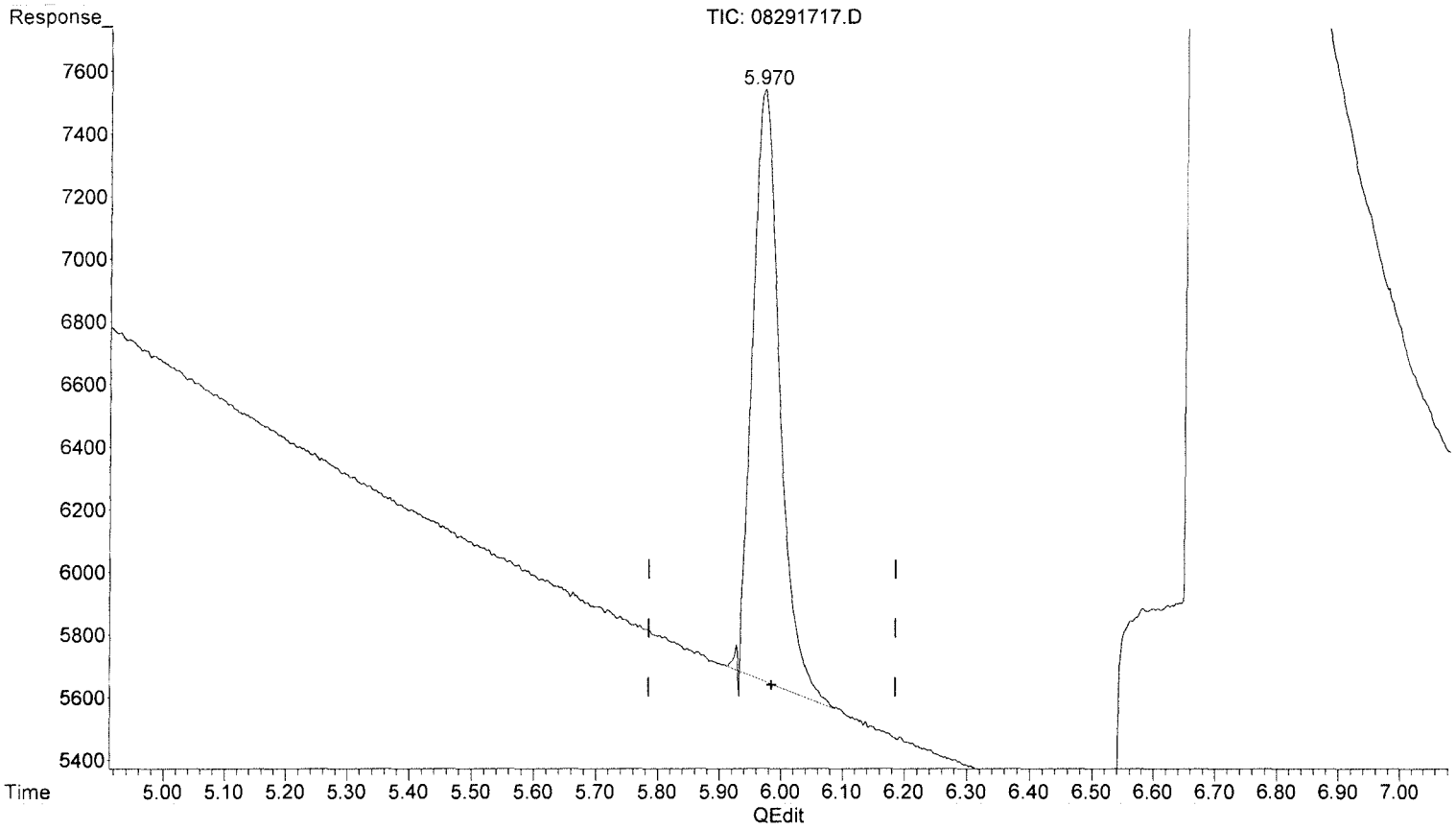




Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.970min 240.204 ppm m

response 58461

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

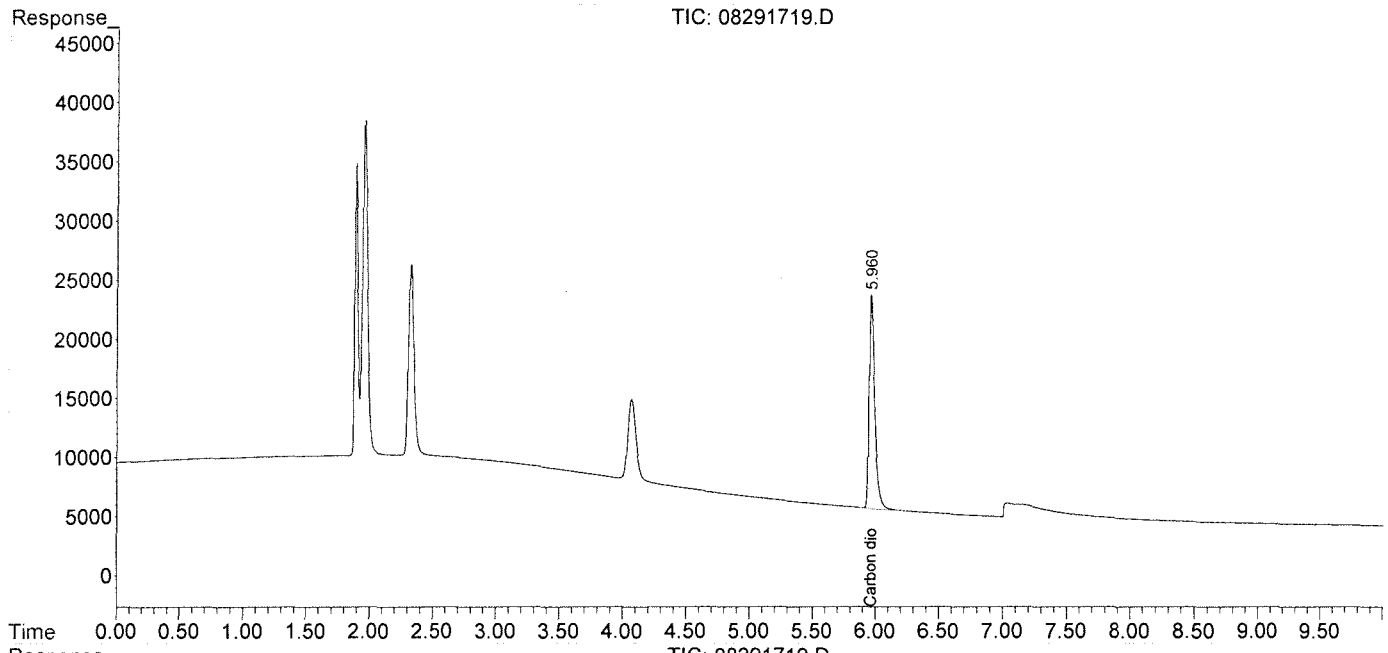
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.891	425113	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.962	568043	2369.673	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

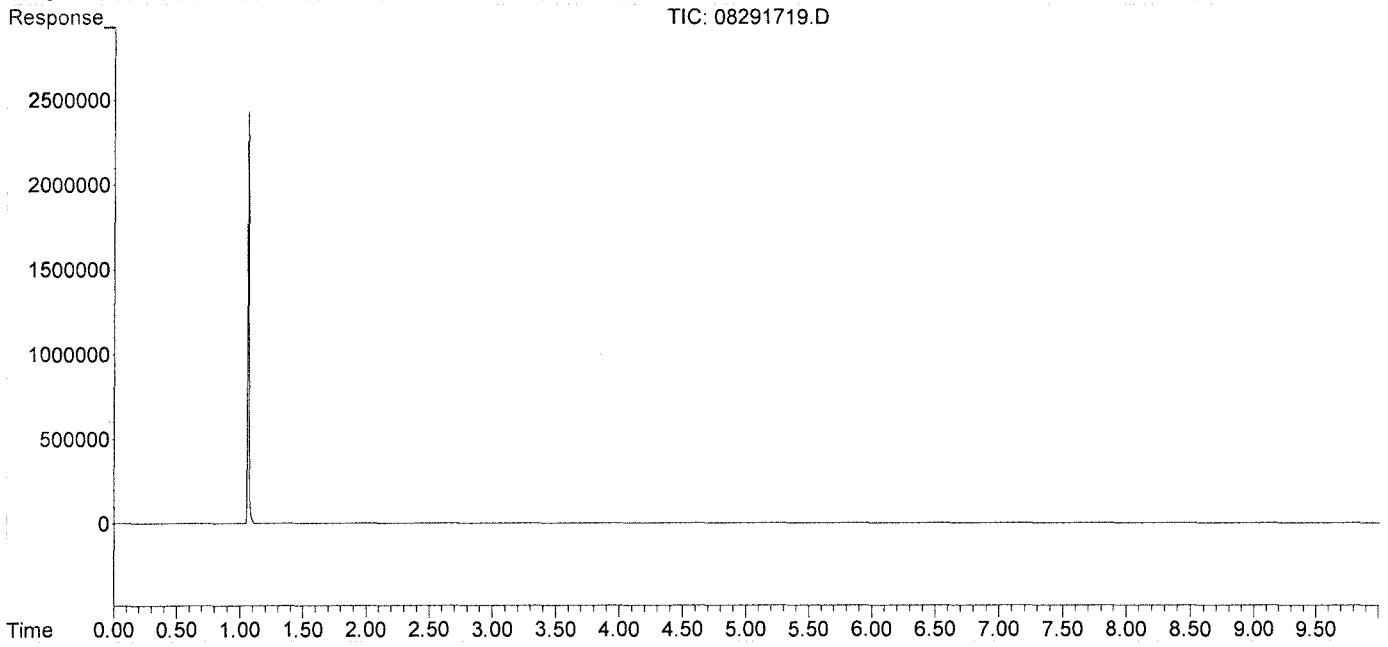
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

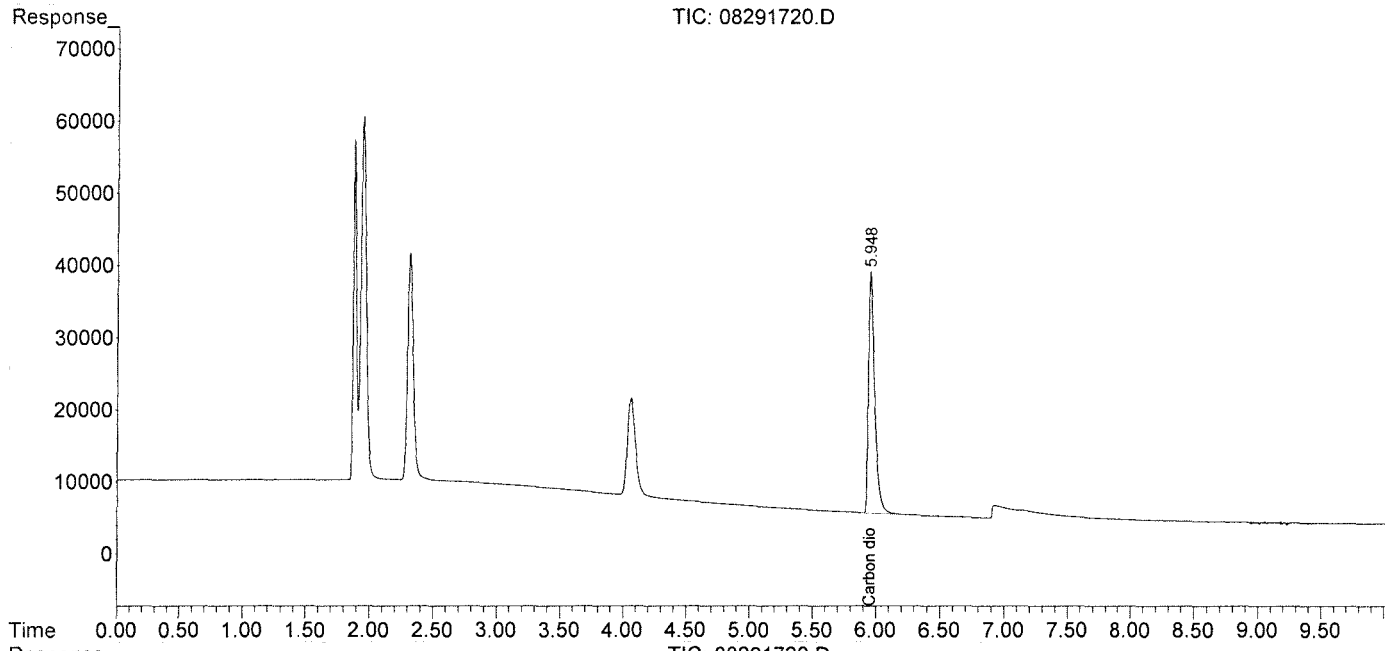
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.880	819221	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.948	1132363	4753.126	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

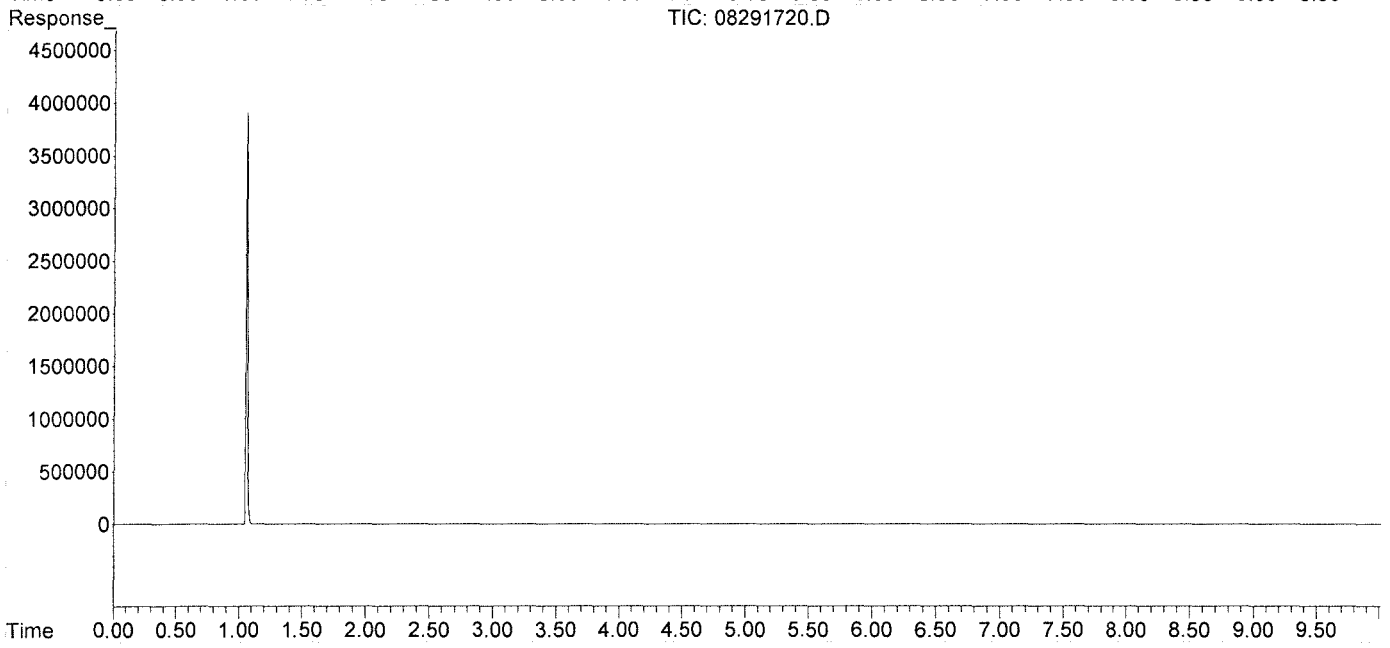
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

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

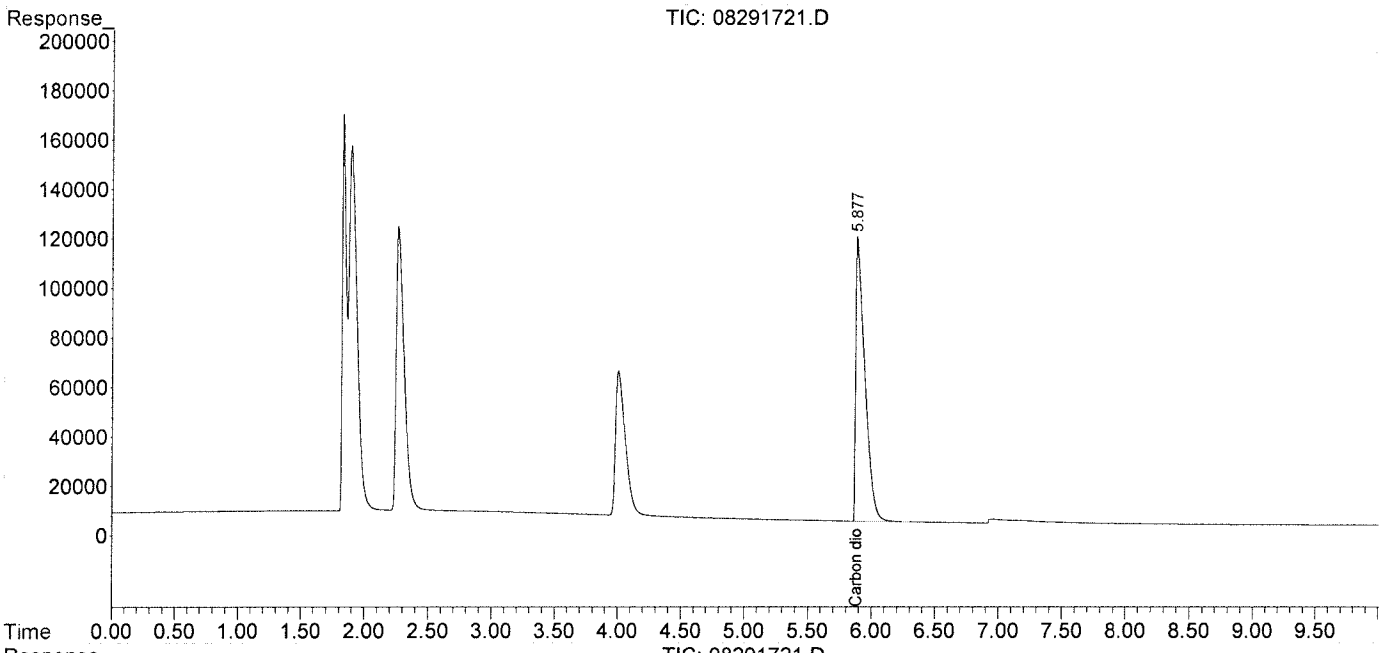
	Compound	R.T.	Response	Conc	Units	
Target	Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.827	3325463	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.879f	5744295	24443.288	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

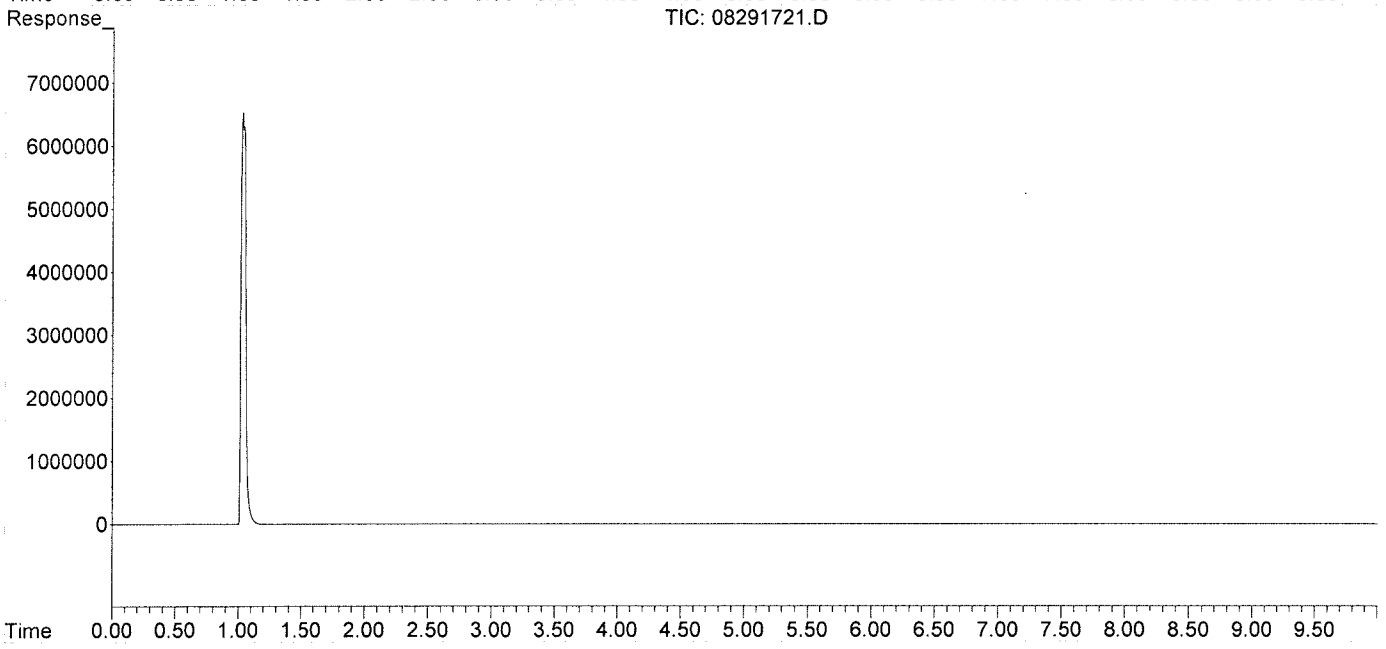
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.886	536422	0.113	ppm
2)	Carbon monoxide	1.886	536422	N.D.	ppm
3)	Methane (TCD)	4.059f	626500	66244.710	ppm
4)	Carbon dioxide	5.947	1163775	4957.948	ppm
6)	Methane (FID)	1.062	37290742	3947.023	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

actual %D
5000 99.16

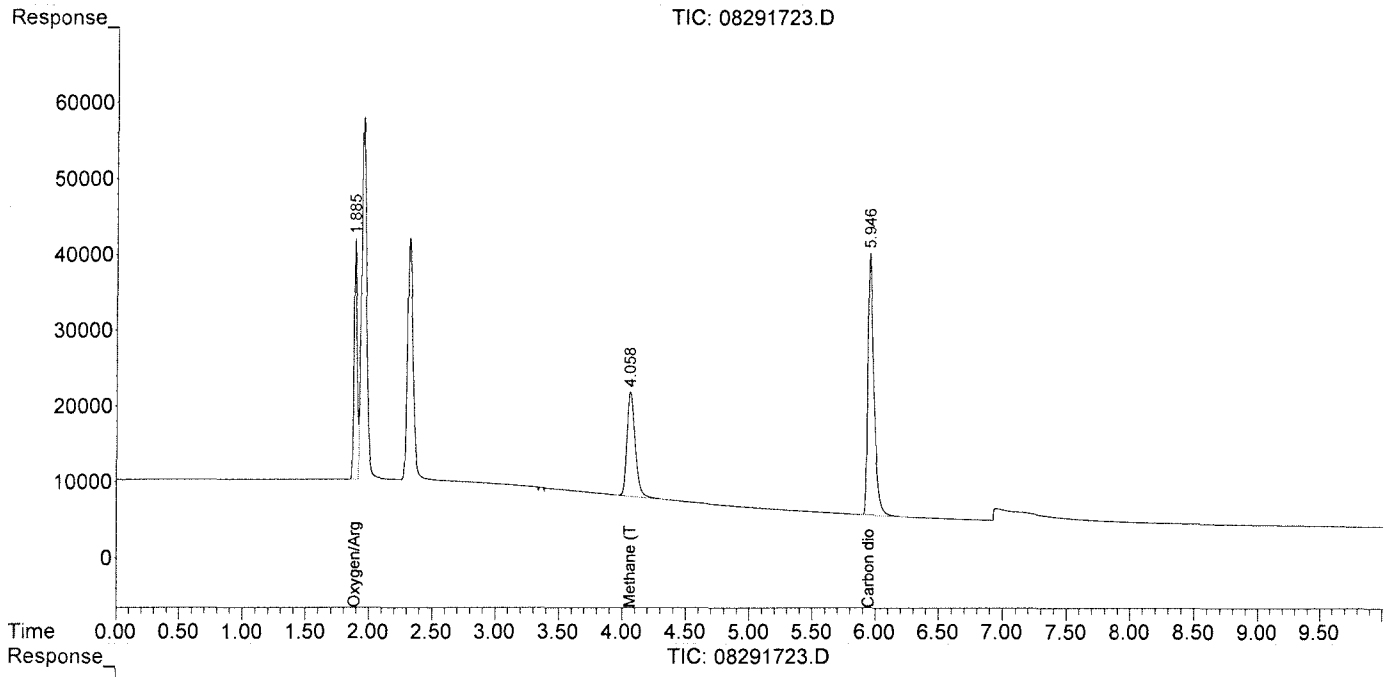
(f)=RT Delta > 1/2 Window (m)=manual int.

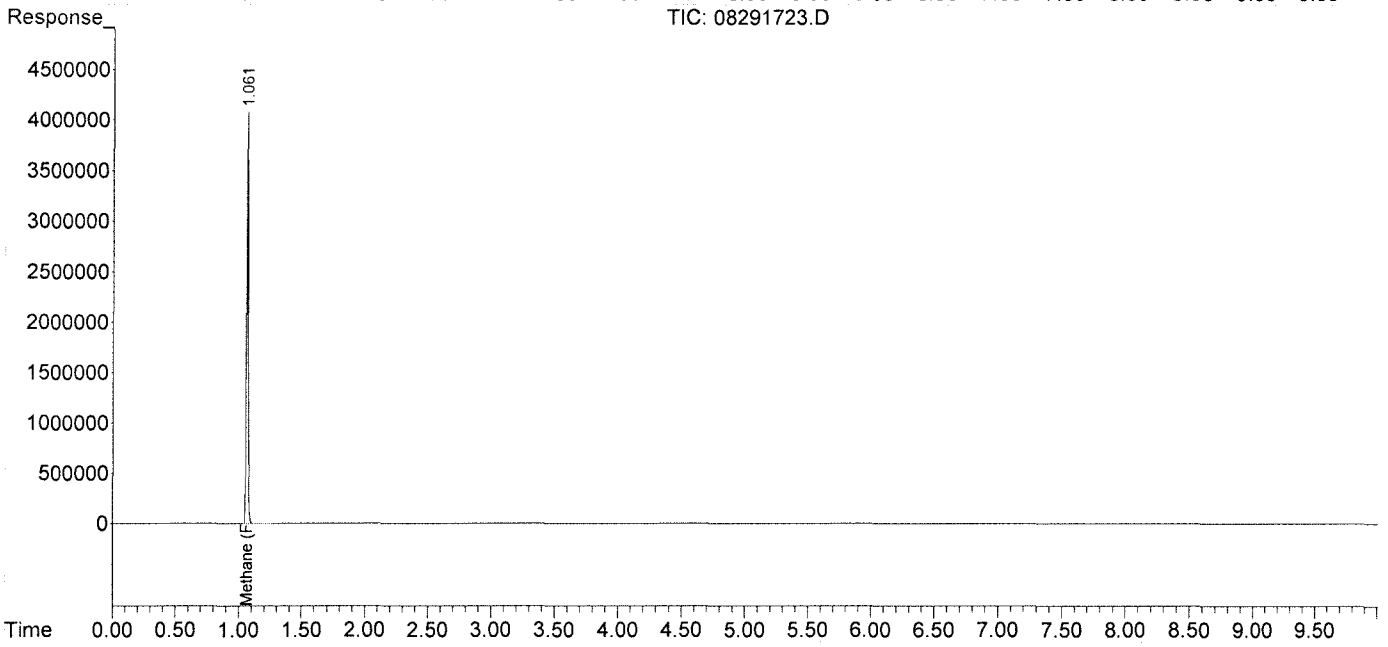
W 9/4/17

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Dissolved Gases by RSK175

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Laboratory Group
Service Request: P2006524
Sample Vol. (ml) : 32.00 ml
Analyst : WH
Date Analysis : 11/24/20
Head Space Vol.(ml) : 8.00 ml
Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Carbon Dioxide
STD S32-11102001	0.100	4805.016
ACTUAL		5000.00
%Difference		3.9%
MCS 0.1mL	0.100	0.000
RB 0.1ml	0.100	0.000
LCS 0.1mL	0.100	913.747
LCSD 0.1mL	0.100	857.915
P2006524-001 0.1mL	0.100	26983.13
P2006524-002 0.1mL	0.100	21658.08
P2006524-003 50uL	0.050	13641.64
P2006524-003MS 50uL	0.050	14965.62
P2006524-003MSD 50uL	0.050	11416.33
STD S32-11102001		4725.638
ACTUAL		5000.00
%Difference		5.5%

FINAL HEAD SPACE RESULT (ppm)

	Carbon Dioxide
WWt.	44.10
HENRY'S CONSTANT	1.42E+03
RL	100.00
MCS 0.1mL	0.000
LCS 0.1mL	9137.470
LCSD 0.1mL	8579.150
P2006524-001 0.1mL	269831.30
P2006524-002 0.1mL	216580.84
P2006524-003 50uL	272832.84
P2006524-003MS 50uL	299312.40
P2006524-003MSD 50uL	228326.50

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 14:15
Operator : WH
Sample : STD S32-11102001
Misc :
ALS Vial : 1 Sample Multiplier: 1

CB 11/25/20

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 14:29:25 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

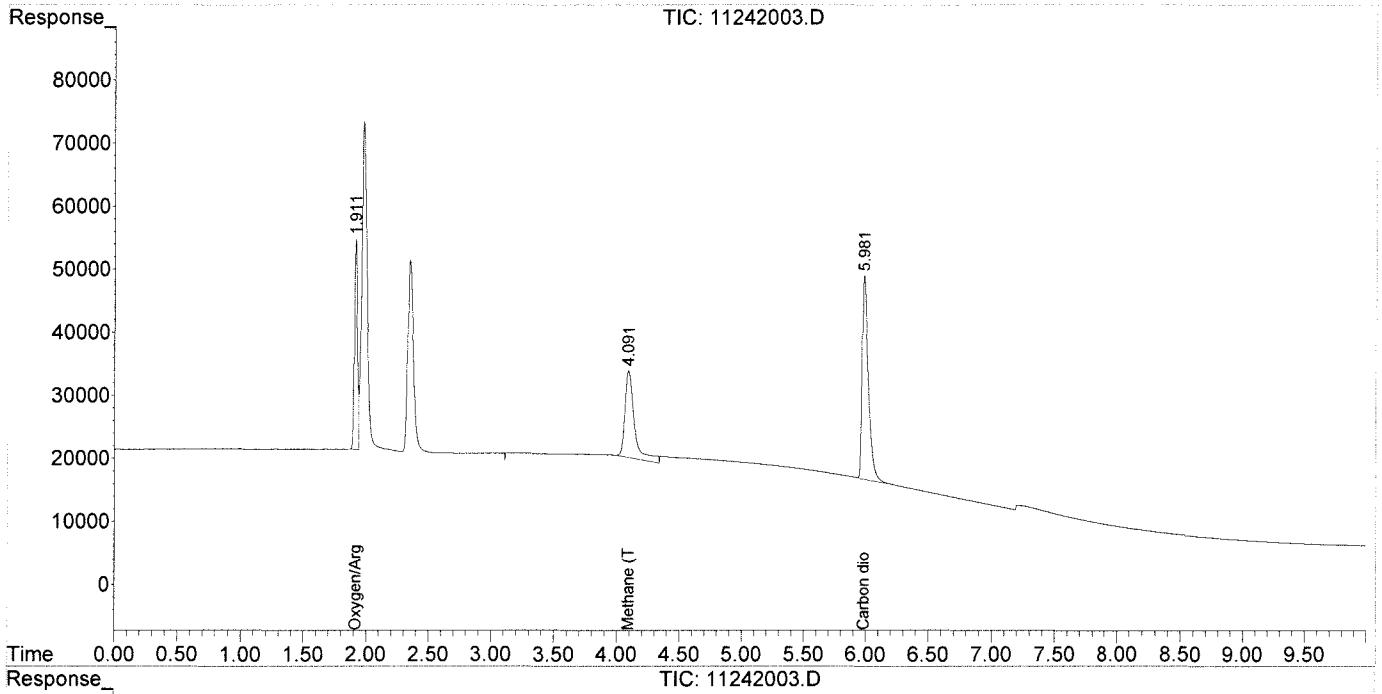
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.912f	581023	0.122	ppm	
2)	Carbon monoxide	1.912f	581023	N.D.	ppm	
3)	Methane (TCD)	4.092f	721089	76246.405	ppm	
4)	Carbon dioxide	5.981	1127878	4805.016	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

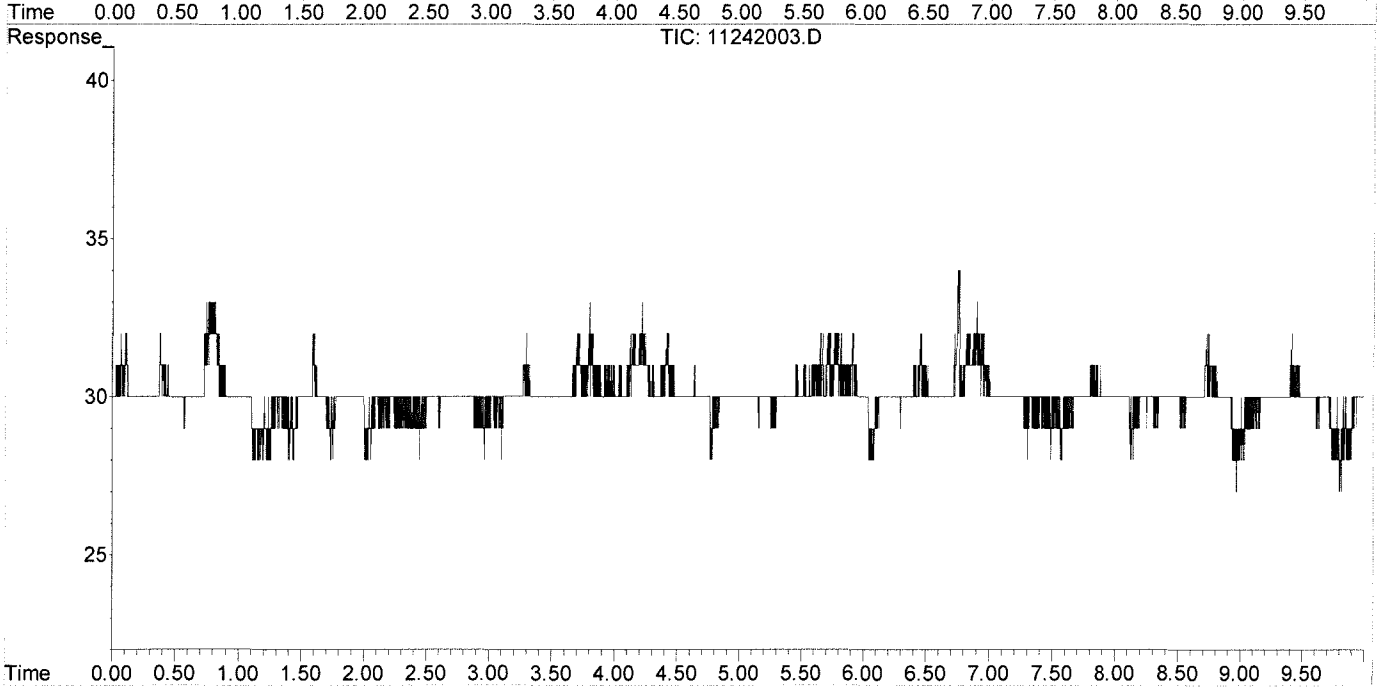
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 14:15
Operator : WH
Sample : STD S32-11102001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 14:29:25 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

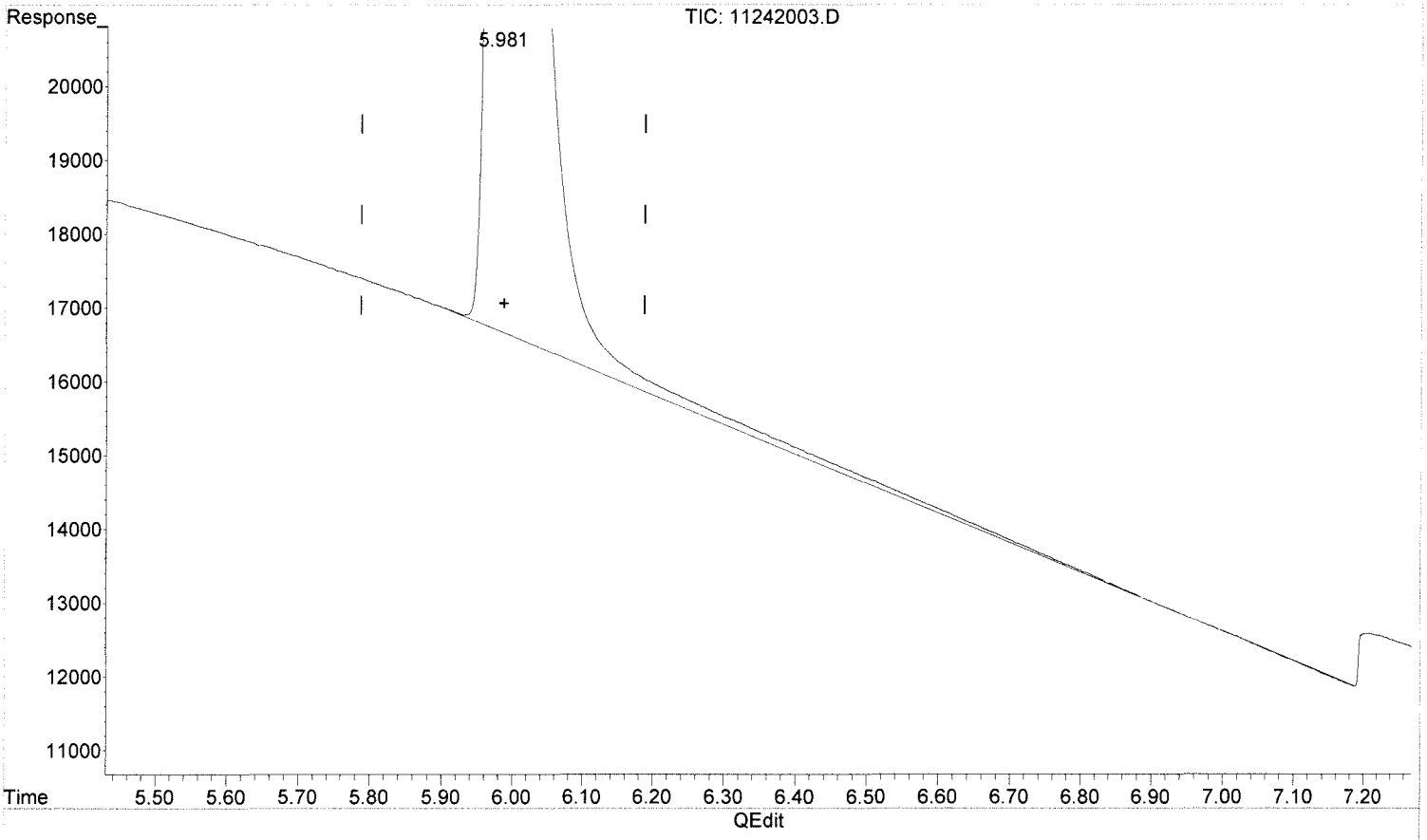




Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 14:15
Operator : WH
Sample : STD S32-11102001
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 14:29:25 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.982min 4992.682 ppm

response 1171928

Manual Integration:

Before

11/24/20

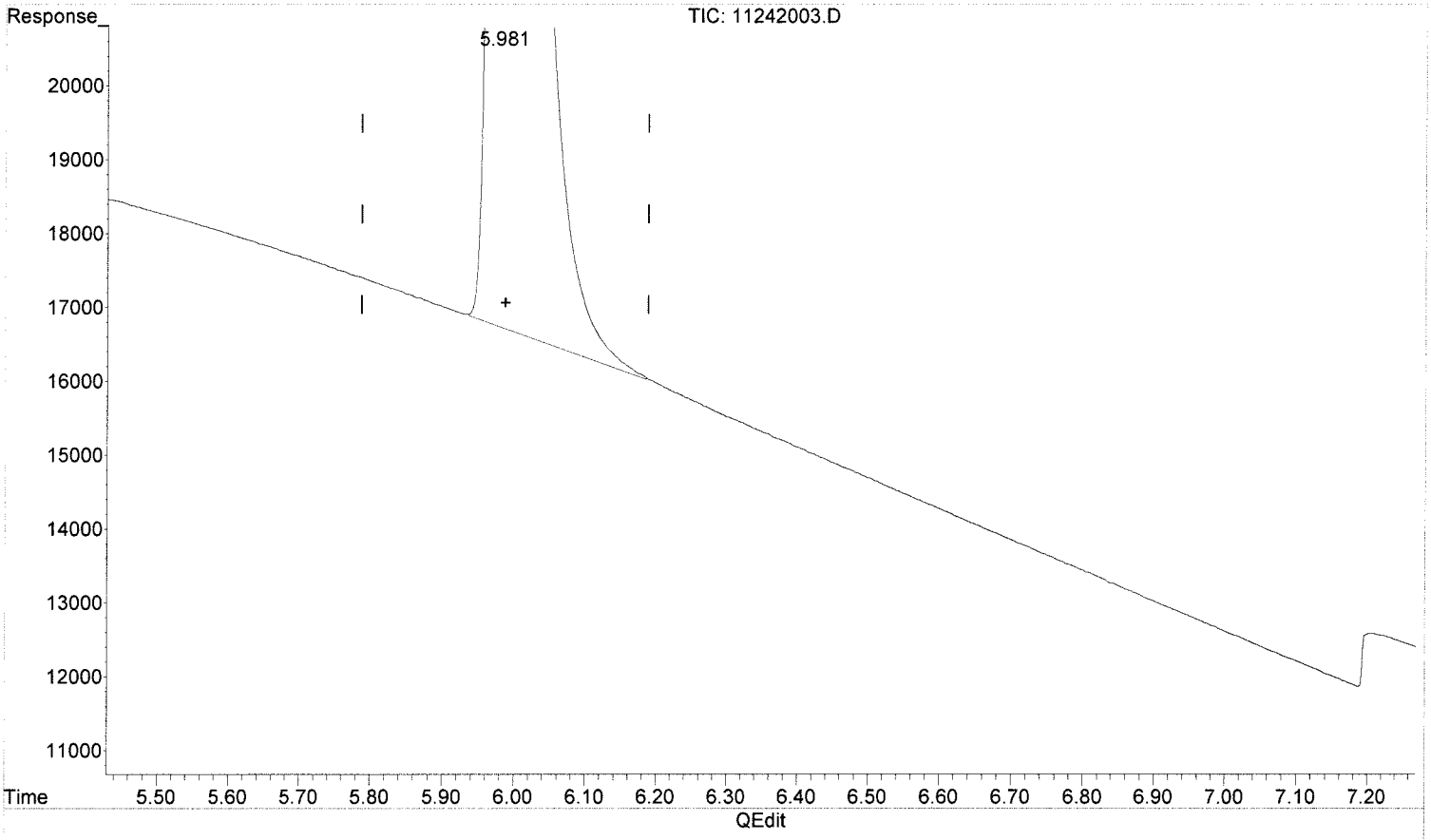
(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242003.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 14:15
Operator : WH
Sample : STD S32-11102001
Misc :
ALS Vial : 1 Sample Multiplier: 1

CB 11/24/20

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 14:29:25 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide
5.981min 4805.016 ppm m
response 1127878

Manual Integration:
After
BLC
11/24/20

(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242018.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 18:06
Operator : WH
Sample : std 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 18:18:04 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

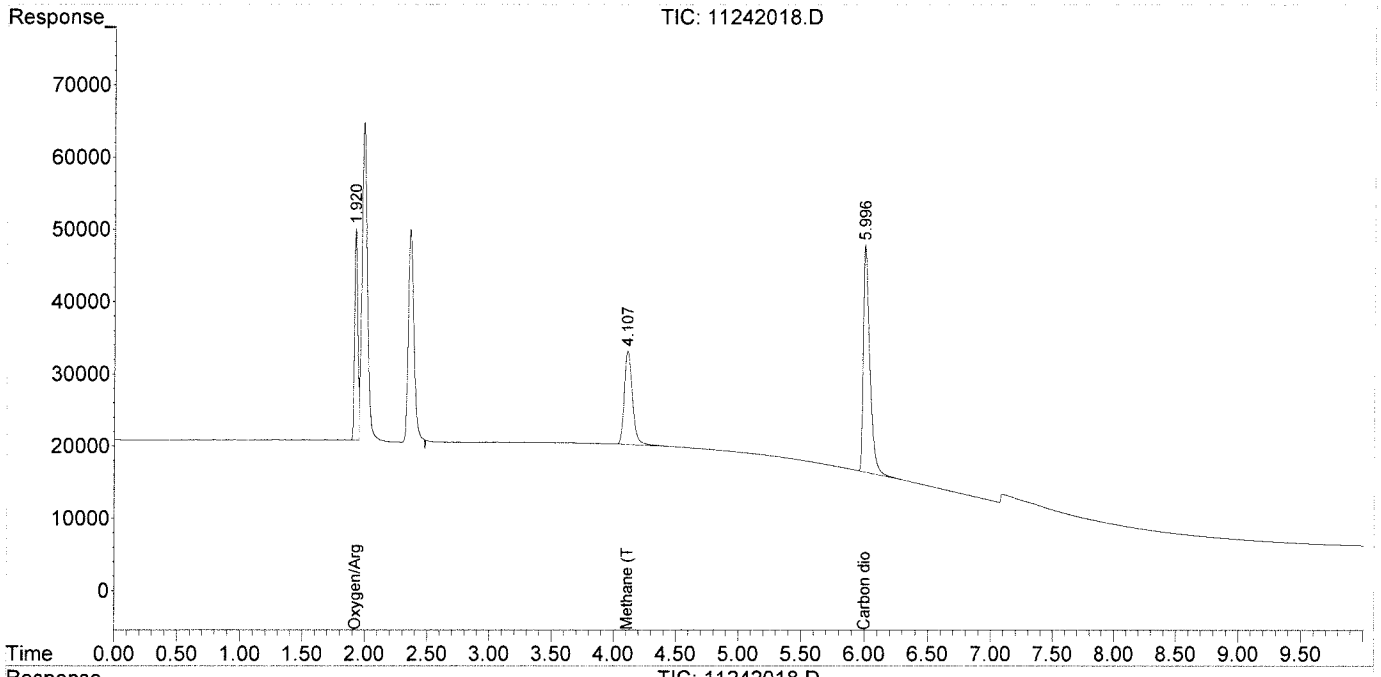
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.921f	517800	0.109	ppm	
2)	Carbon monoxide	1.921f	517800	N.D.	ppm	
3)	Methane (TCD)	4.108f	600641	63510.490	ppm	
4)	Carbon dioxide	5.996	1109245	4725.638	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

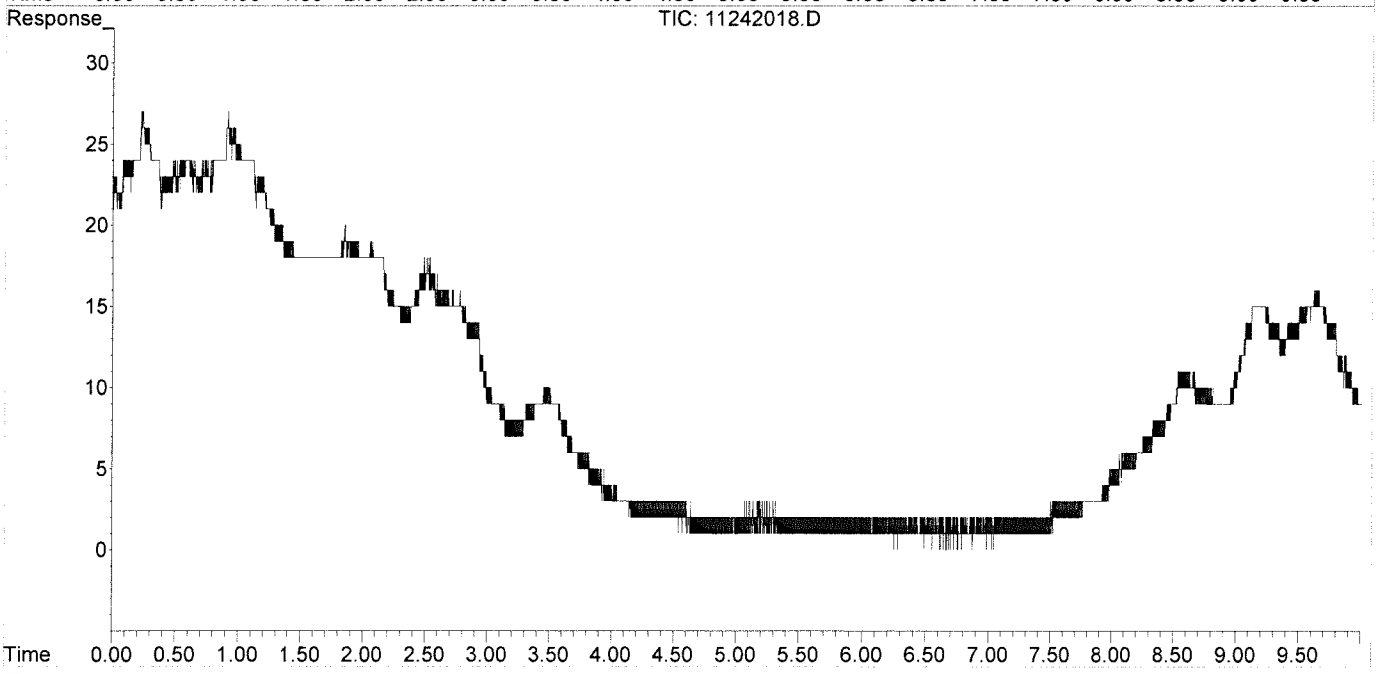
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242018.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 18:06
Operator : WH
Sample : std 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 18:18:04 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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

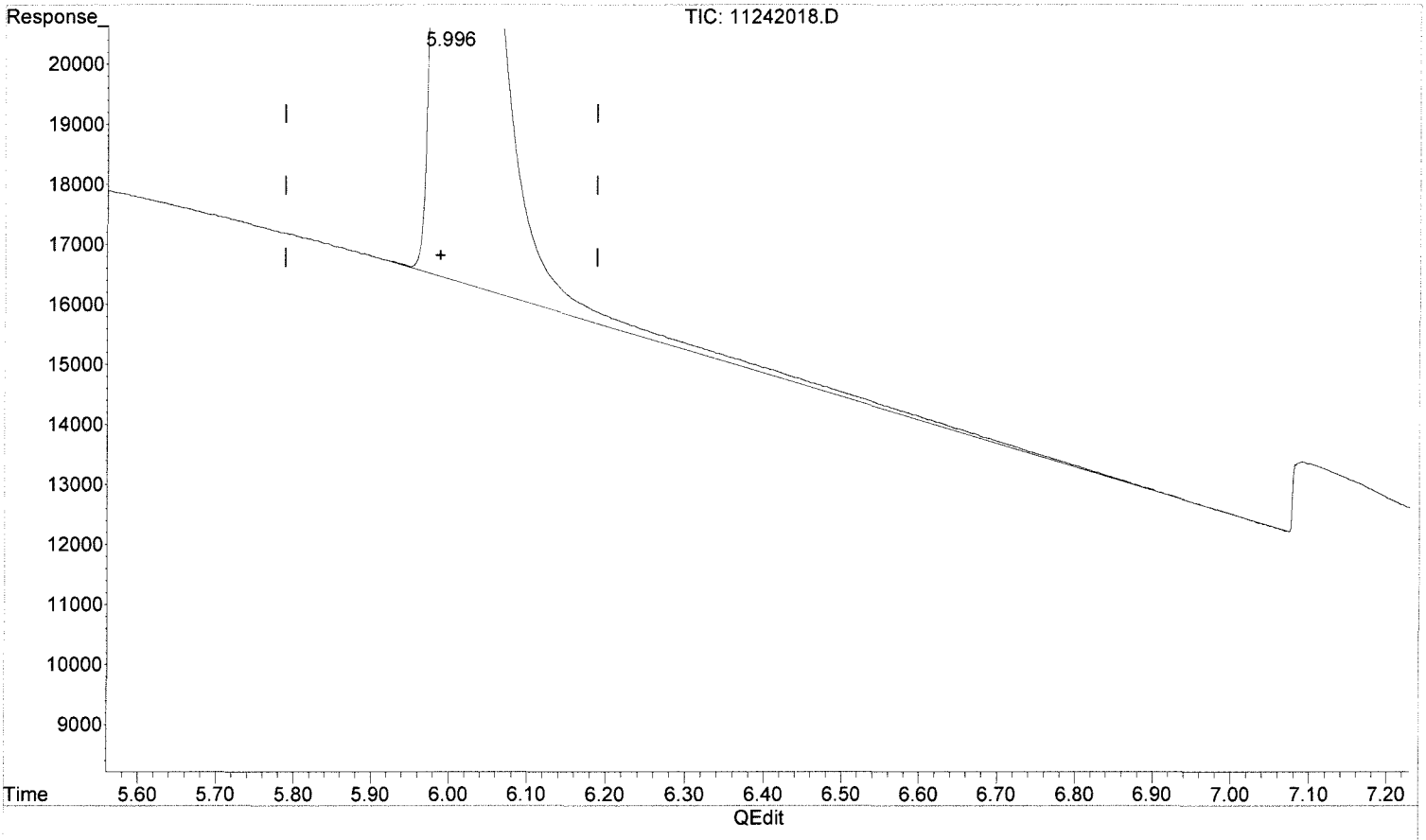




Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242018.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 18:06
Operator : WH
Sample : std 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 18:18:04 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide

5.999min 4859.538 ppm

response 1140675

Manual Integration:

Before

11/24/20

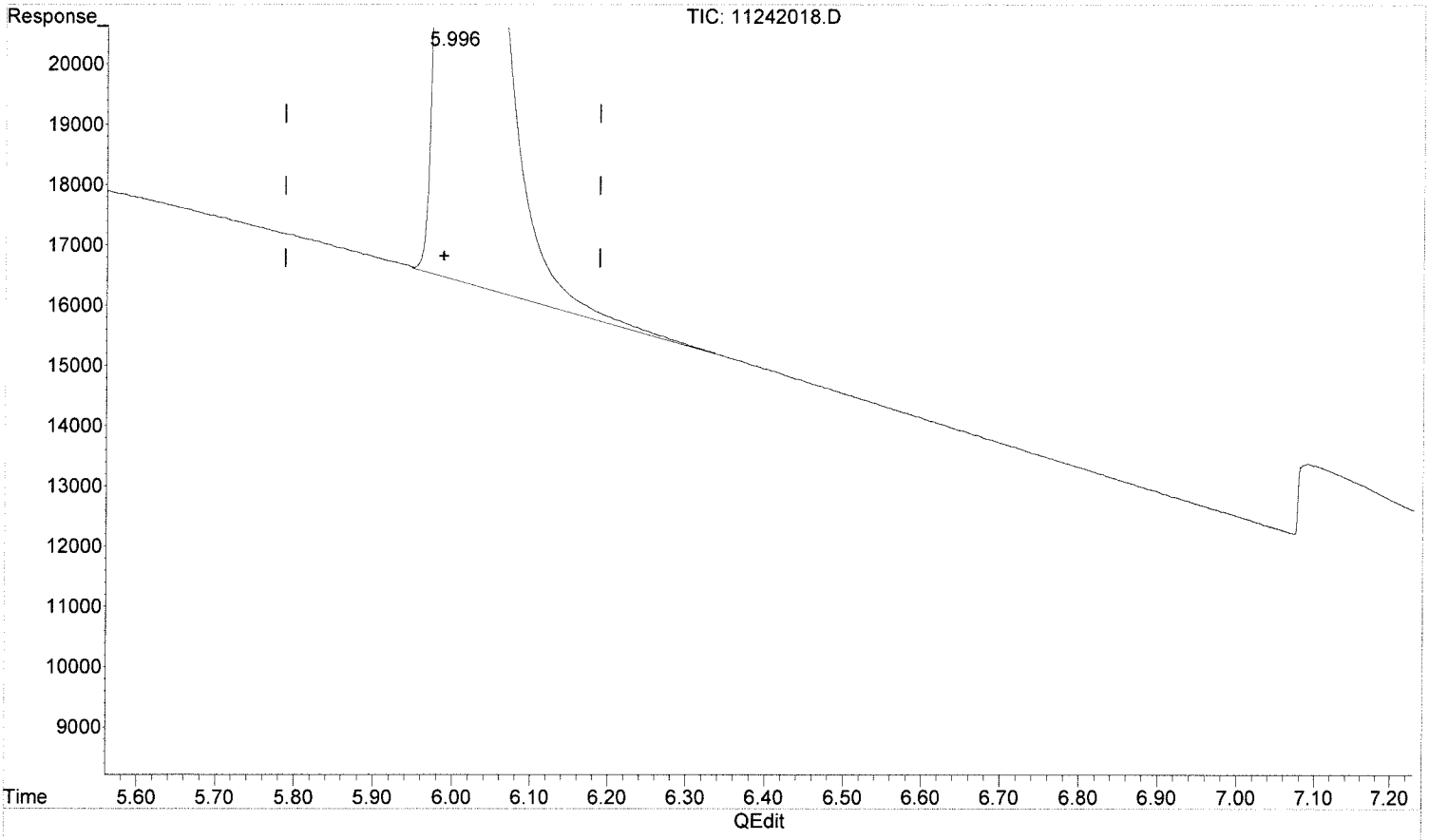
(+) = Expected Retention Time

Data Path : I:\GC10\DATA\RSK_FID\2020_11\24CO2\
Data File : 11242018.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 24-Nov-2020, 18:06
Operator : WH
Sample : std 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

CB
11/24/20

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 24 18:18:04 2020
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(4) Carbon dioxide
5.996min 4725.638 ppm m
response 1109245

Manual Integration:
After
BLC
11/24/20

(+) = Expected Retention Time

Injection Log

Directory: I:\GC10\DATA\RSK_FID\2017_08\29\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	29-Aug-17, 07:58:00	08291701.D	std s30-06161601		MC	RSKBOTH.M	Pass
2	29-Aug-17, 08:11:02	08291702.D	mb 0.5ml		MC	RSKBOTH.M	Pass
3	29-Aug-17, 08:24:13	08291703.D	4089-001 0.5ml		MC	RSKBOTH.M	
4	29-Aug-17, 08:39:29	08291704.D	4089-002 0.5ml		MC	RSKBOTH.M	
5	29-Aug-17, 08:53:38	08291705.D	4089-003 0.5ml		MC	RSKBOTH.M	
6	29-Aug-17, 09:33:52	08291706.D	4089-004 0.5ml		MC	RSKBOTH.M	
7	29-Aug-17, 09:50:51	08291707.D	4089-005 0.5ml		MC	RSKBOTH.M	
8	29-Aug-17, 10:07:54	08291708.D	4089-006 0.5ml		MC	RSKBOTH.M	
9	29-Aug-17, 10:42:34	08291709.D	4089-007 0.5ml		MC	RSKBOTH.M	
10	29-Aug-17, 11:06:01	08291710.D	4089-008 0.5ml		MC	RSKBOTH.M	
11	29-Aug-17, 11:23:53	08291711.D	4089-009 0.5ml		MC	RSKBOTH.M	
12	29-Aug-17, 11:37:17	08291712.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
13	29-Aug-17, 11:50:31	08291713.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
14	29-Aug-17, 12:29:45	08291714.D	std s30-06161601		MC	RSKBOTH.M	Pass
15	29-Aug-17, 14:07:01	08291715.D	25ppm s32-08291701 0.25ml		MC	RSKBOTH.M	Curve
16	29-Aug-17, 14:22:12	08291716.D	100ppm s32-08291702 0.2ml		MC	RSKBOTH.M	Curve
17	29-Aug-17, 14:53:00	08291717.D	250ppm s32-08291702 0.5ml		MC	RSKBOTH.M	Curve
18	29-Aug-17, 15:07:43	08291718.D	mis inject		MC	RSKBOTH.M	
19	29-Aug-17, 15:23:21	08291719.D	2500ppm s32-08231701 50ul		MC	RSKBOTH.M	Curve
20	29-Aug-17, 15:44:54	08291720.D	5000ppm s32-08231701 0.1ml		MC	RSKBOTH.M	Curve
21	29-Aug-17, 16:00:09	08291721.D	25000ppm s32-08231701 0.5ml		MC	RSKBOTH.M	Curve
22	29-Aug-17, 16:15:43	08291722.D	mb 0.1ml		MC	RSKBOTH.M	Pass
23	29-Aug-17, 16:35:37	08291723.D	icv s30-07071701		MC	RSKBOTH.M	Pass

Injection Log

Directory: I:\GC10\DATA\RSK_TCD\2020_11\24\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	24-Nov-20, 13:28:11	11242001.D	prime		WH	RSKBOTH.M	
2	24-Nov-20, 13:50:22	11242002.D	prime		WH	RSKBOTH.M	
3	24-Nov-20, 14:15:41	11242003.D	STD S32-11102001		WH	RS082417.M	pass
4	24-Nov-20, 14:35:10	11242004.D	RB 0.1ml		WH	RSKBOTH.M	pass
5	24-Nov-20, 14:50:31	11242005.D	MCS 0.1mL		WH	RSKBOTH.M	pass
6	24-Nov-20, 15:07:25	11242006.D	P2006524-001 0.1mL		WH	RSKBOTH.M	
7	24-Nov-20, 15:21:34	11242007.D	P2006524-002 0.1mL		WH	RSKBOTH.M	
8	24-Nov-20, 15:35:48	11242008.D	P2006524-003 0.1mL		WH	RSKBOTH.M	
9	24-Nov-20, 15:53:28	11242009.D	P2006524-003 MS 0.1mL		WH	RSKBOTH.M	
10	24-Nov-20, 16:08:09	11242010.D	P2006524-003 MSD 0.1mL		WH	RSKBOTH.M	
11	24-Nov-20, 16:22:21	11242011.D	xP2006524-003 x2		WH	RSKBOTH.M	
12	24-Nov-20, 16:23:15	11242012.D	xPurge		WH	RSKBOTH.M	
13	24-Nov-20, 16:37:31	11242013.D	P2006524-003 50uL		WH	RSKBOTH.M	
14	24-Nov-20, 16:52:14	11242014.D	P2006524-003MS 50uL		WH	RSKBOTH.M	
15	24-Nov-20, 17:07:22	11242015.D	P2006524-003MSD 50uL		WH	RSKBOTH.M	
16	24-Nov-20, 17:24:37	11242016.D	LCS 0.1mL		WH	RSKBOTH.M	pass
17	24-Nov-20, 17:40:48	11242017.D	LCSD 0.1mL		WH	RSKBOTH.M	pass
18	24-Nov-20, 18:06:40	11242018.D	STD S32-11102001		WH	RSKBOTH.M	pass
19	24-Nov-20, 18:21:00	11242019.D	LCS3 0.1mL		WH	RSKBOTH.M	
20	24-Nov-20, 18:37:36	11242020.D	LCS4 0.1mL		WH	RSKBOTH.M	
21	24-Nov-20, 18:51:54	11242021.D	LCS5 0.1mL		WH	RSKBOTH.M	

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 12:47
Operator : WH
Sample : P2006524-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:47:35 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

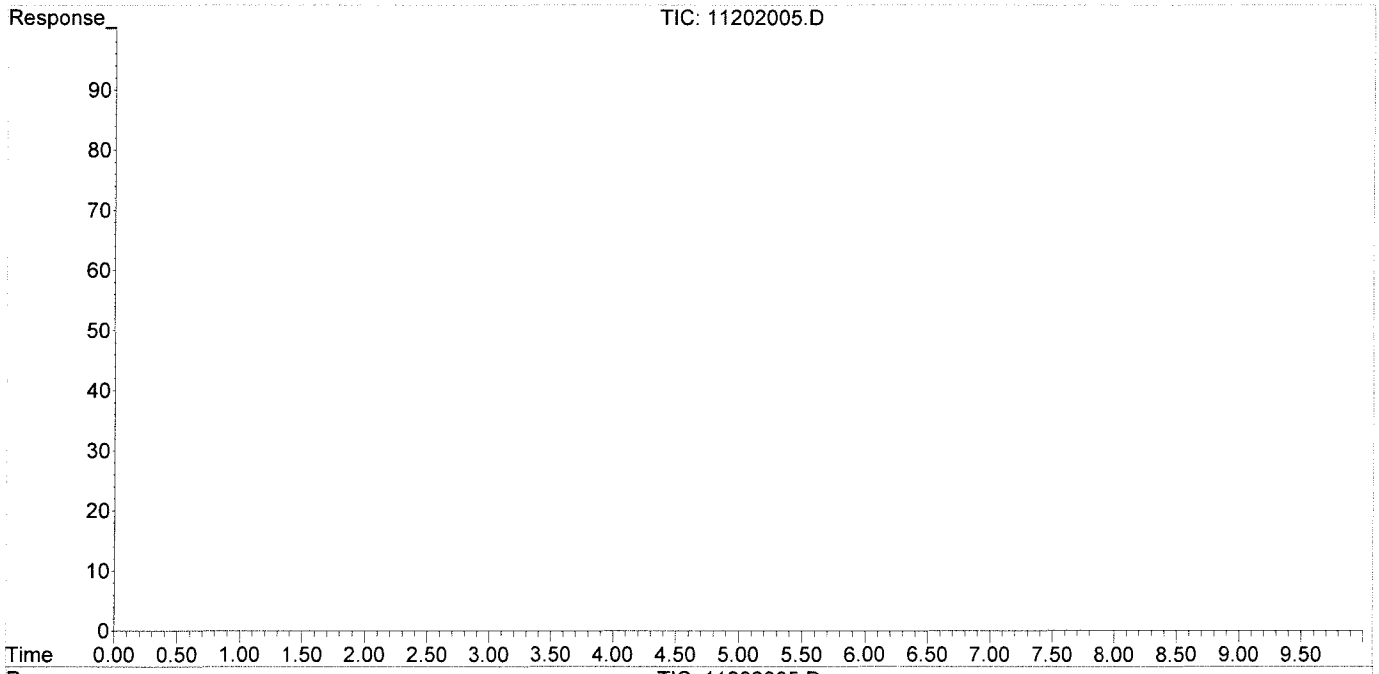
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000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

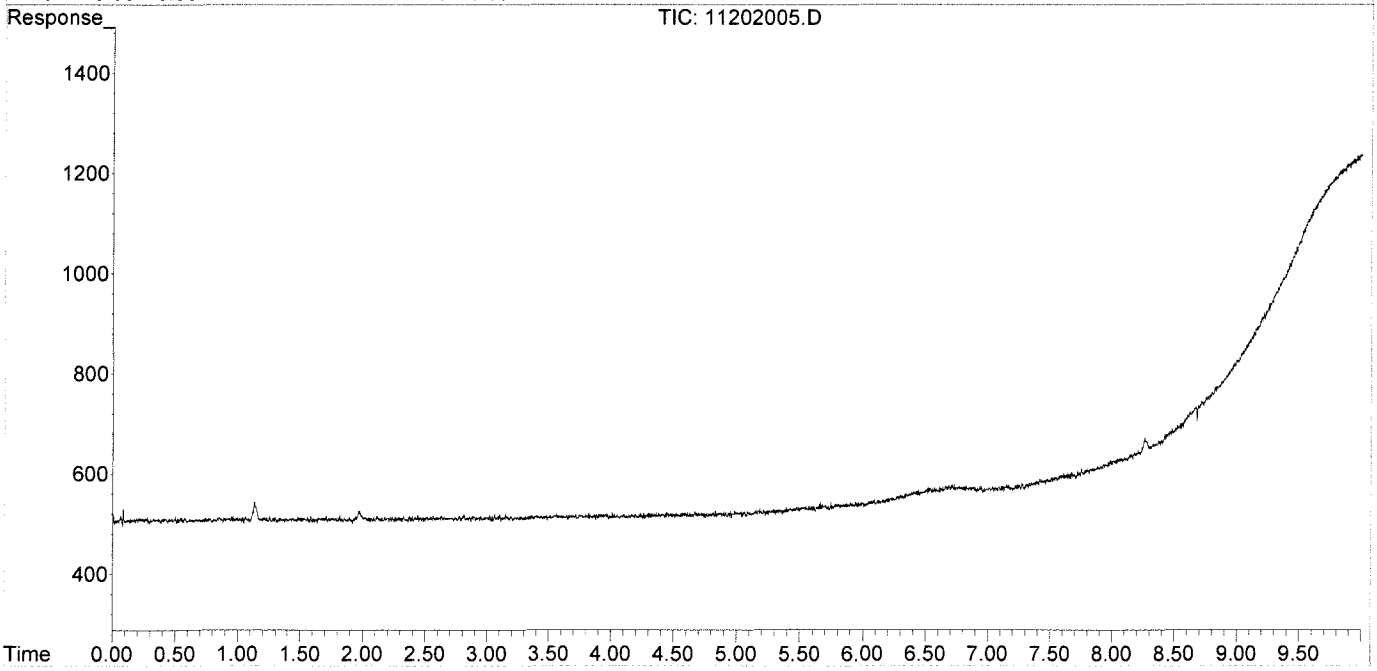
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202005.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 12:47
Operator : WH
Sample : P2006524-001 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:47:35 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 13:01
Operator : WH
Sample : P2006524-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:47:39 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

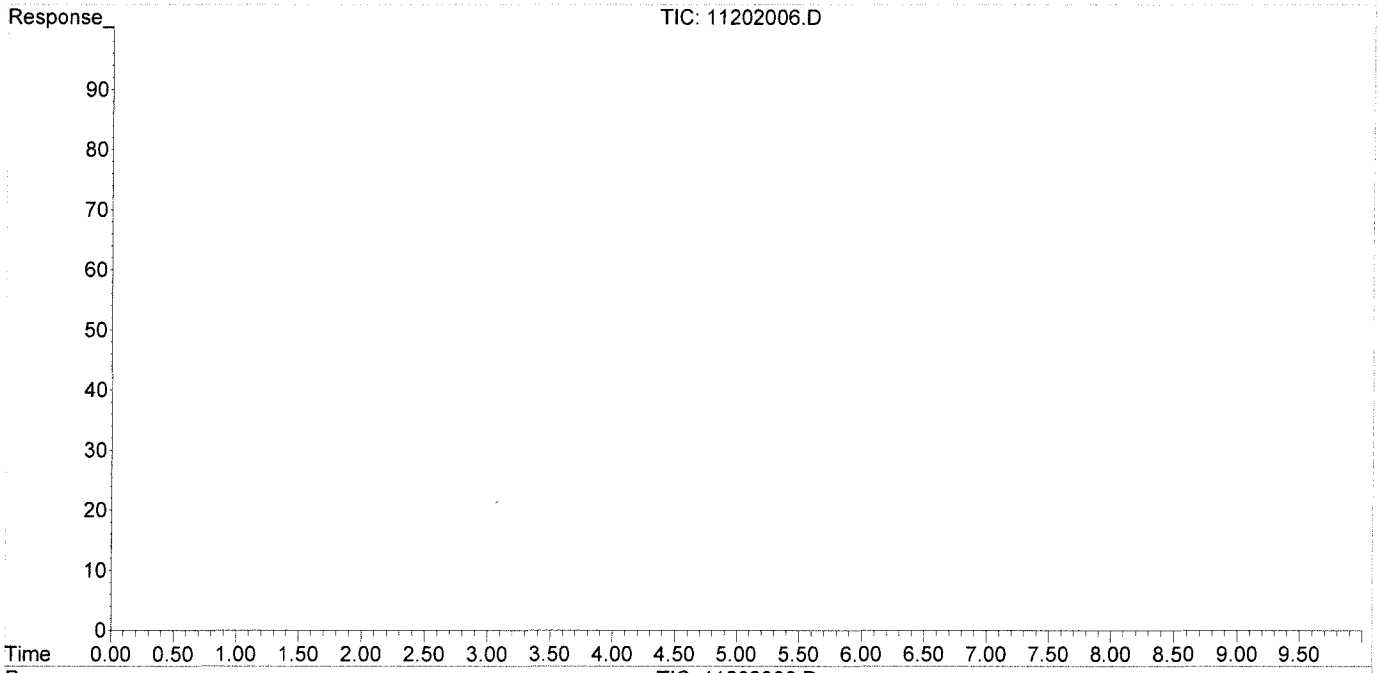
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000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

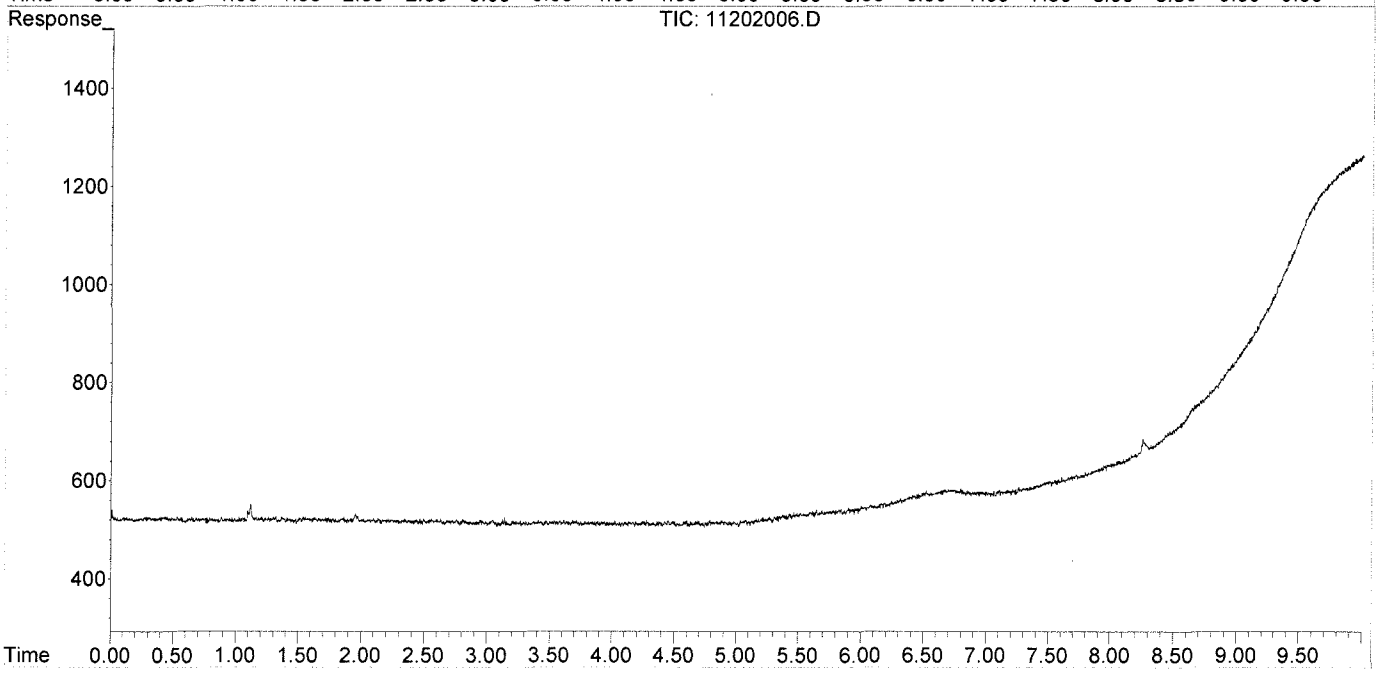
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202006.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 13:01
Operator : WH
Sample : P2006524-002 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:47:39 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 13:16
Operator : WH
Sample : P2006524-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:47:43 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

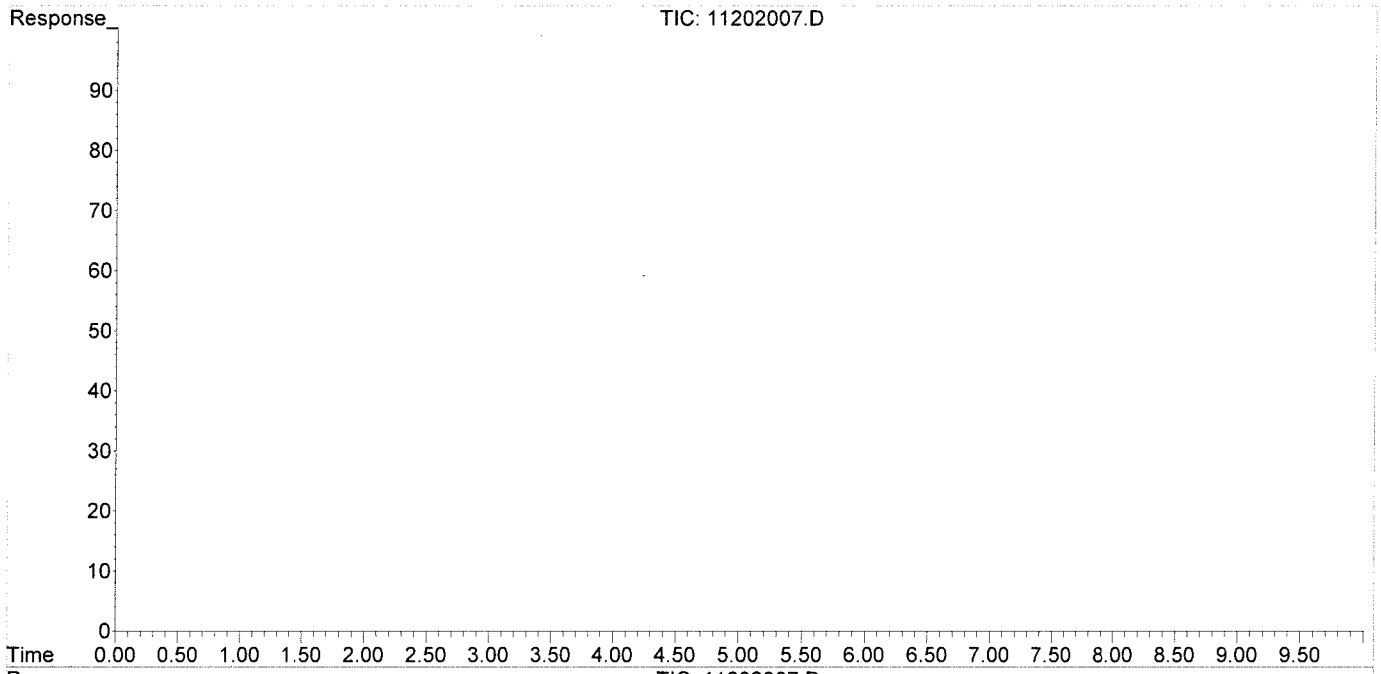
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.119	1930	0.213	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

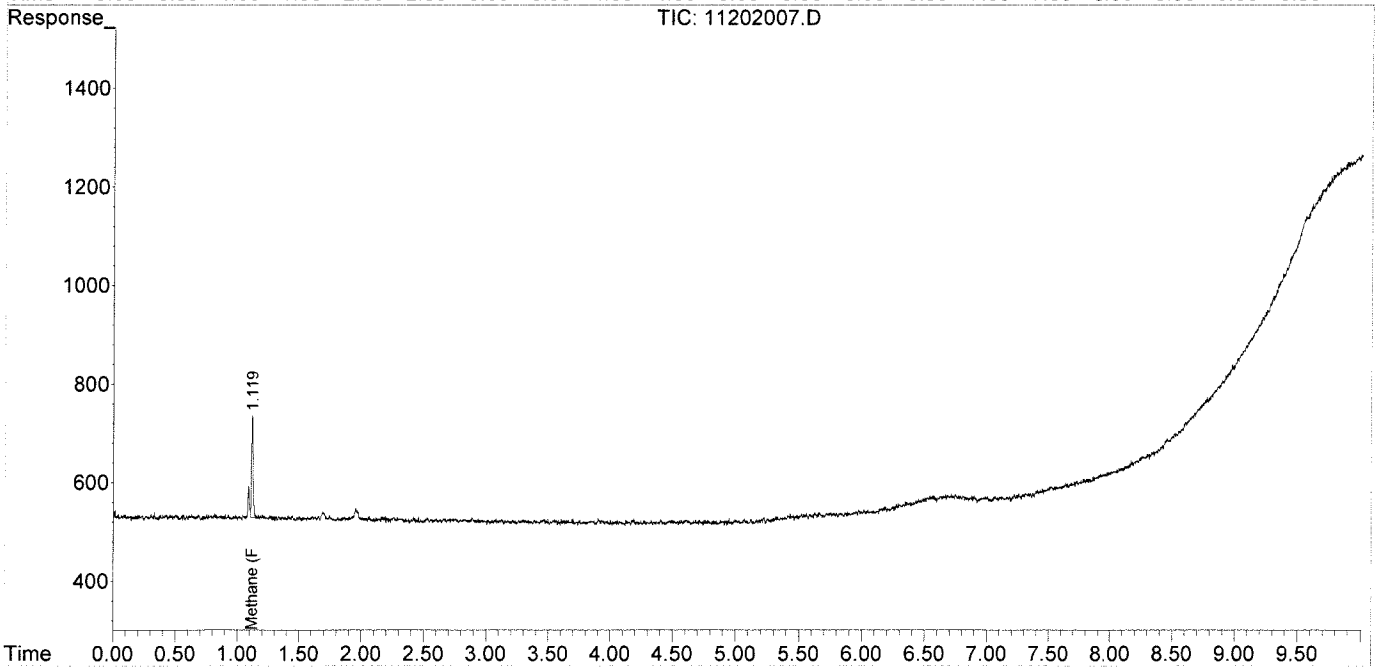
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202007.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 13:16
Operator : WH
Sample : P2006524-003 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:47:43 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202008.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 13:29
Operator : WH
Sample : P2006524-003ms 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:07:04 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

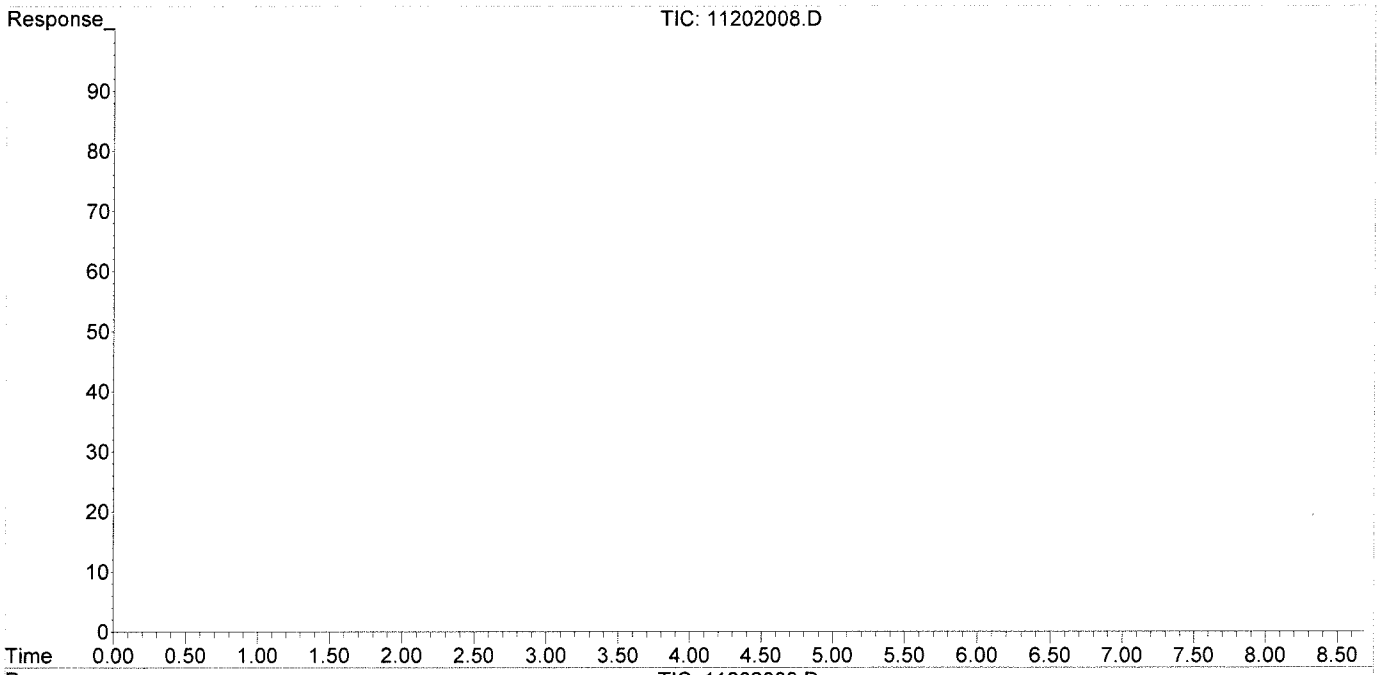
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.126	569733	62.811	ppm
7)	Ethylene	1.691	921748	55.081	ppm
8)	Ethane	1.955	1083687	63.934	ppm
9)	Propylene	4.333	1281049	54.672	ppm
10)	Propane	4.454	1677497	67.423	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

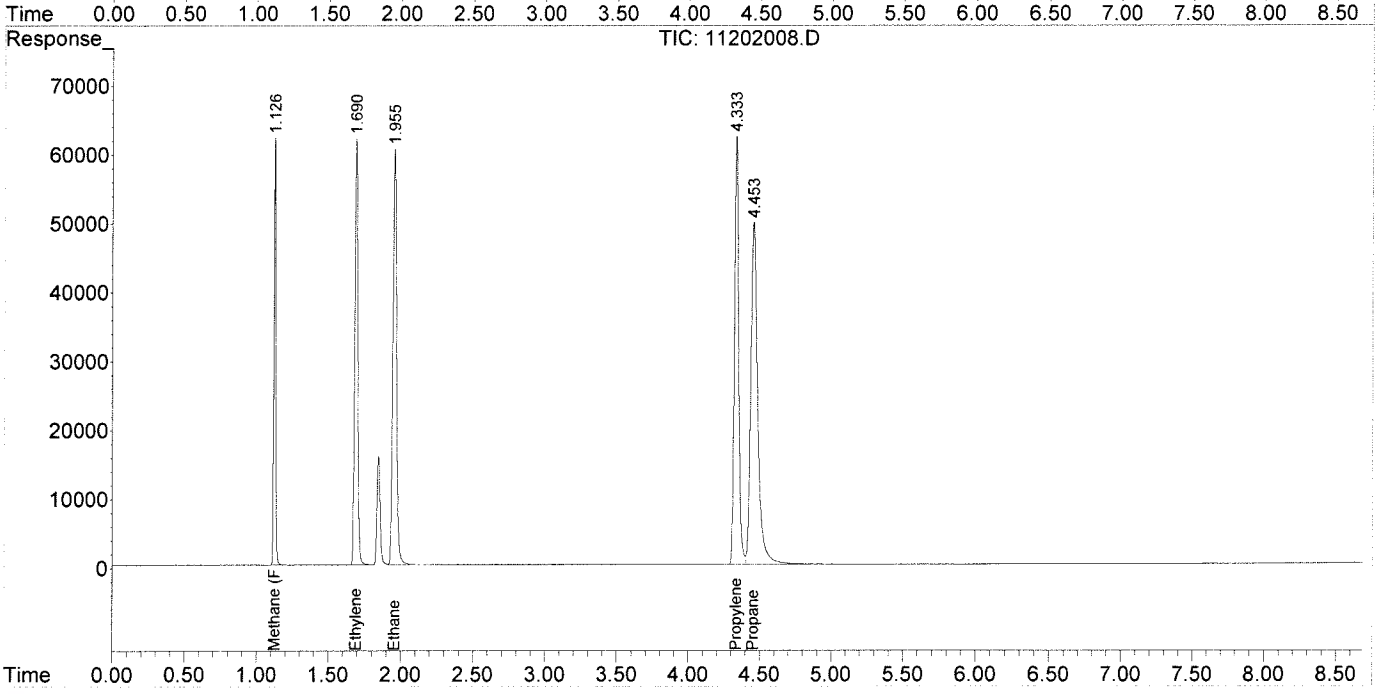
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202008.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 13:29
Operator : WH
Sample : P2006524-003ms 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:07:04 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202009.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 13:46
Operator : WH
Sample : P2006524-003msd 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:07:20 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

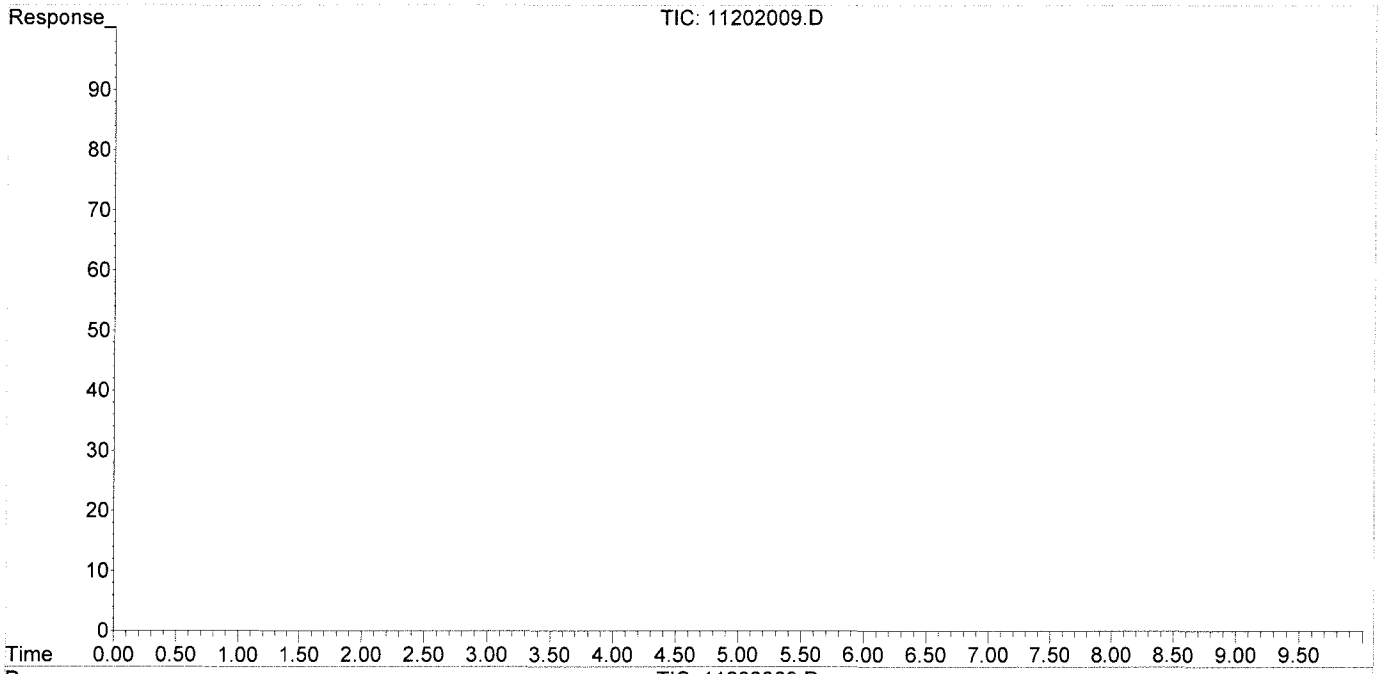
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.127	569732	62.811	ppm
7)	Ethylene	1.698	946987	56.589	ppm
8)	Ethane	1.963	1091818	64.413	ppm
9)	Propylene	4.334	1332169	56.854	ppm
10)	Propane	4.454	1674403	67.299	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

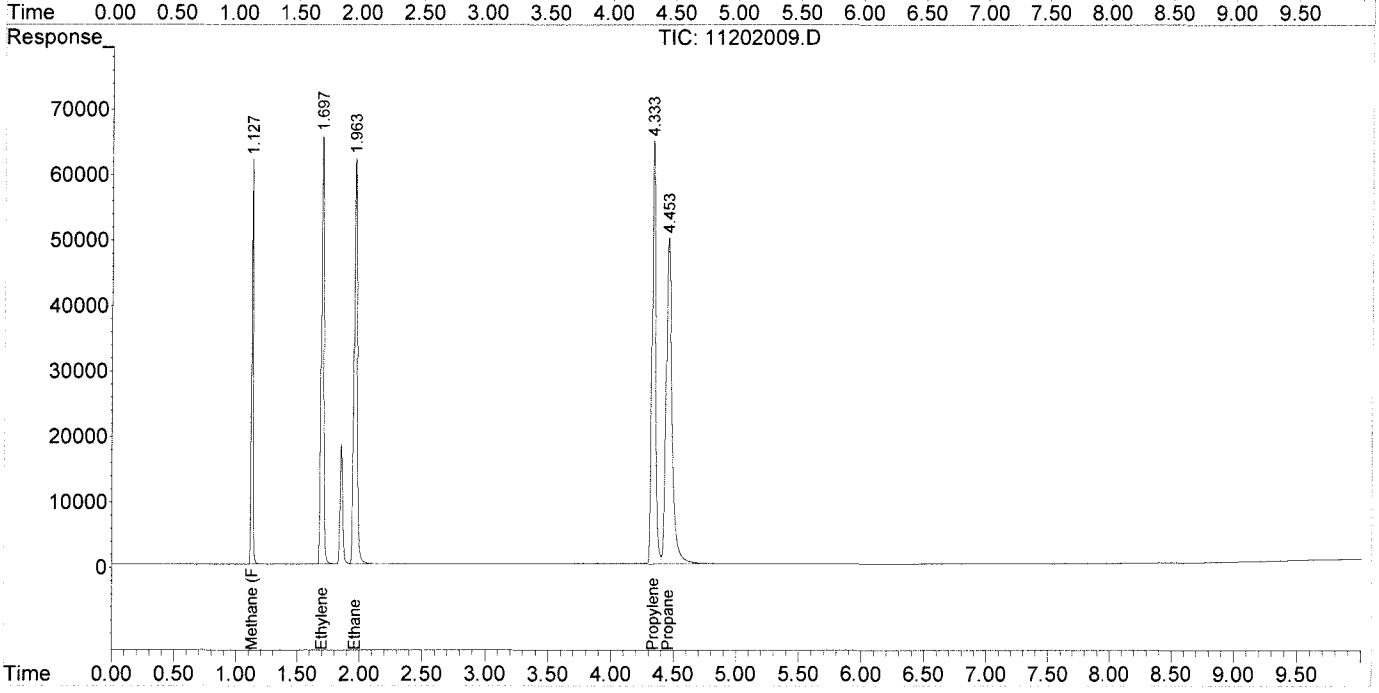
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202009.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 13:46
Operator : WH
Sample : P2006524-003msd 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:07:20 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202004.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 12:33
Operator : WH
Sample : mcs 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:47:32 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

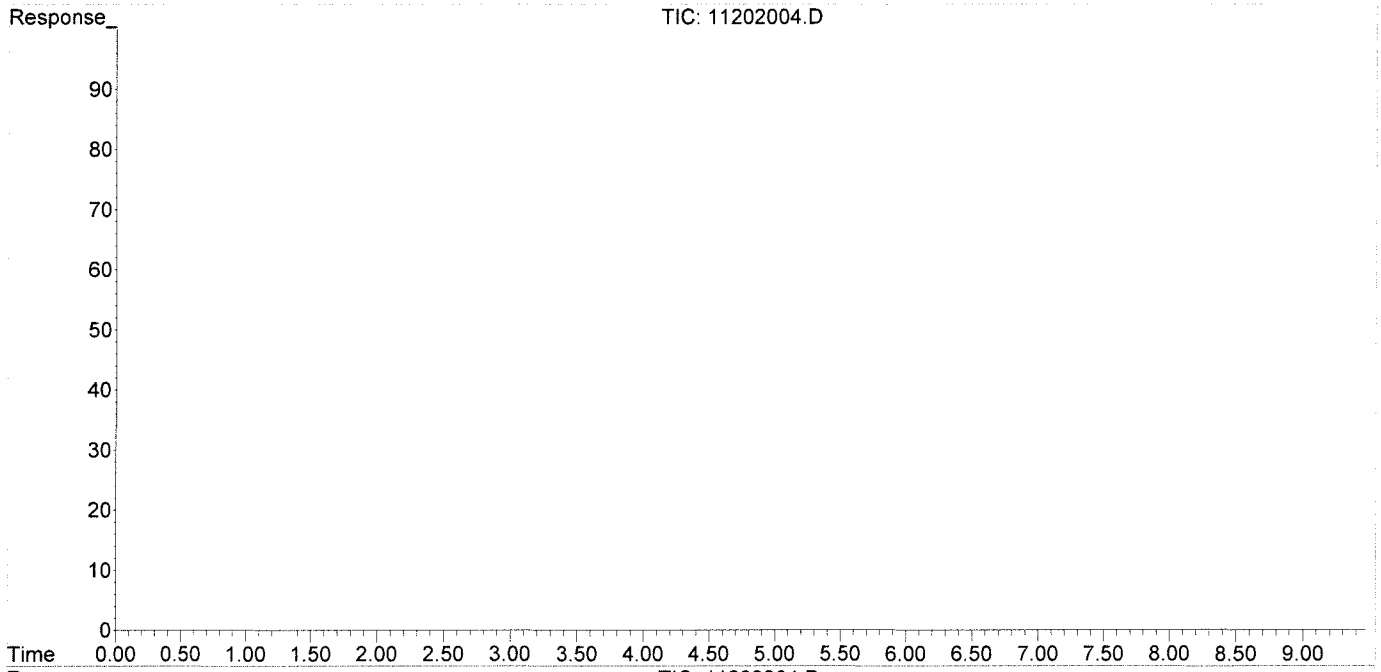
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000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

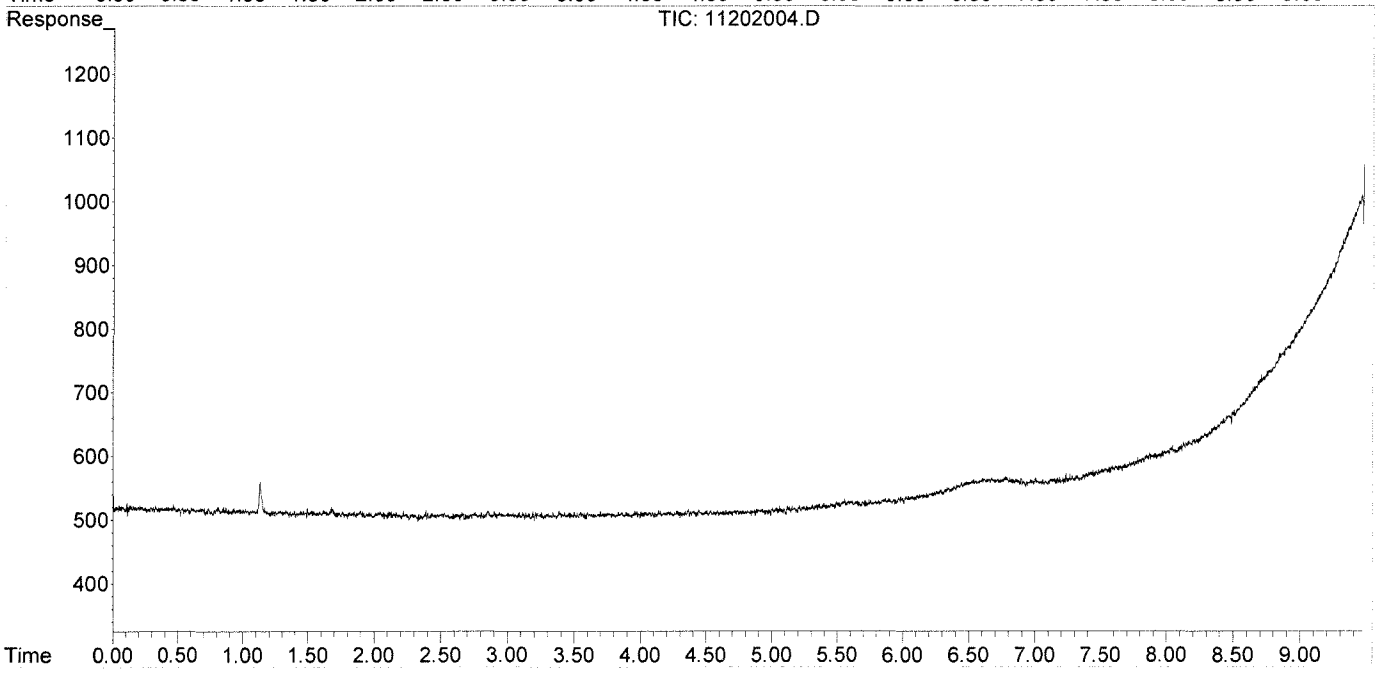
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202004.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 12:33
Operator : WH
Sample : mcs 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 15:47:32 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202010.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 14:00
Operator : WH
Sample : lcs 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 14:47:12 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

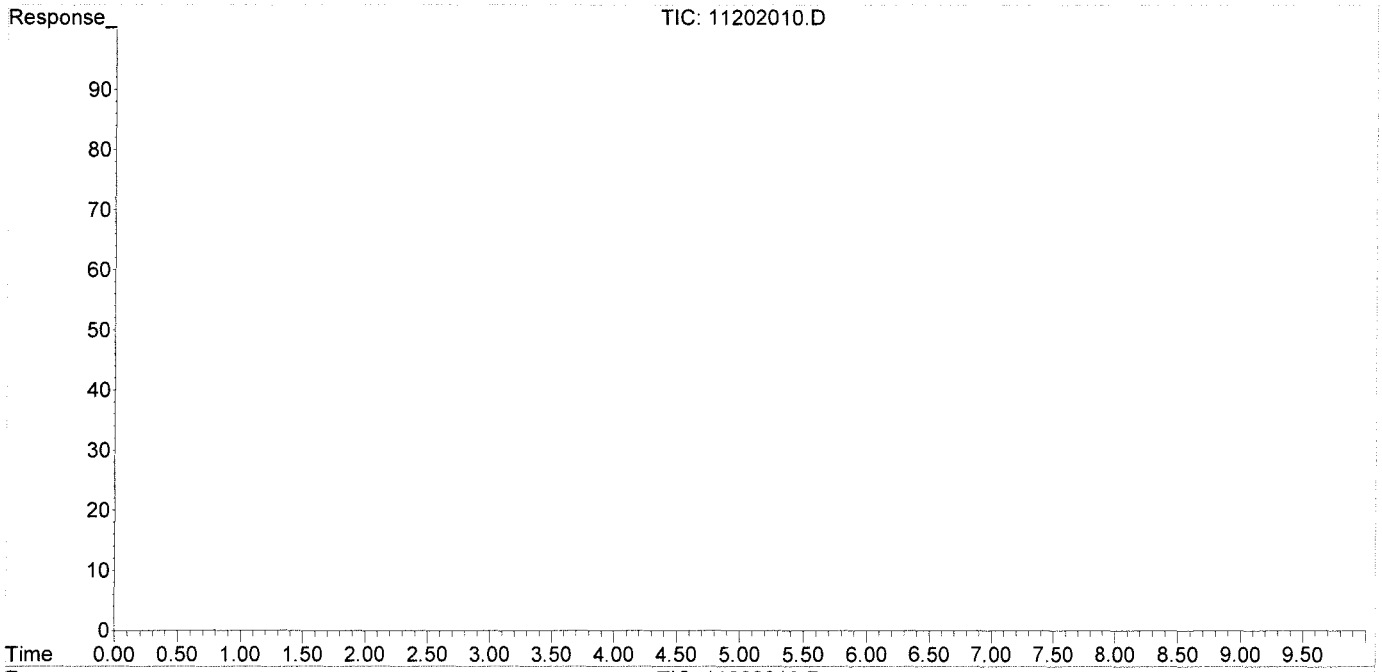
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.118	13786	1.520	ppm
7)	Ethylene	1.690	19712	1.178	ppm
8)	Ethane	1.955	23029	1.359	ppm
9)	Propylene	4.334	27161	1.159	ppm
10)	Propane	4.453	34614	1.391	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.661	47050	1.768	ppm
13)	n-Butane	6.661	47050	1.768	ppm

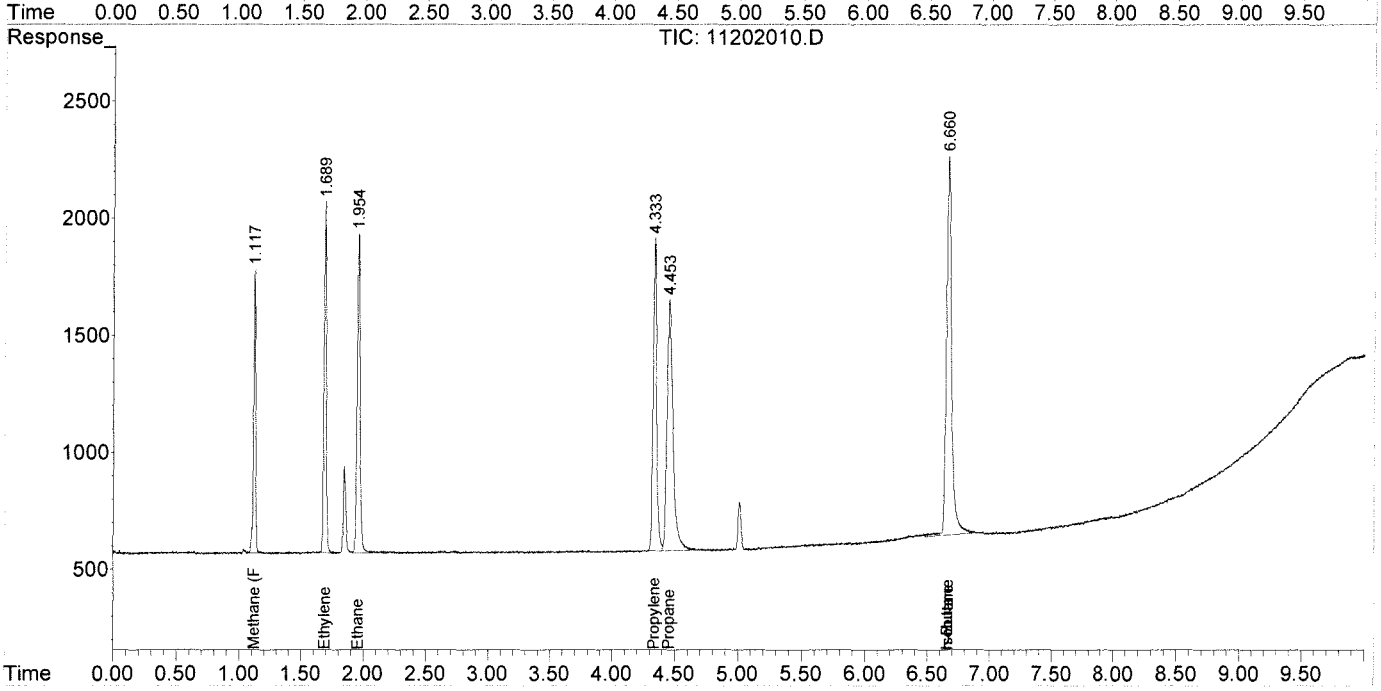
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202010.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 14:00
Operator : WH
Sample : lcs 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 14:47:12 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202011.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 14:19
Operator : WH
Sample : lcsd 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 14:47:24 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

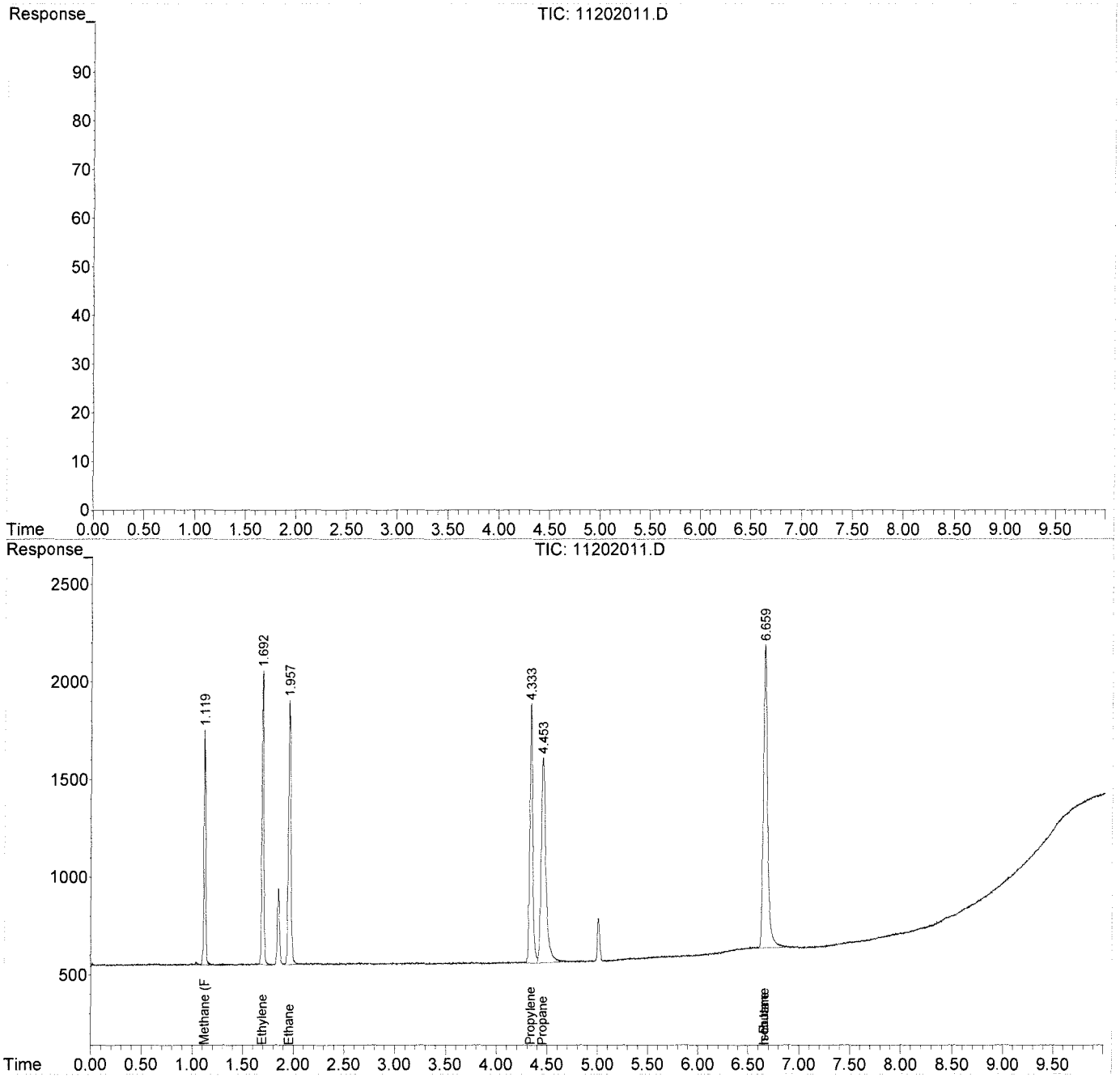
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.120	13653	1.505	ppm
7)	Ethylene	1.693	19684	1.176	ppm
8)	Ethane	1.958	22608	1.334	ppm
9)	Propylene	4.334	27196	1.161	ppm
10)	Propane	4.453	34119	1.371	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.660	44269	1.663	ppm
13)	n-Butane	6.660	44269	1.663	ppm

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

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202011.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 14:19
Operator : WH
Sample : lcsd 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 14:47:24 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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



Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1)	Oxygen/Argon	3.739		1.014			0.001	0.793 E6	189.17
2)	Carbon monoxide	3.739		1.014			0.001	0.594 E6	221.92
3)	Methane (TCD)						2.161	0.951 E2	106.37
4)	Carbon dioxide	2.365	2.569	2.558	2.361	2.459	2.314	2.438 E2	4.44

Signal #2 Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg	%RSD
6)	Methane (FID)		1.180	0.975	0.908	0.870	0.868	0.907 E4	11.66
7)	Ethylene	1.736	1.638	1.780	1.720	1.628	1.670	1.673 E4	3.90
8)	Ethane	1.781	1.676	1.784	1.730	1.692	1.675	1.695 E4	3.83
9)	Propylene	2.505	2.296	2.592	2.480	2.346	2.252	2.343 E4	6.56
10)	Propane	2.439	2.283	2.645	2.555	2.433	2.522	2.488 E4	4.20
11)	Isobutylene							0.652 E1	138.46
12)	Isobutane	6.058	4.793	2.214	1.553	1.353		2.662 E4	86.17
13)	n-Butane	6.058	4.793	2.214	1.553	1.353		2.662 E4	86.17

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS091217_R.M Wed Sep 13 15:11:48 2017

Edit Compounds -- Compound #6 -- Methane (FID)

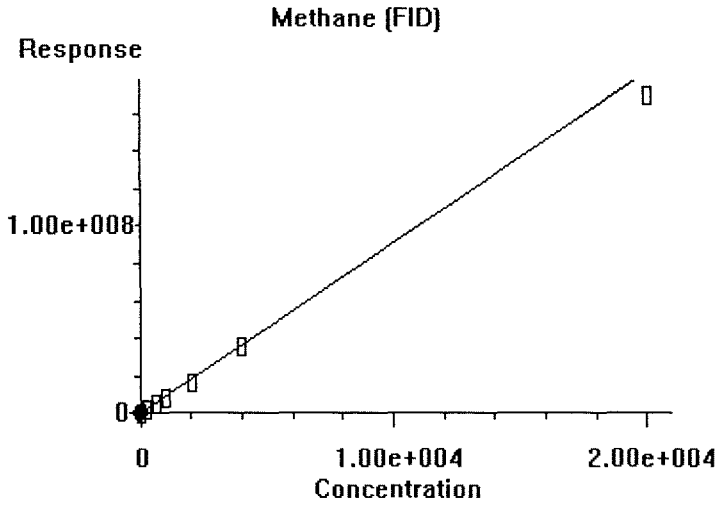
Search by: Ret Time Name Index Find Compound

Compound Database
External Standard Compoun
- Oxygen/Argon
- Carbon monoxide
- Methane (TCD)
- Carbon dioxide
- Signal #2
- Methane (FID)
- Ethylene
- Ethane
- Propylene
- Propane
- Isobutylene
- Isobutane
- n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	
2	0.302000	3564.400000
3	1.510000	14725.268625
4	4.530000	41128.575000
5	10.570000	91966.784531
6	200.000000	1735997.497500
7	600.000000	5189848.900000
8	1000.000000	8598533.570000
9	2000.000000	16098209.390000
10	4000.000000	35776839.311362

Lvl ID	Concentration	Response
11	20000.000000	169009160.49199



0.000e+000	Quadratic term
9.071e+003	Linear term
0.000e+000	Constant term
11.657%	RF Rel Std Dev

OK Cancel Help Print Calibration Curve Copy Calibration Curve

Edit Compounds -- Compound #7 -- Ethylene

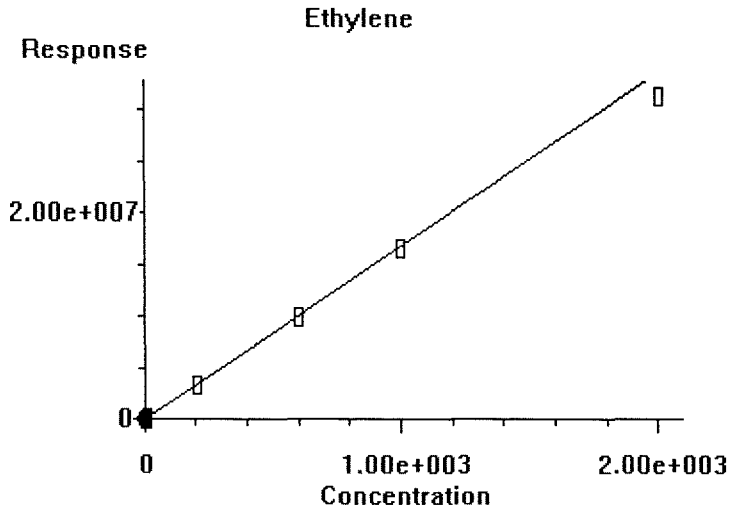
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2621.970000
2	0.302000	4946.731301
3	1.510000	26884.746847
4	4.530000	77902.721497
5	10.570000	172085.529560
6	200.000000	3339702.313219
7	600.000000	10007758.776971
8	1000.000000	16608503.805988
9	2000.000000	31192443.898600
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
1.673e+004	Linear term
0.000e+000	Constant term
3.897%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #8 -- Ethane

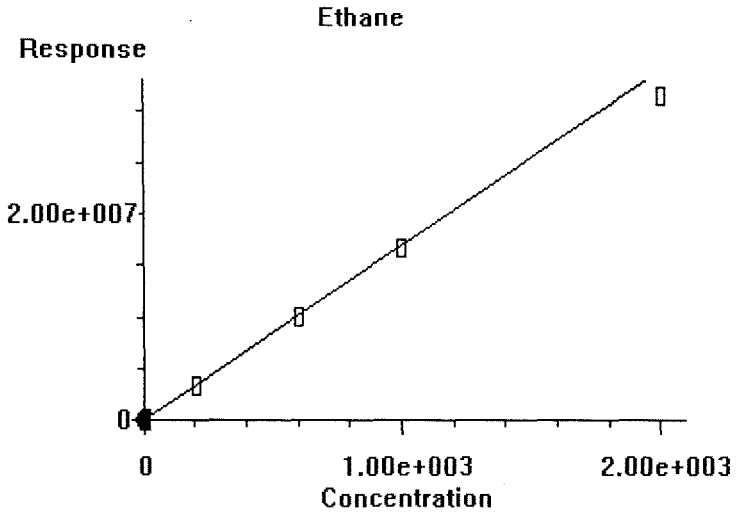
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2689.928008
2	0.302000	5060.331943
3	1.510000	26943.667500
4	4.530000	78353.525045
5	10.570000	178840.731148
6	200.000000	3350442.319129
7	600.000000	10048964.218029
8	1000.000000	16709164.879012
9	2000.000000	31424217.938900
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
1.695e+004	Linear term
0.000e+000	Constant term
3.831%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #9 -- Propylene

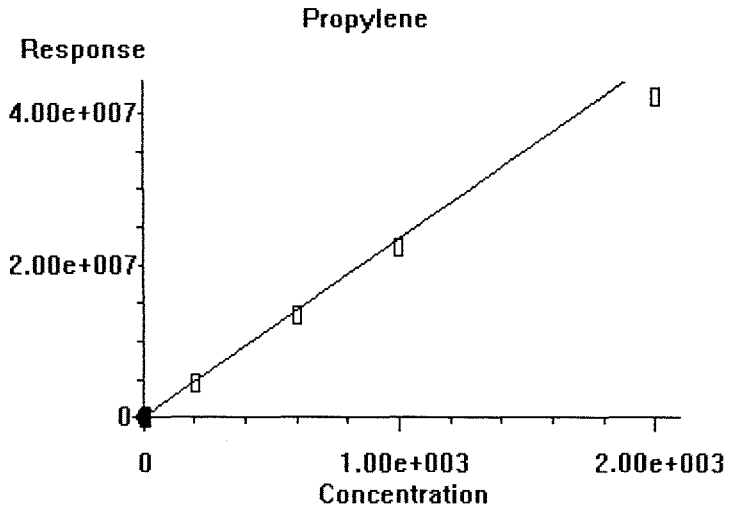
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl	ID	Concentration	Response
1		0.151000	3782.537646
2		0.302000	6933.285530
3		1.510000	39139.518208
4		4.530000	112341.896872
5		10.570000	248003.903623
6		200.000000	4504060.086084
7		600.000000	13569342.761419
8		1000.000000	22494887.720990
9		2000.000000	42124689.656800
10		4000.000000	

Lvl	ID	Concentration	Response
11		20000.000000	



0.000e+000	Quadratic term
2.343e+004	Linear term
0.000e+000	Constant term
6.559%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #10 -- Propane

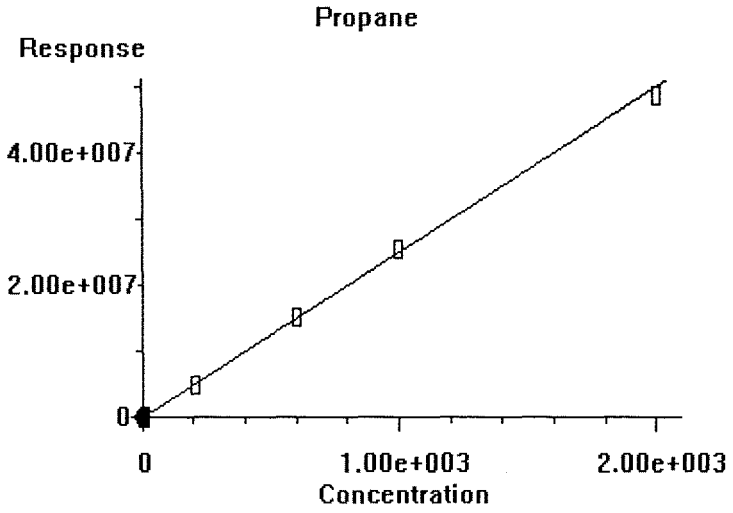
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	3682.897354
2	0.302000	6894.237803
3	1.510000	39934.166792
4	4.530000	115723.428128
5	10.570000	257124.432806
6	200.000000	5043035.663916
7	600.000000	15251325.797404
8	1000.000000	25459410.657938
9	2000.000000	48583085.287451
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
2.488e+004	Linear term
0.000e+000	Constant term
4.200%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121702.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121703.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121704.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121705.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121706.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121707.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121711.D
11	11	20000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121712.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 13 11:04 2017	Sep 12 15:03 2017	12-Sep-2017, 10:52
2	2	Sep 13 11:05 2017	Sep 13 11:05 2017	12-Sep-2017, 11:05
3	3	Sep 13 11:06 2017	Sep 13 11:05 2017	12-Sep-2017, 11:45
4	4	Sep 13 11:09 2017	Sep 13 11:06 2017	12-Sep-2017, 12:09
5	5	Sep 13 11:09 2017	Sep 13 11:09 2017	12-Sep-2017, 12:30
6	6	Sep 13 11:10 2017	Sep 13 11:10 2017	12-Sep-2017, 12:47
7	7	Sep 13 11:11 2017	Sep 13 11:10 2017	12-Sep-2017, 13:00
8	8	Sep 13 11:12 2017	Sep 13 11:11 2017	12-Sep-2017, 13:47
9	9	Sep 13 11:12 2017	Sep 13 11:12 2017	12-Sep-2017, 14:07
10	10	Sep 13 11:14 2017	Sep 13 11:13 2017	12-Sep-2017, 14:48
11	11	Sep 13 11:14 2017	Sep 13 11:14 2017	12-Sep-2017, 15:21

RS091217_R.M Wed Sep 13 15:11:22 2017

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.767	373920	0.128	ppm	
2)	Carbon monoxide	1.767	373920	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	1.595	2622	0.156	ppm	
8)	Ethane	1.848	2690	0.156	ppm	
9)	Propylene	4.222	3783	0.154	ppm	
10)	Propane	4.348	3683	0.139	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.582f	6058	NoCal	ppm	
13)	n-Butane	6.582f	6058	NoCal	ppm	

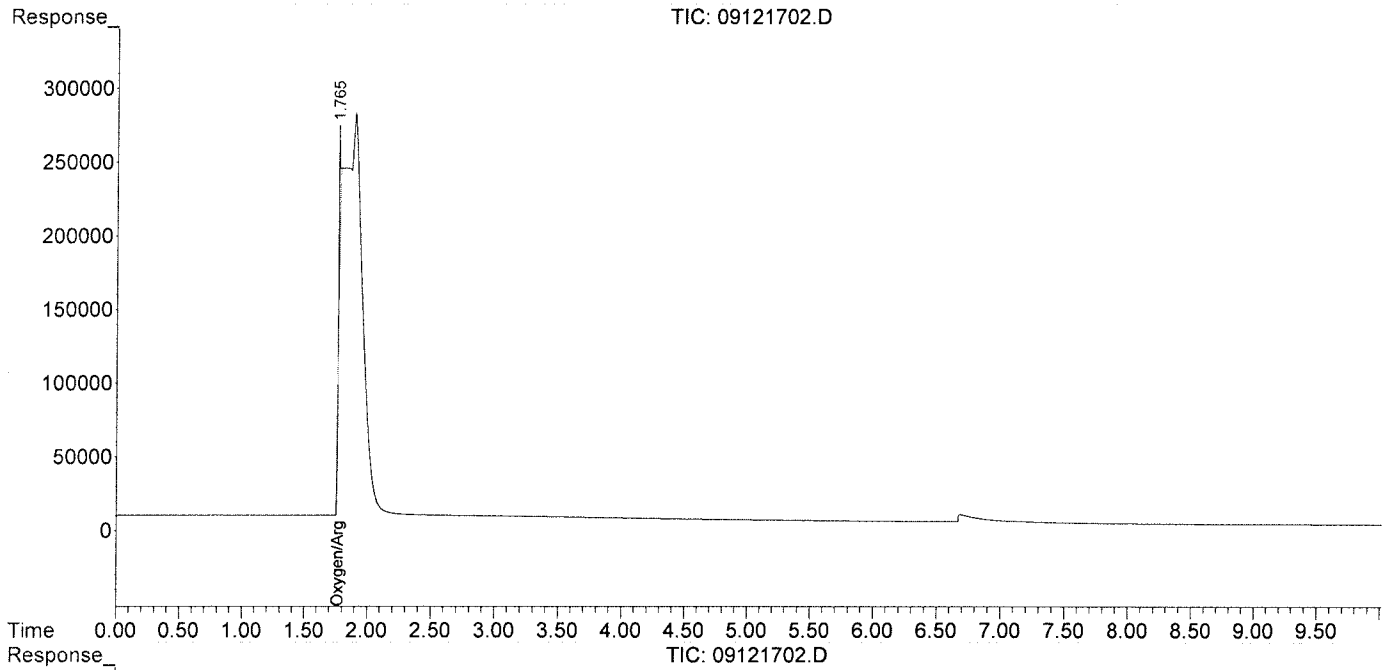
(f)=RT Delta > 1/2 Window (m)=manual int.

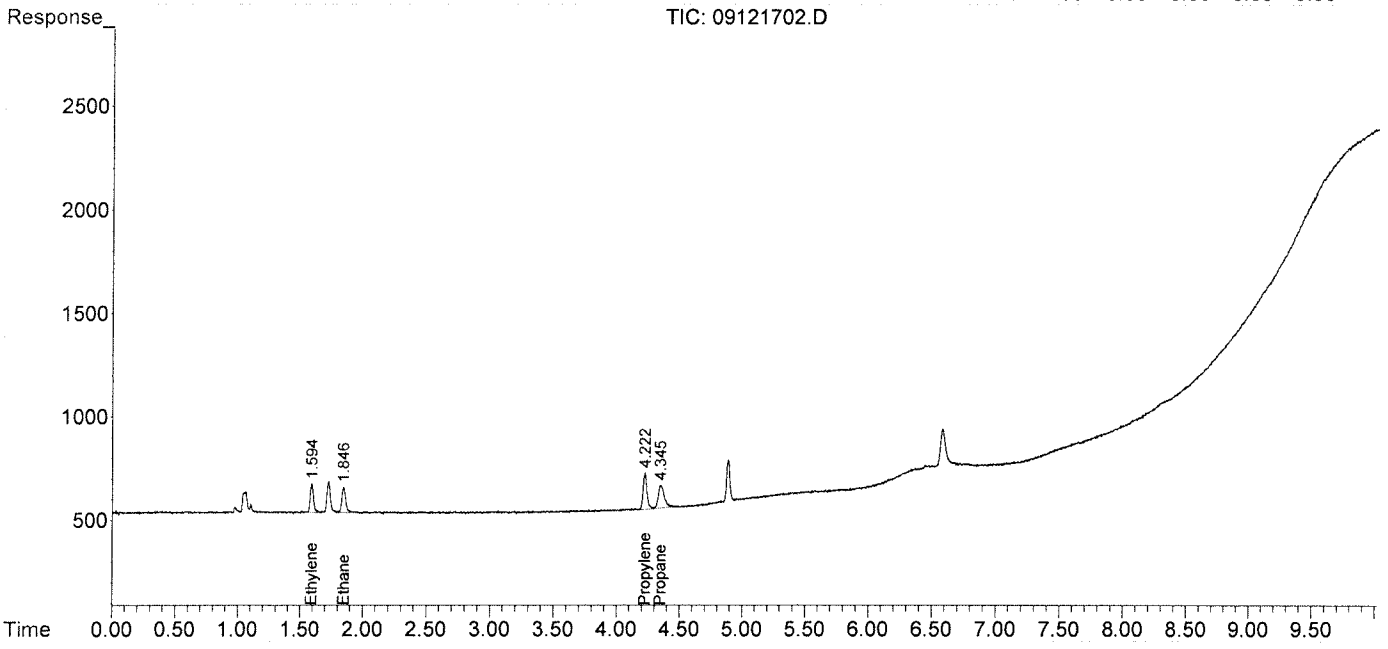
9/13/17

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

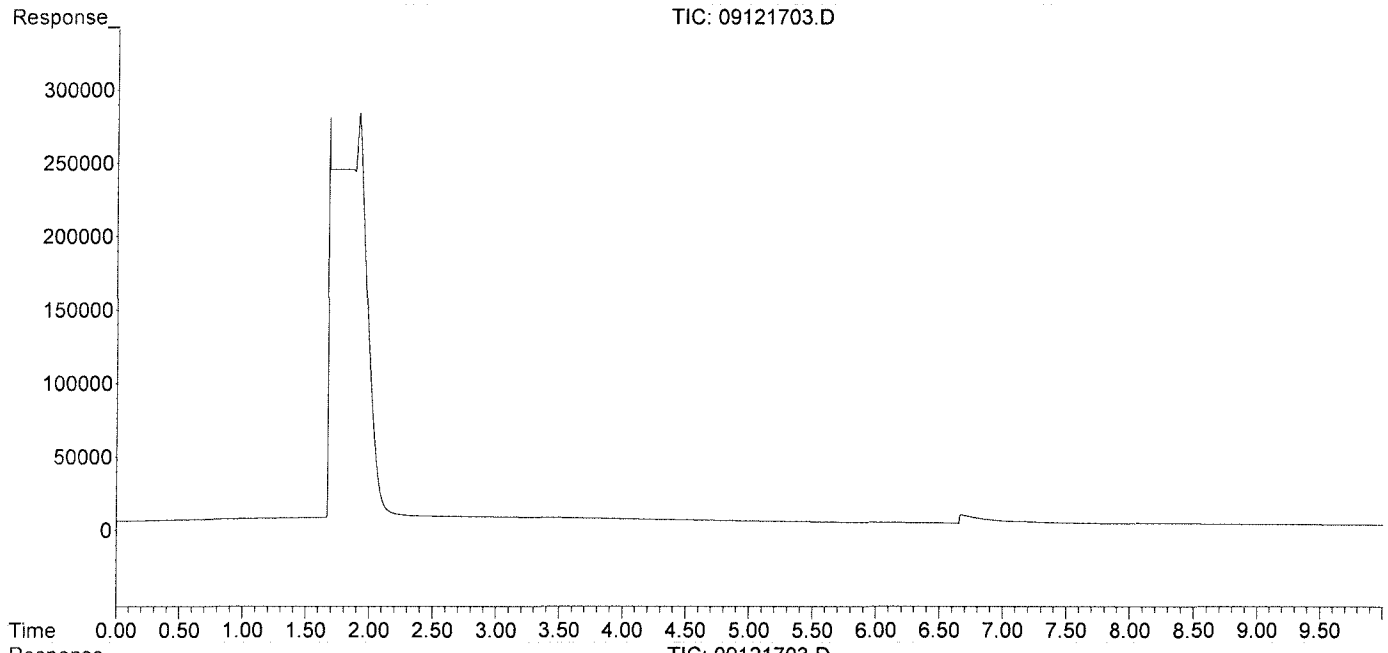
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.913f	-25181981	N.D.	ppm	
2)	Carbon monoxide	1.913f	-25181981	1.089	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.049	3564	0.391	ppm	m
7)	Ethylene	1.577	4947	0.292	ppm	
8)	Ethane	1.828	5060	0.293	ppm	
9)	Propylene	4.207	6933	0.281	ppm	
10)	Propane	4.337	6894	0.268	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	9587	0.158	ppm	
13)	n-Butane	6.579f	9587	0.158	ppm	

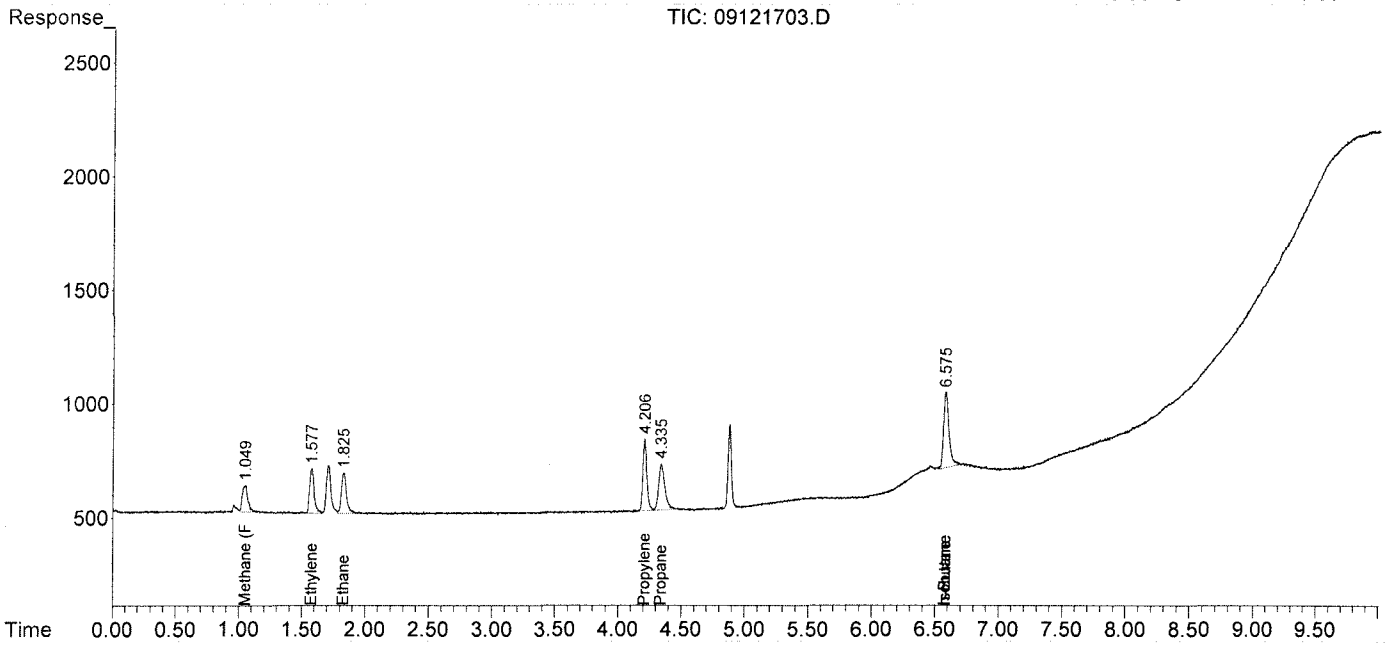
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

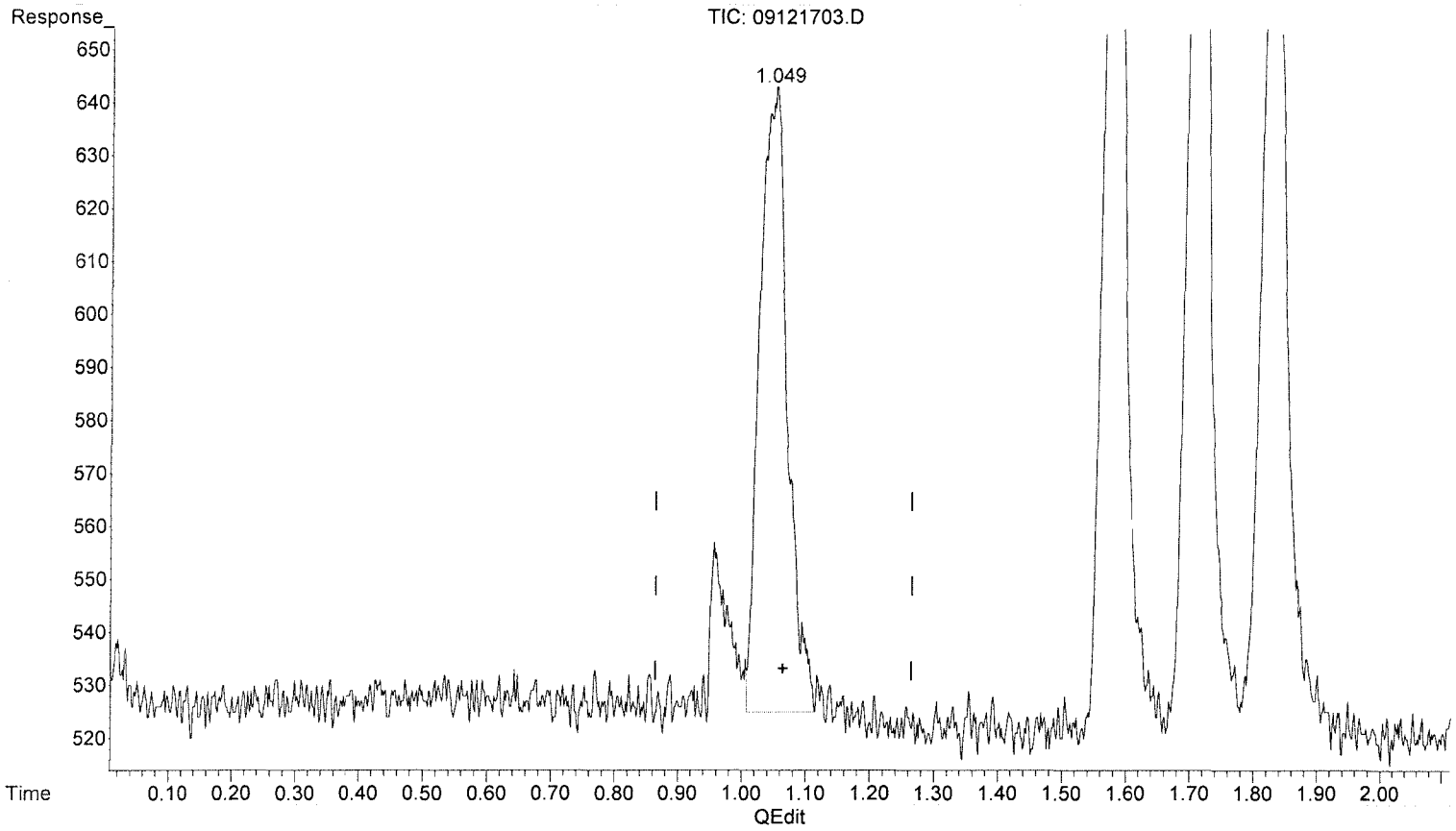




Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(6) Methane (FID)

1.049min 0.391 ppm m

response 3564

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

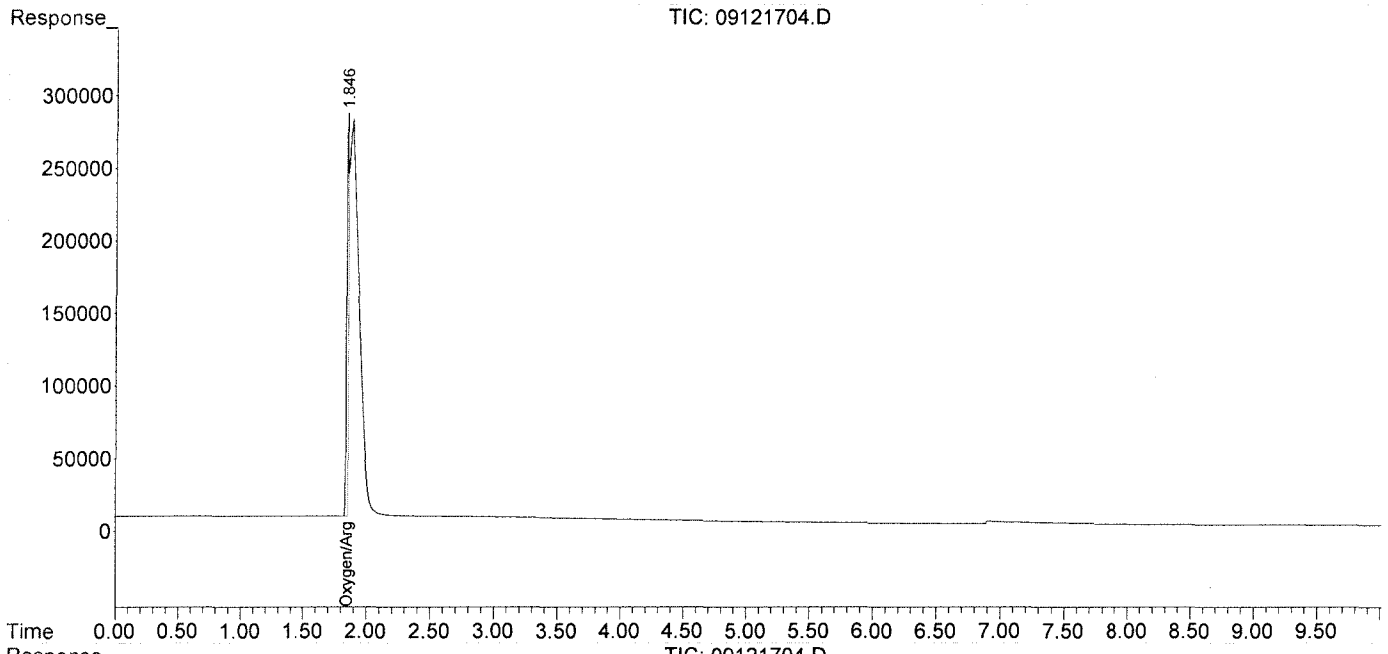
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.847	2536230	1.056	ppm
2)	Carbon monoxide	1.847	2536230	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.064	14725	1.613	ppm
7)	Ethylene	1.598	26885	1.582	ppm
8)	Ethane	1.851	26944	1.555	ppm
9)	Propylene	4.220	39140	1.589	ppm
10)	Propane	4.349	39934	1.596	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	55348	1.020	ppm
13)	n-Butane	6.578f	55348	1.020	ppm

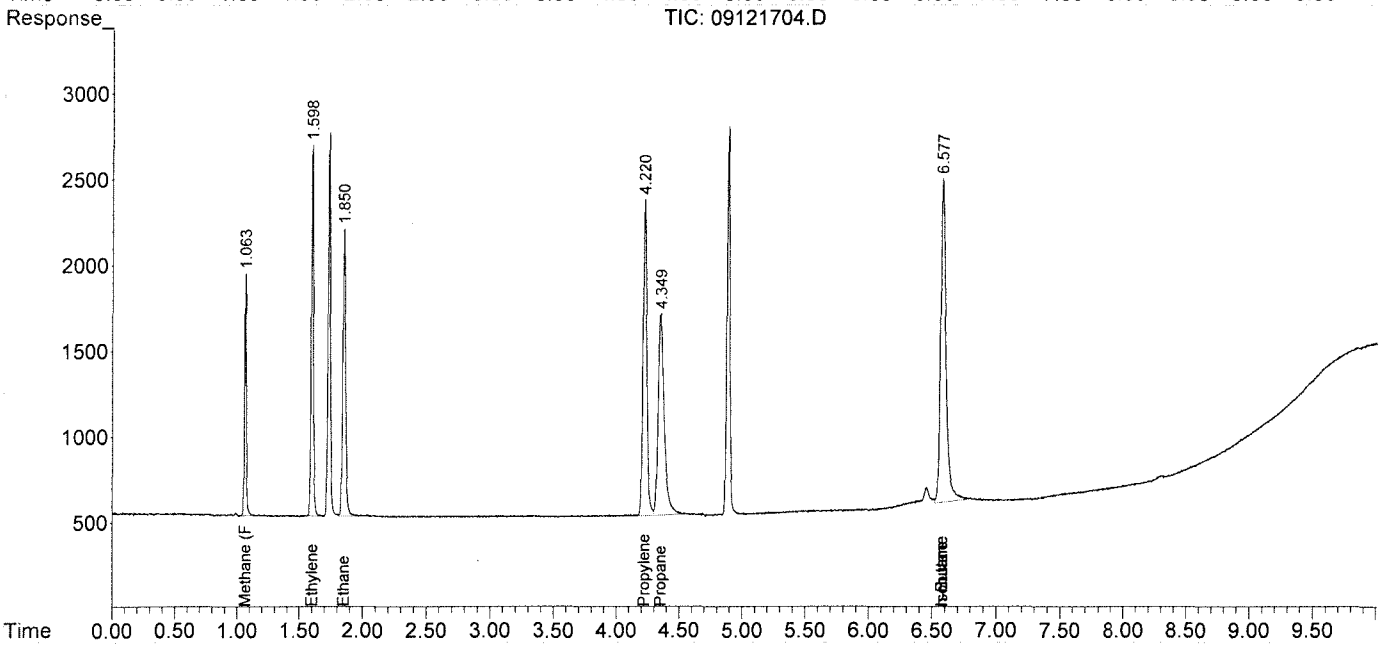
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

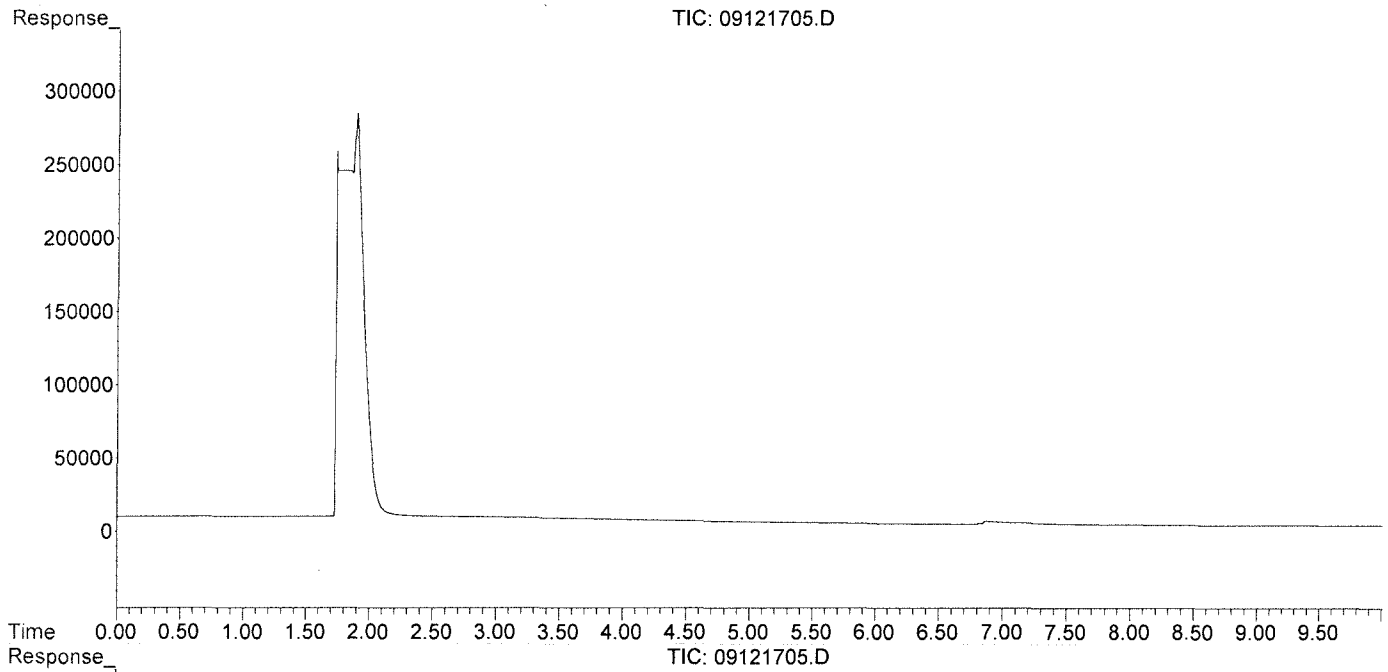
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.738	-331216	N.D.	ppm
2)	Carbon monoxide	1.738	-331216	0.019	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.052	41129	4.522	ppm
7)	Ethylene	1.586	77903	4.637	ppm
8)	Ethane	1.838	78354	4.558	ppm
9)	Propylene	4.218	112342	4.614	ppm
10)	Propane	4.347	115723	4.680	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.580f	155256	3.565	ppm
13)	n-Butane	6.580f	155256	3.565	ppm

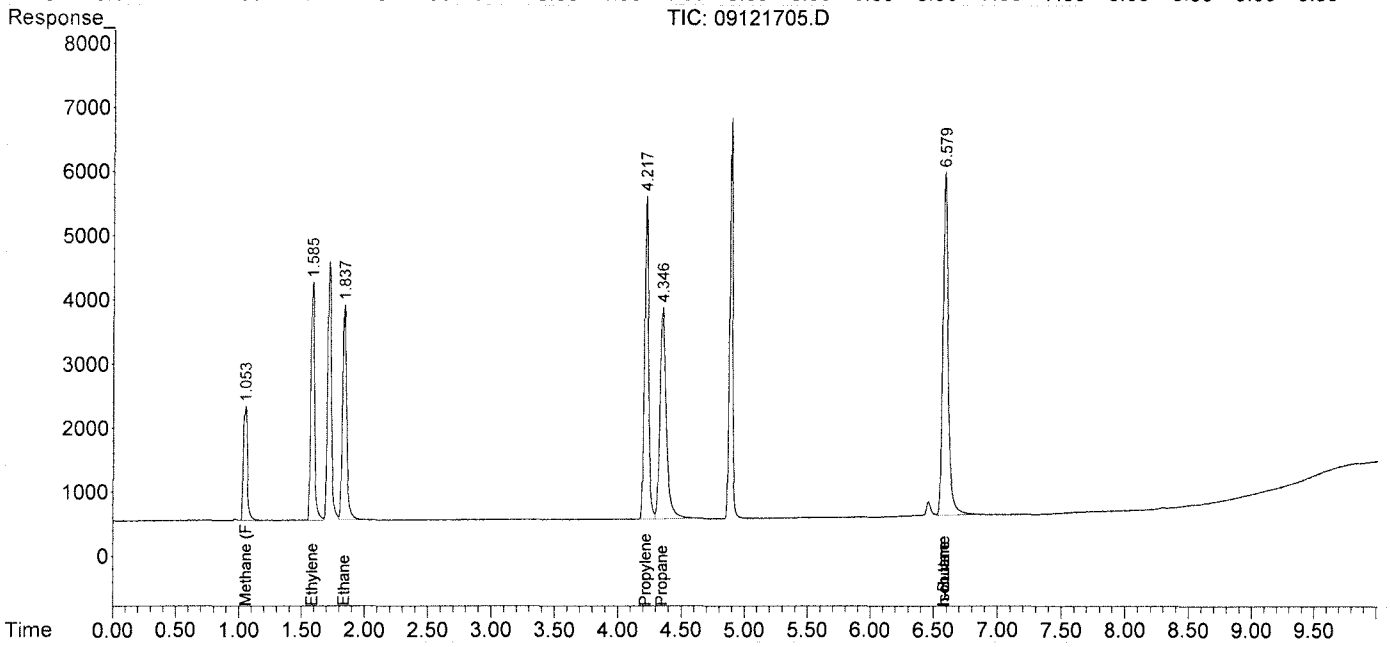
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

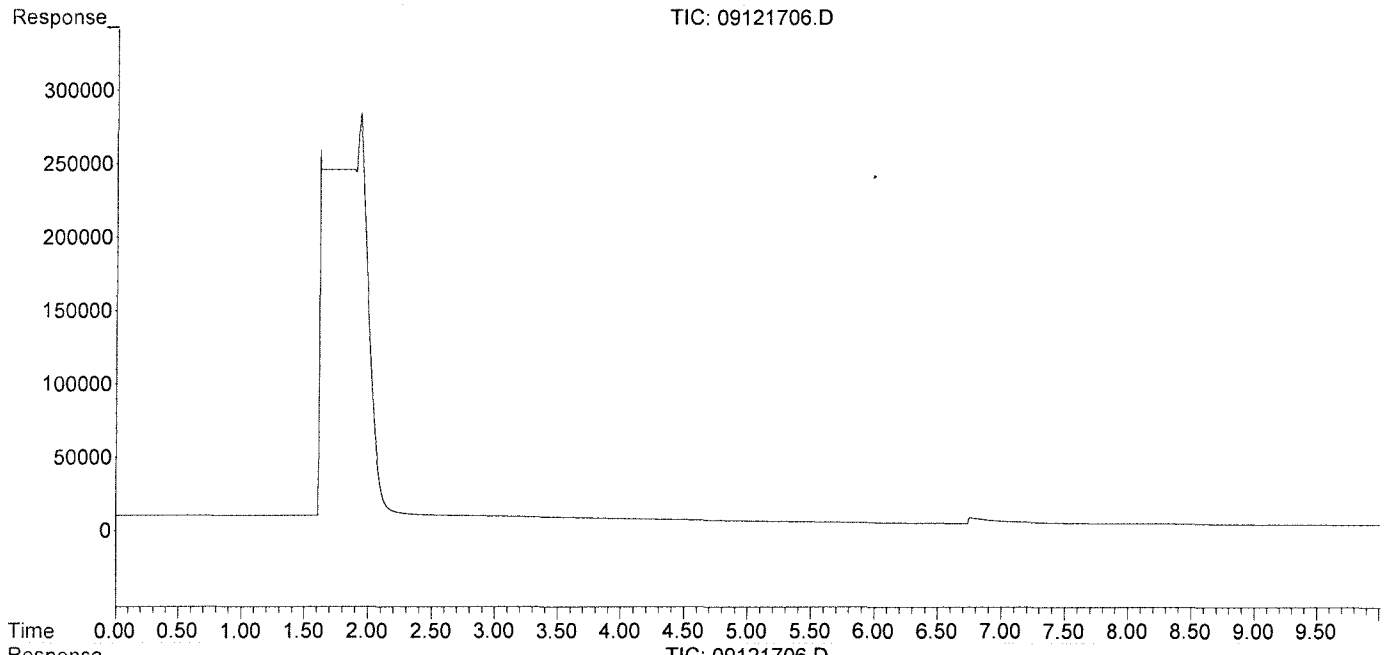
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.929f	-31871242	N.D.	ppm
2)	Carbon monoxide	1.929f	-31871242	1.818	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.025	91967	10.135	ppm
7)	Ethylene	1.568	172086	10.273	ppm
8)	Ethane	1.822	178841	10.441	ppm
9)	Propylene	4.214	248004	10.236	ppm
10)	Propane	4.344	257124	10.458	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	338181	9.254	ppm
13)	n-Butane	6.578f	338181	9.254	ppm

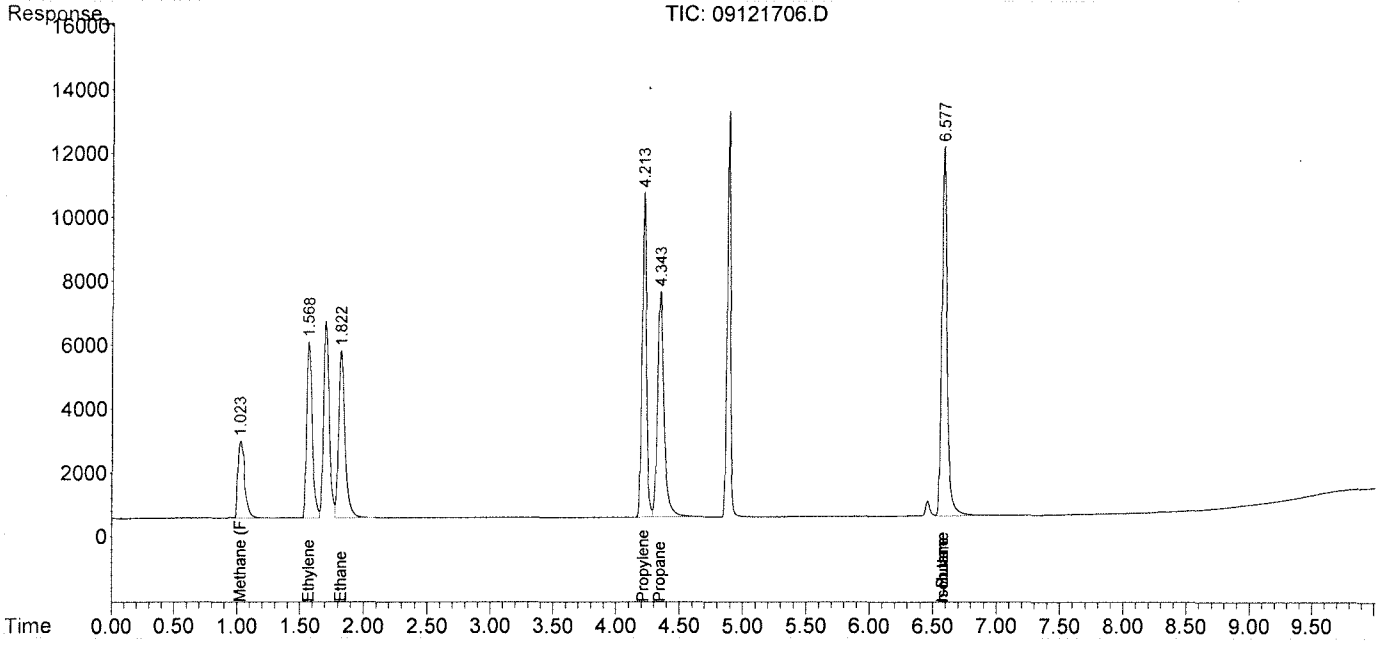
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

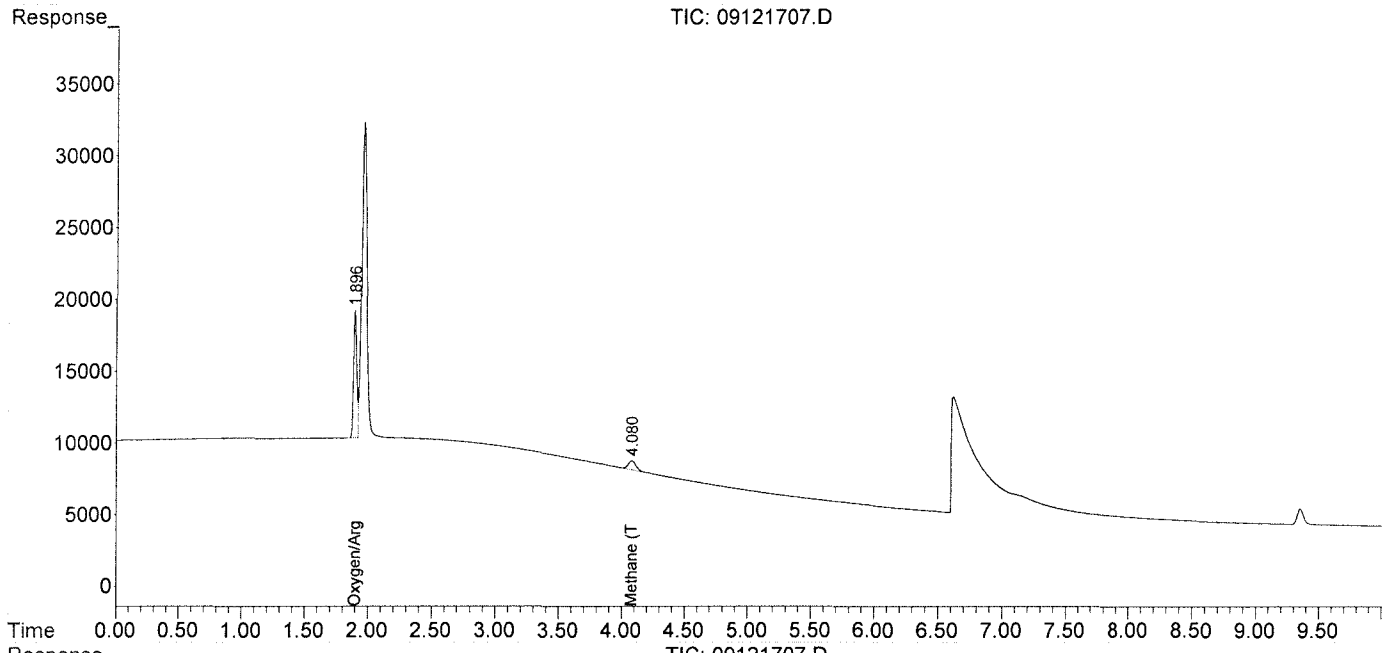
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.897	155286	0.065	ppm
2)	Carbon monoxide	1.897	155286	N.D.	ppm
3)	Methane (TCD)	4.079f	27015	2856.472	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.063	1735997	190.792	ppm
7)	Ethylene	1.597	3339702	198.758	ppm
8)	Ethane	1.849	3350442	194.597	ppm
9)	Propylene	4.201	4504060	185.706	ppm
10)	Propane	4.333	5043036	204.809	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

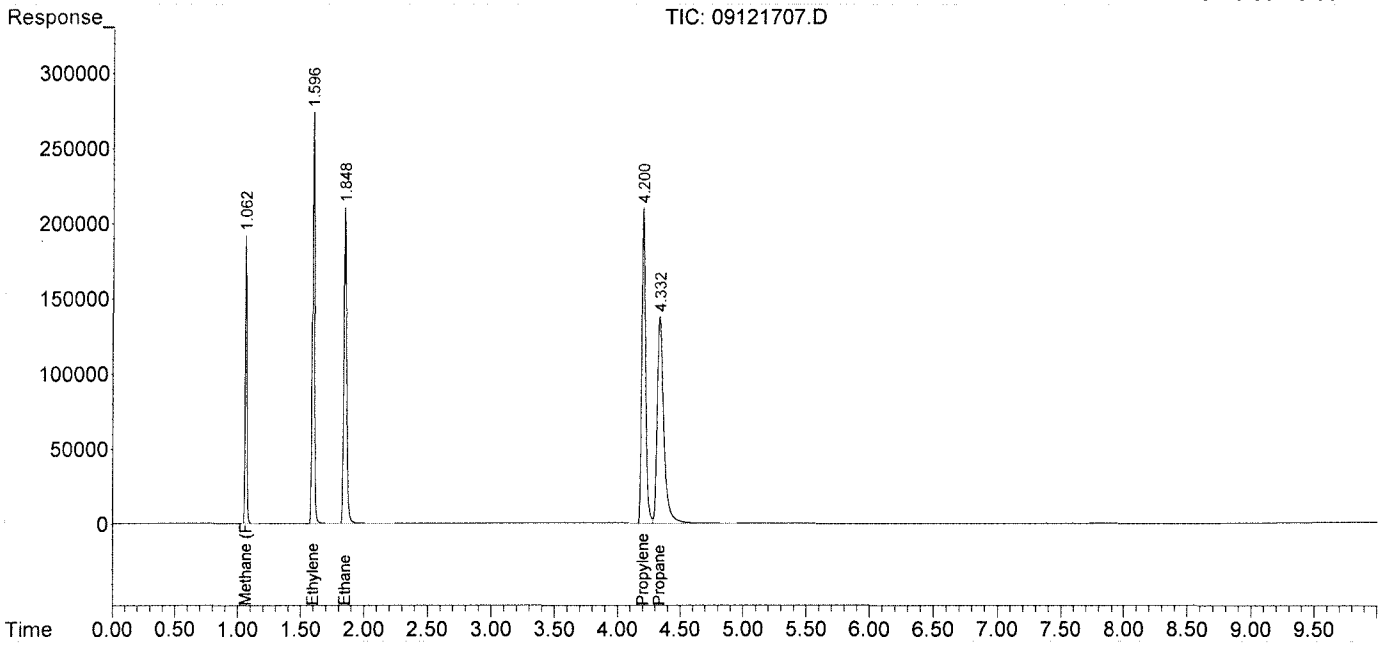
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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

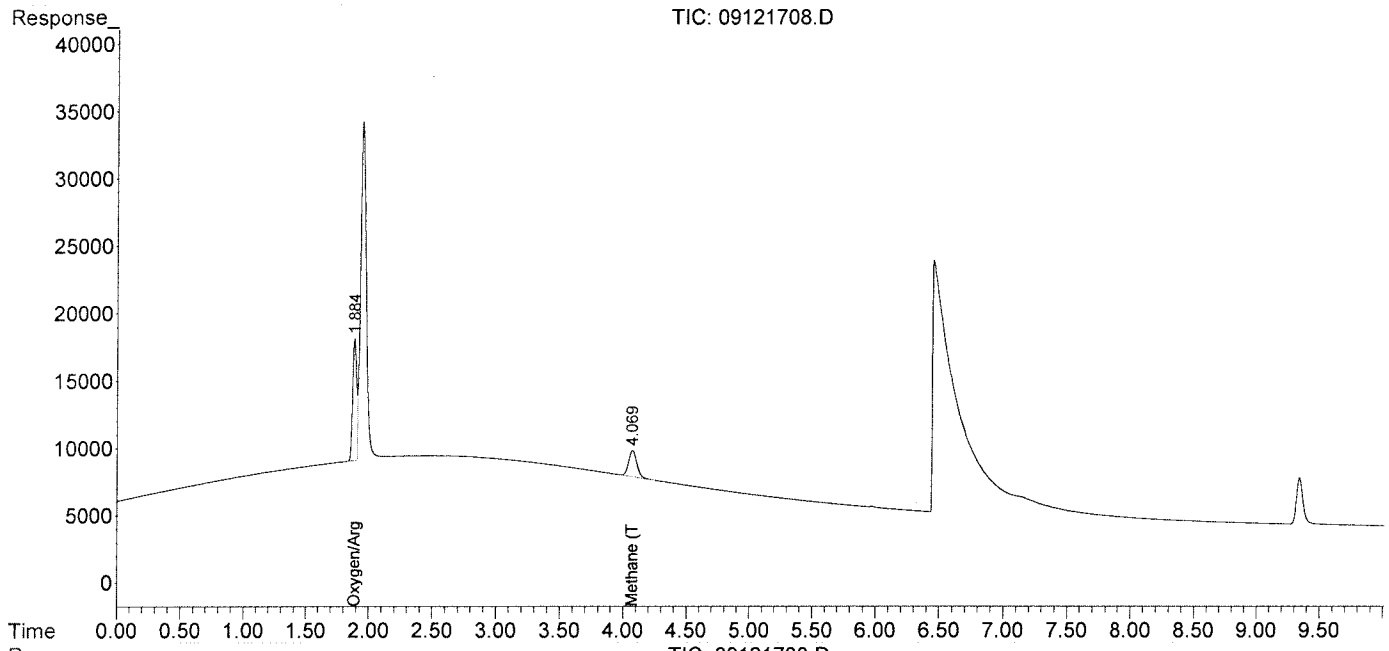
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.884	196022	0.124	ppm
2)	Carbon monoxide	1.884	196022	N.D.	ppm
3)	Methane (TCD)	4.070f	88282	782.730	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.044	5189849	539.759	ppm
7)	Ethylene	1.573	10007759	590.286	ppm
8)	Ethane	1.822	10048964	583.213	ppm
9)	Propylene	4.160	13569343	562.612	ppm
10)	Propane	4.300	15251326	615.171	ppm
11)	Isobutylene	6.143	9815	NoCal	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

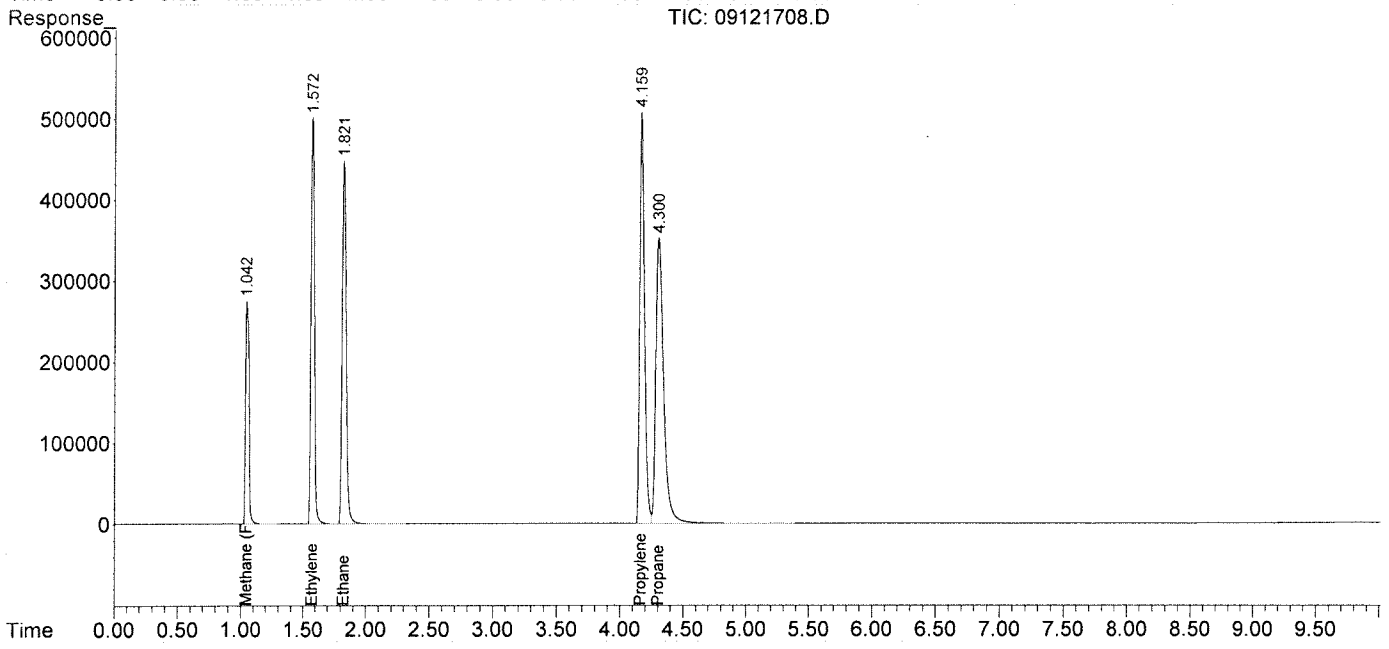
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

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

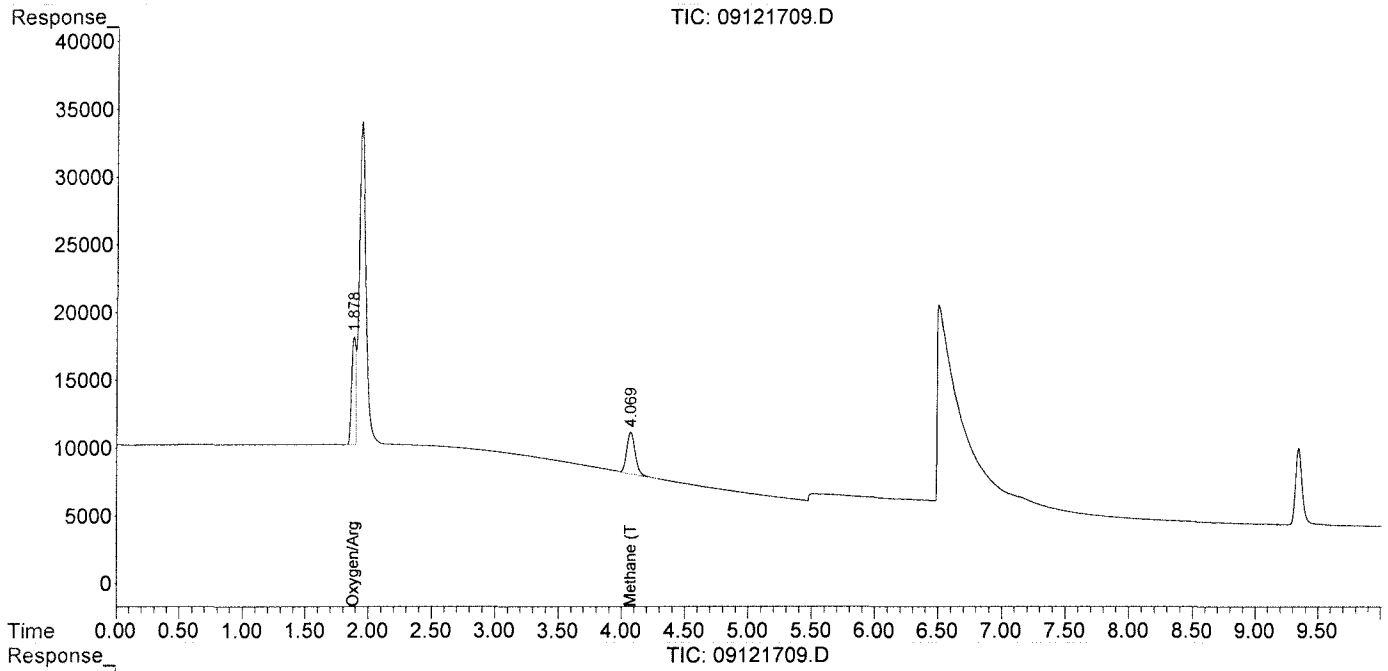
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.879	192611	0.162	ppm
2)	Carbon monoxide	1.879	192611	N.D.	ppm
3)	Methane (TCD)	4.070f	145492	1244.729	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.039	8598534	945.644	ppm
7)	Ethylene	1.576	16608504	981.887	ppm
8)	Ethane	1.827	16709165	973.644	ppm
9)	Propylene	4.161	22494888	941.060	ppm
10)	Propane	4.298	25459411	1023.223	ppm
11)	Isobutylene	6.138	16970	8645.243	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

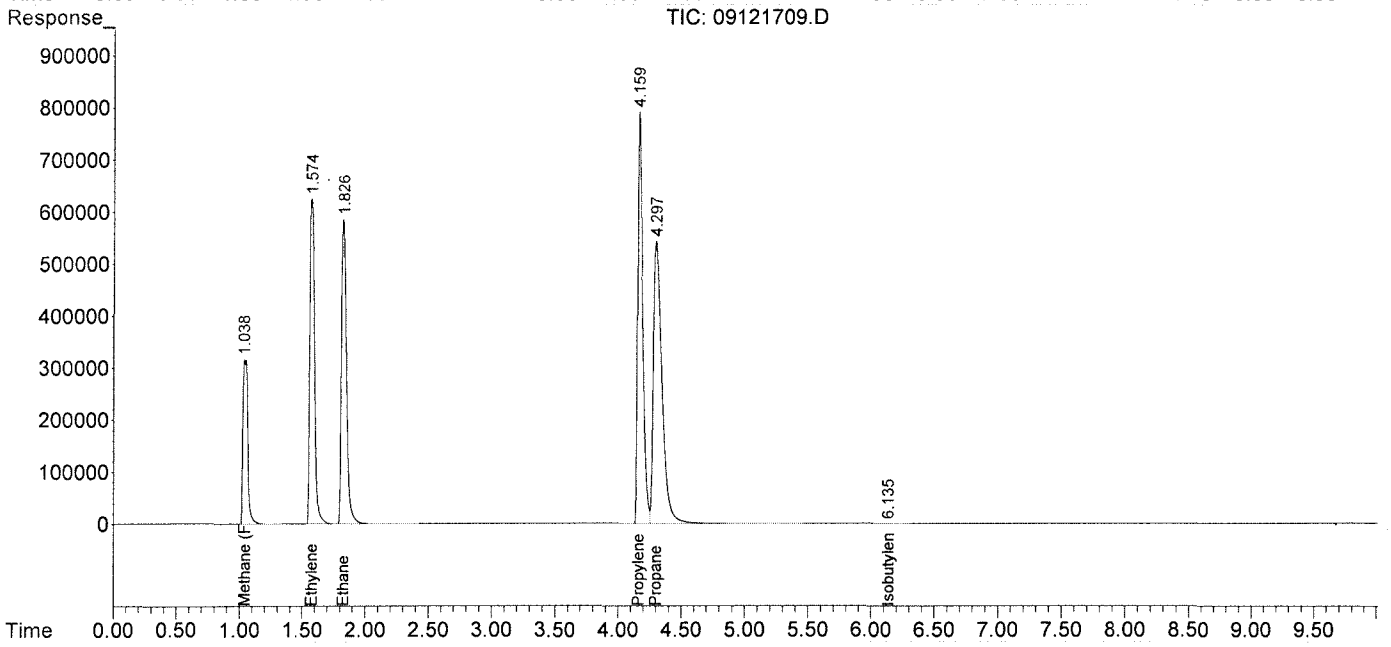
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

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

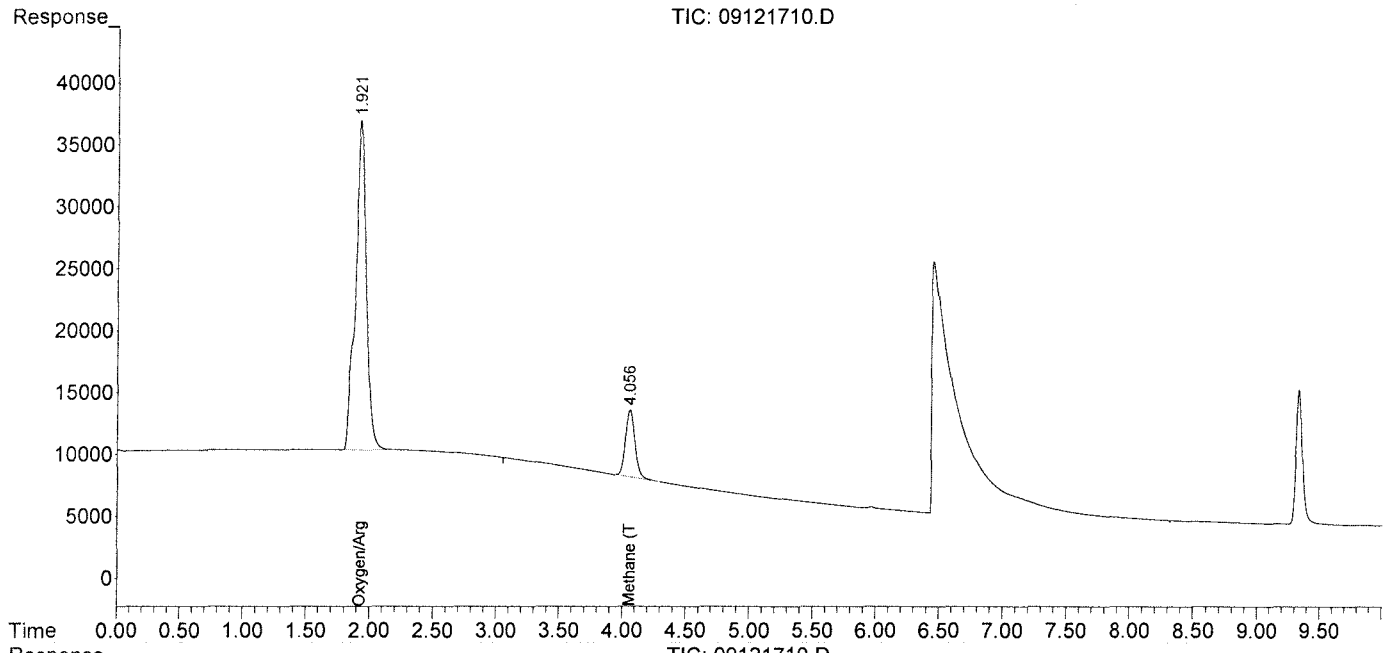
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.922f	1578147	1.659	ppm	
2)	Carbon monoxide	1.922f	1578147	N.D.	ppm	
3)	Methane (TCD)	4.057f	281651	3526.607	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.016	16098209	1763.622	ppm	
7)	Ethylene	1.552	31192444	1848.268	ppm	
8)	Ethane	1.801	31424218	1837.143	ppm	
9)	Propylene	4.129	42124690	1775.341	ppm	m
10)	Propane	4.269	48583085	1946.921	ppm	
11)	Isobutylene	6.136	33832	25613.603	ppm	
12)	Isobutane	6.576f	3845	0.120	ppm	
13)	n-Butane	6.576f	3845	0.120	ppm	

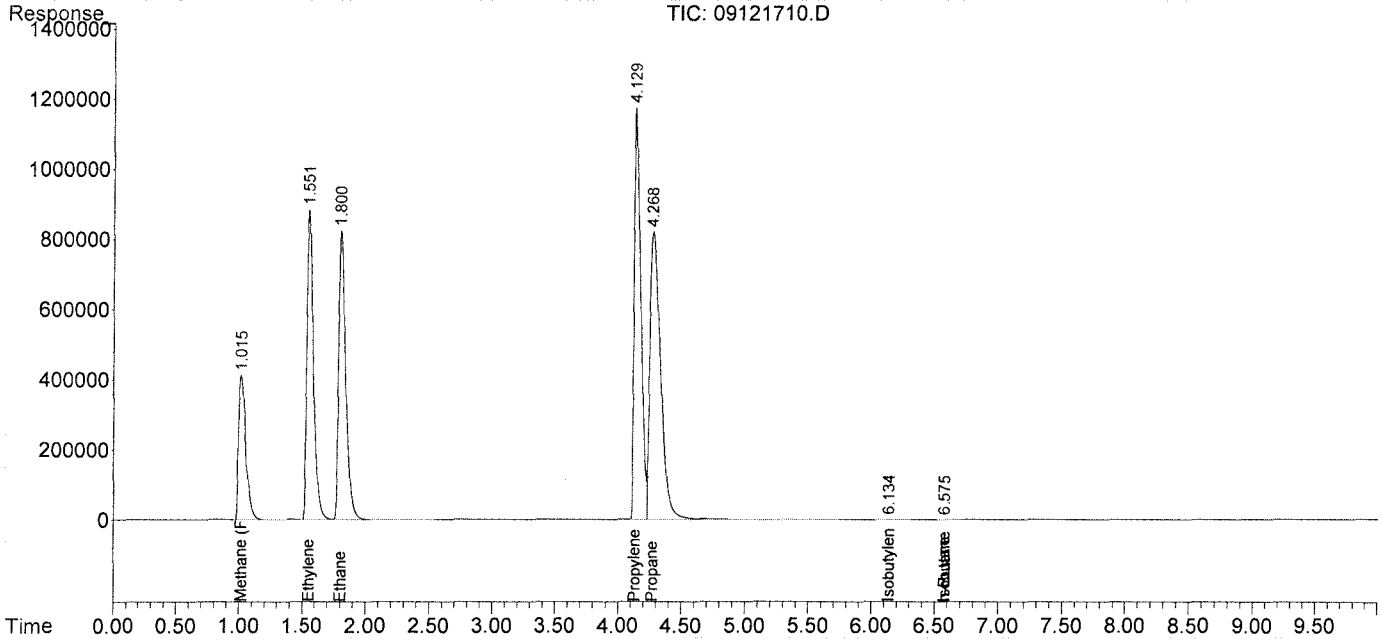
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

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

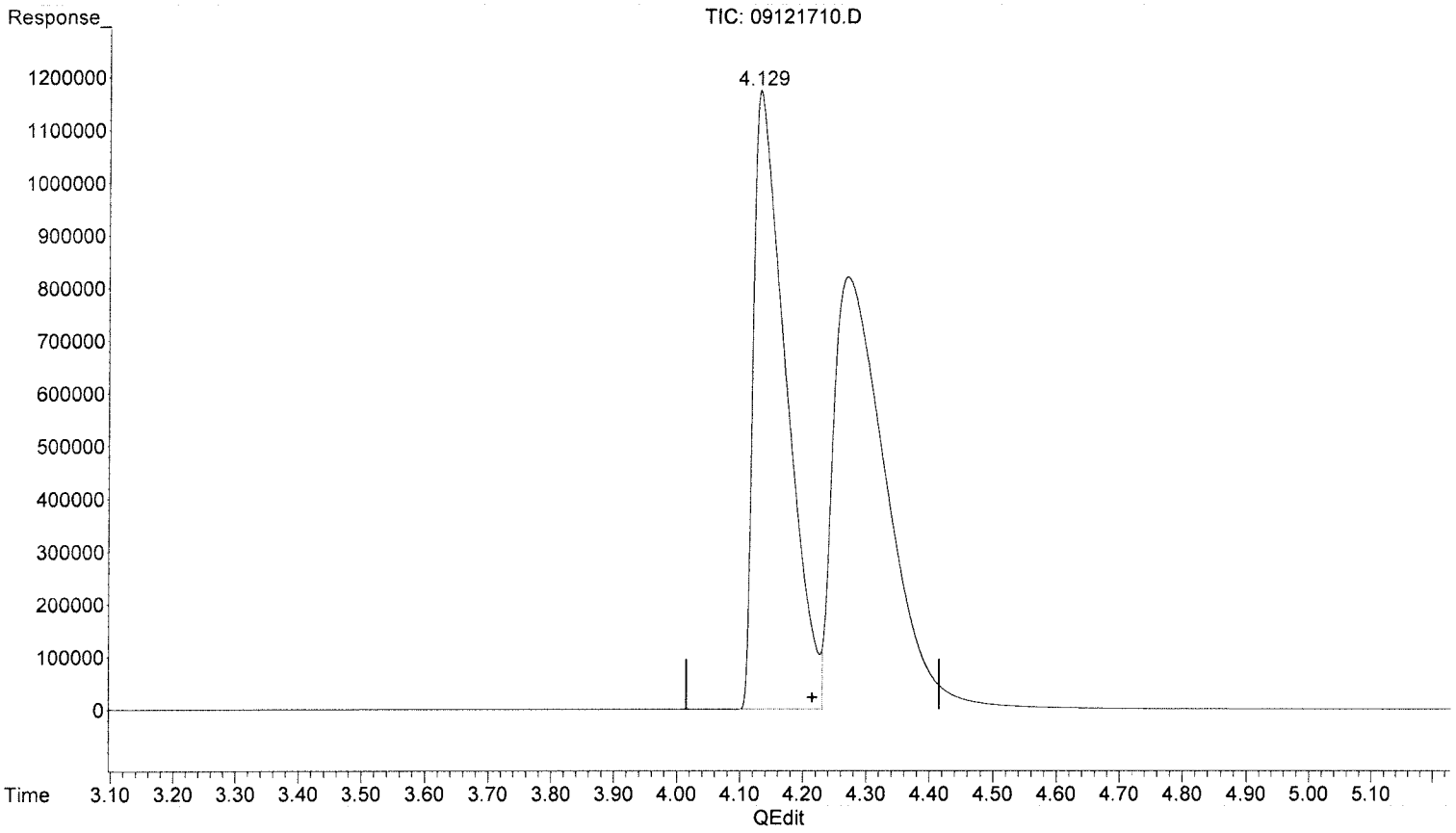




Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

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



(9) Propylene

4.129min 1775.341 ppm m

response 42124690

(+) = Expected Retention Time

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

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

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

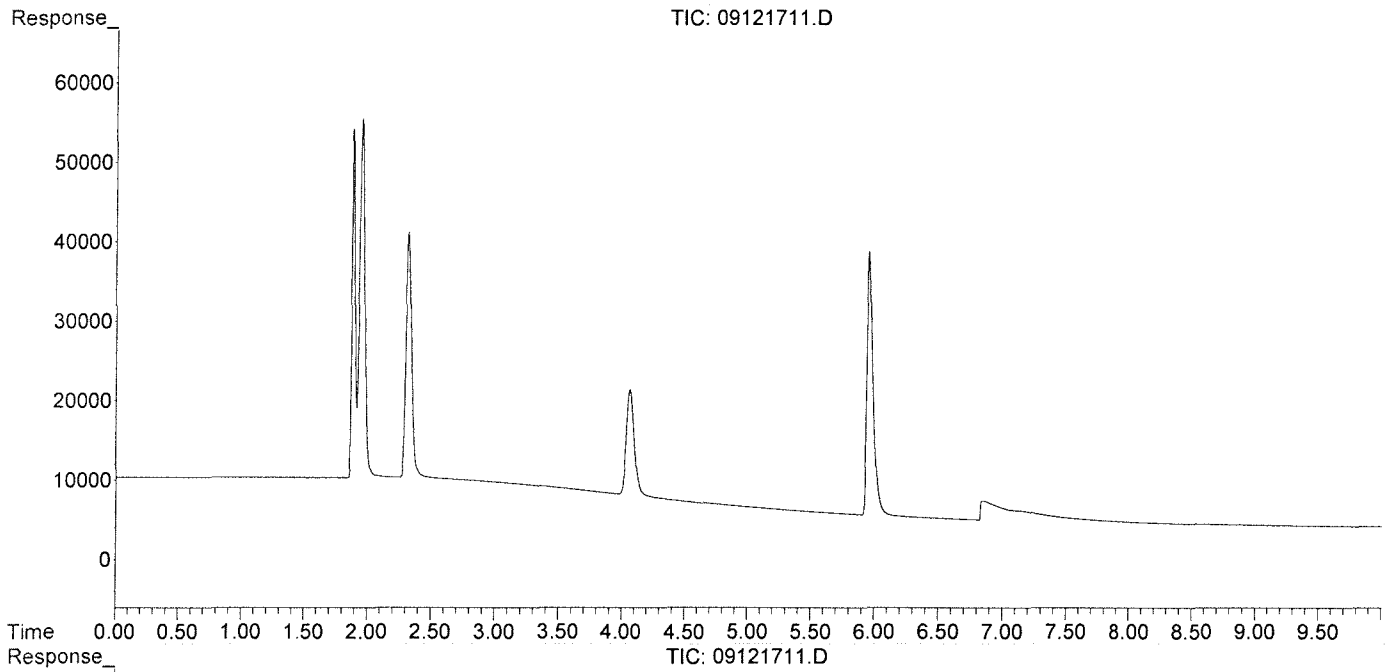
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.059	35776839	3925.122	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

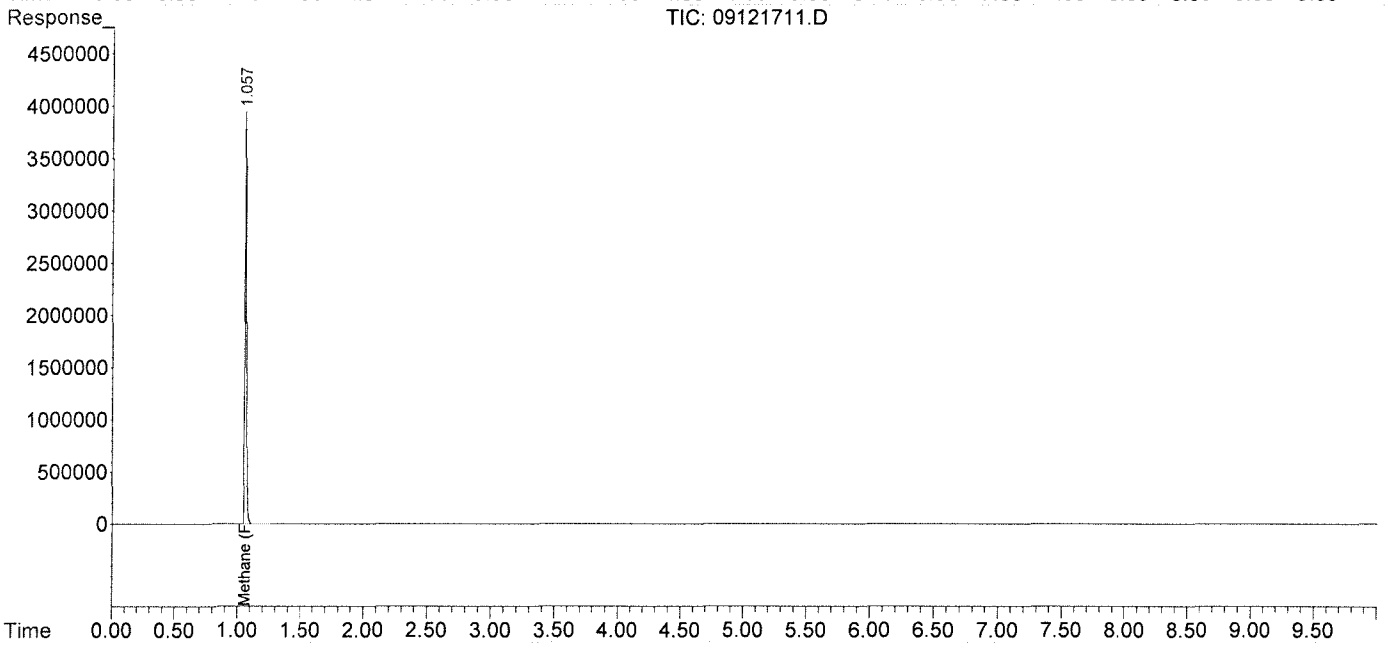
(f)=RT Delta > 1/2 Window (m)=manual int.

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

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

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





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

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

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

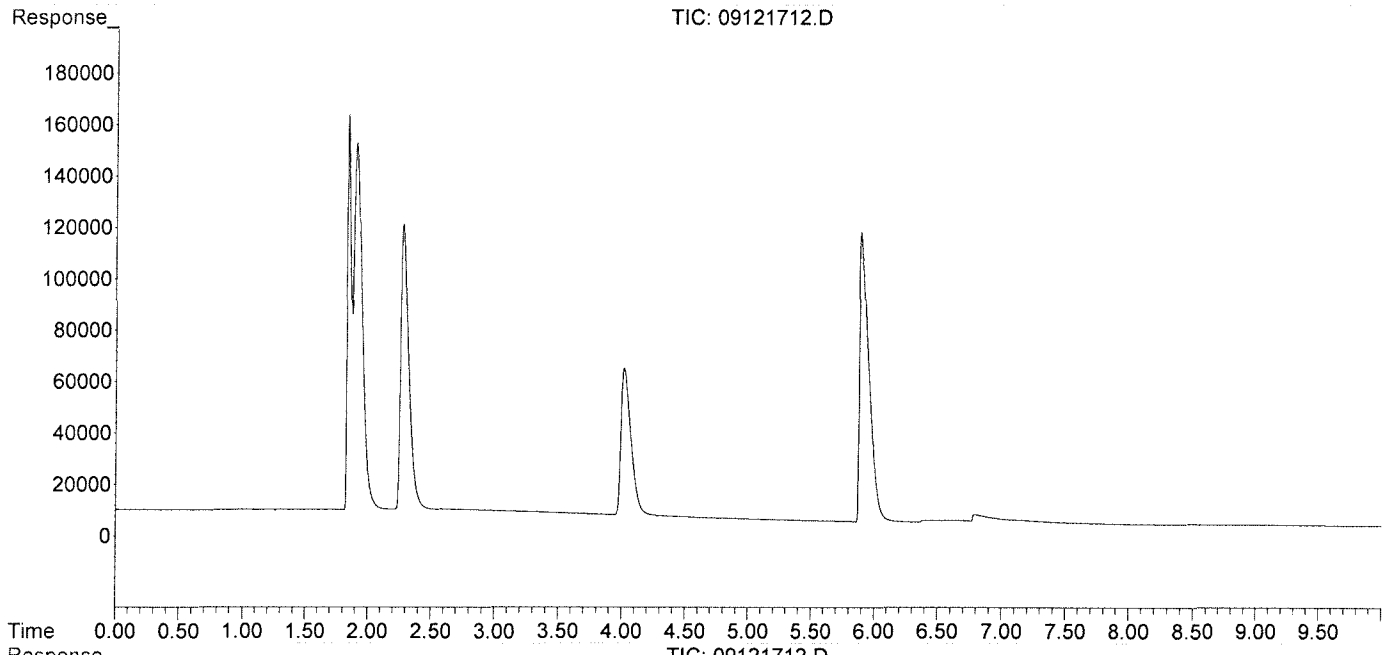
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.836	3190788	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.034	169009160	18492.064	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000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

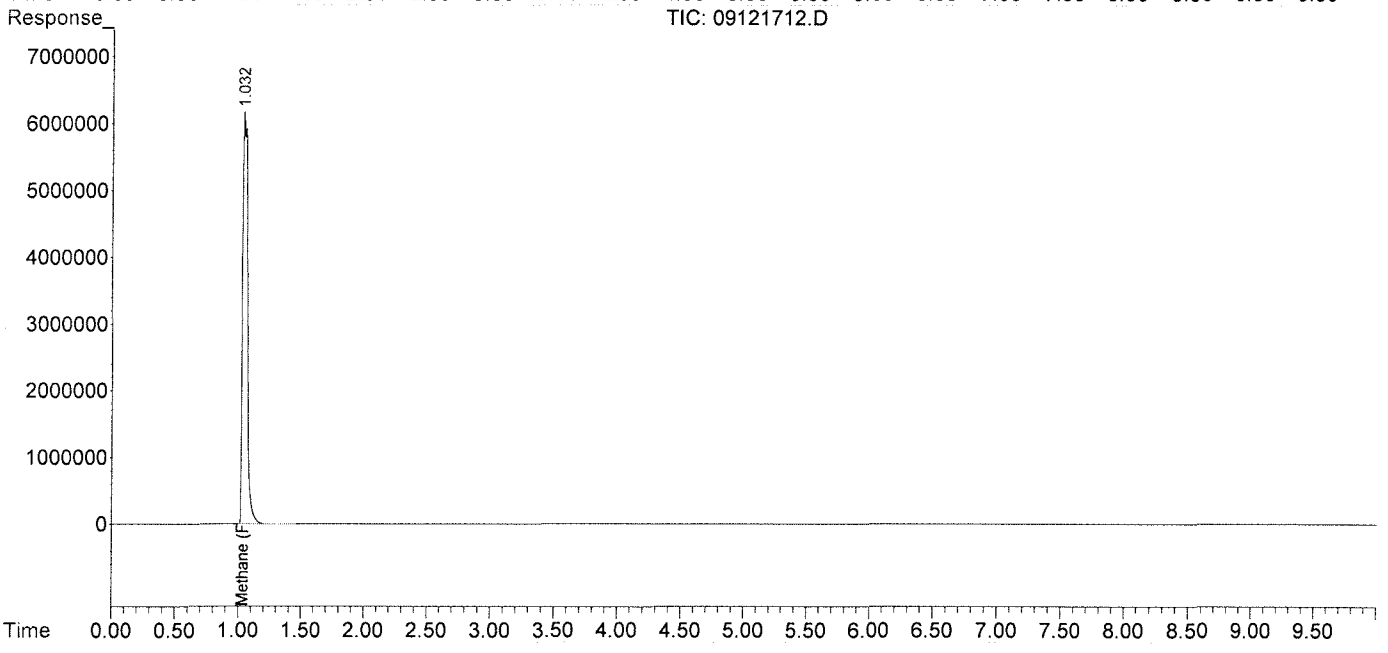
(f)=RT Delta > 1/2 Window (m)=manual int.

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

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

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





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

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

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

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

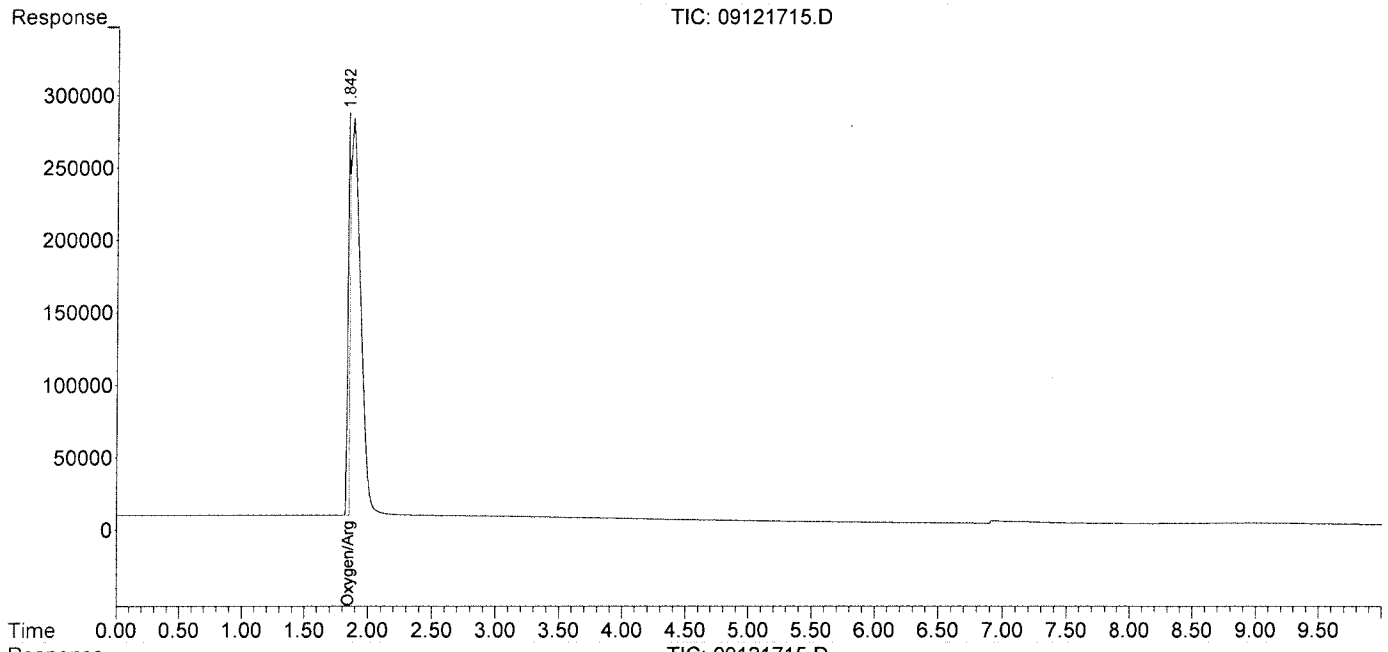
(f)=RT Delta > 1/2 Window (m)=manual int.

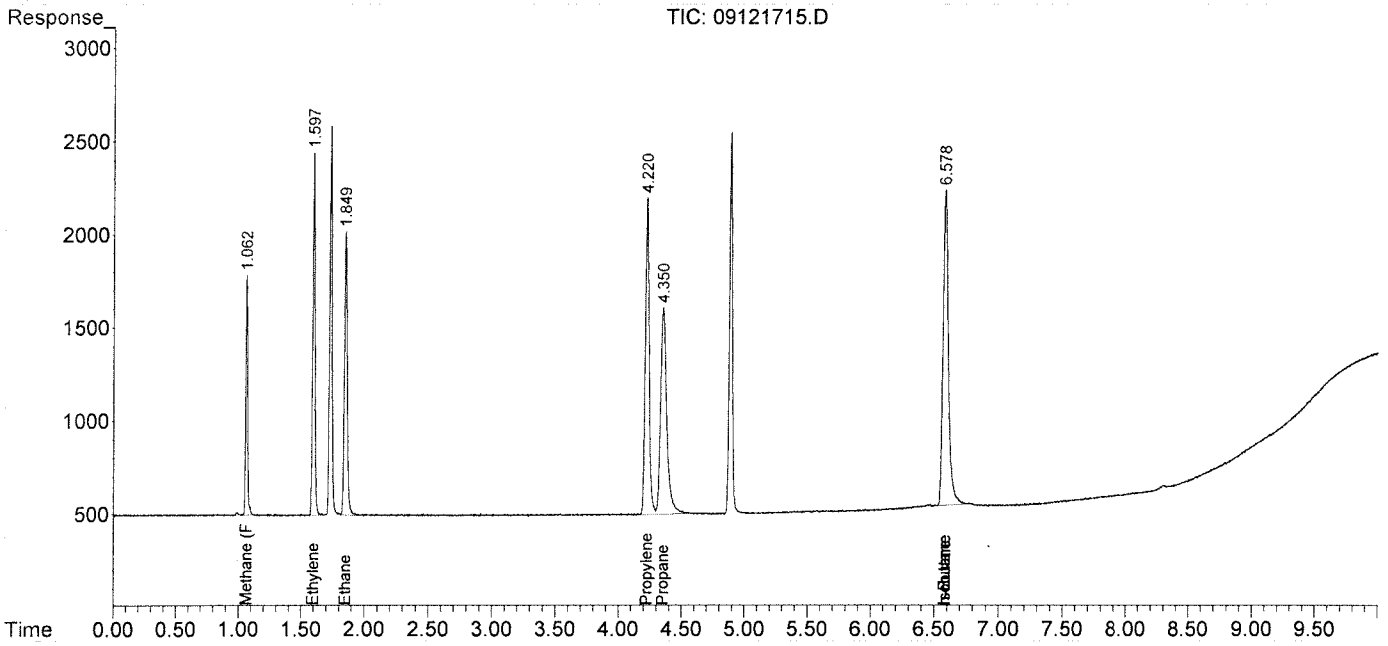
9/14/17

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

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

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





Dissolved Gases by RSK175

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Laboratory Group
Service Request: P2006524
Sample Vol. (ml) : 32.00 ml
Analyst : WH
Date Analysis : 11/20/20
Head Space Vol.(ml) : 8.00 ml
Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Methane	Ethylene	Ethane
STD S32-05221901	0.100	92.789	98.707	98.000
ACTUAL		101.50	100.90	101.40
%Difference		8.6%	2.2%	3.4%
mcs 0.1ml	0.100	0.000	0.000	0.000
RB	0.100	0.097	0.000	0.000
lcs 0.1mL	0.100	1.520	1.178	1.359
lcsd 0.1mL	0.100	1.505	1.176	1.334
P2006524-001 0.1ml	0.100	0.000	0.000	0.000
P2006524-002 0.1ml	0.100	0.000	0.000	0.000
P2006524-003 0.1ml	0.100	0.213	0.000	0.000
P2006524-003ms 0.1ml	0.100	62.811	55.081	63.934
P2006524-003msd 0.1ml	0.100	62.811	56.589	64.413
STD S32-05221901		90.028	95.689	95.155
ACTUAL		101.50	100.90	101.40
%Difference		11.3%	5.2%	6.2%

FINAL HEAD SPACE RESULT (ppm)

	Methane	Ethylene	Ethane
WWt.	16.04	28.05	30.07
HENRY'S CONSTANT	3.76E+04	1.02E+04	2.63E+04
RL	1.30	1.00	0.60
mcs 0.1ml	0.000	0.000	0.000
lcs 0.1mL	15.200	11.780	13.590
lcsd 0.1mL	15.050	11.760	13.340
P2006524-001 0.1ml	0.000	0.000	0.000
P2006524-002 0.1ml	0.000	0.000	0.000
P2006524-003 0.1ml	2.130	0.000	0.000
P2006524-003ms 0.1ml	628.110	550.810	639.340
P2006524-003msd 0.1ml	628.110	565.890	644.130

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 11:36
Operator : WH
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

CB 11/23/20

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 11:55:46 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

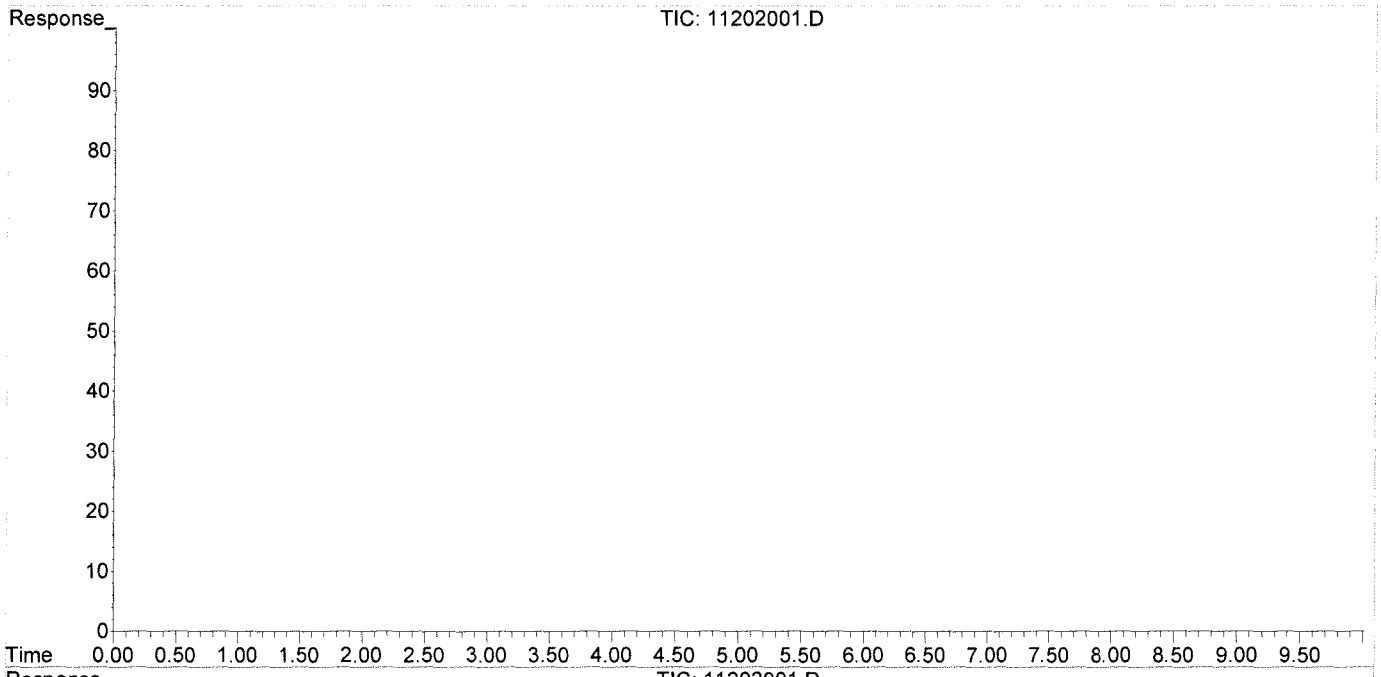
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.118	841658	92.789	ppm
7)	Ethylene	1.688	1651788	98.707	ppm
8)	Ethane	1.952	1661125	98.000	ppm
9)	Propylene	4.324	2428322	103.635	ppm
10)	Propane	4.445	2496408	100.337	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

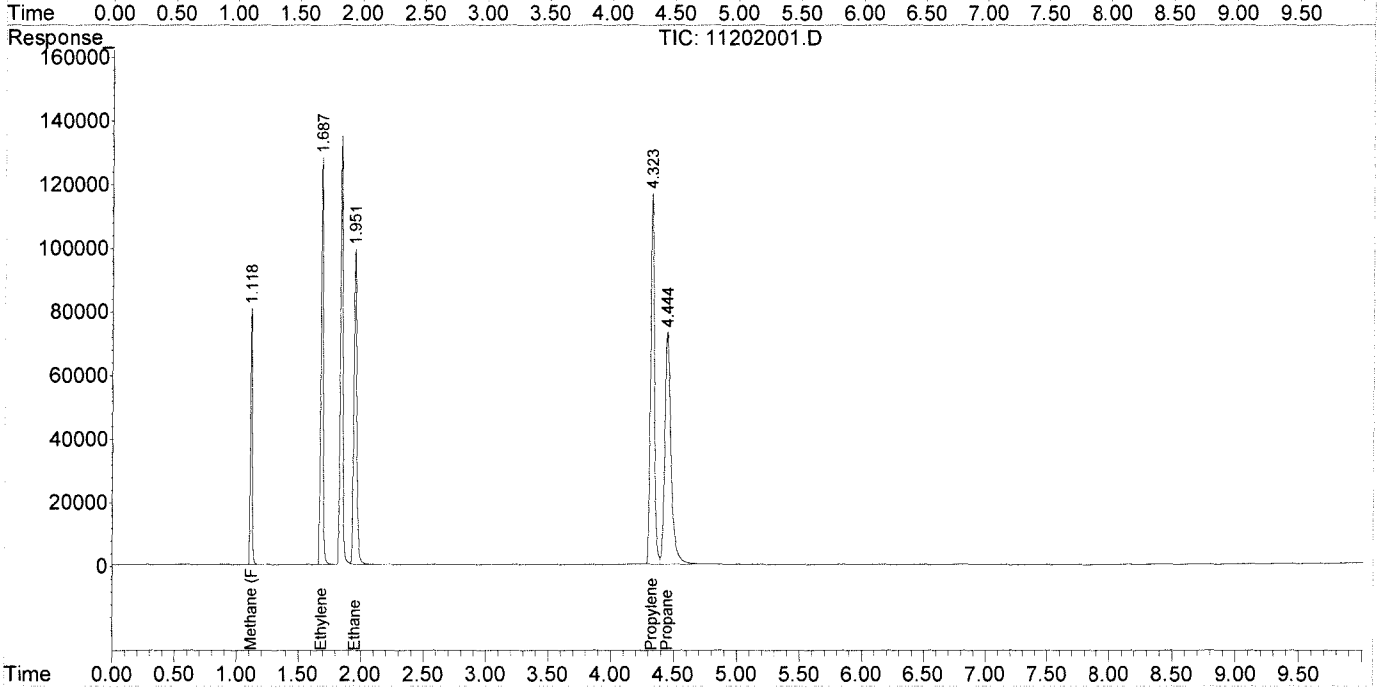
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202001.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 11:36
Operator : WH
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 11:55:46 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202012.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 14:35
Operator : WH
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 14:47:19 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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

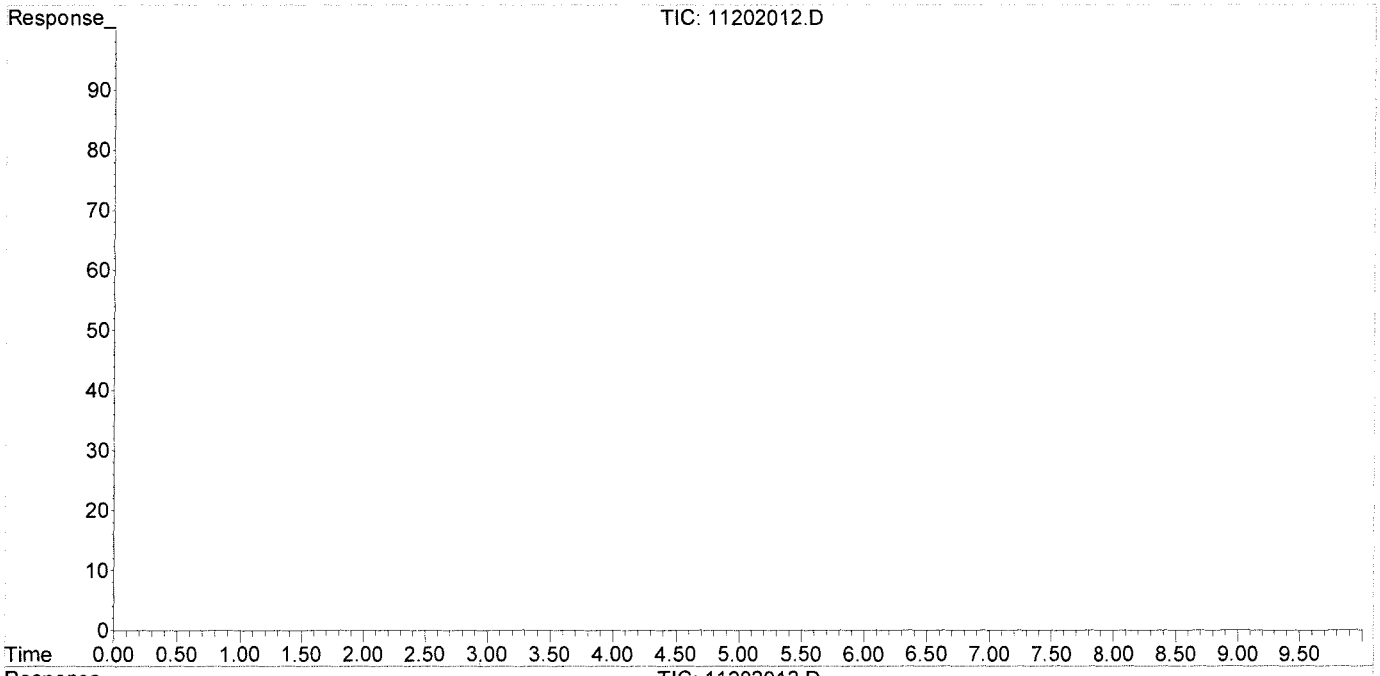
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.118	816609	90.028	ppm
7)	Ethylene	1.691	1601297	95.689	ppm
8)	Ethane	1.956	1612898	95.155	ppm
9)	Propylene	4.329	2347091	100.168	ppm
10)	Propane	4.450	2419714	97.255	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

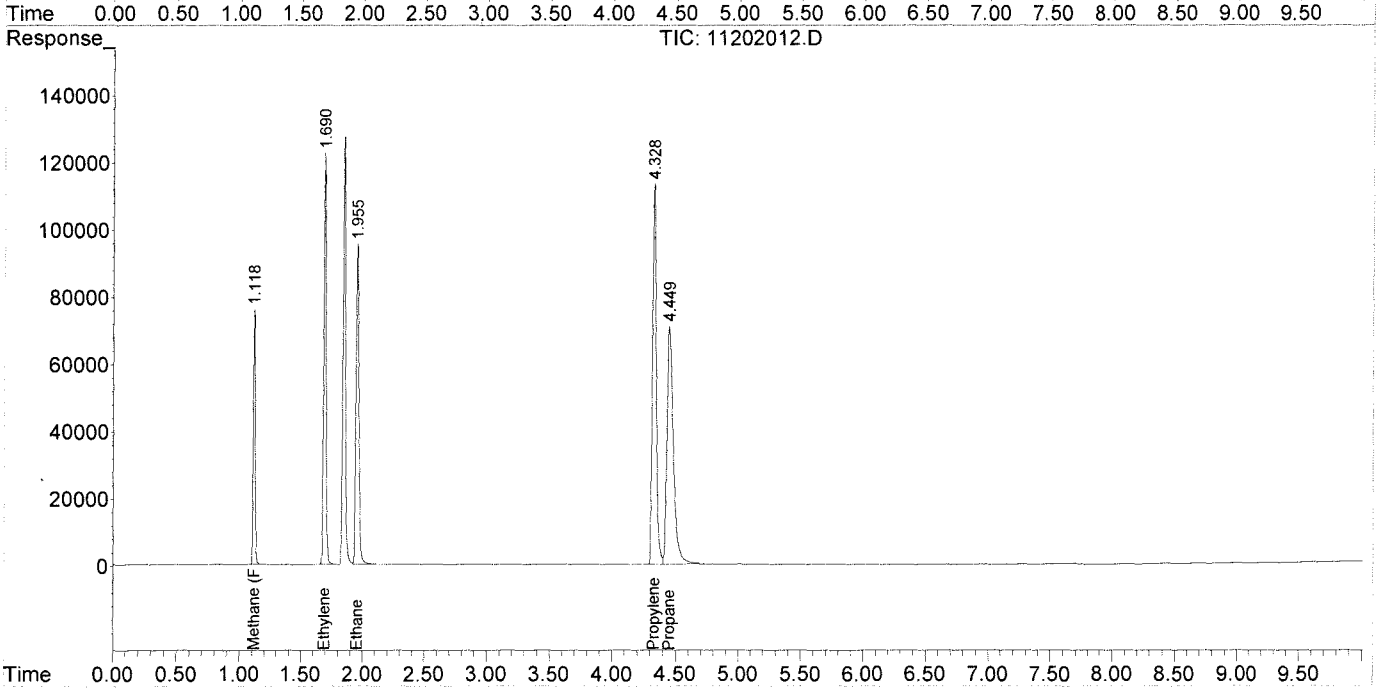
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2020_11\20\
Data File : 11202012.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 20-Nov-2020, 14:35
Operator : WH
Sample : STD S32-05221901
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Nov 20 14:47:19 2020
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

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





Injection Log

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

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

Injection Log

Directory: I:\GC10\DATA\RSK_FID\2020_11\20\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	20-Nov-20, 11:36:04	11202001.D	STD S32-05221901		WH	RSKBOTH.M	pass
2	20-Nov-20, 12:01:14	11202002.D	RB		WH	RSKBOTH.M	pass
3	20-Nov-20, 12:20:42	11202003.D	K2010568-001		WH	RSKBOTH.M	
4	20-Nov-20, 12:33:33	11202004.D	mcs 0.1ml		WH	RSKBOTH.M	pass
5	20-Nov-20, 12:47:36	11202005.D	P2006524-001 0.1ml		WH	RSKBOTH.M	
6	20-Nov-20, 13:01:47	11202006.D	P2006524-002 0.1ml		WH	RSKBOTH.M	
7	20-Nov-20, 13:16:34	11202007.D	P2006524-003 0.1ml		WH	RSKBOTH.M	
8	20-Nov-20, 13:29:36	11202008.D	P2006524-003ms 0.1ml		WH	RSKBOTH.M	
9	20-Nov-20, 13:46:54	11202009.D	P2006524-003msd 0.1ml		WH	RSKBOTH.M	
10	20-Nov-20, 14:00:50	11202010.D	lcs 0.1mL		WH	RSKBOTH.M	pass
11	20-Nov-20, 14:19:18	11202011.D	lcsd 0.1mL		WH	RSKBOTH.M	pass
12	20-Nov-20, 14:35:24	11202012.D	STD S32-05221901		WH	RSKBOTH.M	pass

HS20110674 ALS Kelso Report K2010645_ Tier IV

ALS WO# HS20110674

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November 30, 2020

Analytical Report for Service Request No: K2010645

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

RE: HS20110674

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 17, 2020
For your reference, these analyses have been assigned our service request number **K2010645.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20110674
Sample Matrix: Ground Water

Service Request: K2010645
Date Received: 11/17/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Three ground water samples were received for analysis at ALS Environmental on 11/17/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 11/30/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
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K2010645

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:** **15161**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110674
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110674-01**	**35BWW08-201111**	**Groundwater**	**11 Nov 2020 07:10**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			30 Nov 2020
2.	**HS20110674-02**	**35BWW08-201111-FD**	**Groundwater**	**11 Nov 2020 07:10**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			30 Nov 2020
3.	**HS20110674-03**	**35BWW12-201111**	**Groundwater**	**11 Nov 2020 08:05**
	TOC: Provide Level II & DOD Level IV/EQuIS APTIM EDD			30 Nov 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.
HS20110674-03 = MS/MSD

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 11/16/2020 1800

Received By: _____ Date/Time: 11/17/2020 1000

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

PM KL

Cooler Receipt and Preservation Form

Client ALS HOUSTON Service Request K20 10645

Received: NOV 17 2020 Opened: NOV 17 2020 By: CG Unloaded: NOV 17 2020 By: CG

1. Samples were received via? *USPS* ~~*Fed Ex*~~ *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N
4. Was a Temperature Blank present in cooler? NA (Y) N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
0.6	—	IR01	15161	—	—	1891 8882 8460	

6. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
13. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
14. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

General Chemistry

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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2010645
Project:	HS20110674	**Date Collected:**	11/11/20
Sample Matrix:	Ground Water	**Date Received:**	11/17/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
35BWW08-201111	K2010645-001	**0.99**	0.50	0.20	0.07	1	11/19/20 17:48	
35BWW08-201111-FD	K2010645-002	**0.74**	0.50	0.20	0.07	1	11/19/20 17:48	
35BWW12-201111	K2010645-003	**0.93**	0.50	0.20	0.07	1	11/19/20 17:48	
Method Blank	K2010645-MB	ND U	0.50	0.20	0.07	1	11/19/20 17:48	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010645
Project	HS20110674	**Date Collected:**	11/11/20
Sample Matrix:	Ground Water	**Date Received:**	11/17/20
		Date Analyzed:	11/19/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	35BWW12-201111	**Units:**	mg/L
Lab Code:	K2010645-003	**Basis:**	NA

Analyte Name	Analysis Method	LOQ	LOD	MDL	Sample Result	Duplicate Sample K2010645-003DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic	SM 5310 C	0.50	0.20	0.07	0.93	0.83	0.882	11 #	10

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

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010645
Project:	HS20110674	**Date Collected:**	11/11/20
Sample Matrix:	Ground Water	**Date Received:**	11/17/20
		Date Analyzed:	11/19/20
		Date Extracted:	NA

Matrix Spike Summary
Carbon, Total Organic

Sample Name:	35BWW12-201111	**Units:**	mg/L
Lab Code:	K2010645-003	**Basis:**	NA
Analysis Method:	SM 5310 C		
Prep Method:	None		

Matrix Spike
K2010645-003MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic	0.93	27.3	25.0	106	83-117

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010645
Project:	HS20110674	**Date Analyzed:**	11/19/20
Sample Matrix:	Ground Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	704227

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2010645-LCS	24.3	25.0	97	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2010645
Project: HS20110674

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	704227	KQ2018410-01	11/19/20 17:48	25.0	25.2	101	90-110
CCV2	704227	KQ2018410-02	11/19/20 17:48	25.0	25.1	100	90-110
CCV3	704227	KQ2018410-03	11/19/20 17:48	25.0	25.0	100	90-110
CCV4	704227	KQ2018410-04	11/19/20 17:48	25.0	24.8	99	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2010645
Project: HS20110674

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	704227	KQ2018410-05	11/19/20 17:48	0.50	0.20	0.07	ND	U
CCB2	704227	KQ2018410-06	11/19/20 17:48	0.50	0.20	0.07	ND	U
CCB3	704227	KQ2018410-07	11/19/20 17:48	0.50	0.20	0.07	ND	U
CCB4	704227	KQ2018410-08	11/19/20 17:48	0.50	0.20	0.07	ND	U

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2010645
Project:	HS20110674	**Date Collected:**	11/11/20
Sample Matrix:	Ground Water	**Date Received:**	11/17/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
35BWW08-201111	K2010645-001	**0.99**	0.50	0.20	0.07	1	11/19/20 17:48	
35BWW08-201111-FD	K2010645-002	**0.74**	0.50	0.20	0.07	1	11/19/20 17:48	
35BWW12-201111	K2010645-003	**0.93**	0.50	0.20	0.07	1	11/19/20 17:48	
Method Blank	K2010645-MB	ND U	0.50	0.20	0.07	1	11/19/20 17:48	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010645
Project	HS20110674	**Date Collected:**	11/11/20
Sample Matrix:	Ground Water	**Date Received:**	11/17/20
		Date Analyzed:	11/19/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	35BWW12-201111	**Units:**	mg/L
Lab Code:	K2010645-003	**Basis:**	NA

Analyte Name	Analysis Method	LOQ	LOD	MDL	Sample Result	Duplicate Sample K2010645-003DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic	SM 5310 C	0.50	0.20	0.07	0.93	0.83	0.882	11 #	10

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

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010645
Project:	HS20110674	**Date Collected:**	11/11/20
Sample Matrix:	Ground Water	**Date Received:**	11/17/20
		Date Analyzed:	11/19/20
		Date Extracted:	NA

Matrix Spike Summary
Carbon, Total Organic

Sample Name:	35BWW12-201111	**Units:**	mg/L
Lab Code:	K2010645-003	**Basis:**	NA
Analysis Method:	SM 5310 C		
Prep Method:	None		

Matrix Spike
K2010645-003MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic	0.93	27.3	25.0	106	83-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Work Request # Original ( ) K2010450, 10465, 10479, 10529, 10530, 10552, 10553, 10645, 10682

Tier: I I II IV IV II II W II

Date Analyzed: 11/19/20

Analyst: MAS Run # 704227

Analysis: SM 5310 C/TOCT

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

-RSD was high between parent & dup. Results were less than 5x MRL.

Final Approved by: JC Date: 11/20/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MSPECHT **Analysis Lot:** 704227 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2010450-001	Carbon, Total Organic	N/A		Ground Water	8.81 mg/L	10 mL	8.81 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	I
K2010450-002	Carbon, Total Organic	N/A		Ground Water	15.51 mg/L	10 mL	15.5 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	I
K2010450-003	Carbon, Total Organic	N/A		Ground Water	21.72 mg/L	10 mL	21.7 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	I
K2010450-004	Carbon, Total Organic	N/A		Ground Water	24.00 mg/L	10 mL	24.0 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	I
K2010450-005	Carbon, Total Organic	N/A		Ground Water	7.75 mg/L	10 mL	7.75 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	I
K2010465-002	Carbon, Total Organic	N/A		Water	26.09 mg/L	10 mL	26.1 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	I
K2010479-001	Carbon, Total Organic	N/A		Ground Water	0.73 mg/L	10 mL	0.73 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	II
K2010479-002	Carbon, Total Organic	N/A		Ground Water	0.33 mg/L	10 mL	0.33 mg/L J	1	0.07	0.50			11/19/20 17:48:00	N	II
K2010529-001	Carbon, Total Organic	N/A		Water	1.25 mg/L	10 mL	1.25 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010530-001	Carbon, Total Organic	N/A		Ground Water	0.51 mg/L	10 mL	0.51 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010530-002	Carbon, Total Organic	N/A		Ground Water	0.76 mg/L	10 mL	0.76 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010530-003	Carbon, Total Organic	N/A		Ground Water	0.52 mg/L	10 mL	0.52 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010530-004	Carbon, Total Organic	N/A		Ground Water	1.13 mg/L	10 mL	1.13 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010552-001	Carbon, Total Organic	N/A		Water	0.13 mg/L	10 mL	0.13 mg/L J	1	0.07	0.50			11/19/20 17:48:00	N	II
K2010553-001	Carbon, Total Organic	N/A		Water	0.06 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/19/20 17:48:00	N	II
K2010645-001	Carbon, Total Organic	N/A		Ground Water	0.99 mg/L	10 mL	0.99 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010645-002	Carbon, Total Organic	N/A		Ground Water	0.74 mg/L	10 mL	0.74 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	IV
K2010645-003	Carbon, Total Organic	N/A		Ground Water	0.93 mg/L	10 mL	0.93 mg/L	1	0.07	0.50			11/19/20 17:48:00	Y	IV
K2010682-001	Carbon, Total Organic	N/A		Water	2.70 mg/L	10 mL	2.70 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	II
K2010682-002	Carbon, Total Organic	N/A		Water	1.64 mg/L	10 mL	1.64 mg/L	1	0.07	0.50			11/19/20 17:48:00	N	II
KQ2018410-01	Carbon, Total Organic	CCV		Ground Water	25.20 mg/L	10 mL	25.2 mg/L	1					11/19/20 17:48:00	N	I
KQ2018410-02	Carbon, Total Organic	CCV		Ground Water	25.09 mg/L	10 mL	25.1 mg/L	1					11/19/20 17:48:00	N	I
KQ2018410-03	Carbon, Total Organic	CCV		Ground Water	25.00 mg/L	10 mL	25.0 mg/L	1					11/19/20 17:48:00	N	I
KQ2018410-04	Carbon, Total Organic	CCV		Ground Water	24.83 mg/L	10 mL	24.8 mg/L	1					11/19/20 17:48:00	N	I
KQ2018410-05	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/19/20 17:48:00	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MSPECHT **Analysis Lot:** 704227 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2018410-06	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/19/20 17:48:00	N	I
KQ2018410-07	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/19/20 17:48:00	N	I
KQ2018410-08	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/19/20 17:48:00	N	I
KQ2018410-09	Carbon, Total Organic	MB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/19/20 17:48:00	N	I
KQ2018410-10	Carbon, Total Organic	LCS		Ground Water	24.30 mg/L	10 mL	24.3 mg/L	1	0.07	0.50	97		11/19/20 17:48:00	N	I
KQ2018410-11	Carbon, Total Organic	MS	K2010645-003	Ground Water	27.33 mg/L	10 mL	27.3 mg/L	1	0.07	0.50	106		11/19/20 17:48:00	N	IV
KQ2018410-12	Carbon, Total Organic	DUP	K2010645-003	Ground Water	0.83 mg/L	10 mL	0.83 mg/L	1	0.07	0.50		11*	11/19/20 17:48:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS Kelso Critical Consumables Evaluation

This is a new lot and requires pre-testing before use on samples.

Department: General Chemistry

☒ New Lot/Pre-Testing ☐ New Vendor Pre-Testing

☐ Acetic Acid

Date Received: 11/9/2020 **Date Delivered to Lab**: 11/9/2020

Department	Critical Consumable	Vendor	Lot Number	Part Number
EN-40	250ml AOX	Systems Plus	Bottle - 72862 Acid - 20200414 34	GL250A/PCP26/L16US-A
EN-40				
EN-40				

Analysis - To be completed by Lab

Analysis	Critical Consumable	Test Date	Initials	Contamination Blank <½ MRL Y/N	LCS Pass Y/N
AOX 1650C	250ml Amber	11.19.20	ES	Y	Y

☒ This consumable product/ Lot Number has been tested and **acceptable** for the following analysis:

☐ Describe or reference the failure: Run # 703914

Routing and filing instructions **for passing** evaluations:

☐ Lab – Scan the raw data.

☐ Lab – Forward this form and scanned raw data to QA representative via email.

☐ QA – Update spreadsheet (G:\QA\Critical Consumables\Critical Consumables Eval Spreadsheet) with Pass/Fail and relevant information.

Schedule: 11192020

Version: 1
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/11/19 17:48 - Thursday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2010529-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2010530-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2010530-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2010530-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2010530-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2010450-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2010450-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
10	Sample	K2010450-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2010450-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2010450-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2010465-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2010479-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2010479-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2010552-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2010553-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2010645-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2010645-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	K2010645-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2010645-003 DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2010645-003 MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2010682-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2010682-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
27	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
28	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
29	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
30	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
31	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
32	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
33	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
34	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
35	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
36	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
37	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
38	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready
39	Sample		CAS_salt_010711 (CAS_salt_010711)	2	False	Ready

Schedule: 11192020

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
40	Sample		CAS_salt_010711 (CAS_salt_010711)	1	False	Ready
41	Sample		CAS_salt_010711 (CAS_salt_010711)	1	False	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	False	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	False	Ready
					False	

Fusion Report - 11192020
Thursday, November 19, 2020 05:48 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/11/20 09:50 - Friday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	11192020	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v1)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/11/19 17:48

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	14.80	27.71	12.91	49.65	05:23
2	TC Clean	9.07	21.80	12.73	50.15	04:05
3	TC Clean	1.26	14.00	12.74	50.10	03:48
4	TC Clean	0.79	13.64	12.85	49.99	03:47

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/11/19 18:10

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.46	12.34	12.80	49.63	05:14
2	TC Clean	3.85	16.50	12.65	50.03	04:01
3	TC Clean	0.82	13.63	12.80	50.16	03:51
4	TC Clean	0.28	13.25	12.98	50.22	03:48

Sample Type: Clean From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/11/19 18:32

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.31	12.37	12.68	49.52	05:09
2	TC Clean	3.20	15.94	12.74	50.07	04:04
3	TC Clean	1.05	13.73	12.68	50.23	03:49
4	TC Clean	0.53	13.45	12.92	49.98	03:46

Sample Type: Blank (Creating v1483) From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/11/19 18:54

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.38	12.36	12.74	49.74	05:14
2	TC Clean	3.71	16.63	12.92	50.18	04:04
3	TC Clean	1.09	13.90	12.82	50.08	03:58
4	TC Clean	1.13	13.86	12.72	50.14	03:56
5	Reagent Blank	4.73	17.55	12.81	49.96	05:06
6	Acid Blank	0.01	12.60	12.58	49.71	05:29

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/19 19:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.53	21.29	12.77	50.59	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2029 ppm (PASS)	0.0000 ppm	0%	2020/11/19 19:42

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.2029	252.0290	186.69	199.59	12.91	50.59	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/11/19 19:57

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.47	19.25	12.78	50.63	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/19 20:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.09	19.05	12.96	50.64	10:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.3031 ppm (PASS)	0.0000 ppm	0%	2020/11/19 20:26

Pos	Base Analysis	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time

	Type									
C	TOC	25.0 ppm	1	24.3031	243.0309	180.37	193.39	13.02	50.66	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	2	TOC	ICS	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/19 20:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.43	21.31	12.88	50.69	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	K2010529-001	1.2491 ppm	0.0438 ppm	3.5100%	2020/11/19 20:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2181	12.1808	17.76	30.81	13.05	50.71	10:29
2	TOC	1.2801	12.8009	18.20	31.19	12.99	50.71	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	K2010530-001	0.5093 ppm	0.0323 ppm	6.3300%	2020/11/19 21:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5321	5.3210	12.95	25.72	12.77	50.73	10:27
2	TOC	0.4865	4.8649	12.63	25.52	12.89	50.74	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	5	TOC	K2010530-002	0.7611 ppm	0.0215 ppm	2.8200%	2020/11/19 21:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7763	7.7630	14.66	27.63	12.97	50.73	10:28
2	TOC	0.7459	7.4594	14.45	27.48	13.03	50.77	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC)	CAS_salt_010711	CAS_salt_010711

(v1483) (v4) (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	6	TOC	K2010530-003	0.5170 ppm	0.0954 ppm	18.4400%	2020/11/19 22:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4496	4.4956	12.37	25.47	13.10	50.78	10:29
2	TOC	0.5844	5.8442	13.32	26.39	13.07	50.78	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2010530-004	1.1261 ppm	0.0129 ppm	1.1500%	2020/11/19 22:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.1170	11.1701	17.05	30.13	13.08	50.78	10:24
2	TOC	1.1353	11.3526	17.18	30.16	12.98	50.79	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2010450-001	8.8123 ppm	0.0381 ppm	0.4300%	2020/11/19 23:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.7853	87.8534	70.85	83.98	13.13	50.79	10:26
2	TOC	8.8392	88.3922	71.22	84.33	13.11	50.82	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2010450-002	15.5060 ppm	0.0166 ppm	0.1100%	2020/11/19 23:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	15.4943	154.9427	117.91	131.03	13.12	50.88	10:30
2	TOC	15.5178	155.1779	118.07	131.16	13.09	50.88	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time

◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.0857 ppm (PASS)	0.0000 ppm	0%	2020/11/20 00:12

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.0857	250.8572	185.86	198.87	13.01	50.96	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/11/20 00:26

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.38	19.59	13.21	50.94	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2010450-003	21.7161 ppm	0.1607 ppm	0.7400%	2020/11/20 00:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	21.8297	218.2971	162.35	175.40	13.05	50.93	10:31
2	TOC	21.6025	216.0248	160.76	173.66	12.91	50.94	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2010450-004	24.0028 ppm	0.4076 ppm	1.7000%	2020/11/20 01:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	24.2911	242.9107	179.62	192.71	13.10	50.92	10:30
2	TOC	23.7146	237.1457	175.57	188.58	13.01	50.97	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2010450-005	7.7486 ppm	0.0648 ppm	0.8400%	2020/11/20 01:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.7028	77.0277	63.25	76.37	13.12	50.95	10:29
2	TOC	7.7944	77.9444	63.90	77.12	13.23	50.95	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2010465-002	26.0945 ppm	0.5570 ppm	2.1300%	2020/11/20 02:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	25.7007	257.0065	189.50	202.65	13.14	50.95	10:24
2	TOC	26.4884	264.8841	195.03	208.32	13.29	50.93	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2010479-001	0.7344 ppm	0.3193 ppm	43.4800%	2020/11/20 02:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9602	9.6020	15.95	29.12	13.17	50.95	10:29
2	TOC	0.5086	5.0858	12.79	26.10	13.31	50.92	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2010479-002	0.3289 ppm	0.0017 ppm	0.5200%	2020/11/20 03:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3301	3.3010	11.53	24.55	13.01	50.92	10:31
2	TOC	0.3277	3.2768	11.52	24.62	13.10	50.91	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2010552-001	0.1306 ppm	0.0326 ppm	24.9300%	2020/11/20 03:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1536	1.5362	10.30	23.67	13.38	50.93	10:28

2	TOC	0.1076	1.0757	9.97	23.21	13.24	50.92	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K2010553-001	0.0638 ppm	0.0306 ppm	48.0200%	2020/11/20 03:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0421	0.4214	9.51	22.86	13.35	50.92	10:27
2	TOC	0.0855	0.8548	9.82	22.99	13.17	50.99	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2010645-001	0.9908 ppm	0.0699 ppm	7.0500%	2020/11/20 04:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9414	9.4138	15.82	29.03	13.21	50.97	10:30
2	TOC	1.0402	10.4017	16.52	29.81	13.29	50.95	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2010645-002	0.7427 ppm	0.0446 ppm	6.0000%	2020/11/20 04:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7112	7.1115	14.21	27.55	13.35	50.96	10:28
2	TOC	0.7742	7.7416	14.65	27.83	13.19	50.96	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.9983 ppm (PASS)	0.0000 ppm	0%	2020/11/20 05:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.9983	249.9833	185.25	198.34	13.09	50.98	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/11/20 05:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.12	19.56	13.44	51.01	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/20 05:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	5.75	19.17	13.43	51.03	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	23.9990 ppm (PASS)	0.0000 ppm	0%	2020/11/20 06:06

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.9990	239.9902	178.24	191.47	13.23	51.10	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2010645-003	0.9320 ppm	0.1304 ppm	14.0000%	2020/11/20 06:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0242	10.2420	16.40	29.82	13.41	51.03	10:29
2	TOC	0.8397	8.3974	15.11	28.58	13.47	50.99	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2010645-003 DUP	0.8321 ppm	0.0126 ppm	1.5100%	2020/11/20 06:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8232	8.2320	14.99	28.31	13.31	50.96	10:27
2	TOC	0.8410	8.4102	15.12	28.48	13.36	50.95	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2010645-003 MS	27.3345 ppm	0.2816 ppm	1.0300%	2020/11/20 07:17

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.5336	275.3363	202.36	215.57	13.21	50.89	10:27
2	TOC	27.1353	271.3533	199.57	213.19	13.62	50.88	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	K2010682-001	2.7006 ppm	0.0783 ppm	2.9000%	2020/11/20 07:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.7560	27.5597	28.55	41.99	13.44	50.87	10:27
2	TOC	2.6452	26.4520	27.77	41.09	13.32	50.84	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2010682-002	1.6366 ppm	0.0271 ppm	1.6600%	2020/11/20 08:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6174	16.1738	20.56	33.71	13.14	50.85	10:27

2	TOC	1.6557	16.5572	20.83	33.97	13.14	50.83	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2184 (IC) (v1483)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.8267 ppm (PASS)	0.0000 ppm	0%	2020/11/20 08:41

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.8267	248.2669	184.05	197.19	13.14	50.78	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 1

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/11/20 08:56

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.22	19.26	13.04	50.76	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1482	1.4370	-0.0500	0.0000	0.0000	0.0000	2020/11/18 12:19	Fusion1 (Fusion1)
v1483	1.5777	0.0150	0.0000	0.0000	0.0000	2020/11/19 19:27	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version:	v38	Calibration curve formula:	TOC: y = 7.015x + 9.892
Ver Creation:	2020/06/13 16:40	r^2 value:	TOC: r^2 = 0.99974
Comment:			
Operator:	Fusion1 (Fusion1)		
Basic Analysis Type	TOC		

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	9.5750	0.0000		2020/06/13 15:13
0.500 ppm	12.9010	0.5000		2020/06/13 15:28
1.0 ppm	15.6320	1.0000		2020/06/13 15:42
5.0 ppm	43.2510	5.0000		2020/06/13 15:56
10 ppm	82.4040	10.0000		2020/06/13 16:11
25 ppm	188.6880	25.0000		2020/06/13 16:25
50 ppm	358.6500	50.0000		2020/06/13 16:39

Methods

Name: CAS_salt_010711 (TOC)

Version:	v4	Operator:	Fusion1 (Fusion1)
Ver Creation:	2019/02/21 17:57		
Comment:			

Parameter	Value
SampleVolume	10.0 mL
Dilution	1:10
AcidVolume	0.5 ml
ReagentVolume	2.0 ml
UVReactorPrerinse	Off
UVReactorPrerinseVolume	5.0
NumberOfUVReactorPrerinses	1
ICSpargeTime	1.00 mins
DetectorSweepFlow	500 ml/min
PreSpargeTime	2.00 mins
SystemFlow	500 ml/min

Advanced Parameter	Value
NeedleRinseVolume	5.0 ml
VialPrimeVolume	2.0 ml
ICSamplePrimeVolume	2.0 ml
ICSpargeRinseVolume	12.0 ml
BaselineStabilizeTime	0.70 min
DetectorPressureFlow	150 ml/min
SyringeSpeedWaste	10
SyringeSpeedAcid	7
SyringeSpeedReagent	7
SyringeSpeedDIWater	7
NDIRPressurization	60 psig
SyringeSpeedSampleDispense	5
SyringeSpeedSampleAspirate	4
SyringeSpeedUVDispense	5
SyringeSpeedUVAspirate	5
SyringeSpeedICDispense	5
SyringeSpeedICAspirate	5
NDIRPressureStabilize	1.75 min
SampleMixing	Off

SampleMixingCycles	1
SampleMixingVolume	10.0
LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/11/20 09:10

ALS Environmental

StarLIMS Run: 704227

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-55J 50 ppm LCS: 19-GEN-8-57K 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-58F

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 19-GEN-8-55I 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-58E

21 % H3PO4: 19-GEN-08-55L

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: MAS	Date Analyzed: 11/19/2020
Reviewed By: JC	Date Reviewed: 11/20/20

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WorkOrder: HS21050689

LHAAP 37 May 2021

Aptim Environmental & Infrastucture, Inc.

Vicki Graves
10333 Richmond Ave Ste 1030
Houston TX 77042

22-Jun-2021

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SAMPLE ACCEPTANCE CHECK FORM
RSK 175
RSK 175
RAW DATA GASES
RAW DATA CO2

HS21050689 LHAAP 37 May 2021 Final

ALS WO# HS21050689

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May 28, 2021

Vicki Graves
Aptim Environmental & Infrastucture, Inc.
10333 Richmond Ave
Ste 1030
Houston, TX 77042

Work Order: **HS21050689**

Laboratory Results for: **LHAAP 37 May 2021**

Dear Vicki Graves ,

ALS Environmental received 3 sample(s) on May 14, 2021 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Ragen Giga
Project Manager

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Work Order: HS21050689

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21050689-01	35BWW04_210513	Groundwater		13-May-2021 11:50	14-May-2021 09:25	☐
HS21050689-02	35BWW20_210513	Groundwater		13-May-2021 12:40	14-May-2021 09:25	☐
HS21050689-03	Trip Blank_210513	Groundwater	CG 121520 -1082	13-May-2020 00:00	14-May-2021 09:25	☐

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Work Order: HS21050689

CASE NARRATIVE

Work Order Comments

• The analysis for Methane, Methene, Ethane and CO2 by RSK175 was subcontracted to ALS Simi Valley, CA. Final report attached.

GCMS Volatiles by Method SW8260

Batch ID: R384020

Sample ID: VLCSW-210518

• 1,2,3-Trichlorobenzene and Naphthalene exceeded QC limits for LCS. Samples are ND for these compounds.

WetChemistry by Method SM5310B

Batch ID: R383987

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9056

Batch ID: R383778

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW04_210513
Collection Date: 13-May-2021 11:50

ANALYTICAL REPORT
WorkOrder:HS21050689
Lab ID:HS21050689-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:34
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:34
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:34
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:34
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:34
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:34
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:34
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:34
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:34
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-May-2021 19:34
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-May-2021 19:34
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:34
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-May-2021 19:34
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	18-May-2021 19:34
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:34
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:34
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:34
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	18-May-2021 19:34
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:34
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW04_210513
Collection Date: 13-May-2021 11:50

ANALYTICAL REPORT
WorkOrder:HS21050689
Lab ID:HS21050689-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-May-2021 19:34
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-May-2021 19:34
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-May-2021 19:34
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	18-May-2021 19:34
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:34
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
Tetrachloroethene	**6.8**		**0.30**	**1.0**	**1.0**	**ug/L**	1	18-May-2021 19:34
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
Trichloroethene	**0.61**	J	**0.20**	**0.50**	**1.0**	**ug/L**	1	18-May-2021 19:34
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:34
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:34
Surr: 1,2-Dichloroethane-d4	*96.0*			**0**	*81-118*	*%REC*	*1*	*18-May-2021 19:34*
Surr: 4-Bromofluorobenzene	*94.1*			**0**	*85-114*	*%REC*	*1*	*18-May-2021 19:34*
Surr: Dibromofluoromethane	*89.9*			**0**	*80-119*	*%REC*	*1*	*18-May-2021 19:34*
Surr: Toluene-d8	*111*			**0**	*89-112*	*%REC*	*1*	*18-May-2021 19:34*
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**0.960**	J	**0.500**	**0.500**	**1.00**	**mg/L**	1	20-May-2021 00:32
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**4.46**		**0.200**	**0.500**	**0.500**	**mg/L**	1	14-May-2021 14:31
Nitrogen, Nitrate (As N)	**0.135**		**0.0300**	**0.100**	**0.100**	**mg/L**	1	14-May-2021 14:31
Sulfate	**28.6**		**0.200**	**0.500**	**0.500**	**mg/L**	1	14-May-2021 14:31
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	28-May-2021 09:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW20_210513
Collection Date: 13-May-2021 12:40

ANALYTICAL REPORT
WorkOrder:HS21050689
Lab ID:HS21050689-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:55
1,1,2-Trichlor-1,2,2-trifluoroethane	**1.1**		**0.50**	**1.0**	**1.0**	**ug/L**	1	18-May-2021 19:55
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:55
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:55
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:55
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:55
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:55
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:55
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:55
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	18-May-2021 19:55
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	18-May-2021 19:55
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:55
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	18-May-2021 19:55
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	18-May-2021 19:55
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:55
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:55
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:55
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	18-May-2021 19:55
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	18-May-2021 19:55
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW20_210513
Collection Date: 13-May-2021 12:40

ANALYTICAL REPORT
WorkOrder:HS21050689
Lab ID:HS21050689-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	18-May-2021 19:55
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	18-May-2021 19:55
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	18-May-2021 19:55
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	18-May-2021 19:55
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	18-May-2021 19:55
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
Tetrachloroethene	**6.1**		**0.30**	**1.0**	**1.0**	**ug/L**	1	18-May-2021 19:55
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
Trichloroethene	**1.8**		**0.20**	**0.50**	**1.0**	**ug/L**	1	18-May-2021 19:55
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	18-May-2021 19:55
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	18-May-2021 19:55
Surr: 1,2-Dichloroethane-d4	*98.4*			**0**	*81-118*	*%REC*	*1*	*18-May-2021 19:55*
Surr: 4-Bromofluorobenzene	*93.7*			**0**	*85-114*	*%REC*	*1*	*18-May-2021 19:55*
Surr: Dibromofluoromethane	*93.6*			**0**	*80-119*	*%REC*	*1*	*18-May-2021 19:55*
Surr: Toluene-d8	*110*			**0**	*89-112*	*%REC*	*1*	*18-May-2021 19:55*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R383778 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS21050689-01	35BWW04_210513	13 May 2021 11:50			14 May 2021 14:31	1
Batch ID: R383987 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B				**Matrix:** Groundwater	
HS21050689-01	35BWW04_210513	13 May 2021 11:50			20 May 2021 00:32	1
Batch ID: R384020 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS21050689-01	35BWW04_210513	13 May 2021 11:50			18 May 2021 19:34	1
HS21050689-02	35BWW20_210513	13 May 2021 12:40			18 May 2021 19:55	1
Batch ID: R384568 (0)	**Test Name :** SUBCONTRACT ANALYSIS - RSK				**Matrix:** Groundwater	
HS21050689-01	35BWW04_210513	13 May 2021 11:50			28 May 2021 09:11	1

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R384020 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210518** Units: **ug/L** Analysis Date: **18-May-2021 17:49**
Client ID: Run ID: **VOA6_384020** SeqNo: **6101560** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	1.0	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	2.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R384020 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210518** Units: **ug/L** Analysis Date: **18-May-2021 17:49**
Client ID: Run ID: **VOA6_384020** SeqNo: **6101560** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	1.0	1.0								U
Carbon disulfide	2.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	2.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*48.59*	*1.0*	*50*	*0*	*97.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46.47*	*1.0*	*50*	*0*	*92.9*	*85 - 114*				
Surr: Dibromofluoromethane	*46.52*	*1.0*	*50*	*0*	*93.0*	*80 - 119*				

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R384020 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210518** Units: **ug/L** Analysis Date: **18-May-2021 17:49**
Client ID: Run ID: **VOA6_384020** SeqNo: **6101560** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*53.79*	*1.0*	*50*	*0*	*108*	*89 - 112*				

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R384020 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-210518** Units: **ug/L** Analysis Date: **18-May-2021 16:46**
Client ID: Run ID: **VOA6_384020** SeqNo: **6101559** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	19.34	1.0	20	0	96.7	78 - 124				
1,1,1-Trichloroethane	20.25	1.0	20	0	101	74 - 131				
1,1,2,2-Tetrachloroethane	21.66	1.0	20	0	108	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	18.42	1.0	20	0	92.1	70 - 136				
1,1,2-Trichloroethane	19.74	1.0	20	0	98.7	80 - 119				
1,1-Dichloroethane	20.44	1.0	20	0	102	77 - 125				
1,1-Dichloroethene	19.66	1.0	20	0	98.3	71 - 131				
1,1-Dichloropropene	20.14	1.0	20	0	101	78 - 125				
1,2,3-Trichlorobenzene	26.52	1.0	20	0	133	69 - 129				S
1,2,3-Trichloropropane	21.33	1.0	20	0	107	73 - 122				
1,2,4-Trichlorobenzene	25.16	1.0	20	0	126	69 - 130				
1,2,4-Trimethylbenzene	19.66	1.0	20	0	98.3	76 - 124				
1,2-Dibromo-3-chloropropane	23.25	1.0	20	0	116	62 - 128				
1,2-Dibromoethane	21.06	1.0	20	0	105	77 - 121				
1,2-Dichlorobenzene	19.08	1.0	20	0	95.4	80 - 119				
1,2-Dichloroethane	20.91	1.0	20	0	105	73 - 128				
1,2-Dichloropropane	20.69	1.0	20	0	103	78 - 122				
1,3,5-Trimethylbenzene	19.48	1.0	20	0	97.4	75 - 124				
1,3-Dichlorobenzene	20.06	1.0	20	0	100	80 - 119				
1,3-Dichloropropane	20.32	1.0	20	0	102	80 - 119				
1,4-Dichlorobenzene	20.55	1.0	20	0	103	79 - 118				
2,2-Dichloropropane	20.86	1.0	20	0	104	60 - 139				
2-Butanone	42.72	2.0	40	0	107	56 - 143				
2-Chlorotoluene	19	1.0	20	0	95.0	79 - 122				
2-Hexanone	42.72	2.0	40	0	107	57 - 139				
4-Chlorotoluene	19.7	1.0	20	0	98.5	78 - 122				
4-Isopropyltoluene	19.43	1.0	20	0	97.2	77 - 127				
4-Methyl-2-pentanone	43.8	2.0	40	0	109	67 - 130				
Acetone	48.21	2.0	40	0	121	39 - 160				
Benzene	21.09	1.0	20	0	105	79 - 120				
Bromobenzene	19.59	1.0	20	0	98.0	80 - 120				
Bromochloromethane	19.43	1.0	20	0	97.2	78 - 123				
Bromodichloromethane	20.6	1.0	20	0	103	79 - 125				
Bromoform	19.91	1.0	20	0	99.6	66 - 130				

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R384020 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-210518** Units: **ug/L** Analysis Date: **18-May-2021 16:46**
Client ID: Run ID: **VOA6_384020** SeqNo: **6101559** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	25.63	1.0	20	0	128	53 - 141				
Carbon disulfide	43.26	2.0	40	0	108	64 - 133				
Carbon tetrachloride	19.19	1.0	20	0	96.0	72 - 136				
Chlorobenzene	19.9	1.0	20	0	99.5	82 - 118				
Chloroethane	19.49	1.0	20	0	97.4	60 - 138				
Chloroform	19.98	1.0	20	0	99.9	79 - 124				
Chloromethane	22.72	1.0	20	0	114	50 - 139				
cis-1,2-Dichloroethene	19.75	1.0	20	0	98.8	78 - 123				
cis-1,3-Dichloropropene	20.76	1.0	20	0	104	75 - 124				
Dibromochloromethane	20.89	1.0	20	0	104	74 - 126				
Dibromomethane	20.85	1.0	20	0	104	79 - 123				
Dichlorodifluoromethane	21.39	1.0	20	0	107	32 - 152				
Ethylbenzene	20.05	1.0	20	0	100	79 - 121				
Hexachlorobutadiene	21.57	1.0	20	0	108	66 - 134				
Isopropylbenzene	18.88	1.0	20	0	94.4	72 - 131				
m,p-Xylene	39.82	2.0	40	0	99.5	80 - 121				
Methylene chloride	21.19	2.0	20	0	106	74 - 124				
Naphthalene	25.77	1.0	20	0	129	61 - 128				S
n-Butylbenzene	18.8	1.0	20	0	94.0	75 - 128				
n-Propylbenzene	19.8	1.0	20	0	99.0	76 - 126				
o-Xylene	19.66	1.0	20	0	98.3	78 - 122				
sec-Butylbenzene	18.12	1.0	20	0	90.6	77 - 126				
Styrene	19.13	1.0	20	0	95.6	78 - 123				
tert-Butylbenzene	18.64	1.0	20	0	93.2	78 - 124				
Tetrachloroethene	19.86	1.0	20	0	99.3	74 - 129				
Toluene	20.55	1.0	20	0	103	80 - 121				
trans-1,2-Dichloroethene	20.88	1.0	20	0	104	75 - 124				
trans-1,3-Dichloropropene	21.09	1.0	20	0	105	73 - 127				
Trichloroethene	20.8	1.0	20	0	104	79 - 123				
Trichlorofluoromethane	19.33	1.0	20	0	96.6	65 - 141				
Vinyl chloride	19.53	1.0	20	0	97.7	58 - 137				
Surr: 1,2-Dichloroethane-d4	*54.04*	*1.0*	*50*	*0*	*108*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.64*	*1.0*	*50*	*0*	*99.3*	*85 - 114*				
Surr: Dibromofluoromethane	*49.37*	*1.0*	*50*	*0*	*98.7*	*80 - 119*				

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R384020 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-210518** Units: **ug/L** Analysis Date: **18-May-2021 16:46**
Client ID: Run ID: **VOA6_384020** SeqNo: **6101559** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*49.76*	*1.0*	*50*	*0*	*99.5*	*89 - 112*				

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R384020 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21050689-01MS** Units: **ug/L** Analysis Date: **18-May-2021 20:58**
Client ID: **35BWW04_210513** Run ID: **VOA6_384020** SeqNo: **6101565** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.32	1.0	20	0	91.6	78 - 124				
1,1,1-Trichloroethane	19.56	1.0	20	0	97.8	74 - 131				
1,1,2,2-Tetrachloroethane	17.6	1.0	20	0	88.0	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	20.53	1.0	20	0	103	70 - 136				
1,1,2-Trichloroethane	18.33	1.0	20	0	91.7	80 - 119				
1,1-Dichloroethane	18.29	1.0	20	0	91.5	77 - 125				
1,1-Dichloroethene	18.18	1.0	20	0	90.9	71 - 131				
1,1-Dichloropropene	21.18	1.0	20	0	106	78 - 125				
1,2,3-Trichlorobenzene	15.06	1.0	20	0	75.3	69 - 129				
1,2,3-Trichloropropane	16.96	1.0	20	0	84.8	73 - 122				
1,2,4-Trichlorobenzene	17.25	1.0	20	0	86.2	69 - 130				
1,2,4-Trimethylbenzene	19.58	1.0	20	0	97.9	76 - 124				
1,2-Dibromo-3-chloropropane	16.58	1.0	20	0	82.9	62 - 128				
1,2-Dibromoethane	18.36	1.0	20	0	91.8	77 - 121				
1,2-Dichlorobenzene	17.49	1.0	20	0	87.5	80 - 119				
1,2-Dichloroethane	19.38	1.0	20	0	96.9	73 - 128				
1,2-Dichloropropane	19.21	1.0	20	0	96.1	78 - 122				
1,3,5-Trimethylbenzene	19.81	1.0	20	0	99.1	75 - 124				
1,3-Dichlorobenzene	18.77	1.0	20	0	93.9	80 - 119				
1,3-Dichloropropane	18.16	1.0	20	0	90.8	80 - 119				
1,4-Dichlorobenzene	19.05	1.0	20	0	95.2	79 - 118				
2,2-Dichloropropane	18.54	1.0	20	0	92.7	60 - 139				
2-Butanone	31.17	2.0	40	0	77.9	56 - 143				
2-Chlorotoluene	18.98	1.0	20	0	94.9	79 - 122				
2-Hexanone	32.93	2.0	40	0	82.3	57 - 139				
4-Chlorotoluene	19.26	1.0	20	0	96.3	78 - 122				
4-Isopropyltoluene	20.48	1.0	20	0	102	77 - 127				
4-Methyl-2-pentanone	33.44	2.0	40	0	83.6	67 - 130				
Acetone	30.62	2.0	40	0	76.5	39 - 160				
Benzene	19.56	1.0	20	0	97.8	79 - 120				
Bromobenzene	18.8	1.0	20	0	94.0	80 - 120				
Bromochloromethane	16.83	1.0	20	0	84.1	78 - 123				
Bromodichloromethane	18.71	1.0	20	0	93.5	79 - 125				
Bromoform	16.82	1.0	20	0	84.1	66 - 130				

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R384020 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21050689-01MS** Units: **ug/L** Analysis Date: **18-May-2021 20:58**
Client ID: **35BWW04_210513** Run ID: **VOA6_384020** SeqNo: **6101565** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	19.48	1.0	20	0	97.4	53 - 141				
Carbon disulfide	37.52	2.0	40	0	93.8	64 - 133				
Carbon tetrachloride	19.96	1.0	20	0	99.8	72 - 136				
Chlorobenzene	18.62	1.0	20	0	93.1	82 - 118				
Chloroethane	16.02	1.0	20	0	80.1	60 - 138				
Chloroform	17.63	1.0	20	0	88.2	79 - 124				
Chloromethane	18.36	1.0	20	0	91.8	50 - 139				
cis-1,2-Dichloroethene	17.61	1.0	20	0	88.1	78 - 123				
cis-1,3-Dichloropropene	18.99	1.0	20	0	95.0	75 - 124				
Dibromochloromethane	17.95	1.0	20	0	89.8	74 - 126				
Dibromomethane	18.42	1.0	20	0	92.1	79 - 123				
Dichlorodifluoromethane	18.28	1.0	20	0	91.4	32 - 152				
Ethylbenzene	20.51	1.0	20	0	103	79 - 121				
Hexachlorobutadiene	20.7	1.0	20	0	104	66 - 134				
Isopropylbenzene	20.51	1.0	20	0	103	72 - 131				
m,p-Xylene	39.81	2.0	40	0	99.5	80 - 121				
Methylene chloride	18.25	2.0	20	0	91.3	74 - 124				
Naphthalene	14.48	1.0	20	0	72.4	61 - 128				
n-Butylbenzene	20.43	1.0	20	0	102	75 - 128				
n-Propylbenzene	20.79	1.0	20	0	104	76 - 126				
o-Xylene	19.16	1.0	20	0	95.8	78 - 122				
sec-Butylbenzene	21.02	1.0	20	0	105	77 - 126				
Styrene	18.3	1.0	20	0	91.5	78 - 123				
tert-Butylbenzene	20.38	1.0	20	0	102	78 - 124				
Tetrachloroethene	27.2	1.0	20	6.806	102	74 - 129				
Toluene	19.64	1.0	20	0	98.2	80 - 121				
trans-1,2-Dichloroethene	18.95	1.0	20	0	94.7	75 - 124				
trans-1,3-Dichloropropene	18.59	1.0	20	0	93.0	73 - 127				
Trichloroethene	20.87	1.0	20	0.6087	101	79 - 123				
Trichlorofluoromethane	19.79	1.0	20	0	99.0	65 - 141				
Vinyl chloride	18.11	1.0	20	0	90.6	58 - 137				
Surr: 1,2-Dichloroethane-d4	*50.51*	*1.0*	*50*	*0*	*101*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.16*	*1.0*	*50*	*0*	*98.3*	*85 - 114*				
Surr: Dibromofluoromethane	*47.28*	*1.0*	*50*	*0*	*94.6*	*80 - 119*				

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R384020 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21050689-01MS** Units: **ug/L** Analysis Date: **18-May-2021 20:58**
Client ID: **35BWW04_210513** Run ID: **VOA6_384020** SeqNo: **6101565** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*52.95*	*1.0*	*50*	*0*	*106*	*89 - 112*				

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R384020 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS21050689-01MSD** Units: **ug/L** Analysis Date: **18-May-2021 21:19**
Client ID: **35BWW04_210513** Run ID: **VOA6_384020** SeqNo: **6101566** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	17.49	1.0	20	0	87.4	78 - 124	18.32	4.63	20	
1,1,1-Trichloroethane	18.77	1.0	20	0	93.9	74 - 131	19.56	4.13	20	
1,1,2,2-Tetrachloroethane	18.67	1.0	20	0	93.3	71 - 121	17.6	5.9	20	
1,1,2-Trichlor-1,2,2-trifluoroethane	19.86	1.0	20	0	99.3	70 - 136	20.53	3.29	20	
1,1,2-Trichloroethane	17.48	1.0	20	0	87.4	80 - 119	18.33	4.74	20	
1,1-Dichloroethane	17.71	1.0	20	0	88.6	77 - 125	18.29	3.22	20	
1,1-Dichloroethene	17.44	1.0	20	0	87.2	71 - 131	18.18	4.17	20	
1,1-Dichloropropene	19.65	1.0	20	0	98.3	78 - 125	21.18	7.48	20	
1,2,3-Trichlorobenzene	18.19	1.0	20	0	90.9	69 - 129	15.06	18.8	20	
1,2,3-Trichloropropane	17.6	1.0	20	0	88.0	73 - 122	16.96	3.75	20	
1,2,4-Trichlorobenzene	18.65	1.0	20	0	93.2	69 - 130	17.25	7.8	20	
1,2,4-Trimethylbenzene	19.54	1.0	20	0	97.7	76 - 124	19.58	0.203	20	
1,2-Dibromo-3-chloropropane	18.46	1.0	20	0	92.3	62 - 128	16.58	10.8	20	
1,2-Dibromoethane	18.15	1.0	20	0	90.8	77 - 121	18.36	1.15	20	
1,2-Dichlorobenzene	18.34	1.0	20	0	91.7	80 - 119	17.49	4.73	20	
1,2-Dichloroethane	19.12	1.0	20	0	95.6	73 - 128	19.38	1.35	20	
1,2-Dichloropropane	18.14	1.0	20	0	90.7	78 - 122	19.21	5.74	20	
1,3,5-Trimethylbenzene	20.16	1.0	20	0	101	75 - 124	19.81	1.75	20	
1,3-Dichlorobenzene	18.65	1.0	20	0	93.2	80 - 119	18.77	0.662	20	
1,3-Dichloropropane	17.9	1.0	20	0	89.5	80 - 119	18.16	1.42	20	
1,4-Dichlorobenzene	19.39	1.0	20	0	96.9	79 - 118	19.05	1.77	20	
2,2-Dichloropropane	17.42	1.0	20	0	87.1	60 - 139	18.54	6.22	20	
2-Butanone	30.36	2.0	40	0	75.9	56 - 143	31.17	2.62	20	
2-Chlorotoluene	18.95	1.0	20	0	94.8	79 - 122	18.98	0.174	20	
2-Hexanone	33.46	2.0	40	0	83.7	57 - 139	32.93	1.61	20	
4-Chlorotoluene	19.8	1.0	20	0	99.0	78 - 122	19.26	2.77	20	
4-Isopropyltoluene	20.56	1.0	20	0	103	77 - 127	20.48	0.416	20	
4-Methyl-2-pentanone	35.46	2.0	40	0	88.7	67 - 130	33.44	5.86	20	
Acetone	30.51	2.0	40	0	76.3	39 - 160	30.62	0.348	20	
Benzene	18.42	1.0	20	0	92.1	79 - 120	19.56	6.02	20	
Bromobenzene	18.93	1.0	20	0	94.6	80 - 120	18.8	0.666	20	
Bromochloromethane	17.29	1.0	20	0	86.4	78 - 123	16.83	2.69	20	
Bromodichloromethane	18.56	1.0	20	0	92.8	79 - 125	18.71	0.788	20	
Bromoform	17.69	1.0	20	0	88.5	66 - 130	16.82	5.06	20	

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R384020 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS21050689-01MSD** Units: **ug/L** Analysis Date: **18-May-2021 21:19**
Client ID: **35BWW04_210513** Run ID: **VOA6_384020** SeqNo: **6101566** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Bromomethane	19.31	1.0	20	0	96.6	53 - 141	19.48	0.865	20	
Carbon disulfide	37	2.0	40	0	92.5	64 - 133	37.52	1.38	20	
Carbon tetrachloride	19.45	1.0	20	0	97.2	72 - 136	19.96	2.61	20	
Chlorobenzene	18.63	1.0	20	0	93.2	82 - 118	18.62	0.0602	20	
Chloroethane	17.32	1.0	20	0	86.6	60 - 138	16.02	7.79	20	
Chloroform	17.51	1.0	20	0	87.5	79 - 124	17.63	0.708	20	
Chloromethane	18.71	1.0	20	0	93.5	50 - 139	18.36	1.87	20	
cis-1,2-Dichloroethene	17.66	1.0	20	0	88.3	78 - 123	17.61	0.303	20	
cis-1,3-Dichloropropene	18.47	1.0	20	0	92.4	75 - 124	18.99	2.79	20	
Dibromochloromethane	17.96	1.0	20	0	89.8	74 - 126	17.95	0.0508	20	
Dibromomethane	18.26	1.0	20	0	91.3	79 - 123	18.42	0.832	20	
Dichlorodifluoromethane	17.95	1.0	20	0	89.8	32 - 152	18.28	1.8	20	
Ethylbenzene	19.44	1.0	20	0	97.2	79 - 121	20.51	5.35	20	
Hexachlorobutadiene	21.72	1.0	20	0	109	66 - 134	20.7	4.77	20	
Isopropylbenzene	20.18	1.0	20	0	101	72 - 131	20.51	1.64	20	
m,p-Xylene	38.96	2.0	40	0	97.4	80 - 121	39.81	2.16	20	
Methylene chloride	17.62	2.0	20	0	88.1	74 - 124	18.25	3.5	20	
Naphthalene	17.06	1.0	20	0	85.3	61 - 128	14.48	16.3	20	
n-Butylbenzene	20.6	1.0	20	0	103	75 - 128	20.43	0.812	20	
n-Propylbenzene	20.86	1.0	20	0	104	76 - 126	20.79	0.347	20	
o-Xylene	18.57	1.0	20	0	92.8	78 - 122	19.16	3.14	20	
sec-Butylbenzene	20.85	1.0	20	0	104	77 - 126	21.02	0.841	20	
Styrene	18.05	1.0	20	0	90.2	78 - 123	18.3	1.38	20	
tert-Butylbenzene	20.78	1.0	20	0	104	78 - 124	20.38	1.94	20	
Tetrachloroethene	26.76	1.0	20	6.806	99.8	74 - 129	27.2	1.64	20	
Toluene	19.33	1.0	20	0	96.7	80 - 121	19.64	1.57	20	
trans-1,2-Dichloroethene	17.96	1.0	20	0	89.8	75 - 124	18.95	5.33	20	
trans-1,3-Dichloropropene	17.94	1.0	20	0	89.7	73 - 127	18.59	3.59	20	
Trichloroethene	19.98	1.0	20	0.6087	96.9	79 - 123	20.87	4.32	20	
Trichlorofluoromethane	18.95	1.0	20	0	94.7	65 - 141	19.79	4.36	20	
Vinyl chloride	17.18	1.0	20	0	85.9	58 - 137	18.11	5.26	20	
Surr: 1,2-Dichloroethane-d4	*49.29*	*1.0*	*50*	*0*	*98.6*	*81 - 118*	*50.51*	*2.44*	*20*	
Surr: 4-Bromofluorobenzene	*50.06*	*1.0*	*50*	*0*	*100*	*85 - 114*	*49.16*	*1.81*	*20*	
Surr: Dibromofluoromethane	*47.28*	*1.0*	*50*	*0*	*94.6*	*80 - 119*	*47.28*	*0.00894*	*20*	

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R384020 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS21050689-01MSD** Units: **ug/L** Analysis Date: **18-May-2021 21:19**
Client ID: **35BWW04_210513** Run ID: **VOA6_384020** SeqNo: **6101566** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*52.61*	*1.0*	*50*	*0*	*105*	*89 - 112*	*52.95*	*0.65*	*20*	

The following samples were analyzed in this batch: HS21050689-01 HS21050689-02

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R383778 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **14-May-2021 10:18**
Client ID: Run ID: **ICS-Integrion_383778** SeqNo: **6095616** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								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: **14-May-2021 10:26**
Client ID: Run ID: **ICS-Integrion_383778** SeqNo: **6095617** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.88	0.500	20	0	99.4	80 - 120				
Nitrogen, Nitrate (As N)	3.808	0.100	4	0	95.2	80 - 120				
Sulfate	20.14	0.500	20	0	101	80 - 120				

MS Sample ID: **HS21050697-03MS** Units: **mg/L** Analysis Date: **14-May-2021 14:53**
Client ID: Run ID: **ICS-Integrion_383778** SeqNo: **6095625** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	11.23	0.500	10	1.25	99.8	80 - 120				
Nitrogen, Nitrate (As N)	2.092	0.100	2	0.0796	101	80 - 120				
Sulfate	22.09	0.500	10	12.56	95.2	80 - 120				

MSD Sample ID: **HS21050697-03MSD** Units: **mg/L** Analysis Date: **14-May-2021 15:00**
Client ID: Run ID: **ICS-Integrion_383778** SeqNo: **6095626** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	11.41	0.500	10	1.25	102	80 - 120	11.23	1.59	20	
Nitrogen, Nitrate (As N)	2.129	0.100	2	0.0796	102	80 - 120	2.092	1.76	20	
Sulfate	22.63	0.500	10	12.56	101	80 - 120	22.09	2.44	20	

The following samples were analyzed in this batch: HS21050689-01

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050689

QC BATCH REPORT

Batch ID: R383987 (0) **Instrument: TOC_04** **Method: TOTAL ORGANIC CARBON - SM5310B**

MBLK Sample ID: **MBLK-05192021** Units: **mg/L** Analysis Date: **19-May-2021 23:57**
Client ID: Run ID: **TOC_04_383987** SeqNo: **6100940** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	0.500	1.00								U

LCS Sample ID: **LCS-05192021** Units: **mg/L** Analysis Date: **20-May-2021 00:09**
Client ID: Run ID: **TOC_04_383987** SeqNo: **6100941** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.21	1.00	10	0	102	85 - 115				

LCSD Sample ID: **LCSD-05192021** Units: **mg/L** Analysis Date: **20-May-2021 00:20**
Client ID: Run ID: **TOC_04_383987** SeqNo: **6100942** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.09	1.00	10	0	101	85 - 115	10.21	1.18	20	

MS Sample ID: **HS21050697-03MS** Units: **mg/L** Analysis Date: **20-May-2021 01:15**
Client ID: Run ID: **TOC_04_383987** SeqNo: **6100946** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	12.37	1.00	10	0.9276	114	80 - 120				

The following samples were analyzed in this batch: HS21050689-01

ALS Houston, US Date: 28-May-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: **HS21050689**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022

ALS Houston, US Date: 28-May-21

Sample Receipt Checklist

Work Order ID: HS21050689 **Date/Time Received:** 14-May-2021 09:25

Client Name: CBI-Houston **Received by:** Jared R. Makan

Completed By: /S/ Jared R. Makan (eSignature) 14-May-2021 12:18 (Date/Time) **Reviewed by:** /S/ Ragen Giga (eSignature) 17-May-2021 09:12 (Date/Time)

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.8°C UC/C	IR31
Cooler(s)/Kit(s):	46963	
Date/Time sample(s) sent to storage:	05/14/2021 12:20	

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: R.J Modashia

Project: APTIM LONGHORN
ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. 501032

Job: **LHAAP 37 May 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 (chloride sulfate, nitrate) by SW9056	CO2 by RSK 175	Perchlorate by SW6850	Remarks (Preservatives, etc.)	Lab I.D.#
35BWW04-210513	WG	5/13/21/1150		12	X	X	X	X	X			
35BWW20-210513	WG	5/13/21/1240		3	X							
TRIPBLANK-210513	W	5/13/21		2	X							

Additional Remarks: **Standard TAT on all parameters. Please email results to Vicki.Graves@aptim.com and invoices to fedinvoices@aptim.com**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	5/13/21	1430	Patti Mann	5/14/21	0925						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

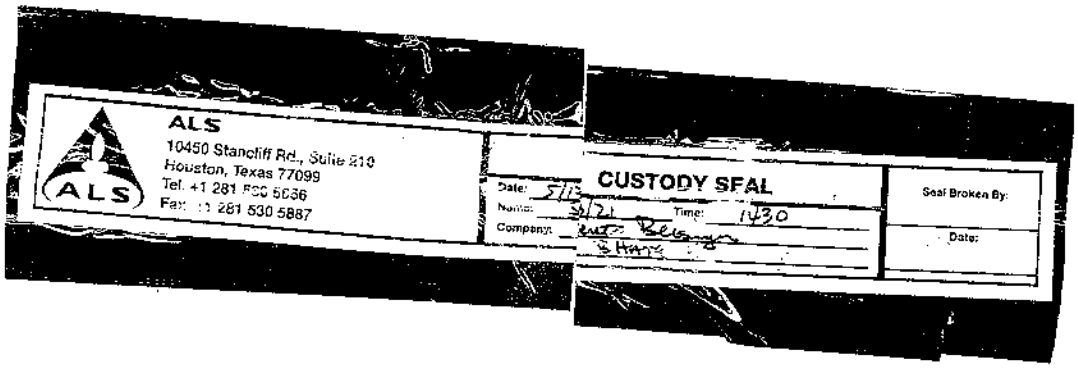
Remarks:

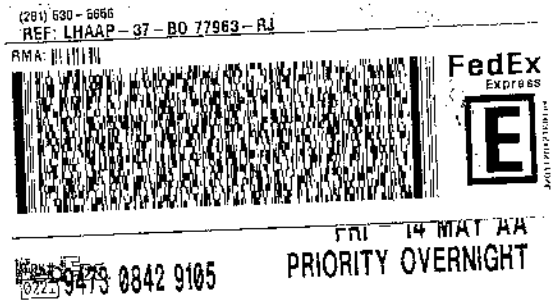
46963 0.EC 1R31 CFO

HS21050689

Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax: +1 281 530 5887
CUSTODY SEAL
Seal Broken By:
Date:
Time:
1430


(281) 530 - 5666
REF: LHAAP - 37 - BO 77963 - RJ
RMA:
FedEx
Express
FRI - 14 MAY AA
9473 0842 9105
PRIORITY OVERNIGHT

LABORATORY REPORT

May 27, 2021

Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099

RE: HS21050689

Dear Ragen:

Enclosed are the results of the sample submitted to our laboratory on May 18, 2021. For your reference, this analysis has been assigned our service request number P2102700.

The analysis was performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Hayden Akers at 6:00 pm, May 27, 2021

Hayden Akers
Project Manager

Client: ALS Environmental - US Service Request No: P2102700
Project: HS21050689

CASE NARRATIVE

The samples were received intact under chain of custody on May 18, 2021 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175 as described in laboratory SOP VOA-DISGAS. This analyte is included on the laboratory's NELAP and DoD-ELAP scope of accreditation.

Methane, Ethene and Ethane Analysis

The samples were analyzed for methane, ethene, and ethane using a gas chromatograph equipped with a flame ionization detector (FID). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least two hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (methane, ethene and ethane) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP accreditation.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-008
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Environmental - US
Service Request: P2102700
Project ID: HS21050689

Date Received: 5/18/2021
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
35BWW04_210513	P2102700-001	Water	5/13/2021	11:50	X	X

RJ02700

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:** **16125**

SUBCONTRACT TO:

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065

Phone: +1 805 526 7161

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21050689
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21050689-01**	**35BWW04_210513**	**Groundwater**	**13 May 2021 11:50**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	c 28 May 2021 4, 8 blank

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: 5/17/2021 1800

Received By: _____ Date/Time: 5-18-21 0930

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2102700
Project: HS21050689
Sample(s) received on: 5/18/2021 Date opened: 5/18/2021 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: ° C Blank Temperature: 4.8° C	Wet Ice		
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? Cooler lid. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2102700-001.01	40mL VOA NP		5		A	CB 5/26/21
P2102700-001.02	40mL VOA NP				A	
P2102700-001.03	40mL VOA NP				A	
P2102700-001.04	40ml VOA HCL		1		A	CB 5/25/21
P2102700-001.05	40ml VOA HCL				A	
P2102700-001.06	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Environmental - US**
Client Sample ID: **35BWW04_210513**
Client Project ID: **HS21050689**

ALS Project ID: P2102700
ALS Sample ID: P2102700-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: 05/13/21
Date Received: 05/18/21
Date Analyzed: 05/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Environmental - US**
Client Sample ID: **Method Control Sample** ALS Project ID: P2102700
Client Project ID: **HS21050689** ALS Sample ID: P210525-MB

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/FID Date Received: NA
Analyst: Connor Barrett Date Analyzed: 5/25/21
Matrix: Water Volume(s) Analyzed: 0.10 ml(s)
Test Notes:

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Environmental - US**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS21050689**

ALS Project ID: P2102700
ALS Sample ID: P210525-LCS
P210525-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result$_1$ LCS µg/L	Result$_1$ DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	2.52	2.38	**100**	**94**	73-125	6	26	
74-85-1	Ethene	4.40	5.15	5.10	**117**	**116**	72-133	0.9	11	
74-84-0	Ethane	4.72	5.01	4.92	**106**	**104**	74-131	2	10	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Environmental - US**
Client Project ID: **HS21050689** ALS Project ID: P2102700

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Connor Barrett
Matrix: Liquid
Test Notes:

Date(s) Collected: 5/13/21
Date Received: 5/18/21
Date Analyzed: 5/26/21

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
35BWW04_210513	P2102700-001	0.10	**150,000**	1,000	860	370	
Method Control Sample	P210526-MB	0.10	860	1,000	860	370	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Environmental - US**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2102700
Client Project ID: **HS21050689** ALS Sample ID: P210526-DLCS

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/TCD Date Received: NA
Analyst: Connor Barrett Date Analyzed: 5/26/21
Matrix: Liquid Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result$_1$ LCS ug/L	Result$_1$ DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	19,200	19,200	**84**	**84**	80-122	0	12	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

HS21050689 8260_W_DOD Raw Data

ALS WO# HS21050689

MSVOA06 -Logbook

Batch: 44956 **Analyst:** Presenta Cabascango

Date: 05-18-2021 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	05-18-2021 11:02 am	1.00	50 mL	50 mL	X051801.D	Liquid	Y	NA
2	VSDT000.25	ICAL1	05-18-2021 11:23 am	1.00	50 mL	50 mL	X051802.D	Liquid	Y	NA
3	VSDT000.5	ICAL2	05-18-2021 11:43 am	1.00	50 mL	50 mL	X051803.D	Liquid	Y	NA
4	VSDT001	ICAL3	05-18-2021 12:25 pm	1.00	50 mL	50 mL	X051804.D	Liquid	Y	NA
5	VSDT002	ICAL4	05-18-2021 12:46 pm	1.00	50 mL	50 mL	X051805.D	Liquid	Y	NA
6	VSDT005	ICAL5	05-18-2021 01:07 pm	1.00	50 mL	50 mL	X051806.D	Liquid	Y	NA
7	VSDT020	ICAL6	05-18-2021 01:28 pm	1.00	50 mL	50 mL	X051807.D	Liquid	Y	NA
8	VSDT050	ICAL7	05-18-2021 01:49 pm	1.00	50 mL	50 mL	X051808.D	Liquid	Y	NA
9	VSDT100	ICAL8	05-18-2021 02:10 pm	1.00	50 mL	50 mL	X051809.D	Liquid	Y	NA
10	VSDT150	ICAL9	05-18-2021 02:31 pm	1.00	50 mL	50 mL	X051810.D	Liquid	Y	NA
11	VSDT200	ICAL	05-18-2021 02:52 pm	1.00	50 mL	50 mL	X051811.D	Liquid	Y	NA
12	BLANK	SAMP	05-18-2021 03:13 pm	1.00	50 mL	50 mL	X051812.D	Liquid	Y	NA
13	BLANK	CCV	05-18-2021 03:43 pm	1.00	50 mL	50 mL	X051813.D	Liquid	Y	NA
14	CCV	CCV	05-18-2021 04:04 pm	1.00	50 mL	50 mL	X051814.D	Liquid	Y	NA
15	BLANK	SAMP	05-18-2021 04:25 pm	1.00	50 mL	50 mL	X051815.D	Liquid	Y	NA
16	VLCSW-210518	LCS	05-18-2021 04:46 pm	1.00	50 mL	50 mL	X051816.D	Liquid	Y	NA
17	BLANK	SAMP	05-18-2021 05:07 pm	1.00	50 mL	50 mL	X051817.D	Liquid	Y	NA
18	BLANK	SAMP	05-18-2021 05:28 pm	1.00	50 mL	50 mL	X051818.D	Liquid	Y	NA
19	VBLKW-210518	MBLK	05-18-2021 05:49 pm	1.00	50 mL	50 mL	X051819.D	Liquid	Y	NA
20	HS21040303-13	SAMP	05-18-2021 06:10 pm	1.00	50 mL	50 mL	X051820.D	Liquid	Y	NA
21	HS21040303-14	SAMP	05-18-2021 06:31 pm	1.00	50 mL	50 mL	X051821.D	Liquid	Y	NA
22	HS21040303-15	SAMP	05-18-2021 06:52 pm	1.00	50 mL	50 mL	X051822.D	Liquid	Y	NA
23	HS21040303-16	SAMP	05-18-2021 07:13 pm	1.00	50 mL	50 mL	X051823.D	Liquid	Y	NA
24	HS21050689-01	SAMP	05-18-2021 07:34 pm	1.00	50 mL	50 mL	X051824.D	Liquid	Y	NA
25	HS21050689-02	SAMP	05-18-2021 07:55 pm	1.00	50 mL	50 mL	X051825.D	Liquid	Y	NA
26	HS21050553-03	SAMP	05-18-2021 08:16 pm	1.00	50 mL	50 mL	X051826.D	Liquid	Y	NA
27	HS21050553-01	SAMP	05-18-2021 08:37 pm	1.00	50 mL	50 mL	X051827.D	Liquid	Y	NA
28	HS21050689-01MS	MS	05-18-2021 08:58 pm	1.00	50 mL	50 mL	X051828.D	Liquid	Y	NA
29	HS21050689-01MSD	MSD	05-18-2021 09:19 pm	1.00	50 mL	50 mL	X051829.D	Liquid	Y	NA
30	CCV-END	CCV	05-18-2021 09:40 pm	1.00	50 mL	50 mL	X051830.D	Liquid	Y	NA
31	BLANK	SAMP	05-18-2021 10:01 pm	1.00	50 mL	50 mL	X051831.D	Liquid	Y	NA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050689

	CLIENT SAMPLE NO.	SMC1 #	SMC2 #	SMC3 (TOL)#	OTHER (DCE)#	TOT OUT
01	VLCSW-210518	99	99	100	108	0
02	VBLKW-210518	93	93	108	97	0
03	HS21050689-01	94	90	111	96	0
04	HS21050689-02	94	94	110	98	0
05	HS21050689-01MS	98	94	106	101	0
06	HS21050689-01MSD	100	94	105	98	0
07						
08						
09						
10						
11						
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28						

		QC LIMITS
SMC1	= 4-Bromofluorobenzene	(70-130)
SMC2	= Dibromofluoromethane	(70-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER(DCE)	= 1,2-Dichloroethane-d4	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050689

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	50.19	100	80-120
trans-1,3-Dichloroprope	50.00	52.04	104	80-120
1,3-Dichlorobenzene	50.00	47.75	96	80-120
2,2-Dichloropropane	50.00	50.09	100	80-120
1,1-Dichloropropene	50.00	48.31	97	80-120
Dibromomethane	50.00	50.15	100	80-120
1,2-Dibromoethane	50.00	51.94	104	80-120
trans-1,2-Dichloroethen	50.00	50.14	100	80-120
1,1,1,2-Tetrachloroetha	50.00	48.20	96	80-120
1,1,1-Trichloroethane	50.00	50.61	101	80-120
1,1,2,2-Tetrachloroetha	50.00	51.75	104	80-120
Toluene	50.00	49.96	100	80-120
1,1,2-Trichloroethane	50.00	50.03	100	80-120
1,1-Dichloroethane	50.00	47.25	94	80-120
1,1-Dichloroethene	50.00	47.25	94	80-120
Trichlorofluoromethane	50.00	48.01	96	80-120
1,2,3-Trichlorobenzene	50.00	59.14	118	80-120
Tetrachloroethene	50.00	50.18	100	80-120
1,2,4-Trichlorobenzene	50.00	53.39	107	80-120
1,2,4-Trimethylbenzene	50.00	46.88	94	80-120
tert-Butylbenzene	50.00	45.40	91	80-120
Trichloroethene	50.00	48.16	96	80-120
1,2-Dichlorobenzene	50.00	46.87	94	80-120
1,2-Dichloroethane	50.00	48.88	98	80-120
1,2-Dichloropropane	50.00	47.74	95	80-120
1,3,5-Trimethylbenzene	50.00	47.22	94	80-120
1,3-Dichloropropane	50.00	50.41	101	80-120
1,4-Dichlorobenzene	50.00	47.95	96	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050689

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Butanone	100.00	103.30	103	80-120
2-Chlorotoluene	50.00	45.74	91	80-120
2-Hexanone	100.00	104.71	105	80-120
4-Chlorotoluene	50.00	47.02	94	80-120
Styrene	50.00	46.53	93	80-120
4-Methyl-2-Pentanone	100.00	102.15	102	80-120
Acetone	100.00	117.46	117	80-120
Benzene	50.00	50.17	100	80-120
Bromobenzene	50.00	47.17	94	80-120
Bromochloromethane	50.00	48.14	96	80-120
Bromodichloromethane	50.00	49.36	99	80-120
Bromoform	50.00	52.15	104	80-120
Bromomethane	50.00	56.94	114	80-120
Carbon Disulfide	100.00	107.07	107	80-120
Carbon Tetrachloride	50.00	48.29	96	80-120
Chlorobenzene	50.00	47.89	96	80-120
Chloroethane	50.00	47.02	94	80-120
Chloroform	50.00	47.74	95	80-120
Chloromethane	50.00	51.81	104	80-120
cis-1,2-Dichloroethene	50.00	48.97	98	80-120
Dibromochloromethane	50.00	52.44	105	80-120
Dichlorodifluoromethane	50.00	51.12	102	80-120
Ethylbenzene	50.00	48.94	98	80-120
Hexachlorobutadiene	50.00	48.34	97	80-120
Isopropylbenzene	50.00	48.03	96	80-120
m,p-Xylenes	100.00	98.78	99	80-120
Methylene Chloride	50.00	49.43	99	80-120
n-Butylbenzene	50.00	47.59	95	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050689

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
n-Propylbenzene	50.00	47.46	95	80-120
Naphthalene	50.00	59.54	119	80-120
o-Xylene	50.00	48.60	97	80-120
sec-Butylbenzene	50.00	46.39	93	80-120
Vinyl Chloride	50.00	47.95	96	80-120
1,2,3-Trichloropropane	50.00	53.16	106	80-120
p-Isopropyltoluene	50.00	46.79	94	80-120
1,2-Dibromo-3-Chloropro	50.00	56.34	113	80-120
Freon TF	50.00	47.72	95	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 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-210518

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050689

Lab File ID: X051819 Lab Sample ID: VBLKW-210518

Date Analyzed: 05/18/21 Time Analyzed: 1749

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-210518	VLCSW-210518	X051816	1646
02	HS21050689-01	HS21050689-01	X051824	1934
03	HS21050689-02	HS21050689-02	X051825	1955
04	HS21050689-01MS	HS21050689-01MS	X051828	2058
05	HS21050689-01MSD	HS21050689-01MSD	X051829	2119
06				
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050689

Lab File ID: X051801 BFB Injection Date: 05/18/21

Instrument ID: VOA6 BFB Injection Time: 1102

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.6
75	30.0 - 60.0% of mass 95	54.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	1.3 (1.6)1
174	Greater than 50.0% of mass 95	81.7
175	5.0 - 9.0% of mass 174	6.4 (7.8)1
176	95.0 - 101.0% of mass 174	78.5 (96.1)1
177	5.0 - 9.0% of mass 176	5.1 (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	VSDT000.25	X051802	05/18/21	1123
02	VSTD000.5	VSDT000.5	X051803	05/18/21	1143
03	VSTD001	VSDT001	X051804	05/18/21	1225
04	VSTD002	VSDT002	X051805	05/18/21	1246
05	VSTD005	VSDT005	X051806	05/18/21	1307
06	VSTD020	VSDT020	X051807	05/18/21	1328
07	VSTD050	VSDT050	X051808	05/18/21	1349
08	VSTD100	VSDT100	X051809	05/18/21	1410
09	VSTD150	VSDT150	X051810	05/18/21	1431
10	VSTD200	VSDT200	X051811	05/18/21	1452
11	ICV	ICV	X051814	05/18/21	1604
12	VLCSW-210518	VLCSW-210518	X051816	05/18/21	1646
13	VBLKW-210518	VBLKW-210518	X051819	05/18/21	1749
14	HS21050689-01	HS21050689-01	X051824	05/18/21	1934
15	HS21050689-02	HS21050689-02	X051825	05/18/21	1955
16	HS21050689-01MS	HS21050689-01MS	X051828	05/18/21	2058
17	HS21050689-01MSD	HS21050689-01MSD	X051829	05/18/21	2119
18	CCV-END	CCV-END	X051830	05/18/21	2140
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050689

Instrument ID: VOA6 Calibration Date(s): 05/18/21 05/18/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1452

LAB FILE ID: RF0.25: X051802 RF0.5: X051803 RF1: X051804
RF2: X051805 RF5: X051806 RF20: X051807

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.487	0.572	0.482	0.536	0.562
trans-1,3-Dichloropropene		0.362	0.481	0.462	0.448	0.484
1,3-Dichlorobenzene		1.298	1.784	1.444	1.385	1.313
2,2-Dichloropropane		0.814	0.849	0.827	0.820	0.784
1,1-Dichloropropene		0.489	0.470	0.395	0.427	0.399
Dibromomethane		0.205	0.266	0.241	0.239	0.244
1,2-Dibromoethane		0.268	0.371	0.360	0.338	0.348
trans-1,2-Dichloroethene		0.501	0.440	0.499	0.456	0.444
1,1,1,2-Tetrachloroethane		0.339	0.370	0.394	0.369	0.343
1,1,1-Trichloroethane		0.814	0.829	0.797	0.851	0.831
1,1,2,2-Tetrachloroethane		1276	3942	6612	14932	63561
Toluene		1.254	1.468	1.434	1.426	1.362
1,1,2-Trichloroethane		0.259	0.353	0.294	0.269	0.277
1,1-Dichloroethane		0.905	1.024	0.837	0.887	0.889
1,1-Dichloroethene		0.602	0.555	0.544	0.494	0.462
Trichlorofluoromethane		1.002	1.059	1.083	1.013	0.935
1,2,3-Trichlorobenzene		298	800	1755	3826	17129
Tetrachloroethene		0.267	0.257	0.293	0.265	0.257
1,2,4-Trichlorobenzene		425	1337	2176	7168	30700
1,2,4-Trimethylbenzene		2.442	3.010	2.493	2.447	2.264
tert-Butylbenzene		2.074	2.525	2.221	2.080	1.787
Trichloroethene		0.303	0.372	0.325	0.354	0.319
1,2-Dichlorobenzene		1.324	1.811	1.406	1.370	1.301
1,2-Dichloroethane		0.502	0.549	0.494	0.503	0.500
1,2-Dichloropropane		0.369	0.354	0.317	0.336	0.337
1,3,5-Trimethylbenzene		2.332	2.757	2.552	2.314	2.225
1,3-Dichloropropane		0.491	0.653	0.571	0.580	0.567
1,4-Dichlorobenzene		2775	6628	10925	24844	112231
2-Butanone		0.208	0.199	0.150	0.167	0.187
2-Chlorotoluene		2.577	2.759	2.223	2.151	1.969
2-Hexanone		1113	4644	6265	15257	64652
4-Chlorotoluene		2.534	3.056	2.582	2.471	2.392
Styrene		2465	6890	12689	31296	151430
4-Methyl-2-Pentanone		1863	6100	9786	23491	96386
Acetone		2121	2806	4685	8158	27873
Benzene		1.285	1.241	1.192	1.243	1.191
Bromobenzene		0.727	1.032	0.792	0.881	0.809
Bromochloromethane		0.300	0.313	0.305	0.314	0.288
Bromodichloromethane		0.468	0.503	0.466	0.483	0.472
Bromoform		0.227	0.256	0.199	0.227	0.224
Bromomethane		1623	3018	5999	15785	51157
Carbon Disulfide		1.049	1.194	1.138	1.099	1.092
Carbon Tetrachloride		0.420	0.447	0.466	0.436	0.396
Chlorobenzene		0.995	1.061	0.996	0.934	0.914

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2105068

Instrument ID: VOA6 Calibration Date(s): 05/18/21 05/18/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1452

LAB FILE ID: RF0.25: X051802 RF0.5: X051803 RF1: X051804
RF2: X051805 RF5: X051806 RF20: X051807

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroethane		0.482	0.365	0.357	0.373	0.414
Chloroform		1.117	1.077	0.992	1.081	1.060
Chloromethane		1464	3160	5348	14179	54108
cis-1,2-Dichloroethene		0.502	0.640	0.565	0.558	0.550
Dibromochloromethane		0.297	0.455	0.365	0.368	0.376
Dichlorodifluoromethane		1498	2403	5548	14123	57043
Ethylbenzene		0.480	0.478	0.501	0.476	0.437
Hexachlorobutadiene		285	1107	2099	4641	20104
Isopropylbenzene		1.418	1.528	1.397	1.412	1.315
m,p-Xylenes		0.569	0.620	0.605	0.597	0.581
Methylene Chloride		0.434	0.476	0.538	0.489	0.488
n-Butylbenzene		2.521	2.761	2.102	2.057	2.013
n-Propylbenzene		3.468	4.022	3.792	3.412	3.065
Naphthalene		406	1471	3094	8781	42386
o-Xylene		0.614	0.616	0.595	0.583	0.553
sec-Butylbenzene		2.812	3.226	3.184	2.734	2.527
Vinyl Chloride		0.706	0.637	0.668	0.630	0.574
1,2,3-Trichloropropane		851	3361	4744	9928	50993
p-Isopropyltoluene		2.384	2.876	2.412	2.335	2.132
1,2-Dibromo-3-Chloropropane		63	283	511	1184	4660
Freon TF		0.504	0.465	0.530	0.495	0.452
4-Bromofluorobenzene		3536	2729	7059	15616	68387
Dibromofluoromethane		1526	2671	5073	12495	55528
Toluene-d8		4554	7865	16788	42740	177650
1,2-Dichloroethane-d4		1965	3259	6073	16438	67187

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2105068

Instrument ID: VOA6 Calibration Date(s): 05/18/21 05/18/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1452

LAB FILE ID: RF50: X051808 RF100: X051809 RF150: X051810
RF200: X051811

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.551	0.592	0.579	0.572
trans-1,3-Dichloropropene	0.521	0.530	0.520	0.507
1,3-Dichlorobenzene	1.363	1.440	1.445	1.456
2,2-Dichloropropane	0.768	0.864	0.862	0.867
1,1-Dichloropropene	0.367	0.444	0.428	0.436
Dibromomethane	0.235	0.250	0.247	0.242
1,2-Dibromoethane	0.358	0.371	0.365	0.364
trans-1,2-Dichloroethene	0.449	0.491	0.520	0.530
1,1,1,2-Tetrachloroethane	0.357	0.371	0.368	0.368
1,1,1-Trichloroethane	0.809	0.898	0.909	0.916
1,1,2,2-Tetrachloroethane	192852	443127	690313	941646
Toluene	1.423	1.541	1.532	1.544
1,1,2-Trichloroethane	0.284	0.298	0.290	0.290
1,1-Dichloroethane	0.901	0.943	0.964	0.982
1,1-Dichloroethene	0.419	0.457	0.472	0.495
Trichlorofluoromethane	0.805	0.902	0.910	0.940
1,2,3-Trichlorobenzene	53322	129422	217046	307927
Tetrachloroethene	0.256	0.297	0.297	0.310
1,2,4-Trichlorobenzene	93881	230076	378072	556188
1,2,4-Trimethylbenzene	2.367	2.620	2.619	2.624
tert-Butylbenzene	1.852	2.157	2.163	2.202
Trichloroethene	0.310	0.337	0.326	0.332
1,2-Dichlorobenzene	1.264	1.348	1.378	1.410
1,2-Dichloroethane	0.493	0.481	0.458	0.443
1,2-Dichloropropane	0.324	0.336	0.328	0.324
1,3,5-Trimethylbenzene	2.338	2.608	2.633	2.704
1,3-Dichloropropane	0.567	0.572	0.569	0.548
1,4-Dichlorobenzene	328636	774191	1228277	1710708
2-Butanone	0.183	0.194	0.189	0.185
2-Chlorotoluene	2.002	2.129	2.128	2.118
2-Hexanone	184352	424072	684773	929961
4-Chlorotoluene	2.422	2.634	2.635	2.660
Styrene	468440	1137742	1857964	2618657
4-Methyl-2-Pentanone	268097	642103	1037606	1395319
Acetone	67628	161640	237075	336393
Benzene	1.208	1.285	1.250	1.237
Bromobenzene	0.778	0.824	0.832	0.827
Bromochloromethane	0.299	0.306	0.312	0.305
Bromodichloromethane	0.471	0.507	0.491	0.486
Bromoform	0.245	0.261	0.270	0.266
Bromomethane	137904	330862		
Carbon Disulfide	1.138	1.206	1.311	1.375
Carbon Tetrachloride	0.378	0.462	0.451	0.466
Chlorobenzene	0.935	0.993	0.978	1.018

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2105068

Instrument ID: VOA6 Calibration Date(s): 05/18/21 05/18/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1452

LAB FILE ID: RF50: X051808 RF100: X051809 RF150: X051810
RF200: X051811

COMPOUND	RF50	RF100	RF150	RF200
Chloroethane	0.336	0.369	0.350	0.361
Chloroform	1.018	1.075	1.069	1.070
Chloromethane	144469	323129	530291	760194
cis-1,2-Dichloroethene	0.555	0.596	0.612	0.608
Dibromochloromethane	0.398	0.419	0.416	0.421
Dichlorodifluoromethane	146727	385804	635388	916851
Ethylbenzene	0.466	0.513	0.501	0.507
Hexachlorobutadiene	54907	159233	251193	377761
Isopropylbenzene	1.391	1.613	1.599	1.652
m,p-Xylenes	0.611	0.676	0.672	0.689
Methylene Chloride	0.488	0.522	0.539	0.538
n-Butylbenzene	2.082	2.488	2.515	2.591
n-Propylbenzene	3.255	3.697	3.540	3.618
Naphthalene	135654	338098	555881	826266
o-Xylene	0.587	0.633	0.637	0.647
sec-Butylbenzene	2.562	3.072	3.064	3.195
Vinyl Chloride	0.520	0.554	0.560	0.583
1,2,3-Trichloropropane	161438	370826	570152	760241
p-Isopropyltoluene	2.228	2.603	2.576	2.673
1,2-Dibromo-3-Chloropropane	14297	35357	55728	81966
Freon TF	0.380	0.462	0.473	0.507
4-Bromofluorobenzene	197985	494712	751419	1039902
Dibromofluoromethane	145001	355480	559479	756859
Toluene-d8	483036	1269181		
1,2-Dichloroethane-d4	177225	428979	631492	867782

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2105068

Instrument ID: VOA6 Calibration Date(s): 05/18/21 05/18/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1452

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.54815013		7.198	15.000
trans-1,3-Dichloropropene	AVRG		0.47952641		10.867	15.000
1,3-Dichlorobenzene	AVRG		1.43648780		9.972	15.000
2,2-Dichloropropane	AVRG		0.82828869		4.331	15.000
1,1-Dichloropropene	AVRG		0.42830770		8.852	15.000
Dibromomethane	AVRG		0.24083691		6.728	15.000
1,2-Dibromoethane	AVRG		0.34906143		9.275	15.000
trans-1,2-Dichloroethene	AVRG		0.48104288		7.125	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.36426927		4.529	15.000
1,1,1-Trichloroethane	AVRG		0.85043801		5.394	15.000
1,1,2,2-Tetrachloroethane	LINR	-1.06e-002	1.22020858		0.9996255	0.9900000
Toluene	AVRG		1.44259465		6.537	15.000
1,1,2-Trichloroethane	AVRG		0.29044361		9.129	15.000
1,1-Dichloroethane	AVRG		0.92592468		6.216	15.000
1,1-Dichloroethene	AVRG		0.50003055		11.379	15.000
Trichlorofluoromethane	AVRG		0.96110314		9.038	15.000
1,2,3-Trichlorobenzene	2ORDR	9.632e-003	4.28133993	-0.5154682	0.9995826	0.9900000
Tetrachloroethene	AVRG		0.27783391		7.699	15.000
1,2,4-Trichlorobenzene	LINR	4.933e-002	2.11604080		0.9976091	0.9900000
1,2,4-Trimethylbenzene	AVRG		2.54299659		8.430	15.000
tert-Butylbenzene	AVRG		2.11785900		10.166	15.000
Trichloroethene	AVRG		0.33109441		6.506	15.000
1,2-Dichlorobenzene	AVRG		1.40138714		11.491	15.000
1,2-Dichloroethane	AVRG		0.49160844		6.118	15.000
1,2-Dichloropropane	AVRG		0.33602311		4.888	15.000
1,3,5-Trimethylbenzene	AVRG		2.49588490		7.816	15.000
1,3-Dichloropropane	AVRG		0.56857427		7.291	15.000
1,4-Dichlorobenzene	LINR	5.061e-003	0.67731606		0.9998297	0.9900000
2-Butanone	AVRG		0.18456292		9.299	15.000
2-Chlorotoluene	AVRG		2.22844412		11.870	15.000
2-Hexanone	LINR	-5.43e-003	4.72960490		0.9996417	0.9900000
4-Chlorotoluene	AVRG		2.59844887		7.579	15.000
Styrene	LINR	3.526e-002	0.84676544		0.9993765	0.9900000
4-Methyl-2-Pentanone	LINR	1.757e-003	3.13747126		0.9992518	0.9900000
Acetone	LINR	-0.1031195	8.31977183		0.9992475	0.9900000
Benzene	AVRG		1.23700589		2.821	15.000
Bromobenzene	AVRG		0.83350948		10.277	15.000
Bromochloromethane	AVRG		0.30471850		2.737	15.000
Bromodichloromethane	AVRG		0.48310323		3.112	15.000
Bromoform	AVRG		0.24181056		9.935	15.000
Bromomethane	LINR	-9.54e-003	1.92097258		0.9993822	0.9900000
Carbon Disulfide	AVRG		1.17802683		9.054	15.000
Carbon Tetrachloride	AVRG		0.43581111		7.302	15.000
Chlorobenzene	AVRG		0.98043280		4.719	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2105068

Instrument ID: VOA6 Calibration Date(s): 05/18/21 05/18/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1452

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroethane	AVRG		0.37848234		11.670	15.000
Chloroform	AVRG		1.06227706		3.452	15.000
Chloromethane	LINR	4.72e-003	1.84566789		0.9991701	0.9900000
cis-1,2-Dichloroethene	AVRG		0.57624659		7.251	15.000
Dibromochloromethane	AVRG		0.39079995		11.706	15.000
Dichlorodifluoromethane	LINR	4.157e-002	1.52321051		0.9978249	0.9900000
Ethylbenzene	AVRG		0.48449831		4.945	15.000
Hexachlorobutadiene	LINR	6.372e-002	3.12063356		0.9952728	0.9900000
Isopropylbenzene	AVRG		1.48070600		8.062	15.000
m,p-Xylenes	AVRG		0.62439142		7.010	15.000
Methylene Chloride	AVRG		0.50138203		7.098	15.000
n-Butylbenzene	AVRG		2.34785648		12.003	15.000
n-Propylbenzene	AVRG		3.54120408		8.079	15.000
Naphthalene	LINR	6.205e-002	1.42523240		0.9969447	0.9900000
o-Xylene	AVRG		0.60729113		5.006	15.000
sec-Butylbenzene	AVRG		2.93063409		9.421	15.000
Vinyl Chloride	AVRG		0.60367291		9.968	15.000
1,2,3-Trichloropropane	LINR	-1.23e-002	1.49190380		0.9985771	0.9900000
p-Isopropyltoluene	AVRG		2.46870248		9.462	15.000
1,2-Dibromo-3-Chloropropane	LINR	3.21e-002	14.3600447		0.9984415	0.9900000
Freon TF	AVRG		0.47436754		9.201	15.000
4-Bromofluorobenzene	LINR	2.432e-003	2.11361156		0.9991459	0.9900000
Dibromofluoromethane	LINR	-4.56e-003	1.80361438		0.9994050	0.9900000
Toluene-d8	LINR	2.027e-002	0.79767420		0.9950610	0.9900000
1,2-Dichloroethane-d4	LINR	-2.54e-002	1.57628033		0.9986859	0.9900000

FORM VI VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050689

Instrument ID: VOA6 Calibration Date: 05/18/21 Time: 2140

Lab File ID: X051830 Init. Calib. Date(s): 05/18/21 05/18/21

Init. Calib. Times: 1123 1452

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
cis-1,3-Dichloropropene	0.5480000	0.5566097	0.5566097	0.2	-1.57	50.00	AVRG
trans-1,3-Dichloropropene	0.4790000	0.5013231	0.5013231	0.1	-4.66	50.00	AVRG
1,3-Dichlorobenzene	1.4360000	1.3999199	1.3999199	0.6	2.51	50.00	AVRG
2,2-Dichloropropane	0.8280000	0.7878951	0.7878951	0.1	4.84	50.00	AVRG
1,1-Dichloropropene	0.4280000	0.4137262	0.4137262	0.1	3.34	50.00	AVRG
Dibromomethane	0.2410000	0.2315305	0.2315305	0.1	3.93	50.00	AVRG
1,2-Dibromoethane	0.3490000	0.3514073	0.3514073	0.1	-0.69	50.00	AVRG
trans-1,2-Dichloroethene	0.4810000	0.4744952	0.4744952	0.1	1.35	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3640000	0.3525812	0.3525812	0.1	3.14	50.00	AVRG
1,1,1-Trichloroethane	0.8500000	0.8516194	0.8516194	0.1	-0.19	50.00	AVRG
1,1,2,2-Tetrachloroethane	46.791650	50.000000	0.7756411	0.3	6.42	50.00	LINR
Toluene	1.4430000	1.4663063	1.4663063	0.4	-1.62	50.00	AVRG
1,1,2-Trichloroethane	0.2900000	0.2827000	0.2827000	0.1	2.52	50.00	AVRG
1,1-Dichloroethane	0.9260000	0.9290675	0.9290675	0.2	-0.33	50.00	AVRG
1,1-Dichloroethene	0.5000000	0.4371565	0.4371565	0.1	12.57	50.00	AVRG
Trichlorofluoromethane	0.9610000	0.8670345	0.8670345	0.1	9.78	50.00	AVRG
1,2,3-Trichlorobenzene	41.165480	50.000000	0.1946121	0.01	17.67	50.00	2RDR
Tetrachloroethene	0.2780000	0.2788146	0.2788146	0.2	-0.29	50.00	AVRG
1,2,4-Trichlorobenzene	41.312532	50.000000	0.3671571	0.1	17.37	50.00	LINR
1,2,4-Trimethylbenzene	2.5430000	2.5270541	2.5270541	0.1	0.63	50.00	AVRG
tert-Butylbenzene	2.1180000	2.0237190	2.0237190	0.1	4.45	50.00	AVRG
Trichloroethene	0.3310000	0.3219782	0.3219782	0.2	2.72	50.00	AVRG
1,2-Dichlorobenzene	1.4010000	1.2697447	1.2697447	0.4	9.37	50.00	AVRG
1,2-Dichloroethane	0.4910000	0.4884643	0.4884643	0.1	0.52	50.00	AVRG
1,2-Dichloropropane	0.3360000	0.3240021	0.3240021	0.1	3.57	50.00	AVRG
1,3,5-Trimethylbenzene	2.4960000	2.4713232	2.4713232	0.1	0.99	50.00	AVRG
1,3-Dichloropropane	0.5690000	0.5531426	0.5531426	0.1	2.79	50.00	AVRG
1,4-Dichlorobenzene	48.072437	50.000000	1.4120255	0.4	3.86	50.00	LINR
2-Butanone	0.1850000	0.1686305	0.1686305	0.1	8.85	50.00	AVRG
2-Chlorotoluene	2.2280000	2.0940627	2.0940627	0.1	6.01	50.00	AVRG
2-Hexanone	88.691640	100.00000	0.1880983	0.1	11.31	50.00	LINR
4-Chlorotoluene	2.5980000	2.5491171	2.5491171	0.1	1.88	50.00	AVRG
Styrene	46.719359	50.000000	1.0618380	0.3	6.56	50.00	LINR
4-Methyl-2-Pentanone	91.368124	100.00000	0.2909359	0.1	8.63	50.00	LINR
Acetone	92.788139	100.00000	0.1177245	0.1	7.21	50.00	LINR
Benzene	1.2370000	1.2433907	1.2433907	0.5	-0.52	50.00	AVRG
Bromobenzene	0.8340000	0.7823363	0.7823363	0.1	6.19	50.00	AVRG
Bromochloromethane	0.3050000	0.2929180	0.2929180	0.1	3.96	50.00	AVRG
Bromodichloromethane	0.4830000	0.4760273	0.4760273	0.2	1.44	50.00	AVRG
Bromoform	0.2420000	0.2284303	0.2284303	0.1	5.61	50.00	AVRG
Bromomethane	49.595555	50.000000	0.5213276	0.1	0.81	50.00	LINR
Carbon Disulfide	1.1780000	1.2313017	1.2313017	0.1	-4.52	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2105068

Instrument ID: VOA6 Calibration Date: 05/18/21 Time: 2140

Lab File ID: X051830 Init. Calib. Date(s): 05/18/21 05/18/21

Init. Calib. Times: 1123 1452

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
Carbon Tetrachloride	0.4360000	0.4063831	0.4063831	0.1	6.79	50.00	AVRG
Chlorobenzene	0.9800000	0.9534663	0.9534663	0.5	2.71	50.00	AVRG
Chloroethane	0.3780000	0.3990408	0.3990408	0.1	-5.57	50.00	AVRG
Chloroform	1.0620000	1.0443922	1.0443922	0.2	1.66	50.00	AVRG
Chloromethane	51.536569	50.000000	0.5559025	0.1	-3.07	50.00	LINR
cis-1,2-Dichloroethene	0.5760000	0.5576641	0.5576641	0.1	3.18	50.00	AVRG
Dibromochloromethane	0.3900000	0.3897324	0.3897324	0.1	0.07	50.00	AVRG
Dichlorodifluoromethane	47.549882	50.000000	0.5970457	0.1	4.90	50.00	LINR
Ethylbenzene	0.4840000	0.4864456	0.4864456	0.1	-0.50	50.00	AVRG
Hexachlorobutadiene	43.157925	50.000000	0.2561790	0.1	13.68	50.00	LINR
Isopropylbenzene	1.4800000	1.4972743	1.4972743	0.1	-1.17	50.00	AVRG
m,p-Xylenes	0.6240000	0.6437893	0.6437893	0.1	-3.17	50.00	AVRG
Methylene Chloride	0.5010000	0.5092740	0.5092740	0.1	-1.65	50.00	AVRG
n-Butylbenzene	2.3480000	2.2569174	2.2569174	0.5	3.88	50.00	AVRG
n-Propylbenzene	3.5410000	3.4825319	3.4825319	0.1	1.65	50.00	AVRG
Naphthalene	40.031482	50.000000	0.5182189	0.2	19.94	50.00	LINR
o-Xylene	0.6070000	0.6032678	0.6032678	0.3	0.61	50.00	AVRG
sec-Butylbenzene	2.9310000	2.8187700	2.8187700	0.1	3.83	50.00	AVRG
Vinyl Chloride	0.6040000	0.5408004	0.5408004	0.1	10.46	50.00	AVRG
1,2,3-Trichloropropane	47.264496	50.000000	0.6418783	0.1	5.47	50.00	LINR
p-Isopropyltoluene	2.4690000	2.3758630	2.3758630	0.1	3.77	50.00	AVRG
1,2-Dibromo-3-Chloropropane	42.770017	50.000000	5.73e-002	0.05	14.46	50.00	LINR
Freon TF	0.4740000	0.4077750	0.4077750	0.1	13.97	50.00	AVRG
4-Bromofluorobenzene	52.451966	50.000000	0.4951748	0.1	-4.90	50.00	LINR
Dibromofluoromethane	52.896050	50.000000	0.5890850	0.1	-5.79	50.00	LINR
Toluene-d8	51.251332	50.000000	1.2596030	0.1	-2.50	50.00	LINR
1,2-Dichloroethane-d4	53.420567	50.000000	0.6939279	0.1	-6.84	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050689

Lab File ID (Standard): X051808 Date Analyzed: 05/18/21

Instrument ID: VOA6 Time Analyzed: 1349

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1(DCB) AREA #	RT #	IS2(CBZ) AREA #	RT #	IS3(DFB) AREA #	RT #
	12 HOUR STD	234223	9.66	443934	7.67	462076	4.96
	UPPER LIMIT	468446	10.16	887868	8.17	924152	5.46
	LOWER LIMIT	117112	9.16	221967	7.17	231038	4.46
	CLIENT SAMPLE NO.						
01	VLCSW-210518	217306	9.66	435248	7.67	454349	4.96
02	VBLKW-210518	195367	9.66	441438	7.67	483775	4.96
03	HS21050689-01	170210	9.66	397473	7.67	463936	4.96
04	HS21050689-02	170800	9.66	391992	7.67	449031	4.96
05	HS21050689-01MS	227275	9.66	455044	7.67	481210	4.96
06	HS21050689-01MSD	222997	9.66	456259	7.67	491541	4.96
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DFB) = 1,4-Difluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050689

Lab File ID (Standard): X051808 Date Analyzed: 05/18/21

Instrument ID: VOA6 Time Analyzed: 1349

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	271623	4.18				
	UPPER LIMIT	543246	4.68				
	LOWER LIMIT	135812	3.68				
	CLIENT SAMPLE NO.						
01	VLCSW-210518	284418	4.18				
02	VBLKW-210518	313668	4.18				
03	HS21050689-01	304264	4.18				
04	HS21050689-02	288067	4.18				
05	HS21050689-01MS	309593	4.18				
06	HS21050689-01MSD	314237	4.18				
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051801.D

Date : 18-MAY-2021 11:02

Client ID: BFB

Instrument: voa6.i

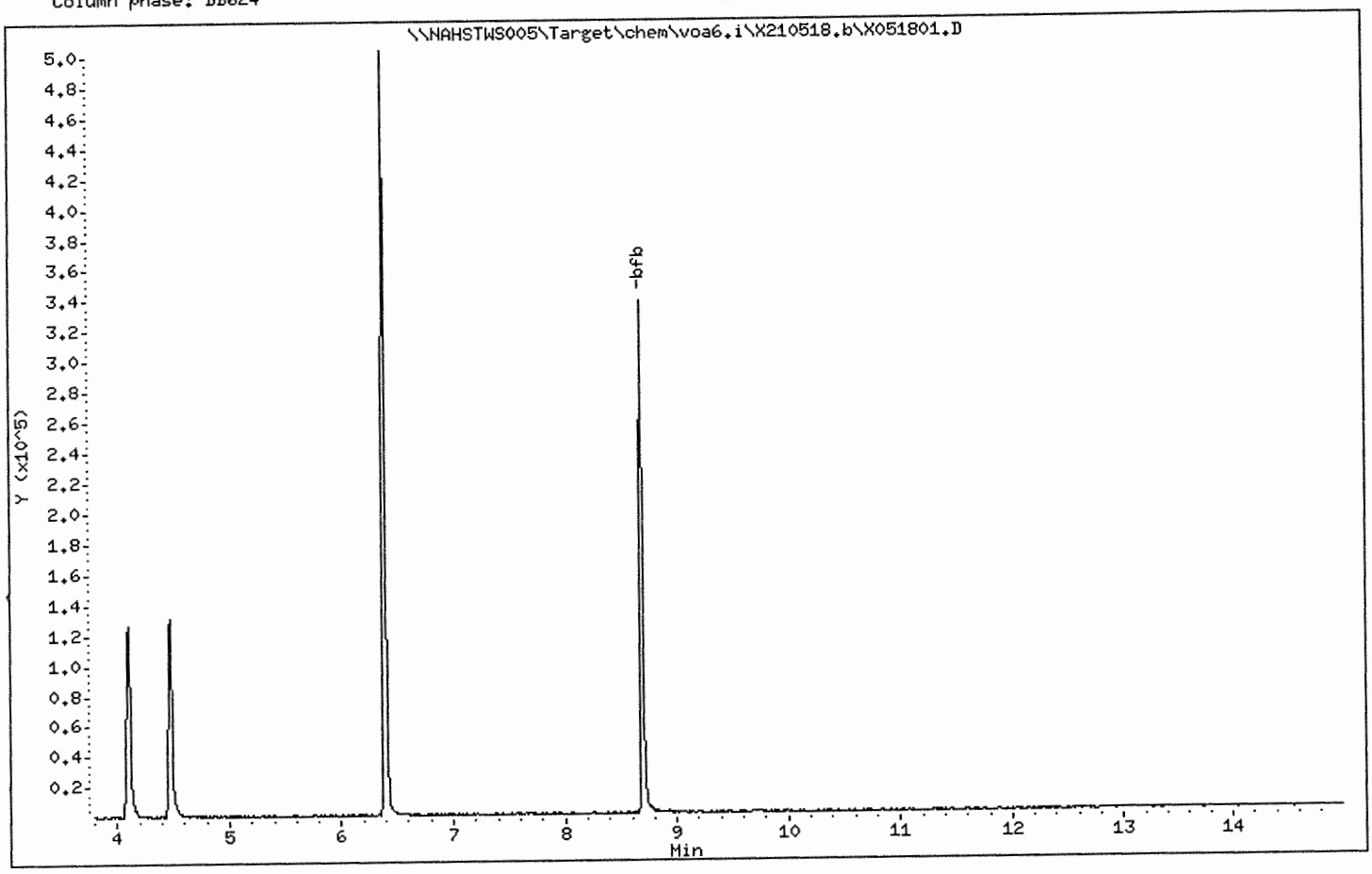
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051801.D

Date : 18-MAY-2021 11:02

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

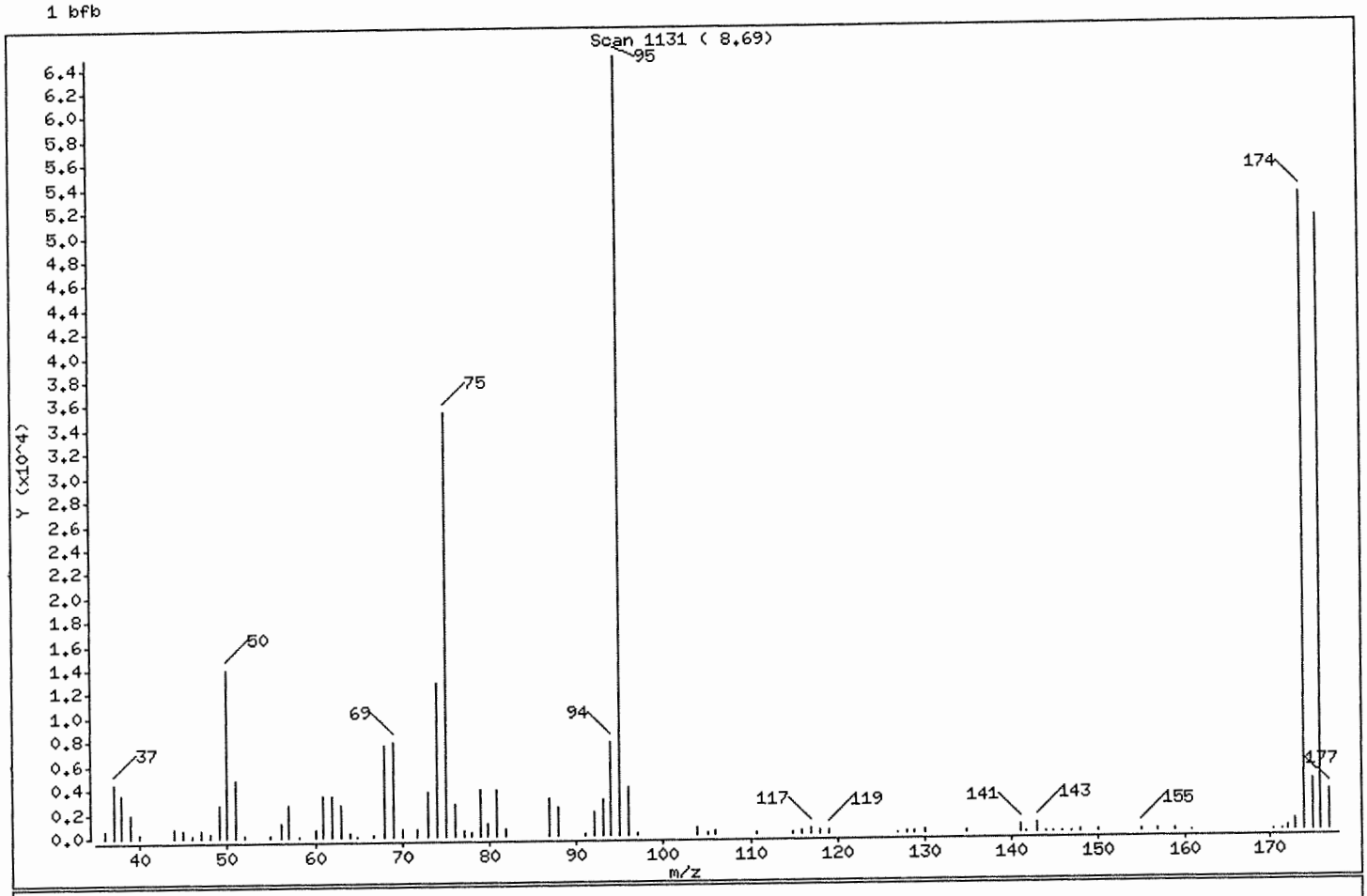
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.57
75	30.00 - 60.00% of mass 95	54.58
96	5.00 - 9.00% of mass 95	6.22
173	Less than 2.00% of mass 174	1.30 (1.59)
174	Greater than 50.00% of mass 95	81.67
175	5.00 - 9.00% of mass 174	6.39 (7.82)
176	95.00 - 101.00% of mass 174	78.52 (96.15)
177	5.00 - 9.00% of mass 176	5.15 (6.56)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051801.D

Date : 18-MAY-2021 11:02

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X051801.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 83

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	659	63.00	2721	92.00	1901	141.70	64
37.00	4492	64.00	282	93.00	2997	142.80	715
38.00	3512	64.80	58	94.00	7815	143.90	60
39.00	1875	66.80	141	95.00	64840	144.80	50
40.00	367	68.00	7559	96.00	4033	145.80	52
44.00	753	69.00	7848	97.00	80	146.80	54
45.00	666	70.10	653	103.90	627	147.90	169
46.00	85	71.80	523	105.00	166	149.90	76
47.00	657	73.00	3762	105.90	293	154.90	186
48.00	369	74.00	12856	110.80	120	156.80	95
49.00	2757	75.00	35392	114.90	109	158.80	137
50.00	13984	76.00	2705	115.90	319	160.80	61
51.00	4819	77.00	459	116.90	497	170.50	59
52.00	122	77.90	266	118.00	279	171.40	59
54.90	202	78.90	3898	118.90	355	172.10	229
56.10	1223	79.90	1045	126.90	66	172.90	844
57.00	2742	80.90	3915	128.00	208	173.90	52952
58.20	65	81.90	608	128.70	126	174.90	4142
60.00	659	86.90	3136	129.90	279	175.90	50912
61.00	3477	87.90	2433	134.80	103	176.90	3338
62.00	3463	90.90	216	140.90	646		

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051802.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051802.D
Lab Smp Id: VSDT000.25 Client Smp ID: VSTD000.25
Inj Date : 18-MAY-2021 11:23
Operator : PC Inst ID: voa6.i
Smp Info : VSDT000.25;VSTD000.25;1;1;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 14:52 Cal File: X051811.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

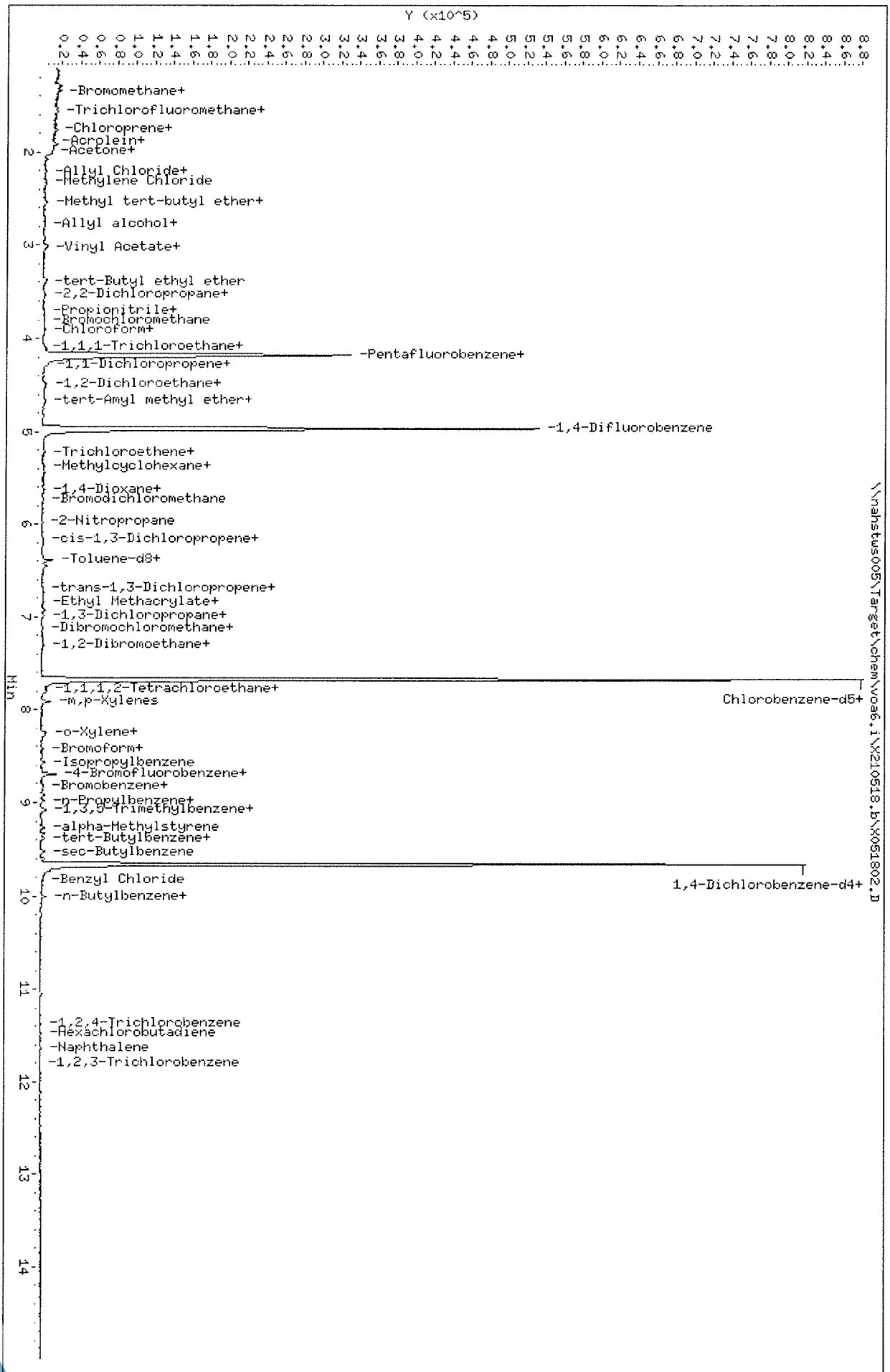
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	259430	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	431449	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	398320	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	184412	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	2365	0.25000	(Ta)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	5204	0.25000	1.50(a)
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	1710	0.25000	0.36(a)
$	48 Toluene-d8	98	6.388	6.388	(0.833)	6953	0.25000	1.70(a)
	60 1,1,1,2-Tetrachloroethane	131	7.771	7.771	(1.013)	675	0.25000	0.23(a)
	31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	1063	0.25000	0.24(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	589	0.25000	(aM)
	138 Freon TF	101	1.926	1.926	(0.461)	574	0.25000	0.23(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	614	0.25000	0.26(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	1620	0.25000	0.33(aM)
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	700	0.25000	0.26(aM)
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	1580	0.25000	0.42(a)
	93 1,2,3-Trichlorobenzene	180	11.789	11.789	(1.220)	70	0.25000	0.56(aM)
	71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	551	0.25000	(aM)
	90 1,2,4-Trichlorobenzene	180	11.374	11.374	(1.177)	245	0.25000	2.60(aM)
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	2182	0.25000	0.23(a)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	893	0.25000	0.32(a)
	88 1,2-Dichlorobenzene	146	10.006	10.006	(1.036)	1360	0.25000	0.26(a)

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051802.D Page 2
Report Date: 22-Jun-2021 08:20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	1269	0.25000	0.29(a)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	680	0.25000	0.23(aM)
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	2277	0.25000	0.24(a)
83	1,3-Dichlorobenzene	146	9.619	9.619	(0.996)	1349	0.25000	0.25(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1203	0.25000	0.26(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	1848	0.25000	0.59(a)
26	2,2-Dichloropropane	77	3.523	3.523	(0.842)	1125	0.25000	0.26(aM)
24	2-Butanone	43	3.630	3.630	(0.868)	349	0.50000	0.36(aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.930)	2422	0.25000	0.29(a)
52	2-Hexanone	43	7.119	7.119	(0.928)	640	0.50000	0.10(TaM)
77	4-Chlorotoluene	91	9.082	9.082	(0.940)	2995	0.25000	0.31(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2275	0.25000	0.24(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1633	0.50000	0.73(aM)
10	Acetone	43	1.983	1.983	(0.474)	1986	0.50000	(a)
37	Benzene	78	4.519	4.519	(0.909)	3242	0.25000	0.30(a)
74	Bromobenzene	156	8.817	8.817	(0.913)	788	0.25000	0.25(a)
29	Bromochloromethane	128	3.802	3.802	(0.909)	596	0.25000	0.37(aM)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	1099	0.25000	0.26(aM)
66	Bromoform	173	8.415	8.415	(1.097)	229	0.25000	0.11(aM)
6	Bromomethane	94	1.345	1.345	(0.322)	1349	0.25000	0.02(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	3241	0.50000	0.53(aM)
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	1043	0.25000	0.27(aM)
59	Chlorobenzene	112	7.692	7.692	(1.003)	1804	0.25000	0.23(a)
7	Chloroethane	64	1.396	1.396	(0.334)	951	0.25000	0.48(aM)
28	Chloroform	83	3.917	3.917	(0.937)	1662	0.25000	0.30(a)
3	Chloromethane	50	1.080	1.080	(0.258)	1250	0.25000	0.68(aM)
27	cis-1,2-Dichloroethene	96	3.545	3.545	(0.848)	627	0.25000	0.20(aM)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	1190	0.25000	0.25(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	804	0.25000	0.25(a)
44	Dibromomethane	93	5.550	5.550	(1.117)	644	0.25000	0.30(aM)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	789	0.25000	2.31(aM)
61	Ethylbenzene	106	7.799	7.799	(1.017)	684	0.25000	0.17(a)
91	Hexachlorobutadiene	225	11.474	11.474	(1.188)	207	0.25000	3.36(aM)
67	Isopropylbenzene	105	8.559	8.559	(1.116)	2610	0.25000	0.22(a)
62	m,p-Xylenes	106	7.914	7.914	(1.032)	2264	0.50000	0.45(a)
17	Methylene Chloride	84	2.312	2.312	(0.553)	955	0.25000	0.36(a)
87	n-Butylbenzene	91	10.013	10.013	(1.036)	1224	0.25000	0.14(a)
73	n-Propylbenzene	91	8.924	8.924	(0.924)	3266	0.25000	0.25(a)
92	Naphthalene	128	11.639	11.639	(1.205)	140	0.25000	3.15(aM)
63	o-Xylene	106	8.243	8.243	(1.075)	1402	0.25000	0.28(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	2583	0.25000	0.23(a)
64	Styrene	104	8.272	8.272	(1.078)	1817	0.25000	1.95(a)
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	1985	0.25000	0.25(a)
56	Tetrachloroethene	164	6.918	6.918	(0.902)	368	0.25000	0.16(aM)
50	Toluene	91	6.453	6.453	(0.841)	3453	0.25000	0.30(a)
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	513	0.25000	0.20(aM)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	972	0.25000	0.23(aM)
38	Trichloroethene	130	5.221	5.221	(1.050)	865	0.25000	0.30(aM)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	1217	0.25000	0.24(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	1276	0.25000	0.40(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



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Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051803.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051803.D
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Inj Date : 18-MAY-2021 11:43
Operator : PC Inst ID: voa6.i
Smp Info : VSDT000.5;VSTD000.5;1;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 11:23 Cal File: X051802.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

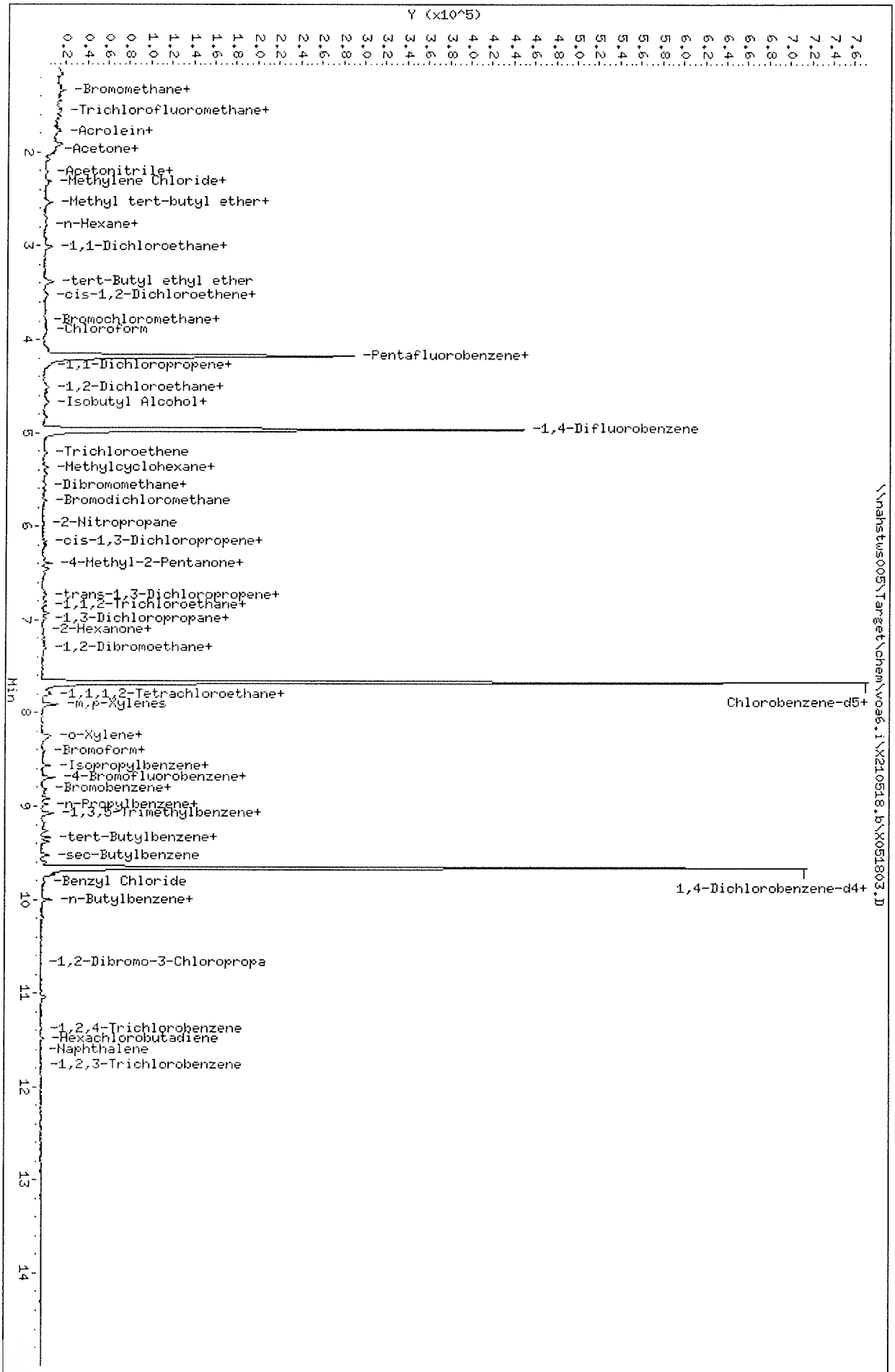
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	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)	226673	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	364110	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	347141	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	155518	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	1965	0.50000	(Ta)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3536	0.50000	1.19(a)
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	1526	0.50000	0.37(aM)
$	48 Toluene-d8	98	6.388	6.388	(0.833)	4554	0.50000	1.53(Ta)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1176	0.50000	0.46(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	1845	0.50000	0.47(a)
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	1276	0.50000	(aM)
	138 Freon TF	101	1.912	1.912	(0.457)	1143	0.50000	0.53(a)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	899	0.50000	0.44(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	2051	0.50000	0.48(Ta)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	1364	0.50000	0.60(aM)
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	1781	0.50000	0.57(a)
	93 1,2,3-Trichlorobenzene	180	11.768	11.768	(1.218)	298	0.50000	0.89(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	851	0.50000	(aMH)
	90 1,2,4-Trichlorobenzene	180	11.381	11.381	(1.178)	425	0.50000	2.75(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	3798	0.50000	0.48(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.672	10.672	(1.105)	63	0.50000	1.89(aM)
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	929	0.50000	0.38(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	2059	0.50000	0.47(a)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	1830	0.50000	0.51(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	1344	0.50000	0.54(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	3626	0.50000	0.46(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	2018	0.50000	0.45(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	1704	0.50000	0.43(aM)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	2775	0.50000	0.85(a)
26	2,2-Dichloropropane	77	3.523	3.523	(0.842)	1844	0.50000	0.49(aM)
24	2-Butanone	43	3.609	3.609	(0.863)	942	1.00000	1.12(aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.930)	4008	0.50000	0.57(a)
52	2-Hexanone	43	7.112	7.112	(0.927)	1113	1.00000	0.48(Ta)
77	4-Chlorotoluene	91	9.082	9.082	(0.940)	3941	0.50000	0.48(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	3707	0.50000	0.48(aM)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1863	1.00000	0.92(a)
10	Acetone	43	1.976	1.976	(0.473)	2121	1.00000	(a)
37	Benzene	78	4.519	4.519	(0.909)	4678	0.50000	0.51(a)
74	Bromobenzene	156	8.810	8.810	(0.912)	1130	0.50000	0.43(a)
29	Bromochloromethane	128	3.788	3.788	(0.906)	680	0.50000	0.49(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	1706	0.50000	0.48(aM)
66	Bromoform	173	8.408	8.408	(1.096)	788	0.50000	0.46(aM)
6	Bromomethane	94	1.338	1.338	(0.320)	1623	0.50000	0.21(a)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	4757	1.00000	0.89(aM)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	1529	0.50000	0.48(aM)
59	Chlorobenzene	112	7.692	7.692	(1.003)	3453	0.50000	0.50(a)
7	Chloroethane	64	1.403	1.403	(0.336)	1092	0.50000	0.63(aM)
28	Chloroform	83	3.910	3.910	(0.935)	2533	0.50000	0.52(a)
3	Chloromethane	50	1.081	1.081	(0.258)	1464	0.50000	0.83(aM)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	1137	0.50000	0.43(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1773	0.50000	0.44(a)
55	Dibromochloromethane	129	7.184	7.184	(0.937)	1032	0.50000	0.38(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	745	0.50000	0.42(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	1498	0.50000	2.58(aM)
61	Ethylbenzene	106	7.807	7.807	(1.018)	1667	0.50000	0.49(a)
91	Hexachlorobutadiene	225	11.474	11.474	(1.188)	285	0.50000	3.47(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	4923	0.50000	0.47(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	3953	1.00000	0.91(a)
17	Methylene Chloride	84	2.305	2.305	(0.551)	985	0.50000	0.43(a)
87	n-Butylbenzene	91	10.006	10.006	(1.036)	3921	0.50000	0.53(a)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	5394	0.50000	0.48(a)
92	Naphthalene	128	11.610	11.610	(1.202)	406	0.50000	3.28(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	2130	0.50000	0.50(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	4374	0.50000	0.47(a)
64	Styrene	104	8.272	8.272	(1.078)	2465	0.50000	2.06(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	3226	0.50000	0.48(a)
56	Tetrachloroethene	164	6.926	6.926	(0.903)	928	0.50000	0.48(a)
50	Toluene	91	6.446	6.446	(0.840)	4354	0.50000	0.43(a)
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	1135	0.50000	0.52(a)
51	trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	1319	0.50000	0.37(a)
38	Trichloroethene	130	5.207	5.207	(1.048)	1104	0.50000	0.45(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	2271	0.50000	0.52(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	1600	0.50000	0.58(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.
H - Operator selected an alternate compound hit.



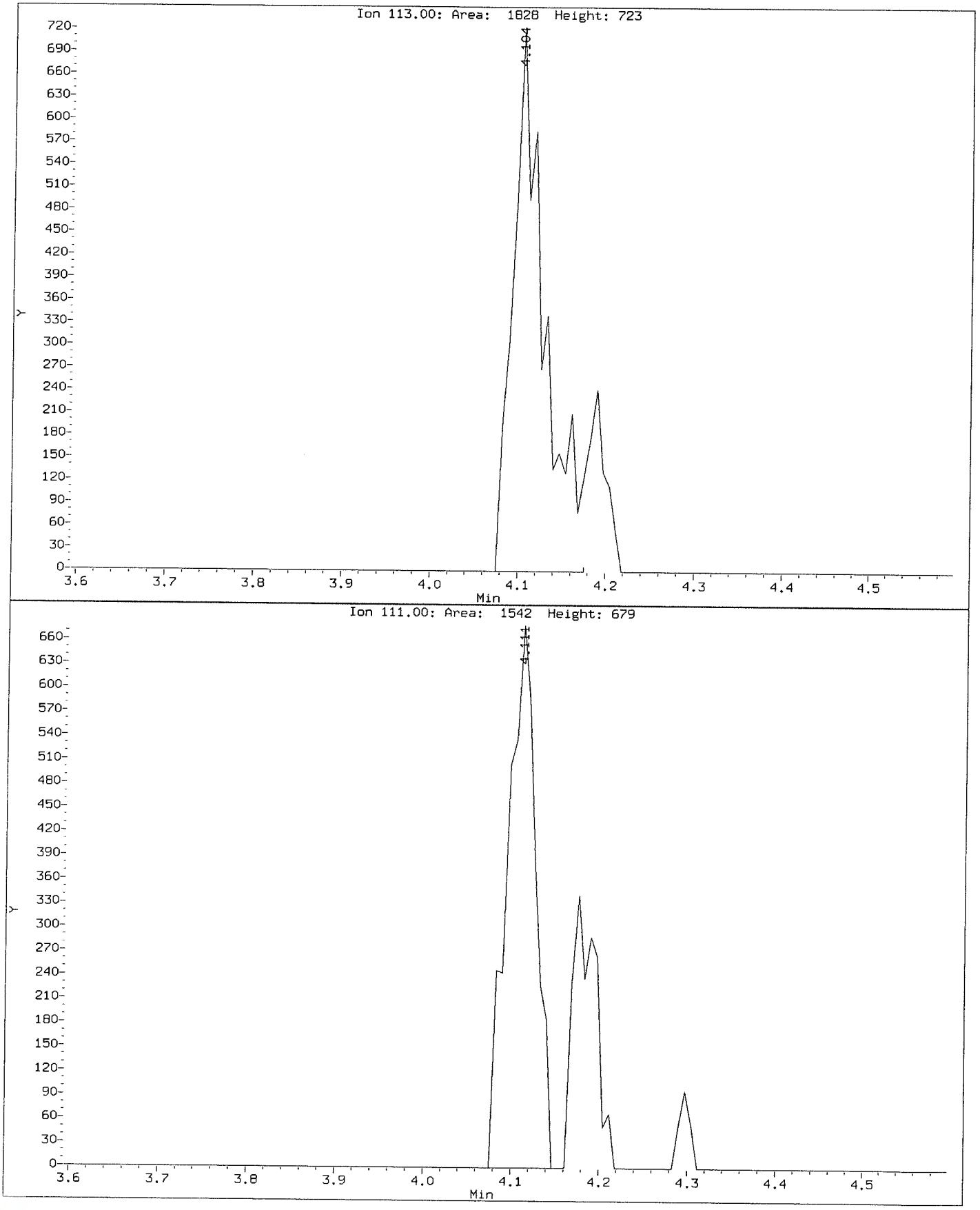
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Purge Volume: 5.0
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Instrument: voa6.i
Operator: PC
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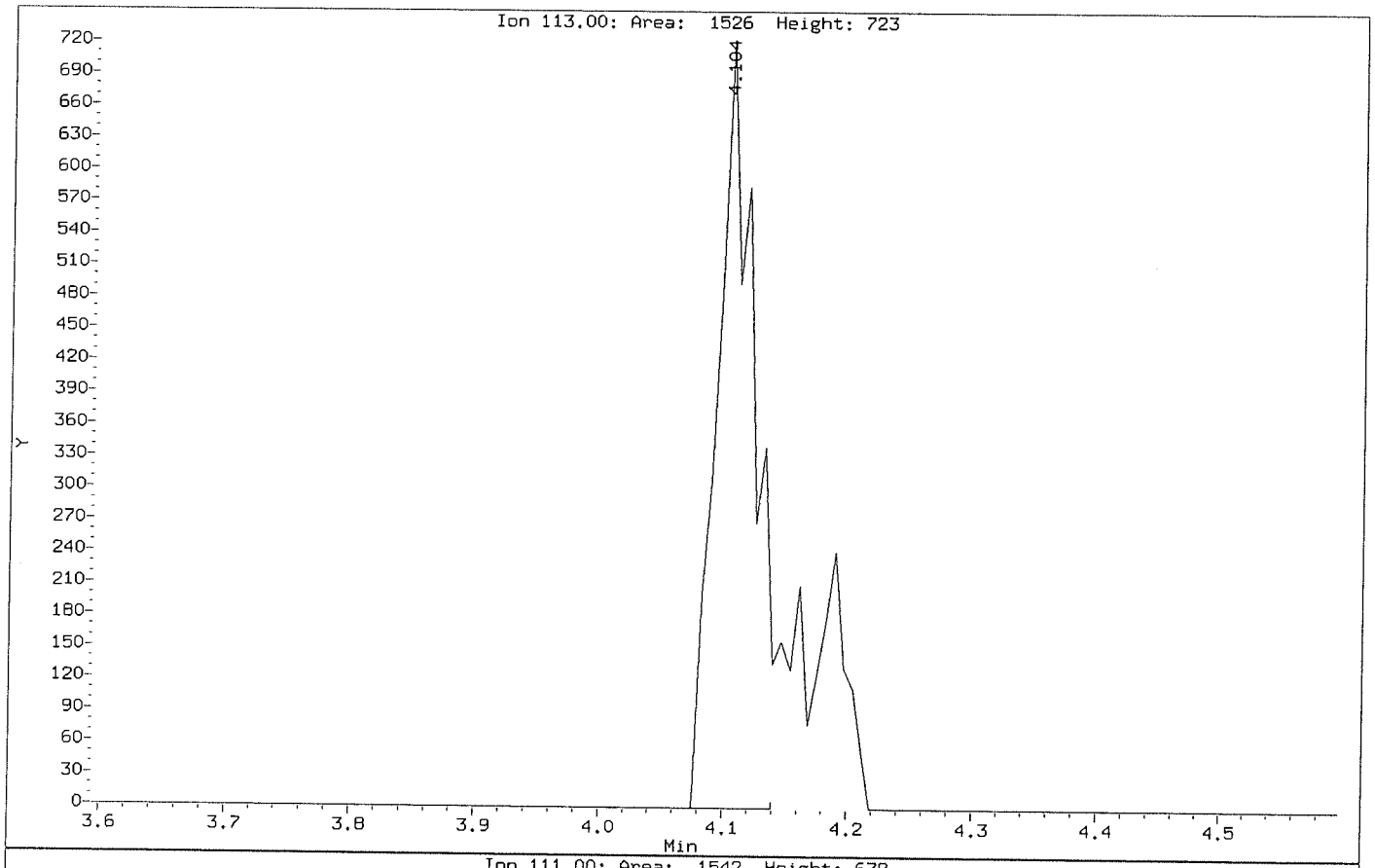
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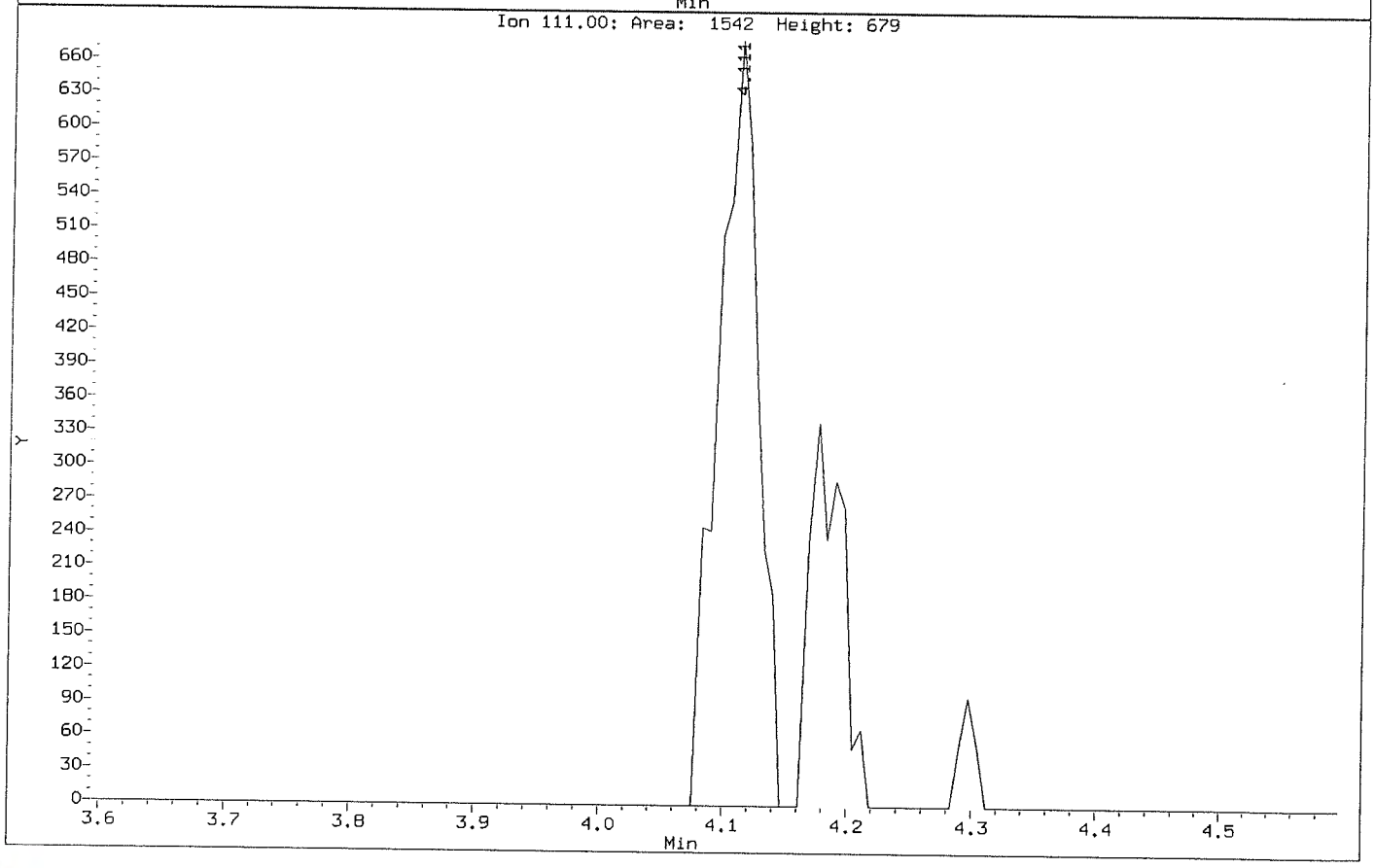
Compound: Dibromofluoromethane
CAS Number: 1868-53-7



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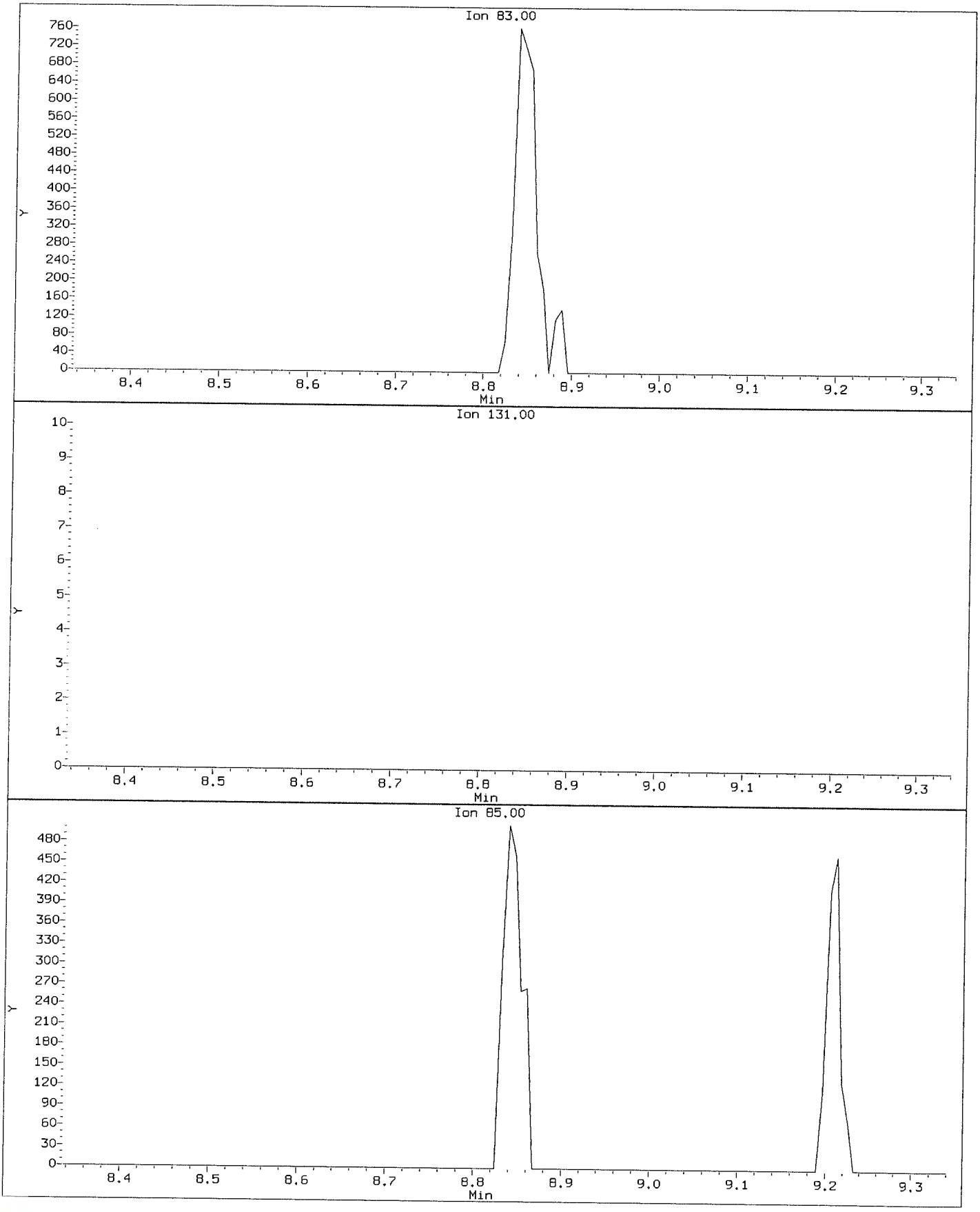
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CAS Number: 1868-53-7





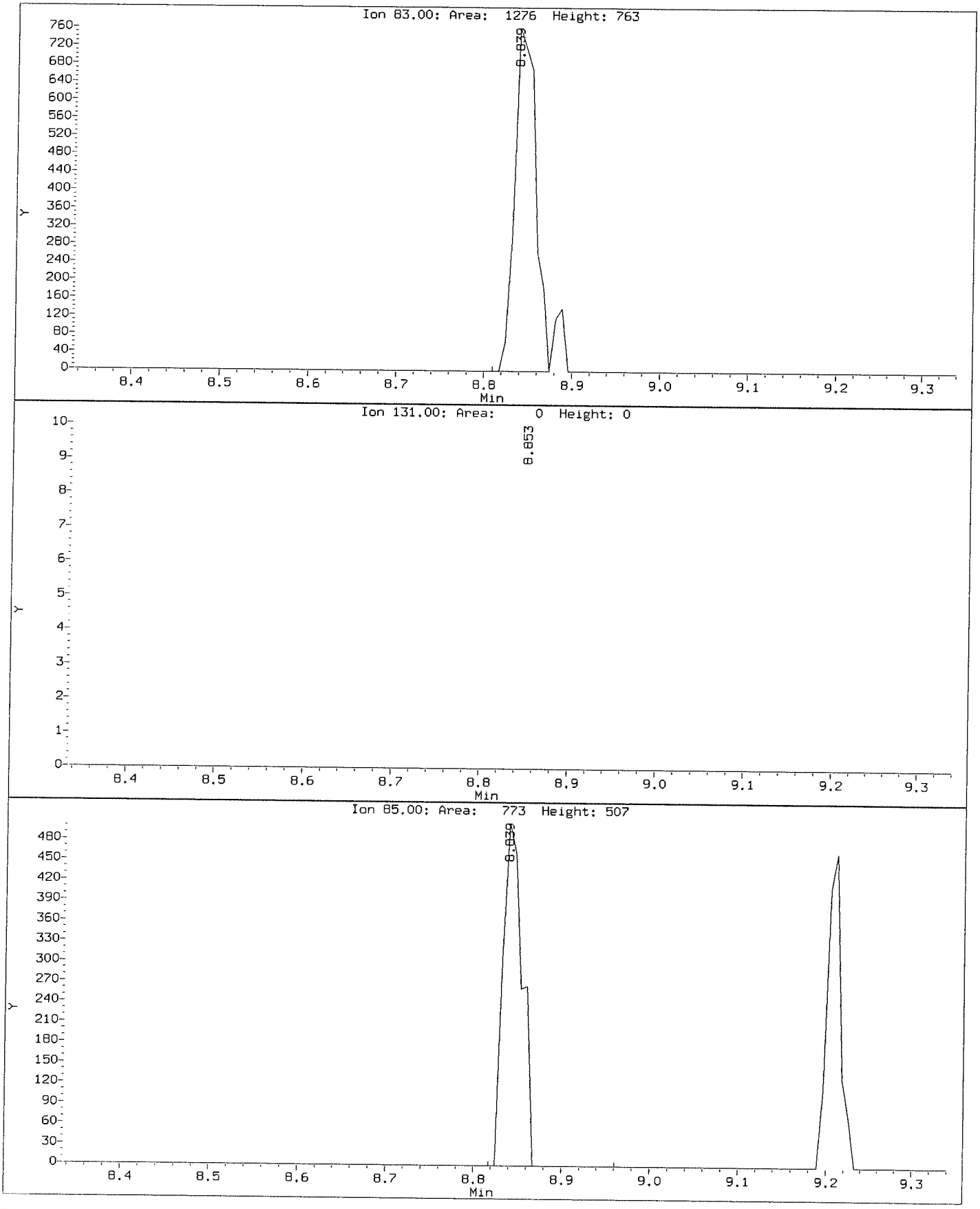
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Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



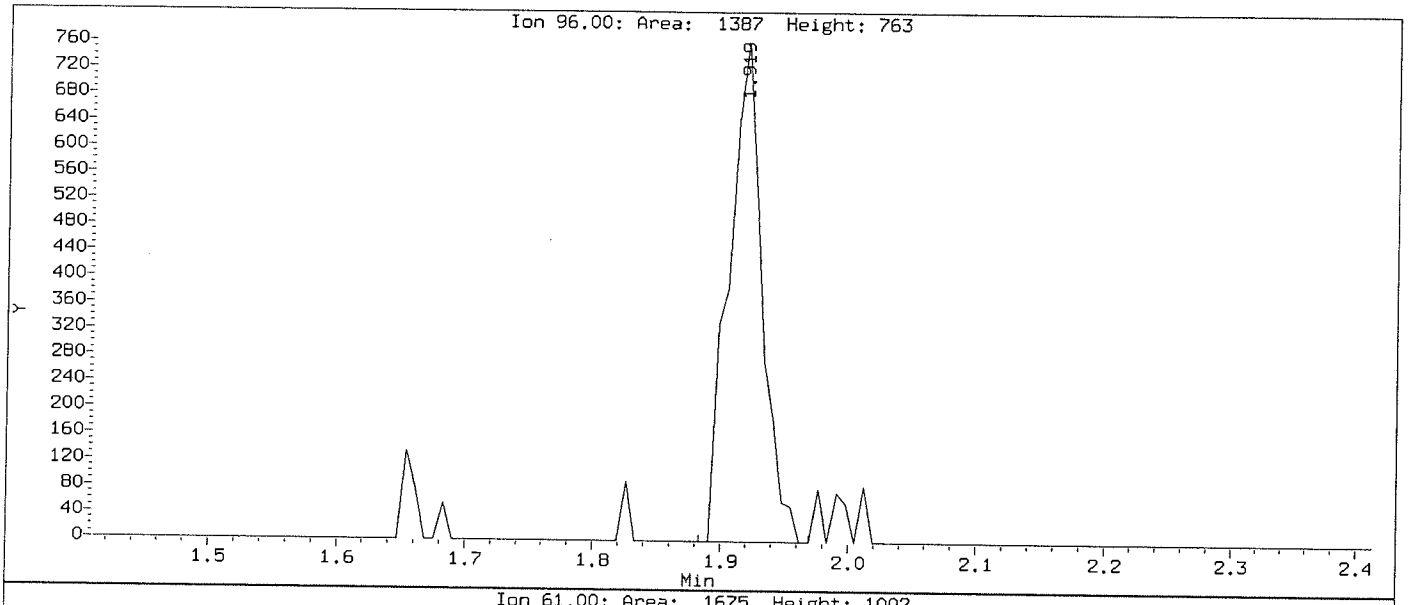
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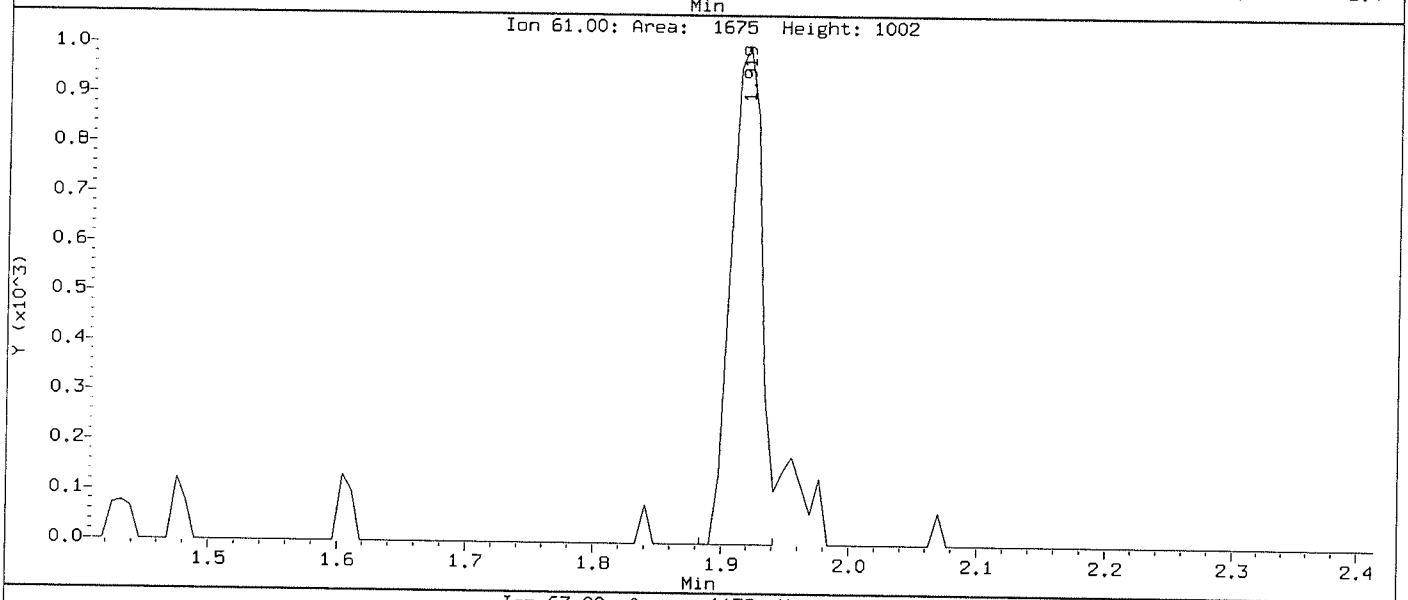
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

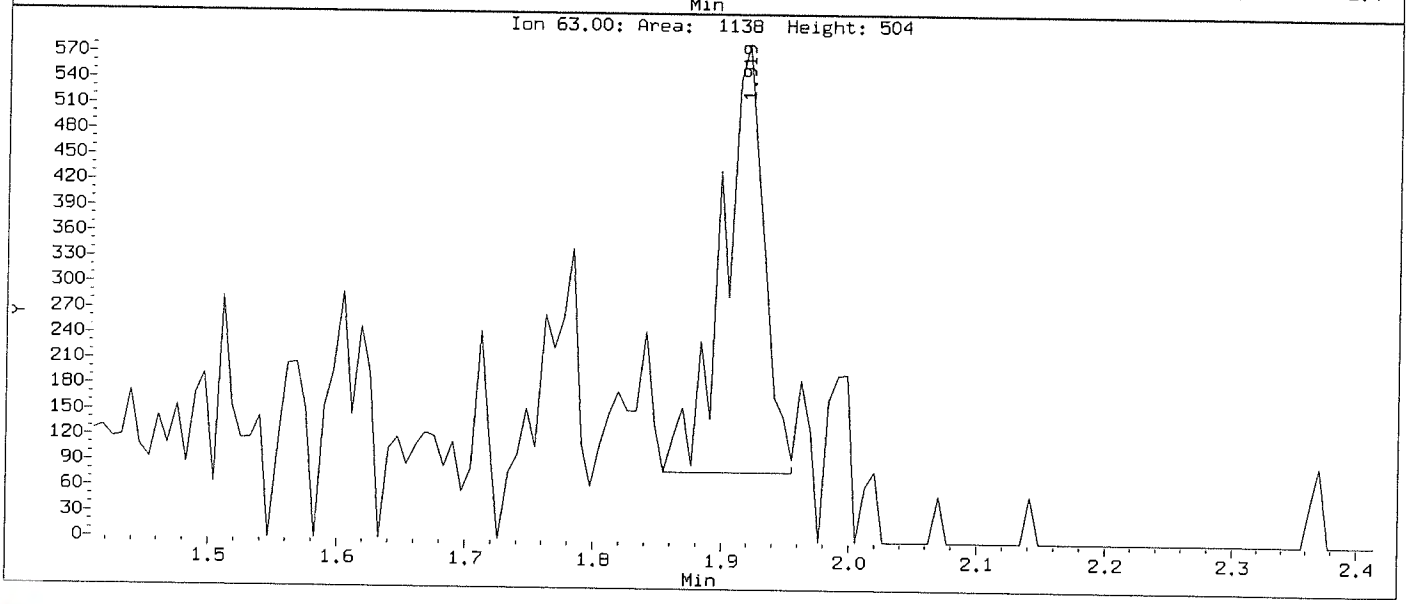


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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

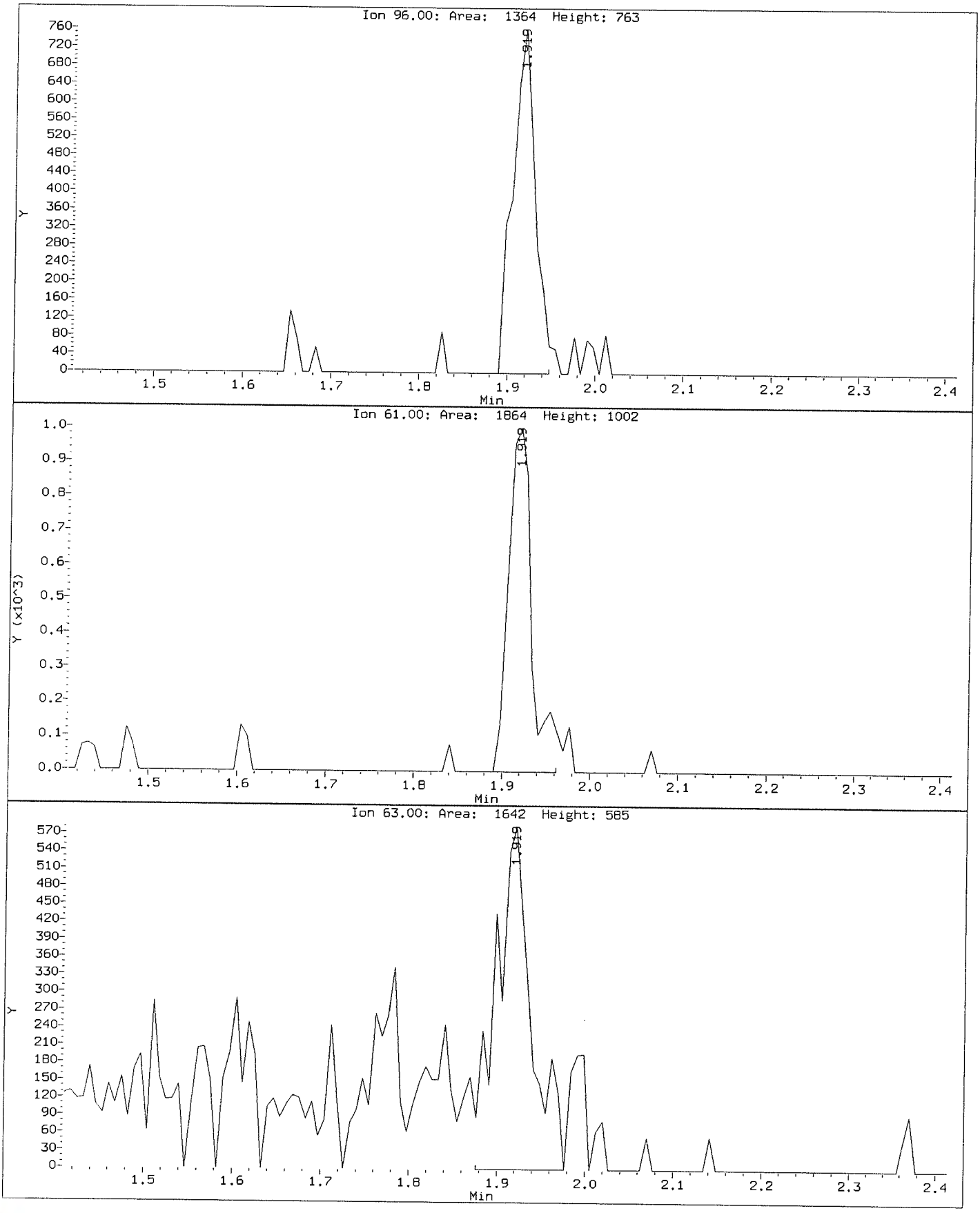






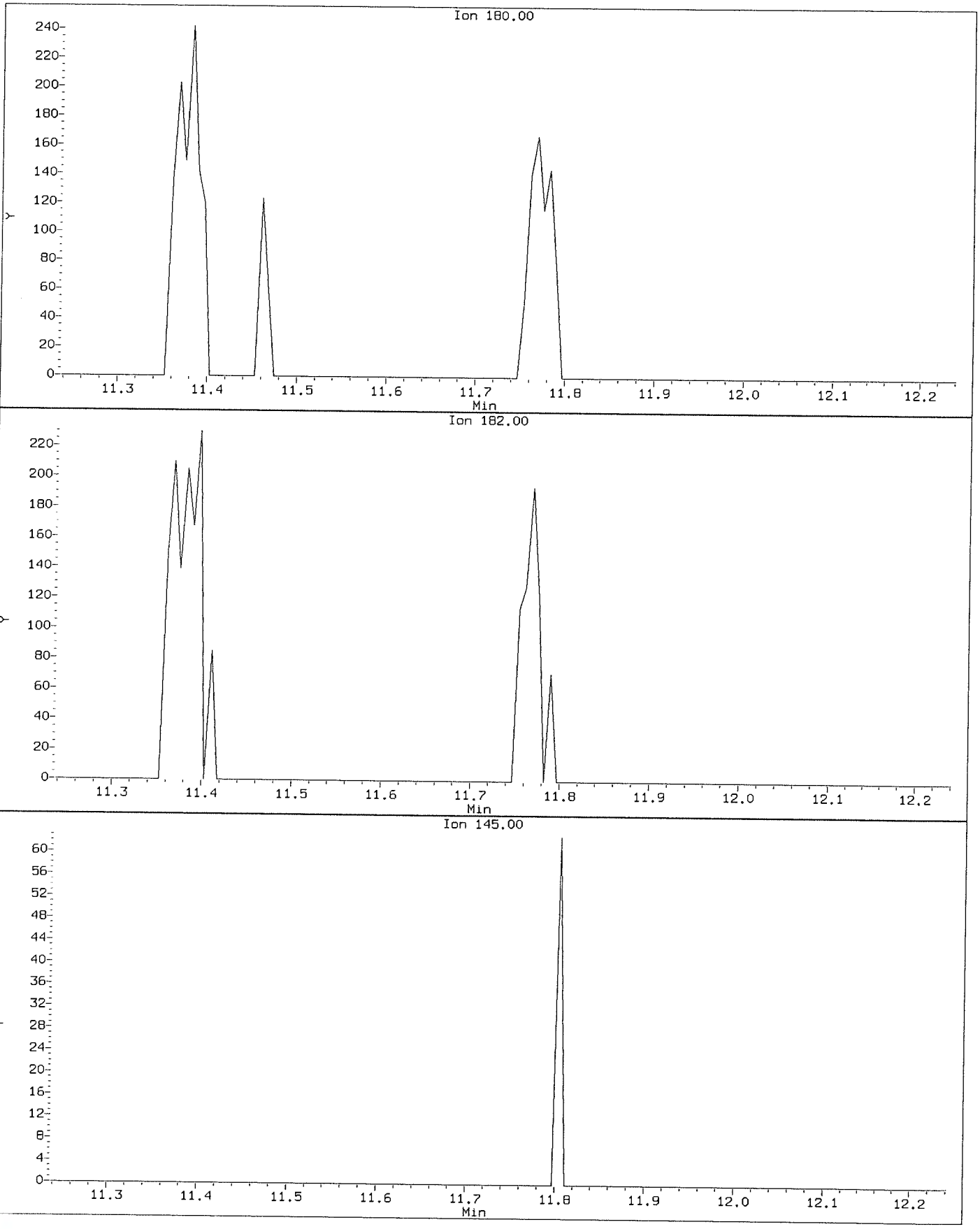
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



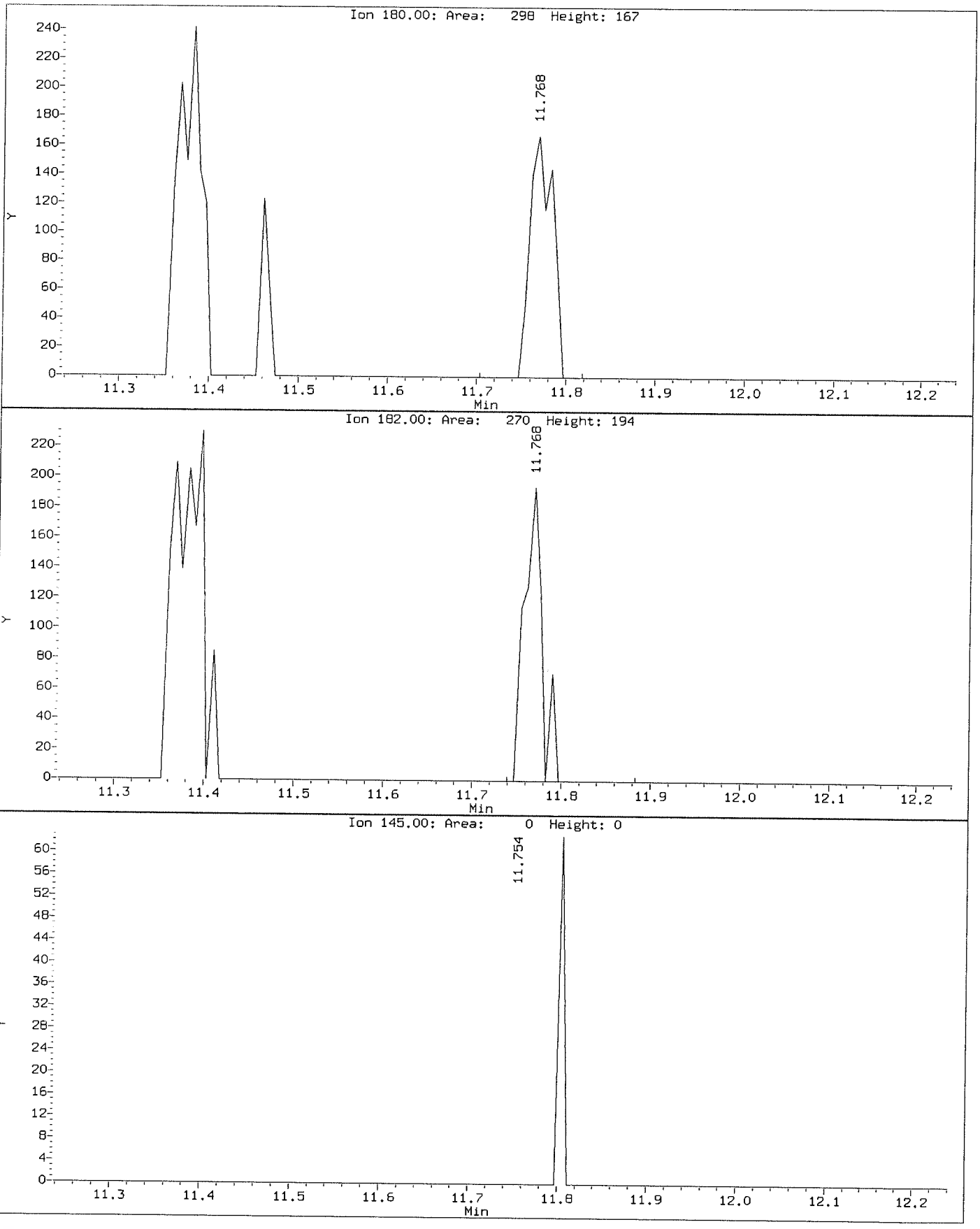
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



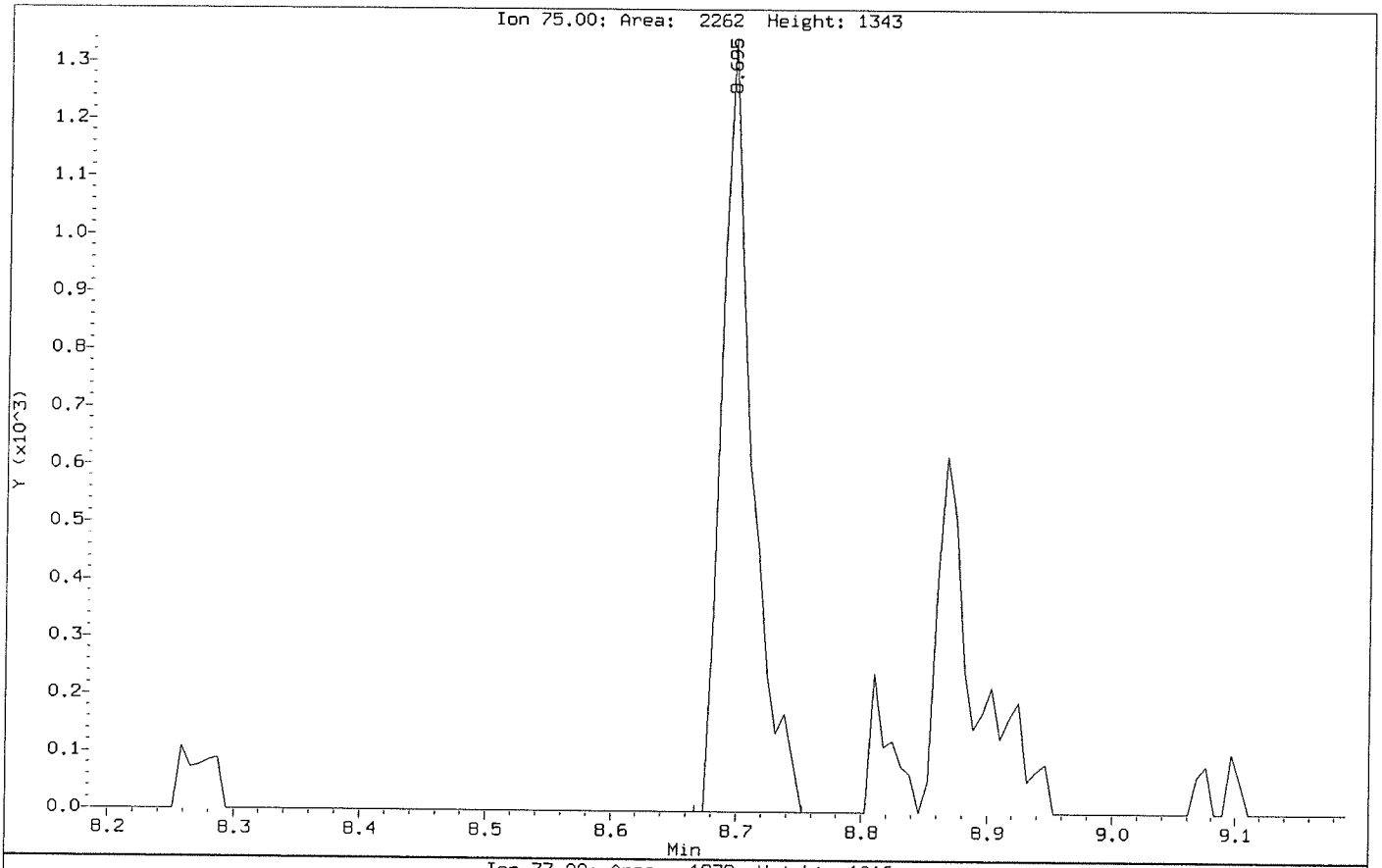
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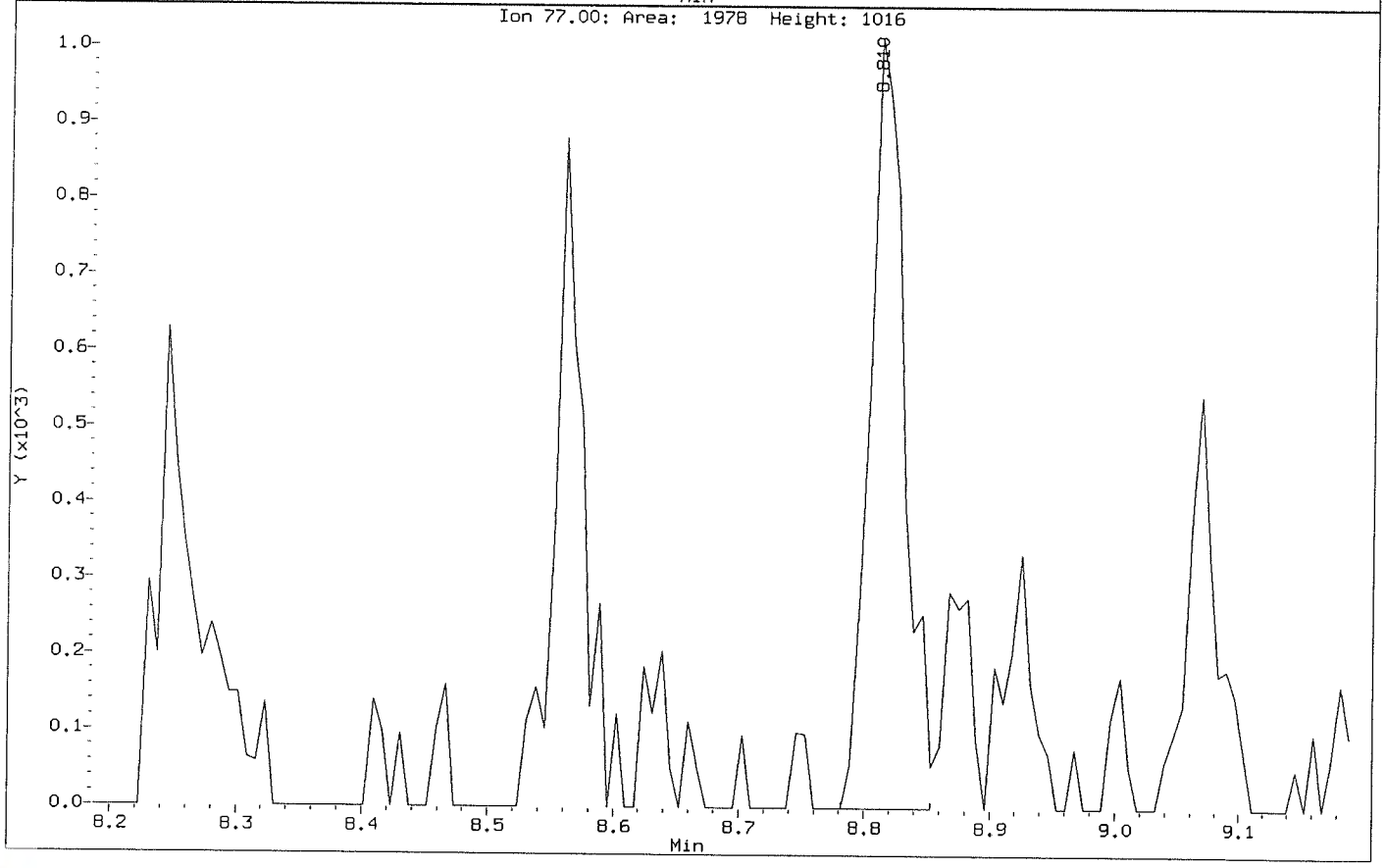
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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Instrument: voa6.i
Client Sample ID: VSTD000.5

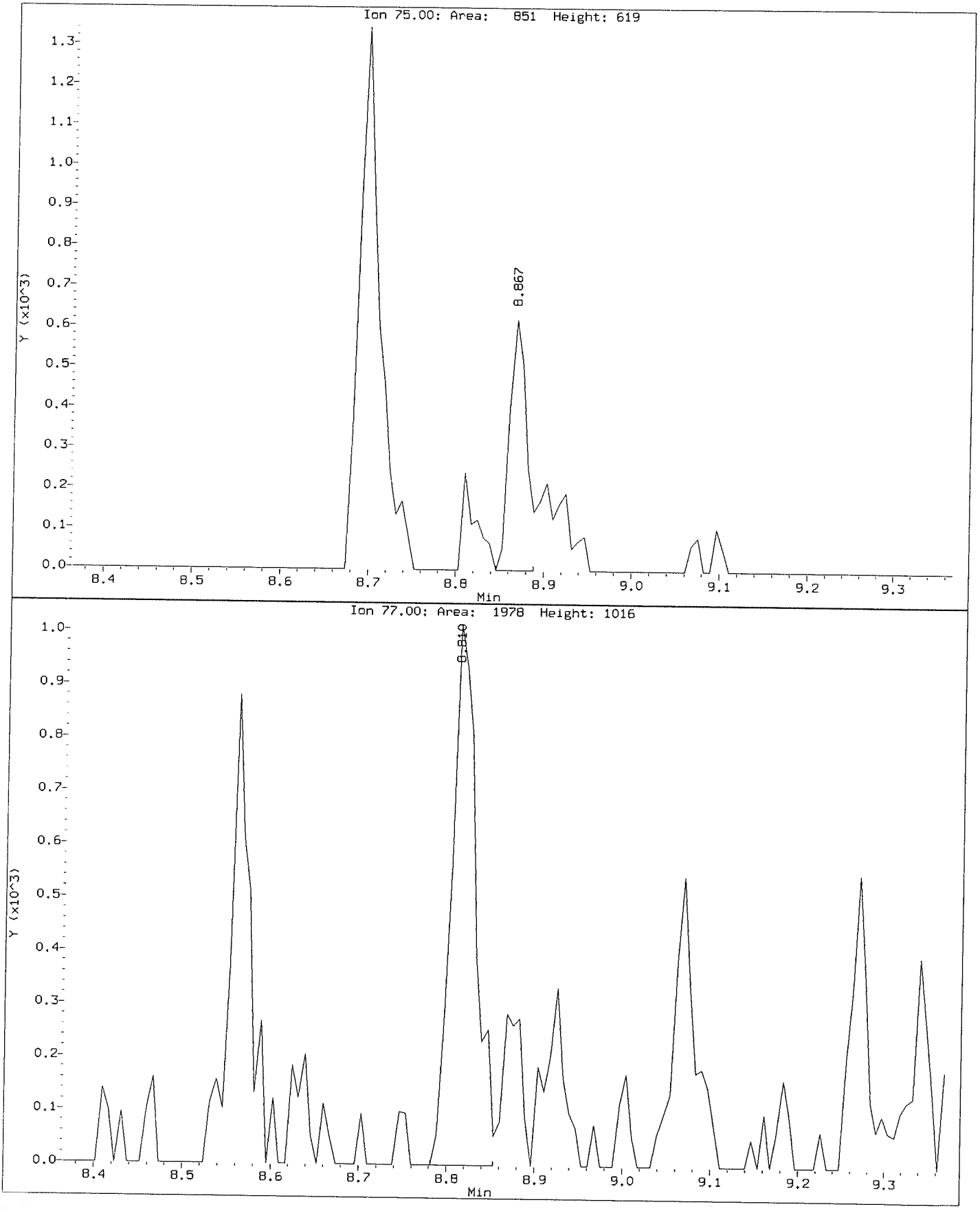
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





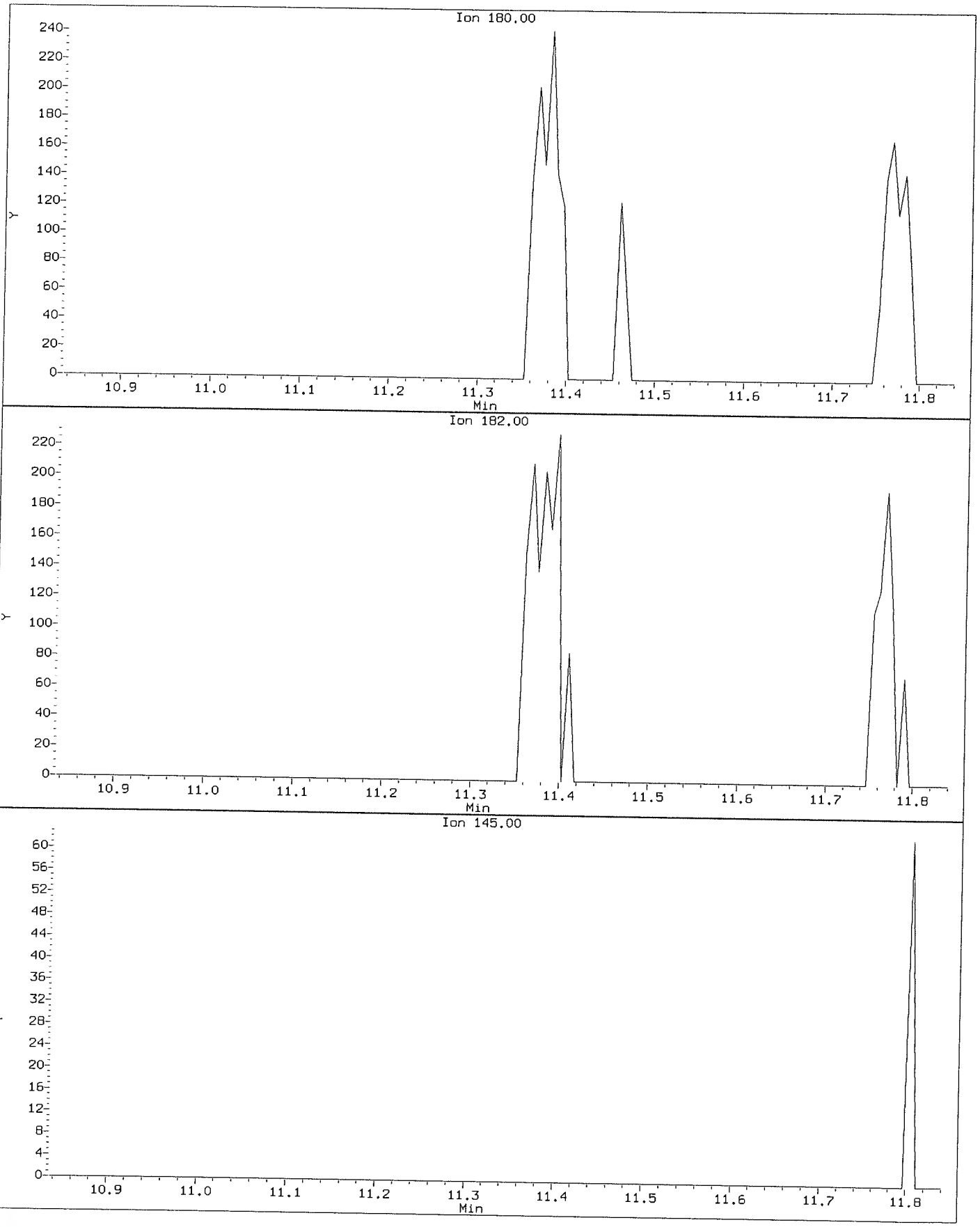
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



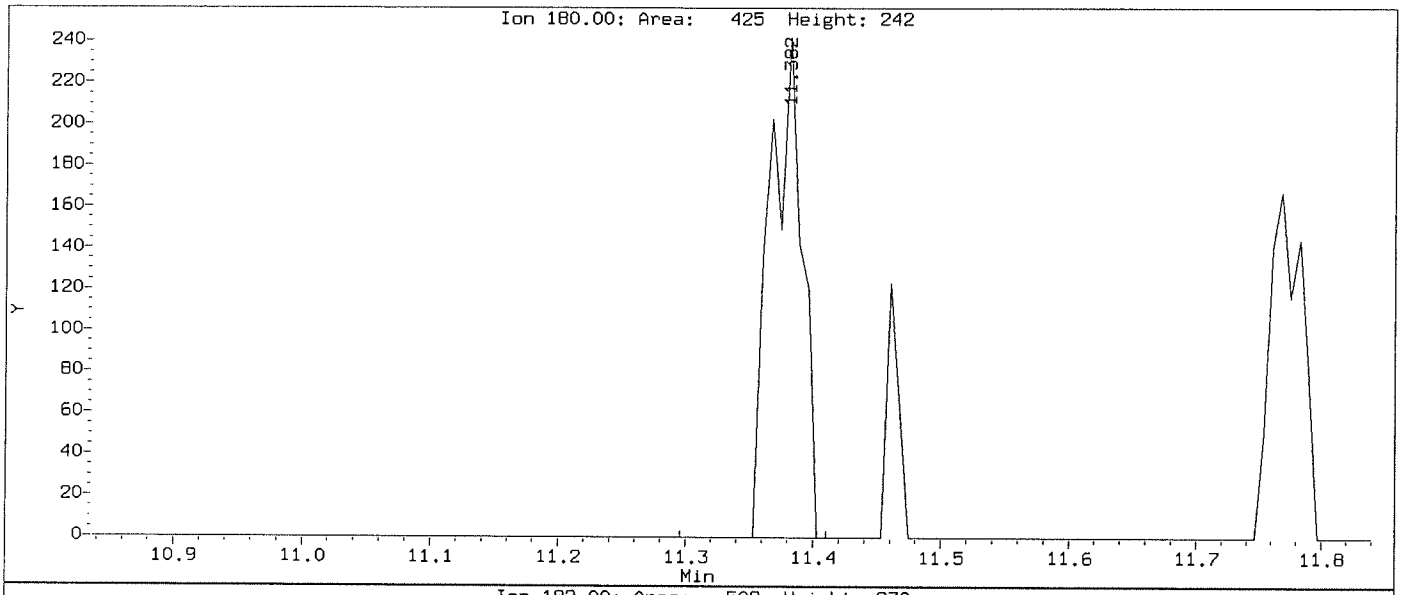
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Client Sample ID: VSTD000.5

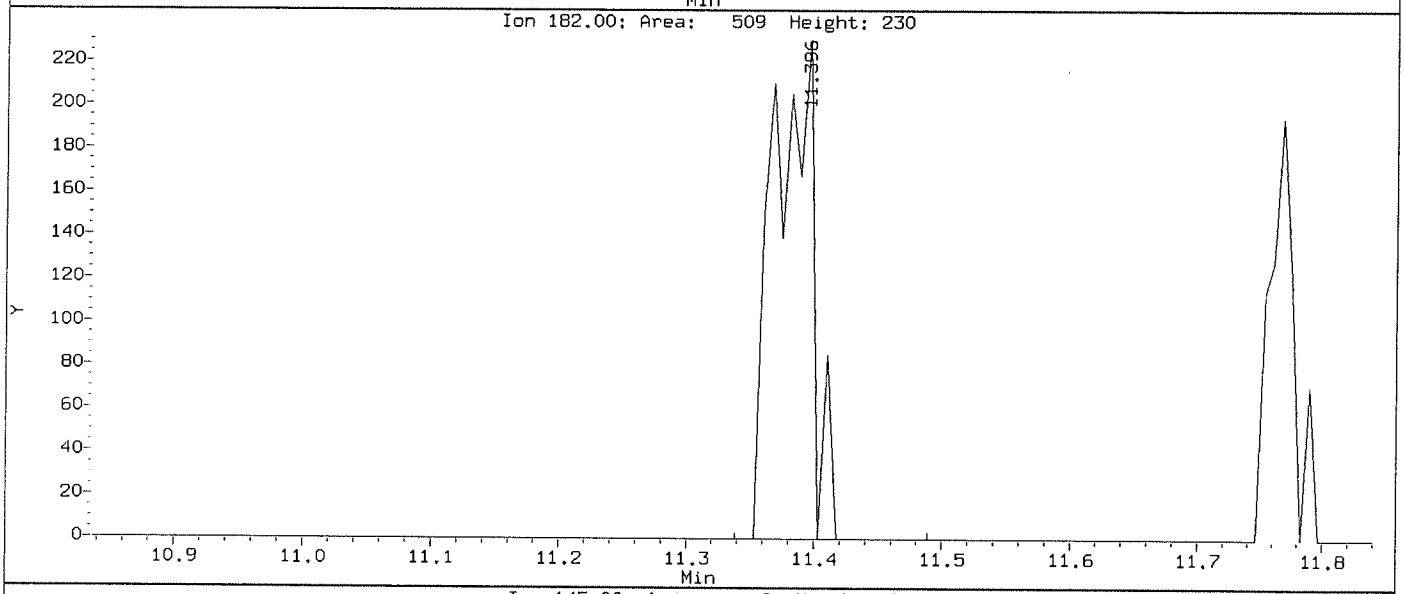
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1

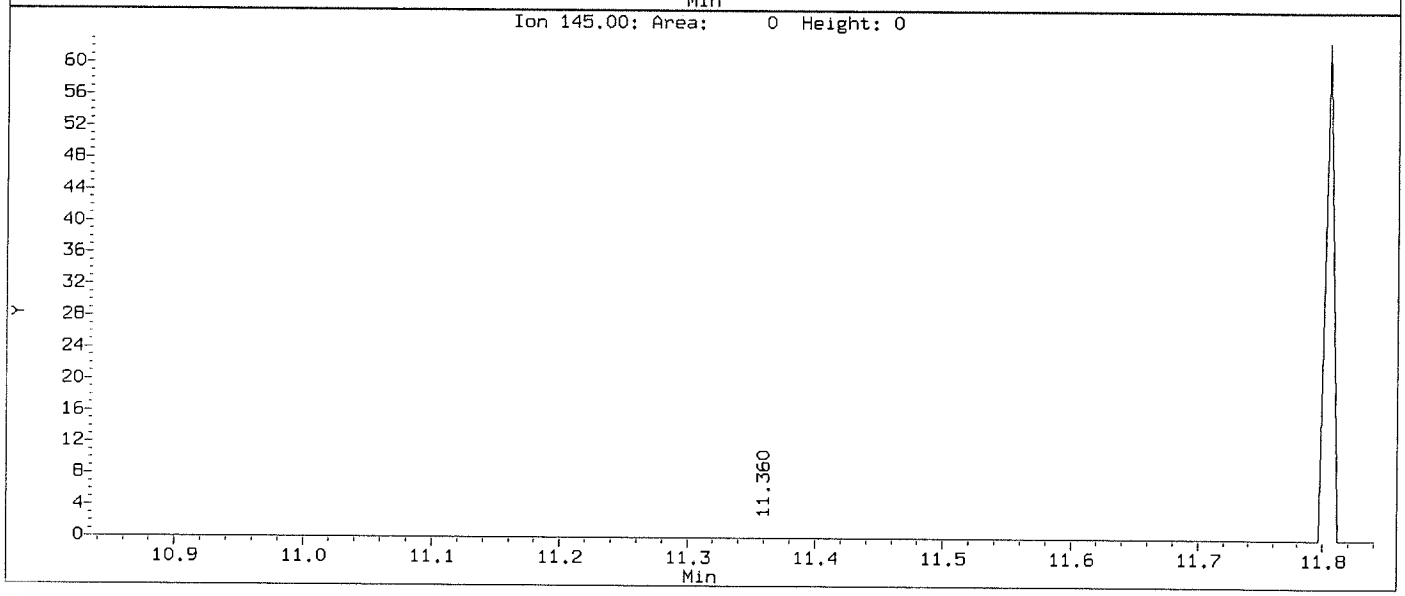


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1

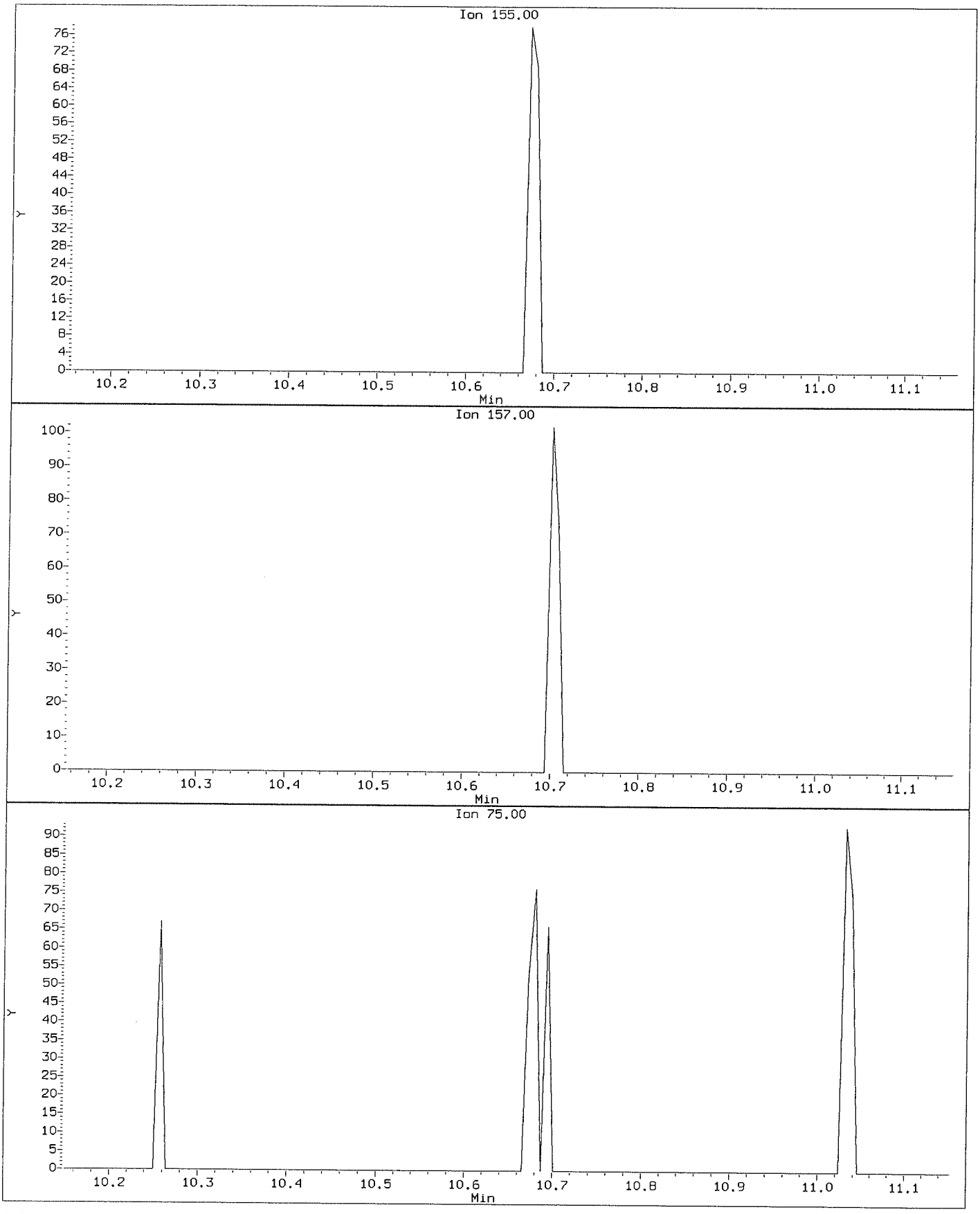






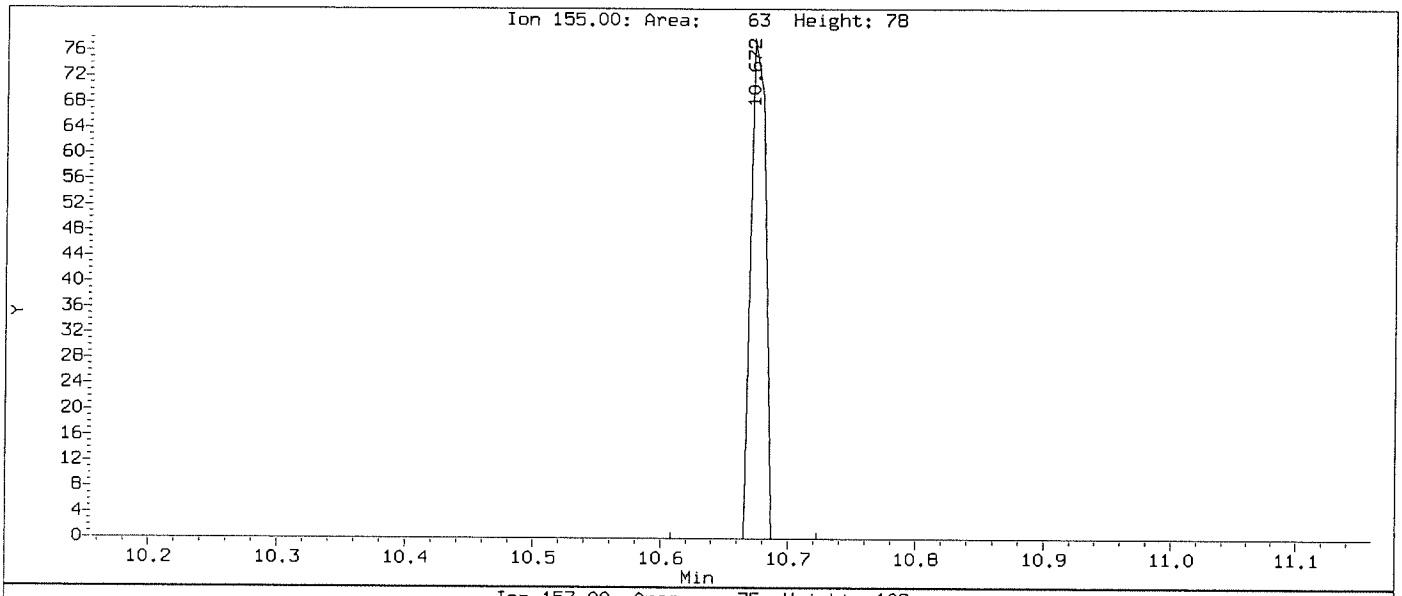
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Client Sample ID: VSTD000.5

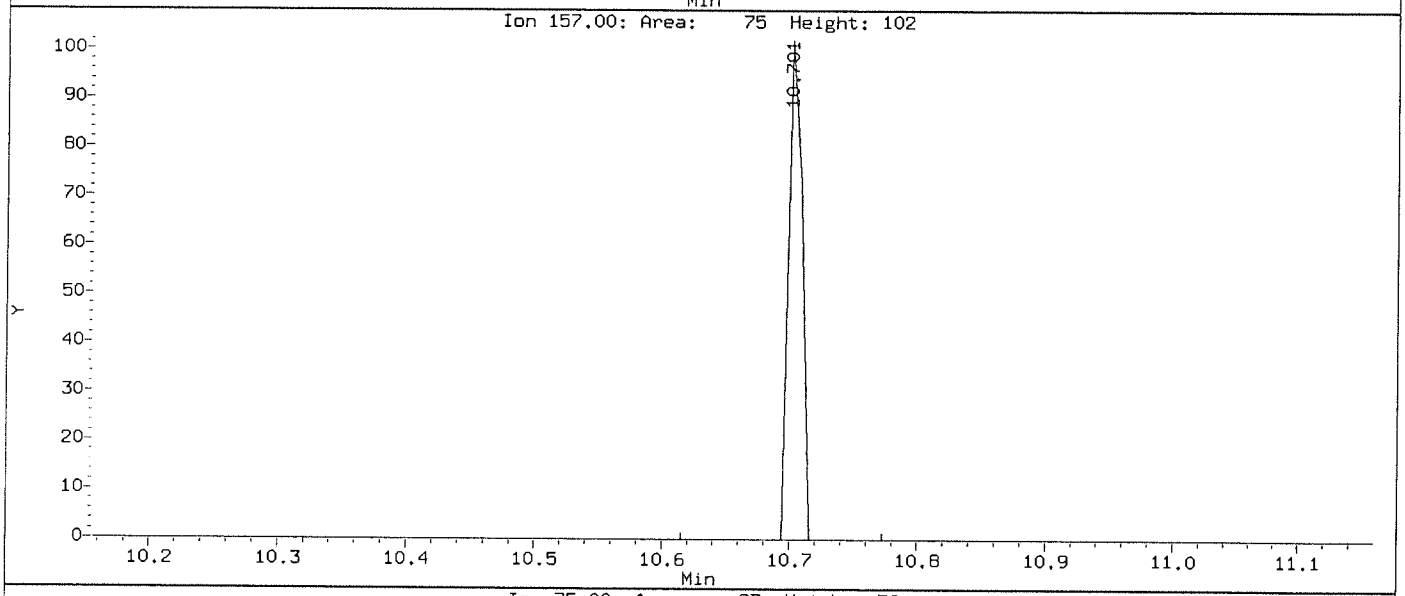
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

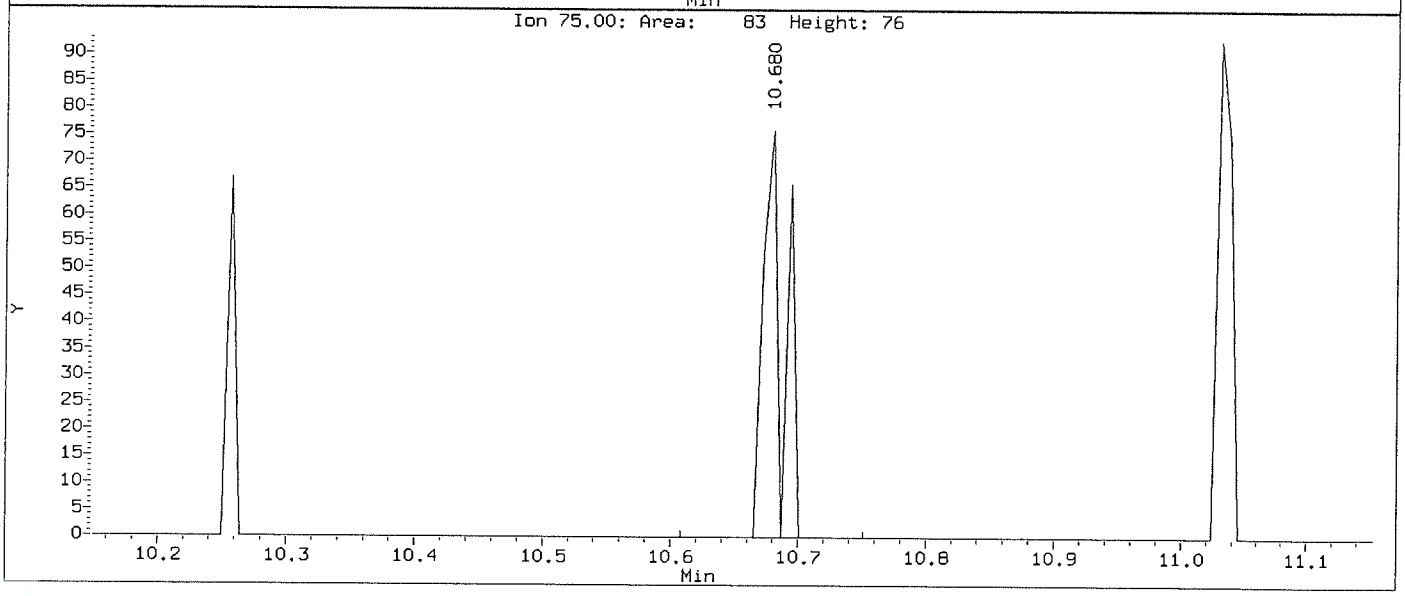


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Injection Date: 18-MAY-2021 11:43
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Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

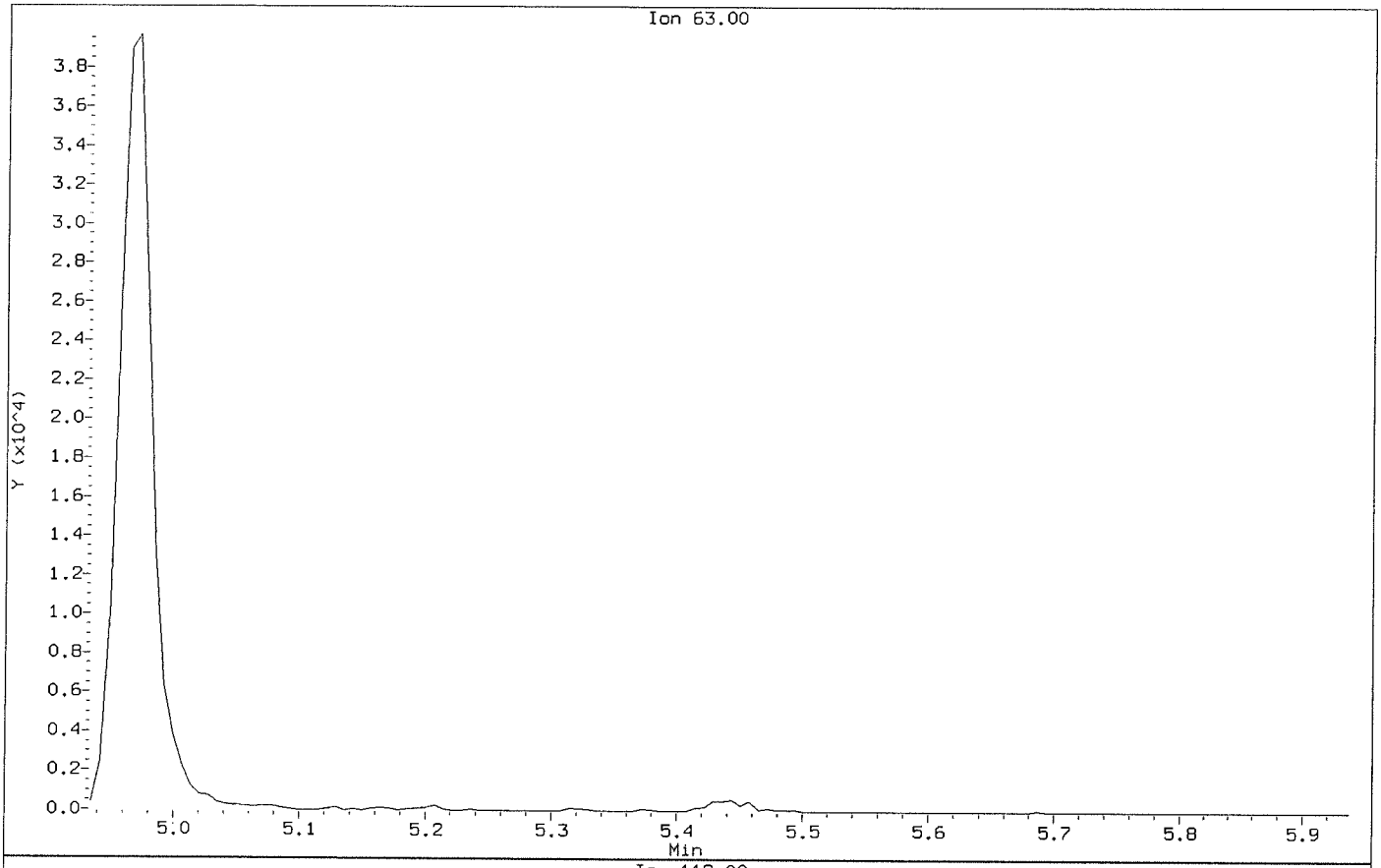


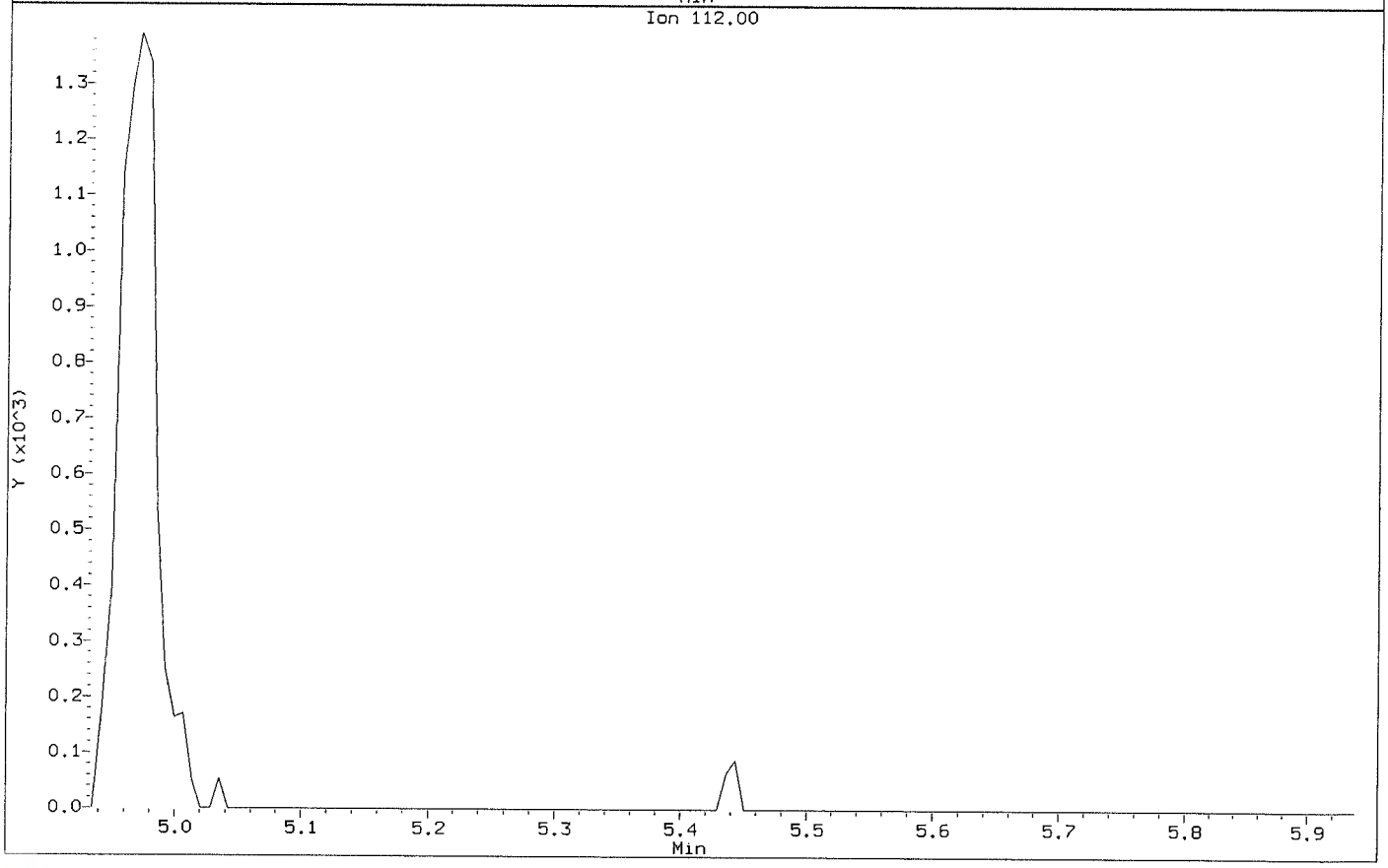




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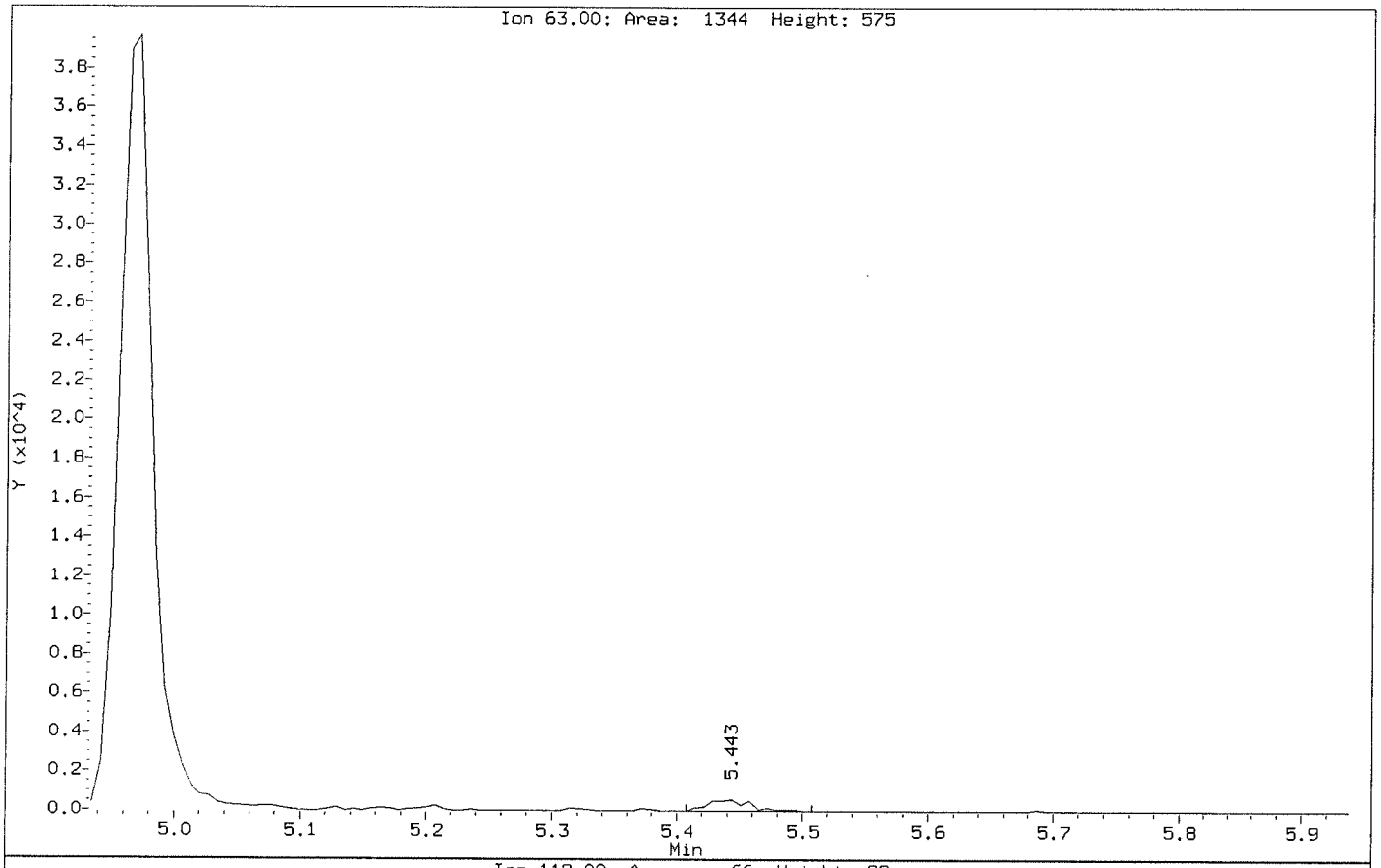
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

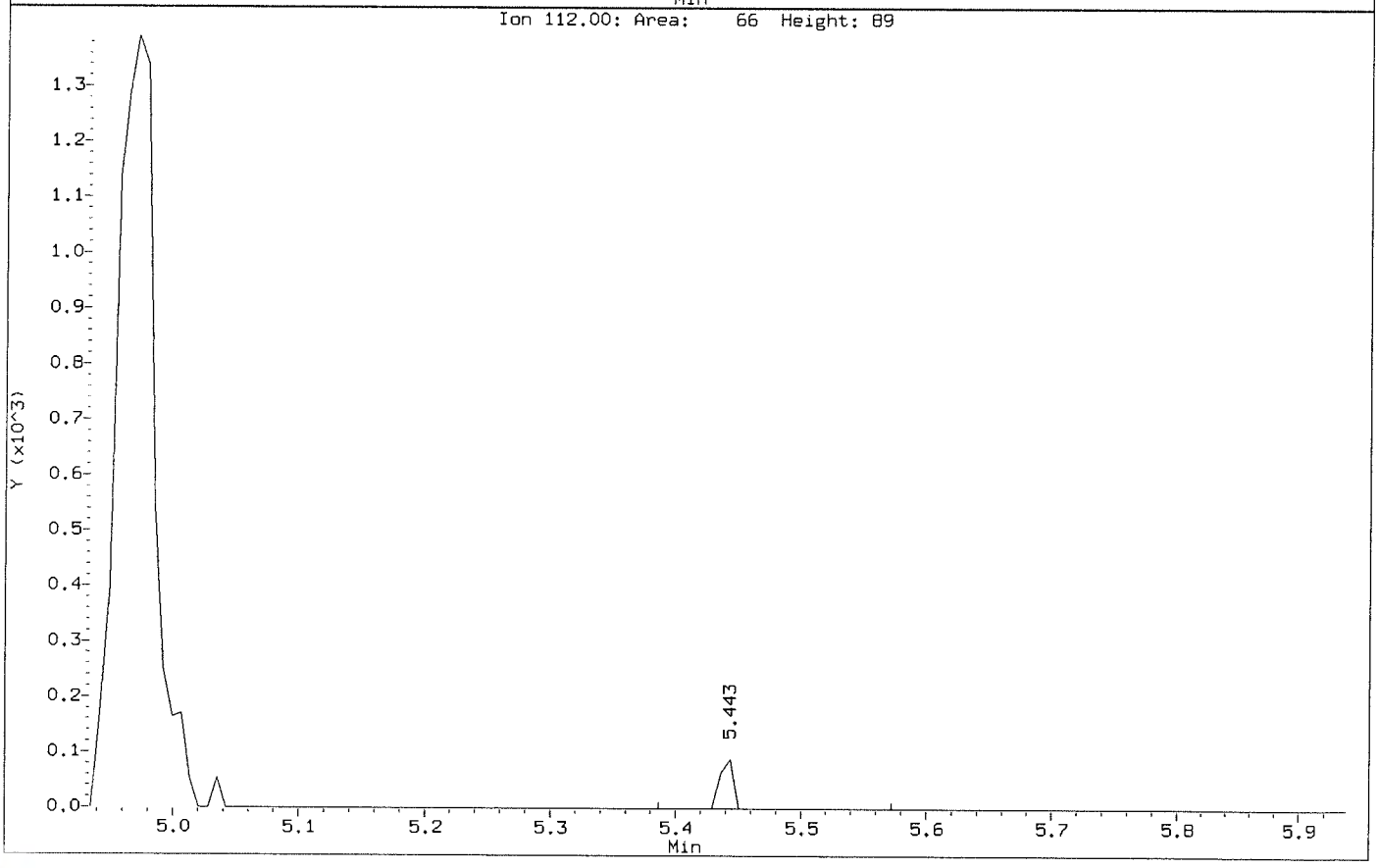




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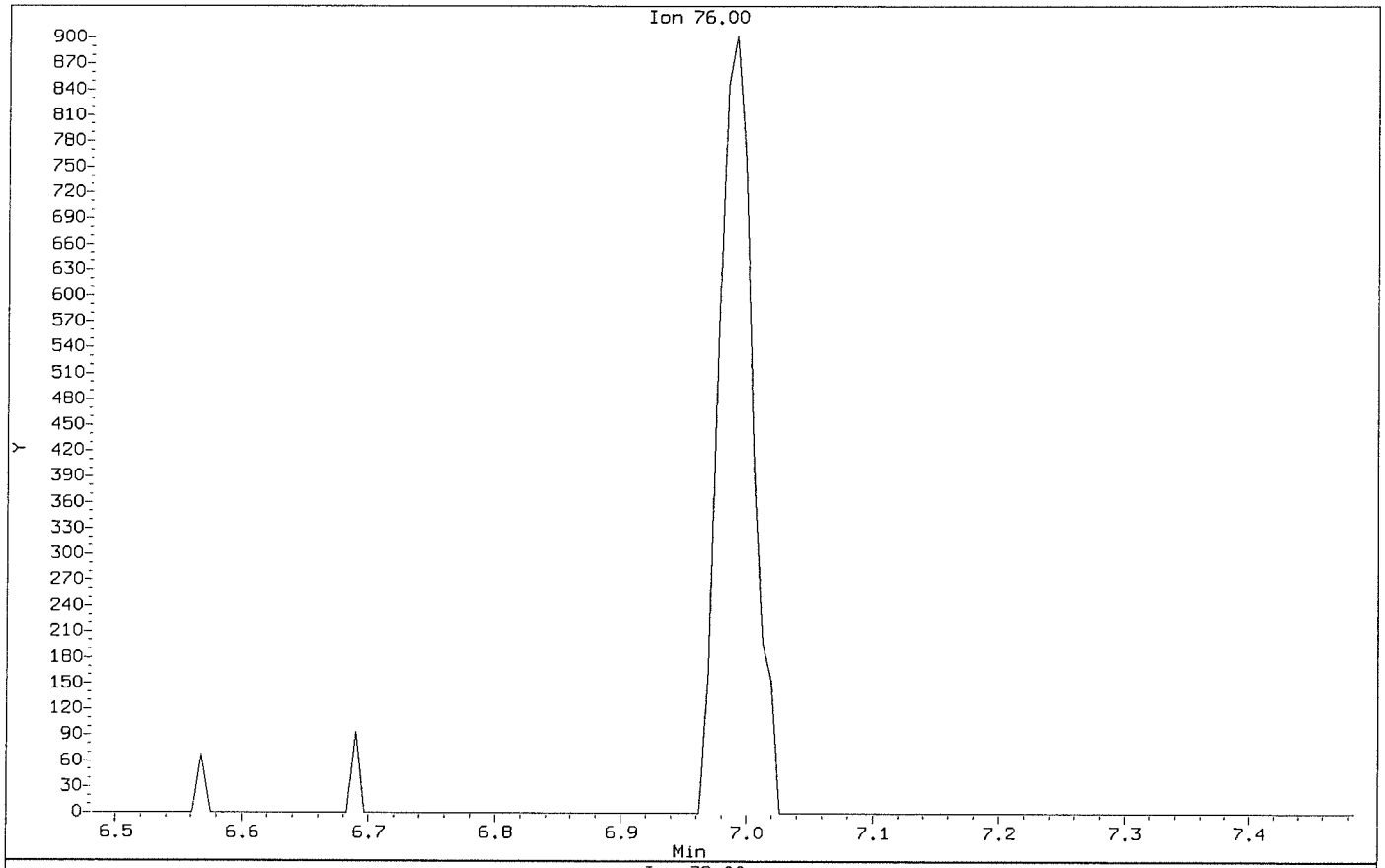
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

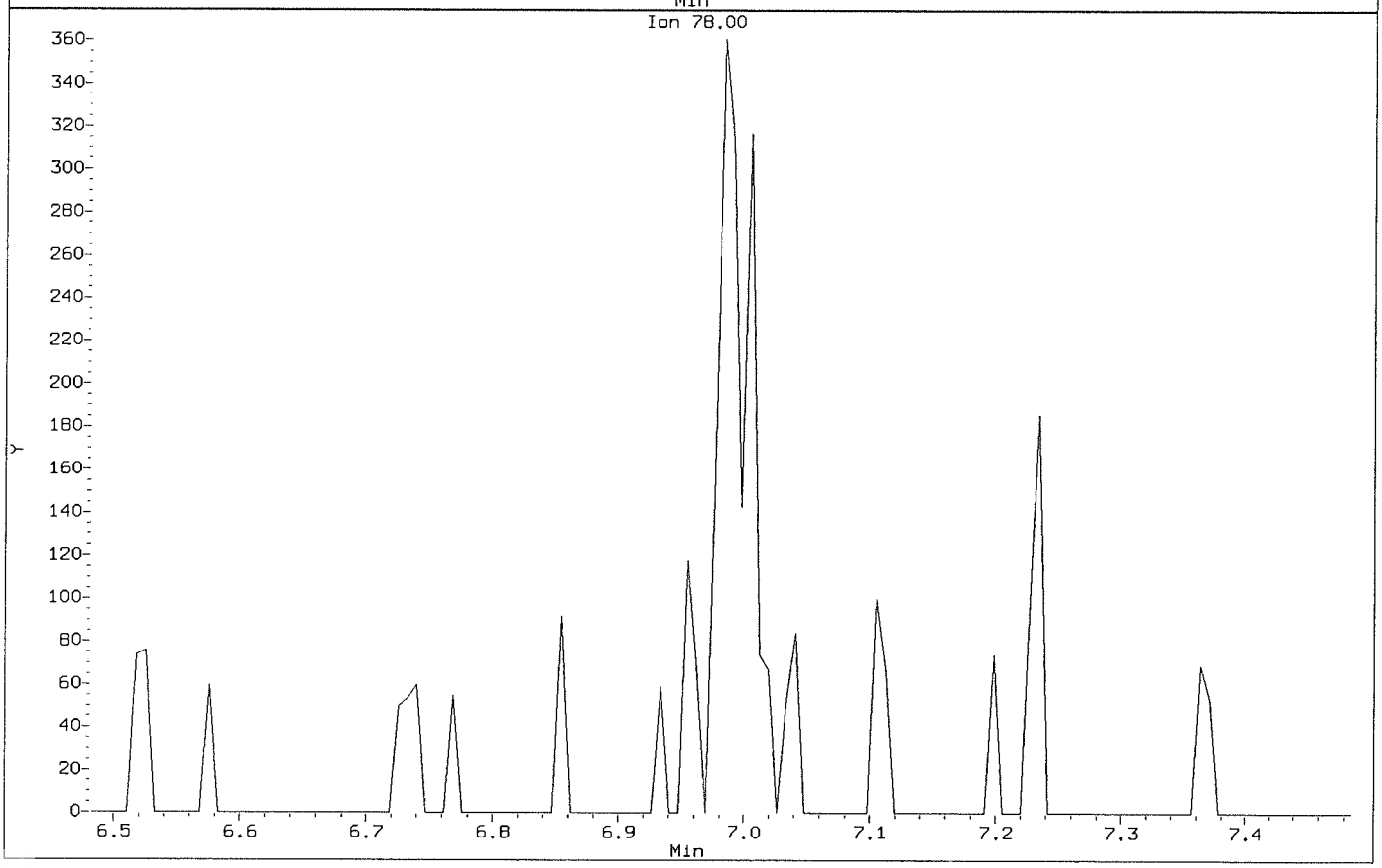




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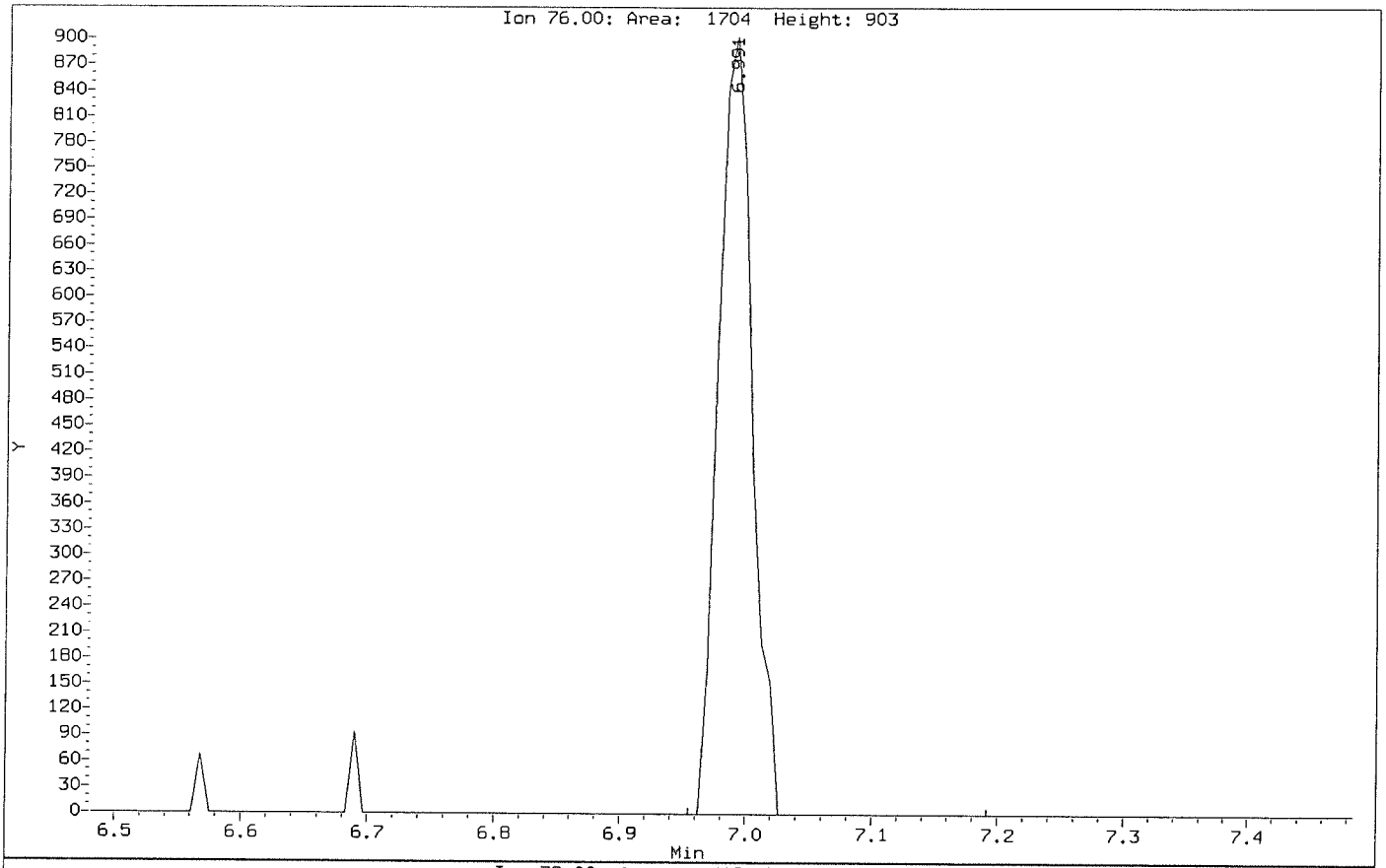
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

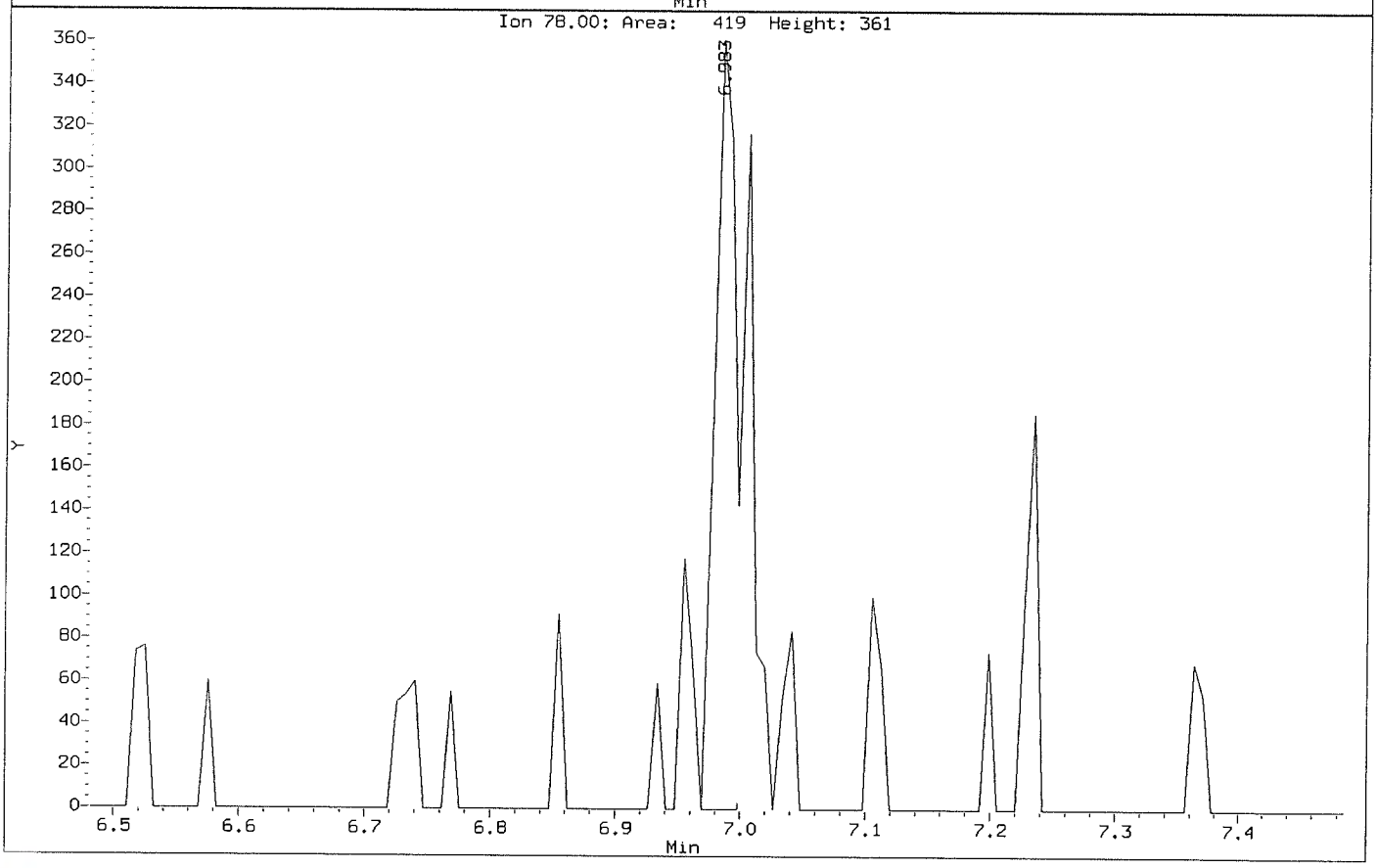




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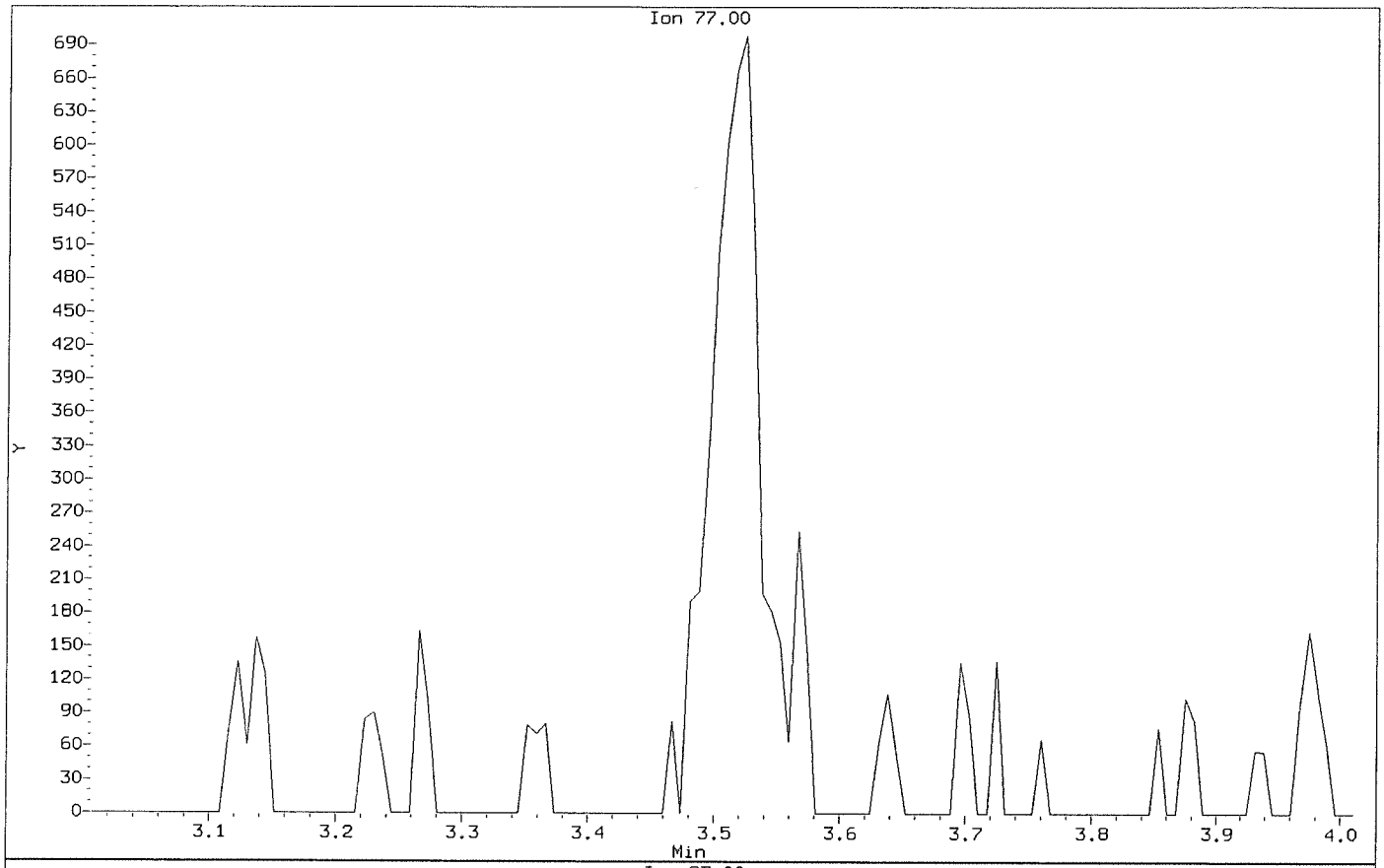
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

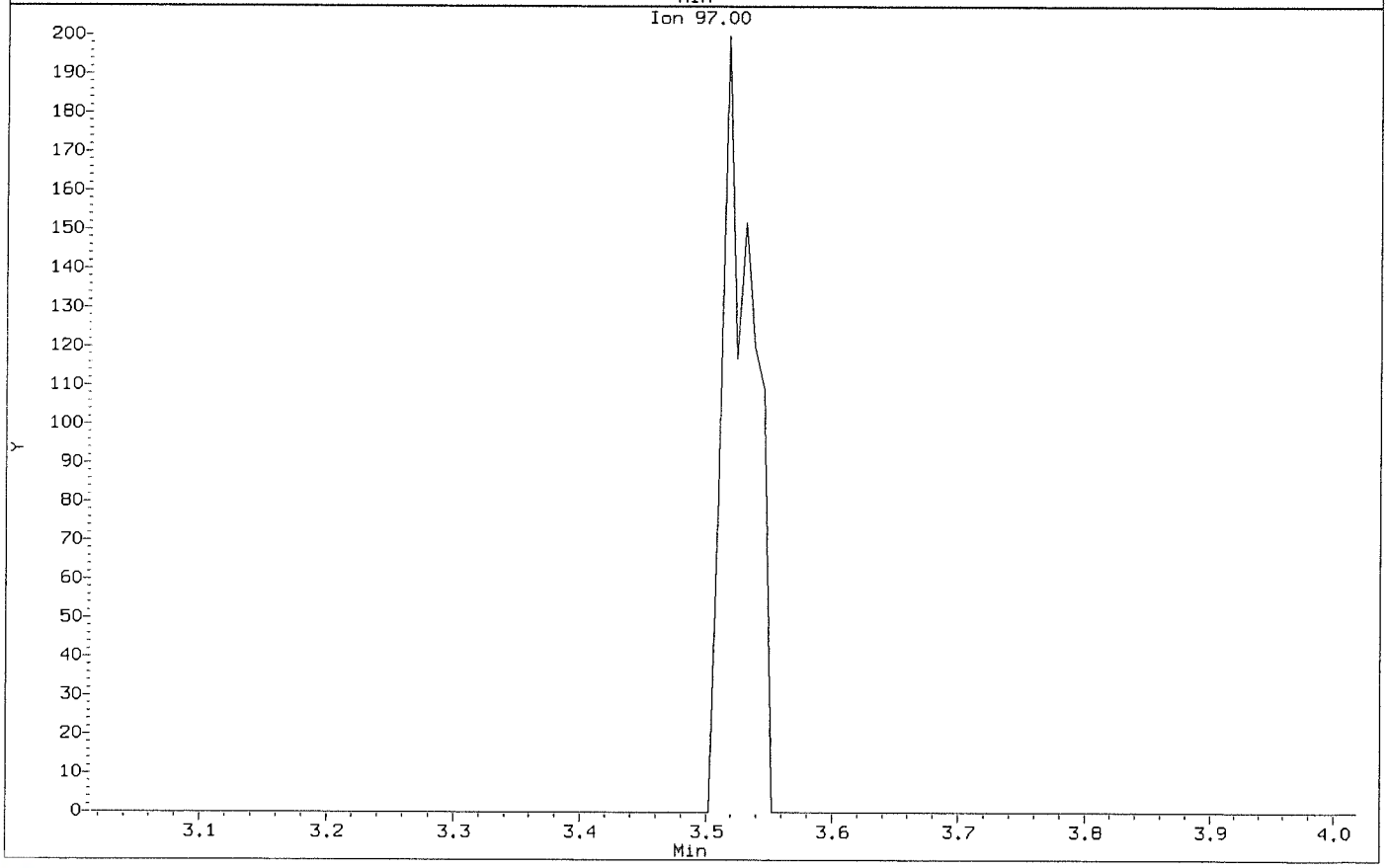




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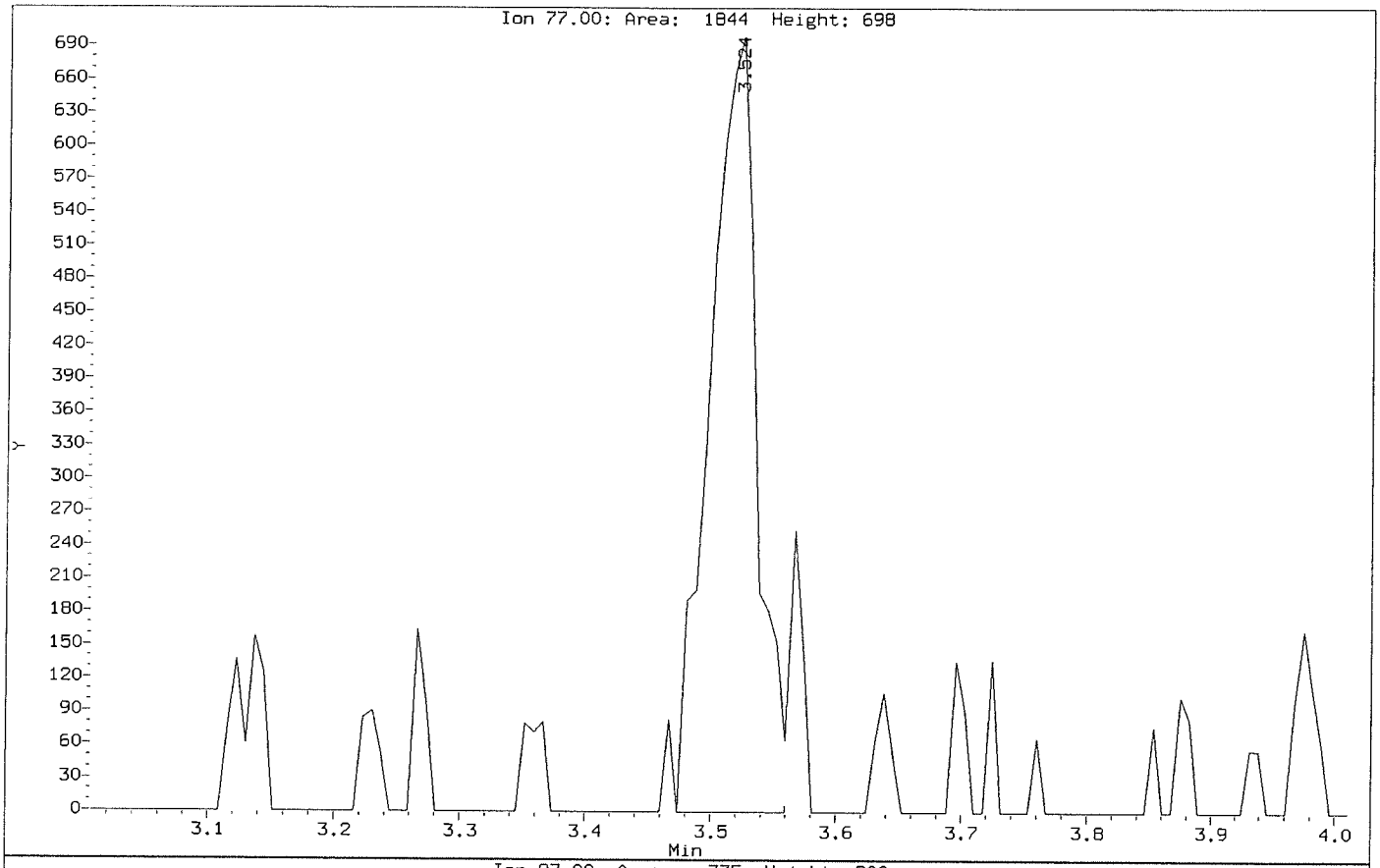
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

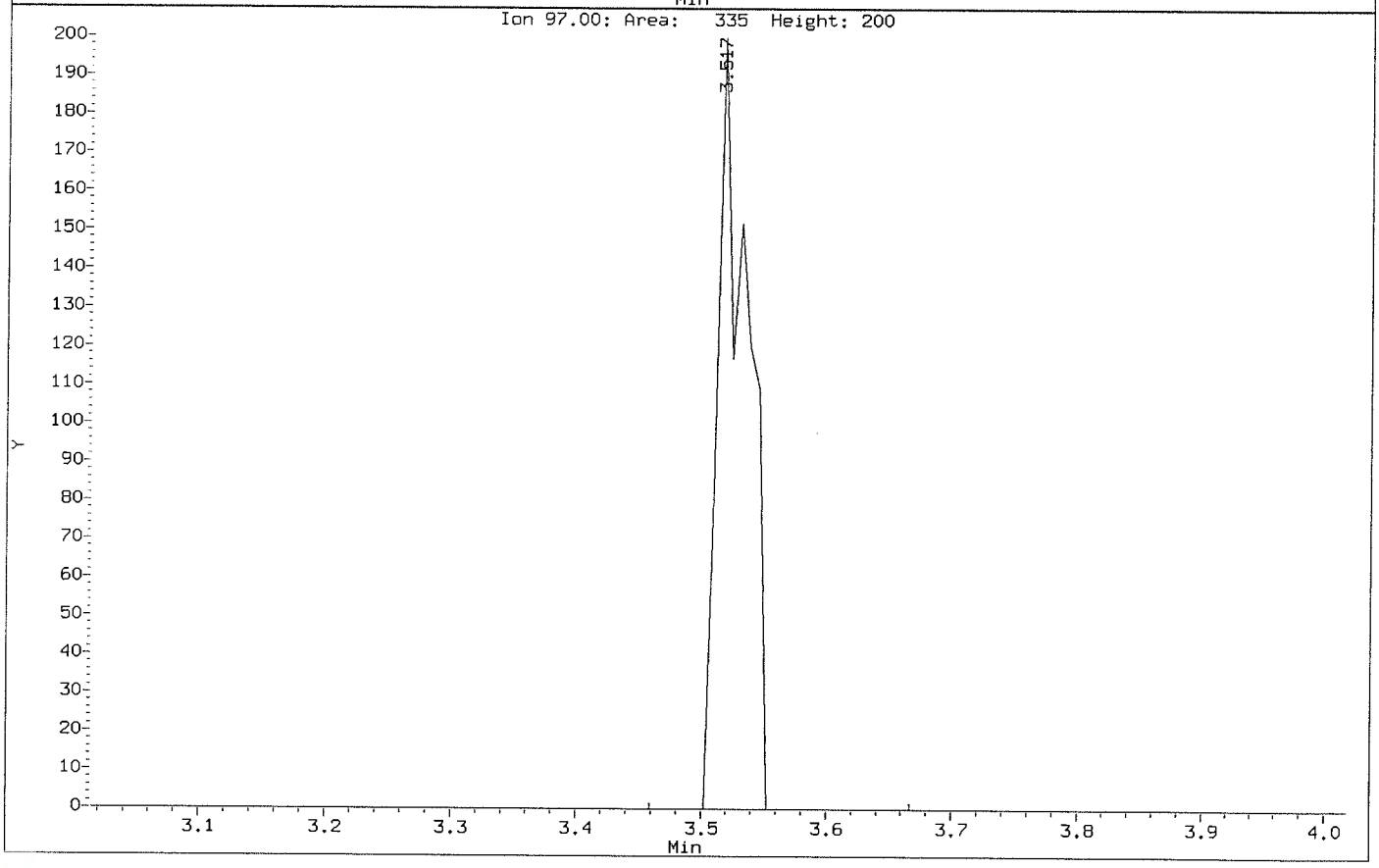




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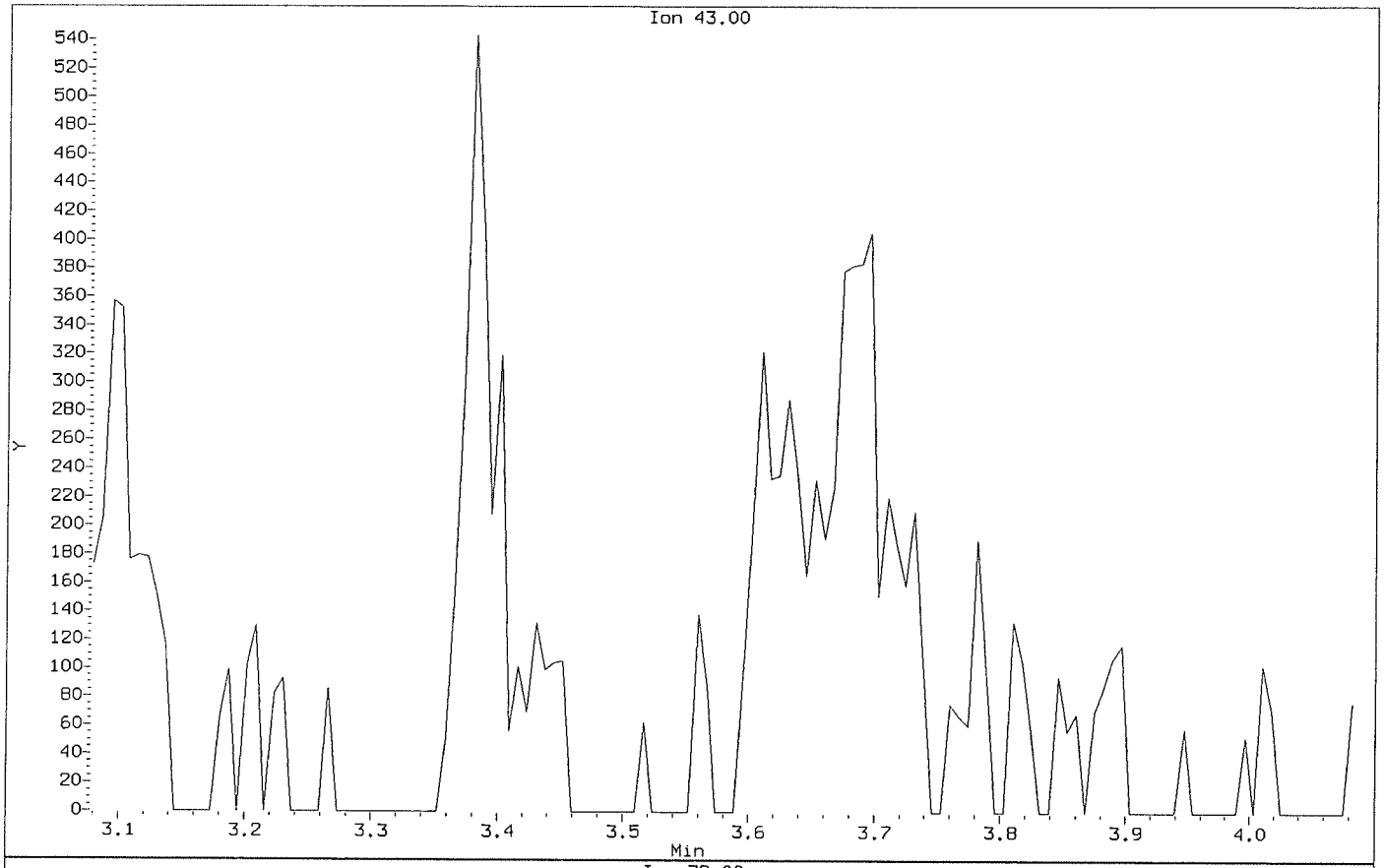
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CAS Number: 594-20-7

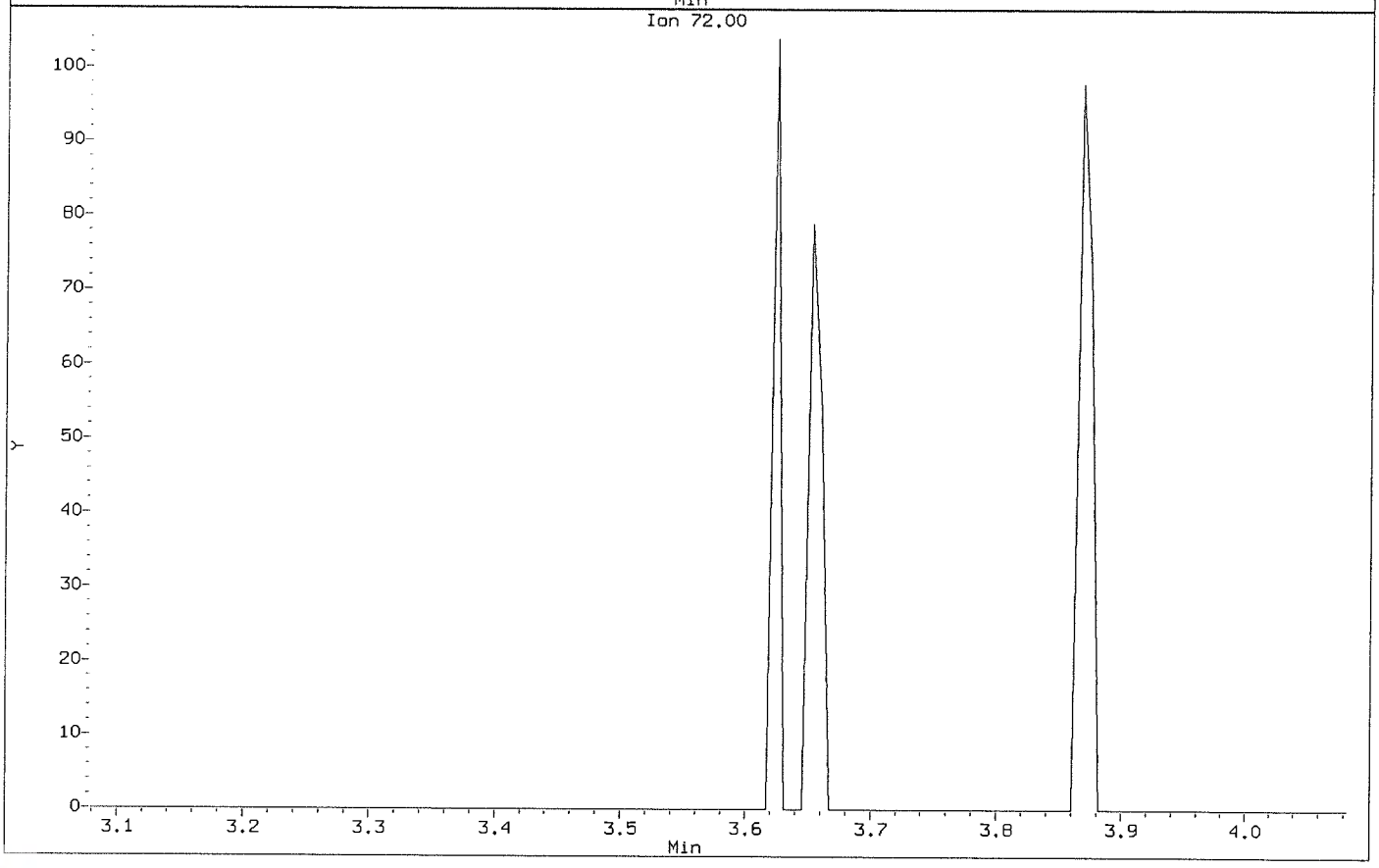




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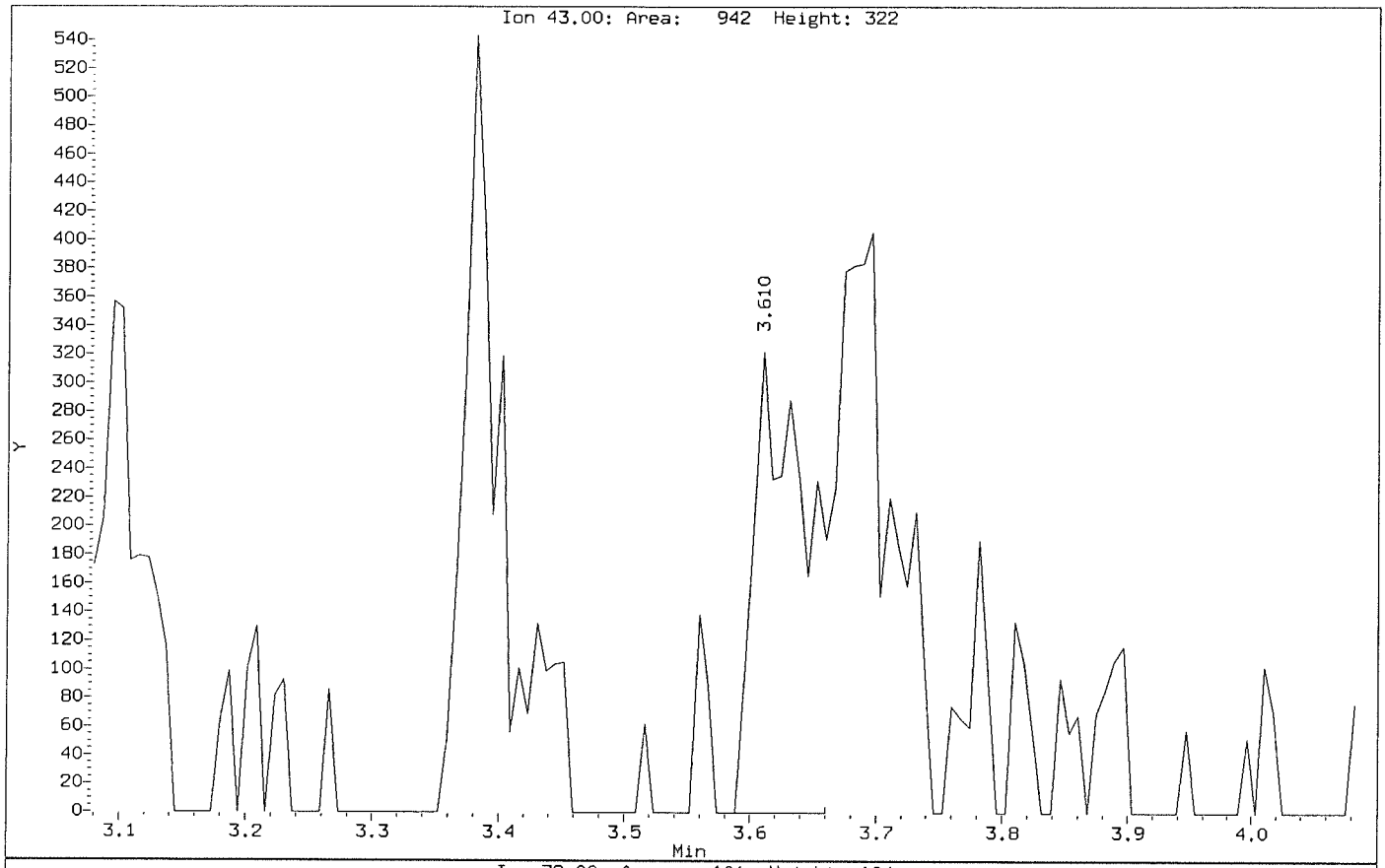
Compound: 2-Butanone
CAS Number: 78-93-3

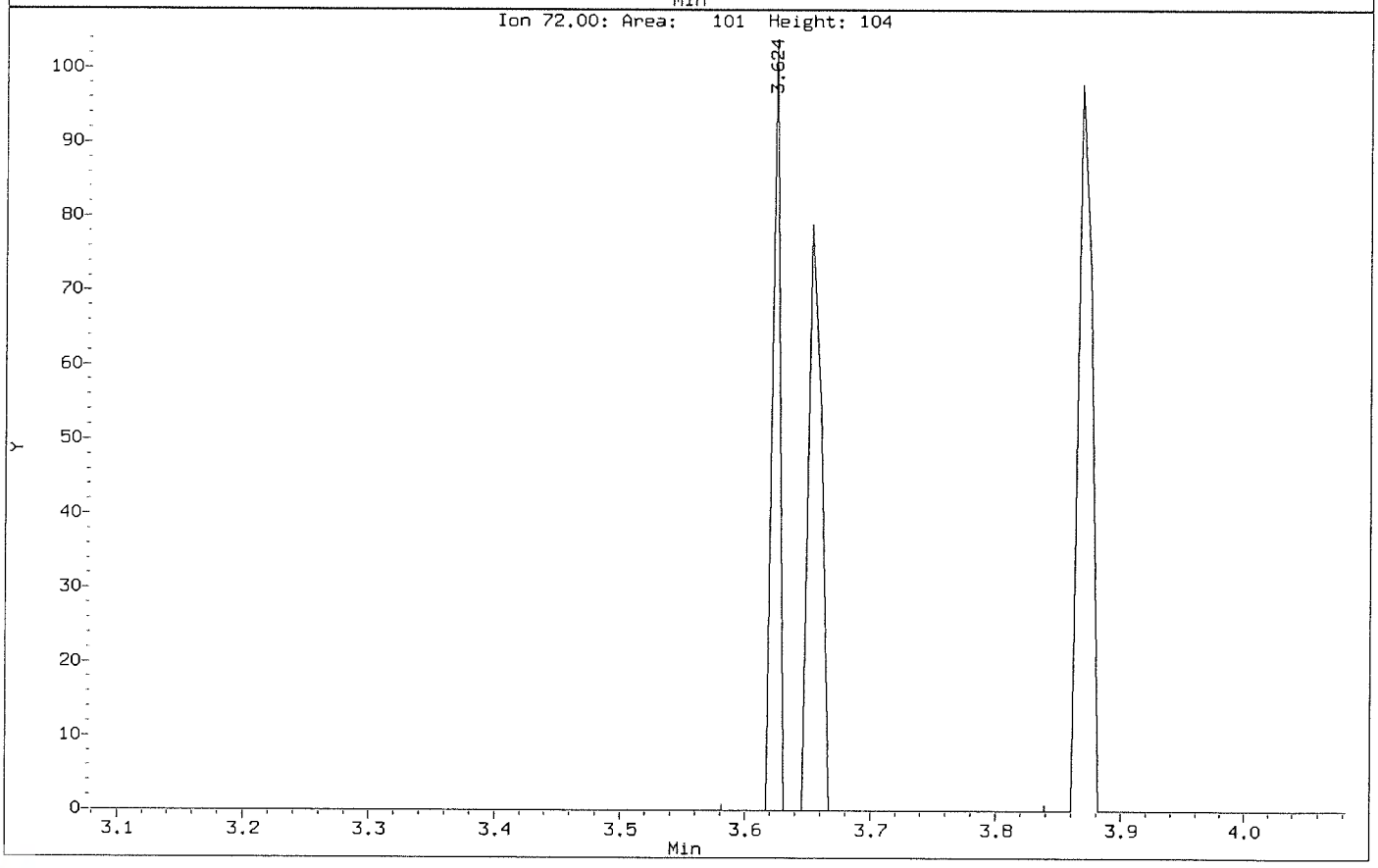




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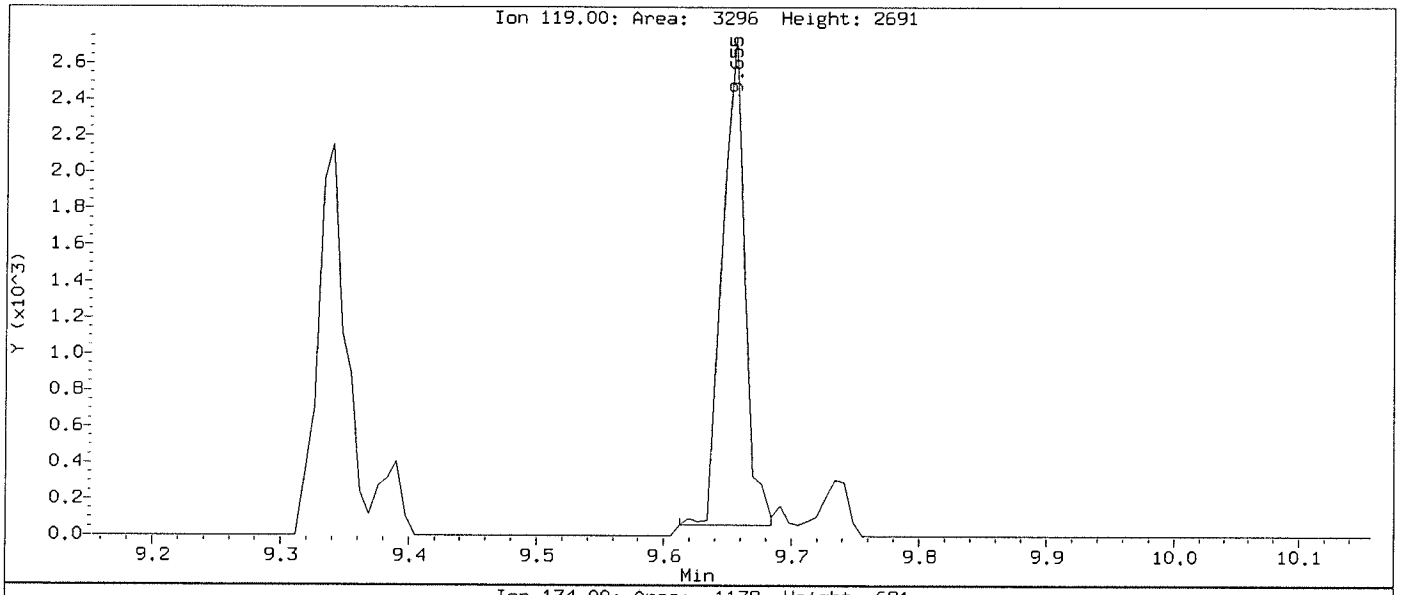
Compound: 2-Butanone
CAS Number: 78-93-3

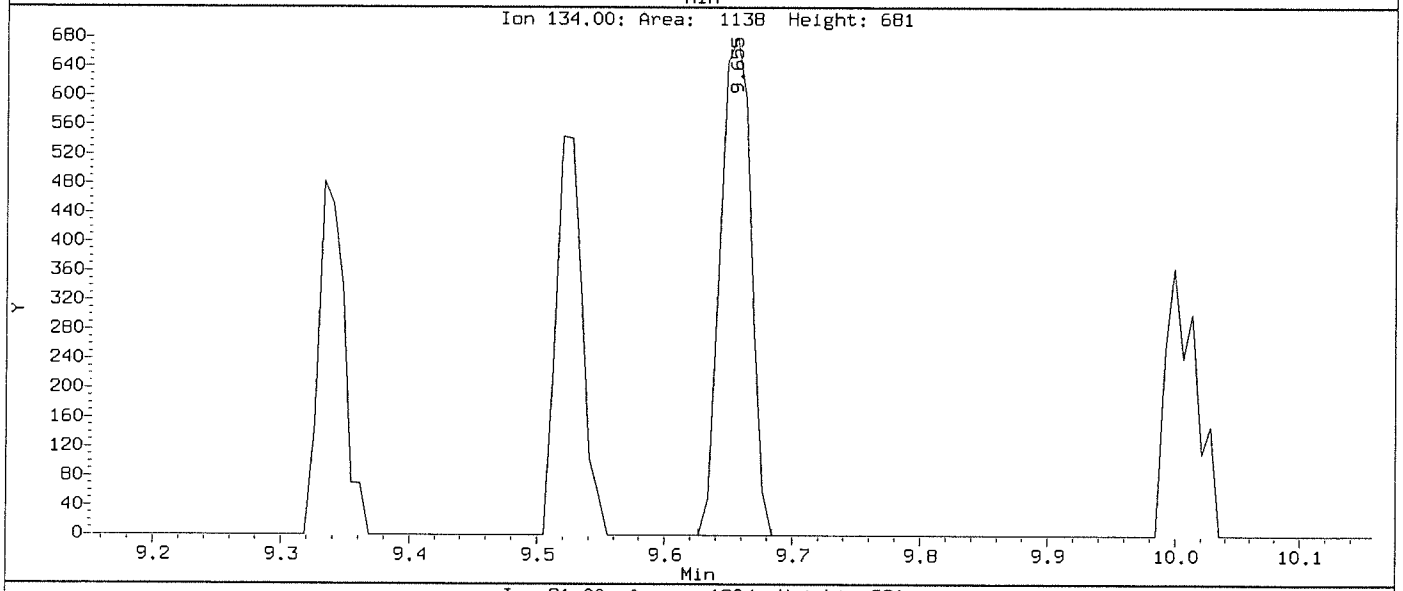


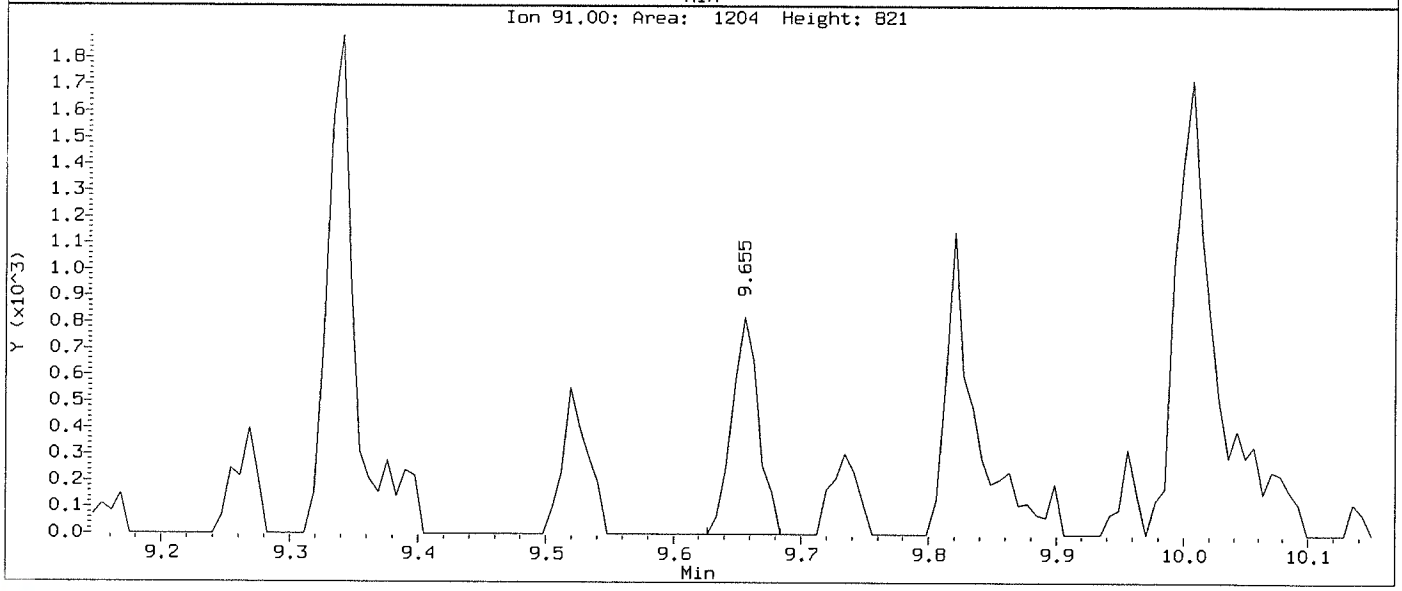


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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6

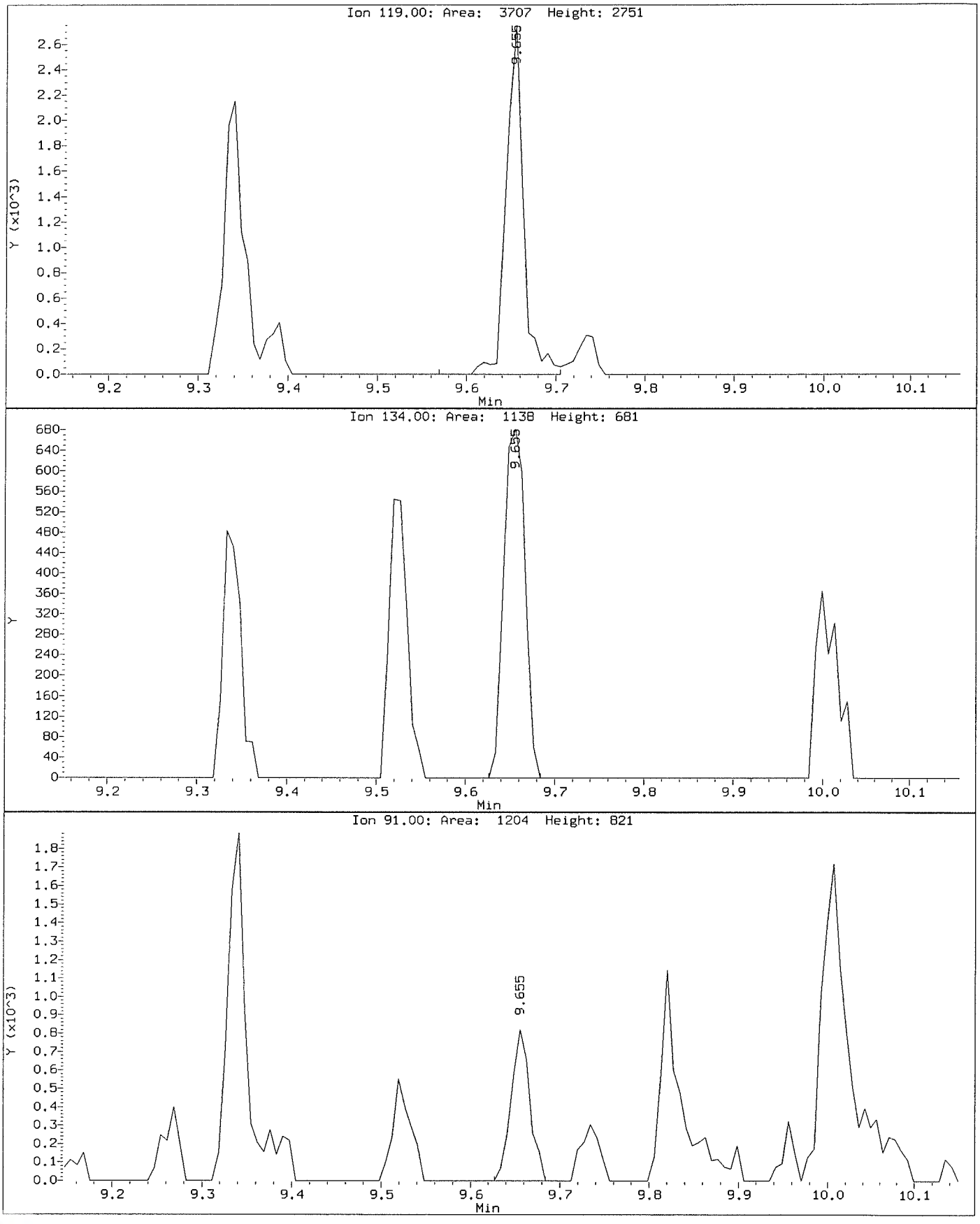






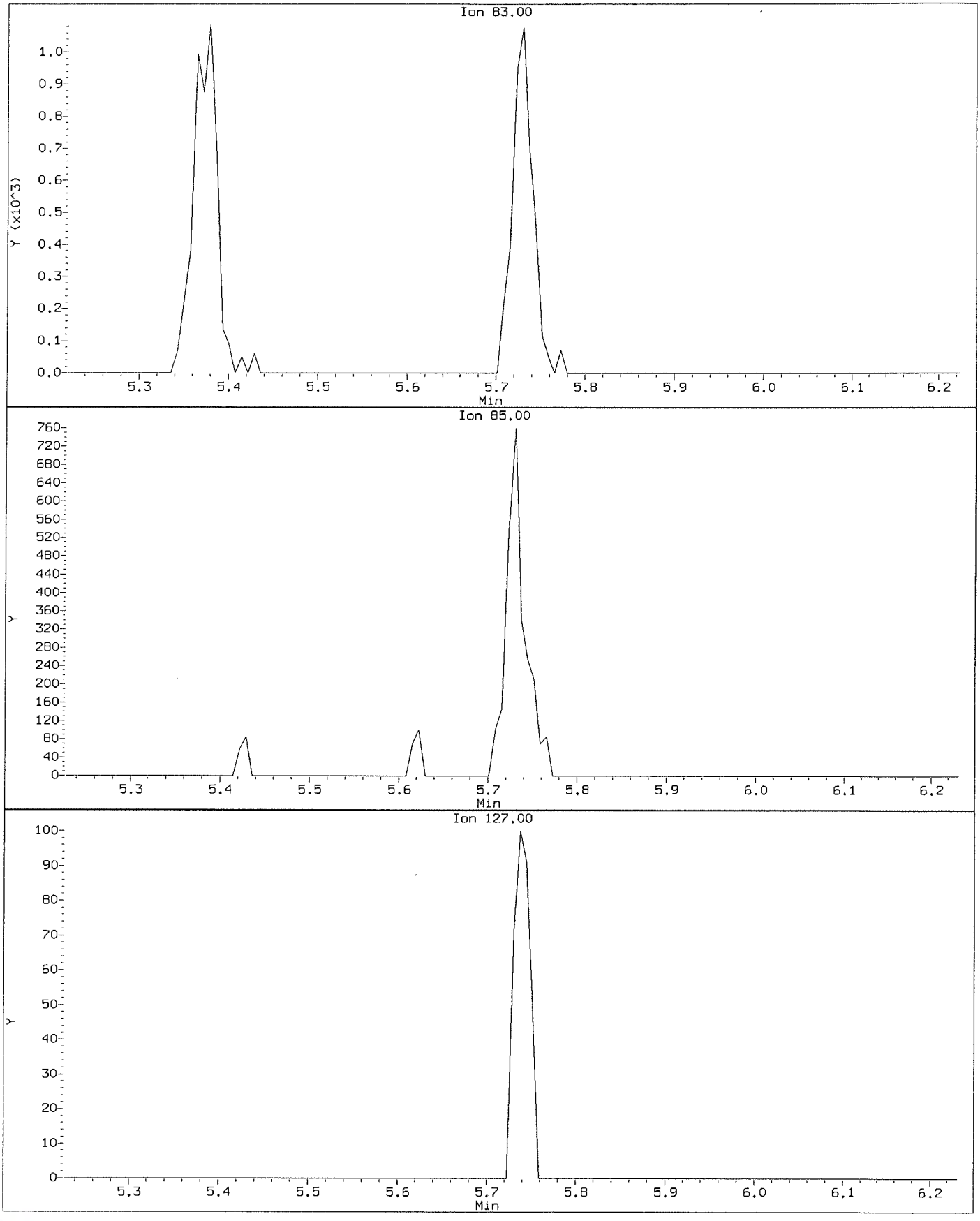
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



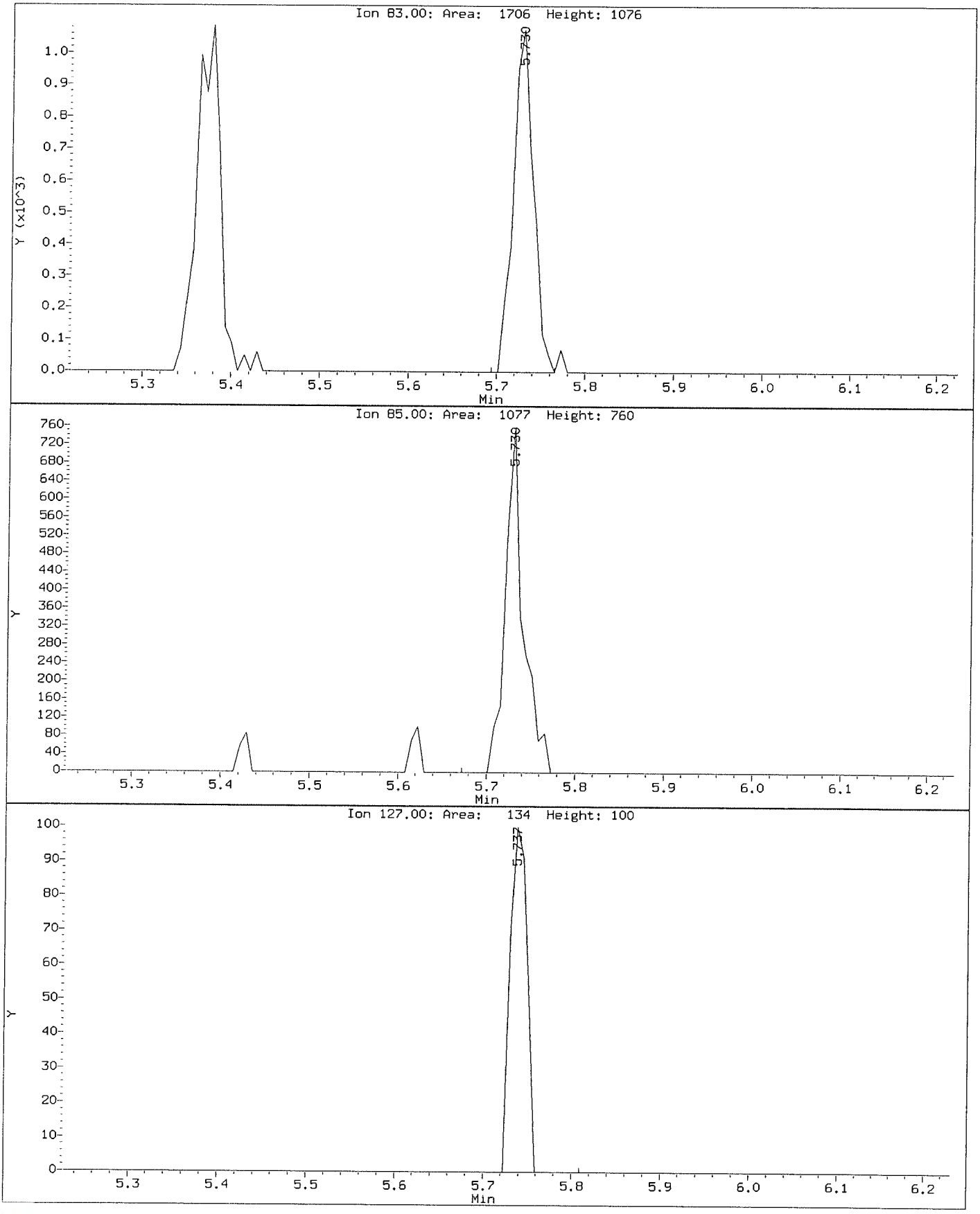
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



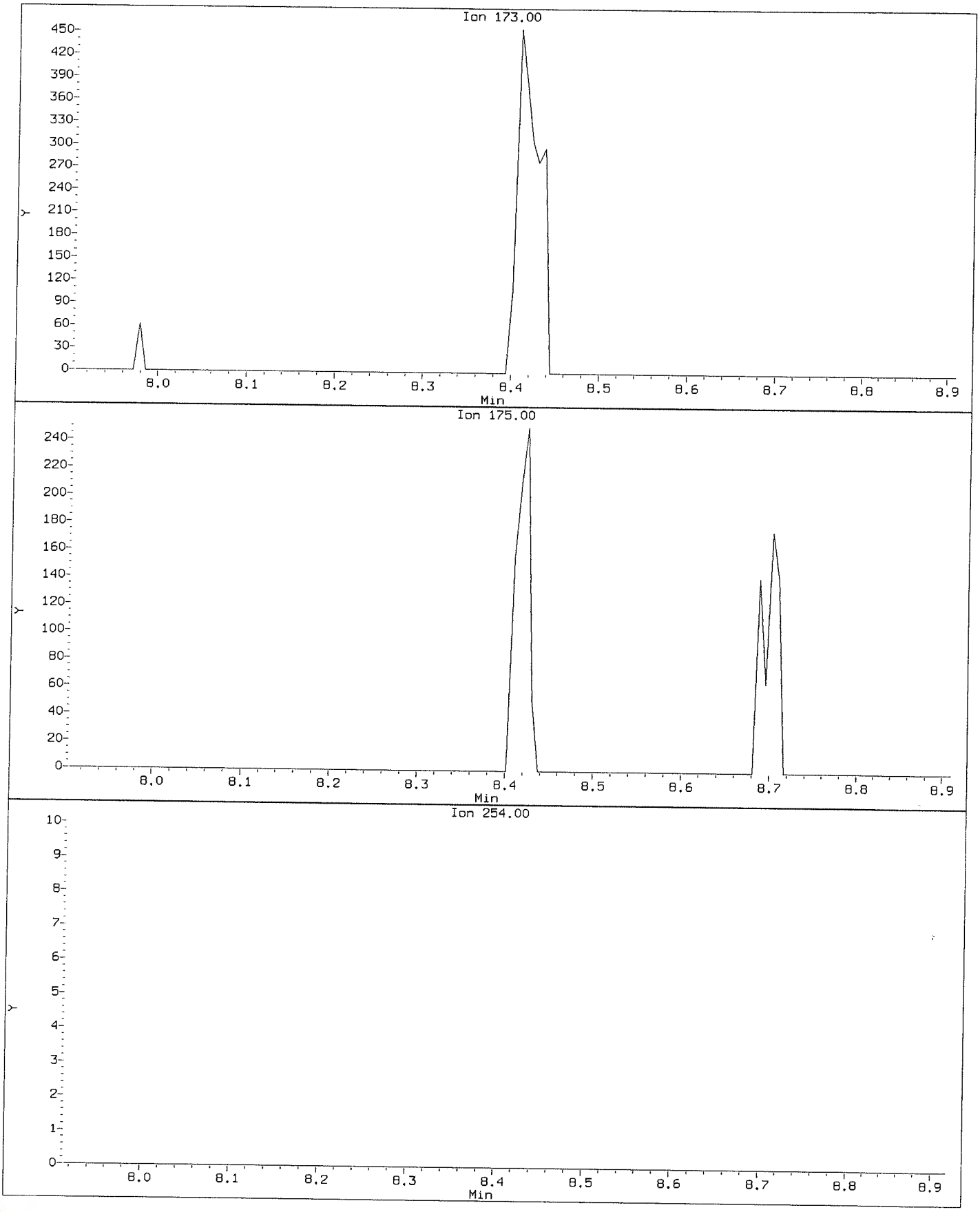
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



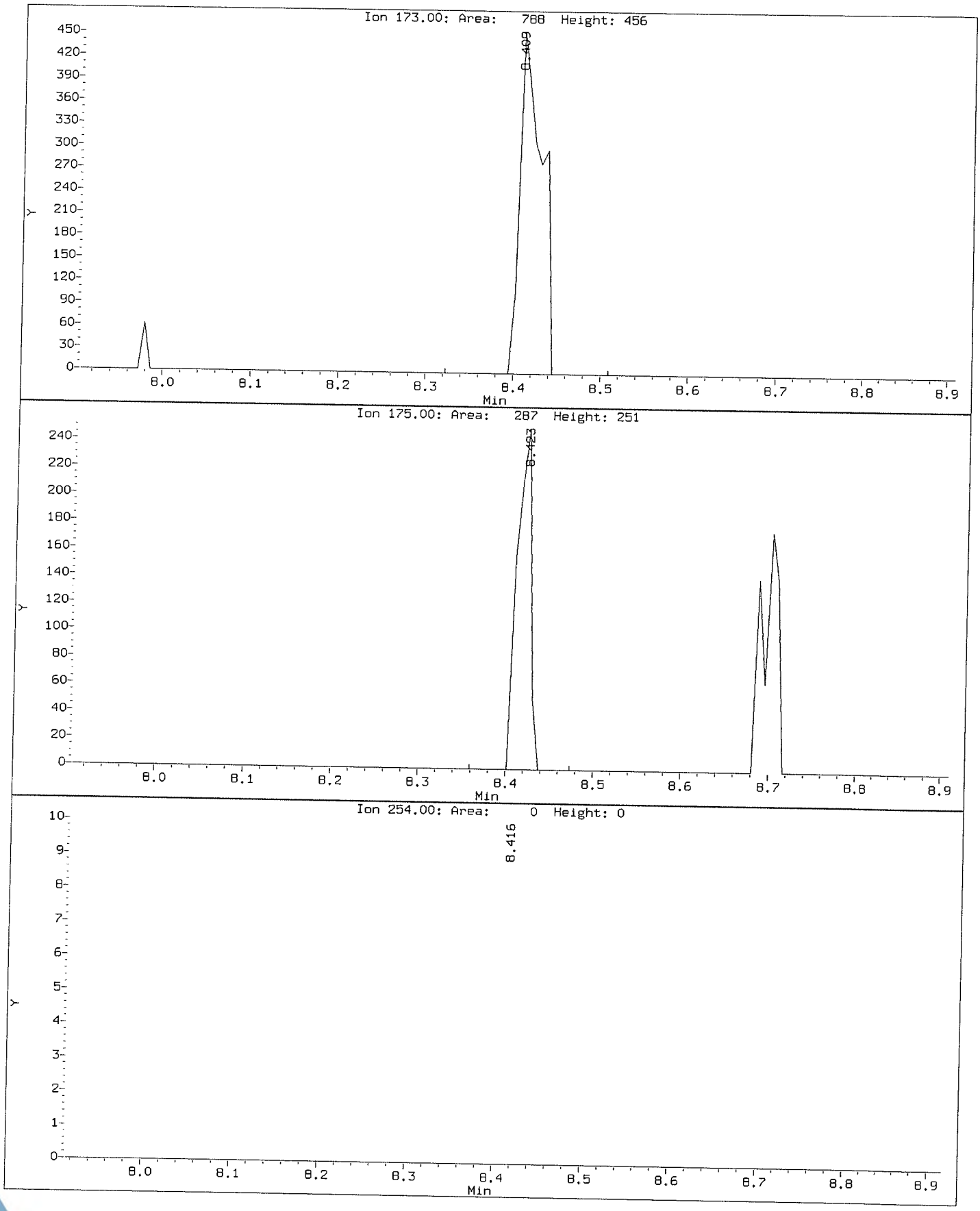
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



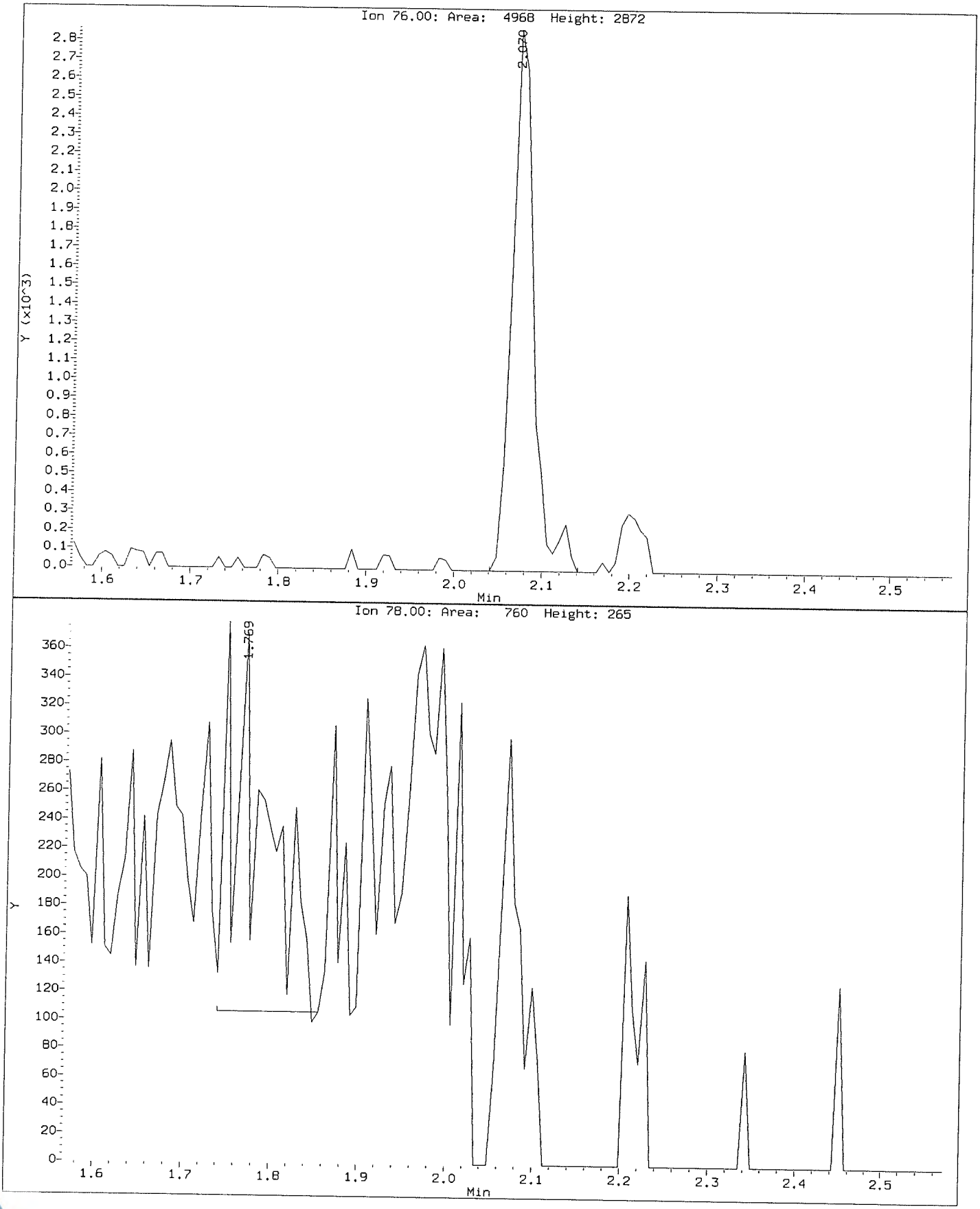
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



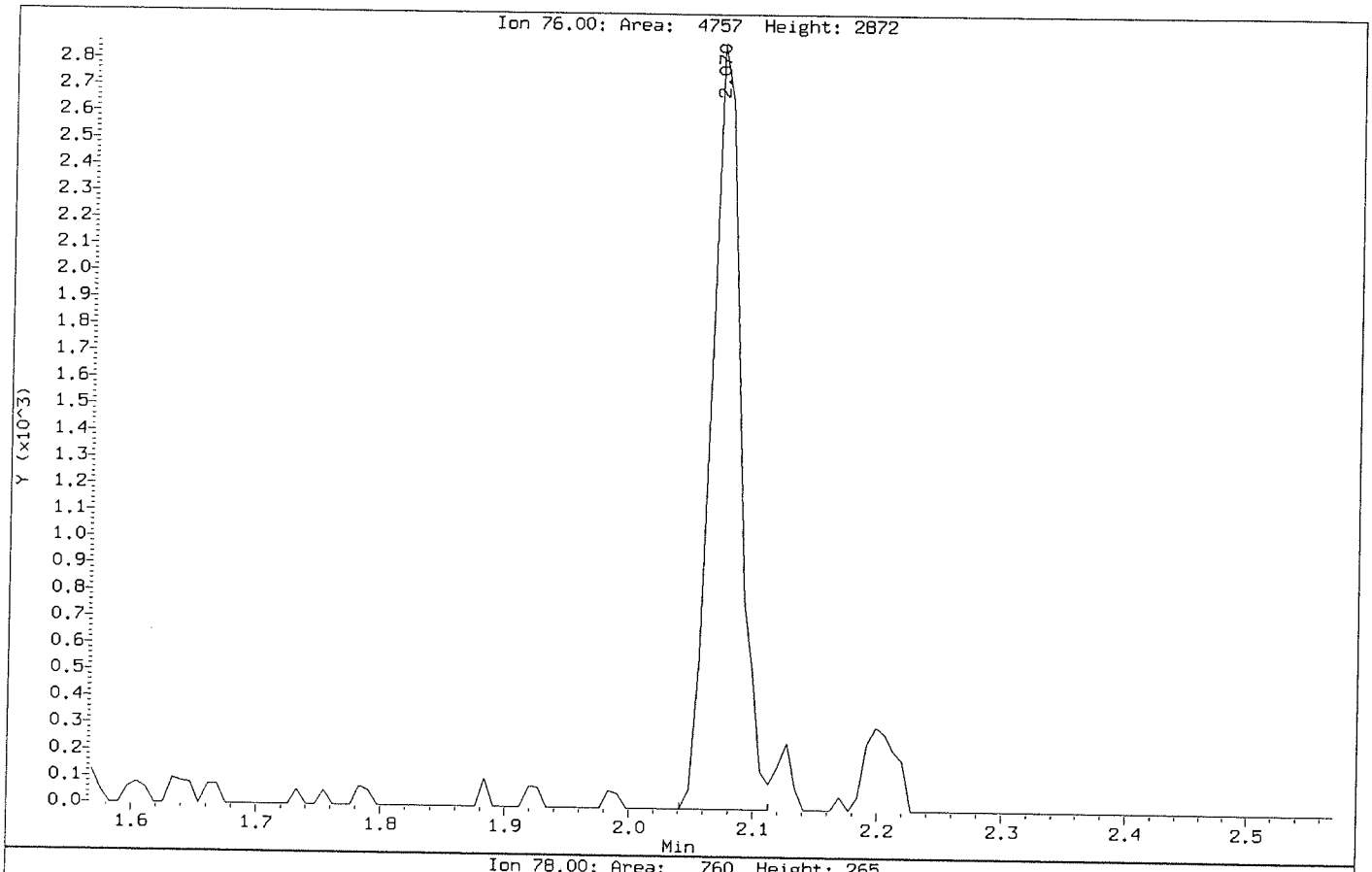
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Instrument: voa6.i
Client Sample ID: VSTD000.5

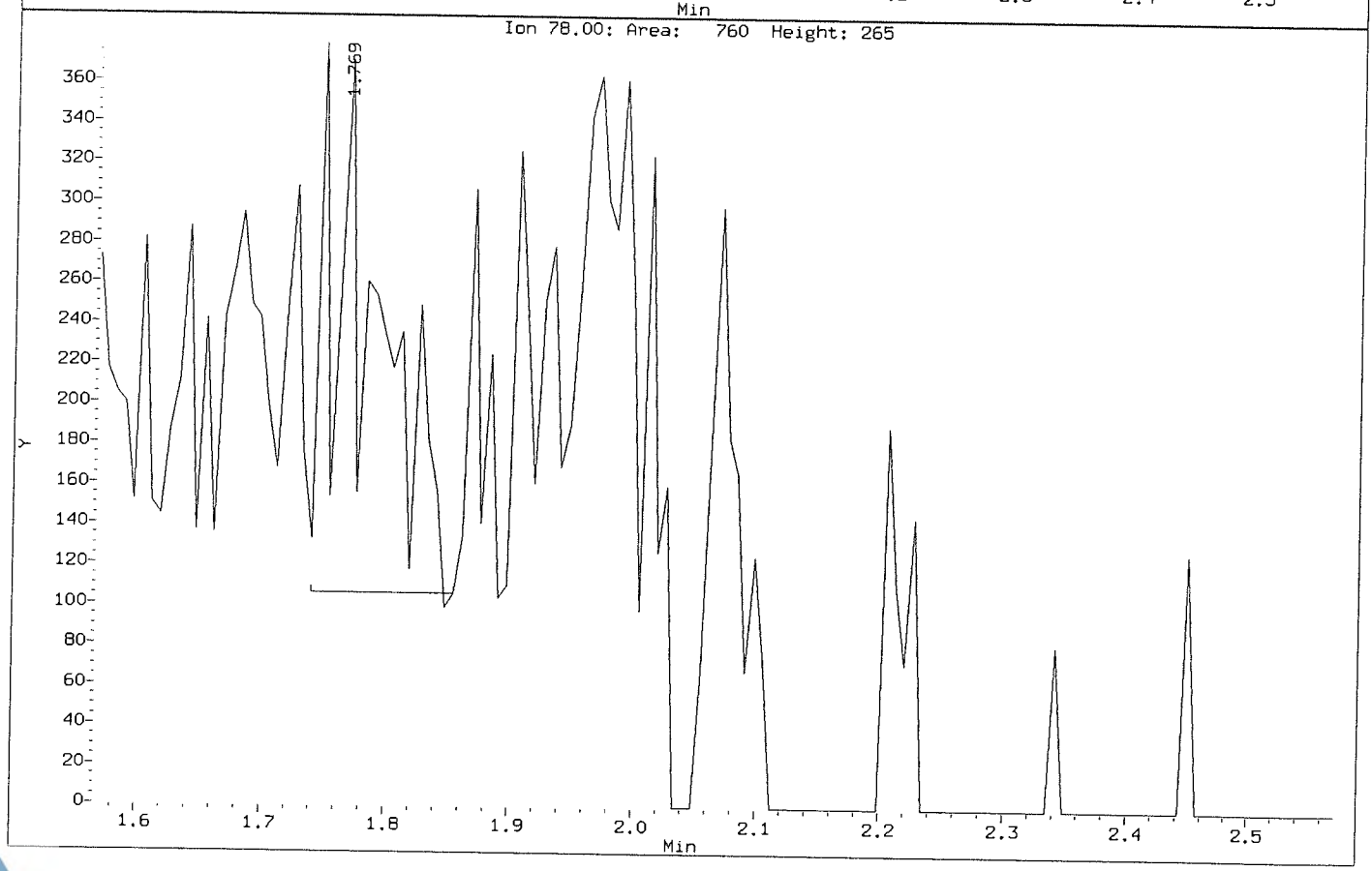
Compound: Carbon Disulfide
CAS Number: 75-15-0



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Instrument: voa6.i
Client Sample ID: VSTD000.5

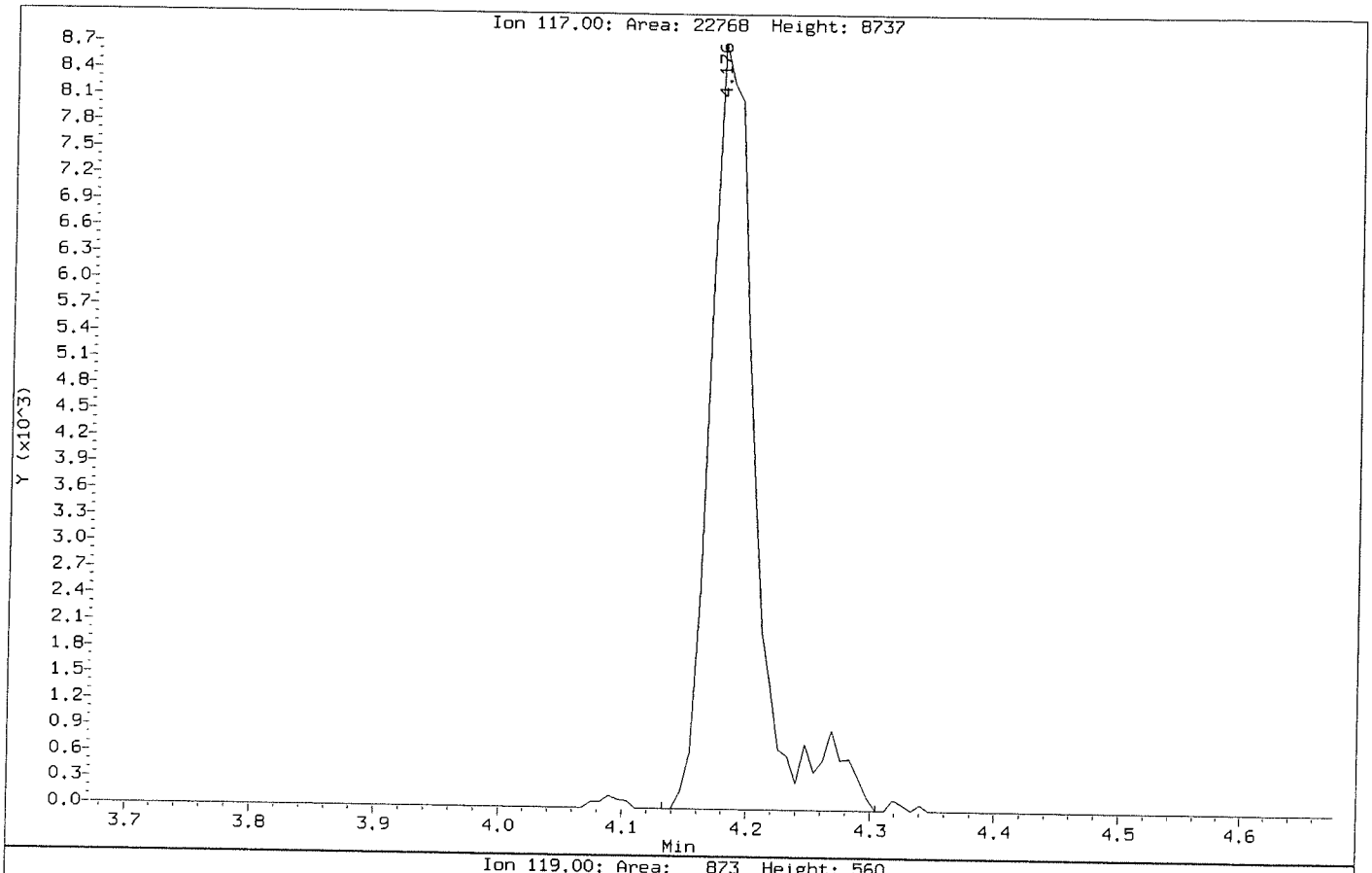
Compound: Carbon Disulfide
CAS Number: 75-15-0

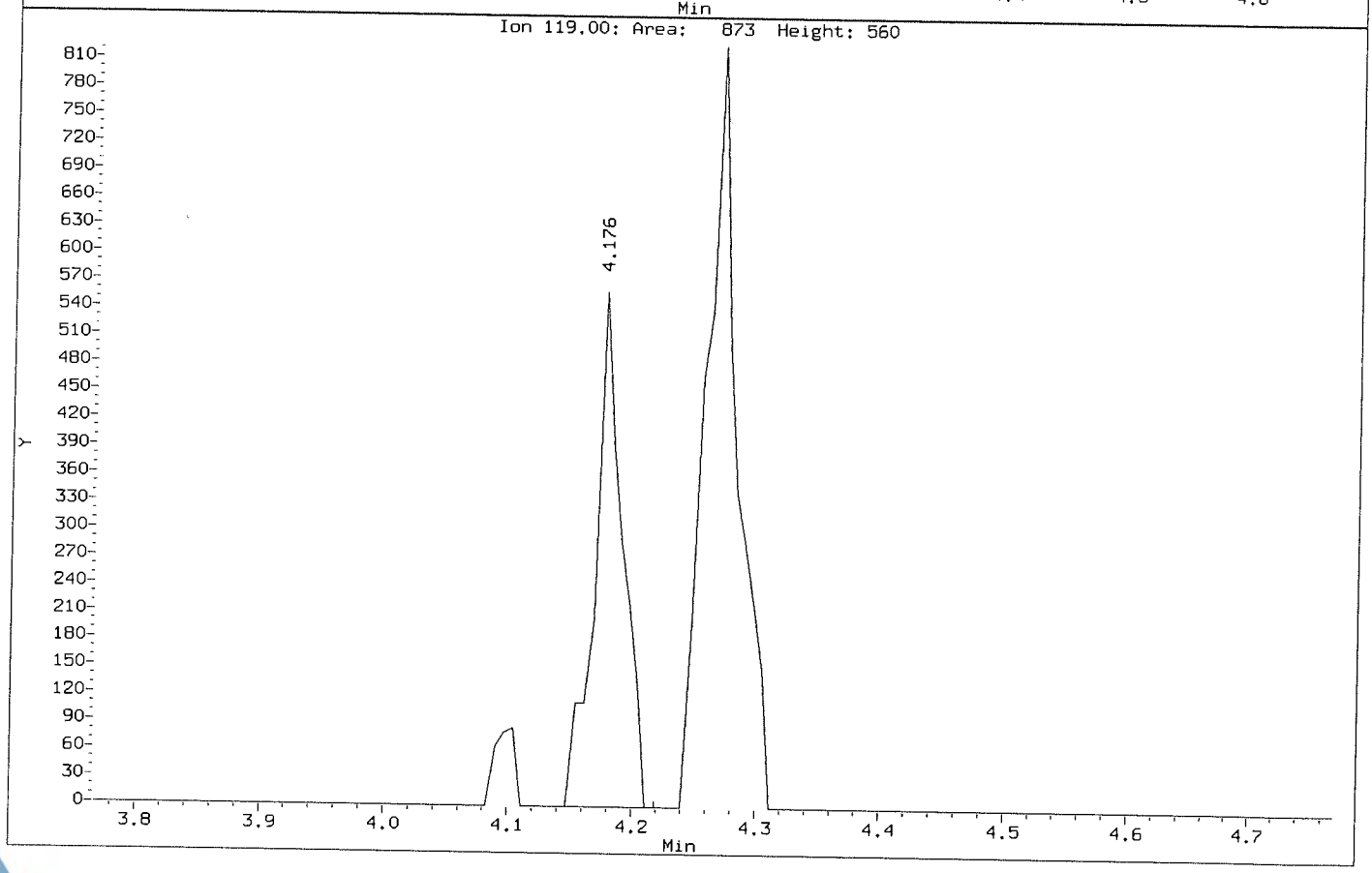




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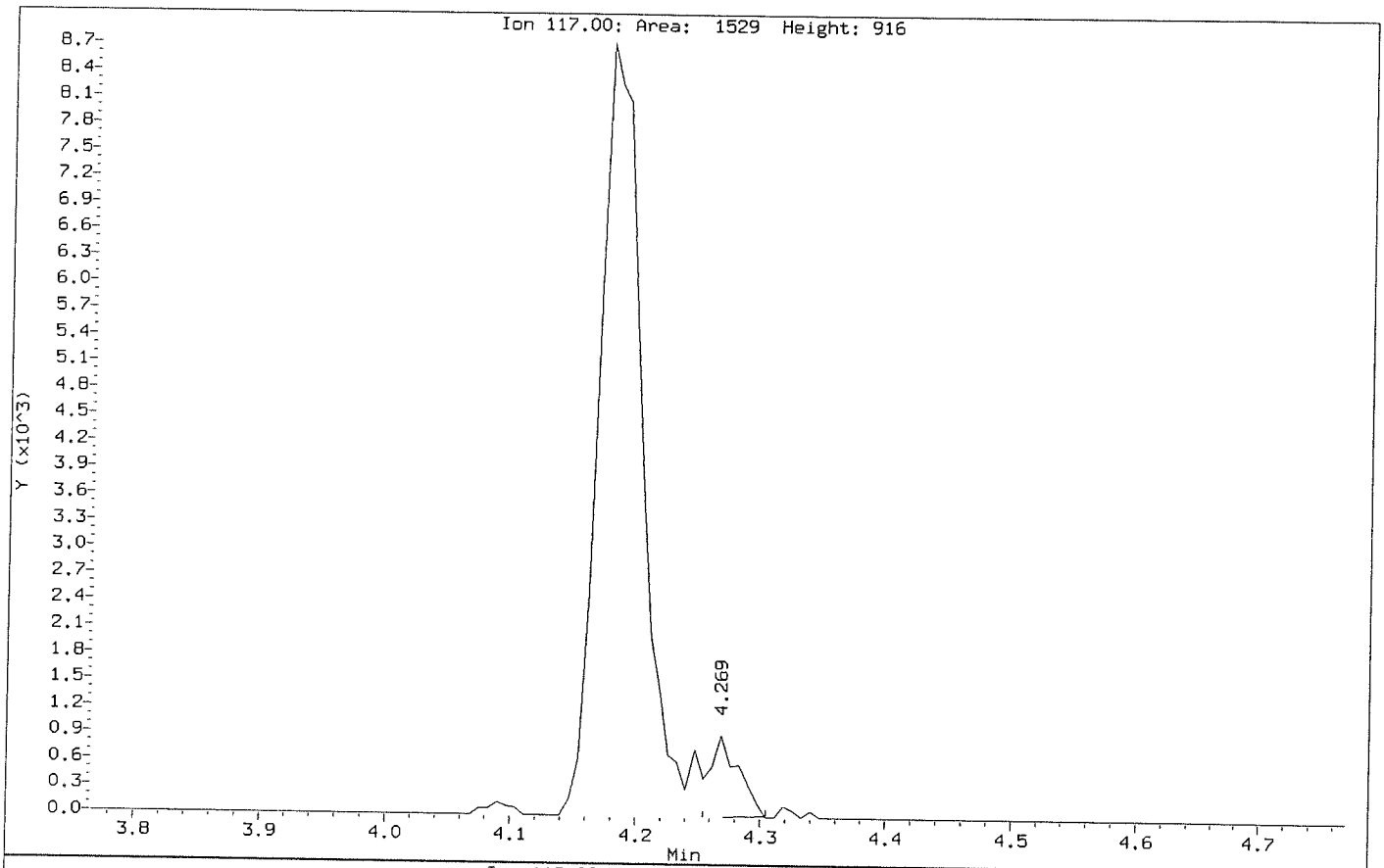
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

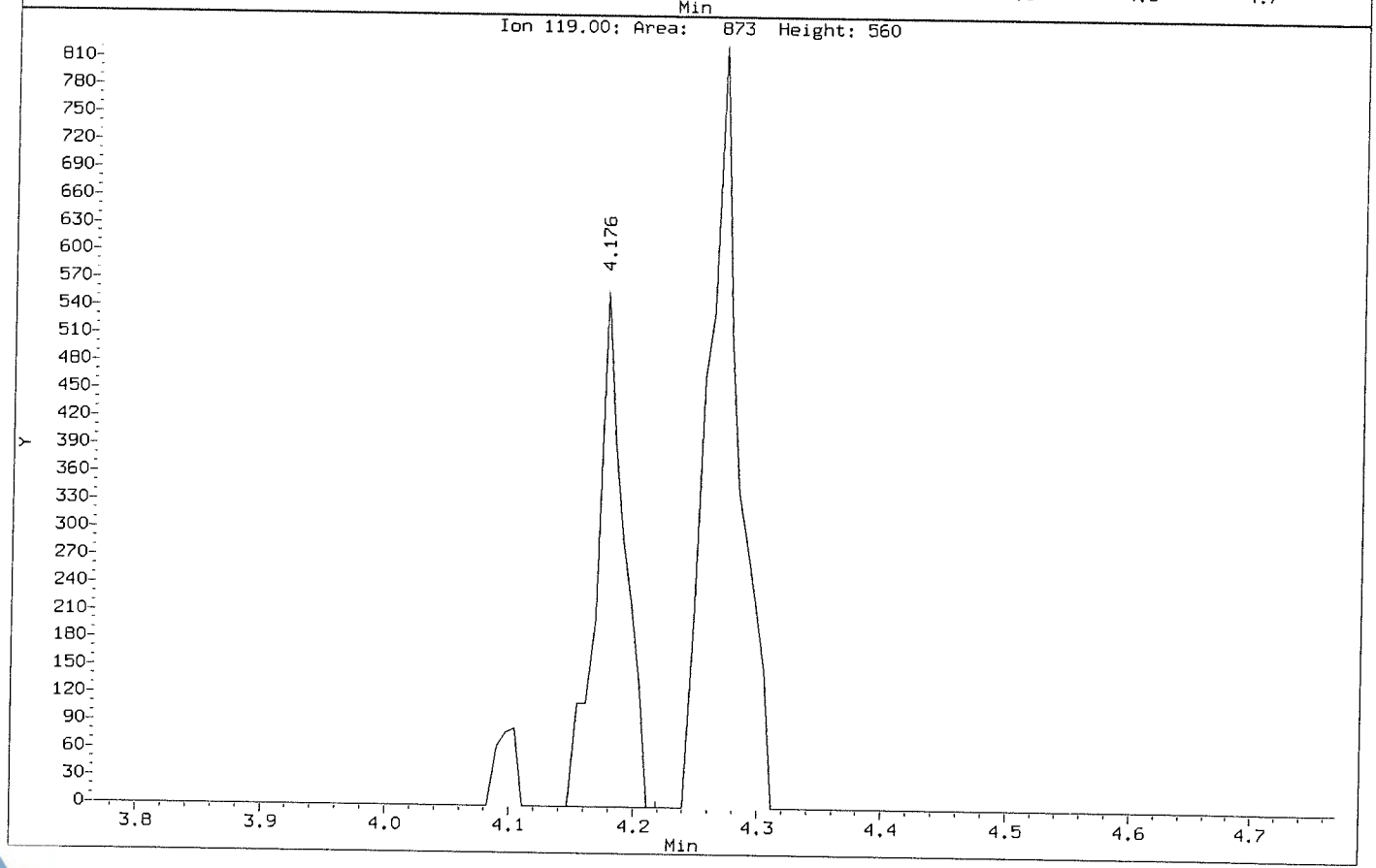




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Client Sample ID: VSTD000.5

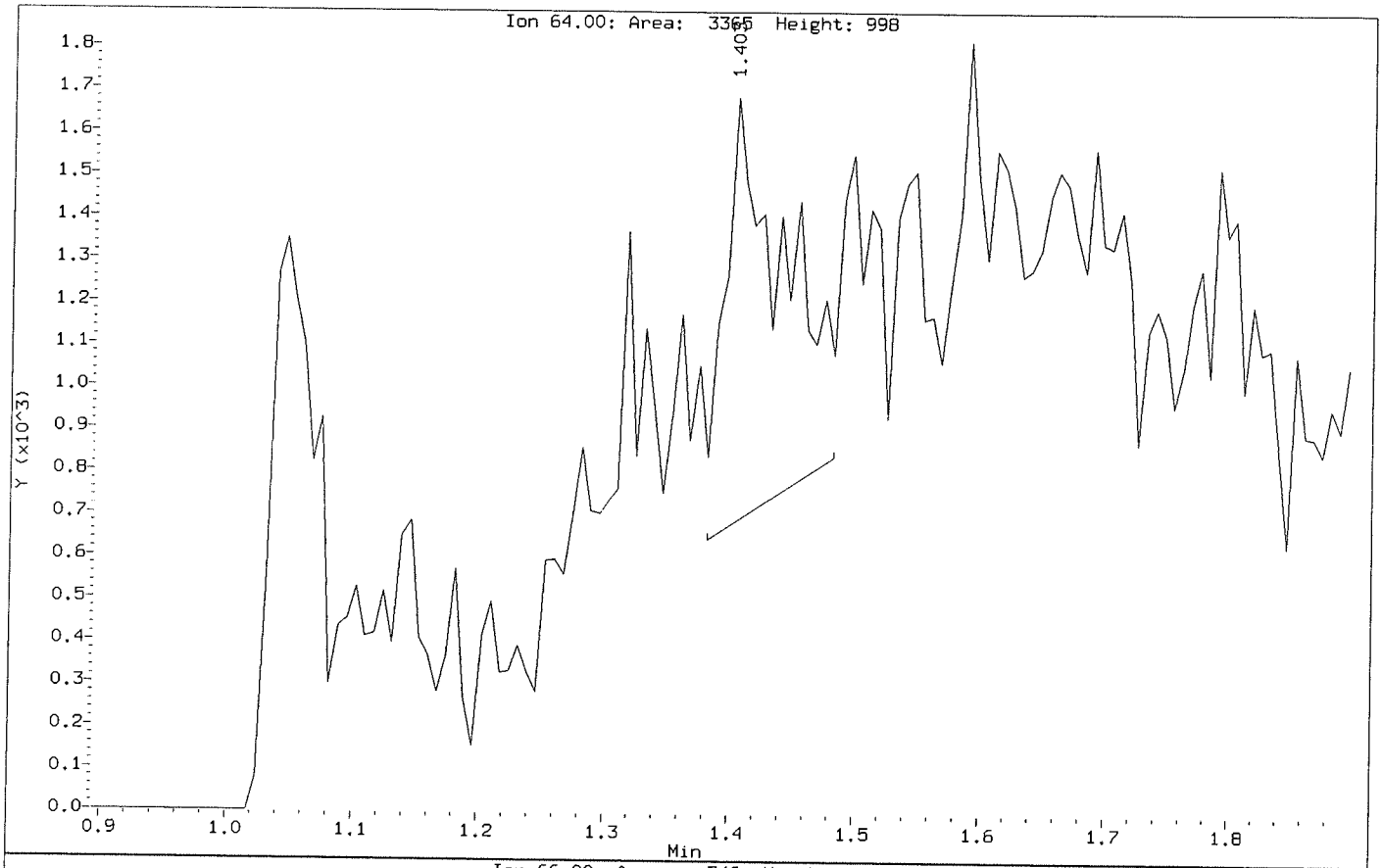
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

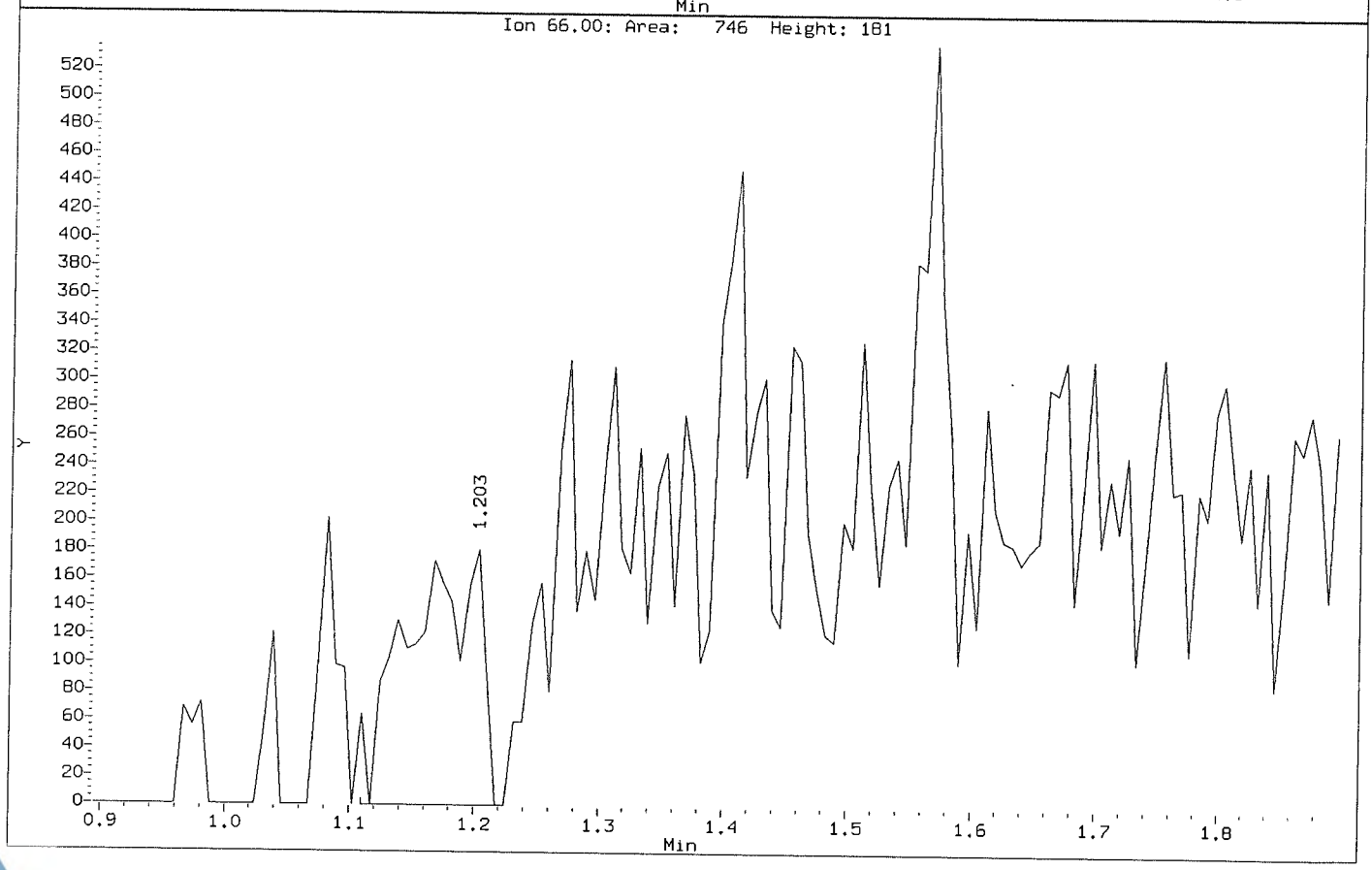




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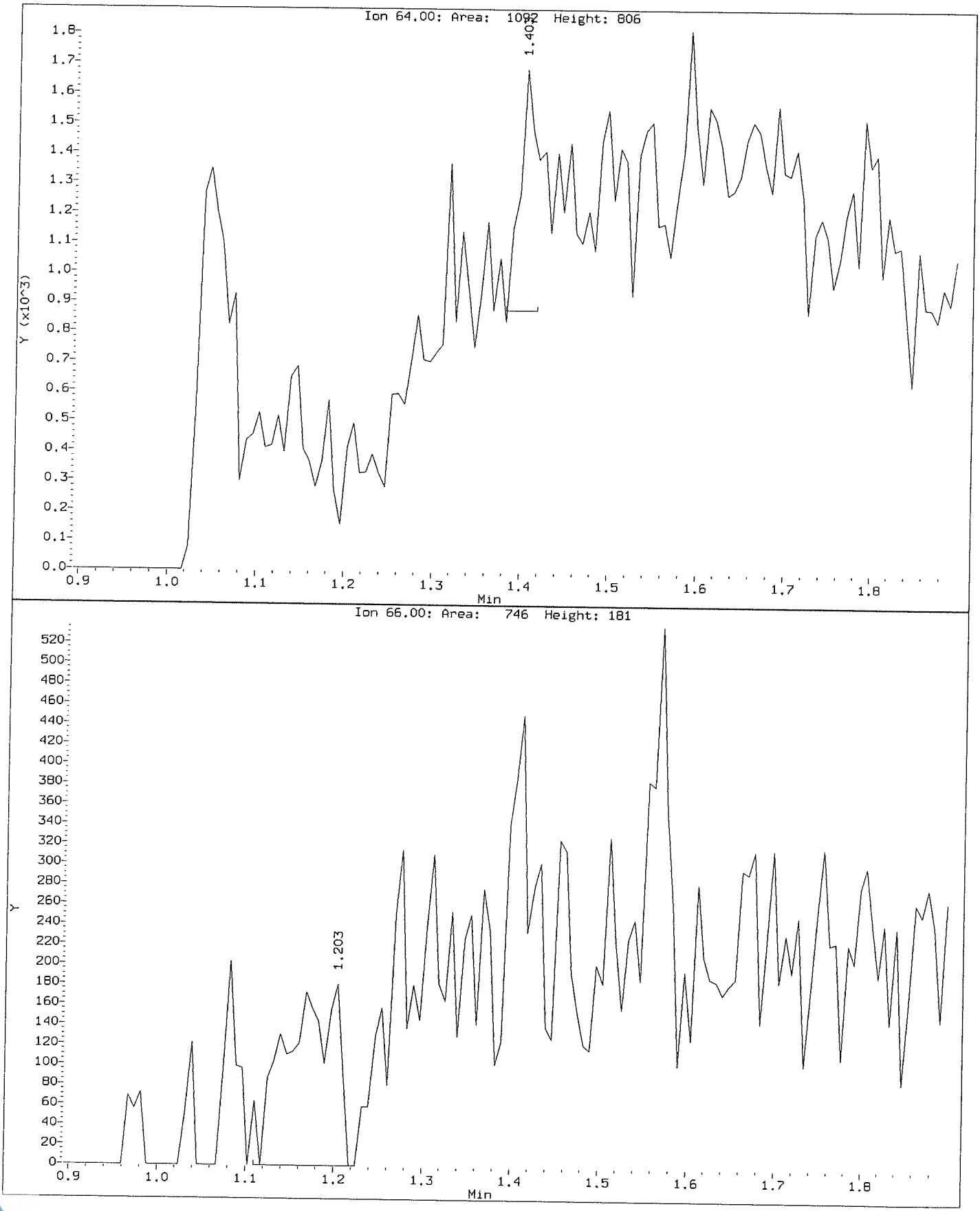
Compound: Chloroethane
CAS Number: 75-00-3





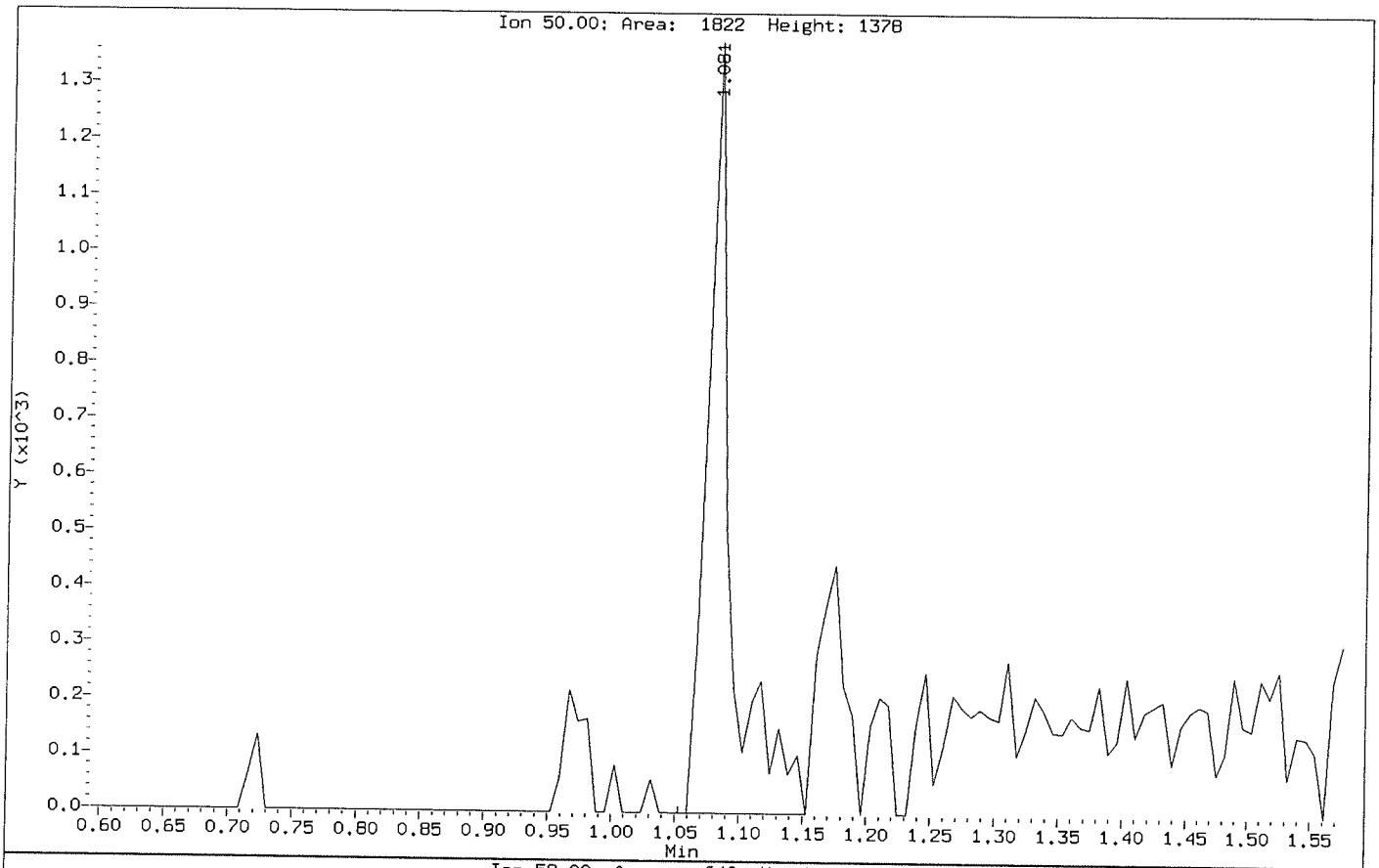
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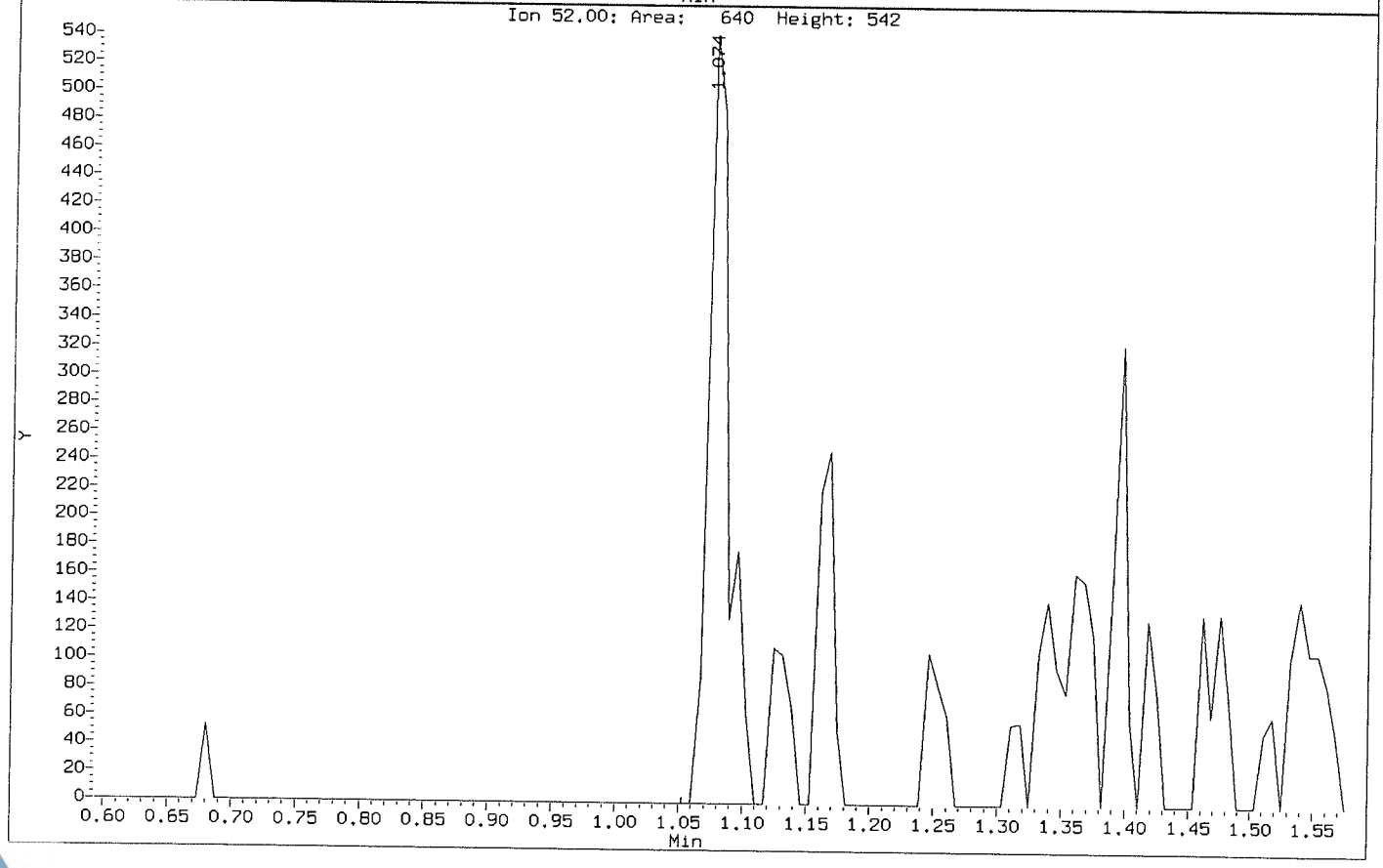
Compound: Chloroethane
CAS Number: 75-00-3



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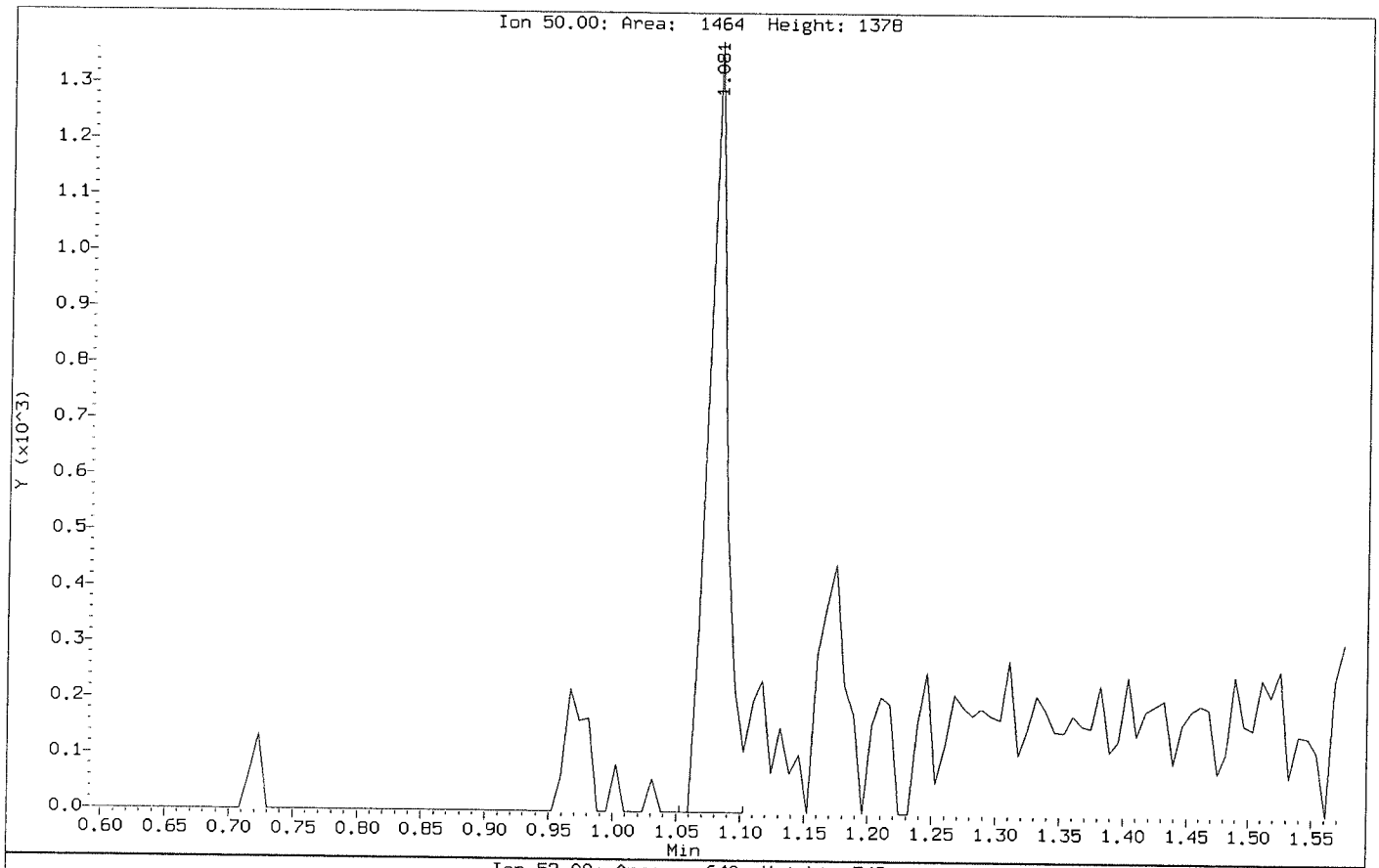
Compound: Chloromethane
CAS Number: 74-87-3

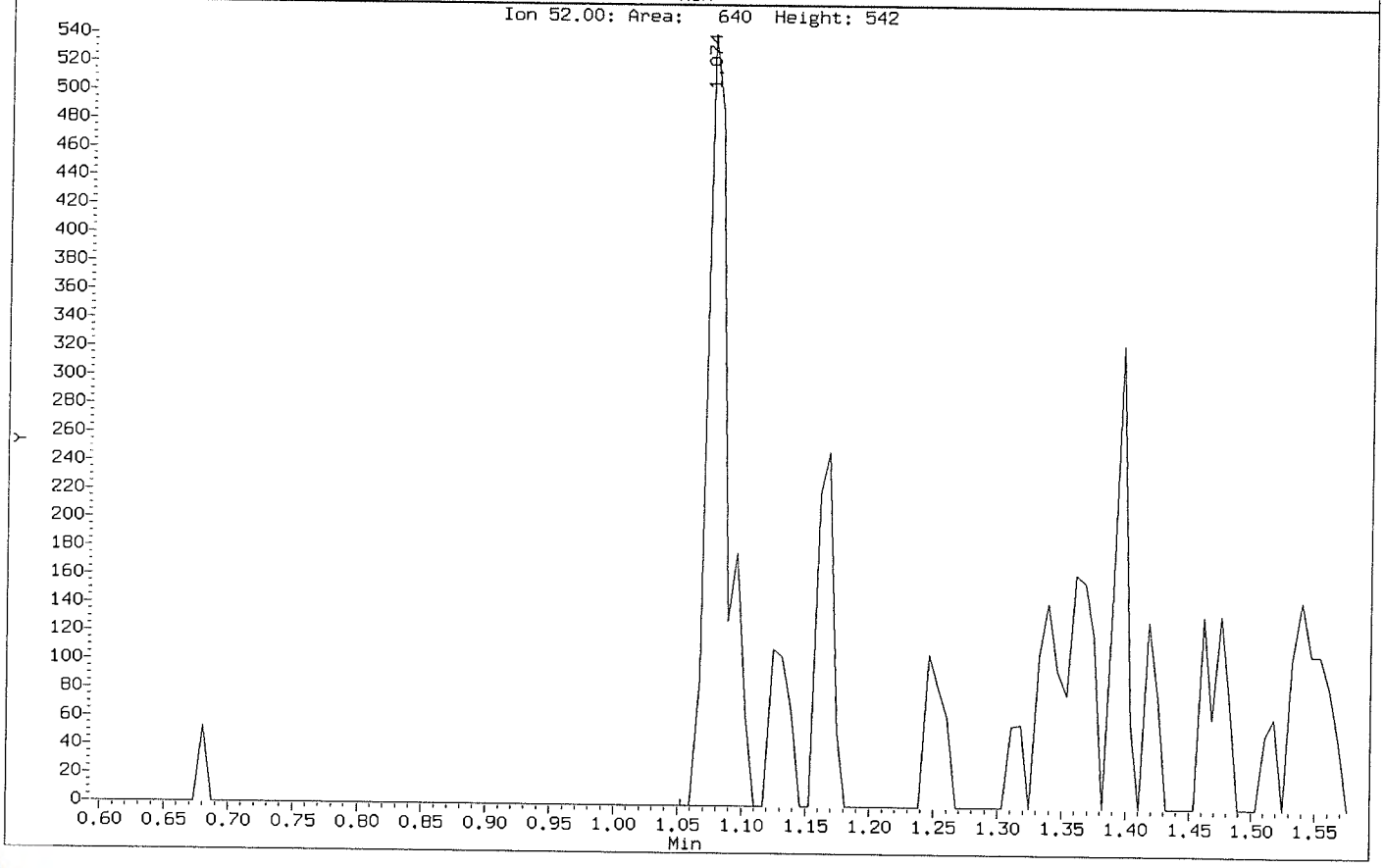




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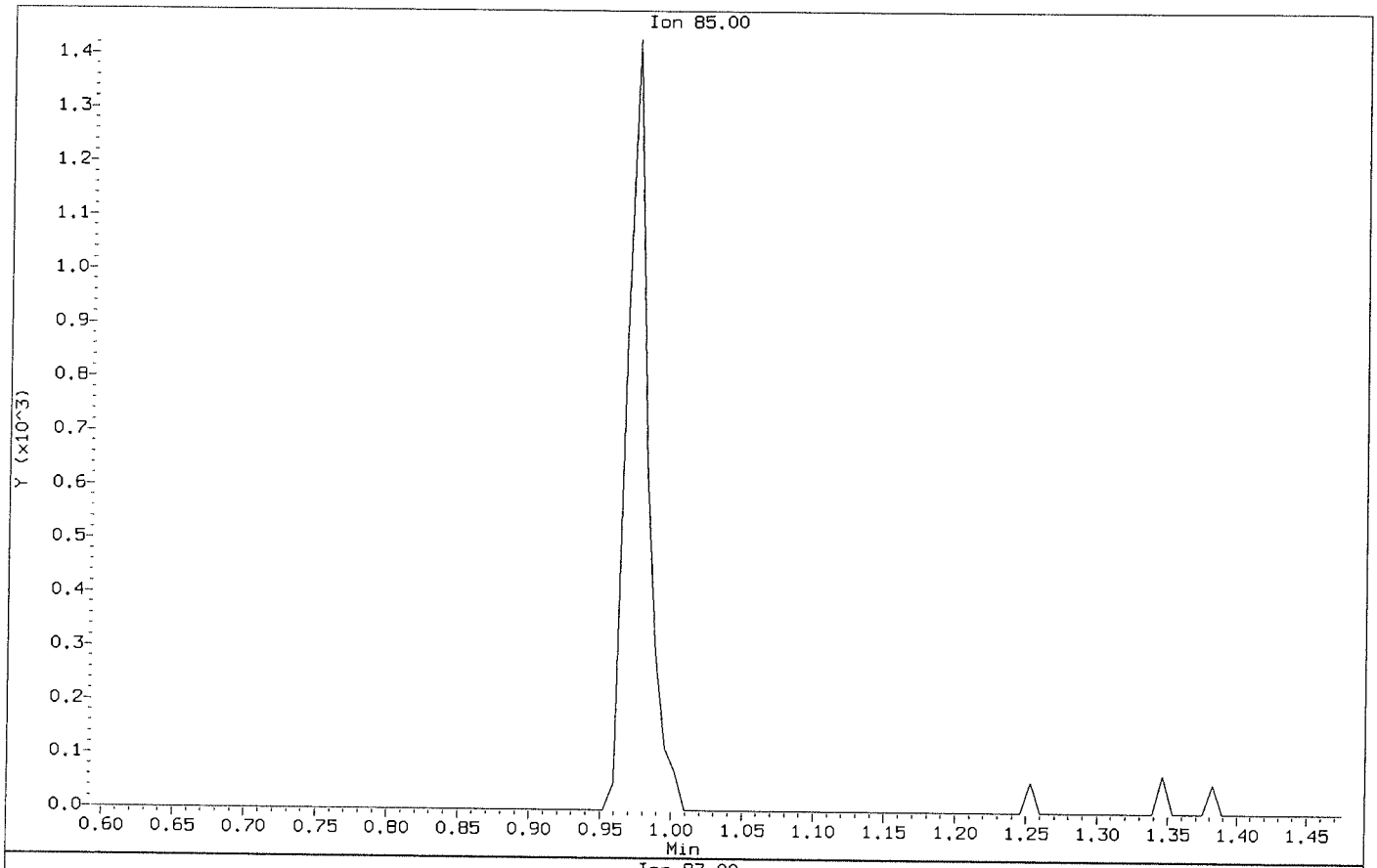
Compound: Chloromethane
CAS Number: 74-87-3

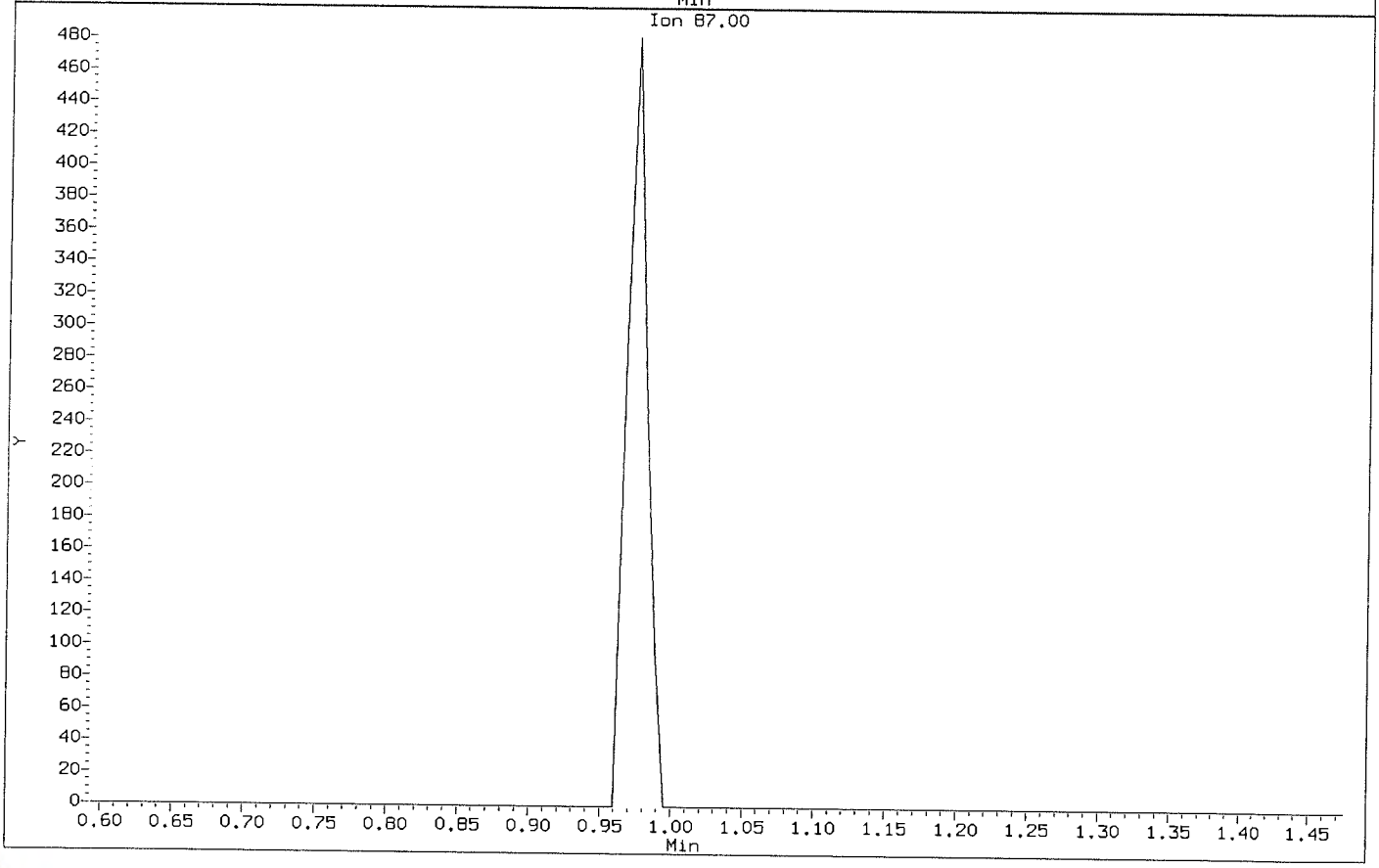




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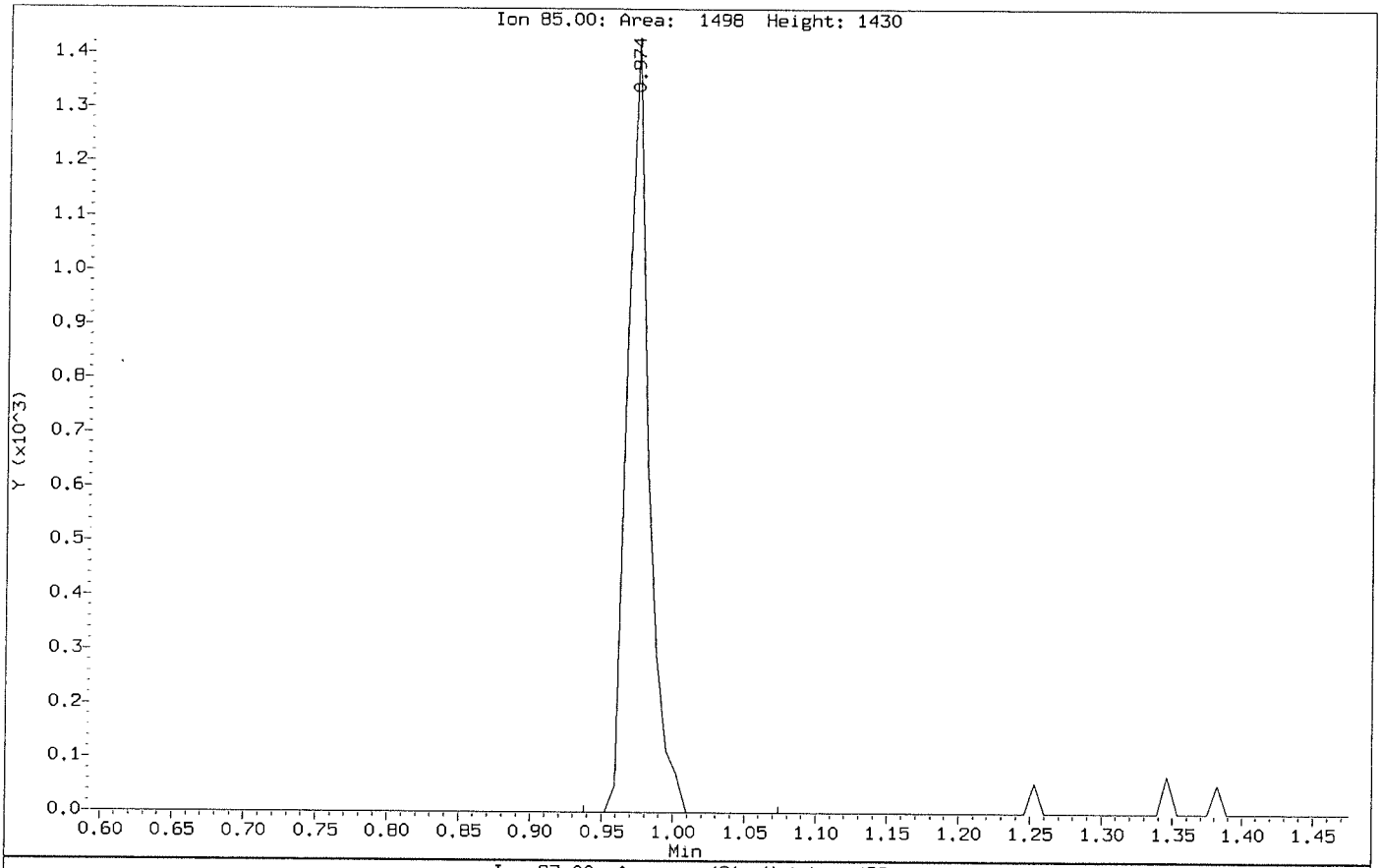
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8

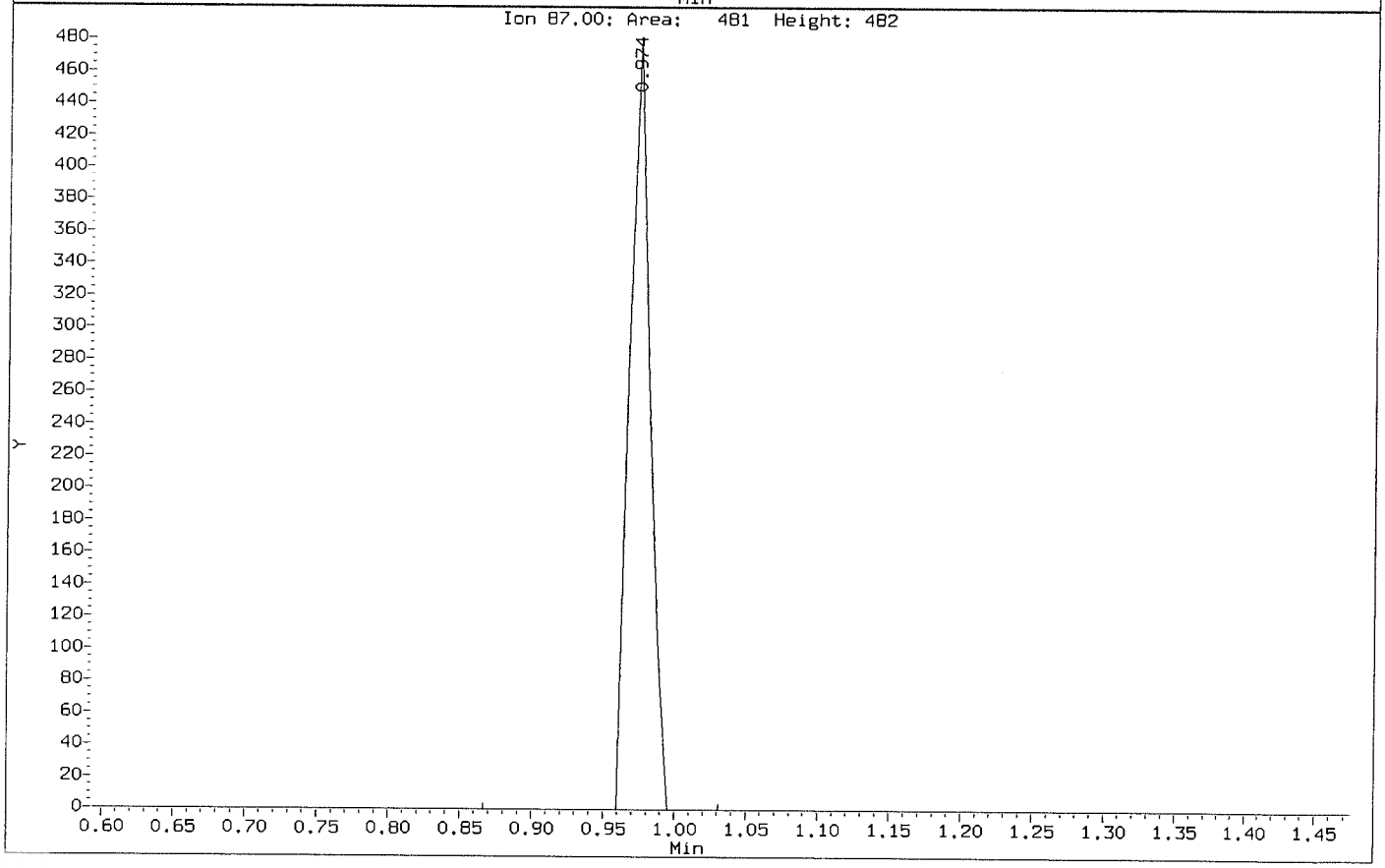




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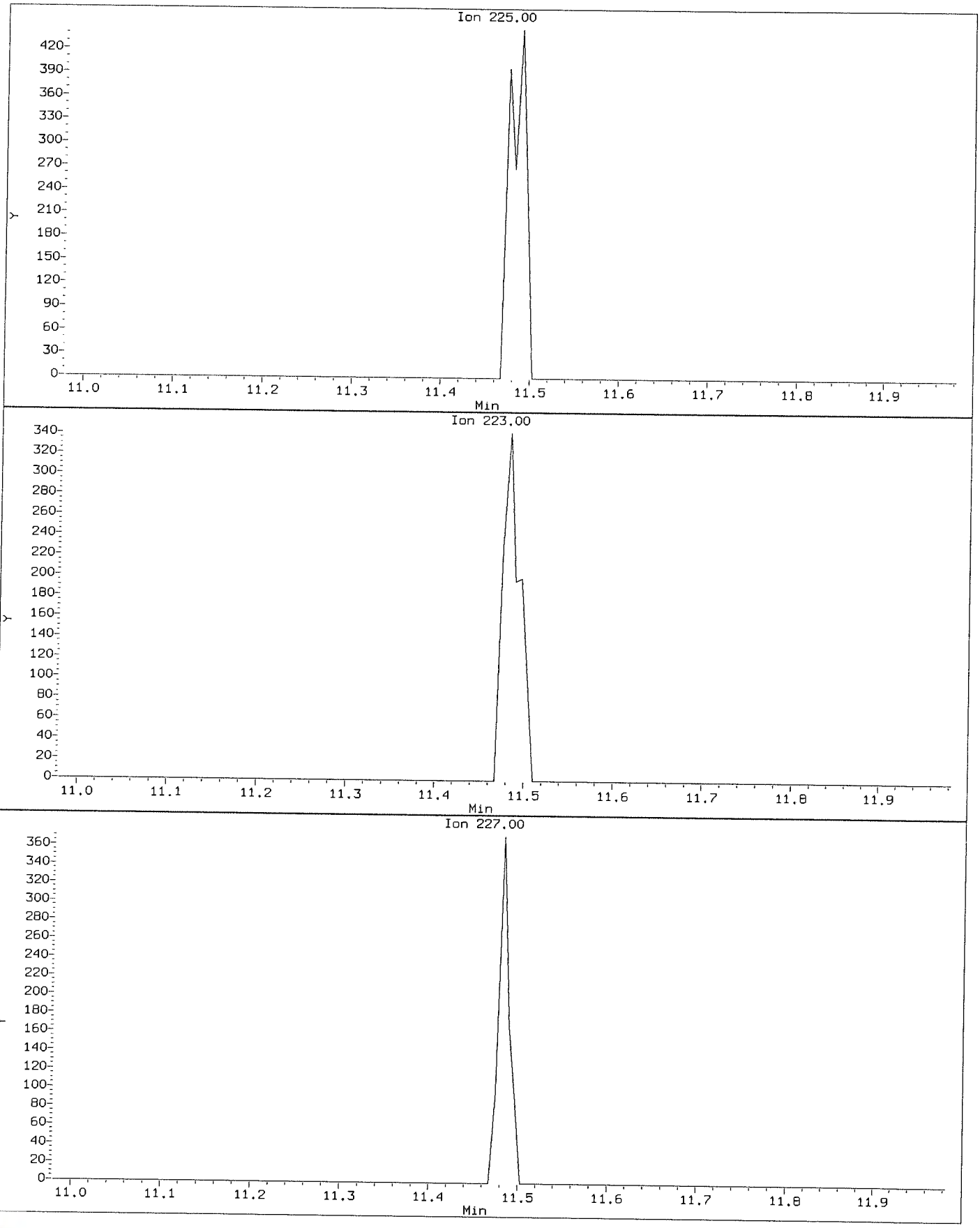
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8





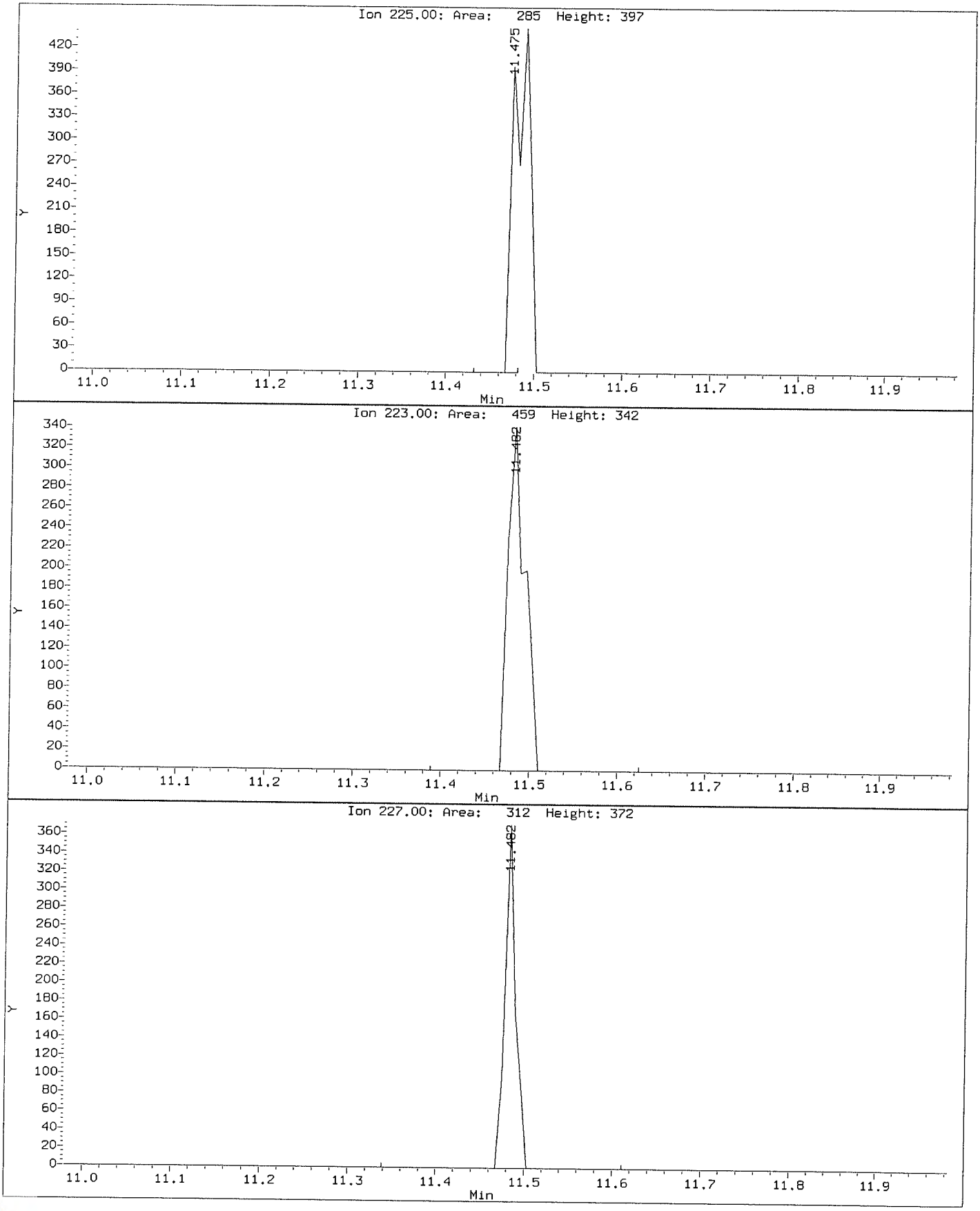
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



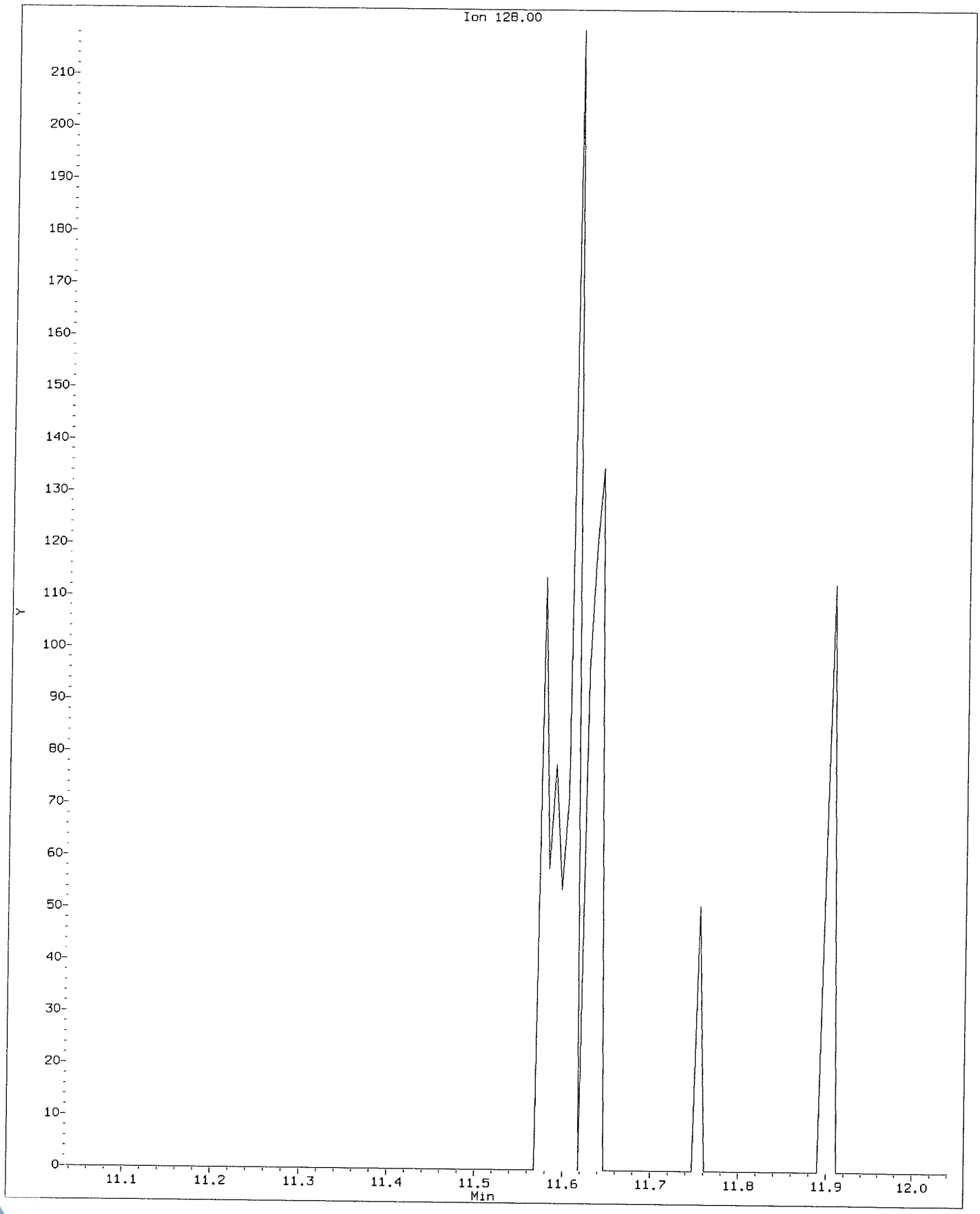
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Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



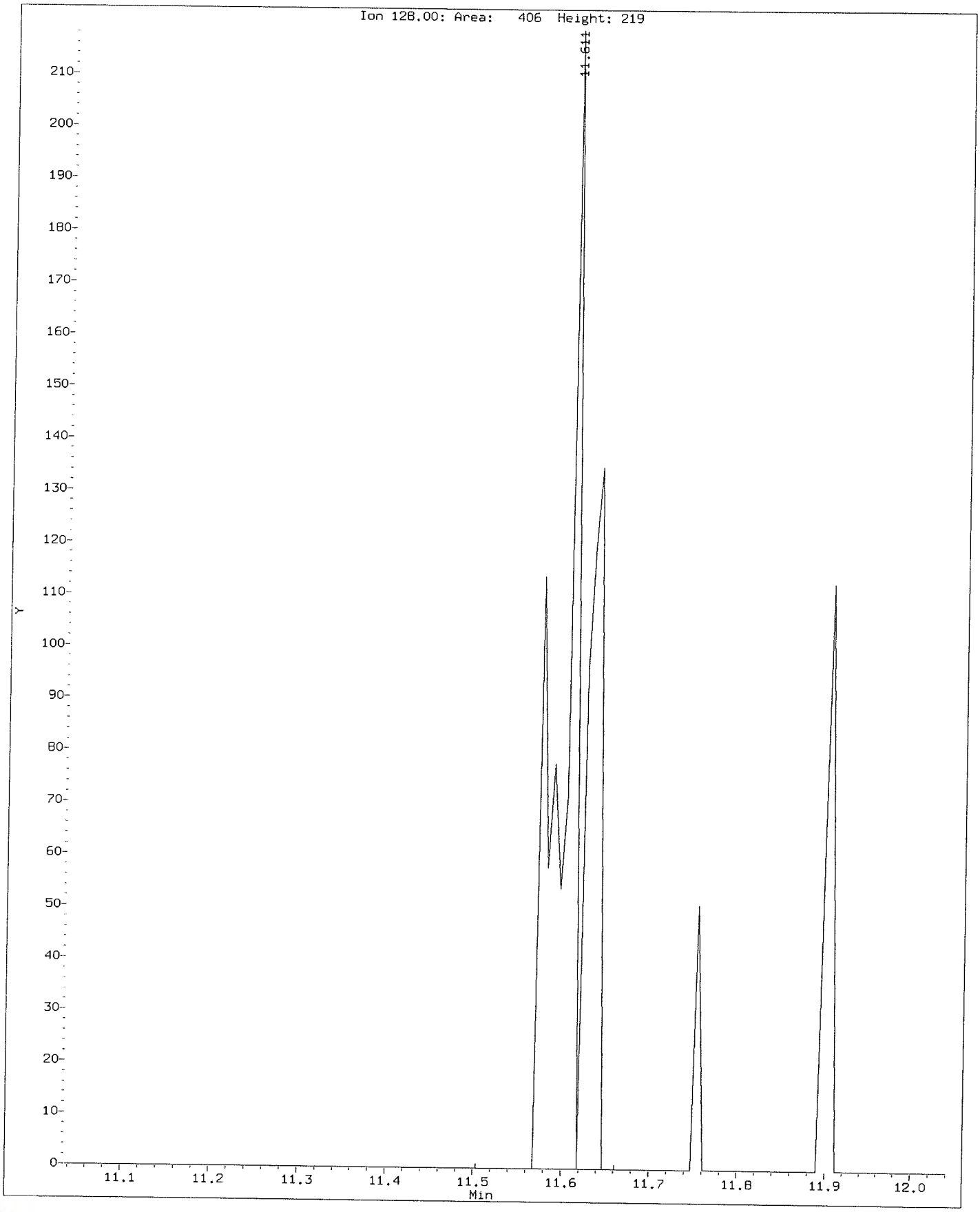
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



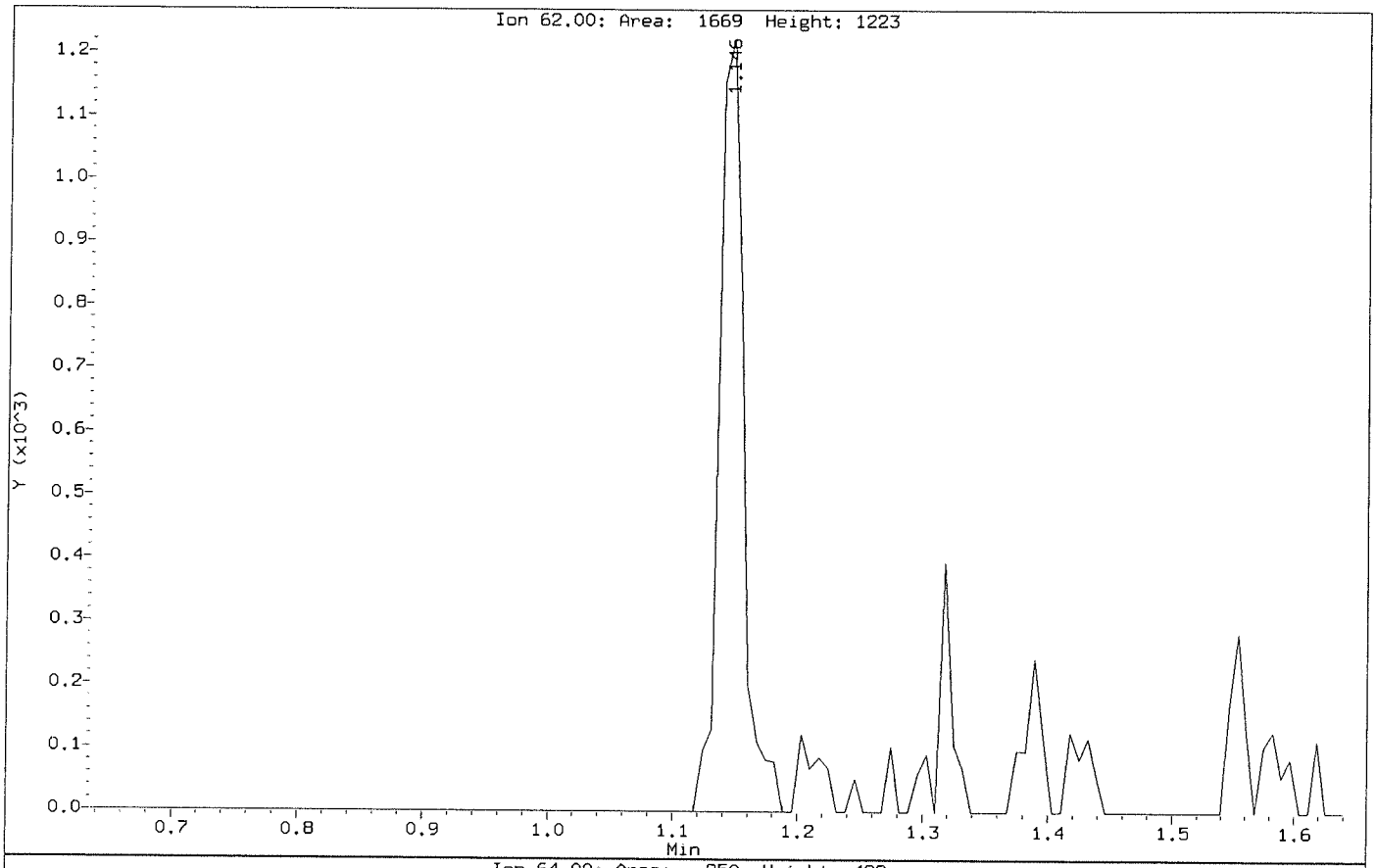
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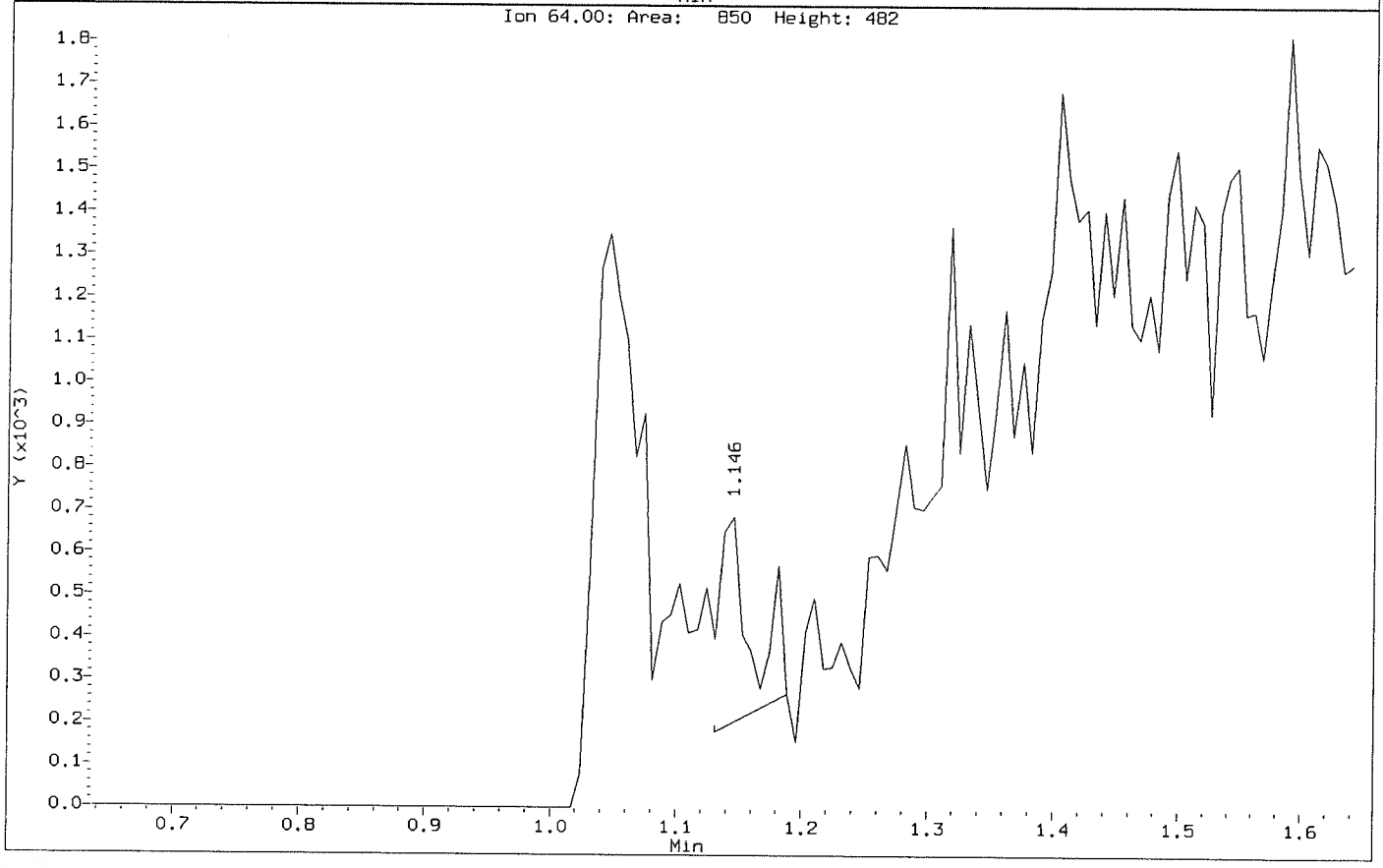
Compound: Naphthalene
CAS Number: 91-20-3



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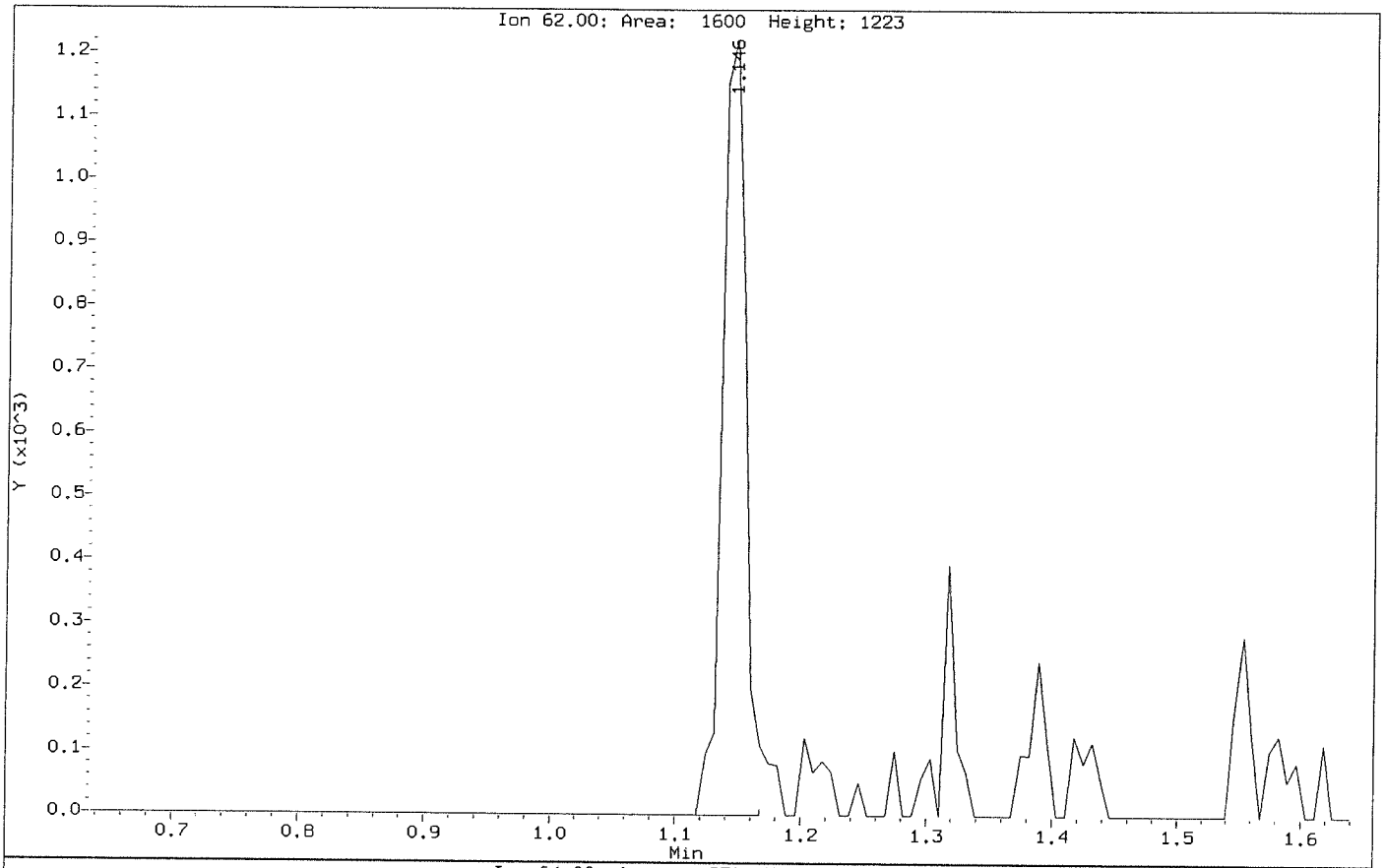
Compound: Vinyl Chloride
CAS Number: 75-01-4

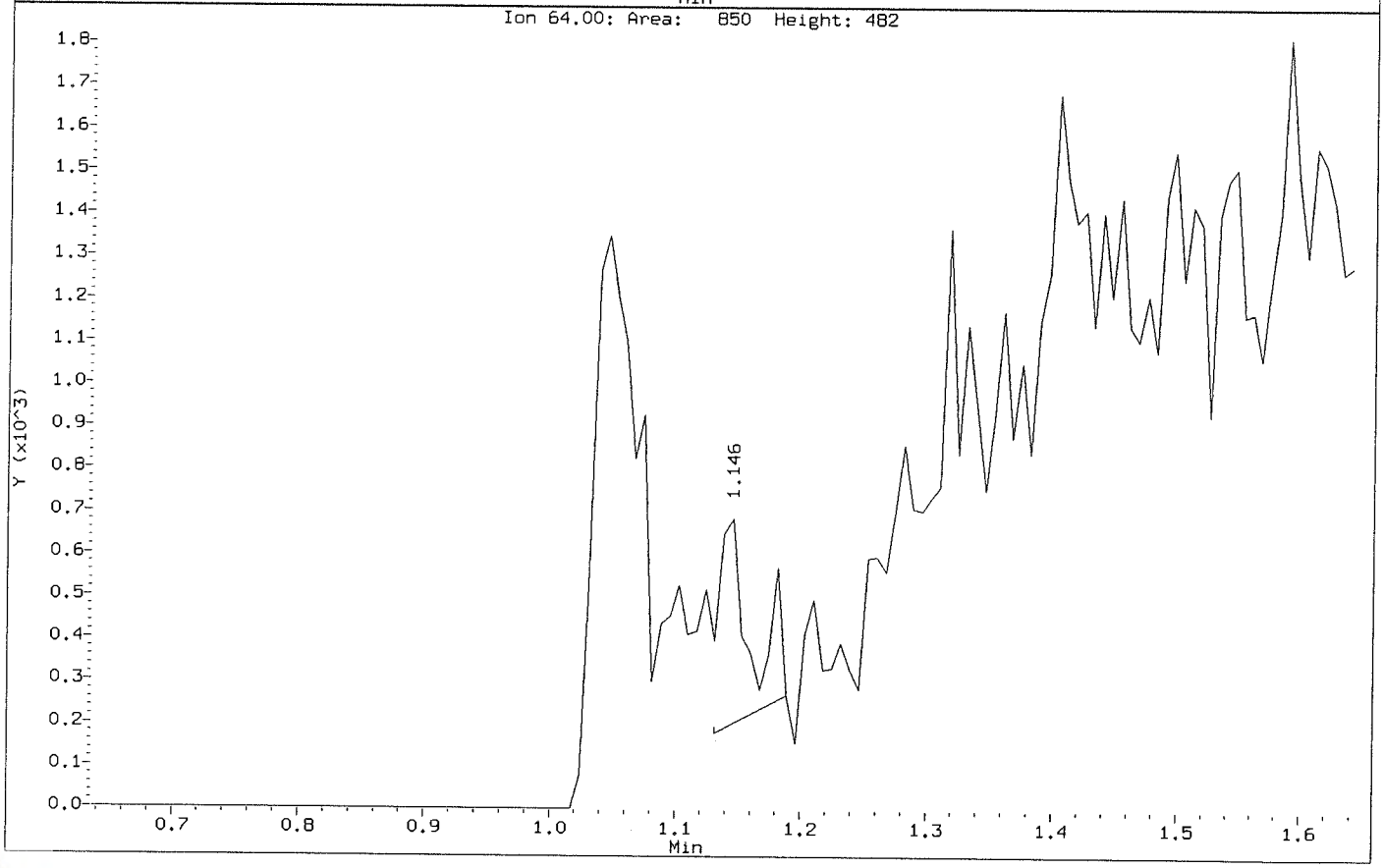




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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051804.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051804.D
Lab Smp Id: VSDT001 Client Smp ID: VSTD001
Inj Date : 18-MAY-2021 12:25
Operator : PC Inst ID: voa6.i
Smp Info : VSDT001;VSTD001;1;3;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 11:43 Cal File: X051803.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

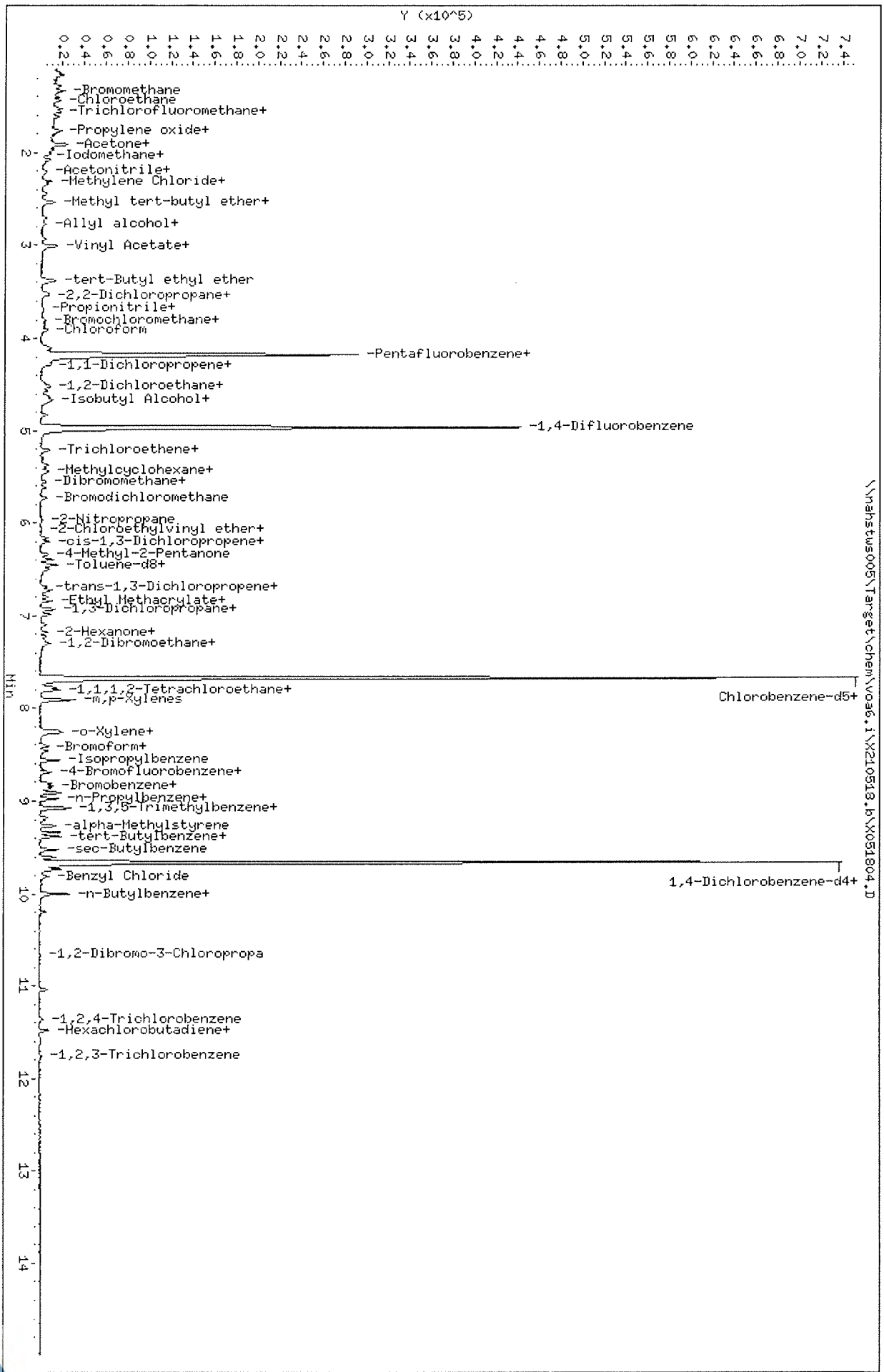
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	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)	219851	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	365818	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	338329	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	153566	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	3259	1.00000	(Ta)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	2729	1.00000	0.97(a)
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	2671	1.00000	0.86(a)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	7865	1.00000	1.94(a)
	60 1,1,1,2-Tetrachloroethane	131	7.771	7.771	(1.013)	2501	1.00000	1.01(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	3645	1.00000	0.97(a)
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	3942	1.00000	1.03(aM)
	138 Freon TF	101	1.926	1.926	(0.461)	2045	1.00000	0.98(a)
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	2388	1.00000	1.21(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	4505	1.00000	1.10(a)
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	2439	1.00000	1.10(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	3437	1.00000	1.09(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	800	1.00000	1.59(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	3361	1.00000	1.01(aMH)
	90 1,2,4-Trichlorobenzene	180	11.360	11.360	(1.176)	1337	1.00000	3.38(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	9246	1.00000	1.18(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	283	1.00000	2.92(aM)
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	2509	1.00000	1.06(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	5563	1.00000	1.29(a)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	4020	1.00000	1.11(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	2590	1.00000	1.05(aM)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	8467	1.00000	1.10(a)
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	5480	1.00000	1.24(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	4419	1.00000	1.14(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	6628	1.00000	1.71(a)
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	3735	1.00000	1.02(a)
24	2-Butanone	43	3.609	3.609	(0.863)	1748	2.00000	2.15(aM)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	8473	1.00000	1.23(aM)
52	2-Hexanone	43	7.098	7.098	(0.925)	4644	2.00000	2.97(a)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	9387	1.00000	1.17(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	8833	1.00000	1.16(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	6100	2.00000	2.91(a)
10	Acetone	43	1.976	1.976	(0.473)	2806	2.00000	0.15(a)
37	Benzene	78	4.519	4.519	(0.909)	9079	1.00000	1.00(a)
74	Bromobenzene	156	8.810	8.810	(0.912)	3170	1.00000	1.23(a)
29	Bromochloromethane	128	3.803	3.803	(0.909)	1376	1.00000	1.02(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	3683	1.00000	1.04(aM)
66	Bromoform	173	8.416	8.416	(1.097)	1736	1.00000	1.06(Ta)
6	Bromomethane	94	1.339	1.339	(0.320)	3018	1.00000	0.84(aM)
19	Carbon Disulfide	76	2.076	2.076	(0.497)	10496	2.00000	2.02(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	3274	1.00000	1.02(aH)
59	Chlorobenzene	112	7.692	7.692	(1.003)	7182	1.00000	1.08(a)
7	Chloroethane	64	1.403	1.403	(0.336)	1604	1.00000	0.96(aM)
28	Chloroform	83	3.917	3.917	(0.937)	4735	1.00000	1.01(a)
3	Chloromethane	50	1.073	1.073	(0.257)	3160	1.00000	1.56(aM)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	2814	1.00000	1.11(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	4187	1.00000	1.04(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	3082	1.00000	1.16(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	1945	1.00000	1.10(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	2403	1.00000	2.91(a)
61	Ethylbenzene	106	7.800	7.800	(1.017)	3237	1.00000	0.98(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	1107	1.00000	4.31(aM)
67	Isopropylbenzene	105	8.559	8.559	(1.116)	10338	1.00000	1.03(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	8386	2.00000	1.98(a)
17	Methylene Chloride	84	2.306	2.306	(0.551)	2091	1.00000	0.94(a)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	8481	1.00000	1.17(a)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	12352	1.00000	1.13(a)
92	Naphthalene	128	11.567	11.567	(1.197)	1471	1.00000	3.78(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	4167	1.00000	1.01(a)
81	sec-Butylbenzene	105	9.519	9.519	(0.985)	9907	1.00000	1.10(a)
64	Styrene	104	8.265	8.265	(1.078)	6890	1.00000	2.62(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	7755	1.00000	1.19(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	1738	1.00000	0.92(a)
50	Toluene	91	6.446	6.446	(0.840)	9931	1.00000	1.01(a)
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	1937	1.00000	0.91(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	3517	1.00000	1.00(a)
38	Trichloroethene	130	5.207	5.207	(1.048)	2724	1.00000	1.12(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	4657	1.00000	1.10(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	2800	1.00000	1.05(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.
H - Operator selected an alternate compound hit.



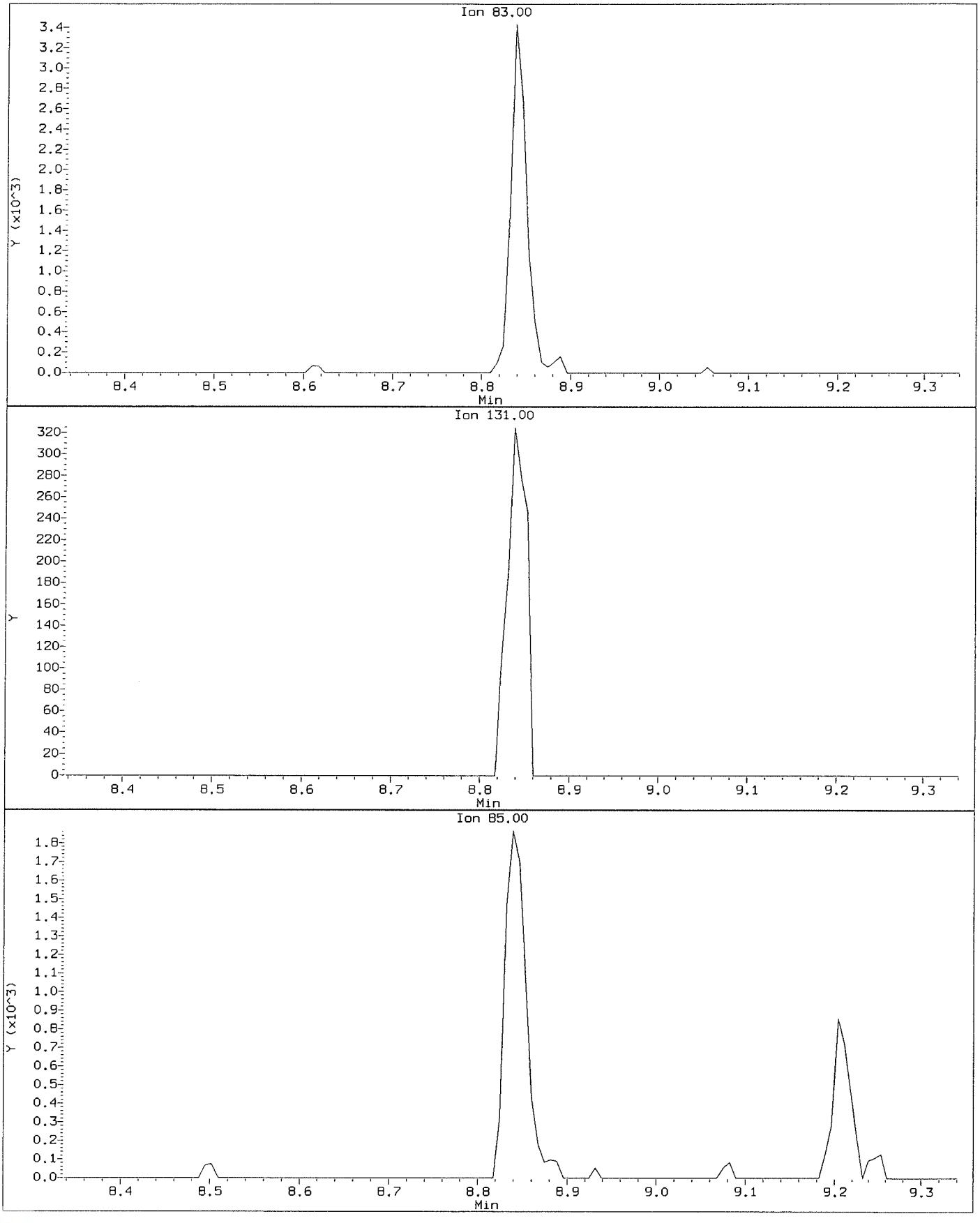
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Date : 18-MAY-2021 12:25
Client ID: VSTD001
Sample Info: VSDT001,VSTD001,1,3,,
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

\\nahstws005\Target\chem\voa6.i\X210518.b\X051804.D

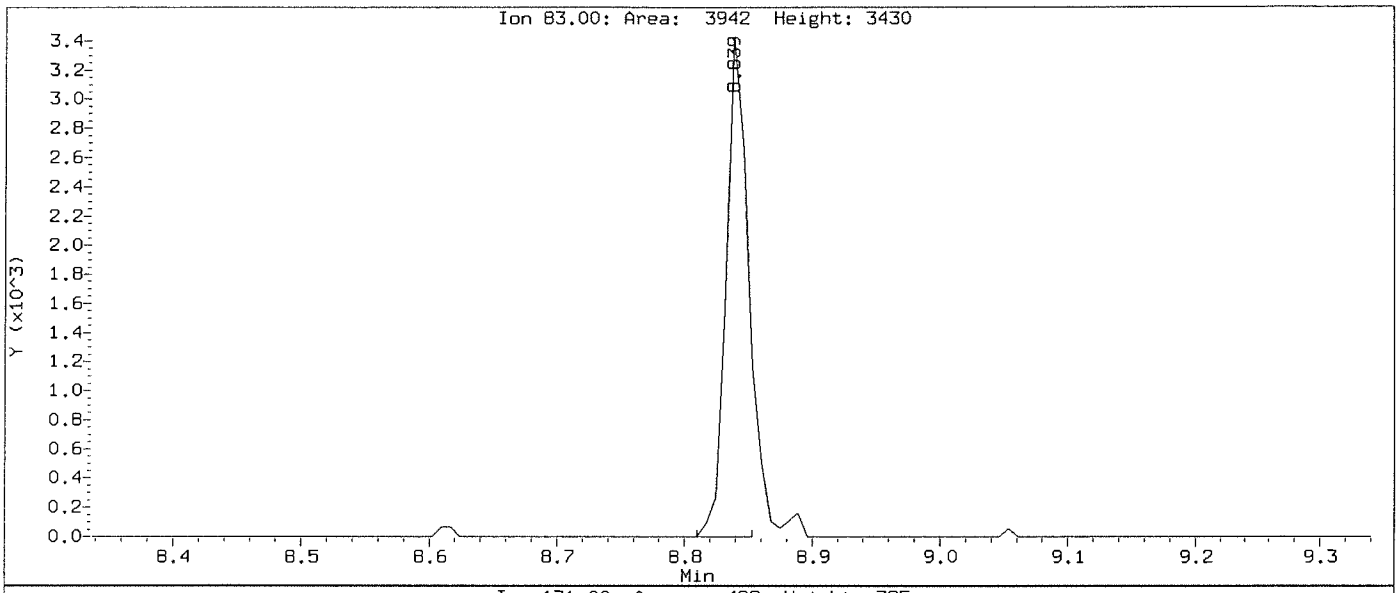
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Instrument: voa6.i
Client Sample ID: VSTD001

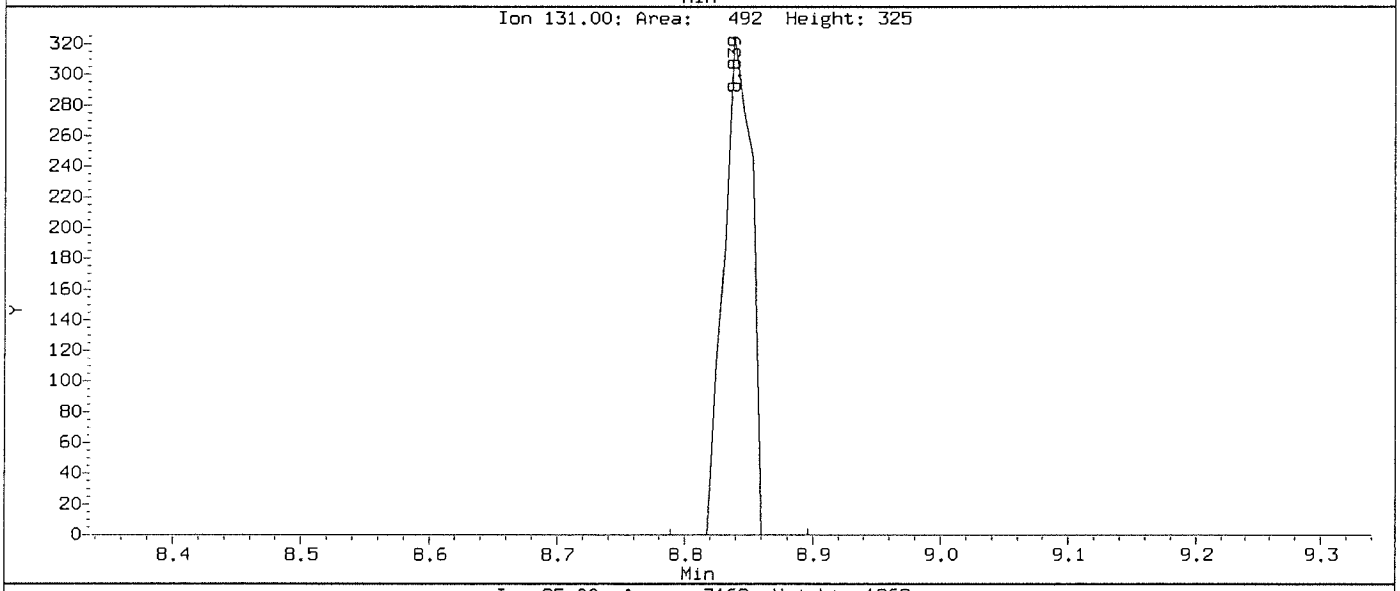
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

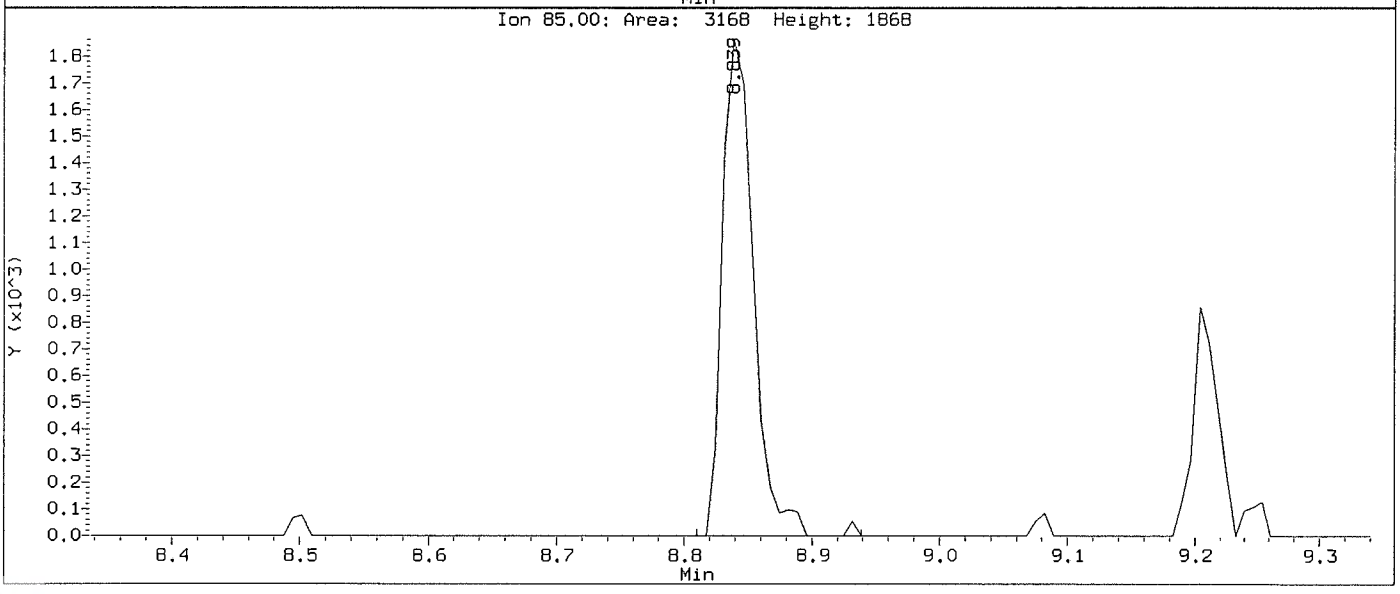


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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

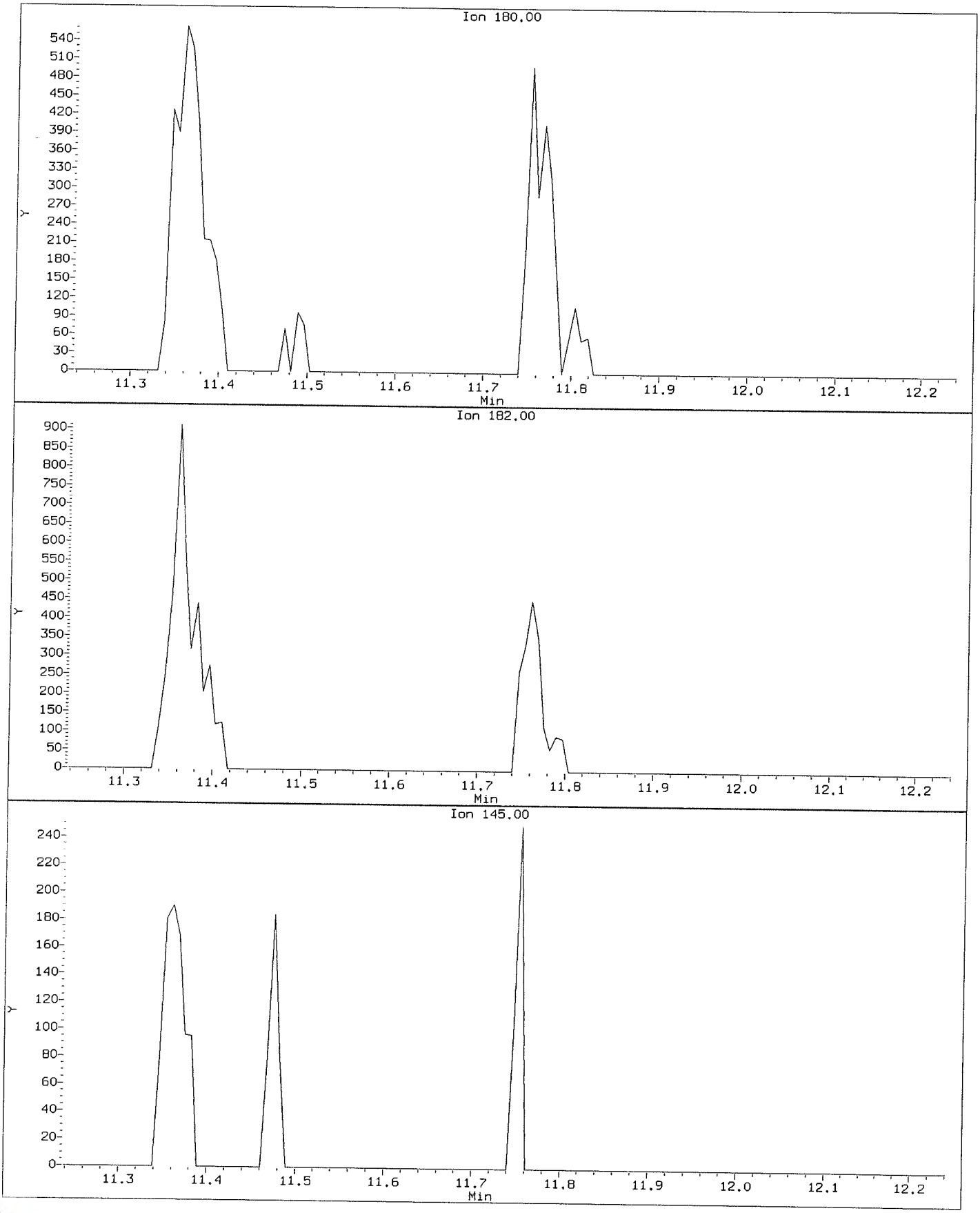






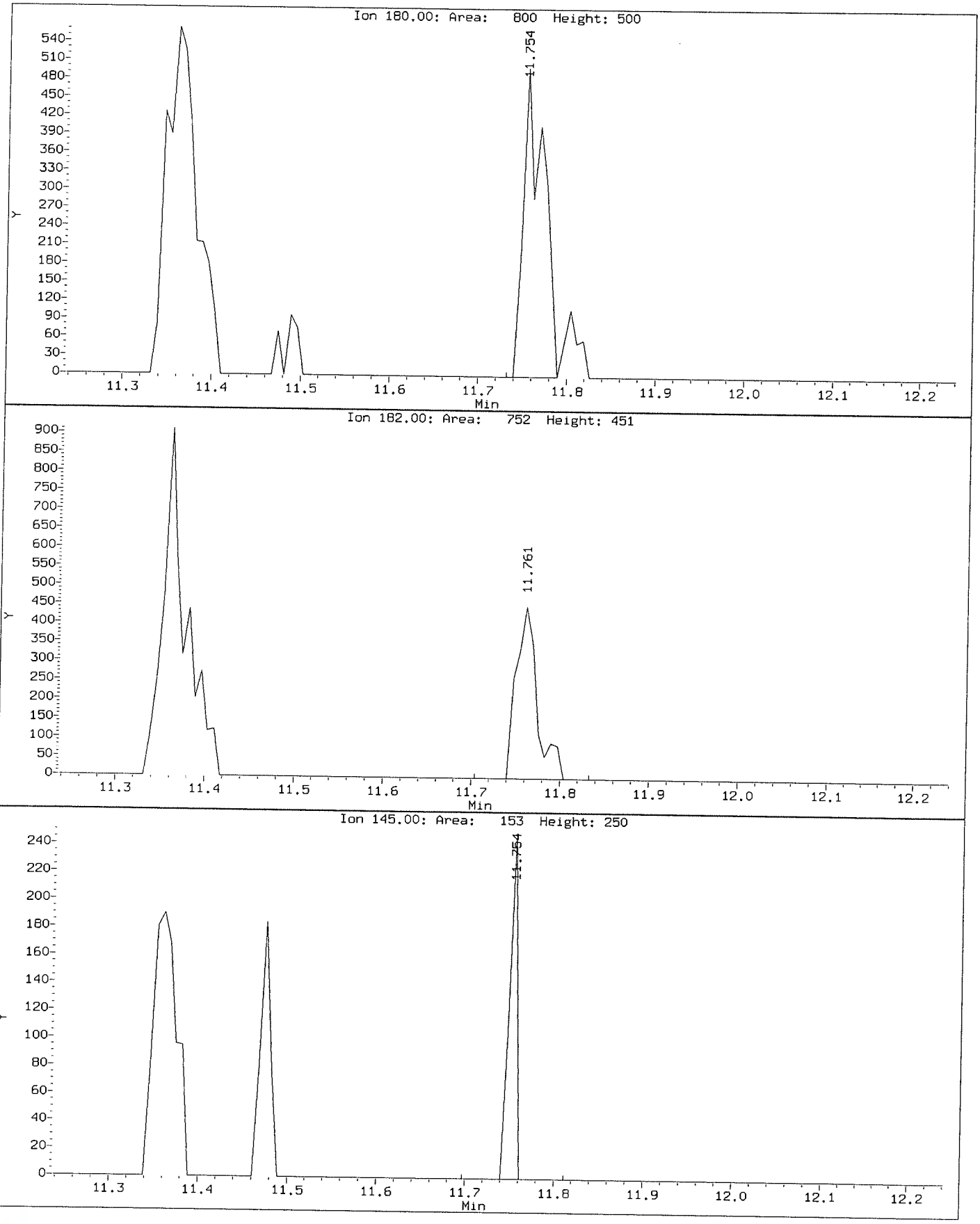
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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



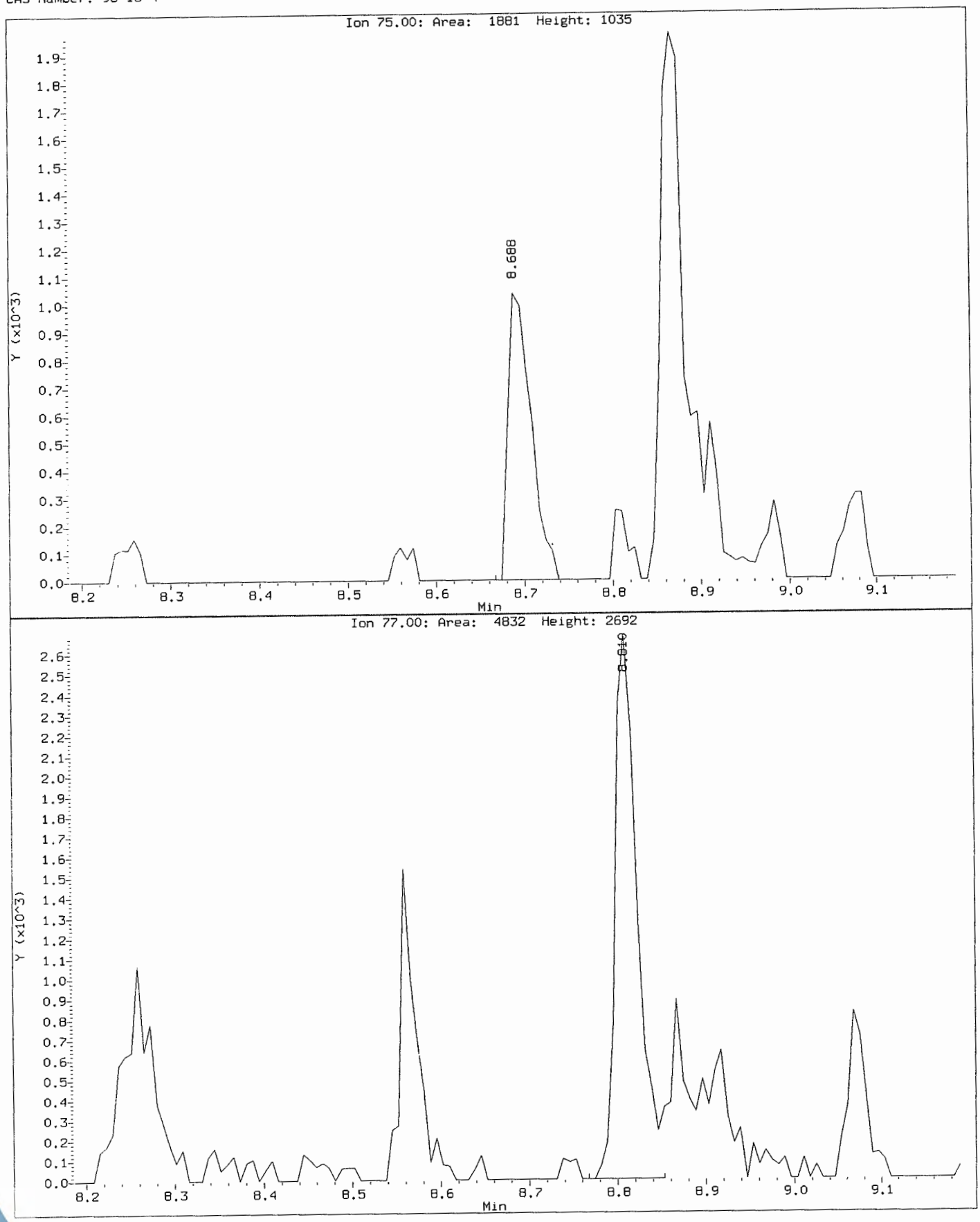
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



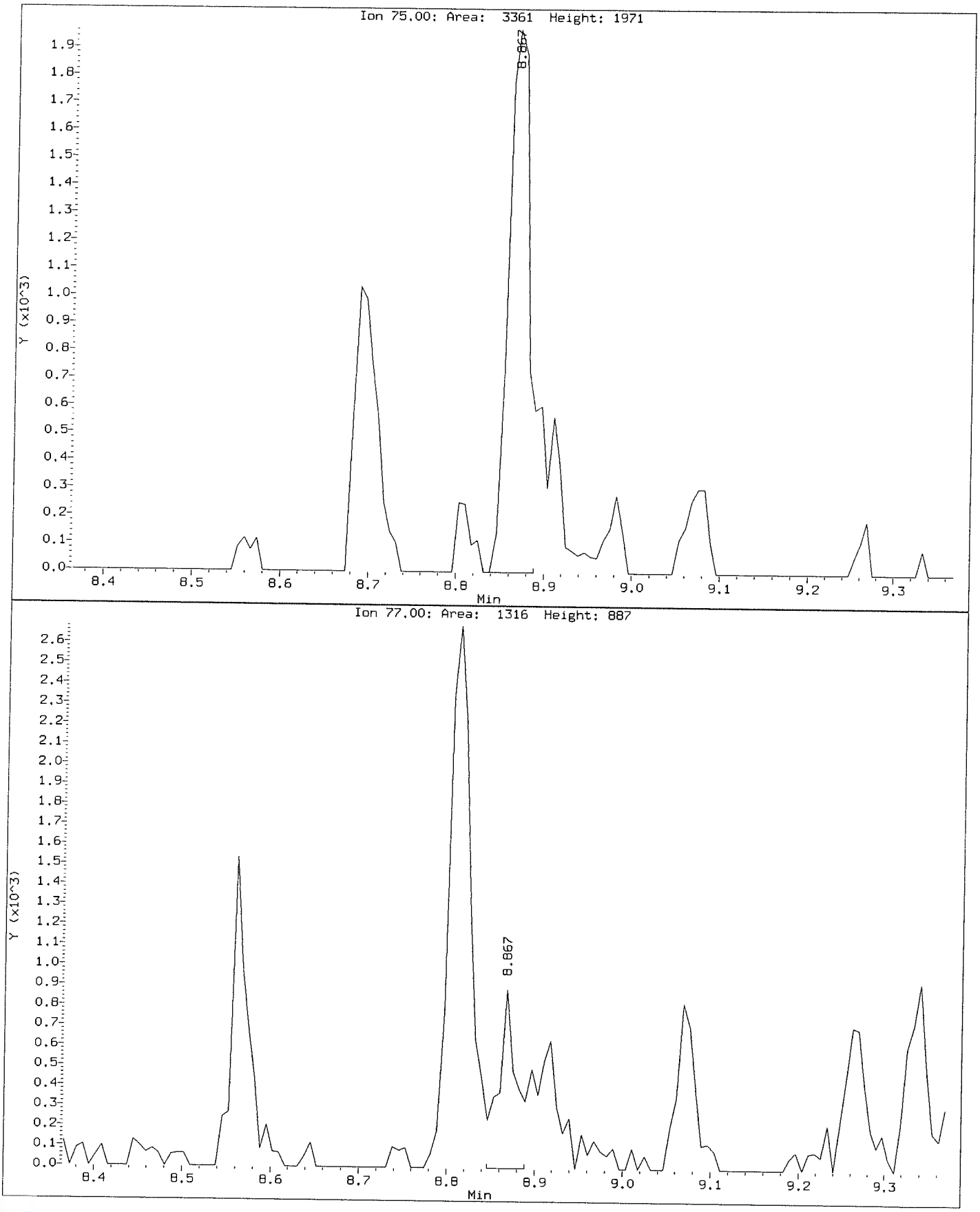
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



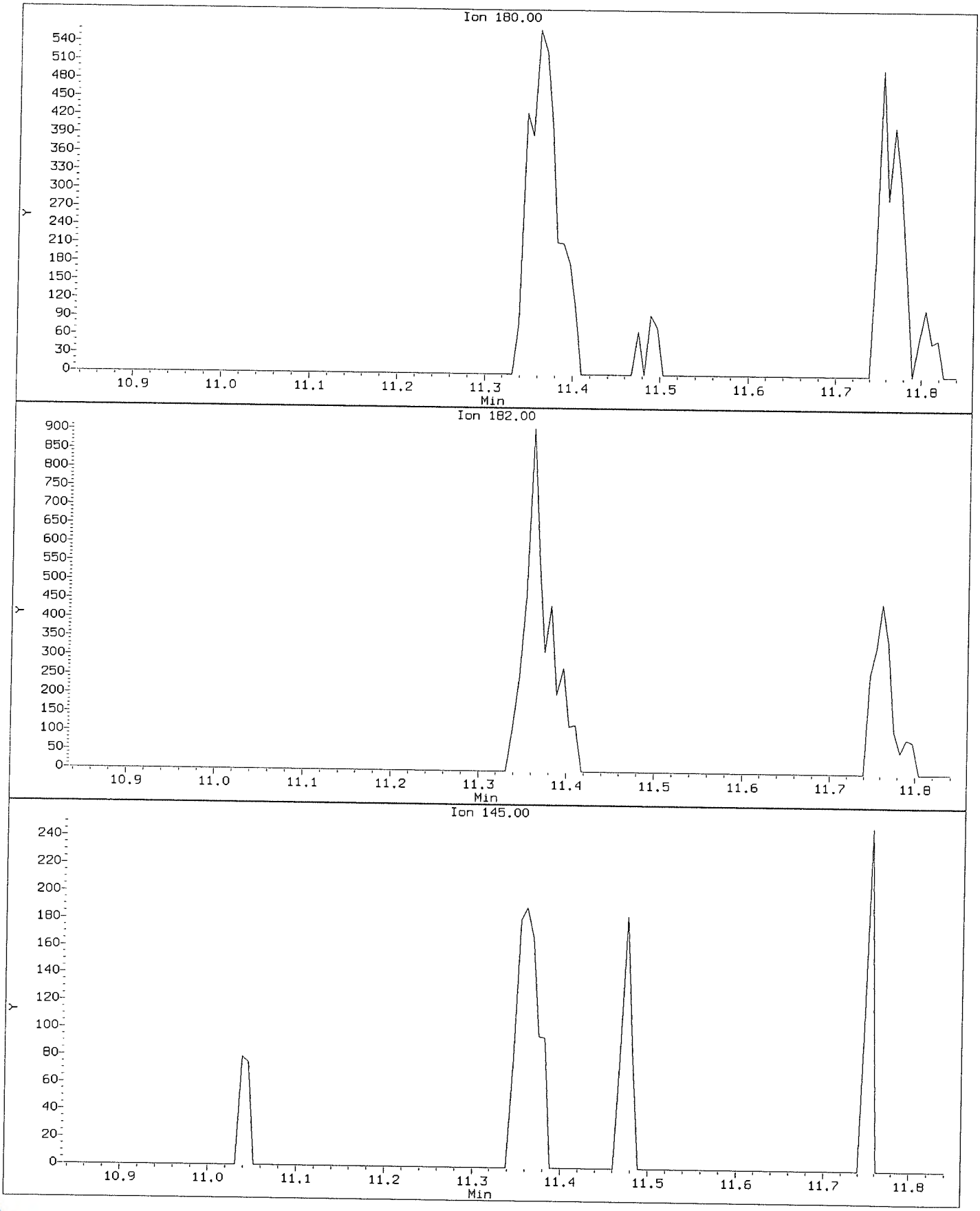
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



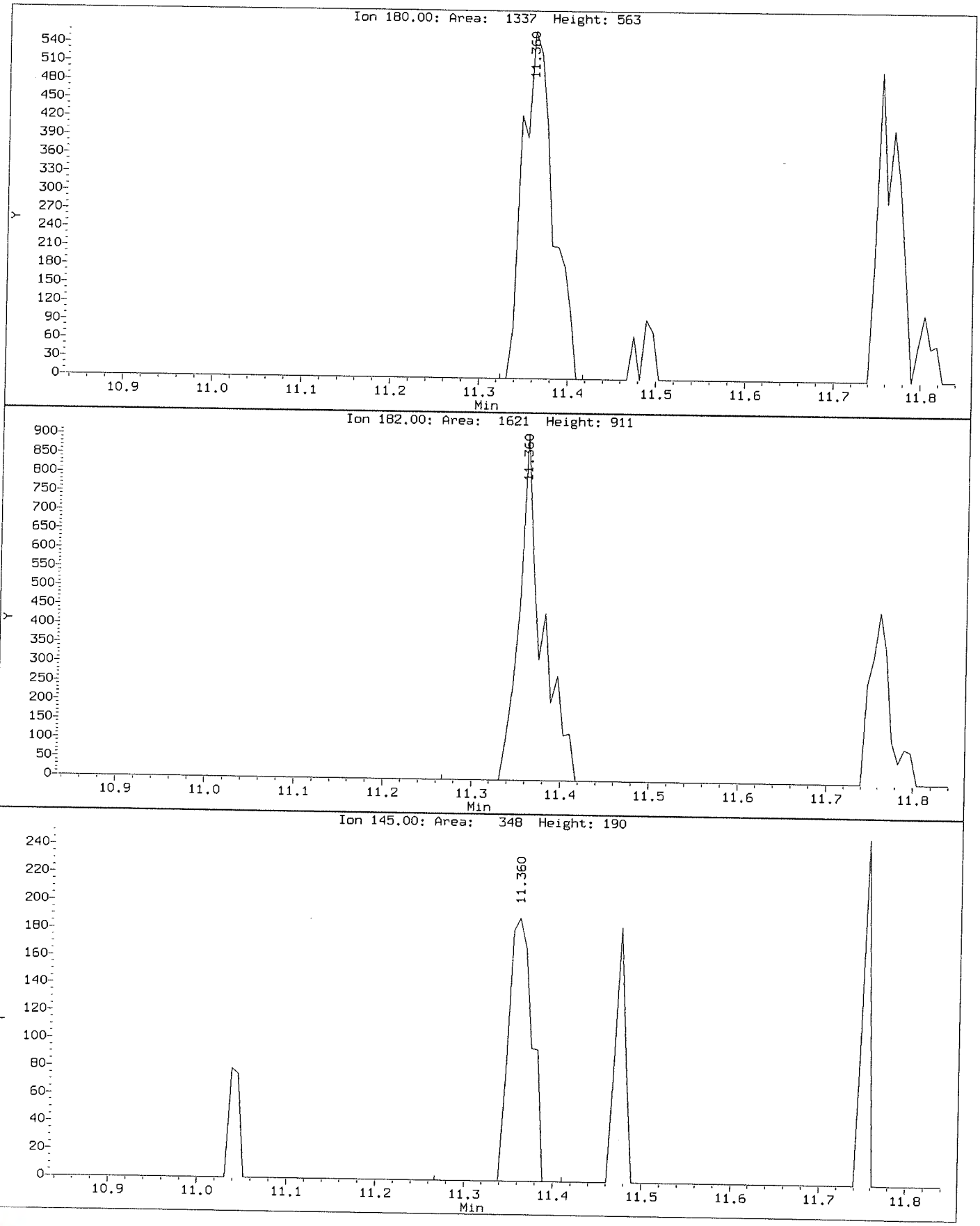
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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



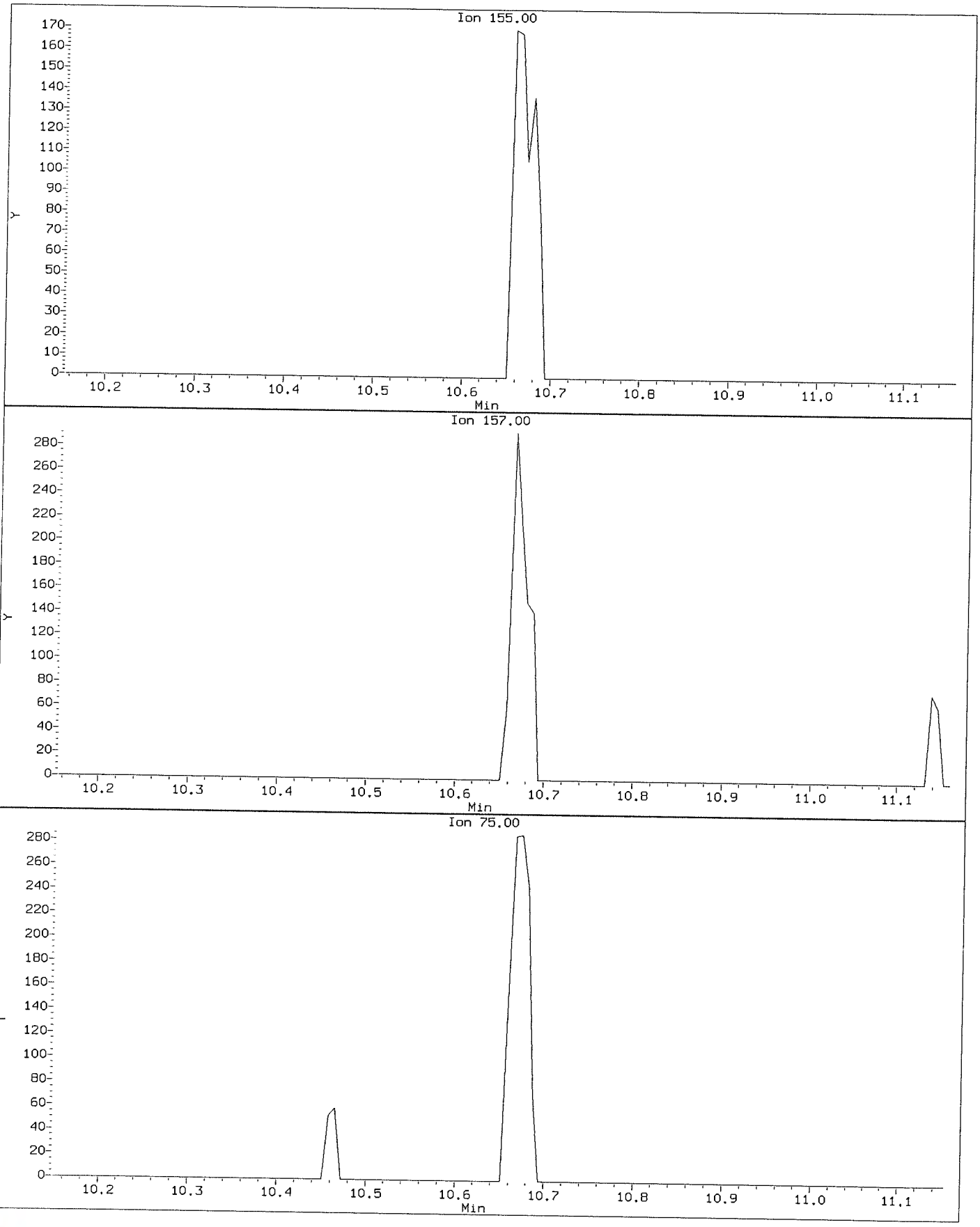
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



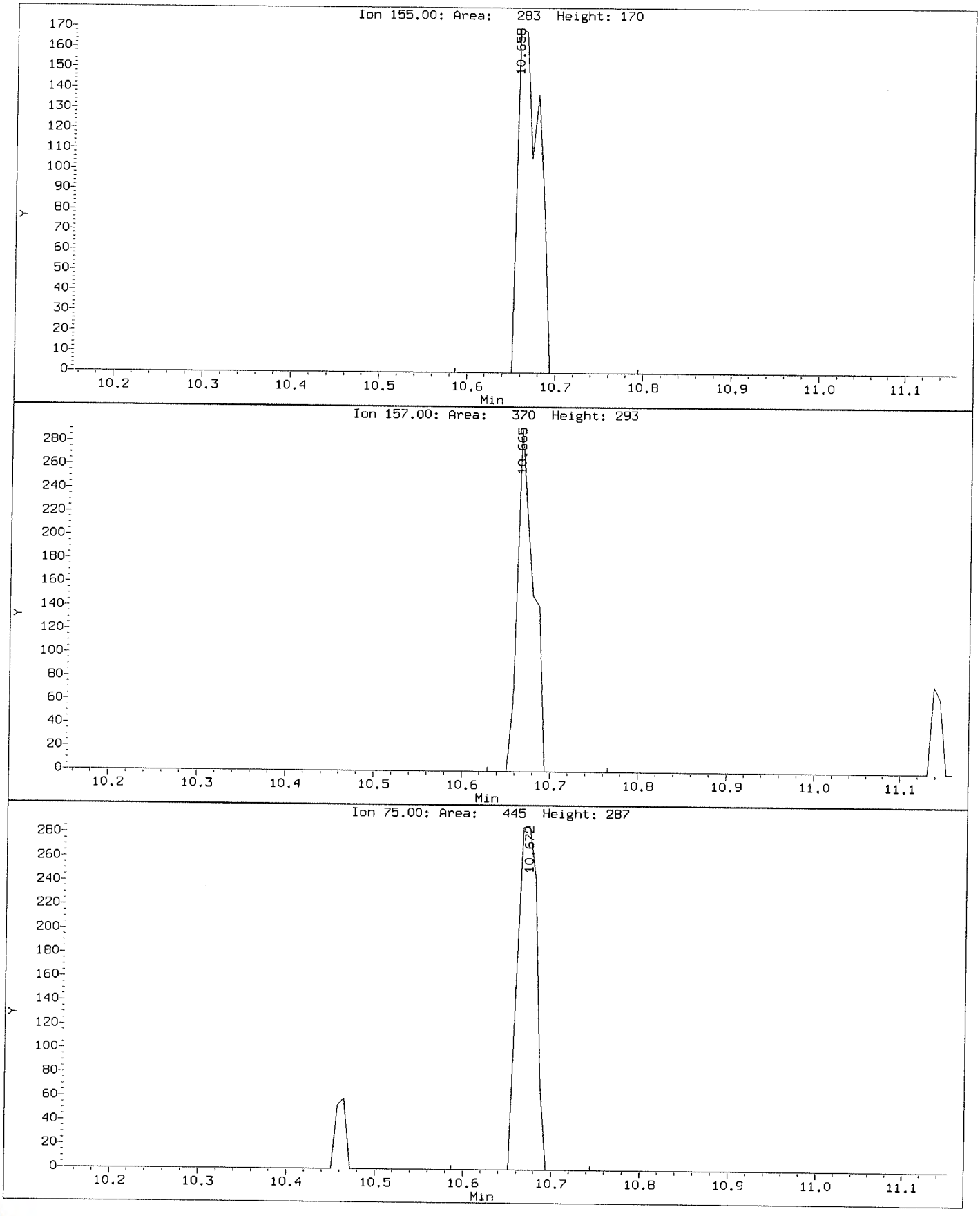
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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



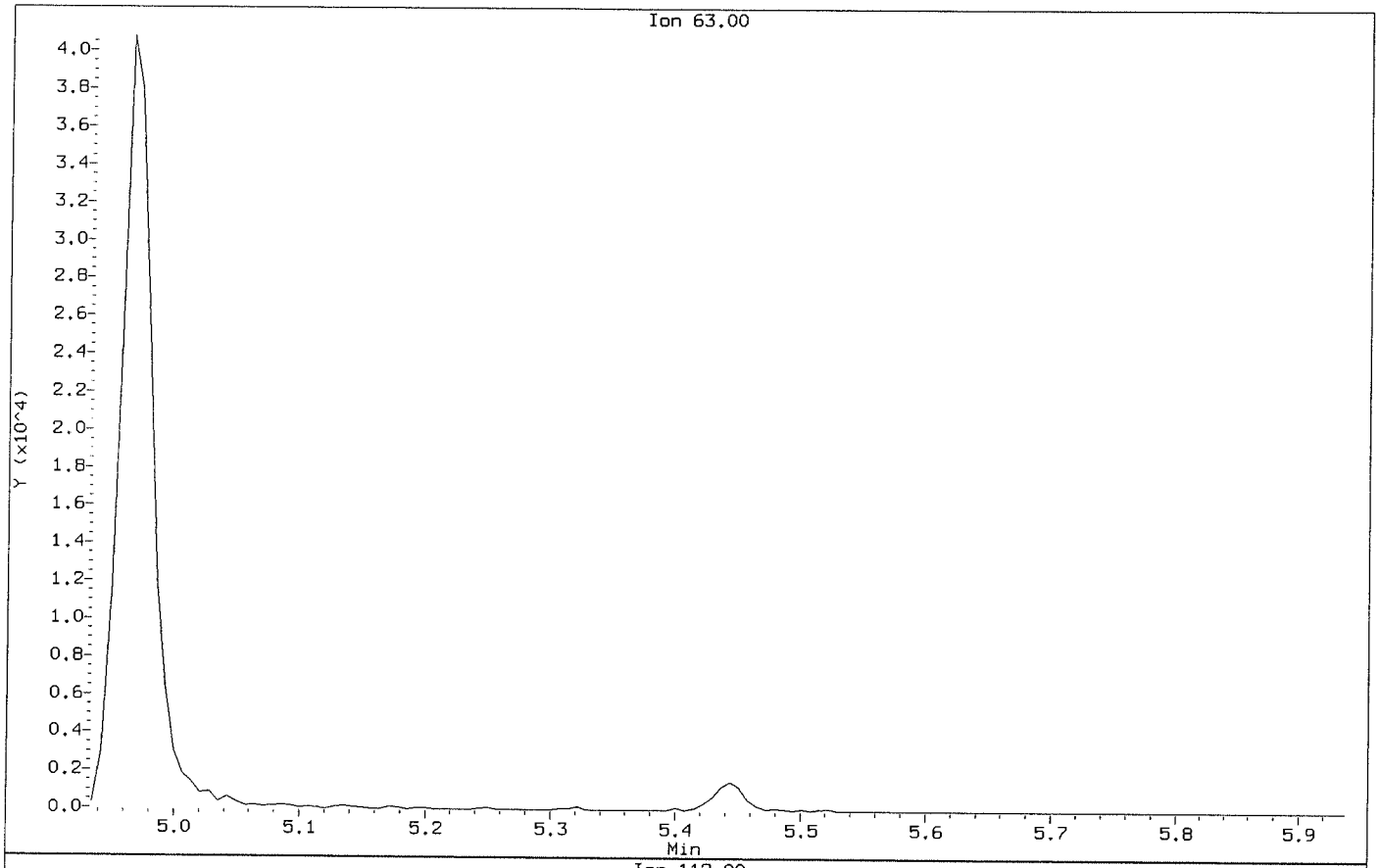
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Instrument: voa6.i
Client Sample ID: VSTD001

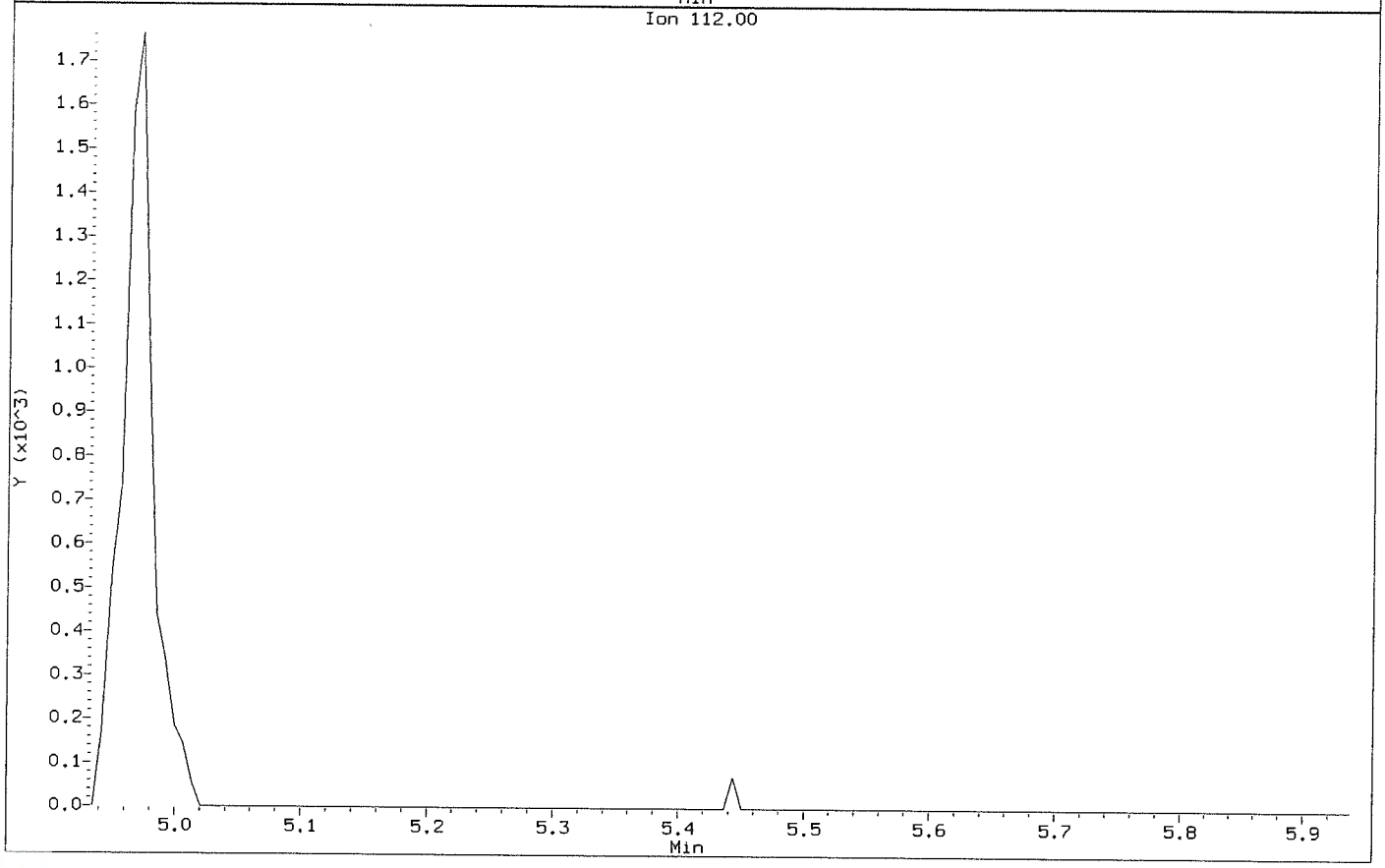
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Instrument: voa6.i
Client Sample ID: VSTD001

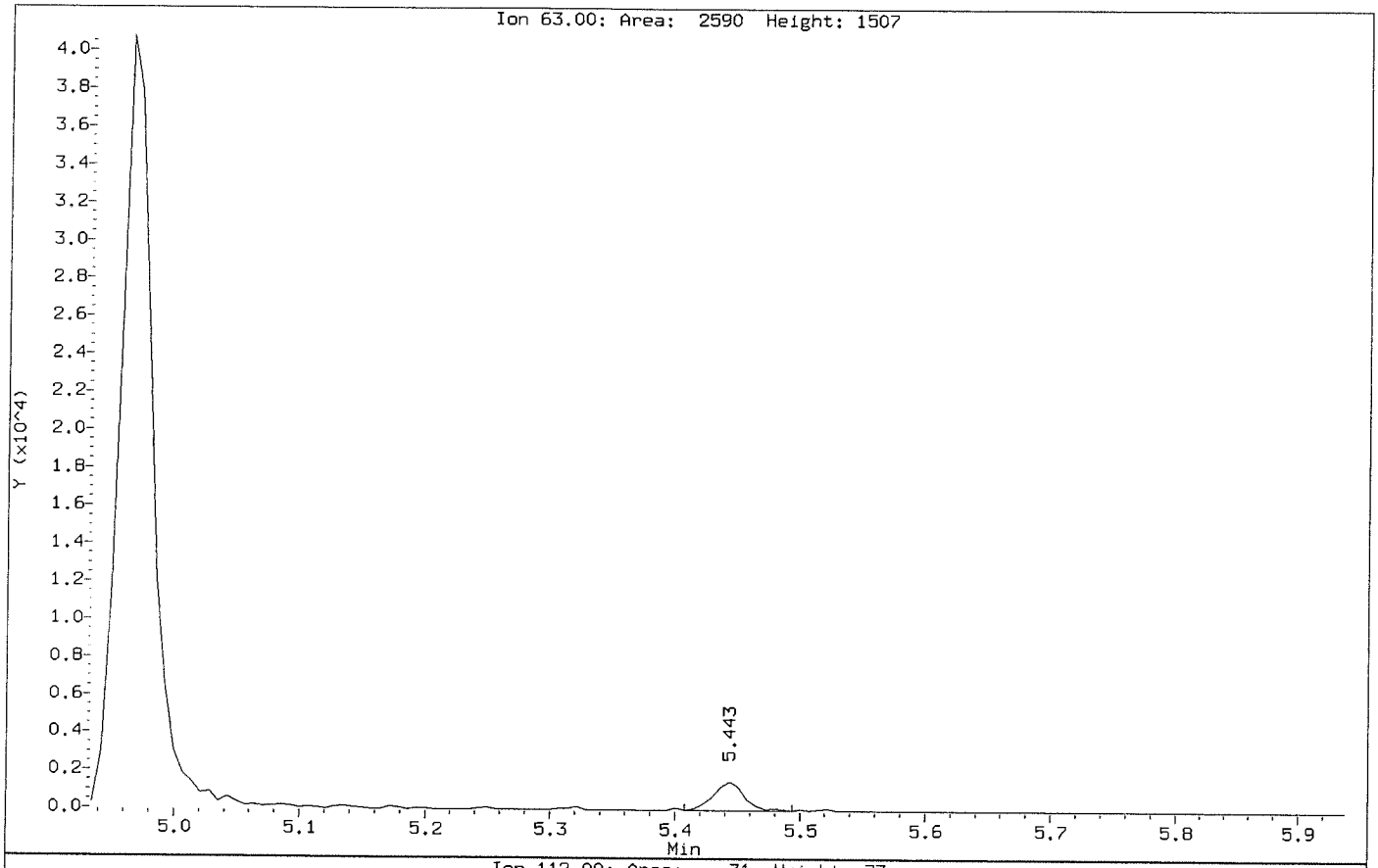
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

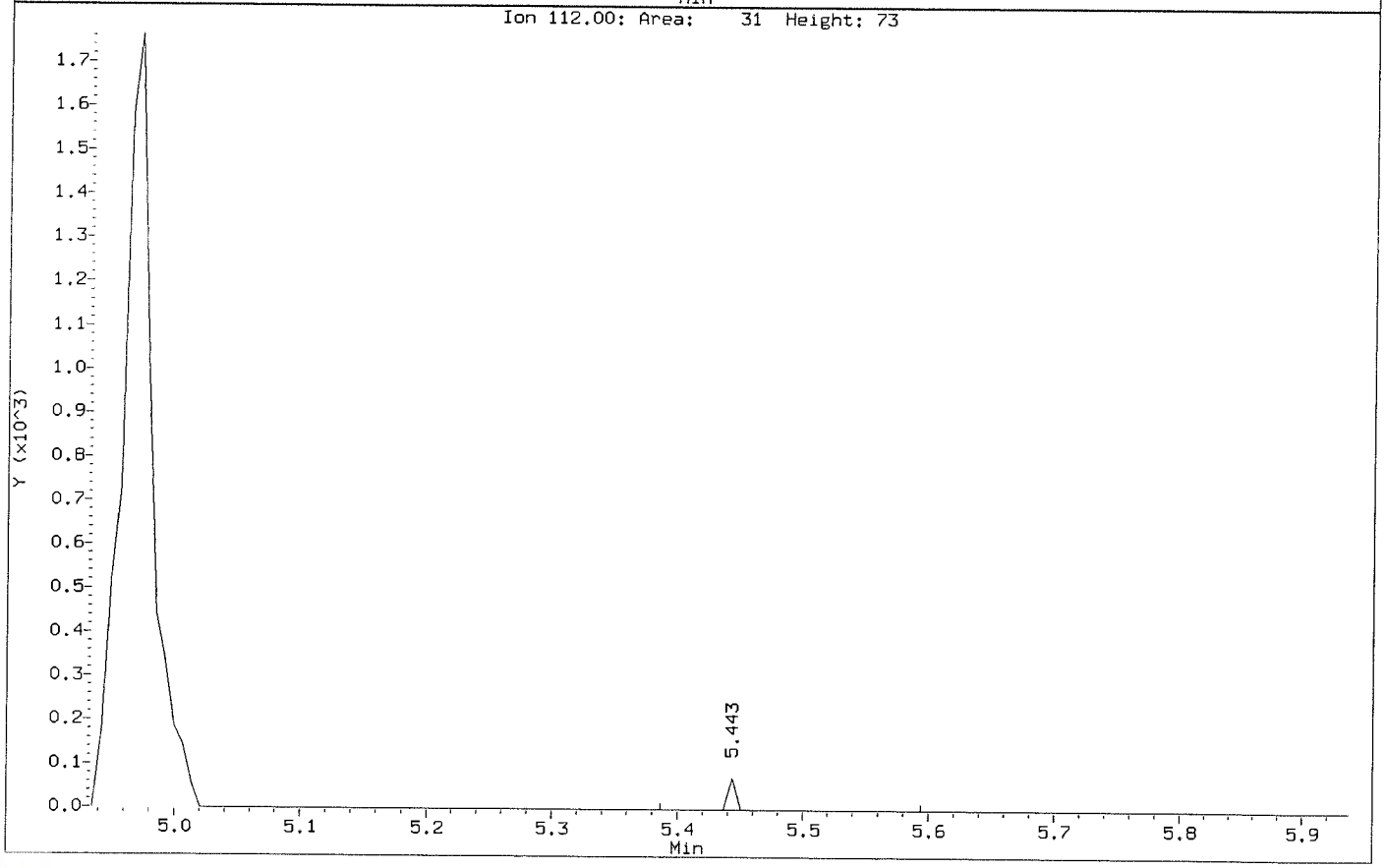




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Client Sample ID: VSTD001

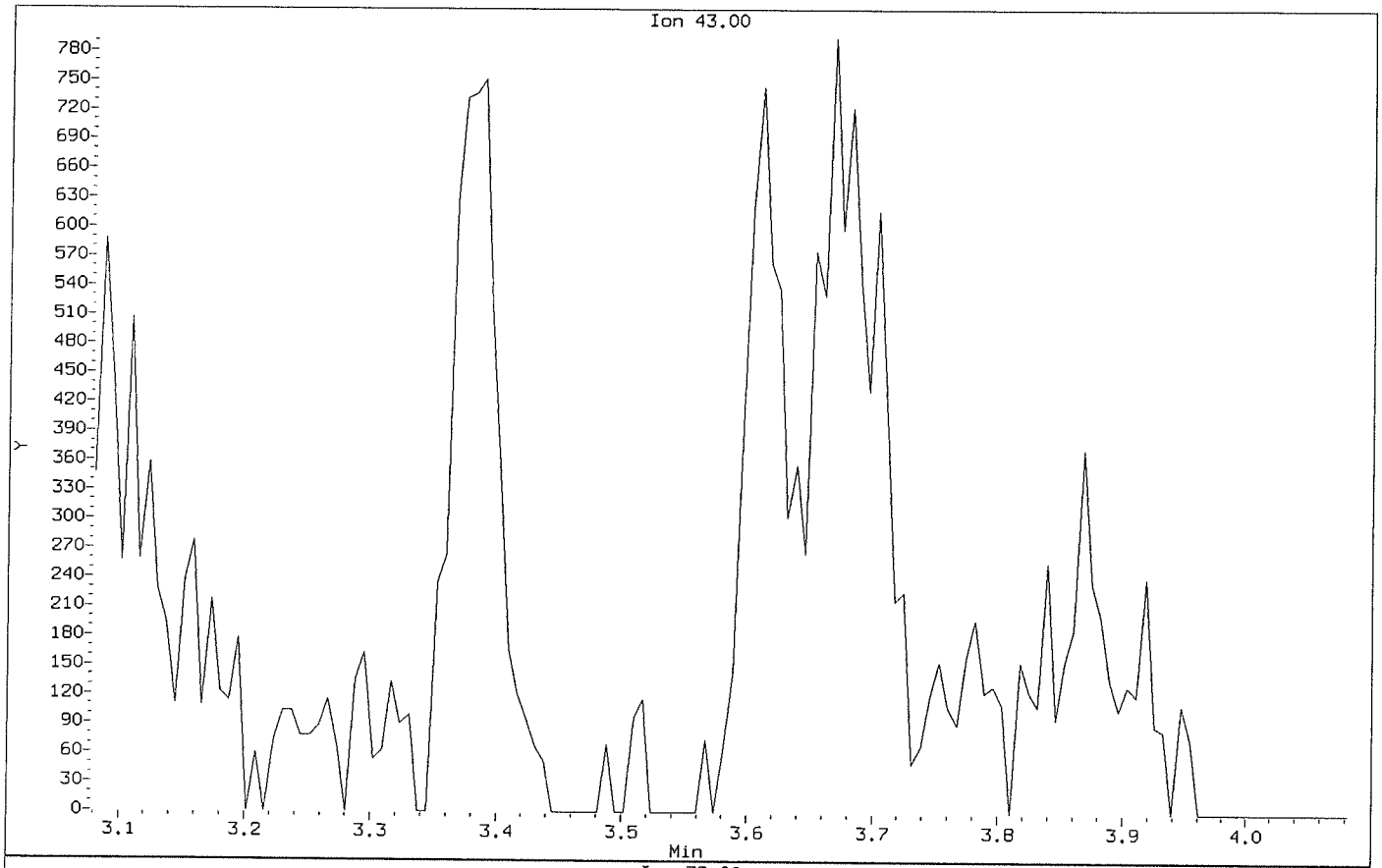
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

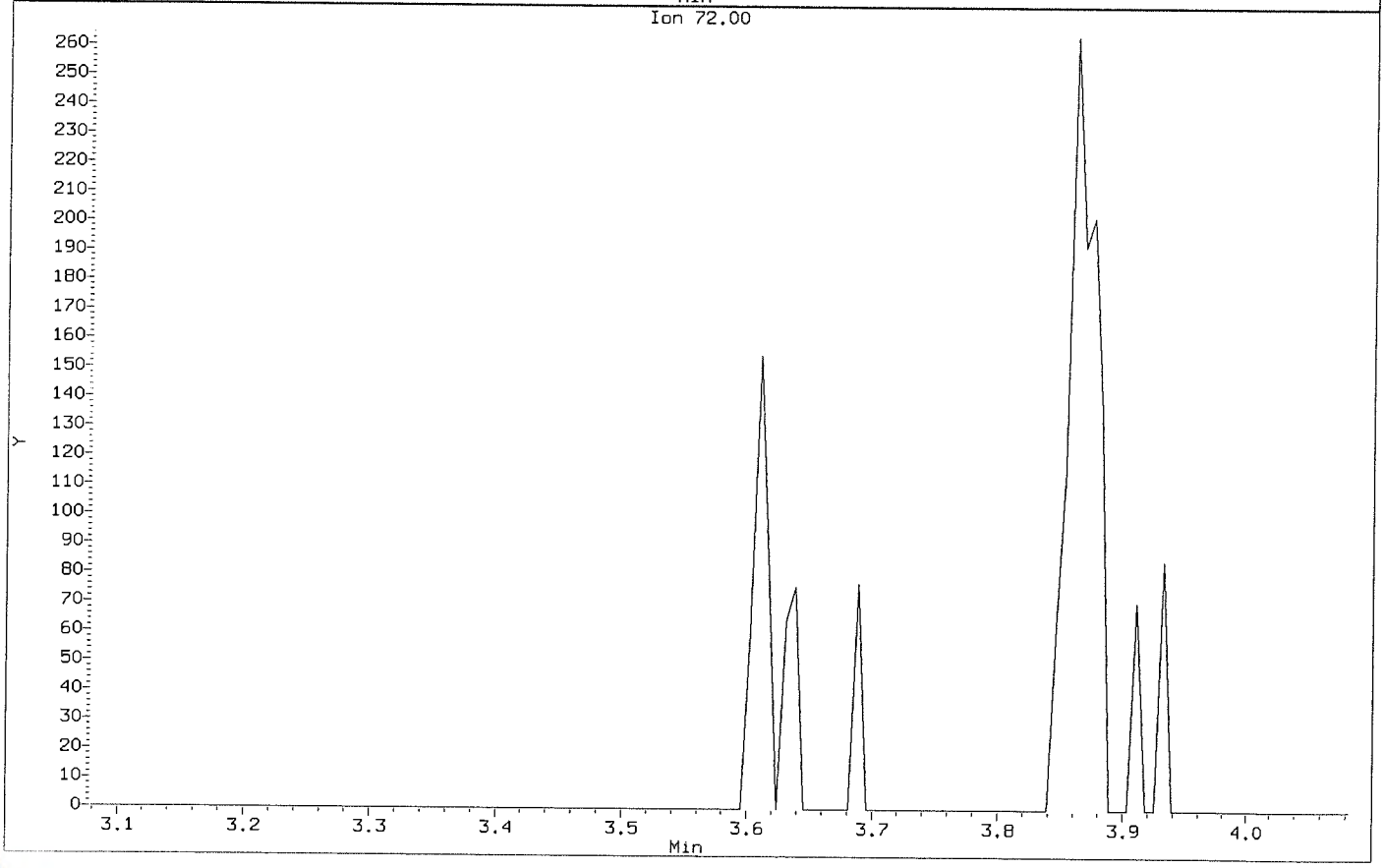




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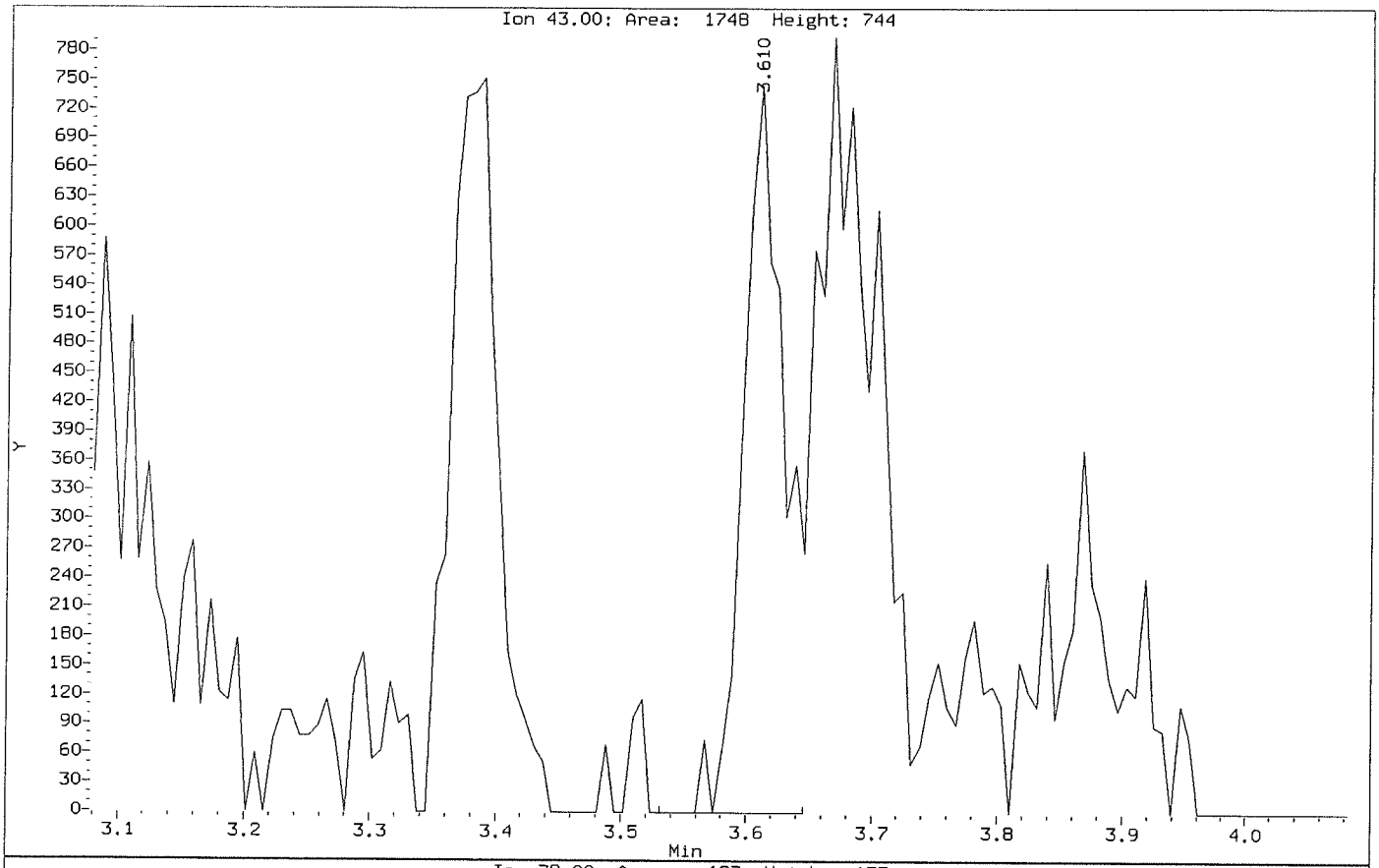
Compound: 2-Butanone
CAS Number: 78-93-3

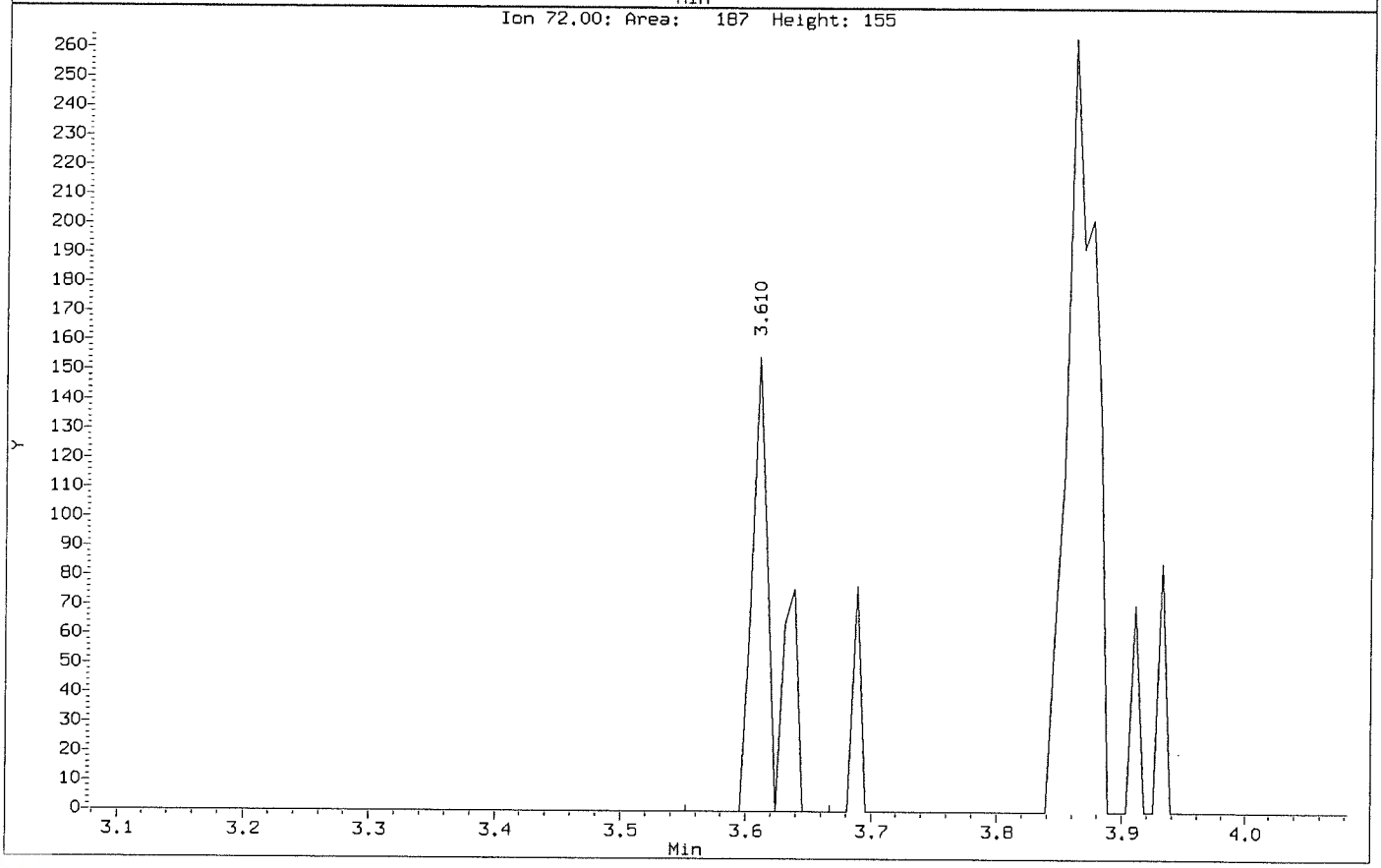




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Client Sample ID: VSTD001

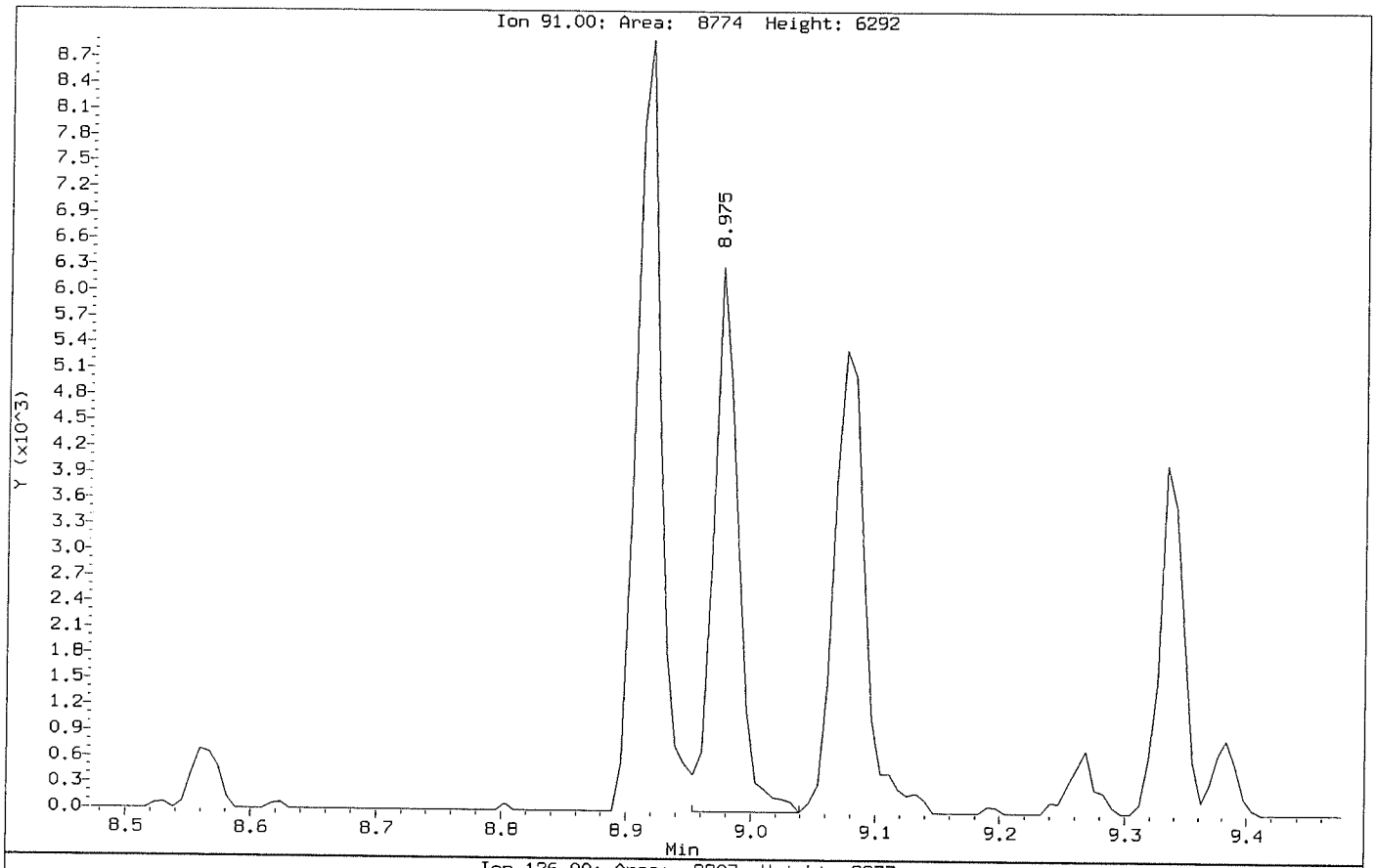
Compound: 2-Butanone
CAS Number: 78-93-3

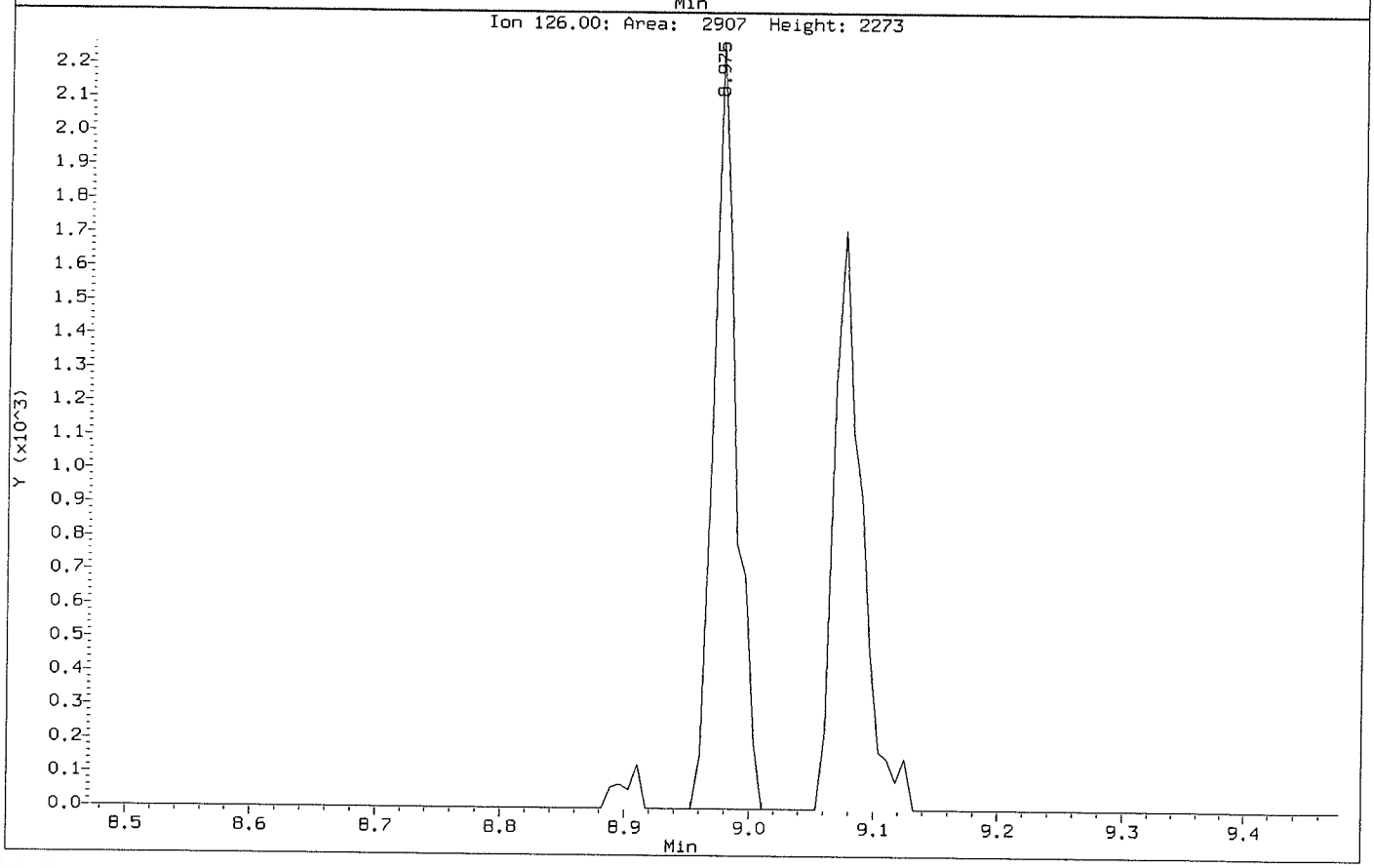




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Instrument: voa6.i
Client Sample ID: VSTD001

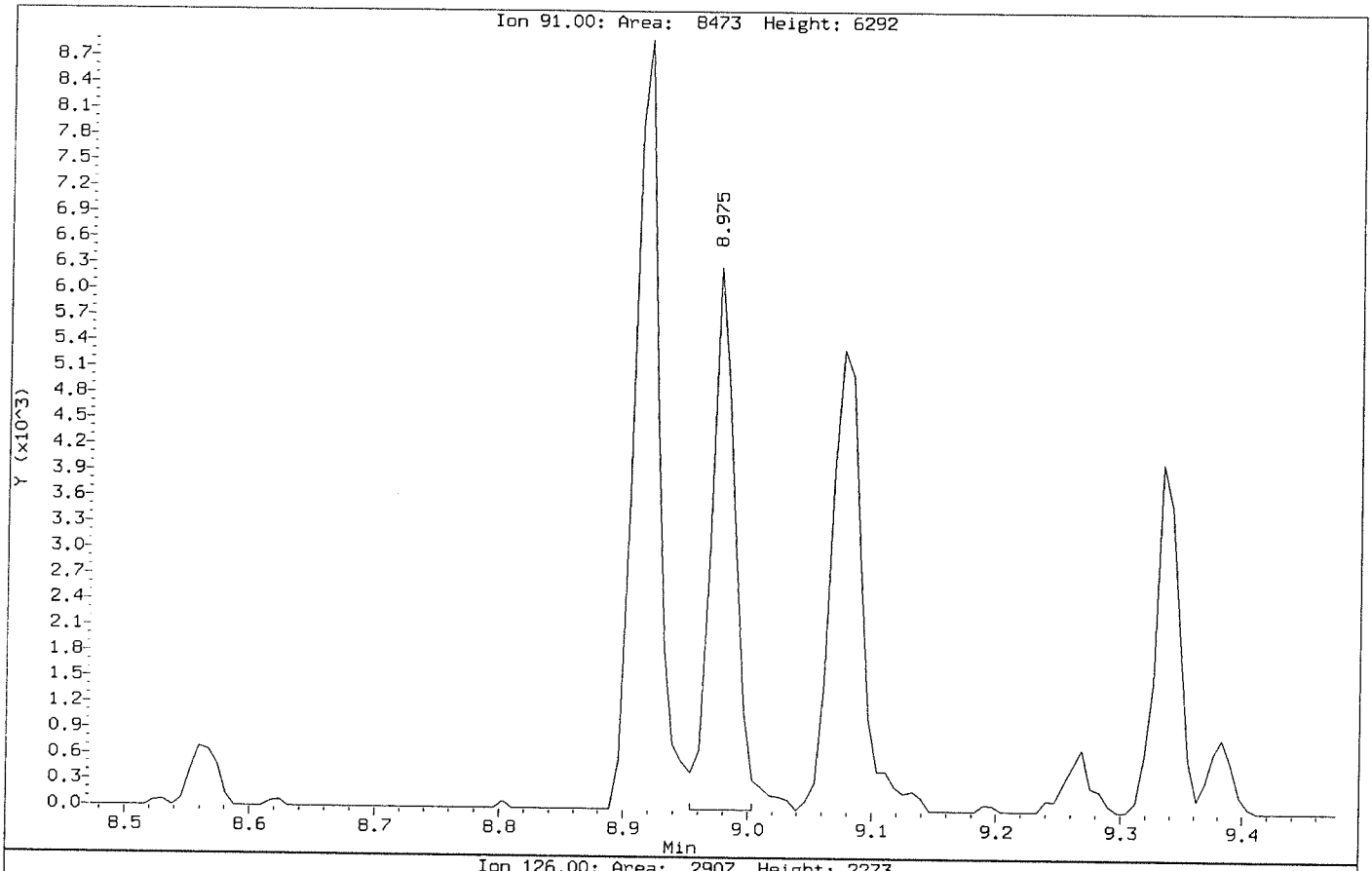
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

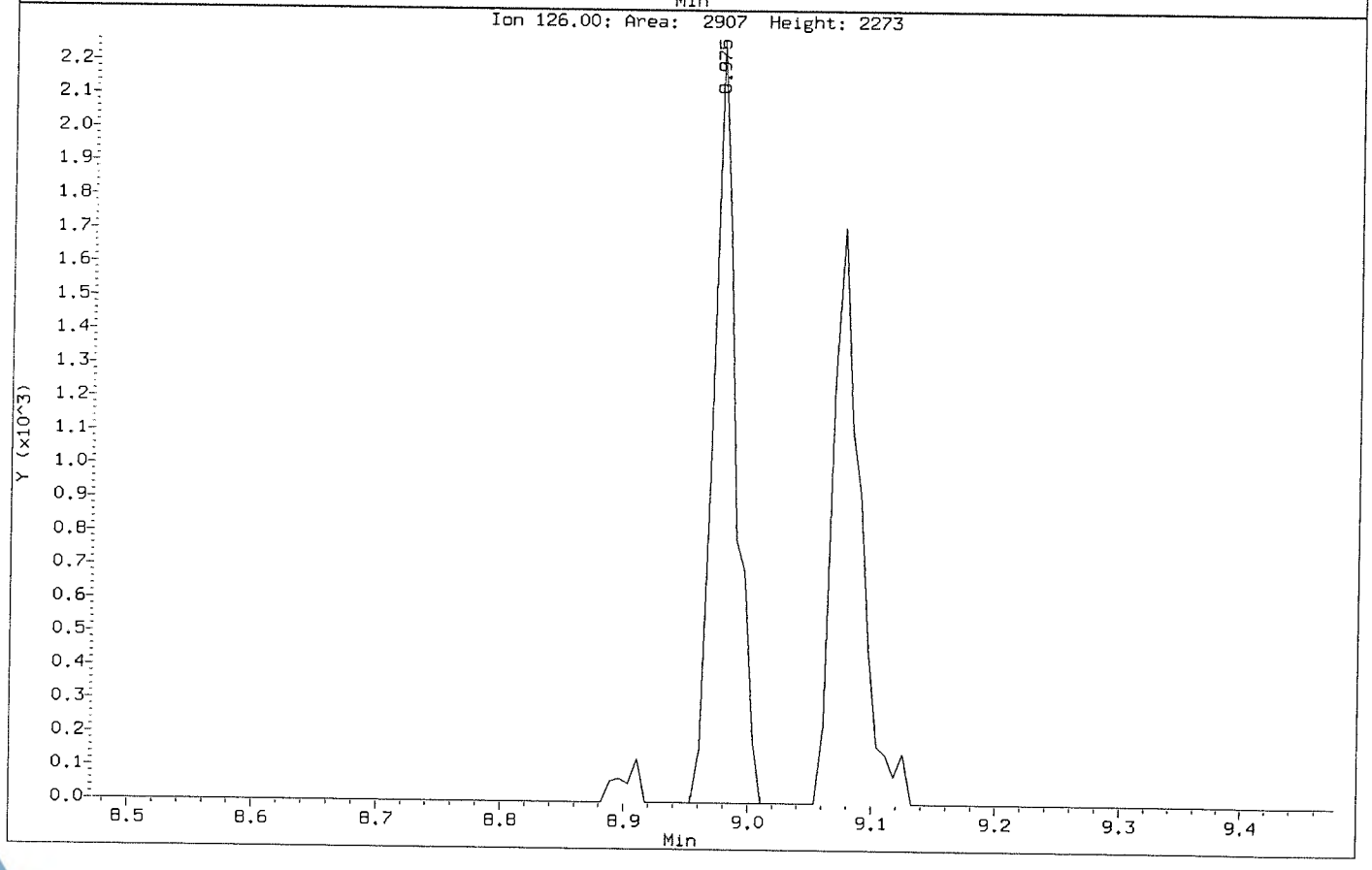




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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

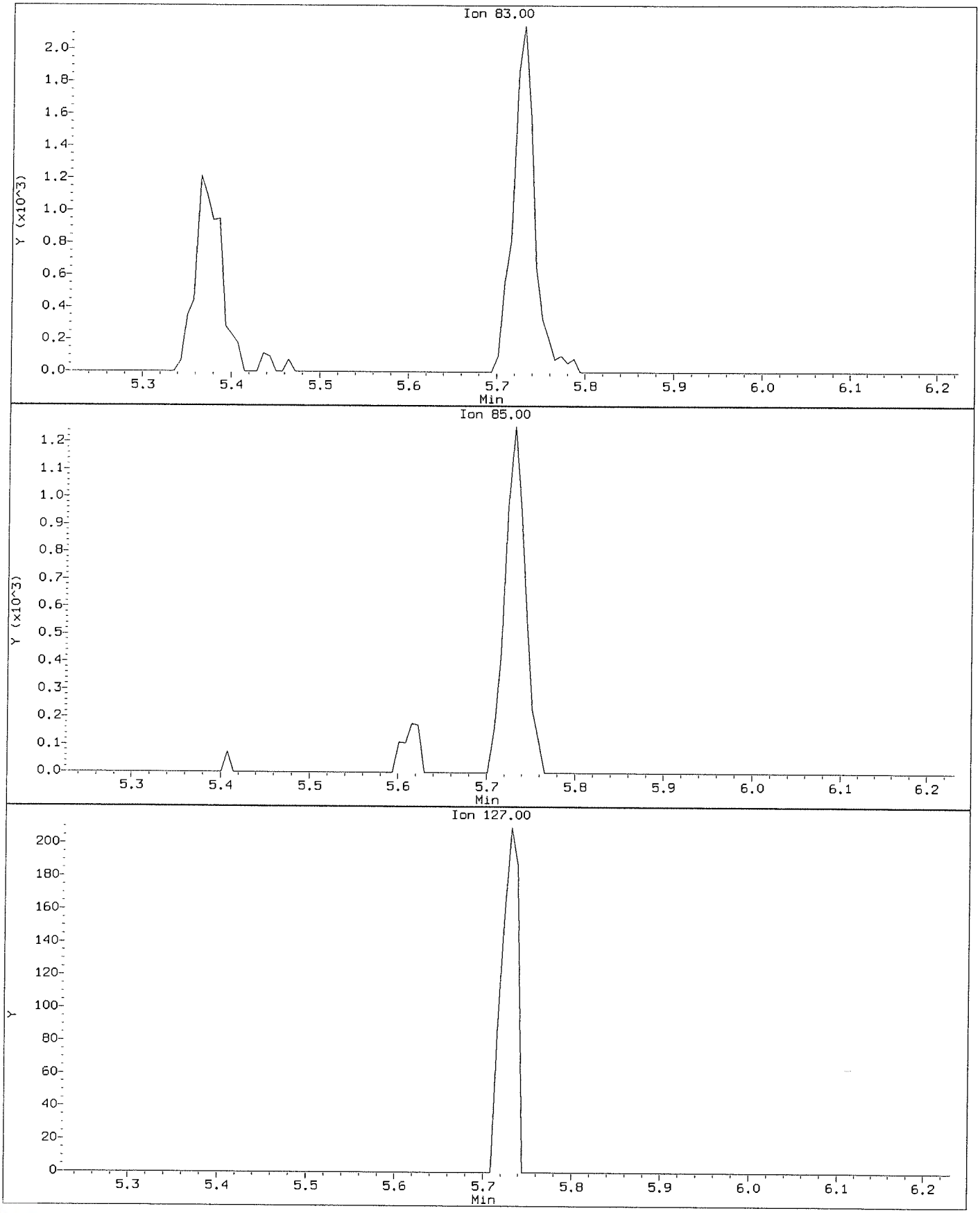
Compound: 2-Chlorotoluene
CAS Number: 95-49-8





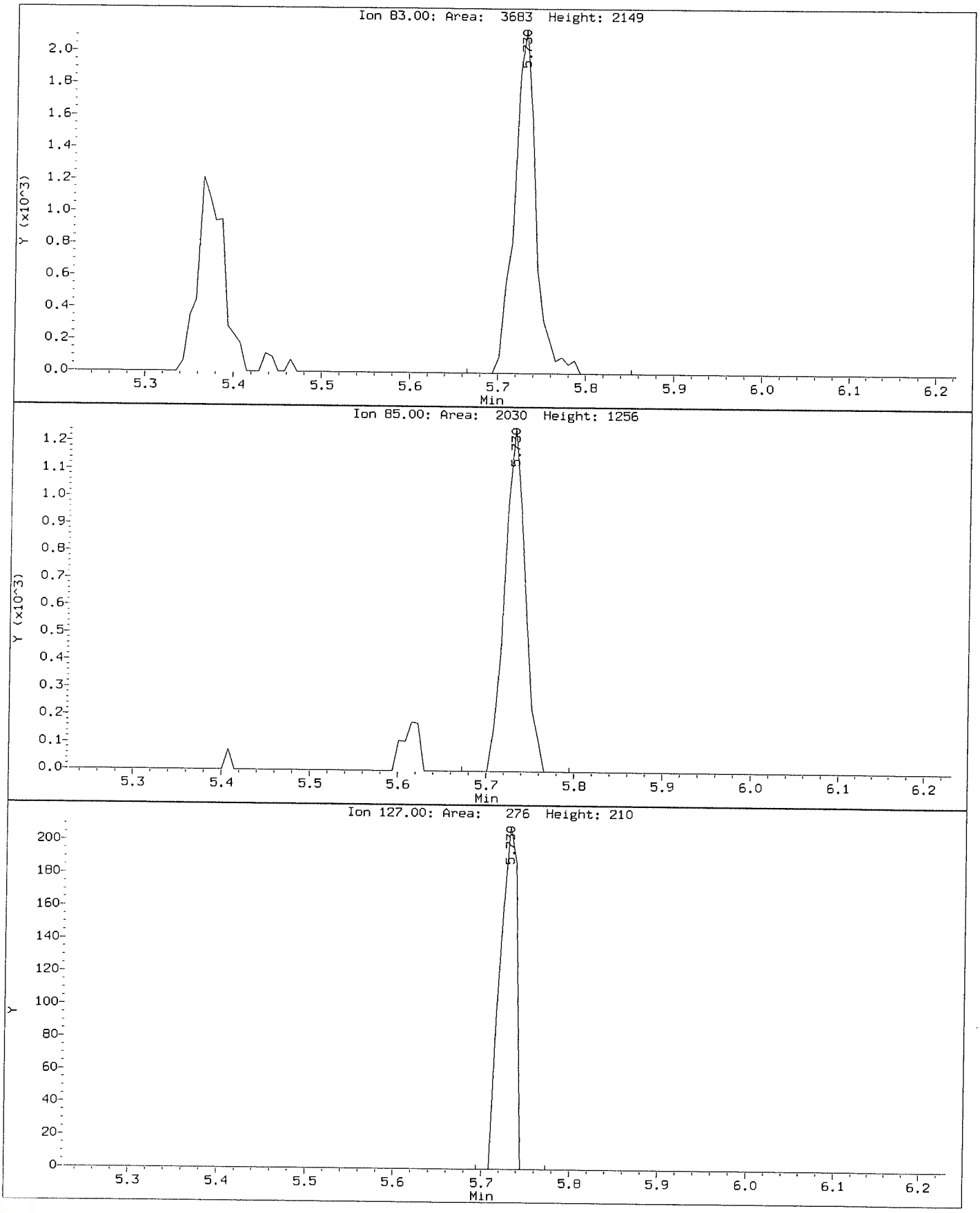
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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



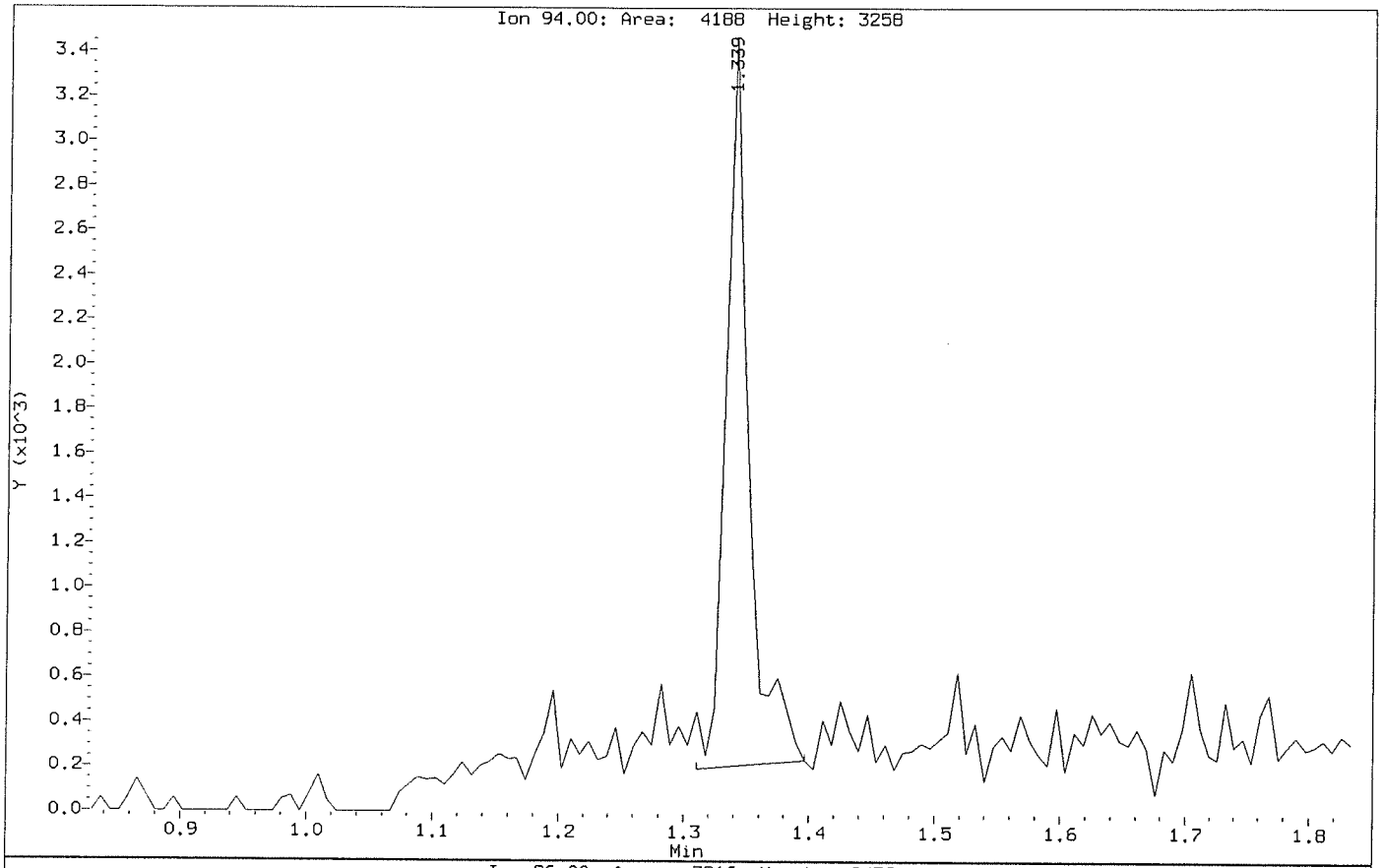
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Instrument: voa6.i
Client Sample ID: VSTD001

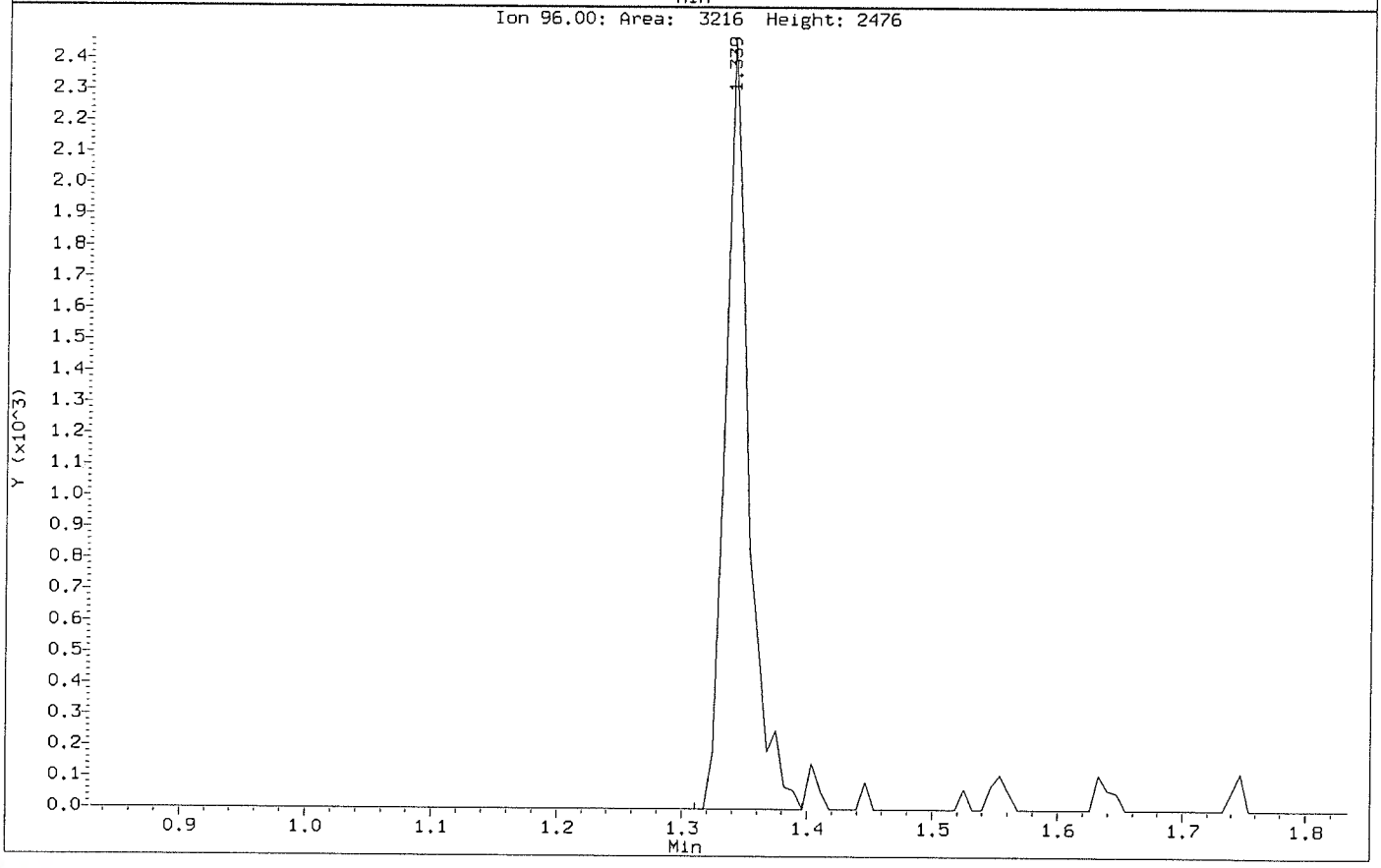
Compound: Bromodichloromethane
CAS Number: 75-27-4



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Client Sample ID: VSTD001

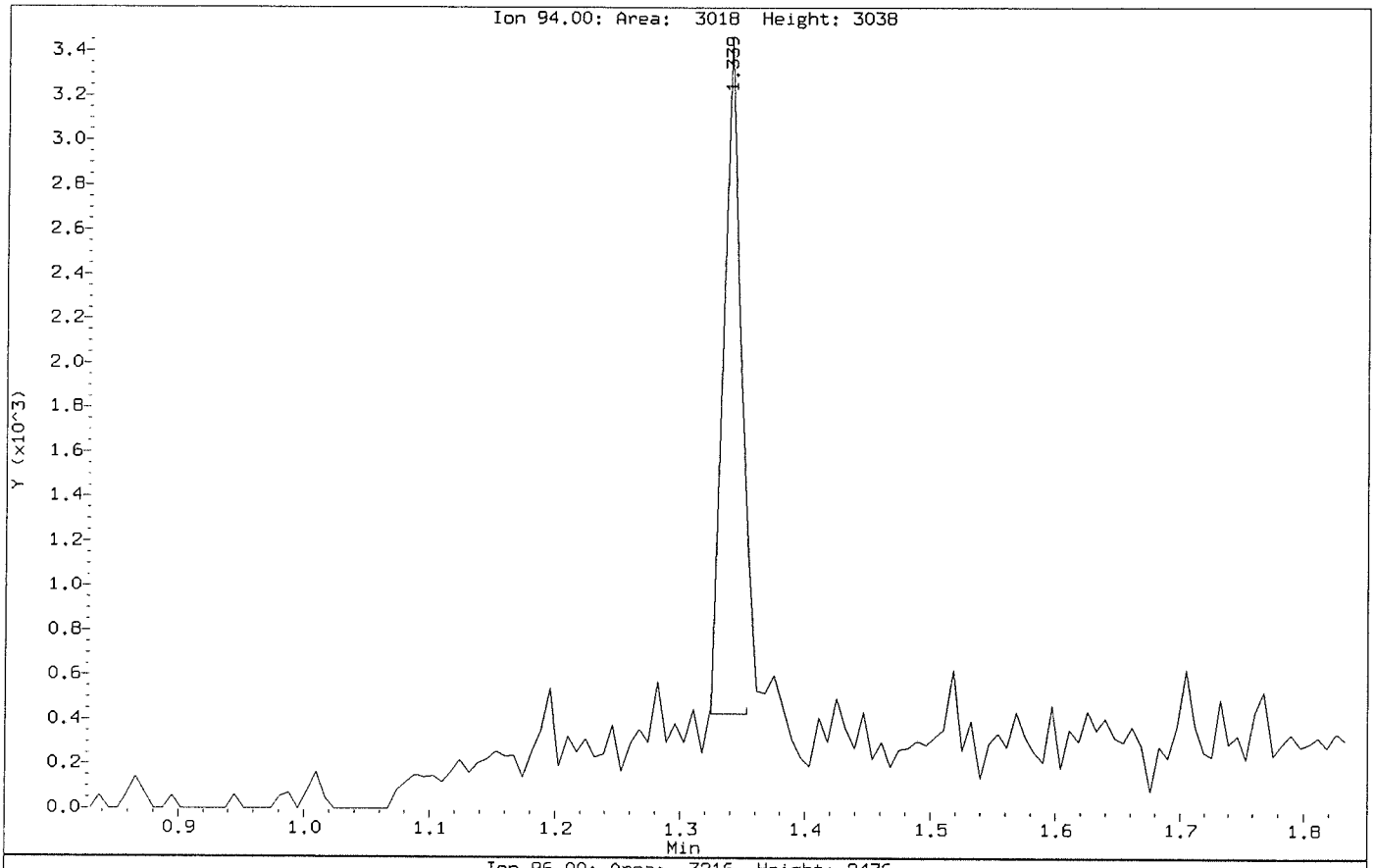
Compound: Bromomethane
CAS Number: 74-83-9

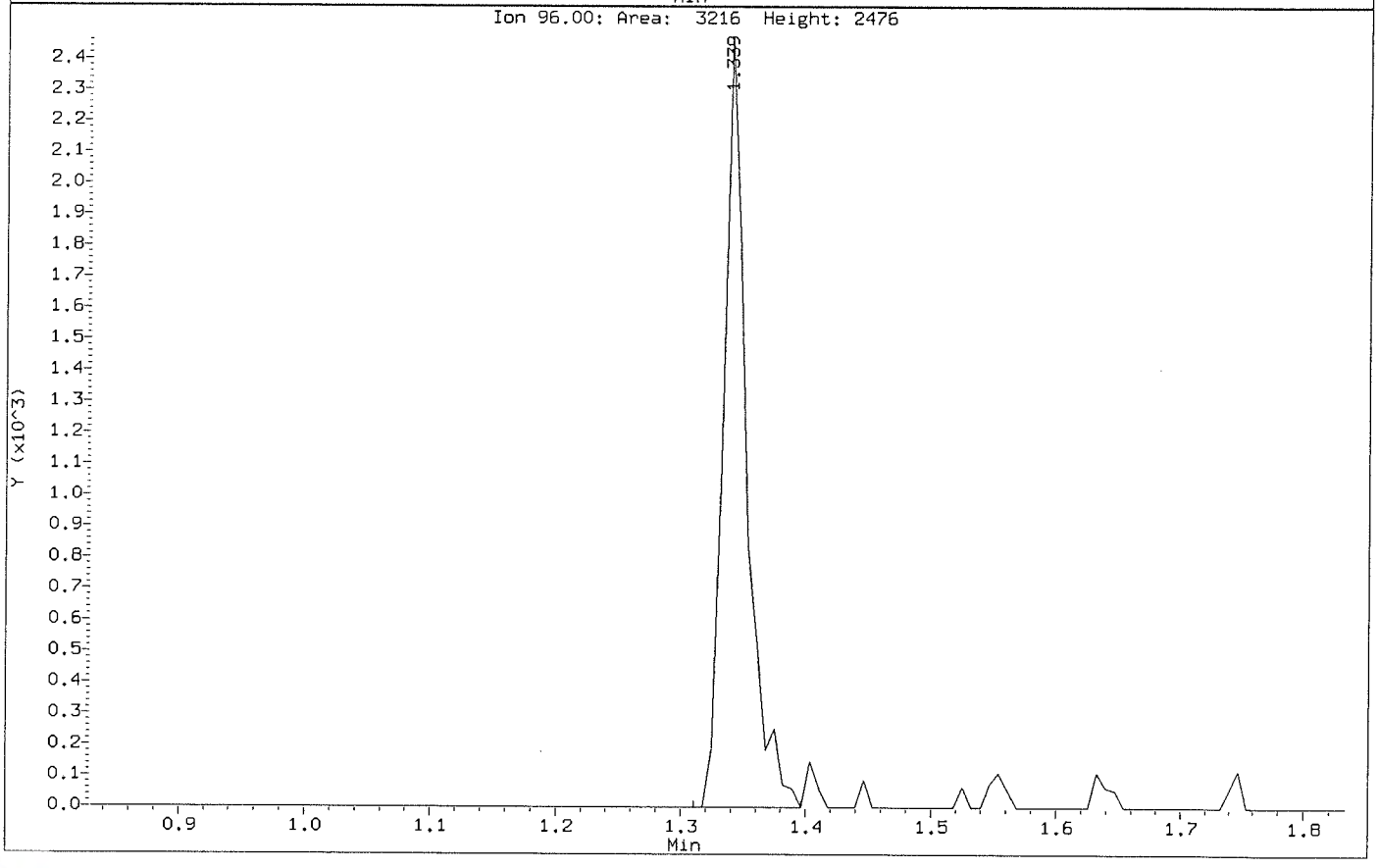




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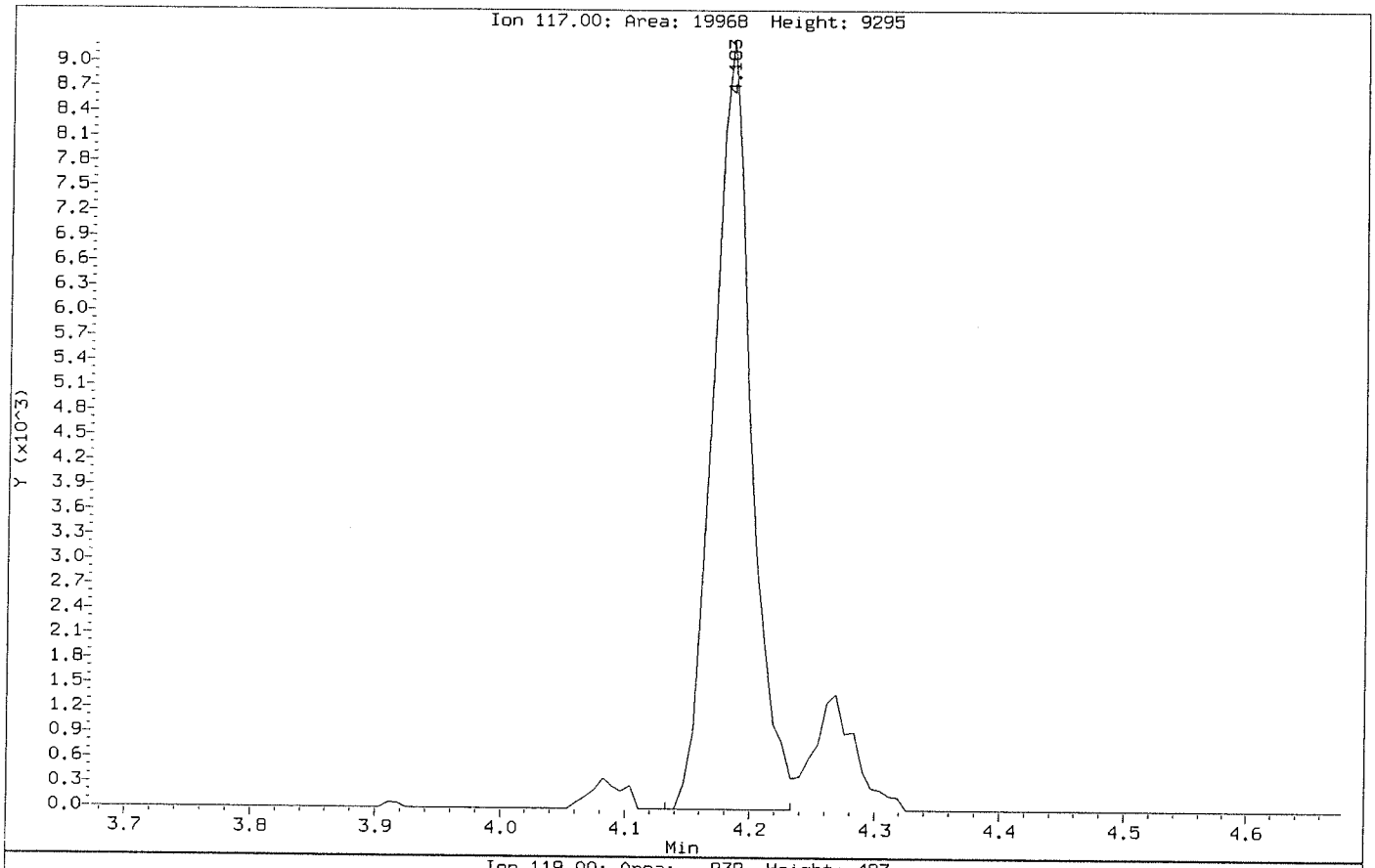
Compound: Bromomethane
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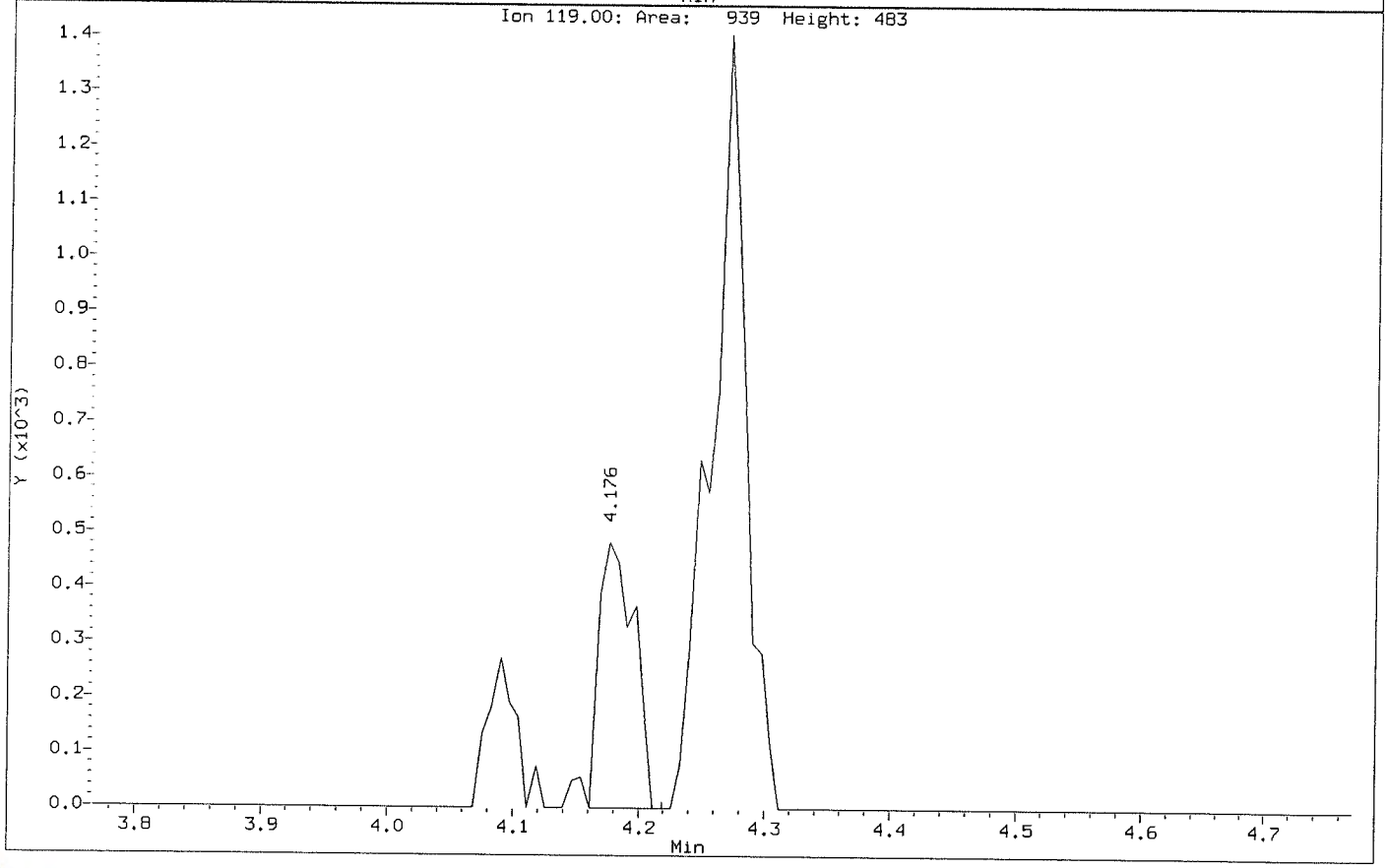




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Instrument: voa6.i
Client Sample ID: VSTD001

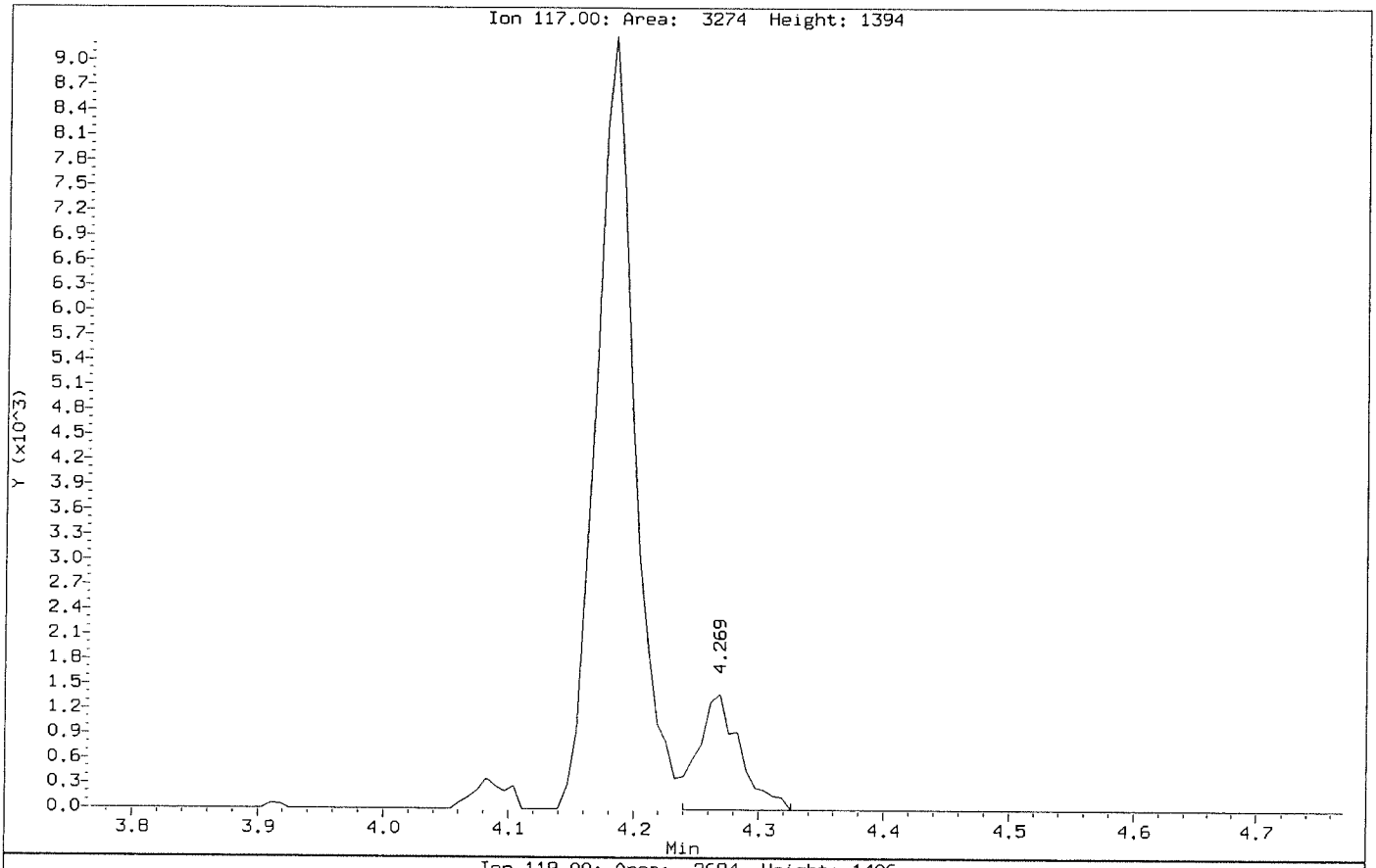
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

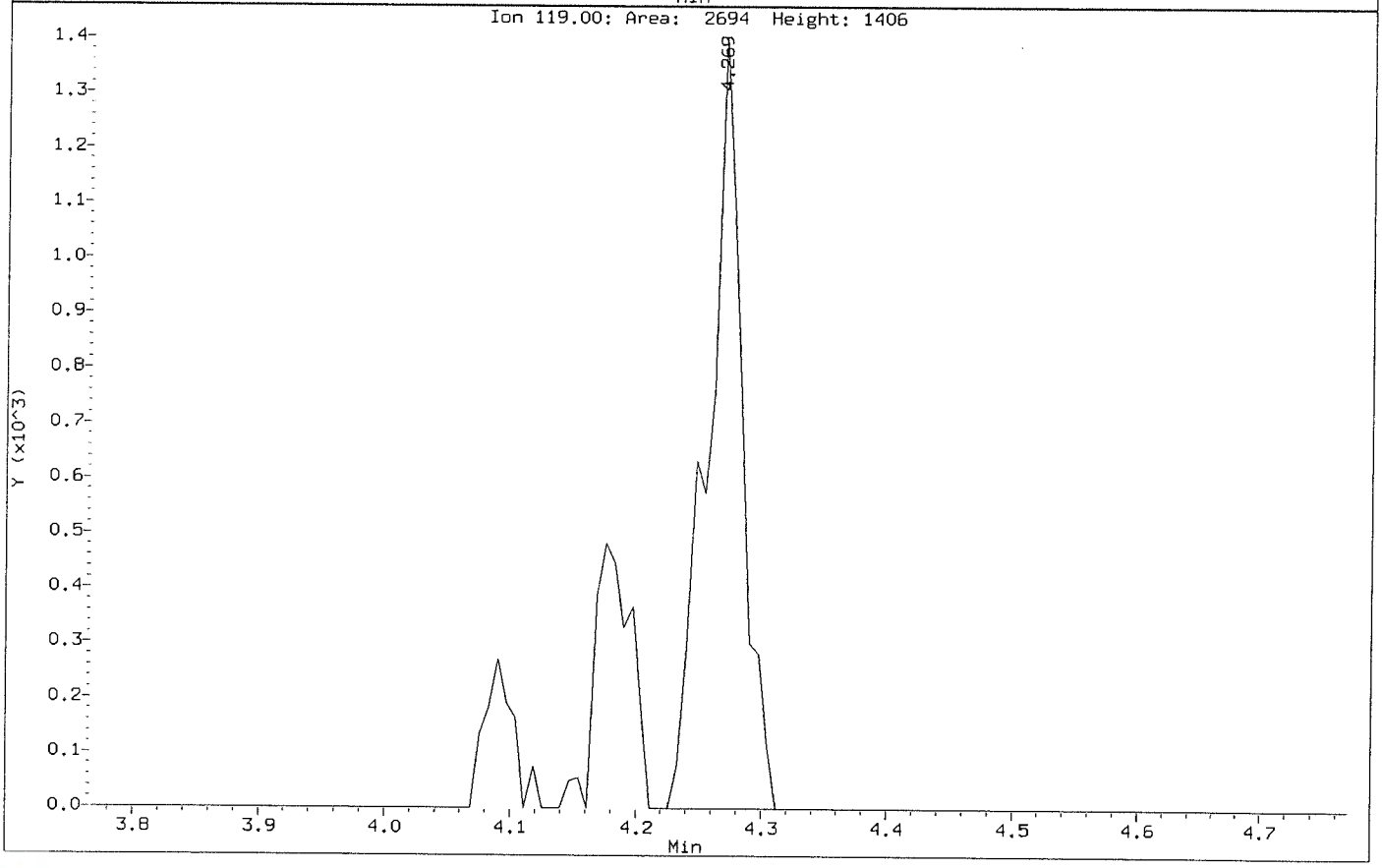




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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

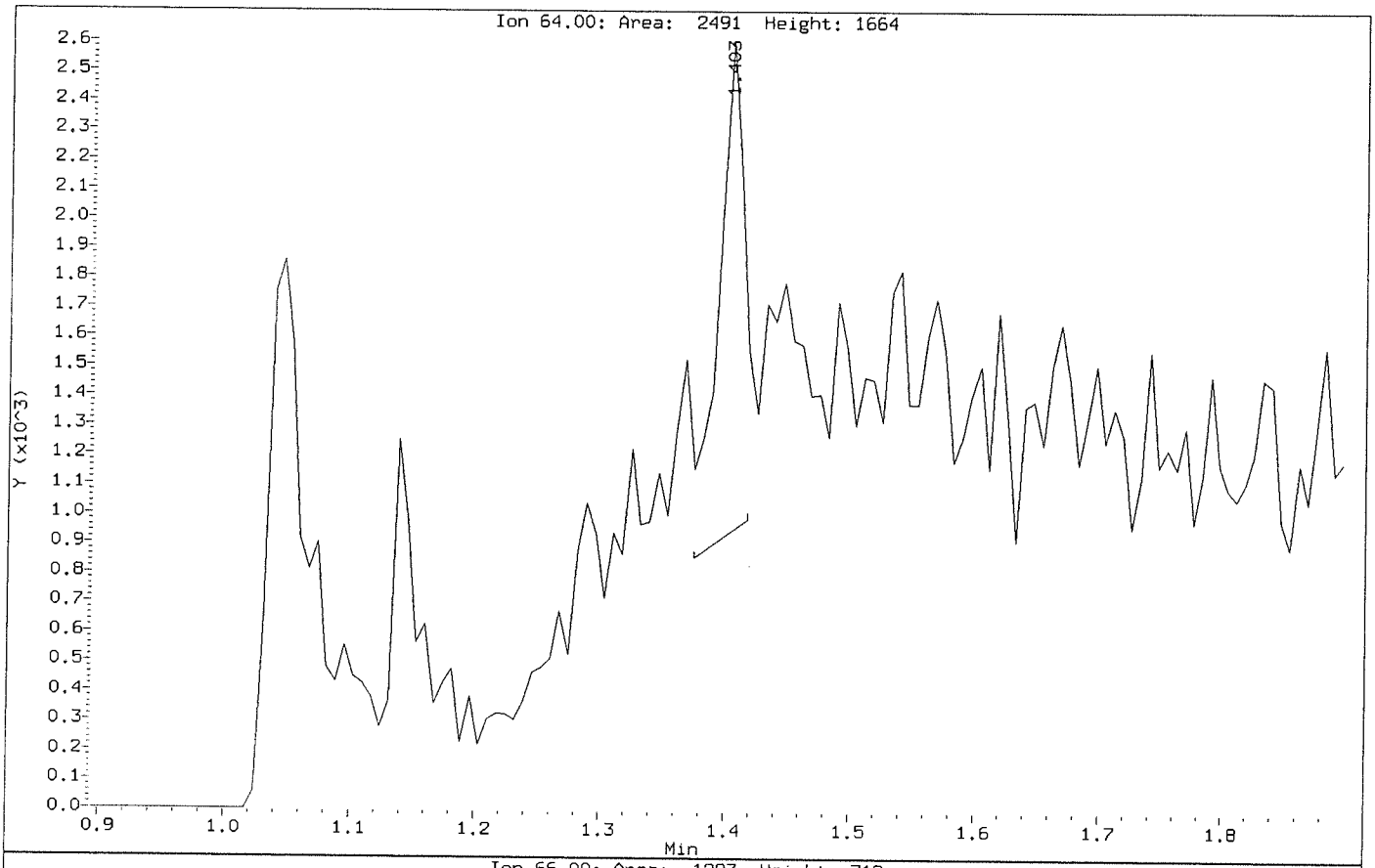
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

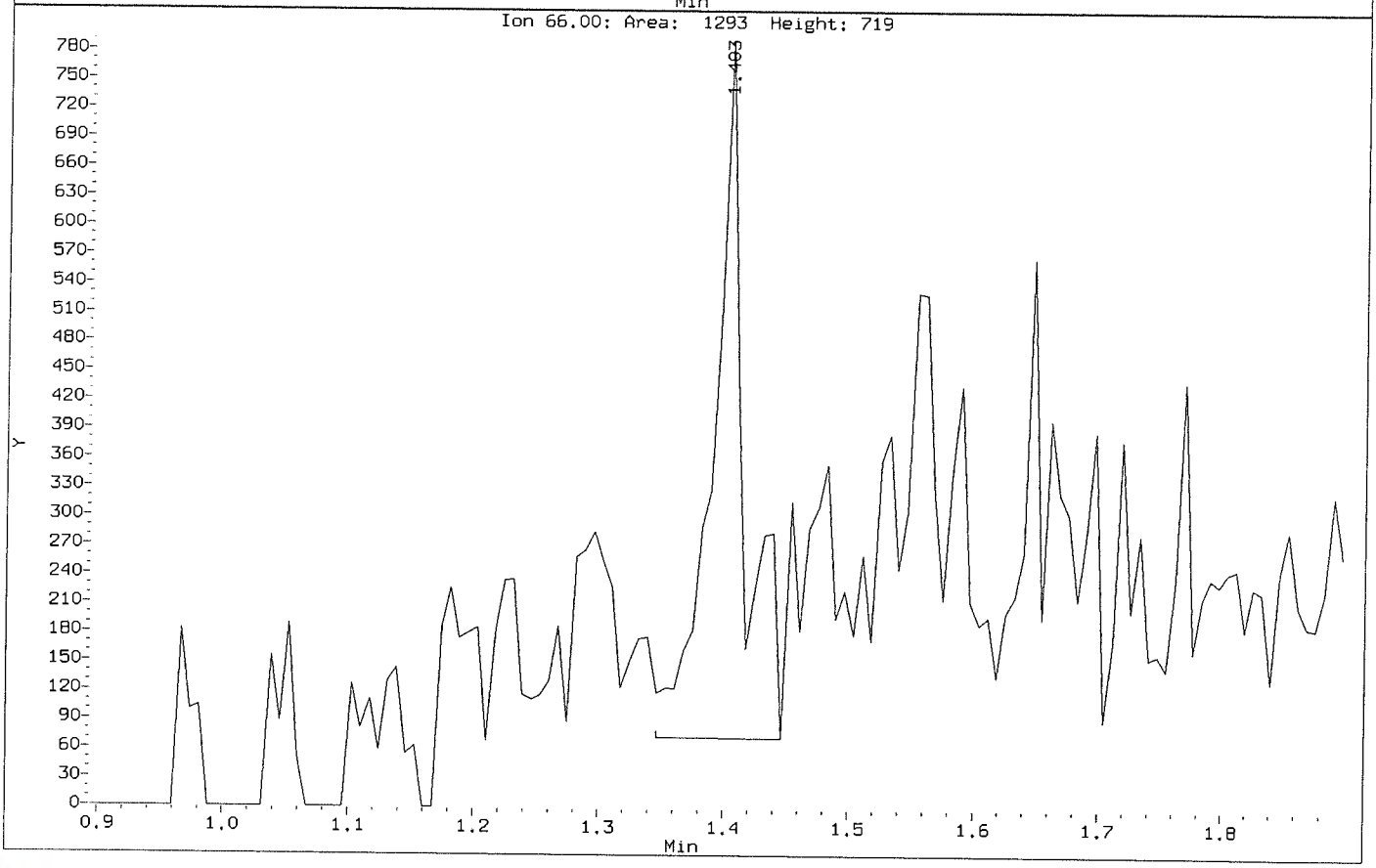




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\Before\X051804.D
Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

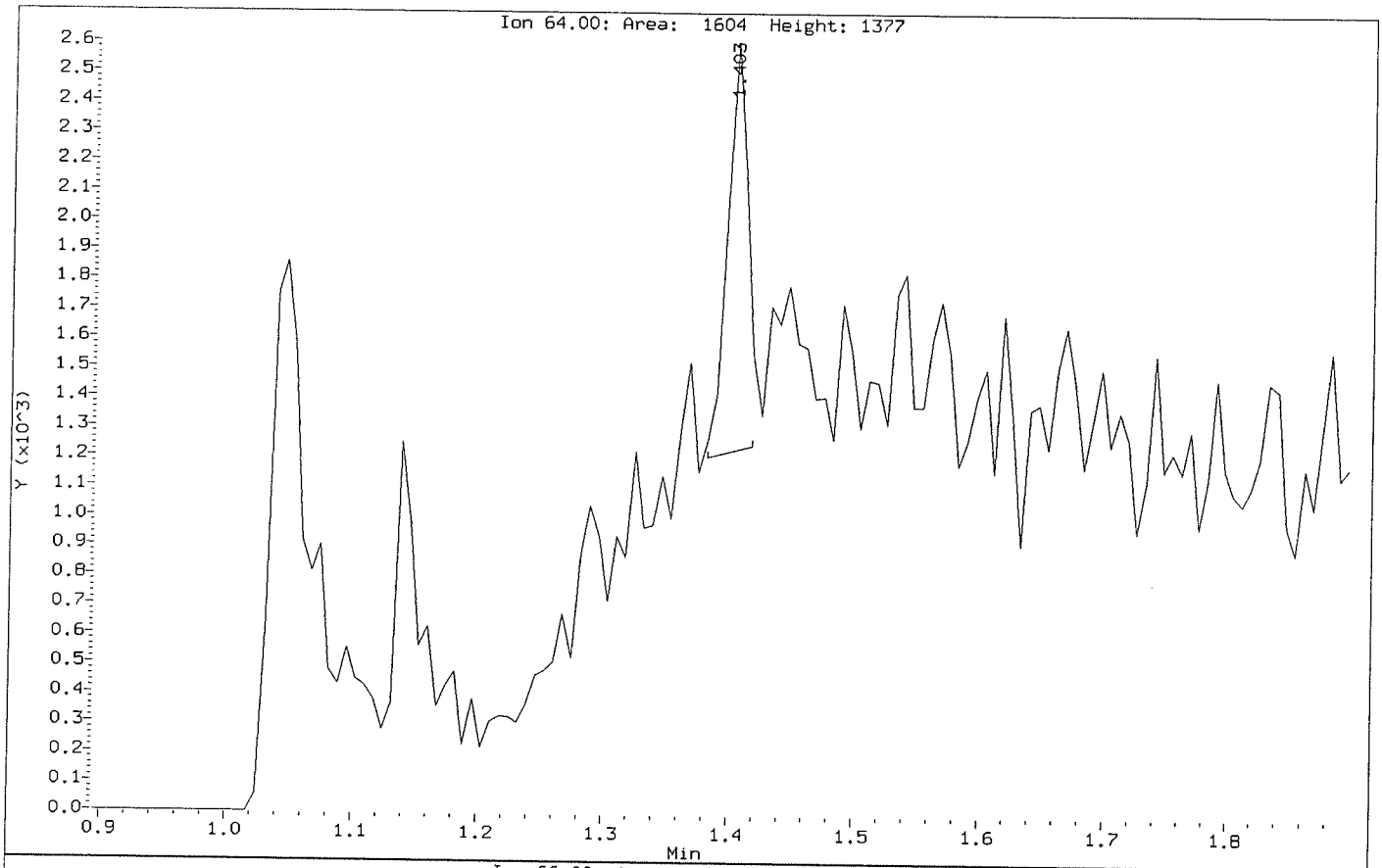
Compound: Chloroethane
CAS Number: 75-00-3

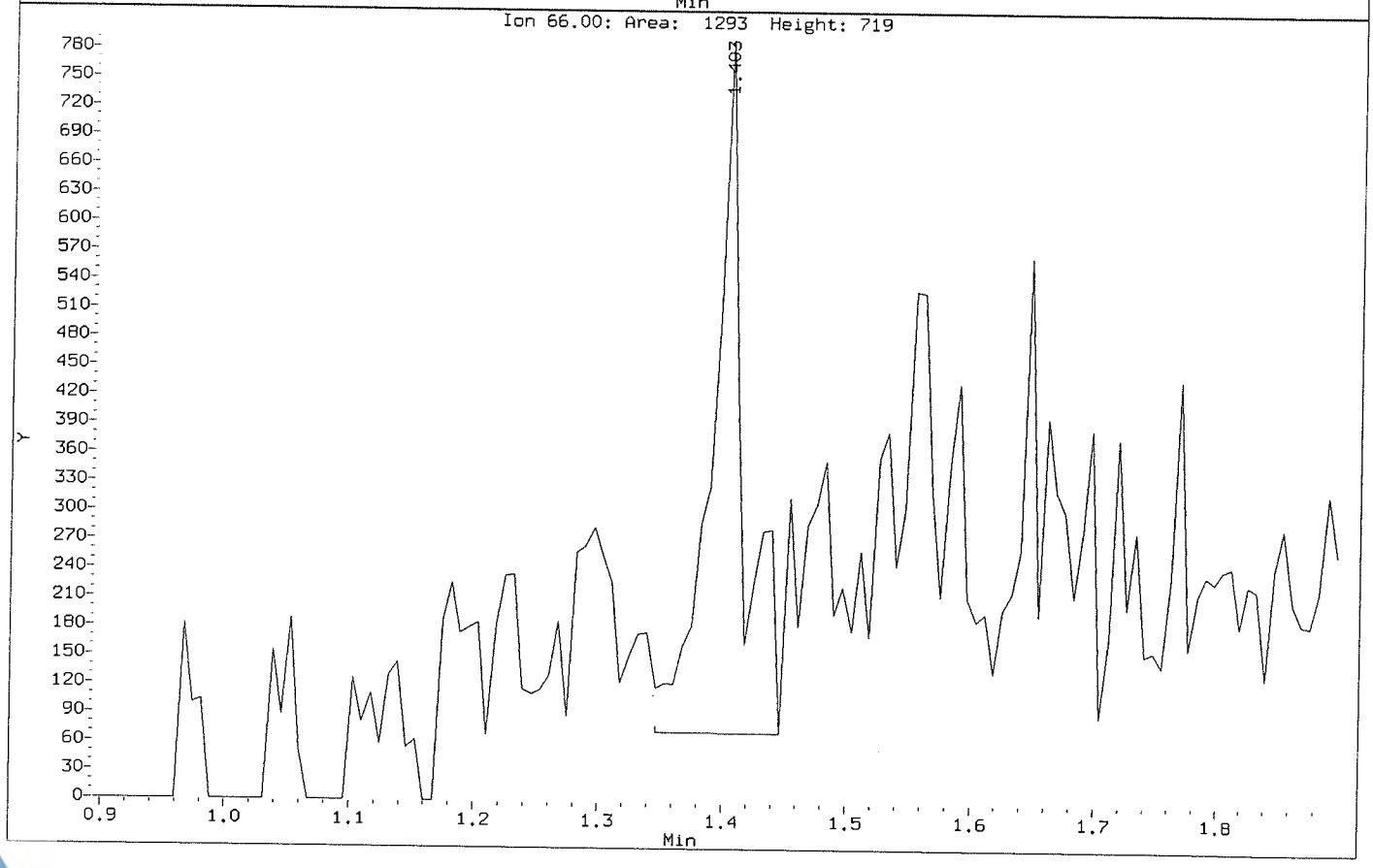




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051804.D
Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

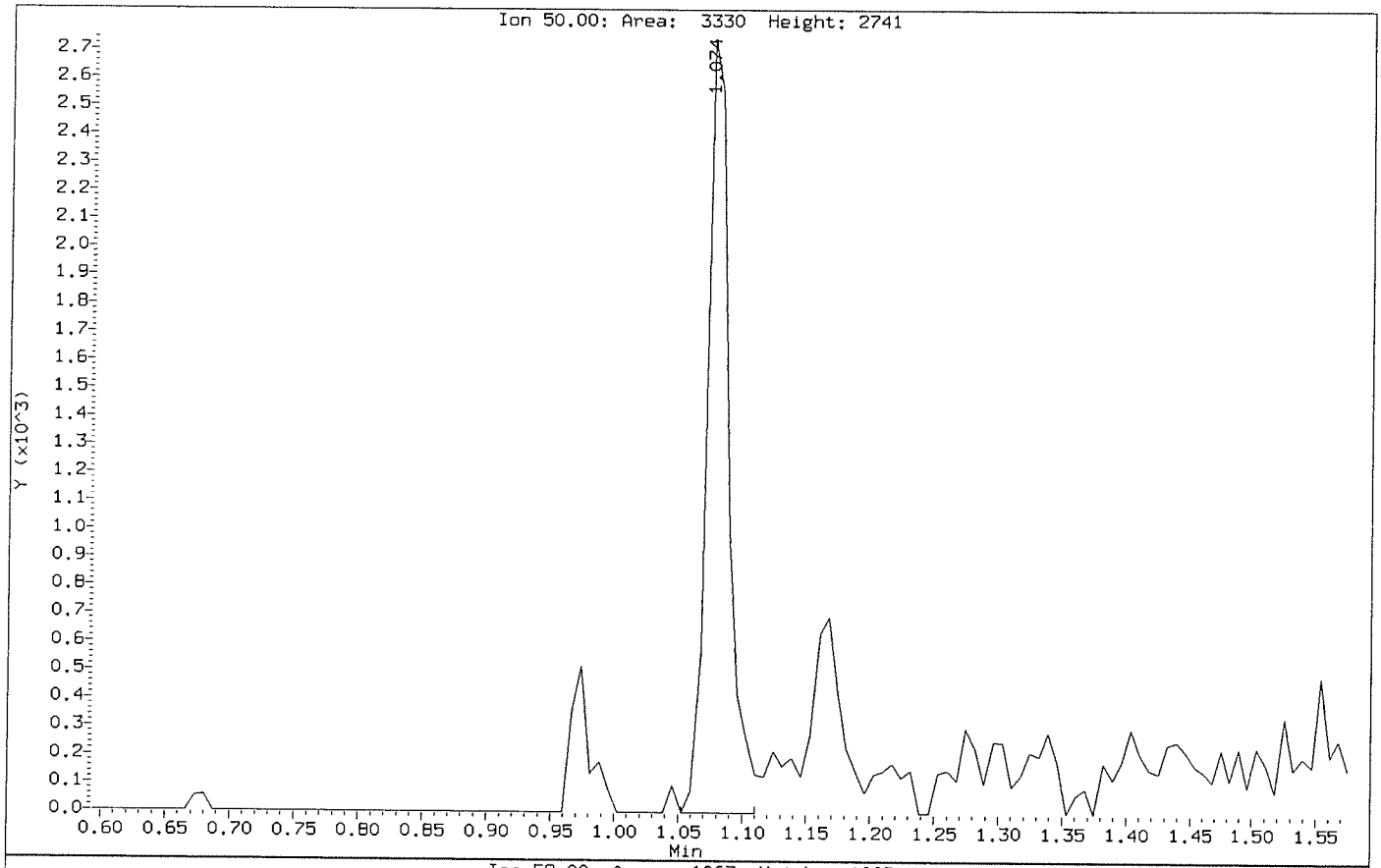
Compound: Chloroethane
CAS Number: 75-00-3

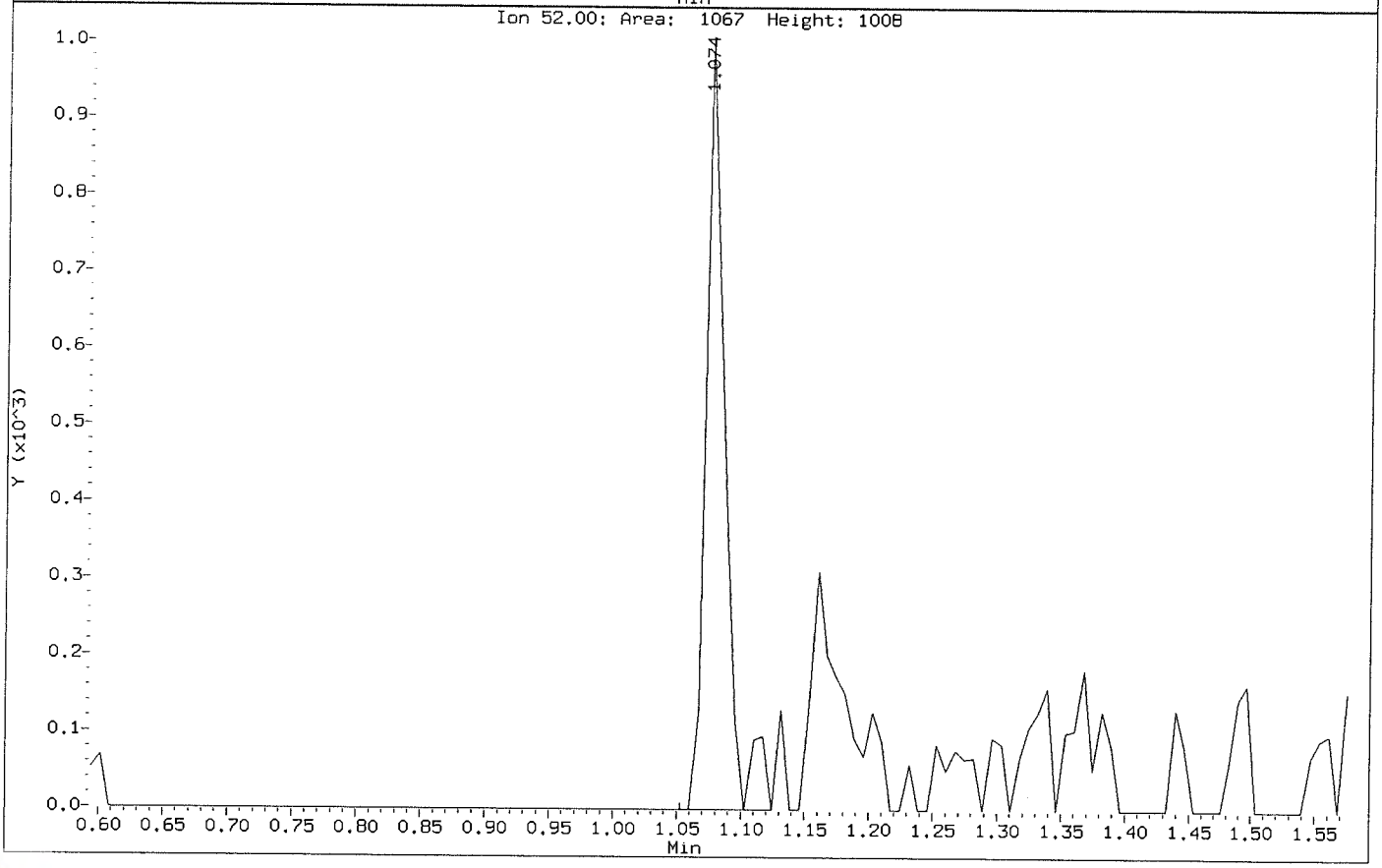




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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

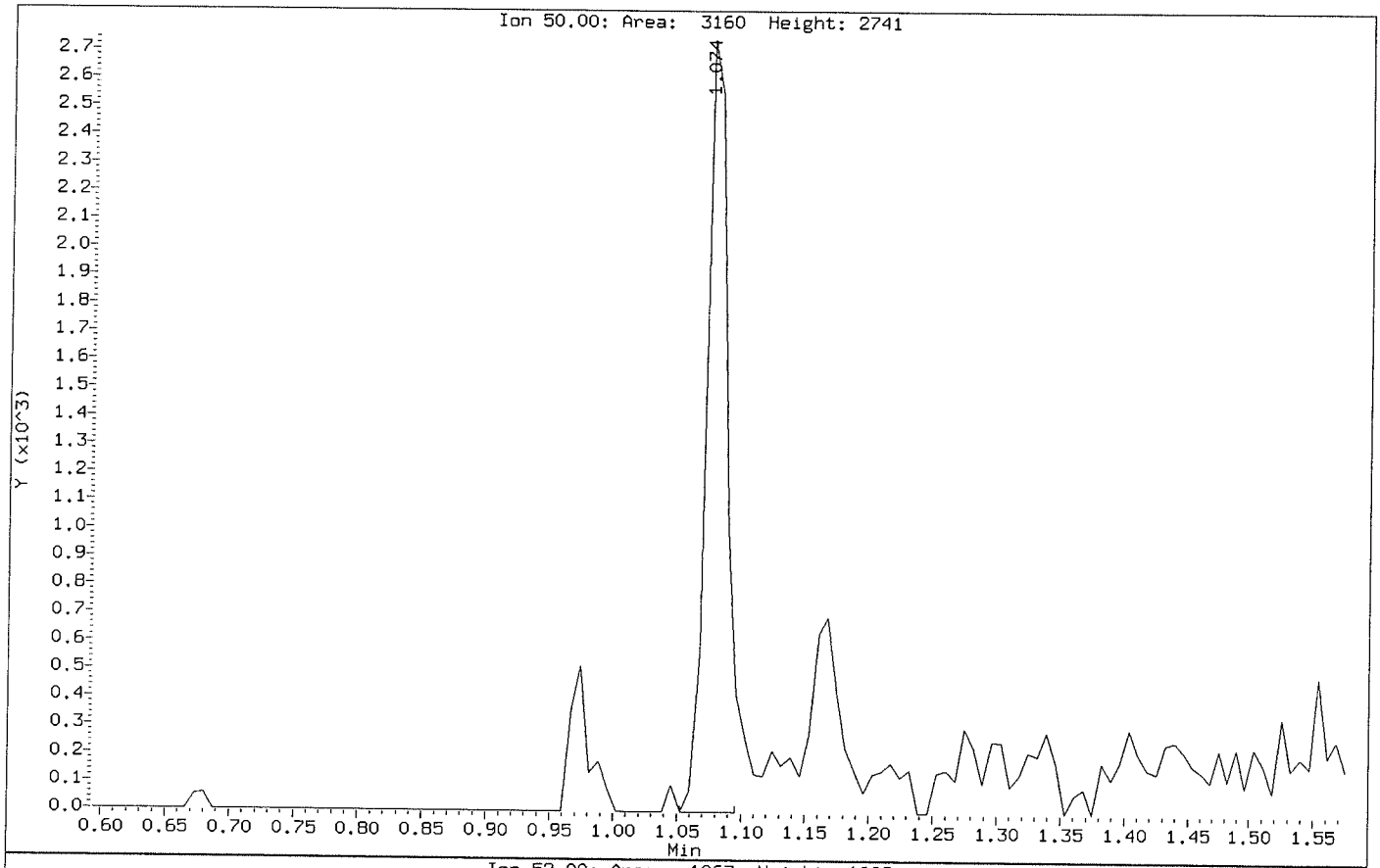
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CAS Number: 74-87-3

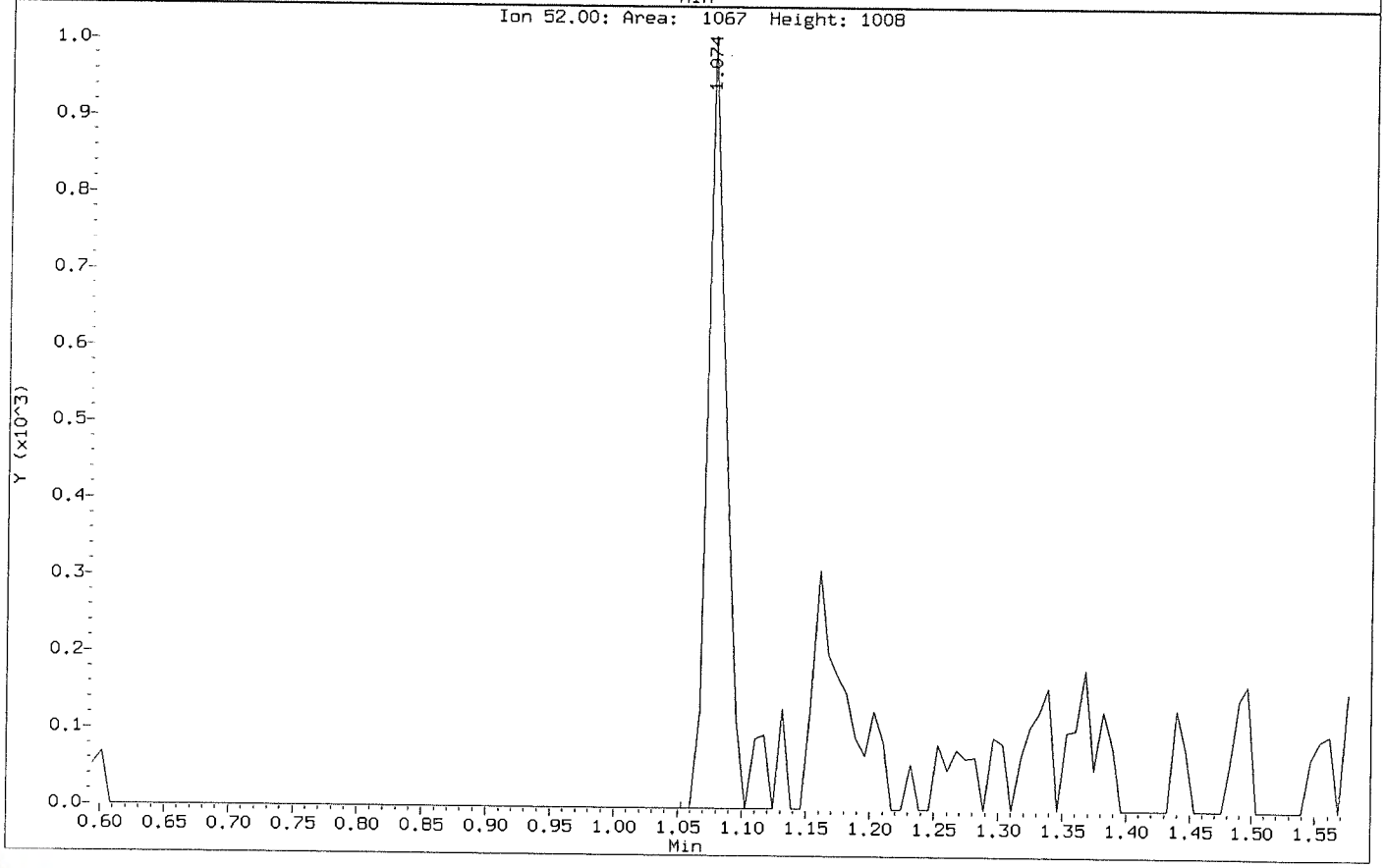




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Instrument: voa6.i
Client Sample ID: VSTD001

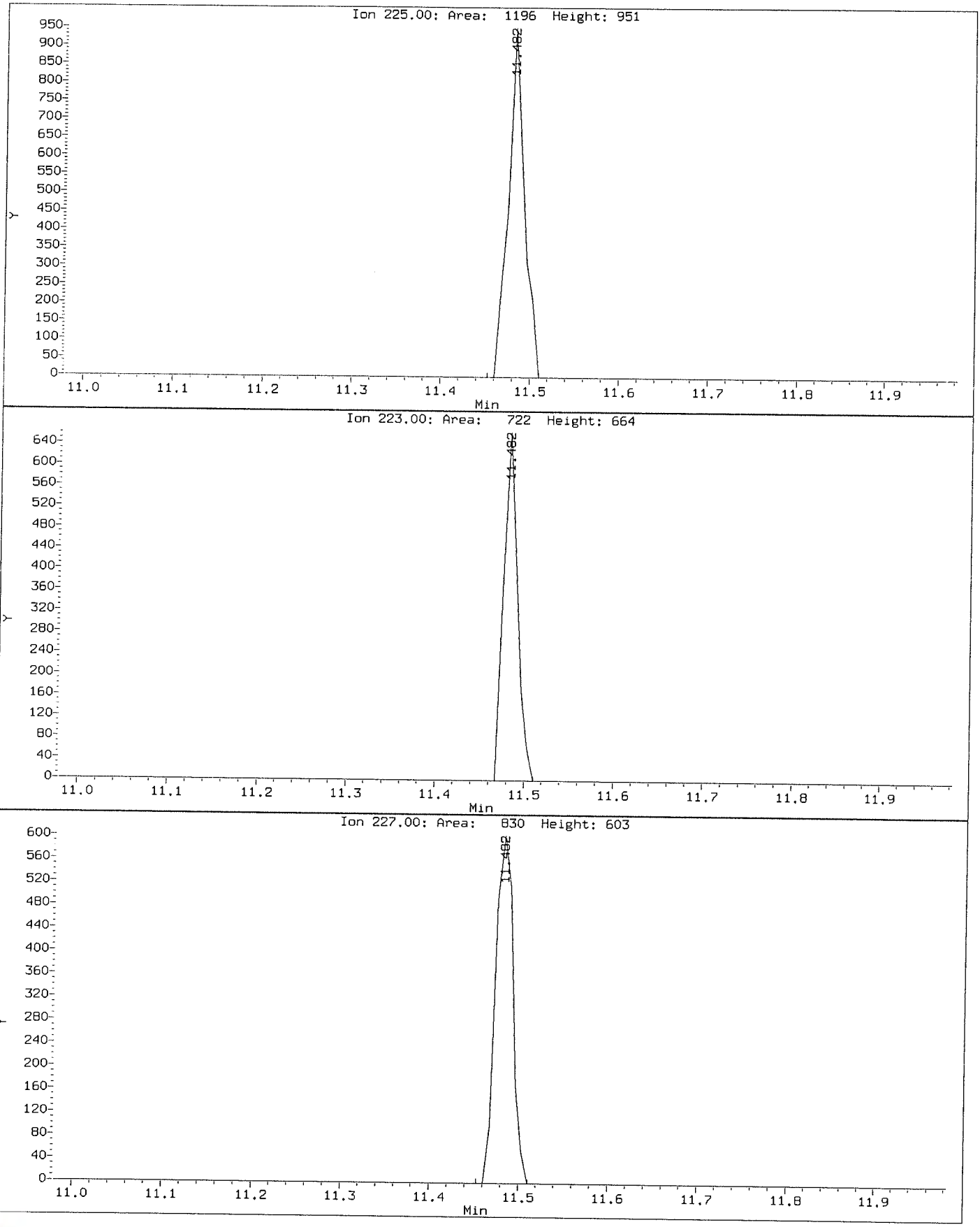
Compound: Chloromethane
CAS Number: 74-87-3





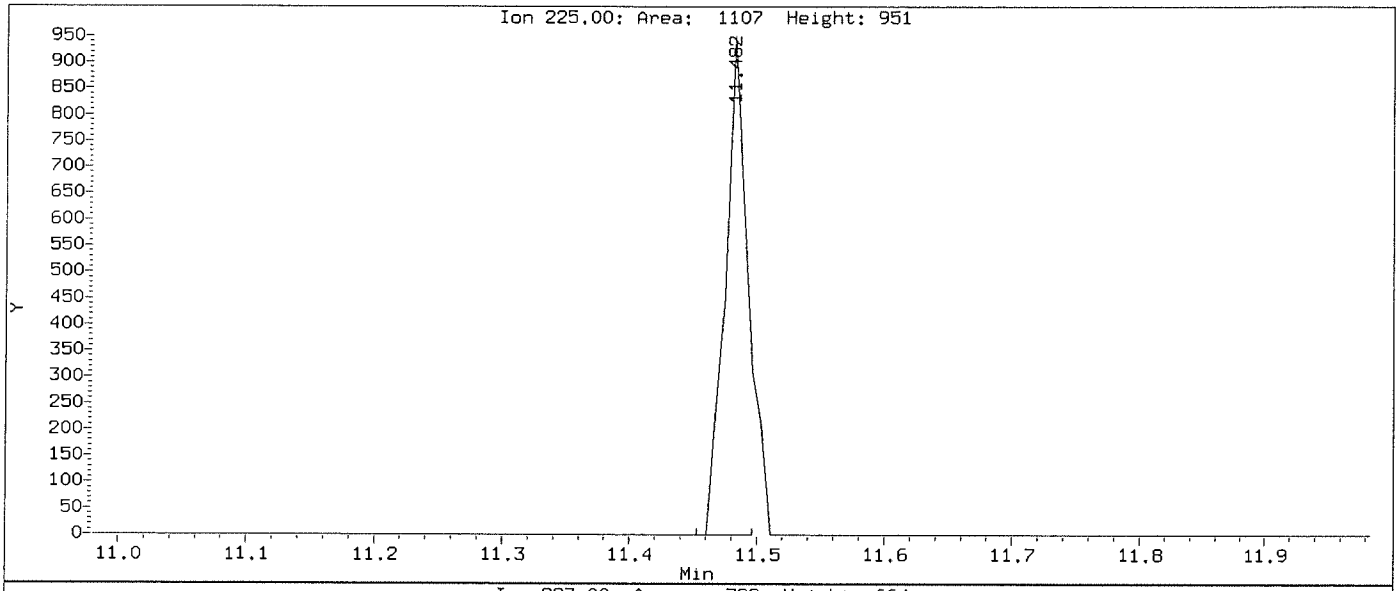
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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

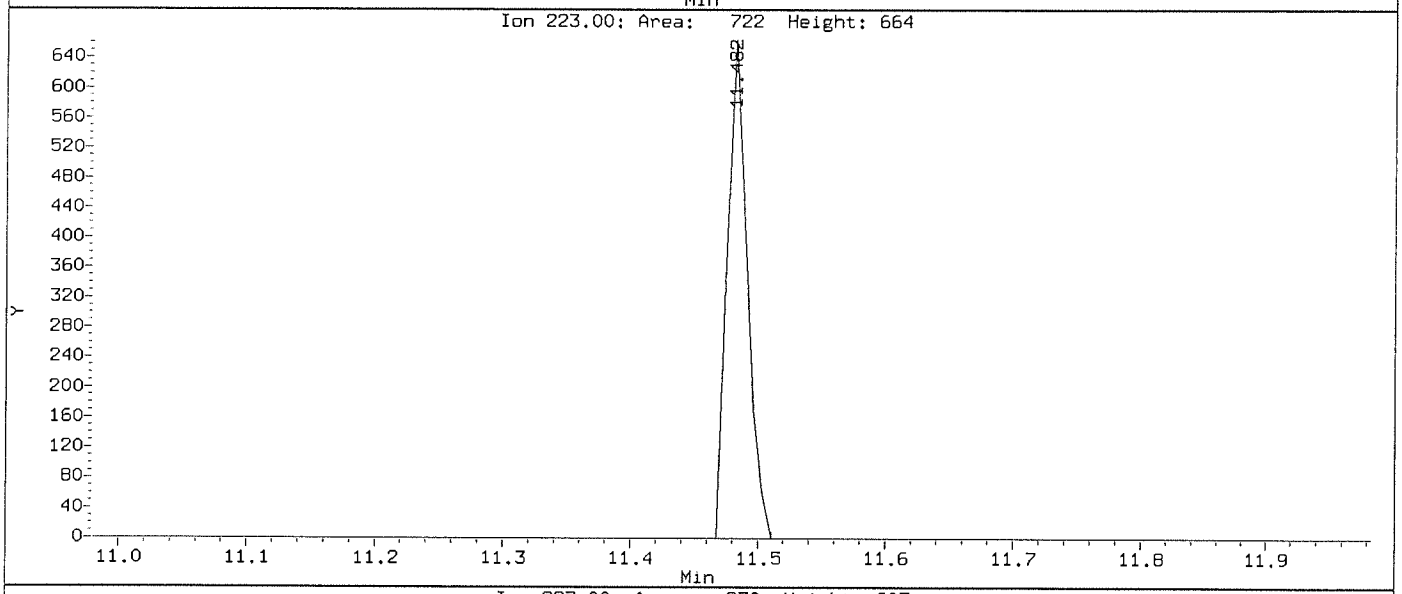
Compound: Hexachlorobutadiene
CAS Number: 87-68-3

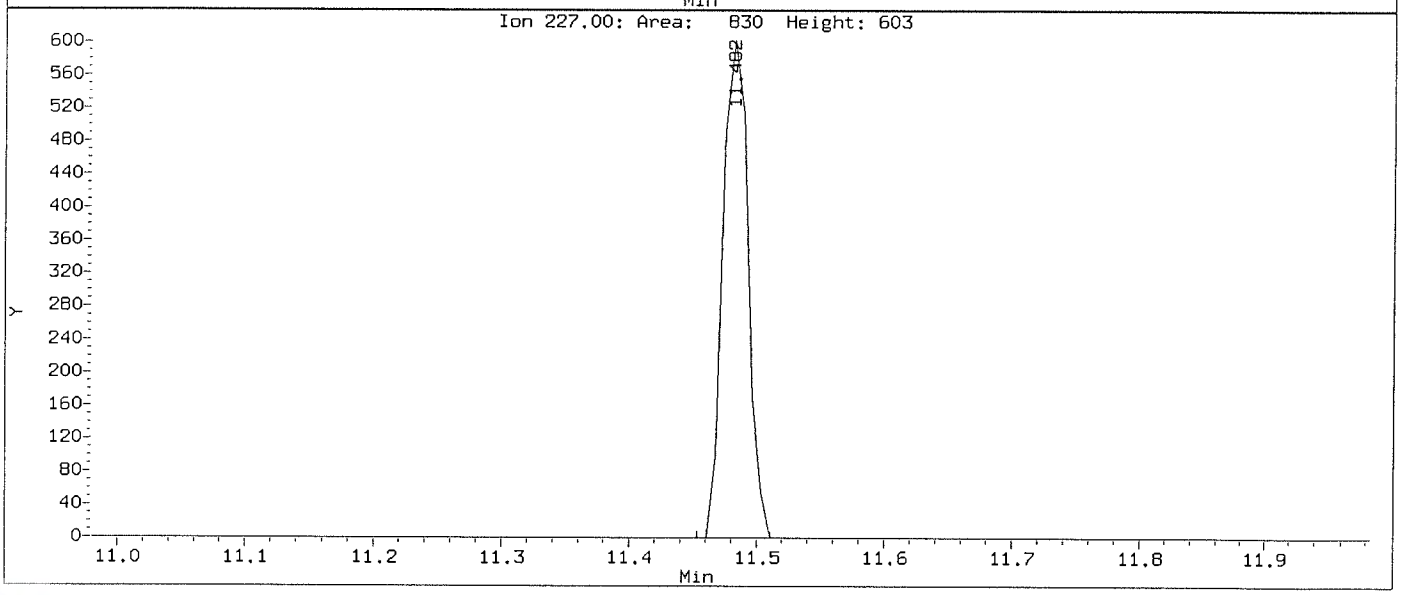


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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

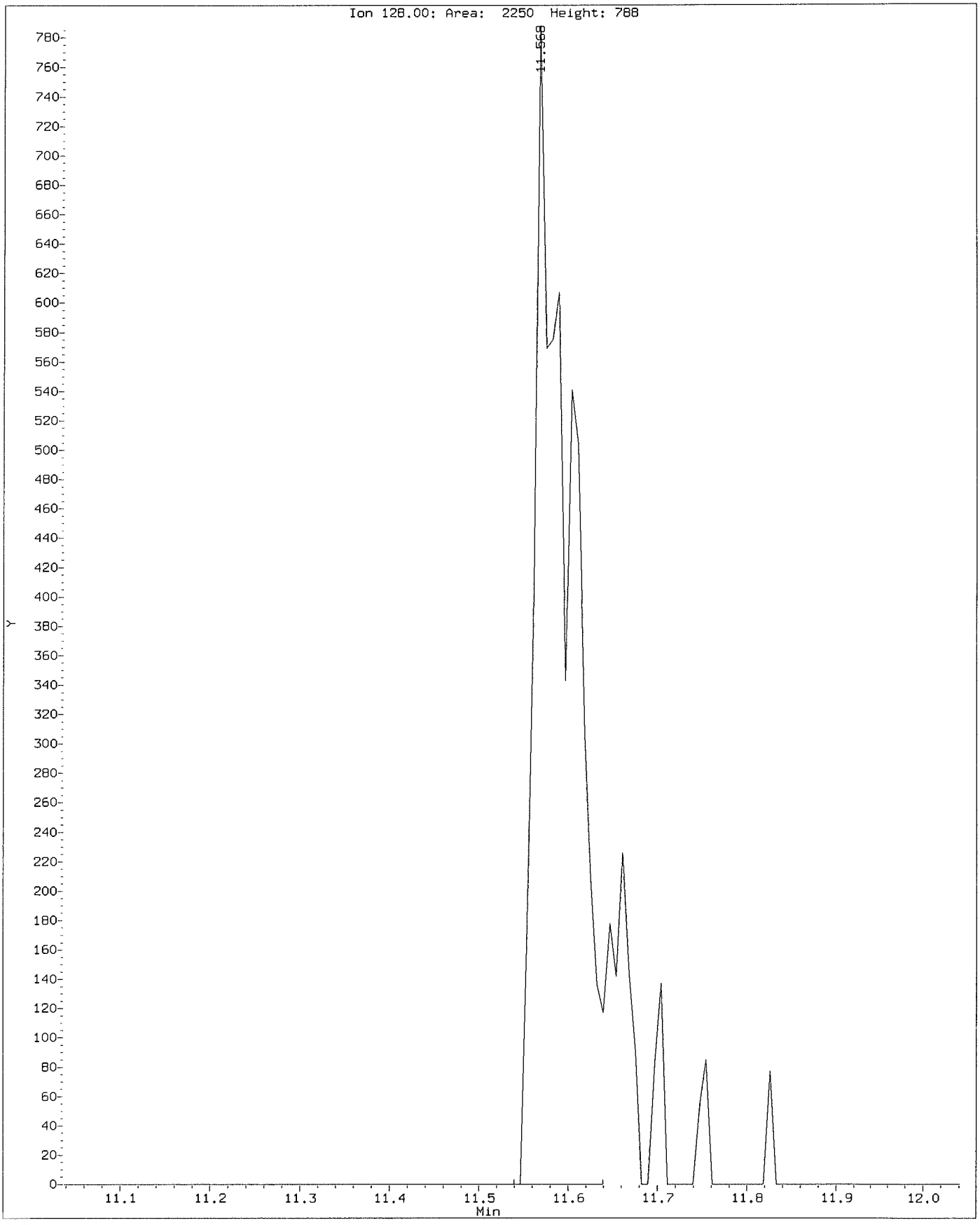






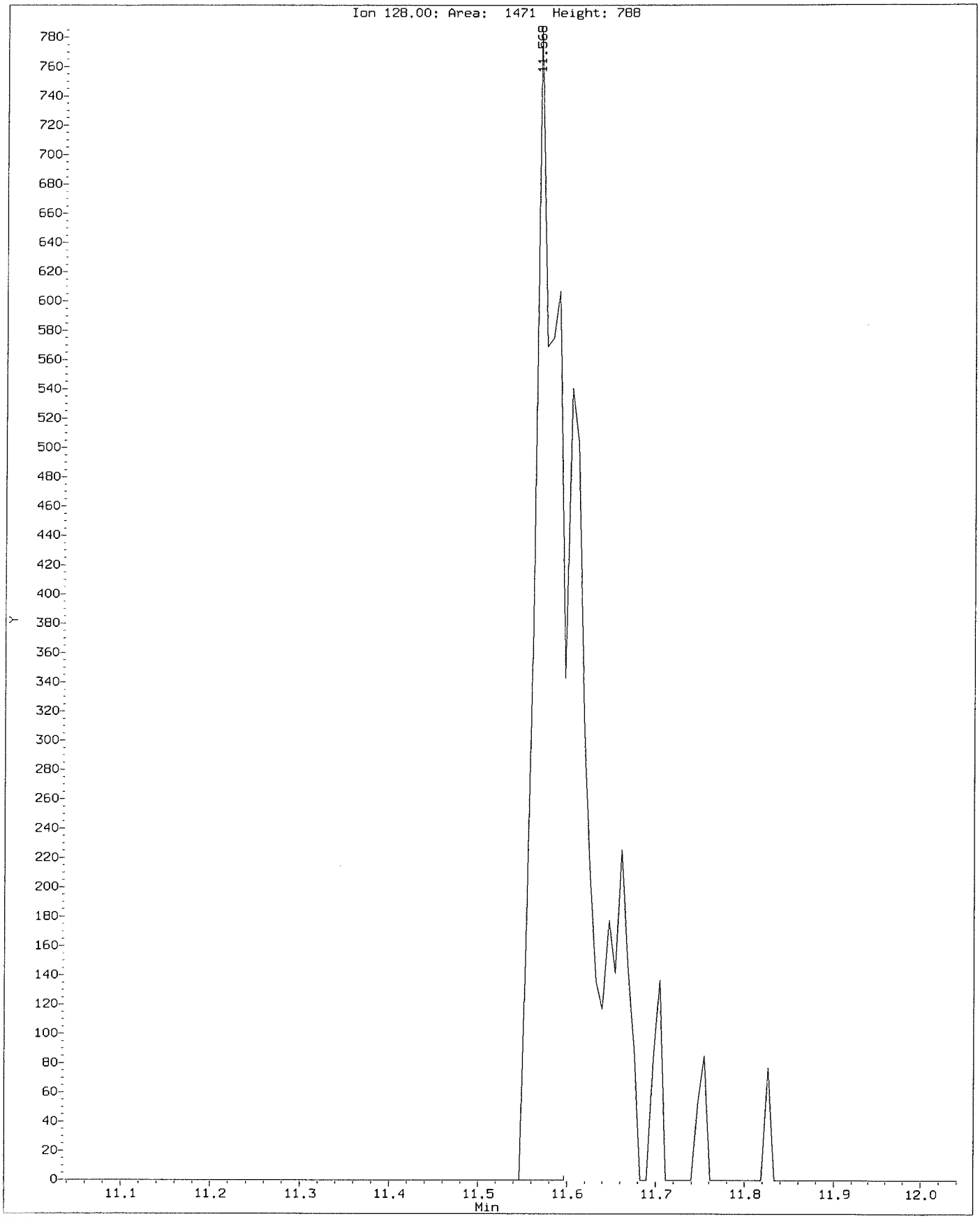
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Naphthalene
CAS Number: 91-20-3



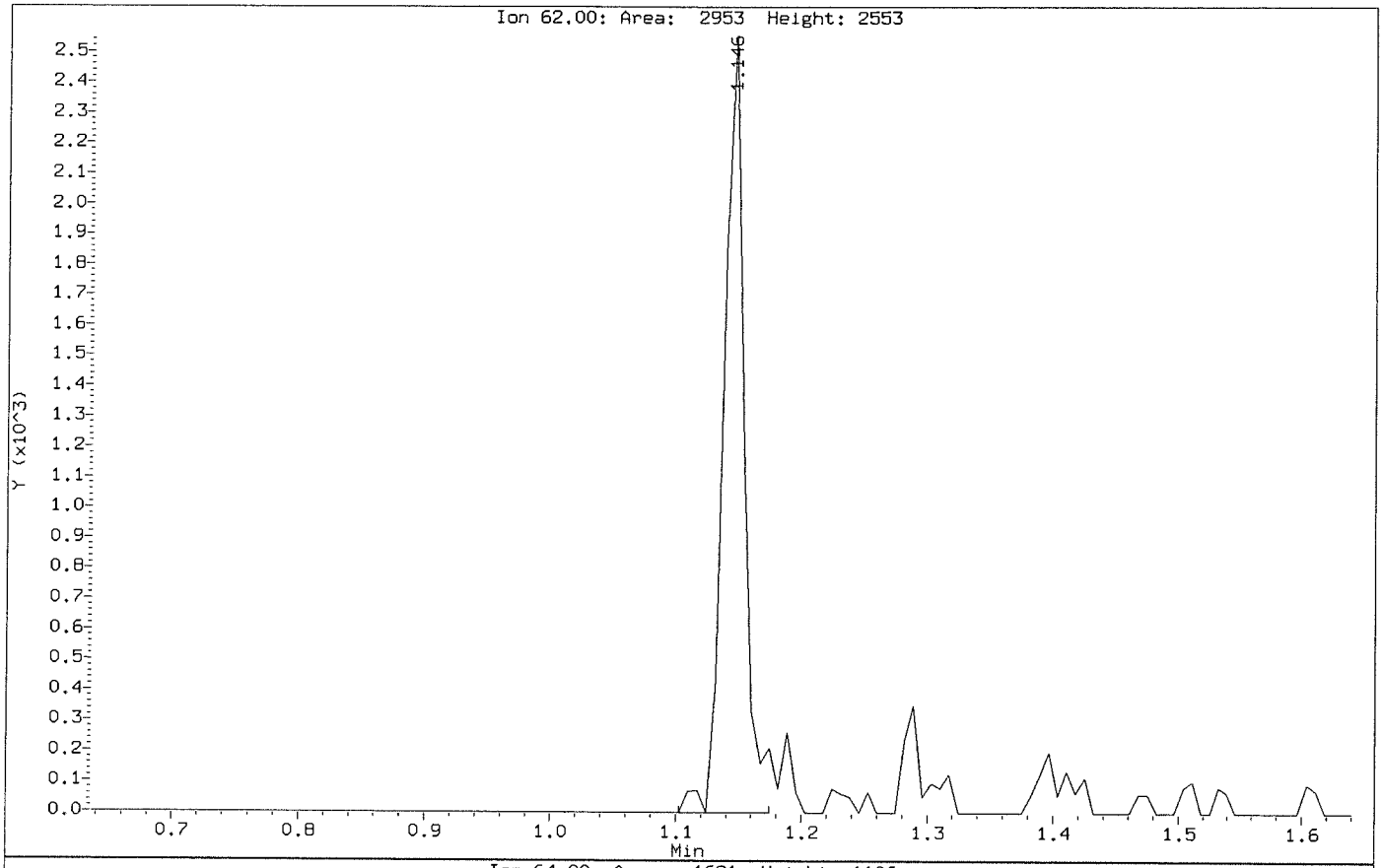
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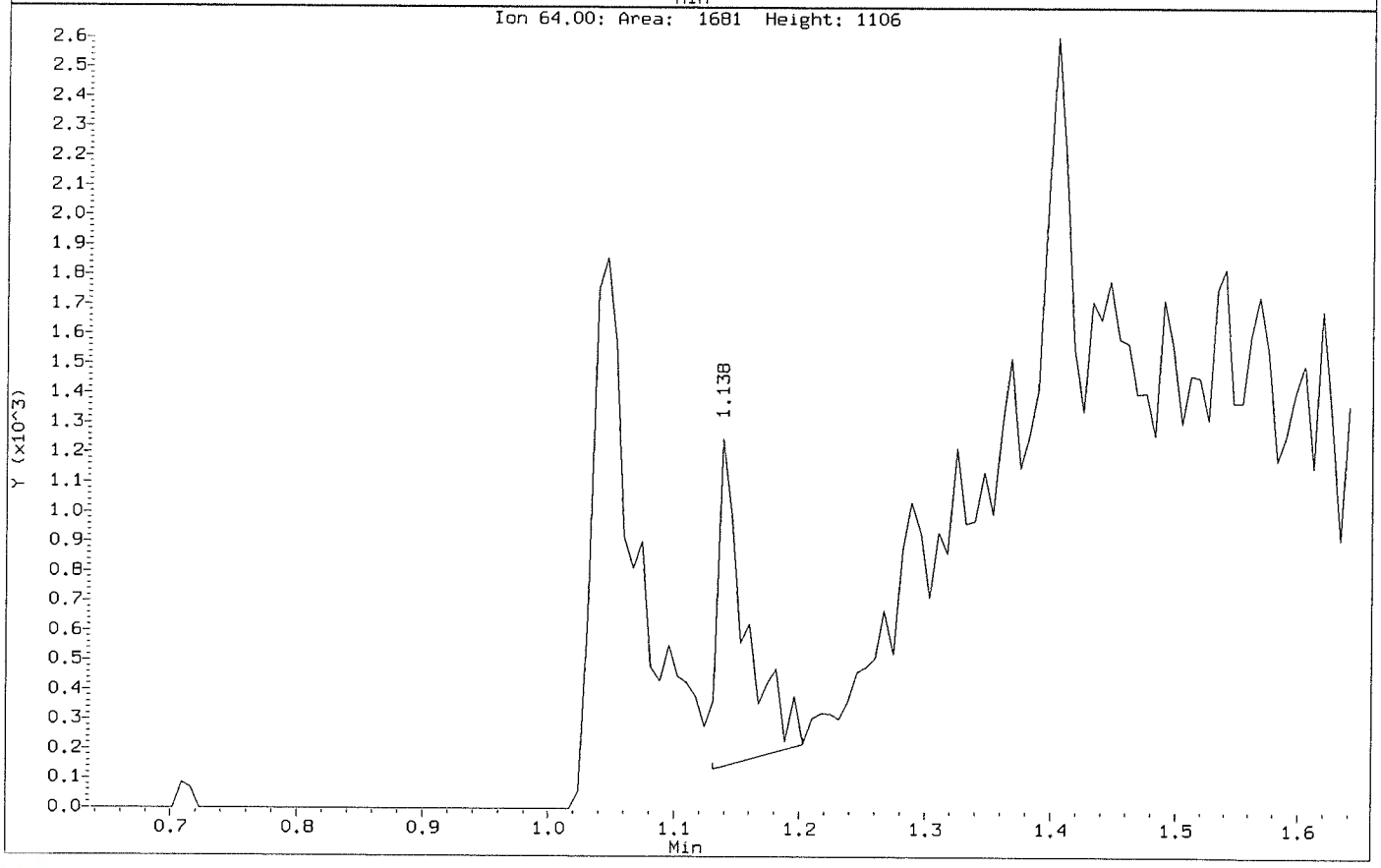
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CAS Number: 91-20-3



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Instrument: voa6.i
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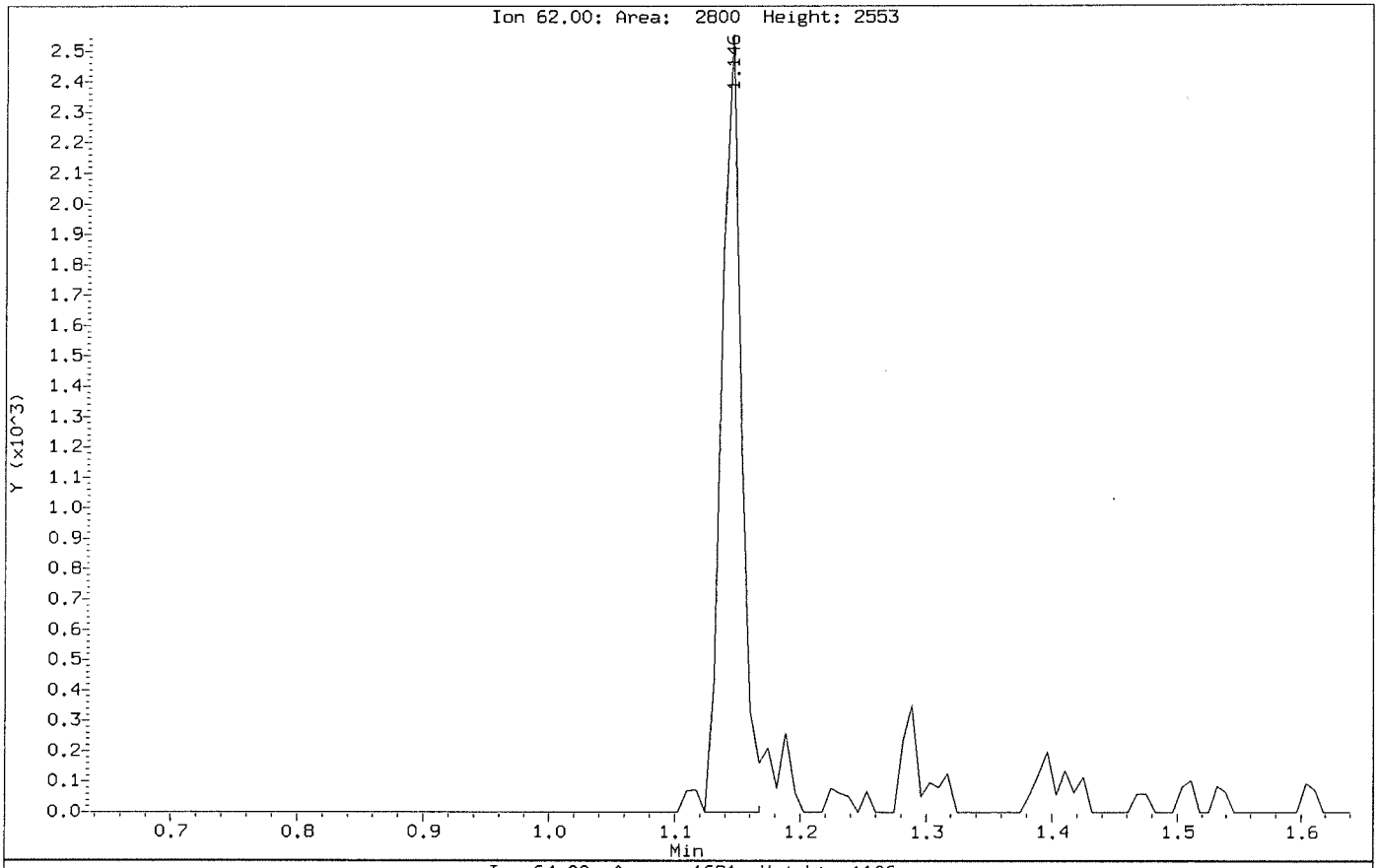
Compound: Vinyl Chloride
CAS Number: 75-01-4

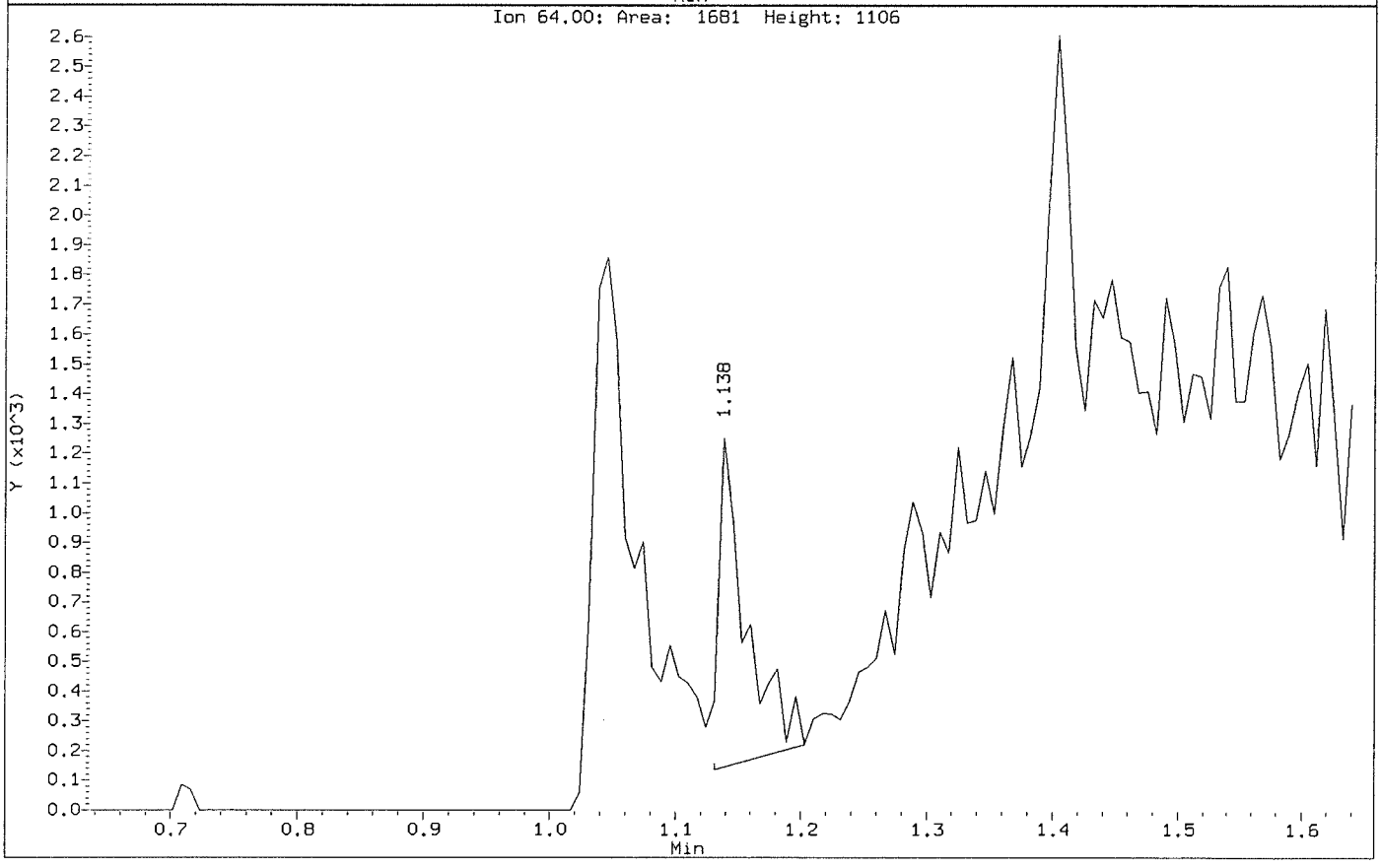




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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051805.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051805.D
Lab Smp Id: VSDT002 Client Smp ID: VSTD002
Inj Date : 18-MAY-2021 12:46
Operator : PC Inst ID: voa6.i
Smp Info : VSDT002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 12:25 Cal File: X051804.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

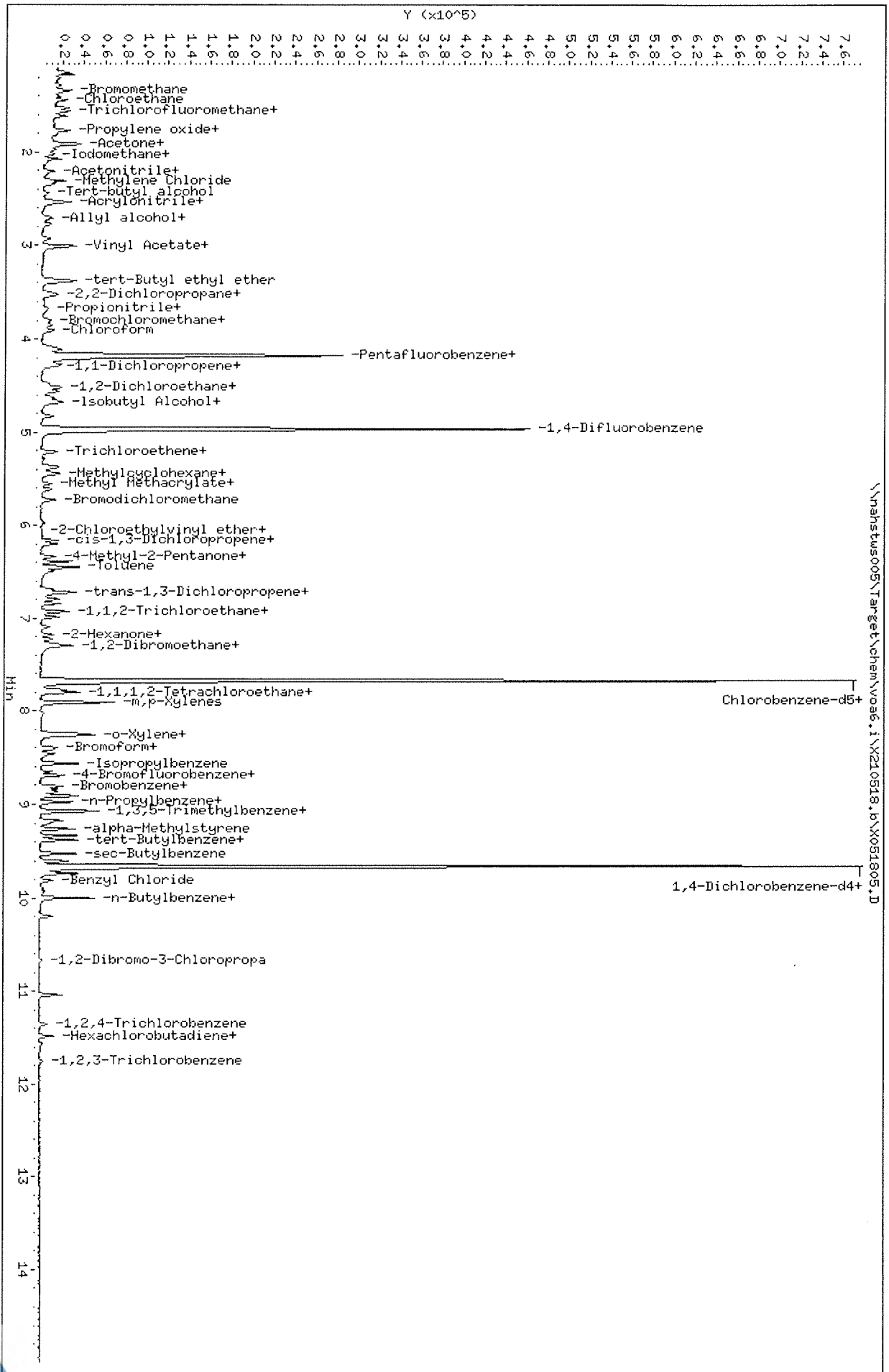
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	223222	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	372877	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	342499	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	158694	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	6073	2.00000	0.87(a)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	7059	2.00000	2.29(a)
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	5073	2.00000	1.82(a)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	16788	2.00000	2.96(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	5404	2.00000	2.16(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	7117	2.00000	1.87(a)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	6612	2.00000	2.01(aM)
138 Freon TF	101	1.919	1.919	(0.459)	4737	2.00000	2.23(aM)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	4027	2.00000	2.02(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	7473	2.00000	1.80(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	4857	2.00000	2.17(a)
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	5889	2.00000	1.84(a)
93 1,2,3-Trichlorobenzene	180	11.753	11.753	(1.216)	1755	2.00000	2.84(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	4744	2.00000	1.61(aMH)
90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.175)	2176	2.00000	3.91(a)
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	15828	2.00000	1.96(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	511	2.00000	3.91(aM)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	4934	2.00000	2.06(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	8926	2.00000	2.00(a)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	7371	2.00000	2.01(a)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	4723	2.00000	1.88(aM)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	16203	2.00000	2.04(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	9167	2.00000	2.01(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	7822	2.00000	2.00(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	10925	2.00000	2.58(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	7384	2.00000	1.99(a)
24	2-Butanone	43	3.609	3.609	(0.863)	2680	4.00000	3.25(aM)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	14113	2.00000	1.99(a)
52	2-Hexanone	43	7.090	7.090	(0.924)	6265	4.00000	4.05(a)
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	16392	2.00000	1.98(a)
82	p-Isopropyltoluene	119	9.647	9.647	(0.999)	15308	2.00000	1.95(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	9786	4.00000	4.57(a)
10	Acetone	43	1.976	1.976	(0.473)	4685	4.00000	3.57(a)
37	Benzene	78	4.519	4.519	(0.909)	17777	2.00000	1.92(a)
74	Bromobenzene	156	8.809	8.809	(0.912)	5025	2.00000	1.89(a)
29	Bromochloromethane	128	3.802	3.802	(0.909)	2725	2.00000	2.00(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	6957	2.00000	1.93(aM)
66	Bromoform	173	8.415	8.415	(1.097)	2721	2.00000	1.64(Ta)
6	Bromomethane	94	1.338	1.338	(0.320)	5999	2.00000	2.10(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	20321	4.00000	3.86(a)
34	Carbon Tetrachloride	117	4.254	4.254	(0.856)	6956	2.00000	2.14(aH)
59	Chlorobenzene	112	7.692	7.692	(1.003)	13639	2.00000	2.03(a)
7	Chloroethane	64	1.403	1.403	(0.336)	3185	2.00000	1.88(aM)
28	Chloroform	83	3.917	3.917	(0.937)	8858	2.00000	1.86(a)
3	Chloromethane	50	1.080	1.080	(0.258)	5348	2.00000	2.44(a)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	5045	2.00000	1.96(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	7191	2.00000	1.75(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	5007	2.00000	1.87(a)
44	Dibromomethane	93	5.557	5.557	(1.118)	3596	2.00000	2.00(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	5548	2.00000	3.97(a)
61	Ethylbenzene	106	7.799	7.799	(1.017)	6867	2.00000	2.06(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	2099	2.00000	5.24(M)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	19138	2.00000	1.88(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	16590	4.00000	3.87(a)
17	Methylene Chloride	84	2.305	2.305	(0.551)	4803	2.00000	2.14(a)
87	n-Butylbenzene	91	9.998	9.998	(1.035)	13346	2.00000	1.79(a)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	24073	2.00000	2.14(a)
92	Naphthalene	128	11.553	11.553	(1.196)	3094	2.00000	4.49(aM)
63	o-Xylene	106	8.243	8.243	(1.075)	8148	2.00000	1.95(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	20210	2.00000	2.17(a)
64	Styrene	104	8.265	8.265	(1.078)	12689	2.00000	3.33(a)
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	14096	2.00000	2.09(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	4009	2.00000	2.10(a)
50	Toluene	91	6.446	6.446	(0.840)	19645	2.00000	1.98(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	4458	2.00000	2.07(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	6893	2.00000	1.92(a)
38	Trichloroethene	130	5.206	5.206	(1.048)	4850	2.00000	1.96(a)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	9673	2.00000	2.25(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	5963	2.00000	2.21(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.
H - Operator selected an alternate compound hit.

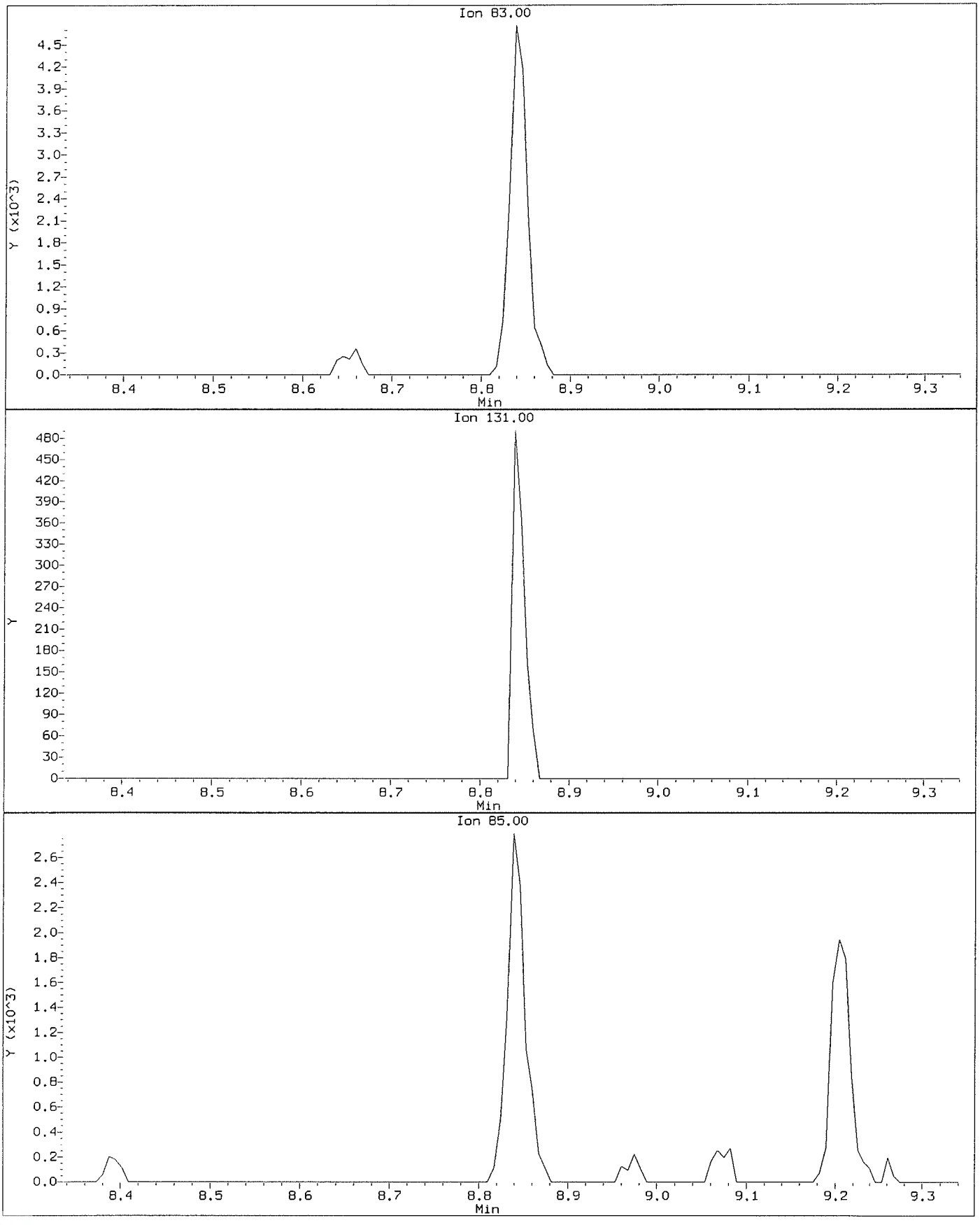


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Date : 18-MAY-2021 12:46
Client ID: VSTD002
Sample Info: VSDT002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

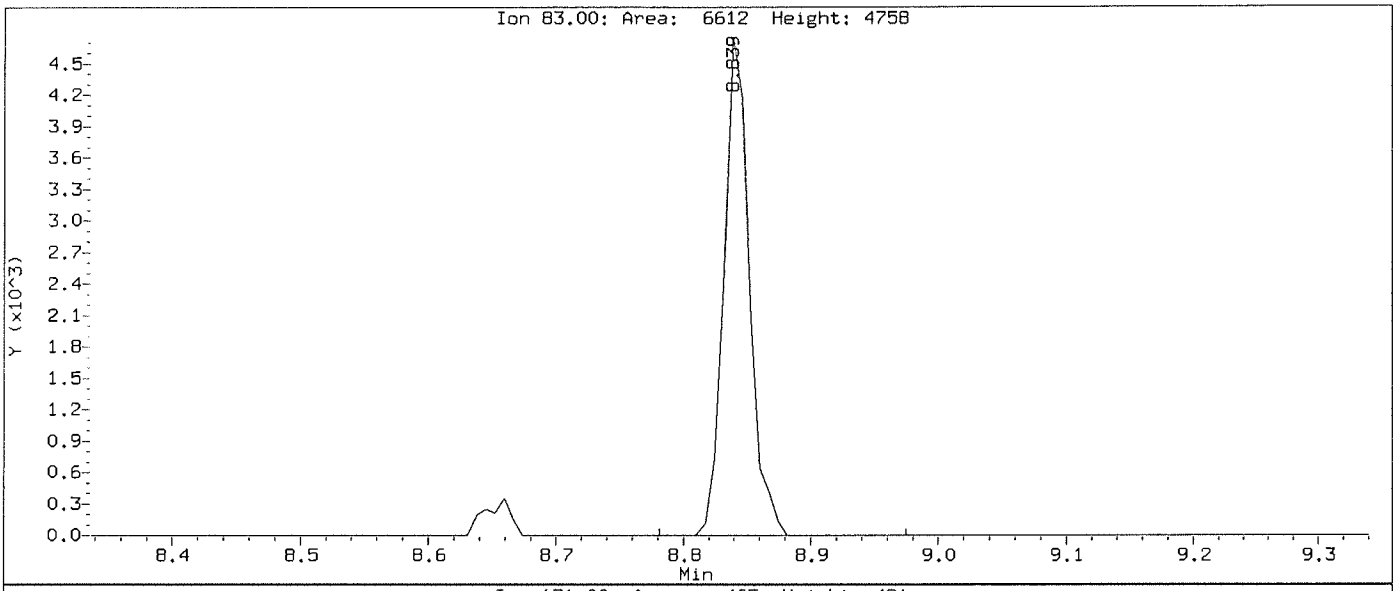
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

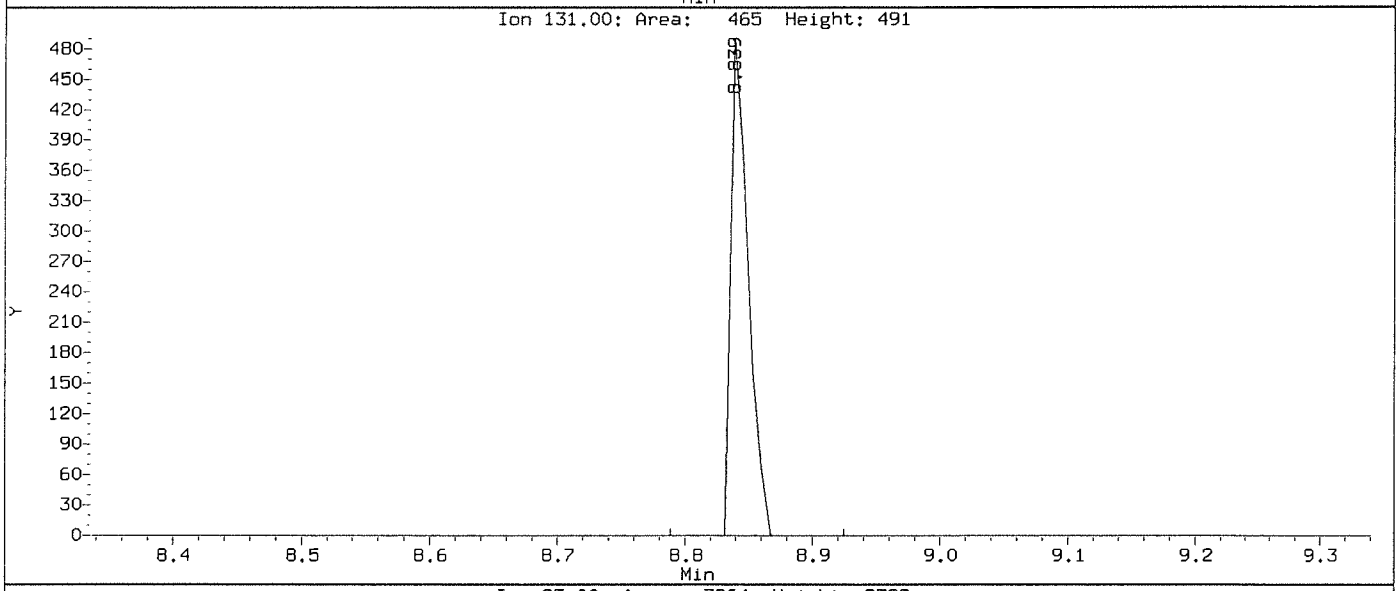
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

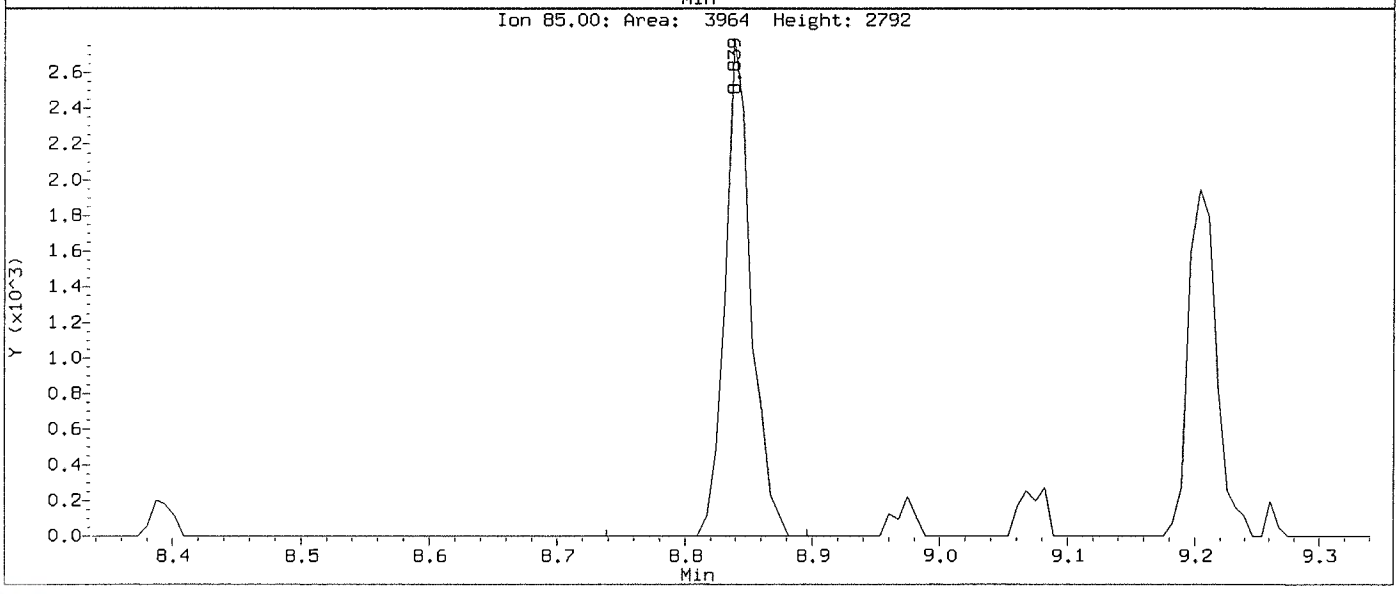


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051805.D
Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

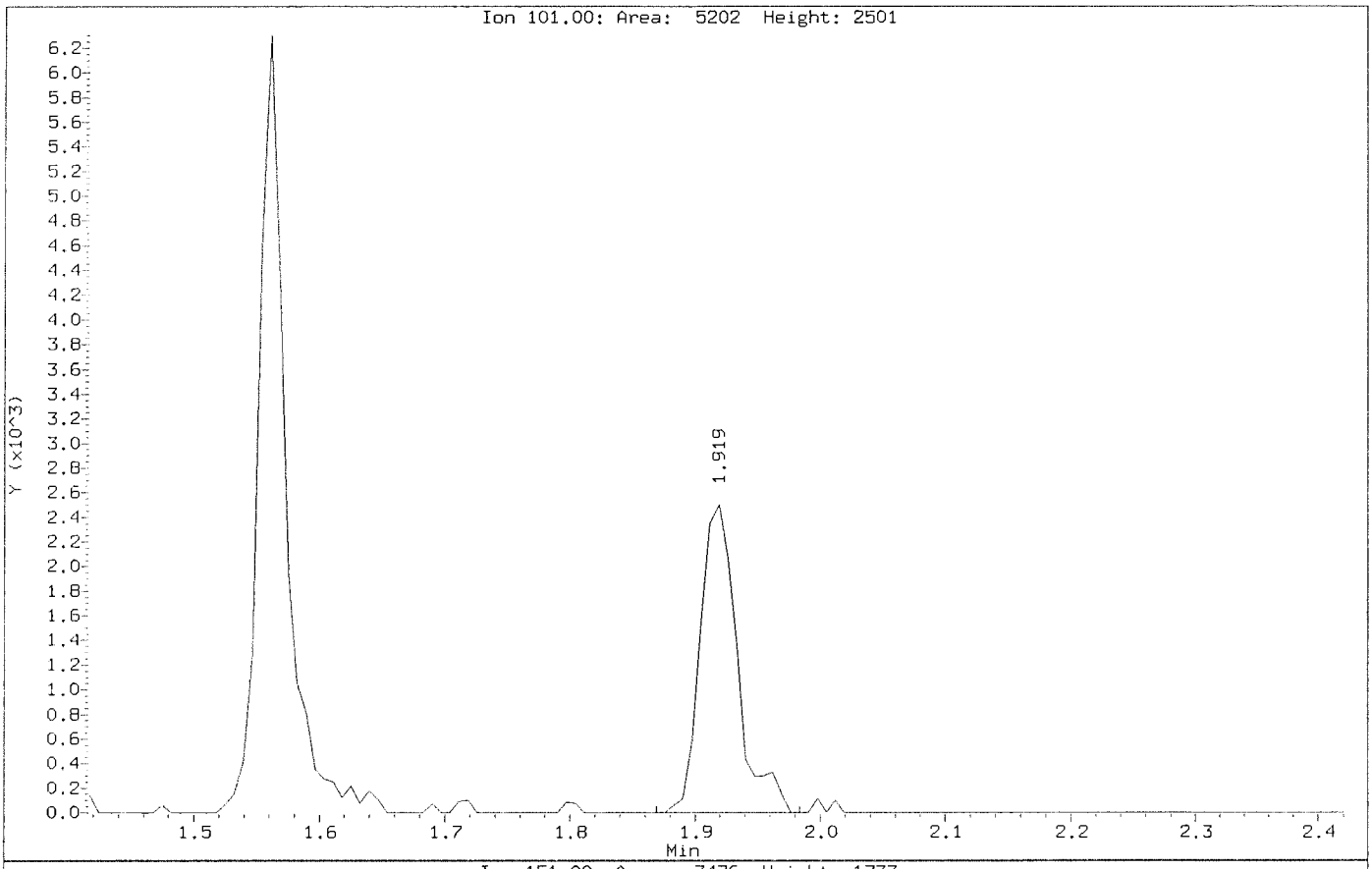


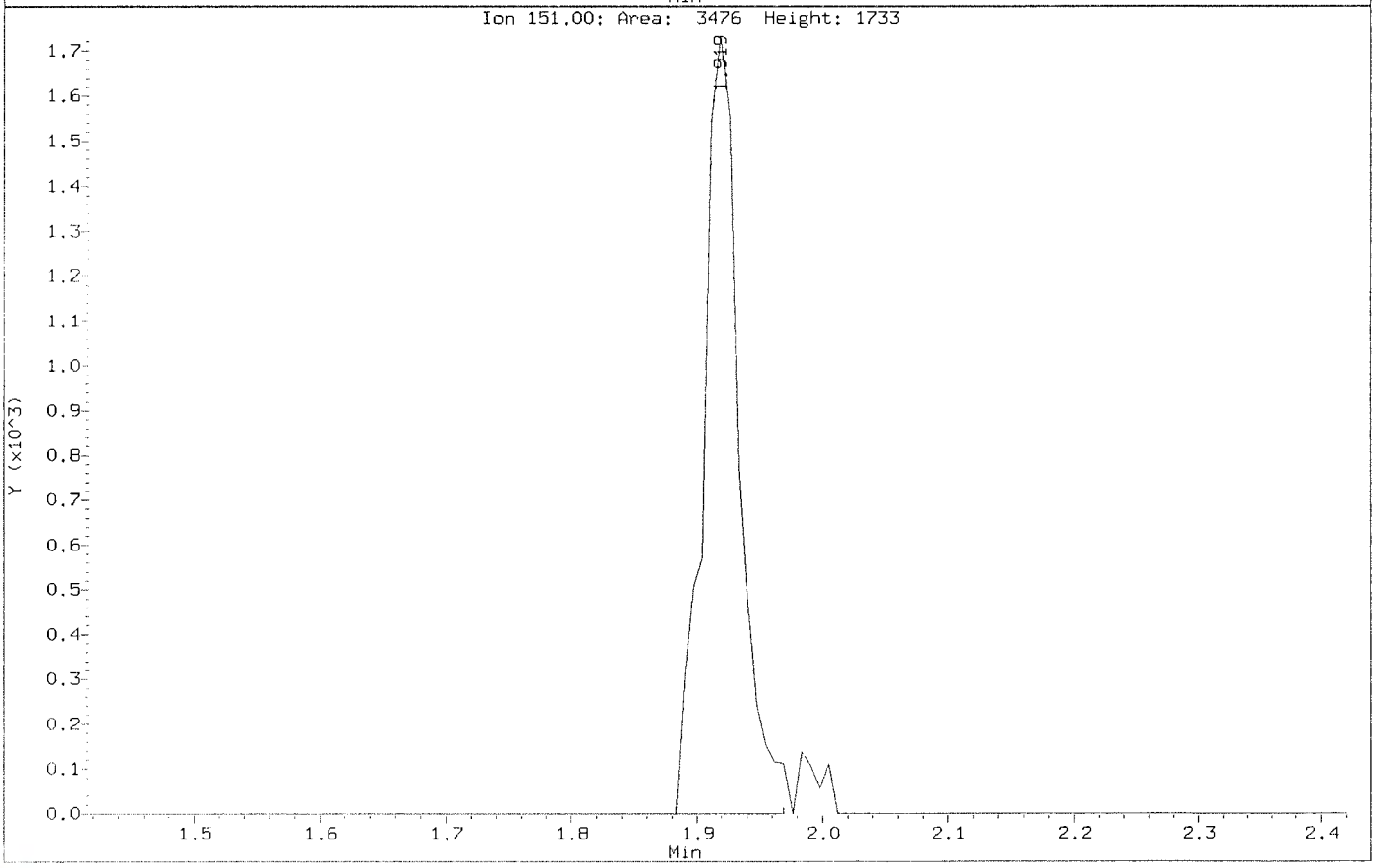




Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\Before3\X051805.D
Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

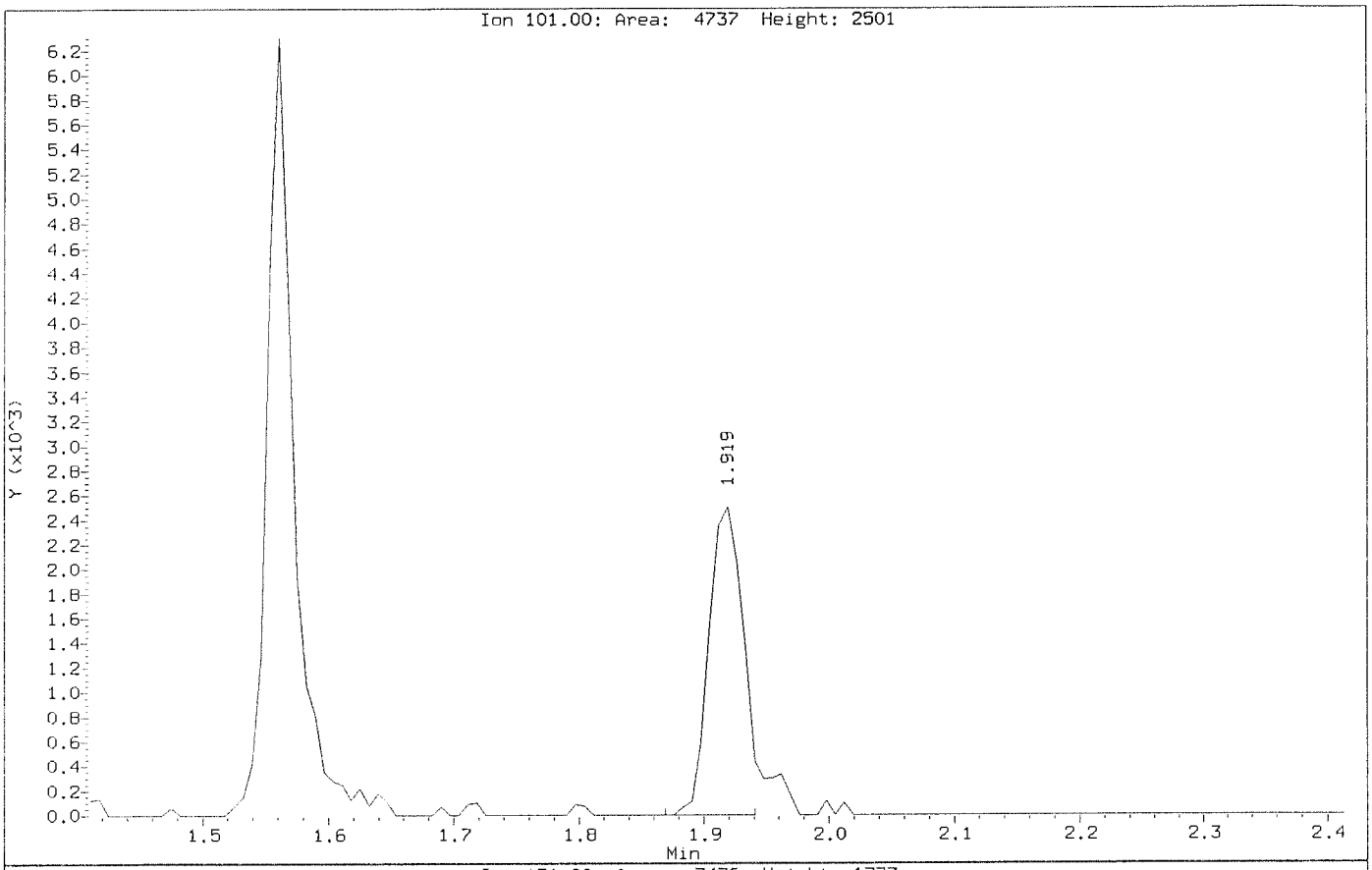
Compound: Freon TF
CAS Number: 76-13-1

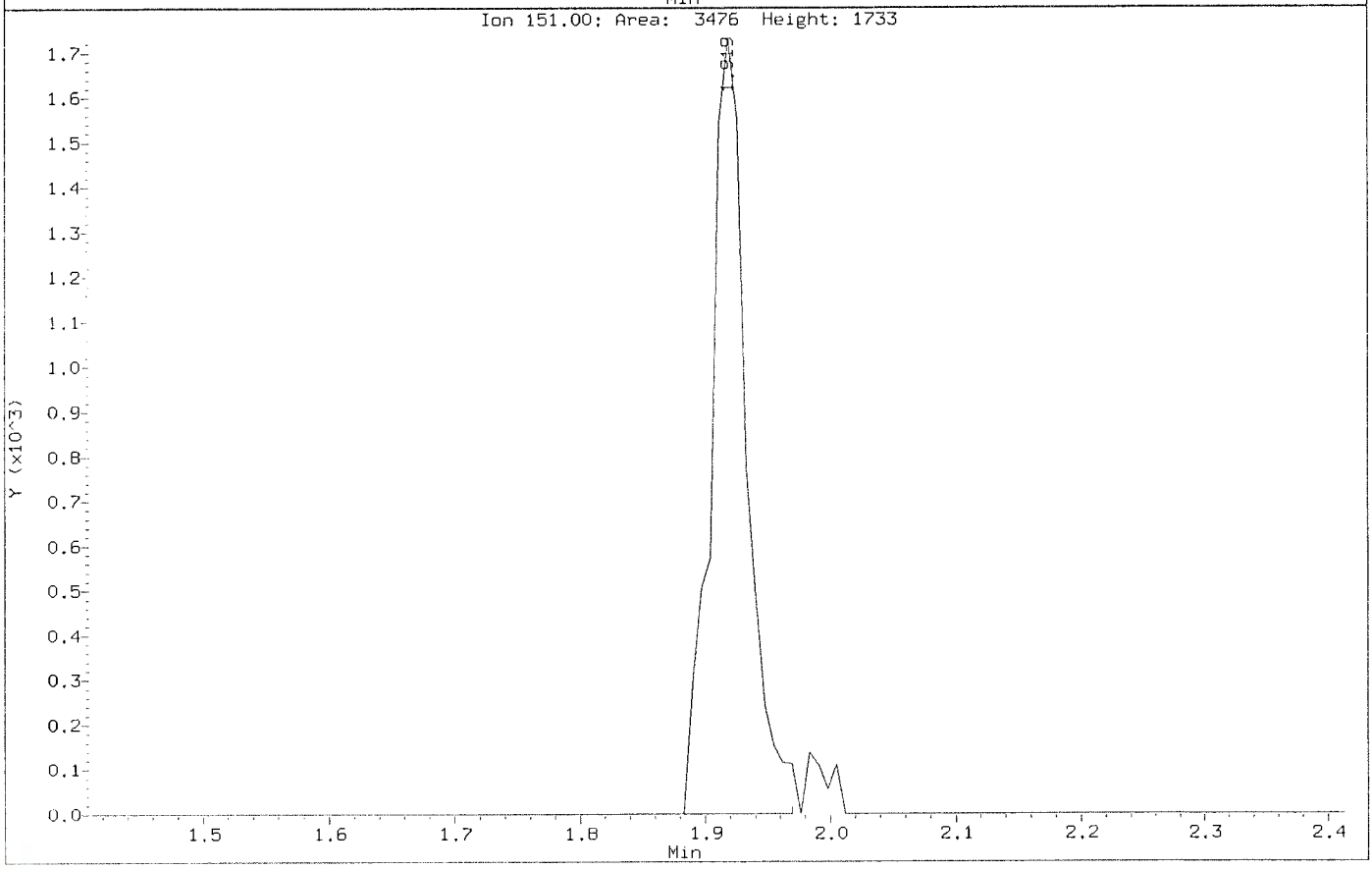




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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

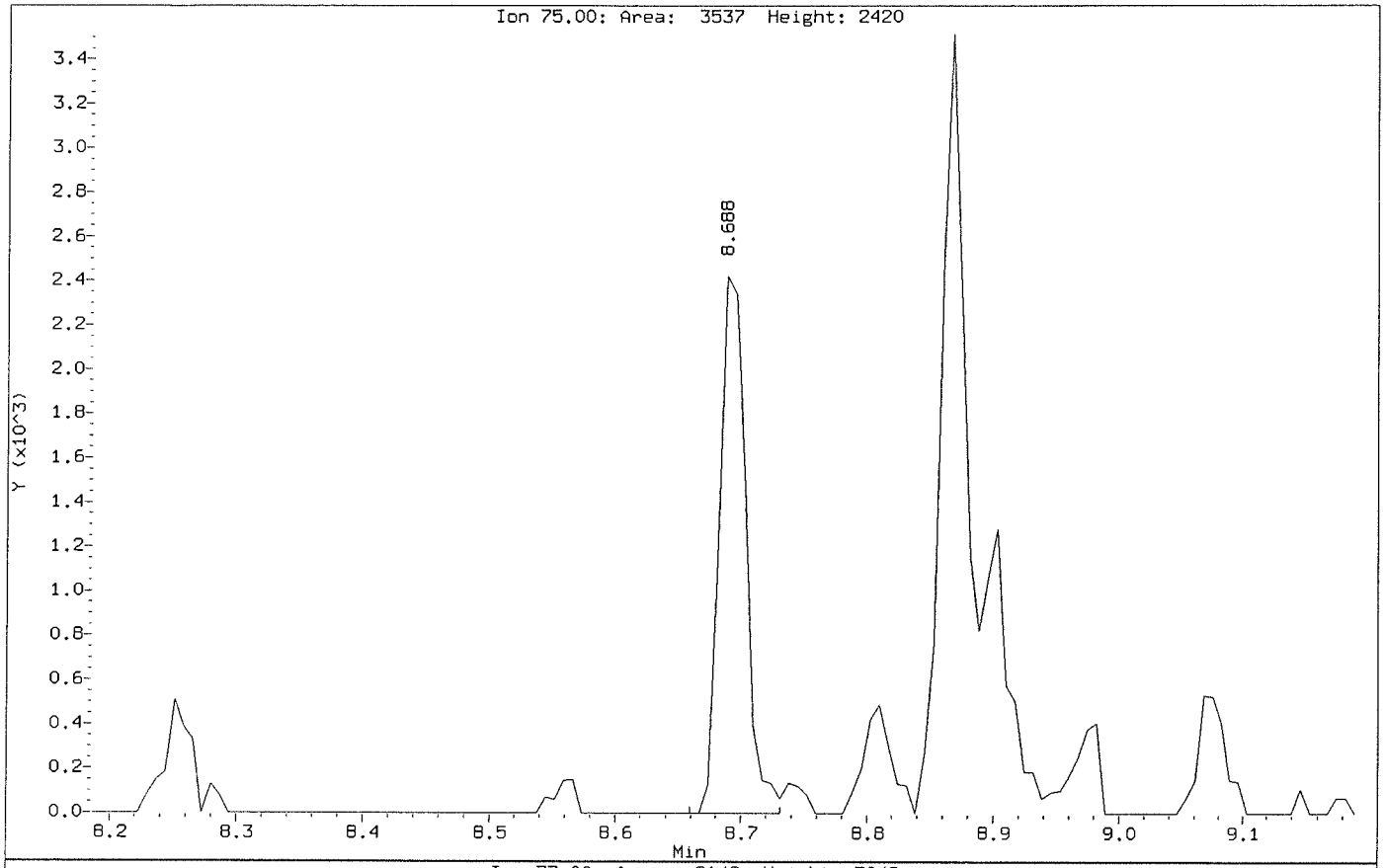
Compound: Freon TF
CAS Number: 76-13-1

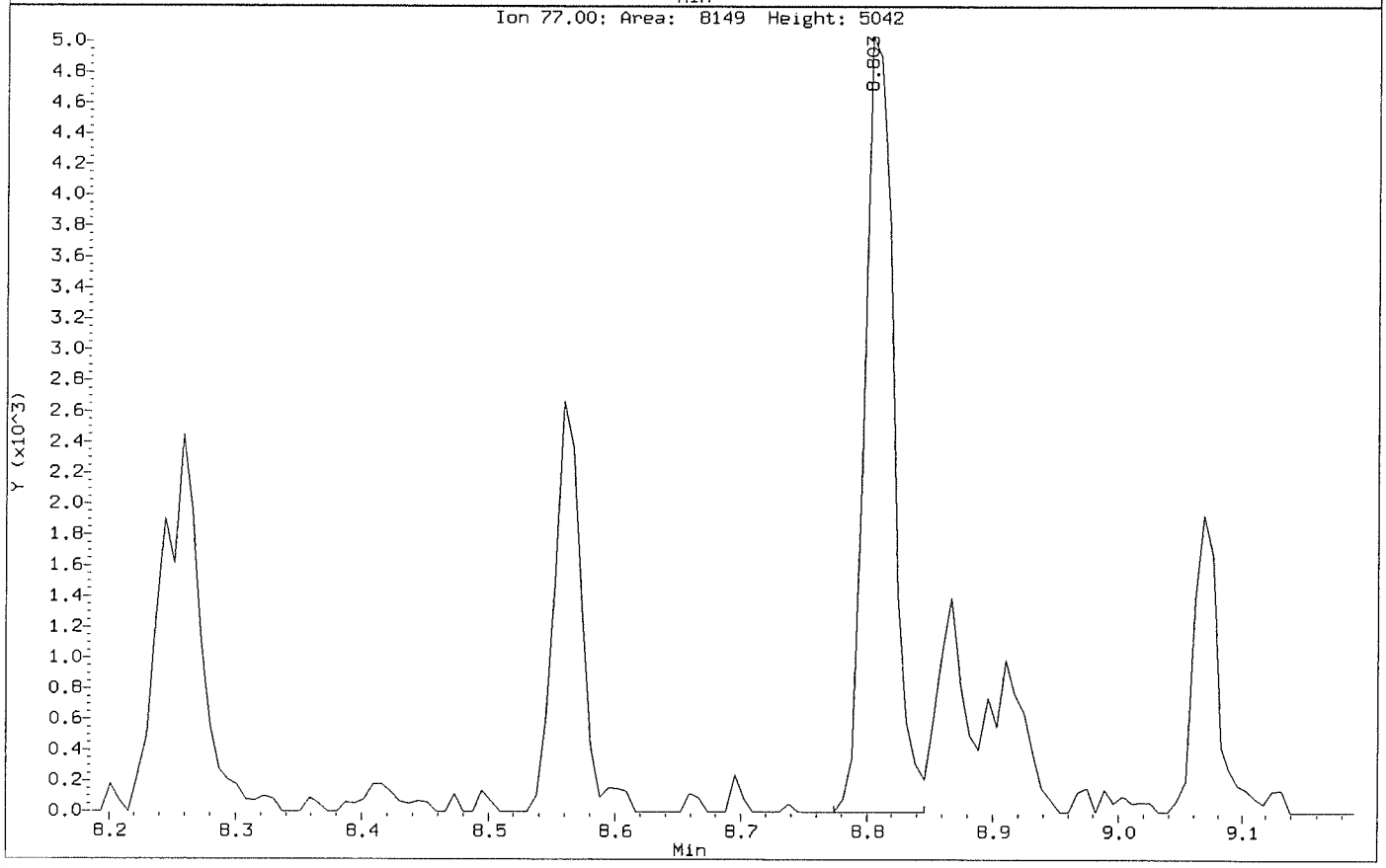




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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

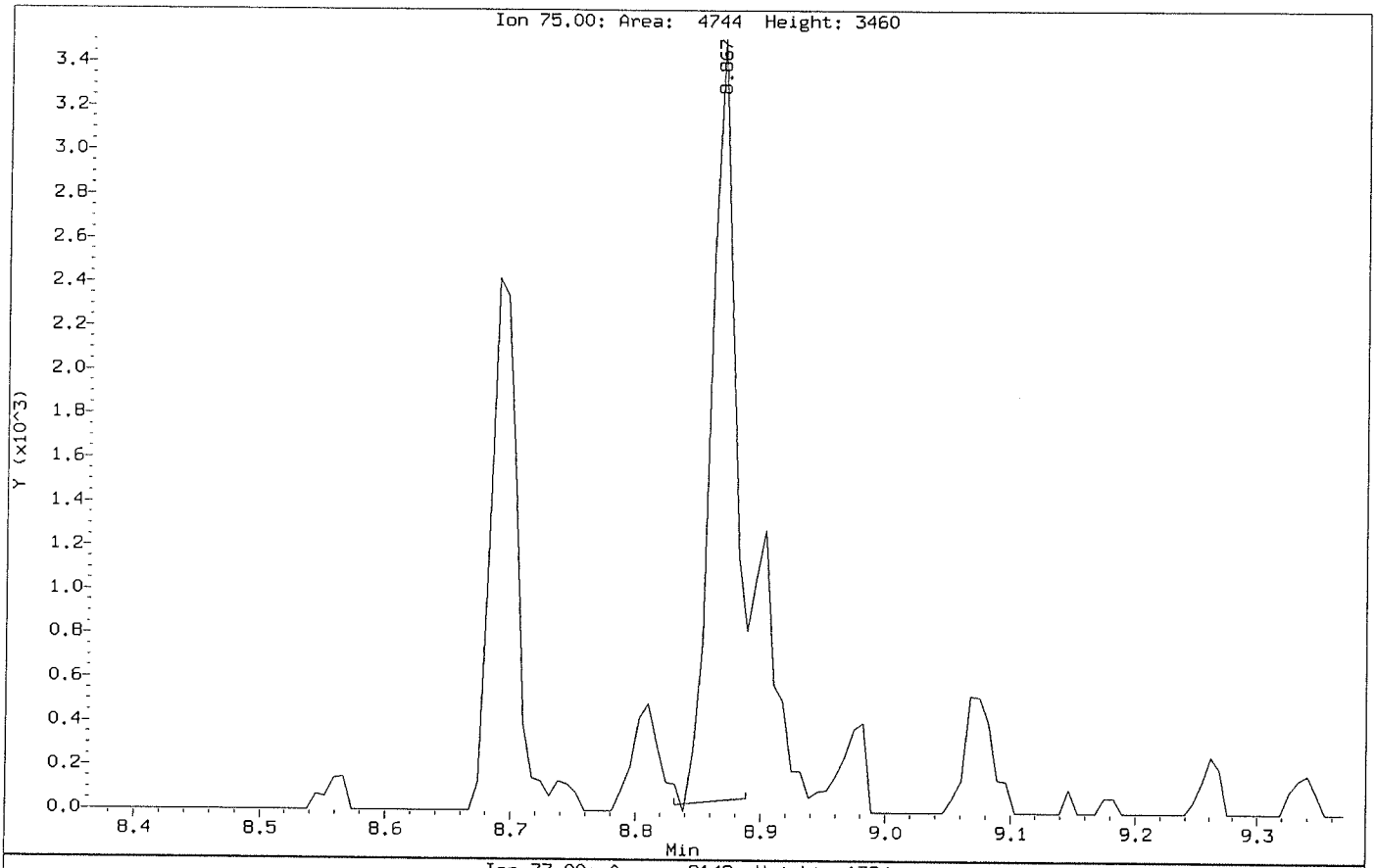
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

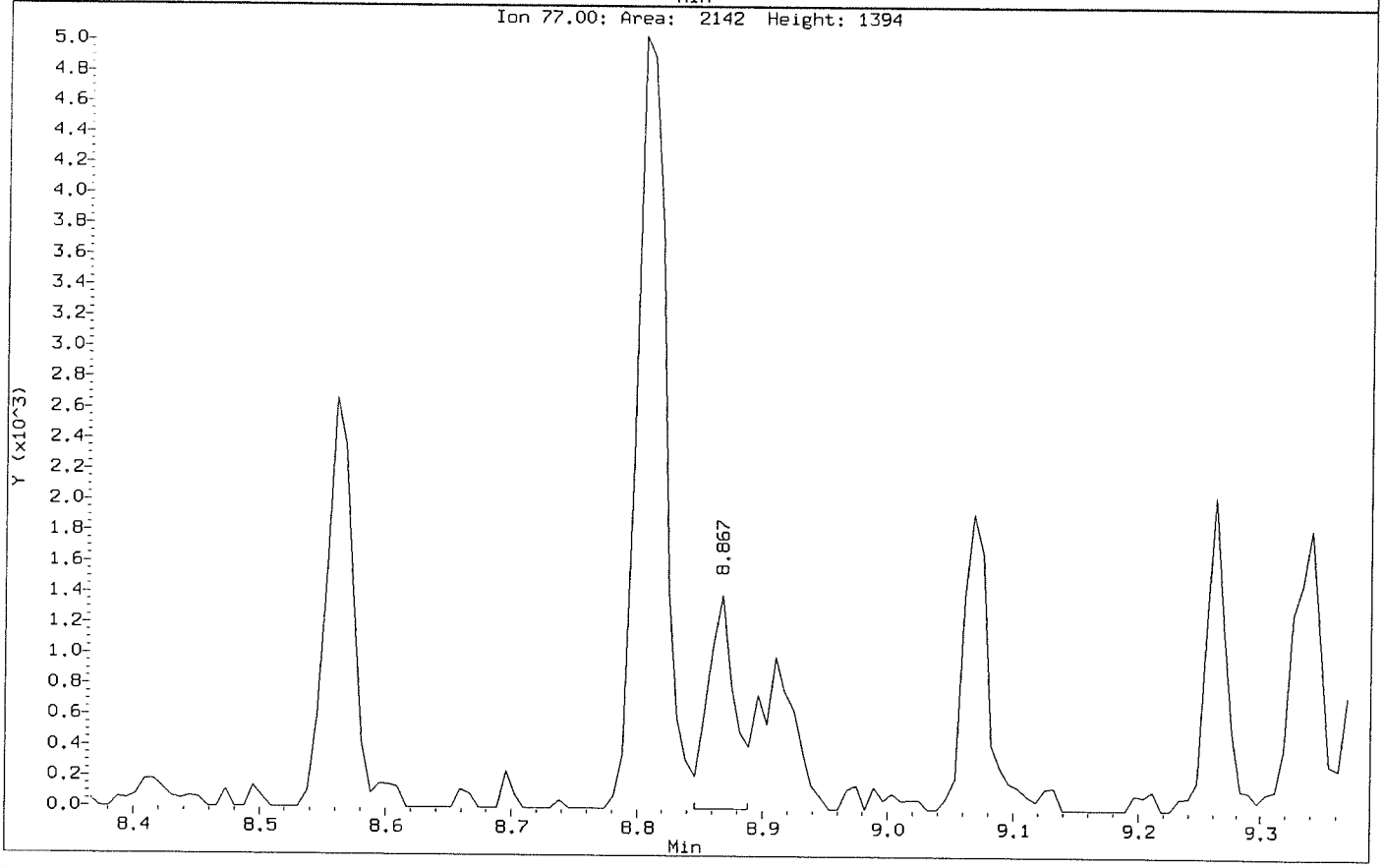




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Client Sample ID: VSTD002

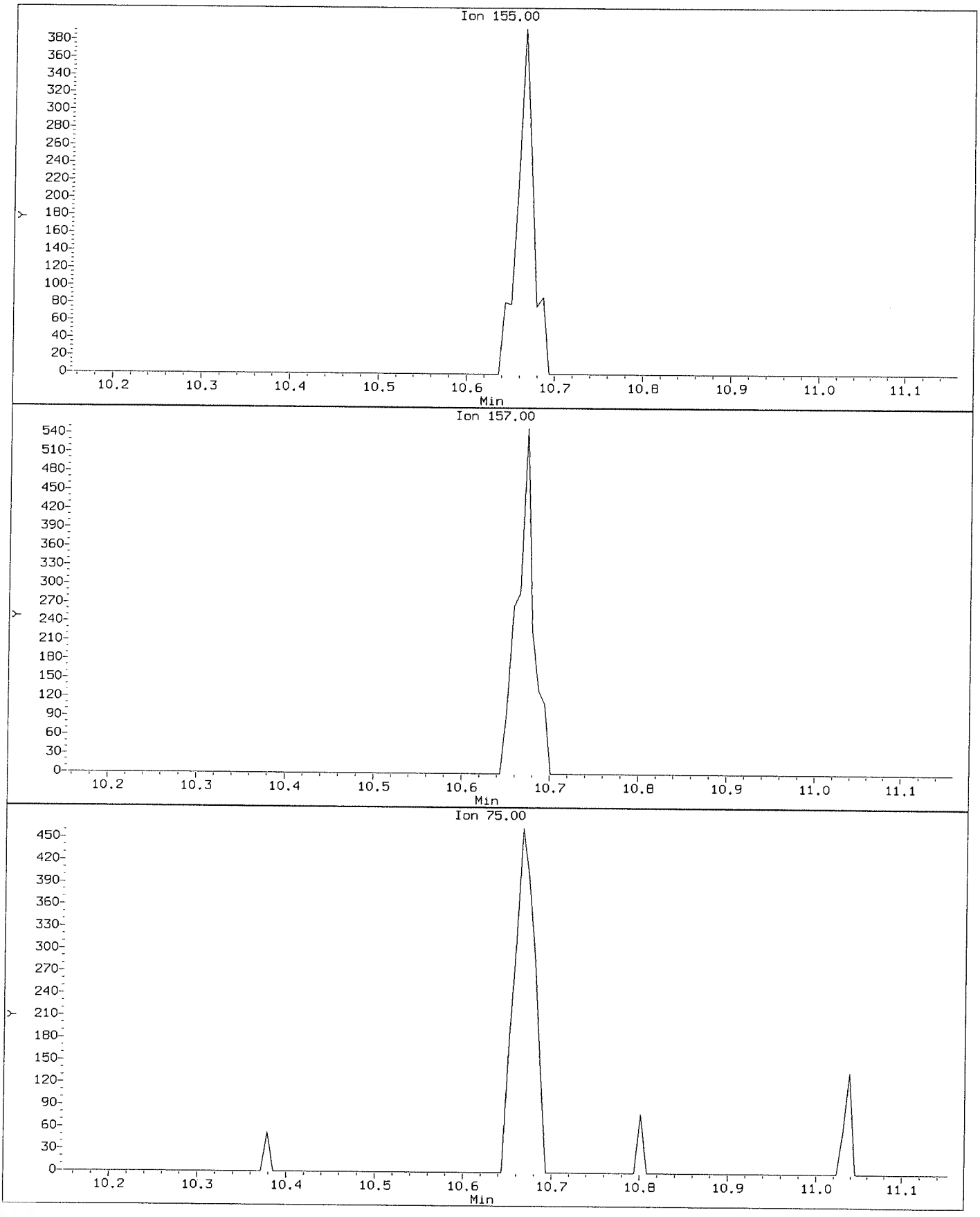
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





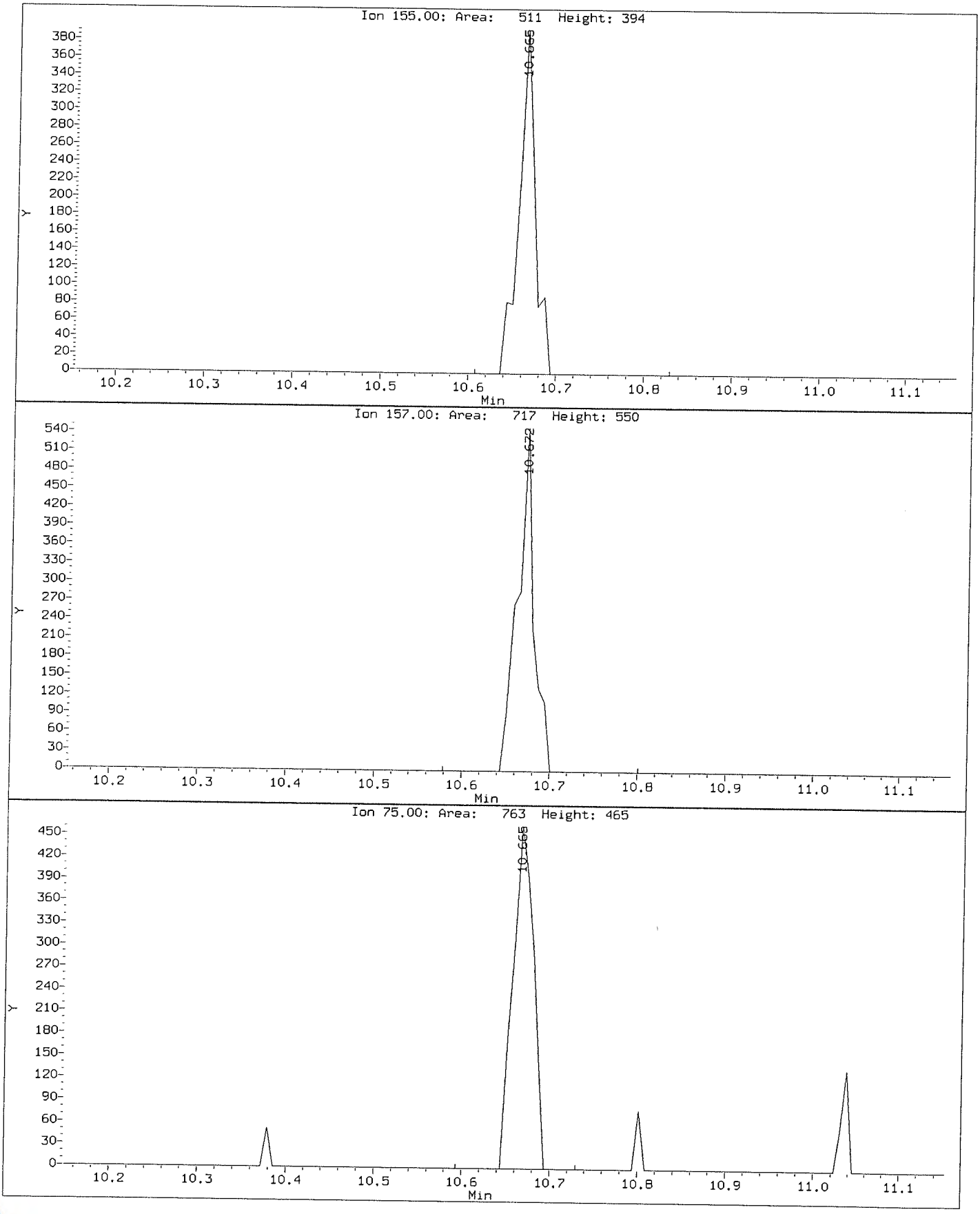
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



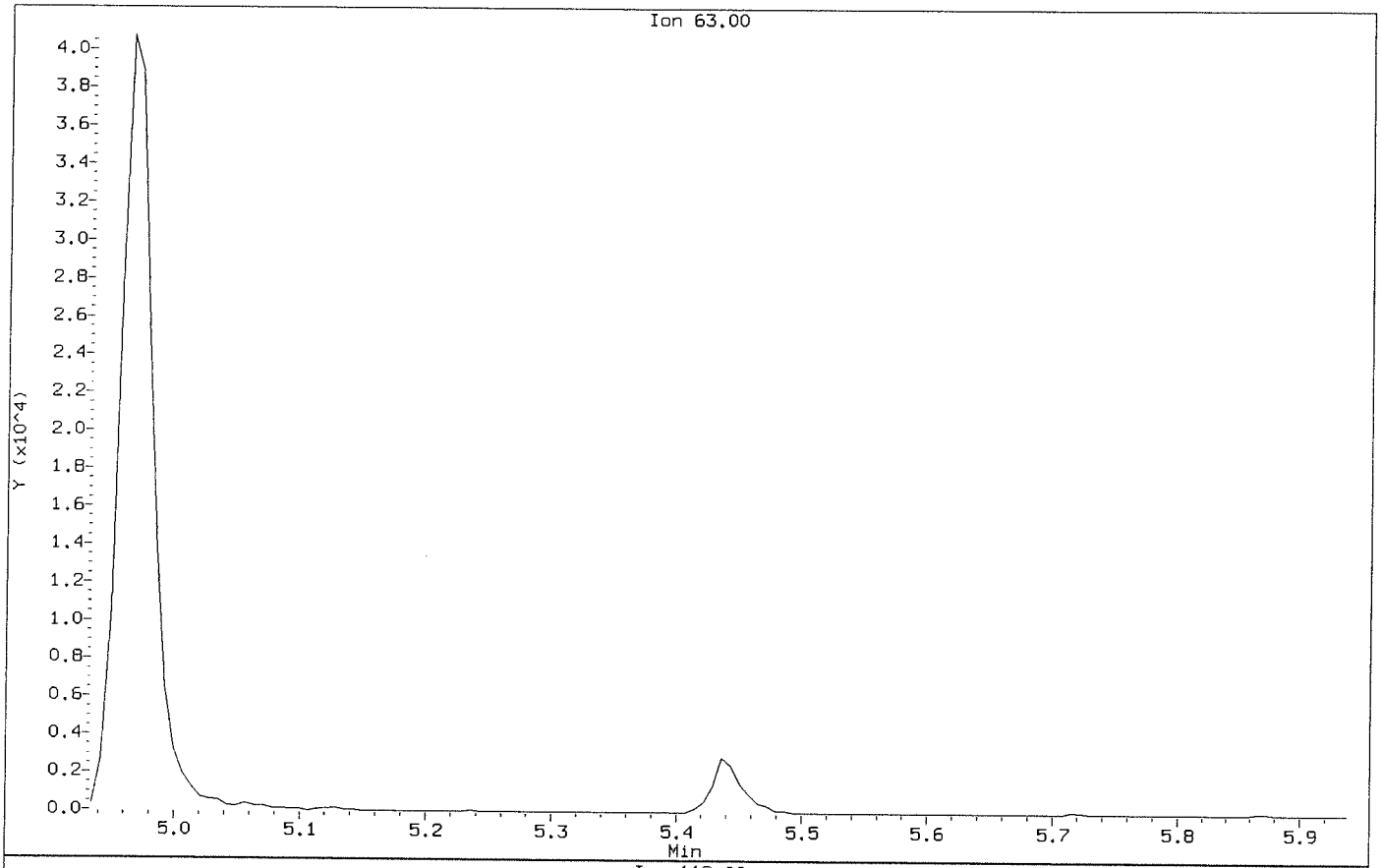
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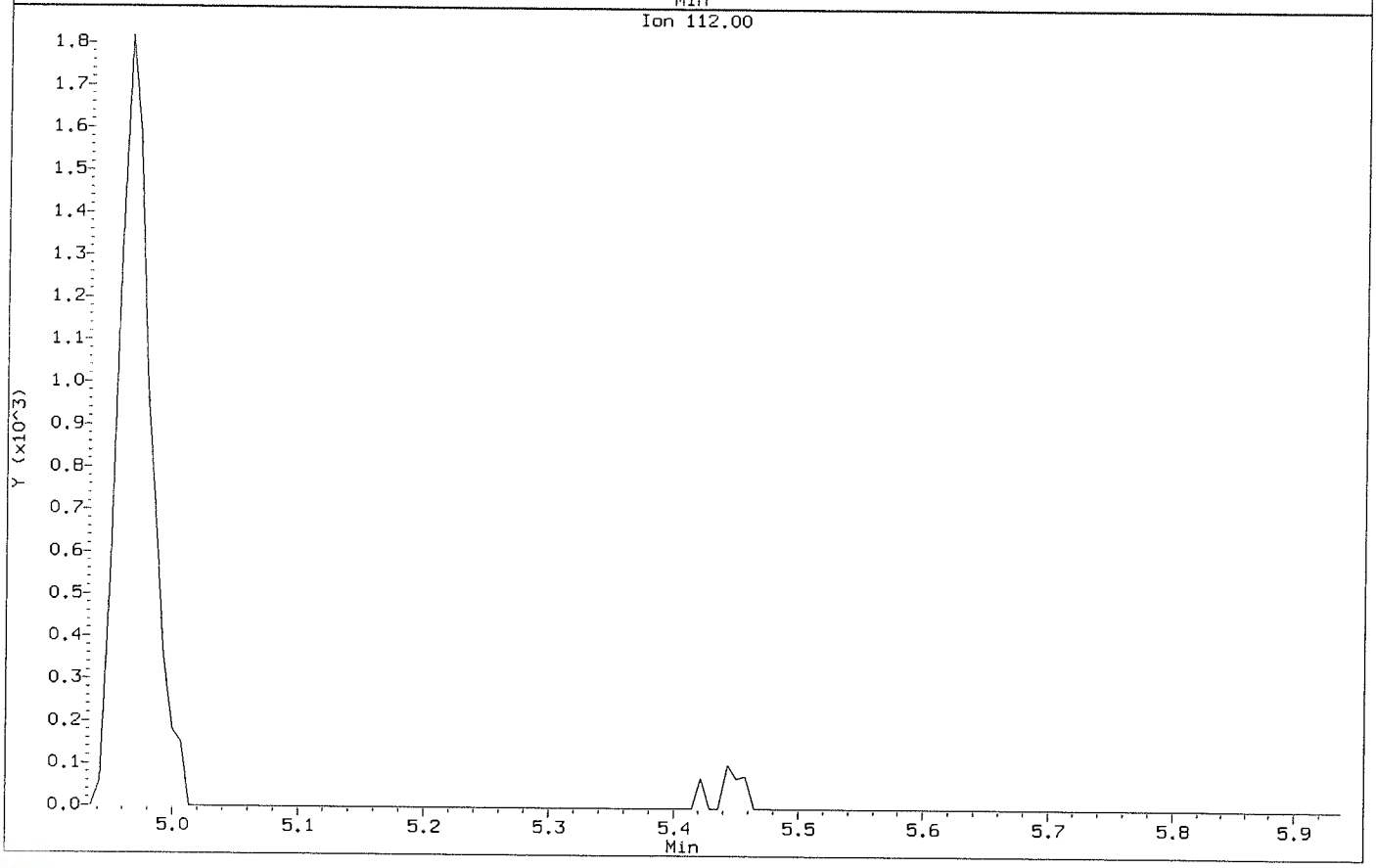
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Instrument: voa6.i
Client Sample ID: VSTD002

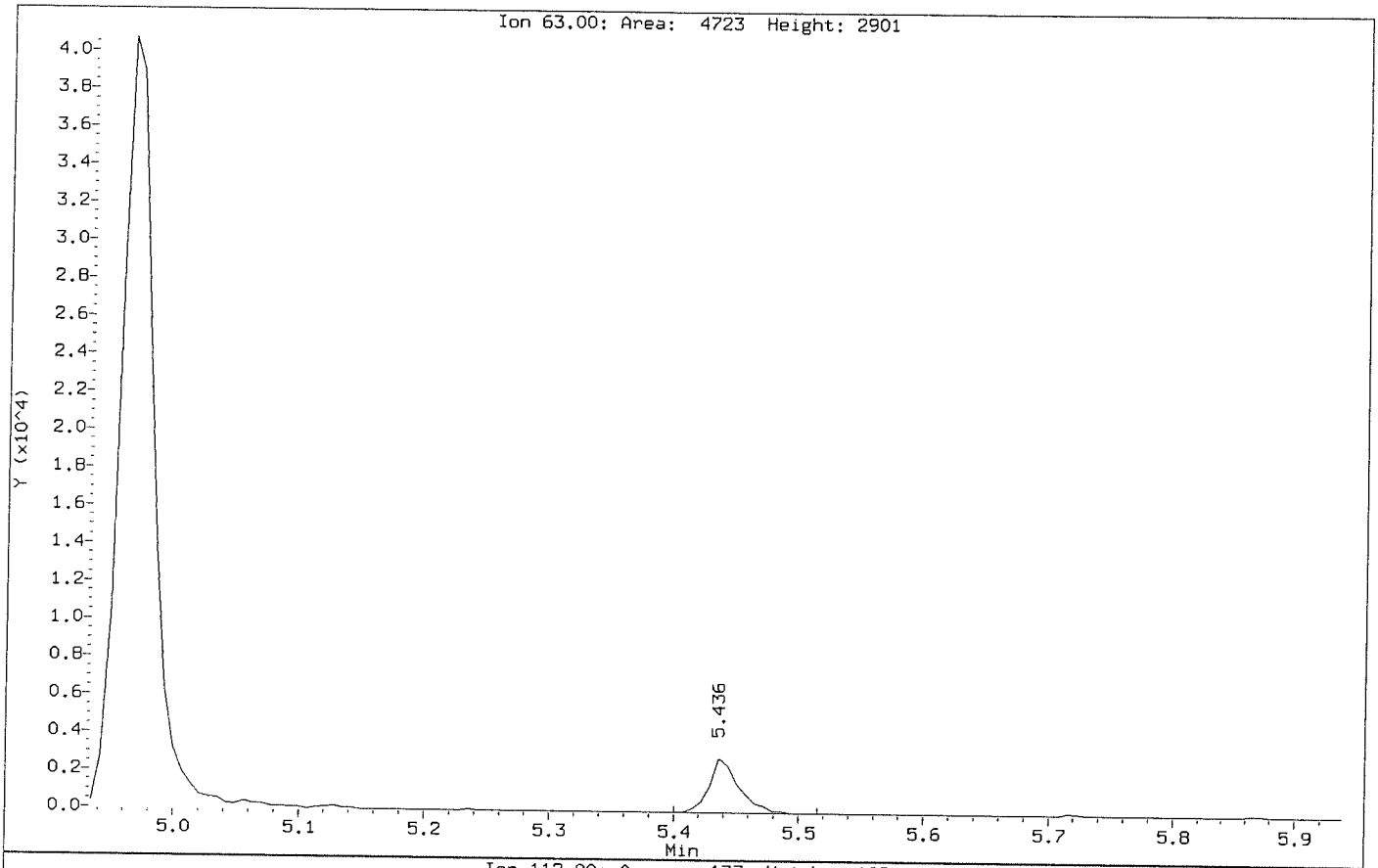
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

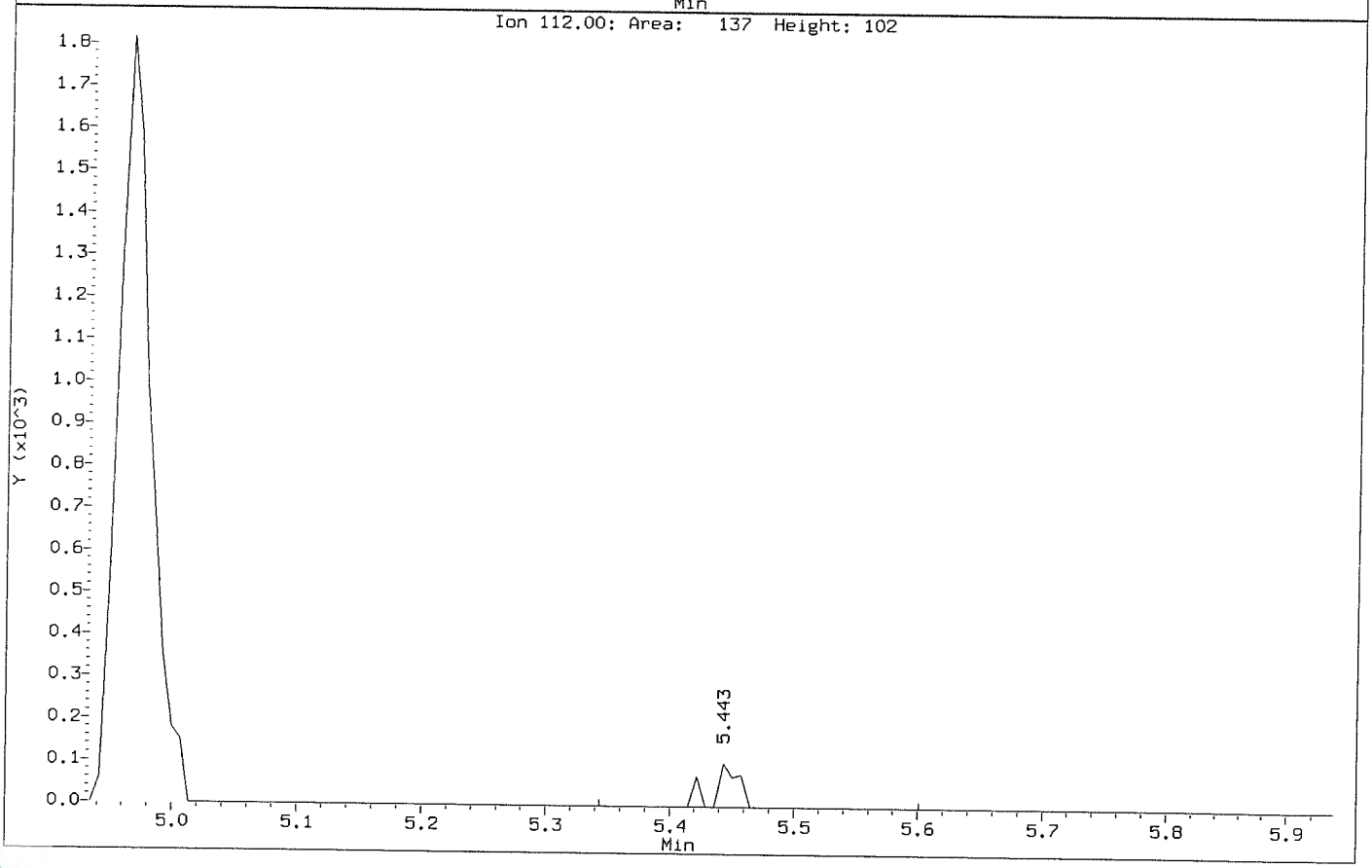




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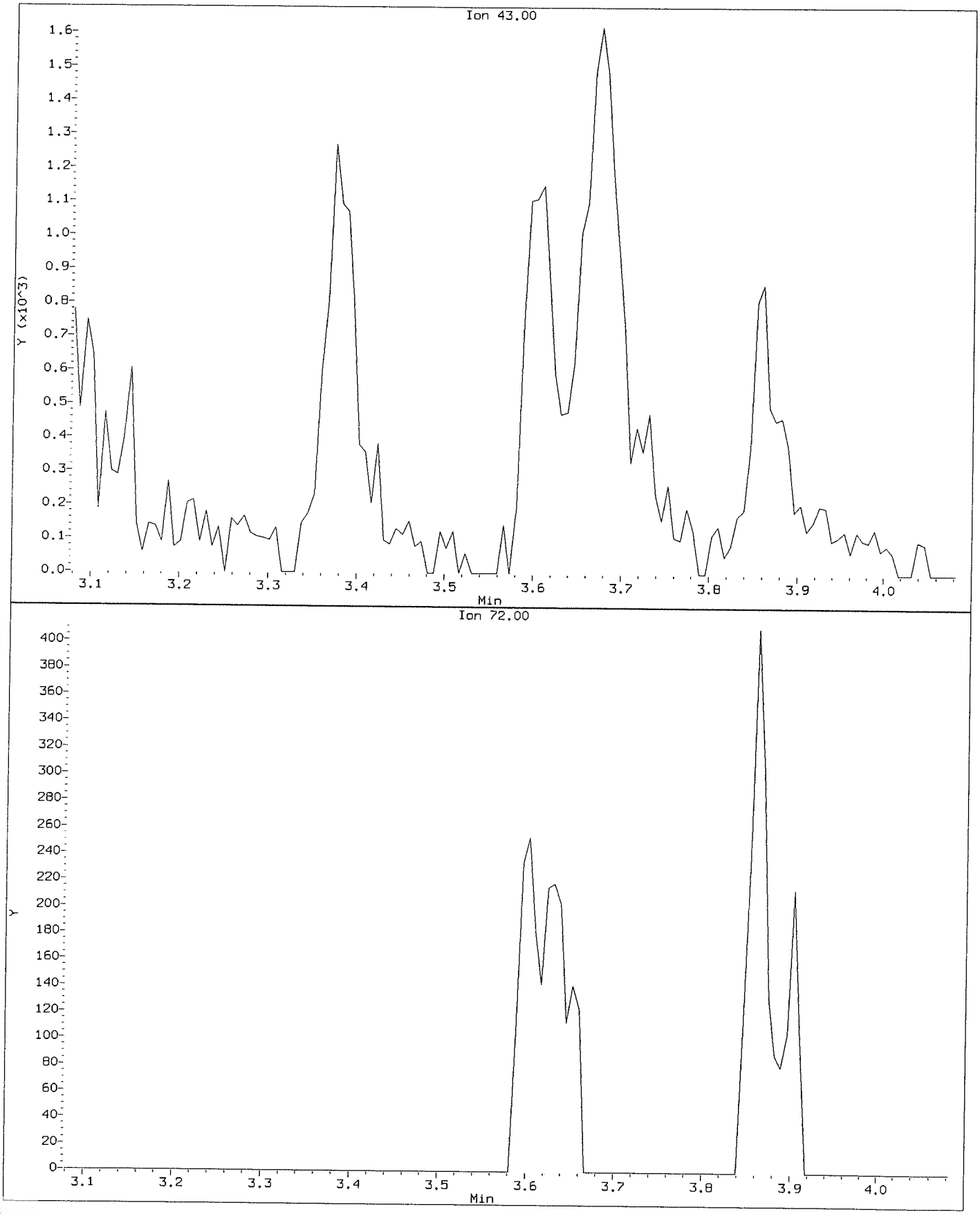
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





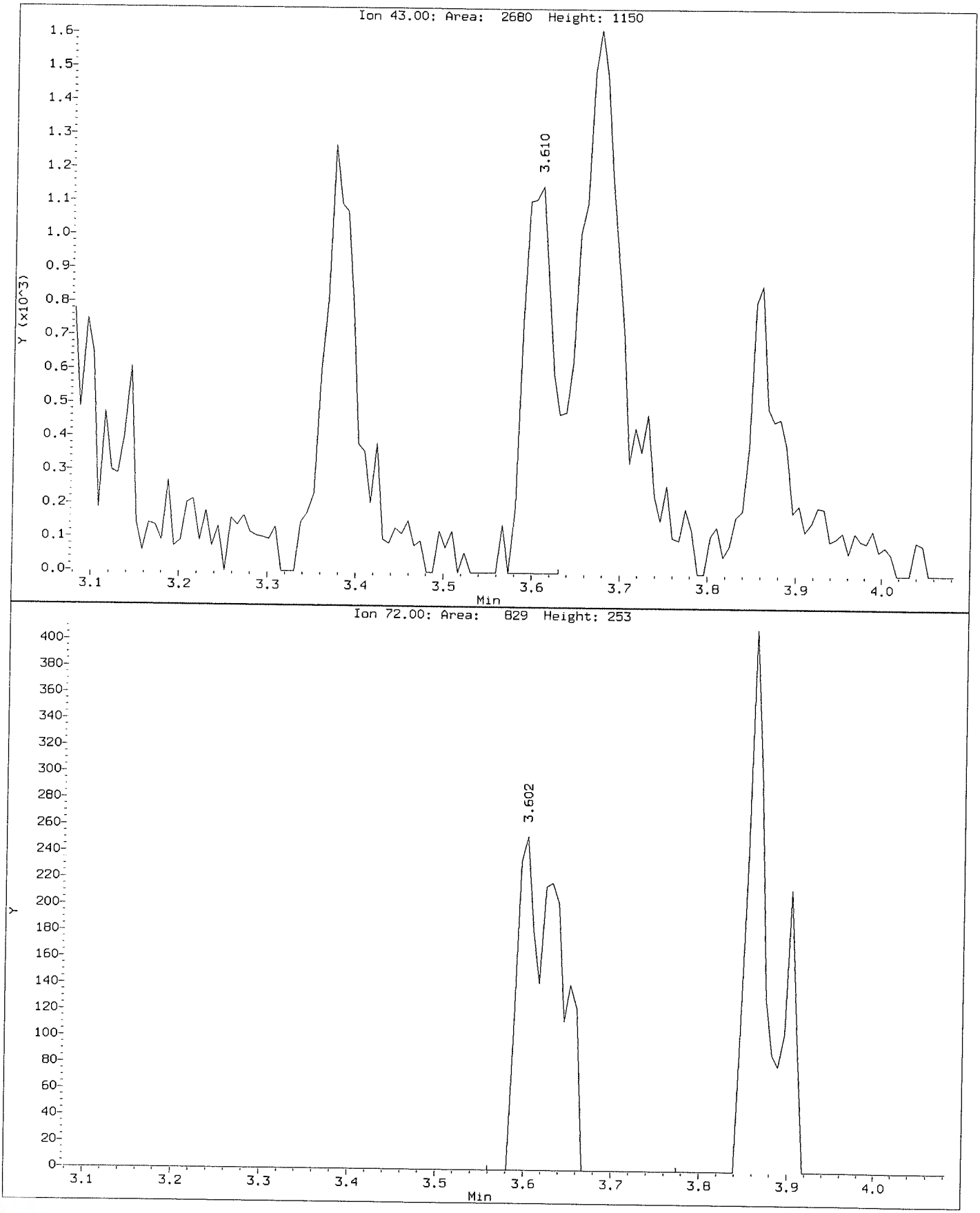
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 2-Butanone
CAS Number: 78-93-3



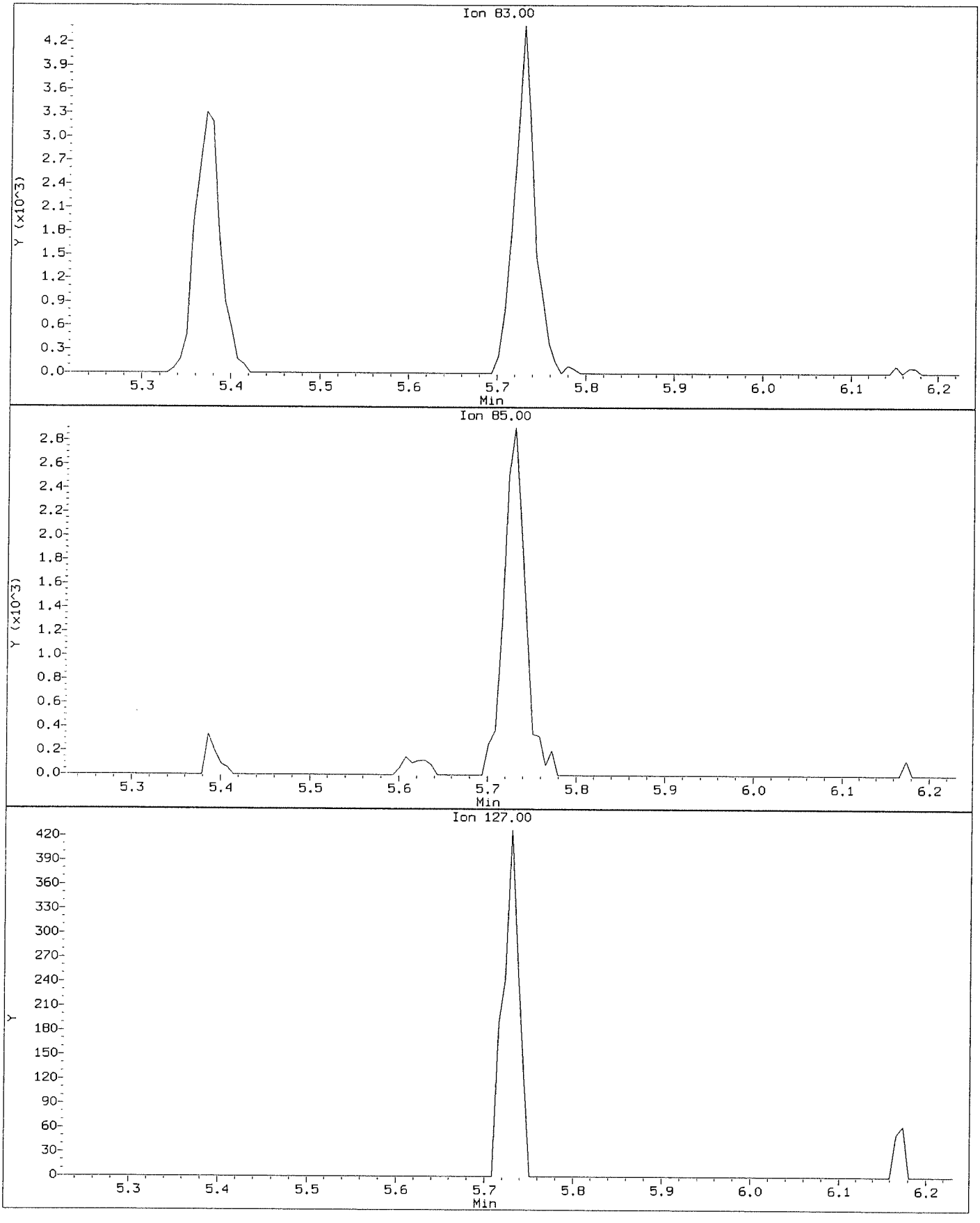
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Client Sample ID: VSTD002

Compound: 2-Butanone
CAS Number: 78-93-3



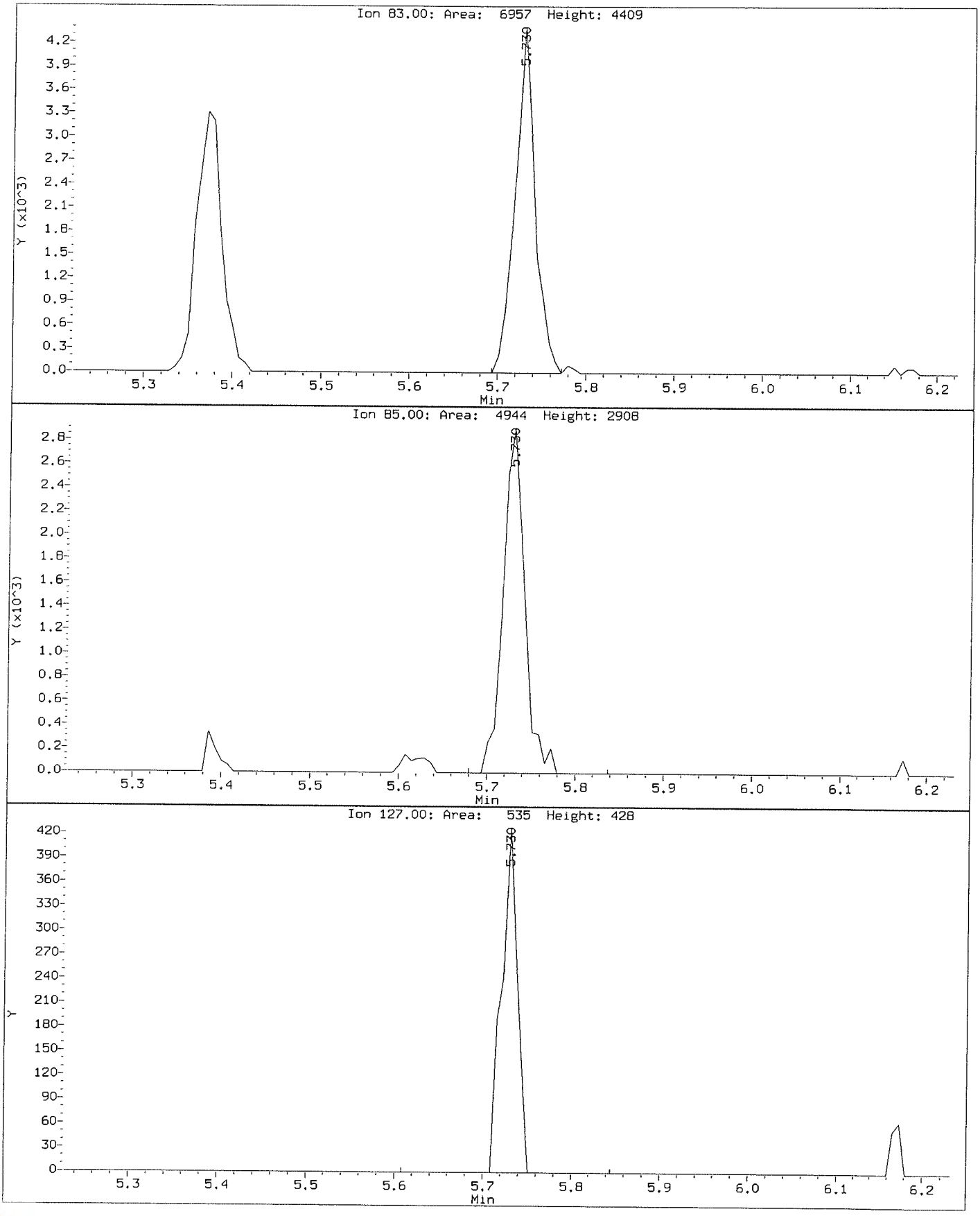
Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Bromodichloromethane
CAS Number: 75-27-4



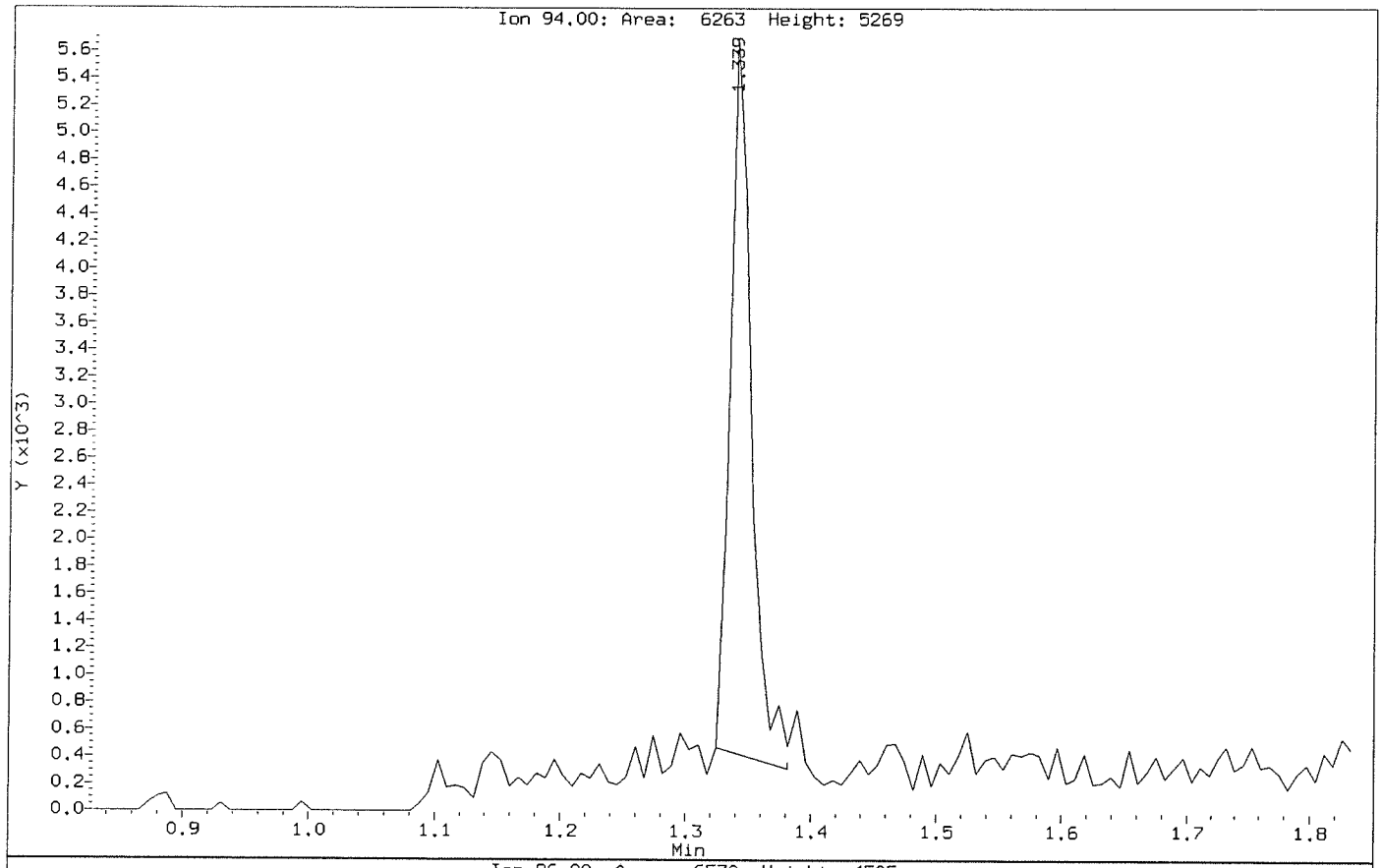
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Client Sample ID: VSTD002

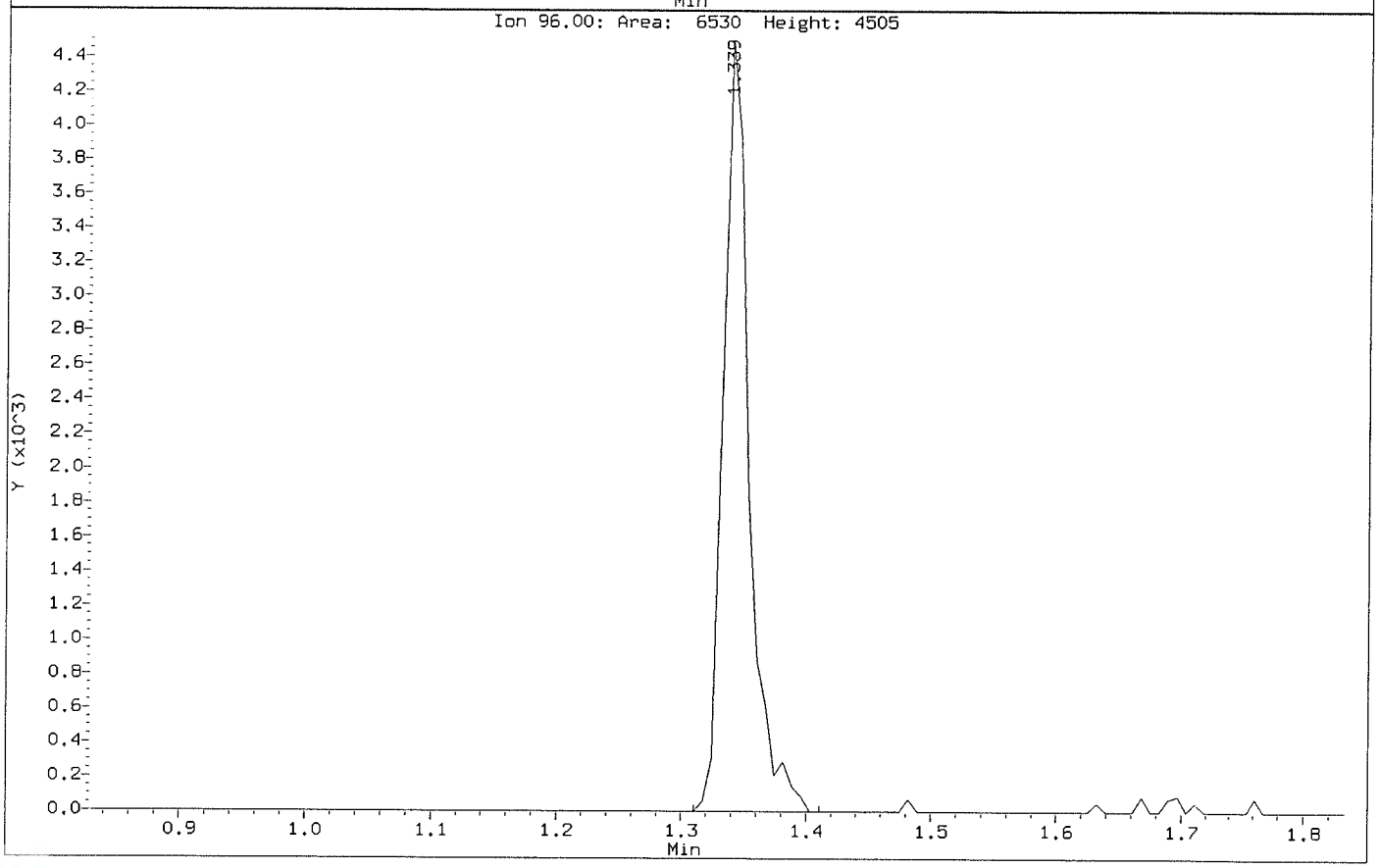
Compound: Bromodichloromethane
CAS Number: 75-27-4



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Client Sample ID: VSTD002

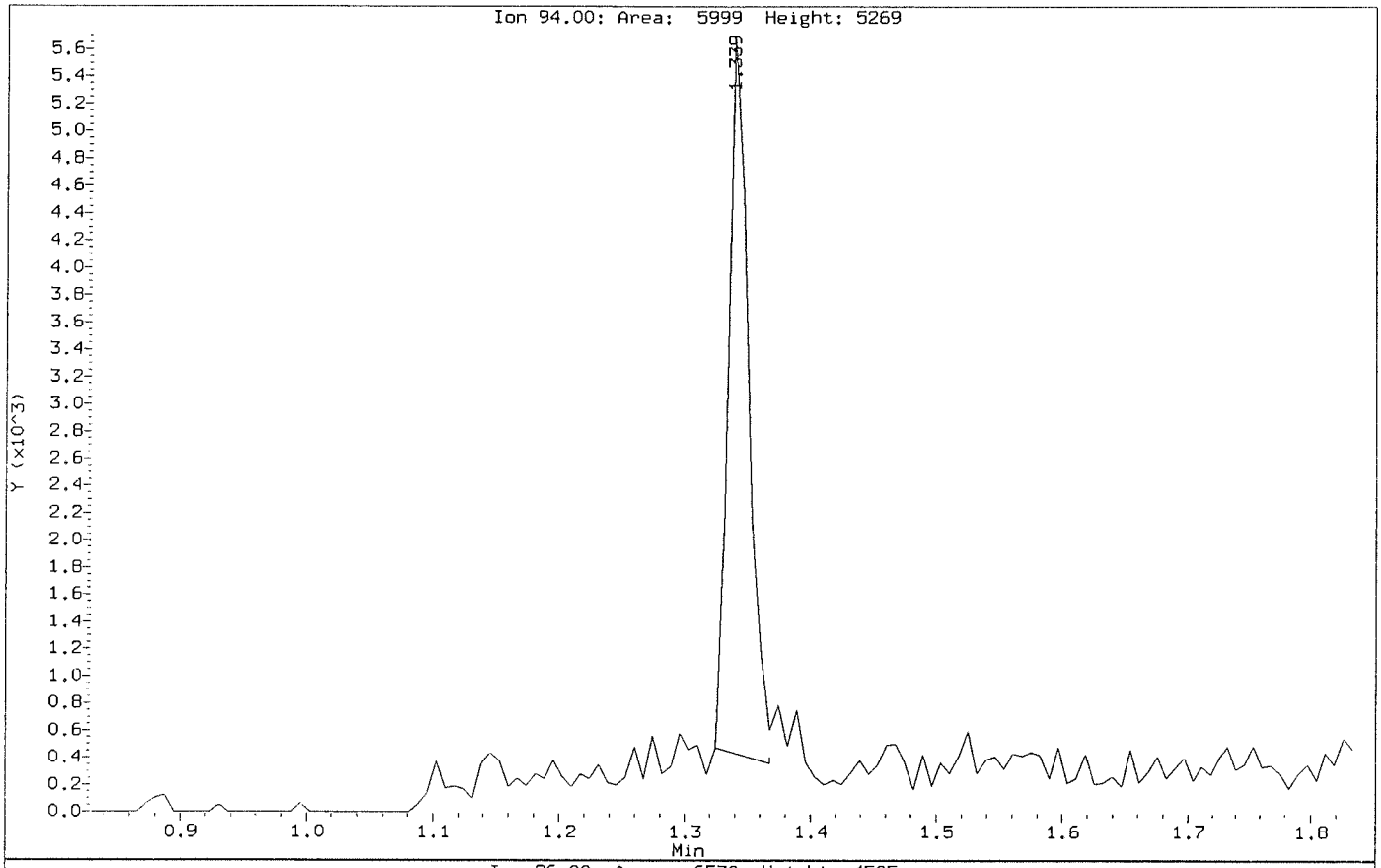
Compound: Bromomethane
CAS Number: 74-83-9

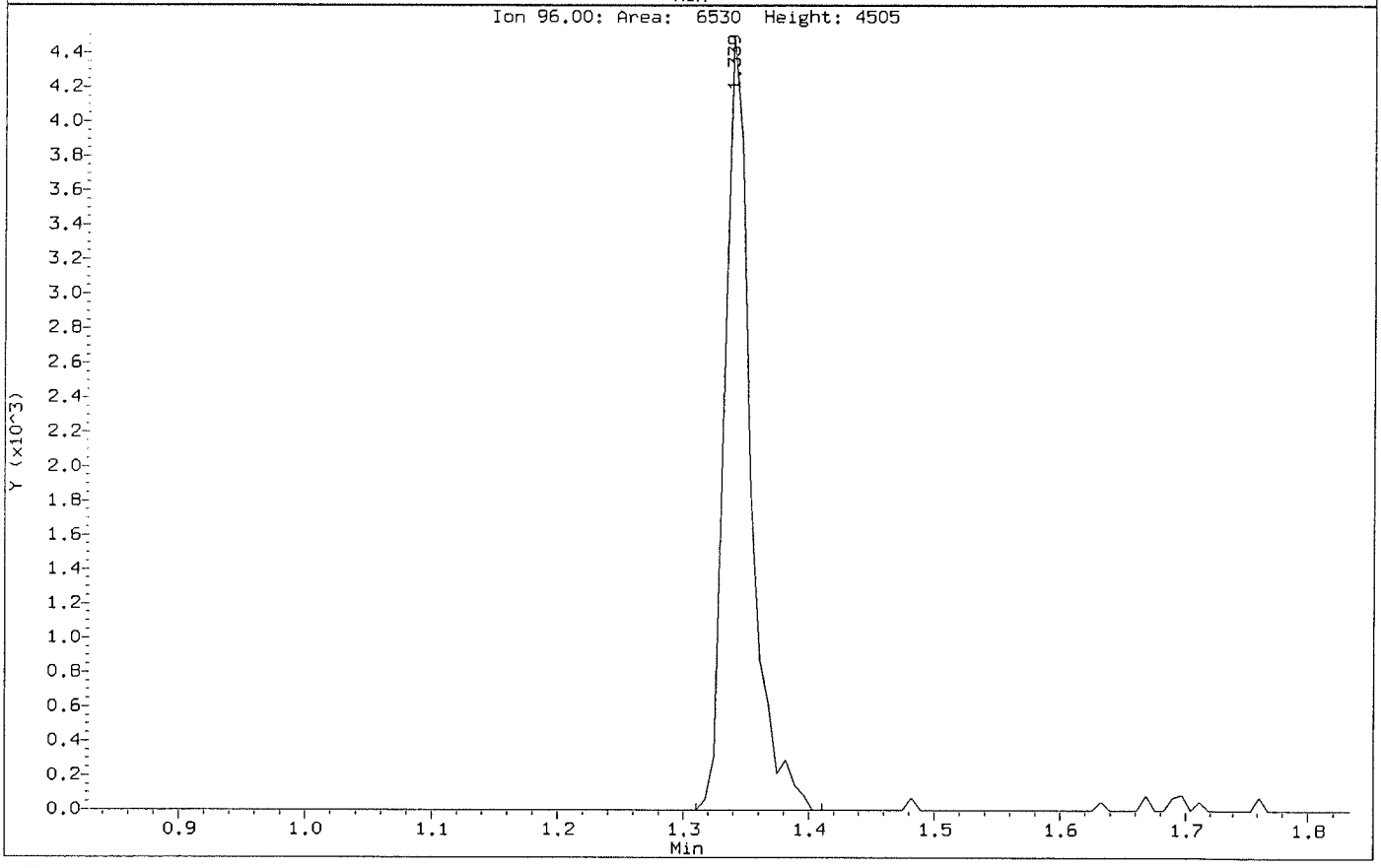




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Client Sample ID: VSTD002

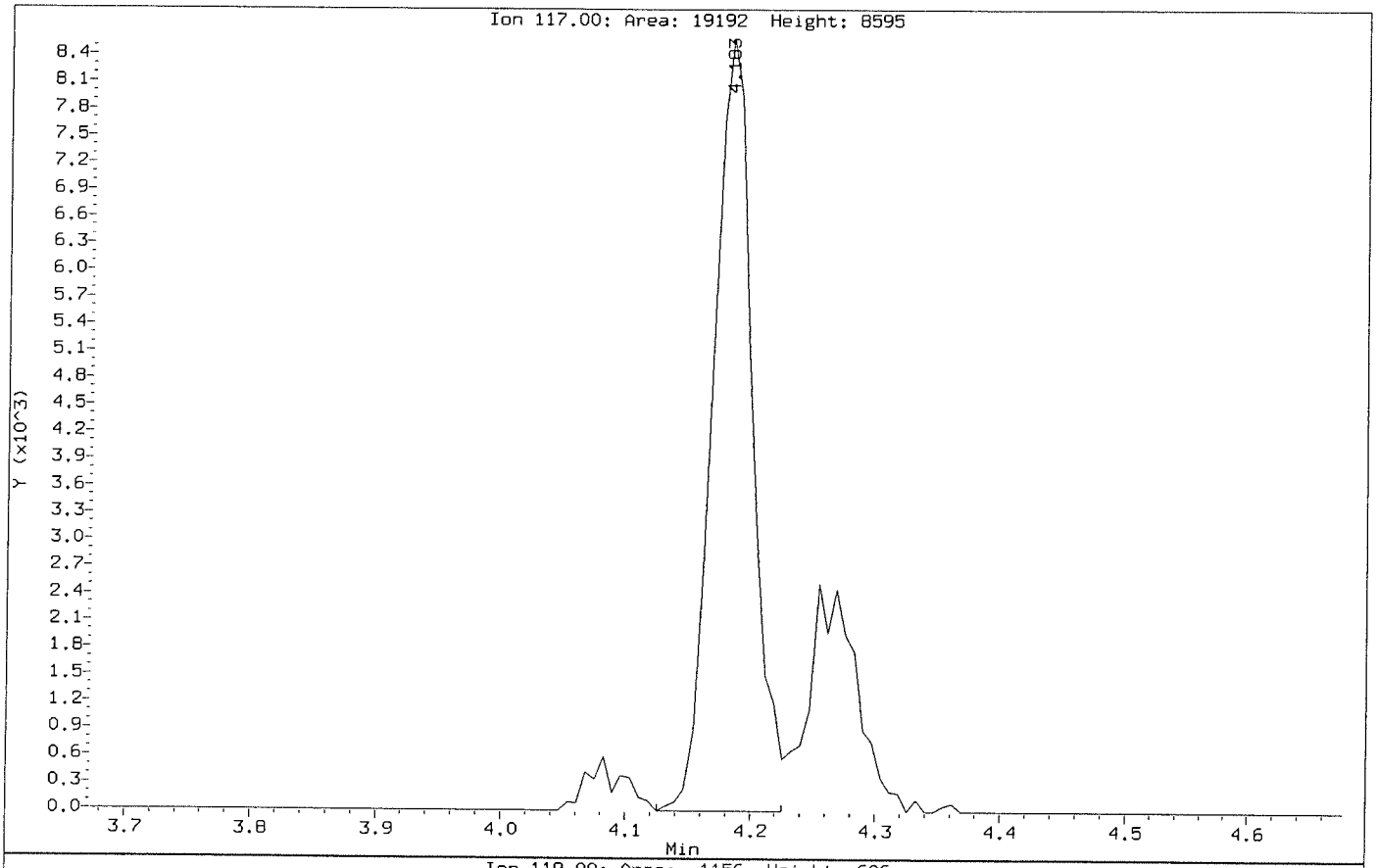
Compound: Bromomethane
CAS Number: 74-83-9

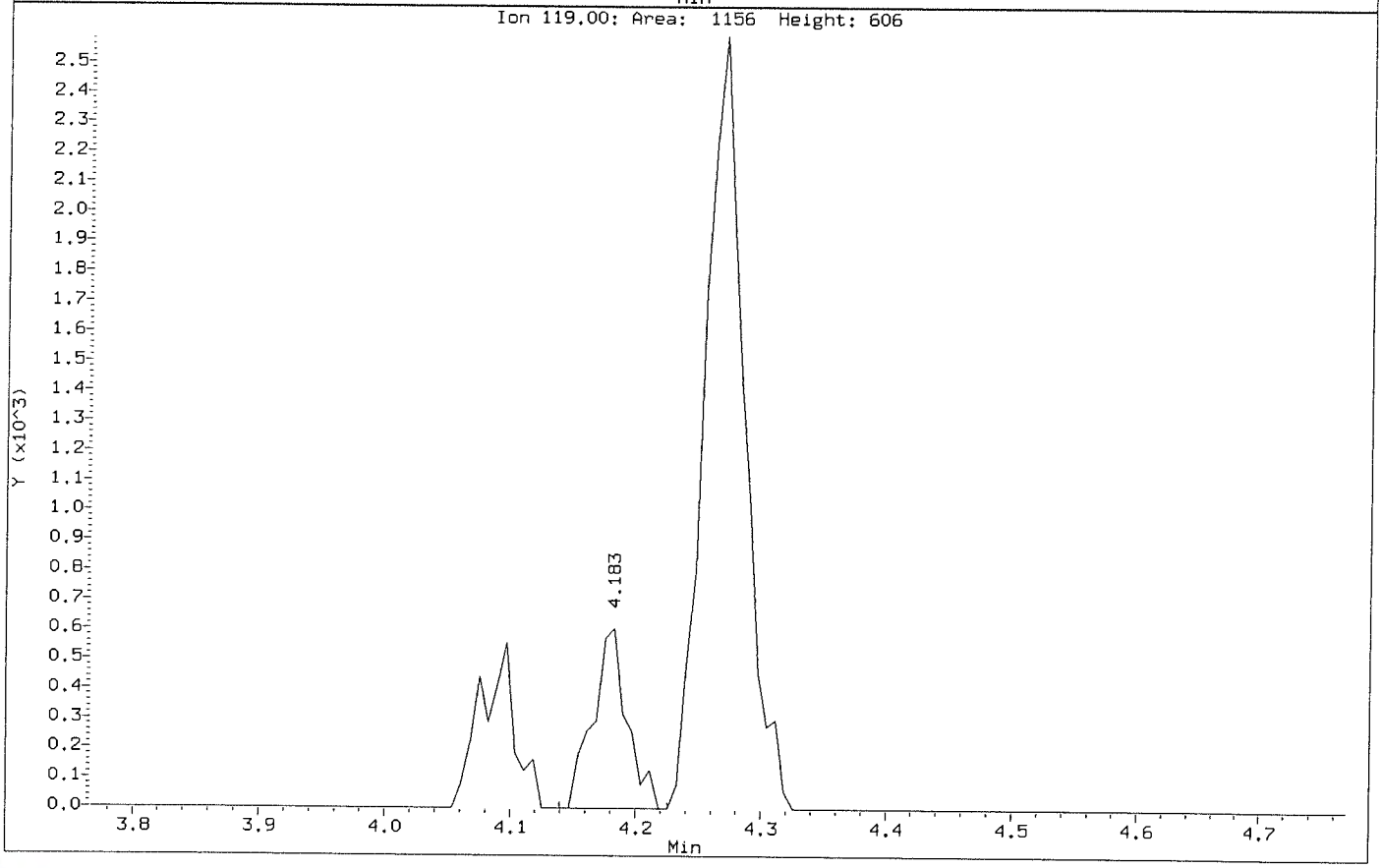




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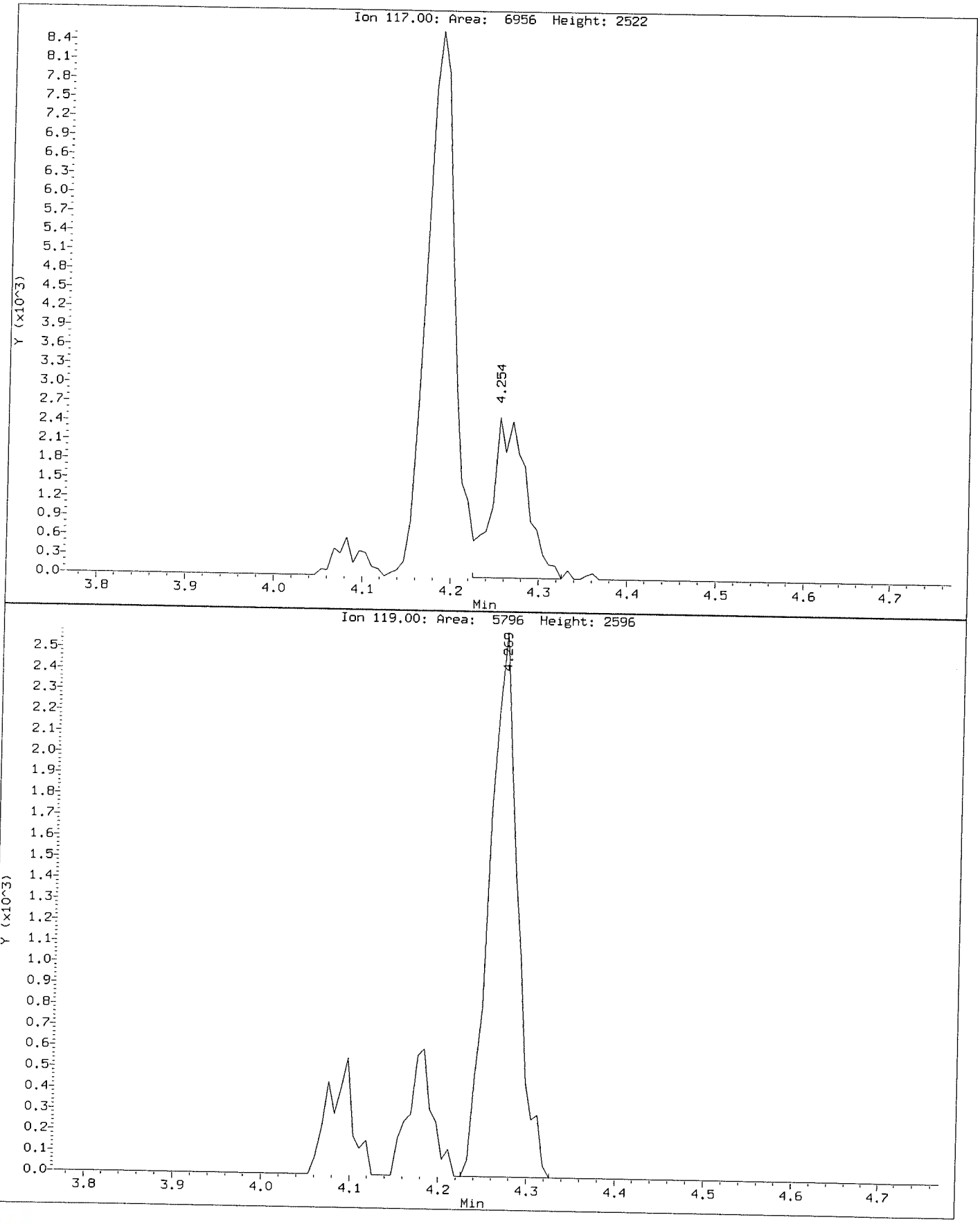
Compound: Carbon Tetrachloride
CAS Number: 56-23-5





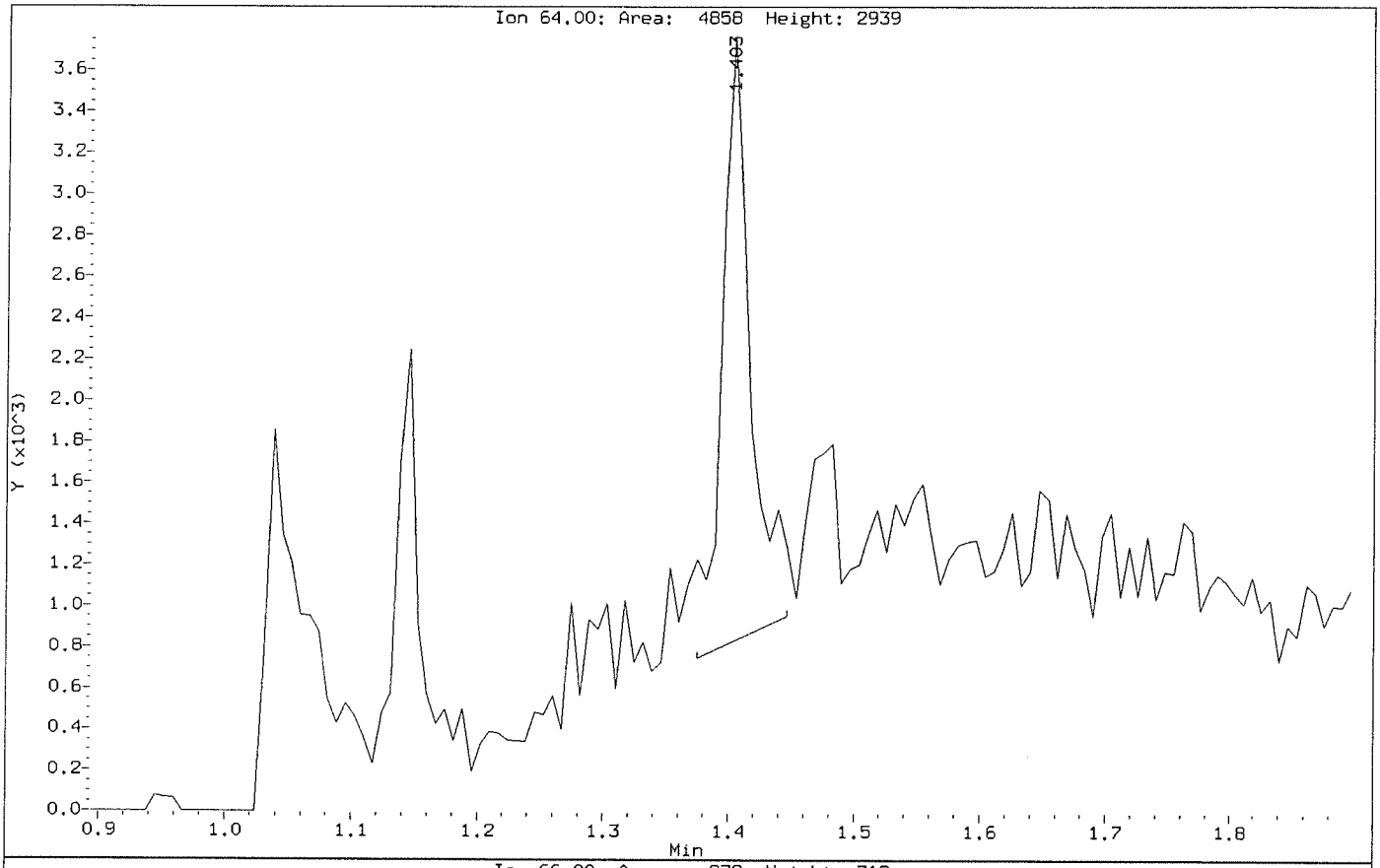
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Client Sample ID: VSTD002

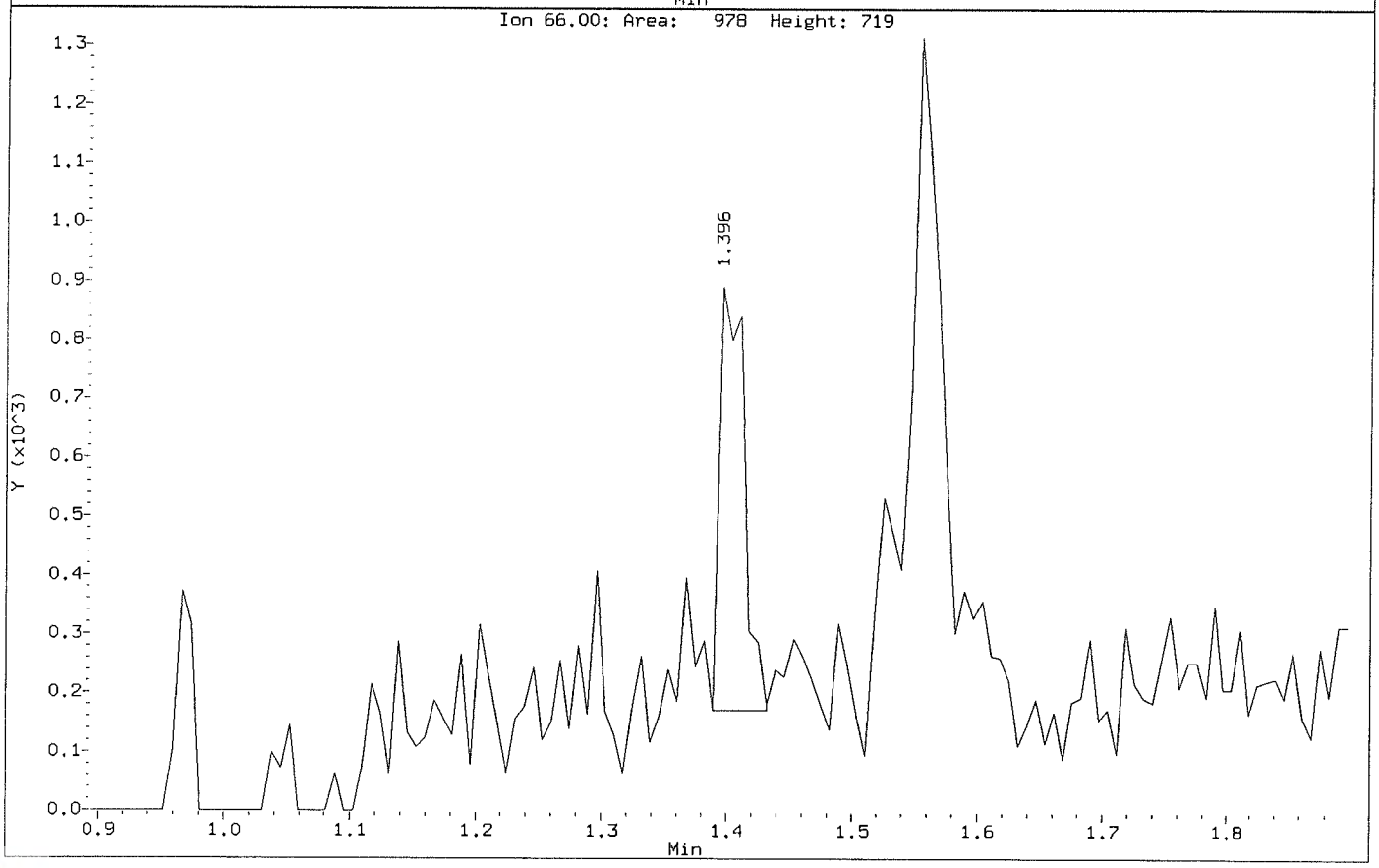
Compound: Carbon Tetrachloride
CAS Number: 56-23-5



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Client Sample ID: VSTD002

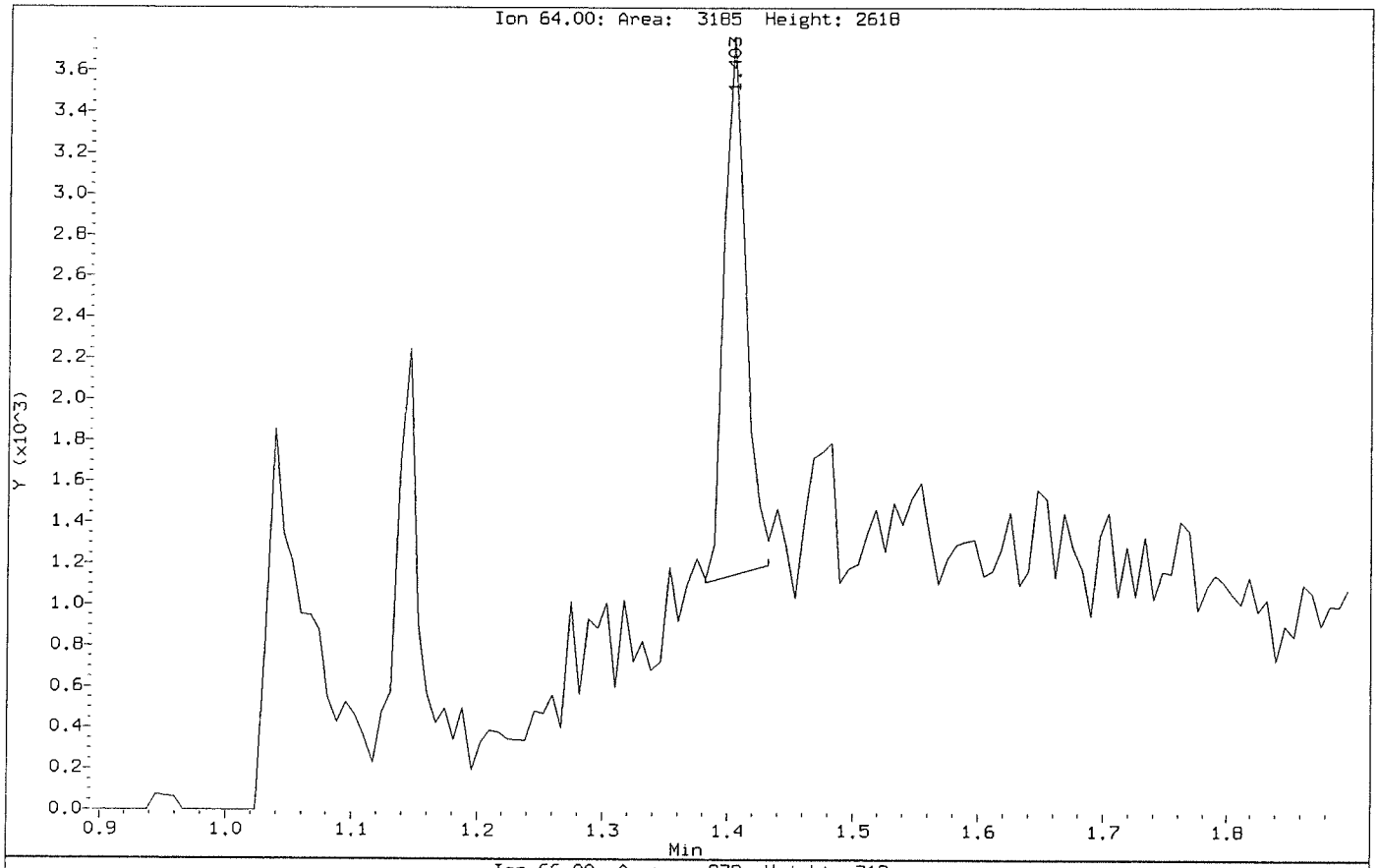
Compound: Chloroethane
CAS Number: 75-00-3

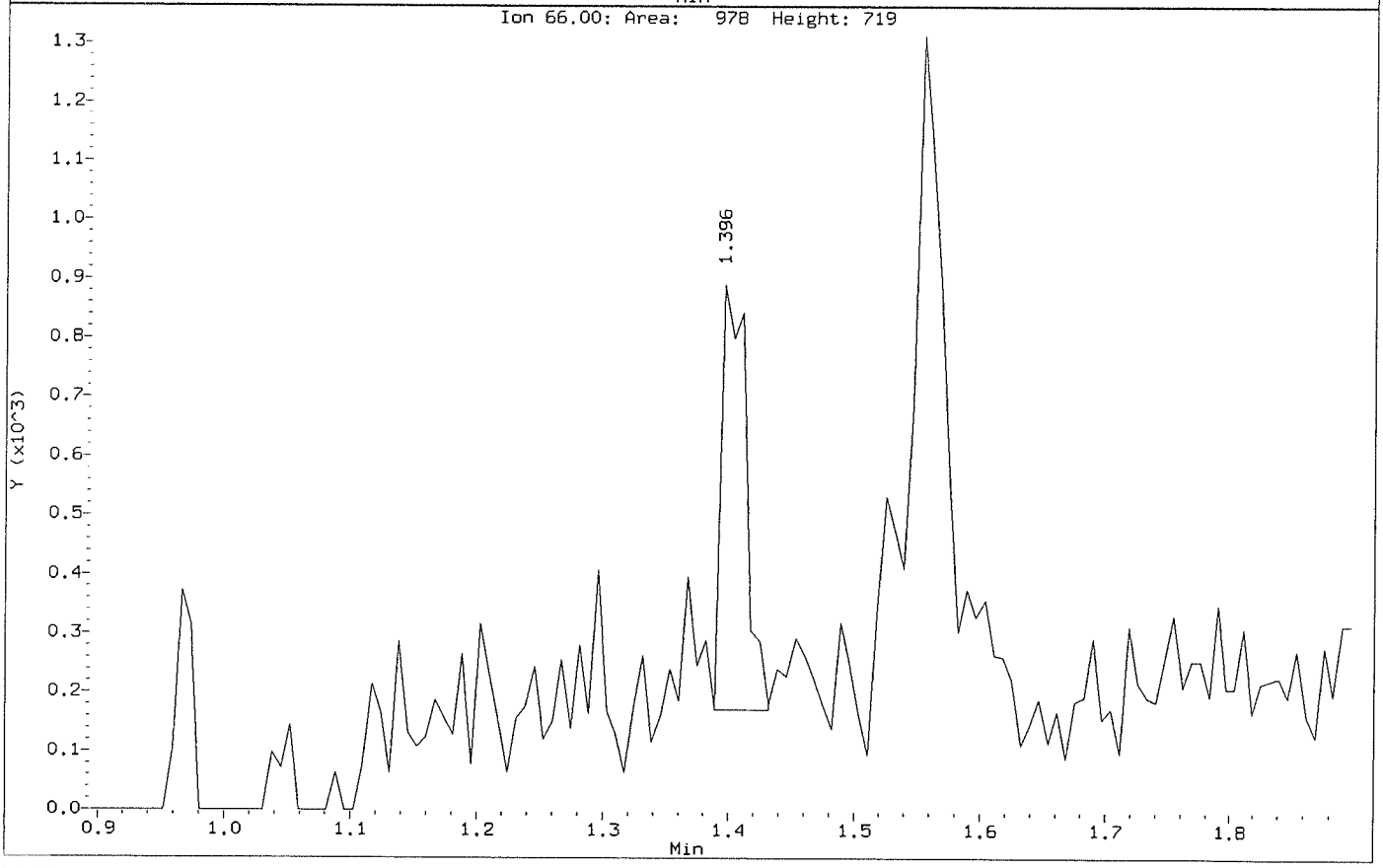




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Instrument: voa6.i
Client Sample ID: VSTD002

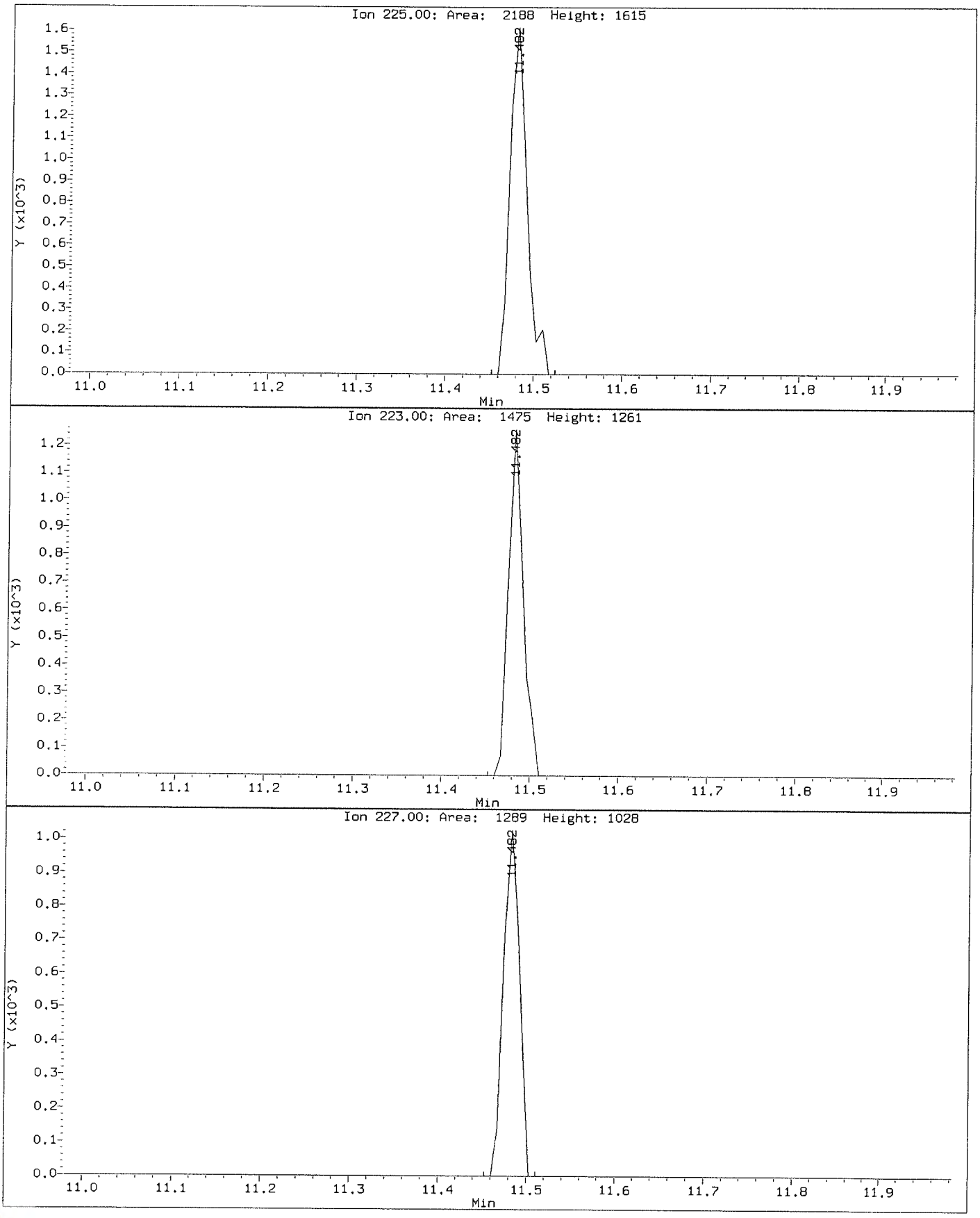
Compound: Chloroethane
CAS Number: 75-00-3





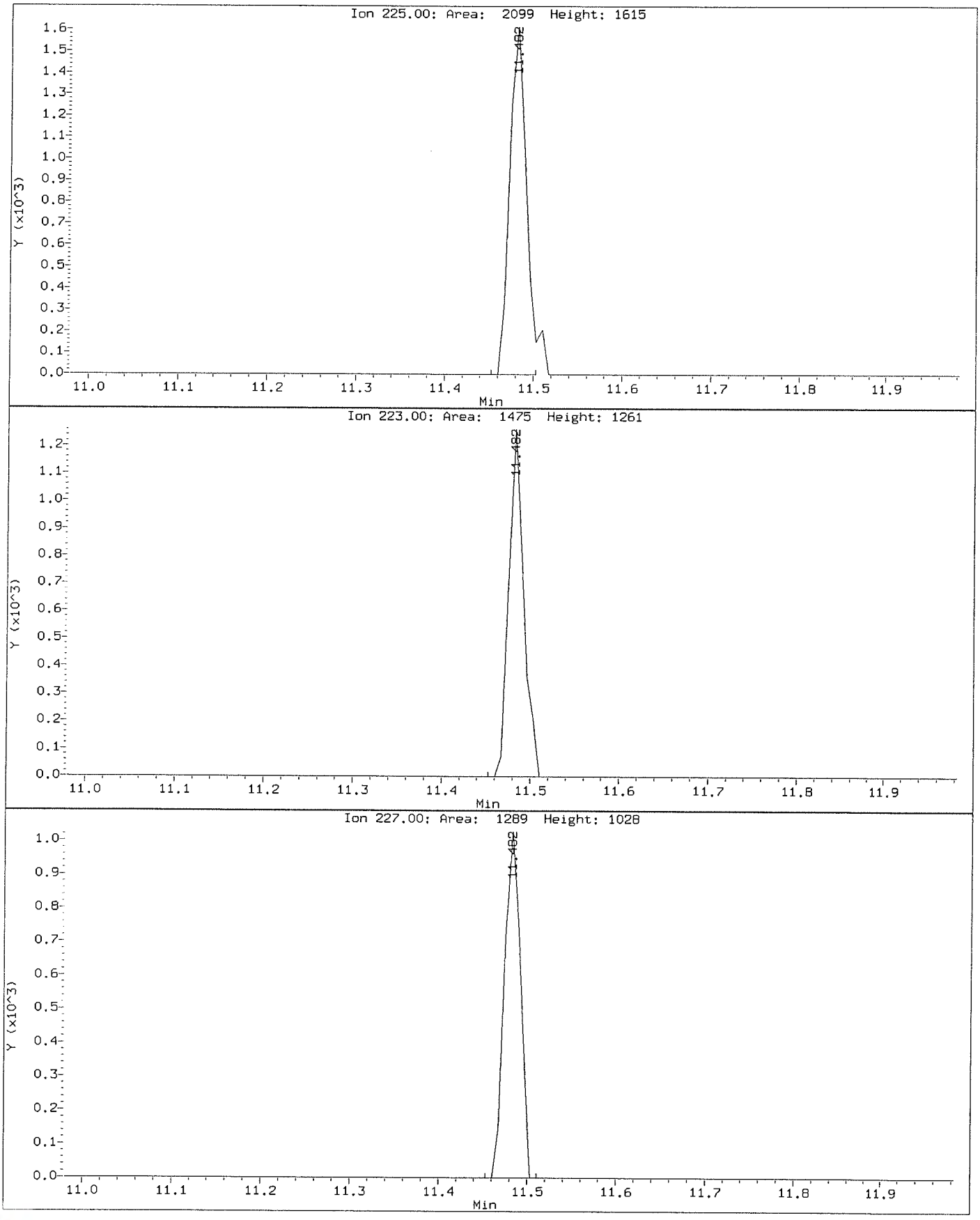
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



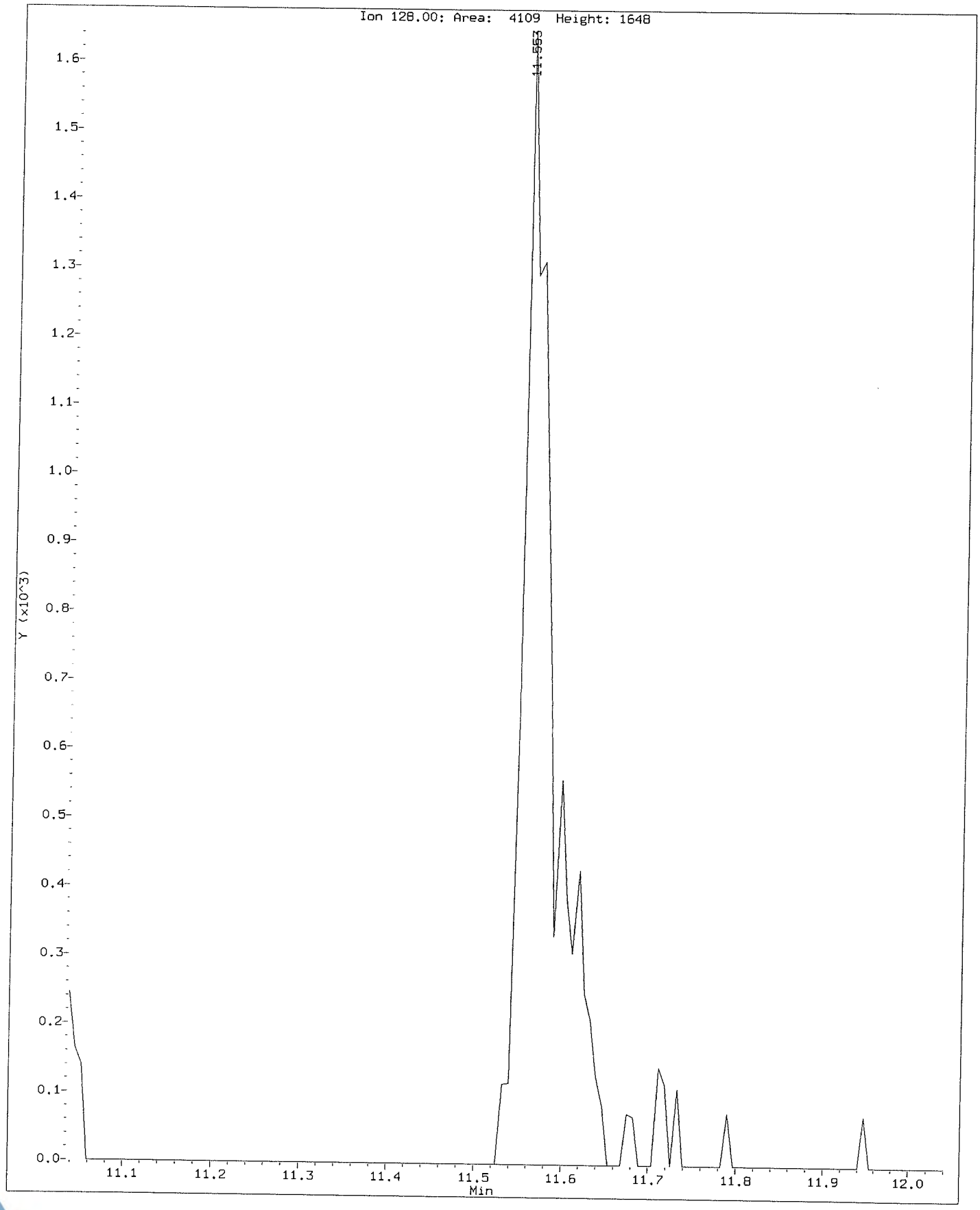
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



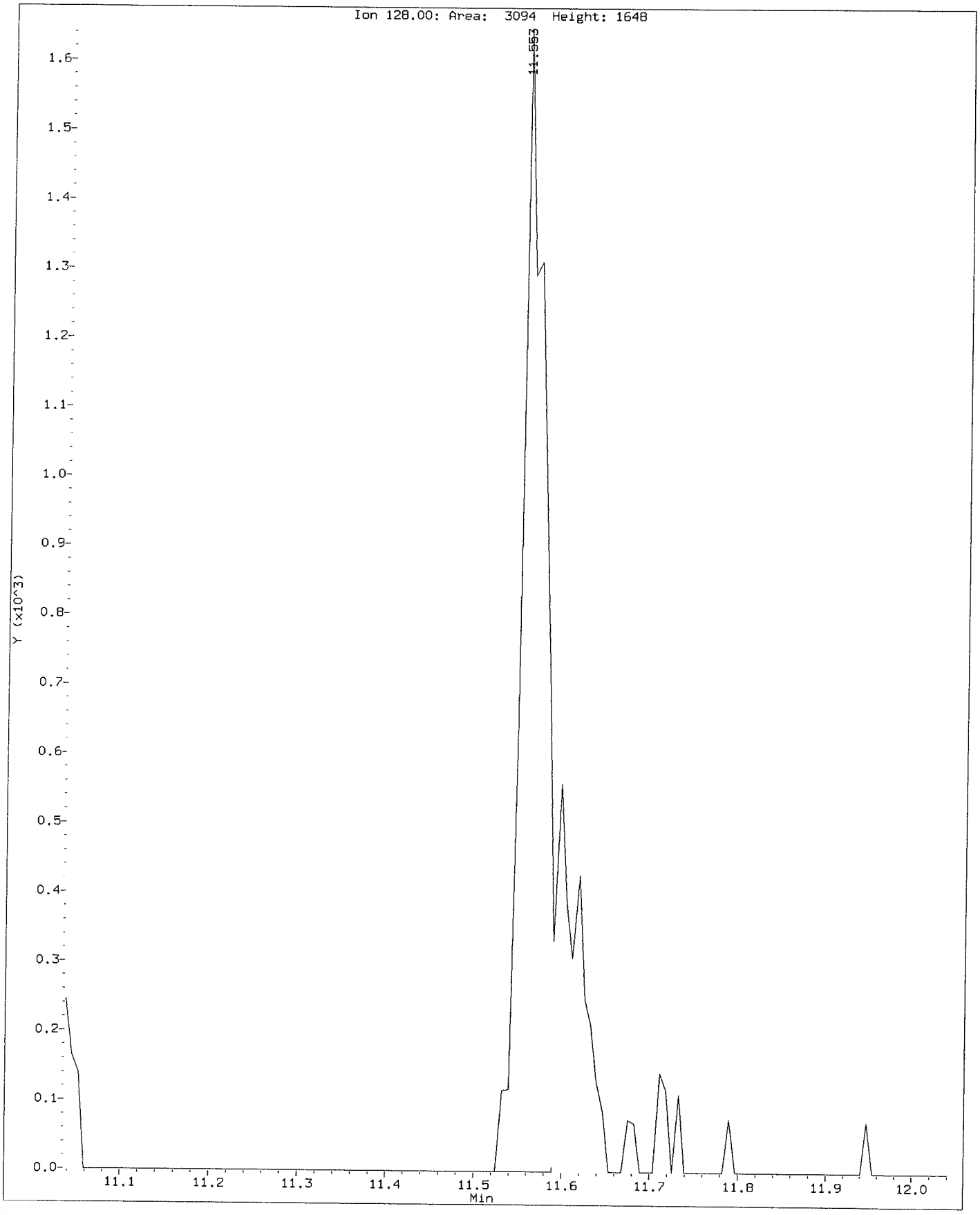
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051805.D
Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051806.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051806.D
Lab Smp Id: VSDT005 Client Smp ID: VSTD005
Inj Date : 18-MAY-2021 13:07
Operator : PC Inst ID: voa6.i
Smp Info : VSDT005;VSTD005;1;5;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 12:46 Cal File: X051805.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

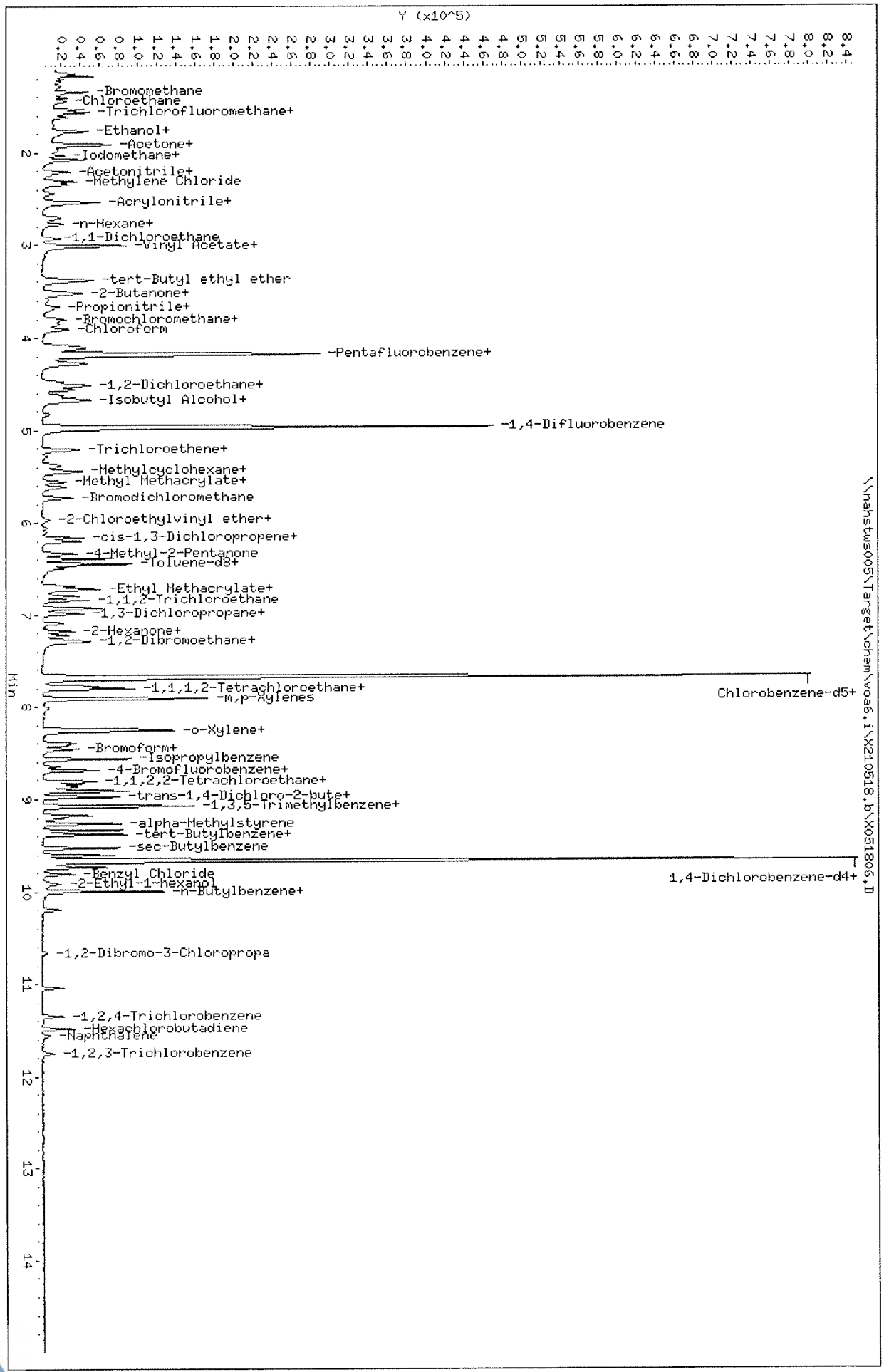
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	225058	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	374386	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	349203	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	167006	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	16438	5.00000	4.48(a)
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	15616	5.00000	4.84(a)
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	12495	5.00000	4.77(a)
$	48 Toluene-d8	98	6.388	6.388	(0.833)	42740	5.00000	5.89
	60 1,1,1,2-Tetrachloroethane	131	7.771	7.771	(1.013)	12874	5.00000	5.06
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	19150	5.00000	5.00
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	14932	5.00000	4.92(a)
	138 Freon TF	101	1.919	1.919	(0.459)	11140	5.00000	5.21
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	9408	5.00000	4.63(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	19958	5.00000	4.78(a)
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	11117	5.00000	4.93(a)
	32 1,1-Dichloropropene	75	4.275	4.275	(0.860)	15980	5.00000	4.98(a)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	3826	5.00000	5.37
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	9928	5.00000	3.81(aMH)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	7168	5.00000	7.00
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	40866	5.00000	4.81(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	1184	5.00000	6.69
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	11790	5.00000	4.83(a)

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051806.D Page 2
Report Date: 22-Jun-2021 08:20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	22875	5.00000	4.88(a)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	18828	5.00000	5.11
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	12574	5.00000	4.99(aM)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	38648	5.00000	4.63(a)
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	23137	5.00000	4.82(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	20253	5.00000	5.10
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	24844	5.00000	5.29
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	18465	5.00000	4.95(a)
24	2-Butanone	43	3.588	3.588	(0.858)	7505	10.0000	9.03
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	35922	5.00000	4.82(a)
52	2-Hexanone	43	7.097	7.097	(0.925)	15257	10.0000	10.06
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	41267	5.00000	4.75(a)
82	p-Isopropyltoluene	119	9.648	9.648	(0.999)	38993	5.00000	4.72(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	23491	10.0000	10.64
10	Acetone	43	1.983	1.983	(0.474)	8158	10.0000	9.92
37	Benzene	78	4.512	4.512	(0.908)	46553	5.00000	5.02
74	Bromobenzene	156	8.809	8.809	(0.912)	14708	5.00000	5.28
29	Bromochloromethane	128	3.802	3.802	(0.909)	7065	5.00000	5.15
39	Bromodichloromethane	83	5.729	5.729	(1.153)	18096	5.00000	5.00
66	Bromoform	173	8.415	8.415	(1.097)	7918	5.00000	4.68(Ta)
6	Bromomethane	94	1.338	1.338	(0.320)	15785	5.00000	6.25
19	Carbon Disulfide	76	2.069	2.069	(0.495)	49473	10.0000	9.33
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	16315	5.00000	4.99(aH)
59	Chlorobenzene	112	7.692	7.692	(1.003)	32631	5.00000	4.76(a)
7	Chloroethane	64	1.403	1.403	(0.336)	8398	5.00000	4.92(aM)
28	Chloroform	83	3.910	3.910	(0.935)	24324	5.00000	5.08
3	Chloromethane	50	1.081	1.081	(0.258)	14179	5.00000	6.05
27	cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	12551	5.00000	4.83(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	20073	5.00000	4.89(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	12858	5.00000	4.71(a)
44	Dibromomethane	93	5.557	5.557	(1.118)	8941	5.00000	4.95(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	14123	5.00000	6.85
61	Ethylbenzene	106	7.799	7.799	(1.017)	16617	5.00000	4.91(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	4641	5.00000	7.52
67	Isopropylbenzene	105	8.559	8.559	(1.116)	49325	5.00000	4.76(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	41694	10.0000	9.56
17	Methylene Chloride	84	2.305	2.305	(0.551)	11006	5.00000	4.87(a)
87	n-Butylbenzene	91	9.991	9.991	(1.034)	34349	5.00000	4.38(a)
73	n-Propylbenzene	91	8.910	8.910	(0.922)	56986	5.00000	4.81(a)
92	Naphthalene	128	11.553	11.553	(1.196)	8781	5.00000	6.84
63	o-Xylene	106	8.244	8.244	(1.075)	20375	5.00000	4.80(a)
81	sec-Butylbenzene	105	9.519	9.519	(0.985)	45656	5.00000	4.66(a)
64	Styrene	104	8.258	8.258	(1.077)	31296	5.00000	5.55
78	tert-Butylbenzene	119	9.332	9.332	(0.966)	34739	5.00000	4.91(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	9252	5.00000	4.76(a)
50	Toluene	91	6.446	6.446	(0.840)	49788	5.00000	4.94(a)
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	10258	5.00000	4.73(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	16774	5.00000	4.67(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	13273	5.00000	5.35
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	22800	5.00000	5.27
5	Vinyl Chloride	62	1.145	1.145	(0.274)	14191	5.00000	5.22

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.
H - Operator selected an alternate compound hit.

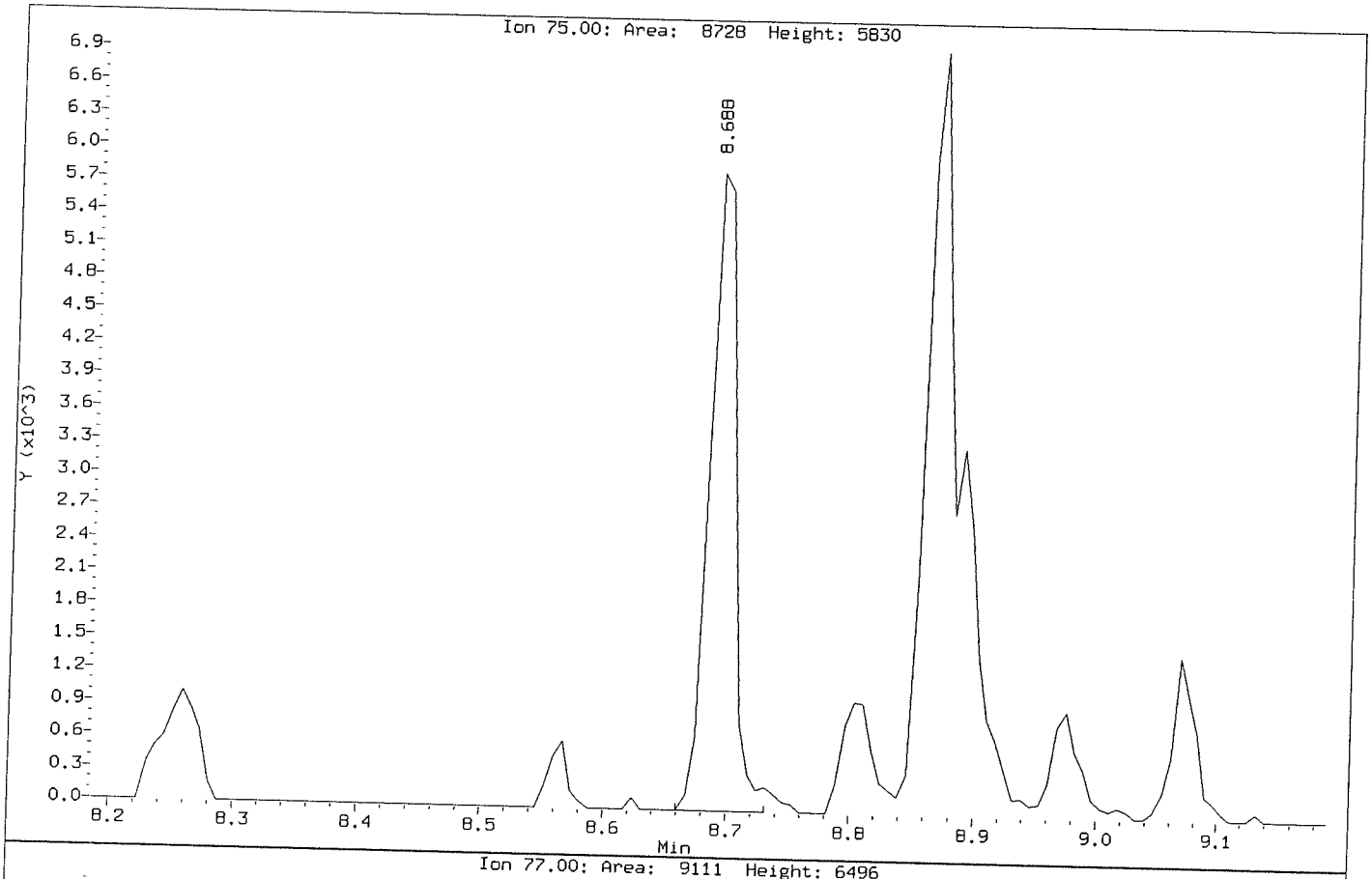


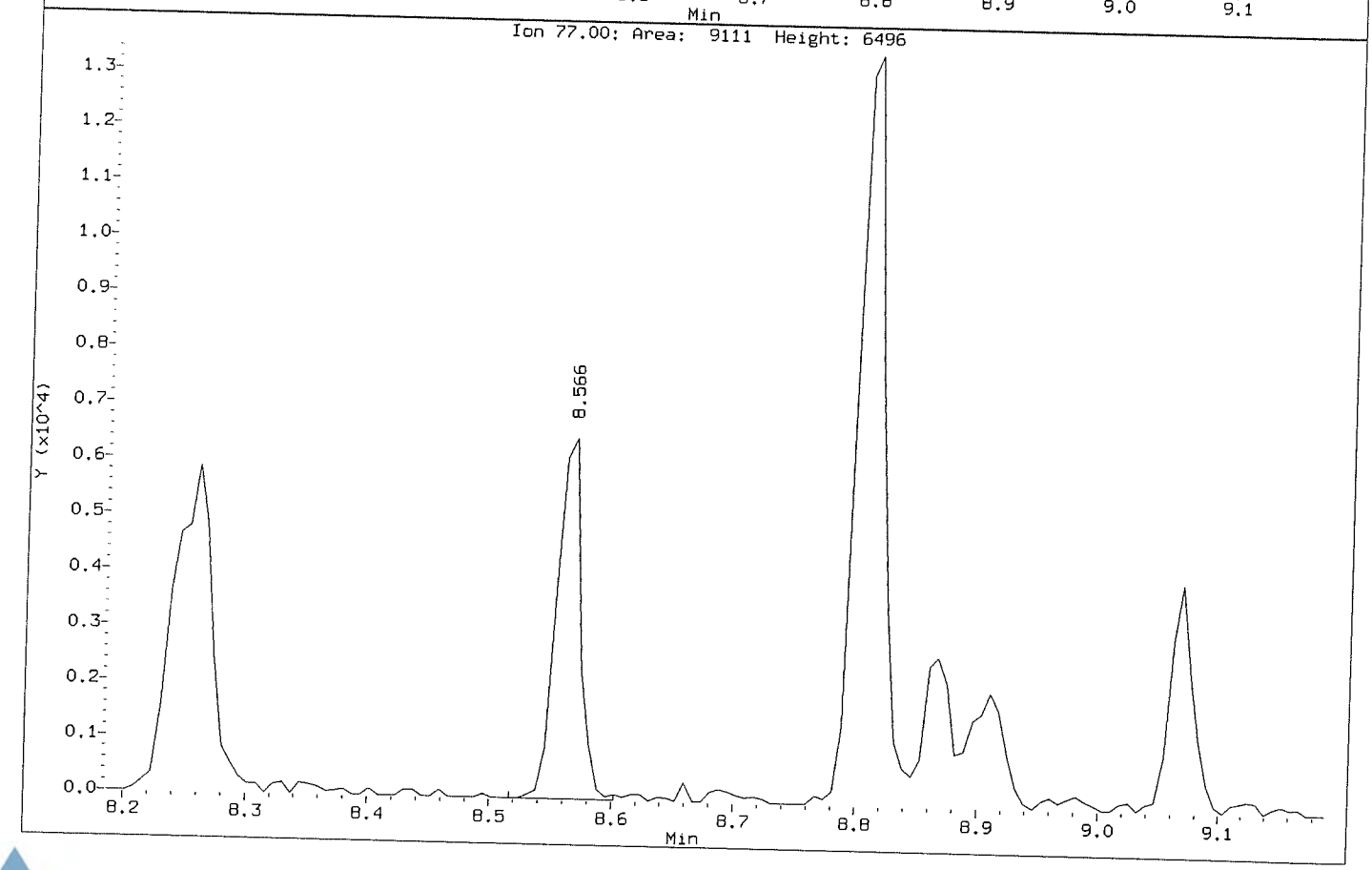
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Client ID: VSTD005
Sample Info: VSDT005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\Before\X051806.D
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Instrument: voa6.i
Client Sample ID: VSTD005

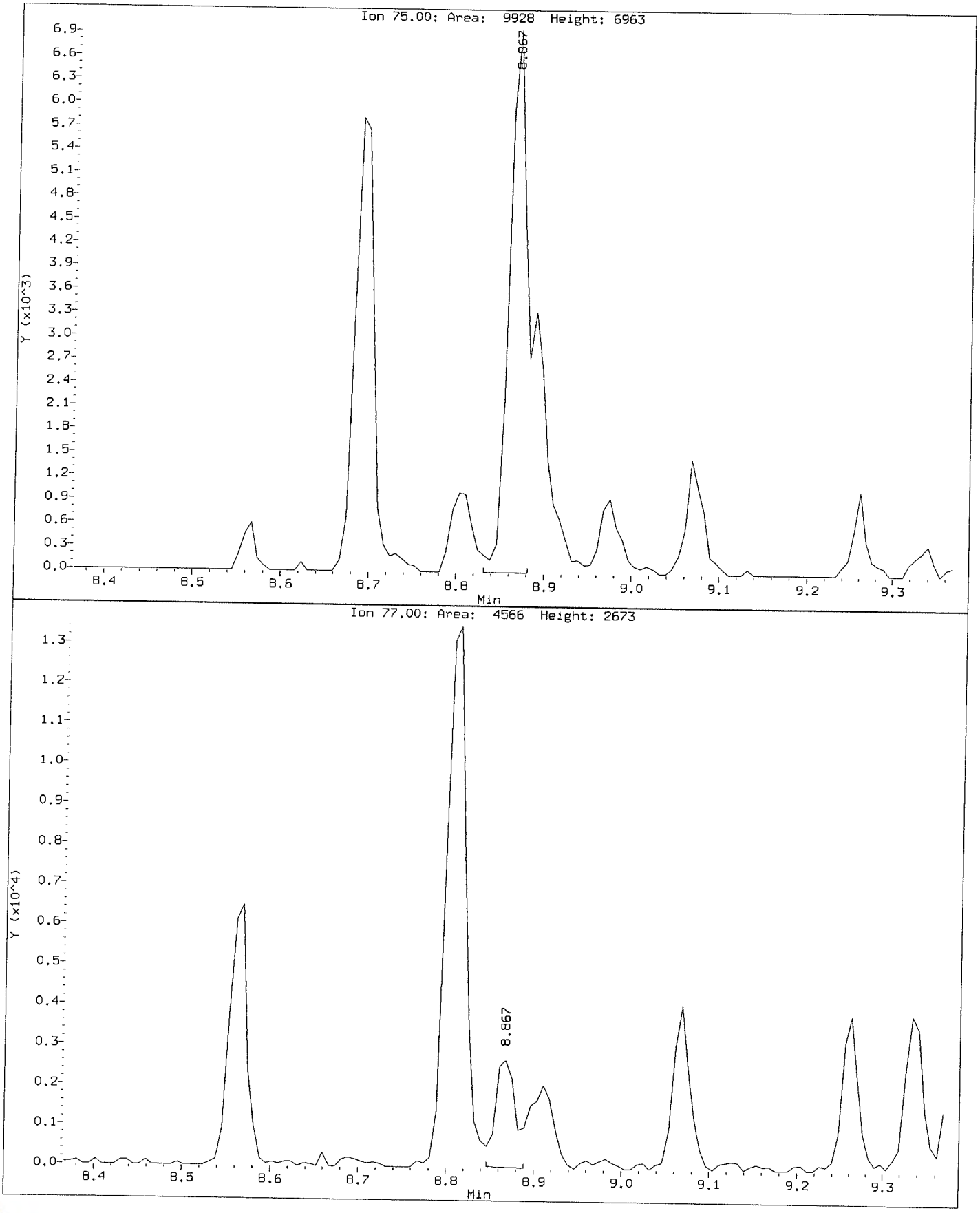
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





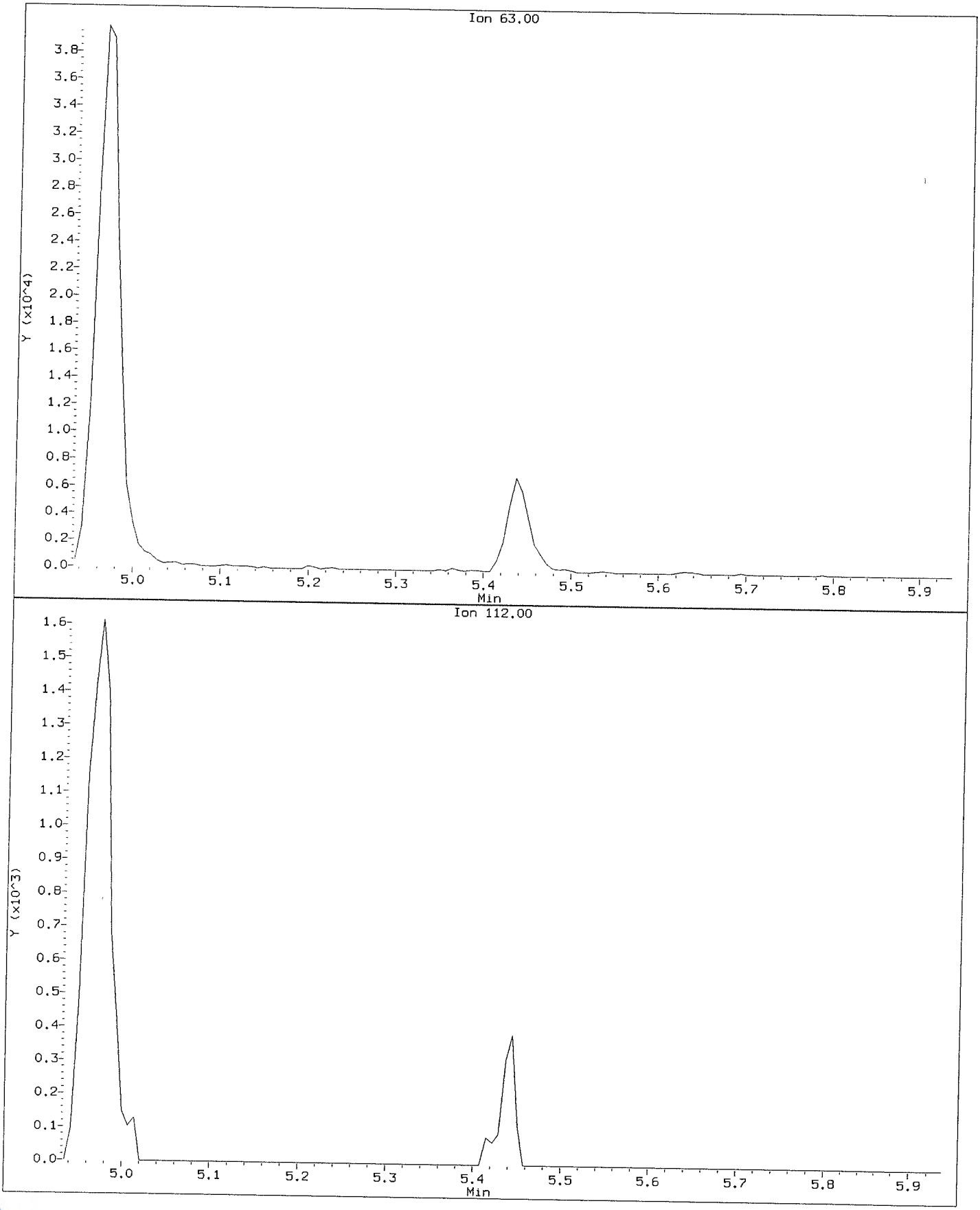
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Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



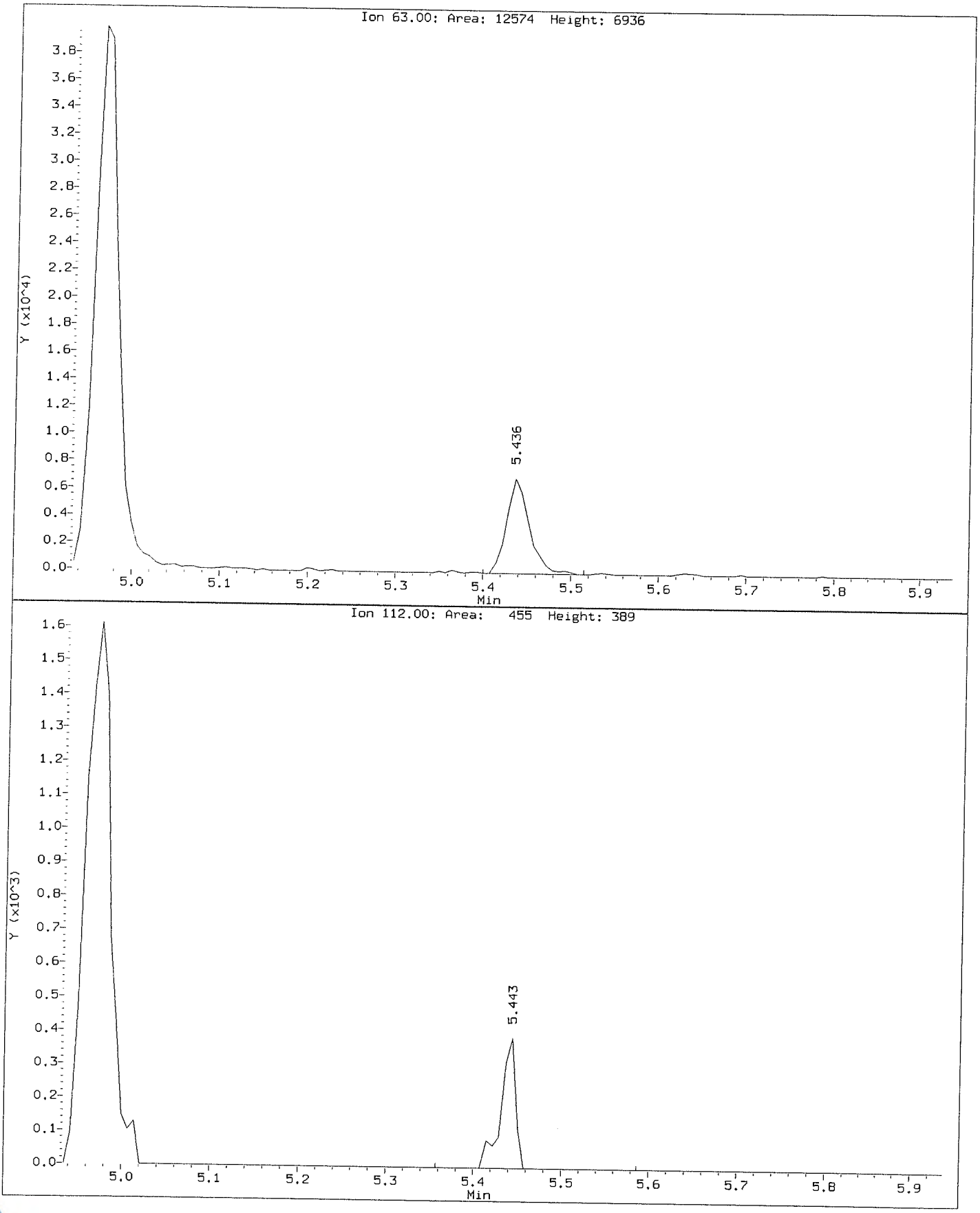
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Instrument: voa6.i
Client Sample ID: VSTD005

Compound: 1,2-Dichloropropane
CAS Number: 78-87-5



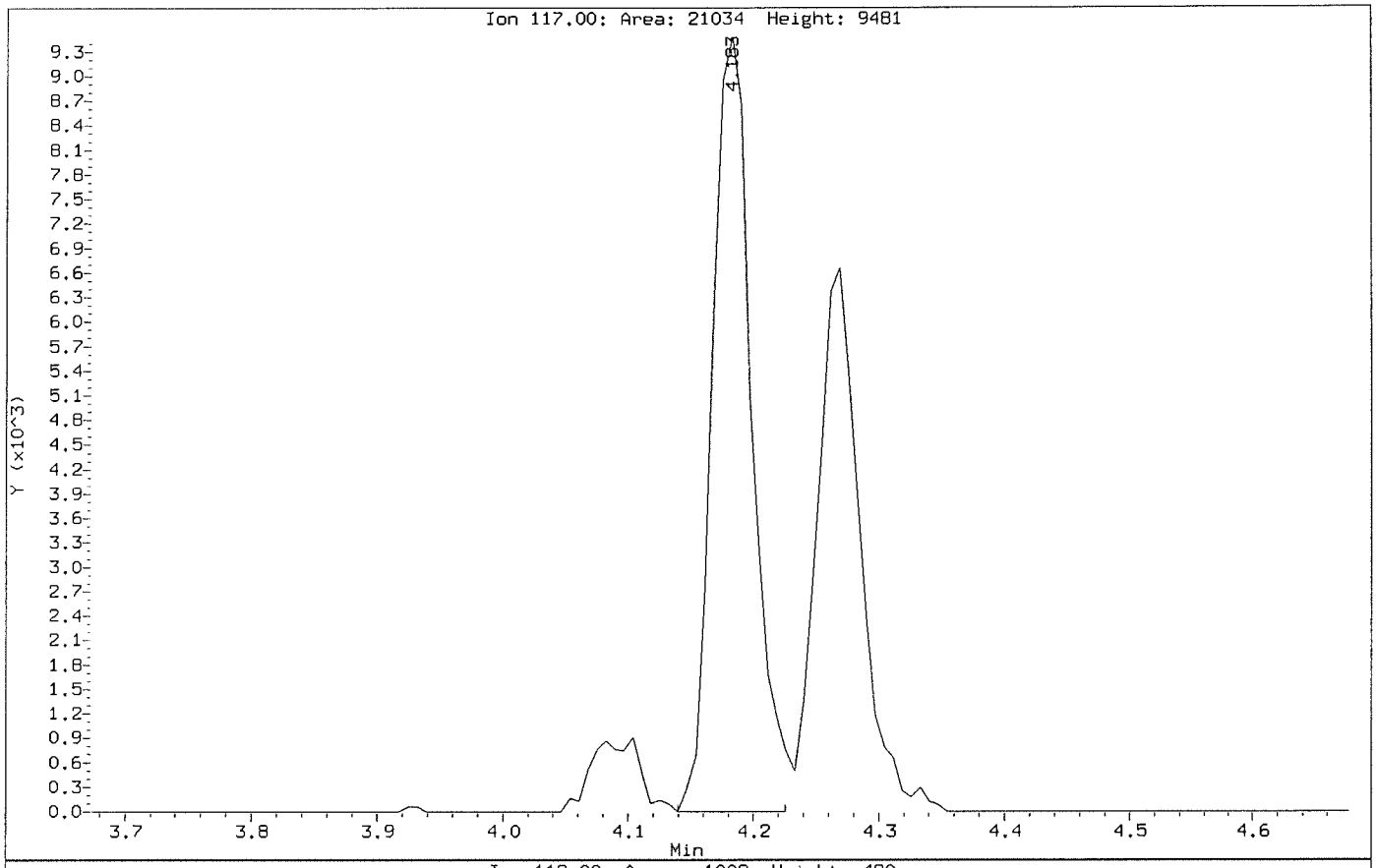
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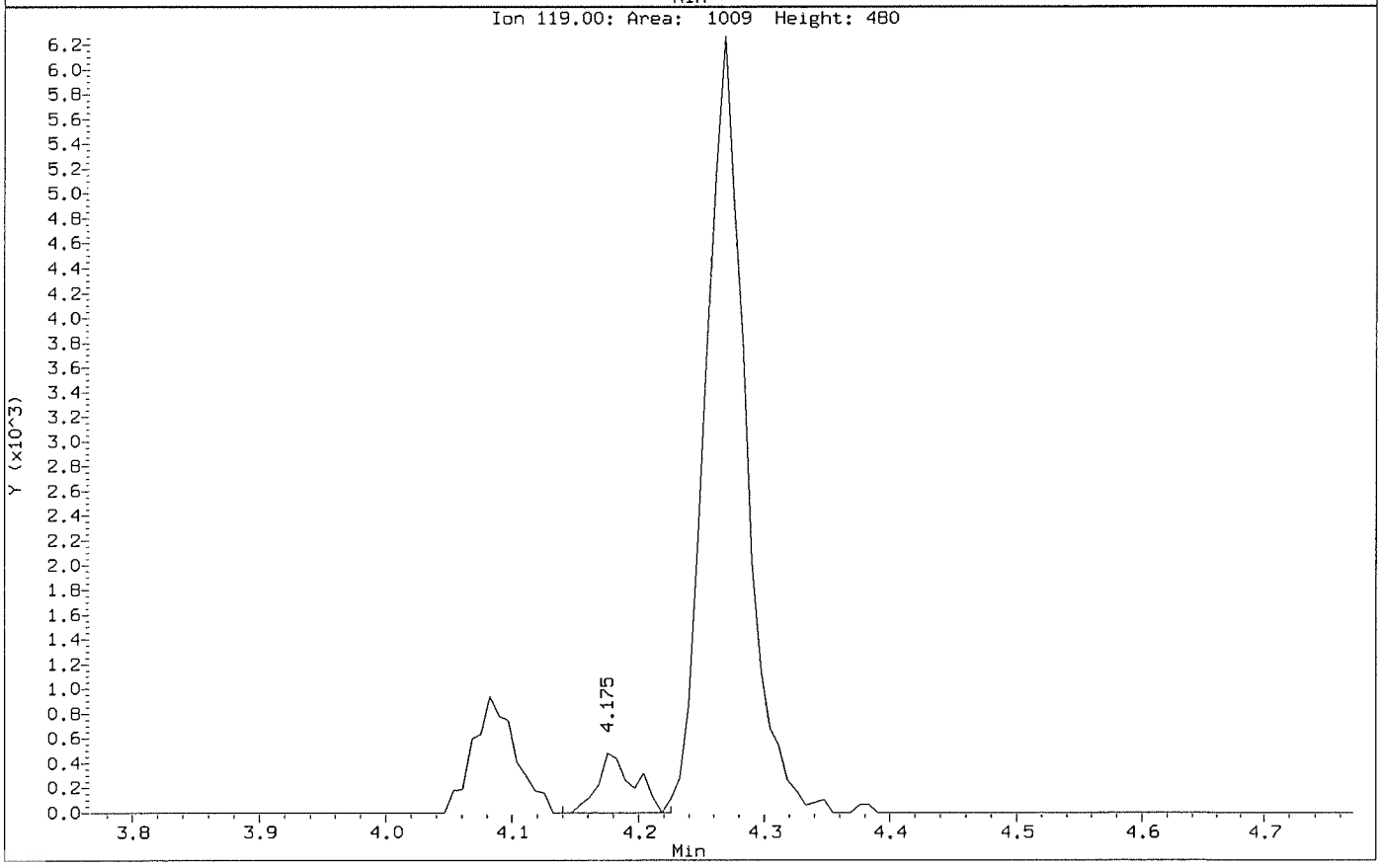
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5



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Instrument: voa6.i
Client Sample ID: VSTD005

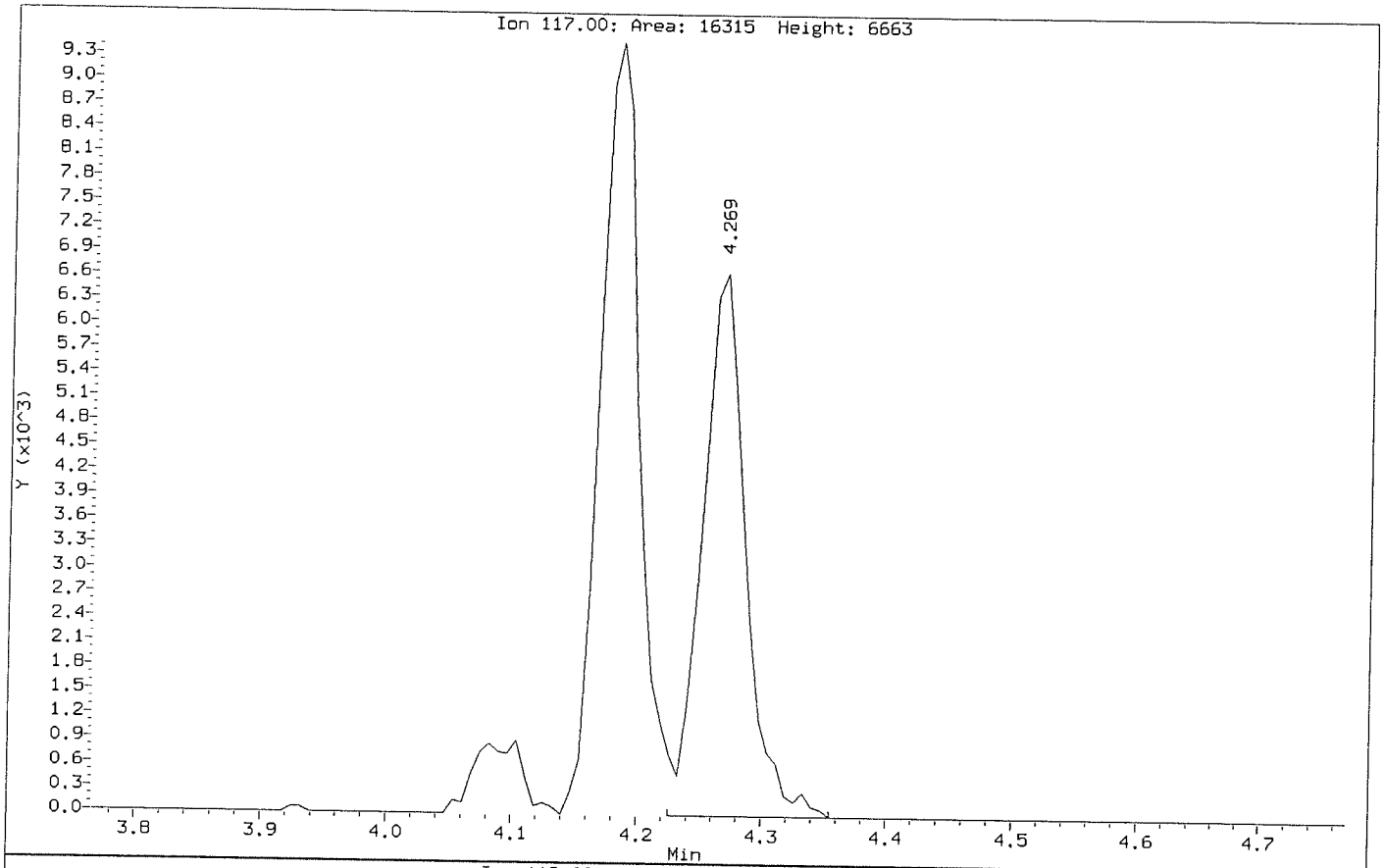
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CAS Number: 56-23-5

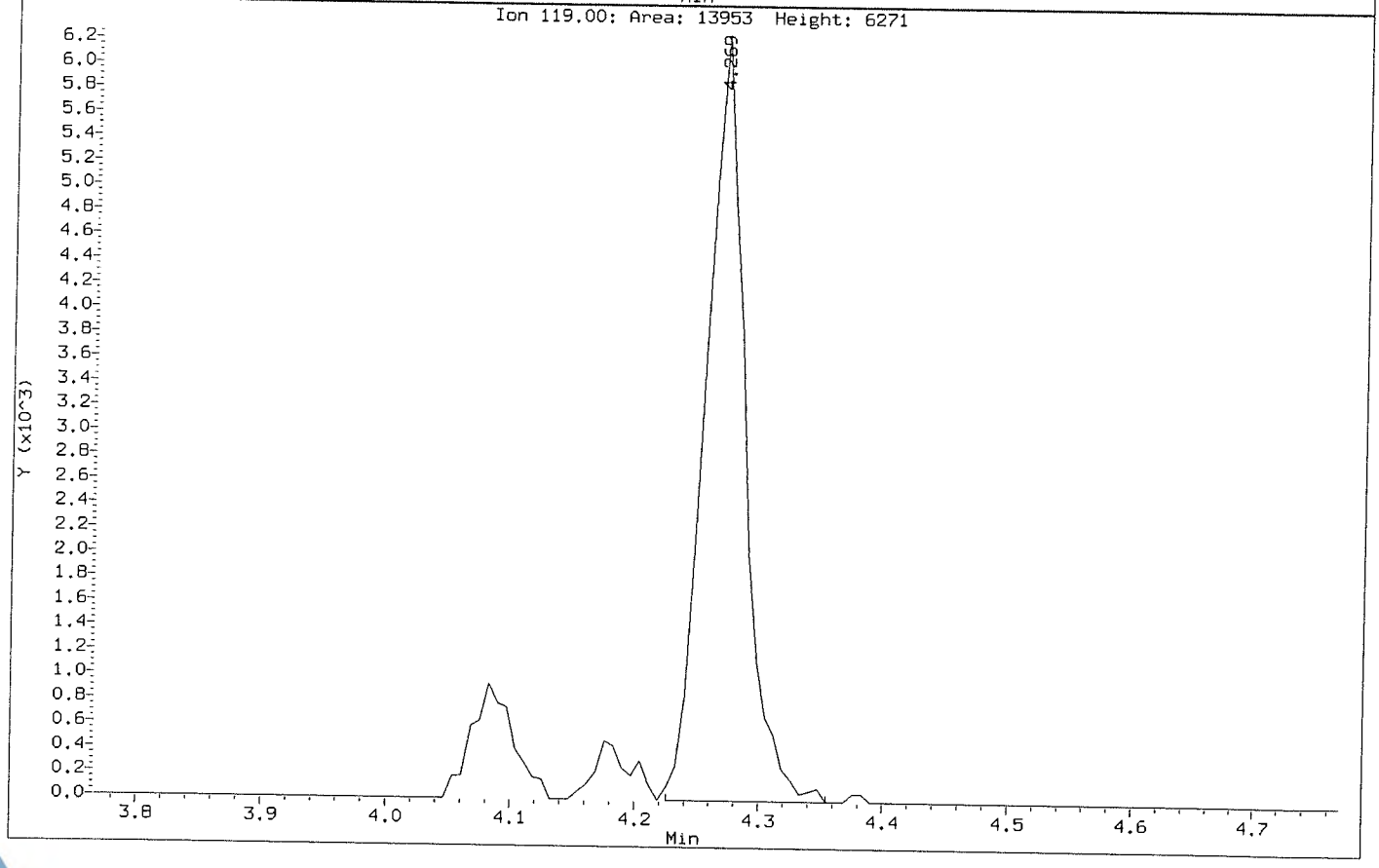




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Instrument: voa6.i
Client Sample ID: VSTD005

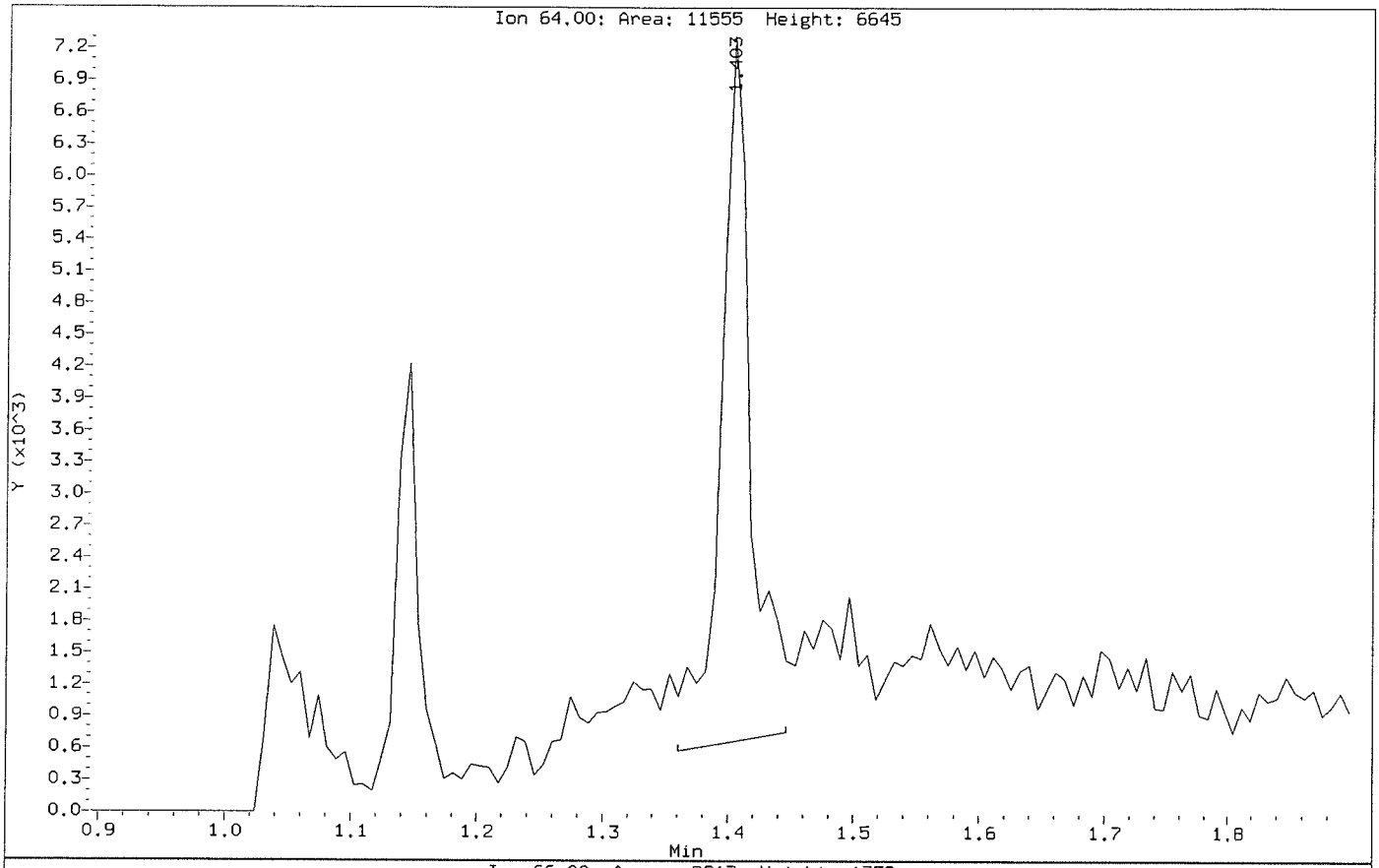
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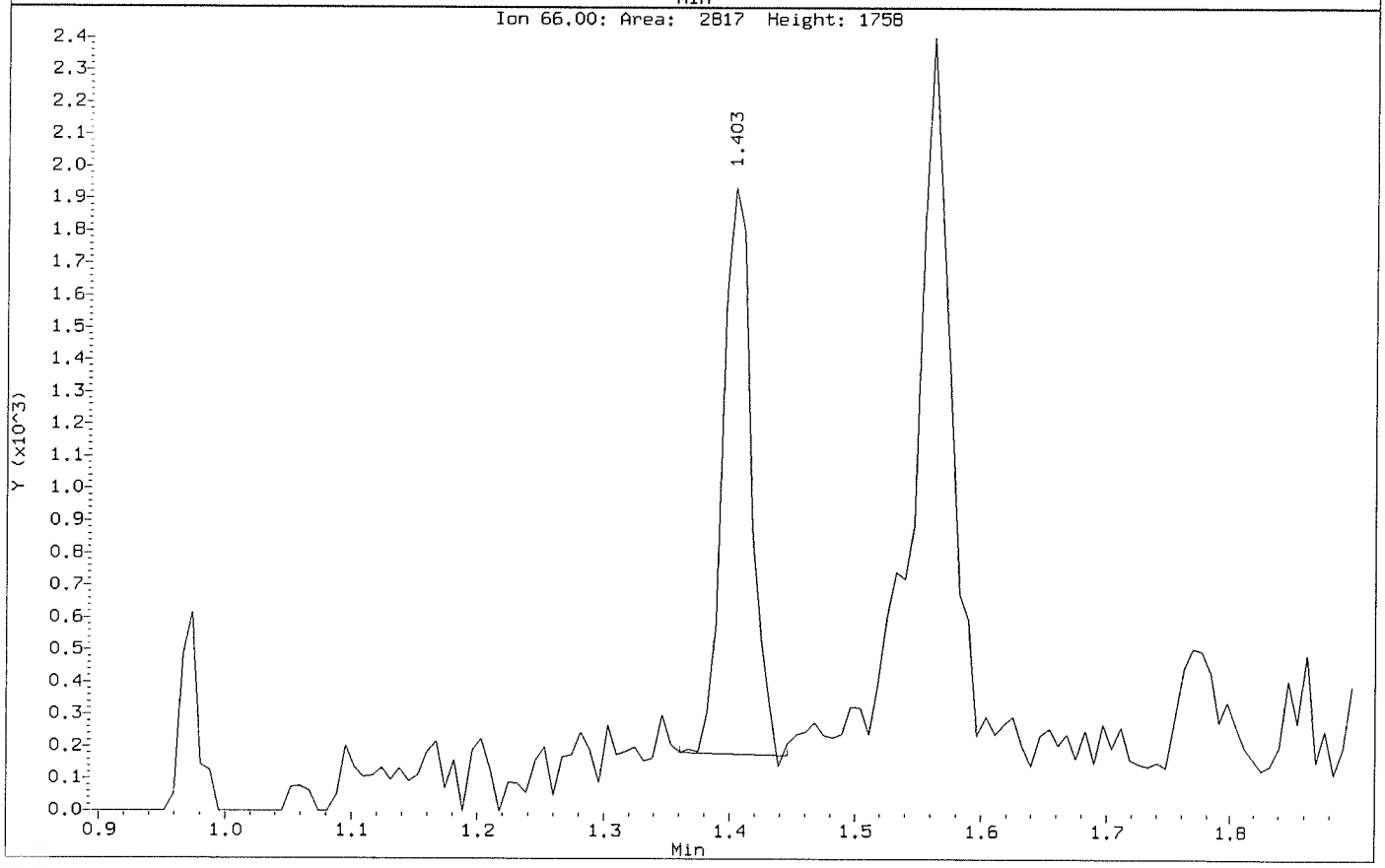




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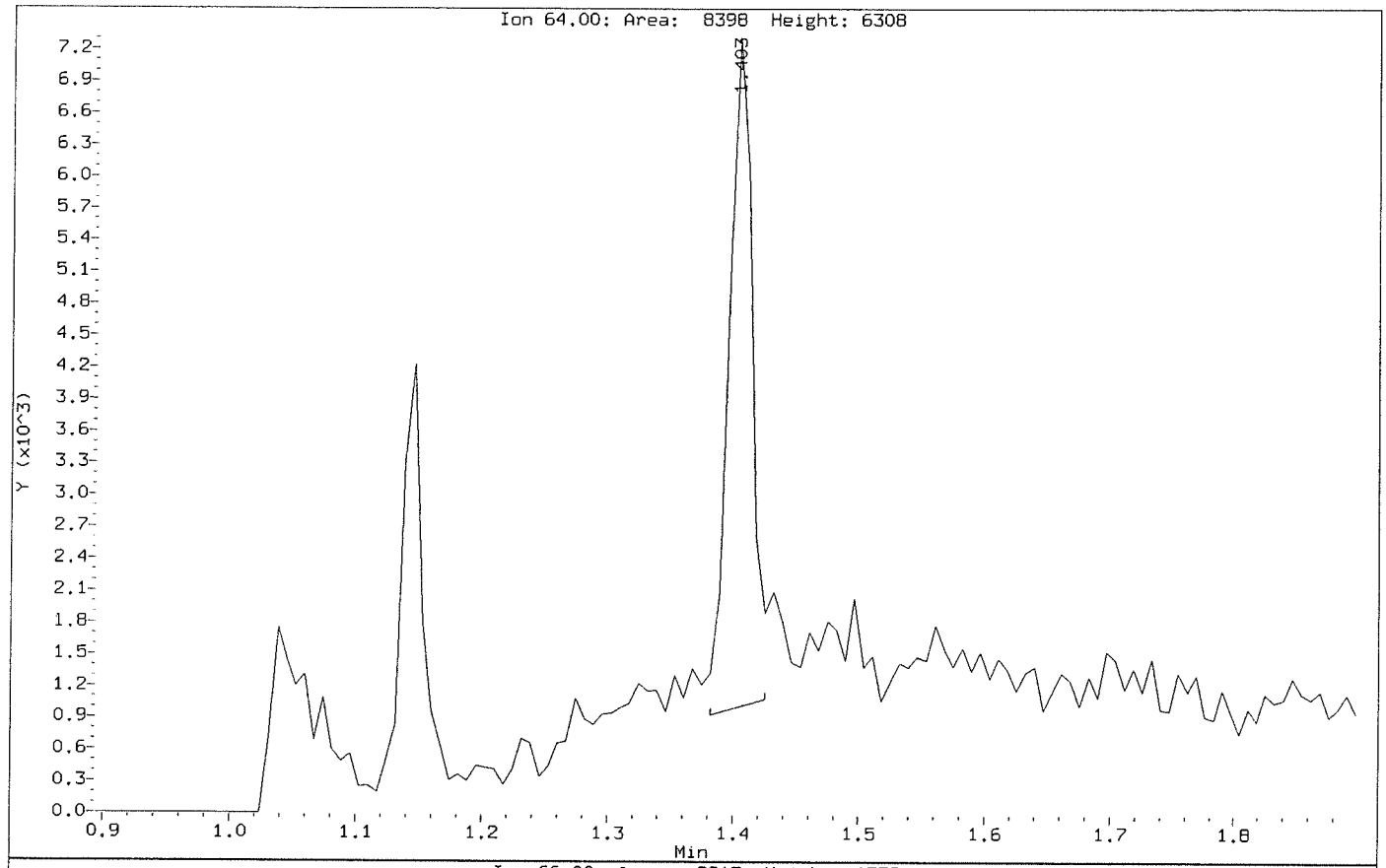
Compound: Chloroethane
CAS Number: 75-00-3

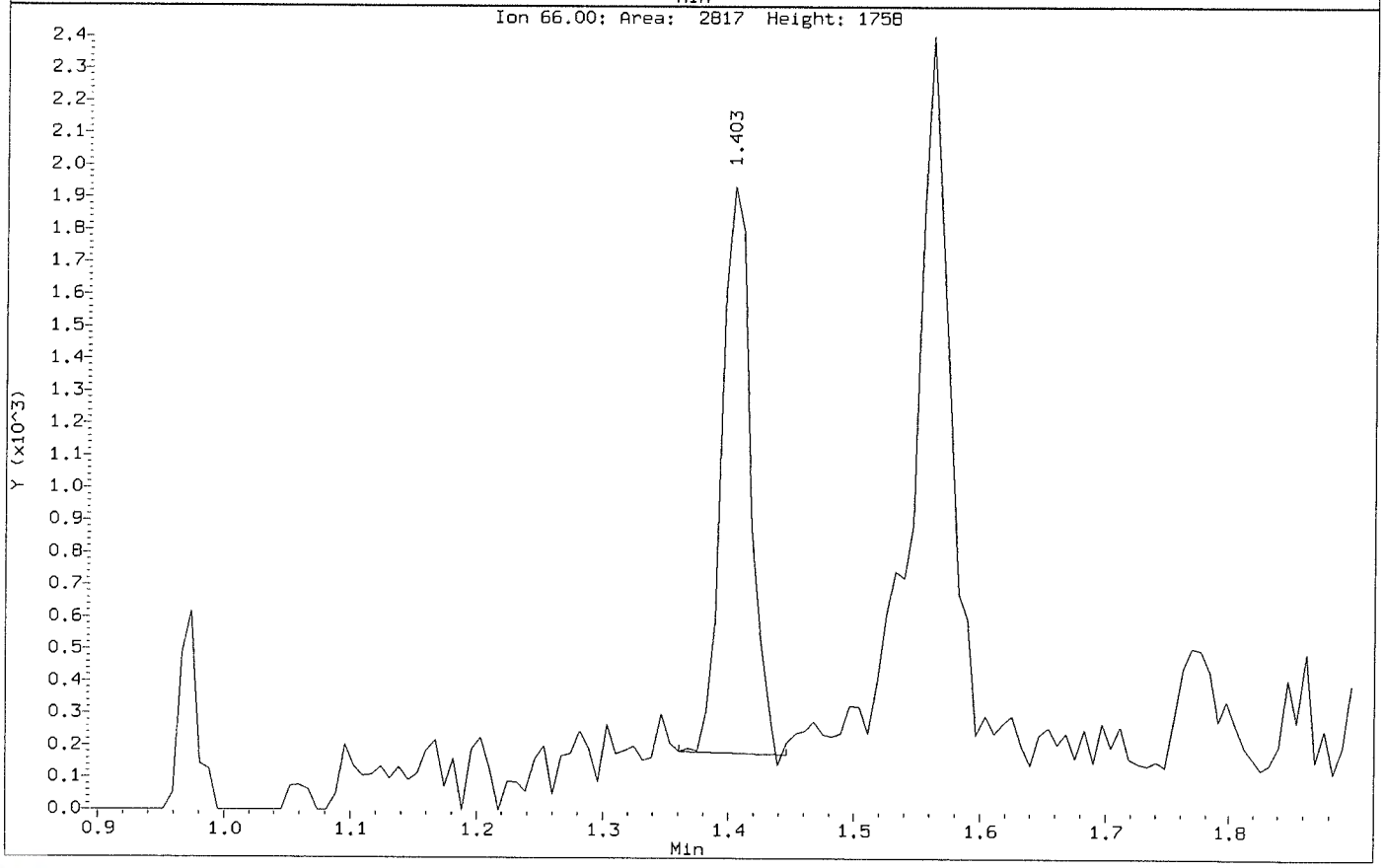




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Injection Date: 18-MAY-2021 13:07
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051807.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051807.D
Lab Smp Id: VSDT020 Client Smp ID: VSTD020
Inj Date : 18-MAY-2021 13:28
Operator : PC Inst ID: voa6.i
Smp Info : VSDT020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 13:07 Cal File: X051806.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

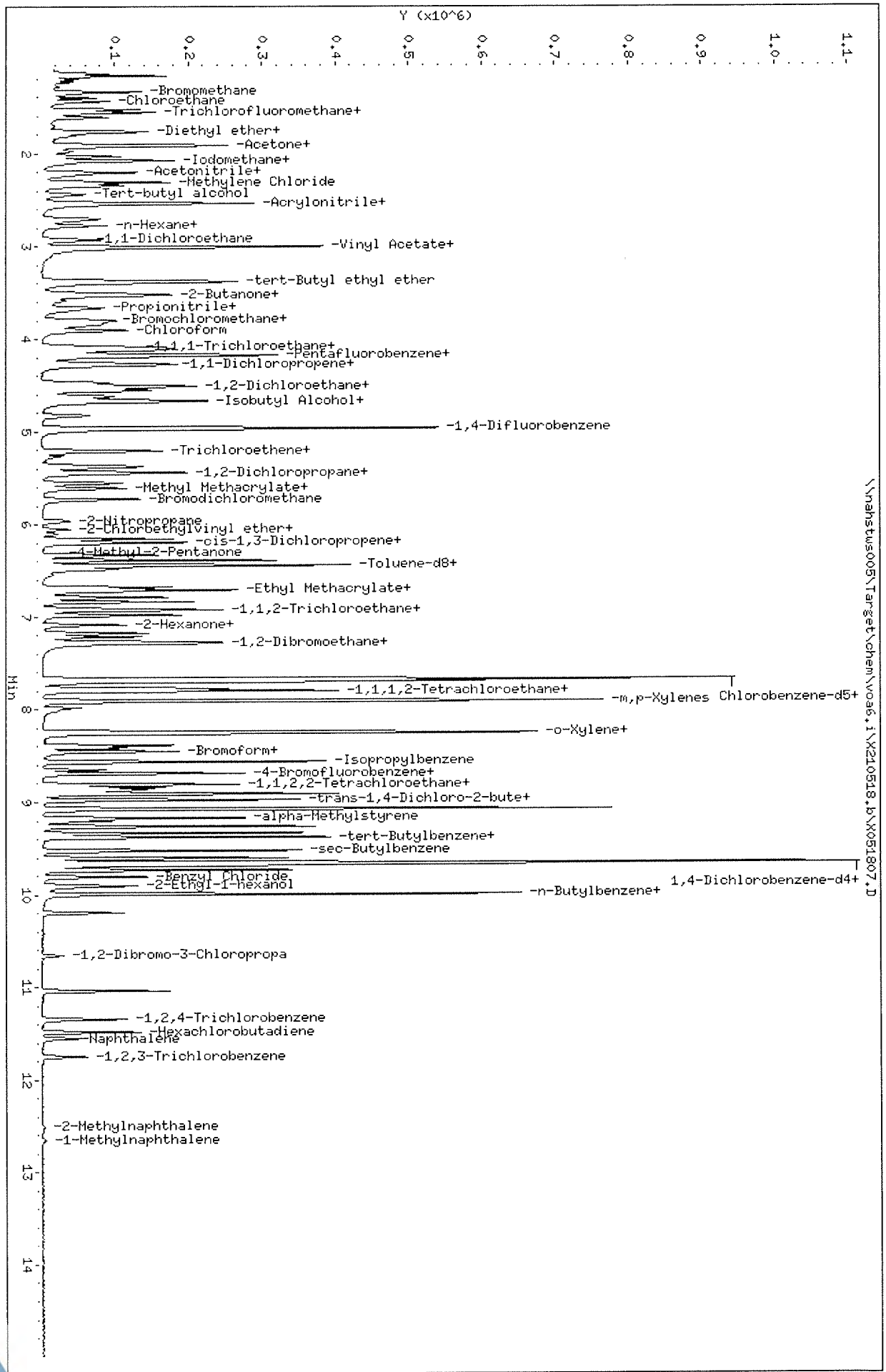
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	239147	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	395431	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	387314	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	196242	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	67187	20.0000	20.87
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	68387	20.0000	18.78
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	55528	20.0000	20.71
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	177650	20.0000	19.30
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	53138	20.0000	18.83
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	79461	20.0000	19.53
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	63561	20.0000	19.23
138 Freon TF	101	1.919	1.919	(0.459)	43285	20.0000	19.07
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	42865	20.0000	19.05
22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	85085	20.0000	19.21
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	44209	20.0000	18.48
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	63118	20.0000	18.63
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	17129	20.0000	18.97
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	50993	20.0000	18.76 (MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	30700	20.0000	19.01
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	177707	20.0000	17.80
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	4660	20.0000	18.65
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	53873	20.0000	19.92

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051807.D Page 2
Report Date: 22-Jun-2021 08:20

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	102122	20.0000	18.56
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	79057	20.0000	20.33
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	53324	20.0000	20.06
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	174662	20.0000	17.83
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	103039	20.0000	18.27
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	87802	20.0000	19.93
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	112231	20.0000	19.62
26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	74977	20.0000	18.92
24 2-Butanone	43	3.581	3.581	(0.856)	35815	40.0000	40.57
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	154565	20.0000	17.67
52 2-Hexanone	43	7.090	7.090	(0.924)	64652	40.0000	39.20
77 4-Chlorotoluene	91	9.067	9.067	(0.938)	187764	20.0000	18.41
82 p-Isopropyltoluene	119	9.648	9.648	(0.999)	167380	20.0000	17.27
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	96386	40.0000	39.12
10 Acetone	43	1.976	1.976	(0.473)	27873	40.0000	43.32
37 Benzene	78	4.512	4.512	(0.908)	188446	20.0000	19.26
74 Bromobenzene	156	8.802	8.802	(0.911)	63498	20.0000	19.41
29 Bromochloromethane	128	3.795	3.795	(0.908)	27530	20.0000	18.88
39 Bromodichloromethane	83	5.729	5.729	(1.153)	74633	20.0000	19.53
66 Bromoform	173	8.408	8.408	(1.096)	34786	20.0000	18.57
6 Bromomethane	94	1.339	1.339	(0.320)	51157	20.0000	20.06
19 Carbon Disulfide	76	2.069	2.069	(0.495)	208910	40.0000	37.07
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	62631	20.0000	18.17(H)
59 Chlorobenzene	112	7.692	7.692	(1.003)	141615	20.0000	18.64
7 Chloroethane	64	1.403	1.403	(0.336)	39588	20.0000	21.86
28 Chloroform	83	3.910	3.910	(0.935)	101443	20.0000	19.96
3 Chloromethane	50	1.073	1.073	(0.257)	54108	20.0000	21.11
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	52610	20.0000	19.08
46 cis-1,3-Dichloropropene	75	6.152	6.152	(1.238)	88923	20.0000	20.51
55 Dibromochloromethane	129	7.176	7.176	(0.936)	58237	20.0000	19.23
44 Dibromomethane	93	5.558	5.558	(1.118)	38557	20.0000	20.24
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	57043	20.0000	20.24
61 Ethylbenzene	106	7.800	7.800	(1.017)	67752	20.0000	18.05
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	20104	20.0000	19.17
67 Isopropylbenzene	105	8.559	8.559	(1.116)	203782	20.0000	17.76
62 m,p-Xylenes	106	7.907	7.907	(1.031)	179924	40.0000	37.19
17 Methylene Chloride	84	2.306	2.306	(0.551)	46728	20.0000	19.48
87 n-Butylbenzene	91	9.991	9.991	(1.034)	158021	20.0000	17.14
73 n-Propylbenzene	91	8.910	8.910	(0.922)	240606	20.0000	17.31
92 Naphthalene	128	11.546	11.546	(1.195)	42386	20.0000	18.49
63 o-Xylene	106	8.244	8.244	(1.075)	85643	20.0000	18.20
81 sec-Butylbenzene	105	9.519	9.519	(0.985)	198389	20.0000	17.24
64 Styrene	104	8.258	8.258	(1.077)	151430	20.0000	18.31
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	140248	20.0000	16.87
56 Tetrachloroethene	164	6.926	6.926	(0.903)	39827	20.0000	18.50
50 Toluene	91	6.446	6.446	(0.840)	211082	20.0000	18.88
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	42462	20.0000	18.45
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	76644	20.0000	20.20
38 Trichloroethene	130	5.207	5.207	(1.048)	50471	20.0000	19.27
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	89444	20.0000	19.45
5 Vinyl Chloride	62	1.145	1.145	(0.274)	54952	20.0000	19.03

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

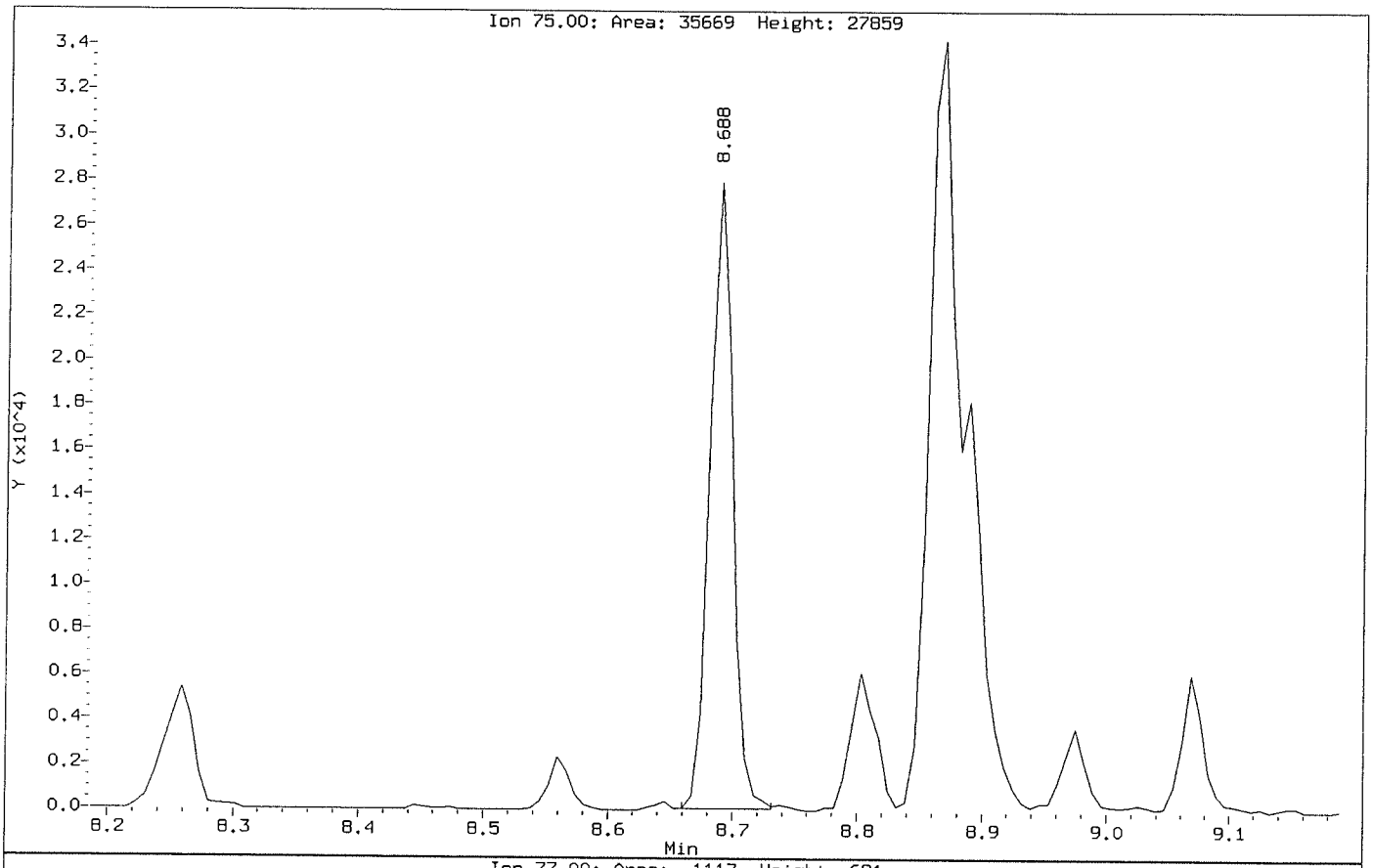


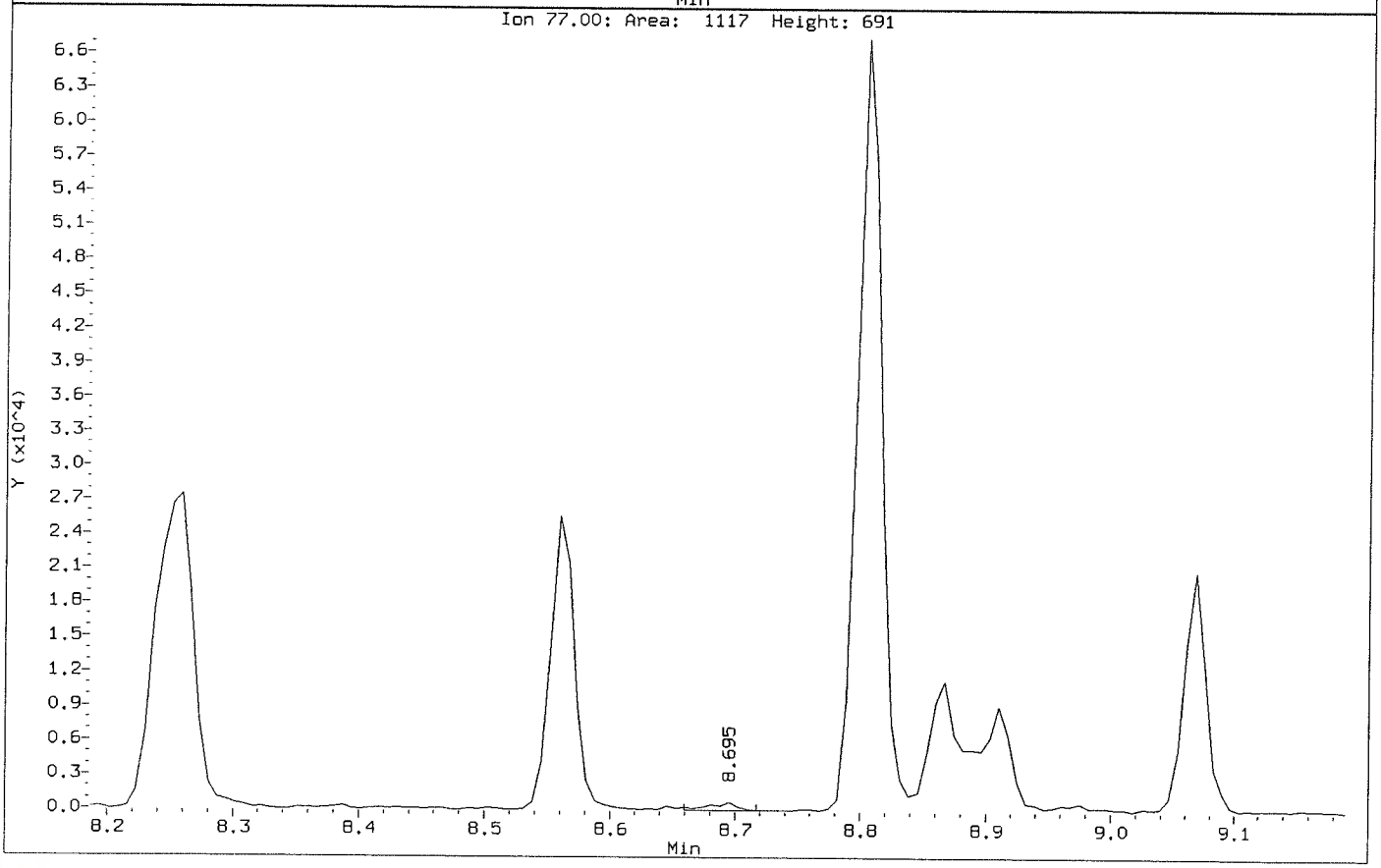
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Sample Info: VSDT020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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Instrument: voa6.i
Client Sample ID: VSTD020

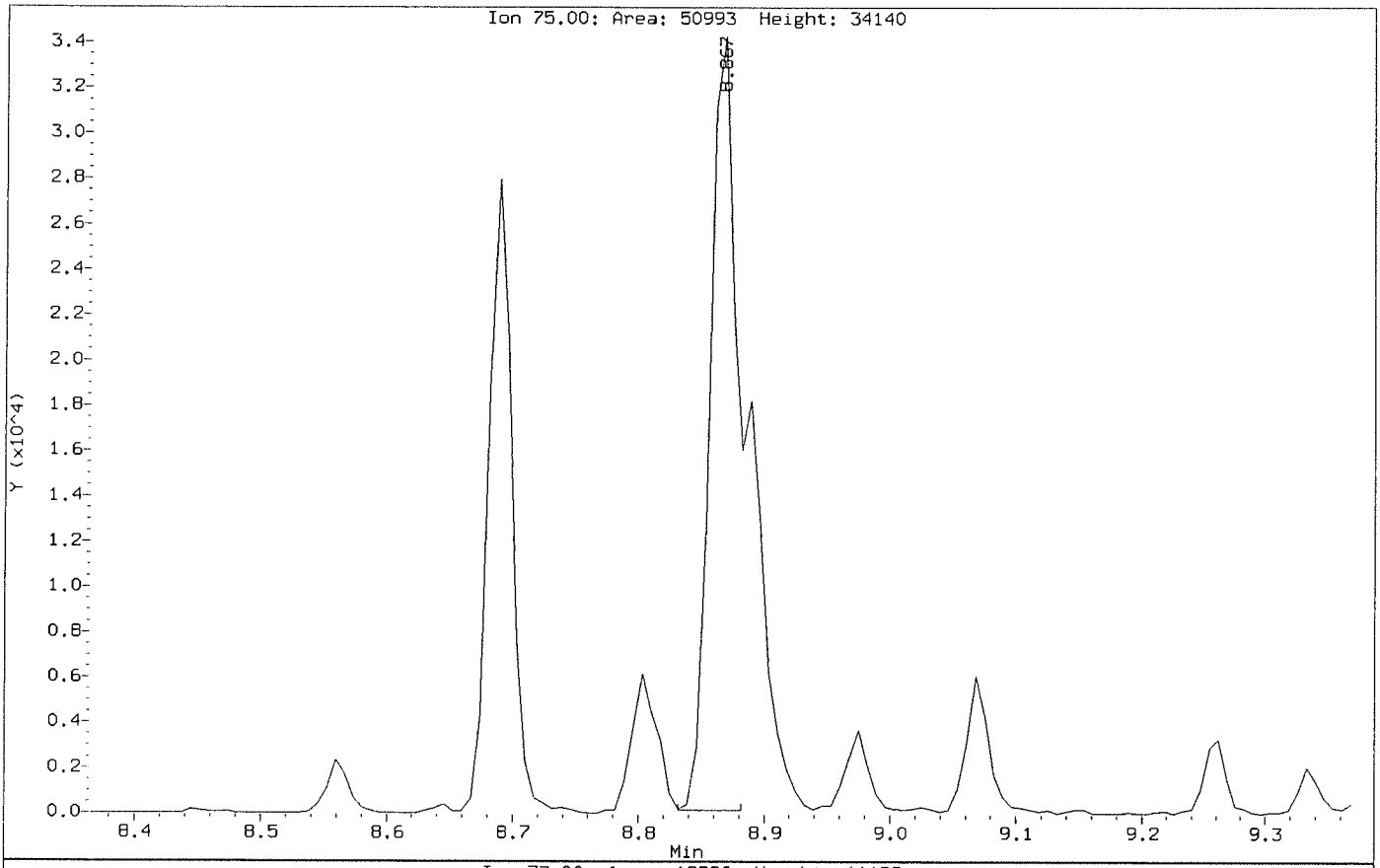
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

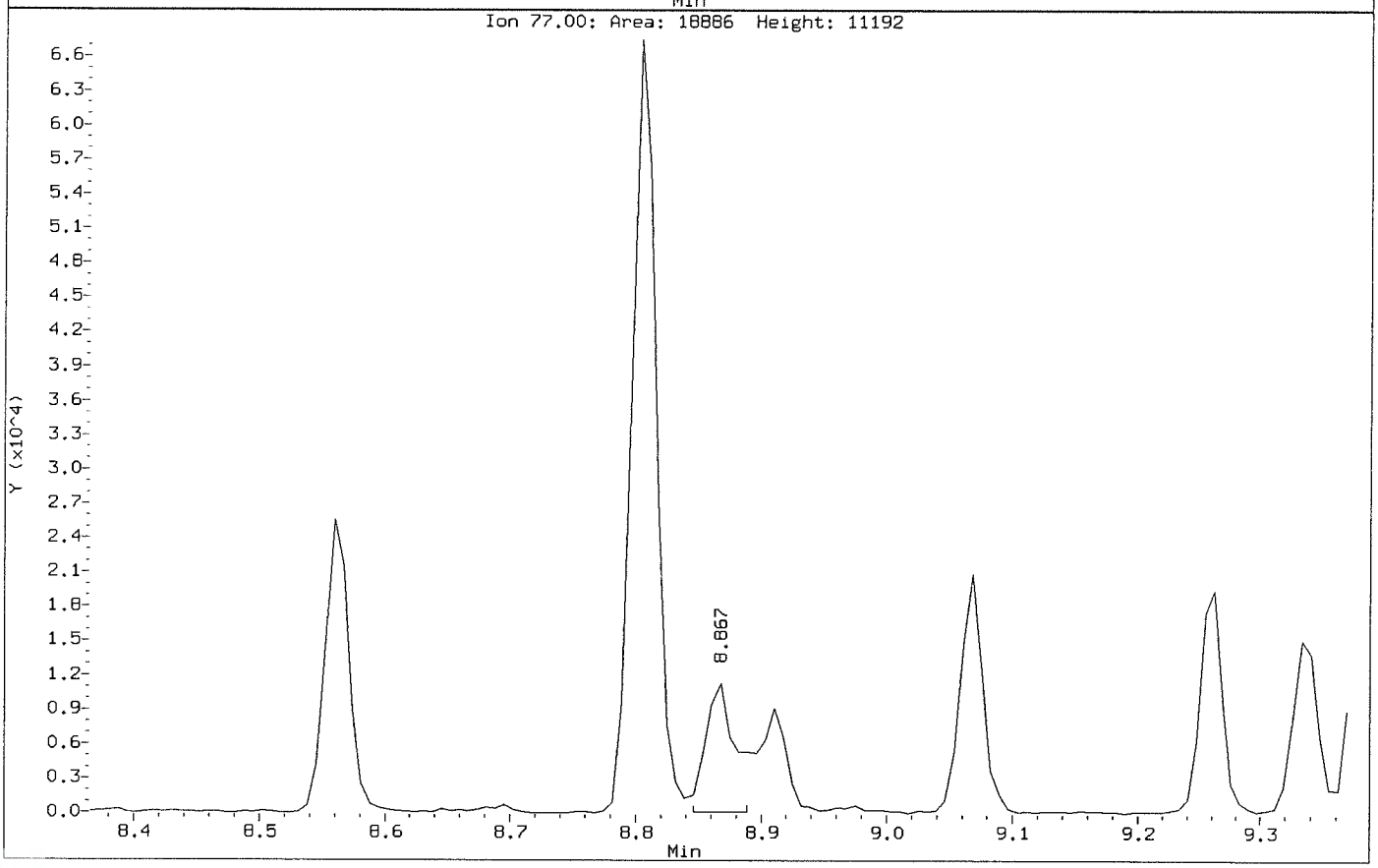




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Injection Date: 18-MAY-2021 13:28
Instrument: voa6.i
Client Sample ID: VSTD020

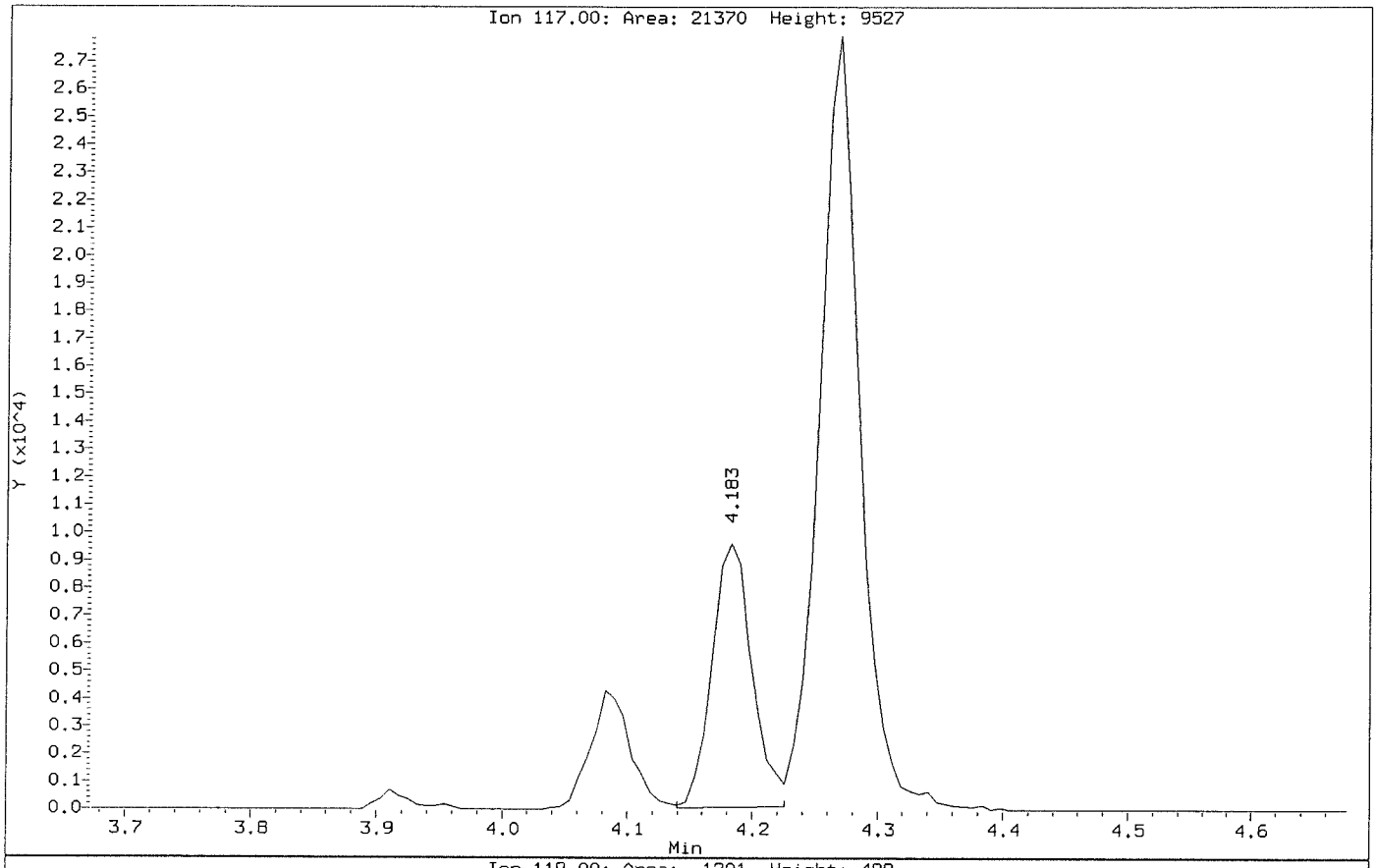
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

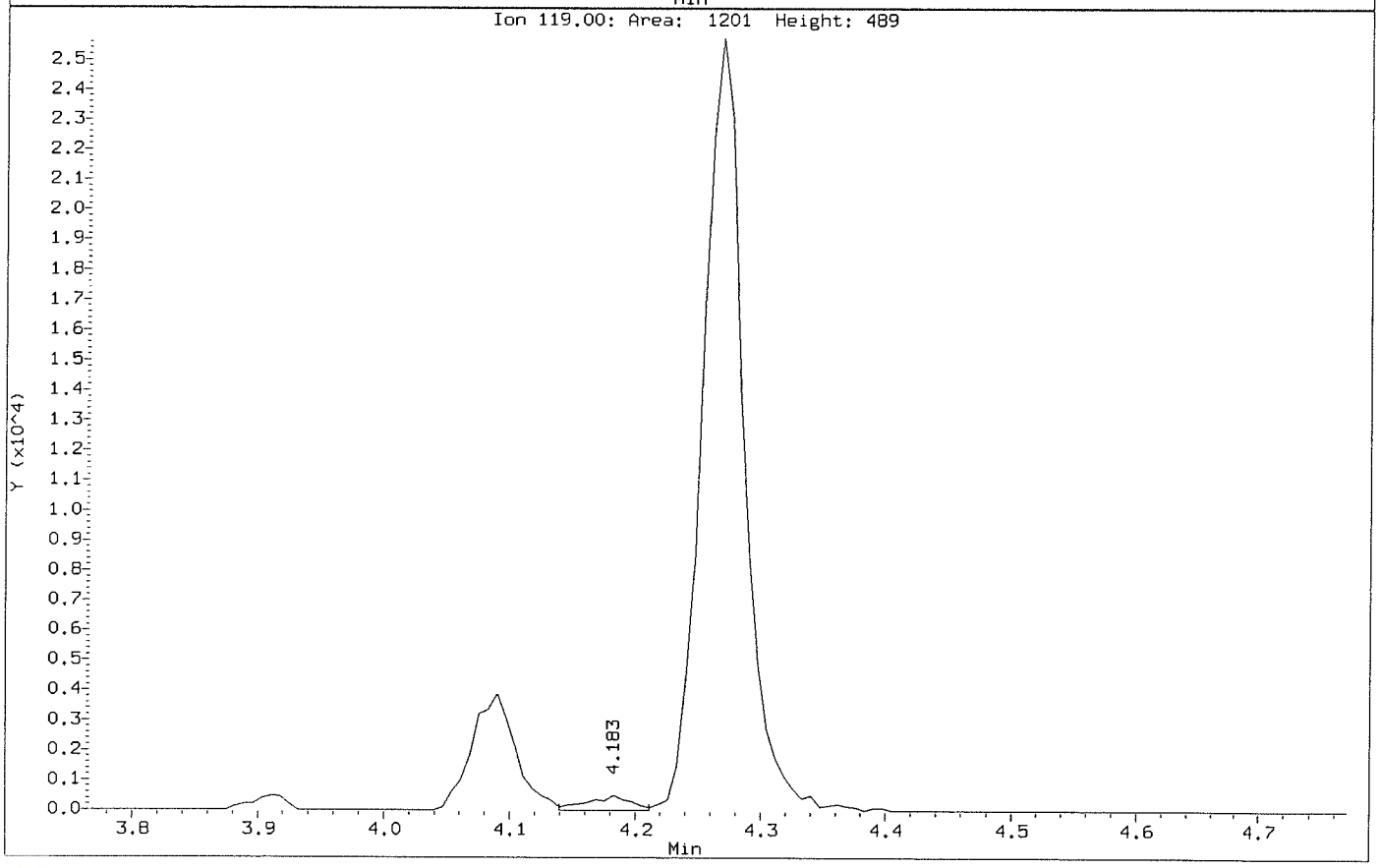




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Instrument: voa6.i
Client Sample ID: VSTD020

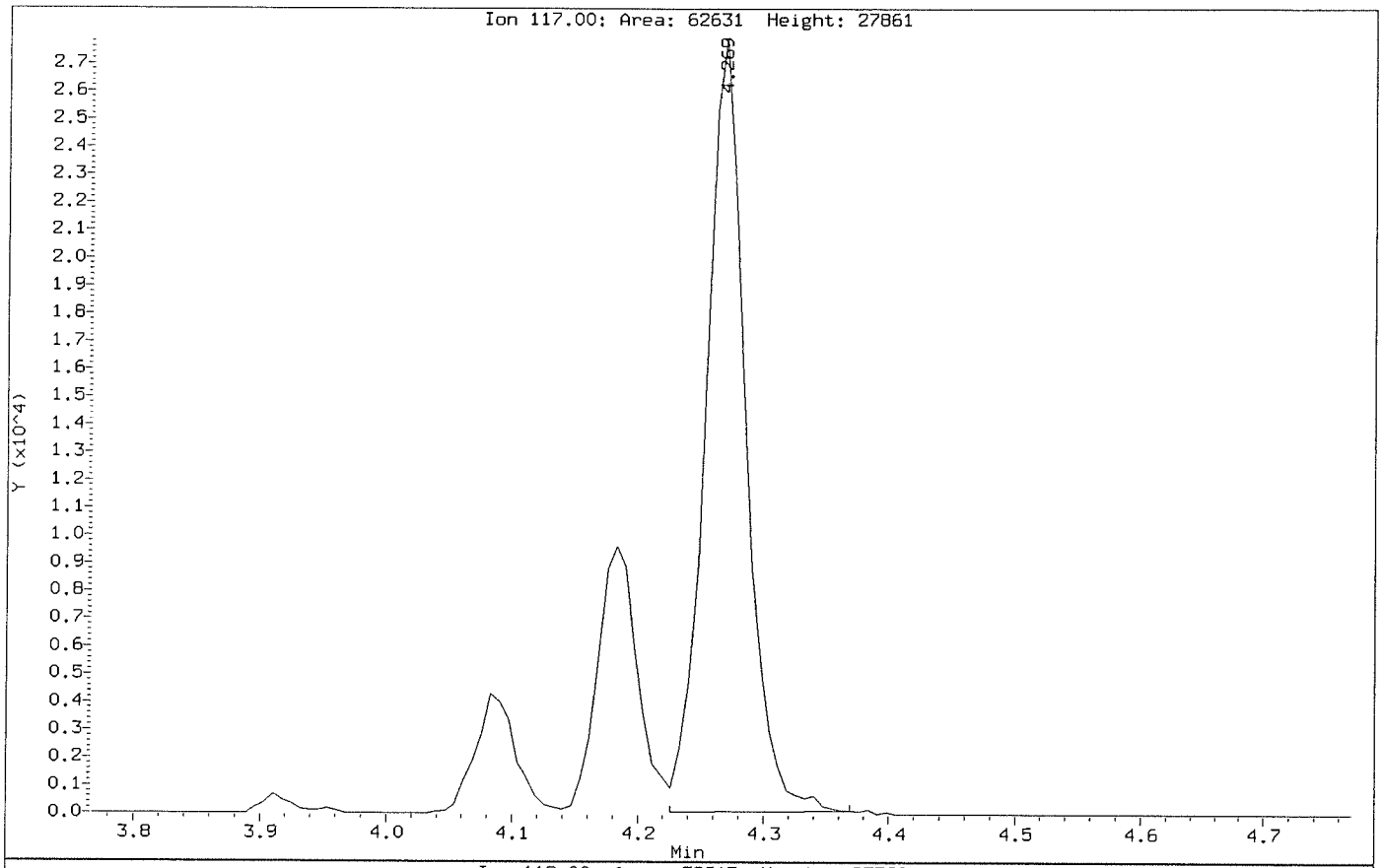
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

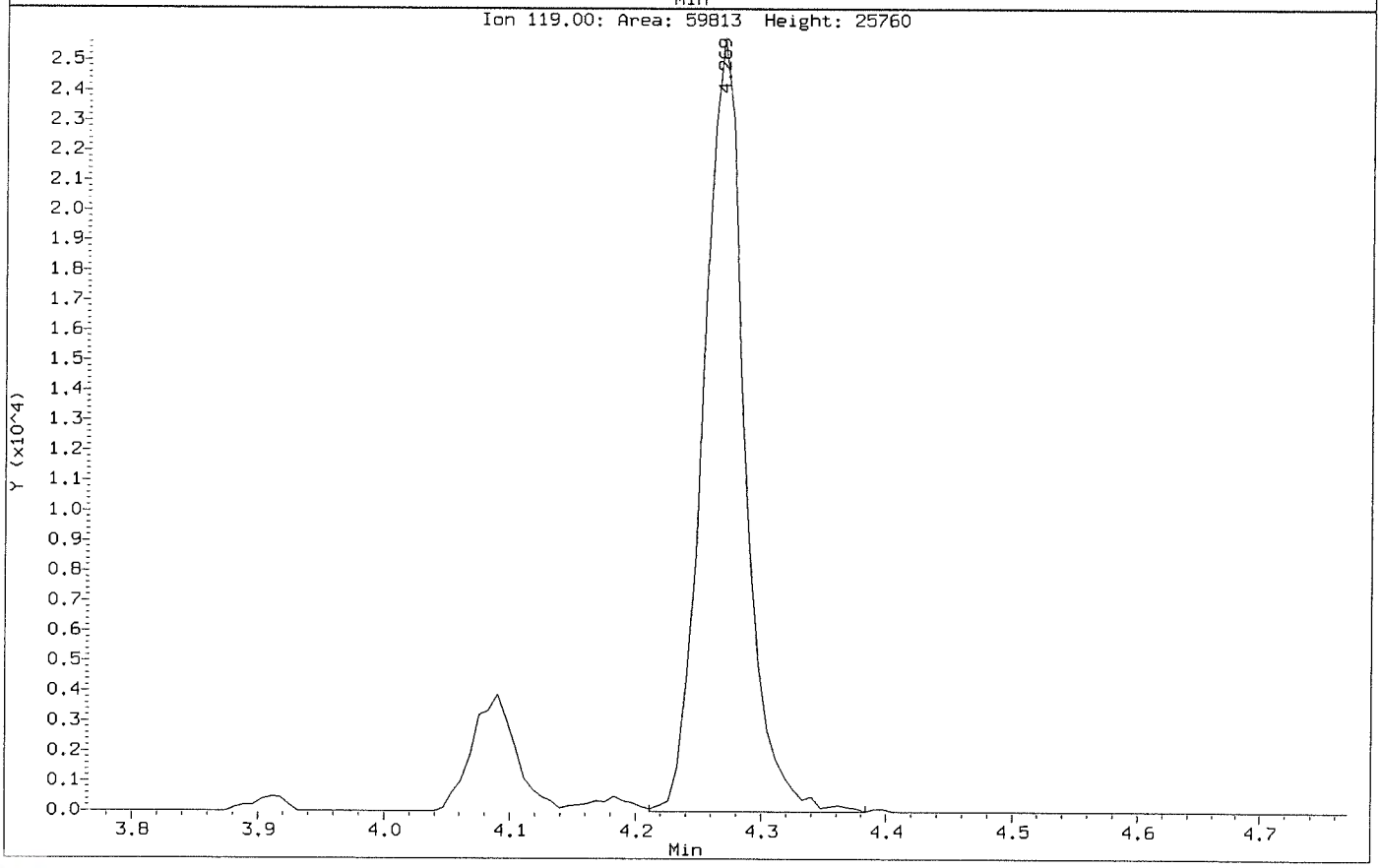




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Instrument: voa6.i
Client Sample ID: VSTD020

Compound: Carbon Tetrachloride
CAS Number: 56-23-5





Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051808.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051808.D
Lab Smp Id: VSDT050 Client Smp ID: VSTD050
Inj Date : 18-MAY-2021 13:49
Operator : PC Inst ID: voa6.i
Smp Info : VSDT050;VSTD050;1;7;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 13:28 Cal File: X051807.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

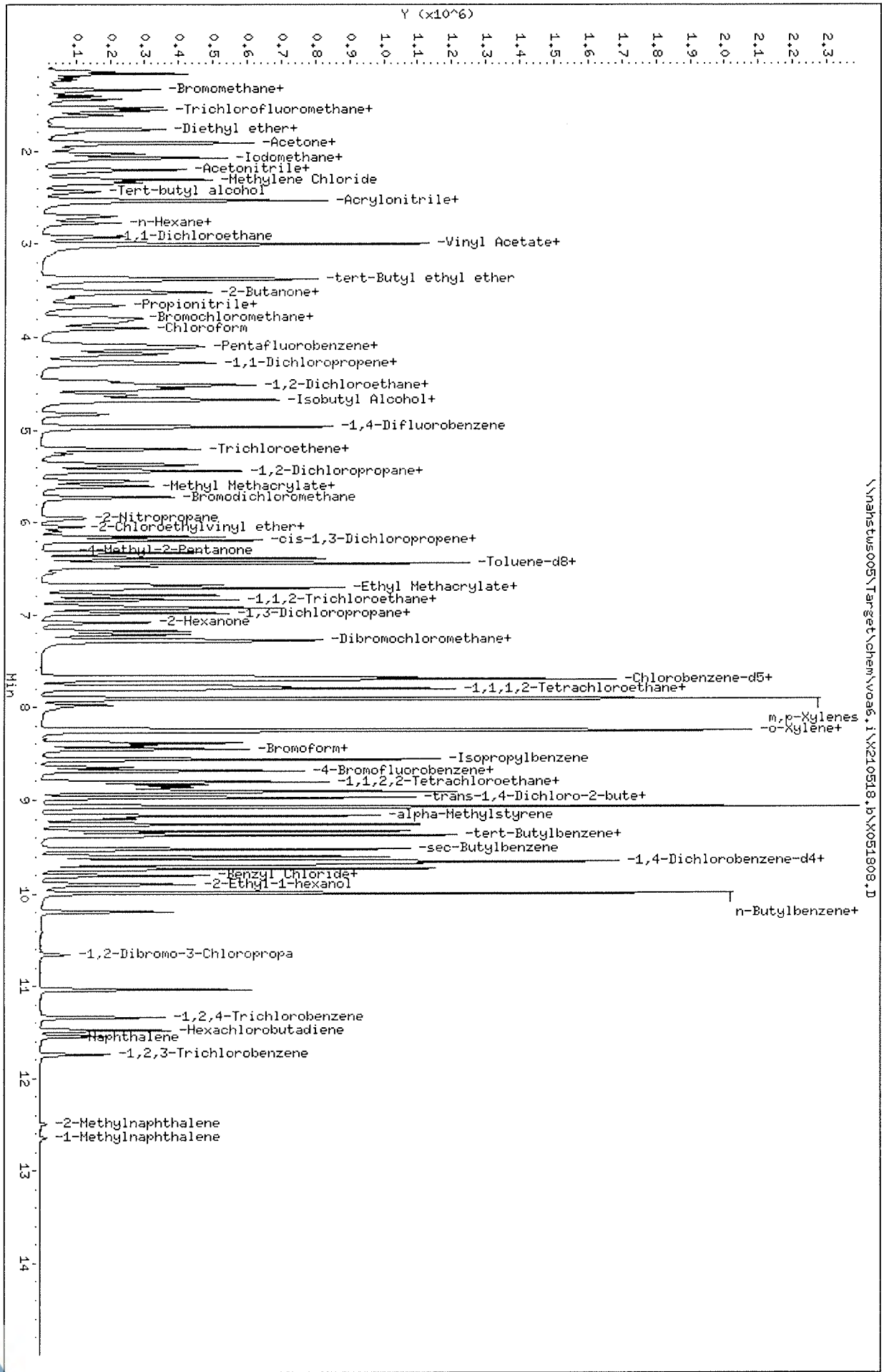
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	271623	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	462076	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	443934	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	234223	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.068)	177225	50.0000	50.15
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	197985	50.0000	47.25
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	145001	50.0000	47.91
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	483036	50.0000	44.41
60 1,1,1,2-Tetrachloroethane	131	7.771	7.771	(1.013)	158680	50.0000	49.06
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	219680	50.0000	47.55
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	192852	50.0000	49.70
138 Freon TF	101	1.912	1.912	(0.457)	103127	50.0000	40.01
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	126274	50.0000	48.96
22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	244803	50.0000	48.66
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	113858	50.0000	41.91
32 1,1-Dichloropropene	75	4.283	4.283	(0.863)	169476	50.0000	42.81
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	53322	50.0000	47.87
71 1,2,3-Trichloropropane	75	8.860	8.860	(0.917)	161438	50.0000	50.79(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	93881	50.0000	44.87
79 1,2,4-Trimethylbenzene	105	9.375	9.375	(0.970)	554335	50.0000	46.53
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	14297	50.0000	45.43
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	158974	50.0000	51.29

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051808.D Page 2
Report Date: 22-Jun-2021 08:20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	296098	50.0000	45.10
33	1,2-Dichloroethane	62	4.555	4.555	(0.918)	227654	50.0000	50.10
42	1,2-Dichloropropane	63	5.436	5.436	(1.095)	149596	50.0000	48.17
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	547543	50.0000	46.83
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	319195	50.0000	47.43
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	251676	50.0000	49.85
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	328636	50.0000	47.76
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	208486	50.0000	46.33
24	2-Butanone	43	3.581	3.581	(0.856)	99370	100.000	99.10
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	468855	50.0000	44.91
52	2-Hexanone	43	7.083	7.083	(0.923)	184352	100.000	97.93
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	567359	50.0000	46.61
82	p-Isopropyltoluene	119	9.648	9.648	(0.999)	521890	50.0000	45.12
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	268097	100.000	94.82
10	Acetone	43	1.976	1.976	(0.473)	67628	100.000	98.41
37	Benzene	78	4.512	4.512	(0.909)	558350	50.0000	48.84
74	Bromobenzene	156	8.802	8.802	(0.911)	182153	50.0000	46.65
29	Bromochloromethane	128	3.795	3.795	(0.908)	81173	50.0000	49.03
39	Bromodichloromethane	83	5.729	5.729	(1.154)	217522	50.0000	48.72
66	Bromoform	173	8.408	8.408	(1.096)	108857	50.0000	50.70
6	Bromomethane	94	1.339	1.339	(0.320)	137904	50.0000	48.28
19	Carbon Disulfide	76	2.069	2.069	(0.495)	618017	100.000	96.57
34	Carbon Tetrachloride	117	4.268	4.268	(0.860)	174579	50.0000	43.34(H)
59	Chlorobenzene	112	7.692	7.692	(1.003)	415148	50.0000	47.69
7	Chloroethane	64	1.403	1.403	(0.336)	91299	50.0000	44.40
28	Chloroform	83	3.910	3.910	(0.935)	276573	50.0000	47.92
3	Chloromethane	50	1.081	1.081	(0.258)	144469	50.0000	49.31
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	150804	50.0000	48.17
46	cis-1,3-Dichloropropene	75	6.152	6.152	(1.240)	254601	50.0000	50.25
55	Dibromochloromethane	129	7.176	7.176	(0.936)	176711	50.0000	50.92
44	Dibromomethane	93	5.550	5.550	(1.118)	108491	50.0000	48.74
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	146727	50.0000	43.21
61	Ethylbenzene	106	7.800	7.800	(1.017)	206868	50.0000	48.08
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	54907	50.0000	39.76
67	Isopropylbenzene	105	8.559	8.559	(1.116)	617711	50.0000	46.98
62	m,p-Xylenes	106	7.907	7.907	(1.031)	542165	100.000	97.79
17	Methylene Chloride	84	2.306	2.306	(0.551)	132553	50.0000	48.66
87	n-Butylbenzene	91	9.991	9.991	(1.034)	487657	50.0000	44.33
73	n-Propylbenzene	91	8.910	8.910	(0.922)	762402	50.0000	45.95
92	Naphthalene	128	11.546	11.546	(1.195)	135654	50.0000	44.37
63	o-Xylene	106	8.244	8.244	(1.075)	260680	50.0000	48.34
81	sec-Butylbenzene	105	9.519	9.519	(0.985)	600068	50.0000	43.70
64	Styrene	104	8.258	8.258	(1.077)	468440	50.0000	46.43
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	433704	50.0000	43.71
56	Tetrachloroethene	164	6.926	6.926	(0.903)	113805	50.0000	46.13
50	Toluene	91	6.446	6.446	(0.840)	631628	50.0000	49.31
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	121902	50.0000	46.64
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.346)	240773	50.0000	54.33
38	Trichloroethene	130	5.207	5.207	(1.049)	143217	50.0000	46.80
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	218785	50.0000	41.90
5	Vinyl Chloride	62	1.145	1.145	(0.274)	141344	50.0000	43.10

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

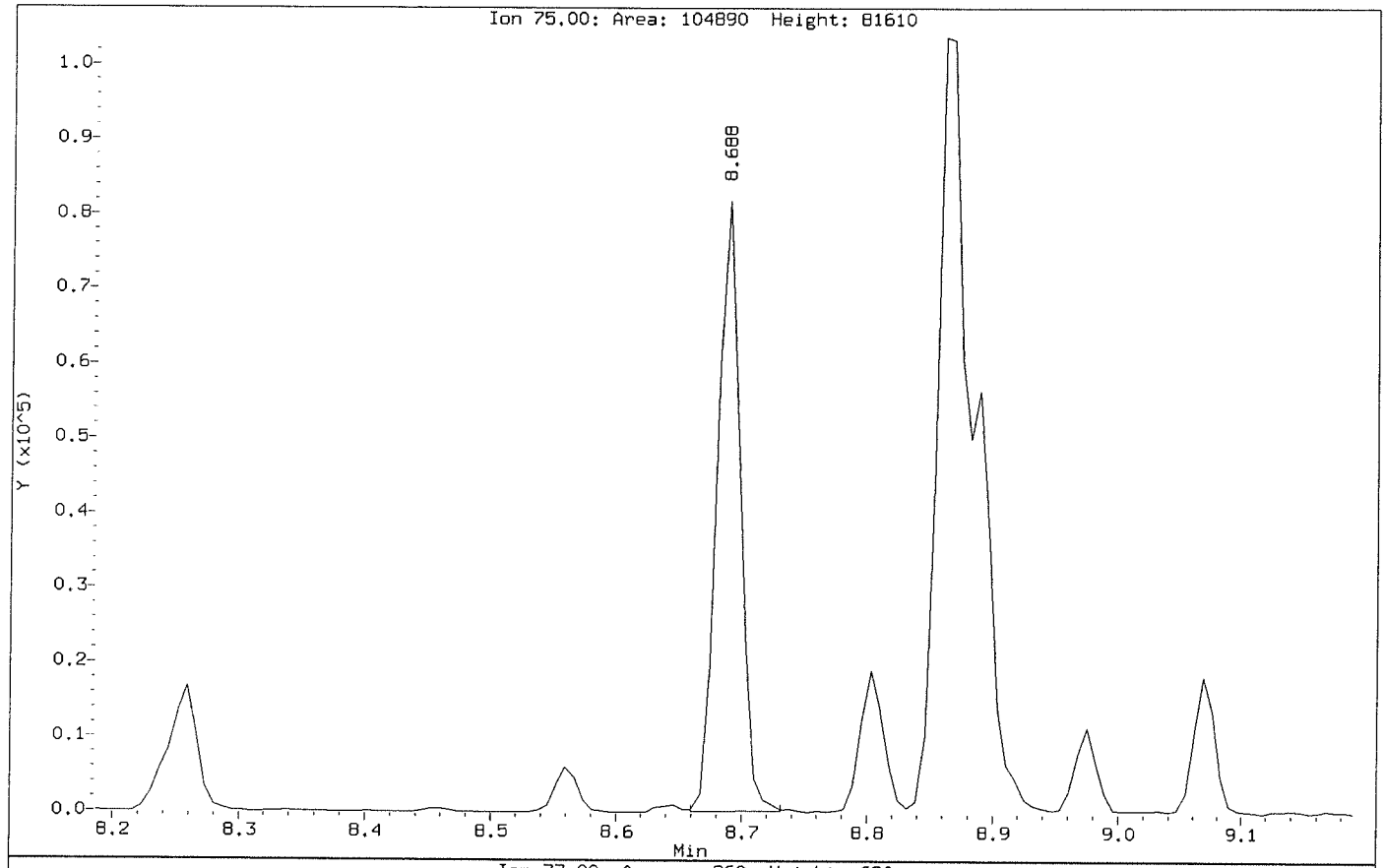


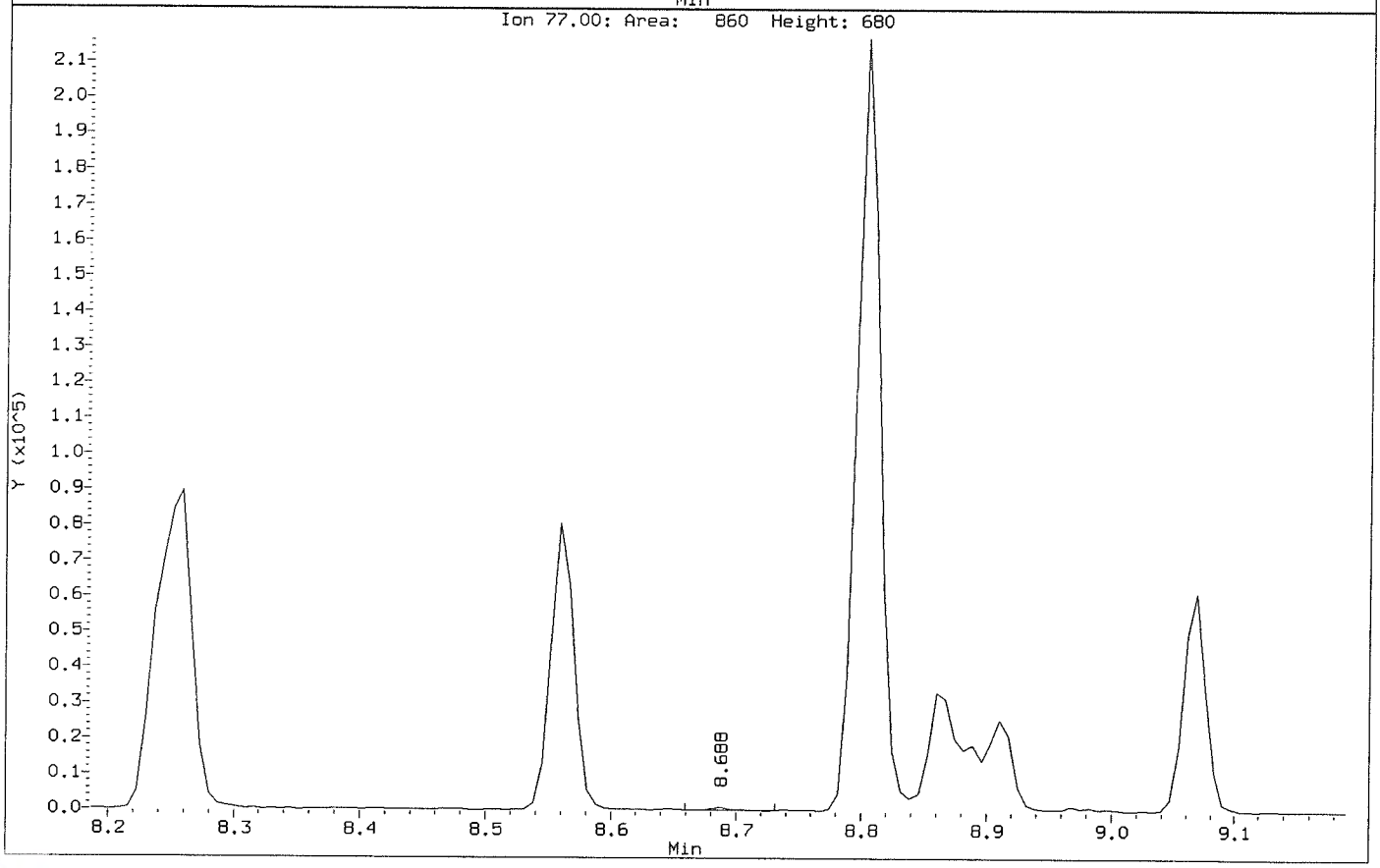
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Client ID: VSTD050
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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\Before\X051808.D
Injection Date: 18-MAY-2021 13:49
Instrument: voa6.i
Client Sample ID: VSTD050

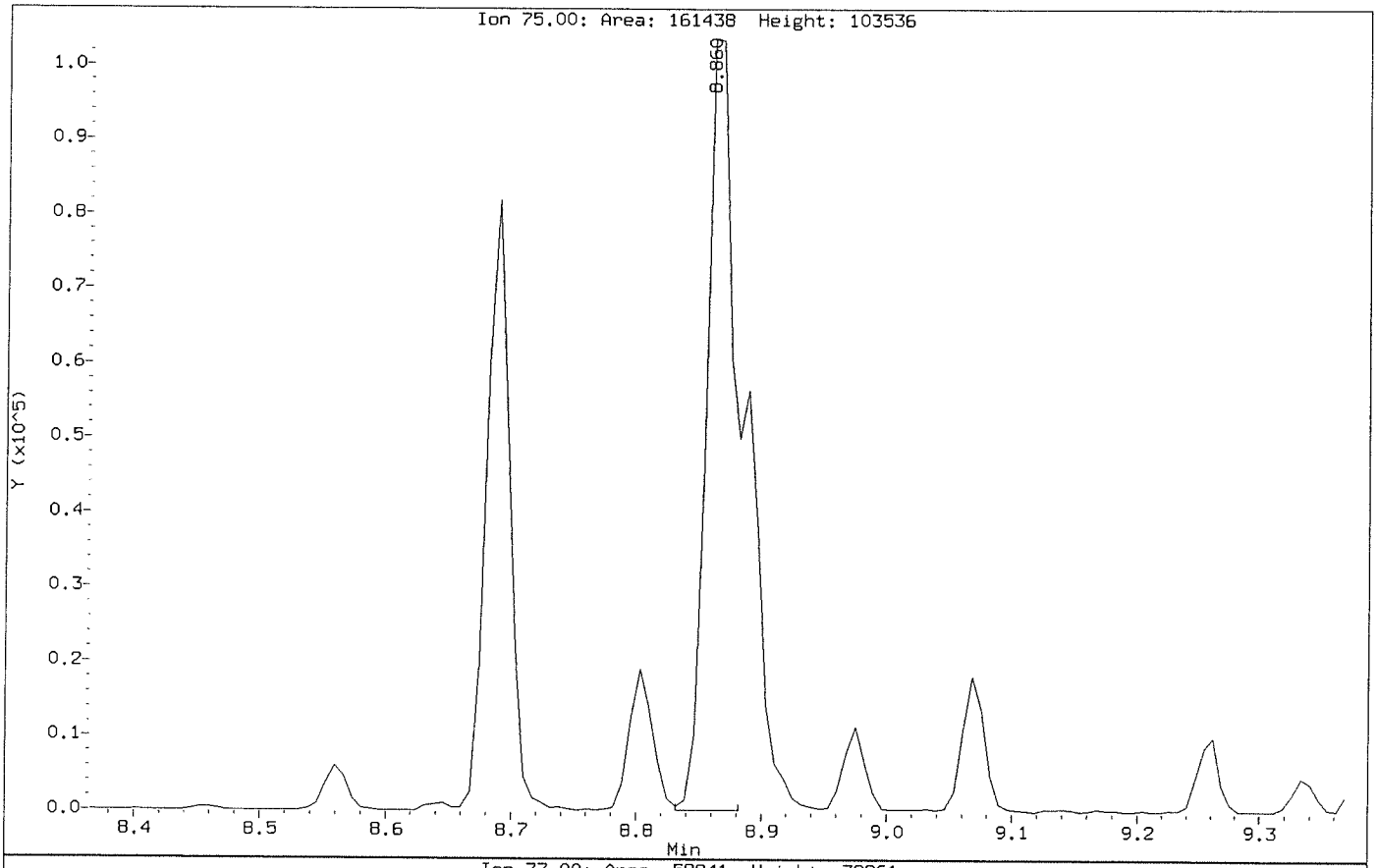
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

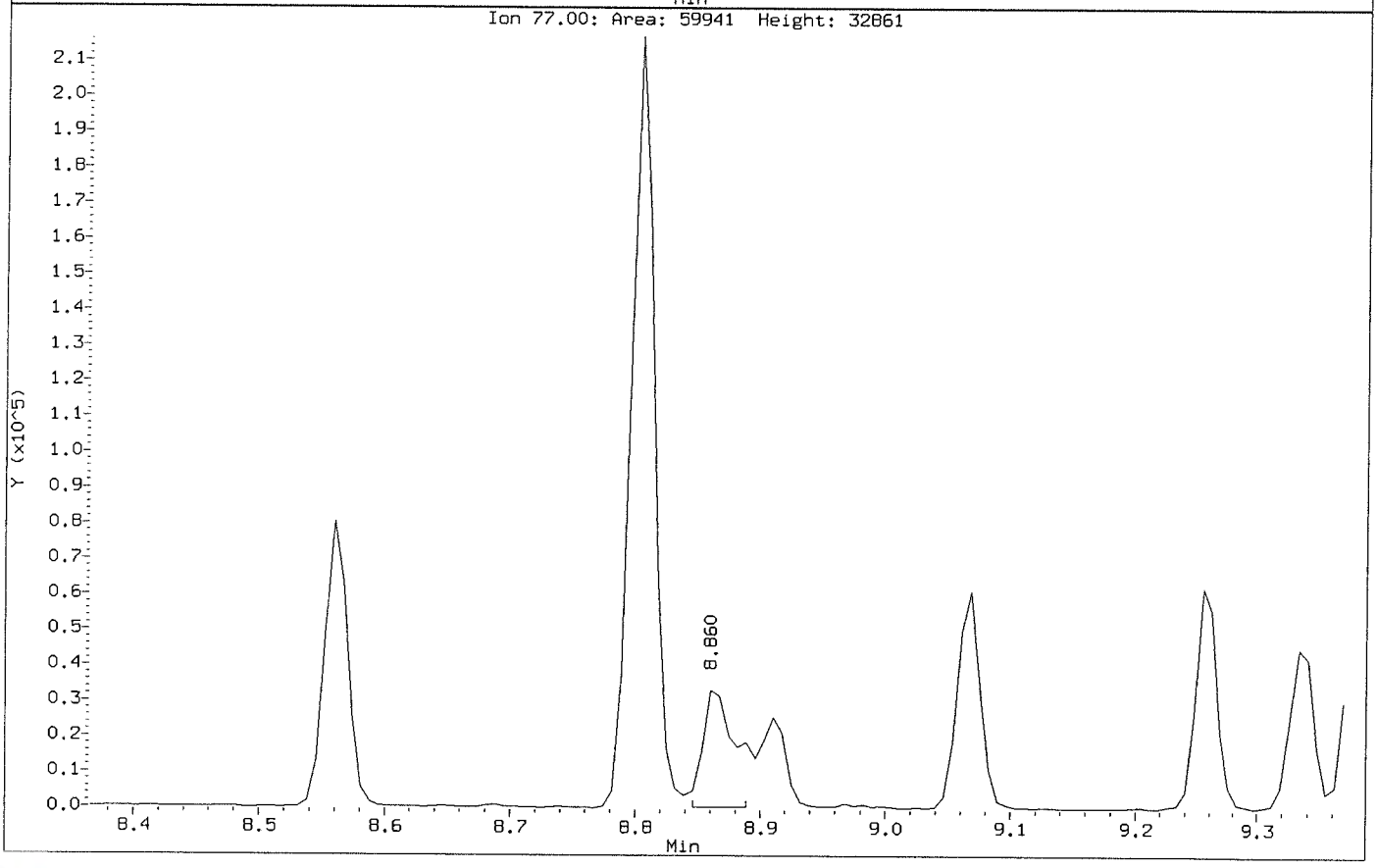




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Instrument: voa6.i
Client Sample ID: VSTD050

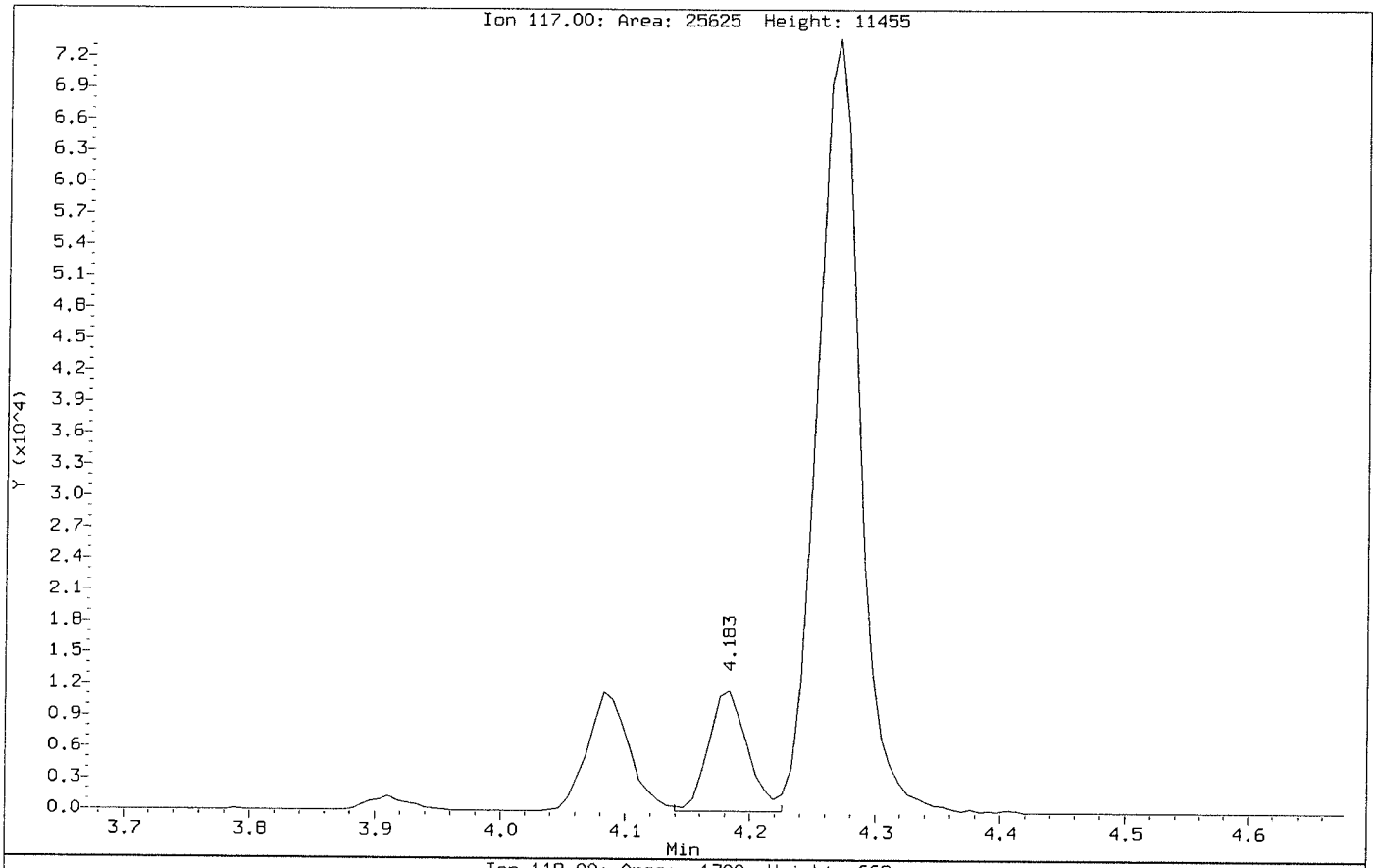
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

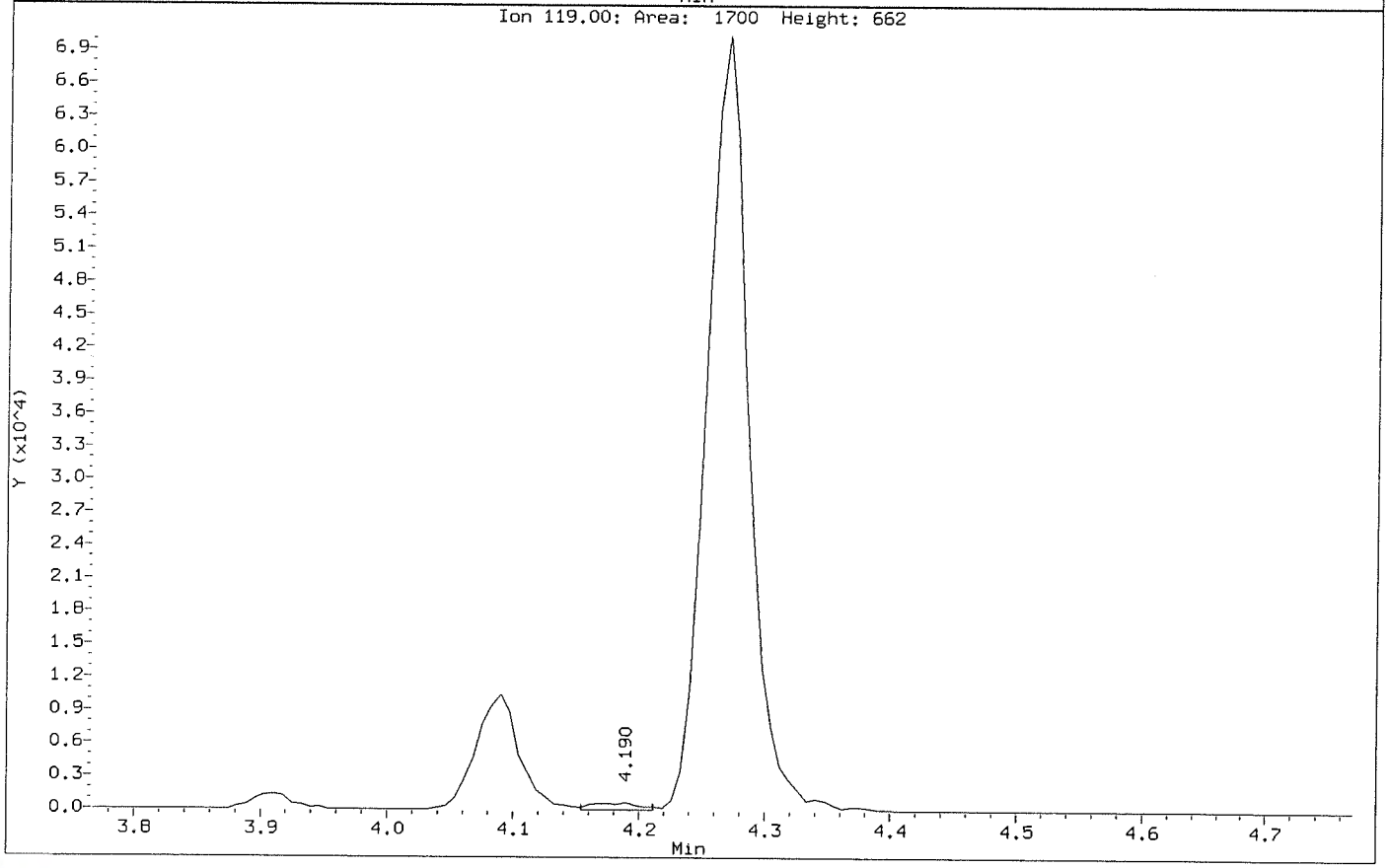




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Instrument: voa6.i
Client Sample ID: VSTD050

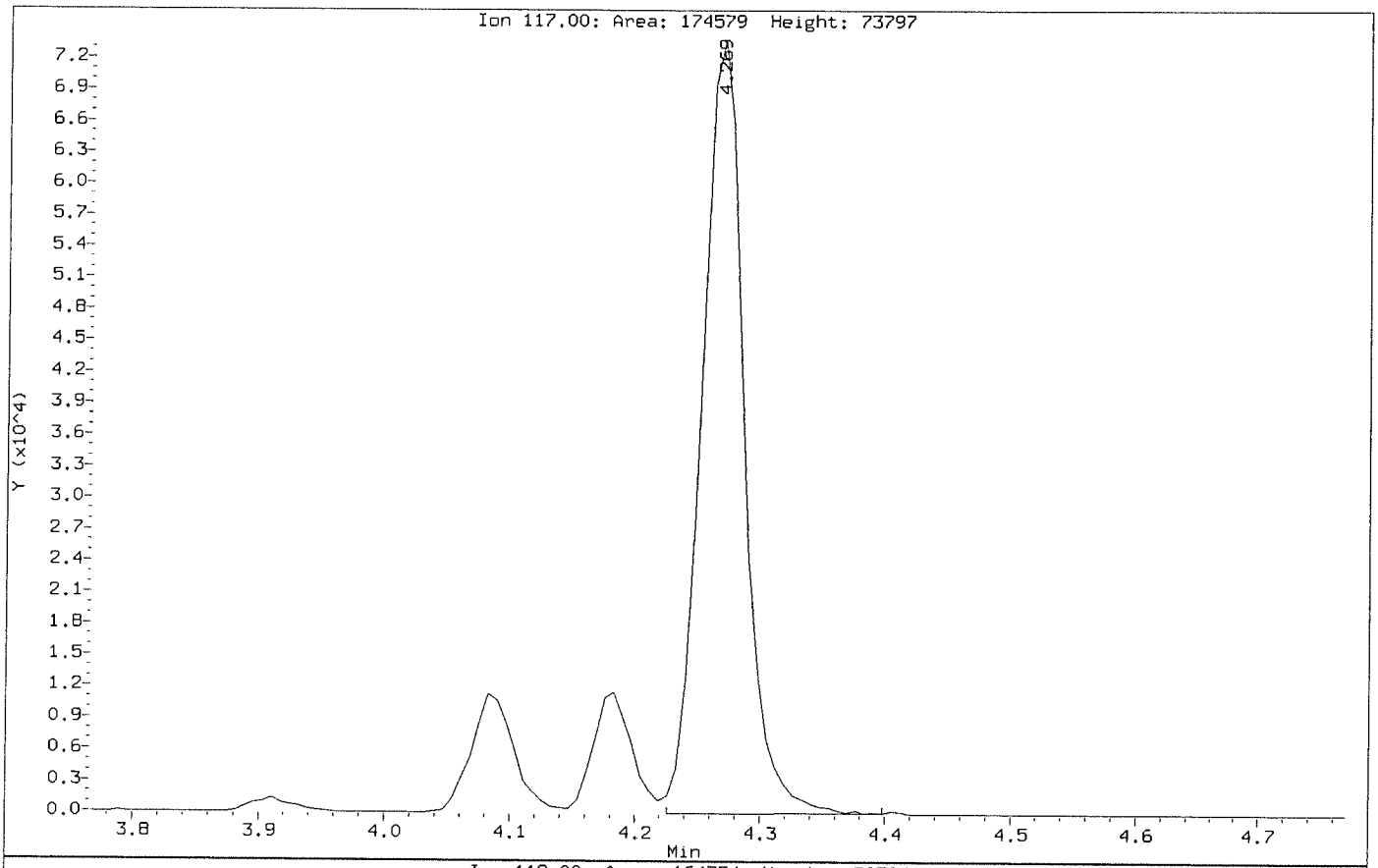
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

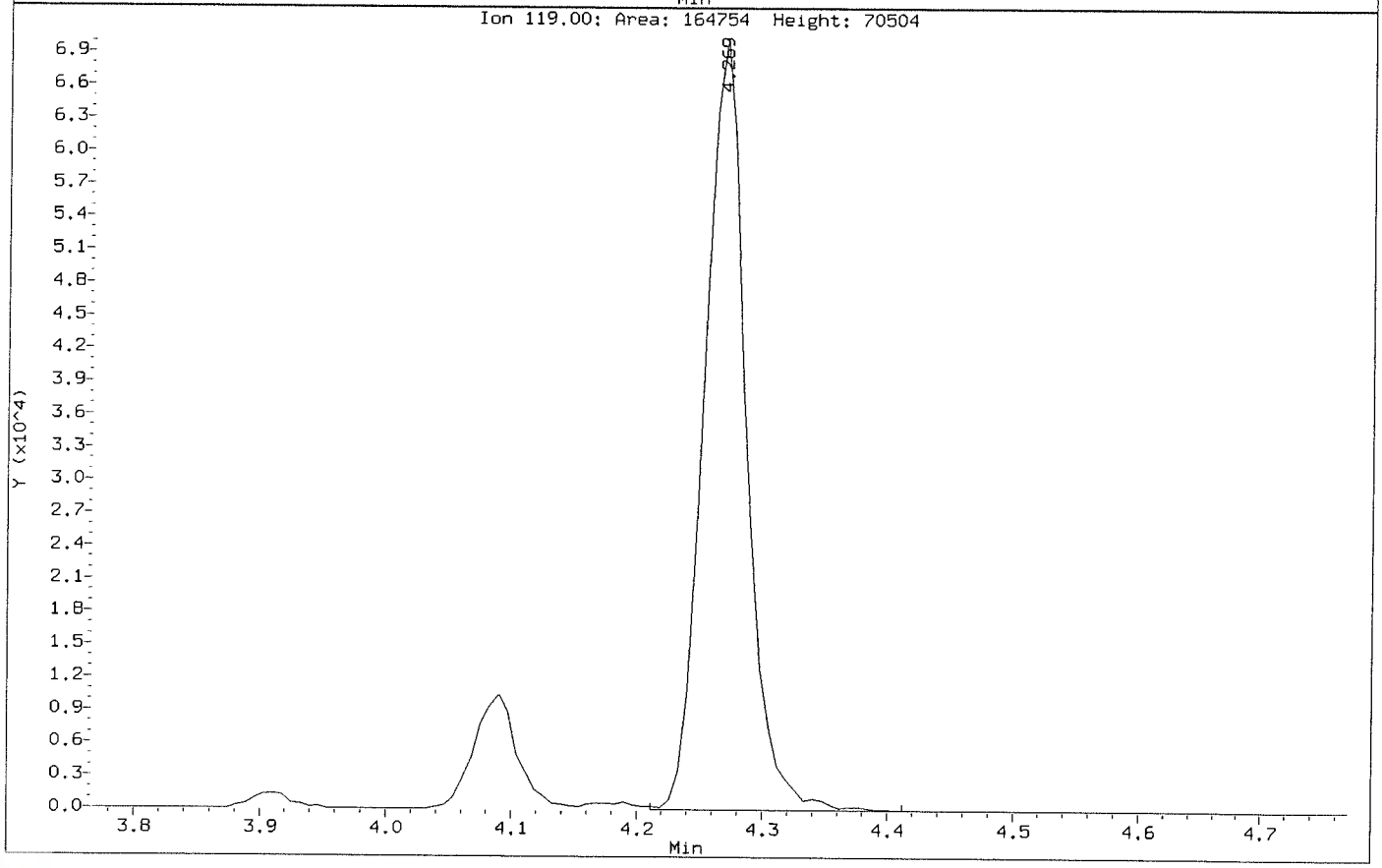




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Injection Date: 18-MAY-2021 13:49
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: Carbon Tetrachloride
CAS Number: 56-23-5





Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051809.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051809.D
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Inj Date : 18-MAY-2021 14:10
Operator : PC Inst ID: voa6.i
Smp Info : VSDT100;VSTD100;1;8;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 13:49 Cal File: X051808.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

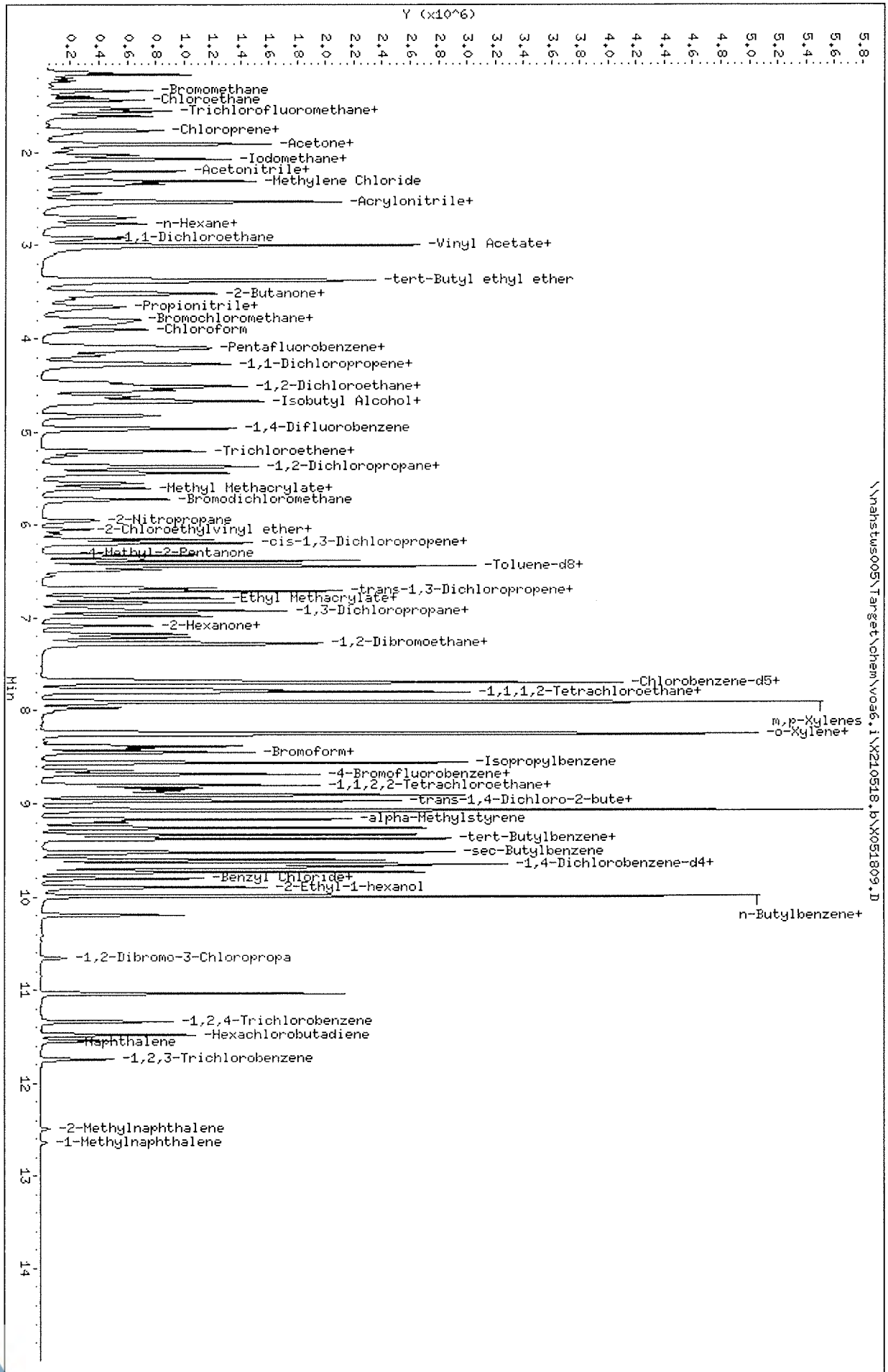
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	314001	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	515778	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	499074	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	263690	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	428979	100.000	106.40
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	494712	100.000	104.87
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	355480	100.000	101.86
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1269181	100.000	102.44
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	370212	100.000	101.81
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	563928	100.000	105.58
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	443127	100.000	101.99
138 Freon TF	101	1.919	1.919	(0.459)	289976	100.000	97.33
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	297064	100.000	102.46
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	592075	100.000	101.82
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	287208	100.000	91.46
32 1,1-Dichloropropene	75	4.282	4.282	(0.863)	458513	100.000	103.77
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	129422	100.000	99.33
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	370826	100.000	104.28(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	230076	100.000	94.78
79 1,2,4-Trimethylbenzene	105	9.375	9.375	(0.970)	1381832	100.000	103.03
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	35357	100.000	97.87
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	370175	100.000	106.24

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051809.D Page 2
Report Date: 22-Jun-2021 08:20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	710748	100.000	96.16
33	1,2-Dichloroethane	62	4.555	4.555	(0.918)	496566	100.000	97.91
42	1,2-Dichloropropane	63	5.436	5.436	(1.095)	346292	100.000	99.90
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1375282	100.000	104.48
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	759728	100.000	100.28
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	570759	100.000	100.57
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	774191	100.000	99.68
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	542311	100.000	104.25
24	2-Butanone	43	3.580	3.580	(0.856)	243094	200.000	209.73(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	1122830	100.000	95.54
52	2-Hexanone	43	7.090	7.090	(0.924)	424072	200.000	200.67(A)
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	1388921	100.000	101.35
82	p-Isopropyltoluene	119	9.647	9.647	(0.999)	1372597	100.000	105.42
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	642103	200.000	201.91(A)
10	Acetone	43	1.976	1.976	(0.473)	161640	200.000	208.98(A)
37	Benzene	78	4.512	4.512	(0.909)	1325440	100.000	103.87
74	Bromobenzene	156	8.802	8.802	(0.911)	434635	100.000	98.87
29	Bromochloromethane	128	3.795	3.795	(0.908)	192522	100.000	100.60
39	Bromodichloromethane	83	5.729	5.729	(1.154)	522723	100.000	104.89
66	Bromoform	173	8.408	8.408	(1.096)	260736	100.000	108.02
6	Bromomethane	94	1.338	1.338	(0.320)	330862	100.000	100.72
19	Carbon Disulfide	76	2.069	2.069	(0.495)	1515397	200.000	204.83(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.860)	477105	100.000	106.12(H)
59	Chlorobenzene	112	7.692	7.692	(1.003)	991098	100.000	101.27
7	Chloroethane	64	1.403	1.403	(0.336)	231805	100.000	97.52
28	Chloroform	83	3.910	3.910	(0.935)	675366	100.000	101.23
3	Chloromethane	50	1.073	1.073	(0.257)	323129	100.000	95.20
27	cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	374274	100.000	103.42
46	cis-1,3-Dichloropropene	75	6.152	6.152	(1.240)	610311	100.000	107.93
55	Dibromochloromethane	129	7.176	7.176	(0.936)	418487	100.000	107.28
44	Dibromomethane	93	5.550	5.550	(1.118)	257462	100.000	103.63
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	385804	100.000	95.65
61	Ethylbenzene	106	7.799	7.799	(1.017)	512156	100.000	105.90
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	159233	100.000	97.40
67	Isopropylbenzene	105	8.559	8.559	(1.116)	1609936	100.000	108.92
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1348570	200.000	216.38(A)
17	Methylene Chloride	84	2.305	2.305	(0.551)	327997	100.000	104.16
87	n-Butylbenzene	91	9.991	9.991	(1.034)	1312086	100.000	105.96
73	n-Propylbenzene	91	8.910	8.910	(0.922)	1949961	100.000	104.41
92	Naphthalene	128	11.539	11.539	(1.194)	338098	100.000	94.47
63	o-Xylene	106	8.244	8.244	(1.075)	632124	100.000	104.28
81	sec-Butylbenzene	105	9.519	9.519	(0.985)	1619983	100.000	104.81
64	Styrene	104	8.258	8.258	(1.077)	1137742	100.000	98.28
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	1137349	100.000	101.82
56	Tetrachloroethene	164	6.926	6.926	(0.903)	296905	100.000	107.06
50	Toluene	91	6.446	6.446	(0.840)	1538042	100.000	106.81
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	308131	100.000	101.99
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.346)	546481	100.000	110.47
38	Trichloroethene	130	5.206	5.206	(1.049)	347501	100.000	101.74
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	566576	100.000	93.87
5	Vinyl Chloride	62	1.145	1.145	(0.274)	347786	100.000	91.73

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

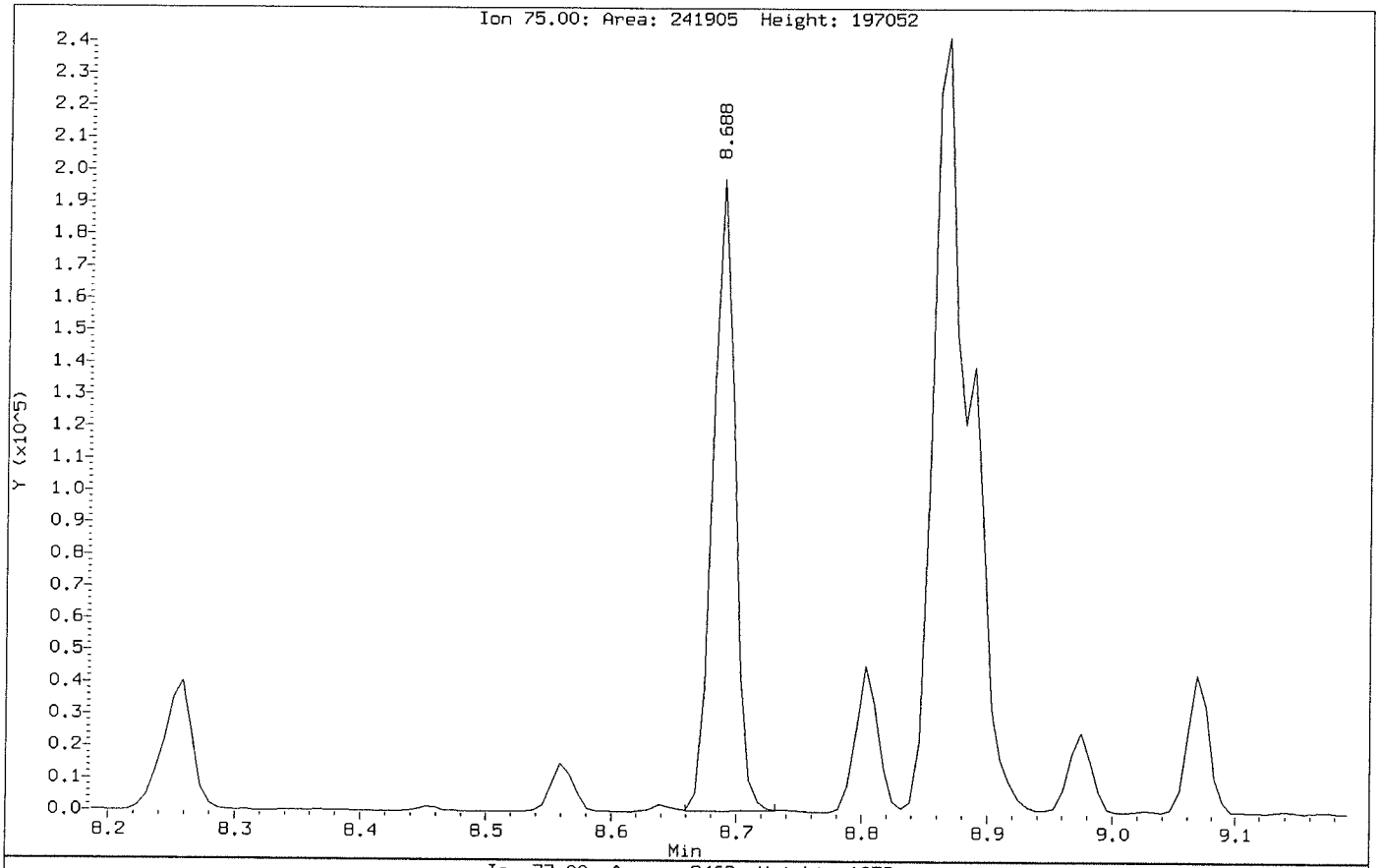


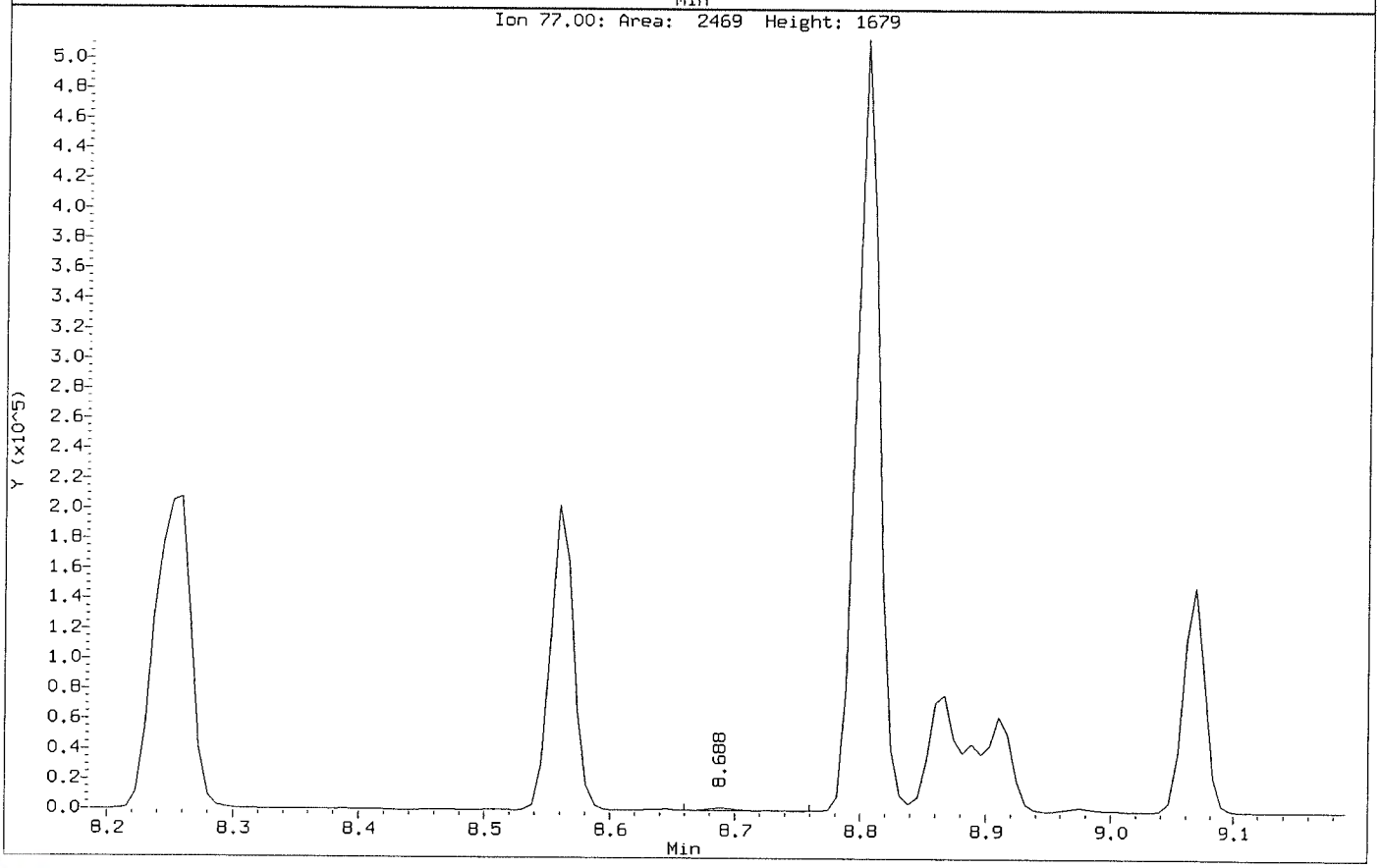
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Date : 18-MAY-2021 14:10
Client ID: VSTD100
Sample Info: VSDT100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\Before\X051809.D
Injection Date: 18-MAY-2021 14:10
Instrument: voa6.i
Client Sample ID: VSTD100

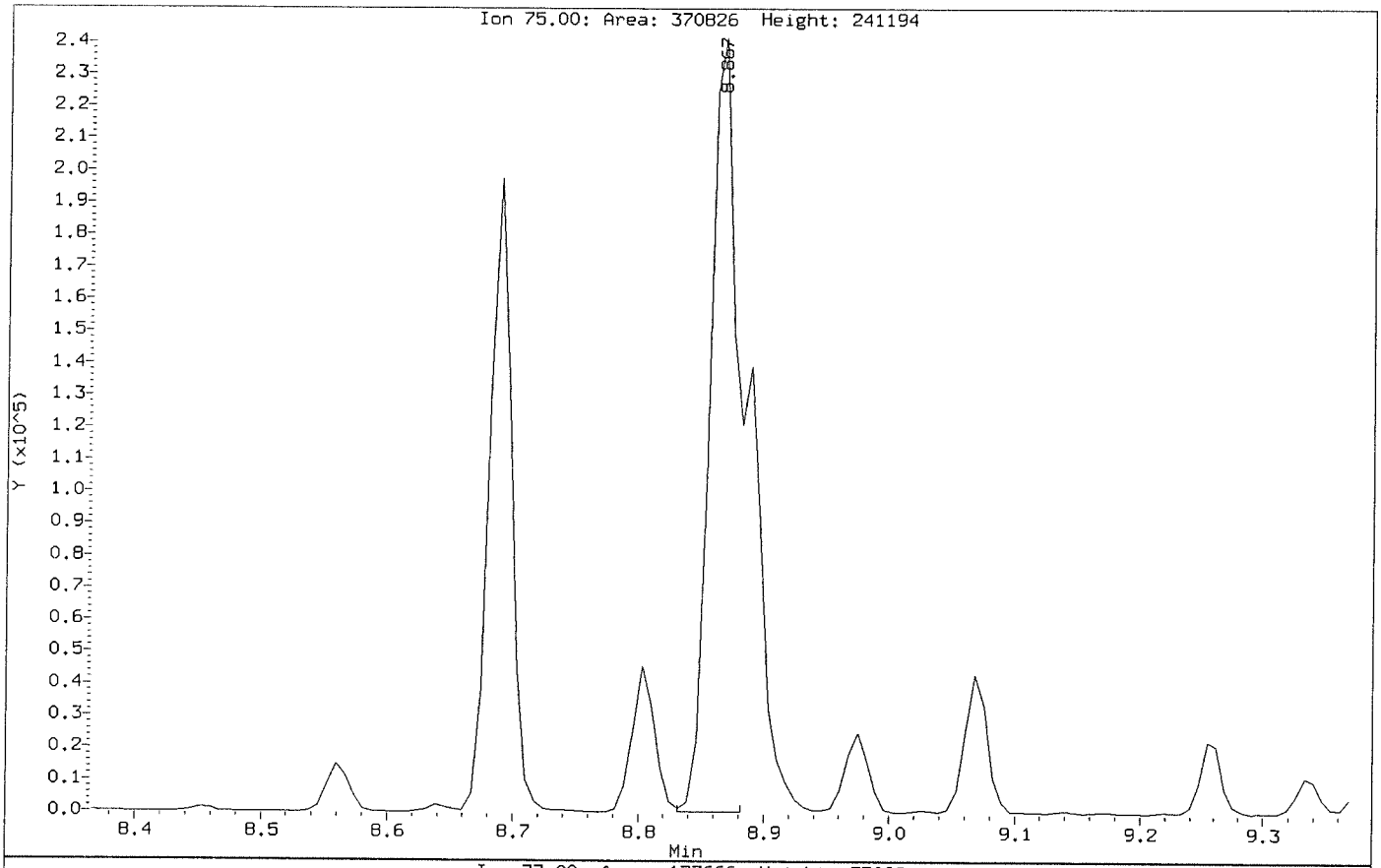
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

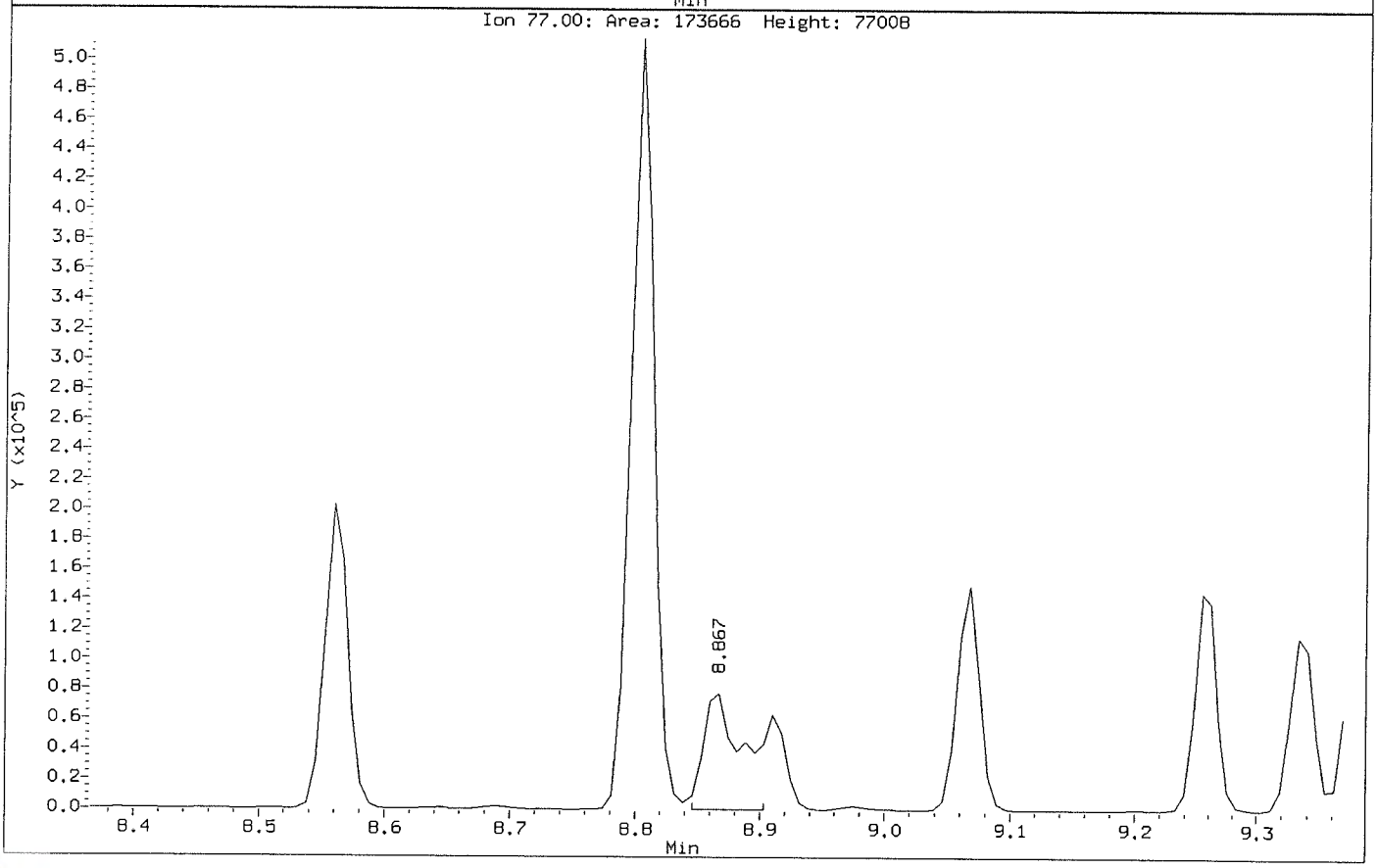




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Instrument: voa6.i
Client Sample ID: VSTD100

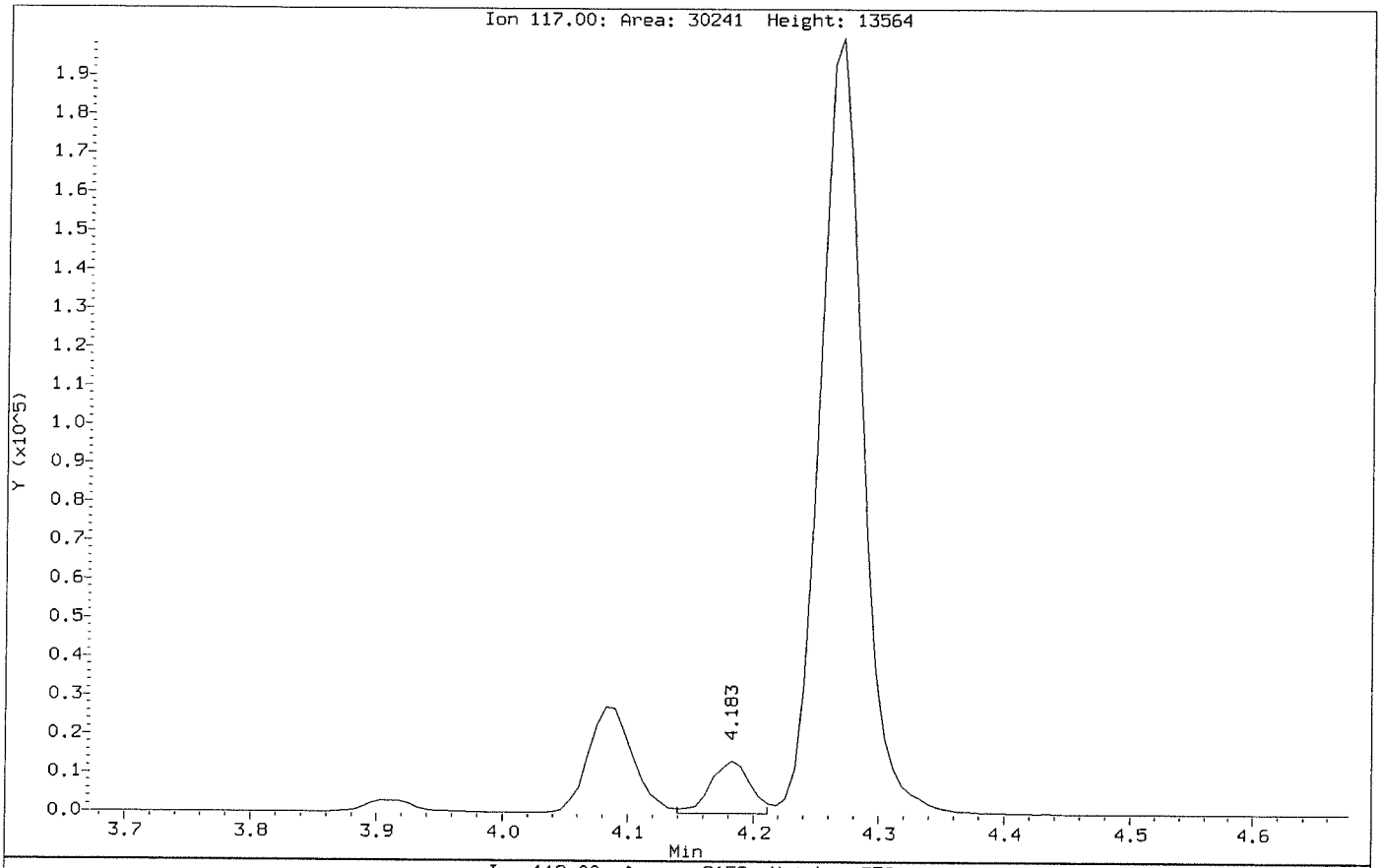
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CAS Number: 96-18-4

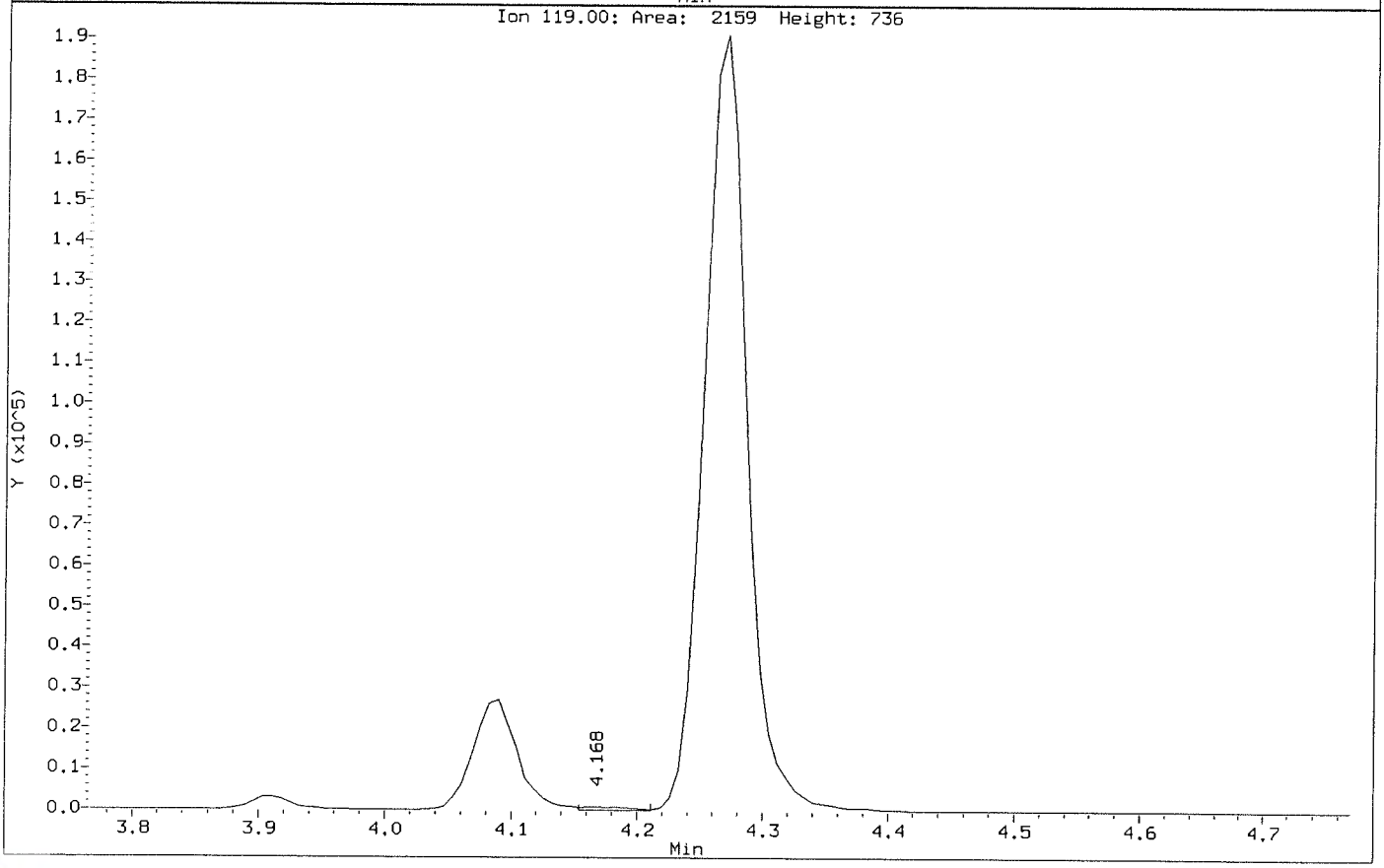




Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\Before\X051809.D
Injection Date: 18-MAY-2021 14:10
Instrument: voa6.i
Client Sample ID: VSTD100

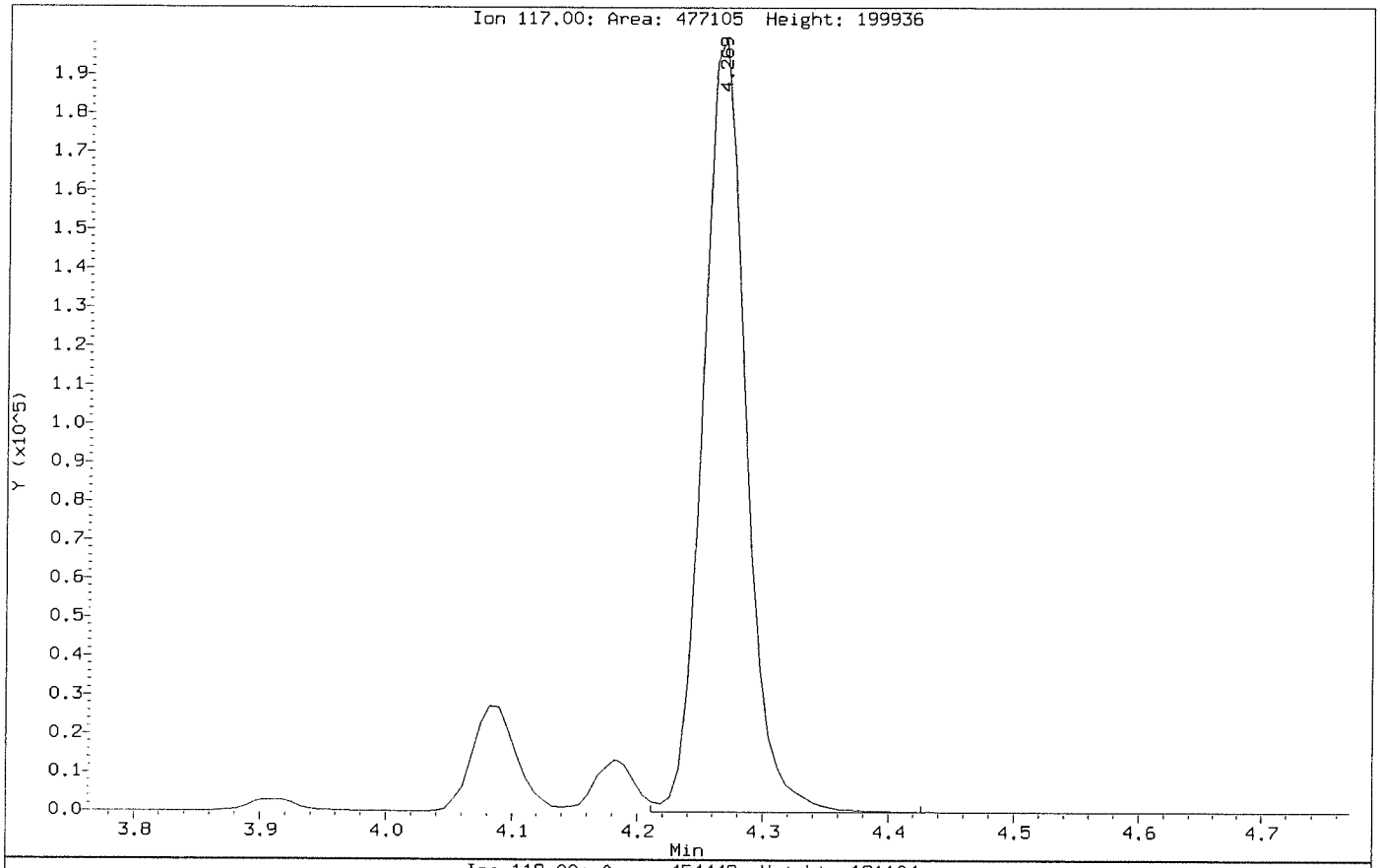
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

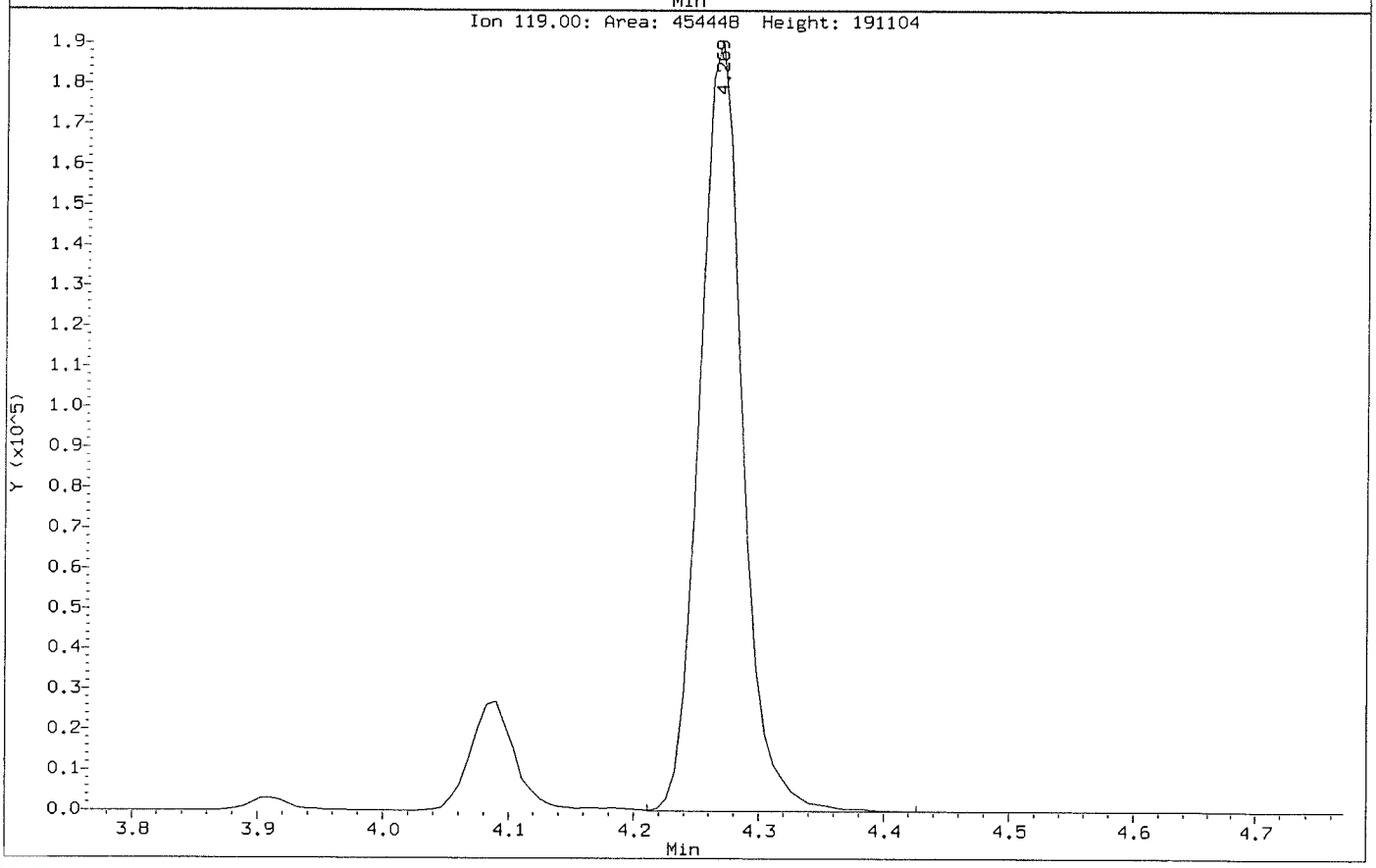




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Injection Date: 18-MAY-2021 14:10
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: Carbon Tetrachloride
CAS Number: 56-23-5





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051810.D
Lab Smp Id: VSDT150 Client Smp ID: VSTD150
Inj Date : 18-MAY-2021 14:31
Operator : PC Inst ID: voa6.i
Smp Info : VSDT150;VSTD150;1;9;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 14:10 Cal File: X051809.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

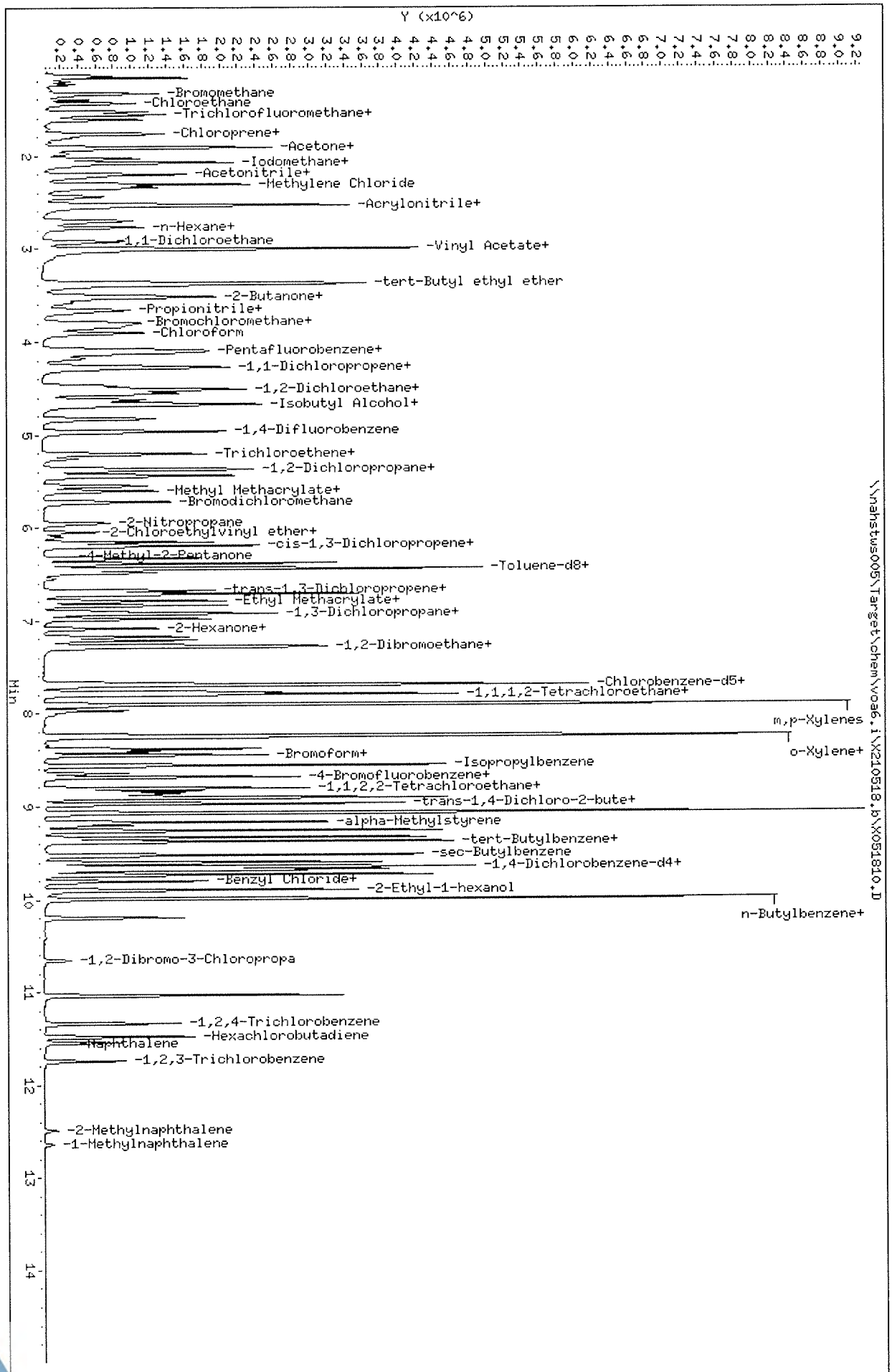
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	329109	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	561232	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	528578	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	275715	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.469	4.469	(1.069)	631492	150.000	149.95
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	751419	150.000	150.35
$	30 Dibromofluoromethane	113	4.096	4.096	(0.979)	559479	150.000	153.07
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1868970	150.000	142.03
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	583245	150.000	151.45
	31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	897728	150.000	160.37
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	690313	150.000	152.22
	138 Freon TF	101	1.911	1.911	(0.457)	467404	150.000	149.69
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	459596	150.000	149.68
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	952111	150.000	156.22
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	466111	150.000	141.61
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	721187	150.000	150.00
	93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	217046	150.000	153.02
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	570152	150.000	153.63(MH)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	378072	150.000	147.54
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	2166512	150.000	154.49
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	55728	150.000	146.72
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	578368	150.000	156.73

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051810.D Page 2
Report Date: 22-Jun-2021 08:20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	1139772	150.000	147.49
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	771966	150.000	139.89
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	552978	150.000	146.61
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	2177669	150.000	158.22
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	1194968	150.000	150.85
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	901901	150.000	150.04
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	1228277	150.000	151.12
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	851542	150.000	156.19
24	2-Butanone	43	3.580	3.580	(0.856)	372510	300.000	306.63(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	1760413	150.000	143.25
52	2-Hexanone	43	7.090	7.090	(0.924)	684773	300.000	306.08(A)
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	2179360	150.000	152.09
82	p-Isopropyltoluene	119	9.648	9.648	(0.999)	2130981	150.000	156.53
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	1037606	300.000	308.03(A)
10	Acetone	43	1.976	1.976	(0.473)	237075	300.000	294.50(A)
37	Benzene	78	4.512	4.512	(0.908)	2104958	150.000	151.60
74	Bromobenzene	156	8.802	8.802	(0.911)	688486	150.000	149.79
29	Bromochloromethane	128	3.795	3.795	(0.908)	308322	150.000	153.72
39	Bromodichloromethane	83	5.722	5.722	(1.151)	826506	150.000	152.41
66	Bromoform	173	8.408	8.408	(1.096)	428300	150.000	167.54
6	Bromomethane	94	1.331	1.331	(0.318)	596164	150.000	173.50
19	Carbon Disulfide	76	2.069	2.069	(0.495)	2589664	300.000	333.97(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	758939	150.000	155.14
59	Chlorobenzene	112	7.692	7.692	(1.003)	1550410	150.000	149.58
7	Chloroethane	64	1.403	1.403	(0.336)	345673	150.000	138.75
28	Chloroform	83	3.910	3.910	(0.935)	1055145	150.000	150.90
3	Chloromethane	50	1.073	1.073	(0.257)	530291	150.000	148.93
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	604470	150.000	159.36
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	975279	150.000	158.51
55	Dibromochloromethane	129	7.176	7.176	(0.936)	660021	150.000	159.75
44	Dibromomethane	93	5.550	5.550	(1.117)	415353	150.000	153.64
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	635388	150.000	149.11
61	Ethylbenzene	106	7.799	7.799	(1.017)	794587	150.000	155.13
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	251193	150.000	145.34
67	Isopropylbenzene	105	8.559	8.559	(1.116)	2535541	150.000	161.98
62	m,p-Xylenes	106	7.907	7.907	(1.031)	2132347	300.000	323.04(A)
17	Methylene Chloride	84	2.305	2.305	(0.551)	531906	150.000	161.17
87	n-Butylbenzene	91	9.991	9.991	(1.034)	2079941	150.000	160.65
73	n-Propylbenzene	91	8.910	8.910	(0.922)	2928436	150.000	149.96
92	Naphthalene	128	11.539	11.539	(1.194)	555881	150.000	146.77
63	o-Xylene	106	8.244	8.244	(1.075)	1010780	150.000	157.44
81	sec-Butylbenzene	105	9.519	9.519	(0.985)	2534431	150.000	156.82
64	Styrene	104	8.258	8.258	(1.077)	1857964	150.000	150.58
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	1789516	150.000	153.23
56	Tetrachloroethene	164	6.933	6.933	(0.904)	471649	150.000	160.58
50	Toluene	91	6.446	6.446	(0.840)	2428646	150.000	159.25
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	513534	150.000	162.18
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	875463	150.000	162.64
38	Trichloroethene	130	5.206	5.206	(1.048)	549218	150.000	147.78
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	898149	150.000	141.97
5	Vinyl Chloride	62	1.138	1.138	(0.272)	553097	150.000	139.19

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

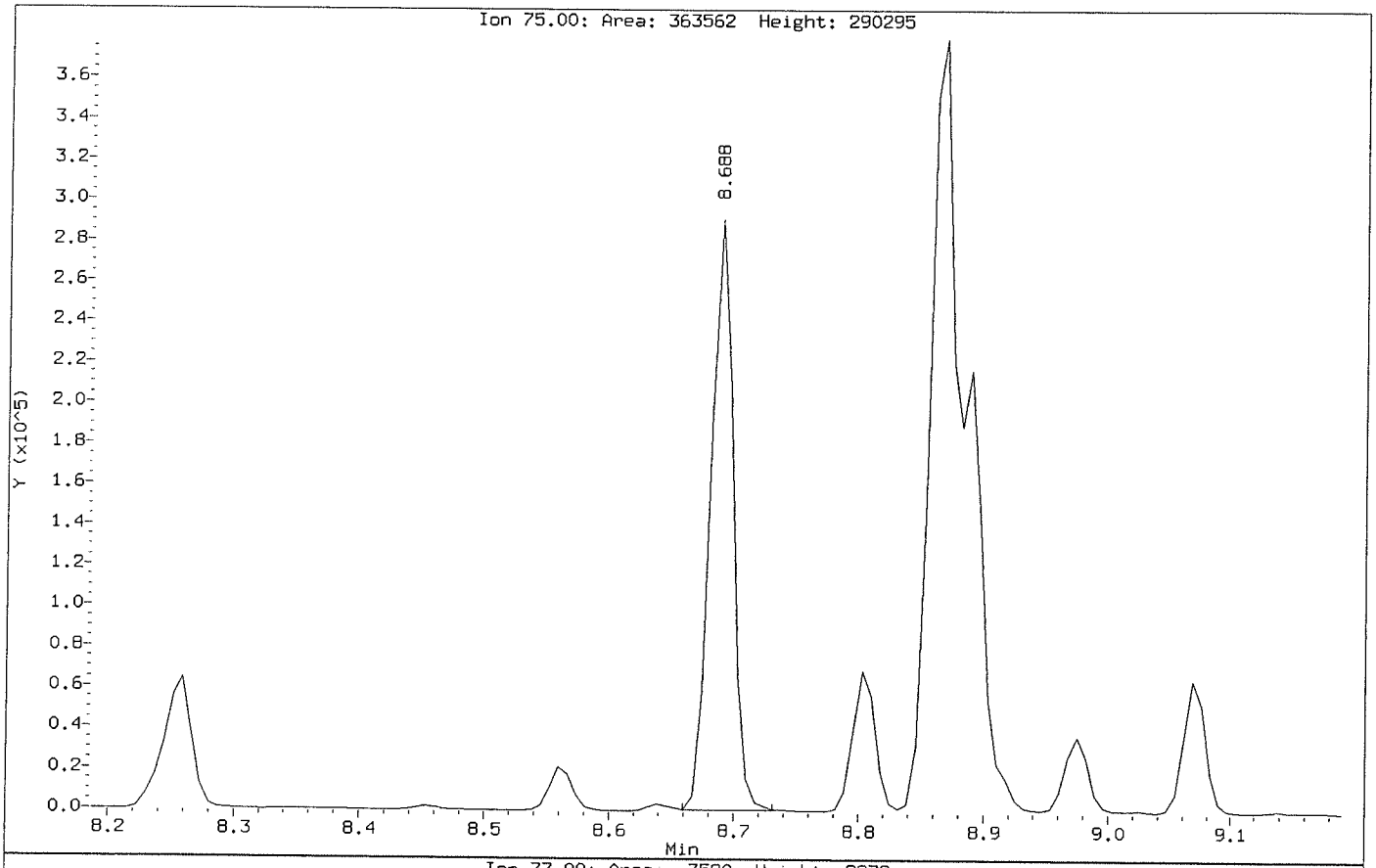


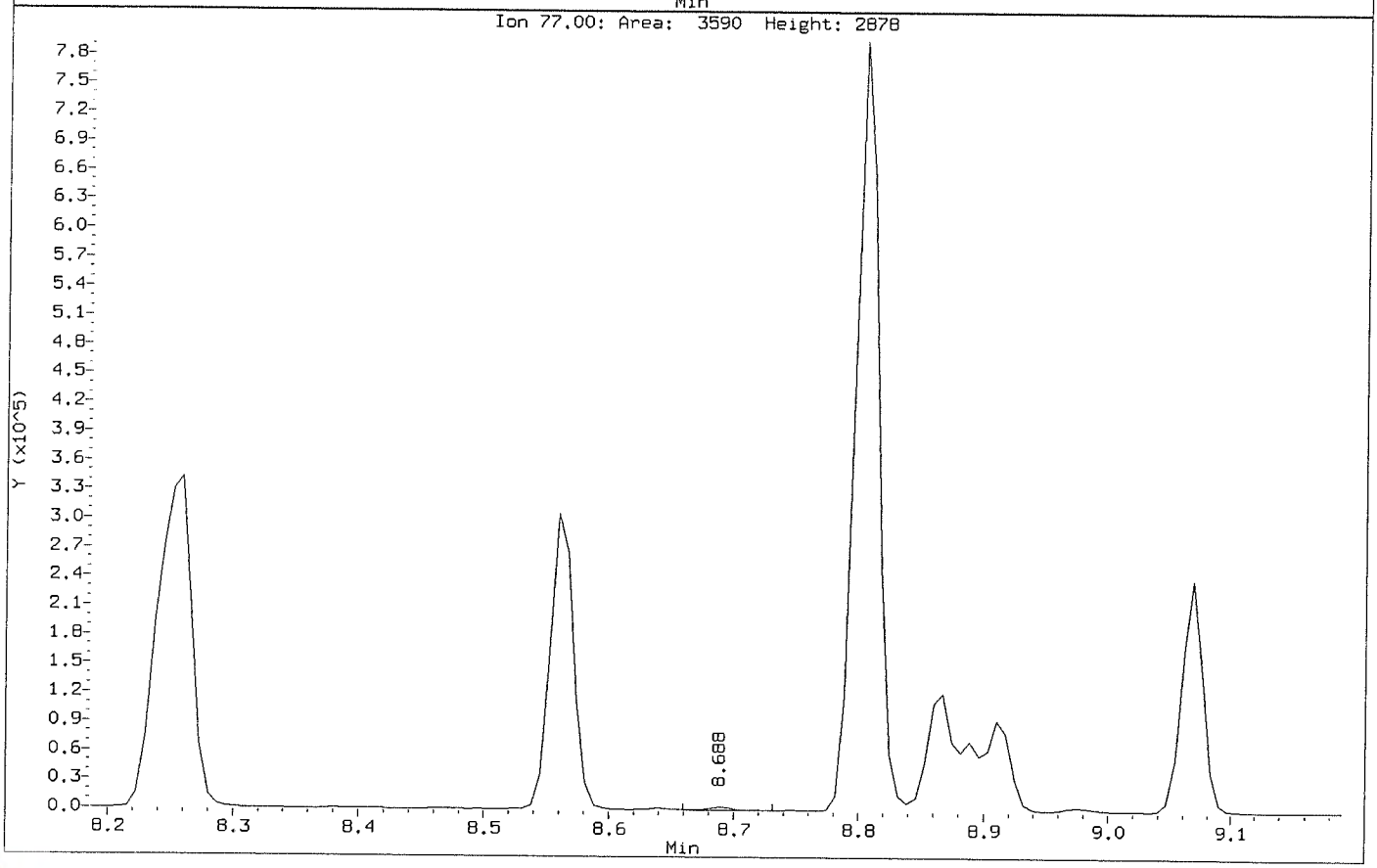
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Client ID: VSTD150
Sample Info: VSDT150;VSTD150;1;9;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\Before\X051810.D
Injection Date: 18-MAY-2021 14:31
Instrument: voa6.i
Client Sample ID: VSTD150

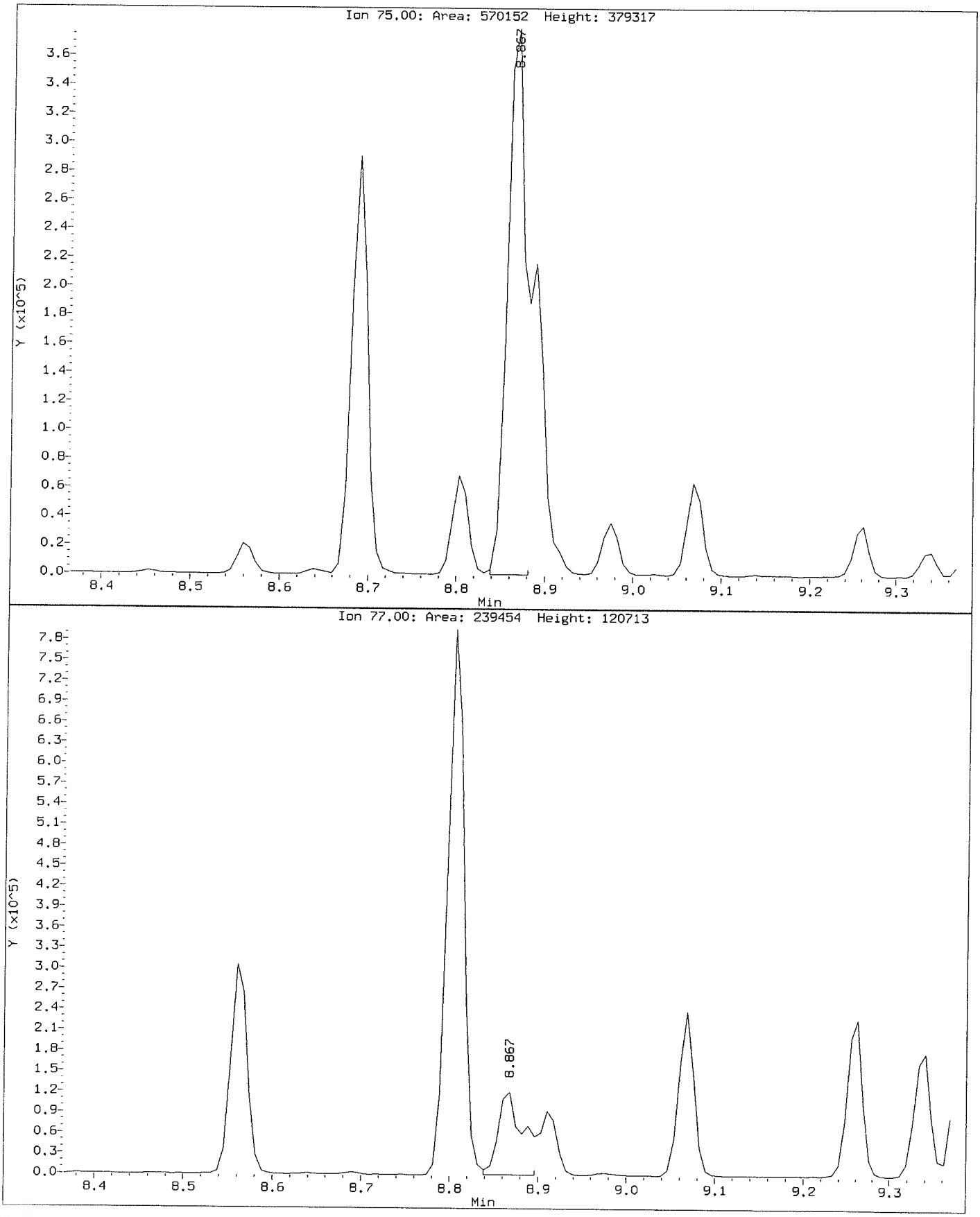
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051810.D
Injection Date: 18-MAY-2021 14:31
Instrument: voa6.i
Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051811.D
Lab Smp Id: VSDT200 Client Smp ID: VSTD200
Inj Date : 18-MAY-2021 14:52
Operator : PC Inst ID: voa6.i
Smp Info : VSDT200;VSTD200;1;10;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 14:31 Cal File: X051810.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

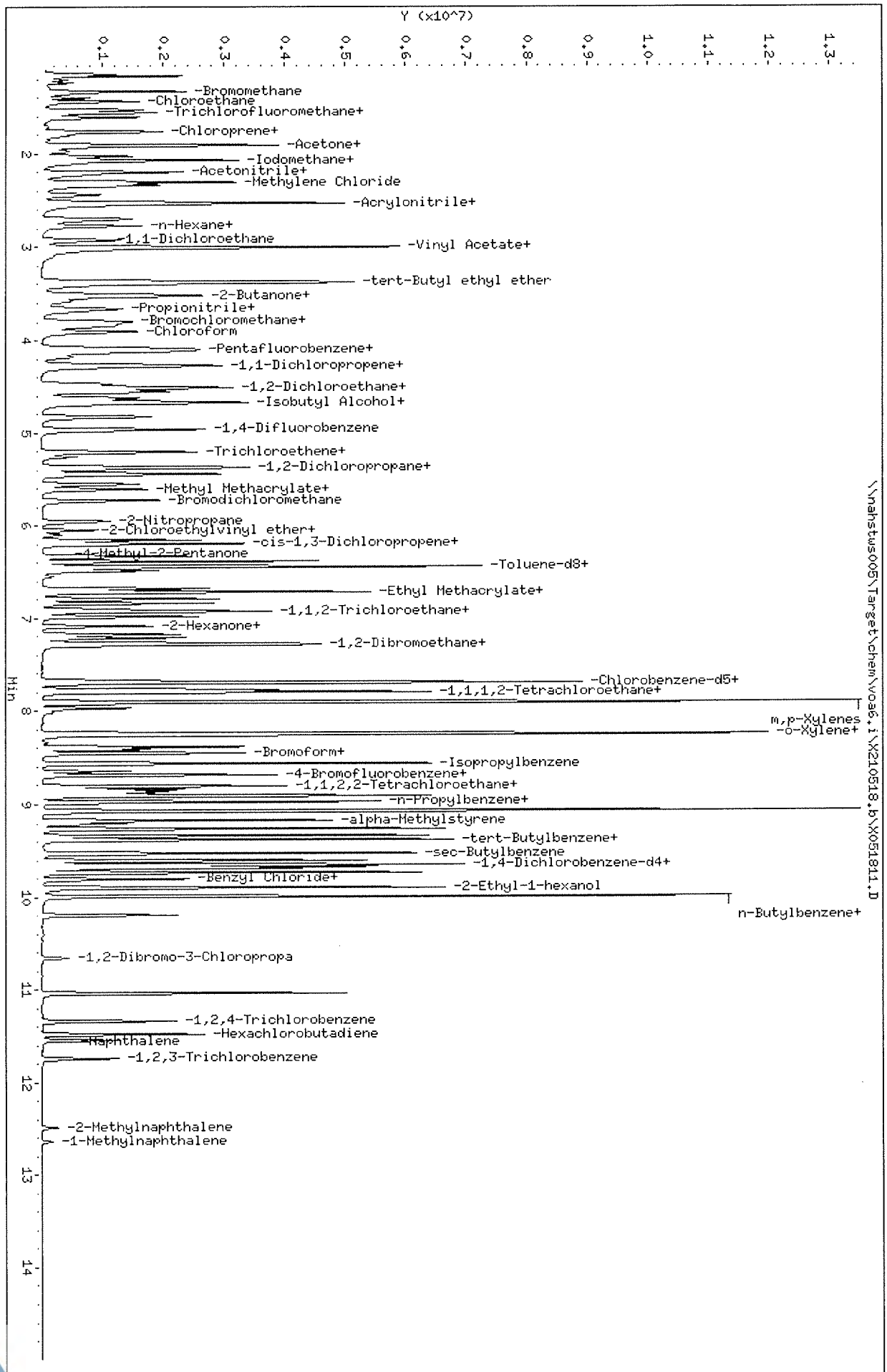
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	345916	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	588472	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	555625	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	290246	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	867782	200.000	196.44
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1039902	200.000	197.91
$ 30 Dibromofluoromethane	113	4.096	4.096	(0.979)	756859	200.000	197.08
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	2599039	200.000	187.57
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	817405	200.000	201.93(A)
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	1267981	200.000	215.51(A)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	941646	200.000	197.40
138 Freon TF	101	1.911	1.911	(0.457)	701725	200.000	213.82(A)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	644929	200.000	199.81
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	1359241	200.000	212.18(A)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	685117	200.000	198.04
32 1,1-Dichloropropene	75	4.282	4.282	(0.863)	1025250	200.000	203.38(A)
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	307927	200.000	198.57
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	760241	200.000	194.77(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	556188	200.000	205.21(A)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	3046305	200.000	206.36(A)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	81966	200.000	204.37(A)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	808859	200.000	208.52(A)

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051811.D Page 2
Report Date: 22-Jun-2021 08:20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	1637655	200.000	201.31(A)
33	1,2-Dichloroethane	62	4.555	4.555	(0.918)	1042686	200.000	180.20
42	1,2-Dichloropropane	63	5.436	5.436	(1.095)	761644	200.000	192.58
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	3139978	200.000	216.72(A)
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	1690760	200.000	202.76(A)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1218096	200.000	192.78
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	1710708	200.000	199.85
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	1199420	200.000	209.30(A)
24	2-Butanone	43	3.580	3.580	(0.856)	513022	400.000	401.78(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	2458535	200.000	190.05
52	2-Hexanone	43	7.090	7.090	(0.924)	929961	400.000	395.53(A)
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	3087694	200.000	204.70(A)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	3103142	200.000	216.53(A)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1395319	400.000	394.03(A)
10	Acetone	43	1.976	1.976	(0.473)	336393	400.000	399.38(A)
37	Benzene	78	4.512	4.512	(0.909)	2912199	200.000	200.02(A)
74	Bromobenzene	156	8.809	8.809	(0.912)	960630	200.000	198.54
29	Bromochloromethane	128	3.795	3.795	(0.908)	421944	200.000	200.14(A)
39	Bromodichloromethane	83	5.722	5.722	(1.153)	1143964	200.000	201.19(A)
66	Bromoform	173	8.408	8.408	(1.096)	591908	200.000	220.27(A)
6	Bromomethane	94	1.331	1.331	(0.318)	1028472	200.000	285.09(A)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	3804461	400.000	466.80(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.860)	1096156	200.000	213.70(A)
59	Chlorobenzene	112	7.692	7.692	(1.003)	2262308	200.000	207.64(A)
7	Chloroethane	64	1.396	1.396	(0.334)	499152	200.000	190.62
28	Chloroform	83	3.910	3.910	(0.935)	1481226	200.000	201.55(A)
3	Chloromethane	50	1.073	1.073	(0.257)	760194	200.000	203.04(A)
27	cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	842045	200.000	211.21(A)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.241)	1345882	200.000	208.61(A)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	936355	200.000	215.61(A)
44	Dibromomethane	93	5.550	5.550	(1.118)	570422	200.000	201.24(A)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	916851	200.000	203.94(A)
61	Ethylbenzene	106	7.799	7.799	(1.017)	1127474	200.000	209.41(A)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	377761	200.000	206.26(A)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	3672148	200.000	223.17(A)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	3061828	400.000	441.27(A)
17	Methylene Chloride	84	2.298	2.298	(0.550)	744253	200.000	214.56(A)
87	n-Butylbenzene	91	9.991	9.991	(1.034)	3008380	200.000	220.73(A)
73	n-Propylbenzene	91	8.910	8.910	(0.922)	4200522	200.000	204.34(A)
92	Naphthalene	128	11.539	11.539	(1.194)	826266	200.000	205.96(A)
63	o-Xylene	106	8.244	8.244	(1.075)	1438569	200.000	213.16(A)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	3709108	200.000	218.02(A)
64	Styrene	104	8.258	8.258	(1.077)	2618657	200.000	201.30(A)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	2556764	200.000	207.96(A)
56	Tetrachloroethene	164	6.926	6.926	(0.903)	689947	200.000	223.46(A)
50	Toluene	91	6.446	6.446	(0.840)	3431584	200.000	214.06(A)
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	732798	200.000	220.19(A)
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.346)	1193973	200.000	211.55(A)
38	Trichloroethene	130	5.206	5.206	(1.049)	782732	200.000	200.86(A)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	1300834	200.000	195.63
5	Vinyl Chloride	62	1.138	1.138	(0.272)	806948	200.000	193.21

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

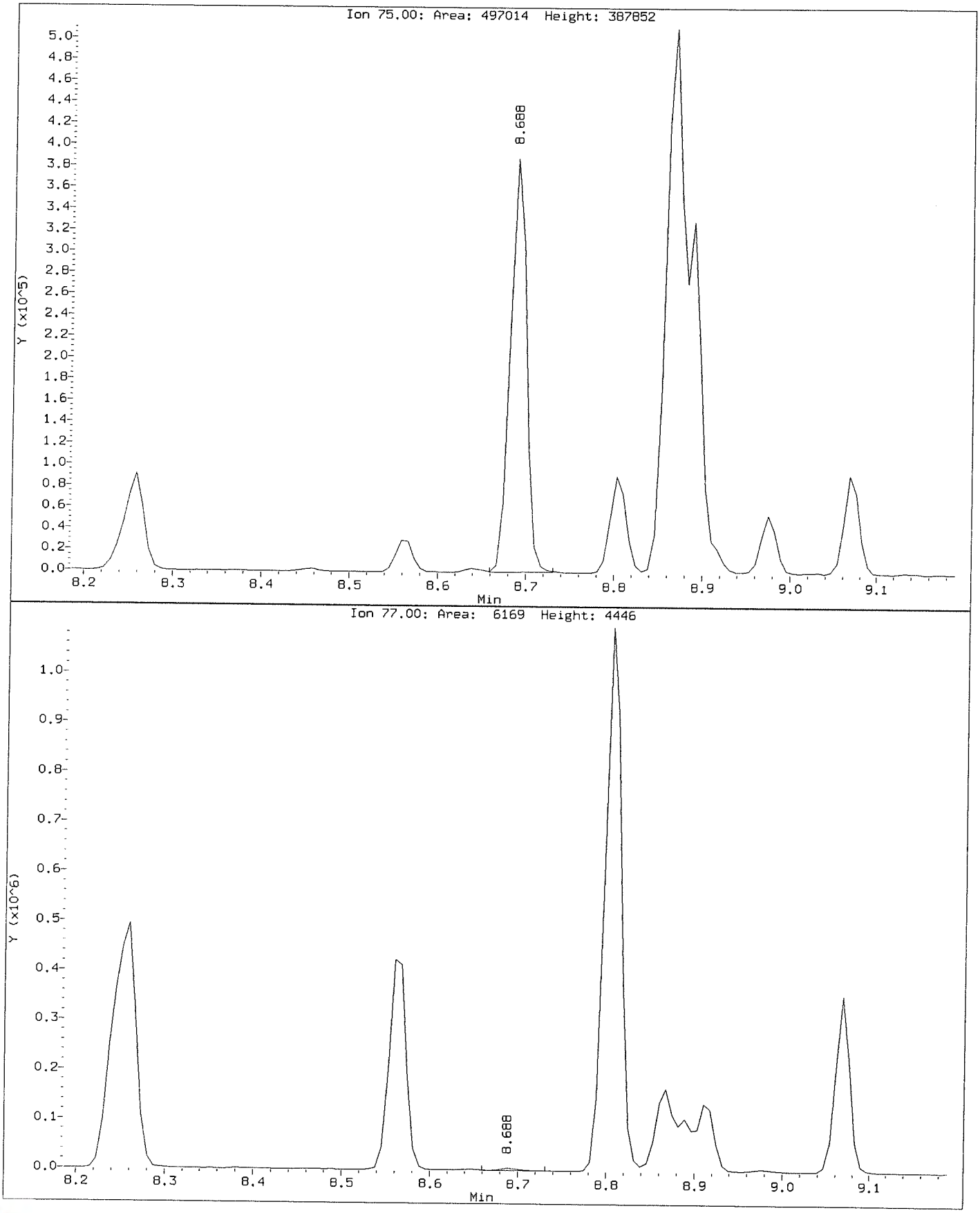


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Client ID: VSTD200
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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

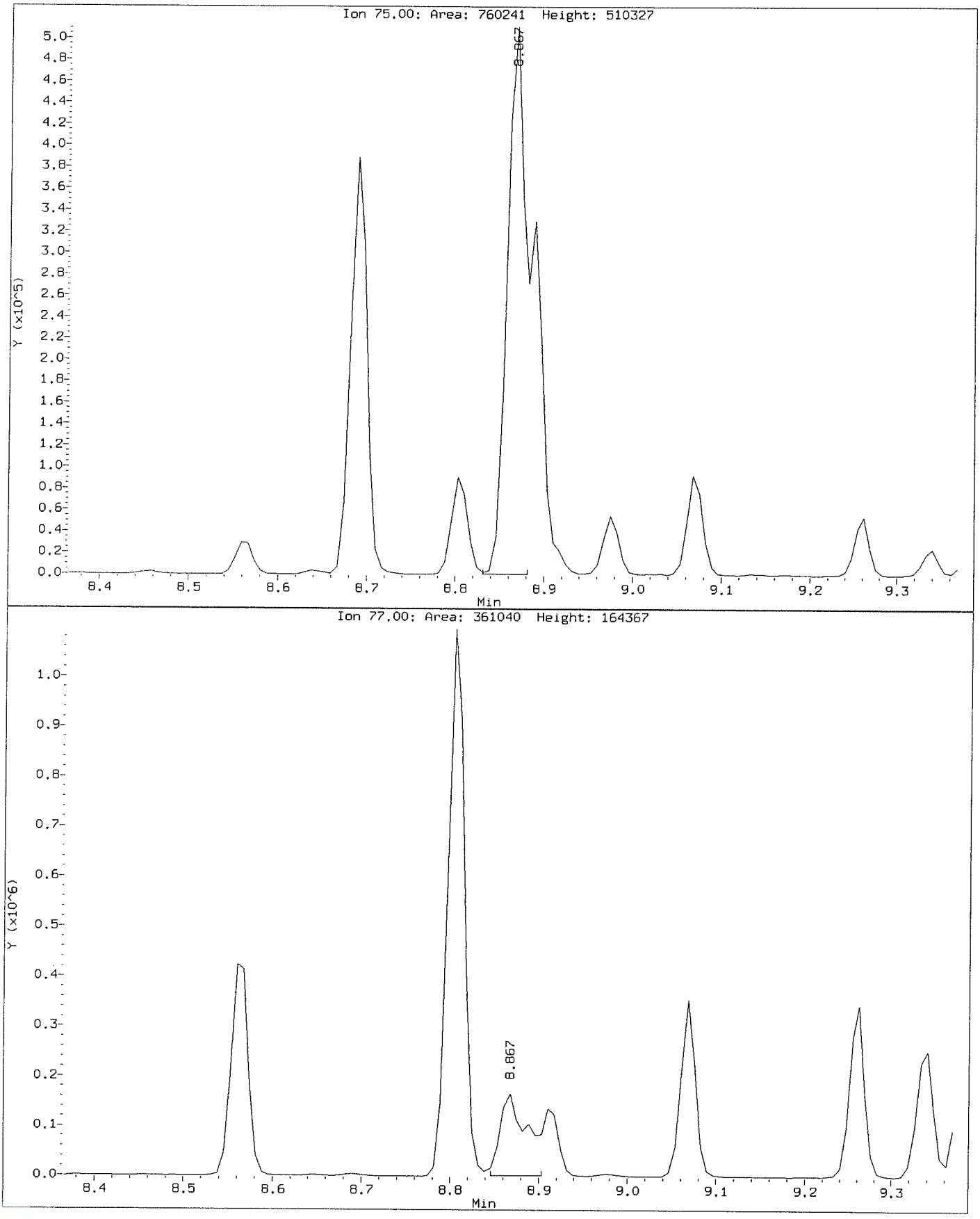
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Injection Date: 18-MAY-2021 14:52
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051811.D
Injection Date: 18-MAY-2021 14:52
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051814.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 18-MAY-2021 16:04
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\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 14:52 Cal File: X051811.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

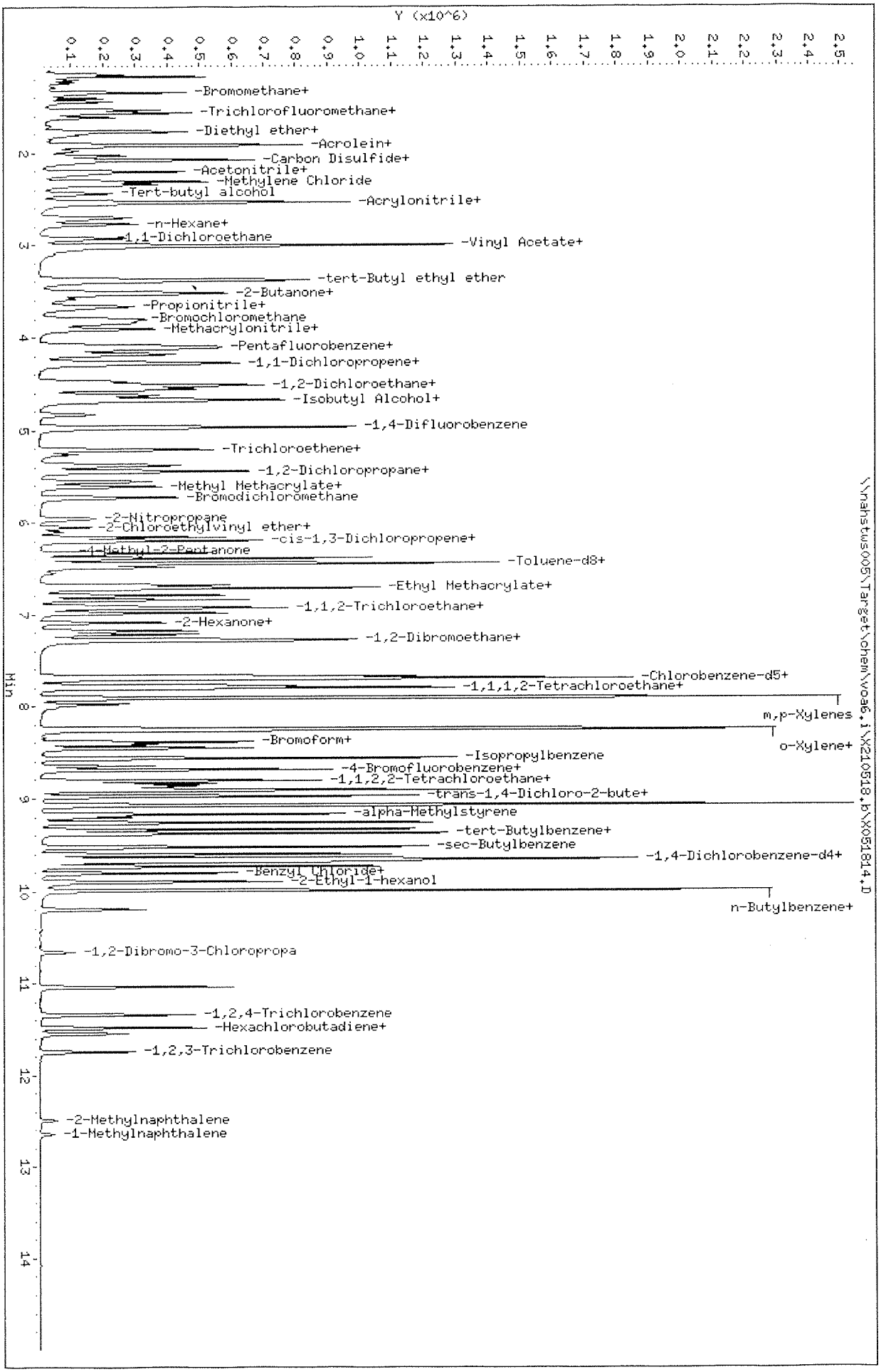
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	314020	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	520811	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	484823	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	250460	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	205067	50.1979	50.19
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	230369	50.3369	50.33
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	175772	50.2504	50.25
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	584625	49.1076	49.10
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	170258	48.2027	48.20
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	270319	50.6112	50.61
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	214655	51.7580	51.75
138 Freon TF	101	1.919	1.911	(0.459)	142176	47.7226	47.72
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	140911	50.0345	50.03
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	274803	47.2562	47.25
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	148405	47.2568	47.25
32 1,1-Dichloropropene	75	4.282	4.282	(0.863)	215541	48.3130	48.31
93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	71059	59.1408	59.14
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	180570	53.1631	53.16(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	120554	53.3923	53.39
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	597253	46.8861	46.88
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	19095	56.3452	56.34
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	175810	51.9432	51.94

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051814.D Page 2
Report Date: 22-Jun-2021 08:20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	329044	46.8735	46.87
33	1,2-Dichloroethane	62	4.555	4.555	(0.918)	250302	48.8804	48.88
42	1,2-Dichloropropane	63	5.436	5.436	(1.095)	167115	47.7459	47.74
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	590381	47.2215	47.22
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	343639	47.7565	47.75
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	277959	50.4174	50.41
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	352814	47.9586	47.95
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	260587	50.0938	50.09
24	2-Butanone	43	3.580	3.580	(0.856)	119740	103.302	103.30
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	510642	45.7453	45.74
52	2-Hexanone	43	7.090	7.090	(0.924)	215239	104.715	104.71
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	612096	47.0259	47.02
82	p-Isopropyltoluene	119	9.647	9.655	(0.999)	578626	46.7908	46.79
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	315436	102.153	102.15
10	Acetone	43	1.976	1.976	(0.473)	92565	117.467	117.46
37	Benzene	78	4.512	4.512	(0.909)	646518	50.1763	50.17
74	Bromobenzene	156	8.802	8.809	(0.911)	196985	47.1796	47.17
29	Bromochloromethane	128	3.795	3.795	(0.908)	92140	48.1462	48.14
39	Bromodichloromethane	83	5.729	5.722	(1.154)	248409	49.3648	49.36
66	Bromoform	173	8.408	8.408	(1.096)	122293	52.1571	52.15
6	Bromomethane	94	1.338	1.331	(0.320)	187724	56.9415	56.94
19	Carbon Disulfide	76	2.069	2.069	(0.495)	792228	107.080	107.07
34	Carbon Tetrachloride	117	4.268	4.268	(0.860)	219217	48.2910	48.29
59	Chlorobenzene	112	7.692	7.692	(1.003)	455368	47.8996	47.89
7	Chloroethane	64	1.403	1.396	(0.336)	111773	47.0223	47.02
28	Chloroform	83	3.910	3.910	(0.935)	318549	47.7476	47.74
3	Chloromethane	50	1.073	1.073	(0.257)	175510	51.8144	51.81
27	cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	177242	48.9746	48.97
46	cis-1,3-Dichloropropene	75	6.152	6.159	(1.240)	286606	50.1968	50.19
55	Dibromochloromethane	129	7.176	7.176	(0.936)	198733	52.4448	52.44
44	Dibromomethane	93	5.550	5.550	(1.118)	125829	50.1588	50.15
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	202217	51.1231	51.12
61	Ethylbenzene	106	7.799	7.799	(1.017)	229958	48.9489	48.94
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	72493	48.3476	48.34
67	Isopropylbenzene	105	8.559	8.566	(1.116)	689621	48.0318	48.03
62	m,p-Xylenes	106	7.900	7.907	(1.030)	598088	98.7859	98.78
17	Methylene Chloride	84	2.305	2.298	(0.551)	155672	49.4373	49.43
87	n-Butylbenzene	91	9.991	9.991	(1.034)	559802	47.5986	47.59
73	n-Propylbenzene	91	8.910	8.910	(0.922)	842024	47.4685	47.46
92	Naphthalene	128	11.539	11.539	(1.194)	198367	59.5423	59.54 (M)
63	o-Xylene	106	8.244	8.244	(1.075)	286204	48.6033	48.60
81	sec-Butylbenzene	105	9.519	9.526	(0.985)	681120	46.3974	46.39
64	Styrene	104	8.258	8.258	(1.077)	512733	46.5385	46.53
78	tert-Butylbenzene	119	9.339	9.340	(0.967)	481642	45.4003	45.40
56	Tetrachloroethene	164	6.926	6.926	(0.903)	135210	50.1892	50.18
50	Toluene	91	6.446	6.446	(0.840)	698935	49.9665	49.96
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	151505	50.1483	50.14
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.346)	259978	52.0492	52.04
38	Trichloroethene	130	5.206	5.206	(1.049)	166097	48.1615	48.16
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	289827	48.0155	48.01
5	Vinyl Chloride	62	1.145	1.138	(0.274)	181830	47.9597	47.95

QC Flag Legend

M - Compound response manually integrated.

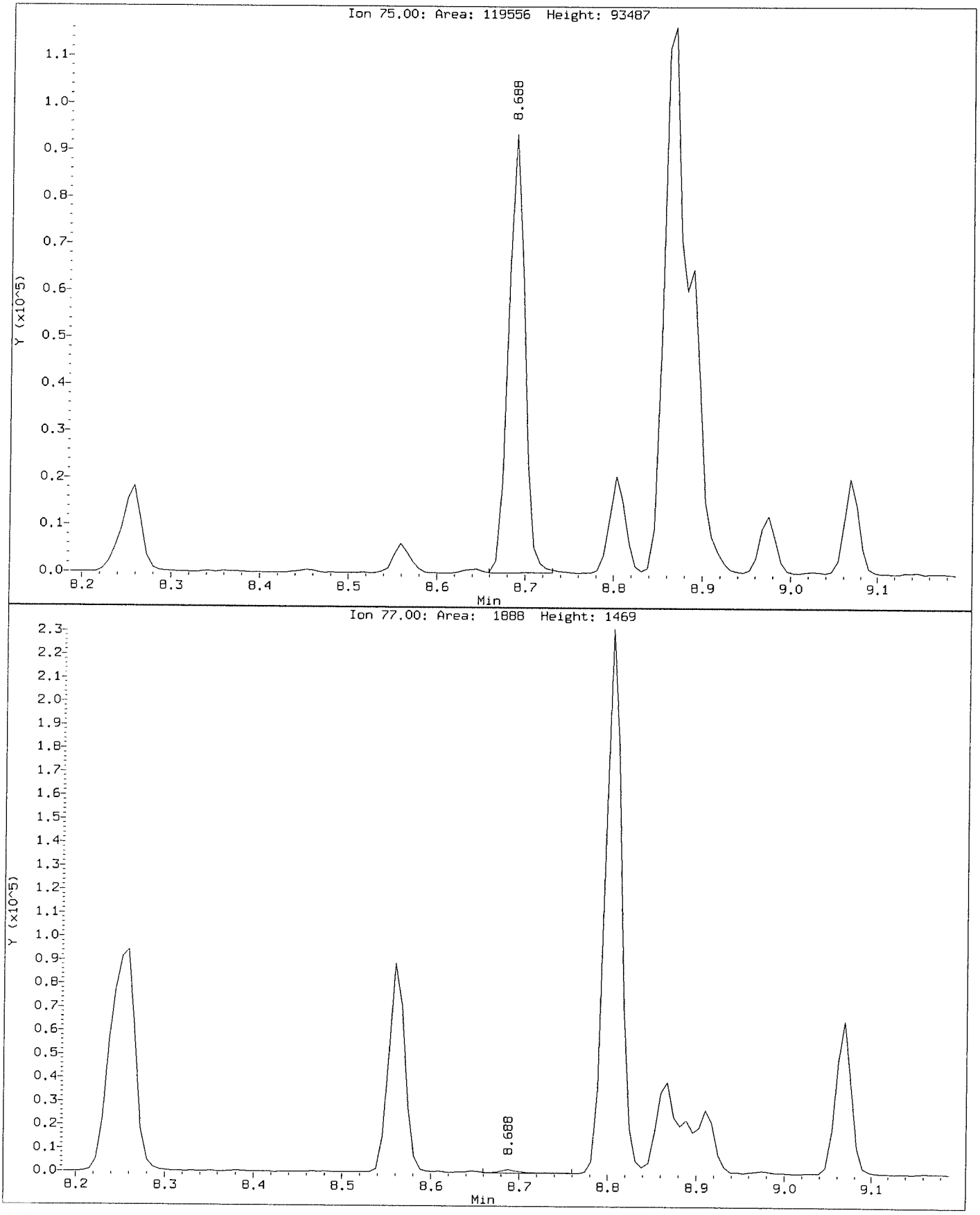


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Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

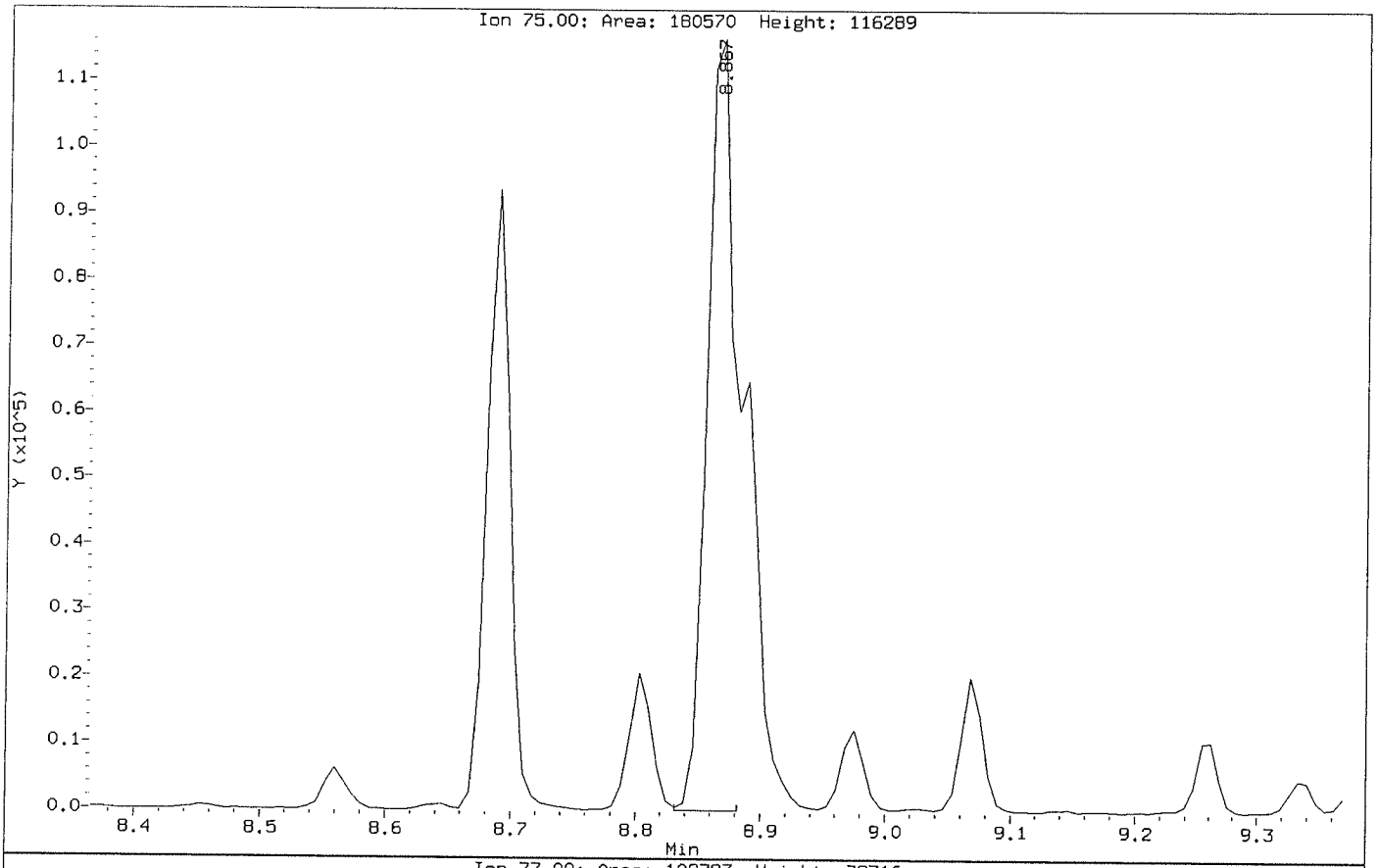
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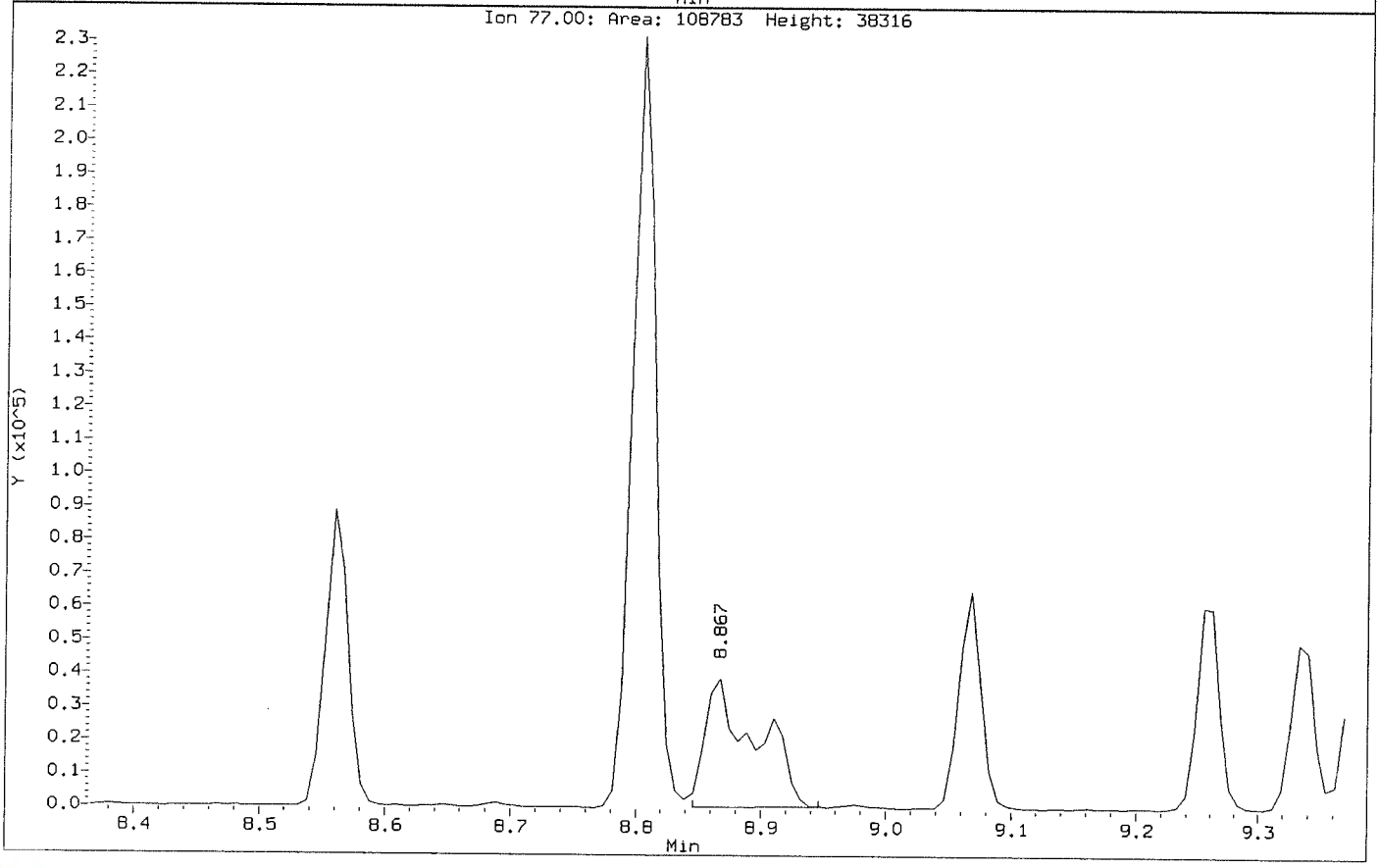
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Instrument: voa6.i
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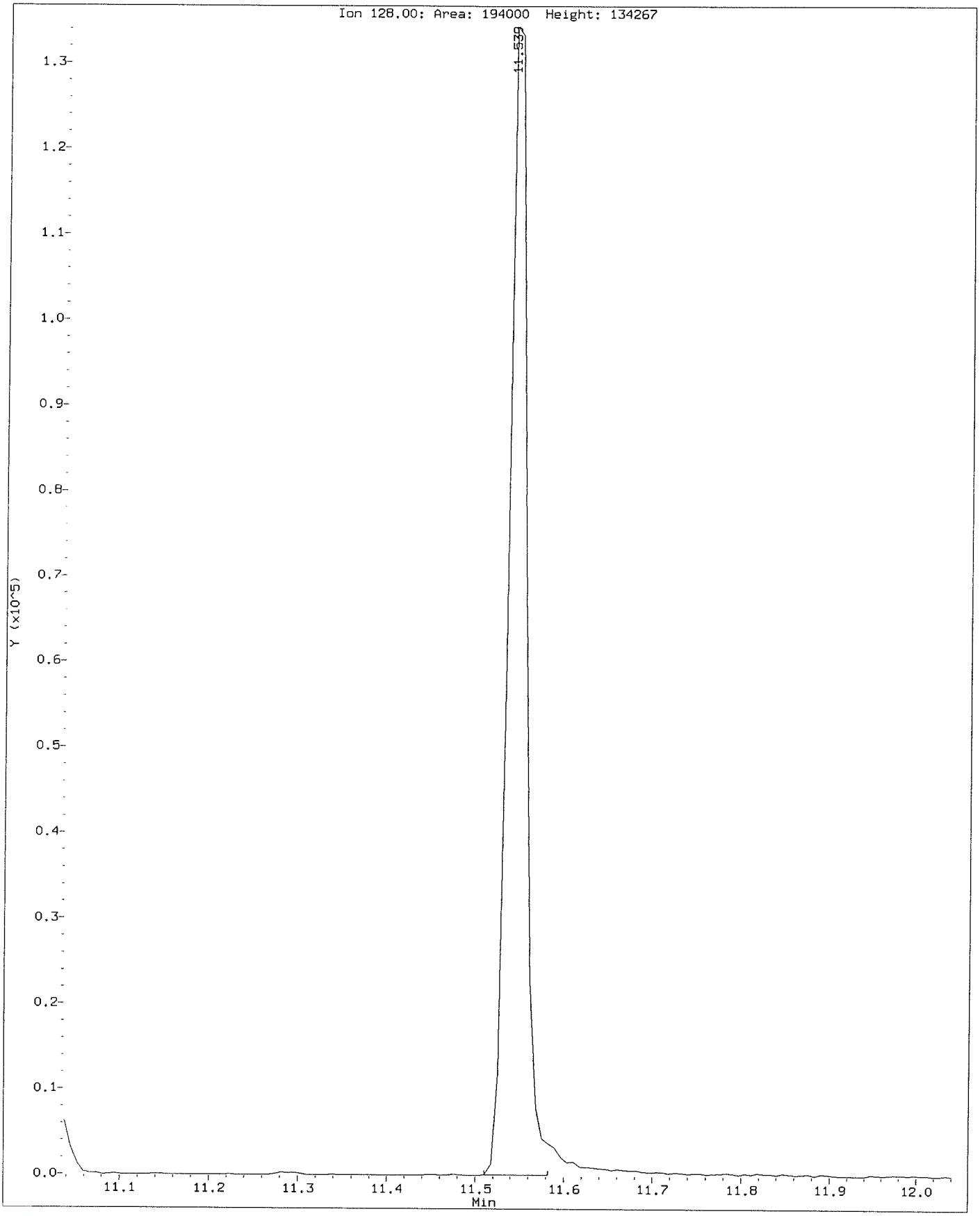
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





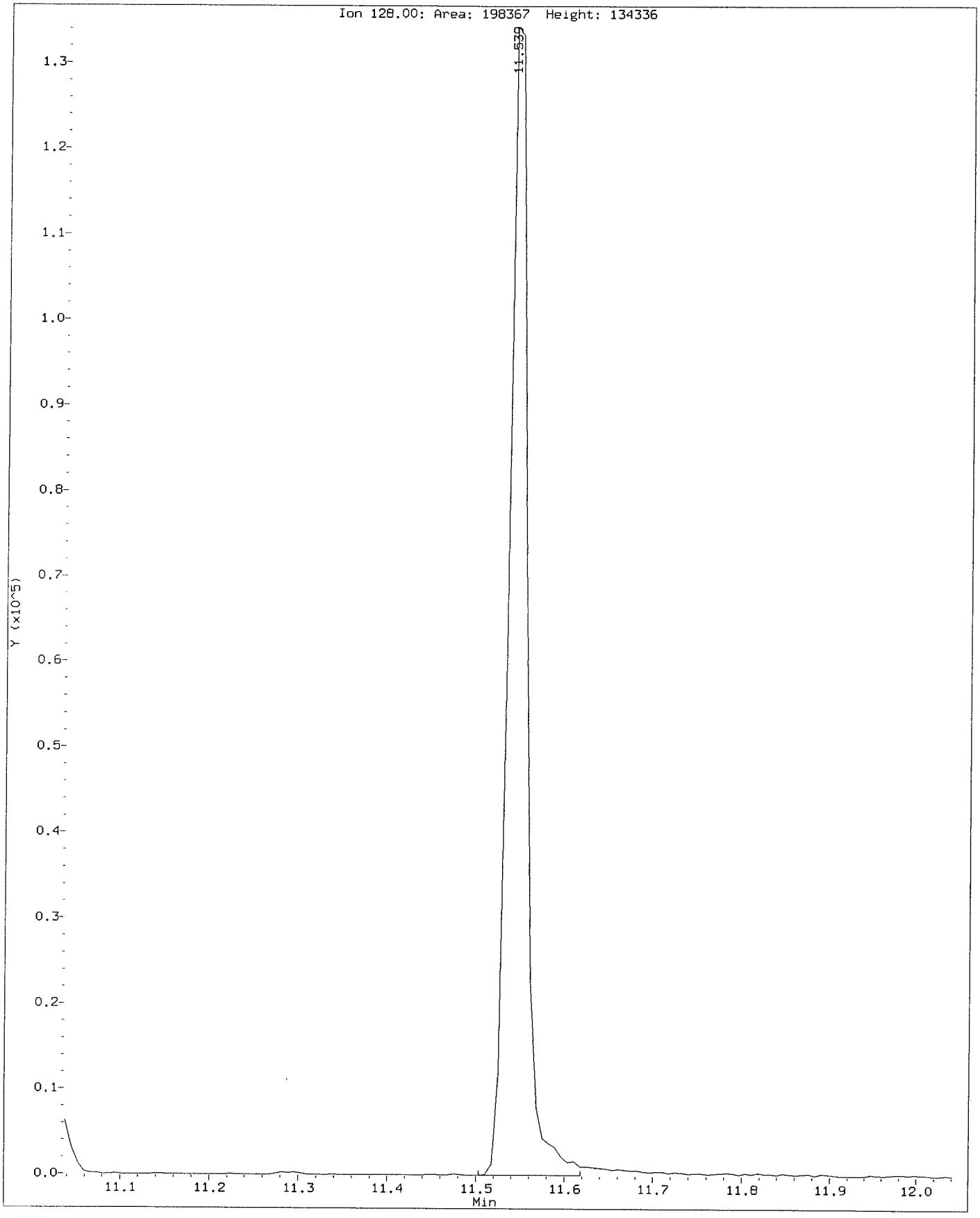
Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\Before\X051814.D
Injection Date: 18-MAY-2021 16:04
Instrument: voa6.i
Client Sample ID: ICV

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051814.D
Injection Date: 18-MAY-2021 16:04
Instrument: voa6.i
Client Sample ID: ICV

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051816.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051816.D
Lab Smp Id: VLCSW-210518 Client Smp ID: VLCSW-210518
Inj Date : 18-MAY-2021 16:46
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-210518;VLCSW-210518;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 14:52 Cal File: X051811.D
Als bottle: 17 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

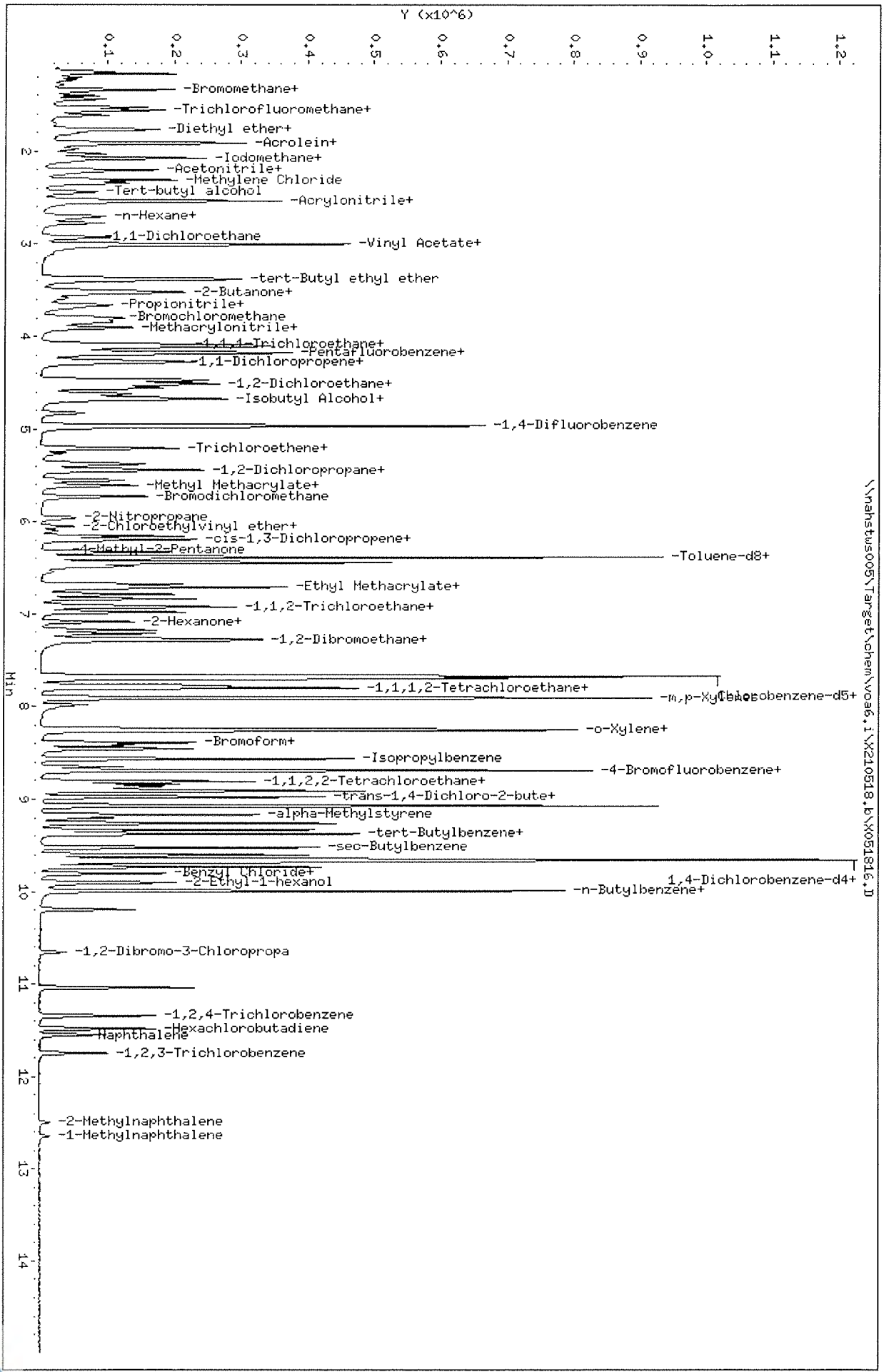
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	284418	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	454349	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	435248	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	217306	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.469	4.476	(1.069)	199609	54.0422	54.04
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	203949	49.6415	49.64
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	156411	49.3653	49.36
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	531938	49.7575	49.75
60 1,1,1,2-Tetrachloroethane	131	7.771	7.778	(1.013)	61317	19.3371	19.33
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	97972	20.2522	20.25
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	79030	21.6578	21.65
138 Freon TF	101	1.919	1.911	(0.459)	49710	18.4222	18.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	49918	19.7437	19.74
22 1,1-Dichloroethane	63	2.929	2.921	(0.700)	107681	20.4445	20.44
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	55910	19.6565	19.65
32 1,1-Dichloropropene	75	4.282	4.282	(0.863)	78378	20.1381	20.13
93 1,2,3-Trichlorobenzene	180	11.746	11.739	(1.216)	26827	26.5159	26.51
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	63931	21.3292	21.32(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	46602	25.1562	25.15
79 1,2,4-Trimethylbenzene	105	9.375	9.383	(0.970)	217236	19.6555	19.65
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	6550	23.2468	23.24
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	63980	21.0560	21.05

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051816.D Page 2
Report Date: 22-Jun-2021 08:20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	116200	19.0786	19.07
33	1,2-Dichloroethane	62	4.555	4.555	(0.918)	93428	20.9141	20.91
42	1,2-Dichloropropane	63	5.436	5.436	(1.095)	63175	20.6898	20.68
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	211287	19.4781	19.47
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	125253	20.0625	20.06
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	100549	20.3153	20.31
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	130231	20.5488	20.54
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	98275	20.8581	20.85
24	2-Butanone	43	3.580	3.580	(0.856)	44849	42.7190	42.71
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	184017	19.0000	19.00
52	2-Hexanone	43	7.090	7.090	(0.924)	79119	42.7158	42.71
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	222433	19.6962	19.69
82	p-Isopropyltoluene	119	9.648	9.655	(0.999)	208501	19.4329	19.43
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	121268	43.7957	43.79
10	Acetone	43	1.976	1.976	(0.473)	36484	48.2054	48.20
37	Benzene	78	4.512	4.512	(0.909)	237038	21.0876	21.08
74	Bromobenzene	156	8.802	8.809	(0.911)	70980	19.5940	19.59
29	Bromochloromethane	128	3.795	3.795	(0.908)	33683	19.4323	19.43
39	Bromodichloromethane	83	5.729	5.722	(1.154)	90419	20.5968	20.59
66	Bromoform	173	8.408	8.408	(1.096)	41913	19.9116	19.91
6	Bromomethane	94	1.338	1.331	(0.320)	77311	25.6309	25.63
19	Carbon Disulfide	76	2.069	2.069	(0.495)	289859	43.2558	43.25
34	Carbon Tetrachloride	117	4.261	4.268	(0.859)	76012	19.1939	19.19
59	Chlorobenzene	112	7.692	7.692	(1.003)	169815	19.8972	19.89
7	Chloroethane	64	1.403	1.396	(0.336)	41953	19.4863	19.48
28	Chloroform	83	3.910	3.910	(0.935)	120706	19.9758	19.97
3	Chloromethane	50	1.073	1.073	(0.257)	69310	22.7246	22.72
27	cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	64751	19.7538	19.75
46	cis-1,3-Dichloropropene	75	6.152	6.159	(1.240)	103397	20.7582	20.75
55	Dibromochloromethane	129	7.176	7.176	(0.936)	71079	20.8939	20.89
44	Dibromomethane	93	5.550	5.550	(1.118)	45628	20.8492	20.84
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	72126	21.3922	21.39
61	Ethylbenzene	106	7.800	7.799	(1.017)	84553	20.0480	20.04
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	25601	21.5681	21.56
67	Isopropylbenzene	105	8.559	8.566	(1.116)	243330	18.8782	18.87
62	m,p-Xylenes	106	7.900	7.907	(1.030)	216408	39.8153	39.81
17	Methylene Chloride	84	2.305	2.298	(0.551)	60449	21.1950	21.19
87	n-Butylbenzene	91	9.991	9.991	(1.034)	191831	18.7995	18.79
73	n-Propylbenzene	91	8.910	8.910	(0.922)	304757	19.8016	19.80
92	Naphthalene	128	11.546	11.539	(1.195)	69122	25.7697	25.76
63	o-Xylene	106	8.244	8.244	(1.075)	103917	19.6573	19.65
81	sec-Butylbenzene	105	9.519	9.526	(0.985)	230835	18.1233	18.12
64	Styrene	104	8.258	8.258	(1.077)	178526	19.1289	19.12
78	tert-Butylbenzene	119	9.332	9.340	(0.966)	171597	18.6428	18.64
56	Tetrachloroethene	164	6.926	6.926	(0.903)	48031	19.8596	19.85
50	Toluene	91	6.446	6.446	(0.840)	258081	20.5516	20.55
20	trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	57142	20.8826	20.88
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.346)	91915	21.0938	21.09
38	Trichloroethene	130	5.206	5.206	(1.049)	62565	20.7951	20.79
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	105652	19.3251	19.32
5	Vinyl Chloride	62	1.145	1.138	(0.274)	67081	19.5349	19.53

QC Flag Legend

M - Compound response manually integrated.

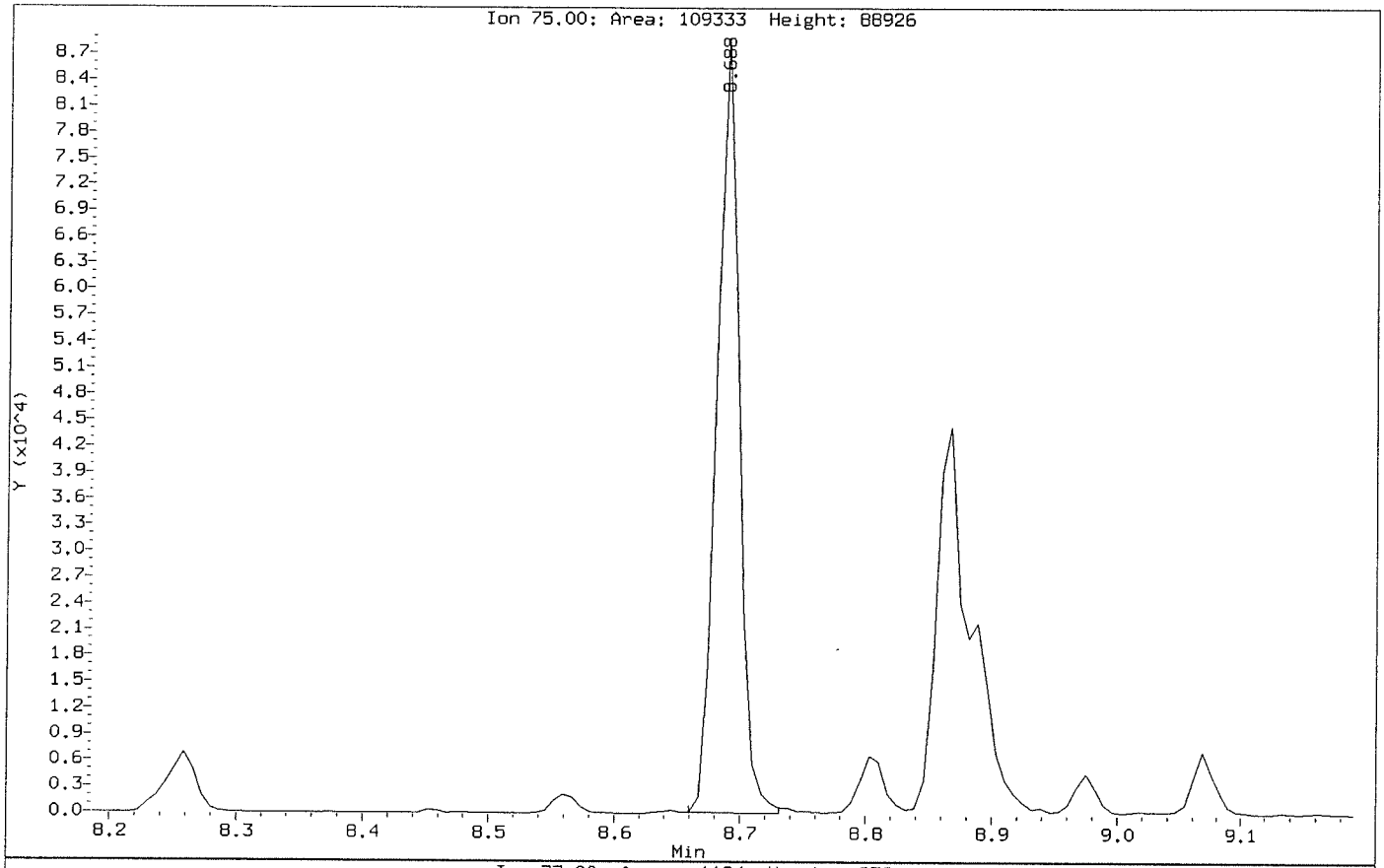


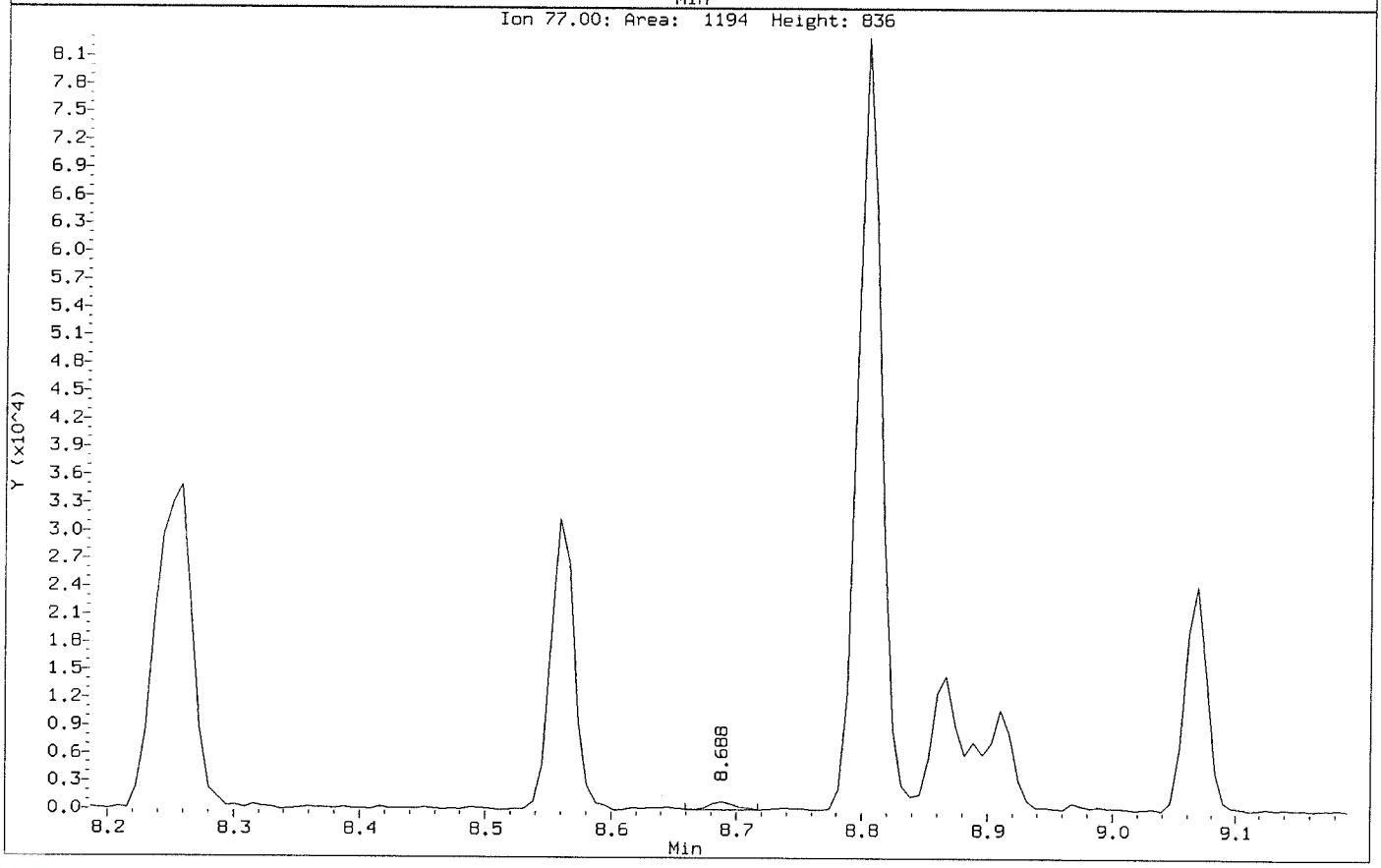
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Client ID: VLCSW-210518
Sample Info: VLCSW-210518;VLCSW-210518;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\Before\X051816.D
Injection Date: 18-MAY-2021 16:46
Instrument: voa6.i
Client Sample ID: VLCSW-210518

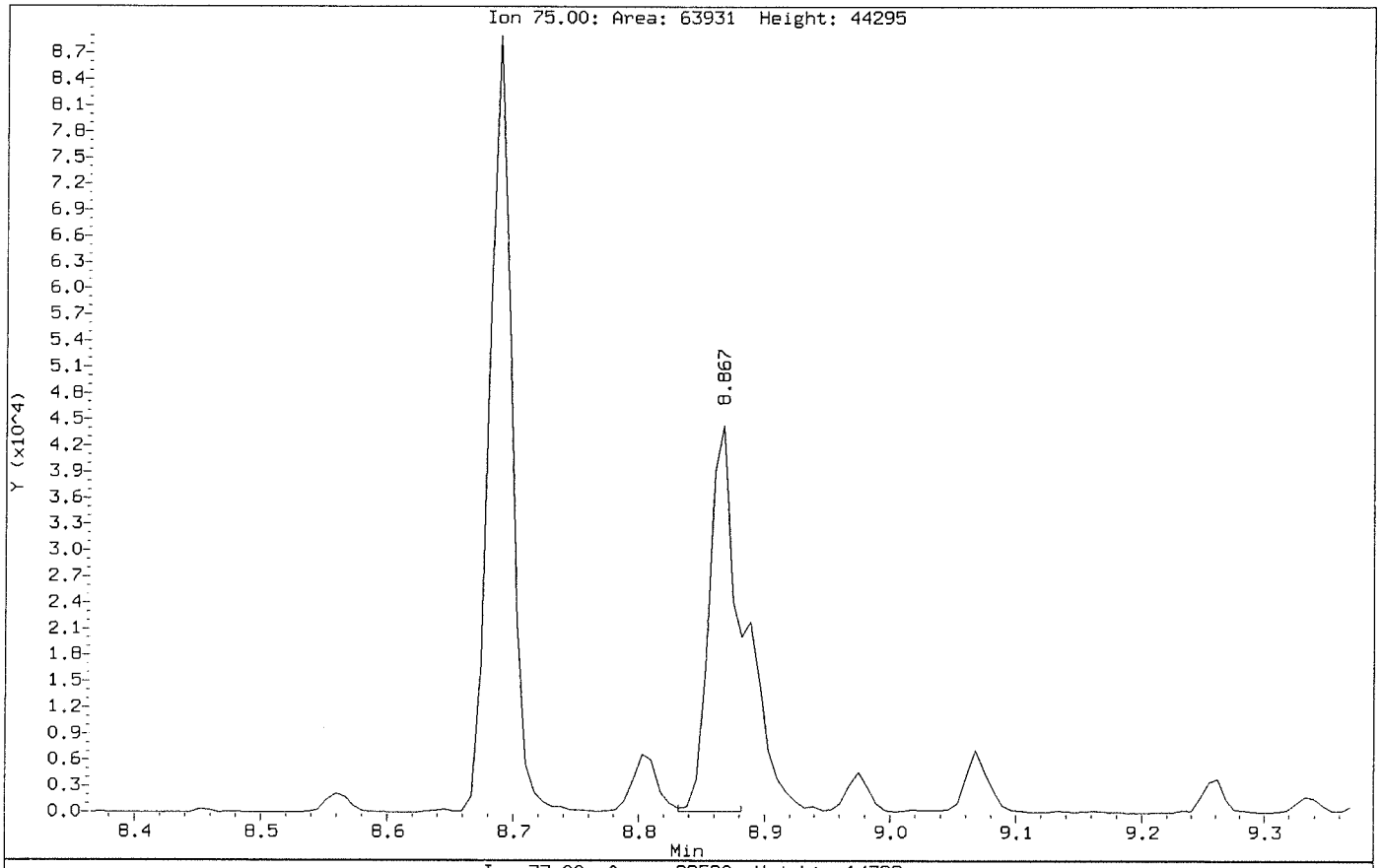
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CAS Number: 96-18-4

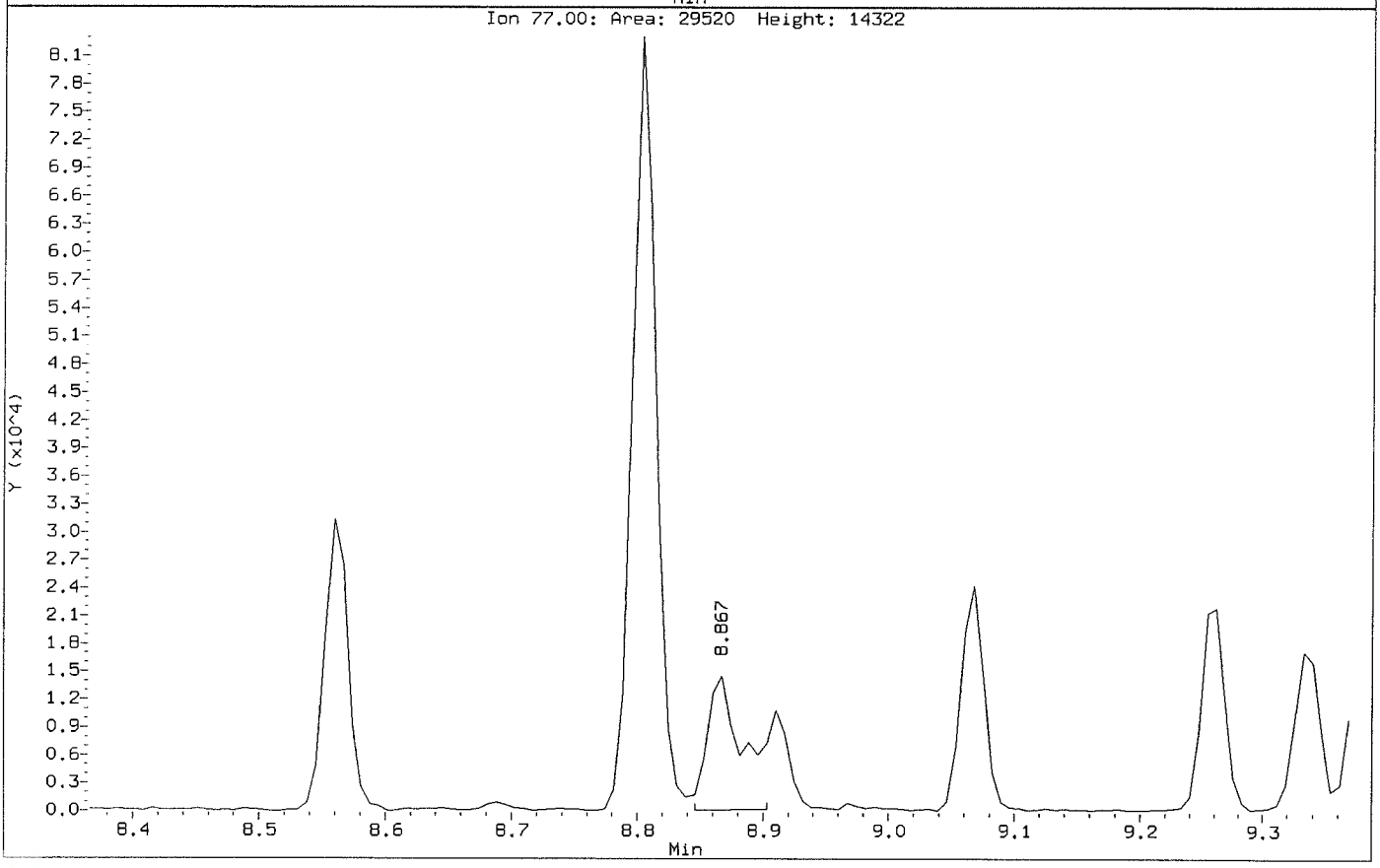




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Injection Date: 18-MAY-2021 16:46
Instrument: voa6.i
Client Sample ID: VLCSW-210518

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051819.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051819.D
Lab Smp Id: VBLKW-210518 Client Smp ID: VBLKW-210518
Inj Date : 18-MAY-2021 17:49
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-210518;VBLKW-210518;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 14:52 Cal File: X051811.D
Als bottle: 20 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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)	313668	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	483775	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	441438	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	195367	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	198438	48.5900	48.58
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	193587	46.4665	46.46
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	162587	46.5163	46.51
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	584098	53.7867	53.78

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051819.D

Date : 18-MAY-2021 17:49

Client ID: VBLKW-210518

Instrument: voa6.i

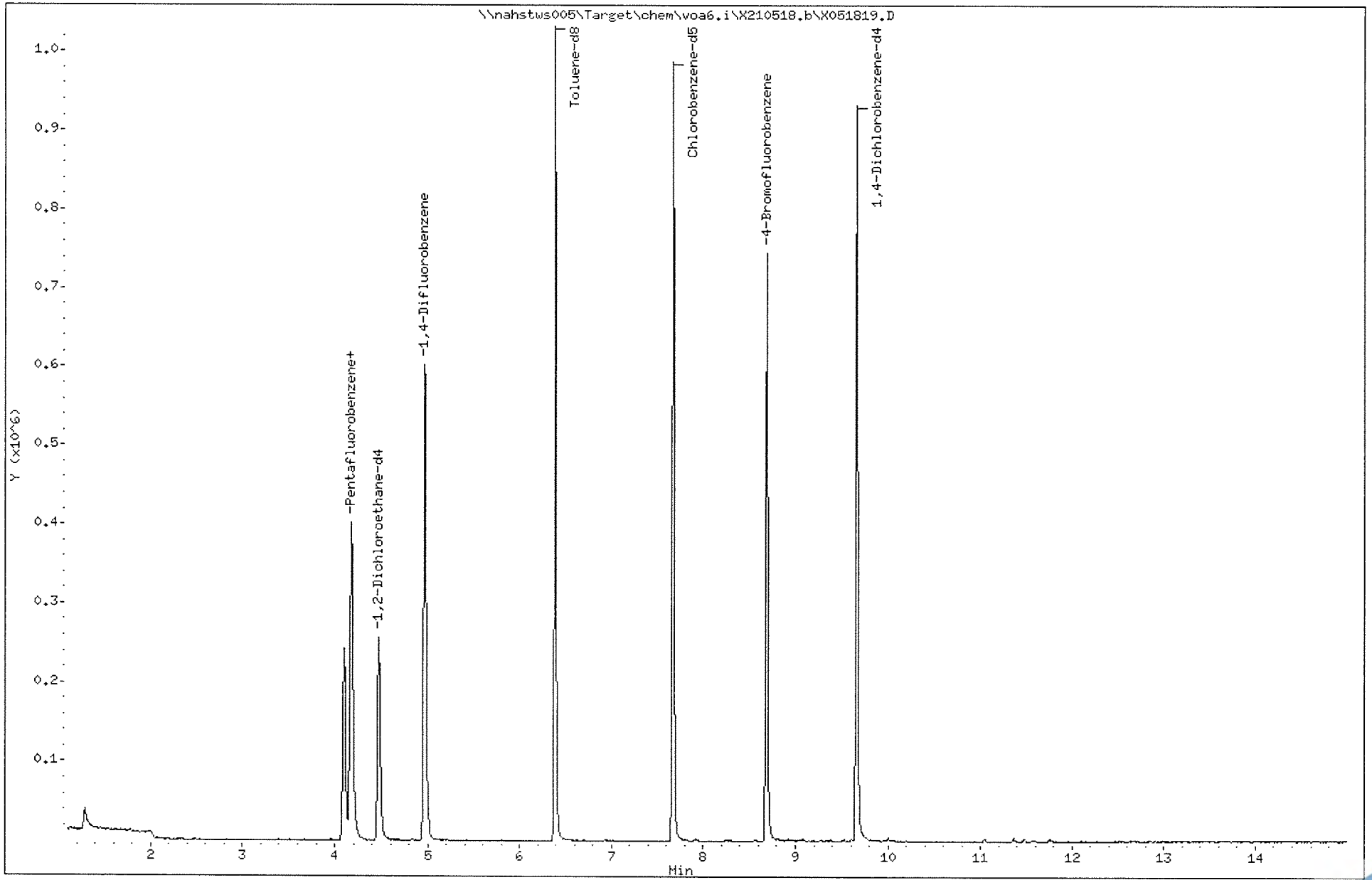
Sample Info: VBLKW-210518;VBLKW-210518;3;;BLANK

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051824.D Page 1
Report Date: 22-Jun-2021 08:32

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051824.D
Lab Smp Id: HS21050689-01 Client Smp ID: HS21050689-01
Inj Date : 18-MAY-2021 19:34
Operator : PC Inst ID: voa6.i
Smp Info : HS21050689-01;HS21050689-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:31 devak.giga Quant Type: ISTD
Cal Date : 18-MAY-2021 14:52 Cal File: X051811.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

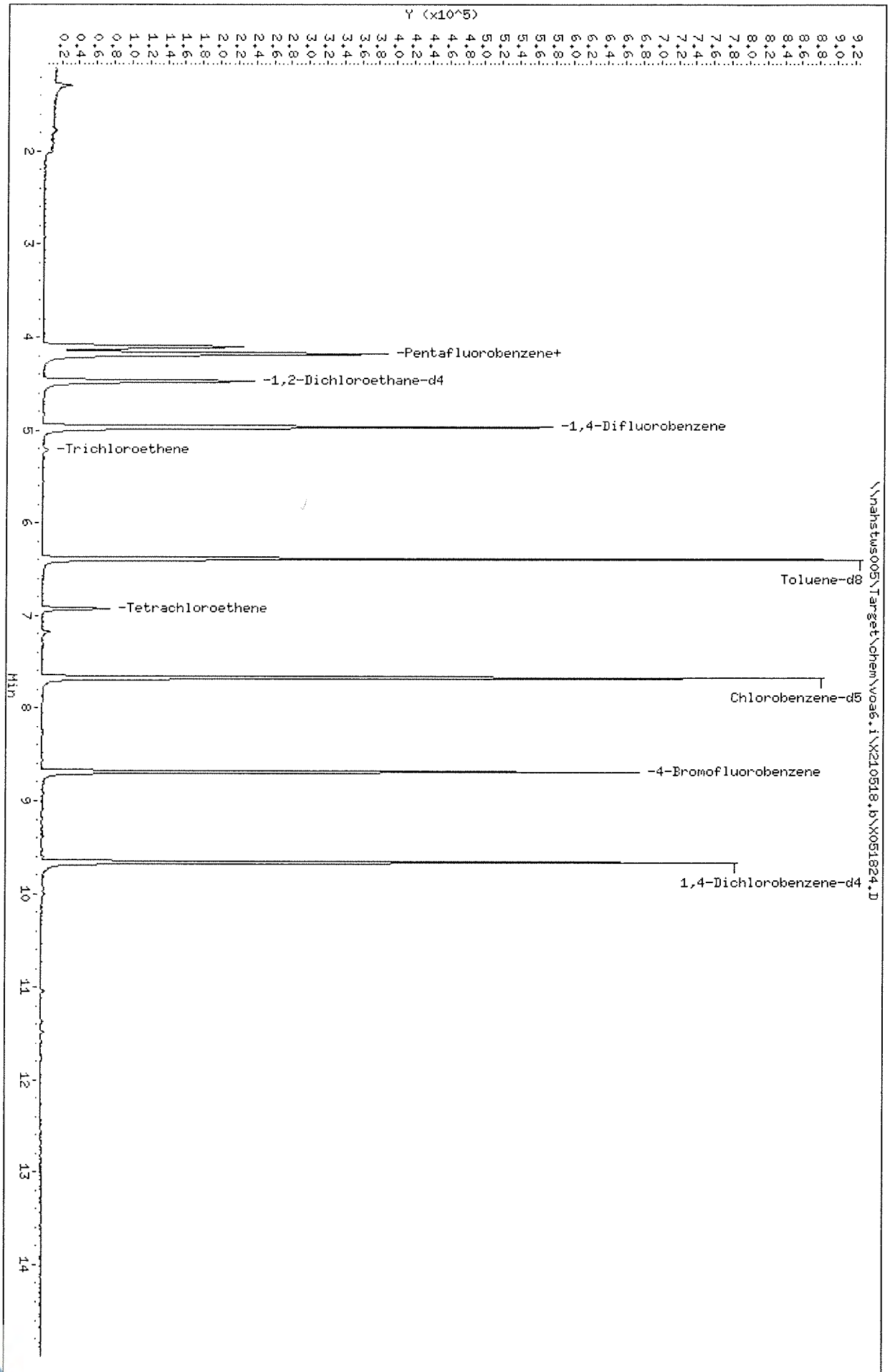
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	304264	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	463936	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	397473	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	170210	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	190184	47.9930	47.99
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	176498	47.0491	47.04
$ 30 Dibromofluoromethane	113	4.096	4.103	(0.979)	152391	44.9391	44.93
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	545213	55.7221	55.72
56 Tetrachloroethene	164	6.926	6.926	(0.903)	15031	6.80558	6.80
38 Trichloroethene	130	5.214	5.206	(1.051)	1870	0.60870	0.60(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051824.D
Date : 18-MAY-2021 19:34
Client ID: HS21050689-01
Sample Info: HS21050689-01;HS21050689-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051824.D

Date : 18-MAY-2021 19:34

Client ID: HS21050689-01

Instrument: voa6.i

Sample Info: HS21050689-01;HS21050689-01;;;

Purge Volume: 5.0

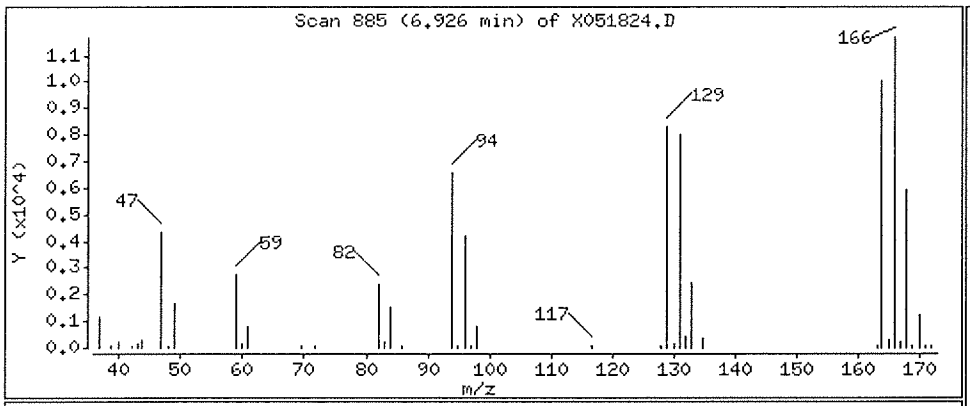
Operator: PC

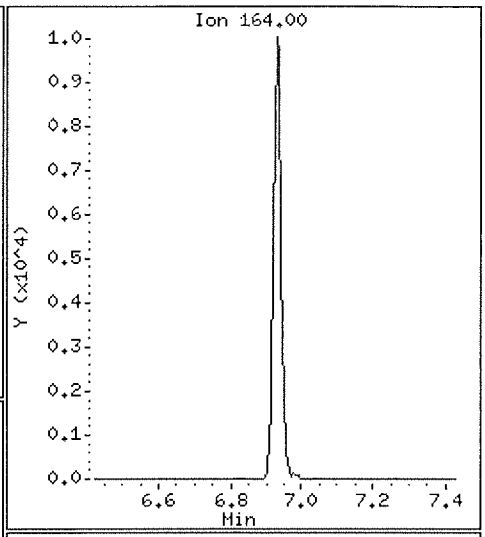
Column phase: DB624

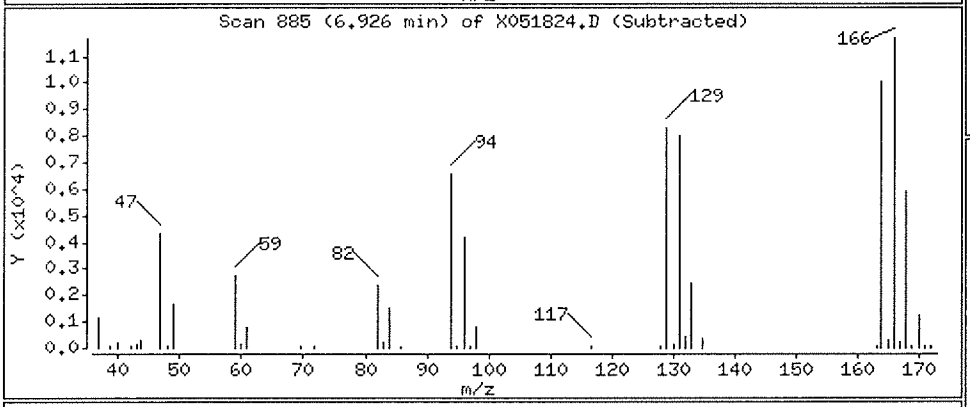
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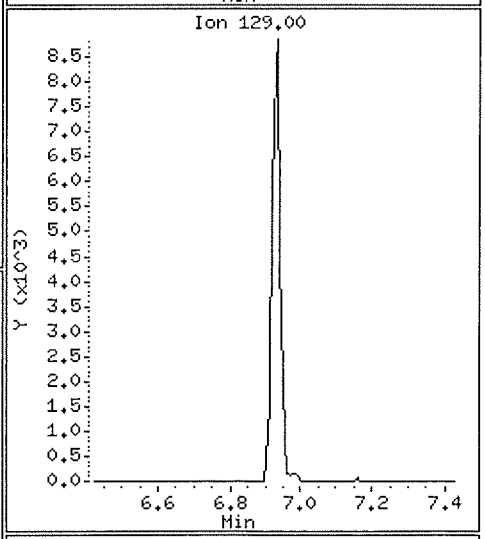
56 Tetrachloroethene

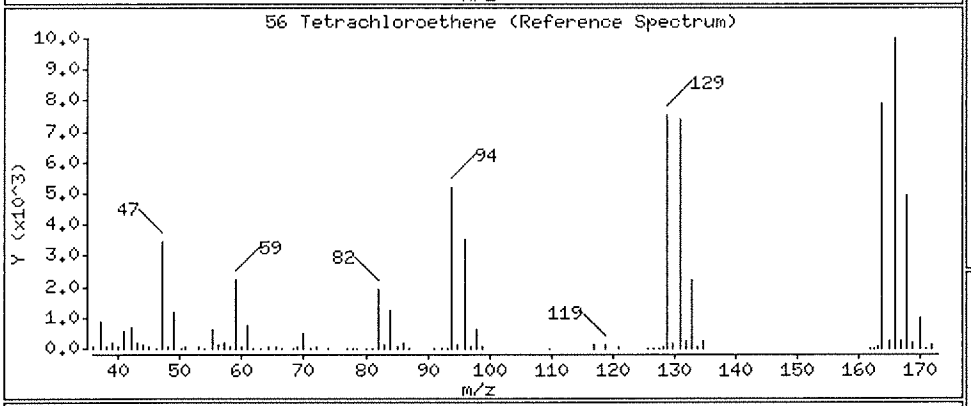
Concentration: 6.80 ug/l

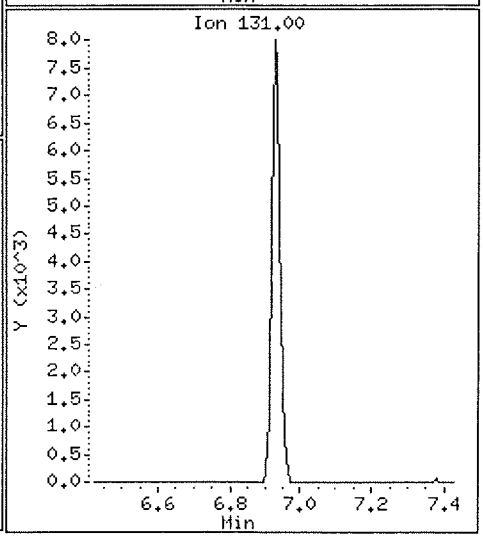


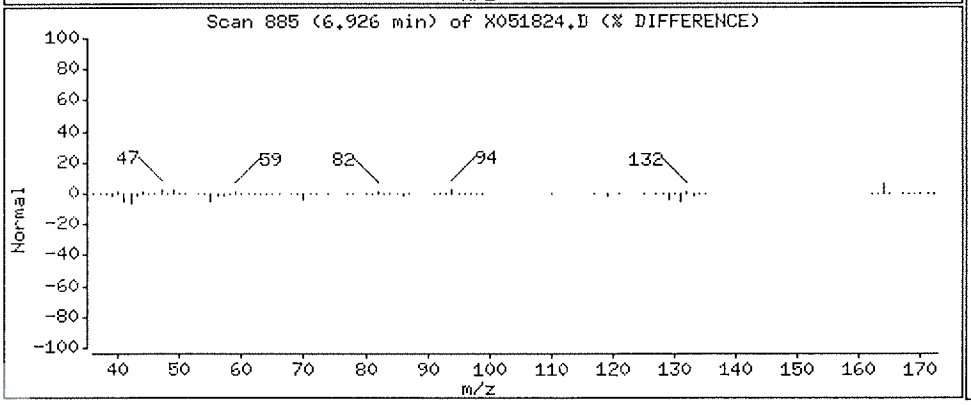












Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051824.D

Date : 18-MAY-2021 19:34

Client ID: HS21050689-01

Instrument: voa6.i

Sample Info: HS21050689-01;HS21050689-01;;;

Purge Volume: 5.0

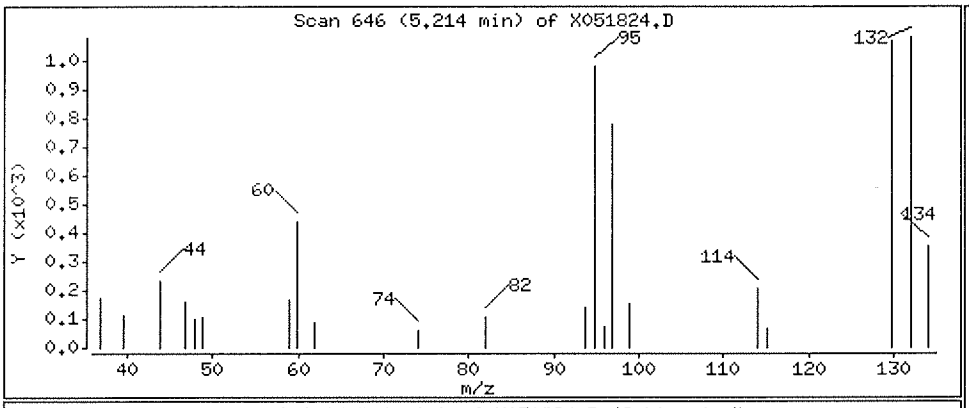
Operator: PC

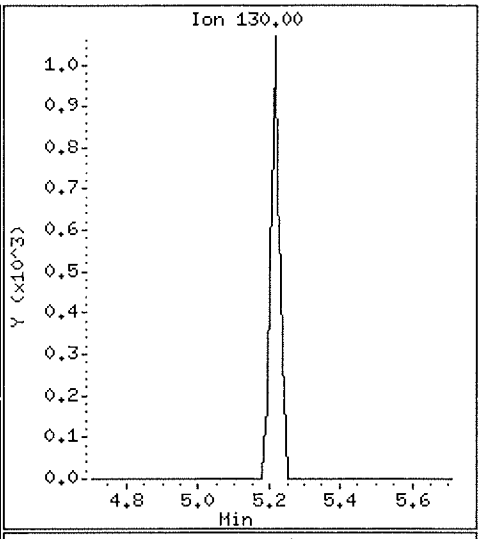
Column phase: DB624

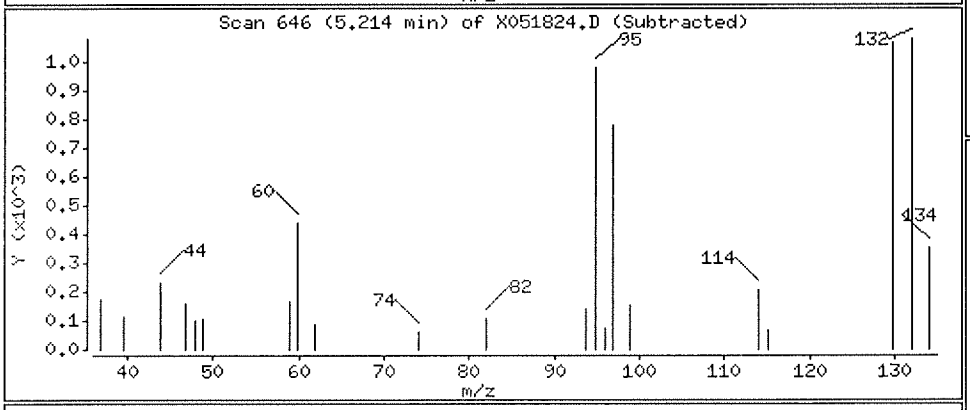
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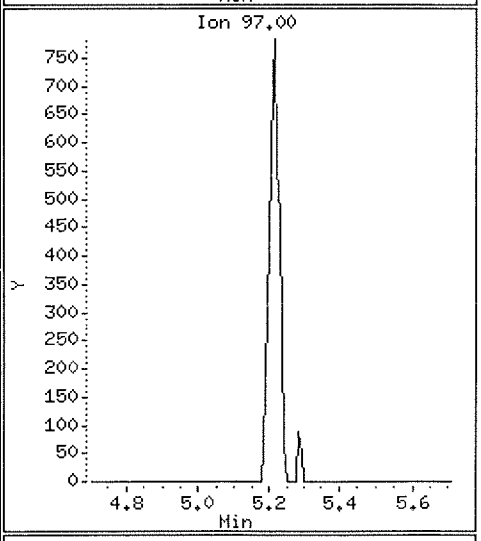
38 Trichloroethene

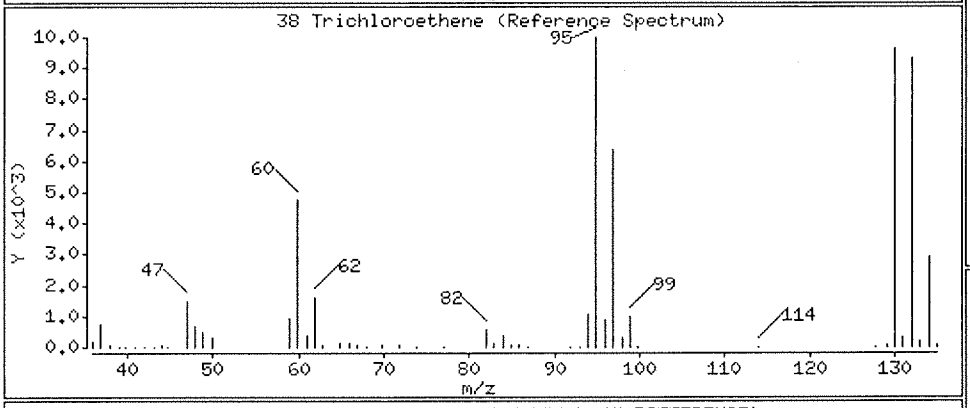
Concentration: 0.60 ug/l

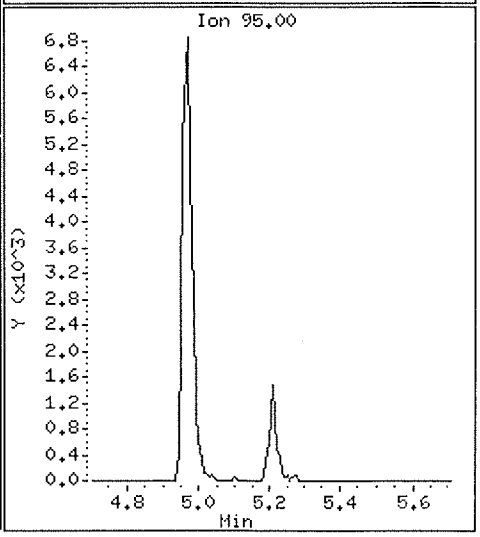


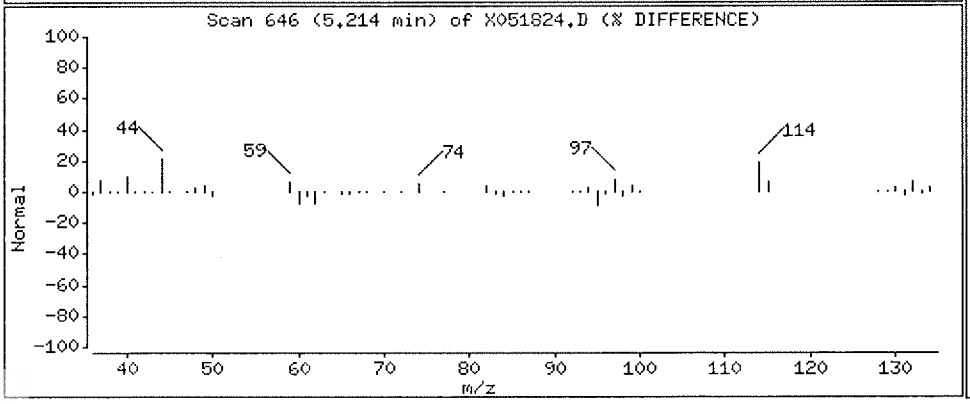












Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051825.D Page 1
Report Date: 22-Jun-2021 08:32

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051825.D
Lab Smp Id: HS21050689-02 Client Smp ID: HS21050689-02
Inj Date : 18-MAY-2021 19:55
Operator : PC Inst ID: voa6.i
Smp Info : HS21050689-02;HS21050689-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:31 devak.giga Quant Type: ISTD
Cal Date : 18-MAY-2021 14:52 Cal File: X051811.D
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

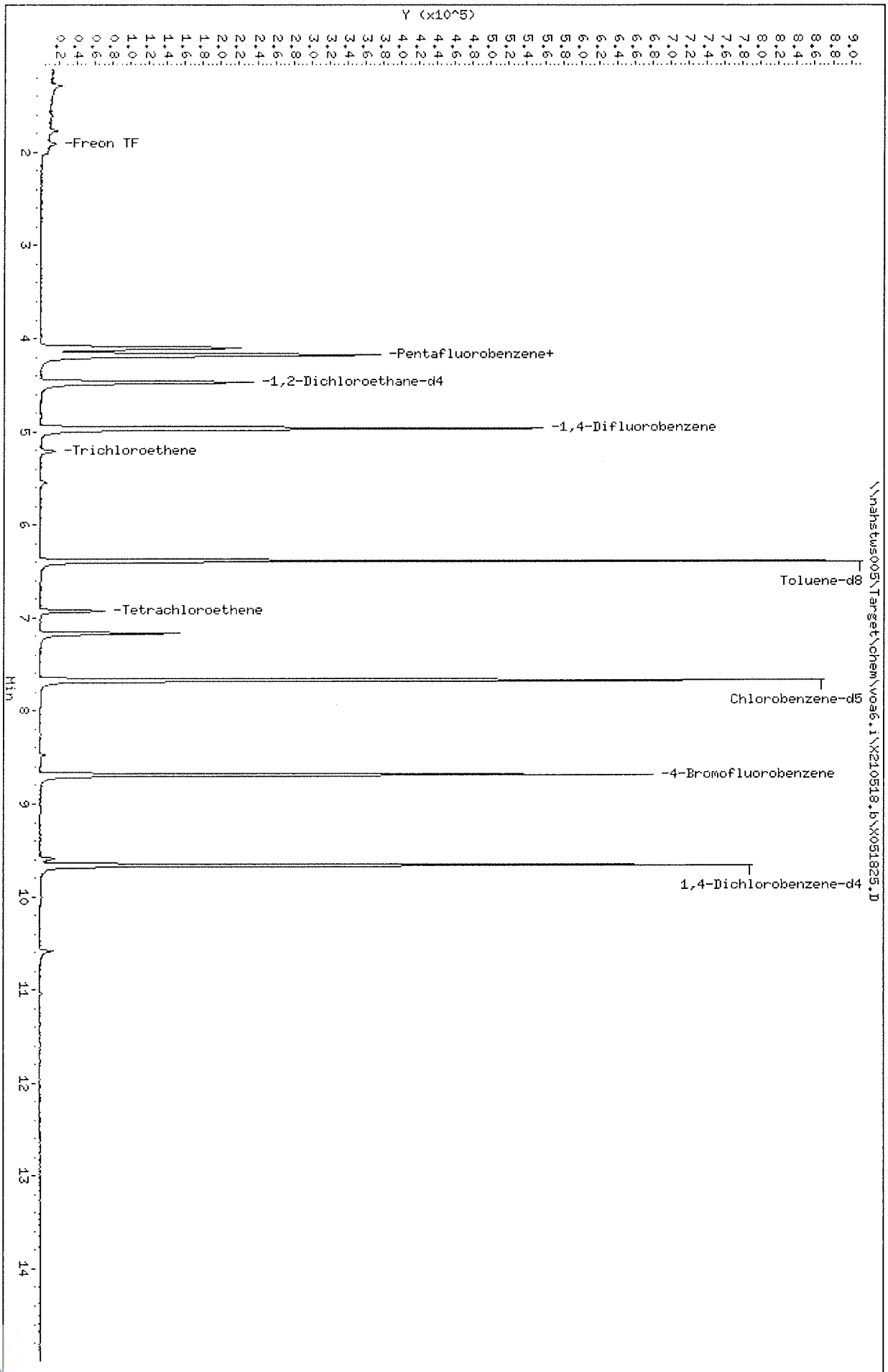
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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)	288067	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	449031	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	391992	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	170800	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	184466	49.1985	49.19
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	173255	46.8309	46.83
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	150217	46.7981	46.79
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	532006	55.1433	55.14
138 Freon TF	101	1.912	1.919	(0.457)	3057	1.11855	1.11(a)
56 Tetrachloroethene	164	6.926	6.926	(0.903)	13272	6.09318	6.09
38 Trichloroethene	130	5.207	5.206	(1.049)	5270	1.77236	1.77(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).



Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051825.D
Date : 18-MAY-2021 19:55
Client ID: HS2105068 9-02
Sample Info: HS2105068 9-02;HS2105068 9-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051825.D

Date : 18-MAY-2021 19:55

Client ID: HS21050689-02

Instrument: voa6.i

Sample Info: HS21050689-02;HS21050689-02;;;

Purge Volume: 5.0

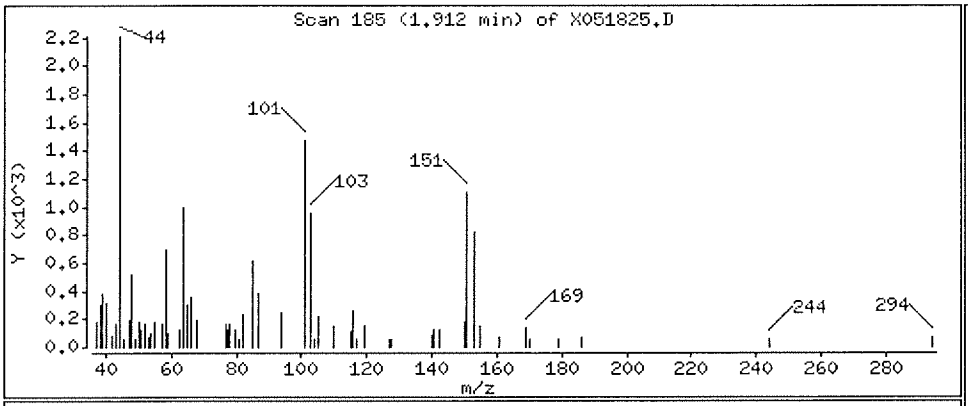
Operator: PC

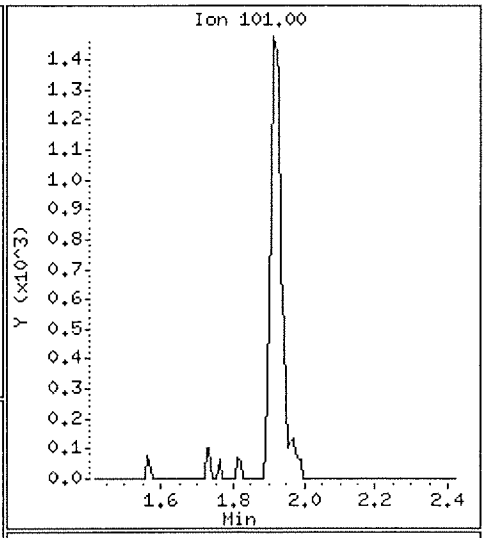
Column phase: DB624

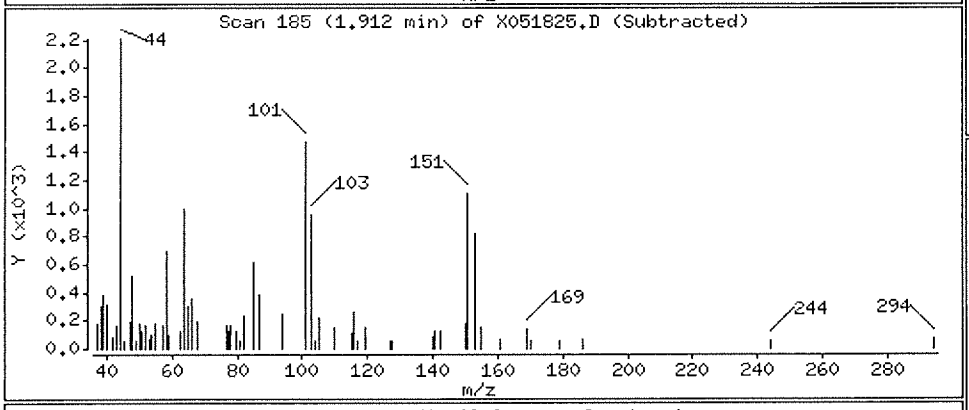
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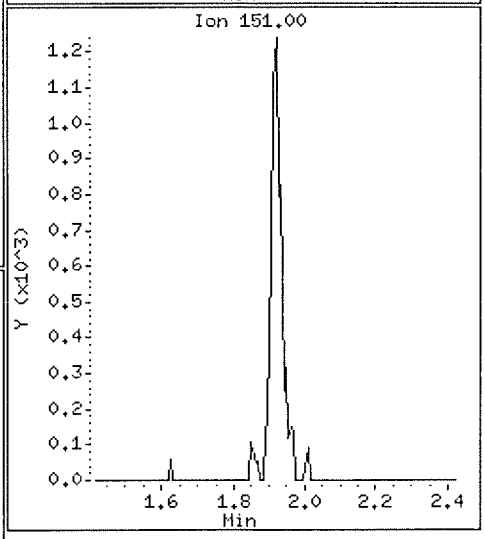
138 Freon TF

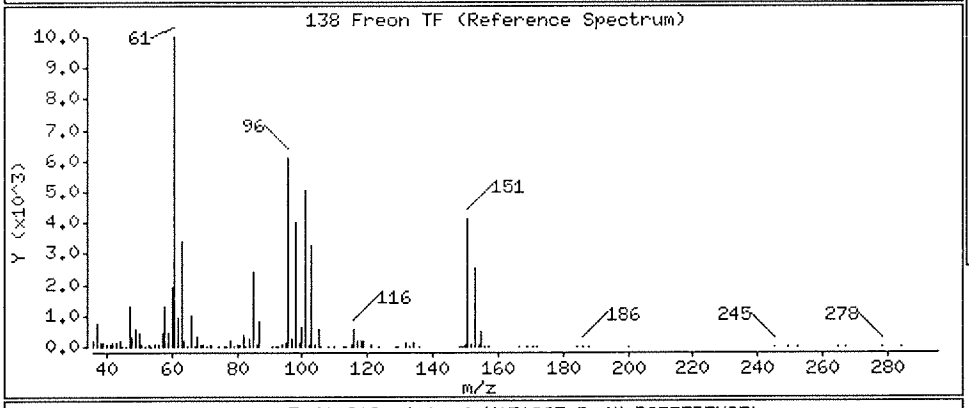
Concentration: 1.11 ug/l

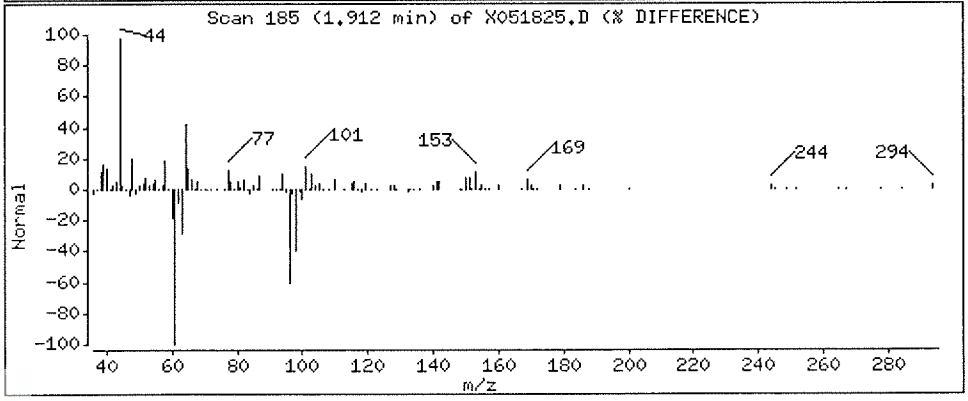












Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051825.D

Date : 18-MAY-2021 19:55

Client ID: HS21050689-02

Instrument: voa6.i

Sample Info: HS21050689-02;HS21050689-02;;;

Purge Volume: 5.0

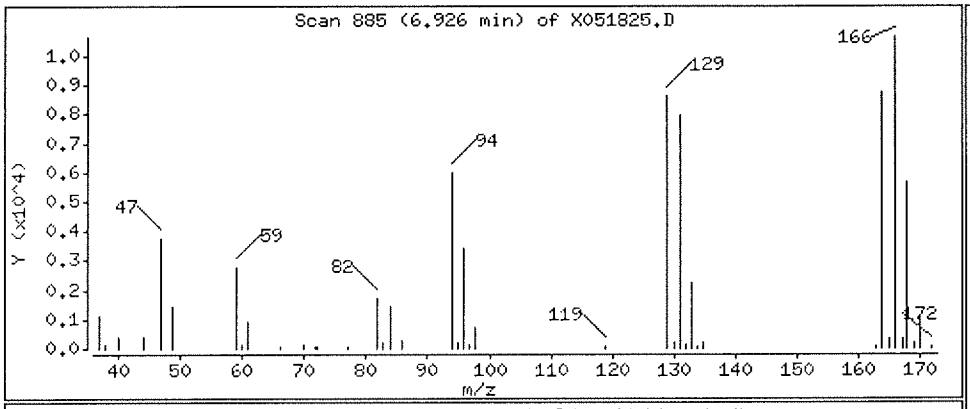
Operator: PC

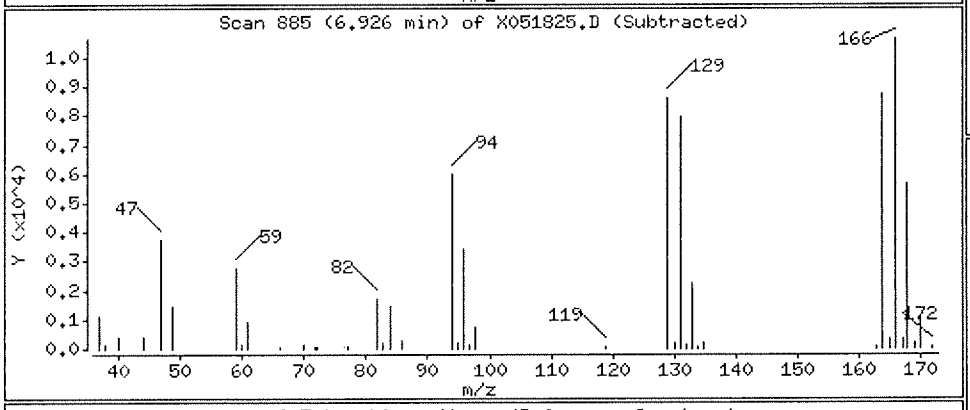
Column phase: DB624

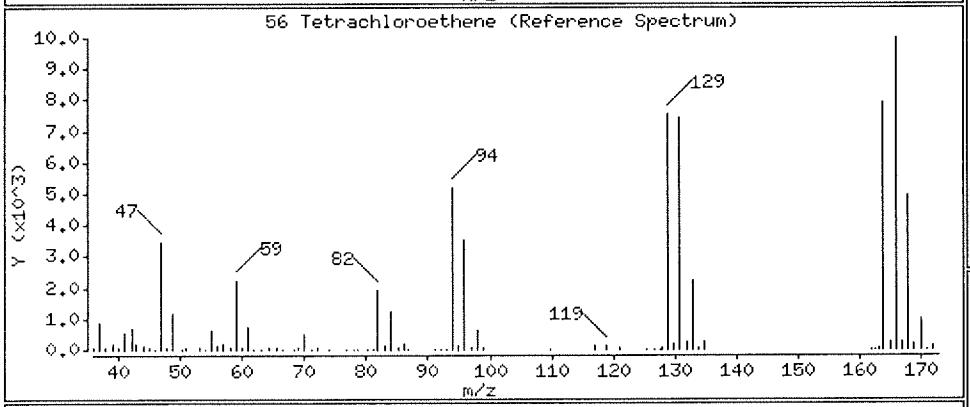
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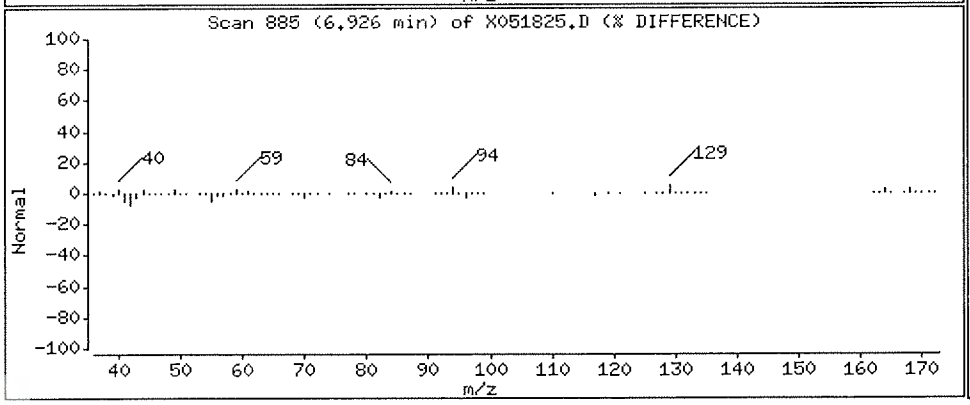
56 Tetrachloroethene

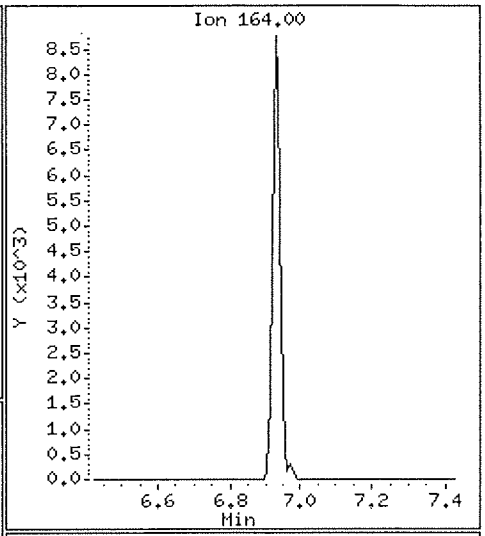
Concentration: 6.09 ug/l

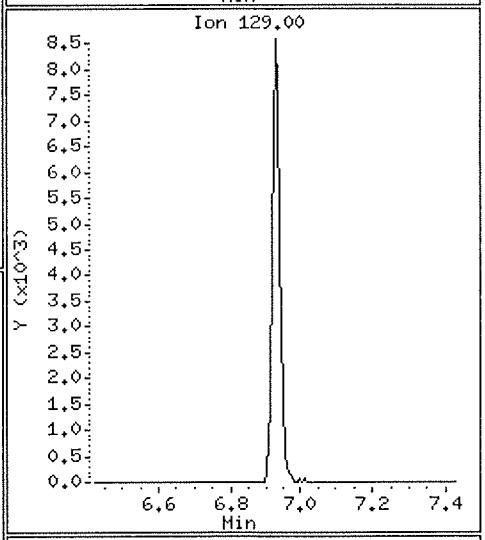


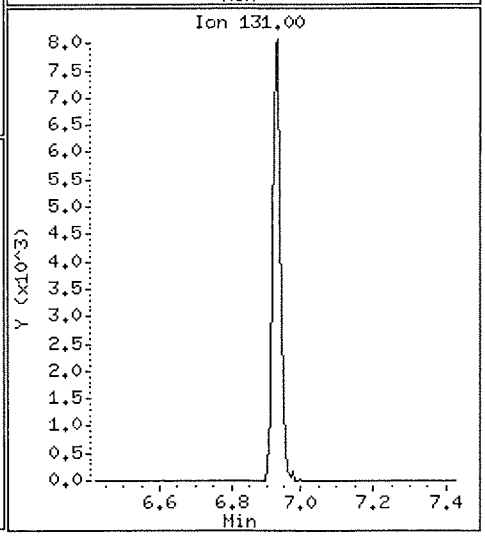












Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051825.D

Date : 18-MAY-2021 19:55

Client ID: HS21050689-02

Instrument: voa6.i

Sample Info: HS21050689-02;HS21050689-02;;;

Purge Volume: 5.0

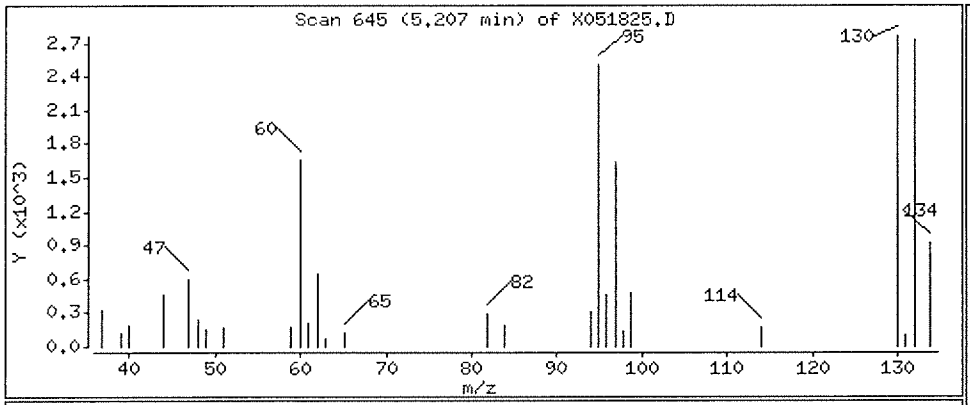
Operator: PC

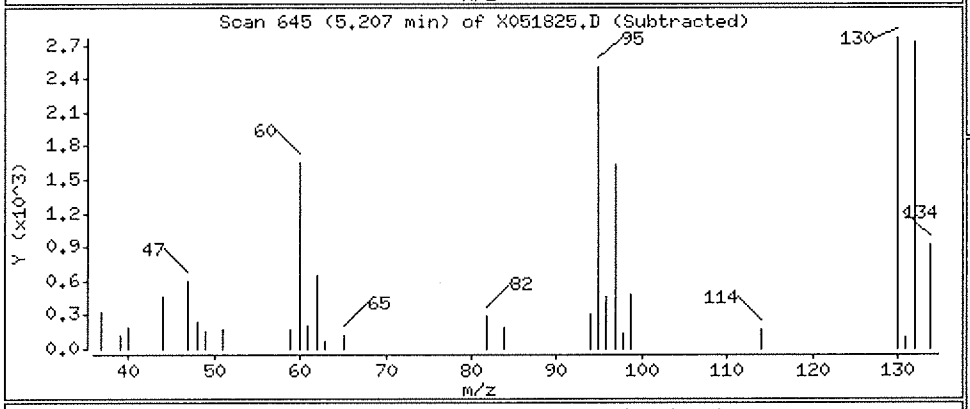
Column phase: DB624

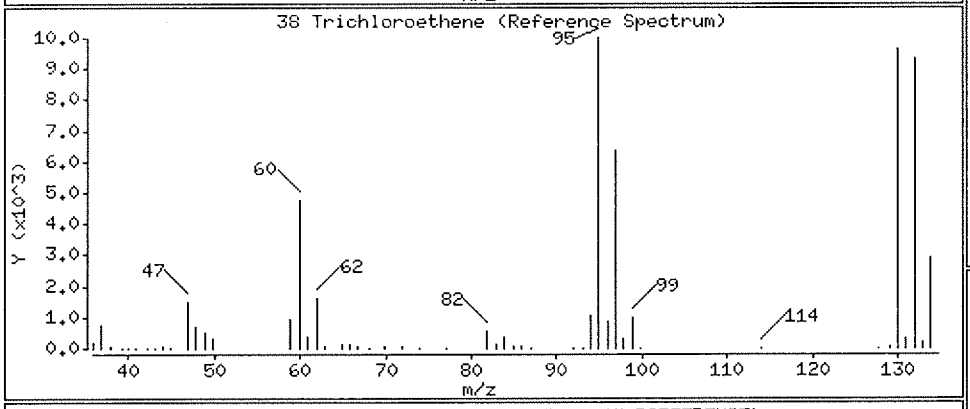
Column diameter: 0.18

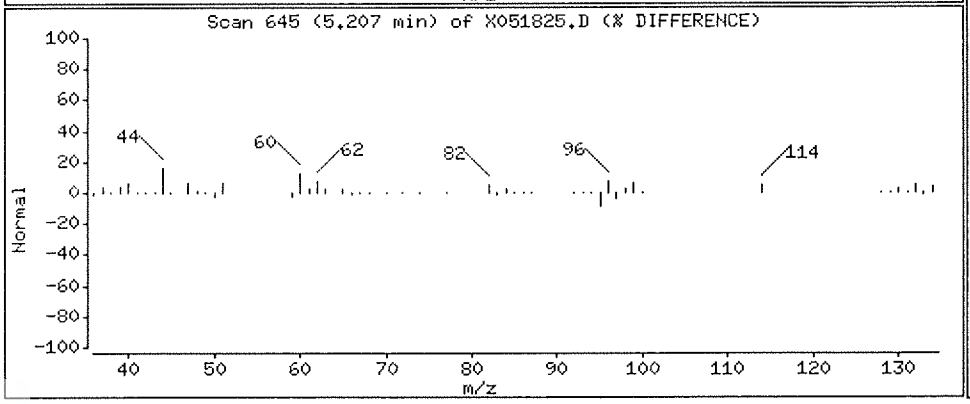
38 Trichloroethene

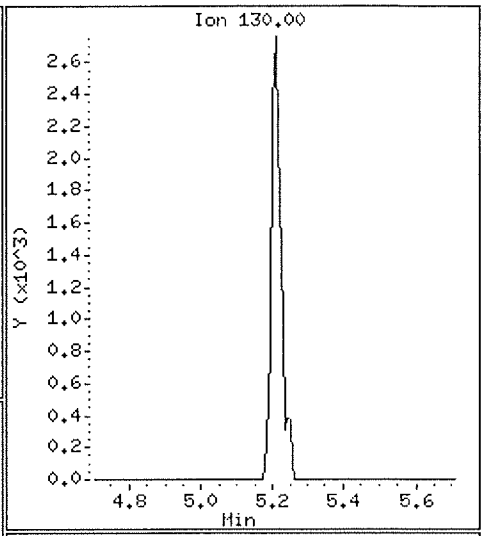
Concentration: 1.77 ug/l

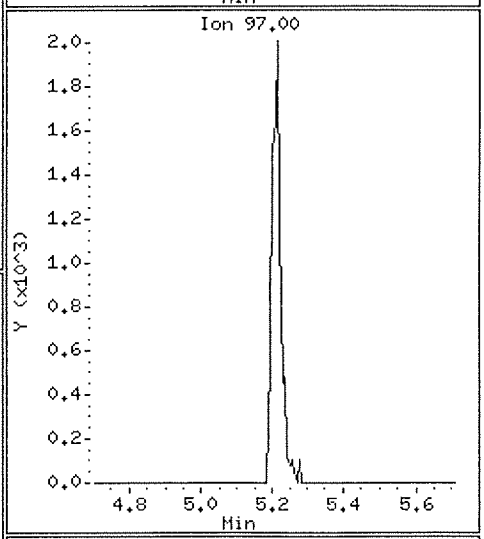


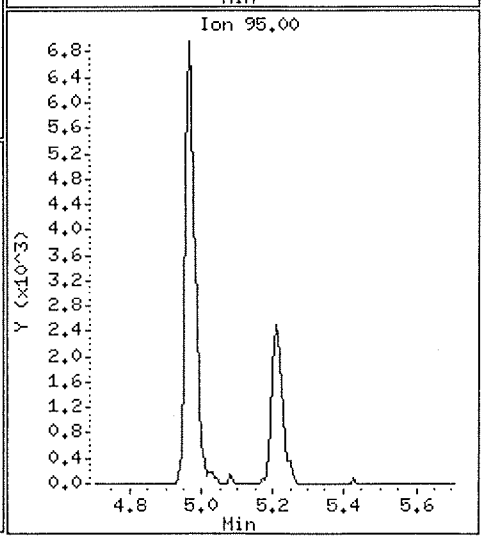












Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051828.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051828.D
Lab Smp Id: HS21050689-01MS Client Smp ID: HS21050689-01MS
Inj Date : 18-MAY-2021 20:58
Operator : PC Inst ID: voa6.i
Smp Info : HS21050689-01MS;HS21050689-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 14:52 Cal File: X051811.D
Als bottle: 29 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

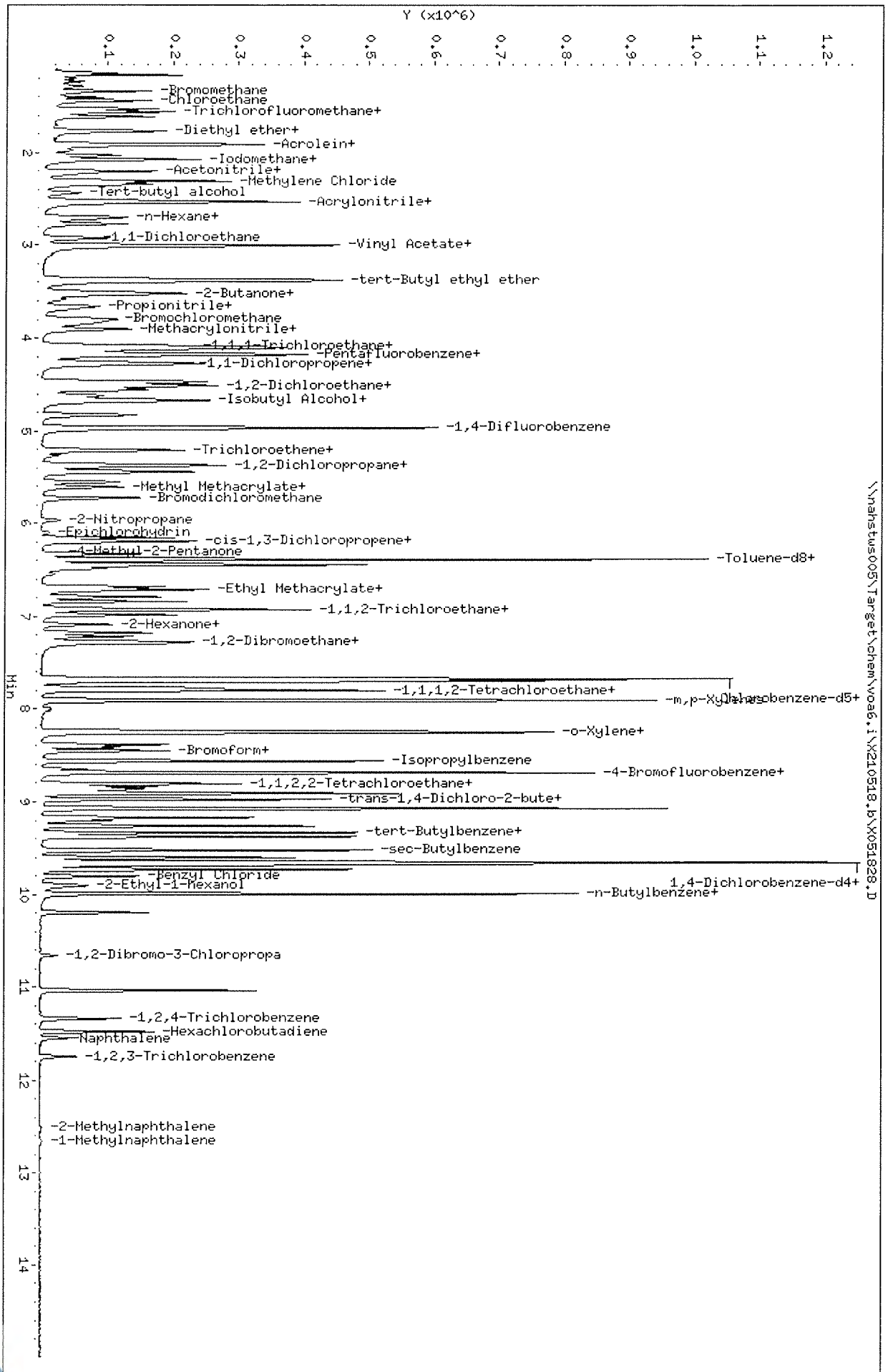
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	309593	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	481210	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	455044	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	227275	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	203392	50.5074	50.50
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	211146	49.1587	49.15
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	163112	47.2845	47.28
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	592572	52.9515	52.95
60 1,1,1,2-Tetrachloroethane	131	7.771	7.778	(1.013)	60730	18.3188	18.31
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	103021	19.5642	19.56
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	67536	17.5990	17.59
138 Freon TF	101	1.911	1.911	(0.457)	60292	20.5269	20.52
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	48455	18.3313	18.33
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	104866	18.2910	18.29
11 1,1-Dichloroethene	96	1.919	1.911	(0.459)	56290	18.1808	18.18
32 1,1-Dichloropropene	75	4.282	4.282	(0.863)	87305	21.1796	21.17
93 1,2,3-Trichlorobenzene	180	11.746	11.739	(1.216)	15609	15.0619	15.06
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	53540	16.9561	16.95(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	31755	17.2493	17.24
79 1,2,4-Trimethylbenzene	105	9.375	9.383	(0.970)	226316	19.5789	19.57
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	4740	16.5794	16.57
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	58338	18.3640	18.36

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051828.D Page 2
Report Date: 22-Jun-2021 08:20

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	111422	17.4917	17.49
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	91712	19.3839	19.38
42 1,2-Dichloropropane	63	5.436	5.436	(1.095)	62129	19.2115	19.21
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	224785	19.8135	19.81
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	122569	18.7714	18.77
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	93964	18.1590	18.15
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	126123	19.0464	19.04
26 2,2-Dichloropropane	77	3.516	3.509	(0.841)	95084	18.5398	18.53
24 2-Butanone	43	3.580	3.580	(0.856)	35617	31.1668	31.16
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	192305	18.9848	18.98
52 2-Hexanone	43	7.090	7.090	(0.924)	63884	32.9283	32.92
77 4-Chlorotoluene	91	9.067	9.067	(0.938)	227506	19.2618	19.26
82 p-Isopropyltoluene	119	9.648	9.655	(0.999)	229778	20.4766	20.47
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	96759	33.4449	33.44
10 Acetone	43	1.976	1.976	(0.473)	26625	30.6190	30.61
37 Benzene	78	4.512	4.512	(0.909)	232880	19.5612	19.56
74 Bromobenzene	156	8.802	8.809	(0.911)	71228	18.8000	18.80
29 Bromochloromethane	128	3.795	3.795	(0.908)	31751	16.8282	16.82
39 Bromodichloromethane	83	5.729	5.722	(1.154)	86990	18.7096	18.70
66 Bromoform	173	8.408	8.408	(1.096)	37020	16.8220	16.82
6 Bromomethane	94	1.338	1.331	(0.320)	64333	19.4815	19.48
19 Carbon Disulfide	76	2.069	2.069	(0.495)	273660	37.5176	37.51
34 Carbon Tetrachloride	117	4.268	4.268	(0.860)	83733	19.9634	19.96
59 Chlorobenzene	112	7.692	7.692	(1.003)	166176	18.6237	18.62
7 Chloroethane	64	1.403	1.396	(0.336)	37547	16.0217	16.02(M)
28 Chloroform	83	3.910	3.910	(0.935)	115986	17.6338	17.63
3 Chloromethane	50	1.073	1.073	(0.257)	60801	18.3595	18.35
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	62838	17.6114	17.61
46 cis-1,3-Dichloropropene	75	6.152	6.159	(1.240)	100198	18.9931	18.99
55 Dibromochloromethane	129	7.176	7.176	(0.936)	63843	17.9505	17.95
44 Dibromomethane	93	5.550	5.550	(1.118)	42689	18.4174	18.41
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	65864	18.2813	18.28
61 Ethylbenzene	106	7.799	7.799	(1.017)	90447	20.5125	20.51
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	25518	20.7048	20.70
67 Isopropylbenzene	105	8.559	8.566	(1.116)	276376	20.5092	20.50
62 m,p-Xylenes	106	7.907	7.907	(1.031)	226195	39.8055	39.80
17 Methylene Chloride	84	2.305	2.298	(0.551)	56659	18.2507	18.25
87 n-Butylbenzene	91	9.991	9.991	(1.034)	218039	20.4306	20.43
73 n-Propylbenzene	91	8.910	8.910	(0.922)	334655	20.7905	20.79
92 Naphthalene	128	11.546	11.539	(1.195)	36301	14.4845	14.48
63 o-Xylene	106	8.244	8.244	(1.075)	105883	19.1578	19.15
81 sec-Butylbenzene	105	9.519	9.526	(0.985)	280046	21.0226	21.02
64 Styrene	104	8.258	8.258	(1.077)	177708	18.2973	18.29
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	196208	20.3816	20.38
56 Tetrachloroethene	164	6.926	6.926	(0.903)	68784	27.2031	27.20
50 Toluene	91	6.446	6.446	(0.840)	257837	19.6389	19.63
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	56431	18.9458	18.94
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.346)	85810	18.5935	18.59
38 Trichloroethene	130	5.206	5.206	(1.049)	66490	20.8660	20.86
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	117793	19.7938	19.79
5 Vinyl Chloride	62	1.145	1.138	(0.274)	67704	18.1130	18.11

QC Flag Legend

M - Compound response manually integrated.

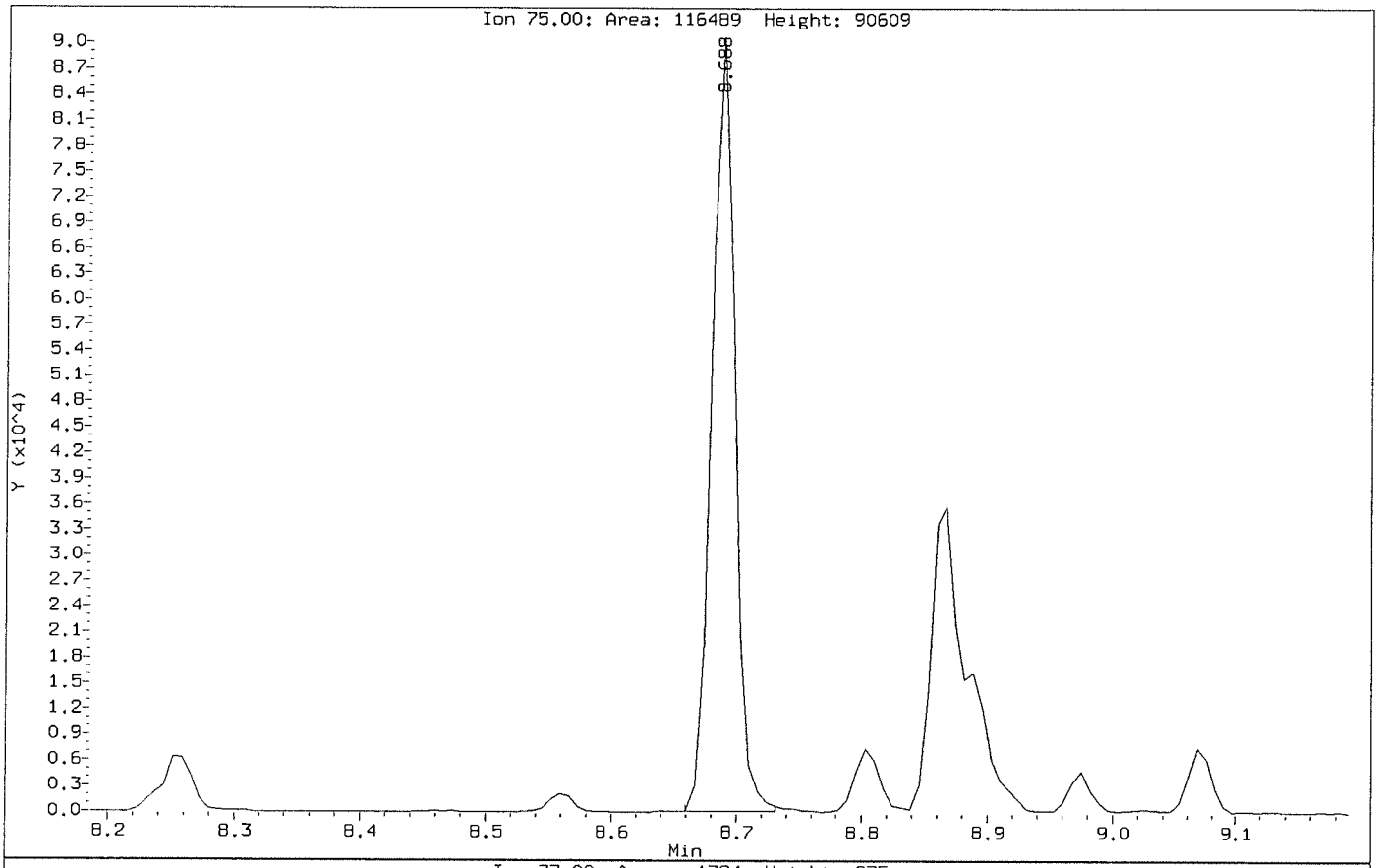


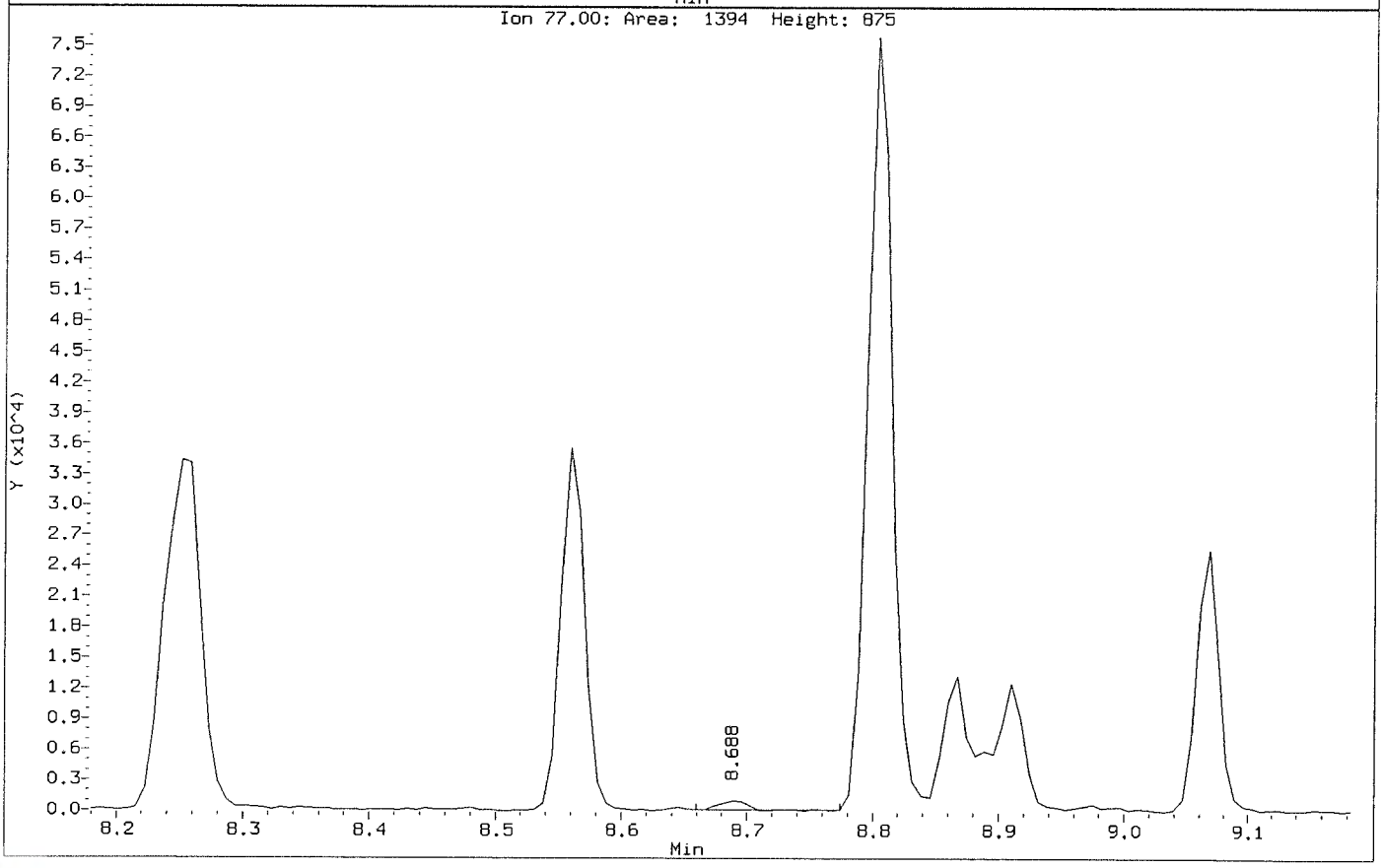
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Client ID: HS21050689-01MS
Sample Info: HS21050689-01MS;HS21050689-01MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\Before\X051828.D
Injection Date: 18-MAY-2021 20:58
Instrument: voa6.i
Client Sample ID: HS21050689-01MS

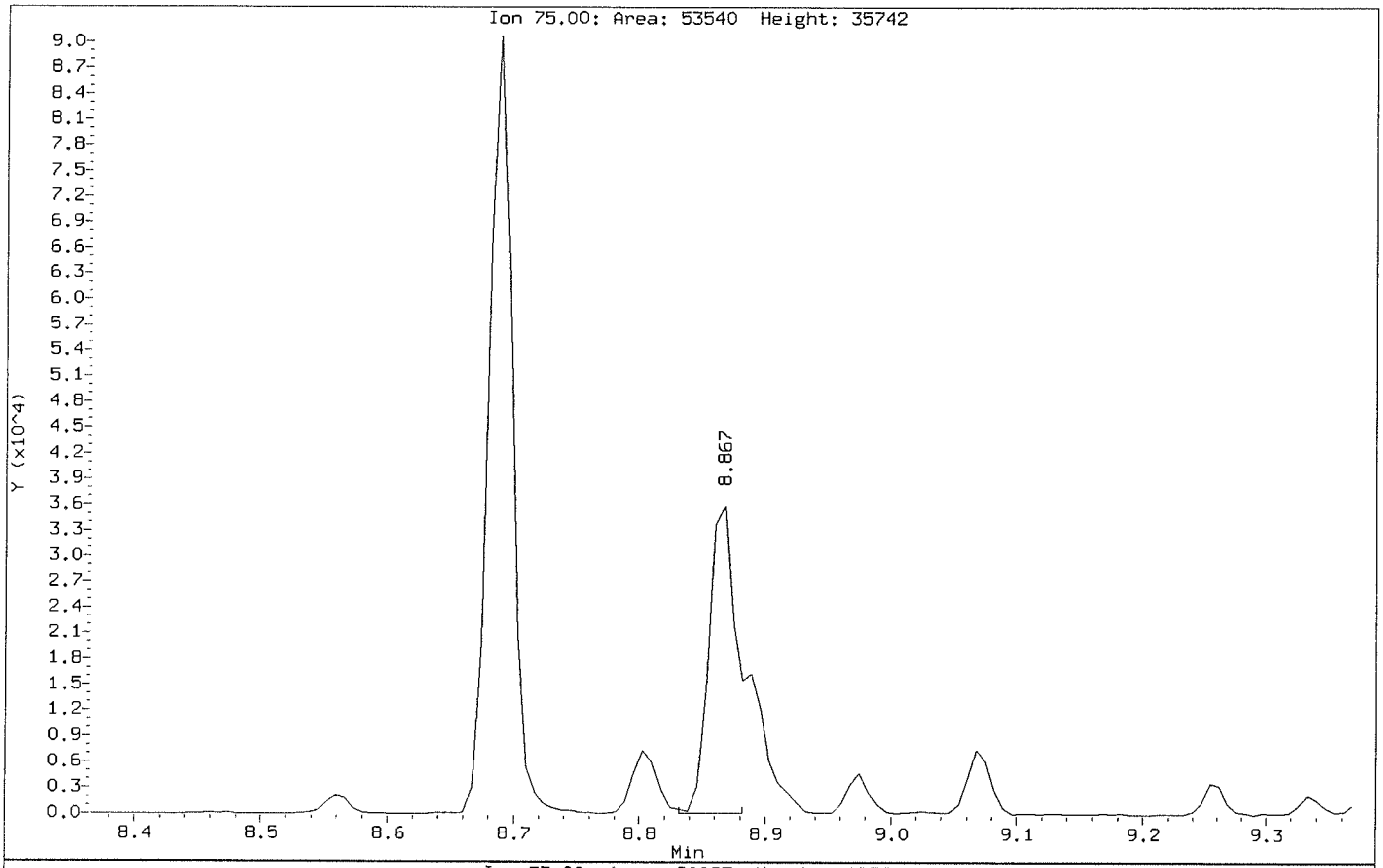
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

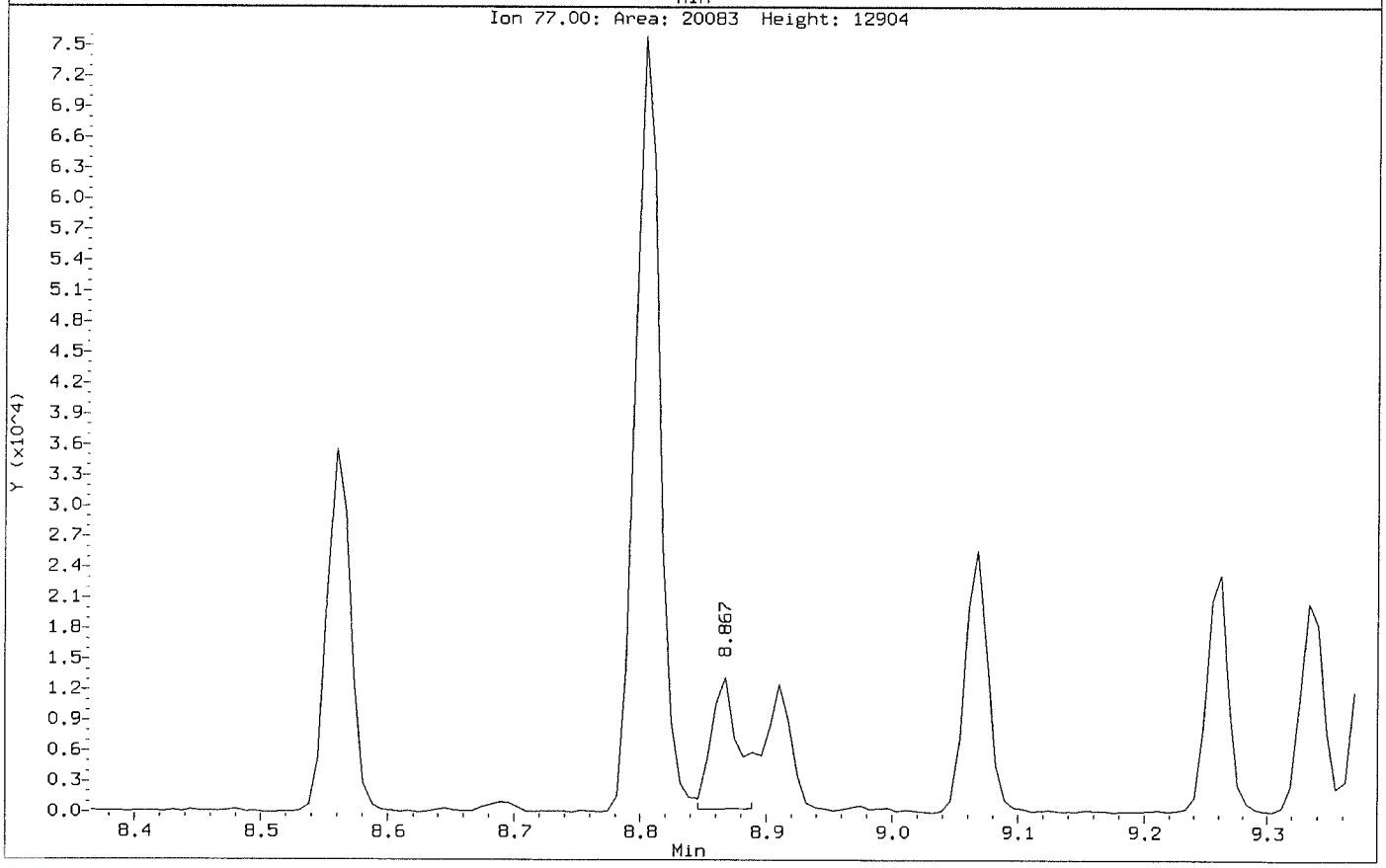




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Injection Date: 18-MAY-2021 20:58
Instrument: voa6.i
Client Sample ID: HS21050689-01MS

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051829.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051829.D
Lab Smp Id: HS21050689-01MSD Client Smp ID: HS21050689-01MSD
Inj Date : 18-MAY-2021 21:19
Operator : PC Inst ID: voa6.i
Smp Info : HS21050689-01MSD;HS21050689-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 14:52 Cal File: X051811.D
Als bottle: 29 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
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Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

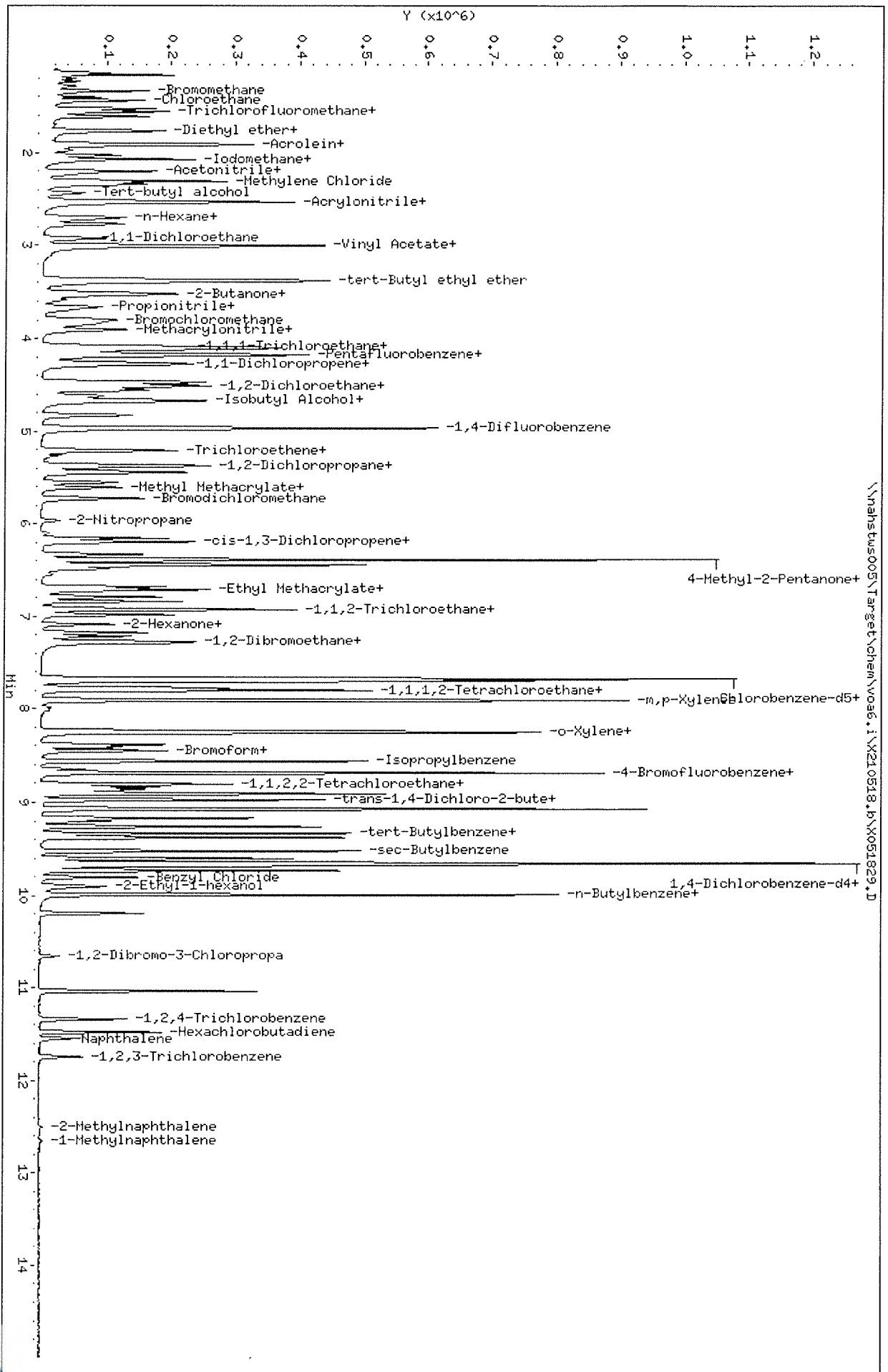
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	314237	50.0000	
* 36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	491541	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	456259	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	222997	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	201581	49.2880	49.28
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	215585	50.0563	50.05
$ 30 Dibromofluoromethane	113	4.103	4.096	(0.981)	165544	47.2803	47.28
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	590227	52.6082	52.60
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	58136	17.4897	17.48
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	100331	18.7718	18.77
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	70172	18.6680	18.66
138 Freon TF	101	1.919	1.911	(0.459)	59217	19.8630	19.86
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	46333	17.4818	17.48
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	103069	17.7119	17.71
11 1,1-Dichloroethene	96	1.919	1.911	(0.459)	54802	17.4386	17.43
32 1,1-Dichloropropene	75	4.282	4.282	(0.863)	82746	19.6518	19.65
93 1,2,3-Trichlorobenzene	180	11.746	11.739	(1.216)	18630	18.1857	18.18
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	54469	17.6040	17.60(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	34109	18.6497	18.64
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	221606	19.5392	19.53
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	5236	18.4637	18.46
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	57826	18.1543	18.15

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051829.D Page 2
Report Date: 22-Jun-2021 08:20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	114617	18.3384	18.33
33	1,2-Dichloroethane	62	4.555	4.555	(0.918)	92428	19.1247	19.12
42	1,2-Dichloropropane	63	5.436	5.436	(1.095)	59922	18.1396	18.13
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	224446	20.1631	20.16
83	1,3-Dichlorobenzene	146	9.604	9.605	(0.994)	119468	18.6475	18.64
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	92882	17.9021	17.90
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	125988	19.3864	19.38
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	90688	17.4213	17.42
24	2-Butanone	43	3.580	3.580	(0.856)	35215	30.3596	30.35
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	188357	18.9518	18.95
52	2-Hexanone	43	7.090	7.090	(0.924)	65087	33.4634	33.46
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	229497	19.8031	19.80
82	p-Isopropyltoluene	119	9.647	9.655	(0.999)	226393	20.5620	20.56
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	102892	35.4647	35.46
10	Acetone	43	1.976	1.976	(0.473)	26944	30.5126	30.51
37	Benzene	78	4.512	4.512	(0.909)	223974	18.4177	18.41
74	Bromobenzene	156	8.809	8.809	(0.912)	70354	18.9256	18.92
29	Bromochloromethane	128	3.802	3.795	(0.909)	33107	17.2876	17.28
39	Bromodichloromethane	83	5.729	5.722	(1.154)	88160	18.5627	18.56
66	Bromoform	173	8.408	8.408	(1.096)	39044	17.6945	17.69
6	Bromomethane	94	1.338	1.331	(0.320)	64749	19.3137	19.31
19	Carbon Disulfide	76	2.069	2.069	(0.495)	273965	37.0043	37.00
34	Carbon Tetrachloride	117	4.268	4.268	(0.860)	83329	19.4495	19.44
59	Chlorobenzene	112	7.692	7.692	(1.003)	166720	18.6350	18.63
7	Chloroethane	64	1.403	1.396	(0.336)	41199	17.3202	17.32(M)
28	Chloroform	83	3.910	3.910	(0.935)	116895	17.5094	17.50
3	Chloromethane	50	1.073	1.073	(0.257)	62891	18.7055	18.70
27	cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	63974	17.6648	17.66
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.241)	99534	18.4707	18.47
55	Dibromochloromethane	129	7.176	7.176	(0.936)	64046	17.9596	17.95
44	Dibromomethane	93	5.550	5.550	(1.118)	43244	18.2647	18.26
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	65503	17.9543	17.95
61	Ethylbenzene	106	7.799	7.799	(1.017)	85965	19.4441	19.44
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	26485	21.7175	21.71
67	Isopropylbenzene	105	8.559	8.566	(1.116)	272605	20.1755	20.17
62	m,p-Xylenes	106	7.907	7.907	(1.031)	221959	38.9560	38.95
17	Methylene Chloride	84	2.305	2.298	(0.551)	55532	17.6233	17.62
87	n-Butylbenzene	91	9.991	9.991	(1.034)	215679	20.5972	20.59
73	n-Propylbenzene	91	8.910	8.910	(0.922)	329497	20.8627	20.86
92	Naphthalene	128	11.546	11.539	(1.195)	43671	17.0580	17.05
63	o-Xylene	106	8.243	8.244	(1.075)	102886	18.5660	18.56
81	sec-Butylbenzene	105	9.519	9.526	(0.985)	272474	20.8466	20.84
64	Styrene	104	8.258	8.258	(1.077)	175479	18.0464	18.04
78	tert-Butylbenzene	119	9.339	9.340	(0.967)	196290	20.7813	20.78
56	Tetrachloroethene	164	6.925	6.926	(0.903)	67845	26.7603	26.76
50	Toluene	91	6.446	6.446	(0.840)	254502	19.3333	19.33
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	54305	17.9626	17.96
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.346)	84560	17.9375	17.93
38	Trichloroethene	130	5.206	5.206	(1.049)	65047	19.9842	19.98
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	114453	18.9483	18.94
5	Vinyl Chloride	62	1.145	1.138	(0.274)	65196	17.1843	17.18

QC Flag Legend

M - Compound response manually integrated.

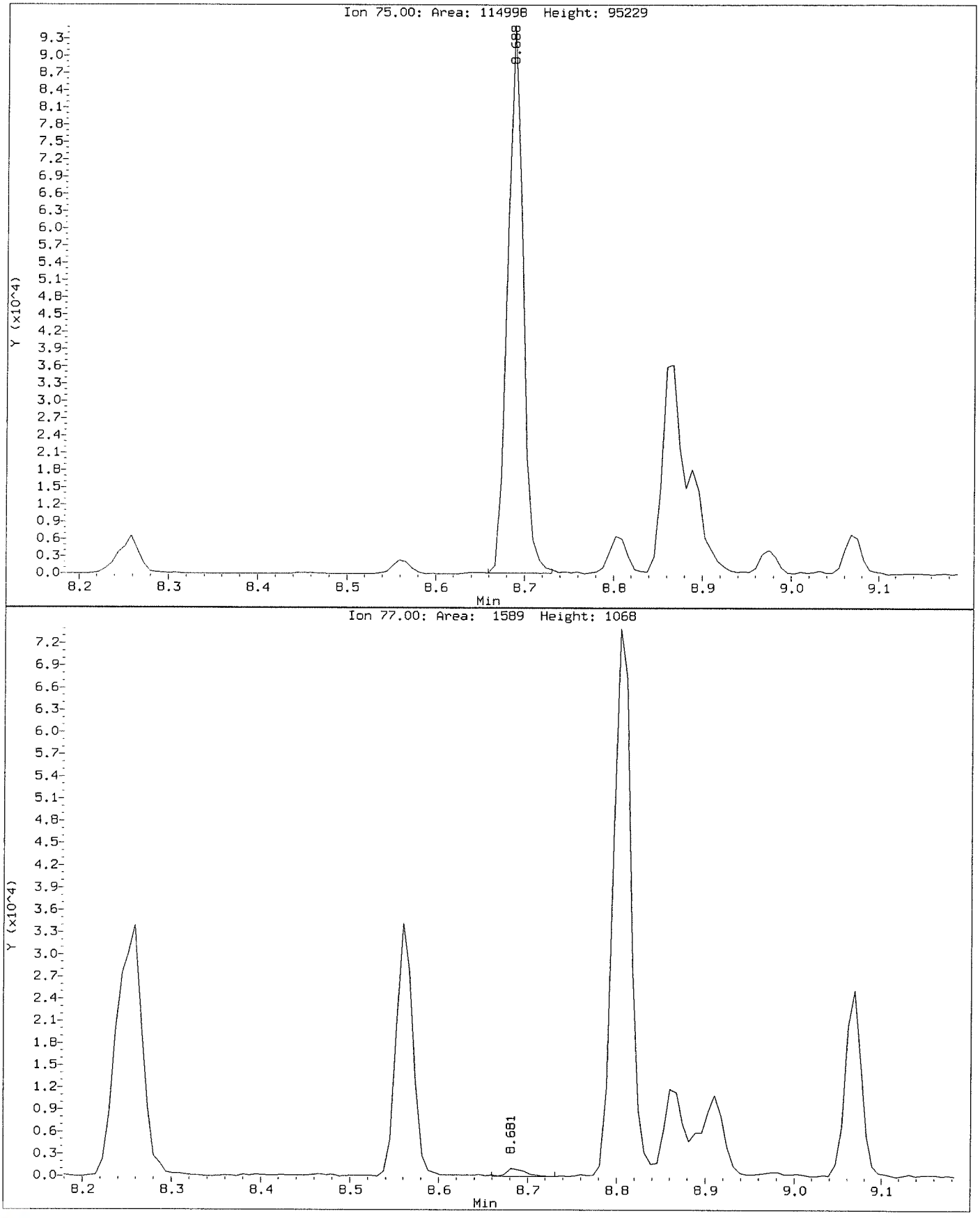


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Sample Info: HS21050689-01MSD;HS21050689-01MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

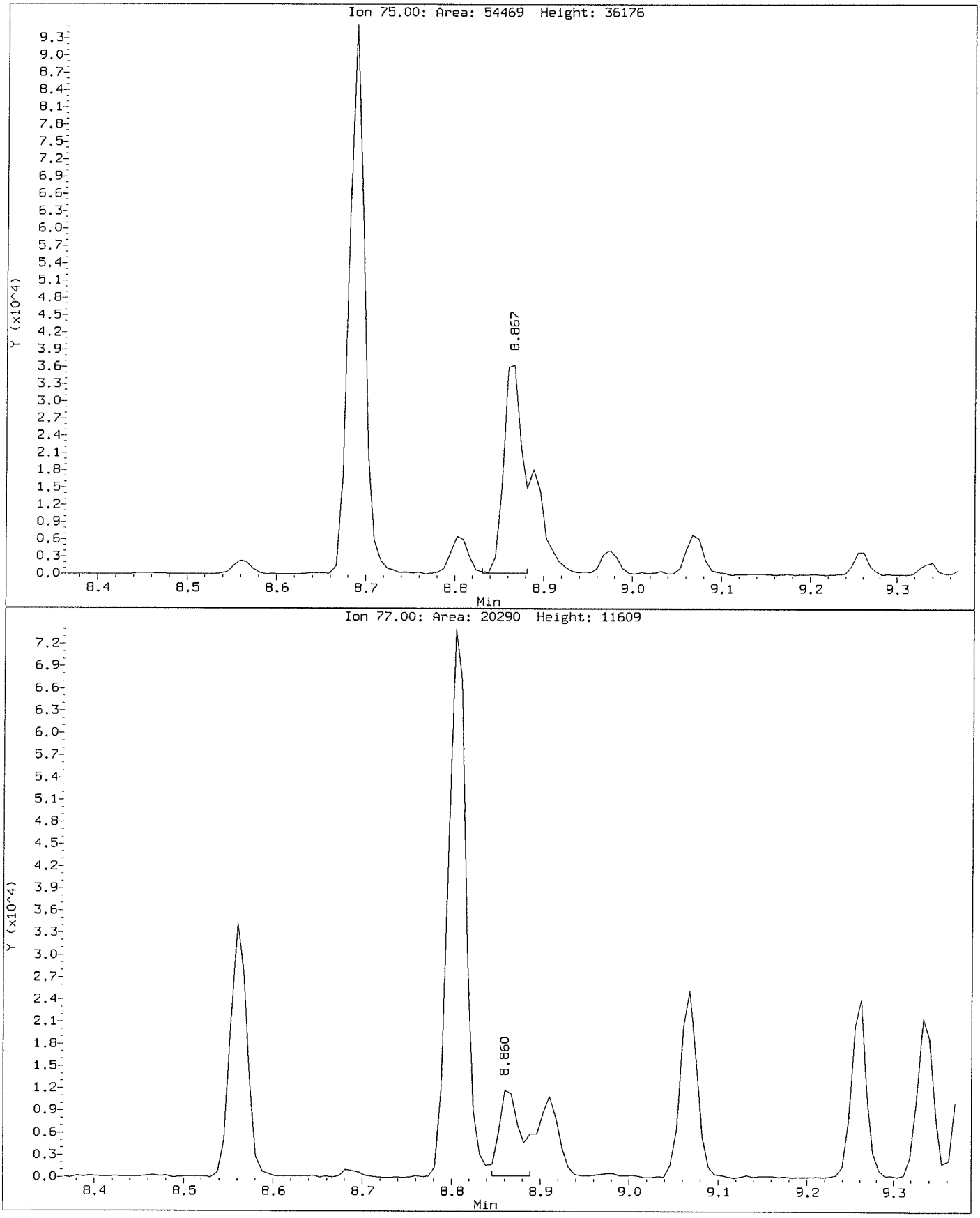
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Injection Date: 18-MAY-2021 21:19
Instrument: voa6.i
Client Sample ID: HS21050689-01MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051829.D
Injection Date: 18-MAY-2021 21:19
Instrument: voa6.i
Client Sample ID: HS21050689-01MSD

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051830.D Page 1
Report Date: 22-Jun-2021 08:30

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051830.D
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Inj Date : 18-MAY-2021 21:40
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\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:30 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 14:52 Cal File: X051811.D
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
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Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

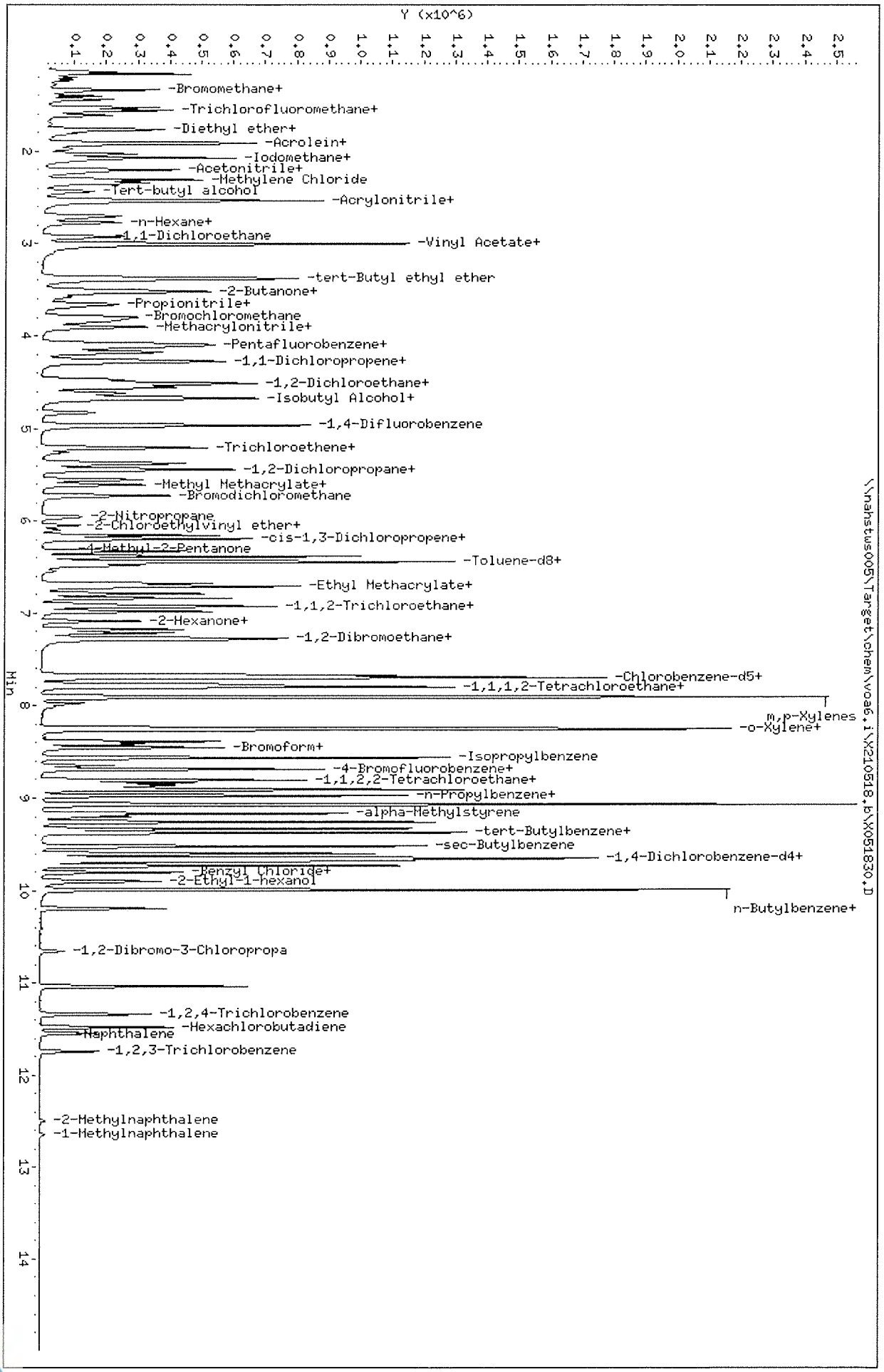
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	284397	50.0000	
*	36 1,4-Difluorobenzene	114	4.963	4.963	(1.000)	483716	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	459151	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	239723	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	197351	50.0000	53.42
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	227360	50.0000	52.45
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	167534	50.0000	52.89
$	48 Toluene-d8	98	6.388	6.388	(0.833)	578348	50.0000	51.25
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	161888	50.0000	48.39
	31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	242198	50.0000	50.06
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	185939	50.0000	46.79
	138 Freon TF	101	1.919	1.919	(0.459)	115970	50.0000	42.98
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	129802	50.0000	48.66
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	264224	50.0000	50.16
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	124326	50.0000	43.71
	32 1,1-Dichloropropene	75	4.282	4.282	(0.863)	200126	50.0000	48.29
	93 1,2,3-Trichlorobenzene	180	11.739	11.739	(1.215)	46653	50.0000	41.16
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	153873	50.0000	47.26(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	88016	50.0000	41.31
	79 1,2,4-Trimethylbenzene	105	9.375	9.375	(0.970)	605793	50.0000	49.68
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	13744	50.0000	42.77
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	161349	50.0000	50.33

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051830.D Page 2
Report Date: 22-Jun-2021 08:30

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	304387	50.0000	45.30
33 1,2-Dichloroethane	62	4.555	4.555	(0.918)	236278	50.0000	49.68
42 1,2-Dichloropropane	63	5.436	5.436	(1.095)	156725	50.0000	48.21
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	592433	50.0000	49.50
83 1,3-Dichlorobenzene	146	9.604	9.604	(0.994)	335593	50.0000	48.72
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	253976	50.0000	48.64
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	338495	50.0000	48.07
26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	224075	50.0000	47.56
24 2-Butanone	43	3.580	3.580	(0.856)	95916	100.000	91.36
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	501995	50.0000	46.98
52 2-Hexanone	43	7.083	7.083	(0.923)	172731	100.000	88.69
77 4-Chlorotoluene	91	9.067	9.067	(0.938)	611082	50.0000	49.05
82 p-Isopropyltoluene	119	9.647	9.647	(0.999)	569549	50.0000	48.11
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	267167	100.000	91.36
10 Acetone	43	1.976	1.976	(0.473)	66961	100.000	92.78
37 Benzene	78	4.512	4.512	(0.909)	601448	50.0000	50.25
74 Bromobenzene	156	8.802	8.802	(0.911)	187544	50.0000	46.93
29 Bromochloromethane	128	3.795	3.795	(0.908)	83305	50.0000	48.06
39 Bromodichloromethane	83	5.729	5.729	(1.154)	230262	50.0000	49.26
66 Bromoform	173	8.408	8.408	(1.096)	104884	50.0000	47.23
6 Bromomethane	94	1.338	1.338	(0.320)	148264	50.0000	49.59
19 Carbon Disulfide	76	2.069	2.069	(0.495)	700357	100.000	104.52
34 Carbon Tetrachloride	117	4.268	4.268	(0.860)	196574	50.0000	46.62
59 Chlorobenzene	112	7.692	7.692	(1.003)	437785	50.0000	48.62
7 Chloroethane	64	1.403	1.403	(0.336)	113486	50.0000	52.71
28 Chloroform	83	3.910	3.910	(0.935)	297022	50.0000	49.15
3 Chloromethane	50	1.073	1.073	(0.257)	158097	50.0000	51.53
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	158598	50.0000	48.38
46 cis-1,3-Dichloropropene	75	6.152	6.152	(1.240)	269241	50.0000	50.77
55 Dibromochloromethane	129	7.176	7.176	(0.936)	178946	50.0000	49.86
44 Dibromomethane	93	5.550	5.550	(1.118)	111995	50.0000	48.06
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	169798	50.0000	47.54
61 Ethylbenzene	106	7.799	7.799	(1.017)	223352	50.0000	50.20
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	61412	50.0000	43.15
67 Isopropylbenzene	105	8.559	8.559	(1.116)	687475	50.0000	50.55
62 m,p-Xylenes	106	7.900	7.900	(1.030)	591193	100.000	103.10
17 Methylene Chloride	84	2.305	2.305	(0.551)	144836	50.0000	50.78
87 n-Butylbenzene	91	9.991	9.991	(1.034)	541035	50.0000	48.06
73 n-Propylbenzene	91	8.910	8.910	(0.922)	834843	50.0000	49.17
92 Naphthalene	128	11.546	11.546	(1.195)	124229	50.0000	40.03
63 o-Xylene	106	8.244	8.244	(1.075)	276991	50.0000	49.66
81 sec-Butylbenzene	105	9.519	9.519	(0.985)	675724	50.0000	48.09
64 Styrene	104	8.258	8.258	(1.077)	487544	50.0000	46.71
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	485132	50.0000	47.77
56 Tetrachloroethene	164	6.926	6.926	(0.903)	128018	50.0000	50.17
50 Toluene	91	6.446	6.446	(0.840)	673256	50.0000	50.82
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	134945	50.0000	49.31
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.346)	242498	50.0000	52.27
38 Trichloroethene	130	5.206	5.206	(1.049)	155746	50.0000	48.62
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	246582	50.0000	45.10
5 Vinyl Chloride	62	1.145	1.145	(0.274)	153802	50.0000	44.79

QC Flag Legend

M - Compound response manually integrated.

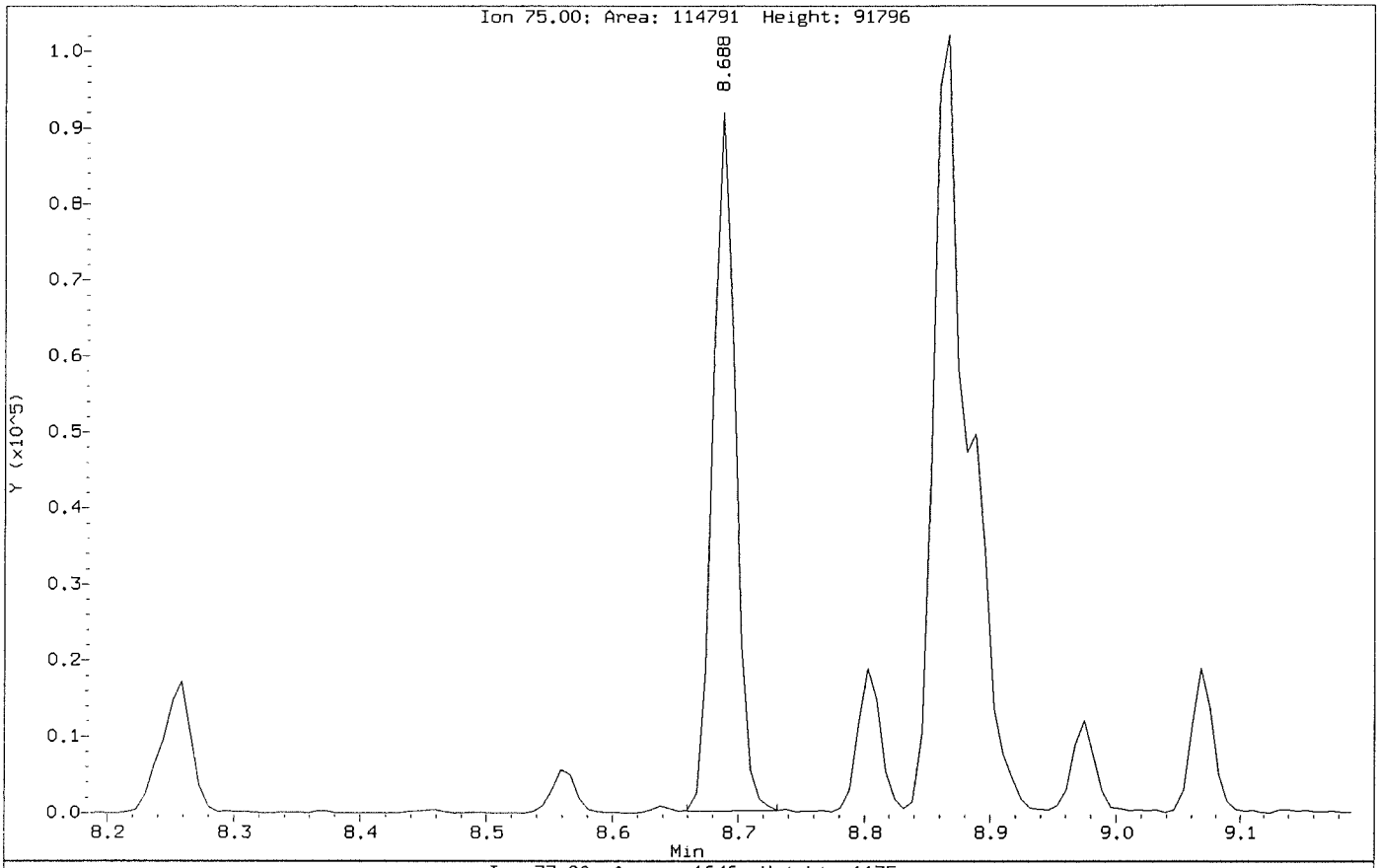


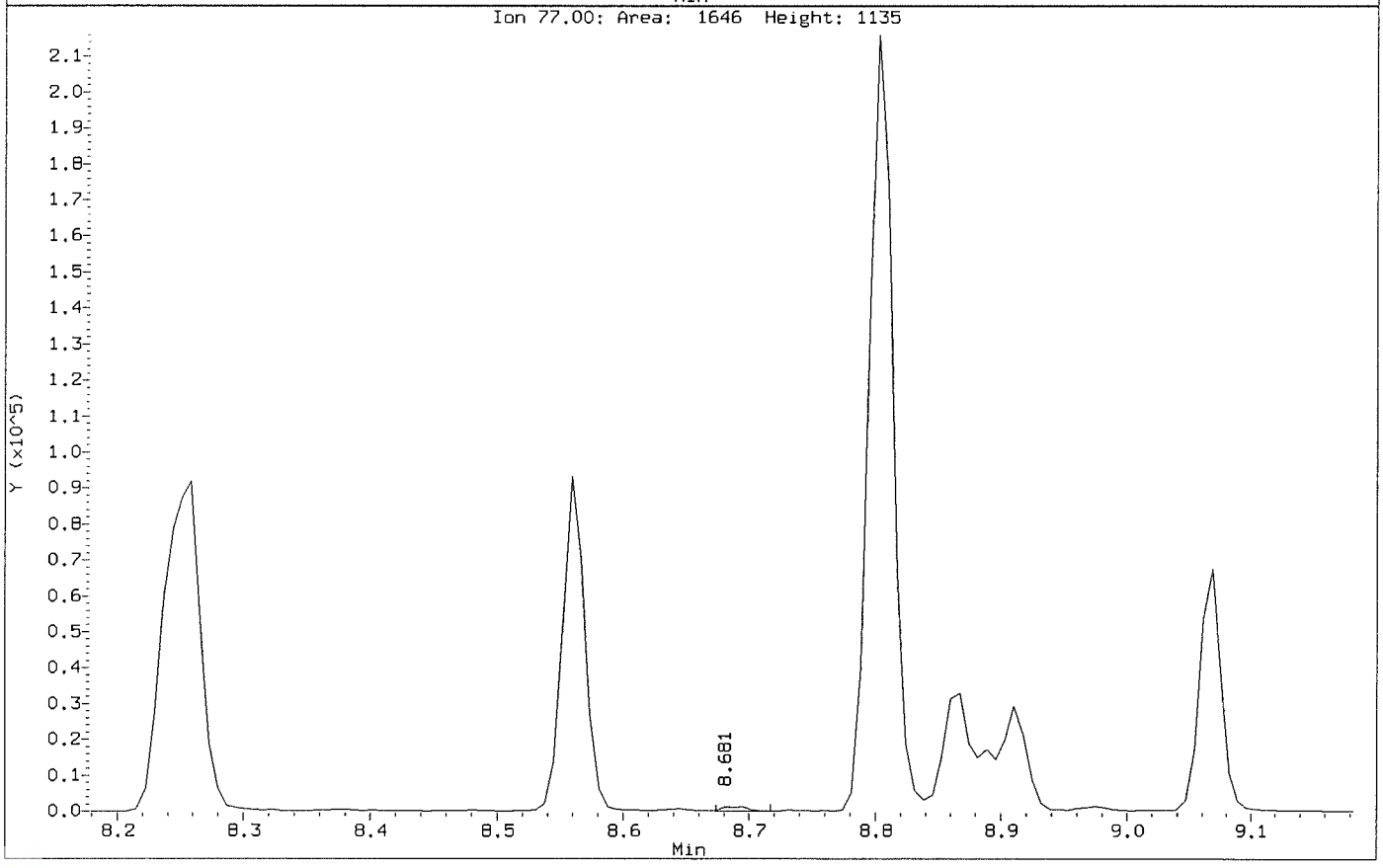
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Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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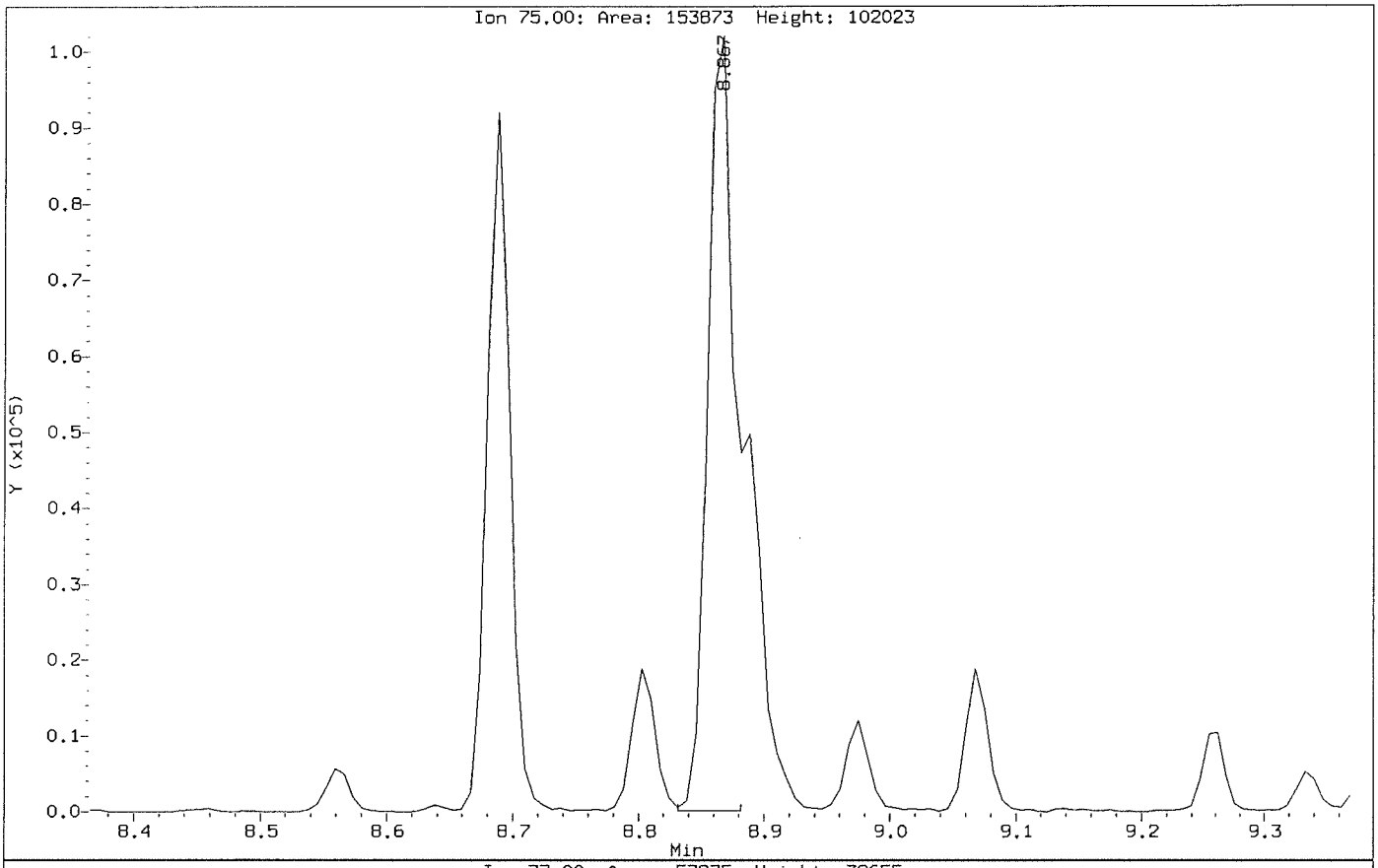
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CAS Number: 96-18-4

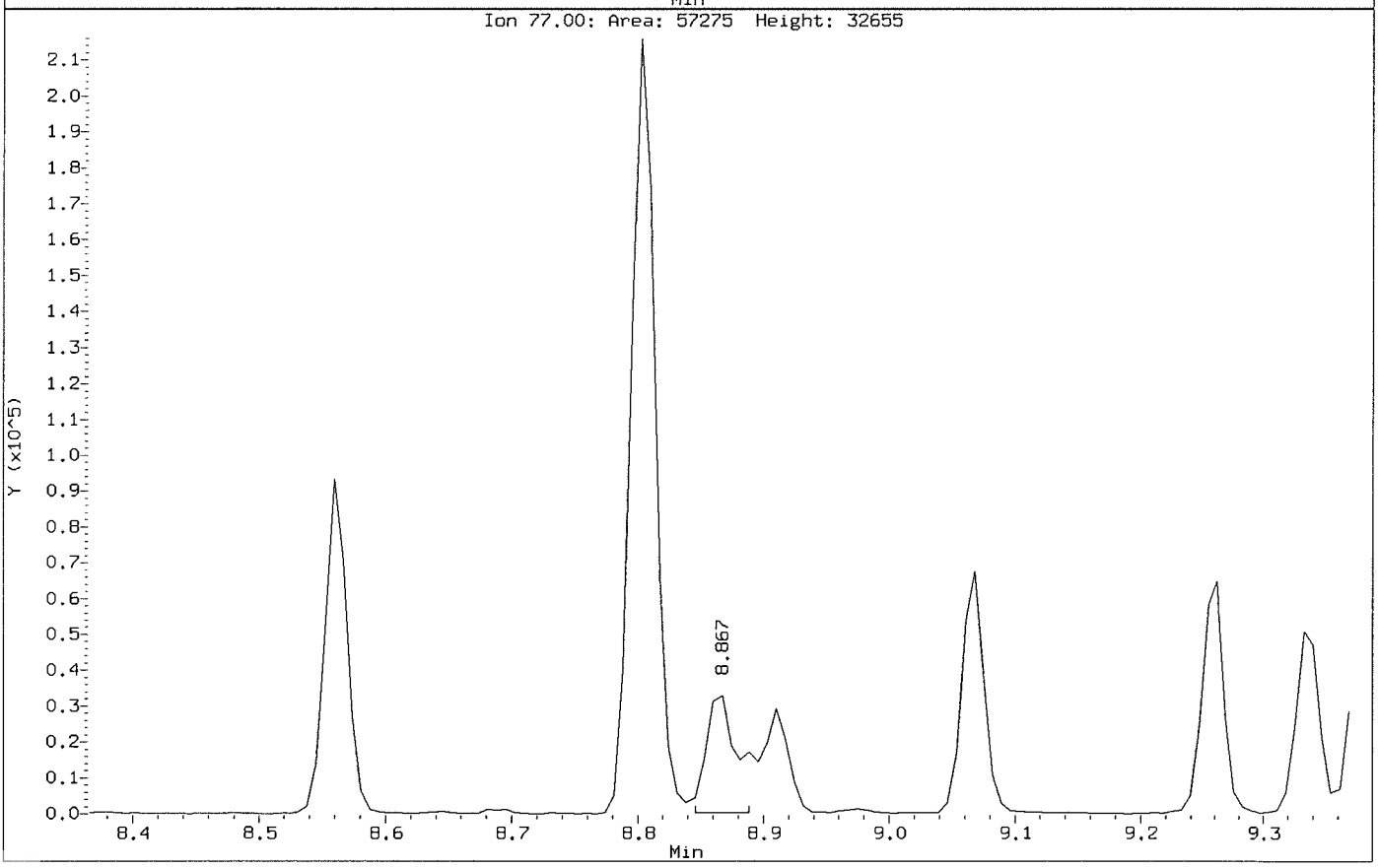




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Injection Date: 18-MAY-2021 21:40
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





HS21050689 Wet Chem Raw Data (9056_anions_W)

ALS WO# HS21050689

Sequence: 051421
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method
	STD1		Calibration	BB1	1.00	1	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD2		Calibration	BB2	1.00	2	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD3		Calibration	BB3	1.00	3	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD4		Calibration	BB4	1.00	4	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD5		Calibration	BB5	1.00	5	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	STD6		Calibration	BB6	1.00	6	Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	ICV		Unknown	BB7	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	ICB		Unknown	BB8	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	R8	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
	HS21050689-01		Unknown	RC5	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21050697-03		Unknown	RC7	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21050697-03MS		Unknown	RC8	1.00		Anions Program ISO37mM 150mm short 0.4	Anions Processing Method ISO
	HS21050697-03MSD		Unknown	RD1	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

Sequence: 051421
Last Update Operator: alshs.nouser

CD	Name	Volume	Status	Inject Time
	STD1	5.0	Finished	5/5/2021 6:12:32 PM -05:00
	STD2	5.0	Finished	5/5/2021 6:20:08 PM -05:00
	STD3	5.0	Finished	5/5/2021 6:27:33 PM -05:00
	STD4	5.0	Finished	5/5/2021 6:34:56 PM -05:00
	STD5	5.0	Finished	5/5/2021 6:42:20 PM -05:00
	STD6	5.0	Finished	5/5/2021 6:49:43 PM -05:00
	ICV	5.0	Finished	5/5/2021 6:57:07 PM -05:00
	ICB	5.0	Finished	5/5/2021 7:14:09 PM -05:00
	CCV	5.0	Finished	5/14/2021 9:48:52 AM -05:00
	CCB	5.0	Finished	5/14/2021 9:56:16 AM -05:00
	MBLK-	5.0	Finished	5/14/2021 10:18:45 AM -05:00
	LCS-	5.0	Finished	5/14/2021 10:26:09 AM -05:00
	CCV1	5.0	Finished	5/14/2021 11:43:42 AM -05:00
	CCB	5.0	Finished	5/14/2021 11:51:05 AM -05:00
	CCV	5.0	Finished	5/14/2021 1:06:18 PM -05:00
	CCB	5.0	Finished	5/14/2021 1:13:42 PM -05:00
	HS21050689-01	5.0	Finished	5/14/2021 2:31:24 PM -05:00
	HS21050697-03	5.0	Finished	5/14/2021 2:46:11 PM -05:00
	HS21050697-03MS	5.0	Finished	5/14/2021 2:53:34 PM -05:00
	HS21050697-03MSD	5.0	Finished	5/14/2021 3:00:57 PM -05:00
	CCV1	5.0	Finished	5/14/2021 3:08:21 PM -05:00
	CCB	5.0	Finished	5/14/2021 3:15:44 PM -05:00

Sequence: 051421
Injection #6: STD6

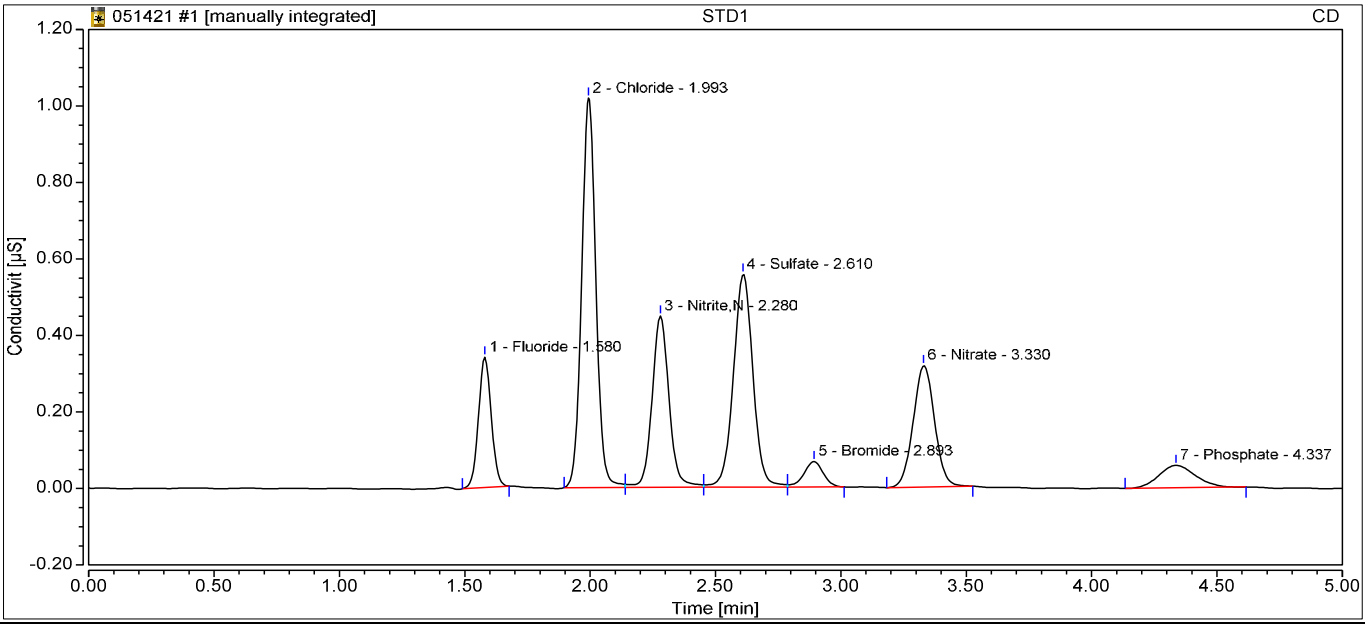
Calibration

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*	*26.4373*	*0.99601*	*0.0037*	*0.2049*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	0.6871	1.00000	-0.0005	0.1344	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	17.7767	0.99788	0.0149	0.2622	0.0000
4	Sulfate	Lin, WithOffset, 1/	Area	6	1.7139	0.99998	0.0010	0.0990	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	3.9005	0.99992	0.0004	0.0565	0.0000
6	Nitrate	Lin, WithOffset, 1/	Area	6	4.7579	0.99988	-0.0013	0.3350	0.0000
7	Phosphate	Lin, WithOffset, 1/	Area	6	7.9708	0.99971	-0.0045	0.1295	0.0000
n.a.	Chlorate	Lin, WithOffset, 1/	Area	0	n.a.	n.a.	n.a.	n.a.	n.a.
Maximum					**26.4373**	1.00000			
Minimum					0.6871	**0.99601**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**BB1**	*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:	**05/05/2021 18:12**	*Sample Weight:*	**1.0000**

Run Time:



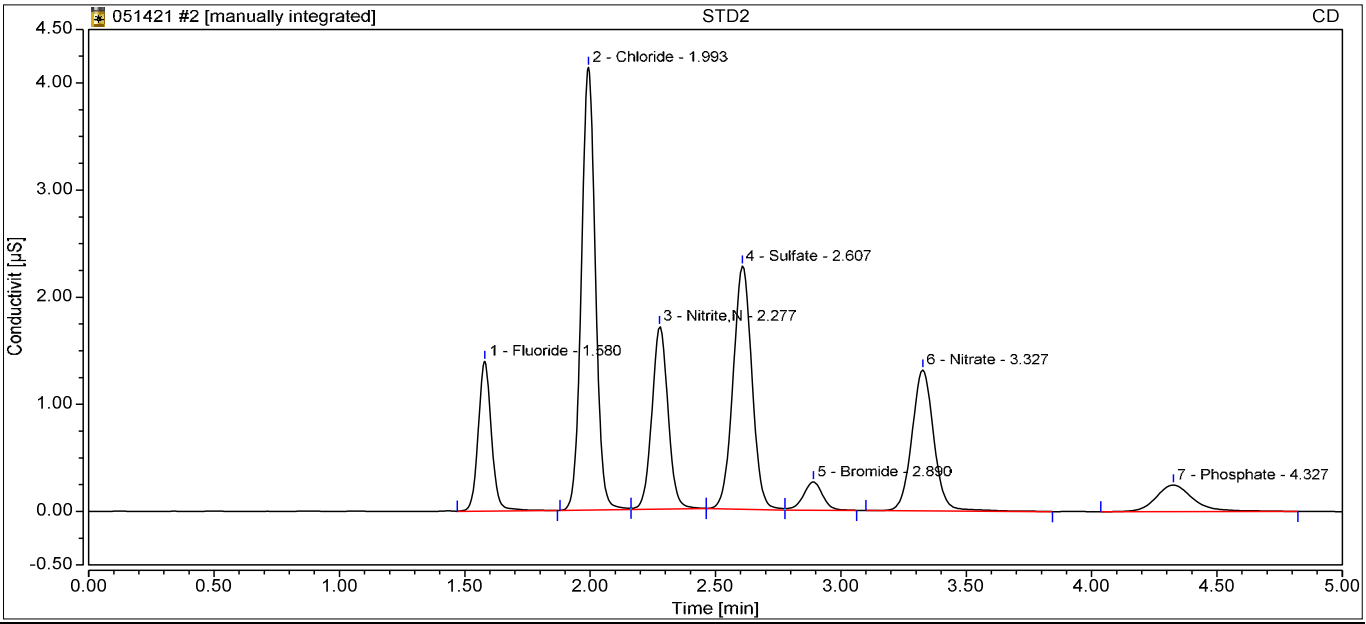
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB*	0.020	0.0804	0.0804	1.0000
2	1.99	Chloride	BM *	0.067	0.4989	0.4989	1.0000
3	2.28	Nitrite,N	M *	0.035	0.0767	0.0767	1.0000
4	2.61	Sulfate	M *	0.050	0.4965	0.4965	1.0000
5	2.89	Bromide	MB*	0.006	0.0985	0.0985	1.0000
6	3.33	Nitrate	BMB*	0.031	0.0974	0.0974	1.0000
7	4.34	Phosphate	BMB*	0.010	0.1110	0.1110	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.219**		**1.46**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**BB2**	*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:	**05/05/2021 18:20**	*Sample Weight:*	**1.0000**

Run Time:



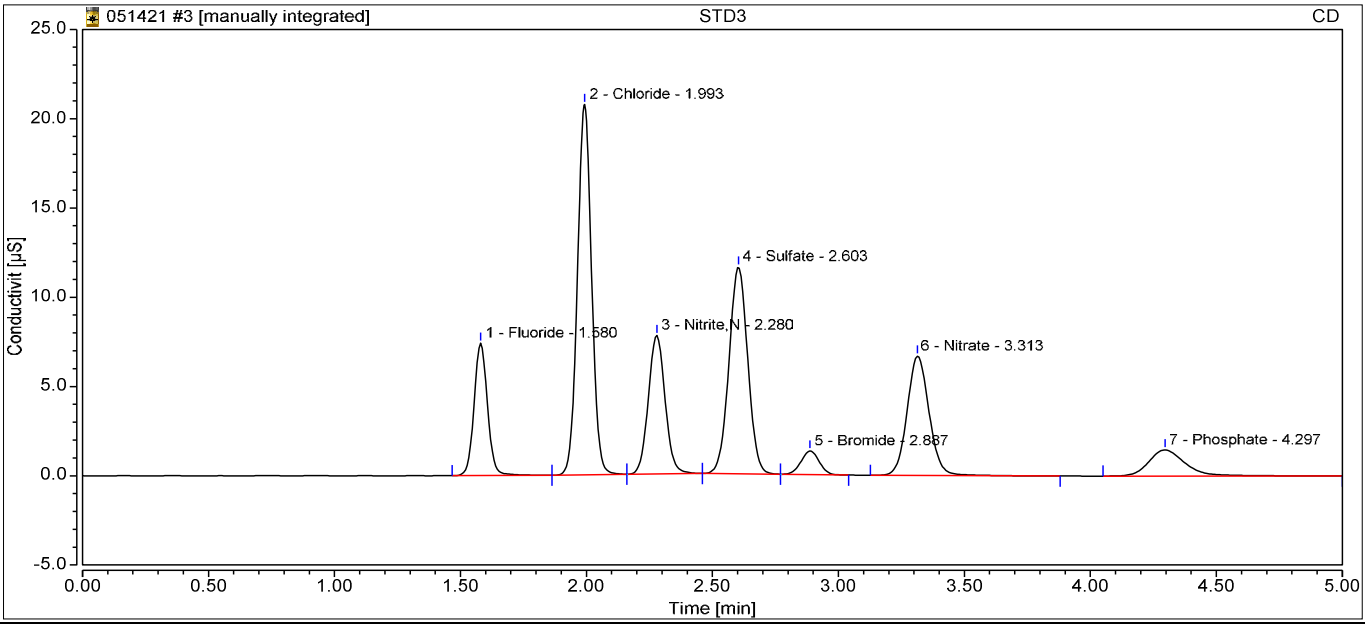
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.085	0.3985	0.3985	1.0000
2	1.99	Chloride	BM *	0.268	1.9973	1.9973	1.0000
3	2.28	Nitrite,N	Mb*	0.127	0.4273	0.4273	1.0000
4	2.61	Sulfate	bM *	0.198	1.9879	1.9879	1.0000
5	2.89	Bromide	MB*	0.024	0.4134	0.4134	1.0000
6	3.33	Nitrate	BMB	0.133	0.4017	0.4017	1.0000
7	4.33	Phosphate	BMB	0.043	0.3676	0.3676	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.878**		**5.99**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**BB3**	*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:	**05/05/2021 18:27**	*Sample Weight:*	**1.0000**

Run Time:



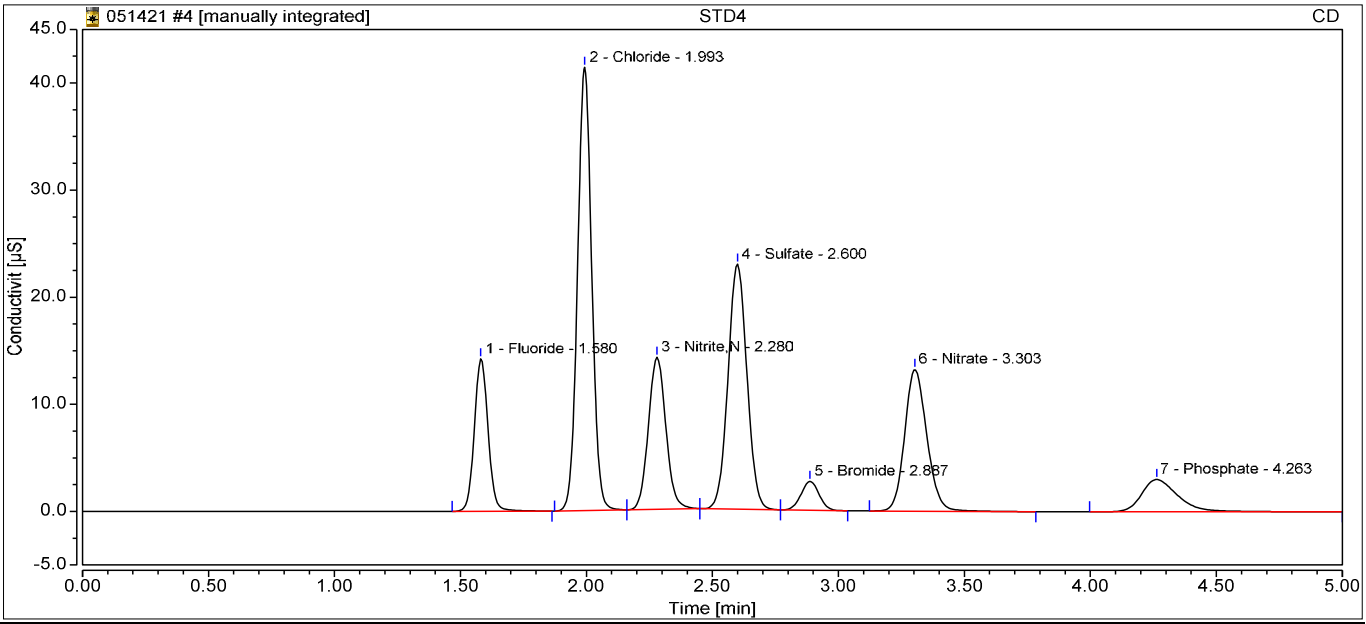
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMb*	0.459	2.2233	2.2233	1.0000
2	1.99	Chloride	bM *	1.346	10.0167	10.0167	1.0000
3	2.28	Nitrite,N	Mb*	0.600	2.2303	2.2303	1.0000
4	2.60	Sulfate	bM *	1.000	10.0941	10.0941	1.0000
5	2.89	Bromide	MB*	0.112	1.9684	1.9684	1.0000
6	3.31	Nitrate	BMB	0.675	2.0188	2.0188	1.0000
7	4.30	Phosphate	BMB	0.247	1.9396	1.9396	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**4.438**		**30.49**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**BB4**	*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:	**05/05/2021 18:34**	*Sample Weight:*	**1.0000**

Run Time:



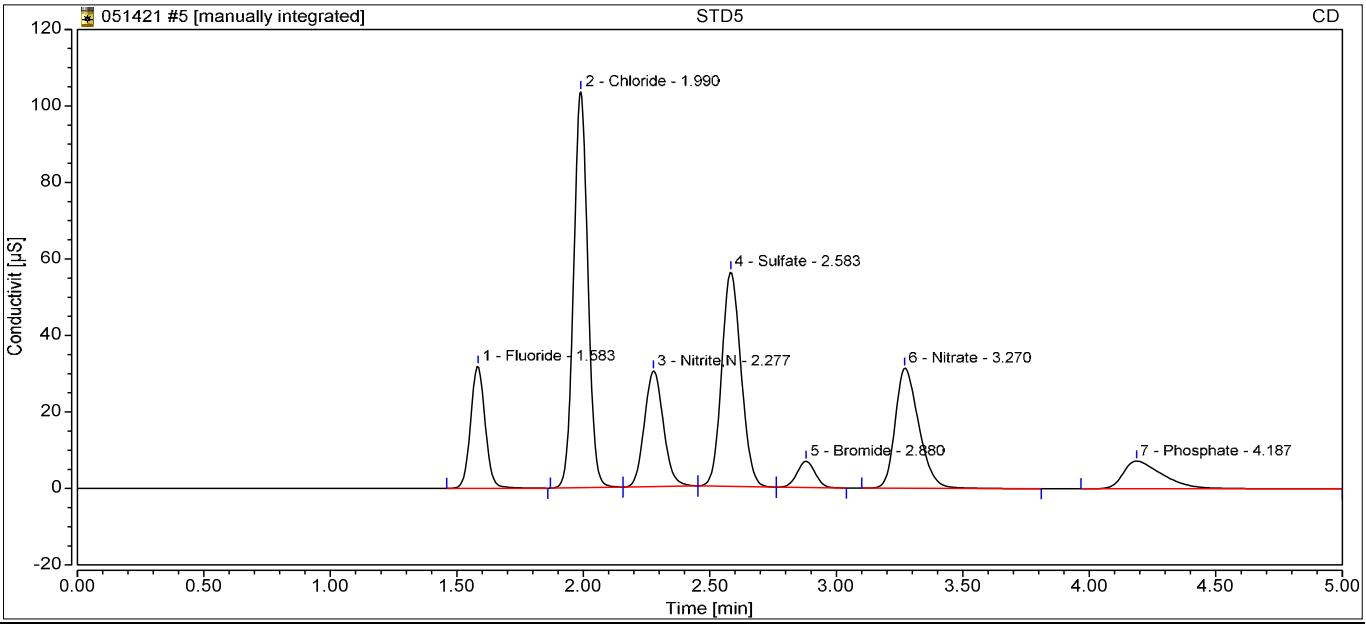
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.903	4.3869	4.3869	1.0000
2	1.99	Chloride	BM *	2.691	20.0267	20.0267	1.0000
3	2.28	Nitrite,N	Mb*	1.144	4.3066	4.3066	1.0000
4	2.60	Sulfate	bMB*	1.988	20.0727	20.0727	1.0000
5	2.89	Bromide	BMB	0.224	3.9555	3.9555	1.0000
6	3.30	Nitrate	BMB	1.350	4.0333	4.0333	1.0000
7	4.26	Phosphate	BMB	0.506	3.9429	3.9429	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**8.805**		**60.72**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**BB5**	*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:	**05/05/2021 18:42**	*Sample Weight:*	**1.0000**

Run Time:



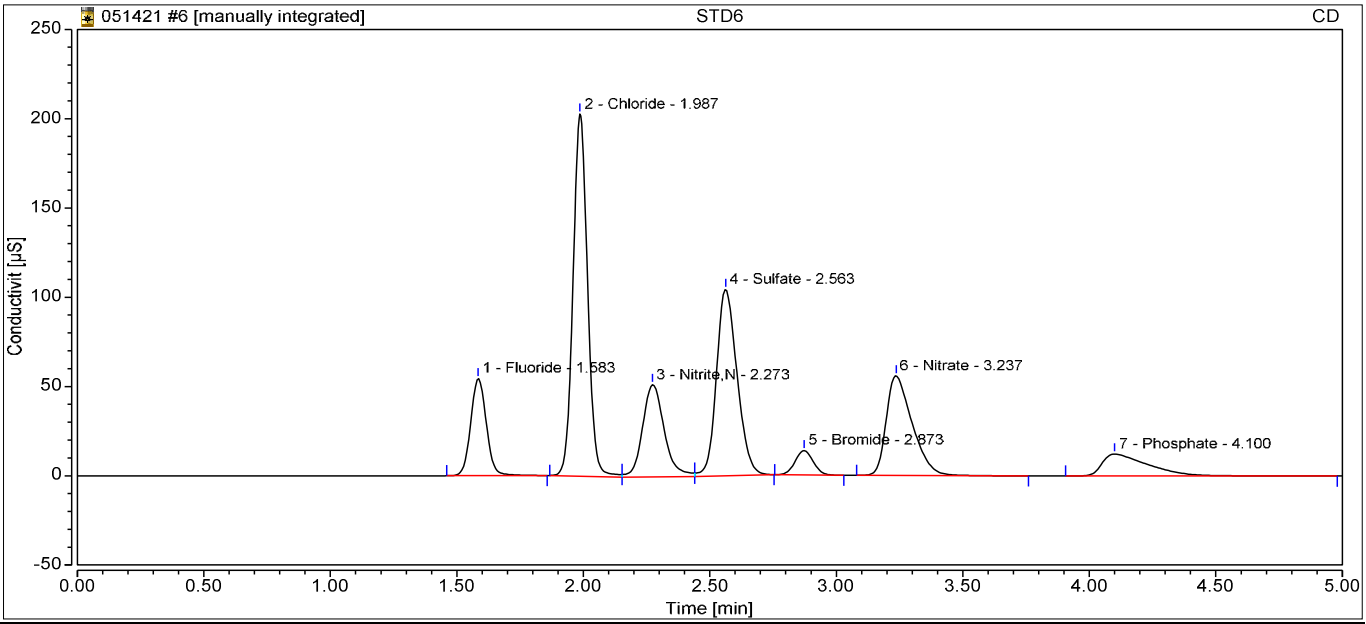
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	2.140	10.4243	10.4243	1.0000
2	1.99	Chloride	BMb*	6.732	50.0934	50.0934	1.0000
3	2.28	Nitrite,N	bMb*	2.637	9.9988	9.9988	1.0000
4	2.58	Sulfate	bMB*	4.966	50.1541	50.1541	1.0000
5	2.88	Bromide	BMB	0.571	10.1112	10.1112	1.0000
6	3.27	Nitrate	BMB	3.393	10.1328	10.1328	1.0000
7	4.19	Phosphate	BMB	1.313	10.1773	10.1773	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**21.751**		**151.09**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**BB6**	*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:	**05/05/2021 18:49**	*Sample Weight:*	**1.0000**

Run Time:



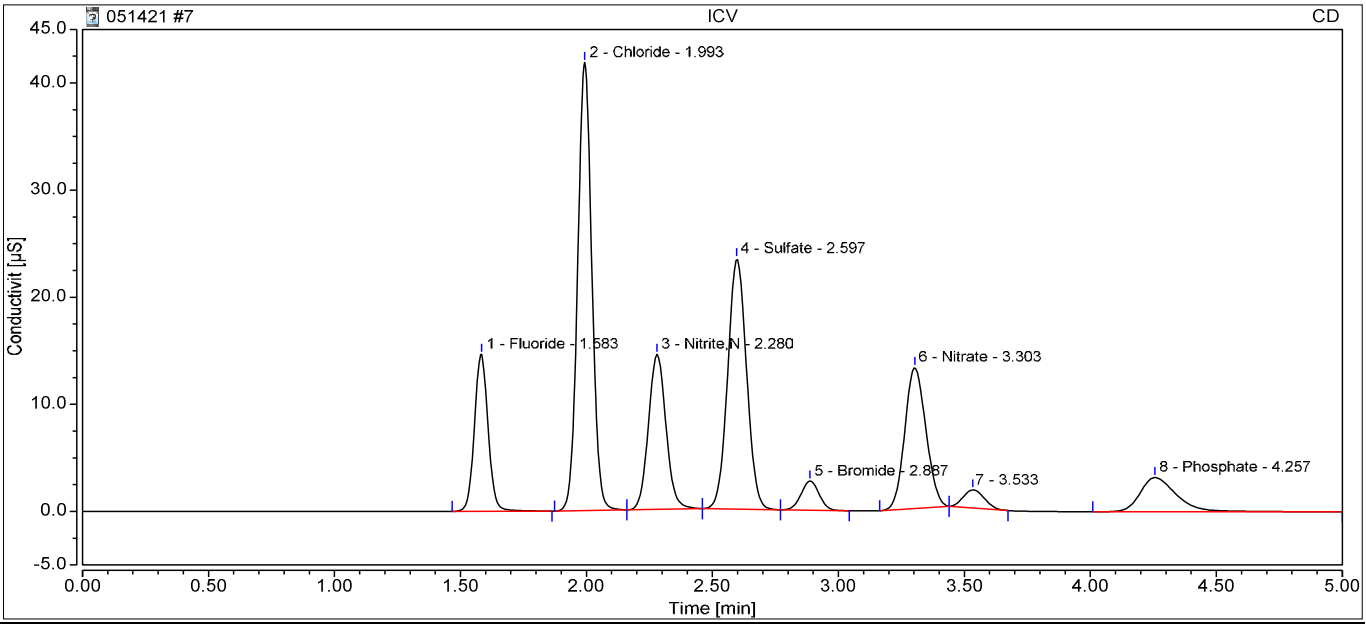
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	3.894	18.9867	18.9867	1.0000
2	1.99	Chloride	BM *	13.421	99.8669	99.8669	1.0000
3	2.27	Nitrite,N	M *	5.117	19.4604	19.4604	1.0000
4	2.56	Sulfate	MB*	9.870	99.6947	99.6947	1.0000
5	2.87	Bromide	BMB	1.127	19.9531	19.9531	1.0000
6	3.24	Nitrate	BMB	6.637	19.8160	19.8160	1.0000
7	4.10	Phosphate	BMB	2.580	19.9616	19.9616	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**42.646**		**297.74**	

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**BB7**	*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:	**05/05/2021 18:57**	*Sample Weight:*	**1.0000**

Run Time:



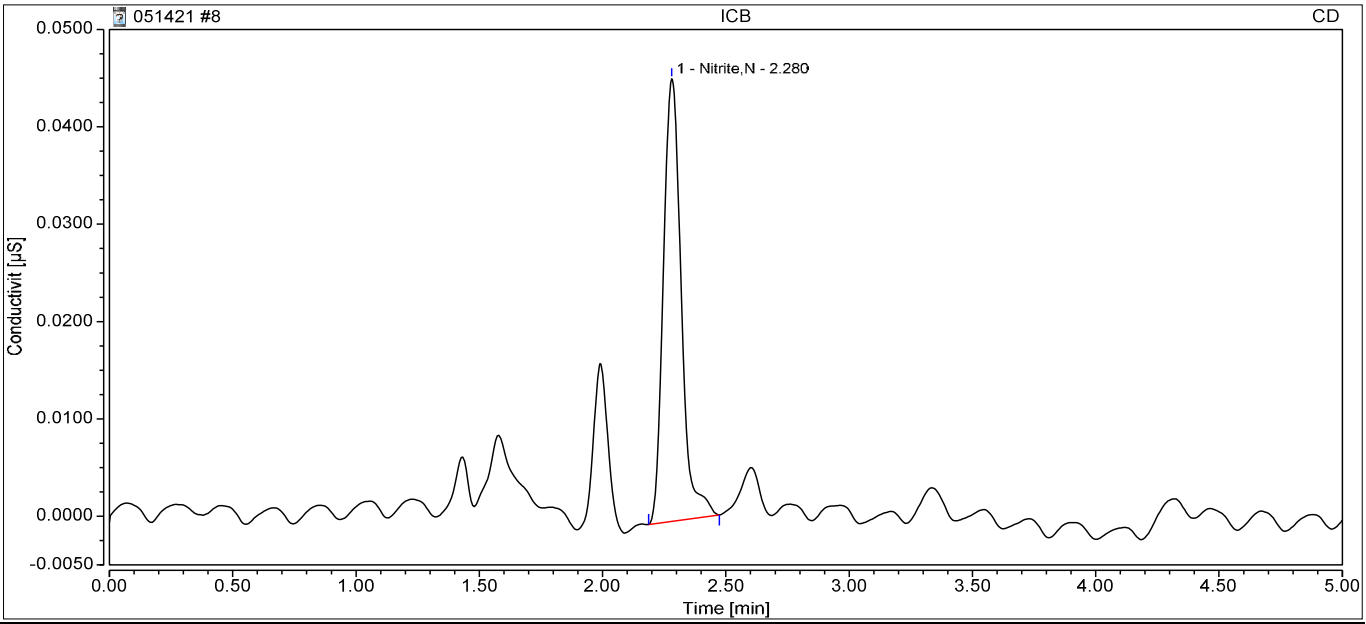
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.924	4.4936	4.4936	1.0000
2	1.99	Chloride	BMB	2.715	20.2077	20.2077	1.0000
3	2.28	Nitrite,N	BMB	1.168	4.3995	4.3995	1.0000
4	2.60	Sulfate	BMB	2.028	20.4771	20.4771	1.0000
5	2.89	Bromide	BMB	0.226	3.9960	3.9960	1.0000
6	3.30	Nitrate	BMB	1.281	3.8265	3.8265	1.0000
8	4.26	Phosphate	BMB	0.533	4.1549	4.1549	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**8.876**		**61.56**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BB8**	*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:	**05/05/2021 19:14**	*Sample Weight:*	**1.0000**

Run Time:

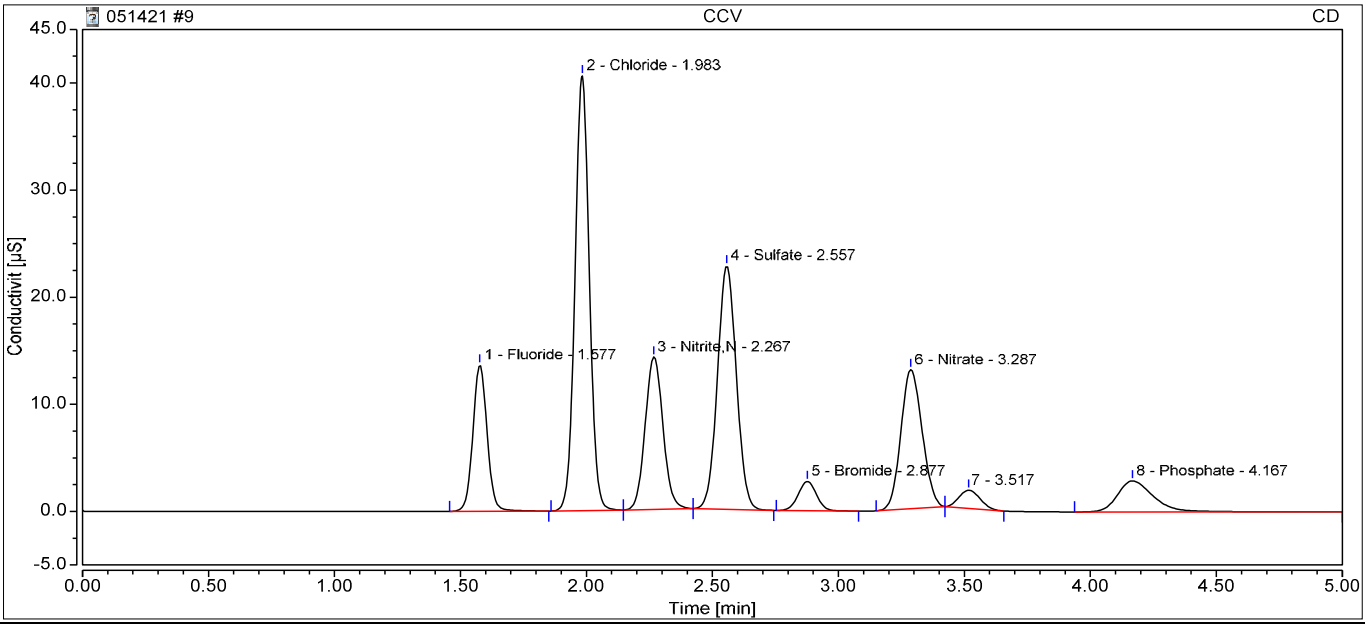


Integration Results

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	0.004	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.	Phosphate	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
Total:			**0.000**	**0.004**		**0.00**	

9 CCV			
Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**R1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program ISO37mM 150mm short 0.4**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method ISO**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/14/2021 09:48**	*Sample Weight:*	**1.0000**

Run Time:



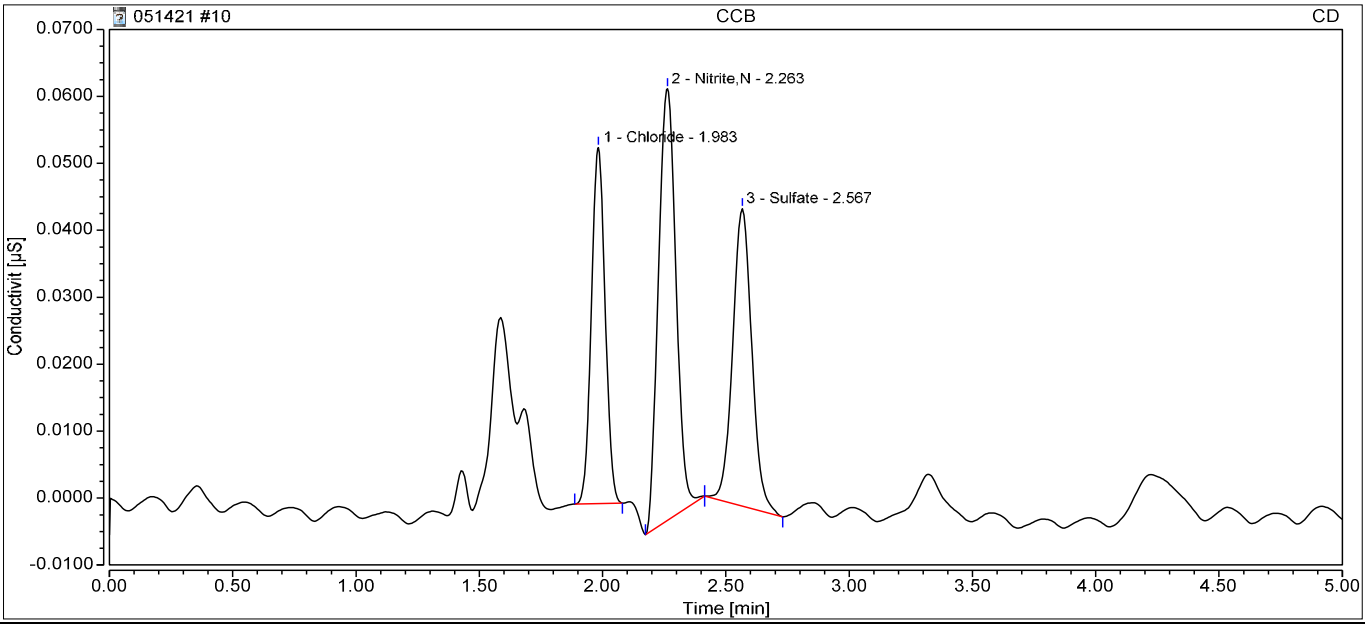
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.897	4.3578	4.3578	1.0000
2	1.98	Chloride	BMB	2.674	19.9042	19.9042	1.0000
3	2.27	Nitrite,N	BMB	1.165	4.3878	4.3878	1.0000
4	2.56	Sulfate	BMB	1.976	19.9539	19.9539	1.0000
5	2.88	Bromide	BMB	0.230	4.0678	4.0678	1.0000
6	3.29	Nitrate	BMB	1.269	3.7909	3.7909	1.0000
8	4.17	Phosphate	BMB	0.480	3.7446	3.7446	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**8.692**		**60.21**	

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:	**05/14/2021 09:56**	*Sample Weight:*	**1.0000**

Run Time:



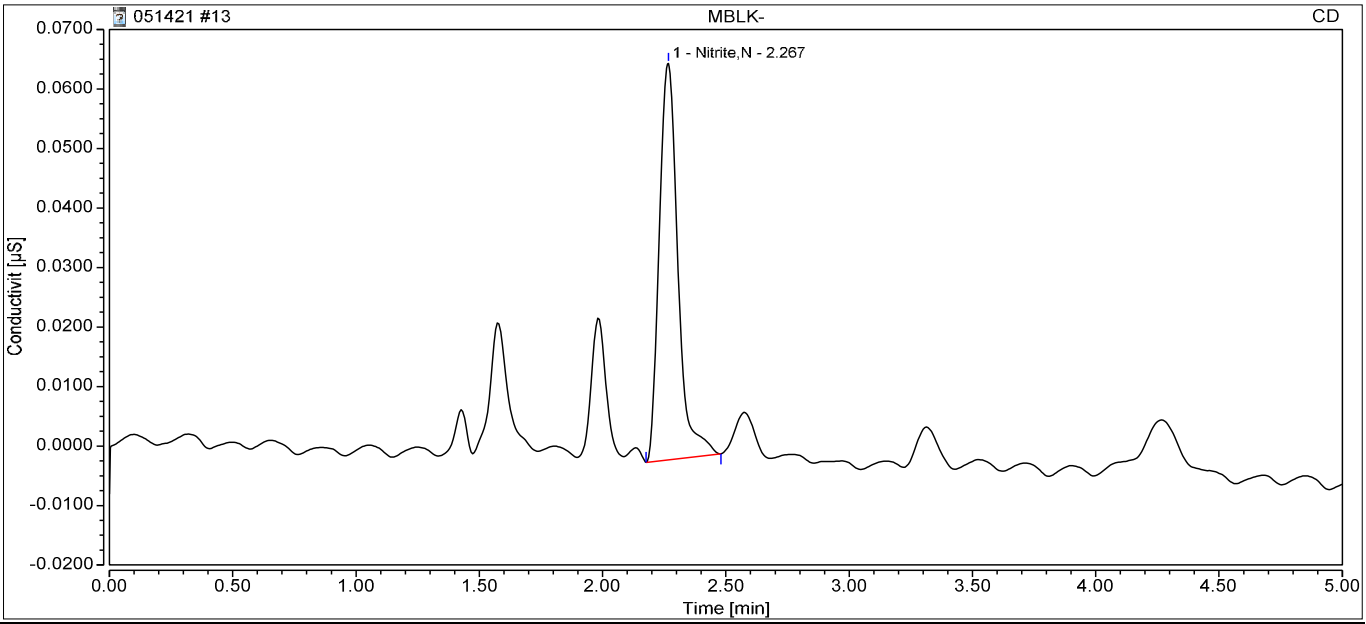
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	1.98	Chloride	BMB	0.003	0.0290	0.0290	1.0000
2	2.26	Nitrite,N	BMB	0.005	n.a.	n.a.	1.0000
3	2.57	Sulfate	BMB	0.004	0.0301	0.0301	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.	Phosphate	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
Total:			**0.000**	**0.013**		**0.06**	

13 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:	**05/14/2021 10:18**	*Sample Weight:*	**1.0000**

Run Time:



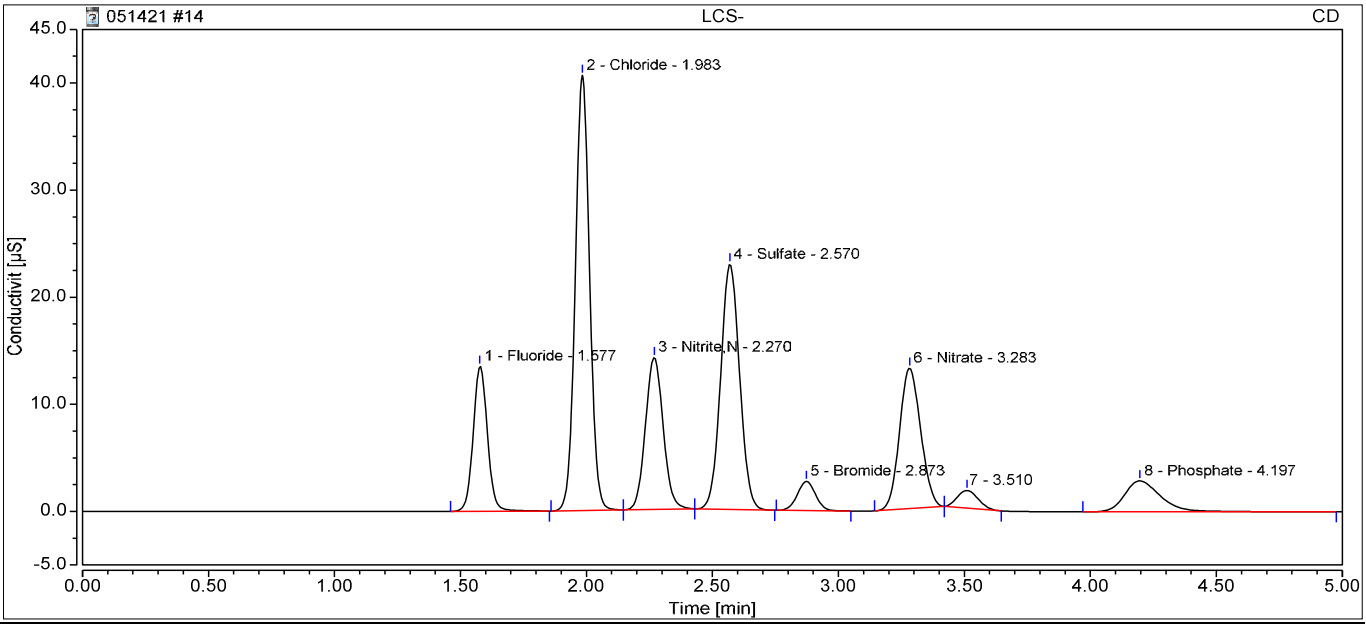
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
1	2.27	Nitrite,N	BMB	0.006	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.	Phosphate	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
Total:			**0.000**	**0.006**		**0.00**	

14 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:	**05/14/2021 10:26**	*Sample Weight:*	**1.0000**

Run Time:



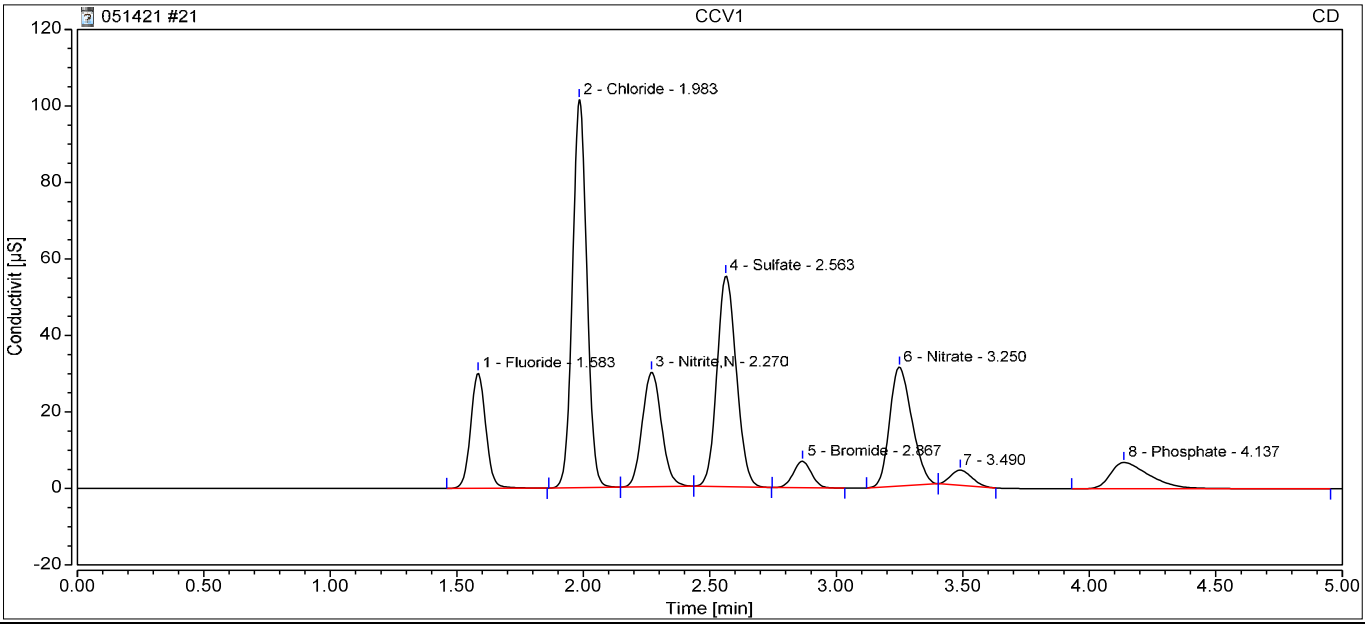
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.889	4.3215	4.3215	1.0000
2	1.98	Chloride	BMB	2.672	19.8824	19.8824	1.0000
3	2.27	Nitrite,N	BMB	1.159	4.3632	4.3632	1.0000
4	2.57	Sulfate	BMB	1.995	20.1397	20.1397	1.0000
5	2.87	Bromide	BMB	0.228	4.0270	4.0270	1.0000
6	3.28	Nitrate	BMB	1.275	3.8083	3.8083	1.0000
8	4.20	Phosphate	BMB	0.482	3.7616	3.7616	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**8.699**		**60.30**	

21 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:	**05/14/2021 11:43**	*Sample Weight:*	**1.0000**

Run Time:



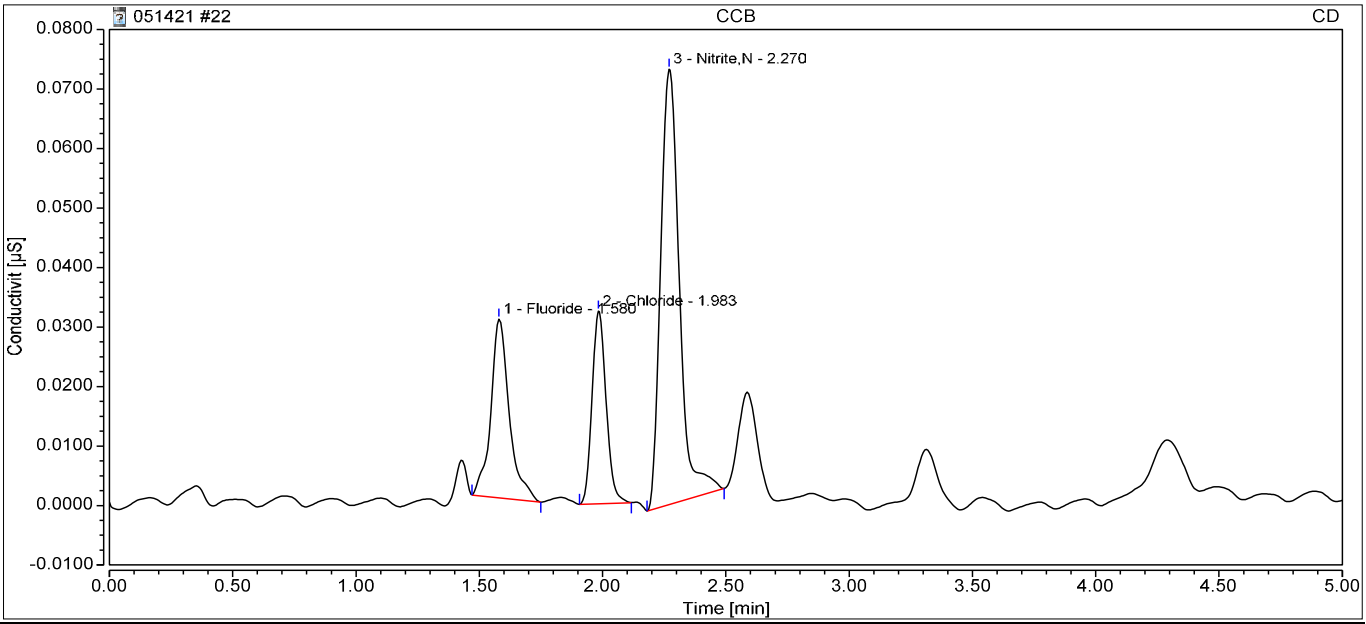
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	2.089	10.1775	10.1775	1.0000
2	1.98	Chloride	BMB	6.680	49.7063	49.7063	1.0000
3	2.27	Nitrite,N	BMB	2.642	10.0207	10.0207	1.0000
4	2.56	Sulfate	BMB	4.887	49.3569	49.3569	1.0000
5	2.87	Bromide	BMB	0.574	10.1657	10.1657	1.0000
6	3.25	Nitrate	BMB	3.167	9.4569	9.4569	1.0000
8	4.14	Phosphate	BMB	1.244	9.6437	9.6437	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**21.283**		**148.53**	

22 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:	**05/14/2021 11:51**	*Sample Weight:*	**1.0000**

Run Time:



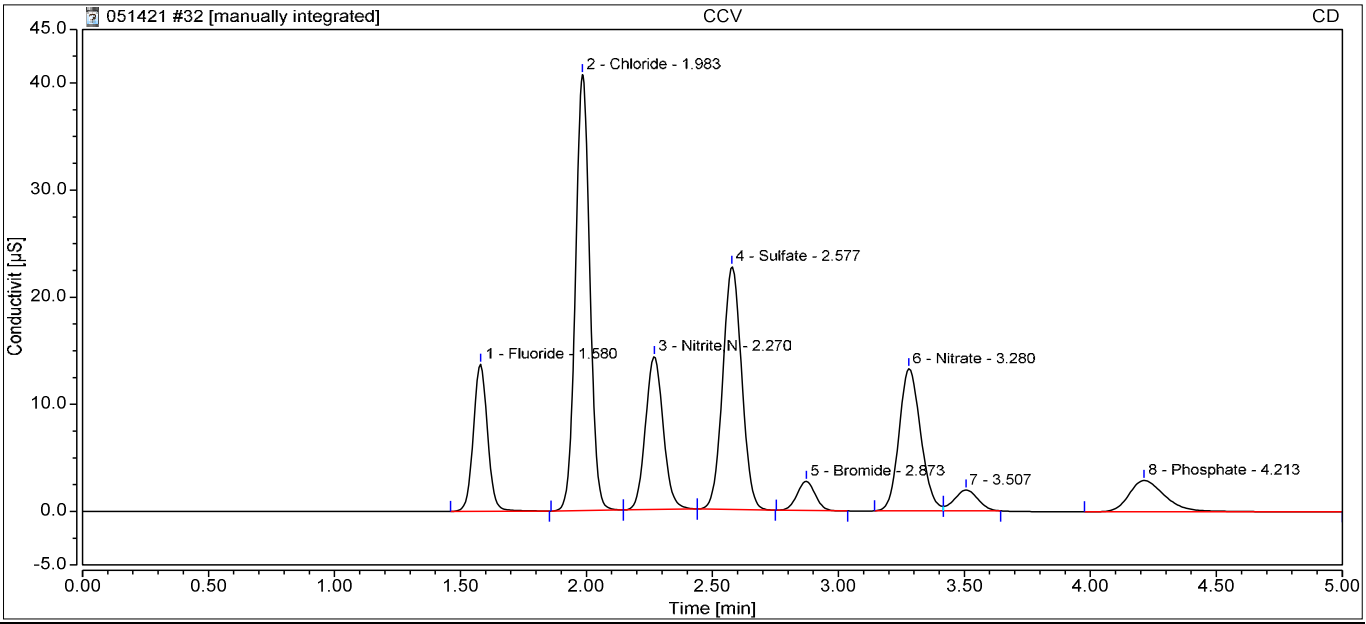
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.003	n.a.	n.a.	1.0000
2	1.98	Chloride	BMB	0.002	0.0194	0.0194	1.0000
3	2.27	Nitrite,N	BMB	0.006	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.	Phosphate	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
Total:			**0.000**	**0.011**		**0.02**	

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:	**05/14/2021 13:06**	*Sample Weight:*	**1.0000**

Run Time:



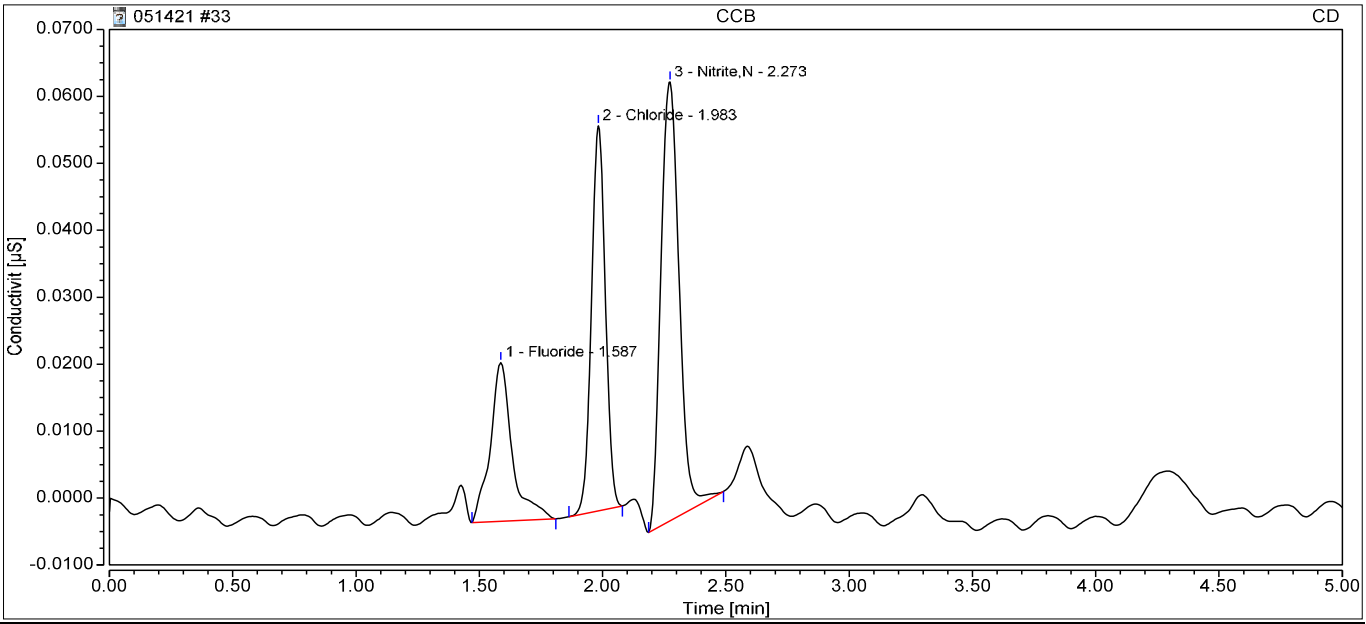
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.897	4.3609	4.3609	1.0000
2	1.98	Chloride	BMB	2.679	19.9366	19.9366	1.0000
3	2.27	Nitrite,N	BMB	1.170	4.4041	4.4041	1.0000
4	2.58	Sulfate	BMB	1.977	19.9638	19.9638	1.0000
5	2.87	Bromide	BMB	0.228	4.0259	4.0259	1.0000
6	3.28	Nitrate	BM *	1.323	3.9534	3.9534	1.0000
8	4.21	Phosphate	BMB	0.491	3.8238	3.8238	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**8.764**		**60.47**	

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:	**05/14/2021 13:13**	*Sample Weight:*	**1.0000**

Run Time:



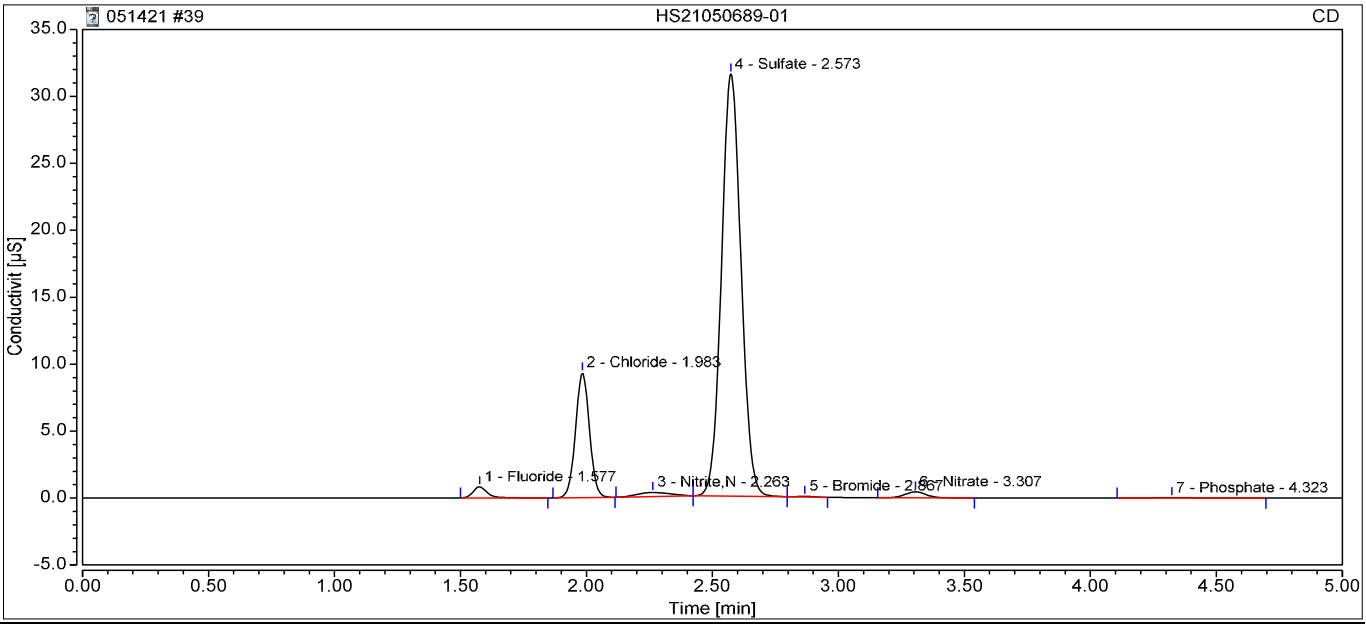
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.59	Fluoride	BMB	0.002	n.a.	n.a.	1.0000
2	1.98	Chloride	BMB	0.004	0.0315	0.0315	1.0000
3	2.27	Nitrite,N	BMB	0.006	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.	Phosphate	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
Total:			**0.000**	**0.012**		**0.03**	

39 HS21050689-01

Sample Name:	**HS21050689-01**	*Injection Volume:*	**5.00**
Vial Number:	**RC5**	*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:	**05/14/2021 14:31**	*Sample Weight:*	**1.0000**

Run Time:



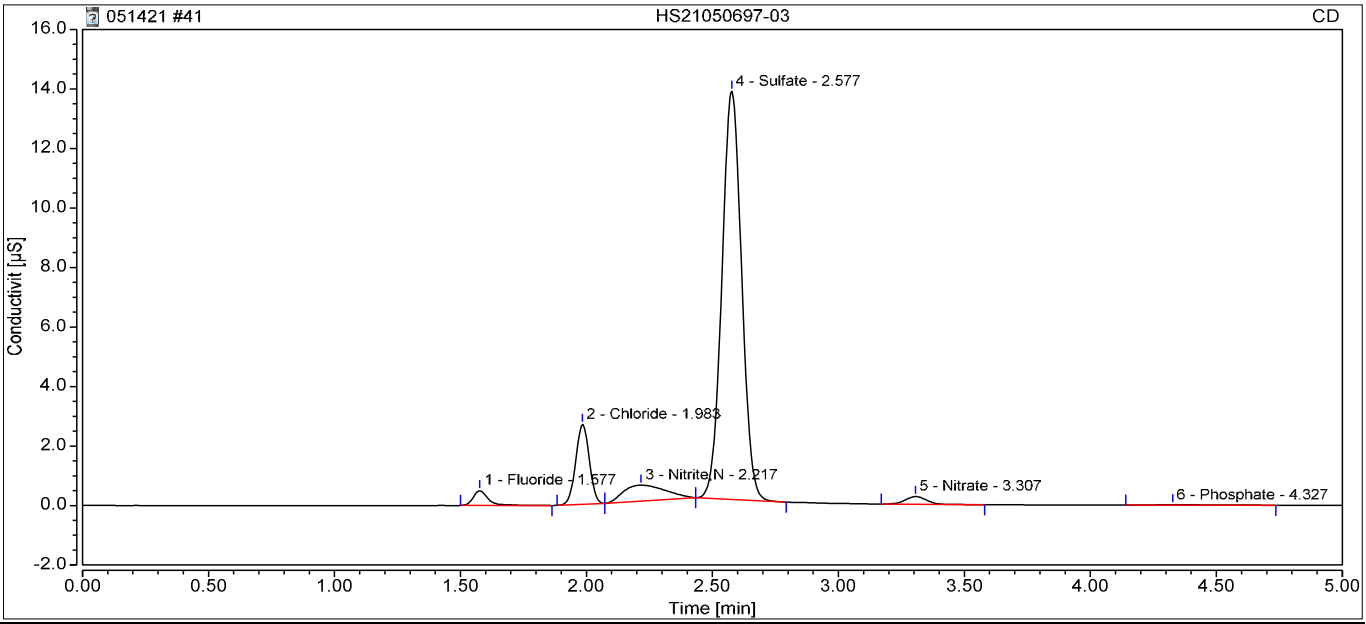
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.055	0.2517	0.2517	1.0000
2	1.98	Chloride	BMB	0.599	4.4592	4.4592	1.0000
3	2.26	Nitrite,N	BMB	0.046	0.1196	0.1196	1.0000
4	2.57	Sulfate	BMB	2.829	28.5715	28.5715	1.0000
5	2.87	Bromide	BMB	0.003	0.0538	0.0538	1.0000
6	3.31	Nitrate	BMB	0.044	0.1349	0.1349	1.0000
7	4.32	Phosphate	BMB	0.006	0.0831	0.0831	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**3.583**		**33.67**	

41 HS21050697-03

Sample Name:	**HS21050697-03**	*Injection Volume:*	**5.00**
Vial Number:	**RC7**	*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:	**05/14/2021 14:46**	*Sample Weight:*	**1.0000**

Run Time:



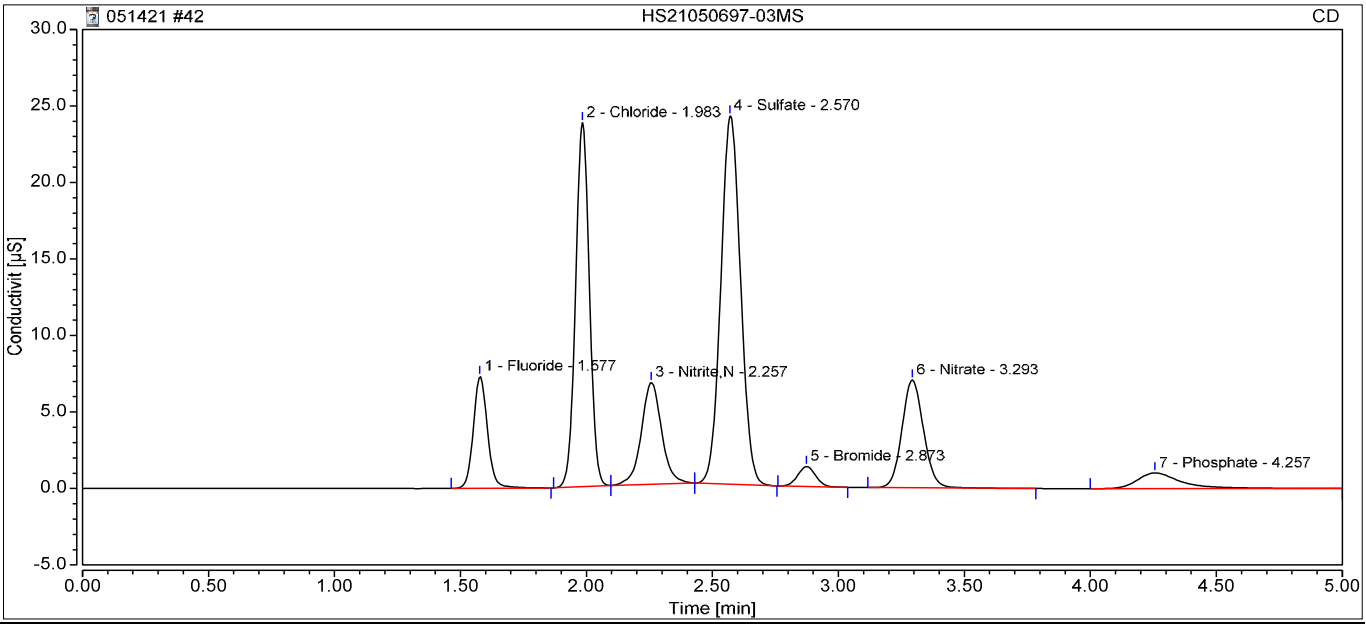
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.034	0.1500	0.1500	1.0000
2	1.98	Chloride	BMB	0.167	1.2497	1.2497	1.0000
3	2.22	Nitrite,N	BMB	0.102	0.3324	0.3324	1.0000
4	2.58	Sulfate	BMB	1.245	12.5649	12.5649	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
5	3.31	Nitrate	BMB	0.025	0.0796	0.0796	1.0000
6	4.33	Phosphate	BMB	0.004	0.0637	0.0637	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**1.578**		**14.44**	

42 HS21050697-03MS

Sample Name:	**HS21050697-03MS**	*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:	**05/14/2021 14:53**	*Sample Weight:*	**1.0000**

Run Time:



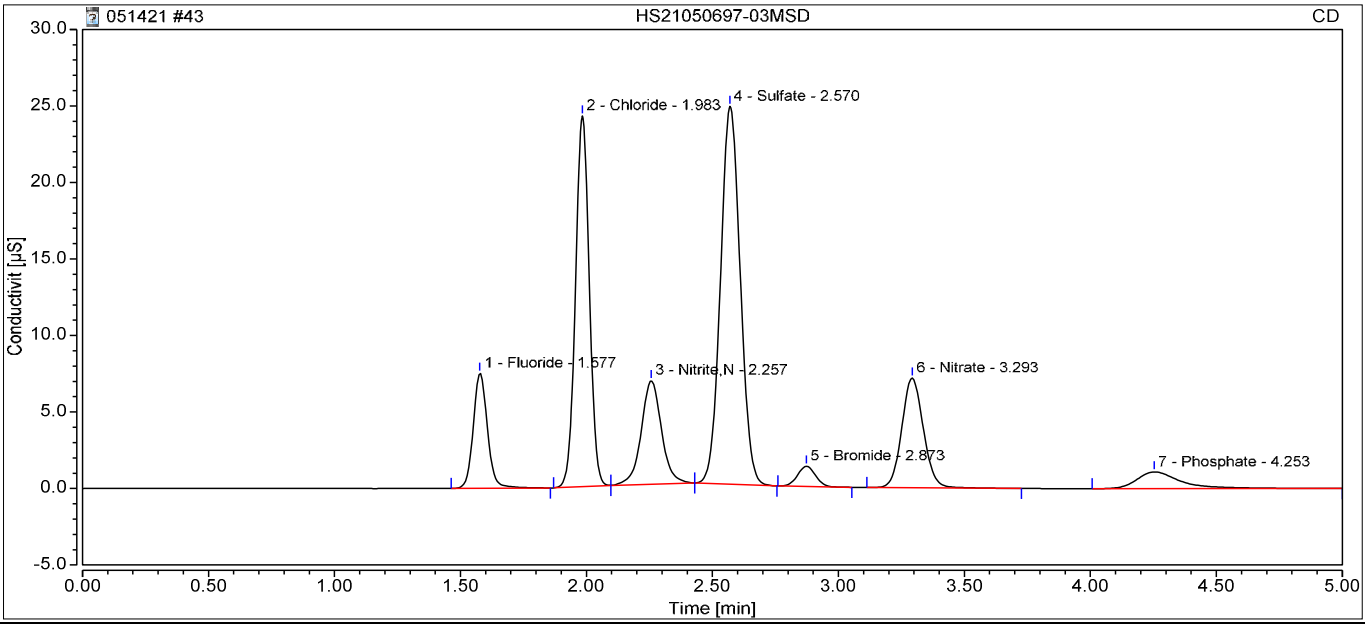
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.478	2.3167	2.3167	1.0000
2	1.98	Chloride	BMB	1.509	11.2308	11.2308	1.0000
3	2.26	Nitrite,N	BMB	0.621	2.3125	2.3125	1.0000
4	2.57	Sulfate	BMB	2.187	22.0862	22.0862	1.0000
5	2.87	Bromide	BMB	0.108	1.8993	1.8993	1.0000
6	3.29	Nitrate	BMB	0.700	2.0920	2.0920	1.0000
7	4.26	Phosphate	BMB	0.209	1.6517	1.6517	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**5.812**		**43.59**	

43 HS21050697-03MSD

Sample Name:	**HS21050697-03MSD**	*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:	**05/14/2021 15:00**	*Sample Weight:*	**1.0000**

Run Time:



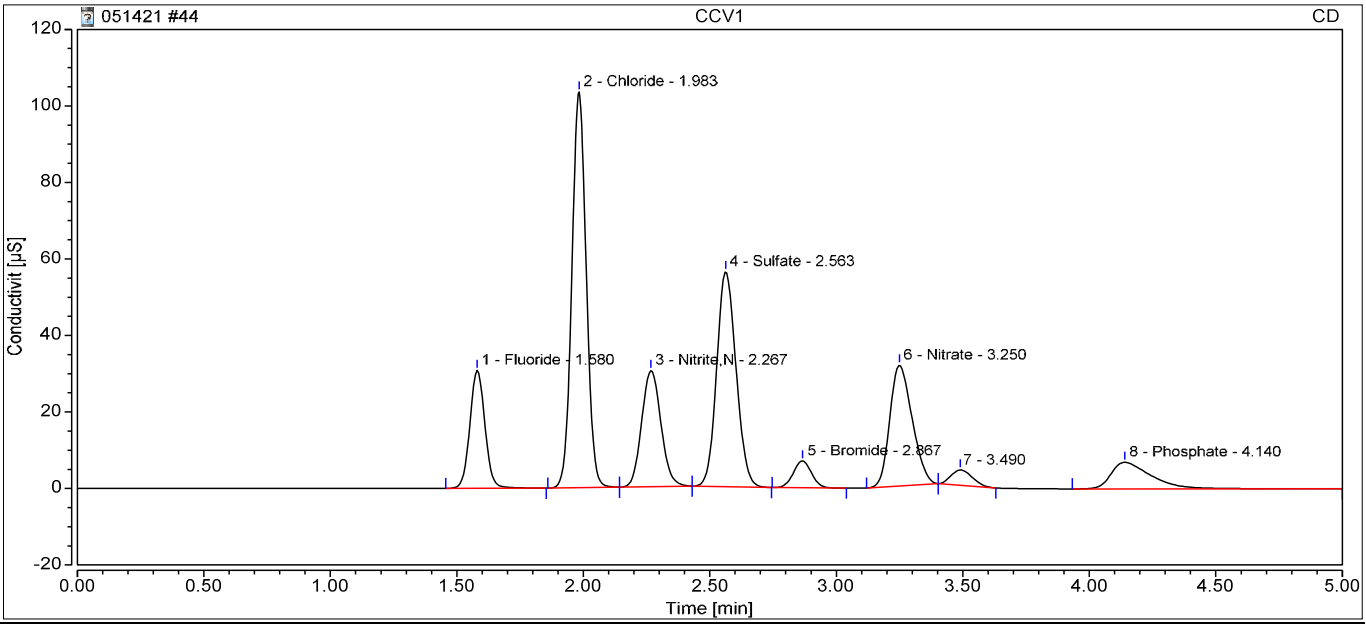
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	0.494	2.3909	2.3909	1.0000
2	1.98	Chloride	BMB	1.533	11.4106	11.4106	1.0000
3	2.26	Nitrite,N	BMB	0.630	2.3475	2.3475	1.0000
4	2.57	Sulfate	BMB	2.241	22.6312	22.6312	1.0000
5	2.87	Bromide	BMB	0.110	1.9319	1.9319	1.0000
6	3.29	Nitrate	BMB	0.712	2.1291	2.1291	1.0000
7	4.25	Phosphate	BMB	0.222	1.7505	1.7505	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**5.942**		**44.59**	

44 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:	**05/14/2021 15:08**	*Sample Weight:*	**1.0000**

Run Time:



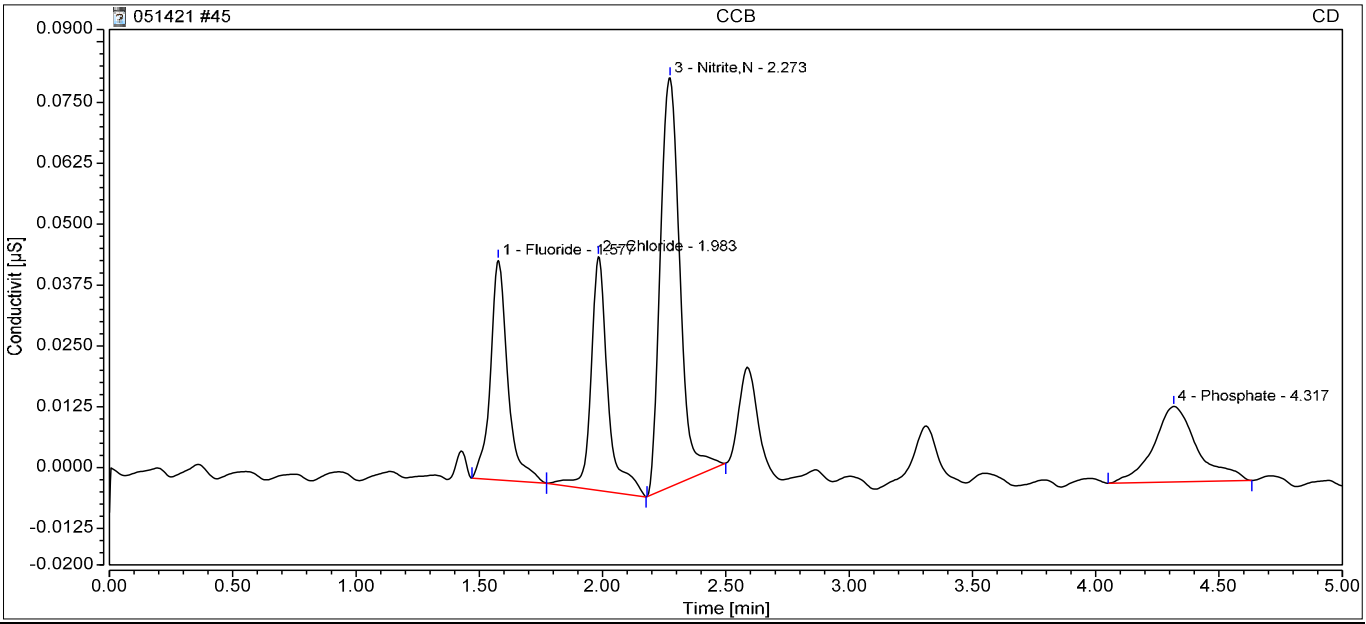
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	1.58	Fluoride	BMB	2.137	10.4122	10.4122	1.0000
2	1.98	Chloride	BMB	6.800	50.6041	50.6041	1.0000
3	2.27	Nitrite,N	BMB	2.688	10.1940	10.1940	1.0000
4	2.56	Sulfate	BMB	4.996	50.4642	50.4642	1.0000
5	2.87	Bromide	BMB	0.585	10.3505	10.3505	1.0000
6	3.25	Nitrate	BMB	3.234	9.6564	9.6564	1.0000
8	4.14	Phosphate	BMB	1.280	9.9244	9.9244	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**21.721**		**151.61**	

45 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:	**05/14/2021 15:15**	*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	0.004	n.a.	n.a.	1.0000
2	1.98	Chloride	BMB	0.004	0.0322	0.0322	1.0000
3	2.27	Nitrite,N	BMB	0.008	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
4	4.32	Phosphate	BMB	0.003	0.0593	0.0593	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.019**		**0.09**	

HS21050689 Wet Chem Raw Data (TOC_W 5310B)

ALS WO# HS21050689

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	Type	Analysis	Sample Name	Sample ID	Origin	Result
1	Standard	NPOC	CAL	3150171(01-07)	02_25_2021_CAL.2021_02_	
2	Unknown	NPOC	ICV	315017108	02_25_2021_CAL.cal	NPOC:10.14mg/L
3	Unknown	NPOC	ICB		02_25_2021_CAL.cal	NPOC:-0.1140mg/L
4	Unknown	NPOC	CCV	315017106	02_25_2021_CAL.cal	NPOC:25.02mg/L
5	Unknown	NPOC	CCB		02_25_2021_CAL.cal	NPOC:-0.07587mg/L
6	Unknown	NPOC	MBLK-02252021		02_25_2021_CAL.cal	NPOC:-0.1214mg/L
7	Unknown	NPOC	LCS-02252021		02_25_2021_CAL.cal	NPOC:10.15mg/L
8	Unknown	NPOC	LCSD02252021		02_25_2021_CAL.cal	NPOC:10.16mg/L
9	Unknown	NPOC	HS21020689-01		02_25_2021_CAL.cal	NPOC:22.48mg/L
10	Unknown	NPOC	HS21020689-02		02_25_2021_CAL.cal	NPOC:17.34mg/L
11	Unknown	NPOC	HS21020689-02MS		02_25_2021_CAL.cal	NPOC:28.25mg/L
12	Unknown	NPOC	HS21020689-03		02_25_2021_CAL.cal	NPOC:10.22mg/L
13	Unknown	NPOC	HS21020538-01		02_25_2021_CAL.cal	NPOC:20.36mg/L
14	Unknown	NPOC	HS21020538-02		02_25_2021_CAL.cal	NPOC:4.452mg/L
15	Unknown	NPOC	HS21020793-02DF10		02_25_2021_CAL.cal	NPOC:17.50mg/L
16	Unknown	NPOC	CCV		02_25_2021_CAL.cal	NPOC:25.46mg/L
17	Unknown	NPOC	CCB		02_25_2021_CAL.cal	NPOC:0.08018mg/L

	Notes	Status	Date / Time	Vial
1		Completed	2/25/2021 1	1, 2, 3, 4, 5,
2		Completed	2/25/2021 1	8
3		Completed	2/25/2021 1	9
4		Completed	2/25/2021 1	10
5		Completed	2/25/2021 1	11
6		Completed	2/25/2021 1	12
7		Completed	2/25/2021 1	13
8		Completed	2/25/2021 1:	14
9		Completed	2/25/2021 1:	15
10		Completed	2/25/2021 1:	16
11		Completed	2/25/2021 1:	17
12		Completed	2/25/2021 2:	18
13		Completed	2/25/2021 2:	19
14		Completed	2/25/2021 2:	20
15		Completed	2/25/2021 2:	21
16		Completed	2/25/2021 3:	22
17		Completed	2/25/2021 3:	23

TOC-Control L Report

2021_02_25_001.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Cal. Curve

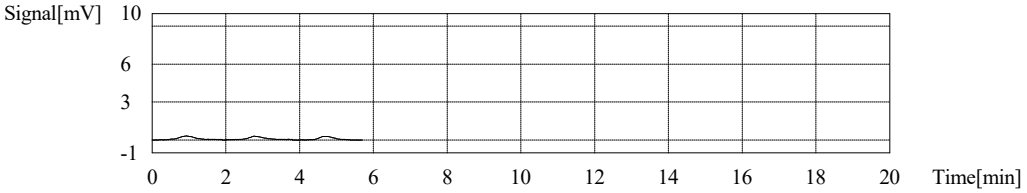
Sample Name:	CAL
Sample ID:	3150171(01-07)
Cal. Curve:	02_25_2021_CAL.2021_02_25_09_13_02.cal
Status	Completed

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.7577	50uL	1.000	*******		2/25/2021 9:21:39 AM
2	0.6368	50uL	1.000	*******		2/25/2021 9:23:47 AM
3	0.6500	50uL	1.000	*******		2/25/2021 9:25:55 AM

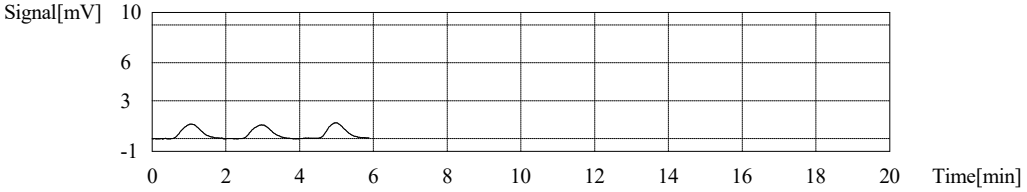
Acid Add.	0.000%
Sparge Gas Flow	80mL/min
Sp. Time	180.0sec
Mean Area	0.6815



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	4.063	50uL	1.000	*******		2/25/2021 9:34:44 AM
2	3.946	50uL	1.000	*******		2/25/2021 9:37:02 AM
3	3.886	50uL	1.000	*******		2/25/2021 9:39:10 AM

Acid Add.	0.000%
Sparge Gas Flow	80mL/min
Sp. Time	180.0sec
Mean Area	3.965

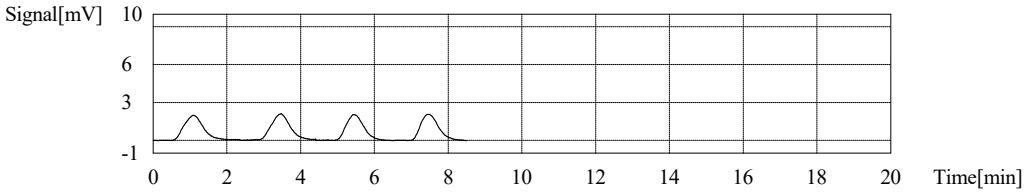


Conc: 2.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	7.014	50uL	1.000	*******		2/25/2021 9:48:25 AM
2	6.976	50uL	1.000	*******		2/25/2021 9:50:44 AM
3	6.738	50uL	1.000	*******	E	2/25/2021 9:53:02 AM
4	6.989	50uL	1.000	*******		2/25/2021 9:55:18 AM

TOC-Control L Report

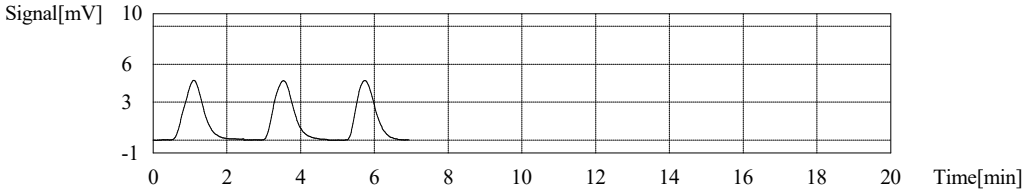
Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 6.993



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	16.70	50uL	1.000	*******		2/25/2021 10:04:35 AM
2	16.99	50uL	1.000	*******		2/25/2021 10:07:06 AM
3	16.40	50uL	1.000	*******		2/25/2021 10:09:32 AM

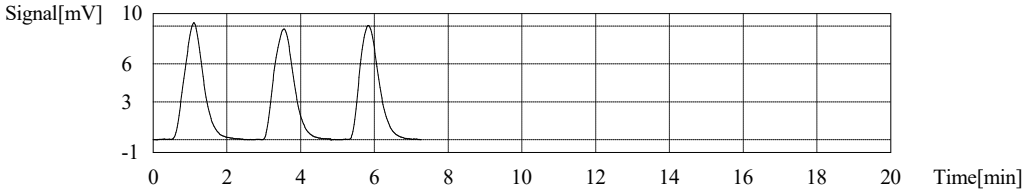
Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 16.70



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	32.33	50uL	1.000	*******		2/25/2021 10:18:54 AM
2	32.41	50uL	1.000	*******		2/25/2021 10:21:29 AM
3	32.27	50uL	1.000	*******		2/25/2021 10:24:10 AM

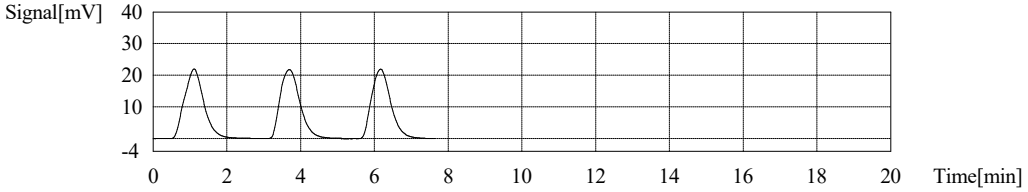
Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 32.34



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	79.83	50uL	1.000	*******		2/25/2021 10:33:42 AM
2	80.51	50uL	1.000	*******		2/25/2021 10:36:25 AM
3	79.09	50uL	1.000	*******		2/25/2021 10:39:12 AM

Acid Add. 0.000%
Sparge Gas Flow 80mL/min
Sp. Time 180.0sec
Mean Area 79.81



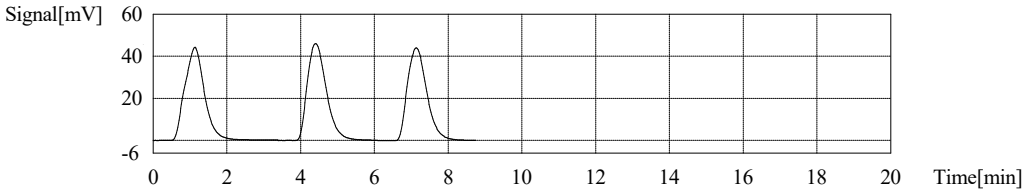
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	162.4	50uL	1.000	*******		2/25/2021 10:49:29 AM
2	163.8	50uL	1.000	*******		2/25/2021 10:52:26 AM
3	159.9	50uL	1.000	*******		2/25/2021 10:55:21 AM

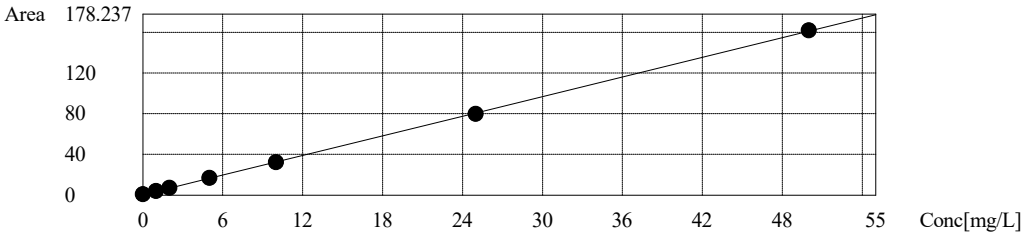
TOC-Control L Report

2021_02_25_001.tlx

Acid Add.	0.000%
Sparge Gas Flow	80mL/min
Sp. Time	180.0sec
Mean Area	162.0



Slope:	3.220
Intercept	0.4365
r^2	0.9999
r	1.0000
RSE(%)	N/A
Zero Shift	No



Sample

Sample Name:	ICV
Sample ID:	315017108
Origin:	02_25_2021_CAL.cal
Status	Completed
Chk. Result	

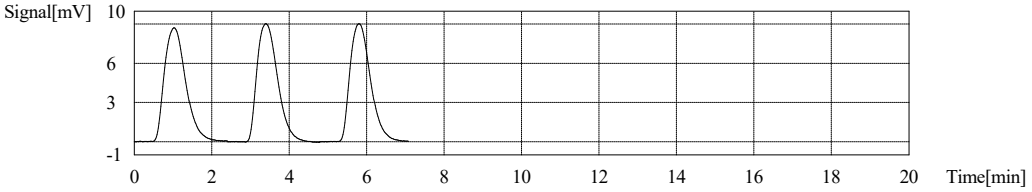
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.14mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.04	10.13mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:32:06 AM
2	33.24	10.19mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:34:44 AM
3	32.98	10.11mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:37:17 AM

Mean Area	33.09
Mean Conc.	10.14mg/L



Sample

Sample Name:	ICB
Sample ID:	
Origin:	02_25_2021_CAL.cal
Status	Completed
Chk. Result	

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:-0.1140mg/L

1. Det

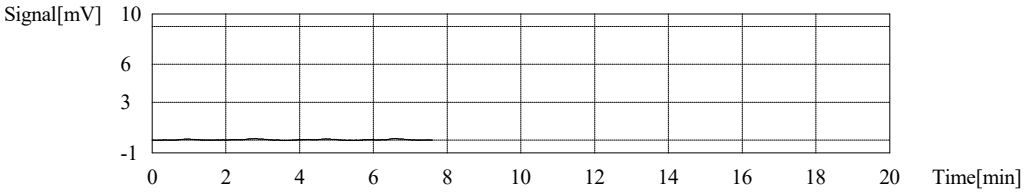
TOC-Control L Report

2021_02_25_001.tlx

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:46:05 AM
2	0.2080	-0.07096mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:48:13 AM
3	0.000	-0.1356mg/L	50uL	1.000		02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:50:20 AM
4	0.2102	-0.07028mg/L	50uL	1.000	E	02_25_2021_CAL.2021_02_25_09_13_02.cal	2/25/2021 11:52:27 AM

Mean Area 0.06933
Mean Conc. -0.1140mg/L



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	Type	Analysis	Sample Name	Sample ID	Origin	Result	Notes	Status	Date / Time
1	Unknown	NPOC	CCV	3100603915	05_10_2021	NPOC:24.2		Completed	5/19/2021 3:
2	Unknown	NPOC	CCB	TOC_W	05_10_2021	NPOC:0.14		Completed	5/19/2021 4:
3	Unknown	NPOC	MBLK-05192021	TOC_W 531	05_10_2021	NPOC:0.09		Completed	5/19/2021 4:
4	Unknown	NPOC	LCS-05192021		05_10_2021	NPOC:9.82		Completed	5/19/2021 4:
5	Unknown	NPOC	LCSD-05192021		05_10_2021	NPOC:9.64		Completed	5/19/2021 4:
6	Unknown	NPOC	HS21050897-01		05_10_2021	NPOC:2.36		Completed	5/19/2021 4:
7	Unknown	NPOC	HS21050897-01MS		05_10_2021	NPOC:12.5		Completed	5/19/2021 5:
8	Unknown	NPOC	HS21050871-01		05_10_2021	NPOC:0.15		Completed	5/19/2021 5:
9	Unknown	NPOC	HS21050888-01		05_10_2021	NPOC:4.34		Completed	5/19/2021 5:
10	Unknown	NPOC	HS21050637-11		05_10_2021	NPOC:2.50		Completed	5/19/2021 5:
11	Unknown	NPOC	HS21050637-12		05_10_2021	NPOC:2.58		Completed	5/19/2021 6:
12	Unknown	NPOC	HS21050637-13		05_10_2021	NPOC:1.03		Completed	5/19/2021 6:
13	Unknown	NPOC	CCV	3100603915	05_10_2021	NPOC:24.7		Completed	5/19/2021 6:
14	Unknown	NPOC	CCB		05_10_2021	NPOC:0.12		Completed	5/19/2021 6:
15	Unknown	NPOC	HS21050637-14		05_10_2021	NPOC:0.88		Completed	5/19/2021 6:
16	Unknown	NPOC	HS21050637-15		05_10_2021	NPOC:0.99		Completed	5/19/2021 7:
17	Unknown	NPOC	HS21050637-16		05_10_2021	NPOC:1.09		Completed	5/19/2021 7:
18	Unknown	NPOC	HS21050637-17		05_10_2021	NPOC:1.00		Completed	5/19/2021 7:
19	Unknown	NPOC	CCV	3100603915	05_10_2021	NPOC:24.1		Completed	5/19/2021 7:
20	Unknown	NPOC	CCB		05_10_2021	NPOC:0.08		Completed	5/19/2021 7:
21	Unknown	NPOC	MBLK-05192021	TOC_W 531	05_10_2021	NPOC:0.06		Completed	5/19/2021 8:
22	Unknown	NPOC	LCS-05192021		05_10_2021	NPOC:9.63		Completed	5/19/2021 8:
23	Unknown	NPOC	LCSD-05192021		05_10_2021	NPOC:9.64		Completed	5/19/2021 8:
24	Unknown	NPOC	HS21050637-18		05_10_2021	NPOC:1.00		Completed	5/19/2021 8:
25	Unknown	NPOC	HS21050637-18MS		05_10_2021	NPOC:11.0		Completed	5/19/2021 8:
26	Unknown	NPOC	HS21050637-19		05_10_2021	NPOC:2.44		Completed	5/19/2021 9:
27	Unknown	NPOC	HS21050637-20		05_10_2021	NPOC:2.51		Completed	5/19/2021 9:
28	Unknown	NPOC	HS21050637-21		05_10_2021	NPOC:2.55		Completed	5/19/2021 9:
29	Unknown	NPOC	HS21050637-22		05_10_2021	NPOC:0.36		Completed	5/19/2021 9:
30	Unknown	NPOC	HS21050637-23		05_10_2021	NPOC:0.26		Completed	5/19/2021 1
31	Unknown	NPOC	CCV	3100603915	05_10_2021	NPOC:24.1		Completed	5/19/2021 1
32	Unknown	NPOC	CCB		05_10_2021	NPOC:0.15		Completed	5/19/2021 1
33	Unknown	NPOC	HS21050830-01		05_10_2021	NPOC:0.35		Completed	5/19/2021 1
34	Unknown	NPOC	HS21050851-01		05_10_2021	NPOC:2.42		Completed	5/19/2021 1
35	Unknown	NPOC	HS21050853-01		05_10_2021	NPOC:1.83		Completed	5/19/2021 1
36	Unknown	NPOC	HS21050854-01		05_10_2021	NPOC:7.78		Completed	5/19/2021 1
37	Unknown	NPOC	CCV	3100603915	05_10_2021	NPOC:26.1		Completed	5/19/2021 1
38	Unknown	NPOC	CCB		05_10_2021	NPOC:0.15		Completed	5/19/2021 1
39	Unknown	NPOC	MBLK-05192021	TOC_W 531	05_10_2021	NPOC:0.09		Completed	5/19/2021 1
40	Unknown	NPOC	LCS-05192021		05_10_2021	NPOC:10.2		Completed	5/20/2021 1
41	Unknown	NPOC	LCSD-05192021		05_10_2021	NPOC:10.0		Completed	5/20/2021 1
42	Unknown	NPOC	HS21050689-01		05_10_2021	NPOC:0.96		Completed	5/20/2021 1
43	Unknown	NPOC	HS21050697-01		05_10_2021	NPOC:0.85		Completed	5/20/2021 1
44	Unknown	NPOC	HS21050697-03		05_10_2021	NPOC:0.92		Completed	5/20/2021 1:
45	Unknown	NPOC	HS21050697-03MS		05_10_2021	NPOC:12.3		Completed	5/20/2021 1:
46	Unknown	NPOC	HS21050782-01		05_10_2021	NPOC:17.3		Completed	5/20/2021 1:
47	Unknown	NPOC	HS21050850-01		05_10_2021	NPOC:8.04		Completed	5/20/2021 1:
48	Unknown	NPOC	HS21050850-02		05_10_2021	NPOC:7.94		Completed	5/20/2021 1:
49	Unknown	NPOC	CCV	3100603915	05_10_2021	NPOC:26.0		Completed	5/20/2021 2:
50	Unknown	NPOC	CCB		05_10_2021	NPOC:0.12		Completed	5/20/2021 2:

	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

TOC-Control L Report

2021_05_19_001.tlx

Instr.Information

Instrument Options: TOC/ASI/IC Unit/
Catalyst: Regular Sensitivity

Sample

Sample Name: CCV
Sample ID: 3100603915
Origin: 05_10_2021A_CAL.cal
Status: Completed
Chk. Result

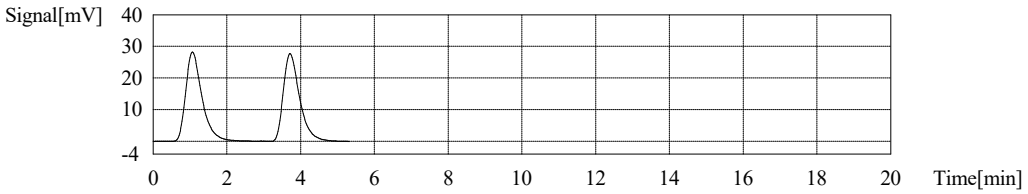
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.19mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	87.48	26.29mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/19/2021 11:32:52 PM
2	86.78	26.08mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/19/2021 11:35:51 PM

Mean Area: 87.13
Mean Conc.: 26.19mg/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:0.1535mg/L

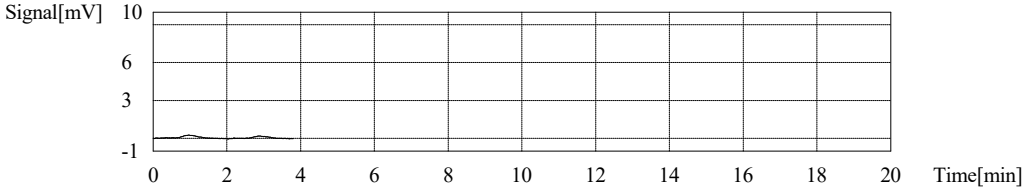
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.5729	0.1722mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/19/2021 11:43:58 PM
2	0.4484	0.1348mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/19/2021 11:46:58 PM

TOC-Control L Report

Mean Area 0.5107
Mean Conc. 0.1535mg/L



Sample

Sample Name: MBLK-05192021
Sample ID: TOC_W 5310B
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

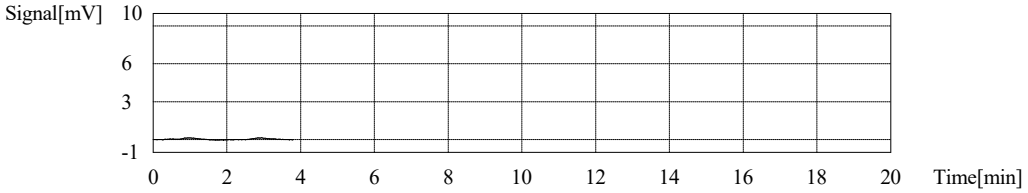
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.09995mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.3535	0.1062mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/19/2021 11:54:58 PM
2	0.3116	0.09365mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/19/2021 11:57:58 PM

Mean Area 0.3326
Mean Conc. 0.09995mg/L



Sample

Sample Name: LCS-05192021
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.21mg/L

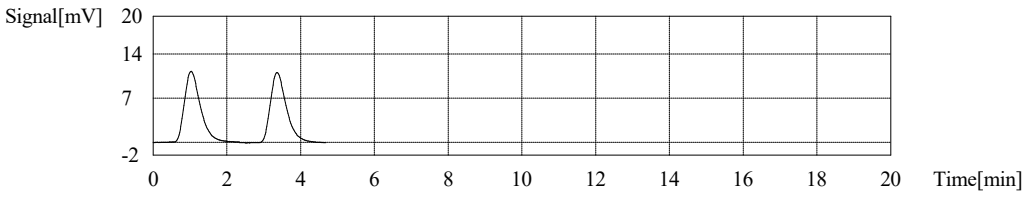
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.93	10.20mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 12:06:22 AM
2	34.03	10.23mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 12:09:23 AM

TOC-Control L Report

Mean Area 33.98
Mean Conc. 10.21mg/L



Sample

Sample Name: LCSD-05192021
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

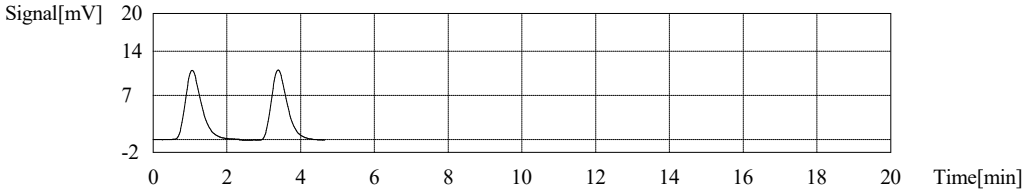
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:10.09mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	33.41	10.04mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 12:17:47 AM
2	33.76	10.15mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 12:20:46 AM

Mean Area 33.59
Mean Conc. 10.09mg/L



Sample

Sample Name: HS21050689-01
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9604mg/L

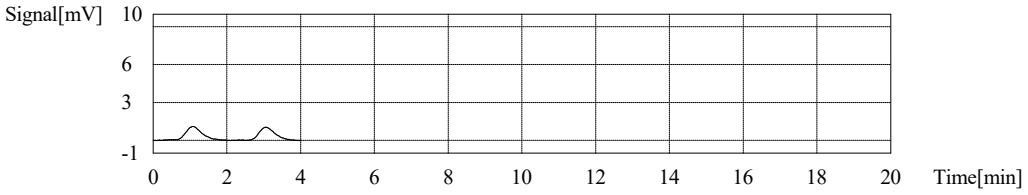
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.218	0.9672mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 12:29:06 AM
2	3.173	0.9536mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 12:32:07 AM

TOC-Control L Report

Mean Area 3.196
Mean Conc. 0.9604mg/L



Sample

Sample Name: HS21050697-03
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

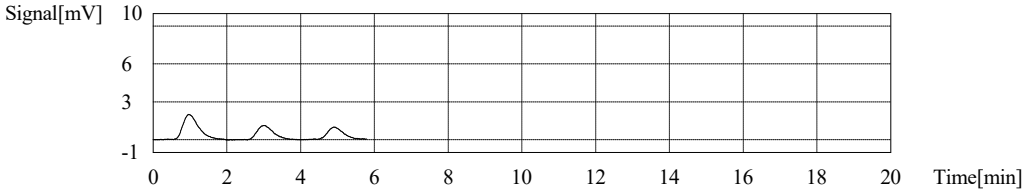
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.9276mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.842	1.756mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 12:54:25 AM
2	3.376	1.015mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 12:57:20 AM
3	2.797	0.8406mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 1:00:20 AM

Mean Area 3.087
Mean Conc. 0.9276mg/L



Sample

Sample Name: HS21050697-03MS
Sample ID:
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:12.37mg/L

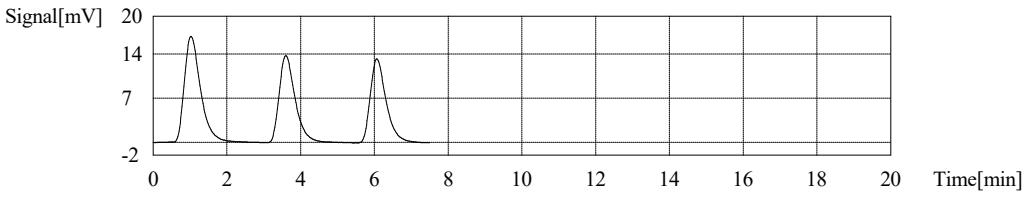
1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	51.51	15.48mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 1:09:13 AM
2	42.10	12.65mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 1:12:08 AM
3	40.25	12.10mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 1:15:09 AM

TOC-Control L Report

Mean Area 41.17
Mean Conc. 12.37mg/L



Sample

Sample Name: CCV
Sample ID: 3100603915
Origin: 05_10_2021A_CAL.cal
Status Completed
Chk. Result

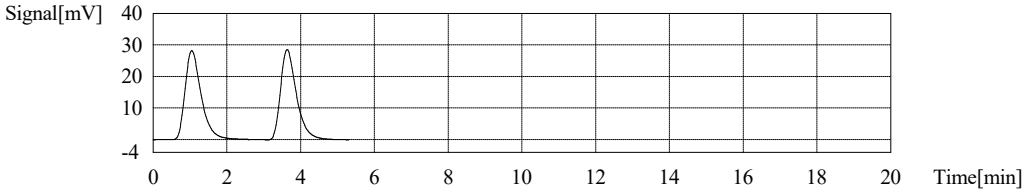
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:26.02mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	86.06	25.86mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 2:05:48 AM
2	87.12	26.18mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 2:08:58 AM

Mean Area 86.59
Mean Conc. 26.02mg/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:0.1298mg/L

1. Det

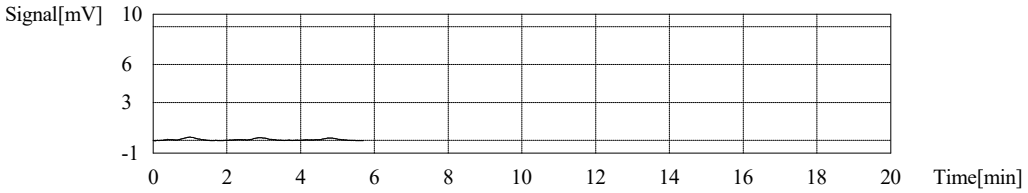
Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7897	0.2373mg/L	50uL	1.000	E	05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 2:17:00 AM
2	0.4321	0.1299mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 2:20:00 AM
3	0.4318	0.1298mg/L	50uL	1.000		05_10_2021A_CAL.2021_05_10_17_37_49.cal	5/20/2021 2:23:00 AM

TOC-Control L Report

2021_05_19_001.tlx

Mean Area	0.4320
Mean Conc.	0.1298mg/L



HS21050689 ALS Simi Valley Sub Data
P2102700 Tier IV

ALS WO# HS21050689

LABORATORY REPORT

May 28, 2021

Ragen Giga
ALS Environmental - US
10450 Stancliff Rd Suite 210
Houston, TX 77099

RE: HS21050689

Dear Ragen:

Enclosed are the results of the sample submitted to our laboratory on May 18, 2021. For your reference, this analysis has been assigned our service request number P2102700.

The analysis was performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Hayden Akers at 2:54 pm, May 28, 2021

Hayden Akers
Project Manager

Client: ALS Environmental - US Service Request No: P2102700
Project: HS21050689

CASE NARRATIVE

The samples were received intact under chain of custody on May 18, 2021 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175 as described in laboratory SOP VOA-DISGAS. This analyte is included on the laboratory's NELAP and DoD-ELAP scope of accreditation.

Methane, Ethene and Ethane Analysis

The samples were analyzed for methane, ethene, and ethane using a gas chromatograph equipped with a flame ionization detector (FID). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least two hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (methane, ethene and ethane) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP accreditation.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-008
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Environmental - US
Service Request: P2102700
Project ID: HS21050689

Date Received: 5/18/2021
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
35BWW04_210513	P2102700-001	Water	5/13/2021	11:50	X	X

RJ102700

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:** **16125**

SUBCONTRACT TO:

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065

Phone: +1 805 526 7161

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21050689
TSR:	Sonia West

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS21050689-01**	**35BWW04_210513**	**Groundwater**	**13 May 2021 11:50**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	~~28 May 2021~~ 4, 8 blank

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: 5/17/2021 1800

Received By: _____ Date/Time: 5-18-21 0930

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2102700
Project: HS21050689
Sample(s) received on: 5/18/21 Date opened: 5/18/21 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: ° C Blank Temperature: 4.8° C	Wet Ice		
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? Cooler lid. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2102700-001.01	40mL VOA NP		5		A	CB 5/26/21
P2102700-001.02	40mL VOA NP				A	
P2102700-001.03	40mL VOA NP				A	
P2102700-001.04	40ml VOA HCL		1		A	CB 5/25/21
P2102700-001.05	40ml VOA HCL				A	
P2102700-001.06	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Environmental - US**
Client Sample ID: **35BWW04_210513**
Client Project ID: **HS21050689**

ALS Project ID: P2102700
ALS Sample ID: P2102700-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: 05/13/21
Date Received: 05/18/21
Date Analyzed: 05/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Environmental - US**
Client Sample ID: **Method Control Sample** ALS Project ID: P2102700
Client Project ID: **HS21050689** ALS Sample ID: P210525-MB

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/FID Date Received: NA
Analyst: Connor Barrett Date Analyzed: 5/25/21
Matrix: Water Volume(s) Analyzed: 0.10 ml(s)
Test Notes:

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Environmental - US**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS21050689**

ALS Project ID: P2102700
ALS Sample ID: P210525-LCS
P210525-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result$_1$ LCS µg/L	Result$_1$ DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	2.52	2.38	**100**	**94**	73-125	6	26	
74-85-1	Ethene	4.40	5.15	5.10	**117**	**116**	72-133	0.9	11	
74-84-0	Ethane	4.72	5.01	4.92	**106**	**104**	74-131	2	10	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Environmental - US**
Client Project ID: **HS21050689** ALS Project ID: P2102700

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Connor Barrett
Matrix: Liquid
Test Notes:

Date(s) Collected: 5/13/21
Date Received: 5/18/21
Date Analyzed: 5/26/21

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
35BWW04_210513	P2102700-001	0.10	**150,000**	1,000	860	370	
Method Control Sample	P210526-MB	0.10	860	1,000	860	370	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Environmental - US**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2102700
Client Project ID: **HS21050689** ALS Sample ID: P210526-DLCS

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/TCD Date Received: NA
Analyst: Connor Barrett Date Analyzed: 5/26/21
Matrix: Liquid Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result$_1$ LCS ug/L	Result$_1$ DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	19,200	19,200	**84**	**84**	80-122	0	12	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2021_05\25\
Data File : 05252111.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 25-May-2021, 16:50:00
Operator : CB
Sample : P2102700-001 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 26 12:01:25 2021
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

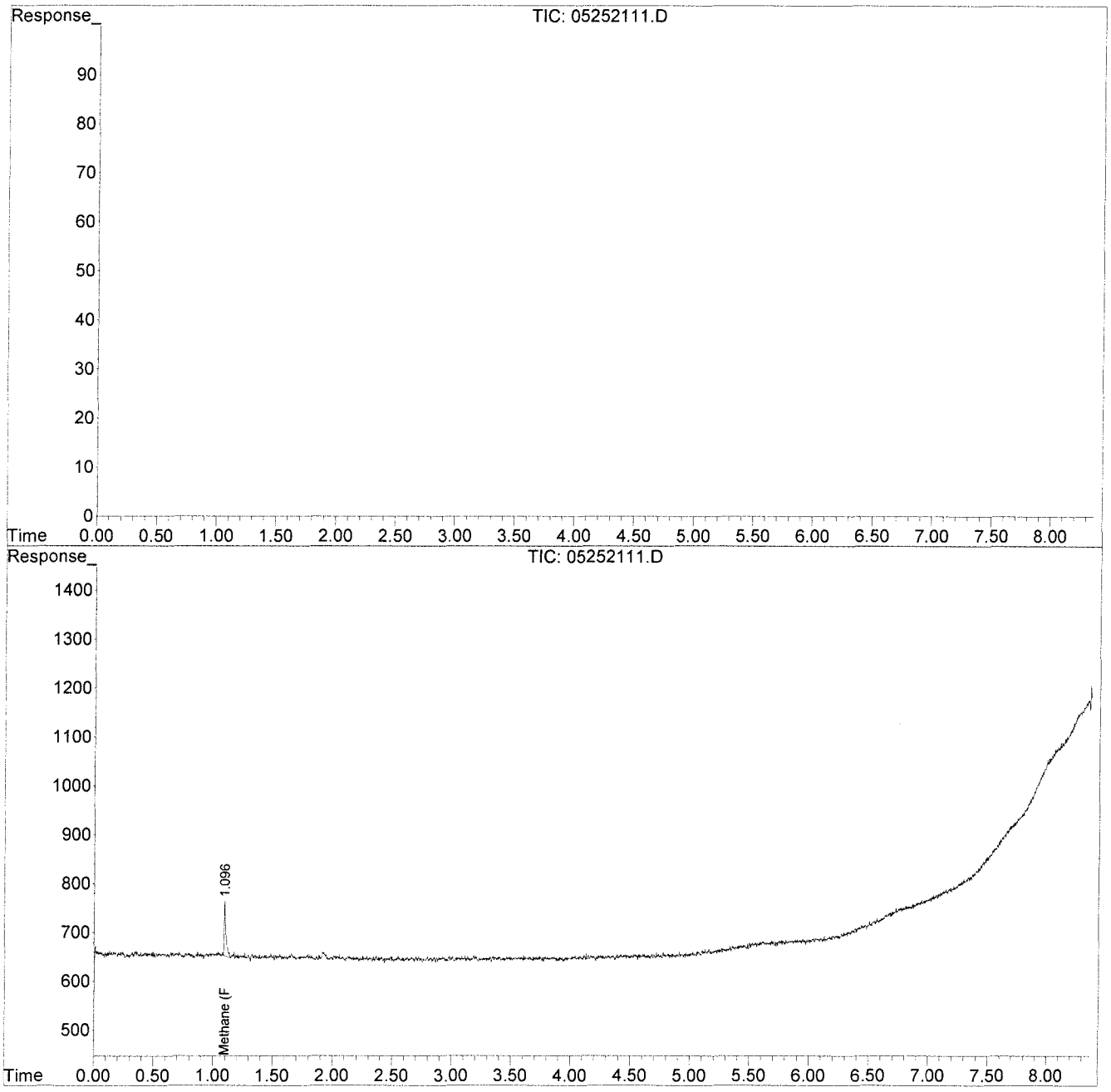
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.096	1203	0.133	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2021_05\25\
Data File : 05252111.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 25-May-2021, 16:50:00
Operator : CB
Sample : P2102700-001 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 26 12:01:25 2021
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : J:\GC10\DATA\RSK_FID\2021_05\25\
Data File : 05252104.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 25-May-2021, 15:10:43
Operator : CB
Sample : MCS 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 25 15:53:06 2021
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

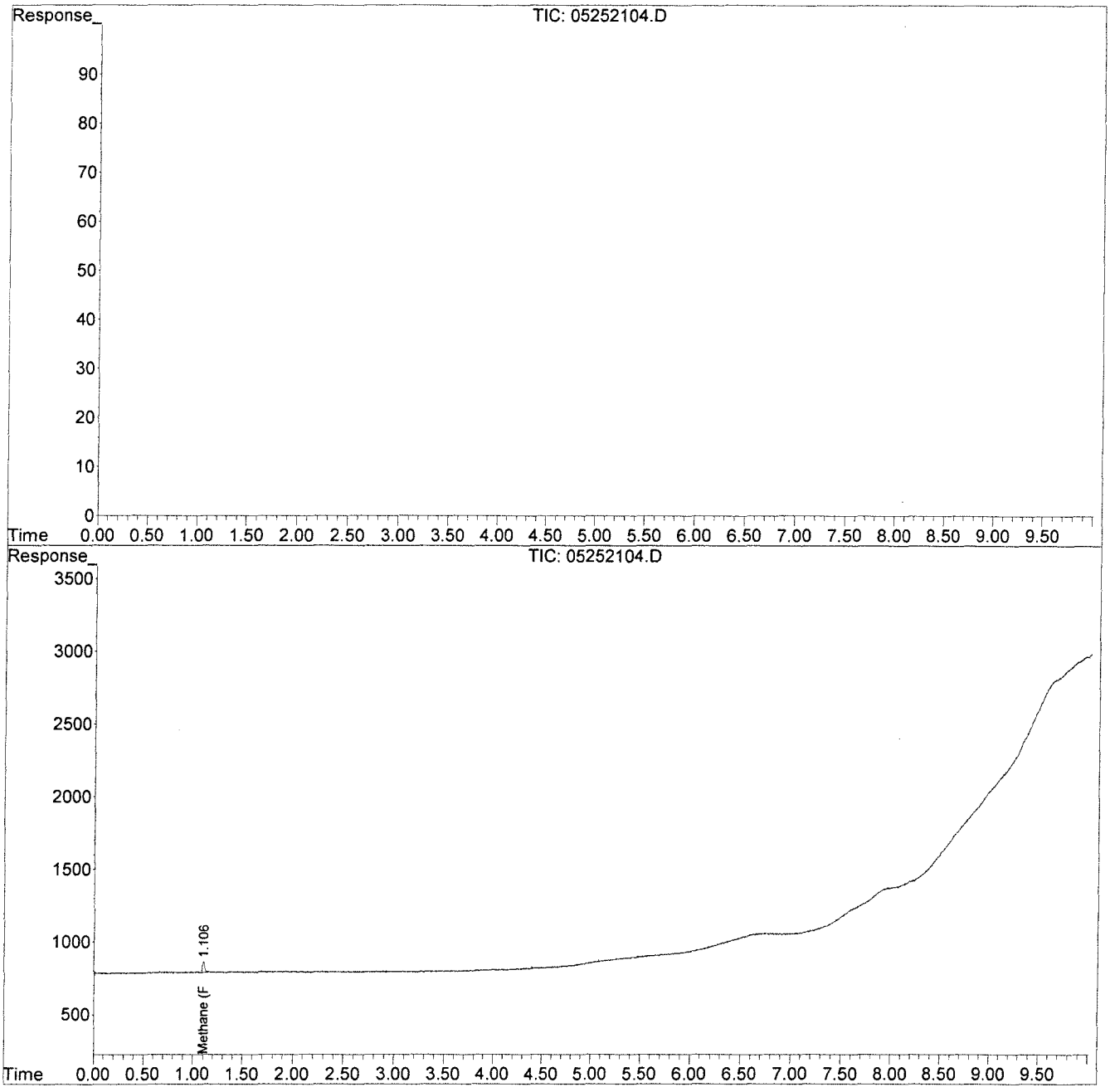
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.108	1190	0.131	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2021_05\25\
Data File : 05252104.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 25-May-2021, 15:10:43
Operator : CB
Sample : MCS 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 25 15:53:06 2021
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : J:\GC10\DATA\RSK_FID\2021_05\25\
Data File : 05252105.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 25-May-2021, 15:25:29
Operator : CB
Sample : LCS 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 25 15:55:08 2021
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

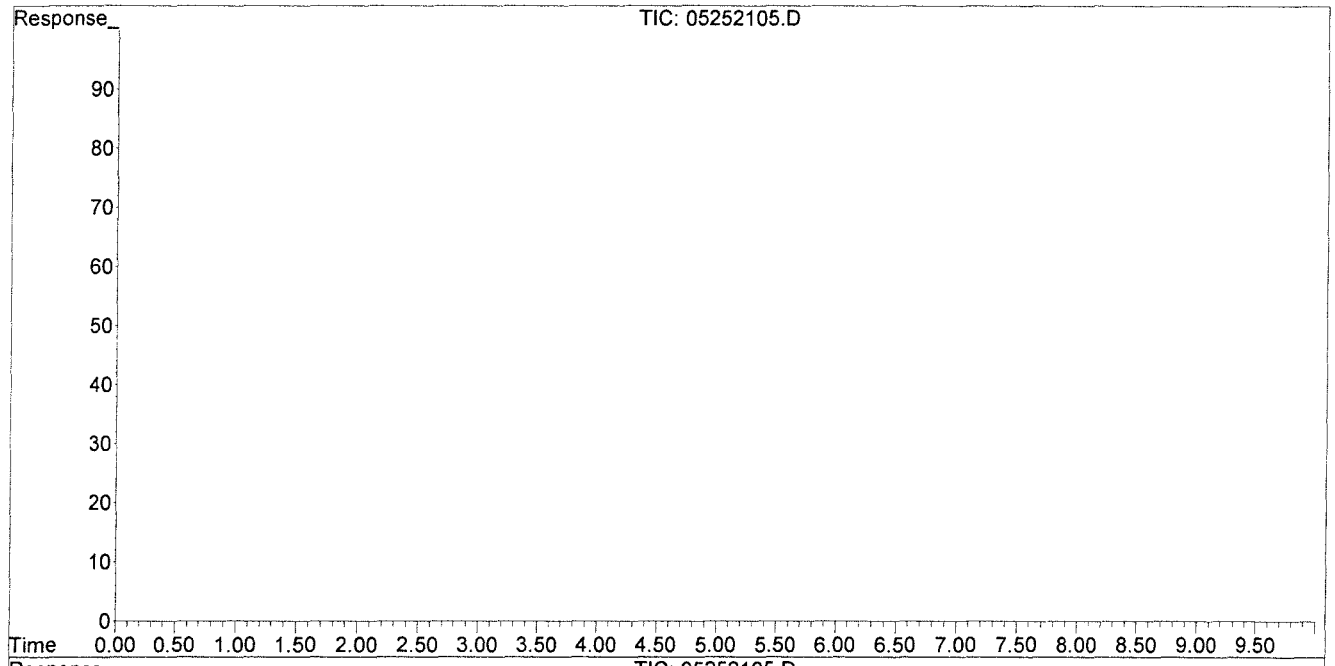
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.109	13195	1.455	ppm
7)	Ethylene	1.677	19401	1.159	ppm
8)	Ethane	1.940	22589	1.333	ppm
9)	Propylene	4.323	26959	1.151	ppm
10)	Propane	4.442	34271	1.377	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.656	61345	2.305	ppm
13)	n-Butane	6.656	61345	2.305	ppm

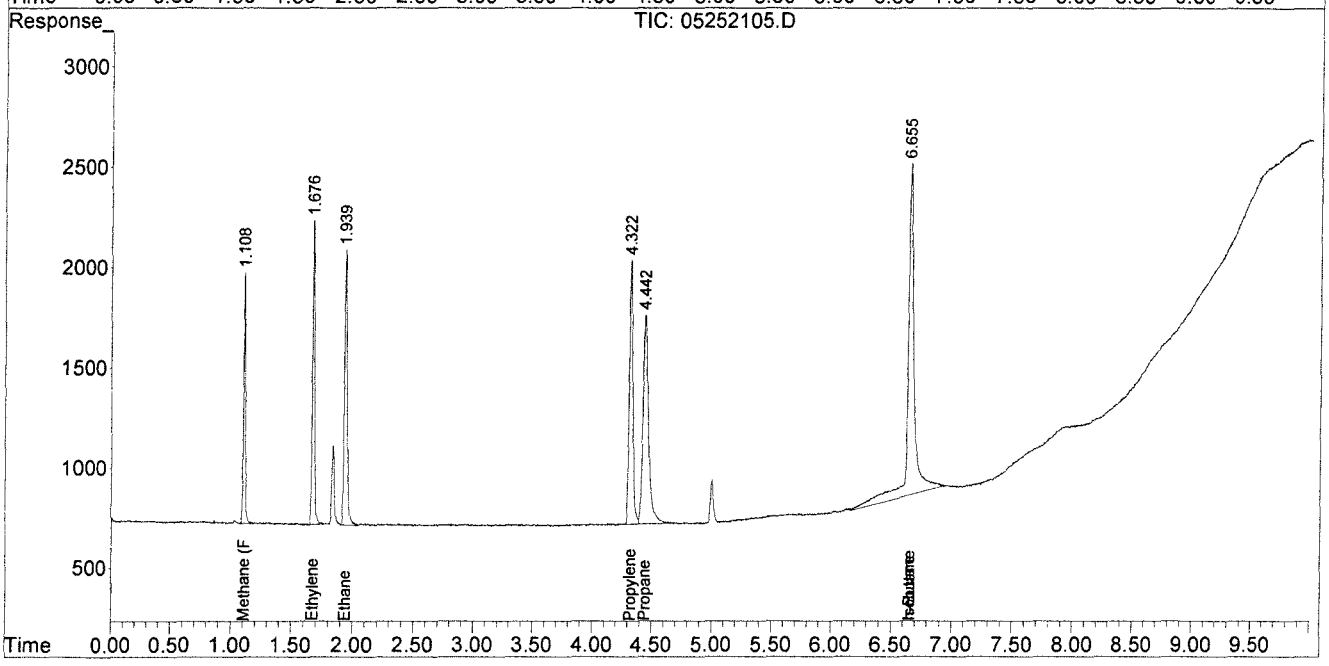
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2021_05\25\
Data File : 05252105.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 25-May-2021, 15:25:29
Operator : CB
Sample : LCS 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 25 15:55:08 2021
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2021_05\25\
Data File : 05252106.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 25-May-2021, 15:39:58
Operator : CB
Sample : LCSD 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 25 15:55:23 2021
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

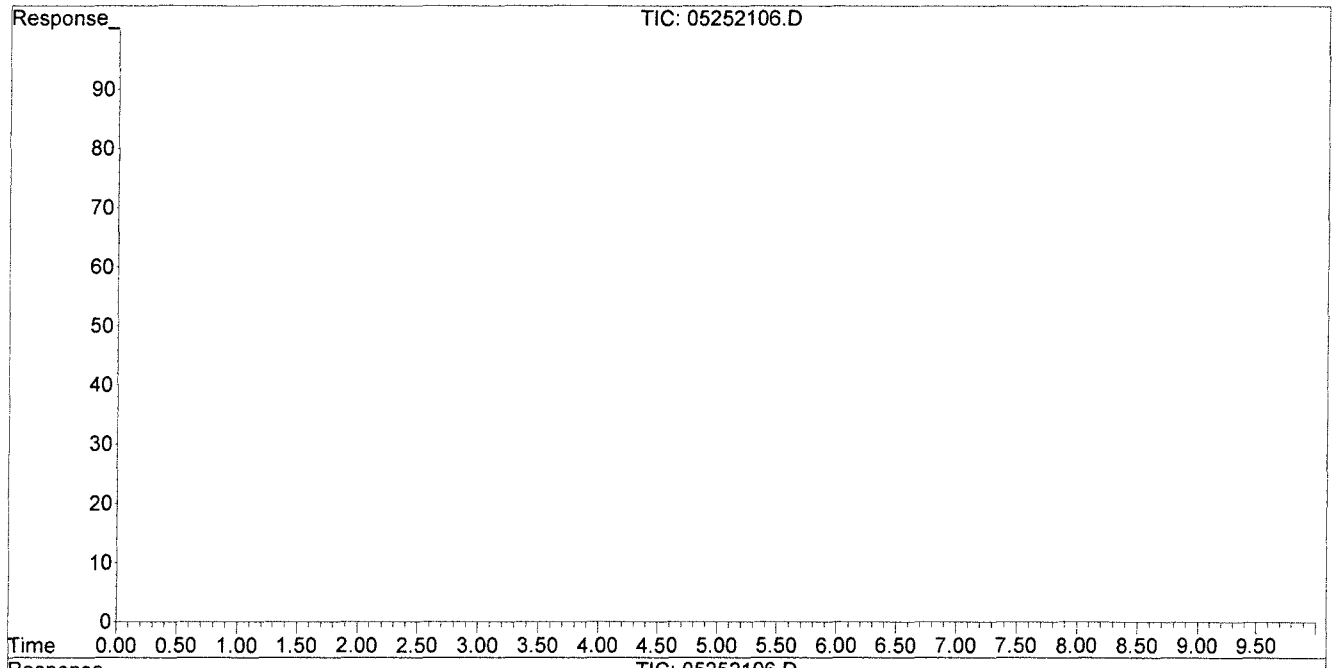
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.109	12529	1.381	ppm
7)	Ethylene	1.676	19222	1.149	ppm
8)	Ethane	1.939	22171	1.308	ppm
9)	Propylene	4.321	26923	1.149	ppm
10)	Propane	4.441	33763	1.357	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.654	56006	2.104	ppm
13)	n-Butane	6.654	56006	2.104	ppm

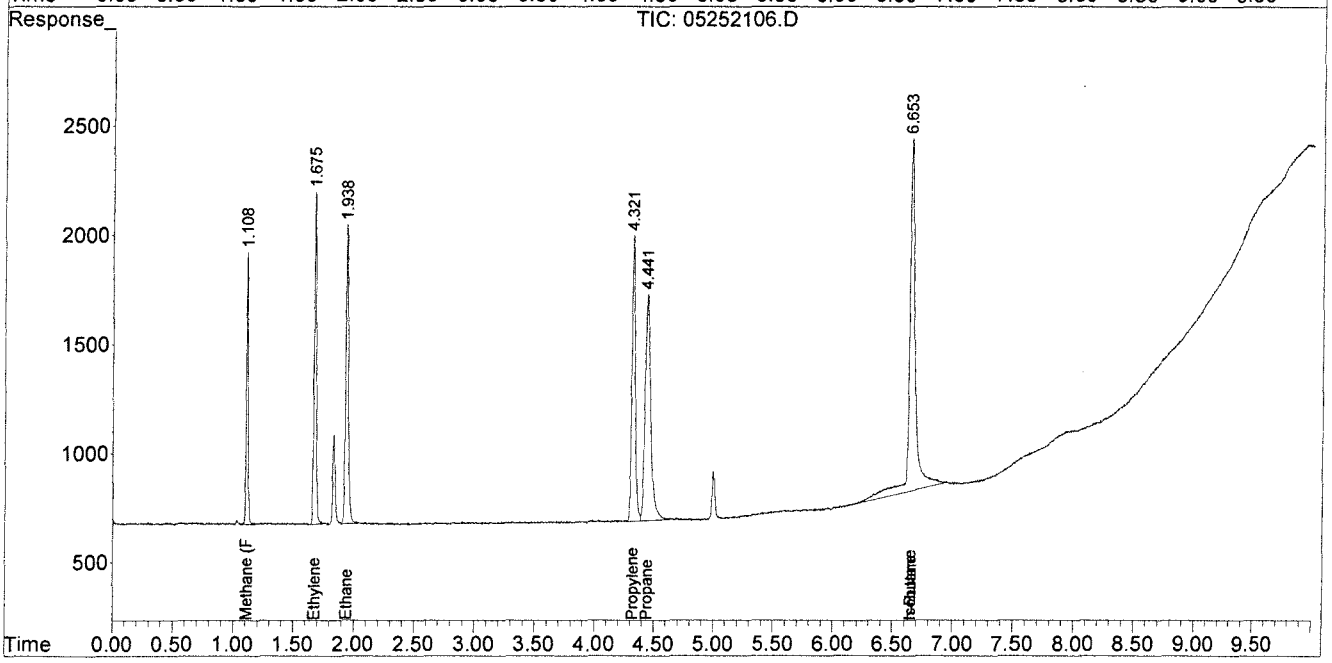
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2021_05\25\
Data File : 05252106.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 25-May-2021, 15:39:58
Operator : CB
Sample : LCSD 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 25 15:55:23 2021
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1)	Oxygen/Argon	3.739		1.014			0.001	0.793 E6	189.17
2)	Carbon monoxide	3.739		1.014			0.001	0.594 E6	221.92
3)	Methane (TCD)						2.161	0.951 E2	106.37
4)	Carbon dioxide	2.365	2.569	2.558	2.361	2.459	2.314	2.438 E2	4.44

Signal #2 Calibration Files
1 =09121702.D 2 =09121703.D 3 =09121704.D
4 =09121705.D 5 =09121706.D 6 =09121707.D

	Compound	1	2	3	4	5	6	Avg	%RSD
6)	Methane (FID)		1.180	0.975	0.908	0.870	0.868	0.907 E4	11.66
7)	Ethylene	1.736	1.638	1.780	1.720	1.628	1.670	1.673 E4	3.90
8)	Ethane	1.781	1.676	1.784	1.730	1.692	1.675	1.695 E4	3.83
9)	Propylene	2.505	2.296	2.592	2.480	2.346	2.252	2.343 E4	6.56
10)	Propane	2.439	2.283	2.645	2.555	2.433	2.522	2.488 E4	4.20
11)	Isobutylene							0.652 E1	138.46
12)	Isobutane	6.058	4.793	2.214	1.553	1.353		2.662 E4	86.17
13)	n-Butane	6.058	4.793	2.214	1.553	1.353		2.662 E4	86.17

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS091217_R.M Wed Sep 13 15:11:48 2017

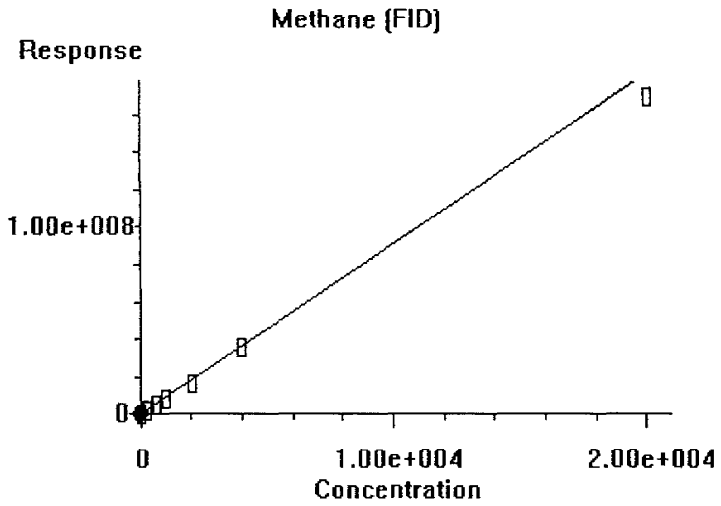
Edit Compounds -- Compound #6 -- Methane (FID)

Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	
2	0.302000	3564.400000
3	1.510000	14725.268625
4	4.530000	41128.575000
5	10.570000	91966.784531
6	200.000000	1735997.497500
7	600.000000	5189848.900000
8	1000.000000	8598533.570000
9	2000.000000	16098209.390000
10	4000.000000	35776839.311362
11	20000.000000	169009160.49199



0.000e+000	Quadratic term
9.071e+003	Linear term
0.000e+000	Constant term
11.657%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #7 -- Ethylene

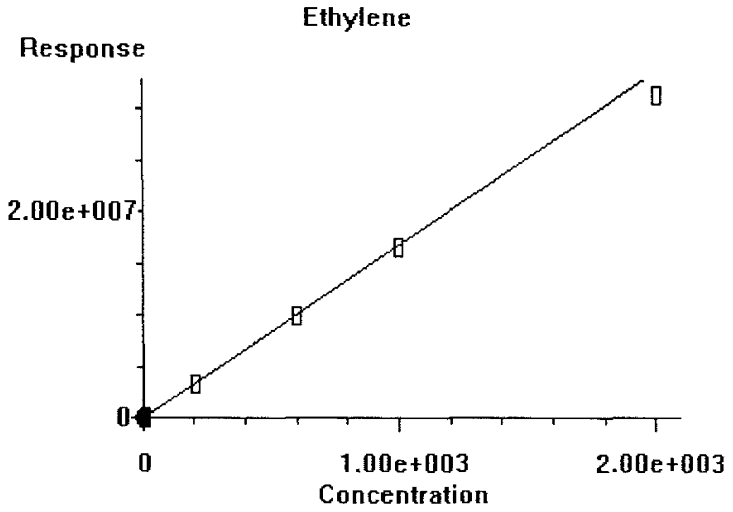
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2621.970000
2	0.302000	4946.731301
3	1.510000	26884.746847
4	4.530000	77902.721497
5	10.570000	172085.529560
6	200.000000	3339702.313219
7	600.000000	10007758.776971
8	1000.000000	16608503.805988
9	2000.000000	31192443.898600
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
1.673e+004	Linear term
0.000e+000	Constant term
3.897%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #8 -- Ethane

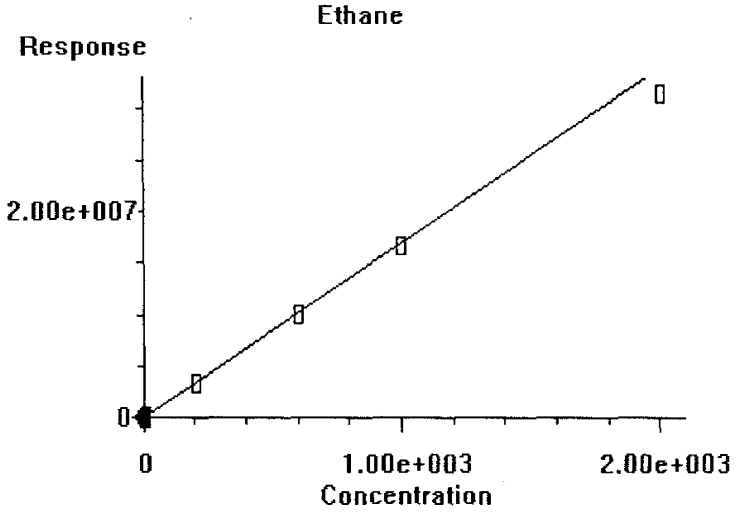
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	2689.928008
2	0.302000	5060.331943
3	1.510000	26943.667500
4	4.530000	78353.525045
5	10.570000	178840.731148
6	200.000000	3350442.319129
7	600.000000	10048964.218029
8	1000.000000	16709164.879012
9	2000.000000	31424217.938900
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
1.695e+004	Linear term
0.000e+000	Constant term
3.831%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #9 -- Propylene

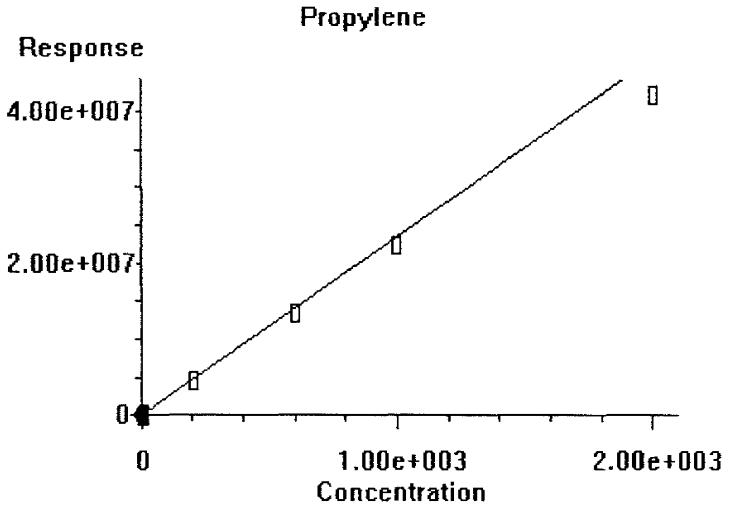
Search by: Ret Time | Name | Index | Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	3782.537646
2	0.302000	6933.285530
3	1.510000	39139.518208
4	4.530000	112341.896872
5	10.570000	248003.903623
6	200.000000	4504060.086084
7	600.000000	13569342.761419
8	1000.000000	22494887.720990
9	2000.000000	42124689.656800
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
2.343e+004	Linear term
0.000e+000	Constant term
6.559%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Edit Compounds -- Compound #10 -- Propane

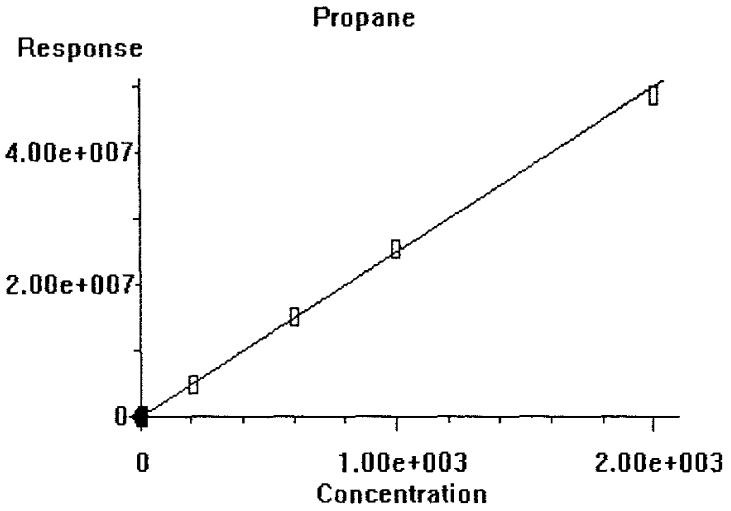
Search by: Ret Time | Name | Index | Find Compound

Compound Database
External Standard Compoun
- Oxygen/Argon
- Carbon monoxide
- Methane (TCD)
- Carbon dioxide
- Signal #2
- Methane (FID)
- Ethylene
- Ethane
- Propylene
- Propane
- Isobutylene
- Isobutane
- n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	0.151000	3682.897354
2	0.302000	6894.237803
3	1.510000	39934.166792
4	4.530000	115723.428128
5	10.570000	257124.432806
6	200.000000	5043035.663916
7	600.000000	15251325.797404
8	1000.000000	25459410.657938
9	2000.000000	48583085.287451
10	4000.000000	

Lvl ID	Concentration	Response
11	20000.000000	



0.000e+000	Quadratic term
2.488e+004	Linear term
0.000e+000	Constant term
4.200%	RF Rel Std Dev

OK | Cancel | Help | Print Calibration Curve | Copy Calibration Curve

Method Path : J:\GC10\METHODS\
Method File : RS091217_R.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Wed Sep 13 11:14:47 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121702.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121703.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121704.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121705.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121706.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121707.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121711.D
11	11	20000	0	J:\GC10\DATA\RSK_FID\2017_09\12\09121712.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Sep 13 11:04 2017	Sep 12 15:03 2017	12-Sep-2017, 10:52
2	2	Sep 13 11:05 2017	Sep 13 11:05 2017	12-Sep-2017, 11:05
3	3	Sep 13 11:06 2017	Sep 13 11:05 2017	12-Sep-2017, 11:45
4	4	Sep 13 11:09 2017	Sep 13 11:06 2017	12-Sep-2017, 12:09
5	5	Sep 13 11:09 2017	Sep 13 11:09 2017	12-Sep-2017, 12:30
6	6	Sep 13 11:10 2017	Sep 13 11:10 2017	12-Sep-2017, 12:47
7	7	Sep 13 11:11 2017	Sep 13 11:10 2017	12-Sep-2017, 13:00
8	8	Sep 13 11:12 2017	Sep 13 11:11 2017	12-Sep-2017, 13:47
9	9	Sep 13 11:12 2017	Sep 13 11:12 2017	12-Sep-2017, 14:07
10	10	Sep 13 11:14 2017	Sep 13 11:13 2017	12-Sep-2017, 14:48
11	11	Sep 13 11:14 2017	Sep 13 11:14 2017	12-Sep-2017, 15:21

RS091217_R.M Wed Sep 13 15:11:22 2017

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.767	373920	0.128	ppm	
2)	Carbon monoxide	1.767	373920	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	1.595	2622	0.156	ppm	
8)	Ethane	1.848	2690	0.156	ppm	
9)	Propylene	4.222	3783	0.154	ppm	
10)	Propane	4.348	3683	0.139	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.582f	6058	NoCal	ppm	
13)	n-Butane	6.582f	6058	NoCal	ppm	

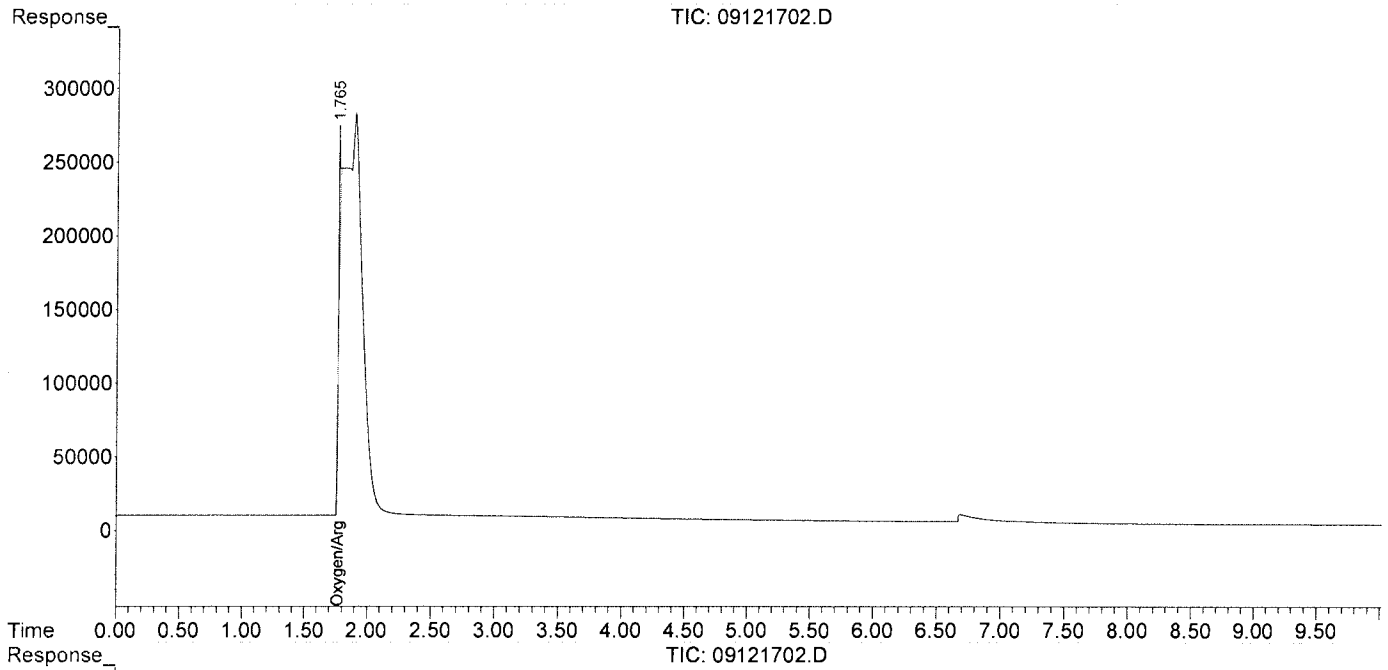
(f)=RT Delta > 1/2 Window (m)=manual int.

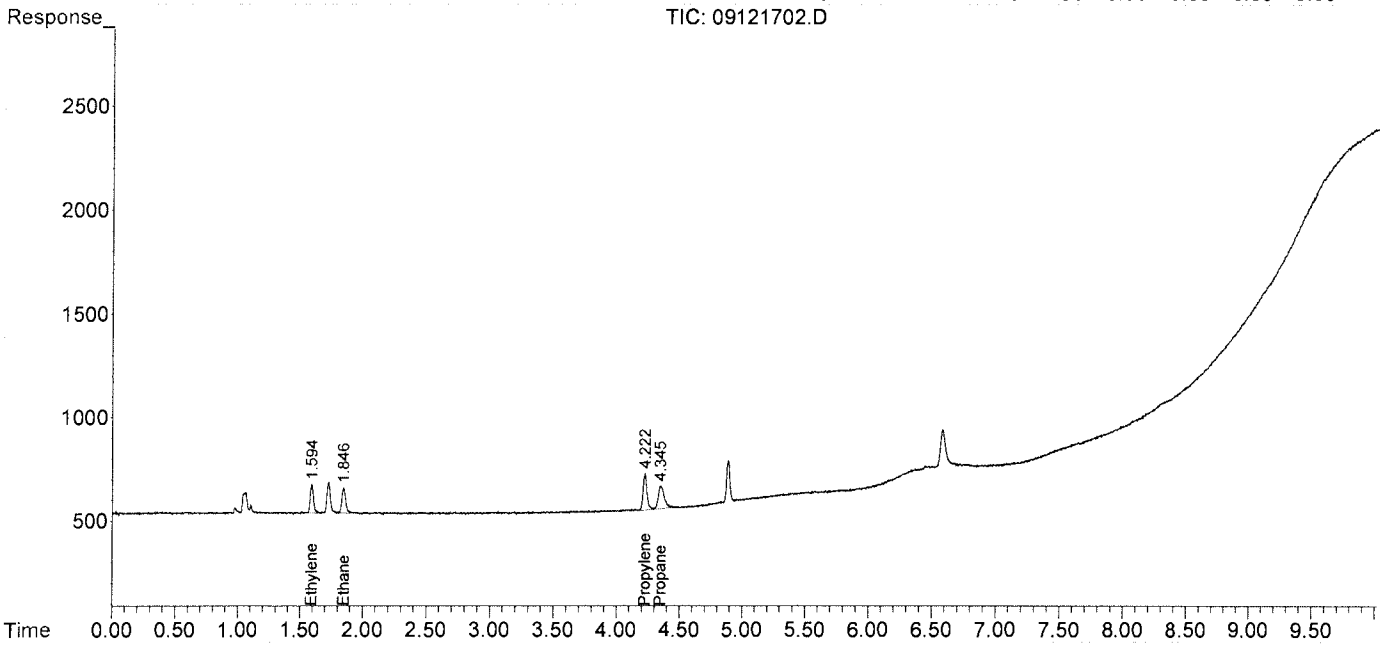
9/13/17

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121702.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 10:52
Operator : MC
Sample : 0.151ppm 0.250ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 12 11:03:15 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

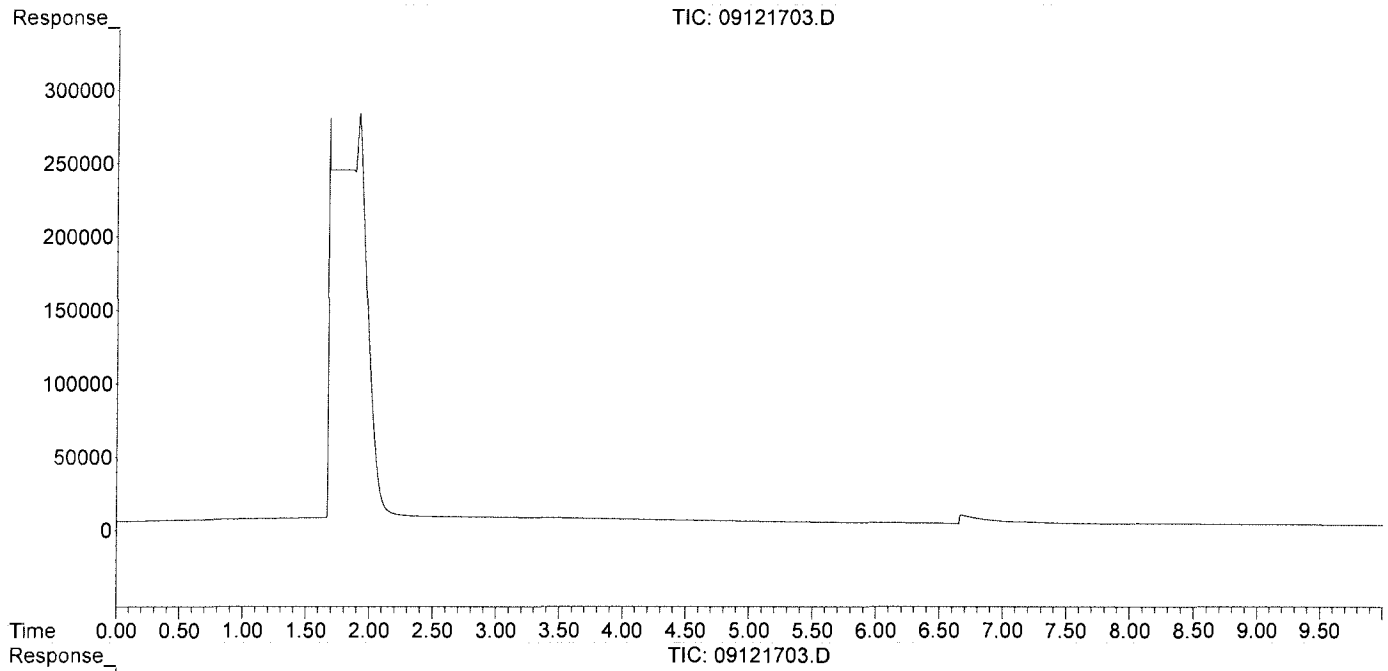
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.913f	-25181981	N.D.	ppm	
2)	Carbon monoxide	1.913f	-25181981	1.089	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.049	3564	0.391	ppm	m
7)	Ethylene	1.577	4947	0.292	ppm	
8)	Ethane	1.828	5060	0.293	ppm	
9)	Propylene	4.207	6933	0.281	ppm	
10)	Propane	4.337	6894	0.268	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	9587	0.158	ppm	
13)	n-Butane	6.579f	9587	0.158	ppm	

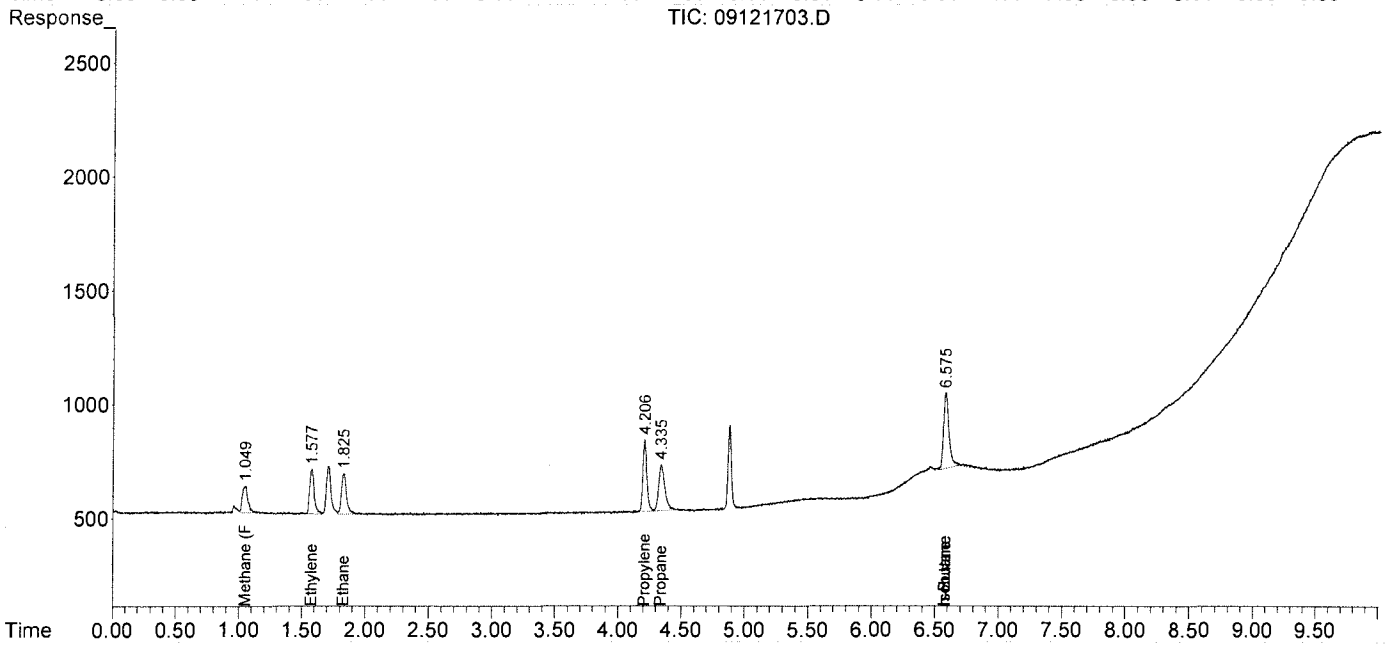
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

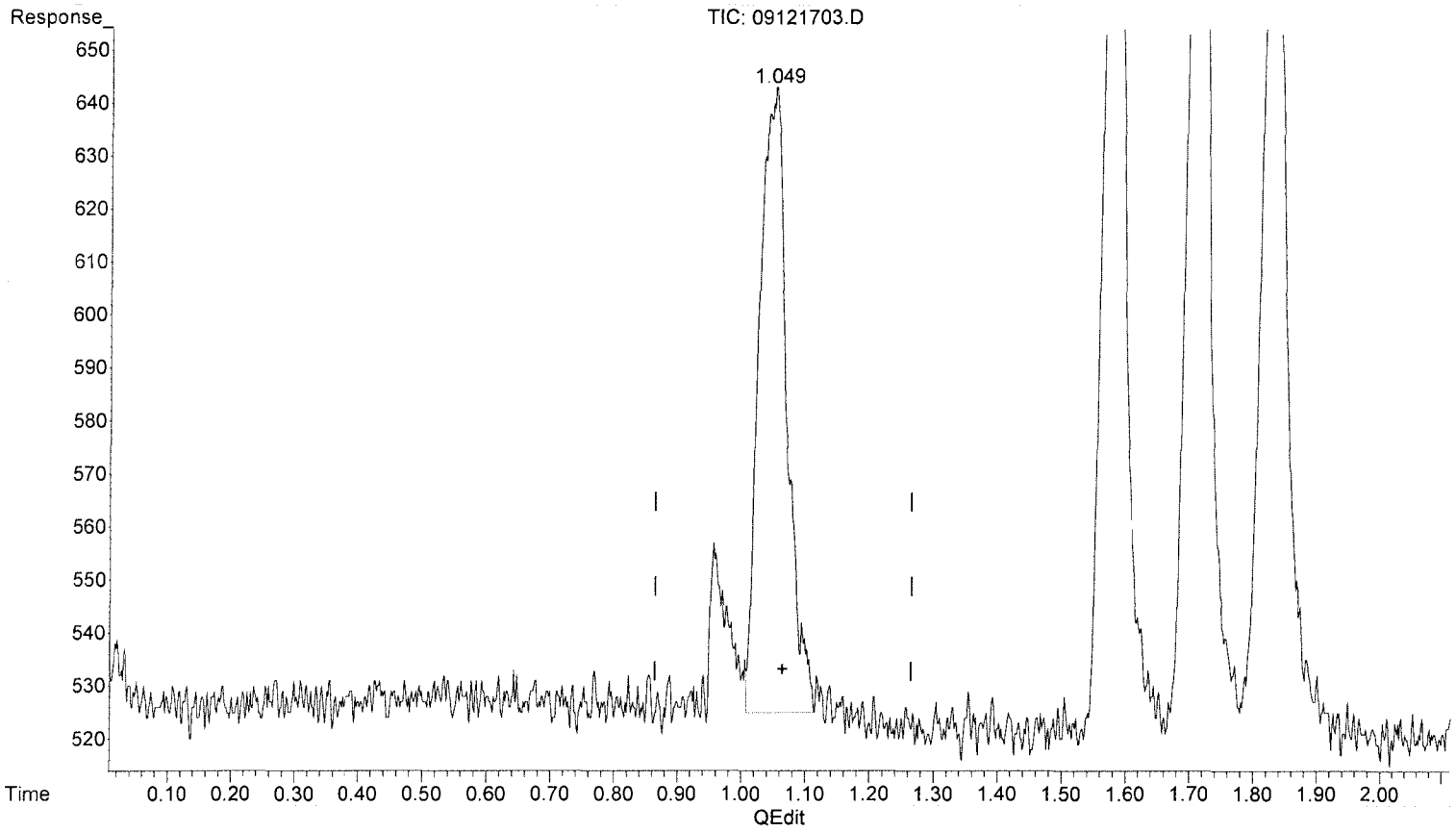




Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121703.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:05
Operator : MC
Sample : 0.302ppm 0.5ml s32-09121702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:03 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(6) Methane (FID)

1.049min 0.391 ppm m

response 3564

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

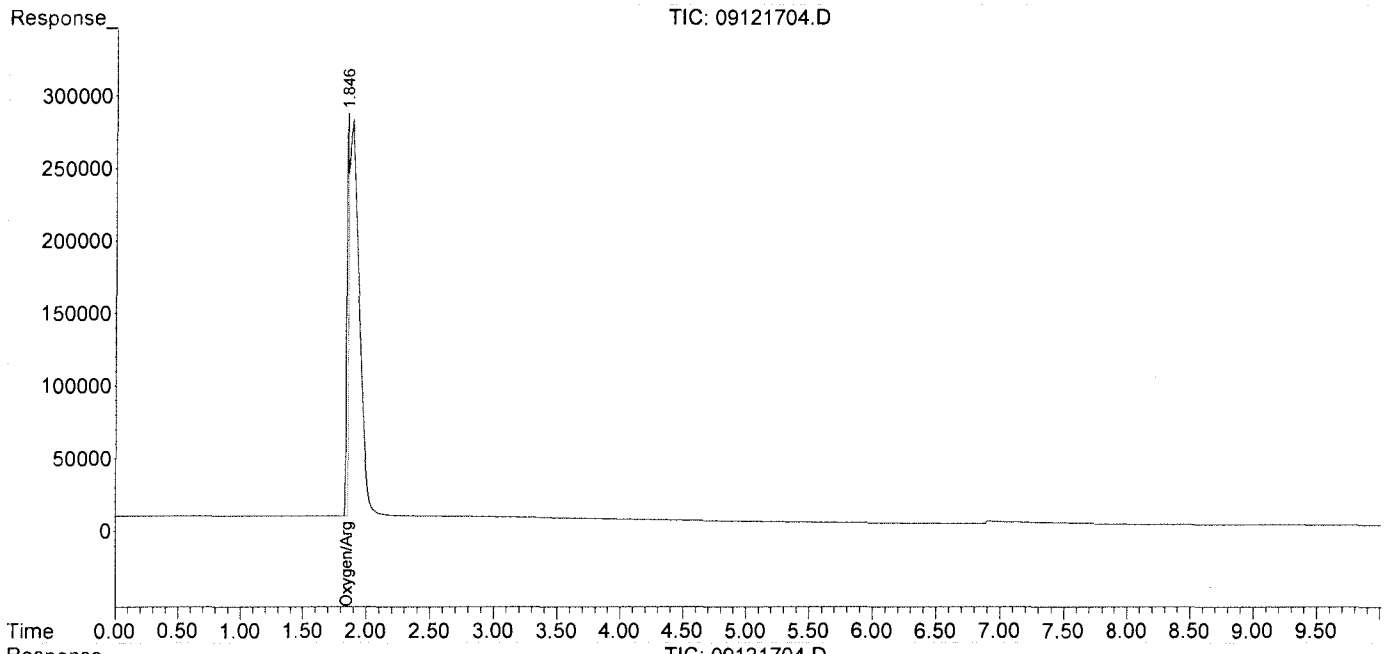
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.847	2536230	1.056	ppm
2)	Carbon monoxide	1.847	2536230	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.064	14725	1.613	ppm
7)	Ethylene	1.598	26885	1.582	ppm
8)	Ethane	1.851	26944	1.555	ppm
9)	Propylene	4.220	39140	1.589	ppm
10)	Propane	4.349	39934	1.596	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	55348	1.020	ppm
13)	n-Butane	6.578f	55348	1.020	ppm

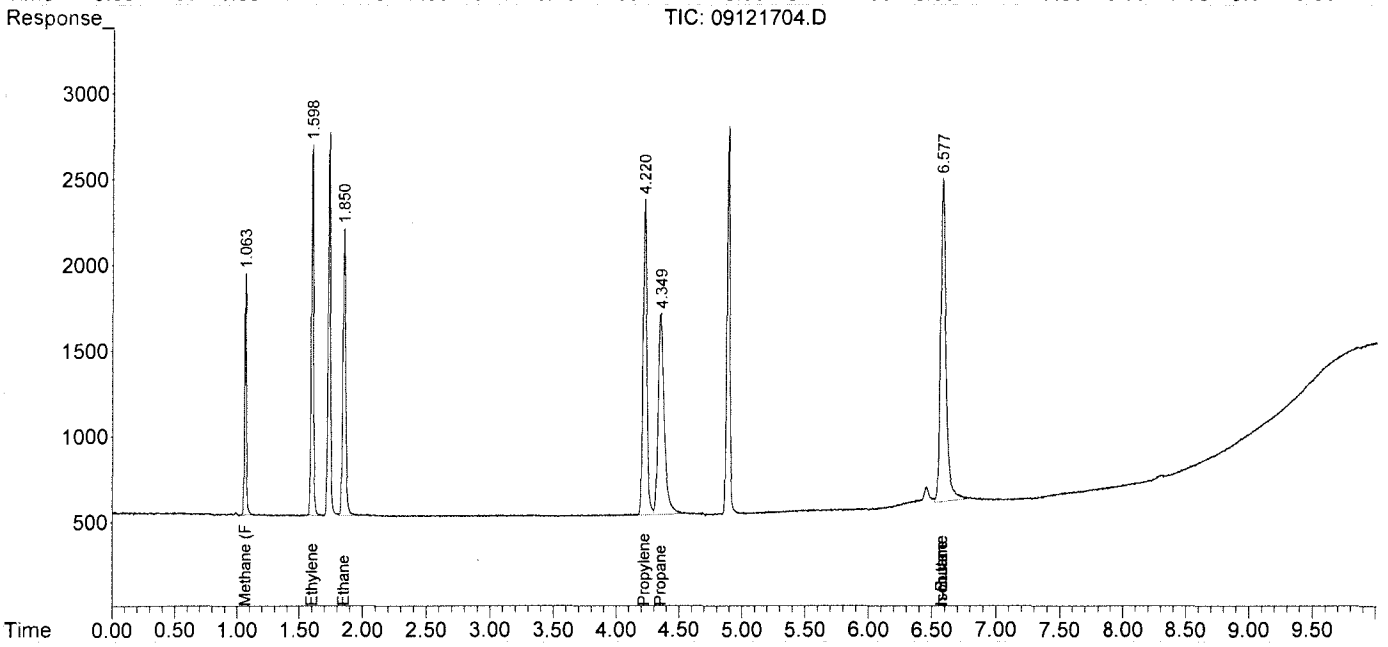
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121704.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 11:45
Operator : MC
Sample : 1.51ppm 0.1ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:05:55 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

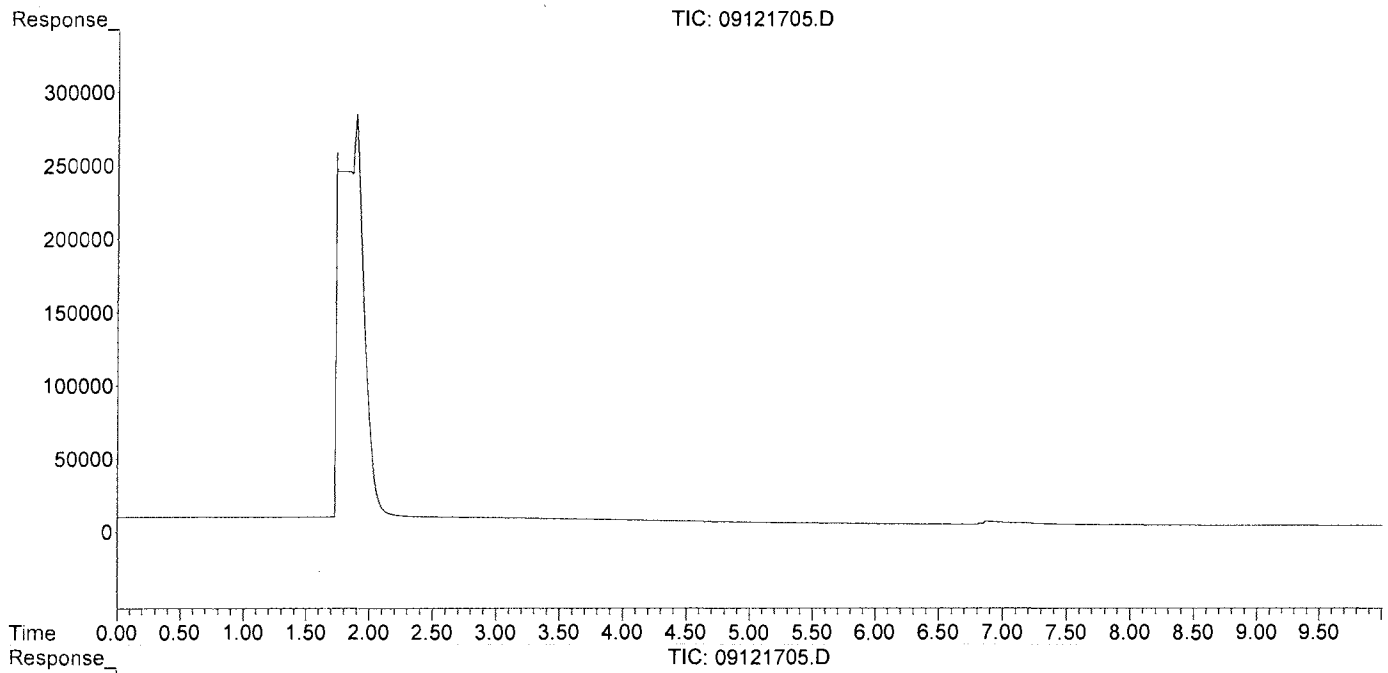
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.738	-331216	N.D.	ppm
2)	Carbon monoxide	1.738	-331216	0.019	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.052	41129	4.522	ppm
7)	Ethylene	1.586	77903	4.637	ppm
8)	Ethane	1.838	78354	4.558	ppm
9)	Propylene	4.218	112342	4.614	ppm
10)	Propane	4.347	115723	4.680	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.580f	155256	3.565	ppm
13)	n-Butane	6.580f	155256	3.565	ppm

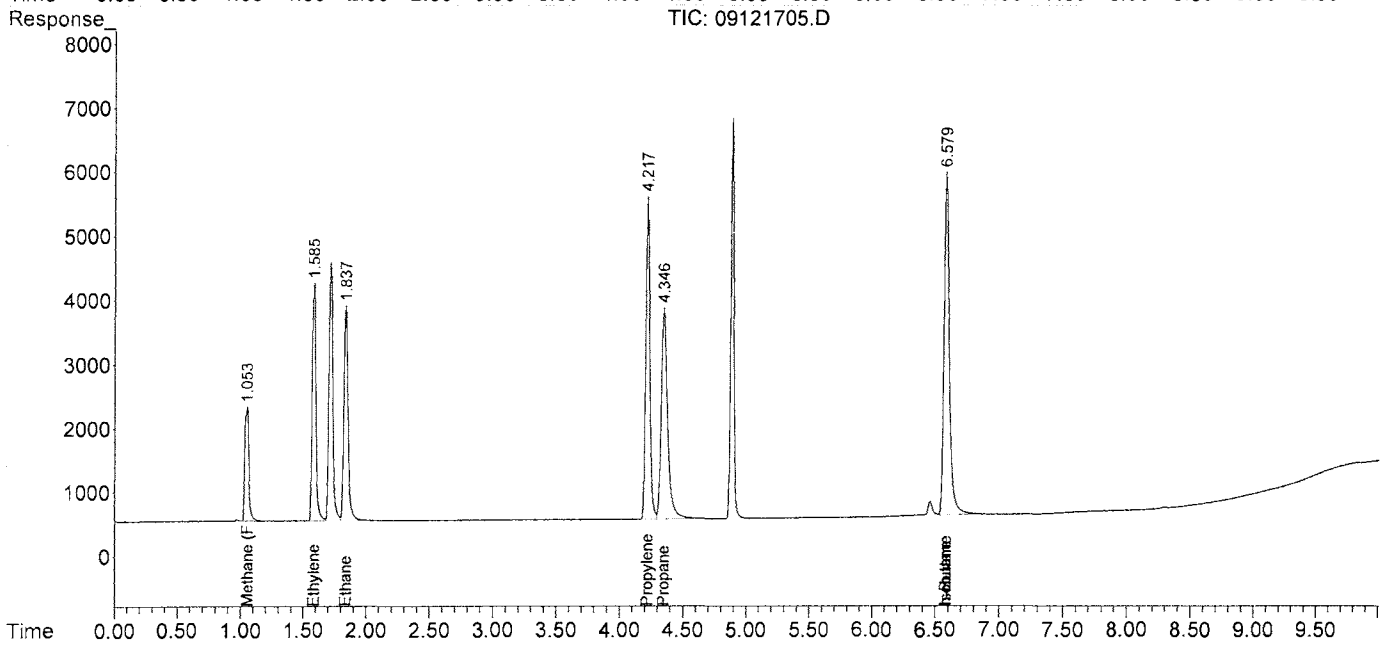
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121705.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:09
Operator : MC
Sample : 4.53ppm 0.3ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:06:32 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

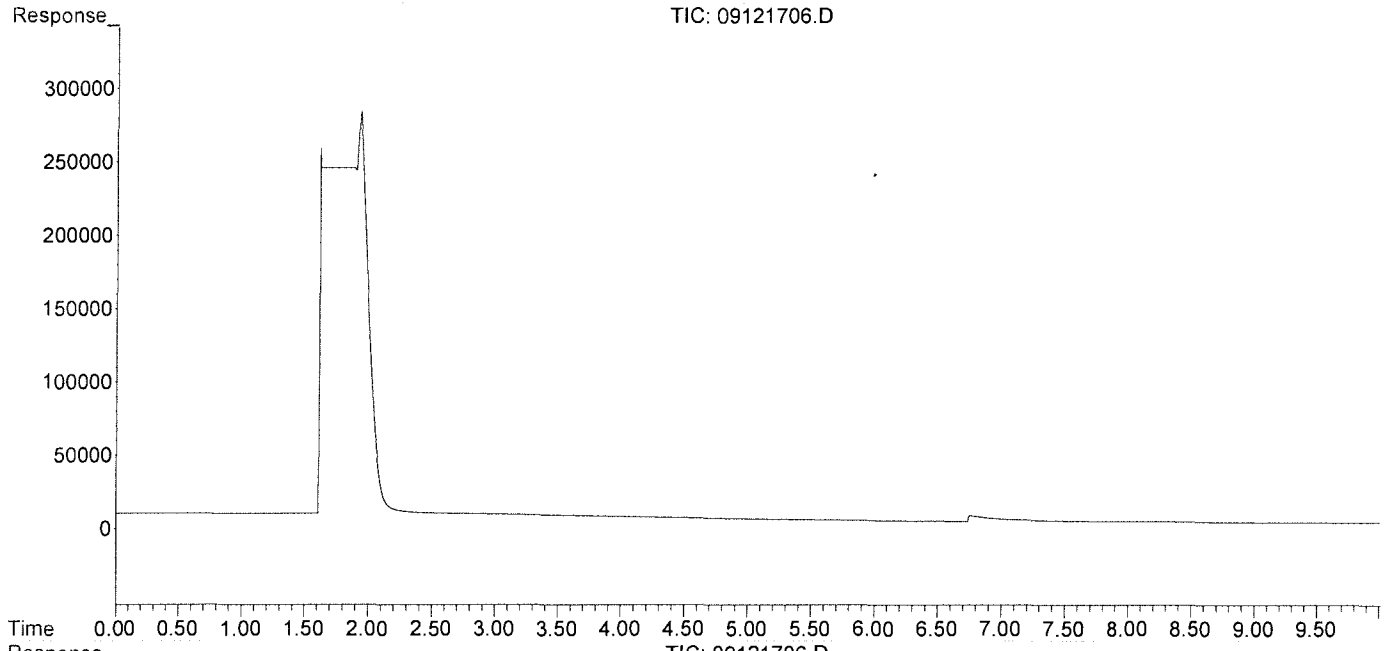
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.929f	-31871242	N.D.	ppm
2)	Carbon monoxide	1.929f	-31871242	1.818	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.025	91967	10.135	ppm
7)	Ethylene	1.568	172086	10.273	ppm
8)	Ethane	1.822	178841	10.441	ppm
9)	Propylene	4.214	248004	10.236	ppm
10)	Propane	4.344	257124	10.458	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.578f	338181	9.254	ppm
13)	n-Butane	6.578f	338181	9.254	ppm

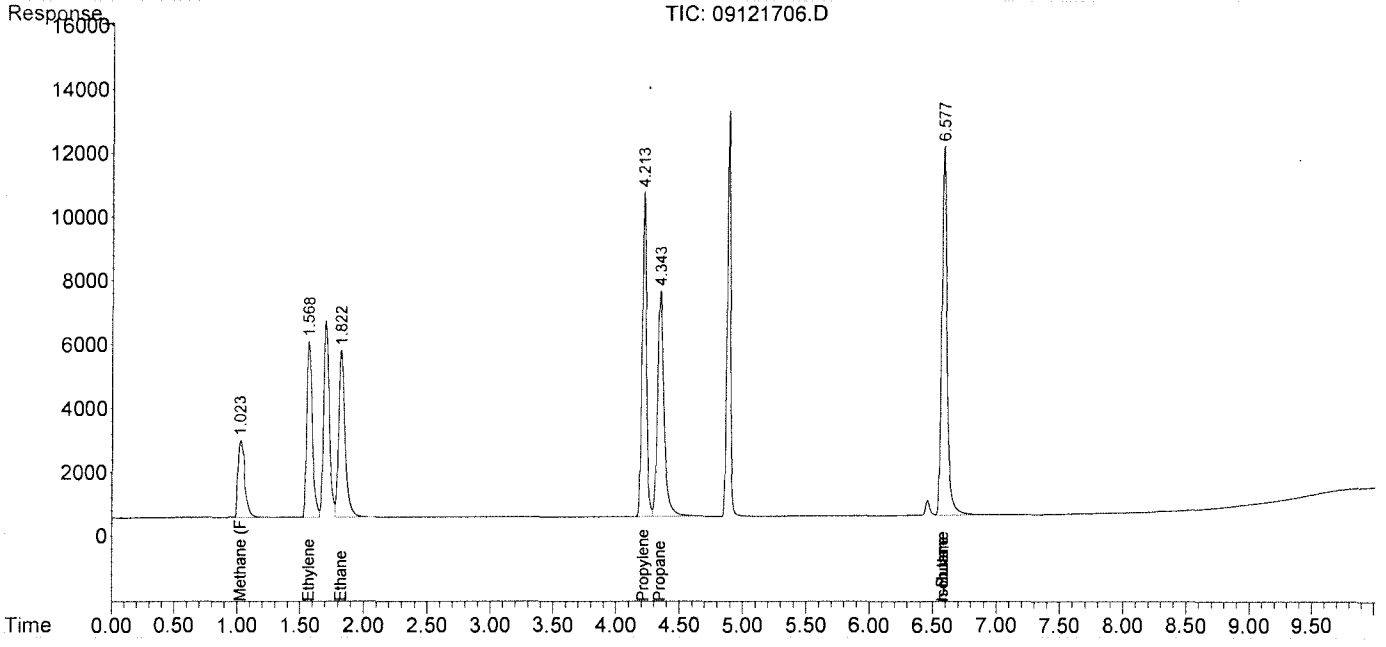
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121706.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:30
Operator : MC
Sample : 10.57ppm 0.7ml s32-09051701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:24 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

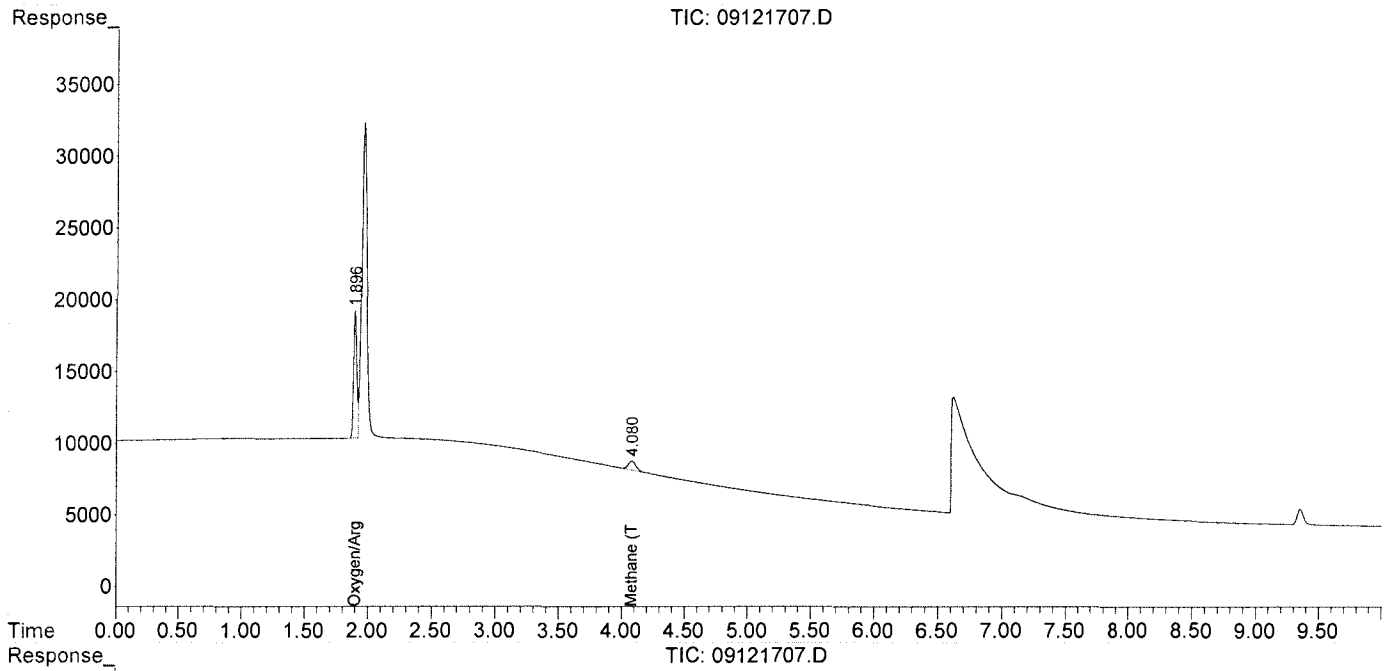
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.897	155286	0.065	ppm
2)	Carbon monoxide	1.897	155286	N.D.	ppm
3)	Methane (TCD)	4.079f	27015	2856.472	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.063	1735997	190.792	ppm
7)	Ethylene	1.597	3339702	198.758	ppm
8)	Ethane	1.849	3350442	194.597	ppm
9)	Propylene	4.201	4504060	185.706	ppm
10)	Propane	4.333	5043036	204.809	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

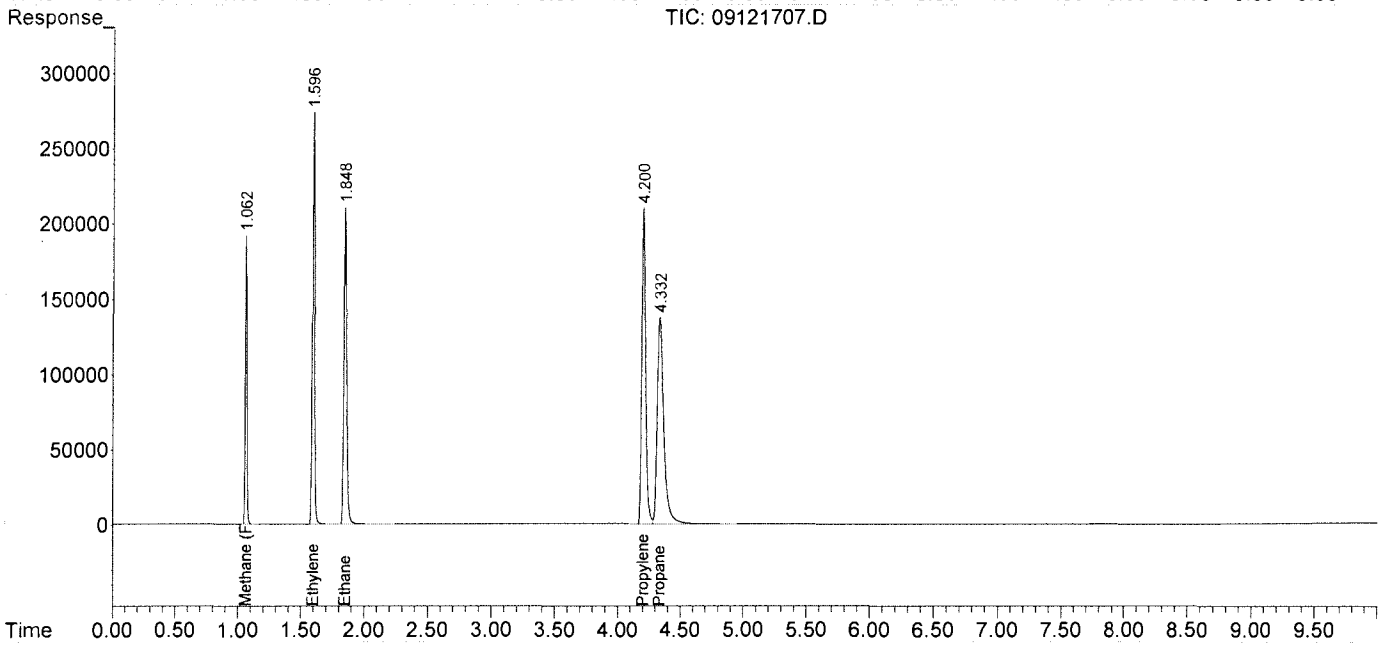
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121707.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 12:47
Operator : MC
Sample : 200ppm 0.1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:09:59 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:04:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

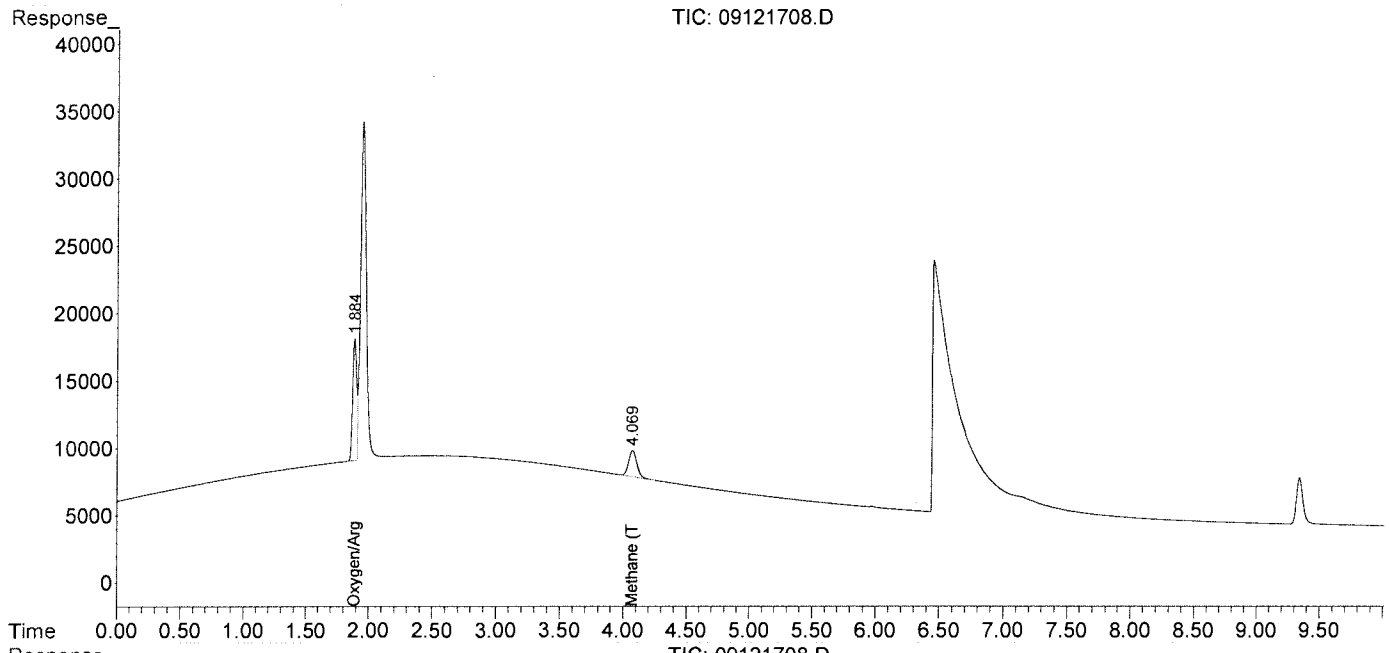
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.884	196022	0.124	ppm
2)	Carbon monoxide	1.884	196022	N.D.	ppm
3)	Methane (TCD)	4.070f	88282	782.730	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.044	5189849	539.759	ppm
7)	Ethylene	1.573	10007759	590.286	ppm
8)	Ethane	1.822	10048964	583.213	ppm
9)	Propylene	4.160	13569343	562.612	ppm
10)	Propane	4.300	15251326	615.171	ppm
11)	Isobutylene	6.143	9815	NoCal	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

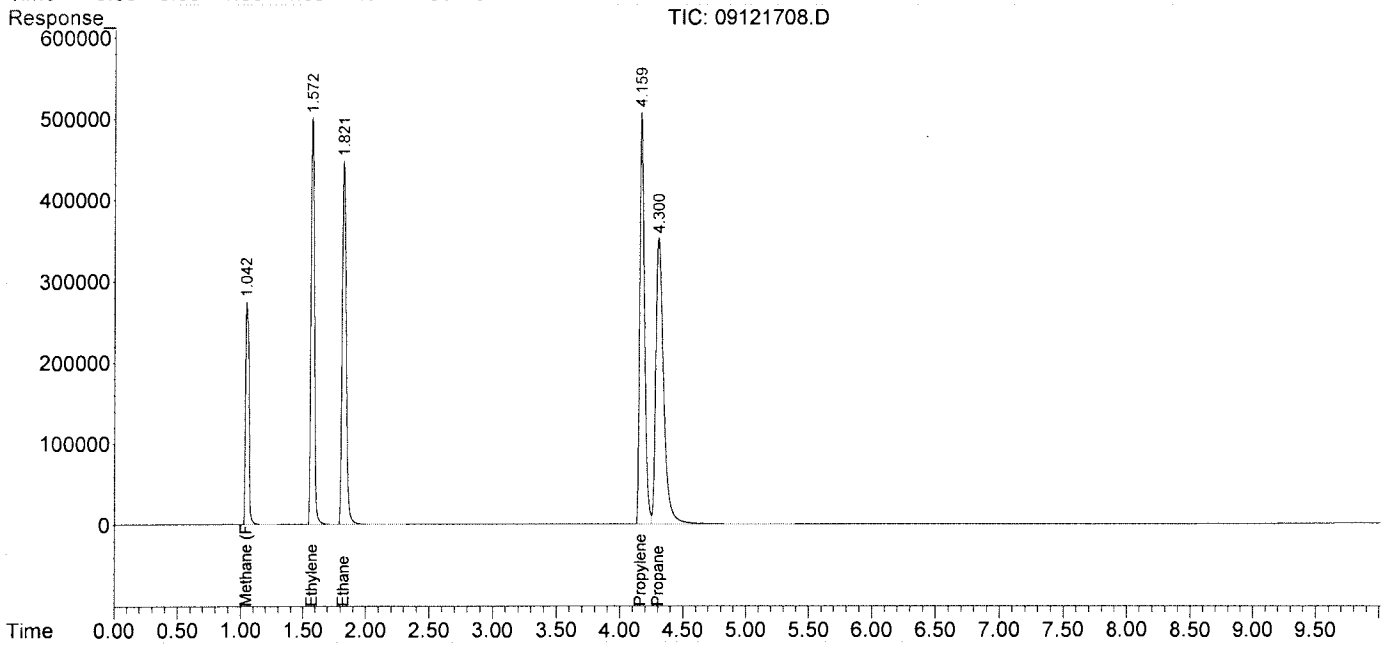
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121708.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:00
Operator : MC
Sample : 600ppm 0.3ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:10:57 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:10:50 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

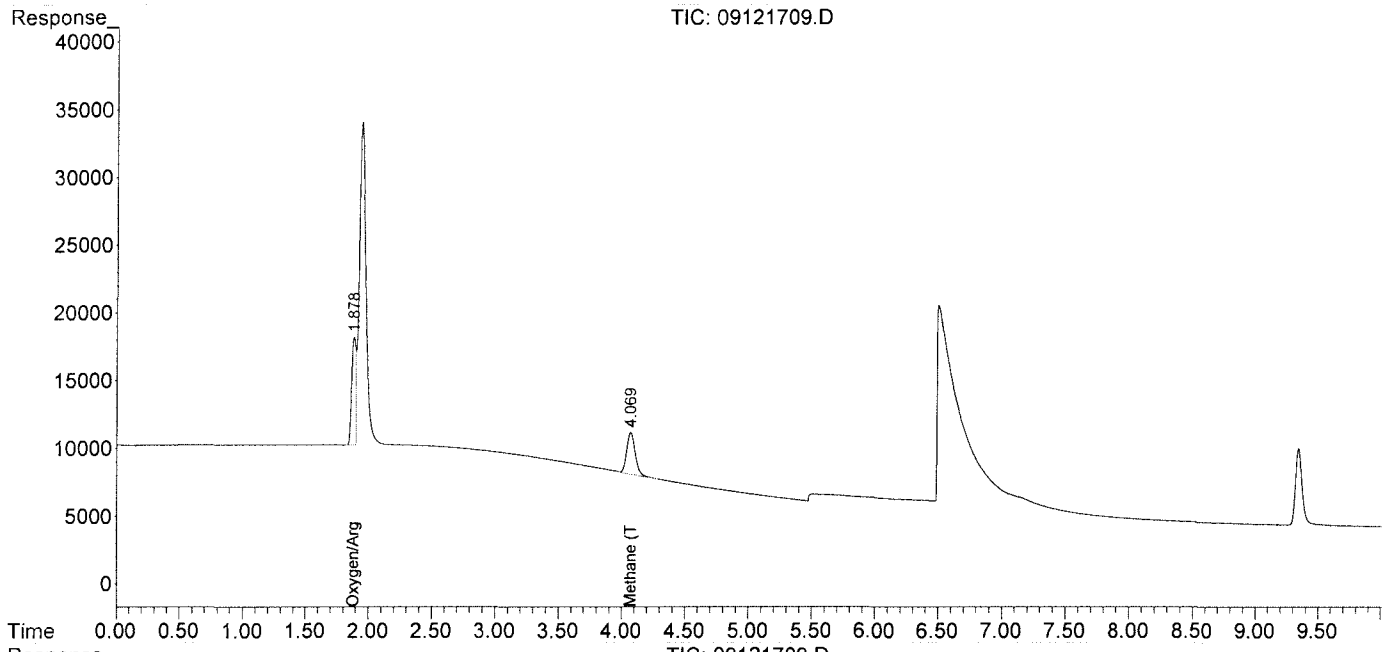
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.879	192611	0.162	ppm
2)	Carbon monoxide	1.879	192611	N.D.	ppm
3)	Methane (TCD)	4.070f	145492	1244.729	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.039	8598534	945.644	ppm
7)	Ethylene	1.576	16608504	981.887	ppm
8)	Ethane	1.827	16709165	973.644	ppm
9)	Propylene	4.161	22494888	941.060	ppm
10)	Propane	4.298	25459411	1023.223	ppm
11)	Isobutylene	6.138	16970	8645.243	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

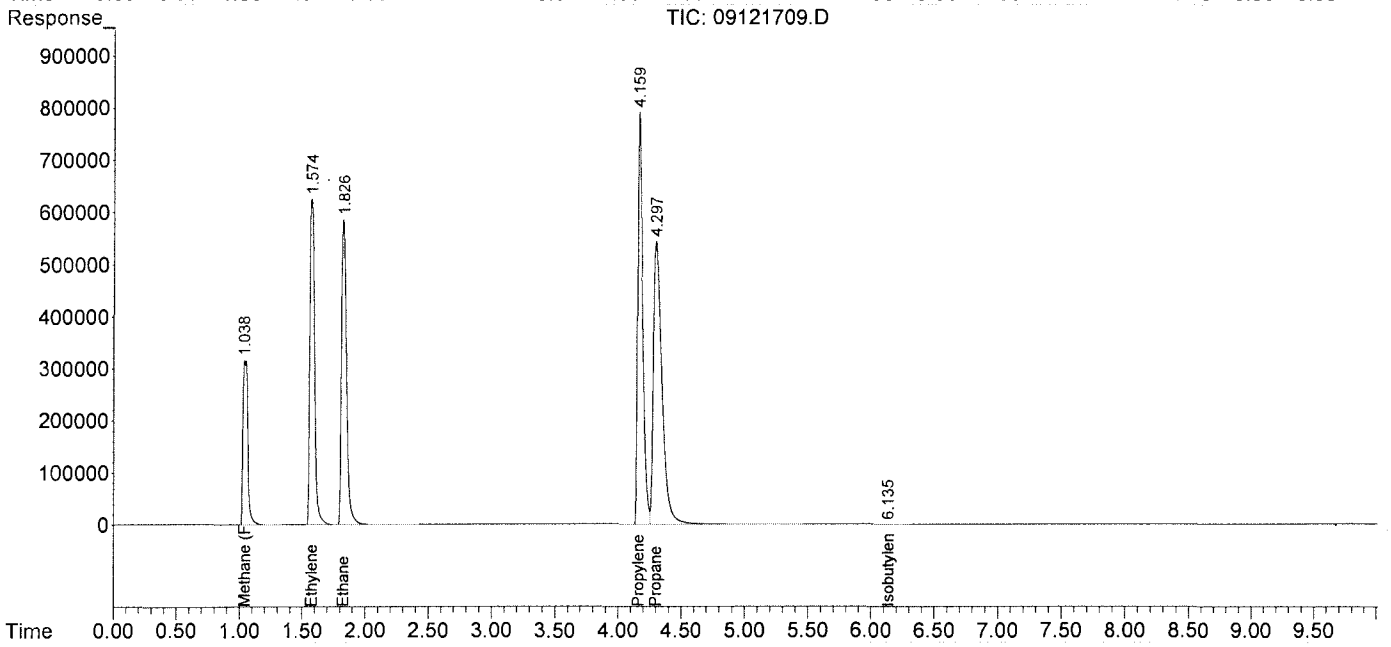
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121709.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 13:47
Operator : MC
Sample : 1000ppm 0.5ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:11:46 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:11:38 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

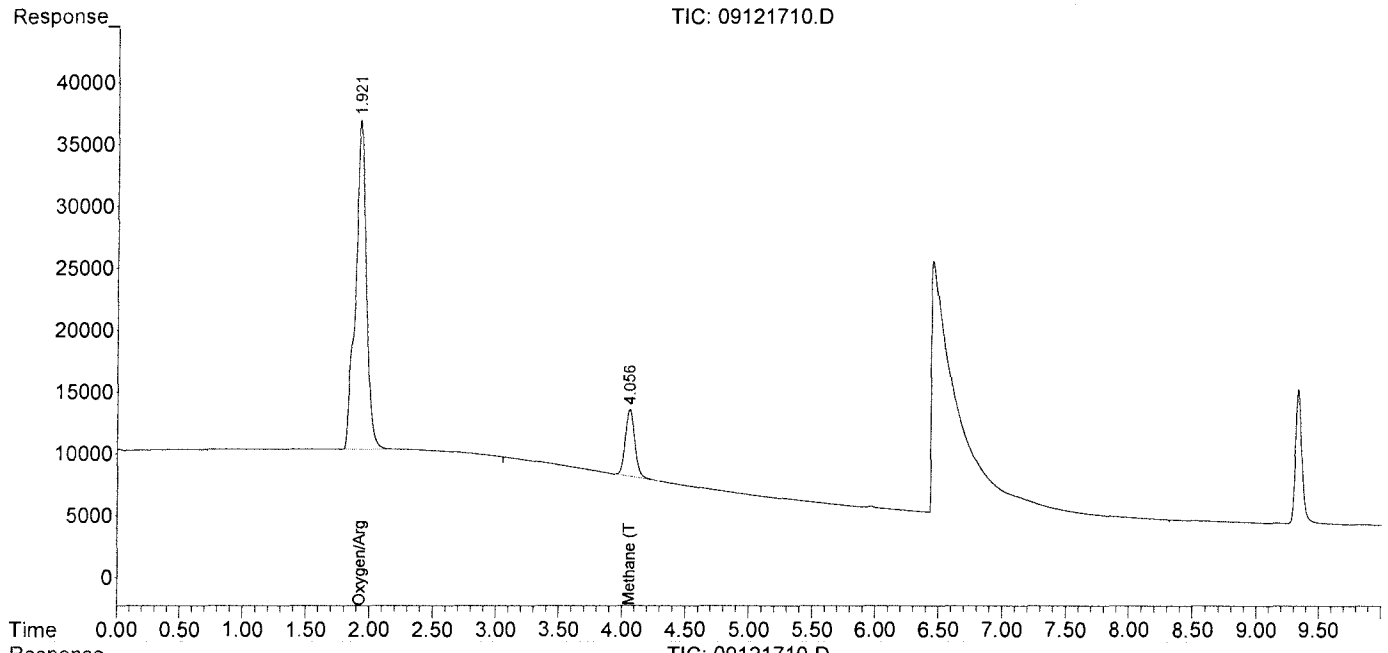
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.922f	1578147	1.659	ppm	
2)	Carbon monoxide	1.922f	1578147	N.D.	ppm	
3)	Methane (TCD)	4.057f	281651	3526.607	ppm	
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.016	16098209	1763.622	ppm	
7)	Ethylene	1.552	31192444	1848.268	ppm	
8)	Ethane	1.801	31424218	1837.143	ppm	
9)	Propylene	4.129	42124690	1775.341	ppm	m
10)	Propane	4.269	48583085	1946.921	ppm	
11)	Isobutylene	6.136	33832	25613.603	ppm	
12)	Isobutane	6.576f	3845	0.120	ppm	
13)	n-Butane	6.576f	3845	0.120	ppm	

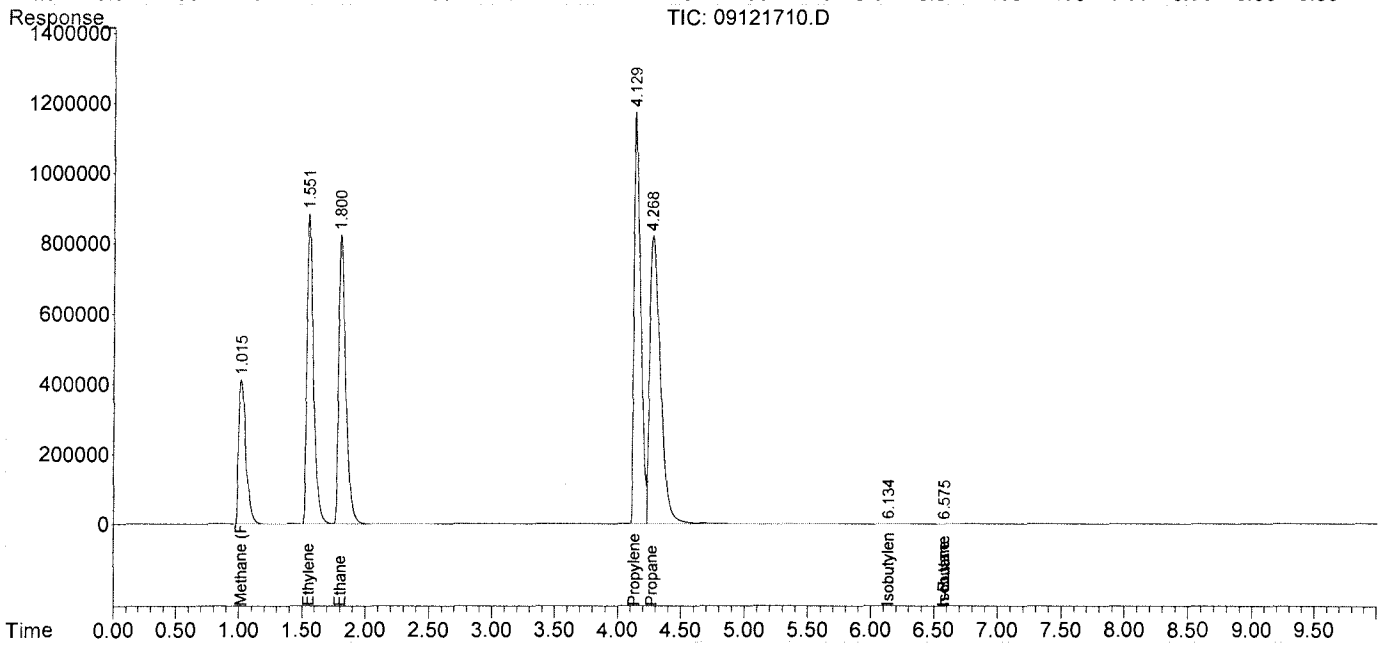
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

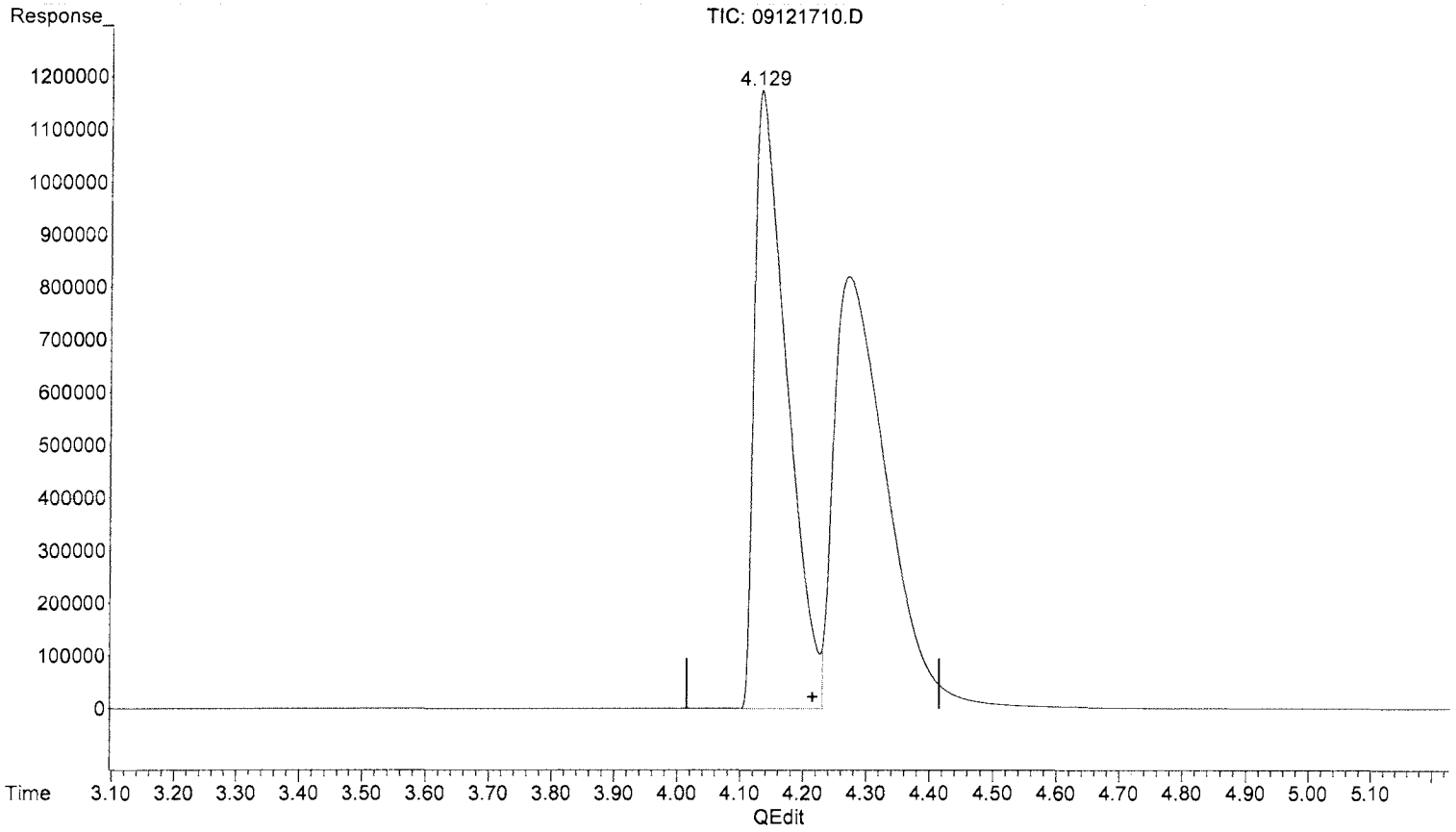




Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121710.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:07
Operator : MC
Sample : 2000ppm 1ml s32-09121701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:12:33 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:12:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(9) Propylene

4.129min 1775.341 ppm m

response 42124690

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121711.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:48
Operator : MC
Sample : 4000ppm 0.1ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:13:37 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

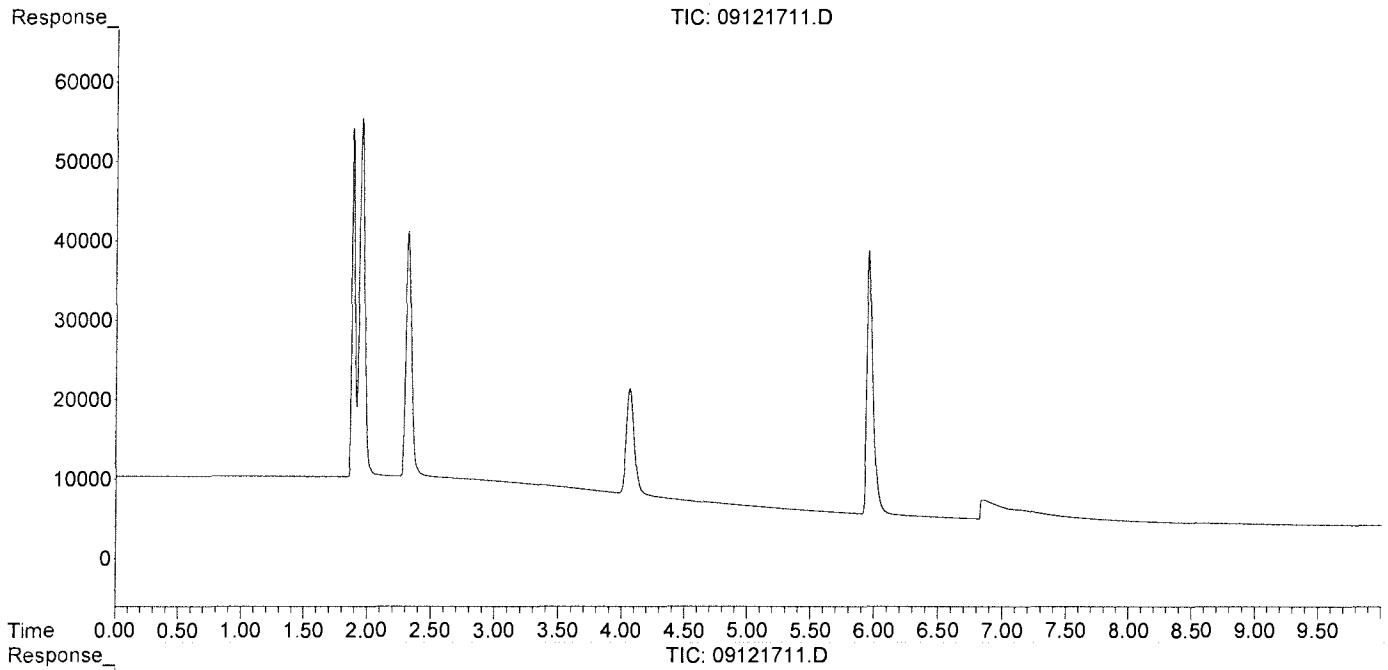
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.059	35776839	3925.122	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

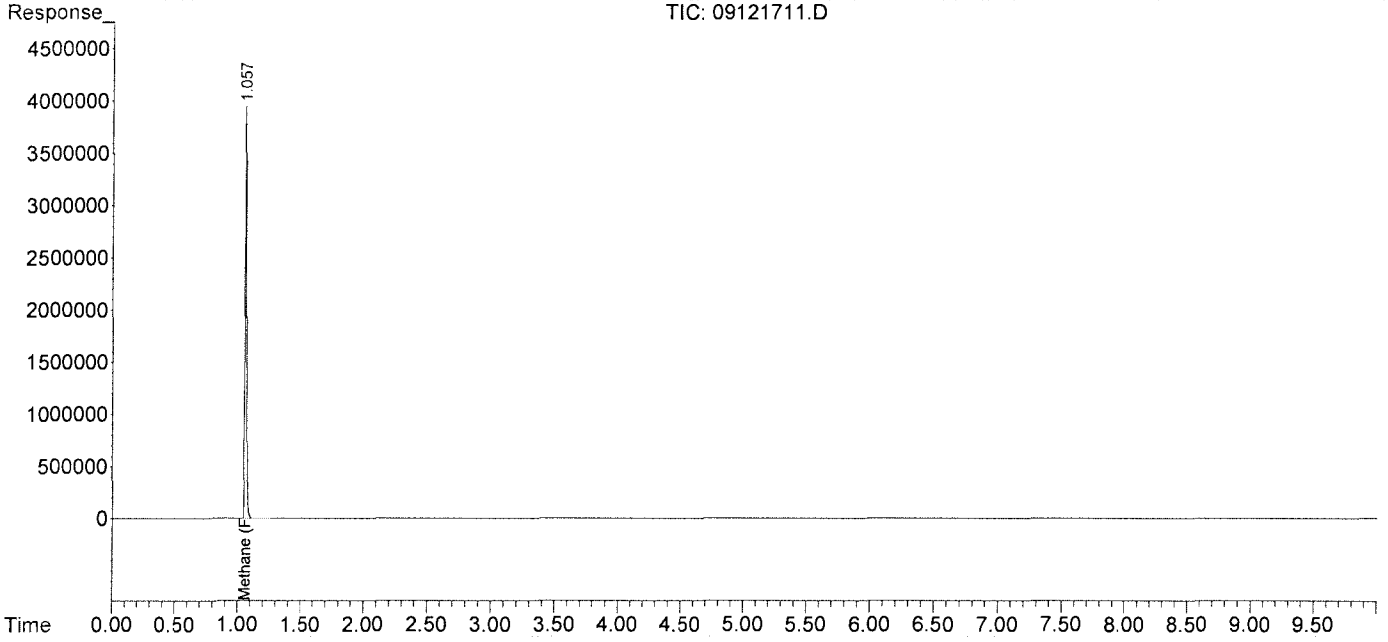
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121711.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 14:48
Operator : MC
Sample : 4000ppm 0.1ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:13:37 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121712.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 15:21
Operator : MC
Sample : 20000ppm 0.5ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:14:17 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

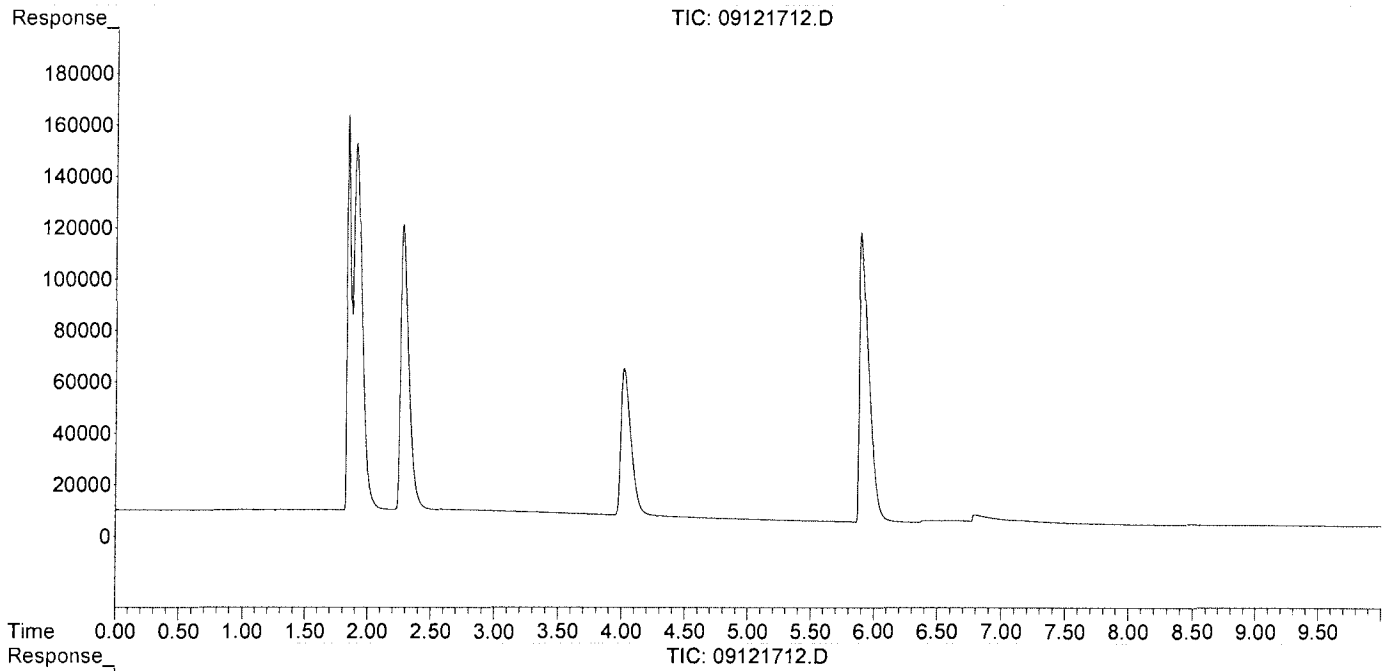
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.836	3190788	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	0.000	0	N.D.	ppm	d
6)	Methane (FID)	1.034	169009160	18492.064	ppm	
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

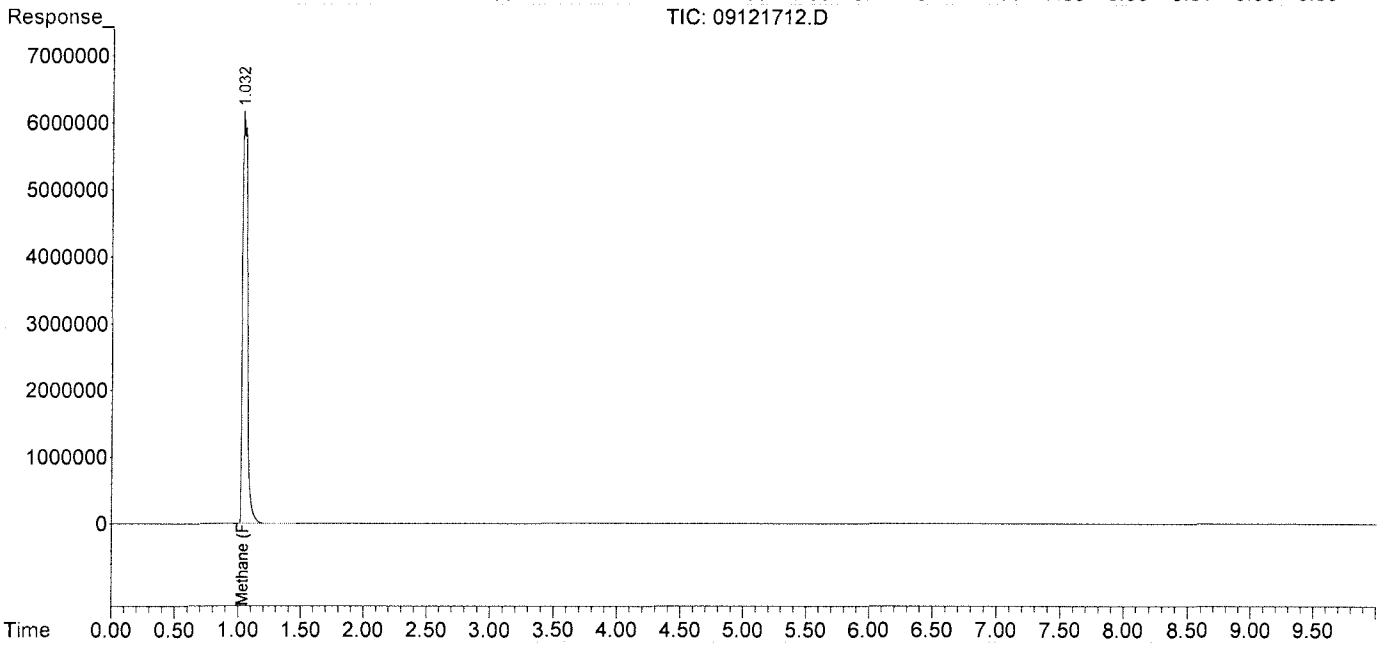
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121712.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 15:21
Operator : MC
Sample : 20000ppm 0.5ml s32-08231701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:14:17 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 16:15
Operator : MC
Sample : icv s30-05241604
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:15:11 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.843	2922459	3.687	ppm	
2)	Carbon monoxide	1.843	2922459	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	actual ZD
4)	Carbon dioxide	0.000	0	N.D.	ppm	
6)	Methane (FID)	1.063	13748	1.516	ppm	~~1570~~ 1.50 101.1
7)	Ethylene	1.598	24153	1.443	ppm	~~1570~~ 1.50 96.2
8)	Ethane	1.850	24488	1.445	ppm	~~1570~~ 1.50 96.3
9)	Propylene	4.221	36004	1.537	ppm	~~1570~~ 1.50 102.5
10)	Propane	4.350	37738	1.517	ppm	~~1571~~ 1.51 100.5
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	6.579f	48019	1.804	ppm	9/14/17
13)	n-Butane	6.579f	48019	1.804	ppm	

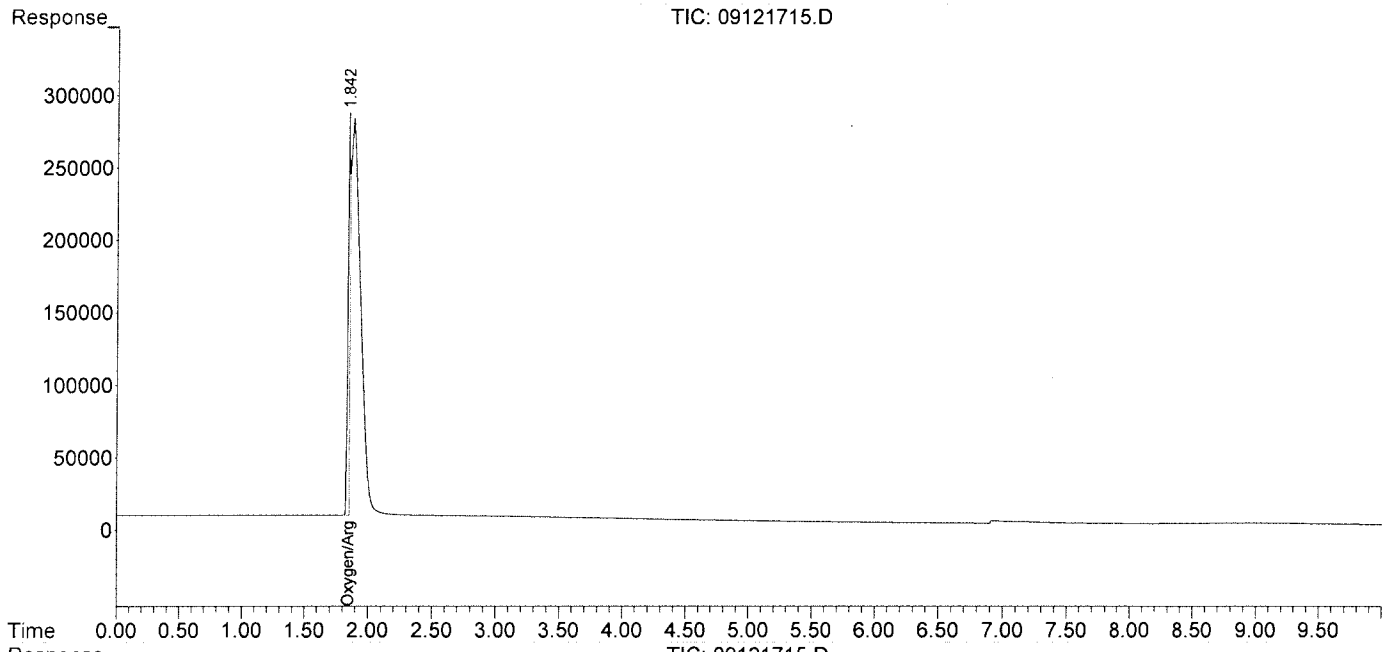
(f)=RT Delta > 1/2 Window (m)=manual int.

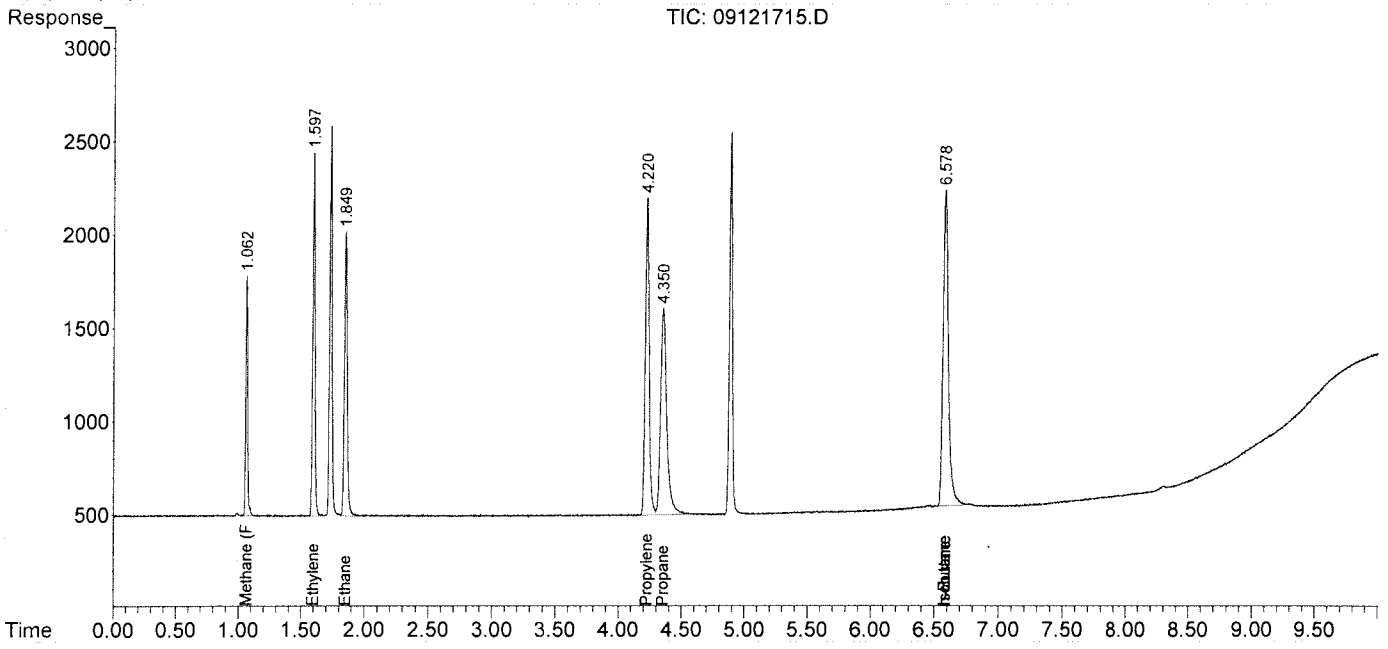
9/14/17

Data Path : J:\GC10\DATA\RSK_FID\2017_09\12\
Data File : 09121715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 12-Sep-2017, 16:15
Operator : MC
Sample : icv s30-05241604
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Sep 13 11:15:11 2017
Quant Method : J:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:13:29 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Dissolved Gases by RSK175

6/4/5/16 CB

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Environmental - US
Service Request: P2102700
Sample Vol. (ml) : 32.00 ml
Analyst : CB
Date Analysis : 05/25/21
Head Space Vol.(ml) : 8.00 ml
Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Methane	Ethylene	Ethane
STD S27-05301301 0.1ml	0.100	1.474	1.468	1.442
ACTUAL		1.52	1.51	1.52
%Difference		3.0%	2.8%	5.1%
MCS 0.1mL	0.100	0.131	0.000	0.000
RB 0.1mL	0.100	0.120	0.000	0.000
LCS 0.1mL	0.100	1.455	1.159	1.333
LCSD 0.1mL	0.100	1.381	1.149	1.308
P2102700-001 0.1mL	0.100	0.133	0.000	0.000

FINAL HEAD SPACE RESULT (ppm)

	Methane	Ethylene	Ethane
WWt.	16.04	28.05	30.07
HENRY'S CONSTANT	3.76E+04	1.02E+04	2.63E+04
RL	1.30	1.00	0.60
MCS 0.1mL	1.310	0.000	0.000
LCS 0.1mL	14.550	11.590	13.330
LCSD 0.1mL	13.810	11.490	13.080
P2102700-001 0.1mL	1.330	0.000	0.000

STD S27-05301301 0.1mL	1.466	1.486	1.478
ACTUAL	1.52	1.51	1.52
%Difference	3.6%	1.6%	2.8%

Data Path : J:\GC10\DATA\RSK_FID\2021_05\25\
Data File : 05252102.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 25-May-2021, 10:28:41
Operator : CB
Sample : STD S27-05301301 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 25 15:51:34 2021
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

CB
5/26/21

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

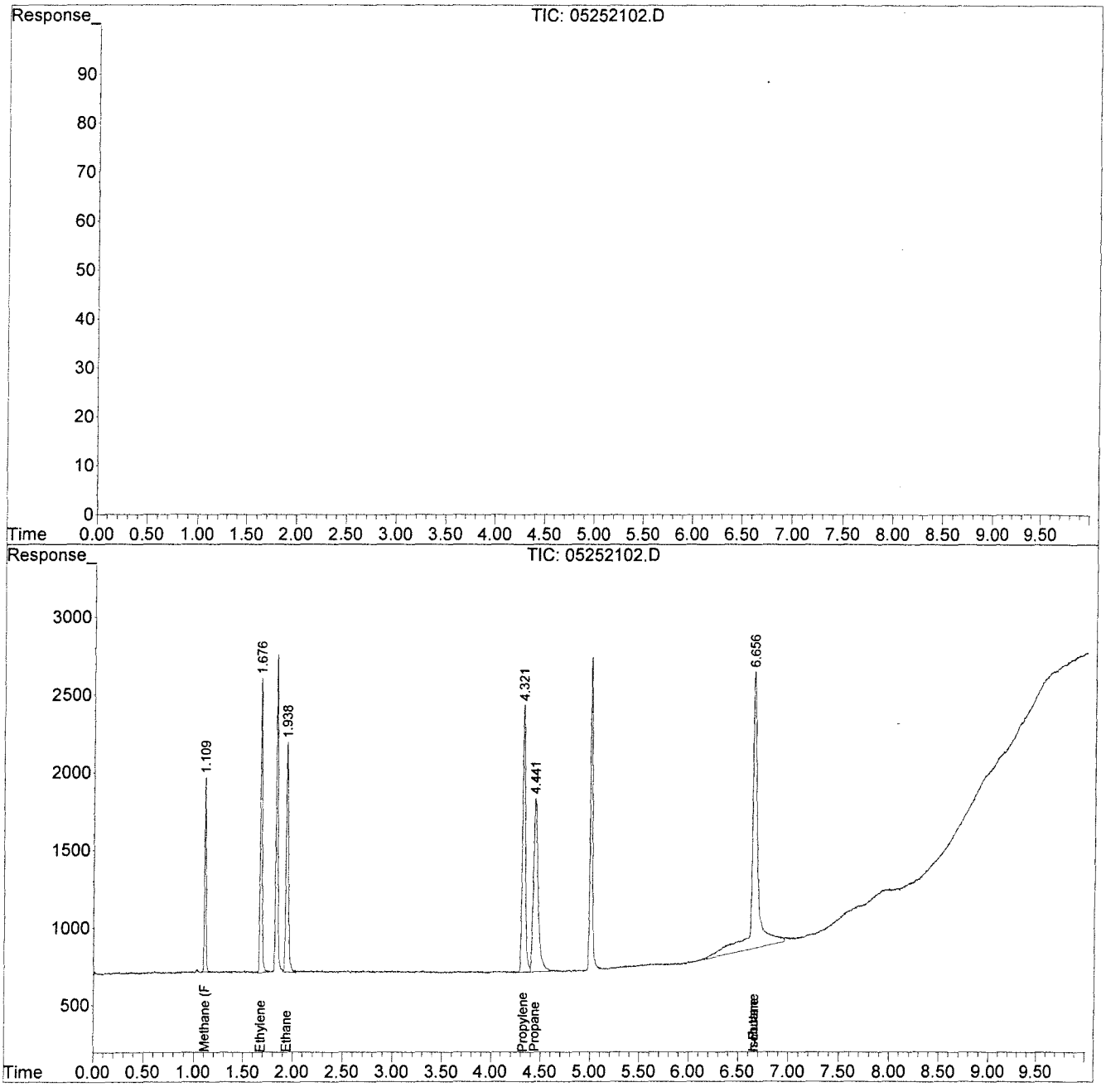
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.110	13370	1.474	ppm
7)	Ethylene	1.677	24560	1.468	ppm
8)	Ethane	1.939	24450	1.442	ppm
9)	Propylene	4.322	35798	1.528	ppm
10)	Propane	4.442	36887	1.483	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.657	73007	2.743	ppm
13)	n-Butane	6.657	73007	2.743	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2021_05\25\
Data File : 05252102.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 25-May-2021, 10:28:41
Operator : CB
Sample : STD S27-05301301 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 25 15:51:34 2021
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : J:\GC10\DATA\RSK_FID\2021_05\25\
Data File : 05252115.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 25-May-2021, 17:21:51
Operator : CB
Sample : STD S27-05301301 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 25 17:32:26 2021
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm
2)	Carbon monoxide	0.000	0	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	1.107	13299	1.466	ppm
7)	Ethylene	1.667	24872	1.486	ppm
8)	Ethane	1.927	25047	1.478	ppm
9)	Propylene	4.311	36298	1.549	ppm
10)	Propane	4.431	37830	1.520	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	6.651	50700	1.905	ppm
13)	n-Butane	6.651	50700	1.905	ppm

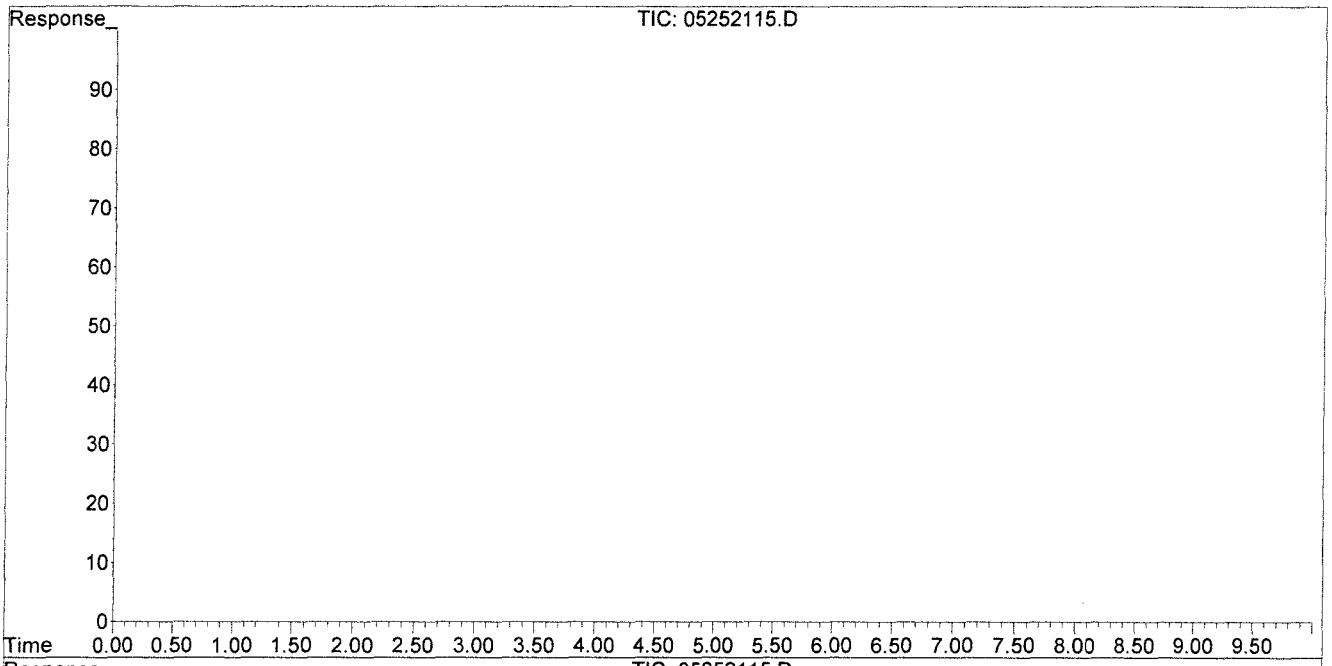
(f)=RT Delta > 1/2 Window (m)=manual int.

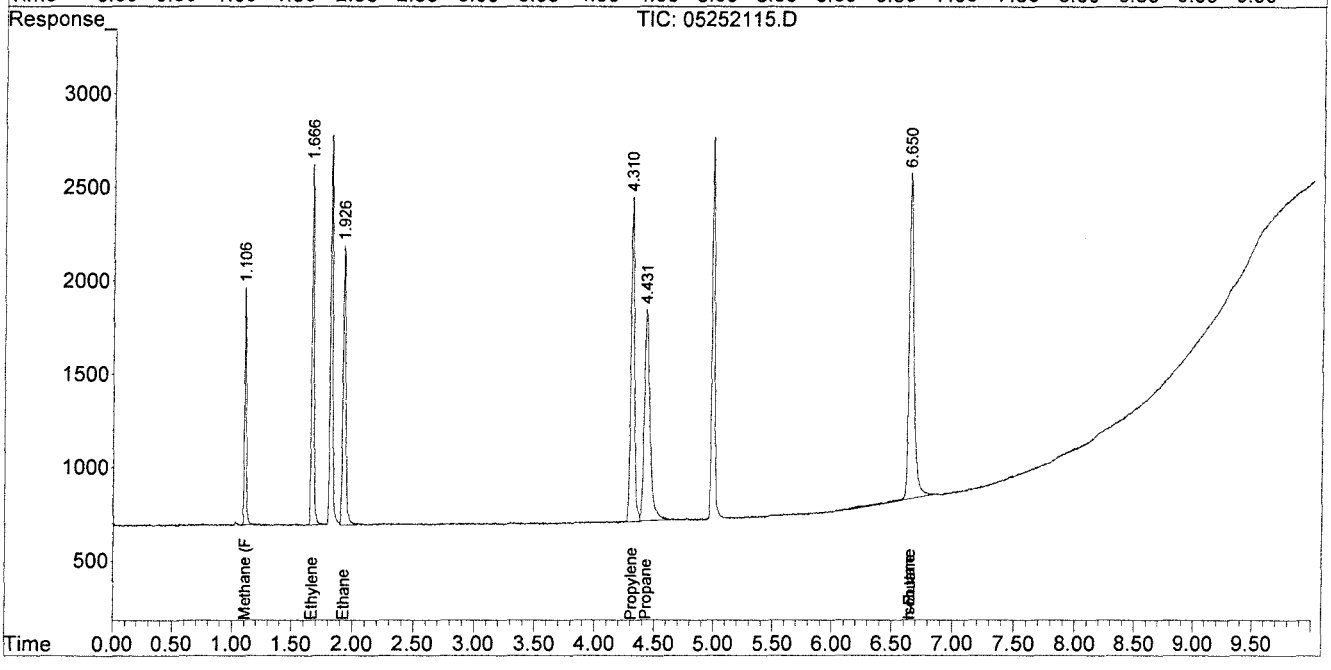
Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_FID\2021_05\25\
Data File : 05252115.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 25-May-2021, 17:21:51
Operator : CB
Sample : STD S27-05301301 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 25 17:32:26 2021
Quant Method : I:\GC10\METHODS\RS091217_R.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Wed Sep 13 11:14:47 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Injection Log

Directory: I:\GC10\DATA\RSK_FID\2017_09\12\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	12-Sep-17, 08:38:08	09121701.D	test		MC	RSKBOTH.M	
2	12-Sep-17, 10:52:40	09121702.D	0.151ppm 0.250ml s32-09121702		MC	RSKBOTH.M	Curve
3	12-Sep-17, 11:05:49	09121703.D	0.302ppm 0.5ml s32-09121702		MC	RSKBOTH.M	Curve
4	12-Sep-17, 11:45:34	09121704.D	1.51ppm 0.1ml s32-09051701		MC	RSKBOTH.M	Curve
5	12-Sep-17, 12:09:33	09121705.D	4.53ppm 0.3ml s32-09051701		MC	RSKBOTH.M	Curve
6	12-Sep-17, 12:30:23	09121706.D	10.57ppm 0.7ml s32-09051701		MC	RSKBOTH.M	Curve
7	12-Sep-17, 12:47:18	09121707.D	200ppm 0.1ml s32-09121701		MC	RSKBOTH.M	Curve
8	12-Sep-17, 13:00:22	09121708.D	600ppm 0.3ml s32-09121701		MC	RSKBOTH.M	Curve
9	12-Sep-17, 13:47:48	09121709.D	1000ppm 0.5ml s32-09121701		MC	RSKBOTH.M	Curve
10	12-Sep-17, 14:07:58	09121710.D	2000ppm 1ml s32-09121701		MC	RSKBOTH.M	Curve
11	12-Sep-17, 14:48:48	09121711.D	4000ppm 0.1ml s32-08231701		MC	RSKBOTH.M	Curve
12	12-Sep-17, 15:21:51	09121712.D	20000ppm 0.5ml s32-08231701		MC	RSKBOTH.M	Curve
13	12-Sep-17, 15:38:59	09121713.D	mb 0.5ml		MC	RSKBOTH.M	Pass
14	12-Sep-17, 15:55:35	09121714.D	mb 0.1ml		MC	RSKBOTH.M	Pass
15	12-Sep-17, 16:15:26	09121715.D	icv s30-05241604		MC	RSKBOTH.M	Pass

Injection Log

Directory: I:\GC10\DATA\RSK_FID\2021_05\25\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	25-May-21, 09:18:45	05252100.D	purge		CB	RSKBOTH.M	
2	25-May-21, 09:44:09	05252101.D	xstd		CB	RSKBOTH.M	
3	25-May-21, 10:28:41	05252102.D	STD S27-05301301 0.1mL		CB	RSKBOTH.M	
4	25-May-21, 11:57:03	05252103.D	RB 0.1mL		CB	RSKBOTH.M	
5	25-May-21, 15:10:43	05252104.D	MCS 0.1mL		CB	RSKBOTH.M	
6	25-May-21, 15:25:29	05252105.D	LCS 0.1mL		CB	RSKBOTH.M	
7	25-May-21, 15:39:58	05252106.D	LCSD 0.1mL		CB	RSKBOTH.M	
8	25-May-21, 15:57:57	05252107.D	P2102701-001 0.1mL		CB	RSKBOTH.M	
9	25-May-21, 16:12:27	05252108.D	P2102701-002 0.1mL		CB	RSKBOTH.M	
10	25-May-21, 16:25:59	05252109.D	P2102701-002 MS 0.1mL		CB	RSKBOTH.M	
11	25-May-21, 16:39:58	05252110.D	P2102701-002 MSD 0.1mL		CB	RSKBOTH.M	
12	25-May-21, 16:50:00	05252111.D	P2102700-001 0.1mL		CB	RSKBOTH.M	
13	25-May-21, 17:02:10	05252112.D	P2102632-001 0.1mL		CB	RSKBOTH.M	
14	25-May-21, 17:09:39	05252113.D	P2102594-001 0.1mL		CB	RSKBOTH.M	
15	25-May-21, 17:15:26	05252114.D	P2102594-002 0.1mL		CB	RSKBOTH.M	
16	25-May-21, 17:21:51	05252115.D	STD S27-05301301 0.1mL		CB	RSKBOTH.M	
17	25-May-21, 17:35:12	05252116.D	K2104207-004 0.1mL		CB	RSKBOTH.M	
18	25-May-21, 17:48:56	05252117.D	K2104207-005 0.1mL		CB	RSKBOTH.M	
19	25-May-21, 18:00:31	05252118.D	K2104207-007 0.1mL		CB	RSKBOTH.M	
20	25-May-21, 18:08:53	05252119.D	STD S27-05301301 0.1mL		CB	RSKBOTH.M	

Data Path : J:\GC10\DATA\RSK_TCD\2021_05\26\
Data File : 05262104.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 26-May-2021, 16:33
Operator : CB
Sample : 2700-001 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 26 16:46:37 2021
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

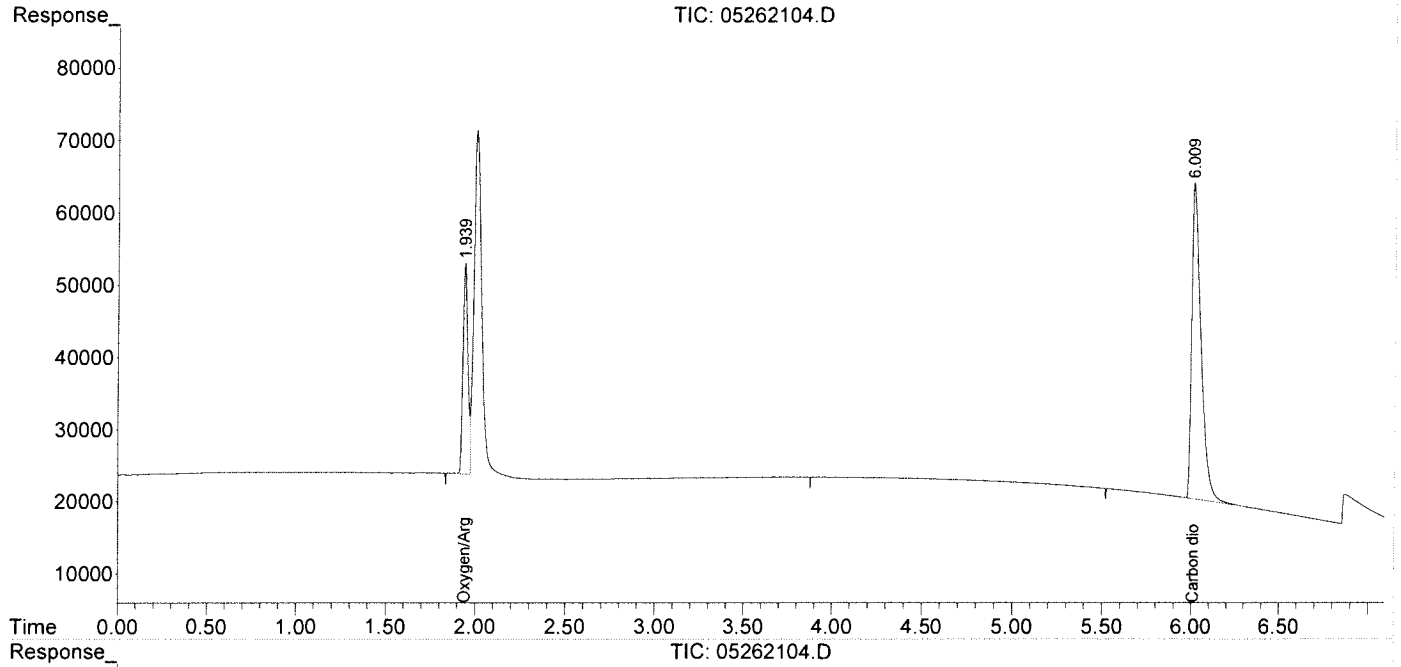
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.940f	524327	0.110	ppm
2)	Carbon monoxide	1.940f	524327	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	6.010	1573622	6703.991	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

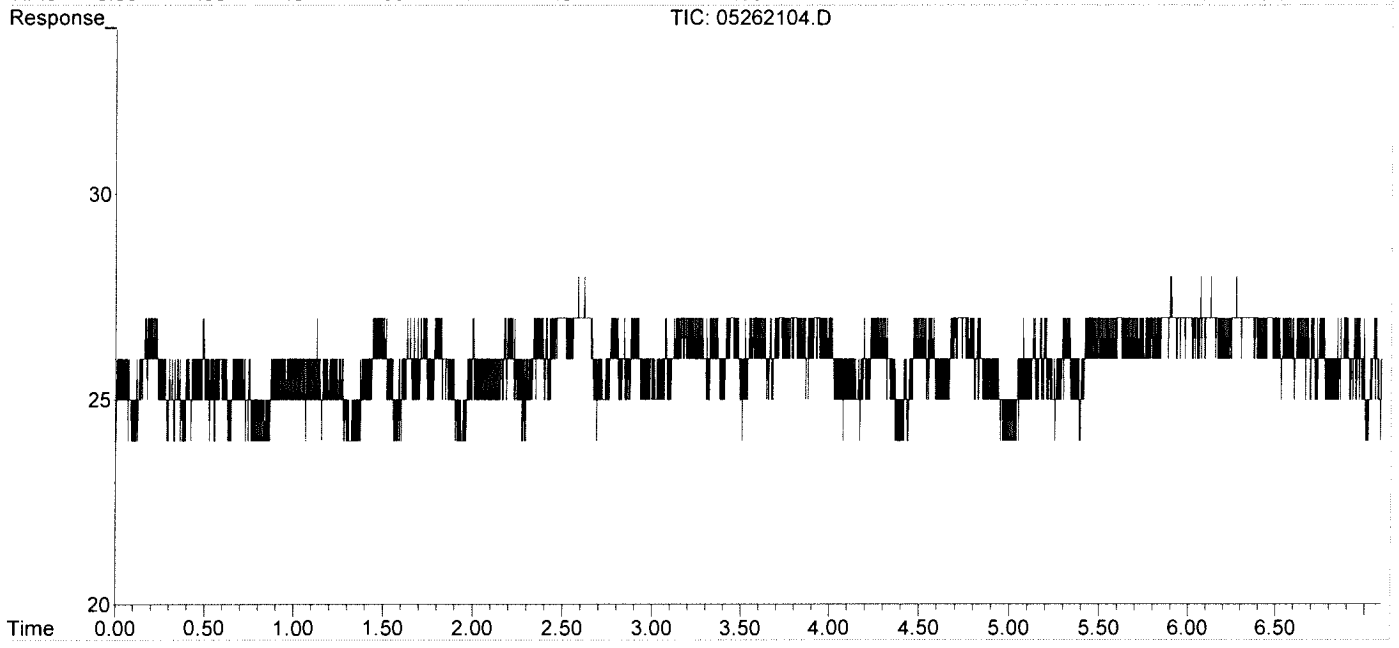
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2021_05\26\
Data File : 05262104.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 26-May-2021, 16:33
Operator : CB
Sample : 2700-001 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 26 16:46:37 2021
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_TCD\2021_05\26\
Data File : 05262103.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 26-May-2021, 16:23
Operator : CB
Sample : mcs 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 27 13:10:54 2021
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

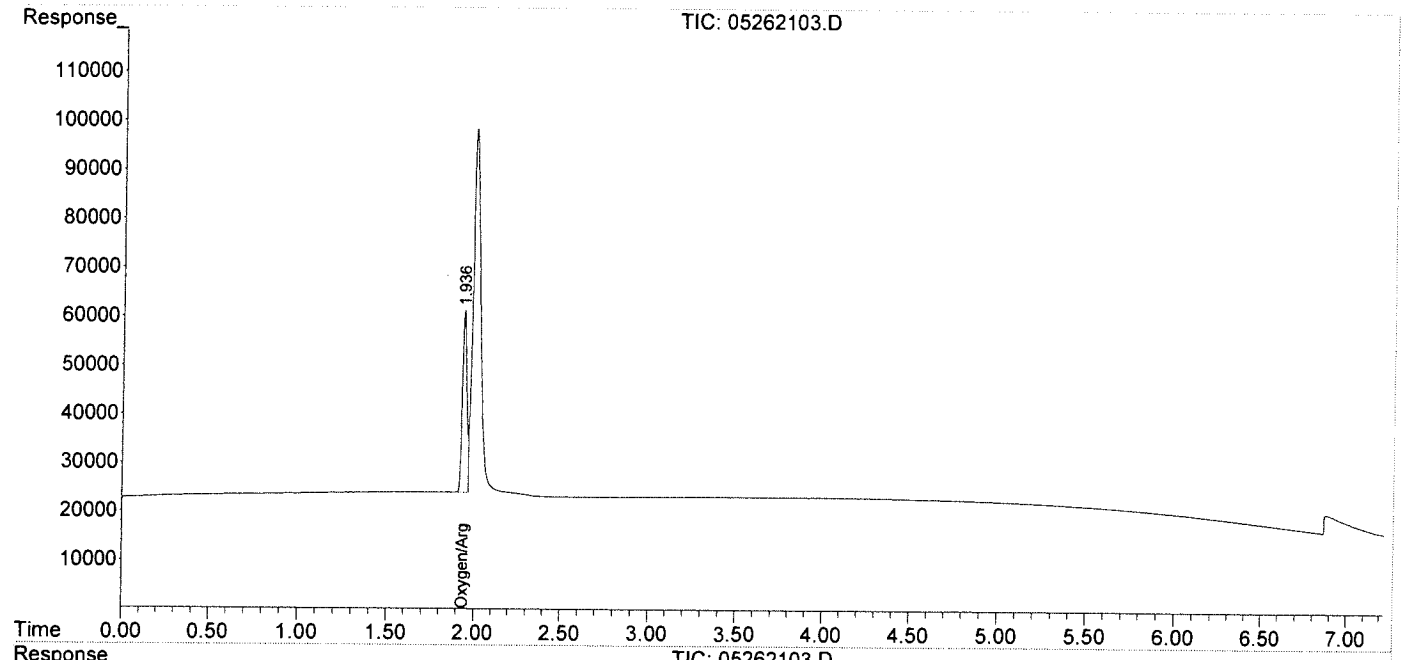
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.936f	643915	0.135	ppm
2)	Carbon monoxide	1.936f	643915	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	0.000	0	N.D.	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

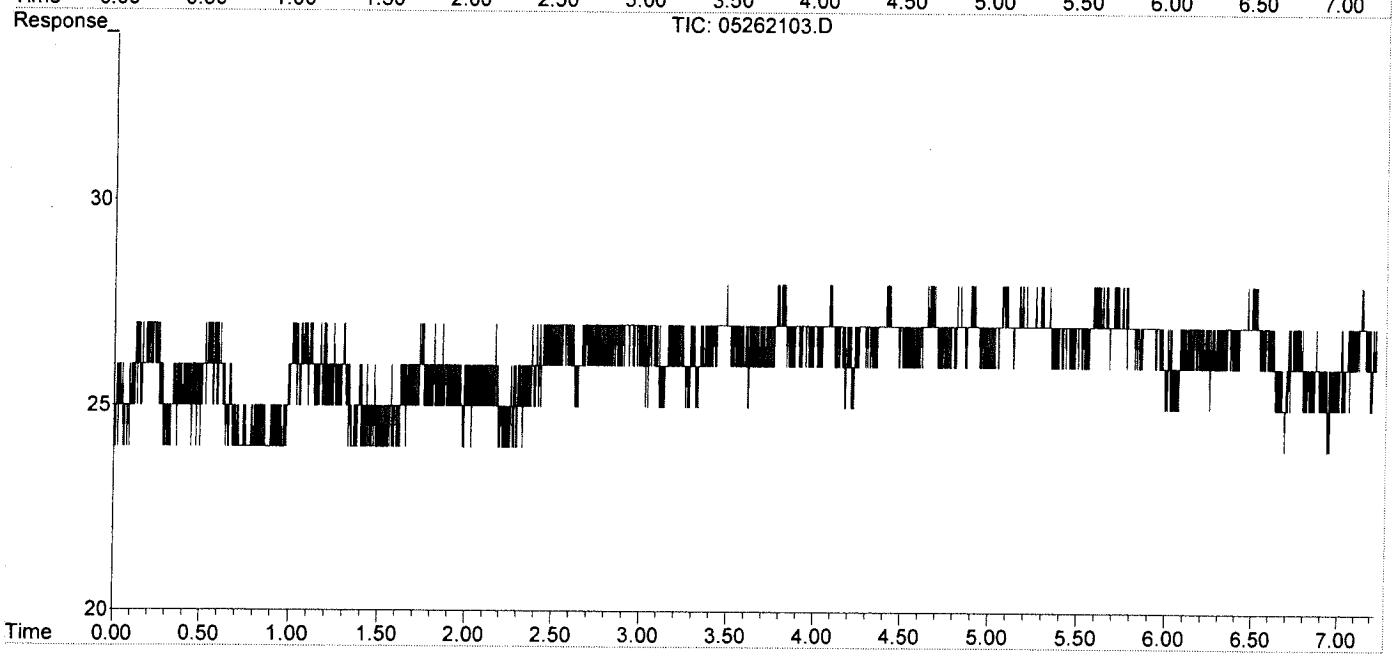
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2021_05\26\
Data File : 05262103.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 26-May-2021, 16:23
Operator : CB
Sample : mcs 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 27 13:10:54 2021
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_TCD\2021_05\26\
Data File : 05262111.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 26-May-2021, 17:55
Operator : CB
Sample : lcs S32-03172101 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 26 18:02:54 2021
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

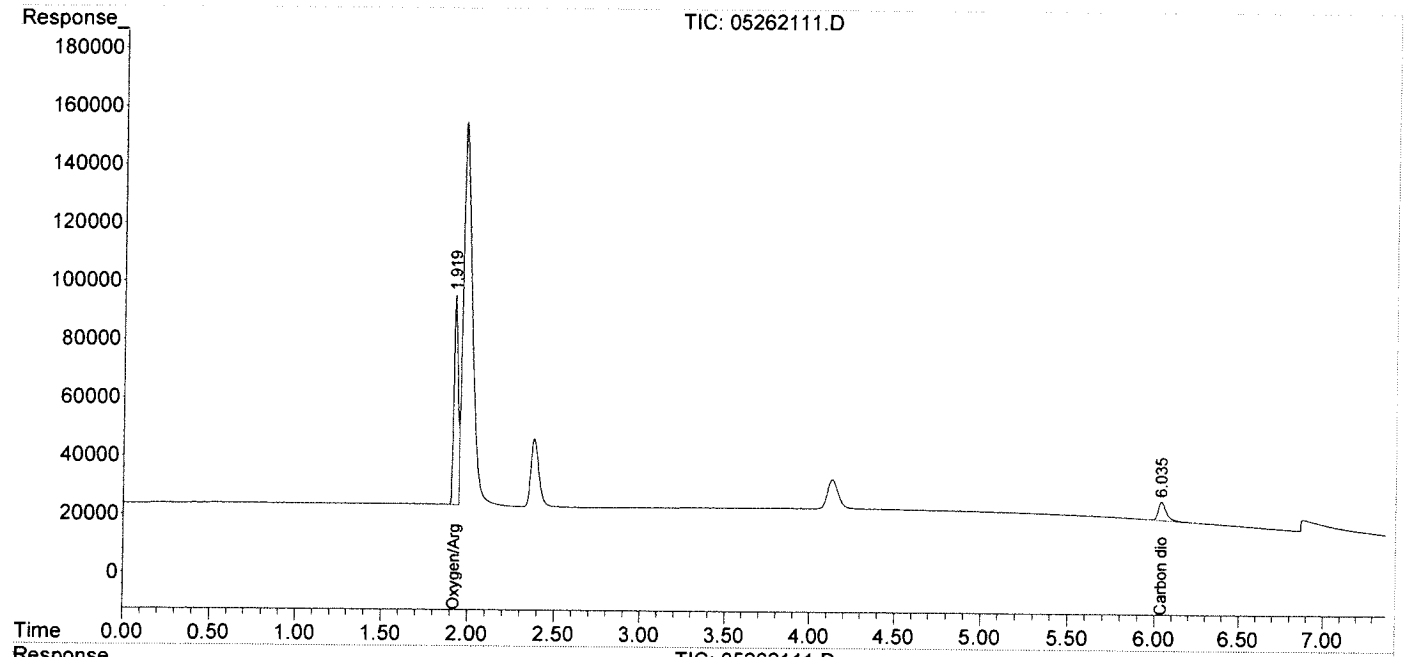
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.920f	1196499	0.251	ppm
2)	Carbon monoxide	1.920f	1196499	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	6.036	206282	878.809	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

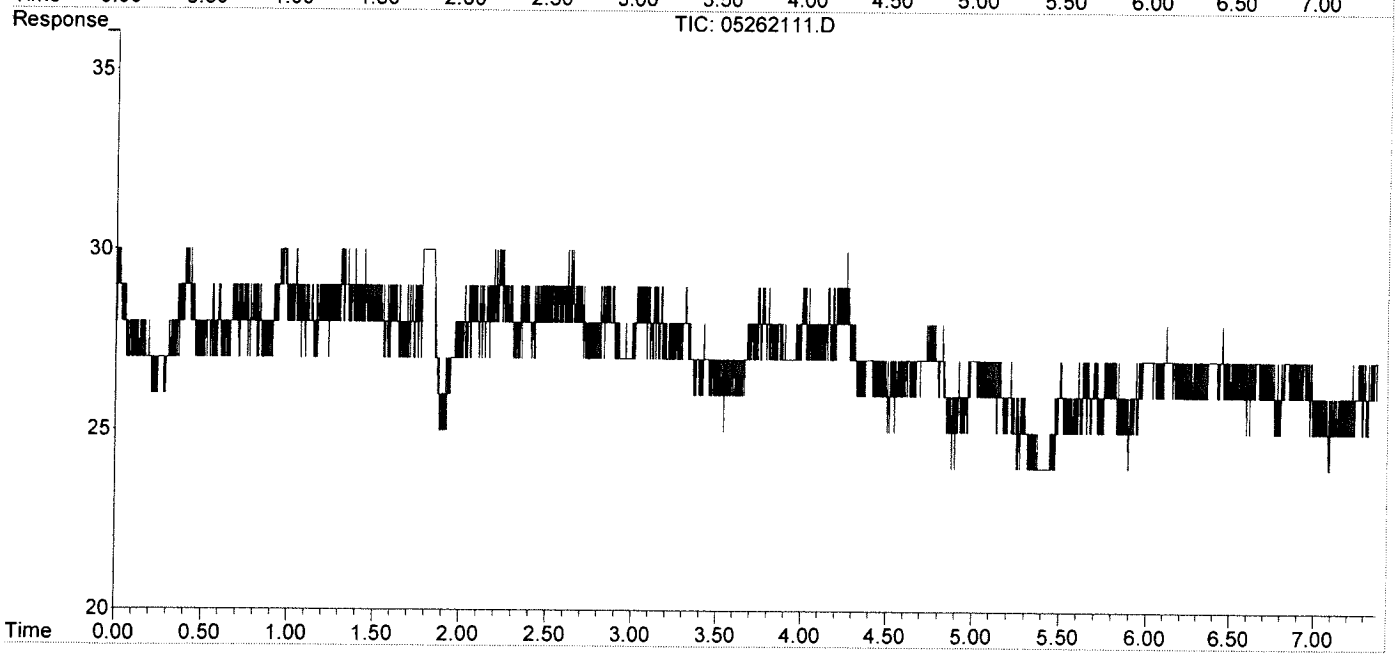
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2021_05\26\
Data File : 05262111.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 26-May-2021, 17:55
Operator : CB
Sample : lcs S32-03172101 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 26 18:02:54 2021
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_TCD\2021_05\26\
Data File : 05262112.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 26-May-2021, 18:05
Operator : CB
Sample : lcsd S32-03172101 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 26 18:12:43 2021
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

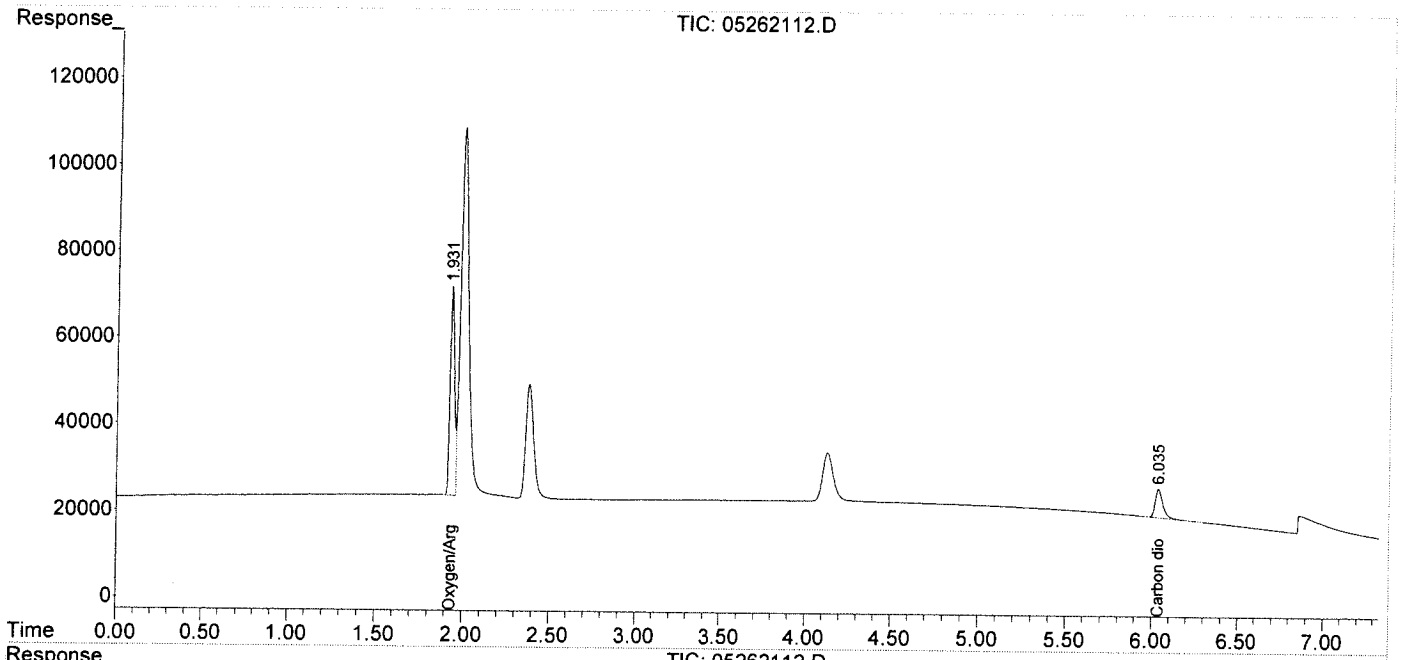
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.932f	828059	0.174	ppm
2)	Carbon monoxide	1.932f	828059	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	6.036	205998	877.597	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

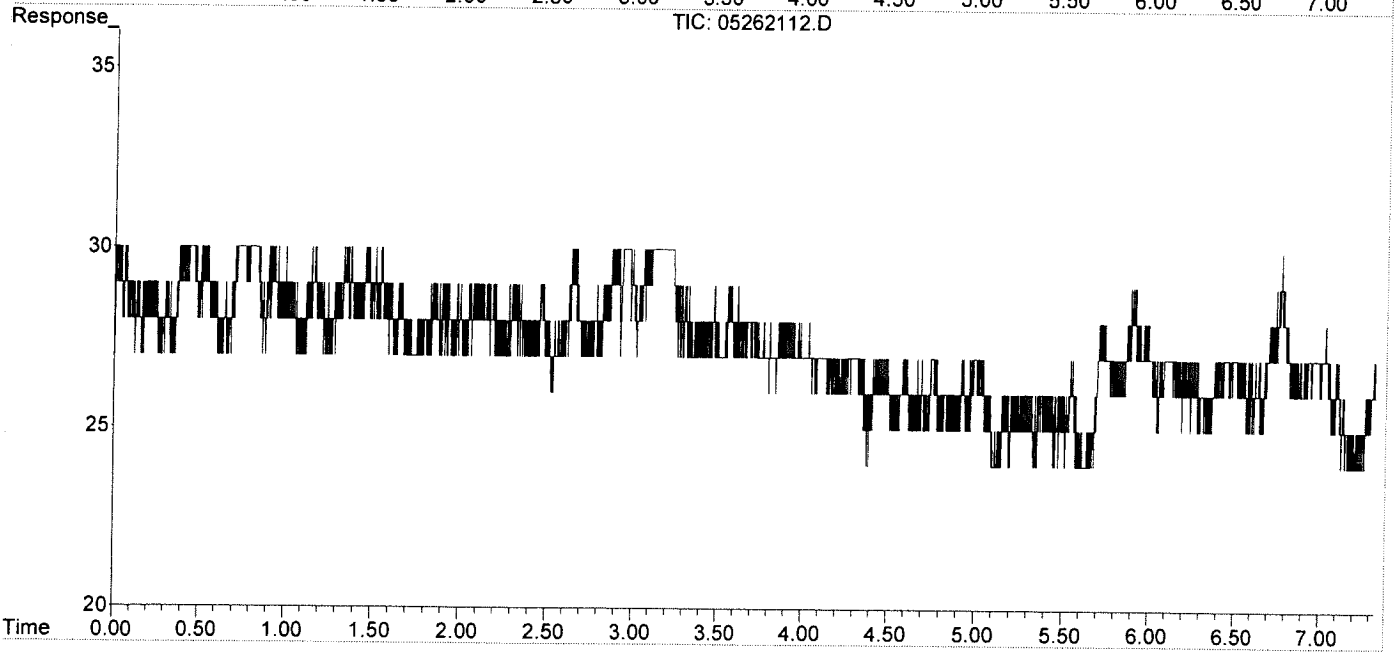
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2021_05\26\
Data File : 05262112.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 26-May-2021, 18:05
Operator : CB
Sample : lcsd S32-03172101 0.1mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 26 18:12:43 2021
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg	%RSD
1)	Oxygen/Argon	4.760						4.760 E6	0.00
2)	Carbon monoxide	2.775		1.066	0.043	0.033	0.027	0.657 E6	170.12
3)	Methane (TCD)							9.457	0.00
4)	Carbon dioxide	2.717	2.193	2.338	2.272	2.265	2.298	2.347 E2	7.99

Signal #2 Calibration Files
1 =08291715.D 2 =08291716.D 3 =08291717.D
4 =08291719.D 5 =08291720.D 6 =08291721.D

	Compound	1	2	3	4	5	6	Avg	%RSD
6)	Methane (FID)	1.253	1.160	1.005	0.927	0.848	0.848	0.945 E4	15.85
7)	Ethylene	1.677	1.605	1.900	1.749	1.597	1.579	1.684 E4	7.30
8)	Ethane	1.769	1.631	1.866	1.767	1.639	1.667	1.723 E4	5.40
9)	Propylene	2.402	2.309	2.767	2.551	2.331	2.333	2.449 E4	7.32
10)	Propane	2.906	2.737	2.817	2.639	2.410	2.420	2.655 E4	7.75
11)	Isobutylene							0.000	-1.00
12)	Isobutane							0.000	-1.00
13)	n-Butane							0.000	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

RS082817_CO2.M Wed Aug 30 13:24:19 2017

Method Path : I:\GC10\METHODS\
Method File : RS082817_CO2.M
Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
Last Update : Tue Aug 29 16:13:13 2017
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291715.D
2	2	0	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291716.D
3	3	3	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291717.D
4	4	10	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291719.D
5	5	25	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291720.D
6	6	125	0	J:\GC10\DATA\RSK_FID\2017_08\29\08291721.D
7	7	5000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241708.D
8	8	25000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241709.D
9	9	2000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241710.D
10	10	30000	0	J:\GC10\DATA\RSK_FID\2017_08\24\08241711.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Aug 29 14:21 2017	Aug 29 14:20 2017	29-Aug-2017, 14:07
2	2	Aug 29 14:52 2017	Aug 29 14:51 2017	29-Aug-2017, 14:22
3	3	Aug 29 15:04 2017	Aug 29 15:04 2017	29-Aug-2017, 14:53
4	4	Aug 29 15:36 2017	Aug 29 15:36 2017	29-Aug-2017, 15:23
5	5	Aug 29 15:57 2017	Aug 29 15:57 2017	29-Aug-2017, 15:44
6	6	Aug 29 16:13 2017	Aug 29 16:13 2017	29-Aug-2017, 16:00
7	7	Aug 25 09:05 2017	Aug 24 16:00 2017	24-Aug-2017, 15:44
8	8	Aug 25 09:06 2017	Aug 24 16:13 2017	24-Aug-2017, 16:02
9	9	Aug 25 09:06 2017	Aug 24 16:31 2017	24-Aug-2017, 16:16
10	10	Aug 25 09:07 2017	Aug 24 16:42 2017	24-Aug-2017, 16:33

RS082817_CO2.M Wed Aug 30 13:24:30 2017

dit Compounds -- Compound #4 -- Carbon dioxide

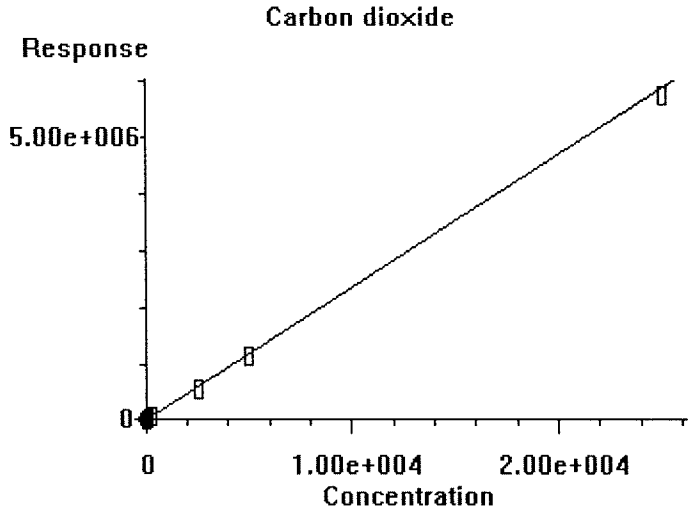
Search by: Ret Time Name Index Find Compound

- Compound Database
- External Standard Compoun
  - Oxygen/Argon
  - Carbon monoxide
  - Methane (TCD)
  - Carbon dioxide
  - Signal #2
  - Methane (FID)
  - Ethylene
  - Ethane
  - Propylene
  - Propane
  - Isobutylene
  - Isobutane
  - n-Butane

Identification | Calibration | User-Defined | Advanced | Reporting

Lvl ID	Concentration	Response
1	25.000000	6793.665186
2	100.000000	21932.418000
3	250.000000	58460.642510
4	2500.000000	568043.388750
5	5000.000000	1132363.215937
6	25000.000000	5744294.891563
7	25000.000000	
8	25000.000000	
9	2000.000000	
10	30000.000000	

Lvl ID	Concentration	Response



0.000e+000	Quadratic term
2.347e+002	Linear term
0.000e+000	Constant term
7.987%	RF Rel Std Dev

OK Cancel Help Print Calibration Curve Copy Calibration Curve

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

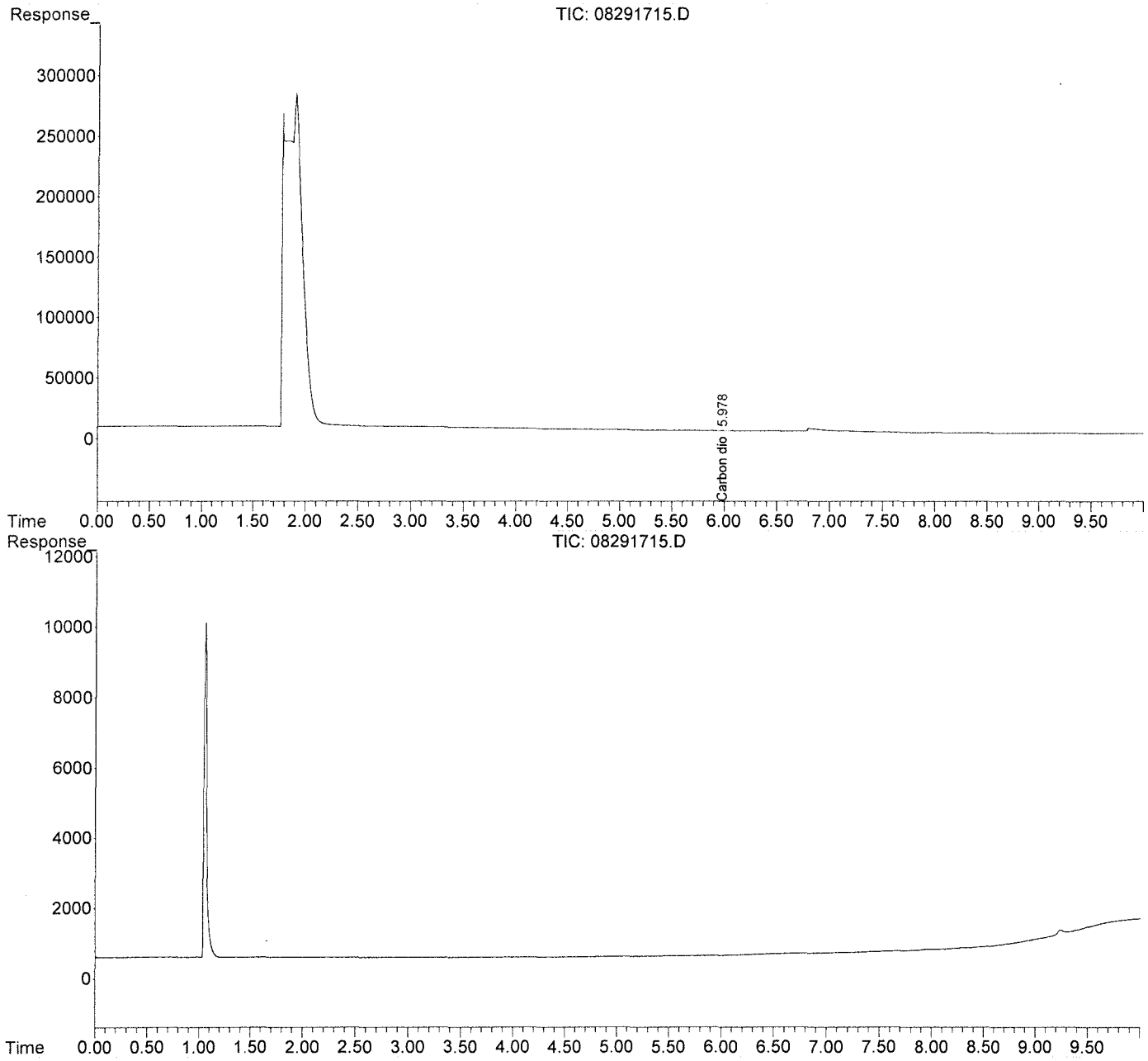
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.776	277465	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	6794	27.870	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

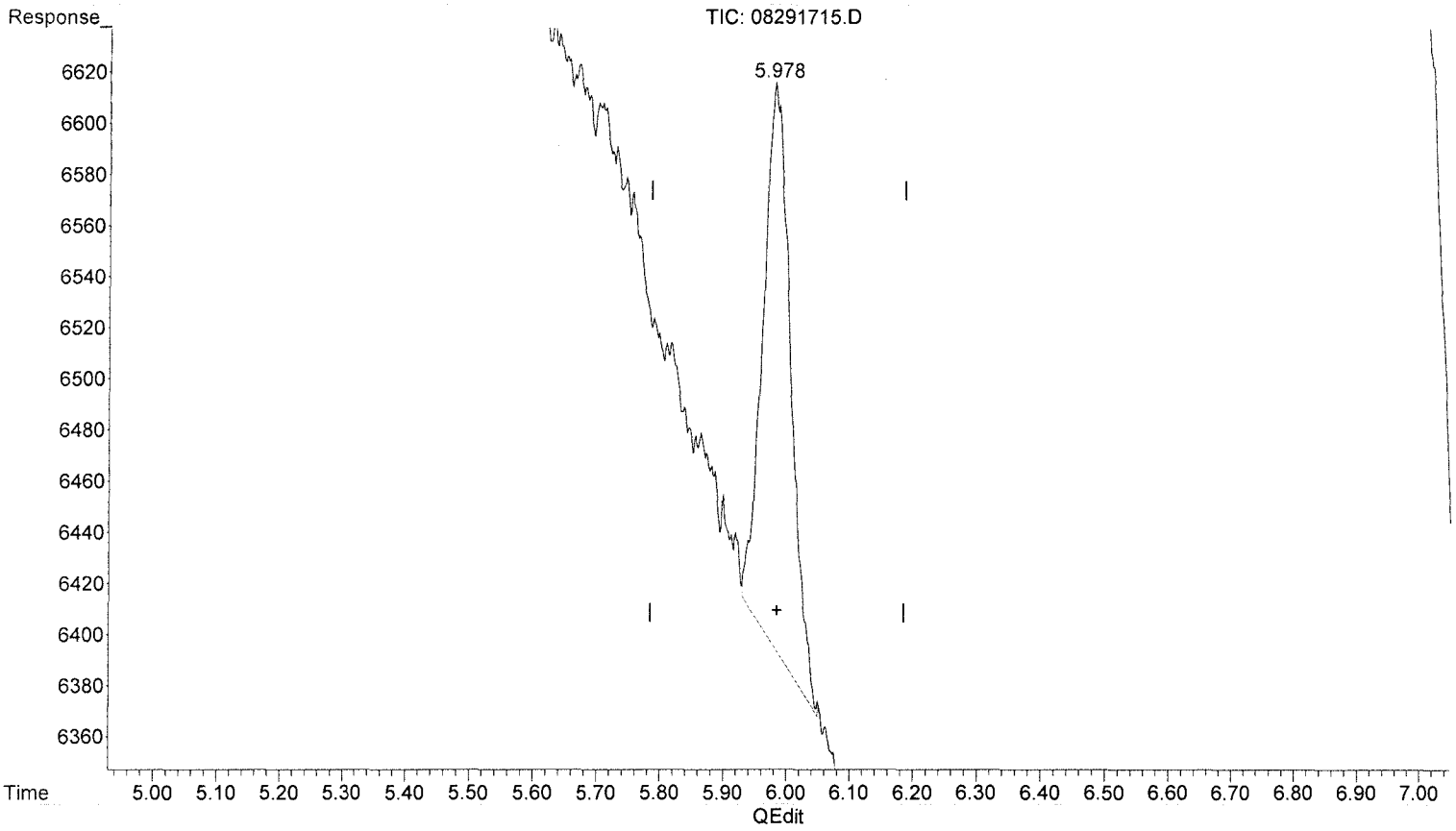
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291715.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:07
Operator : MC
Sample : 25ppm s32-08291701 0.25ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:20:06 2017
Quant Method : I:\GC10\METHODS\RS082417.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Fri Aug 25 09:19:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(4) Carbon dioxide

5.978min 27.870 ppm m

response 6794

M 9/30/17
BLK
M
PEER REVIEW

M 9/4/17

(+) = Expected Retention Time

RS082817_CO2.M Wed Aug 30 13:17:47 2017

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

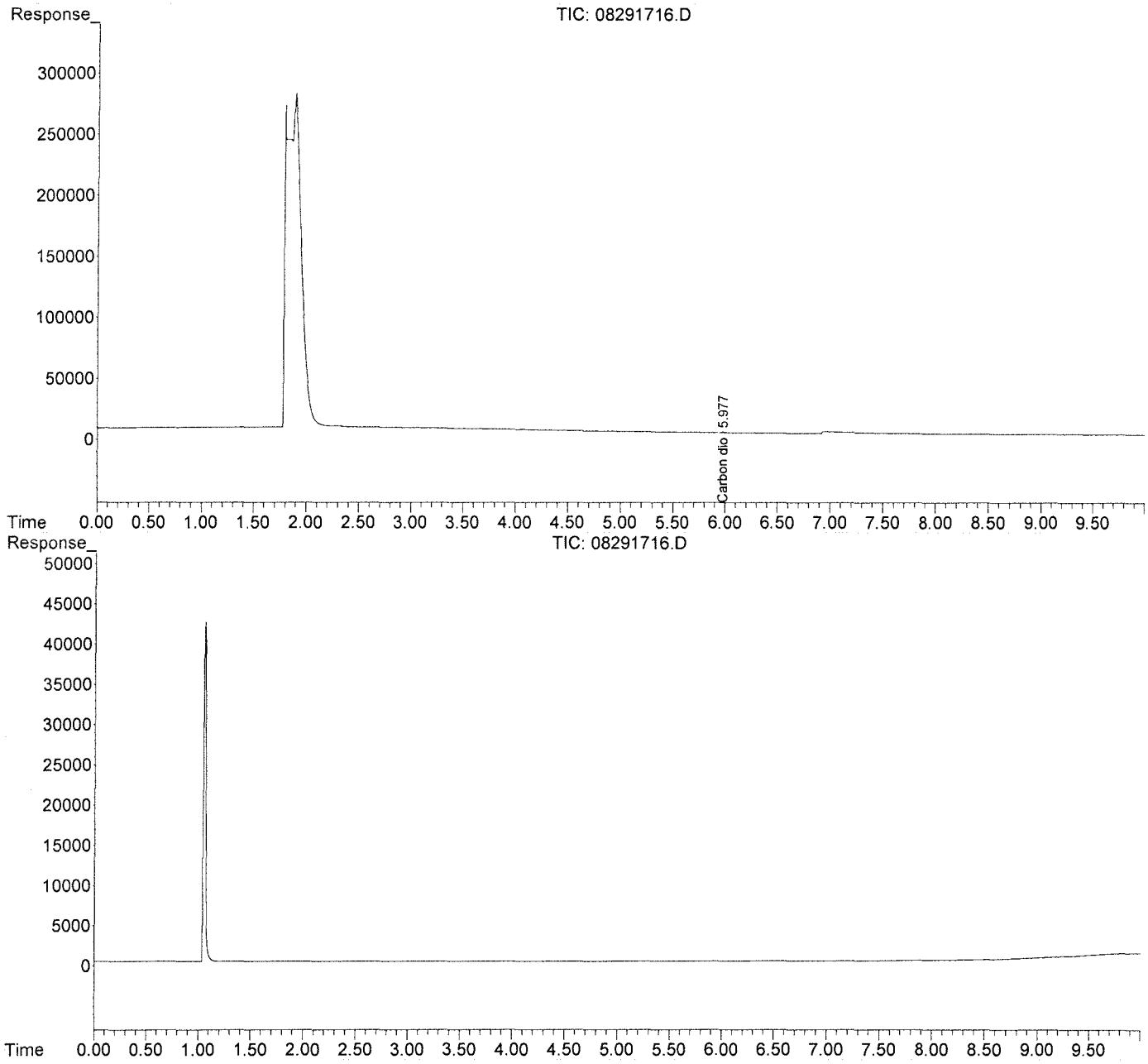
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.790	-598962	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	
4)	Carbon dioxide	5.978	21932	87.858	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291716.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:22
Operator : MC
Sample : 100ppm s32-08291702 0.2ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 14:51:38 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:21:08 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

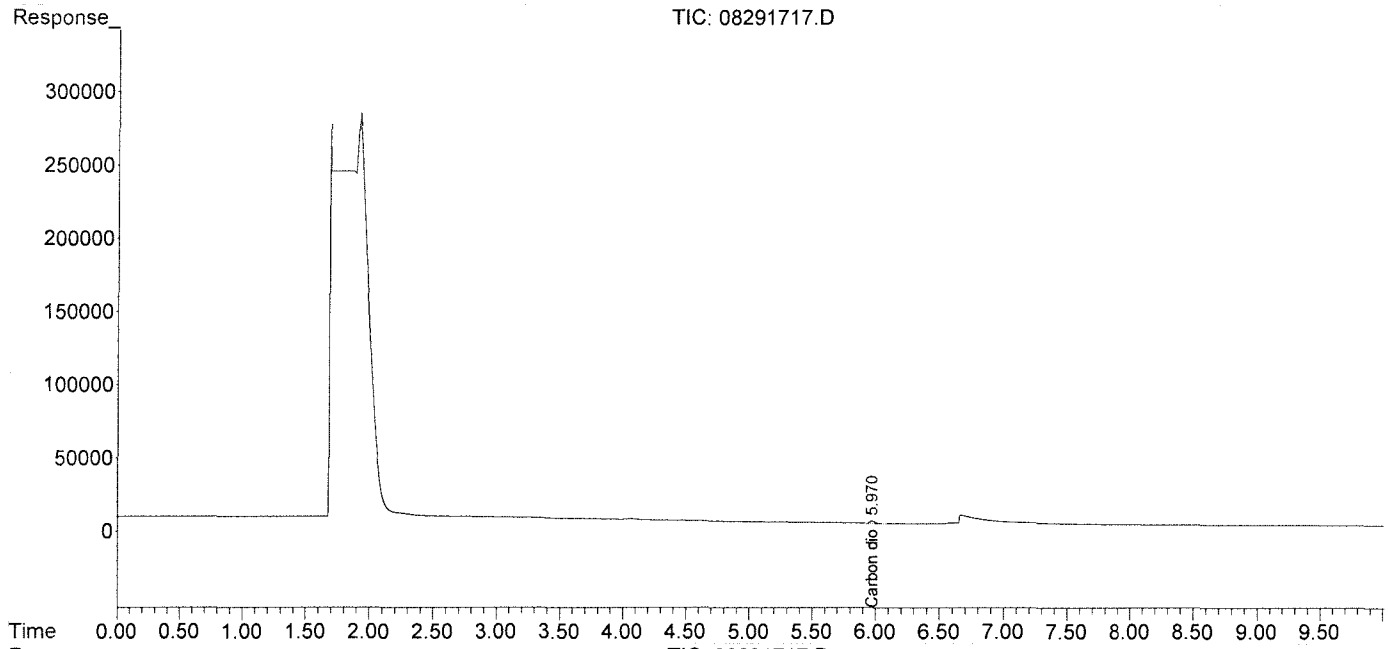
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	1.920f	-30716454	N.D.	ppm	
2)	Carbon monoxide	0.000	0	N.D.	ppm	d
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.970	58461	240.204	ppm	m
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

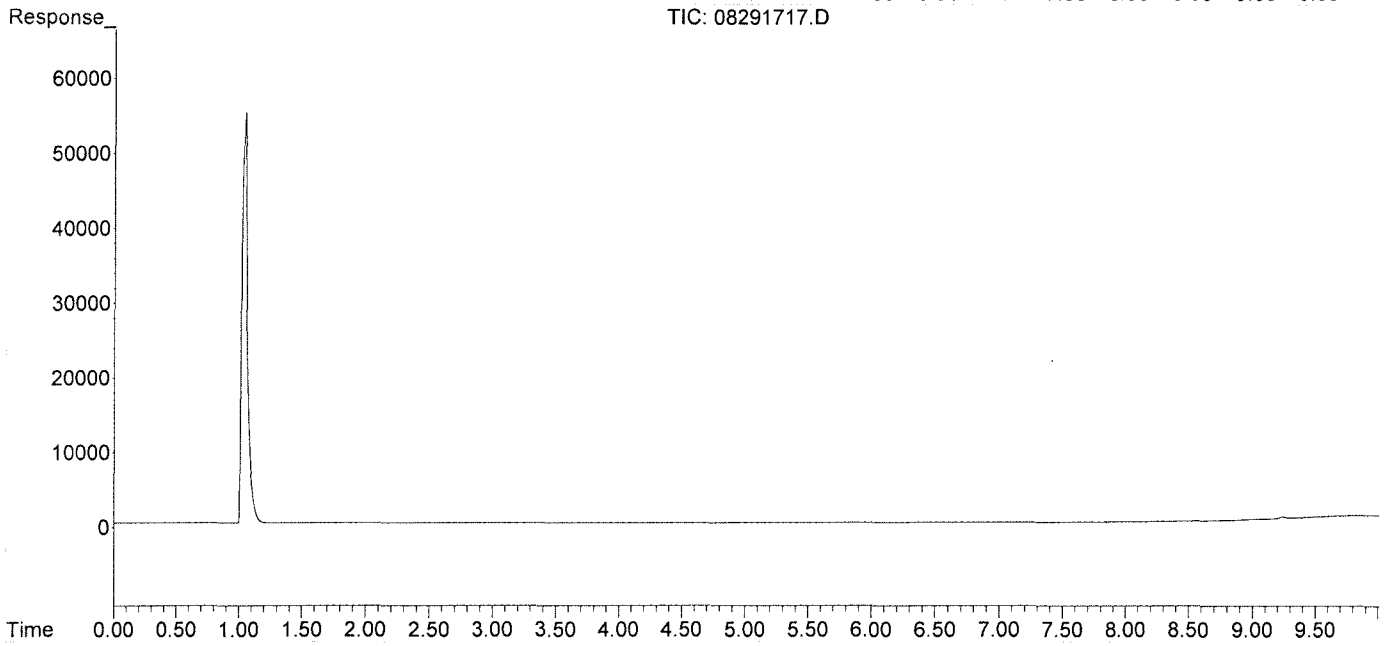
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

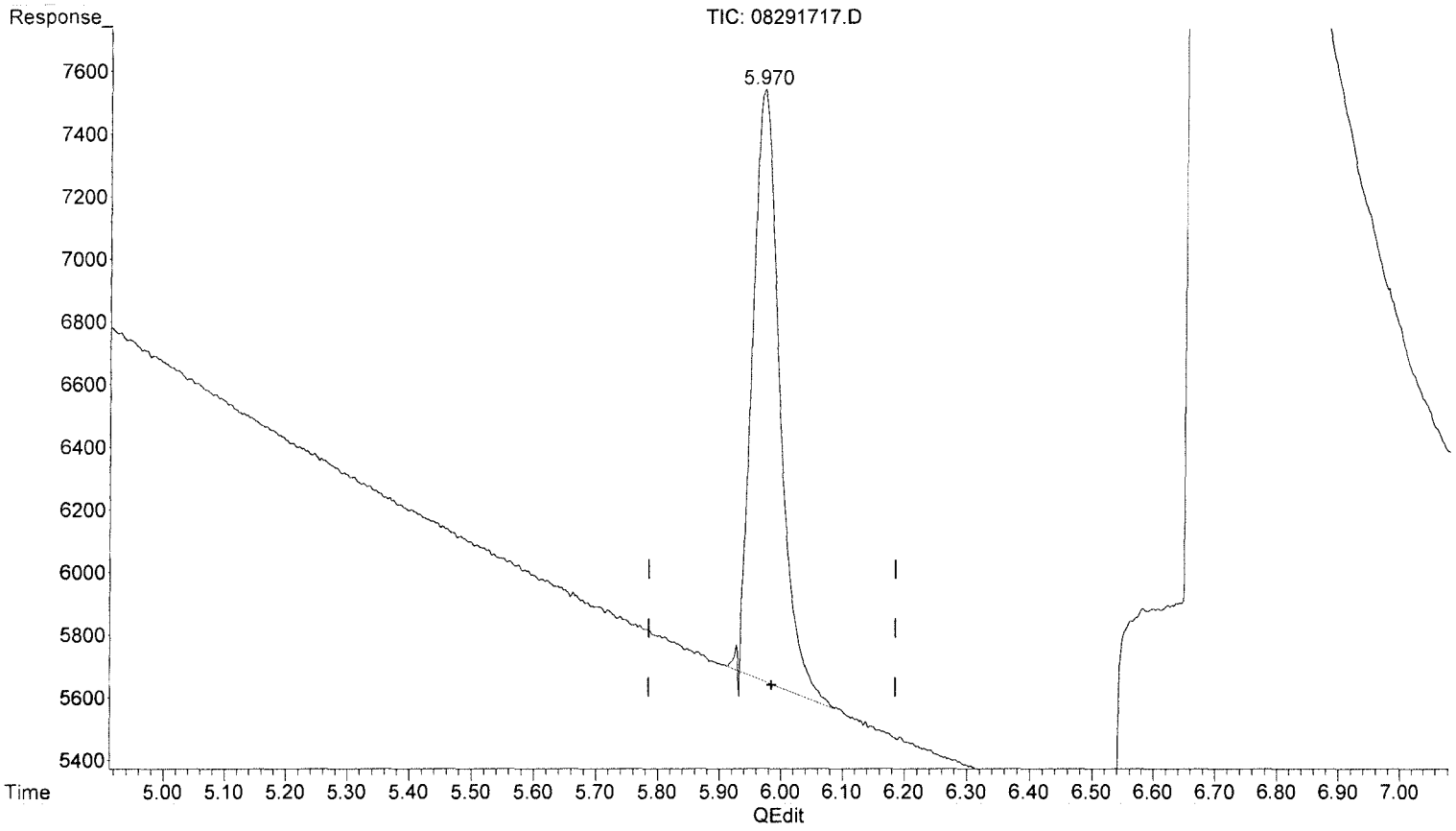




Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291717.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 14:53
Operator : MC
Sample : 250ppm s32-08291702 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:03:42 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 14:52:06 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



(4) Carbon dioxide

5.970min 240.204 ppm m

response 58461

(+) = Expected Retention Time

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

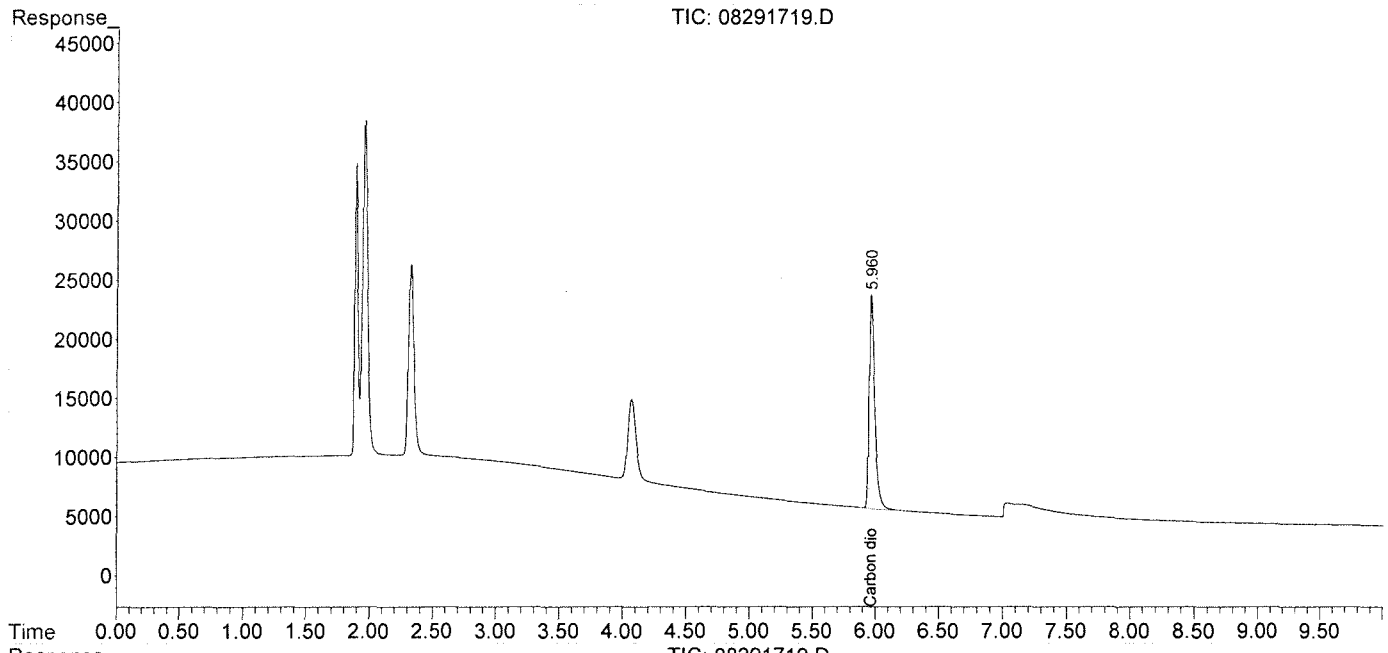
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.891	425113	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.962	568043	2369.673	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

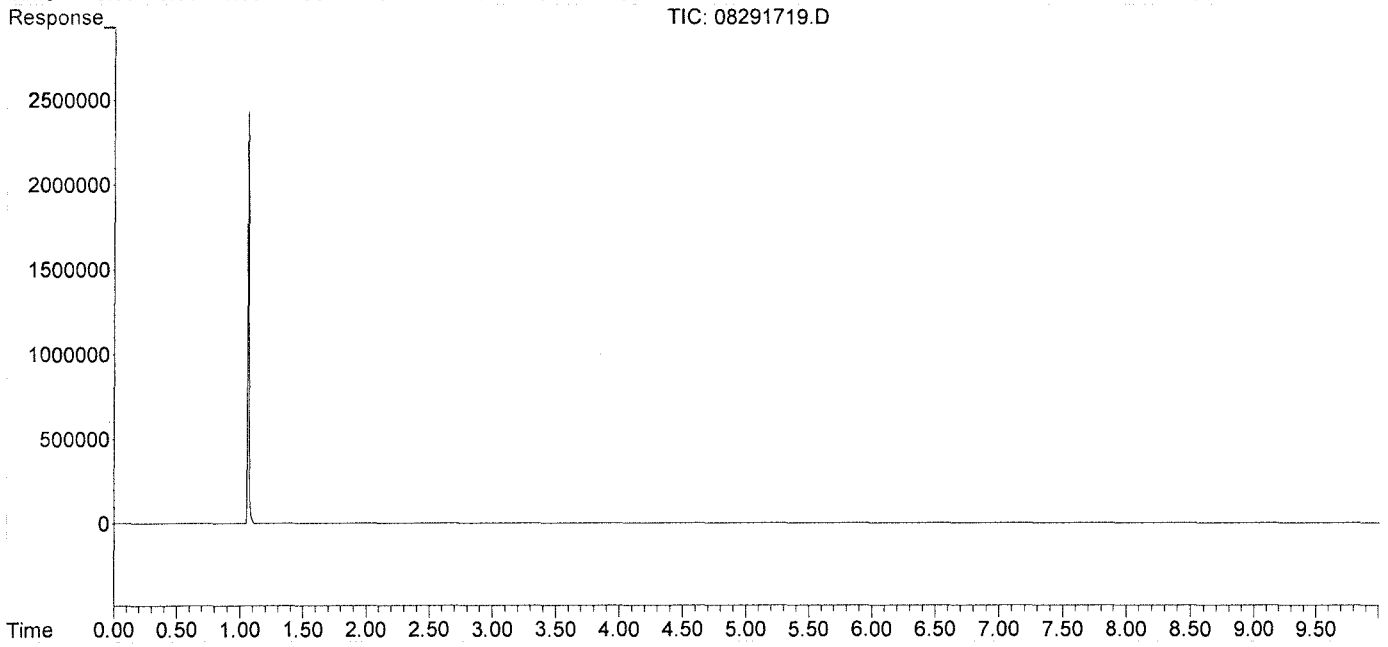
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291719.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:23
Operator : MC
Sample : 2500ppm s32-08231701 50ul
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:35:50 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:04:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

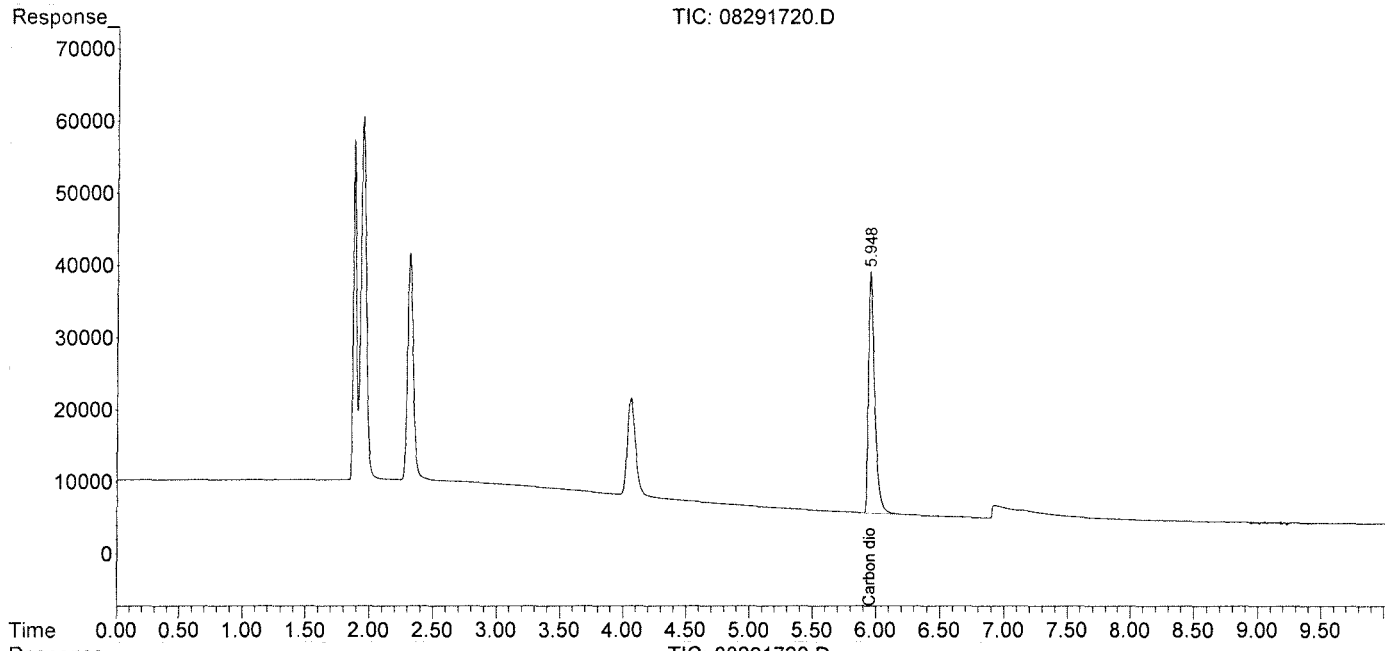
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.880	819221	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.948	1132363	4753.126	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

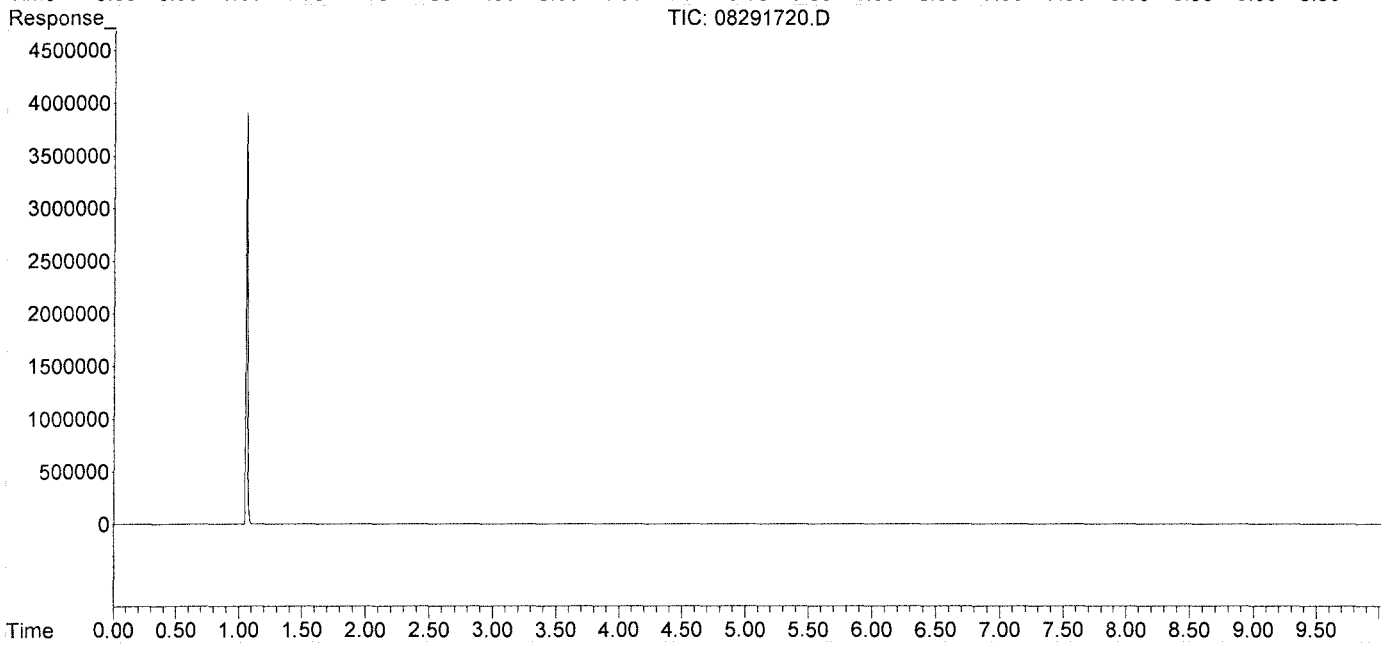
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291720.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 15:44
Operator : MC
Sample : 5000ppm s32-08231701 0.1ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 15:57:17 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:36:14 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

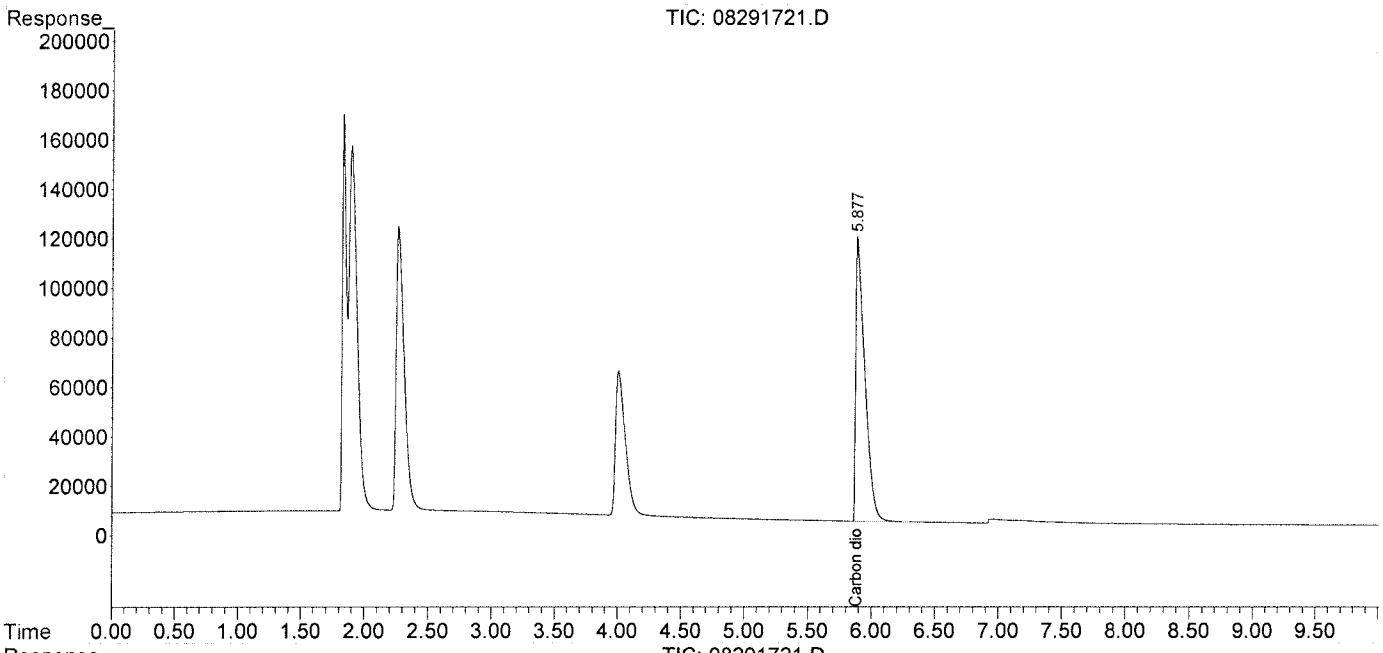
	Compound	R.T.	Response	Conc	Units	
Target	Compounds					
1)	Oxygen/Argon	0.000	0	N.D.	ppm	d
2)	Carbon monoxide	1.827	3325463	N.D.	ppm	
3)	Methane (TCD)	0.000	0	N.D.	ppm	d
4)	Carbon dioxide	5.879f	5744295	24443.288	ppm	
6)	Methane (FID)	0.000	0	N.D.	ppm	d
7)	Ethylene	0.000	0	N.D.	ppm	
8)	Ethane	0.000	0	N.D.	ppm	
9)	Propylene	0.000	0	N.D.	ppm	
10)	Propane	0.000	0	N.D.	ppm	
11)	Isobutylene	0.000	0	N.D.	ppm	
12)	Isobutane	0.000	0	N.D.	ppm	
13)	n-Butane	0.000	0	N.D.	ppm	

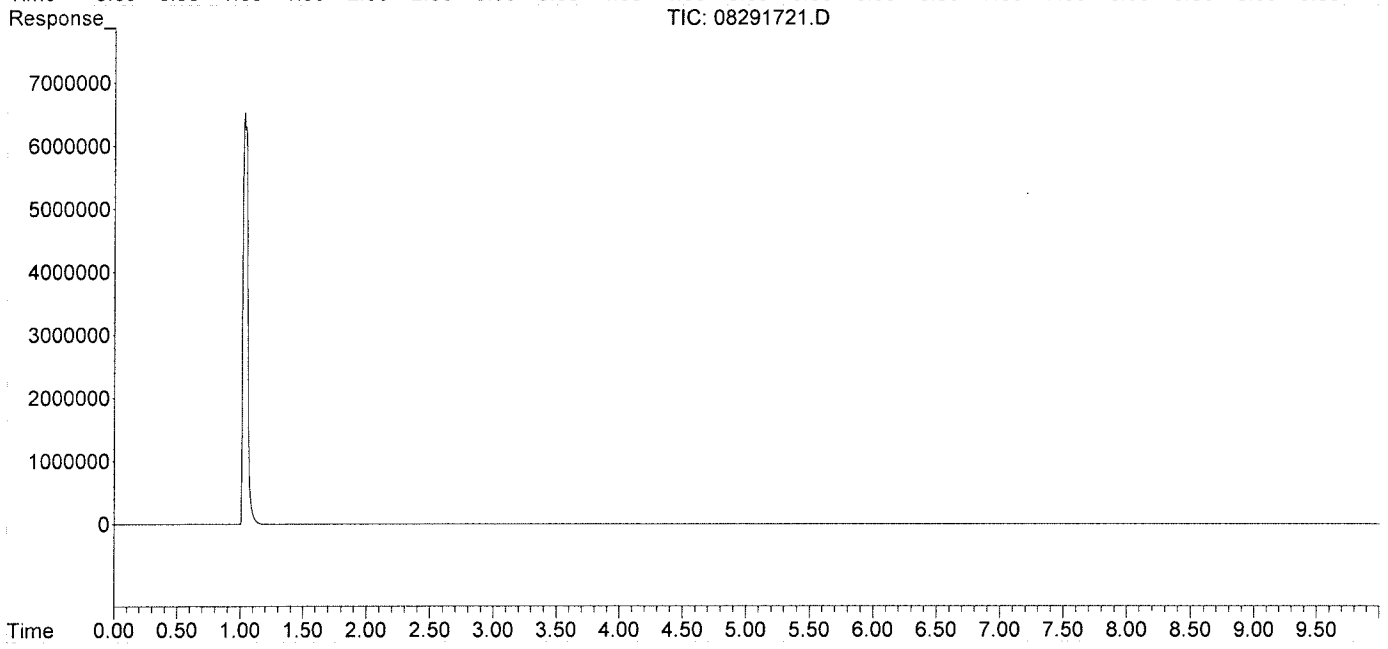
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291721.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:00
Operator : MC
Sample : 25000ppm s32-08231701 0.5ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:12:53 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 15:57:37 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.886	536422	0.113	ppm
2)	Carbon monoxide	1.886	536422	N.D.	ppm
3)	Methane (TCD)	4.059f	626500	66244.710	ppm
4)	Carbon dioxide	5.947	1163775	4957.948	ppm
6)	Methane (FID)	1.062	37290742	3947.023	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

actual %D
5000 99.16

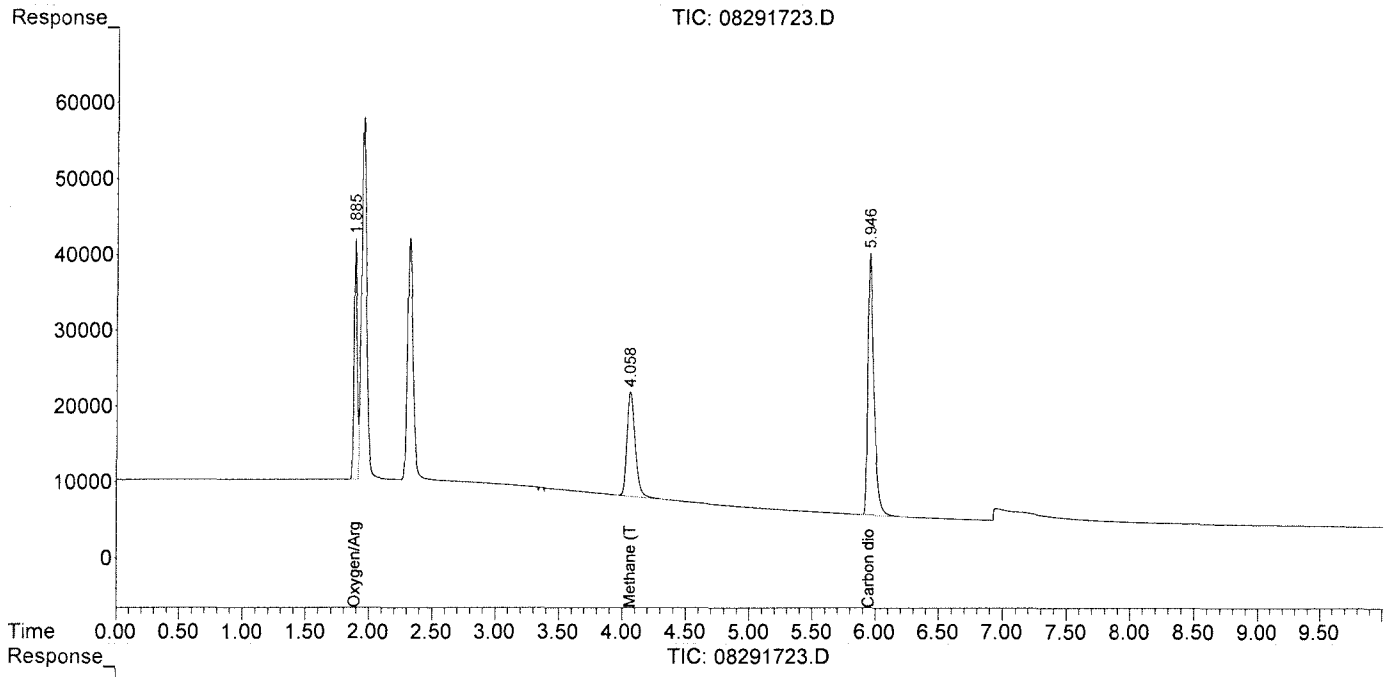
(f)=RT Delta > 1/2 Window (m)=manual int.

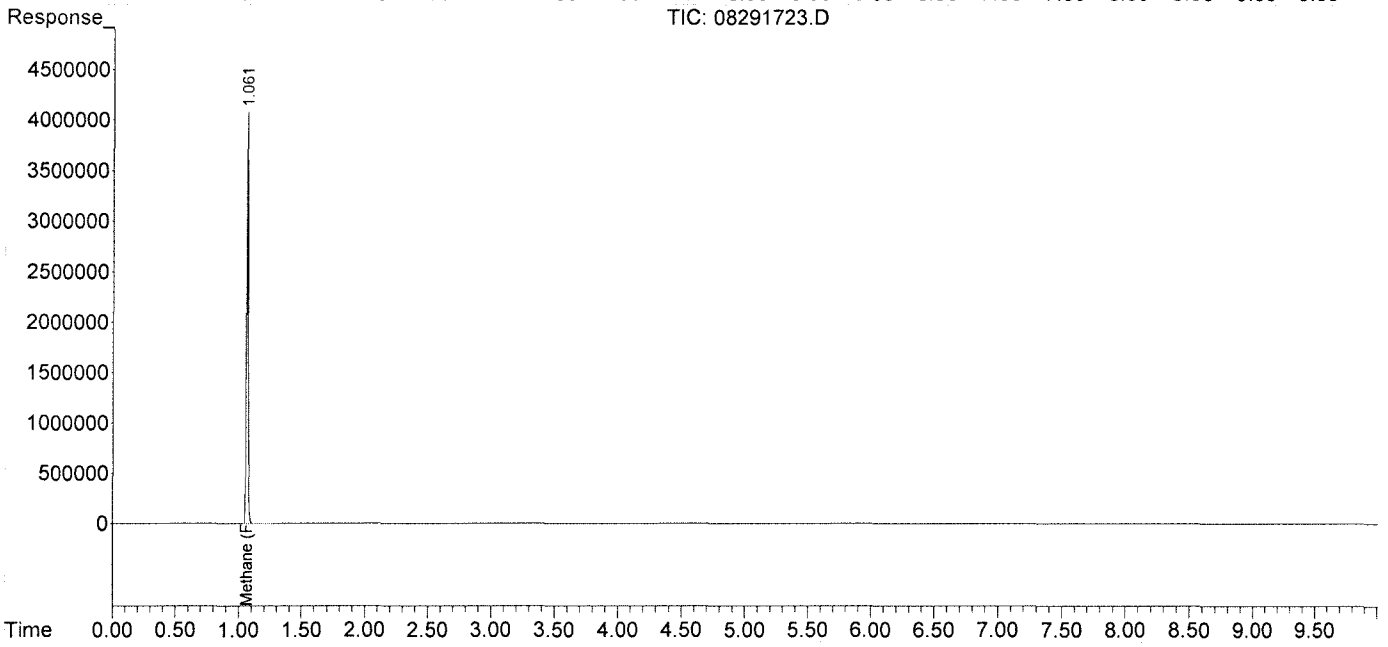
W 9/4/17

Data Path : J:\GC10\DATA\RSK_FID\2017_08\29\
Data File : 08291723.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 29-Aug-2017, 16:35
Operator : MC
Sample : icv s30-07071701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Aug 29 16:54:07 2017
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Dissolved Gases by RSK175

ALS Environmental

Method : RSK175 Headspace Method for Dissolved Hydrocarbon in Water by FID/TCD
Client : ALS Environmental - US
Service Request: P2102700
Sample Vol. (ml) : 32.00 ml
Analyst : CB
Date Analysis : 05/26/21
Head Space Vol.(ml) : 8.00 ml

Instrument : GC#10
Detector : FID#10, TCD#10
Gas Constant : 24.05684 (20°C)

HEAD SPACE RESULT (ppm)

Sample ID	Inj. Vol.	Carbon Dioxide
std 0.5mL	0.100	964.823
ACTUAL		1000.00
%Difference		3.5%
mcs 0.1mL	0.100	0.000
RB 0.1mL	0.100	0.000
lcs S32-03172101 0.1mL	0.100	878.809
lcsd S32-03172101 0.1mL	0.100	877.597
P2102700-001 0.1mL	0.100	6703.991
STD S32-03232001 0.5mL		987.826
ACTUAL		1000.00
%Difference		1.2%

FINAL HEAD SPACE RESULT (ppm)

	WWt.	Carbon Dioxide
HENRY'S CONSTANT		44.10
		1.42E+03
RL		100.00
mcs 0.1mL		0.000
lcs S32-03172101 0.1mL		8788.090
lcsd S32-03172101 0.1mL		8775.970
P2102700-001 0.1mL		67039.910

Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_TCD\2021_05\26\
Data File : 05262101.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 26-May-2021, 15:48
Operator : CB
Sample : STD S32-03232001 0.5mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

CB 5/27/21

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 26 15:57:40 2021
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

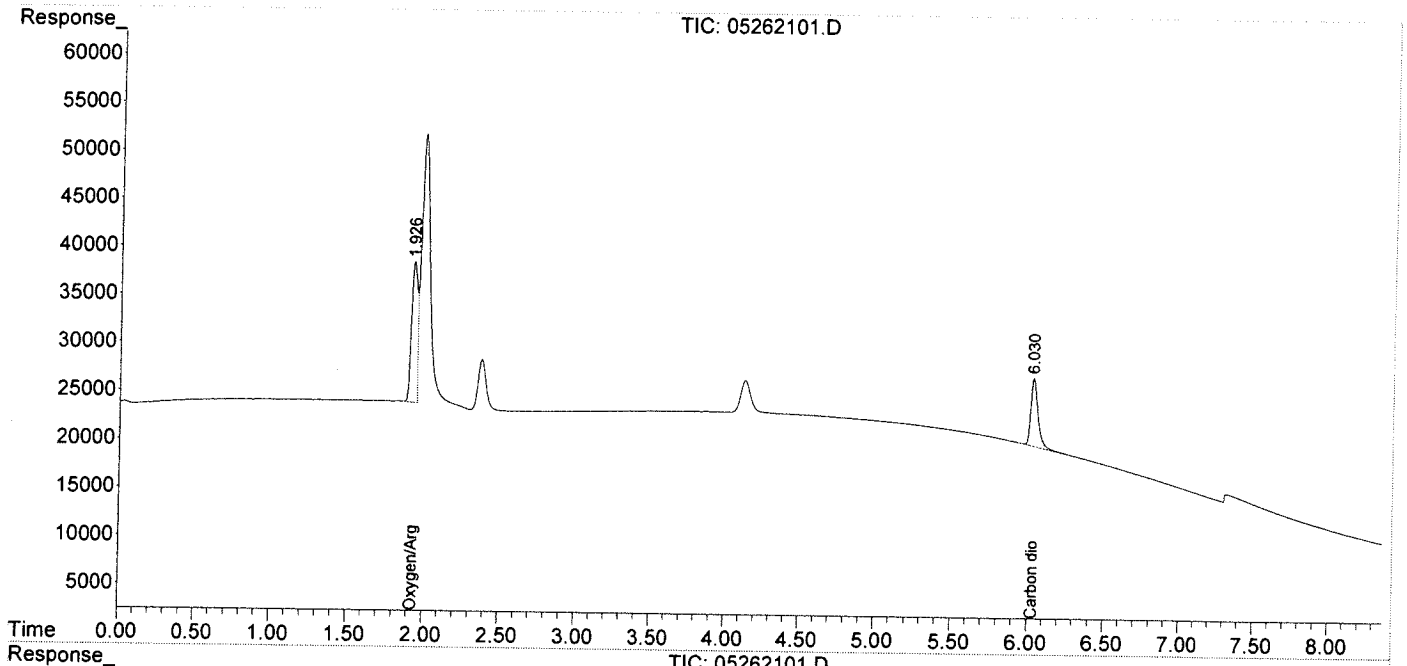
	Compound	R.T.	Response	Conc	Units
Target Compounds					
1)	Oxygen/Argon	1.927f	375783	0.079	ppm
2)	Carbon monoxide	1.927f	375783	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	6.031	231872	987.826	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

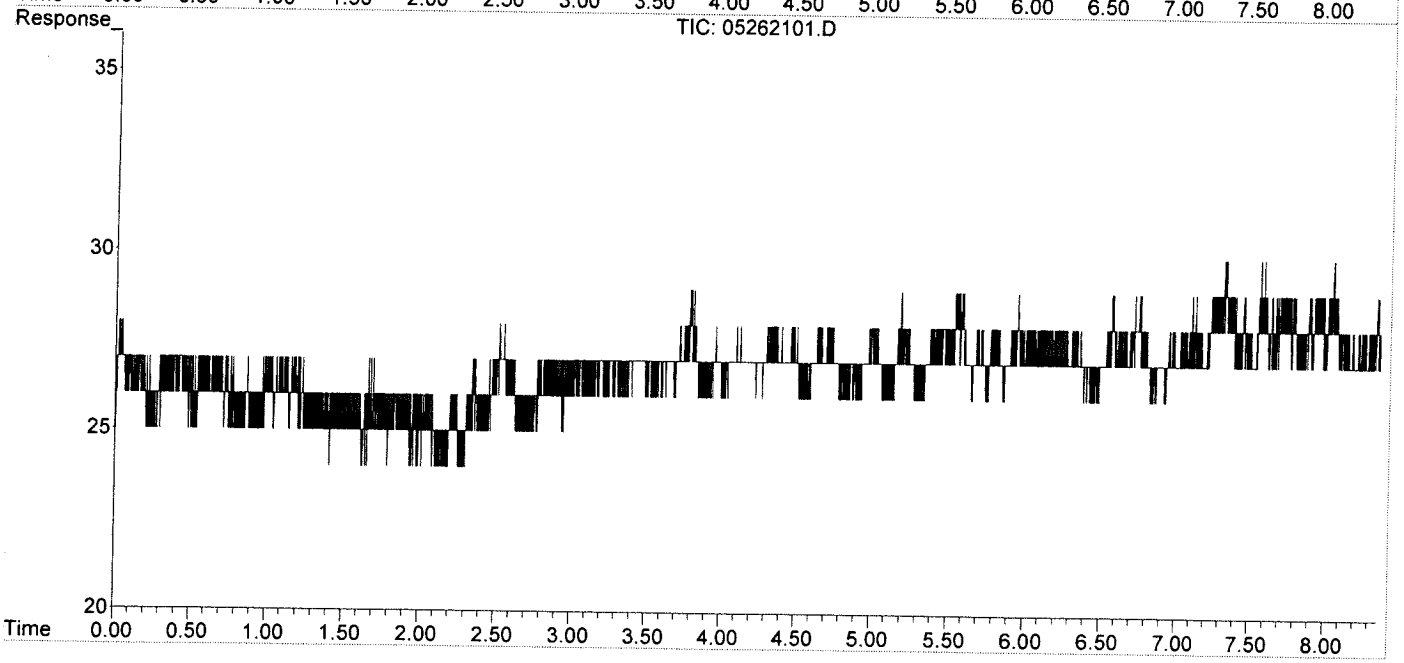
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2021_05\26\
Data File : 05262101.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 26-May-2021, 15:48
Operator : CB
Sample : STD S32-03232001 0.5mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 26 15:57:40 2021
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





Quantitation Report (QT Reviewed)

Data Path : J:\GC10\DATA\RSK_TCD\2021_05\26\
Data File : 05262113.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 26-May-2021, 18:14
Operator : CB
Sample : std 0.5mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 26 18:21:26 2021
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

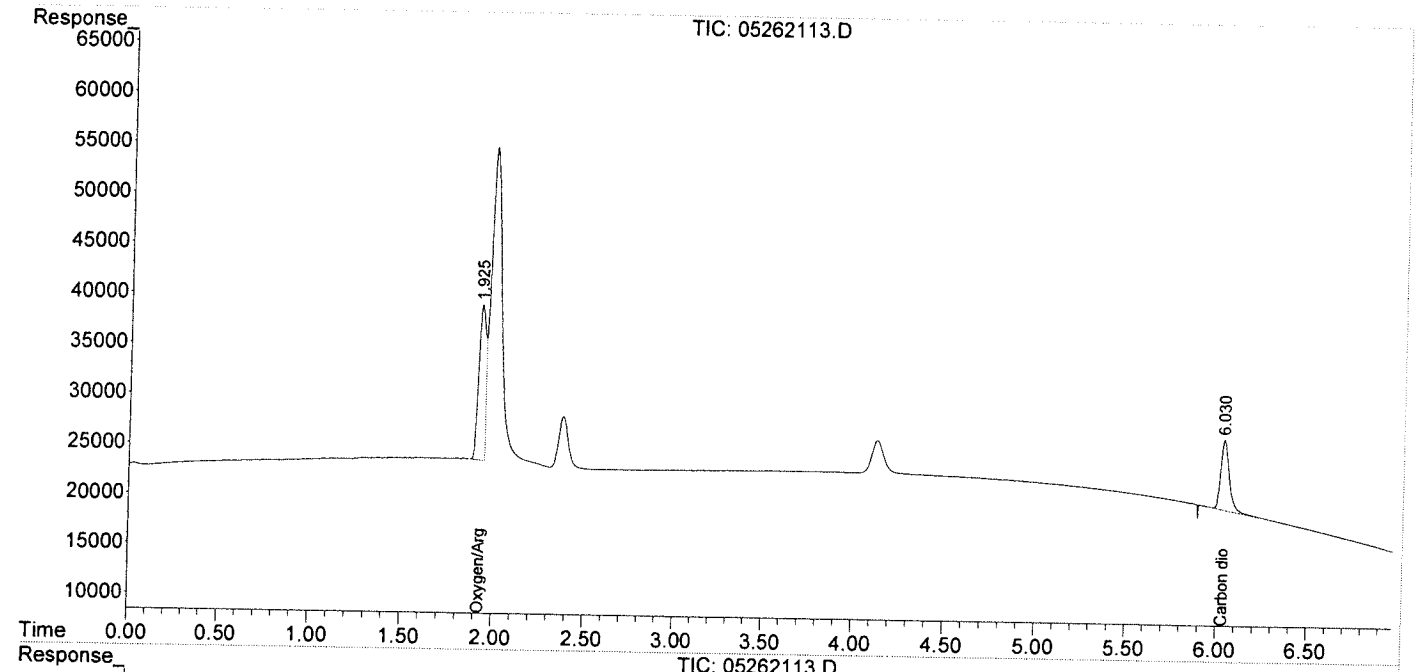
	Compound	R.T.	Response	Conc	Units
Target	Compounds				
1)	Oxygen/Argon	1.926f	390106	0.082	ppm
2)	Carbon monoxide	1.926f	390106	N.D.	ppm
3)	Methane (TCD)	0.000	0	N.D.	ppm
4)	Carbon dioxide	6.031	226472	964.823	ppm
6)	Methane (FID)	0.000	0	N.D.	ppm
7)	Ethylene	0.000	0	N.D.	ppm
8)	Ethane	0.000	0	N.D.	ppm
9)	Propylene	0.000	0	N.D.	ppm
10)	Propane	0.000	0	N.D.	ppm
11)	Isobutylene	0.000	0	N.D.	ppm
12)	Isobutane	0.000	0	N.D.	ppm
13)	n-Butane	0.000	0	N.D.	ppm

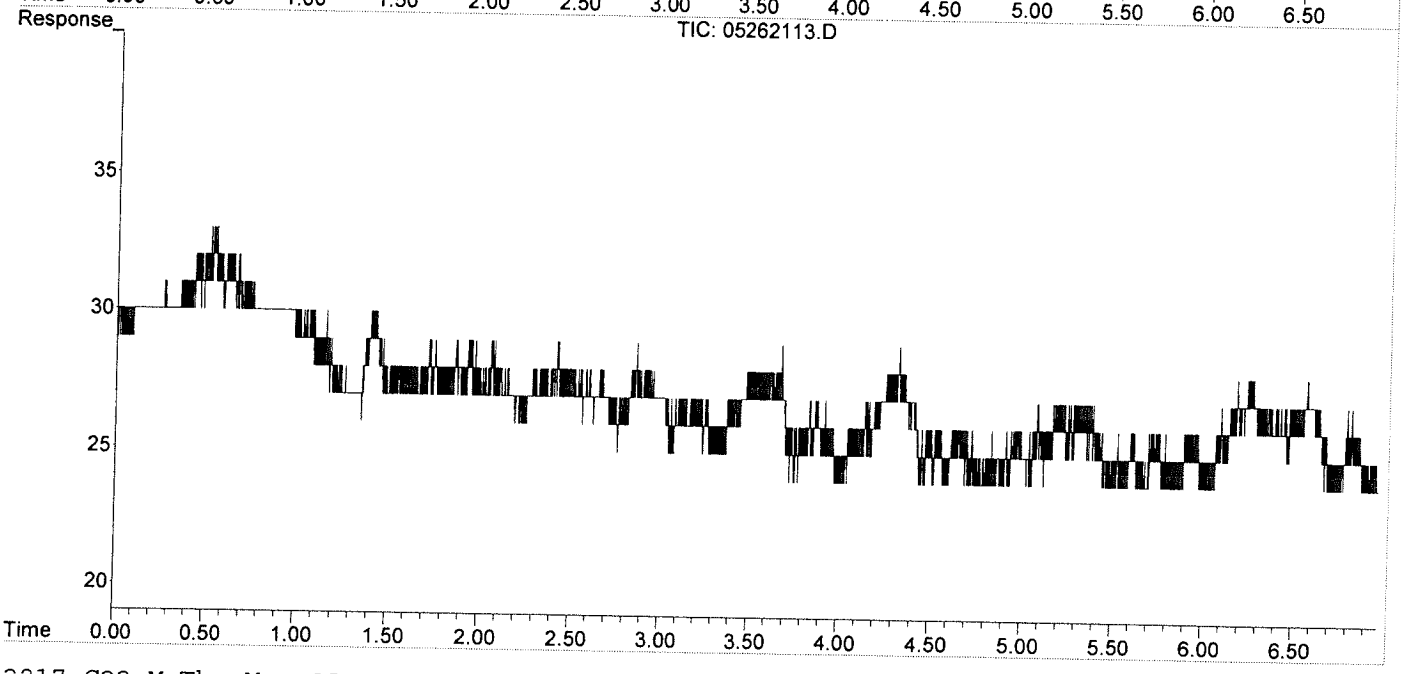
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : J:\GC10\DATA\RSK_TCD\2021_05\26\
Data File : 05262113.D
Signal(s) : Signal #1: TCD1A.CH Signal #2: FID2B.CH
Acq On : 26-May-2021, 18:14
Operator : CB
Sample : std 0.5mL
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 26 18:21:26 2021
Quant Method : I:\GC10\METHODS\RS082817_CO2.M
Quant Title : RSK175, VOA-DISGAS, VOA-TO3C1C6
QLast Update : Tue Aug 29 16:13:13 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





RS082817_CO2.M Thu May 27 13:11:43 2021

Injection Log

Directory: I:\GC10\DATA\RSK_FID\2017_08\29\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	29-Aug-17, 07:58:00	08291701.D	std s30-06161601		MC	RSKBOTH.M	Pass
2	29-Aug-17, 08:11:02	08291702.D	mb 0.5ml		MC	RSKBOTH.M	Pass
3	29-Aug-17, 08:24:13	08291703.D	4089-001 0.5ml		MC	RSKBOTH.M	
4	29-Aug-17, 08:39:29	08291704.D	4089-002 0.5ml		MC	RSKBOTH.M	
5	29-Aug-17, 08:53:38	08291705.D	4089-003 0.5ml		MC	RSKBOTH.M	
6	29-Aug-17, 09:33:52	08291706.D	4089-004 0.5ml		MC	RSKBOTH.M	
7	29-Aug-17, 09:50:51	08291707.D	4089-005 0.5ml		MC	RSKBOTH.M	
8	29-Aug-17, 10:07:54	08291708.D	4089-006 0.5ml		MC	RSKBOTH.M	
9	29-Aug-17, 10:42:34	08291709.D	4089-007 0.5ml		MC	RSKBOTH.M	
10	29-Aug-17, 11:06:01	08291710.D	4089-008 0.5ml		MC	RSKBOTH.M	
11	29-Aug-17, 11:23:53	08291711.D	4089-009 0.5ml		MC	RSKBOTH.M	
12	29-Aug-17, 11:37:17	08291712.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
13	29-Aug-17, 11:50:31	08291713.D	lcs s30-05241604		MC	RSKBOTH.M	Pass
14	29-Aug-17, 12:29:45	08291714.D	std s30-06161601		MC	RSKBOTH.M	Pass
15	29-Aug-17, 14:07:01	08291715.D	25ppm s32-08291701 0.25ml		MC	RSKBOTH.M	Curve
16	29-Aug-17, 14:22:12	08291716.D	100ppm s32-08291702 0.2ml		MC	RSKBOTH.M	Curve
17	29-Aug-17, 14:53:00	08291717.D	250ppm s32-08291702 0.5ml		MC	RSKBOTH.M	Curve
18	29-Aug-17, 15:07:43	08291718.D	mis inject		MC	RSKBOTH.M	
19	29-Aug-17, 15:23:21	08291719.D	2500ppm s32-08231701 50ul		MC	RSKBOTH.M	Curve
20	29-Aug-17, 15:44:54	08291720.D	5000ppm s32-08231701 0.1ml		MC	RSKBOTH.M	Curve
21	29-Aug-17, 16:00:09	08291721.D	25000ppm s32-08231701 0.5ml		MC	RSKBOTH.M	Curve
22	29-Aug-17, 16:15:43	08291722.D	mb 0.1ml		MC	RSKBOTH.M	Pass
23	29-Aug-17, 16:35:37	08291723.D	icv s30-07071701		MC	RSKBOTH.M	Pass

Injection Log

Directory: I:\GC10\DATA\RSK_TCD\2021_05\26\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Acquisition Method	Comments
1	26-May-21, 11:44:08	05262100.D	xSTD S32-03172101 0.1mL		CB	RSKBOTH.M	
2	26-May-21, 15:48:54	05262101.D	STD S32-03232001 0.5mL		CB	RSKBOTH.M	Pass
3	26-May-21, 16:10:51	05262102.D	RB 0.1mL		CB	RSKBOTH.M	
4	26-May-21, 16:23:14	05262103.D	mcs 0.1mL		CB	RSKBOTH.M	
5	26-May-21, 16:33:50	05262104.D	P2102700-001 0.1mL		CB	RSKBOTH.M	
6	26-May-21, 16:45:57	05262105.D	P2102701-001 0.1mL		CB	RSKBOTH.M	
7	26-May-21, 17:00:19	05262106.D	x2701-002 0.1mL		CB	RSKBOTH.M	
8	26-May-21, 17:09:56	05262107.D	x2701-002 0.05mL		CB	RSKBOTH.M	
9	26-May-21, 17:19:39	05262108.D	P2102701-002 ms 50uL		CB	RSKBOTH.M	
10	26-May-21, 17:29:38	05262109.D	P2102701-002 msd 50uL		CB	RSKBOTH.M	
11	26-May-21, 17:44:10	05262110.D	P2102701-002 50uL		CB	RSKBOTH.M	
12	26-May-21, 17:55:11	05262111.D	lcs S32-03172101 0.1mL		CB	RSKBOTH.M	Pass
13	26-May-21, 18:05:08	05262112.D	lcsd S32-03172101 0.1mL		CB	RSKBOTH.M	Pass
14	26-May-21, 18:14:58	05262113.D	std 0.5mL		CB	RSKBOTH.M	Pass

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WorkOrder: HS21050697

LHAAP 37 May 2021

Aptim Environmental & Infrastucture, Inc.

Vicki Graves
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Houston TX 77042

22-Jun-2021

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RSK 175
RAW DATA GASES
RAW DATA CO2

HS21050697 LHAAP 37 May 2021 Final REV01

ALS WO# HS21050697

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June 09, 2021

Vicki Graves
Aptim Environmental & Infrastucture, Inc.
10333 Richmond Ave
Ste 1030
Houston, TX 77042

Work Order: **HS21050697**

Laboratory Results for: **LHAAP 37 May 2021**

Dear Vicki Graves ,

ALS Environmental received 6 sample(s) on May 14, 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-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Work Order: HS21050697

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21050697-01	35BWW26-210513	Groundwater		13-May-2021 07:10	14-May-2021 09:25	☐
HS21050697-02	35BWW01-210513	Groundwater		13-May-2021 08:00	14-May-2021 09:25	☐
HS21050697-03	35BWW08-210513	Groundwater		13-May-2021 08:45	14-May-2021 09:25	☐
HS21050697-04	35BWW10-210513	Groundwater		13-May-2021 09:40	14-May-2021 09:25	☐
HS21050697-05	35BWW05-210513	Groundwater		13-May-2021 10:25	14-May-2021 09:25	☐
HS21050697-06	LHSMW58-210513	Groundwater		13-May-2021 11:05	14-May-2021 09:25	☐

Revision:1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc. **CASE NARRATIVE**
Project: LHAAP 37 May 2021
Work Order: HS21050697

Work Order Comments

• Sample ID format updated to match COC

Work Order Comments

• The analysis for Methane, Methene, Ethane and CO2 by RSK175 was subcontracted to ALS Simi Valley, CA. Final report attached.

GCMS Volatiles by Method SW8260

Batch ID: R384028

Sample ID: 35BWW08_210513(HS21050697-03MSD

• The RPD between the MS and MSD was outside of the control limit. Chloroethane

WetChemistry by Method SM5310B

Batch ID: R383987

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9056

Batch ID: R383778

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW26-210513
Collection Date: 13-May-2021 07:10

ANALYTICAL REPORT
WorkOrder:HS21050697
Lab ID:HS21050697-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:20
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:20
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:20
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:20
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:20
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:20
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:20
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:20
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:20
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	19-May-2021 13:20
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	19-May-2021 13:20
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:20
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	19-May-2021 13:20
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	19-May-2021 13:20
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:20
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:20
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:20
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	19-May-2021 13:20
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:20
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW26-210513
Collection Date: 13-May-2021 07:10

ANALYTICAL REPORT
WorkOrder:HS21050697
Lab ID:HS21050697-01
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	19-May-2021 13:20
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	19-May-2021 13:20
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	19-May-2021 13:20
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-May-2021 13:20
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:20
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:20
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:20
Surr: 1,2-Dichloroethane-d4	*92.7*			**0**	*81-118*	*%REC*	*1*	*19-May-2021 13:20*
Surr: 4-Bromofluorobenzene	*92.6*			**0**	*85-114*	*%REC*	*1*	*19-May-2021 13:20*
Surr: Dibromofluoromethane	*90.7*			**0**	*80-119*	*%REC*	*1*	*19-May-2021 13:20*
Surr: Toluene-d8	*111*			**0**	*89-112*	*%REC*	*1*	*19-May-2021 13:20*
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**0.857**	J	**0.500**	**0.500**	**1.00**	**mg/L**	1	20-May-2021 00:46
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**32.9**		**0.200**	**0.500**	**0.500**	**mg/L**	1	14-May-2021 14:38
Nitrogen, Nitrate (As N)	**0.0817**	J	**0.0300**	**0.100**	**0.100**	**mg/L**	1	14-May-2021 14:38
Sulfate	**25.0**		**0.200**	**0.500**	**0.500**	**mg/L**	1	14-May-2021 14:38
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	28-May-2021 09:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW01-210513
Collection Date: 13-May-2021 08:00

ANALYTICAL REPORT
WorkOrder:HS21050697
Lab ID:HS21050697-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:41
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:41
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:41
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:41
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:41
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:41
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:41
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:41
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:41
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	19-May-2021 13:41
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	19-May-2021 13:41
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:41
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	19-May-2021 13:41
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	19-May-2021 13:41
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:41
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:41
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:41
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	19-May-2021 13:41
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 13:41
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW01-210513
Collection Date: 13-May-2021 08:00

ANALYTICAL REPORT
WorkOrder:HS21050697
Lab ID:HS21050697-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	19-May-2021 13:41
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	19-May-2021 13:41
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	19-May-2021 13:41
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-May-2021 13:41
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 13:41
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 13:41
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 13:41
Surr: 1,2-Dichloroethane-d4	*93.7*			**0**	*81-118*	*%REC*	*1*	*19-May-2021 13:41*
Surr: 4-Bromofluorobenzene	*93.0*			**0**	*85-114*	*%REC*	*1*	*19-May-2021 13:41*
Surr: Dibromofluoromethane	*91.0*			**0**	*80-119*	*%REC*	*1*	*19-May-2021 13:41*
Surr: Toluene-d8	*110*			**0**	*89-112*	*%REC*	*1*	*19-May-2021 13:41*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW08-210513
Collection Date: 13-May-2021 08:45

ANALYTICAL REPORT
WorkOrder:HS21050697
Lab ID:HS21050697-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:02
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:02
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:02
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:02
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:02
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:02
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:02
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:02
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:02
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	19-May-2021 14:02
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	19-May-2021 14:02
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:02
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	19-May-2021 14:02
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	19-May-2021 14:02
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:02
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:02
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:02
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	19-May-2021 14:02
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:02
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW08-210513
Collection Date: 13-May-2021 08:45

ANALYTICAL REPORT
WorkOrder:HS21050697
Lab ID:HS21050697-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	19-May-2021 14:02
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	19-May-2021 14:02
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	19-May-2021 14:02
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-May-2021 14:02
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:02
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:02
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:02
Surr: 1,2-Dichloroethane-d4	*92.4*			**0**	*81-118*	*%REC*	*1*	*19-May-2021 14:02*
Surr: 4-Bromofluorobenzene	*92.7*			**0**	*85-114*	*%REC*	*1*	*19-May-2021 14:02*
Surr: Dibromofluoromethane	*89.9*			**0**	*80-119*	*%REC*	*1*	*19-May-2021 14:02*
Surr: Toluene-d8	*111*			**0**	*89-112*	*%REC*	*1*	*19-May-2021 14:02*
TOTAL ORGANIC CARBON - SM5310B		**Method:SM5310B**						Analyst: JAC
Organic Carbon, Total	**0.928**	J	**0.500**	**0.500**	**1.00**	**mg/L**	1	20-May-2021 01:00
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**1.25**		**0.200**	**0.500**	**0.500**	**mg/L**	1	14-May-2021 14:46
Nitrogen, Nitrate (As N)	**0.0796**	J	**0.0300**	**0.100**	**0.100**	**mg/L**	1	14-May-2021 14:46
Sulfate	**12.6**		**0.200**	**0.500**	**0.500**	**mg/L**	1	14-May-2021 14:46
SUBCONTRACT ANALYSIS - RSK		**Method:NA**						Analyst: SUBCA
Subcontract Analysis	See Attached		0	0		NA	1	28-May-2021 09:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW10-210513
Collection Date: 13-May-2021 09:40

ANALYTICAL REPORT
WorkOrder:HS21050697
Lab ID:HS21050697-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:23
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:23
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:23
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:23
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:23
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:23
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:23
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:23
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:23
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	19-May-2021 14:23
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	19-May-2021 14:23
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:23
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	19-May-2021 14:23
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	19-May-2021 14:23
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:23
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:23
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:23
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	19-May-2021 14:23
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:23
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW10-210513
Collection Date: 13-May-2021 09:40

ANALYTICAL REPORT
WorkOrder:HS21050697
Lab ID:HS21050697-04
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	19-May-2021 14:23
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	19-May-2021 14:23
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	19-May-2021 14:23
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-May-2021 14:23
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:23
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
Tetrachloroethene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
Trichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:23
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:23
Surr: 1,2-Dichloroethane-d4	*93.9*			**0**	*81-118*	*%REC*	*1*	*19-May-2021 14:23*
Surr: 4-Bromofluorobenzene	*90.3*			**0**	*85-114*	*%REC*	*1*	*19-May-2021 14:23*
Surr: Dibromofluoromethane	*91.8*			**0**	*80-119*	*%REC*	*1*	*19-May-2021 14:23*
Surr: Toluene-d8	*111*			**0**	*89-112*	*%REC*	*1*	*19-May-2021 14:23*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW05-210513
Collection Date: 13-May-2021 10:25

ANALYTICAL REPORT
WorkOrder:HS21050697
Lab ID:HS21050697-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:44
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:44
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:44
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:44
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:44
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:44
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:44
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:44
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:44
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	19-May-2021 14:44
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	19-May-2021 14:44
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:44
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	19-May-2021 14:44
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	19-May-2021 14:44
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:44
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:44
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:44
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	19-May-2021 14:44
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 14:44
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: 35BWW05-210513
Collection Date: 13-May-2021 10:25

ANALYTICAL REPORT
WorkOrder:HS21050697
Lab ID:HS21050697-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	19-May-2021 14:44
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	19-May-2021 14:44
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	19-May-2021 14:44
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-May-2021 14:44
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 14:44
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
Tetrachloroethene	**2.5**		**0.30**	**1.0**	**1.0**	**ug/L**	1	19-May-2021 14:44
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
Trichloroethene	**6.3**		**0.20**	**0.50**	**1.0**	**ug/L**	1	19-May-2021 14:44
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 14:44
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 14:44
Surr: 1,2-Dichloroethane-d4	*92.4*			**0**	*81-118*	*%REC*	*1*	*19-May-2021 14:44*
Surr: 4-Bromofluorobenzene	*85.0*			**0**	*85-114*	*%REC*	*1*	*19-May-2021 14:44*
Surr: Dibromofluoromethane	*90.5*			**0**	*80-119*	*%REC*	*1*	*19-May-2021 14:44*
Surr: Toluene-d8	*108*			**0**	*89-112*	*%REC*	*1*	*19-May-2021 14:44*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: LHSMW58-210513
Collection Date: 13-May-2021 11:05

ANALYTICAL REPORT
WorkOrder:HS21050697
Lab ID:HS21050697-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 15:05
1,1,2-Trichlor-1,2,2-trifluoroethane	**0.73**	J	**0.50**	**1.0**	**1.0**	**ug/L**	1	19-May-2021 15:05
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 15:05
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 15:05
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 15:05
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 15:05
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 15:05
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 15:05
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 15:05
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
2-Butanone	1.0	U	0.50	1.0	2.0	ug/L	1	19-May-2021 15:05
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
2-Hexanone	2.0	U	1.0	2.0	2.0	ug/L	1	19-May-2021 15:05
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 15:05
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	ug/L	1	19-May-2021 15:05
Acetone	2.0	U	0.40	2.0	2.0	ug/L	1	19-May-2021 15:05
Benzene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
Bromobenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 15:05
Bromochloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
Bromodichloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
Bromoform	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 15:05
Bromomethane	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 15:05
Carbon disulfide	2.0	U	0.60	2.0	2.0	ug/L	1	19-May-2021 15:05
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	ug/L	1	19-May-2021 15:05
Chlorobenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Sample ID: LHSMW58-210513
Collection Date: 13-May-2021 11:05

ANALYTICAL REPORT
WorkOrder:HS21050697
Lab ID:HS21050697-06
Matrix:Groundwater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloroethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
Chloroform	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
Chloromethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	ug/L	1	19-May-2021 15:05
Dibromochloromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
Dibromomethane	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
Ethylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	ug/L	1	19-May-2021 15:05
Isopropylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
m,p-Xylene	1.0	U	0.50	1.0	2.0	ug/L	1	19-May-2021 15:05
Methylene chloride	2.0	U	0.40	2.0	2.0	ug/L	1	19-May-2021 15:05
n-Butylbenzene	1.0	U	0.40	1.0	1.0	ug/L	1	19-May-2021 15:05
n-Propylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
Naphthalene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
o-Xylene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
Styrene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
Tetrachloroethene	**19**		**0.30**	**1.0**	**1.0**	**ug/L**	1	19-May-2021 15:05
Toluene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
Trichloroethene	**1.1**		**0.20**	**0.50**	**1.0**	**ug/L**	1	19-May-2021 15:05
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	ug/L	1	19-May-2021 15:05
Vinyl chloride	0.50	U	0.20	0.50	1.0	ug/L	1	19-May-2021 15:05
Surr: 1,2-Dichloroethane-d4	*91.5*			**0**	*81-118*	*%REC*	*1*	*19-May-2021 15:05*
Surr: 4-Bromofluorobenzene	*87.1*			**0**	*85-114*	*%REC*	*1*	*19-May-2021 15:05*
Surr: Dibromofluoromethane	*91.5*			**0**	*80-119*	*%REC*	*1*	*19-May-2021 15:05*
Surr: Toluene-d8	*109*			**0**	*89-112*	*%REC*	*1*	*19-May-2021 15:05*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R383778 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Groundwater	
HS21050697-01	35BWW26-210513	13 May 2021 07:10			14 May 2021 14:38	1
HS21050697-03	35BWW08-210513	13 May 2021 08:45			14 May 2021 14:46	1
Batch ID: R383987 (0)	**Test Name :** TOTAL ORGANIC CARBON - SM5310B				**Matrix:** Groundwater	
HS21050697-01	35BWW26-210513	13 May 2021 07:10			20 May 2021 00:46	1
HS21050697-03	35BWW08-210513	13 May 2021 08:45			20 May 2021 01:00	1
Batch ID: R384028 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Groundwater	
HS21050697-01	35BWW26-210513	13 May 2021 07:10			19 May 2021 13:20	1
HS21050697-02	35BWW01-210513	13 May 2021 08:00			19 May 2021 13:41	1
HS21050697-03	35BWW08-210513	13 May 2021 08:45			19 May 2021 14:02	1
HS21050697-04	35BWW10-210513	13 May 2021 09:40			19 May 2021 14:23	1
HS21050697-05	35BWW05-210513	13 May 2021 10:25			19 May 2021 14:44	1
HS21050697-06	LHSMW58-210513	13 May 2021 11:05			19 May 2021 15:05	1
Batch ID: R384568 (0)	**Test Name :** SUBCONTRACT ANALYSIS - RSK				**Matrix:** Groundwater	
HS21050697-01	35BWW26-210513	13 May 2021 07:10			28 May 2021 09:11	1
HS21050697-03	35BWW08-210513	13 May 2021 08:45			28 May 2021 09:11	1

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210519** Units: **ug/L** Analysis Date: **19-May-2021 12:59**
Client ID: Run ID: **VOA6_384028** SeqNo: **6101732** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichlor-1,2,2-trifluoroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	1.0	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	2.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210519** Units: **ug/L** Analysis Date: **19-May-2021 12:59**
Client ID: Run ID: **VOA6_384028** SeqNo: **6101732** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	1.0	1.0								U
Carbon disulfide	2.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	2.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*47.28*	*1.0*	*50*	*0*	*94.6*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*46.67*	*1.0*	*50*	*0*	*93.3*	*85 - 114*				
Surr: Dibromofluoromethane	*45.94*	*1.0*	*50*	*0*	*91.9*	*80 - 119*				

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-210519** Units: **ug/L** Analysis Date: **19-May-2021 12:59**
Client ID: Run ID: **VOA6_384028** SeqNo: **6101732** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*54.75*	*1.0*	*50*	*0*	*109*	*89 - 112*				

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-210519** Units: **ug/L** Analysis Date: **19-May-2021 12:17**
Client ID: Run ID: **VOA6_384028** SeqNo: **6101731** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.49	1.0	20	0	92.4	78 - 124				
1,1,1-Trichloroethane	19.26	1.0	20	0	96.3	74 - 131				
1,1,2,2-Tetrachloroethane	17.67	1.0	20	0	88.4	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	14.79	1.0	20	0	74.0	70 - 136				
1,1,2-Trichloroethane	18.11	1.0	20	0	90.5	80 - 119				
1,1-Dichloroethane	19.74	1.0	20	0	98.7	77 - 125				
1,1-Dichloroethene	17.45	1.0	20	0	87.3	71 - 131				
1,1-Dichloropropene	18.84	1.0	20	0	94.2	78 - 125				
1,2,3-Trichlorobenzene	17.33	1.0	20	0	86.6	69 - 129				
1,2,3-Trichloropropane	17.49	1.0	20	0	87.4	73 - 122				
1,2,4-Trichlorobenzene	18.2	1.0	20	0	91.0	69 - 130				
1,2,4-Trimethylbenzene	18.78	1.0	20	0	93.9	76 - 124				
1,2-Dibromo-3-chloropropane	17.04	1.0	20	0	85.2	62 - 128				
1,2-Dibromoethane	18.61	1.0	20	0	93.1	77 - 121				
1,2-Dichlorobenzene	17.71	1.0	20	0	88.5	80 - 119				
1,2-Dichloroethane	20.16	1.0	20	0	101	73 - 128				
1,2-Dichloropropane	19.27	1.0	20	0	96.3	78 - 122				
1,3,5-Trimethylbenzene	18.82	1.0	20	0	94.1	75 - 124				
1,3-Dichlorobenzene	19.13	1.0	20	0	95.6	80 - 119				
1,3-Dichloropropane	19.14	1.0	20	0	95.7	80 - 119				
1,4-Dichlorobenzene	19.24	1.0	20	0	96.2	79 - 118				
2,2-Dichloropropane	20.29	1.0	20	0	101	60 - 139				
2-Butanone	36.81	2.0	40	0	92.0	56 - 143				
2-Chlorotoluene	18.57	1.0	20	0	92.9	79 - 122				
2-Hexanone	34.55	2.0	40	0	86.4	57 - 139				
4-Chlorotoluene	19.32	1.0	20	0	96.6	78 - 122				
4-Isopropyltoluene	18.57	1.0	20	0	92.8	77 - 127				
4-Methyl-2-pentanone	35.91	2.0	40	0	89.8	67 - 130				
Acetone	42.44	2.0	40	0	106	39 - 160				
Benzene	19.55	1.0	20	0	97.8	79 - 120				
Bromobenzene	19.62	1.0	20	0	98.1	80 - 120				
Bromochloromethane	19.32	1.0	20	0	96.6	78 - 123				
Bromodichloromethane	19.66	1.0	20	0	98.3	79 - 125				
Bromoform	16.94	1.0	20	0	84.7	66 - 130				

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-210519** Units: **ug/L** Analysis Date: **19-May-2021 12:17**
Client ID: Run ID: **VOA6_384028** SeqNo: **6101731** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	22.13	1.0	20	0	111	53 - 141				
Carbon disulfide	39.11	2.0	40	0	97.8	64 - 133				
Carbon tetrachloride	17.83	1.0	20	0	89.1	72 - 136				
Chlorobenzene	18.89	1.0	20	0	94.5	82 - 118				
Chloroethane	20.77	1.0	20	0	104	60 - 138				
Chloroform	19.62	1.0	20	0	98.1	79 - 124				
Chloromethane	21.97	1.0	20	0	110	50 - 139				
cis-1,2-Dichloroethene	19.62	1.0	20	0	98.1	78 - 123				
cis-1,3-Dichloropropene	20.32	1.0	20	0	102	75 - 124				
Dibromochloromethane	18.64	1.0	20	0	93.2	74 - 126				
Dibromomethane	19.83	1.0	20	0	99.1	79 - 123				
Dichlorodifluoromethane	19.4	1.0	20	0	97.0	32 - 152				
Ethylbenzene	18.57	1.0	20	0	92.9	79 - 121				
Hexachlorobutadiene	21.11	1.0	20	0	106	66 - 134				
Isopropylbenzene	17.97	1.0	20	0	89.8	72 - 131				
m,p-Xylene	37.24	2.0	40	0	93.1	80 - 121				
Methylene chloride	19.96	2.0	20	0	99.8	74 - 124				
Naphthalene	17.59	1.0	20	0	88.0	61 - 128				
n-Butylbenzene	18.51	1.0	20	0	92.6	75 - 128				
n-Propylbenzene	18.81	1.0	20	0	94.0	76 - 126				
o-Xylene	18.25	1.0	20	0	91.3	78 - 122				
sec-Butylbenzene	17.88	1.0	20	0	89.4	77 - 126				
Styrene	18.63	1.0	20	0	93.2	78 - 123				
tert-Butylbenzene	17.31	1.0	20	0	86.5	78 - 124				
Tetrachloroethene	19.31	1.0	20	0	96.5	74 - 129				
Toluene	19.49	1.0	20	0	97.4	80 - 121				
trans-1,2-Dichloroethene	20.17	1.0	20	0	101	75 - 124				
trans-1,3-Dichloropropene	20.09	1.0	20	0	100	73 - 127				
Trichloroethene	19.71	1.0	20	0	98.6	79 - 123				
Trichlorofluoromethane	17.41	1.0	20	0	87.0	65 - 141				
Vinyl chloride	18.05	1.0	20	0	90.2	58 - 137				
Surr: 1,2-Dichloroethane-d4	*53.69*	*1.0*	*50*	*0*	*107*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.81*	*1.0*	*50*	*0*	*97.6*	*85 - 114*				
Surr: Dibromofluoromethane	*51.33*	*1.0*	*50*	*0*	*103*	*80 - 119*				

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-210519** Units: **ug/L** Analysis Date: **19-May-2021 12:17**
Client ID: Run ID: **VOA6_384028** SeqNo: **6101731** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*49.67*	*1.0*	*50*	*0*	*99.3*	*89 - 112*				

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21050697-03MS** Units: **ug/L** Analysis Date: **19-May-2021 15:26**
Client ID: **35BWW08-210513** Run ID: **VOA6_384028** SeqNo: **6101739** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.95	1.0	20	0	94.8	78 - 124				
1,1,1-Trichloroethane	19.93	1.0	20	0	99.7	74 - 131				
1,1,2,2-Tetrachloroethane	18.58	1.0	20	0	92.9	71 - 121				
1,1,2-Trichlor-1,2,2-trifluoroethane	20.07	1.0	20	0	100	70 - 136				
1,1,2-Trichloroethane	19.4	1.0	20	0	97.0	80 - 119				
1,1-Dichloroethane	16.89	1.0	20	0	84.4	77 - 125				
1,1-Dichloroethene	18.15	1.0	20	0	90.7	71 - 131				
1,1-Dichloropropene	20.37	1.0	20	0	102	78 - 125				
1,2,3-Trichlorobenzene	14.55	1.0	20	0	72.8	69 - 129				
1,2,3-Trichloropropane	18.07	1.0	20	0	90.3	73 - 122				
1,2,4-Trichlorobenzene	16.04	1.0	20	0	80.2	69 - 130				
1,2,4-Trimethylbenzene	19.74	1.0	20	0	98.7	76 - 124				
1,2-Dibromo-3-chloropropane	17.01	1.0	20	0	85.0	62 - 128				
1,2-Dibromoethane	19.52	1.0	20	0	97.6	77 - 121				
1,2-Dichlorobenzene	17.94	1.0	20	0	89.7	80 - 119				
1,2-Dichloroethane	19.59	1.0	20	0	98.0	73 - 128				
1,2-Dichloropropane	19.43	1.0	20	0	97.1	78 - 122				
1,3,5-Trimethylbenzene	20.93	1.0	20	0	105	75 - 124				
1,3-Dichlorobenzene	19.55	1.0	20	0	97.7	80 - 119				
1,3-Dichloropropane	19.34	1.0	20	0	96.7	80 - 119				
1,4-Dichlorobenzene	19.84	1.0	20	0	99.2	79 - 118				
2,2-Dichloropropane	18.59	1.0	20	0	93.0	60 - 139				
2-Butanone	28.63	2.0	40	0	71.6	56 - 143				
2-Chlorotoluene	20.11	1.0	20	0	101	79 - 122				
2-Hexanone	34.48	2.0	40	0	86.2	57 - 139				
4-Chlorotoluene	20.43	1.0	20	0	102	78 - 122				
4-Isopropyltoluene	20.56	1.0	20	0	103	77 - 127				
4-Methyl-2-pentanone	34.5	2.0	40	0	86.2	67 - 130				
Acetone	31.18	2.0	40	0	77.9	39 - 160				
Benzene	19.77	1.0	20	0	98.9	79 - 120				
Bromobenzene	20.2	1.0	20	0	101	80 - 120				
Bromochloromethane	17.78	1.0	20	0	88.9	78 - 123				
Bromodichloromethane	18.85	1.0	20	0	94.3	79 - 125				
Bromoform	17.83	1.0	20	0	89.1	66 - 130				

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21050697-03MS** Units: **ug/L** Analysis Date: **19-May-2021 15:26**
Client ID: **35BWW08-210513** Run ID: **VOA6_384028** SeqNo: **6101739** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromomethane	21.02	1.0	20	0	105	53 - 141				
Carbon disulfide	38.22	2.0	40	0	95.6	64 - 133				
Carbon tetrachloride	20.23	1.0	20	0	101	72 - 136				
Chlorobenzene	19.58	1.0	20	0	97.9	82 - 118				
Chloroethane	20.69	1.0	20	0	103	60 - 138				
Chloroform	17.66	1.0	20	0	88.3	79 - 124				
Chloromethane	18.62	1.0	20	0	93.1	50 - 139				
cis-1,2-Dichloroethene	18.16	1.0	20	0	90.8	78 - 123				
cis-1,3-Dichloropropene	19.14	1.0	20	0	95.7	75 - 124				
Dibromochloromethane	18.98	1.0	20	0	94.9	74 - 126				
Dibromomethane	18.76	1.0	20	0	93.8	79 - 123				
Dichlorodifluoromethane	17.1	1.0	20	0	85.5	32 - 152				
Ethylbenzene	21.01	1.0	20	0	105	79 - 121				
Hexachlorobutadiene	16.88	1.0	20	0	84.4	66 - 134				
Isopropylbenzene	20.99	1.0	20	0	105	72 - 131				
m,p-Xylene	40.81	2.0	40	0	102	80 - 121				
Methylene chloride	17.48	2.0	20	0	87.4	74 - 124				
Naphthalene	14.46	1.0	20	0	72.3	61 - 128				
n-Butylbenzene	19	1.0	20	0	95.0	75 - 128				
n-Propylbenzene	21.58	1.0	20	0	108	76 - 126				
o-Xylene	20.08	1.0	20	0	100	78 - 122				
sec-Butylbenzene	20.09	1.0	20	0	100	77 - 126				
Styrene	18.63	1.0	20	0	93.2	78 - 123				
tert-Butylbenzene	19.52	1.0	20	0	97.6	78 - 124				
Tetrachloroethene	23.08	1.0	20	0	115	74 - 129				
Toluene	20.9	1.0	20	0	104	80 - 121				
trans-1,2-Dichloroethene	18.5	1.0	20	0	92.5	75 - 124				
trans-1,3-Dichloropropene	19.2	1.0	20	0	96.0	73 - 127				
Trichloroethene	20.49	1.0	20	0	102	79 - 123				
Trichlorofluoromethane	19.54	1.0	20	0	97.7	65 - 141				
Vinyl chloride	18.16	1.0	20	0	90.8	58 - 137				
Surr: 1,2-Dichloroethane-d4	*49.09*	*1.0*	*50*	*0*	*98.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.87*	*1.0*	*50*	*0*	*97.7*	*85 - 114*				
Surr: Dibromofluoromethane	*47.9*	*1.0*	*50*	*0*	*95.8*	*80 - 119*				

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS21050697-03MS** Units: **ug/L** Analysis Date: **19-May-2021 15:26**
Client ID: **35BWW08-210513** Run ID: **VOA6_384028** SeqNo: **6101739** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*53.03*	*1.0*	*50*	*0*	*106*	*89 - 112*				

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS21050697-03MSD** Units: **ug/L** Analysis Date: **19-May-2021 15:48**
Client ID: **35BWW08-210513** Run ID: **VOA6_384028** SeqNo: **6101740** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.6	1.0	20	0	93.0	78 - 124	18.95	1.88	20	
1,1,1-Trichloroethane	19.3	1.0	20	0	96.5	74 - 131	19.93	3.25	20	
1,1,2,2-Tetrachloroethane	18.25	1.0	20	0	91.3	71 - 121	18.58	1.79	20	
1,1,2-Trichlor-1,2,2-trifluoroethane	19.75	1.0	20	0	98.8	70 - 136	20.07	1.62	20	
1,1,2-Trichloroethane	18.57	1.0	20	0	92.8	80 - 119	19.4	4.42	20	
1,1-Dichloroethane	16.21	1.0	20	0	81.0	77 - 125	16.89	4.11	20	
1,1-Dichloroethene	17.4	1.0	20	0	87.0	71 - 131	18.15	4.23	20	
1,1-Dichloropropene	19.31	1.0	20	0	96.6	78 - 125	20.37	5.35	20	
1,2,3-Trichlorobenzene	15.66	1.0	20	0	78.3	69 - 129	14.55	7.36	20	
1,2,3-Trichloropropane	17.99	1.0	20	0	89.9	73 - 122	18.07	0.449	20	
1,2,4-Trichlorobenzene	16.42	1.0	20	0	82.1	69 - 130	16.04	2.35	20	
1,2,4-Trimethylbenzene	18.86	1.0	20	0	94.3	76 - 124	19.74	4.58	20	
1,2-Dibromo-3-chloropropane	16.72	1.0	20	0	83.6	62 - 128	17.01	1.71	20	
1,2-Dibromoethane	19.59	1.0	20	0	97.9	77 - 121	19.52	0.344	20	
1,2-Dichlorobenzene	17.83	1.0	20	0	89.2	80 - 119	17.94	0.597	20	
1,2-Dichloroethane	19.49	1.0	20	0	97.5	73 - 128	19.59	0.5	20	
1,2-Dichloropropane	18.29	1.0	20	0	91.5	78 - 122	19.43	6	20	
1,3,5-Trimethylbenzene	19.5	1.0	20	0	97.5	75 - 124	20.93	7.09	20	
1,3-Dichlorobenzene	19.14	1.0	20	0	95.7	80 - 119	19.55	2.1	20	
1,3-Dichloropropane	18.61	1.0	20	0	93.0	80 - 119	19.34	3.87	20	
1,4-Dichlorobenzene	19.37	1.0	20	0	96.9	79 - 118	19.84	2.41	20	
2,2-Dichloropropane	18.36	1.0	20	0	91.8	60 - 139	18.59	1.25	20	
2-Butanone	28.18	2.0	40	0	70.5	56 - 143	28.63	1.55	20	
2-Chlorotoluene	18.78	1.0	20	0	93.9	79 - 122	20.11	6.86	20	
2-Hexanone	33.97	2.0	40	0	84.9	57 - 139	34.48	1.51	20	
4-Chlorotoluene	18.77	1.0	20	0	93.9	78 - 122	20.43	8.43	20	
4-Isopropyltoluene	19.17	1.0	20	0	95.9	77 - 127	20.56	6.96	20	
4-Methyl-2-pentanone	35	2.0	40	0	87.5	67 - 130	34.5	1.44	20	
Acetone	30.91	2.0	40	0	77.3	39 - 160	31.18	0.87	20	
Benzene	19.13	1.0	20	0	95.6	79 - 120	19.77	3.32	20	
Bromobenzene	18.87	1.0	20	0	94.3	80 - 120	20.2	6.84	20	
Bromochloromethane	17.85	1.0	20	0	89.3	78 - 123	17.78	0.383	20	
Bromodichloromethane	18.41	1.0	20	0	92.0	79 - 125	18.85	2.39	20	
Bromoform	17.07	1.0	20	0	85.4	66 - 130	17.83	4.33	20	

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS21050697-03MSD** Units: **ug/L** Analysis Date: **19-May-2021 15:48**
Client ID: **35BWW08-210513** Run ID: **VOA6_384028** SeqNo: **6101740** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Bromomethane	20.15	1.0	20	0	101	53 - 141	21.02	4.23	20	
Carbon disulfide	36.06	2.0	40	0	90.1	64 - 133	38.22	5.83	20	
Carbon tetrachloride	18.76	1.0	20	0	93.8	72 - 136	20.23	7.58	20	
Chlorobenzene	18.96	1.0	20	0	94.8	82 - 118	19.58	3.2	20	
Chloroethane	16.55	1.0	20	0	82.8	60 - 138	20.69	22.2	20	R
Chloroform	17.29	1.0	20	0	86.4	79 - 124	17.66	2.11	20	
Chloromethane	18.72	1.0	20	0	93.6	50 - 139	18.62	0.547	20	
cis-1,2-Dichloroethene	17.76	1.0	20	0	88.8	78 - 123	18.16	2.22	20	
cis-1,3-Dichloropropene	18.45	1.0	20	0	92.2	75 - 124	19.14	3.66	20	
Dibromochloromethane	18.45	1.0	20	0	92.3	74 - 126	18.98	2.84	20	
Dibromomethane	18.19	1.0	20	0	90.9	79 - 123	18.76	3.07	20	
Dichlorodifluoromethane	17.19	1.0	20	0	86.0	32 - 152	17.1	0.574	20	
Ethylbenzene	19.84	1.0	20	0	99.2	79 - 121	21.01	5.72	20	
Hexachlorobutadiene	17.77	1.0	20	0	88.9	66 - 134	16.88	5.19	20	
Isopropylbenzene	19.84	1.0	20	0	99.2	72 - 131	20.99	5.65	20	
m,p-Xylene	39.02	2.0	40	0	97.6	80 - 121	40.81	4.49	20	
Methylene chloride	16.88	2.0	20	0	84.4	74 - 124	17.48	3.54	20	
Naphthalene	14.9	1.0	20	0	74.5	61 - 128	14.46	2.96	20	
n-Butylbenzene	18.65	1.0	20	0	93.2	75 - 128	19	1.86	20	
n-Propylbenzene	20.06	1.0	20	0	100	76 - 126	21.58	7.33	20	
o-Xylene	18.76	1.0	20	0	93.8	78 - 122	20.08	6.81	20	
sec-Butylbenzene	19.03	1.0	20	0	95.2	77 - 126	20.09	5.39	20	
Styrene	18.1	1.0	20	0	90.5	78 - 123	18.63	2.92	20	
tert-Butylbenzene	18.9	1.0	20	0	94.5	78 - 124	19.52	3.22	20	
Tetrachloroethene	21.69	1.0	20	0	108	74 - 129	23.08	6.2	20	
Toluene	20.14	1.0	20	0	101	80 - 121	20.9	3.67	20	
trans-1,2-Dichloroethene	18.07	1.0	20	0	90.3	75 - 124	18.5	2.39	20	
trans-1,3-Dichloropropene	19.29	1.0	20	0	96.4	73 - 127	19.2	0.464	20	
Trichloroethene	19.56	1.0	20	0	97.8	79 - 123	20.49	4.66	20	
Trichlorofluoromethane	18.48	1.0	20	0	92.4	65 - 141	19.54	5.58	20	
Vinyl chloride	16.97	1.0	20	0	84.8	58 - 137	18.16	6.79	20	
Surr: 1,2-Dichloroethane-d4	*49.48*	*1.0*	*50*	*0*	*99.0*	*81 - 118*	*49.09*	*0.787*	*20*	
Surr: 4-Bromofluorobenzene	*48.92*	*1.0*	*50*	*0*	*97.8*	*85 - 114*	*48.87*	*0.0908*	*20*	
Surr: Dibromofluoromethane	*47.64*	*1.0*	*50*	*0*	*95.3*	*80 - 119*	*47.9*	*0.548*	*20*	

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R384028 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS21050697-03MSD** Units: **ug/L** Analysis Date: **19-May-2021 15:48**
Client ID: **35BWW08-210513** Run ID: **VOA6_384028** SeqNo: **6101740** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Toluene-d8	*52.56*	*1.0*	*50*	*0*	*105*	*89 - 112*	*53.03*	*0.897*	*20*	

The following samples were analyzed in this batch: HS21050697-01 HS21050697-02 HS21050697-03 HS21050697-04 HS21050697-05 HS21050697-06

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R383778 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

MBLK Sample ID: **MBLK-** Units: **mg/L** Analysis Date: **14-May-2021 10:18**
Client ID: Run ID: **ICS-Integrion_383778** SeqNo: **6095616** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								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: **14-May-2021 10:26**
Client ID: Run ID: **ICS-Integrion_383778** SeqNo: **6095617** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.88	0.500	20	0	99.4	80 - 120				
Nitrogen, Nitrate (As N)	3.808	0.100	4	0	95.2	80 - 120				
Sulfate	20.14	0.500	20	0	101	80 - 120				

MS Sample ID: **HS21050697-03MS** Units: **mg/L** Analysis Date: **14-May-2021 14:53**
Client ID: **35BWW08-210513** Run ID: **ICS-Integrion_383778** SeqNo: **6095625** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	11.23	0.500	10	1.25	99.8	80 - 120				
Nitrogen, Nitrate (As N)	2.092	0.100	2	0.0796	101	80 - 120				
Sulfate	22.09	0.500	10	12.56	95.2	80 - 120				

MSD Sample ID: **HS21050697-03MSD** Units: **mg/L** Analysis Date: **14-May-2021 15:00**
Client ID: **35BWW08-210513** Run ID: **ICS-Integrion_383778** SeqNo: **6095626** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	11.41	0.500	10	1.25	102	80 - 120	11.23	1.59	20	
Nitrogen, Nitrate (As N)	2.129	0.100	2	0.0796	102	80 - 120	2.092	1.76	20	
Sulfate	22.63	0.500	10	12.56	101	80 - 120	22.09	2.44	20	

The following samples were analyzed in this batch: HS21050697-01 HS21050697-03

Revision: 1

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: HS21050697

QC BATCH REPORT

Batch ID: R383987 (0) **Instrument:** TOC_04 **Method:** TOTAL ORGANIC CARBON - SM5310B

MBLK Sample ID: **MBLK-05192021** Units: **mg/L** Analysis Date: **19-May-2021 23:57**
Client ID: Run ID: **TOC_04_383987** SeqNo: **6100940** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	0.500	1.00								U

LCS Sample ID: **LCS-05192021** Units: **mg/L** Analysis Date: **20-May-2021 00:09**
Client ID: Run ID: **TOC_04_383987** SeqNo: **6100941** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.21	1.00	10	0	102	85 - 115				

LCSD Sample ID: **LCSD-05192021** Units: **mg/L** Analysis Date: **20-May-2021 00:20**
Client ID: Run ID: **TOC_04_383987** SeqNo: **6100942** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.09	1.00	10	0	101	85 - 115	10.21	1.18	20	

MS Sample ID: **HS21050697-03MS** Units: **mg/L** Analysis Date: **20-May-2021 01:15**
Client ID: **35BWW08-210513** Run ID: **TOC_04_383987** SeqNo: **6100946** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	12.37	1.00	10	0.9276	114	80 - 120				

The following samples were analyzed in this batch: HS21050697-01 HS21050697-03

Revision: 1

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
WorkOrder: **HS21050697**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322021-7	09-May-2022
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022
Utah	TX026932021-10	31-Jul-2021

ALS Houston, US Date: 09-Jun-21

Client: Aptim Environmental & Infrastucture, Inc.
Project: LHAAP 37 May 2021
Work Order: HS21050697

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS21050697-01	35BWW26-210513	Login	5/14/2021 12:34:31 PM	JRM	WET037
HS21050697-01	35BWW26-210513	Login	5/14/2021 12:34:31 PM	JRM	VOA042
HS21050697-01	35BWW26-210513	Login	5/14/2021 12:34:31 PM	JRM	WET037
HS21050697-01	35BWW26-210513	Login	5/14/2021 12:34:31 PM	JRM	Sub
HS21050697-02	35BWW01-210513	Login	5/14/2021 12:34:31 PM	JRM	VOA042

Revision:1

ALS Houston, US Date: 09-Jun-21

Sample Receipt Checklist

Work Order ID: HS21050697 **Date/Time Received:** 14-May-2021 09:25

Client Name: CBI-Houston **Received by:** Jared R. Makan

Completed By: /S/ Jared R. Makan (eSignature) 14-May-2021 12:18 (Date/Time) **Reviewed by:** /S/ Ragen Giga (eSignature) 17-May-2021 08:58 (Date/Time)

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	0.8°C UC/C	IR31	
Cooler(s)/Kit(s):	46963		
Date/Time sample(s) sent to storage:	05/14/2021 12:55		
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: R.J Modashia

Project: APTIM LONGHORN
ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. 501032

Job: **LHAAP 37 May 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 (chloride sulfate, nitrate) by SW9056	CO2 by RSK 175	Perchlorate by SW6850	Remarks (Preservatives, etc.)	Lab I.D.#
35Bww26-210513	wG	5/13/21/0710		12	X	X	X	X	X			
35Bww01-210513	wG	5/13/21/0800		3	X							
35Bww08-210513	wG	5/13/21/0845		12	X	X	X	X	X			
35Bww08-210513-ms	wG	5/13/21/0845		12	X	X	X	X	X			
35Bww08-210513-msD	wG	5/13/21/0845		12	X	X	X	X	X			
35Bww10-210513	wG	5/13/21/0940		3	X							
35Bww05-210513	wG	5/13/21/1025		3	X							
LHSmw58-210513	wG	5/13/21/1105		3	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	5/13/21	1430	Patti Mac	5/14/21	9:35						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

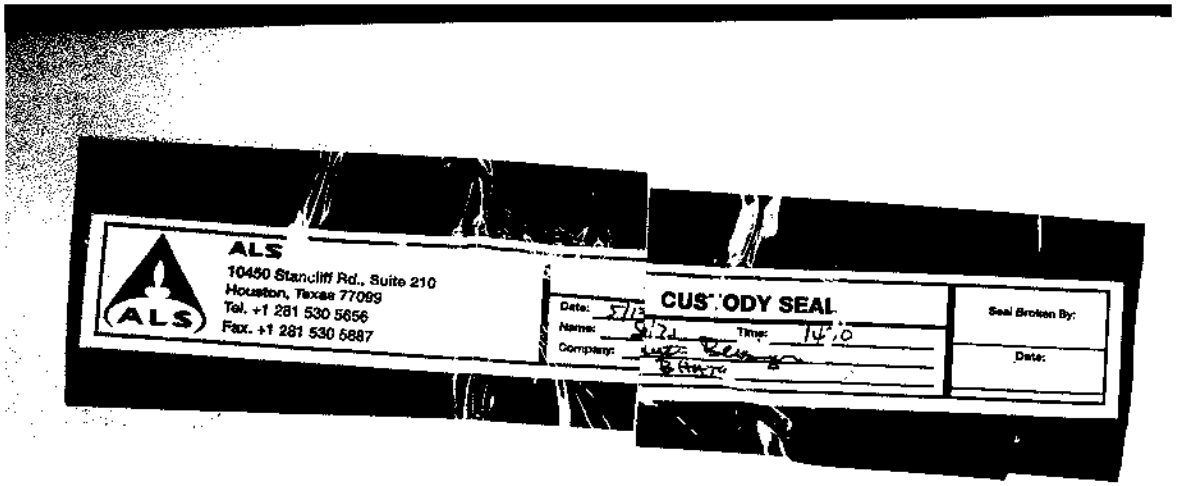
Remarks:

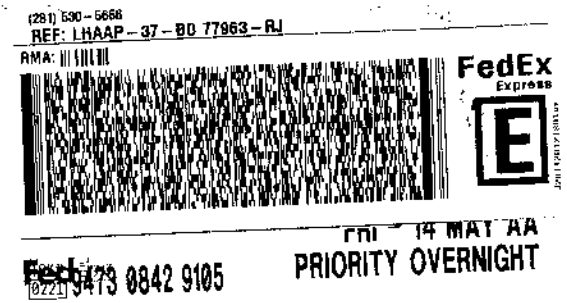
46463 0.EC (R3) CPo

HS21050697

Aptim Environmental & Infrastucture, Inc.
Longhorn Army Ammunition Plant

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
CUSTODY SEAL
Seal Broken By:
Date:


(281) 530-5656
REF: LHAAP-37-BD 77963-RJ
RMA:
FedEx
Express
FRI - 14 MAY AA
PRIORITY OVERNIGHT
9473 0842 9105

LABORATORY REPORT

May 27, 2021

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road Suite 210
Houston, TX 77099-4338

RE: HS21050697

Dear RJ:

Enclosed are the results of the samples submitted to our laboratory on May 18, 2021. For your reference, these analyses have been assigned our service request number P2102701.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Hayden Akers at 6:06 pm, May 27, 2021

Hayden Akers
Project Manager

Client: ALS Laboratory Group
Project: HS21050697

Service Request No: P2102701

CASE NARRATIVE

The samples were received intact under chain of custody on May 18, 2021 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175 as described in laboratory SOP VOA-DISGAS. This analyte is included on the laboratory's NELAP and DoD-ELAP scope of accreditation.

Methane, Ethene and Ethane Analysis

The samples were analyzed for methane, ethene, and ethane using a gas chromatograph equipped with a flame ionization detector (FID). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least two hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gases (methane, ethene and ethane) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP accreditation.

Client: ALS Laboratory Group Service Request No: P2102701
Project: HS21050697

Manual integrations were performed on the following samples and analyte. Refer to the raw data for additional information.

Sample Identification(s)	Analyte(s)
P2102701-002msd	methane

The recovery for ethane for the matrix spike was below the DoD specified limit. However all criteria were met with the laboratory control spike and laboratory control spike duplicate.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-008
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Laboratory Group
Service Request: P2102701
Project ID: HS21050697

Date Received: 5/18/2021
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2	RSK 175 - Gases
35BWW26_210513	P2102701-001	Water	5/13/2021	07:10	X	X
35BWW08_210513	P2102701-002	Water	5/13/2021	08:45	X	X

R407701

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:** **16124**

SUBCONTRACT TO:

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065

Phone: +1 805 526 7161

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS21050697
TSR:	Sonia West

	LAB SAMPLE ID / ANALYSIS REQUESTED	CLIENT SAMPLE ID	MATRIX	COLLECT DATE / DUE DATE
1.	**HS21050697-01**	**35BWW26_210513**	**Groundwater**	**13 May 2021 07:10**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	28 May 2021
2.	**HS21050697-03**	**35BWW08_210513**	**Groundwater**	**13 May 2021 08:45**
	MEE + CO2. Provide DOD LV II & IV pdf separate. EDD. EQuIS 5.0 - Longhorn		Equis	28 May 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

HS21050697-03 MS/MSD

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 5/17/2021 1800.

Received By: _____ Date/Time: 5-18-21 0930

Cooler ID(s): _____ Temperature(s): 4.8 WS

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2102701

Project: HS21050697

Sample(s) received on: 5/18/2021 Date opened: 5/18/2021 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: ° C Blank Temperature: 4.8° C	Wet Ice		
8	Were **custody seals** on outside of cooler/Box/Container?	☒	☐	☐
	Location of seal(s)? Cooler lid. Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☒	☐	☐
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2102701-001.01	40mL VOA NP		5		A	CB 5/26/21
P2102701-001.02	40mL VOA NP				A	
P2102701-001.03	40mL VOA NP				A	
P2102701-001.04	40ml VOA HCL		1		A	CB 5/25/21
P2102701-001.05	40ml VOA HCL				A	
P2102701-001.06	40ml VOA HCL				A	
P2102701-002.01	40mL VOA NP				A	
P2102701-002.02	40mL VOA NP				A	
P2102701-002.03	40mL VOA NP				A	
P2102701-002.04	40ml VOA HCL		1		A	CB 5/25/21
P2102701-002.05	40ml VOA HCL		1		A	CB 5/25/21
P2102701-002.06	40ml VOA HCL		1		A	CB 5/25/21
P2102701-002.07	40mL VOA NP				A	
P2102701-002.08	40mL VOA NP				A	
P2102701-002.09	40mL VOA NP				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: ALS Laboratory Group Work order: P2102701

Project: HS21050697

Sample(s) received on: 5/18/2021 Date opened: 5/18/2021 by: ADAVID

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2102701-002.10	40mL VOA NP		5		A	CB 5/26/21
P2102701-002.11	40mL VOA NP		5		A	CB 5/26/21
P2102701-002.12	40mL VOA NP		5		A	CB 5/26/21
P2102701-002.13	40ml VOA HCL				A	
P2102701-002.14	40ml VOA HCL				A	
P2102701-002.15	40ml VOA HCL				A	
P2102701-002.16	40ml VOA HCL				A	
P2102701-002.17	40ml VOA HCL				A	
P2102701-002.18	40ml VOA HCL				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW26_210513**
Client Project ID: **HS21050697**

ALS Project ID: P2102701
ALS Sample ID: P2102701-001

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: 05/13/21
Date Received: 05/18/21
Date Analyzed: 05/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW08_210513**
Client Project ID: **HS21050697**

ALS Project ID: P2102701
ALS Sample ID: P2102701-002

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: 05/13/21
Date Received: 05/18/21
Date Analyzed: 05/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Sample ID: **Method Control Sample**
Client Project ID: **HS21050697**

ALS Project ID: P2102701
ALS Sample ID: P210525-MB

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
74-82-8	Methane	1.0	1.3	1.0	0.51	**U**
74-85-1	Ethene	0.55	1.0	0.55	0.24	**U**
74-84-0	Ethane	0.47	0.60	0.47	0.16	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

MATRIX SPIKE / DUPLICATE MATRIX SPIKE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW08_210513**
Client Project ID: **HS21050697**

ALS Project ID: P2102701
ALS Sample ID: P2102701-002MS
P2102701-002DMS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: 5/13/21
Date Received: 5/18/21
Date Analyzed: 5/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount MS / DMS µg/L	Sample Amount µg/L	Result MS µg/L	Result DMS µg/L	% Recovery MS	% Recovery DMS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.53	0.447	2.02	1.93	**62**	**59**	73-125	5	30	**N**
74-85-1	Ethene	4.40	ND	3.48	3.84	**79**	**87**	72-133	10	30	
74-84-0	Ethane	4.75	ND	3.42	3.64	**72**	**77**	74-131	7	30	**N**

N = The matrix spike recovery is not within control limits. See case narrative.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS21050697**

ALS Project ID: P2102701
ALS Sample ID: P210525-LCS
P210525-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/FID
Analyst: Connor Barrett
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/25/21
Volume(s) Analyzed: 0.10 ml(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/L	Result$_1$ LCS µg/L	Result$_1$ DLCS µg/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
74-82-8	Methane	2.52	2.52	2.38	**100**	**94**	73-125	6	26	
74-85-1	Ethene	4.40	5.15	5.10	**117**	**116**	72-133	0.9	11	
74-84-0	Ethane	4.72	5.01	4.92	**106**	**104**	74-131	2	10	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Laboratory Group**
Client Project ID: **HS21050697** ALS Project ID: P2102701

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Connor Barrett
Matrix: Liquid
Test Notes:

Date(s) Collected: 5/13/21
Date Received: 5/18/21
Date Analyzed: 5/26/21

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	LOQ µg/L	LOD µg/L	MDL µg/L	Data Qualifier
35BWW26_210513	P2102701-001	0.10	**330,000**	1,000	860	370	
35BWW08_210513	P2102701-002	0.050	**680,000**	2,000	1,700	740	
Method Control Sample	P210526-MB	0.10	860	1,000	860	370	**U**

The Method Control Sample is laboratory water carried through the entire analytical process.
U = Compound was analyzed for, but not detected above the laboratory detection limit.
LOQ = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

MATRIX SPIKE / DUPLICATE MATRIX SPIKE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **35BWW08_210513**
Client Project ID: **HS21050697**

ALS Project ID: P2102701
ALS Sample ID: P2102701-002MS
P2102701-002DMS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Connor Barrett
Matrix: Liquid
Test Notes:

Date Collected: ######
Date Received: ######
Date Analyzed: ######
Volume(s) Analyzed: 0.050 ml(s)

CAS #	Compound	Spike Amount MS / DMS ug/L	Sample Amount ug/L	Result MS ug/L	Result DMS ug/L	% Recovery MS	% Recovery DMS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	4,580	684,000	628,000	729,000	**0**	**983**	80-122	200	30	**N, R**

N = The matrix spike sample recovery is not within control limits. See case narrative.
R = Duplicate precision not met.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Laboratory Group**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2102701
Client Project ID: **HS21050697** ALS Sample ID: P210526-DLCS

Test Code: RSK 175 Date Collected: NA
Instrument ID: HP5890A/GC10/TCD Date Received: NA
Analyst: Connor Barrett Date Analyzed: 5/26/21
Matrix: Liquid Volume(s) Analyzed: NA ml(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result$_1$ LCS ug/L	Result$_1$ DLCS ug/L	% Recovery LCS	% Recovery DLCS	DOD Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	19,200	19,200	**84**	**84**	80-122	0	12	

$_1$ = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

HS21050697 8260_W_DOD Raw Data

ALS WO# HS21050697

MSVOA06 -Logbook

Batch: 44956 **Analyst:** Presenta Cabascango

Date: 05-18-2021 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	05-18-2021 11:02 am	1.00	50 mL	50 mL	X051801.D	Liquid	Y	NA
2	VSDT000.25	ICAL1	05-18-2021 11:23 am	1.00	50 mL	50 mL	X051802.D	Liquid	Y	NA
3	VSDT000.5	ICAL2	05-18-2021 11:43 am	1.00	50 mL	50 mL	X051803.D	Liquid	Y	NA
4	VSDT001	ICAL3	05-18-2021 12:25 pm	1.00	50 mL	50 mL	X051804.D	Liquid	Y	NA
5	VSDT002	ICAL4	05-18-2021 12:46 pm	1.00	50 mL	50 mL	X051805.D	Liquid	Y	NA
6	VSDT005	ICAL5	05-18-2021 01:07 pm	1.00	50 mL	50 mL	X051806.D	Liquid	Y	NA
7	VSDT020	ICAL6	05-18-2021 01:28 pm	1.00	50 mL	50 mL	X051807.D	Liquid	Y	NA
8	VSDT050	ICAL7	05-18-2021 01:49 pm	1.00	50 mL	50 mL	X051808.D	Liquid	Y	NA
9	VSDT100	ICAL8	05-18-2021 02:10 pm	1.00	50 mL	50 mL	X051809.D	Liquid	Y	NA
10	VSDT150	ICAL9	05-18-2021 02:31 pm	1.00	50 mL	50 mL	X051810.D	Liquid	Y	NA
11	VSDT200	ICAL	05-18-2021 02:52 pm	1.00	50 mL	50 mL	X051811.D	Liquid	Y	NA
12	BLANK	SAMP	05-18-2021 03:13 pm	1.00	50 mL	50 mL	X051812.D	Liquid	Y	NA
13	BLANK	CCV	05-18-2021 03:43 pm	1.00	50 mL	50 mL	X051813.D	Liquid	Y	NA
14	CCV	CCV	05-18-2021 04:04 pm	1.00	50 mL	50 mL	X051814.D	Liquid	Y	NA
15	BLANK	SAMP	05-18-2021 04:25 pm	1.00	50 mL	50 mL	X051815.D	Liquid	Y	NA
16	VLCSW-210518	LCS	05-18-2021 04:46 pm	1.00	50 mL	50 mL	X051816.D	Liquid	Y	NA
17	BLANK	SAMP	05-18-2021 05:07 pm	1.00	50 mL	50 mL	X051817.D	Liquid	Y	NA
18	BLANK	SAMP	05-18-2021 05:28 pm	1.00	50 mL	50 mL	X051818.D	Liquid	Y	NA
19	VBLKW-210518	MBLK	05-18-2021 05:49 pm	1.00	50 mL	50 mL	X051819.D	Liquid	Y	NA
20	HS21040303-13	SAMP	05-18-2021 06:10 pm	1.00	50 mL	50 mL	X051820.D	Liquid	Y	NA
21	HS21040303-14	SAMP	05-18-2021 06:31 pm	1.00	50 mL	50 mL	X051821.D	Liquid	Y	NA
22	HS21040303-15	SAMP	05-18-2021 06:52 pm	1.00	50 mL	50 mL	X051822.D	Liquid	Y	NA
23	HS21040303-16	SAMP	05-18-2021 07:13 pm	1.00	50 mL	50 mL	X051823.D	Liquid	Y	NA
24	HS21050689-01	SAMP	05-18-2021 07:34 pm	1.00	50 mL	50 mL	X051824.D	Liquid	Y	NA
25	HS21050689-02	SAMP	05-18-2021 07:55 pm	1.00	50 mL	50 mL	X051825.D	Liquid	Y	NA
26	HS21050553-03	SAMP	05-18-2021 08:16 pm	1.00	50 mL	50 mL	X051826.D	Liquid	Y	NA
27	HS21050553-01	SAMP	05-18-2021 08:37 pm	1.00	50 mL	50 mL	X051827.D	Liquid	Y	NA
28	HS21050689-01MS	MS	05-18-2021 08:58 pm	1.00	50 mL	50 mL	X051828.D	Liquid	Y	NA
29	HS21050689-01MSD	MSD	05-18-2021 09:19 pm	1.00	50 mL	50 mL	X051829.D	Liquid	Y	NA
30	CCV-END	CCV	05-18-2021 09:40 pm	1.00	50 mL	50 mL	X051830.D	Liquid	Y	NA
31	BLANK	SAMP	05-18-2021 10:01 pm	1.00	50 mL	50 mL	X051831.D	Liquid	Y	NA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050697

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	50.19	100	80-120
trans-1,3-Dichloroprope	50.00	52.04	104	80-120
1,3-Dichlorobenzene	50.00	47.75	96	80-120
2,2-Dichloropropane	50.00	50.09	100	80-120
1,1-Dichloropropene	50.00	48.31	97	80-120
Dibromomethane	50.00	50.15	100	80-120
1,2-Dibromoethane	50.00	51.94	104	80-120
trans-1,2-Dichloroethen	50.00	50.14	100	80-120
1,1,1,2-Tetrachloroetha	50.00	48.20	96	80-120
1,1,1-Trichloroethane	50.00	50.61	101	80-120
1,1,2,2-Tetrachloroetha	50.00	51.75	104	80-120
Toluene	50.00	49.96	100	80-120
1,1,2-Trichloroethane	50.00	50.03	100	80-120
1,1-Dichloroethane	50.00	47.25	94	80-120
1,1-Dichloroethene	50.00	47.25	94	80-120
Trichlorofluoromethane	50.00	48.01	96	80-120
1,2,3-Trichlorobenzene	50.00	59.14	118	80-120
Tetrachloroethene	50.00	50.18	100	80-120
1,2,4-Trichlorobenzene	50.00	53.39	107	80-120
1,2,4-Trimethylbenzene	50.00	46.88	94	80-120
tert-Butylbenzene	50.00	45.40	91	80-120
Trichloroethene	50.00	48.16	96	80-120
1,2-Dichlorobenzene	50.00	46.87	94	80-120
1,2-Dichloroethane	50.00	48.88	98	80-120
1,2-Dichloropropane	50.00	47.74	95	80-120
1,3,5-Trimethylbenzene	50.00	47.22	94	80-120
1,3-Dichloropropane	50.00	50.41	101	80-120
1,4-Dichlorobenzene	50.00	47.95	96	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050697

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Butanone	100.00	103.30	103	80-120
2-Chlorotoluene	50.00	45.74	91	80-120
2-Hexanone	100.00	104.71	105	80-120
4-Chlorotoluene	50.00	47.02	94	80-120
Styrene	50.00	46.53	93	80-120
4-Methyl-2-Pentanone	100.00	102.15	102	80-120
Acetone	100.00	117.46	117	80-120
Benzene	50.00	50.17	100	80-120
Bromobenzene	50.00	47.17	94	80-120
Bromochloromethane	50.00	48.14	96	80-120
Bromodichloromethane	50.00	49.36	99	80-120
Bromoform	50.00	52.15	104	80-120
Bromomethane	50.00	56.94	114	80-120
Carbon Disulfide	100.00	107.07	107	80-120
Carbon Tetrachloride	50.00	48.29	96	80-120
Chlorobenzene	50.00	47.89	96	80-120
Chloroethane	50.00	47.02	94	80-120
Chloroform	50.00	47.74	95	80-120
Chloromethane	50.00	51.81	104	80-120
cis-1,2-Dichloroethene	50.00	48.97	98	80-120
Dibromochloromethane	50.00	52.44	105	80-120
Dichlorodifluoromethane	50.00	51.12	102	80-120
Ethylbenzene	50.00	48.94	98	80-120
Hexachlorobutadiene	50.00	48.34	97	80-120
Isopropylbenzene	50.00	48.03	96	80-120
m,p-Xylenes	100.00	98.78	99	80-120
Methylene Chloride	50.00	49.43	99	80-120
n-Butylbenzene	50.00	47.59	95	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050697

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
n-Propylbenzene	50.00	47.46	95	80-120
Naphthalene	50.00	59.54	119	80-120
o-Xylene	50.00	48.60	97	80-120
sec-Butylbenzene	50.00	46.39	93	80-120
Vinyl Chloride	50.00	47.95	96	80-120
1,2,3-Trichloropropane	50.00	53.16	106	80-120
p-Isopropyltoluene	50.00	46.79	94	80-120
1,2-Dibromo-3-Chloropro	50.00	56.34	113	80-120
Freon TF	50.00	47.72	95	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050697

Lab File ID: X051801 BFB Injection Date: 05/18/21

Instrument ID: VOA6 BFB Injection Time: 1102

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.6
75	30.0 - 60.0% of mass 95	54.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	1.3 (1.6)1
174	Greater than 50.0% of mass 95	81.7
175	5.0 - 9.0% of mass 174	6.4 (7.8)1
176	95.0 - 101.0% of mass 174	78.5 (96.1)1
177	5.0 - 9.0% of mass 176	5.1 (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	VSDT000.25	X051802	05/18/21	1123
02	VSTD000.5	VSDT000.5	X051803	05/18/21	1143
03	VSTD001	VSDT001	X051804	05/18/21	1225
04	VSTD002	VSDT002	X051805	05/18/21	1246
05	VSTD005	VSDT005	X051806	05/18/21	1307
06	VSTD020	VSDT020	X051807	05/18/21	1328
07	VSTD050	VSDT050	X051808	05/18/21	1349
08	VSTD100	VSDT100	X051809	05/18/21	1410
09	VSTD150	VSDT150	X051810	05/18/21	1431
10	VSTD200	VSDT200	X051811	05/18/21	1452
11	ICV	ICV	X051814	05/18/21	1604
12					
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FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS21050697

Instrument ID: VOA6 Calibration Date(s): 05/18/21 05/18/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1452

LAB FILE ID: RF0.25: X051802 RF0.5: X051803 RF1: X051804
RF2: X051805 RF5: X051806 RF20: X051807

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.487	0.572	0.482	0.536	0.562
trans-1,3-Dichloropropene		0.362	0.481	0.462	0.448	0.484
1,3-Dichlorobenzene		1.298	1.784	1.444	1.385	1.313
2,2-Dichloropropane		0.814	0.849	0.827	0.820	0.784
1,1-Dichloropropene		0.489	0.470	0.395	0.427	0.399
Dibromomethane		0.205	0.266	0.241	0.239	0.244
1,2-Dibromoethane		0.268	0.371	0.360	0.338	0.348
trans-1,2-Dichloroethene		0.501	0.440	0.499	0.456	0.444
1,1,1,2-Tetrachloroethane		0.339	0.370	0.394	0.369	0.343
1,1,1-Trichloroethane		0.814	0.829	0.797	0.851	0.831
1,1,2,2-Tetrachloroethane		1276	3942	6612	14932	63561
Toluene		1.254	1.468	1.434	1.426	1.362
1,1,2-Trichloroethane		0.259	0.353	0.294	0.269	0.277
1,1-Dichloroethane		0.905	1.024	0.837	0.887	0.889
1,1-Dichloroethene		0.602	0.555	0.544	0.494	0.462
Trichlorofluoromethane		1.002	1.059	1.083	1.013	0.935
1,2,3-Trichlorobenzene		298	800	1755	3826	17129
Tetrachloroethene		0.267	0.257	0.293	0.265	0.257
1,2,4-Trichlorobenzene		425	1337	2176	7168	30700
1,2,4-Trimethylbenzene		2.442	3.010	2.493	2.447	2.264
tert-Butylbenzene		2.074	2.525	2.221	2.080	1.787
Trichloroethene		0.303	0.372	0.325	0.354	0.319
1,2-Dichlorobenzene		1.324	1.811	1.406	1.370	1.301
1,2-Dichloroethane		0.502	0.549	0.494	0.503	0.500
1,2-Dichloropropane		0.369	0.354	0.317	0.336	0.337
1,3,5-Trimethylbenzene		2.332	2.757	2.552	2.314	2.225
1,3-Dichloropropane		0.491	0.653	0.571	0.580	0.567
1,4-Dichlorobenzene		2775	6628	10925	24844	112231
2-Butanone		0.208	0.199	0.150	0.167	0.187
2-Chlorotoluene		2.577	2.759	2.223	2.151	1.969
2-Hexanone		1113	4644	6265	15257	64652
4-Chlorotoluene		2.534	3.056	2.582	2.471	2.392
Styrene		2465	6890	12689	31296	151430
4-Methyl-2-Pentanone		1863	6100	9786	23491	96386
Acetone		2121	2806	4685	8158	27873
Benzene		1.285	1.241	1.192	1.243	1.191
Bromobenzene		0.727	1.032	0.792	0.881	0.809
Bromochloromethane		0.300	0.313	0.305	0.314	0.288
Bromodichloromethane		0.468	0.503	0.466	0.483	0.472
Bromoform		0.227	0.256	0.199	0.227	0.224
Bromomethane		1623	3018	5999	15785	51157
Carbon Disulfide		1.049	1.194	1.138	1.099	1.092
Carbon Tetrachloride		0.420	0.447	0.466	0.436	0.396
Chlorobenzene		0.995	1.061	0.996	0.934	0.914

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2105069

Instrument ID: VOA6 Calibration Date(s): 05/18/21 05/18/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1452

LAB FILE ID: RF0.25: X051802 RF0.5: X051803 RF1: X051804
RF2: X051805 RF5: X051806 RF20: X051807

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroethane		0.482	0.365	0.357	0.373	0.414
Chloroform		1.117	1.077	0.992	1.081	1.060
Chloromethane		1464	3160	5348	14179	54108
cis-1,2-Dichloroethene		0.502	0.640	0.565	0.558	0.550
Dibromochloromethane		0.297	0.455	0.365	0.368	0.376
Dichlorodifluoromethane		1498	2403	5548	14123	57043
Ethylbenzene		0.480	0.478	0.501	0.476	0.437
Hexachlorobutadiene		285	1107	2099	4641	20104
Isopropylbenzene		1.418	1.528	1.397	1.412	1.315
m,p-Xylenes		0.569	0.620	0.605	0.597	0.581
Methylene Chloride		0.434	0.476	0.538	0.489	0.488
n-Butylbenzene		2.521	2.761	2.102	2.057	2.013
n-Propylbenzene		3.468	4.022	3.792	3.412	3.065
Naphthalene		406	1471	3094	8781	42386
o-Xylene		0.614	0.616	0.595	0.583	0.553
sec-Butylbenzene		2.812	3.226	3.184	2.734	2.527
Vinyl Chloride		0.706	0.637	0.668	0.630	0.574
1,2,3-Trichloropropane		851	3361	4744	9928	50993
p-Isopropyltoluene		2.384	2.876	2.412	2.335	2.132
1,2-Dibromo-3-Chloropropane		63	283	511	1184	4660
Freon TF		0.504	0.465	0.530	0.495	0.452
4-Bromofluorobenzene		3536	2729	7059	15616	68387
Dibromofluoromethane		1526	2671	5073	12495	55528
Toluene-d8		4554	7865	16788	42740	177650
1,2-Dichloroethane-d4		1965	3259	6073	16438	67187

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2105069

Instrument ID: VOA6 Calibration Date(s): 05/18/21 05/18/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1452

LAB FILE ID: RF50: X051808 RF100: X051809 RF150: X051810
RF200: X051811

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.551	0.592	0.579	0.572
trans-1,3-Dichloropropene	0.521	0.530	0.520	0.507
1,3-Dichlorobenzene	1.363	1.440	1.445	1.456
2,2-Dichloropropane	0.768	0.864	0.862	0.867
1,1-Dichloropropene	0.367	0.444	0.428	0.436
Dibromomethane	0.235	0.250	0.247	0.242
1,2-Dibromoethane	0.358	0.371	0.365	0.364
trans-1,2-Dichloroethene	0.449	0.491	0.520	0.530
1,1,1,2-Tetrachloroethane	0.357	0.371	0.368	0.368
1,1,1-Trichloroethane	0.809	0.898	0.909	0.916
1,1,2,2-Tetrachloroethane	192852	443127	690313	941646
Toluene	1.423	1.541	1.532	1.544
1,1,2-Trichloroethane	0.284	0.298	0.290	0.290
1,1-Dichloroethane	0.901	0.943	0.964	0.982
1,1-Dichloroethene	0.419	0.457	0.472	0.495
Trichlorofluoromethane	0.805	0.902	0.910	0.940
1,2,3-Trichlorobenzene	53322	129422	217046	307927
Tetrachloroethene	0.256	0.297	0.297	0.310
1,2,4-Trichlorobenzene	93881	230076	378072	556188
1,2,4-Trimethylbenzene	2.367	2.620	2.619	2.624
tert-Butylbenzene	1.852	2.157	2.163	2.202
Trichloroethene	0.310	0.337	0.326	0.332
1,2-Dichlorobenzene	1.264	1.348	1.378	1.410
1,2-Dichloroethane	0.493	0.481	0.458	0.443
1,2-Dichloropropane	0.324	0.336	0.328	0.324
1,3,5-Trimethylbenzene	2.338	2.608	2.633	2.704
1,3-Dichloropropane	0.567	0.572	0.569	0.548
1,4-Dichlorobenzene	328636	774191	1228277	1710708
2-Butanone	0.183	0.194	0.189	0.185
2-Chlorotoluene	2.002	2.129	2.128	2.118
2-Hexanone	184352	424072	684773	929961
4-Chlorotoluene	2.422	2.634	2.635	2.660
Styrene	468440	1137742	1857964	2618657
4-Methyl-2-Pentanone	268097	642103	1037606	1395319
Acetone	67628	161640	237075	336393
Benzene	1.208	1.285	1.250	1.237
Bromobenzene	0.778	0.824	0.832	0.827
Bromochloromethane	0.299	0.306	0.312	0.305
Bromodichloromethane	0.471	0.507	0.491	0.486
Bromoform	0.245	0.261	0.270	0.266
Bromomethane	137904	330862		
Carbon Disulfide	1.138	1.206	1.311	1.375
Carbon Tetrachloride	0.378	0.462	0.451	0.466
Chlorobenzene	0.935	0.993	0.978	1.018

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2105069

Instrument ID: VOA6 Calibration Date(s): 05/18/21 05/18/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1452

LAB FILE ID: RF50: X051808 RF100: X051809 RF150: X051810
RF200: X051811

COMPOUND	RF50	RF100	RF150	RF200
Chloroethane	0.336	0.369	0.350	0.361
Chloroform	1.018	1.075	1.069	1.070
Chloromethane	144469	323129	530291	760194
cis-1,2-Dichloroethene	0.555	0.596	0.612	0.608
Dibromochloromethane	0.398	0.419	0.416	0.421
Dichlorodifluoromethane	146727	385804	635388	916851
Ethylbenzene	0.466	0.513	0.501	0.507
Hexachlorobutadiene	54907	159233	251193	377761
Isopropylbenzene	1.391	1.613	1.599	1.652
m,p-Xylenes	0.611	0.676	0.672	0.689
Methylene Chloride	0.488	0.522	0.539	0.538
n-Butylbenzene	2.082	2.488	2.515	2.591
n-Propylbenzene	3.255	3.697	3.540	3.618
Naphthalene	135654	338098	555881	826266
o-Xylene	0.587	0.633	0.637	0.647
sec-Butylbenzene	2.562	3.072	3.064	3.195
Vinyl Chloride	0.520	0.554	0.560	0.583
1,2,3-Trichloropropane	161438	370826	570152	760241
p-Isopropyltoluene	2.228	2.603	2.576	2.673
1,2-Dibromo-3-Chloropropane	14297	35357	55728	81966
Freon TF	0.380	0.462	0.473	0.507
4-Bromofluorobenzene	197985	494712	751419	1039902
Dibromofluoromethane	145001	355480	559479	756859
Toluene-d8	483036	1269181		
1,2-Dichloroethane-d4	177225	428979	631492	867782

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2105069

Instrument ID: VOA6 Calibration Date(s): 05/18/21 05/18/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1452

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.54815013		7.198	15.000
trans-1,3-Dichloropropene	AVRG		0.47952641		10.867	15.000
1,3-Dichlorobenzene	AVRG		1.43648780		9.972	15.000
2,2-Dichloropropane	AVRG		0.82828869		4.331	15.000
1,1-Dichloropropene	AVRG		0.42830770		8.852	15.000
Dibromomethane	AVRG		0.24083691		6.728	15.000
1,2-Dibromoethane	AVRG		0.34906143		9.275	15.000
trans-1,2-Dichloroethene	AVRG		0.48104288		7.125	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.36426927		4.529	15.000
1,1,1-Trichloroethane	AVRG		0.85043801		5.394	15.000
1,1,2,2-Tetrachloroethane	LINR	-1.06e-002	1.22020858		0.9996255	0.9900000
Toluene	AVRG		1.44259465		6.537	15.000
1,1,2-Trichloroethane	AVRG		0.29044361		9.129	15.000
1,1-Dichloroethane	AVRG		0.92592468		6.216	15.000
1,1-Dichloroethene	AVRG		0.50003055		11.379	15.000
Trichlorofluoromethane	AVRG		0.96110314		9.038	15.000
1,2,3-Trichlorobenzene	2ORDR	9.632e-003	4.28133993	-0.5154682	0.9995826	0.9900000
Tetrachloroethene	AVRG		0.27783391		7.699	15.000
1,2,4-Trichlorobenzene	LINR	4.933e-002	2.11604080		0.9976091	0.9900000
1,2,4-Trimethylbenzene	AVRG		2.54299659		8.430	15.000
tert-Butylbenzene	AVRG		2.11785900		10.166	15.000
Trichloroethene	AVRG		0.33109441		6.506	15.000
1,2-Dichlorobenzene	AVRG		1.40138714		11.491	15.000
1,2-Dichloroethane	AVRG		0.49160844		6.118	15.000
1,2-Dichloropropane	AVRG		0.33602311		4.888	15.000
1,3,5-Trimethylbenzene	AVRG		2.49588490		7.816	15.000
1,3-Dichloropropane	AVRG		0.56857427		7.291	15.000
1,4-Dichlorobenzene	LINR	5.061e-003	0.67731606		0.9998297	0.9900000
2-Butanone	AVRG		0.18456292		9.299	15.000
2-Chlorotoluene	AVRG		2.22844412		11.870	15.000
2-Hexanone	LINR	-5.43e-003	4.72960490		0.9996417	0.9900000
4-Chlorotoluene	AVRG		2.59844887		7.579	15.000
Styrene	LINR	3.526e-002	0.84676544		0.9993765	0.9900000
4-Methyl-2-Pentanone	LINR	1.757e-003	3.13747126		0.9992518	0.9900000
Acetone	LINR	-0.1031195	8.31977183		0.9992475	0.9900000
Benzene	AVRG		1.23700589		2.821	15.000
Bromobenzene	AVRG		0.83350948		10.277	15.000
Bromochloromethane	AVRG		0.30471850		2.737	15.000
Bromodichloromethane	AVRG		0.48310323		3.112	15.000
Bromoform	AVRG		0.24181056		9.935	15.000
Bromomethane	LINR	-9.54e-003	1.92097258		0.9993822	0.9900000
Carbon Disulfide	AVRG		1.17802683		9.054	15.000
Carbon Tetrachloride	AVRG		0.43581111		7.302	15.000
Chlorobenzene	AVRG		0.98043280		4.719	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS HOUSTON Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2105069

Instrument ID: VOA6 Calibration Date(s): 05/18/21 05/18/21

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1452

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroethane	AVRG		0.37848234		11.670	15.000
Chloroform	AVRG		1.06227706		3.452	15.000
Chloromethane	LINR	4.72e-003	1.84566789		0.9991701	0.9900000
cis-1,2-Dichloroethene	AVRG		0.57624659		7.251	15.000
Dibromochloromethane	AVRG		0.39079995		11.706	15.000
Dichlorodifluoromethane	LINR	4.157e-002	1.52321051		0.9978249	0.9900000
Ethylbenzene	AVRG		0.48449831		4.945	15.000
Hexachlorobutadiene	LINR	6.372e-002	3.12063356		0.9952728	0.9900000
Isopropylbenzene	AVRG		1.48070600		8.062	15.000
m,p-Xylenes	AVRG		0.62439142		7.010	15.000
Methylene Chloride	AVRG		0.50138203		7.098	15.000
n-Butylbenzene	AVRG		2.34785648		12.003	15.000
n-Propylbenzene	AVRG		3.54120408		8.079	15.000
Naphthalene	LINR	6.205e-002	1.42523240		0.9969447	0.9900000
o-Xylene	AVRG		0.60729113		5.006	15.000
sec-Butylbenzene	AVRG		2.93063409		9.421	15.000
Vinyl Chloride	AVRG		0.60367291		9.968	15.000
1,2,3-Trichloropropane	LINR	-1.23e-002	1.49190380		0.9985771	0.9900000
p-Isopropyltoluene	AVRG		2.46870248		9.462	15.000
1,2-Dibromo-3-Chloropropane	LINR	3.21e-002	14.3600447		0.9984415	0.9900000
Freon TF	AVRG		0.47436754		9.201	15.000
4-Bromofluorobenzene	LINR	2.432e-003	2.11361156		0.9991459	0.9900000
Dibromofluoromethane	LINR	-4.56e-003	1.80361438		0.9994050	0.9900000
Toluene-d8	LINR	2.027e-002	0.79767420		0.9950610	0.9900000
1,2-Dichloroethane-d4	LINR	-2.54e-002	1.57628033		0.9986859	0.9900000

FORM VI VOA

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051801.D

Date : 18-MAY-2021 11:02

Client ID: BFB

Instrument: voa6.i

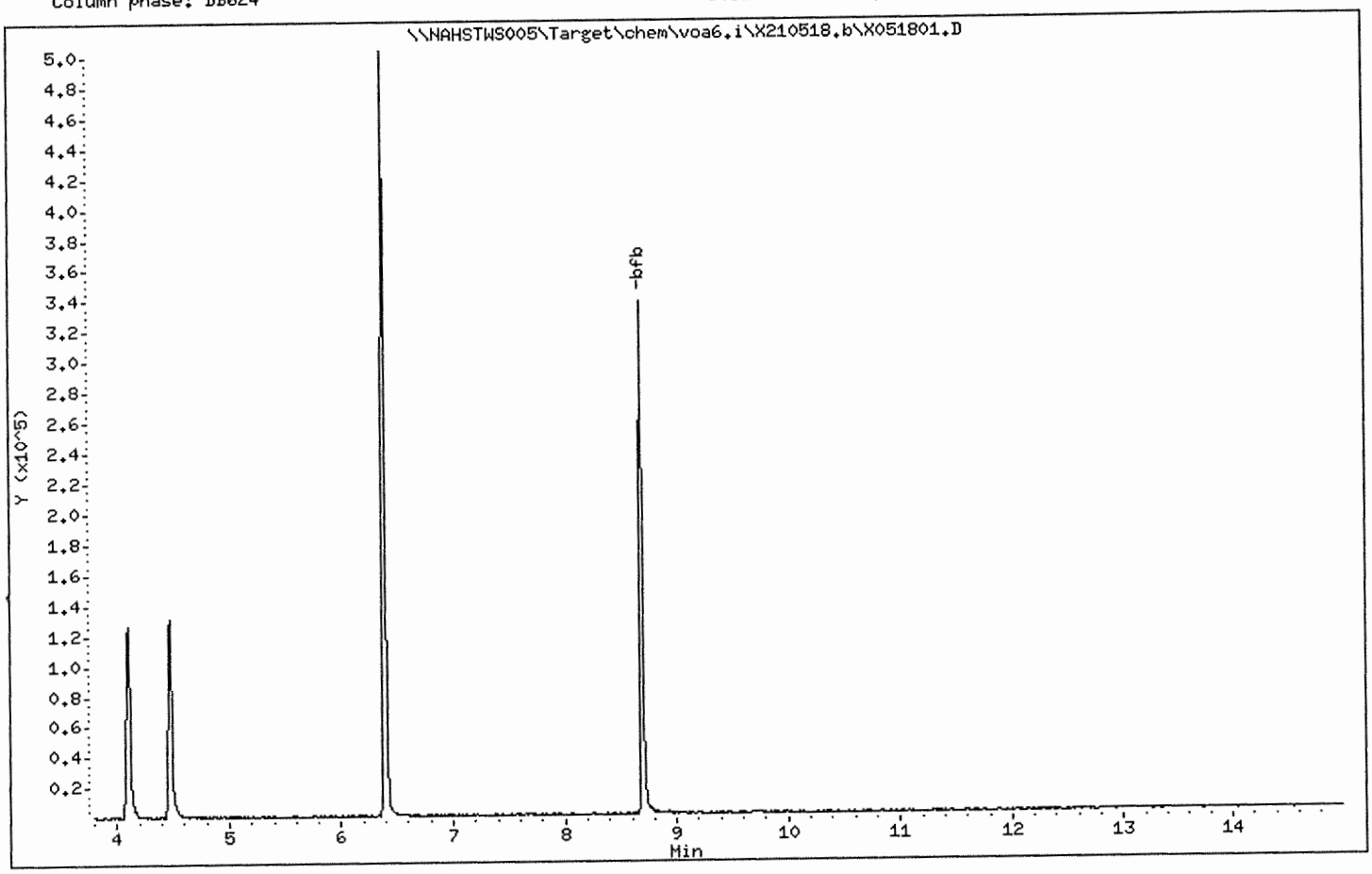
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051801.D

Date : 18-MAY-2021 11:02

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

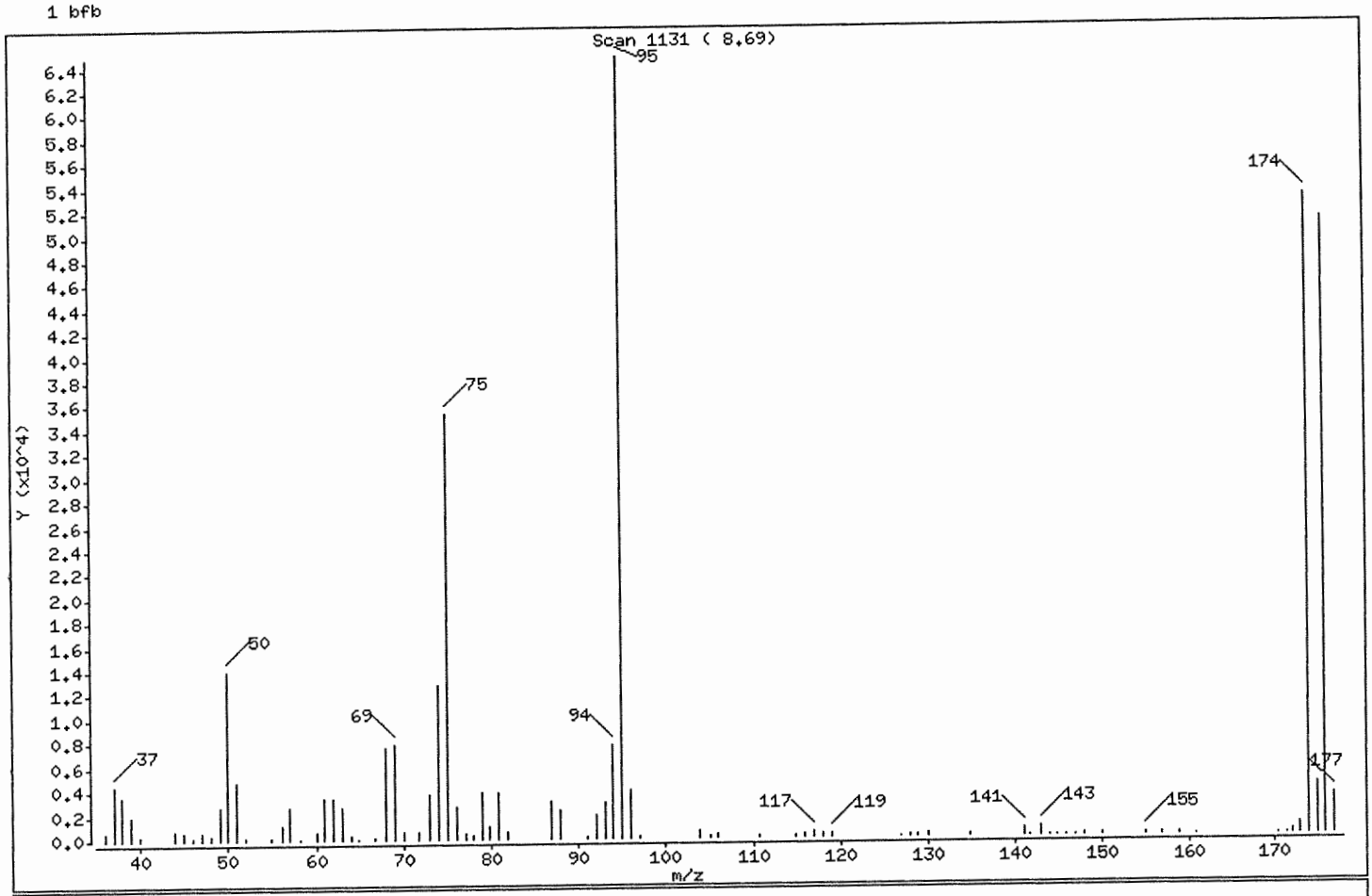
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.57
75	30.00 - 60.00% of mass 95	54.58
96	5.00 - 9.00% of mass 95	6.22
173	Less than 2.00% of mass 174	1.30 (1.59)
174	Greater than 50.00% of mass 95	81.67
175	5.00 - 9.00% of mass 174	6.39 (7.82)
176	95.00 - 101.00% of mass 174	78.52 (96.15)
177	5.00 - 9.00% of mass 176	5.15 (6.56)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051801.D

Date : 18-MAY-2021 11:02

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X051801.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 83

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	659	63.00	2721	92.00	1901	141.70	64
37.00	4492	64.00	282	93.00	2997	142.80	715
38.00	3512	64.80	58	94.00	7815	143.90	60
39.00	1875	66.80	141	95.00	64840	144.80	50
40.00	367	68.00	7559	96.00	4033	145.80	52
44.00	753	69.00	7848	97.00	80	146.80	54
45.00	666	70.10	653	103.90	627	147.90	169
46.00	85	71.80	523	105.00	166	149.90	76
47.00	657	73.00	3762	105.90	293	154.90	186
48.00	369	74.00	12856	110.80	120	156.80	95
49.00	2757	75.00	35392	114.90	109	158.80	137
50.00	13984	76.00	2705	115.90	319	160.80	61
51.00	4819	77.00	459	116.90	497	170.50	59
52.00	122	77.90	266	118.00	279	171.40	59
54.90	202	78.90	3898	118.90	355	172.10	229
56.10	1223	79.90	1045	126.90	66	172.90	844
57.00	2742	80.90	3915	128.00	208	173.90	52952
58.20	65	81.90	608	128.70	126	174.90	4142
60.00	659	86.90	3136	129.90	279	175.90	50912
61.00	3477	87.90	2433	134.80	103	176.90	3338
62.00	3463	90.90	216	140.90	646		

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051802.D
Lab Smp Id: VSDT000.25 Client Smp ID: VSTD000.25
Inj Date : 18-MAY-2021 11:23
Operator : PC Inst ID: voa6.i
Smp Info : VSDT000.25;VSTD000.25;1;1;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 14:52 Cal File: X051811.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

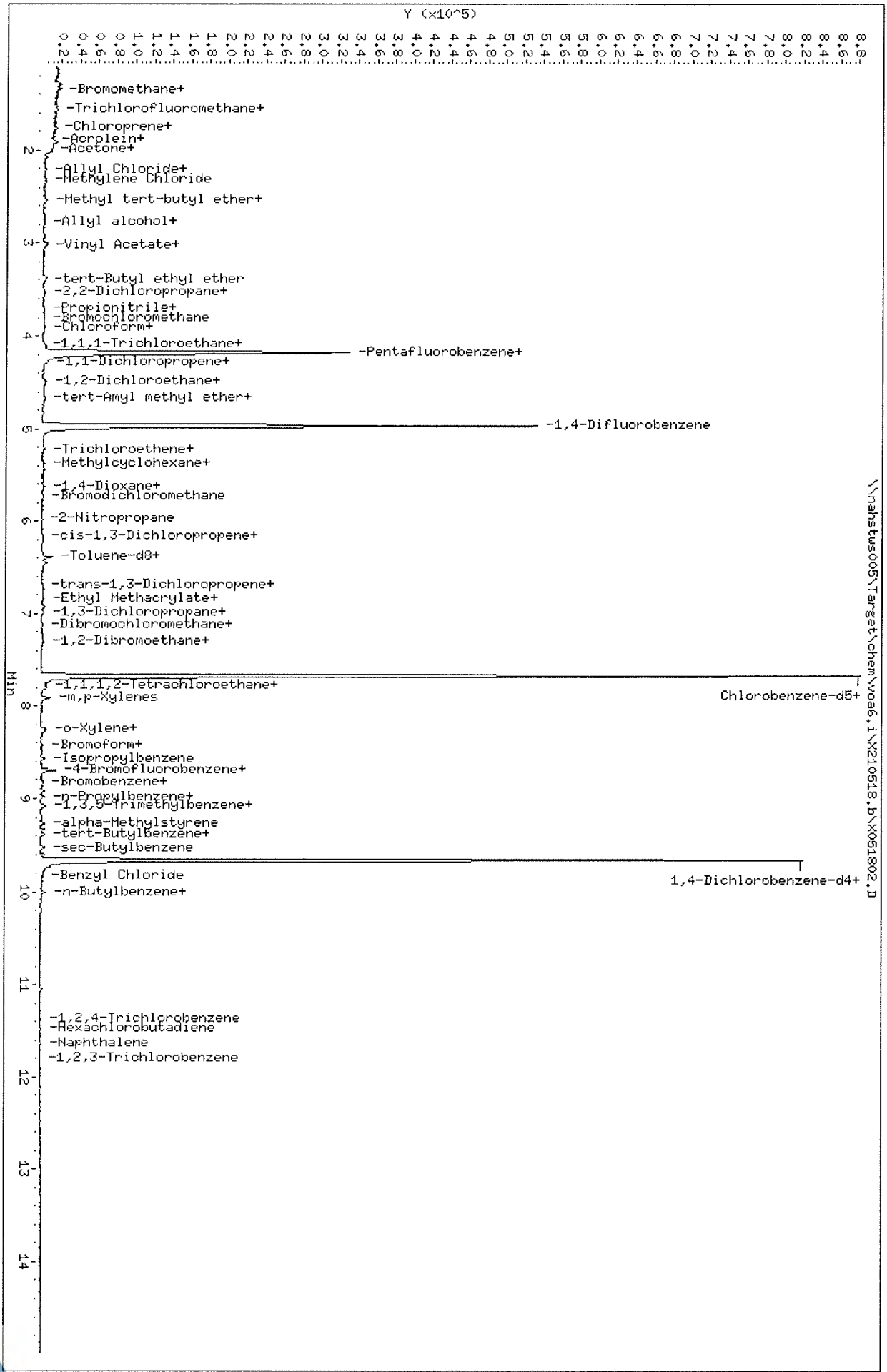
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	259430	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	431449	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	398320	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	184412	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	2365	0.25000	(Ta)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	5204	0.25000	1.50(a)
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	1710	0.25000	0.36(a)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	6953	0.25000	1.70(a)
60 1,1,1,2-Tetrachloroethane	131	7.771	7.771	(1.013)	675	0.25000	0.23(a)
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	1063	0.25000	0.24(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	589	0.25000	(aM)
138 Freon TF	101	1.926	1.926	(0.461)	574	0.25000	0.23(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	614	0.25000	0.26(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	1620	0.25000	0.33(aM)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	700	0.25000	0.26(aM)
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	1580	0.25000	0.42(a)
93 1,2,3-Trichlorobenzene	180	11.789	11.789	(1.220)	70	0.25000	0.56(aM)
71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	551	0.25000	(aM)
90 1,2,4-Trichlorobenzene	180	11.374	11.374	(1.177)	245	0.25000	2.60(aM)
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	2182	0.25000	0.23(a)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	893	0.25000	0.32(a)
88 1,2-Dichlorobenzene	146	10.006	10.006	(1.036)	1360	0.25000	0.26(a)

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051802.D Page 2
Report Date: 22-Jun-2021 08:20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	1269	0.25000	0.29(a)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	680	0.25000	0.23(aM)
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	2277	0.25000	0.24(a)
83	1,3-Dichlorobenzene	146	9.619	9.619	(0.996)	1349	0.25000	0.25(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1203	0.25000	0.26(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	1848	0.25000	0.59(a)
26	2,2-Dichloropropane	77	3.523	3.523	(0.842)	1125	0.25000	0.26(aM)
24	2-Butanone	43	3.630	3.630	(0.868)	349	0.50000	0.36(aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.930)	2422	0.25000	0.29(a)
52	2-Hexanone	43	7.119	7.119	(0.928)	640	0.50000	0.10(TaM)
77	4-Chlorotoluene	91	9.082	9.082	(0.940)	2995	0.25000	0.31(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2275	0.25000	0.24(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1633	0.50000	0.73(aM)
10	Acetone	43	1.983	1.983	(0.474)	1986	0.50000	(a)
37	Benzene	78	4.519	4.519	(0.909)	3242	0.25000	0.30(a)
74	Bromobenzene	156	8.817	8.817	(0.913)	788	0.25000	0.25(a)
29	Bromochloromethane	128	3.802	3.802	(0.909)	596	0.25000	0.37(aM)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	1099	0.25000	0.26(aM)
66	Bromoform	173	8.415	8.415	(1.097)	229	0.25000	0.11(aM)
6	Bromomethane	94	1.345	1.345	(0.322)	1349	0.25000	0.02(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	3241	0.50000	0.53(aM)
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	1043	0.25000	0.27(aM)
59	Chlorobenzene	112	7.692	7.692	(1.003)	1804	0.25000	0.23(a)
7	Chloroethane	64	1.396	1.396	(0.334)	951	0.25000	0.48(aM)
28	Chloroform	83	3.917	3.917	(0.937)	1662	0.25000	0.30(a)
3	Chloromethane	50	1.080	1.080	(0.258)	1250	0.25000	0.68(aM)
27	cis-1,2-Dichloroethene	96	3.545	3.545	(0.848)	627	0.25000	0.20(aM)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	1190	0.25000	0.25(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	804	0.25000	0.25(a)
44	Dibromomethane	93	5.550	5.550	(1.117)	644	0.25000	0.30(aM)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	789	0.25000	2.31(aM)
61	Ethylbenzene	106	7.799	7.799	(1.017)	684	0.25000	0.17(a)
91	Hexachlorobutadiene	225	11.474	11.474	(1.188)	207	0.25000	3.36(aM)
67	Isopropylbenzene	105	8.559	8.559	(1.116)	2610	0.25000	0.22(a)
62	m,p-Xylenes	106	7.914	7.914	(1.032)	2264	0.50000	0.45(a)
17	Methylene Chloride	84	2.312	2.312	(0.553)	955	0.25000	0.36(a)
87	n-Butylbenzene	91	10.013	10.013	(1.036)	1224	0.25000	0.14(a)
73	n-Propylbenzene	91	8.924	8.924	(0.924)	3266	0.25000	0.25(a)
92	Naphthalene	128	11.639	11.639	(1.205)	140	0.25000	3.15(aM)
63	o-Xylene	106	8.243	8.243	(1.075)	1402	0.25000	0.28(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	2583	0.25000	0.23(a)
64	Styrene	104	8.272	8.272	(1.078)	1817	0.25000	1.95(a)
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	1985	0.25000	0.25(a)
56	Tetrachloroethene	164	6.918	6.918	(0.902)	368	0.25000	0.16(aM)
50	Toluene	91	6.453	6.453	(0.841)	3453	0.25000	0.30(a)
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	513	0.25000	0.20(aM)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	972	0.25000	0.23(aM)
38	Trichloroethene	130	5.221	5.221	(1.050)	865	0.25000	0.30(aM)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	1217	0.25000	0.24(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	1276	0.25000	0.40(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\X210518.b\X051802.D
Date : 18-MAY-2021 11:23
Client ID: VSTD000.25
Sample Info: VSDT000.25;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\X210518.b\X051803.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051803.D
Lab Smp Id: VSDT000.5 Client Smp ID: VSTD000.5
Inj Date : 18-MAY-2021 11:43
Operator : PC Inst ID: voa6.i
Smp Info : VSDT000.5;VSTD000.5;1;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 11:23 Cal File: X051802.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

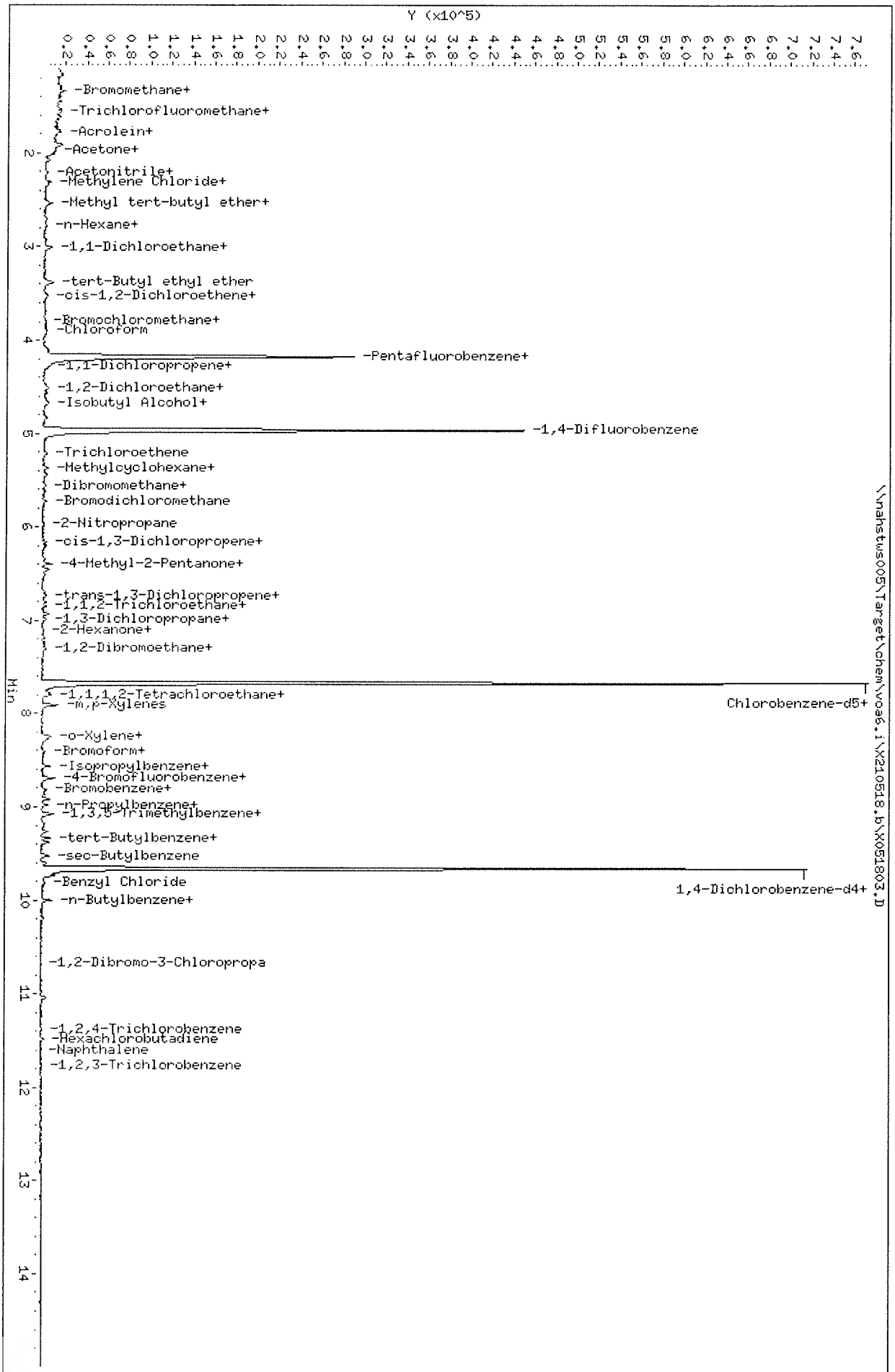
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

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)	226673	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	364110	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	347141	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	155518	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	1965	0.50000	(Ta)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	3536	0.50000	1.19(a)
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	1526	0.50000	0.37(aM)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	4554	0.50000	1.53(Ta)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1176	0.50000	0.46(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	1845	0.50000	0.47(a)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	1276	0.50000	(aM)
138 Freon TF	101	1.912	1.912	(0.457)	1143	0.50000	0.53(a)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	899	0.50000	0.44(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	2051	0.50000	0.48(Ta)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	1364	0.50000	0.60(aM)
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	1781	0.50000	0.57(a)
93 1,2,3-Trichlorobenzene	180	11.768	11.768	(1.218)	298	0.50000	0.89(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	851	0.50000	(aMH)
90 1,2,4-Trichlorobenzene	180	11.381	11.381	(1.178)	425	0.50000	2.75(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	3798	0.50000	0.48(a)
89 1,2-Dibromo-3-Chloropropane	155	10.672	10.672	(1.105)	63	0.50000	1.89(aM)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	929	0.50000	0.38(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	2059	0.50000	0.47(a)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	1830	0.50000	0.51(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	1344	0.50000	0.54(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	3626	0.50000	0.46(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	2018	0.50000	0.45(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	1704	0.50000	0.43(aM)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	2775	0.50000	0.85(a)
26	2,2-Dichloropropane	77	3.523	3.523	(0.842)	1844	0.50000	0.49(aM)
24	2-Butanone	43	3.609	3.609	(0.863)	942	1.00000	1.12(aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.930)	4008	0.50000	0.57(a)
52	2-Hexanone	43	7.112	7.112	(0.927)	1113	1.00000	0.48(Ta)
77	4-Chlorotoluene	91	9.082	9.082	(0.940)	3941	0.50000	0.48(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	3707	0.50000	0.48(aM)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1863	1.00000	0.92(a)
10	Acetone	43	1.976	1.976	(0.473)	2121	1.00000	(a)
37	Benzene	78	4.519	4.519	(0.909)	4678	0.50000	0.51(a)
74	Bromobenzene	156	8.810	8.810	(0.912)	1130	0.50000	0.43(a)
29	Bromochloromethane	128	3.788	3.788	(0.906)	680	0.50000	0.49(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	1706	0.50000	0.48(aM)
66	Bromoform	173	8.408	8.408	(1.096)	788	0.50000	0.46(aM)
6	Bromomethane	94	1.338	1.338	(0.320)	1623	0.50000	0.21(a)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	4757	1.00000	0.89(aM)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	1529	0.50000	0.48(aM)
59	Chlorobenzene	112	7.692	7.692	(1.003)	3453	0.50000	0.50(a)
7	Chloroethane	64	1.403	1.403	(0.336)	1092	0.50000	0.63(aM)
28	Chloroform	83	3.910	3.910	(0.935)	2533	0.50000	0.52(a)
3	Chloromethane	50	1.081	1.081	(0.258)	1464	0.50000	0.83(aM)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	1137	0.50000	0.43(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1773	0.50000	0.44(a)
55	Dibromochloromethane	129	7.184	7.184	(0.937)	1032	0.50000	0.38(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	745	0.50000	0.42(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	1498	0.50000	2.58(aM)
61	Ethylbenzene	106	7.807	7.807	(1.018)	1667	0.50000	0.49(a)
91	Hexachlorobutadiene	225	11.474	11.474	(1.188)	285	0.50000	3.47(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	4923	0.50000	0.47(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	3953	1.00000	0.91(a)
17	Methylene Chloride	84	2.305	2.305	(0.551)	985	0.50000	0.43(a)
87	n-Butylbenzene	91	10.006	10.006	(1.036)	3921	0.50000	0.53(a)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	5394	0.50000	0.48(a)
92	Naphthalene	128	11.610	11.610	(1.202)	406	0.50000	3.28(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	2130	0.50000	0.50(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	4374	0.50000	0.47(a)
64	Styrene	104	8.272	8.272	(1.078)	2465	0.50000	2.06(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	3226	0.50000	0.48(a)
56	Tetrachloroethene	164	6.926	6.926	(0.903)	928	0.50000	0.48(a)
50	Toluene	91	6.446	6.446	(0.840)	4354	0.50000	0.43(a)
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	1135	0.50000	0.52(a)
51	trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	1319	0.50000	0.37(a)
38	Trichloroethene	130	5.207	5.207	(1.048)	1104	0.50000	0.45(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	2271	0.50000	0.52(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	1600	0.50000	0.58(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.
H - Operator selected an alternate compound hit.



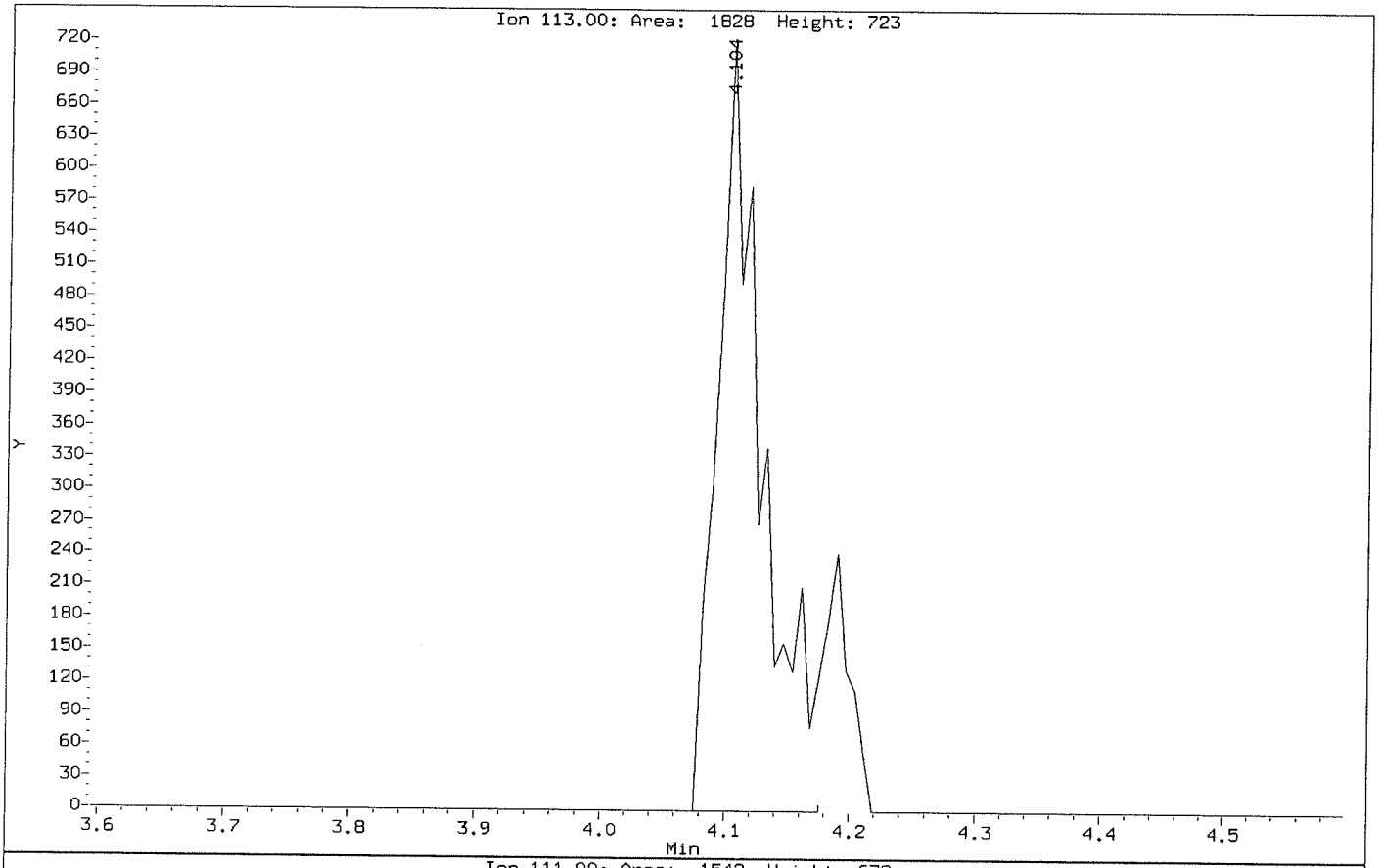
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Client ID: VSTD000.5
Sample Info: VSDT000.5;VSTD000.5;1;2;;
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Column phase: DB624

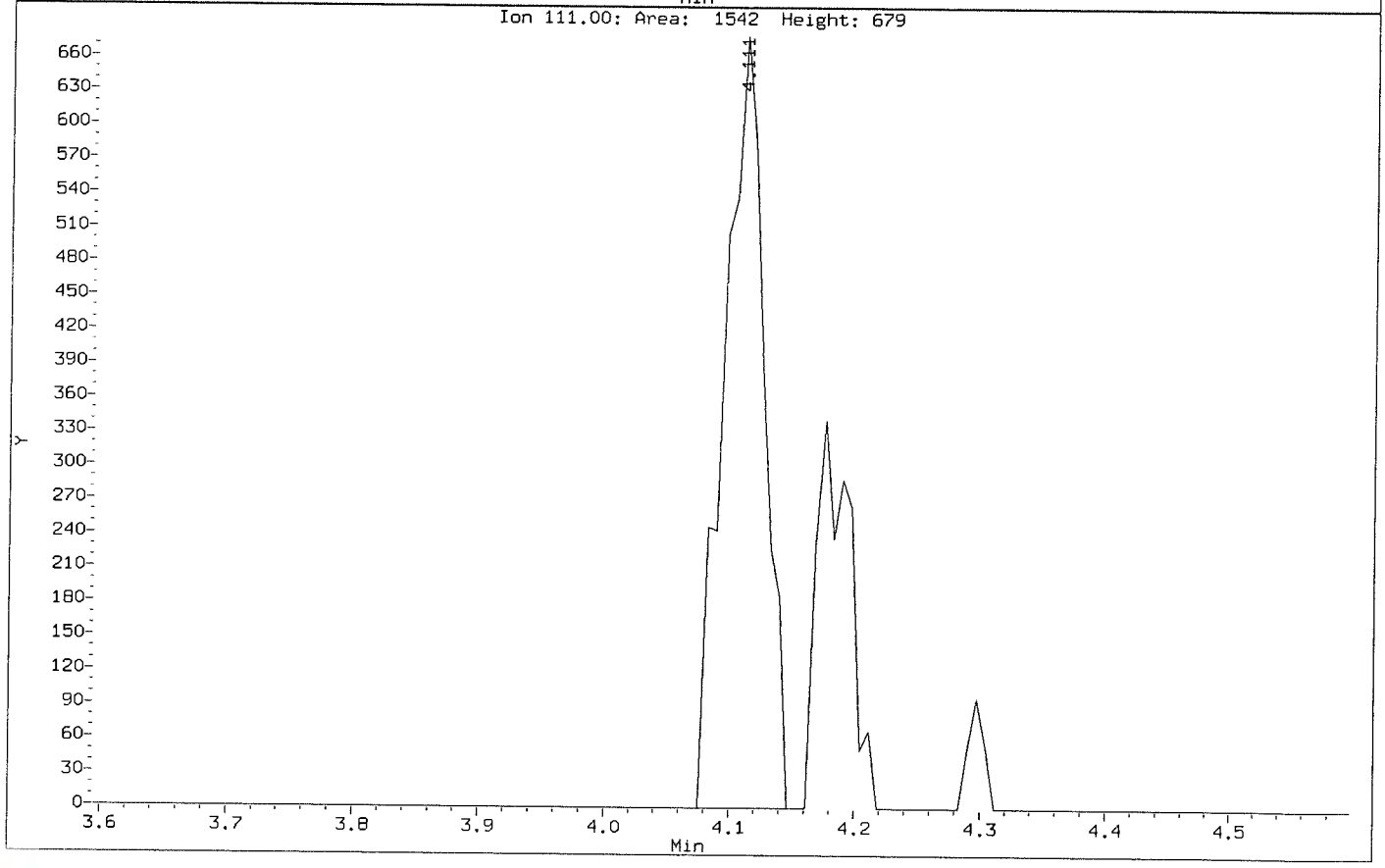
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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Instrument: voa6.i
Client Sample ID: VSTD000.5

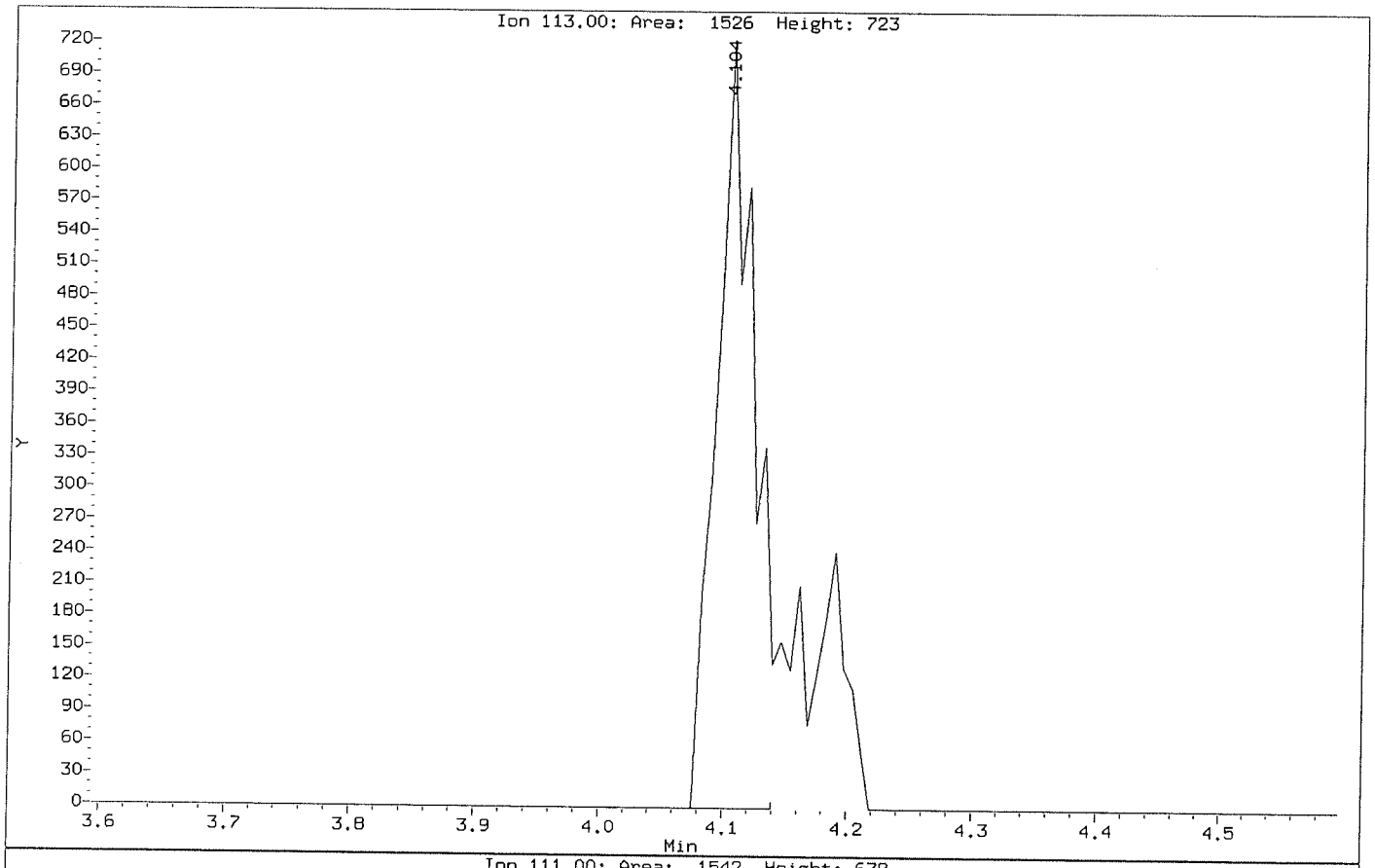
Compound: Dibromofluoromethane
CAS Number: 1868-53-7

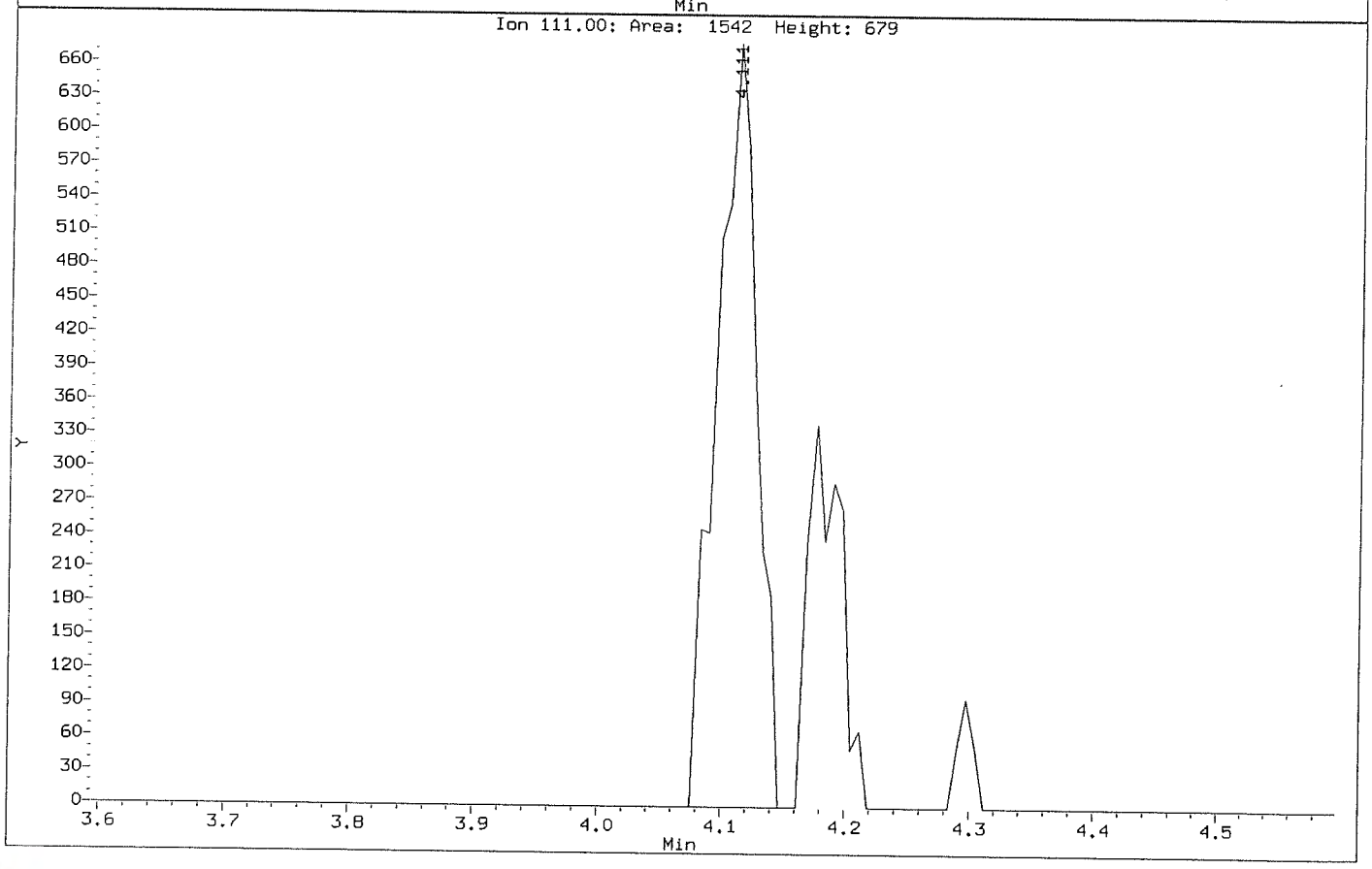




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Client Sample ID: VSTD000.5

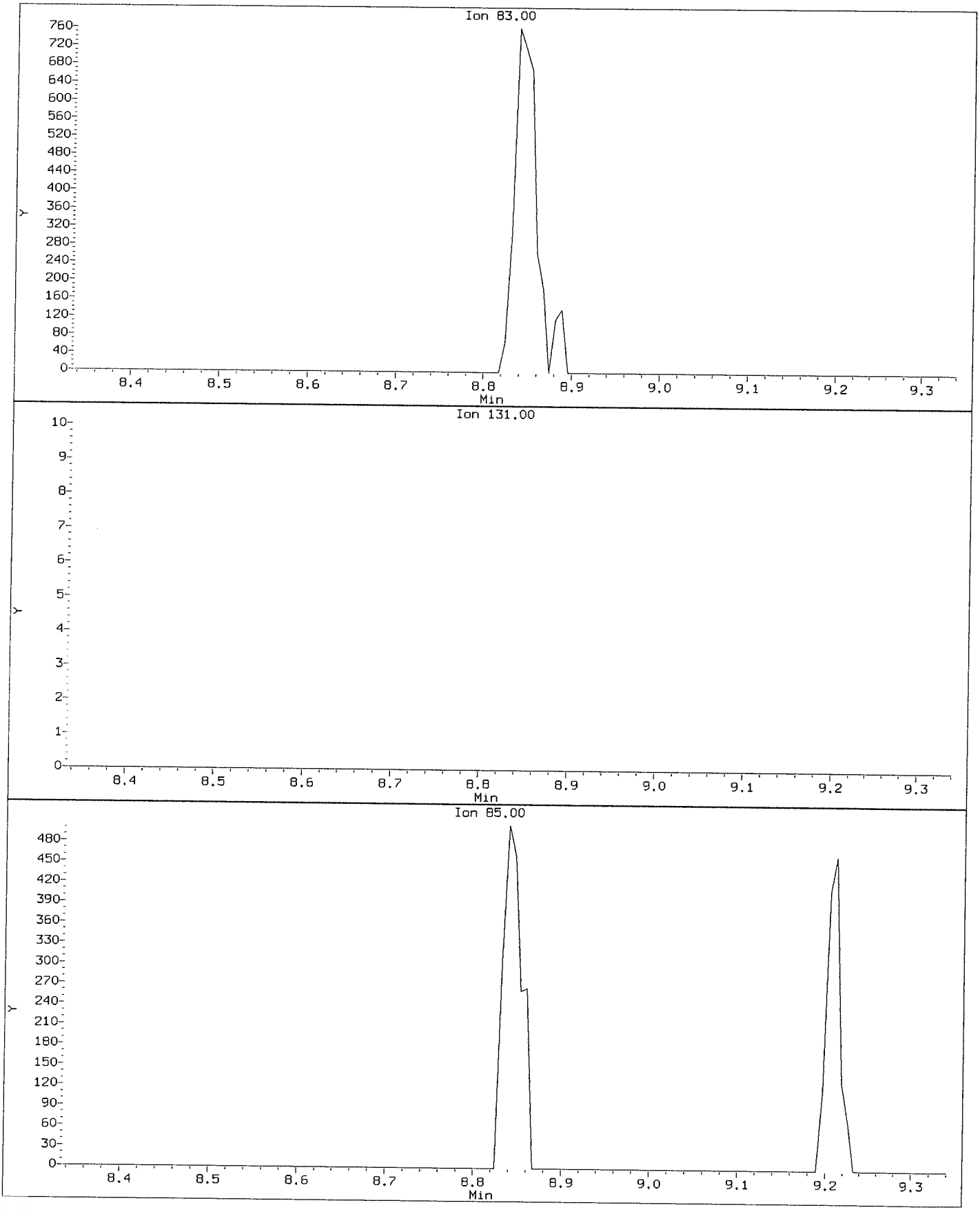
Compound: Dibromofluoromethane
CAS Number: 1868-53-7





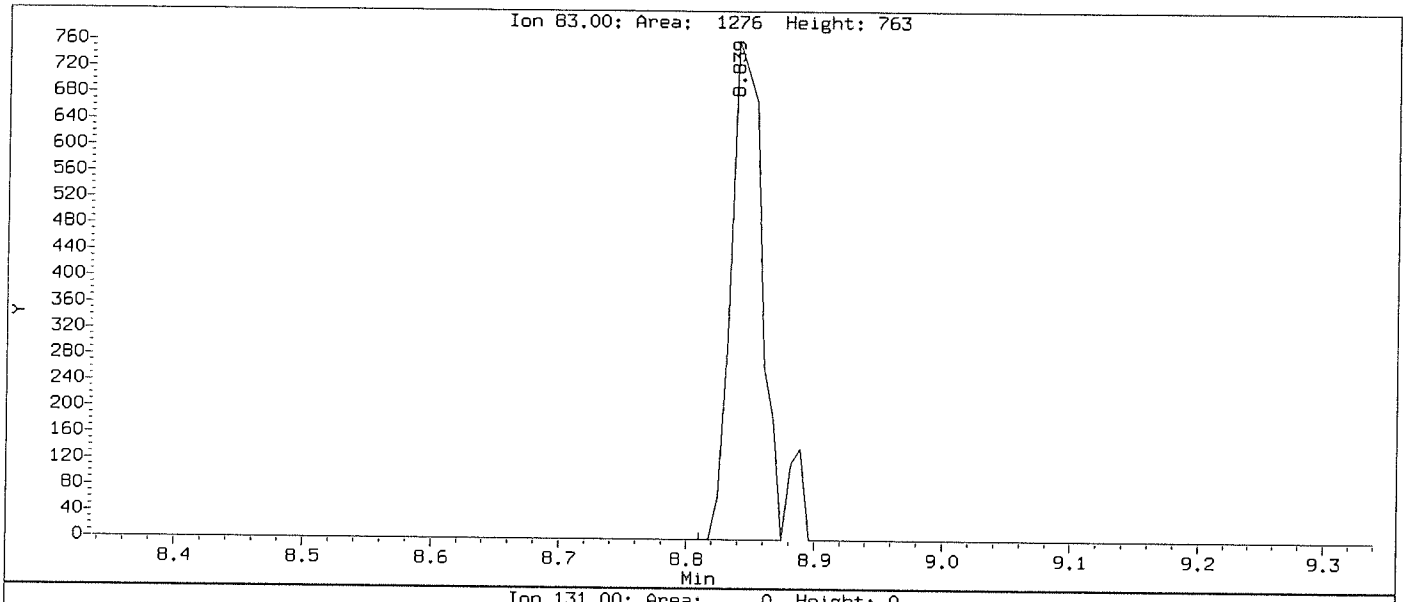
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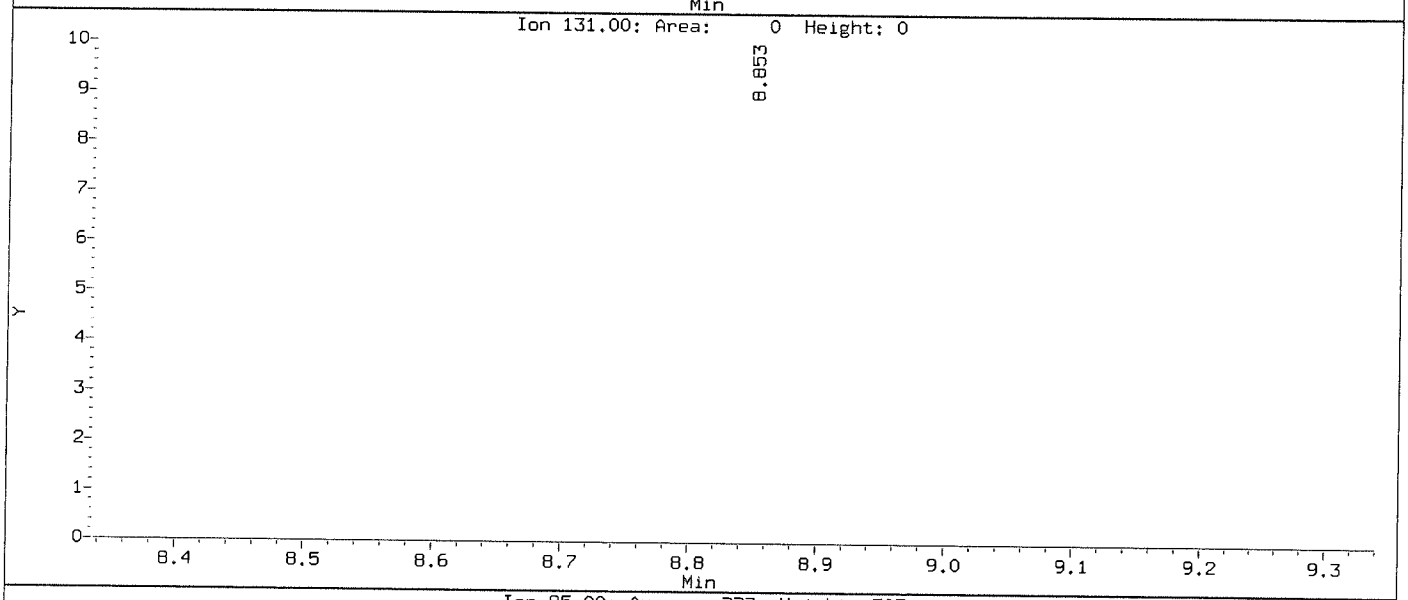
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

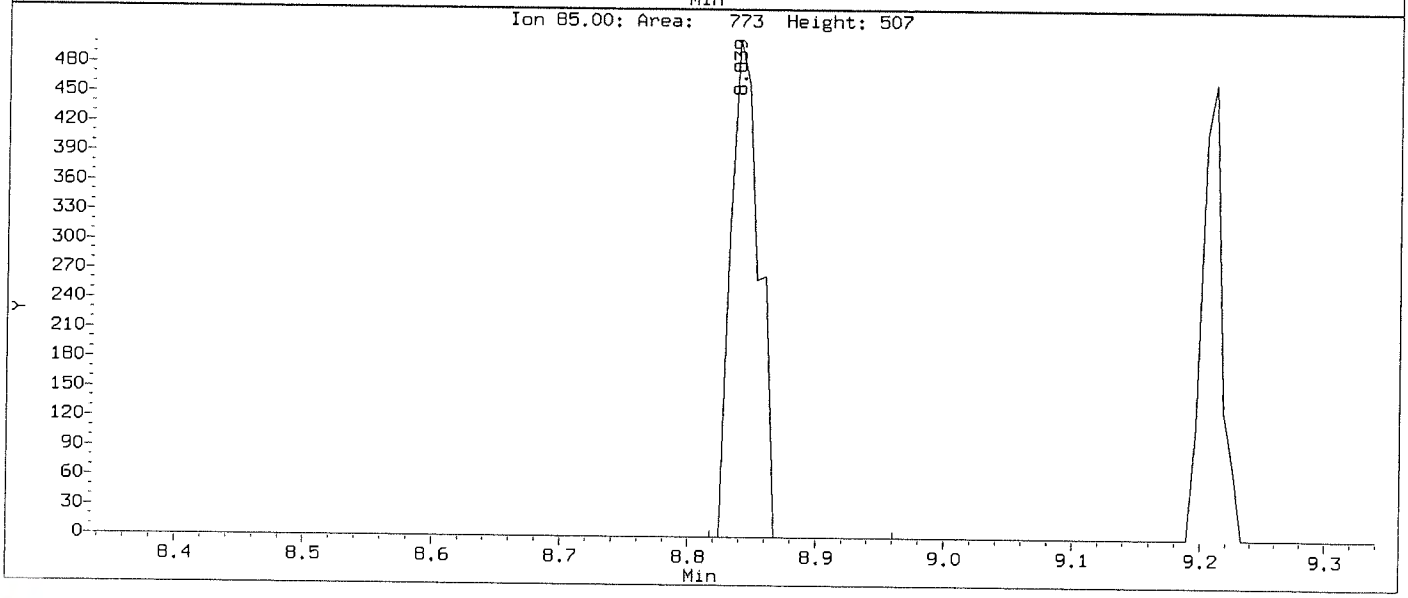


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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

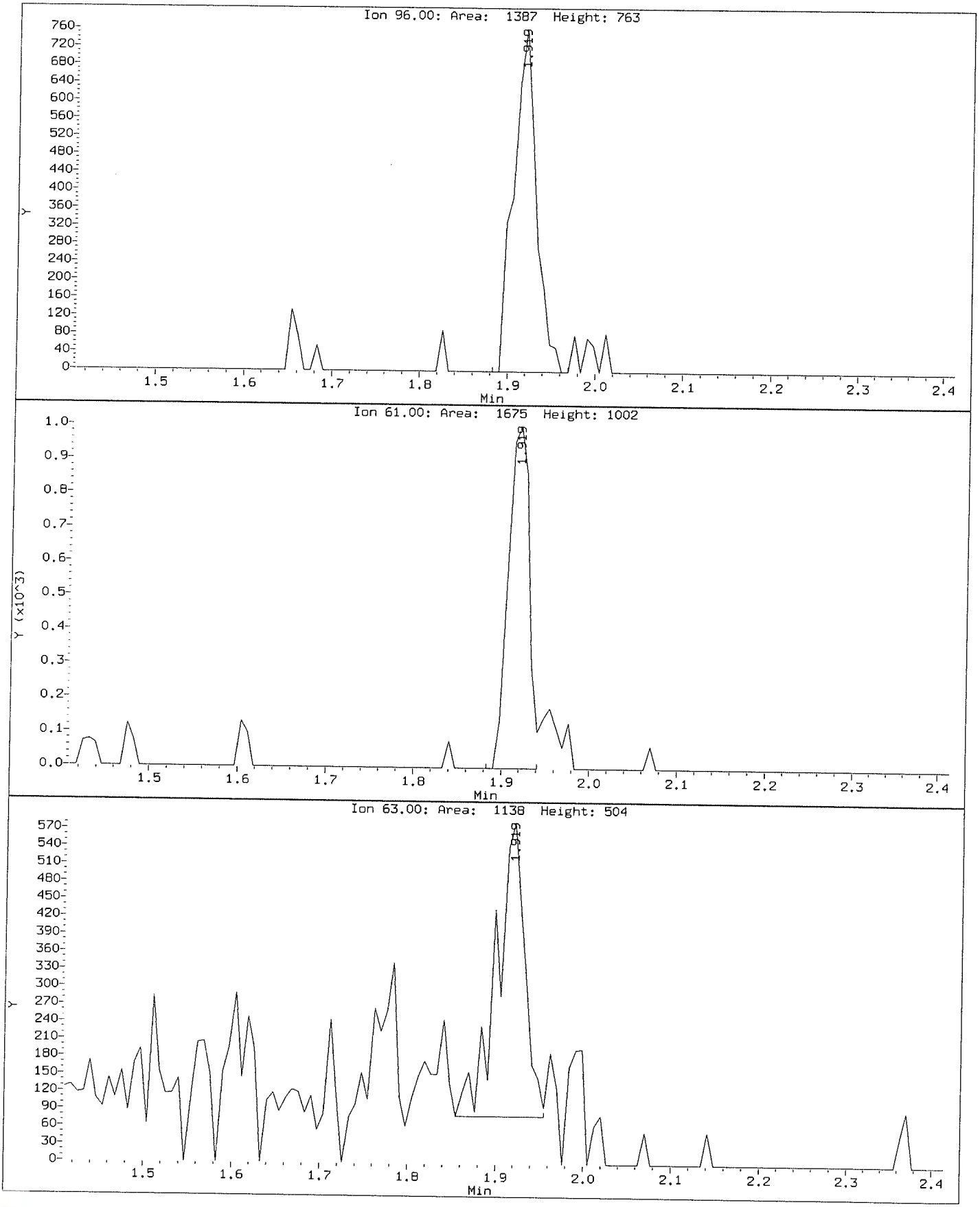






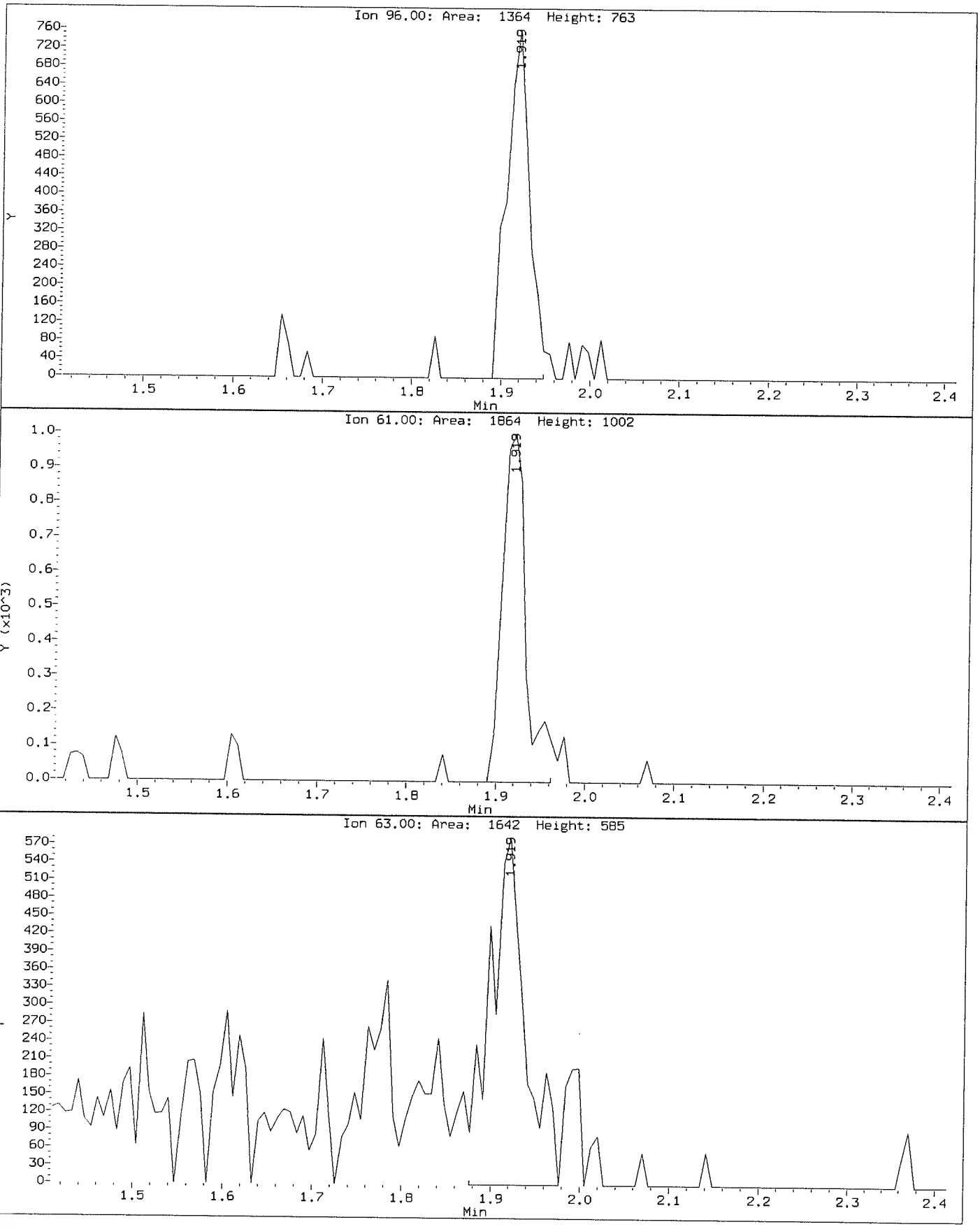
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



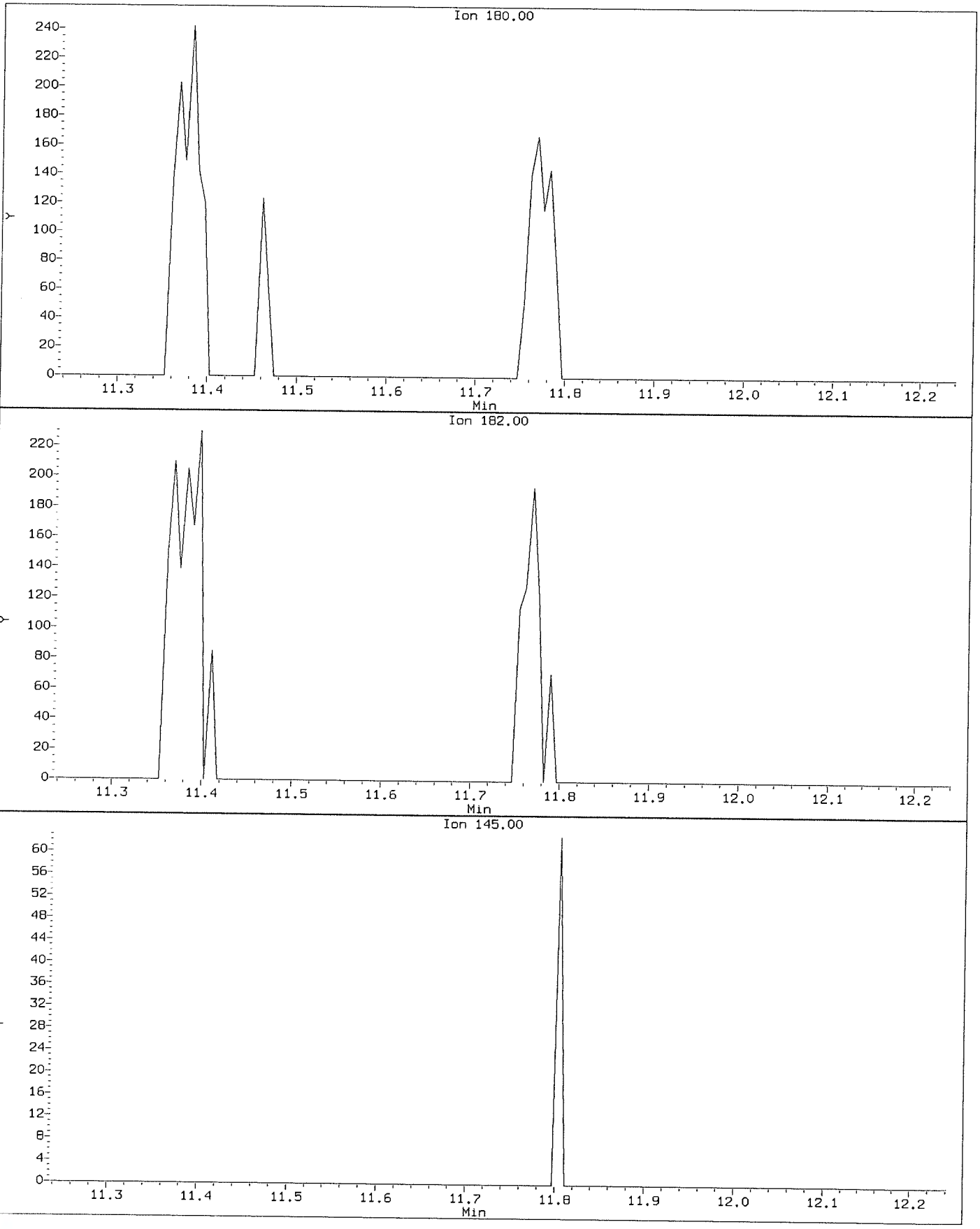
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Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



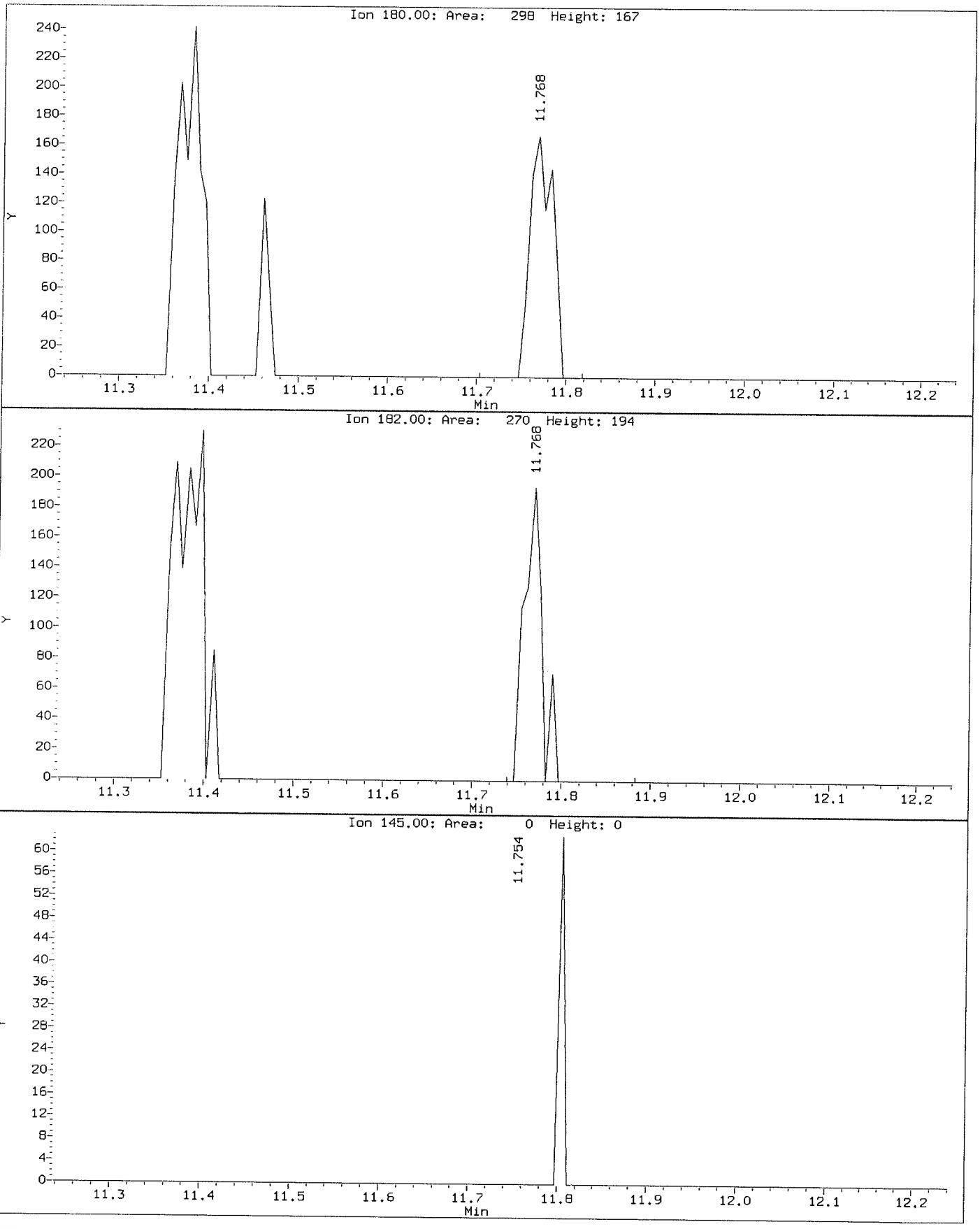
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



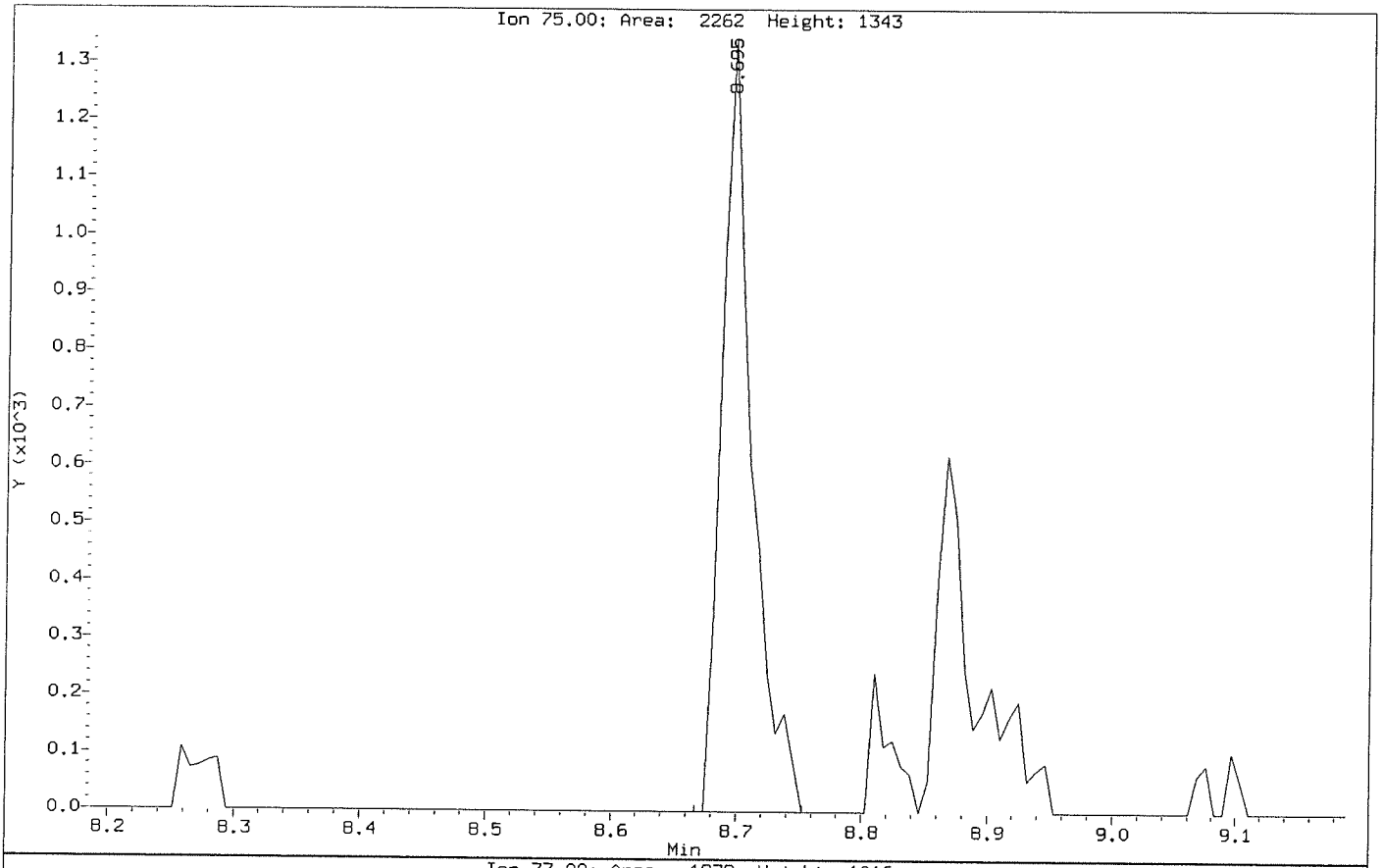
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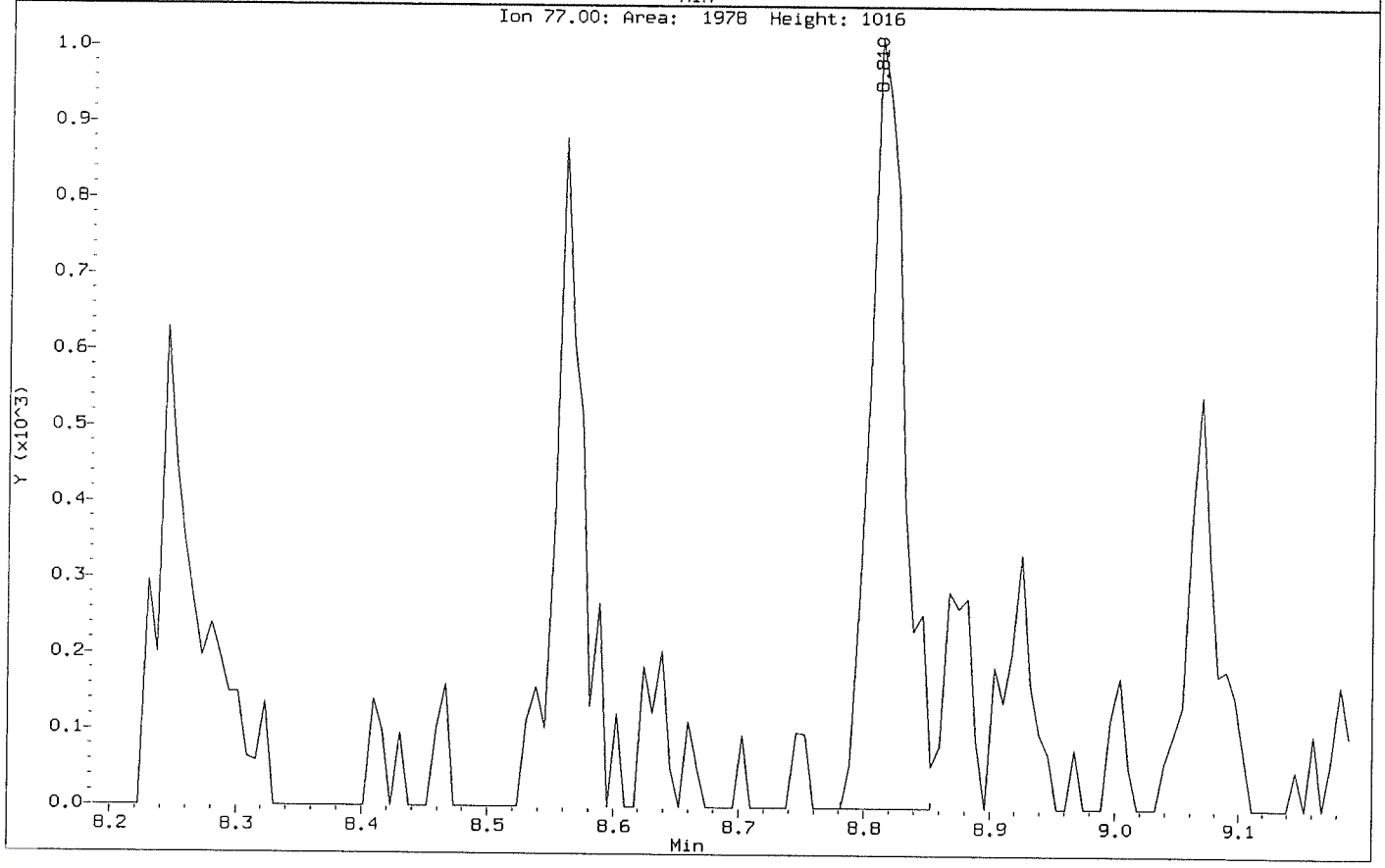
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CAS Number: 87-61-6



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Client Sample ID: VSTD000.5

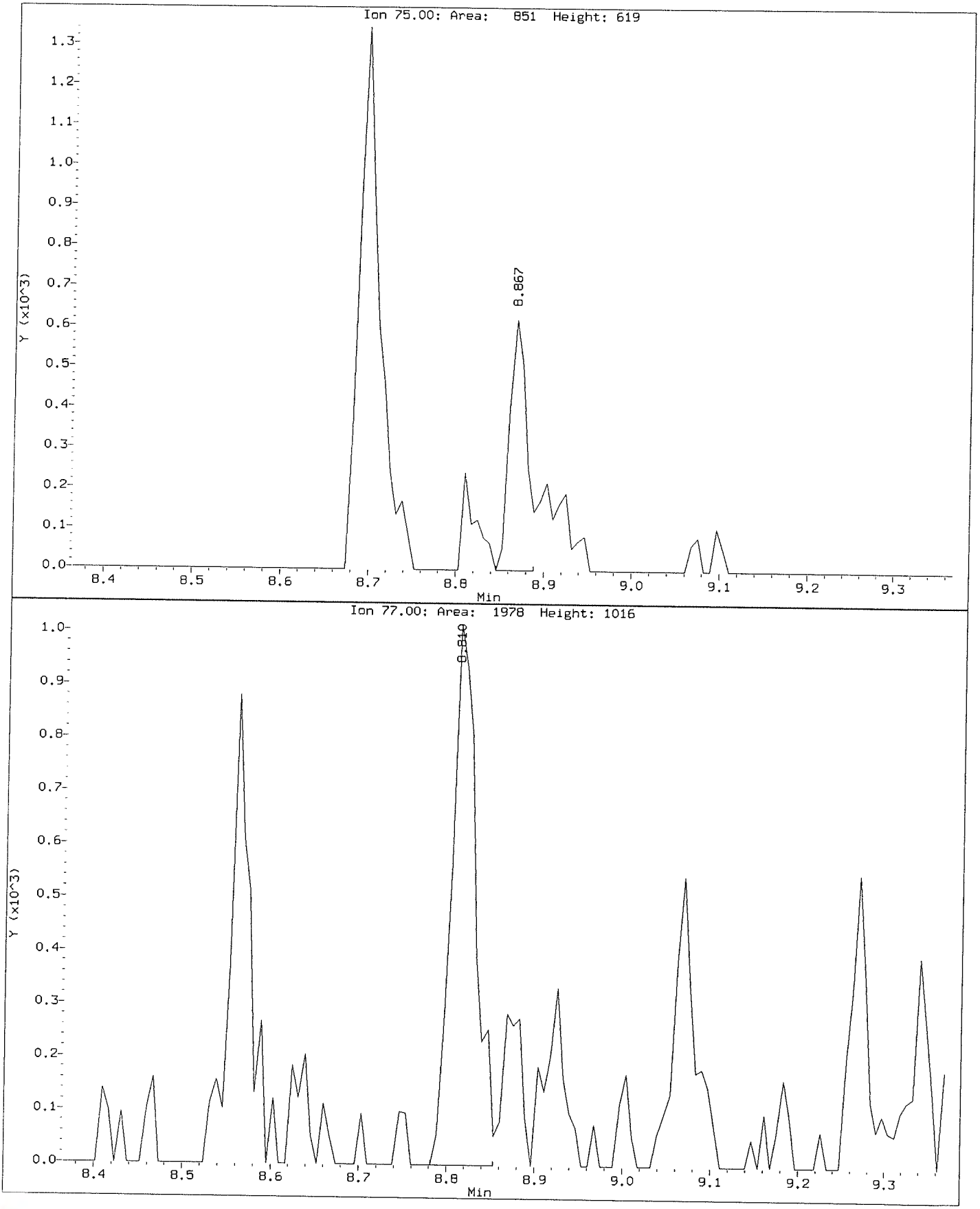
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





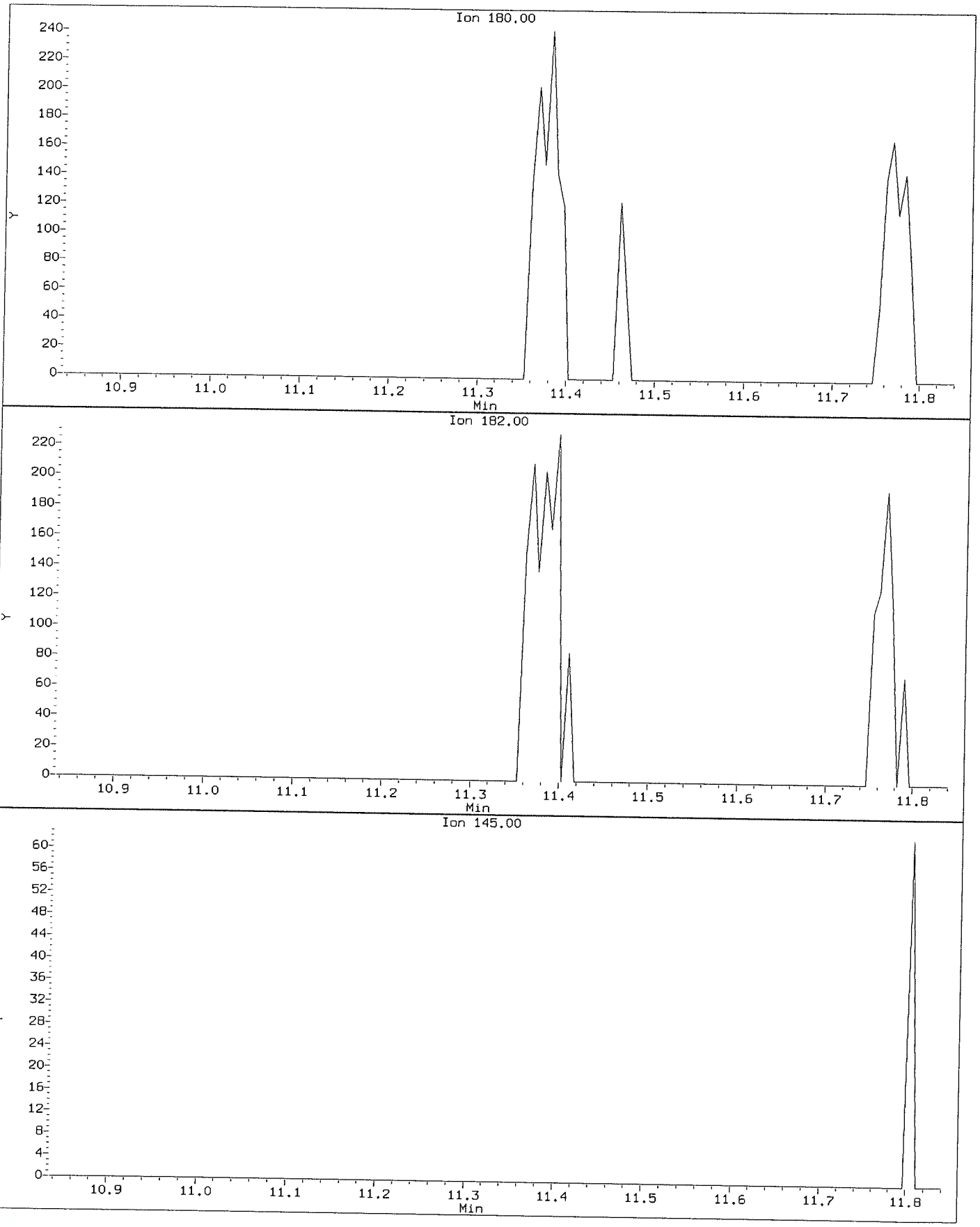
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



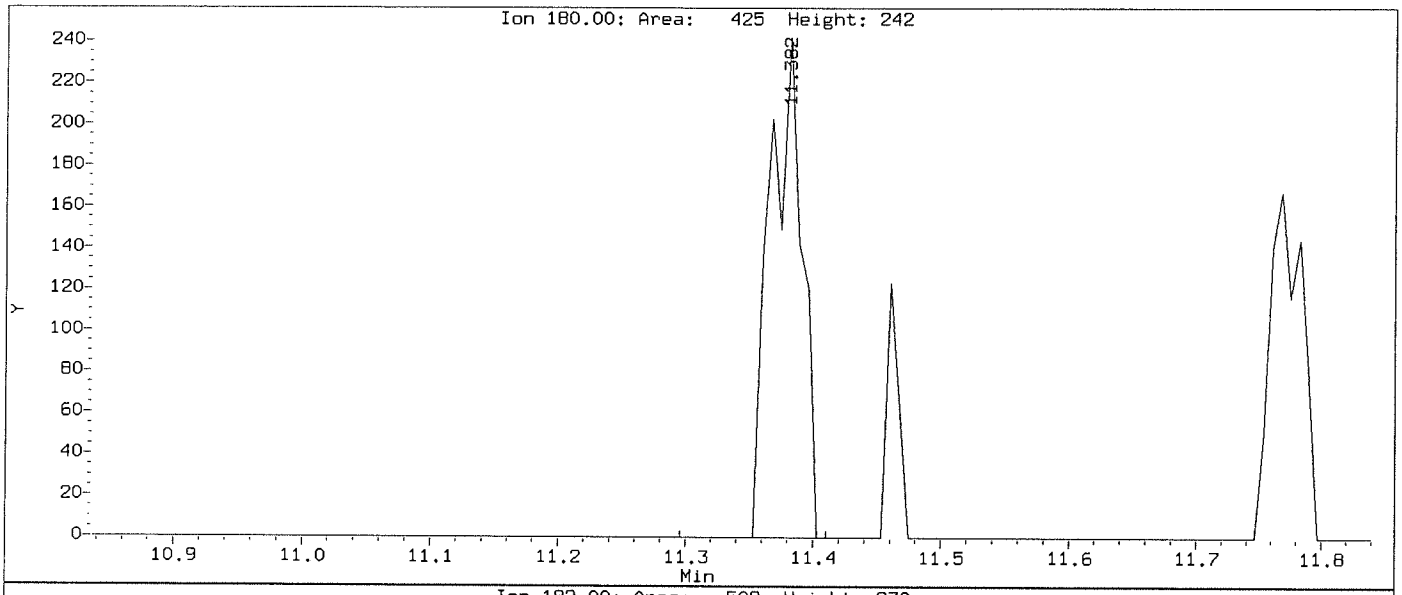
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Client Sample ID: VSTD000.5

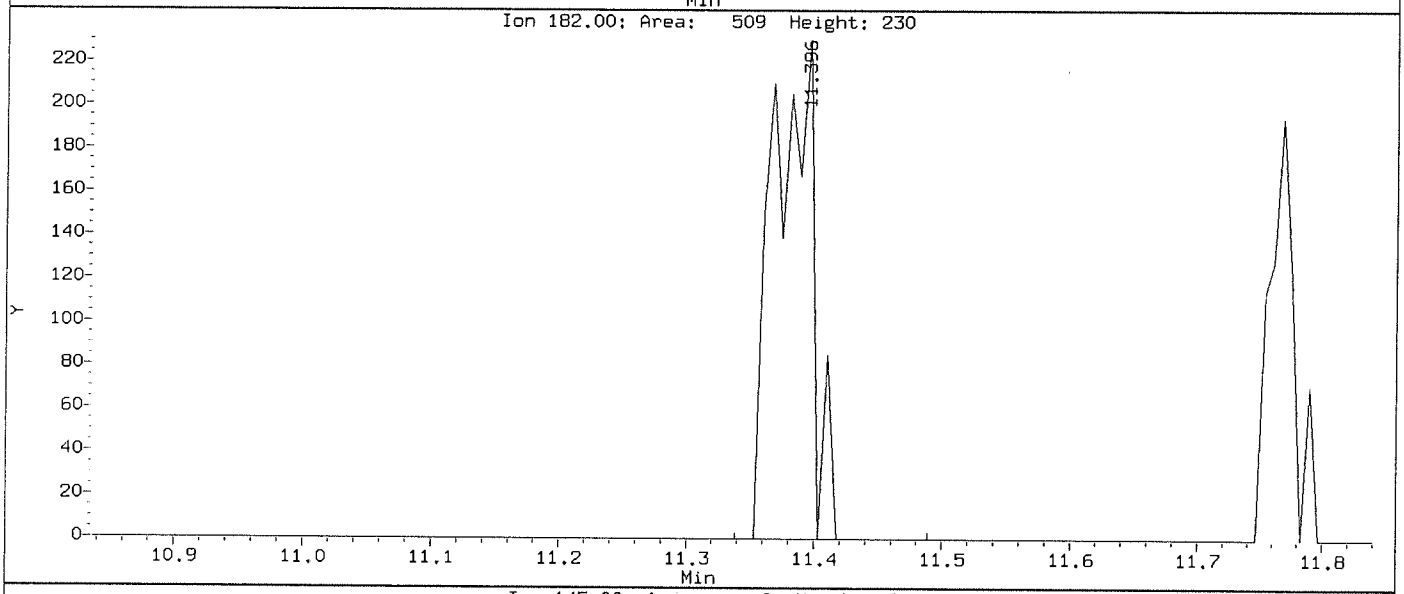
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1

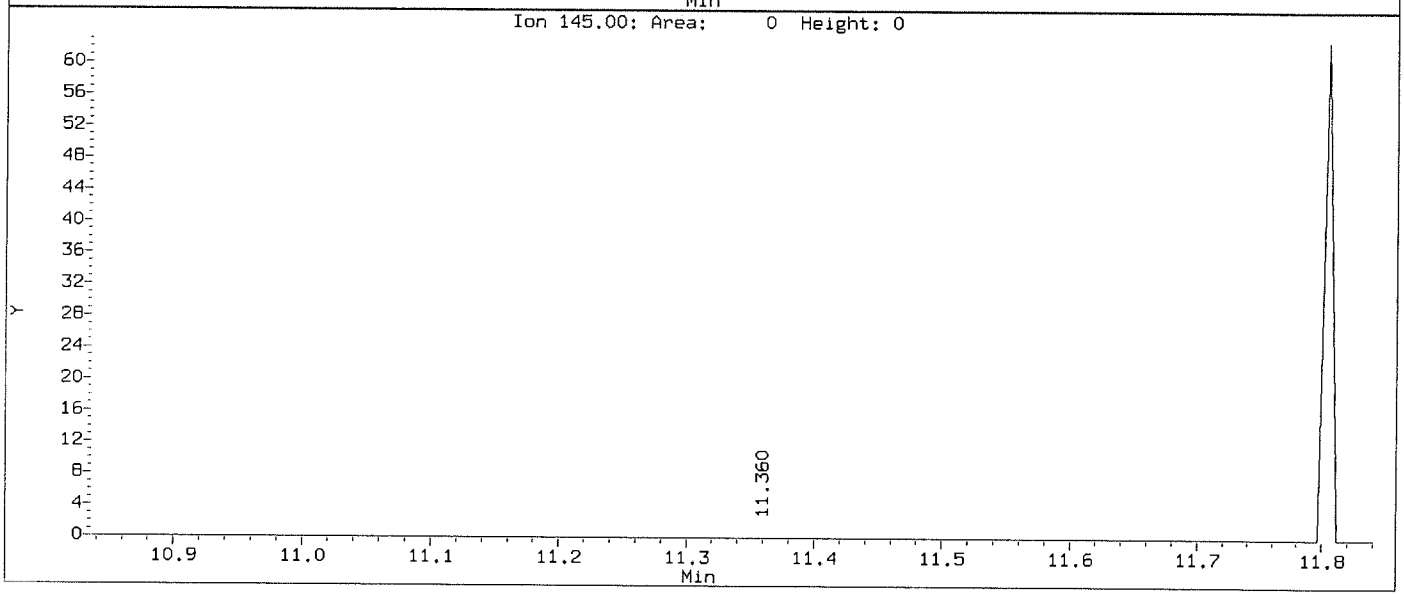


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Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1

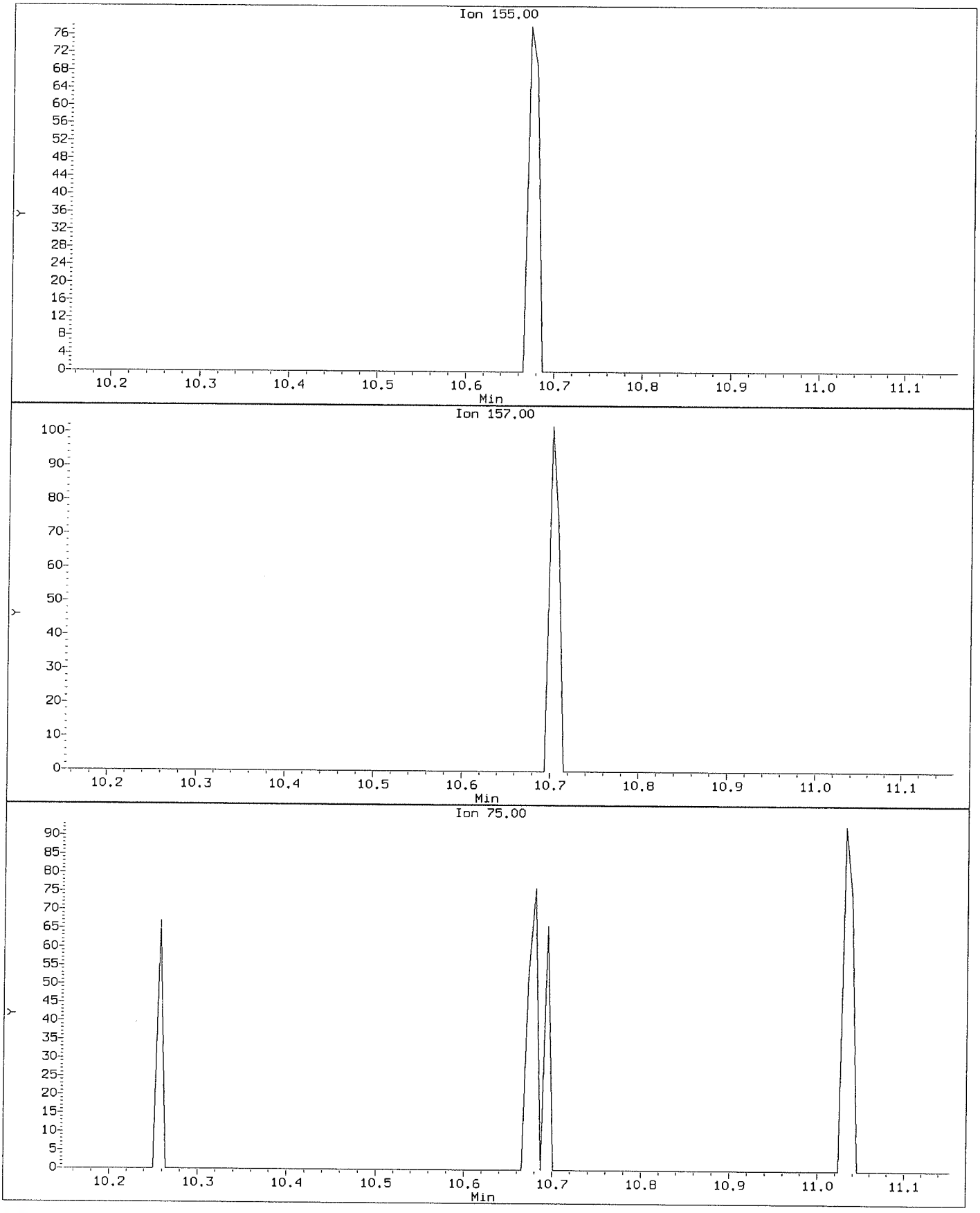






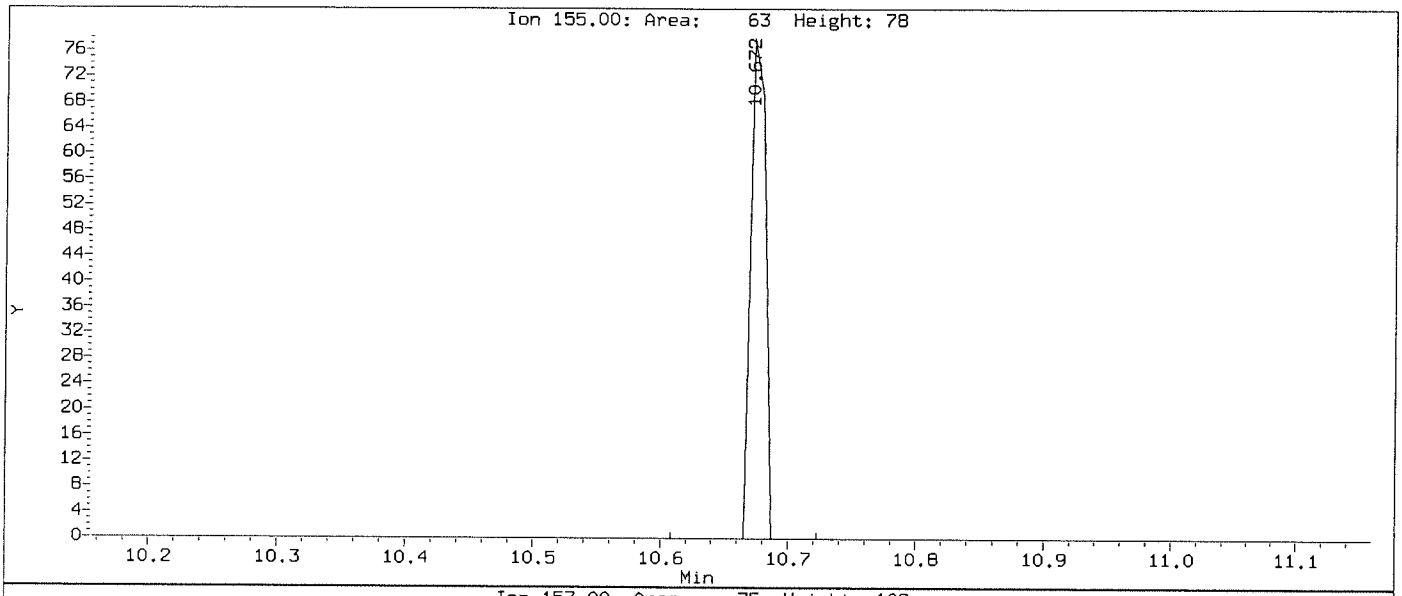
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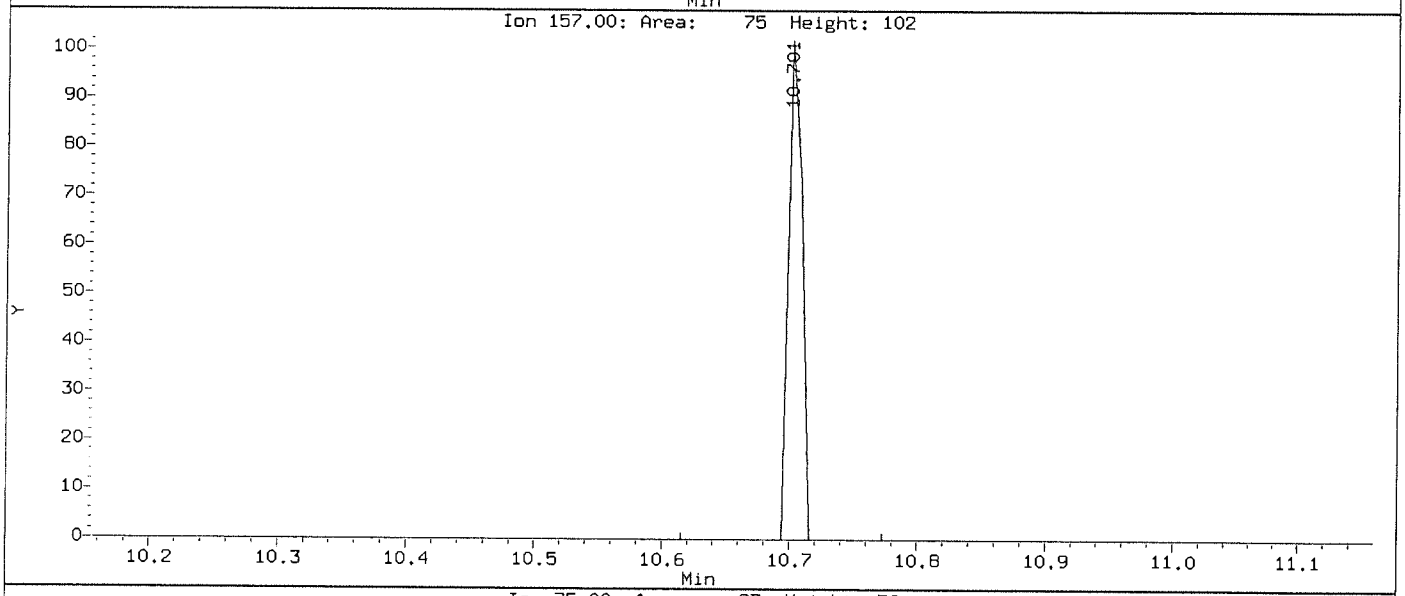
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

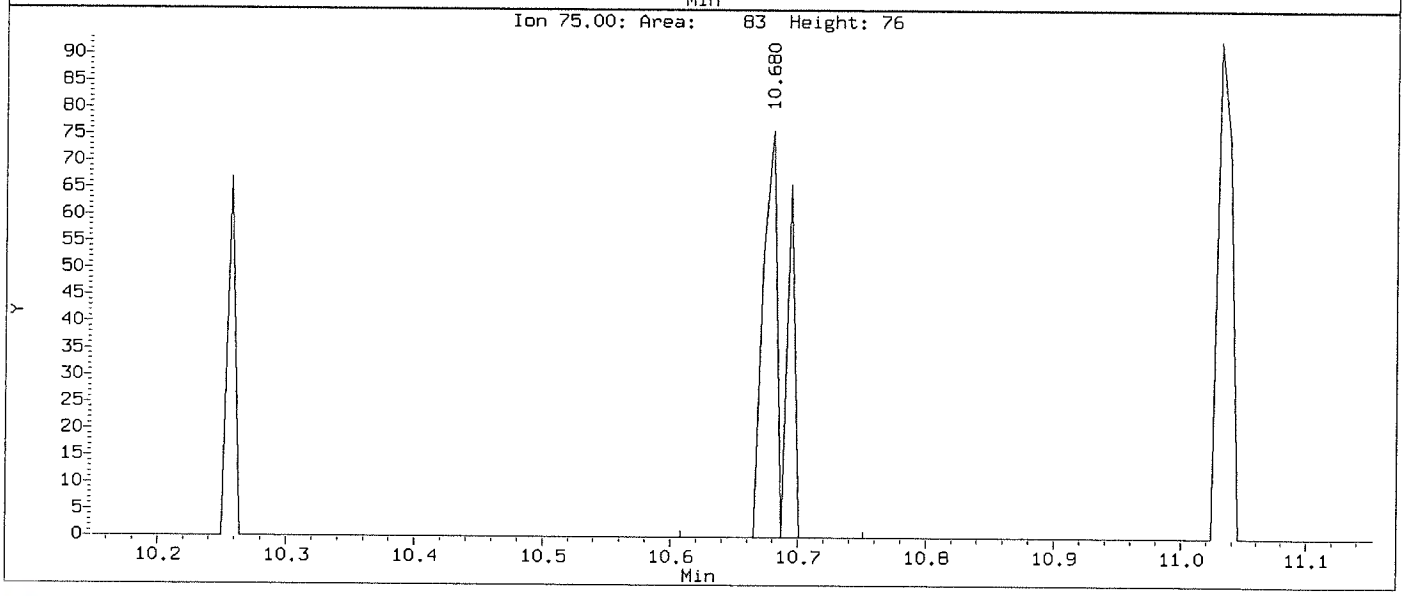


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Injection Date: 18-MAY-2021 11:43
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Client Sample ID: VSTD000.5

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

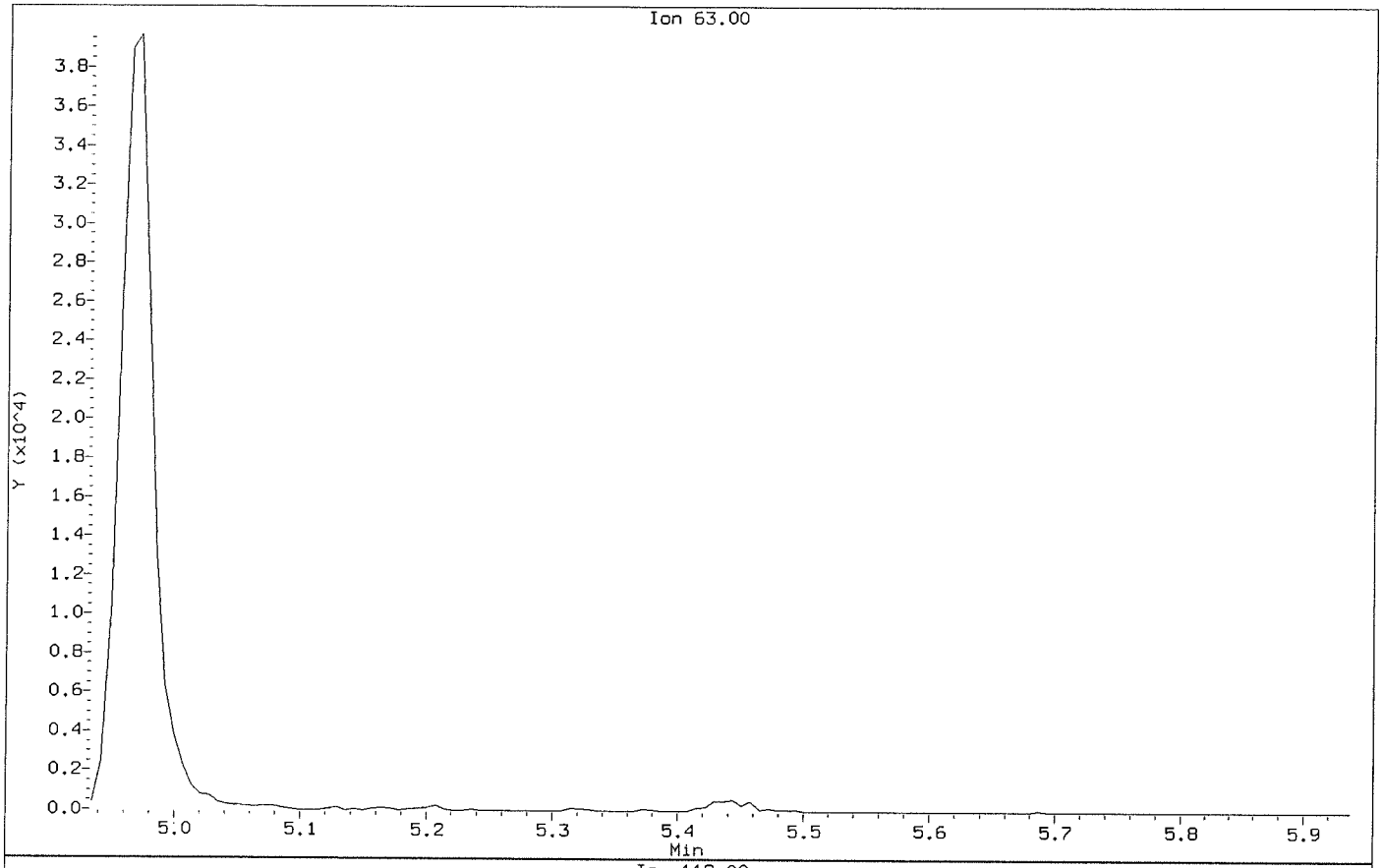


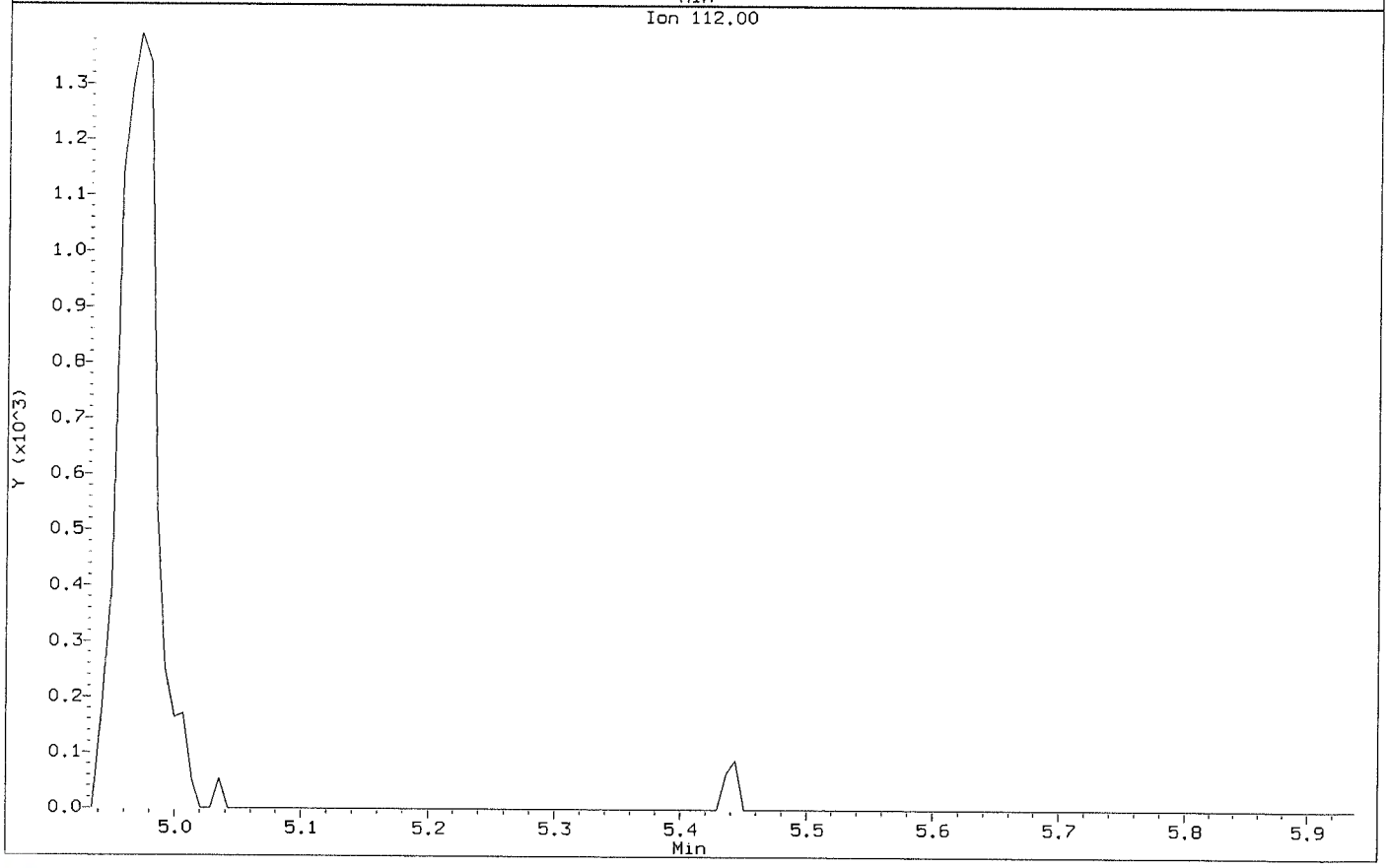




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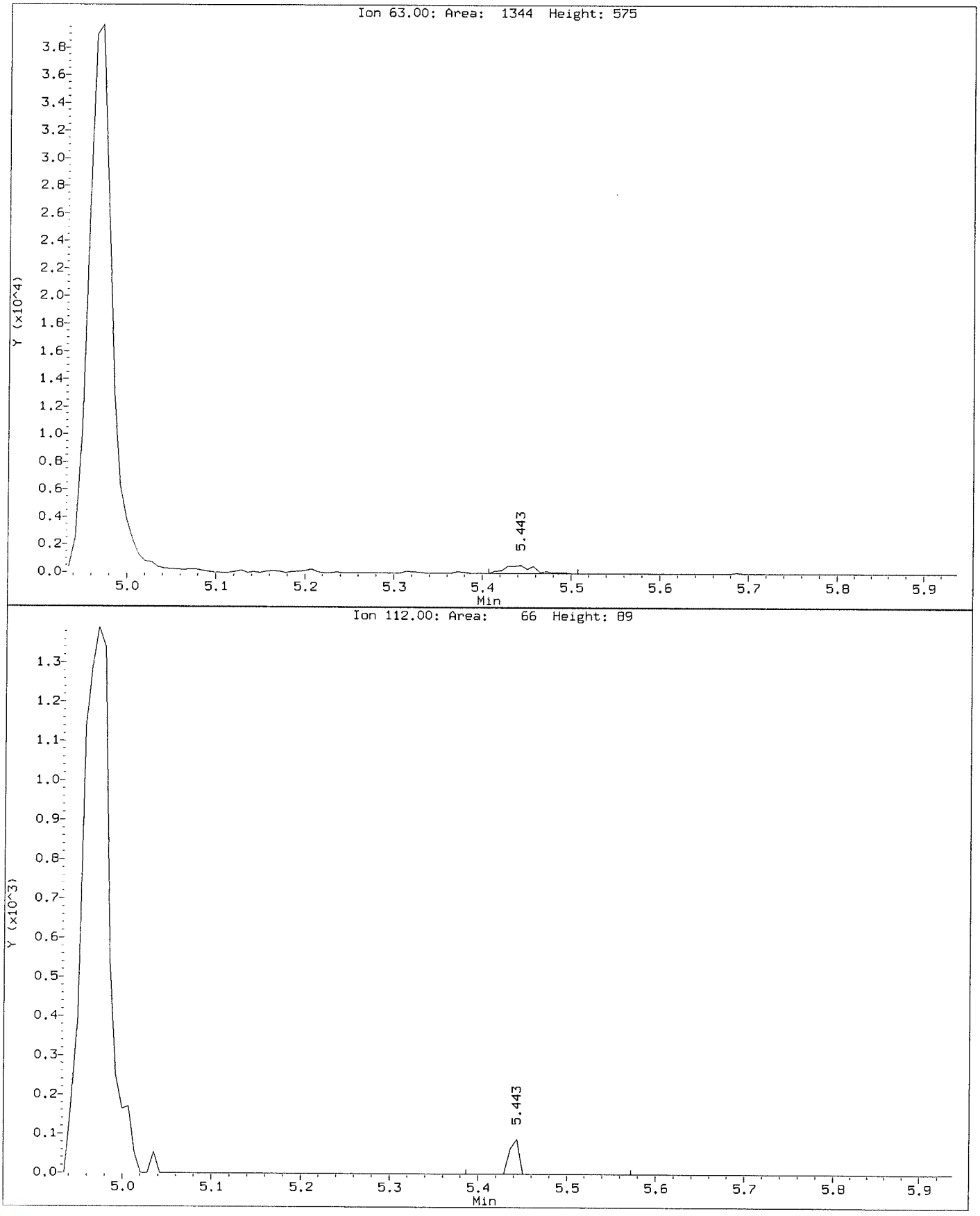
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





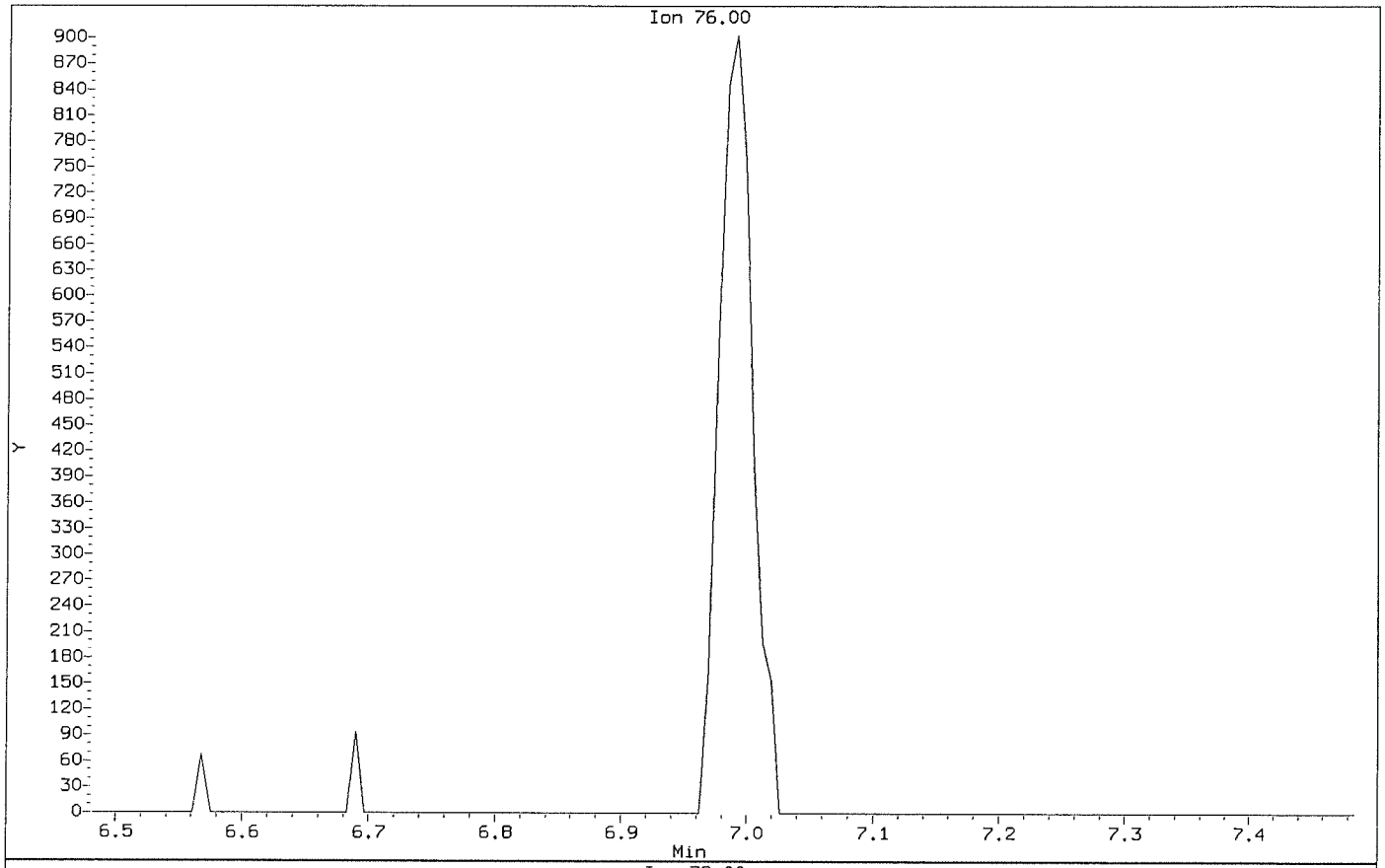
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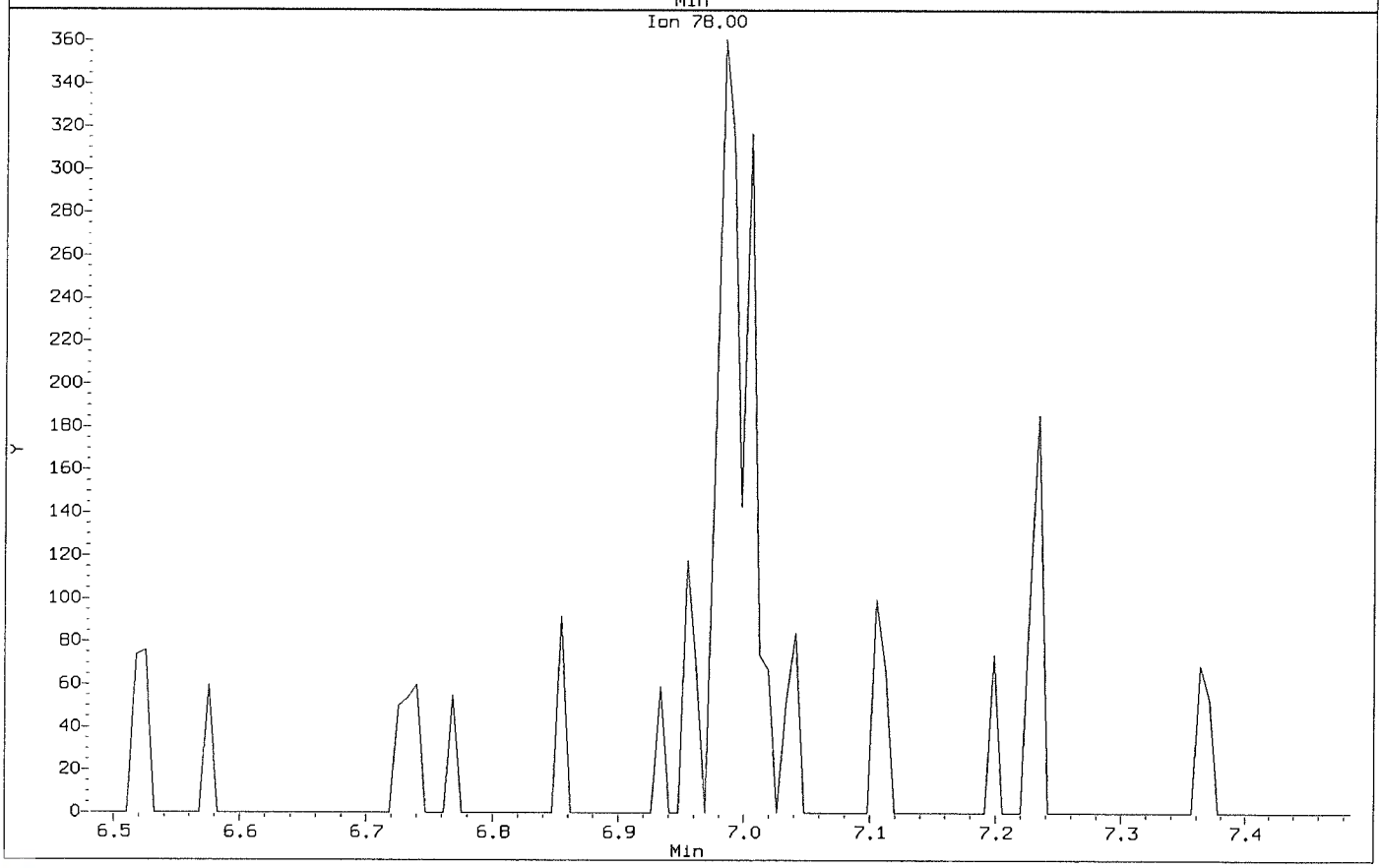
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5



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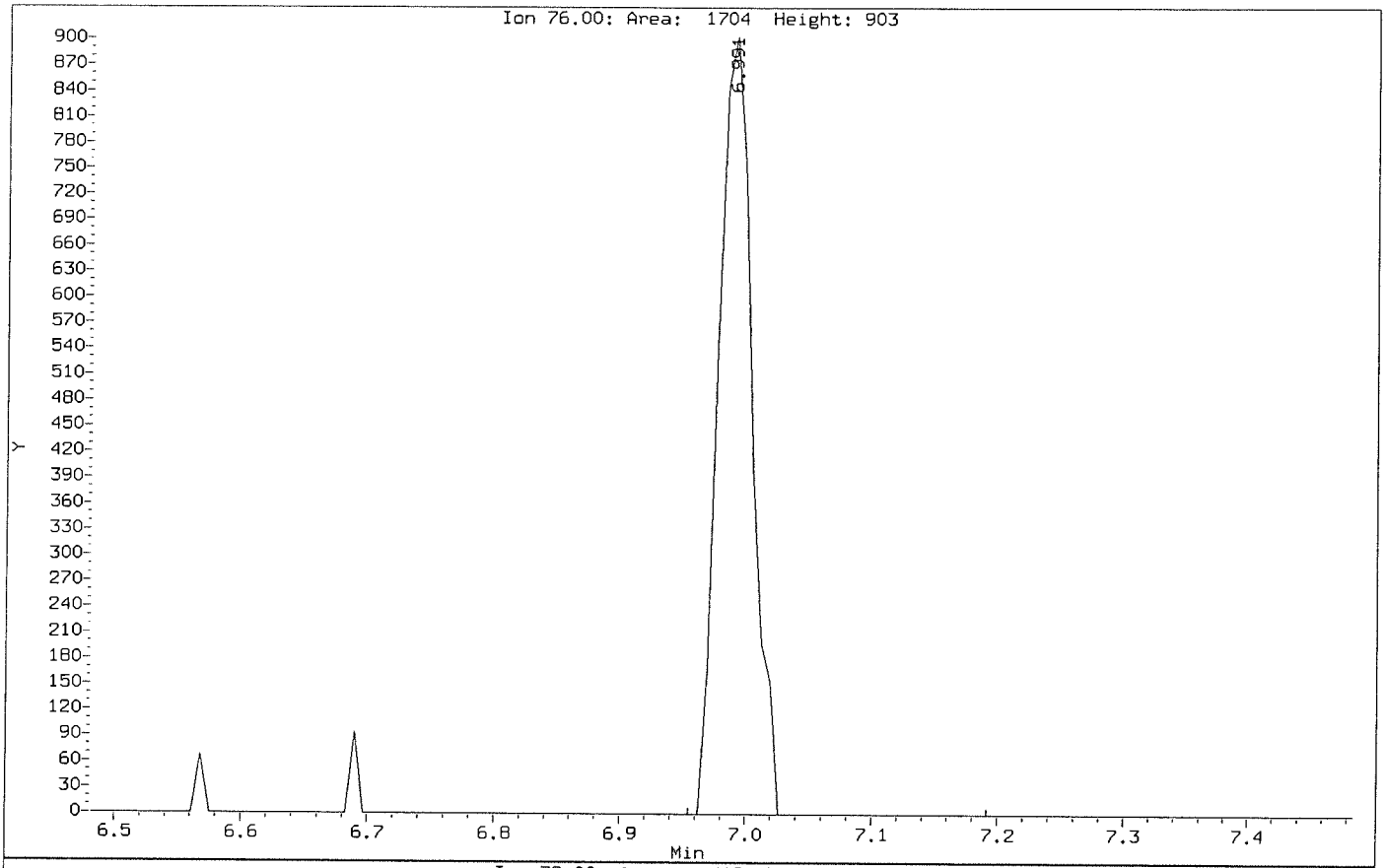
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

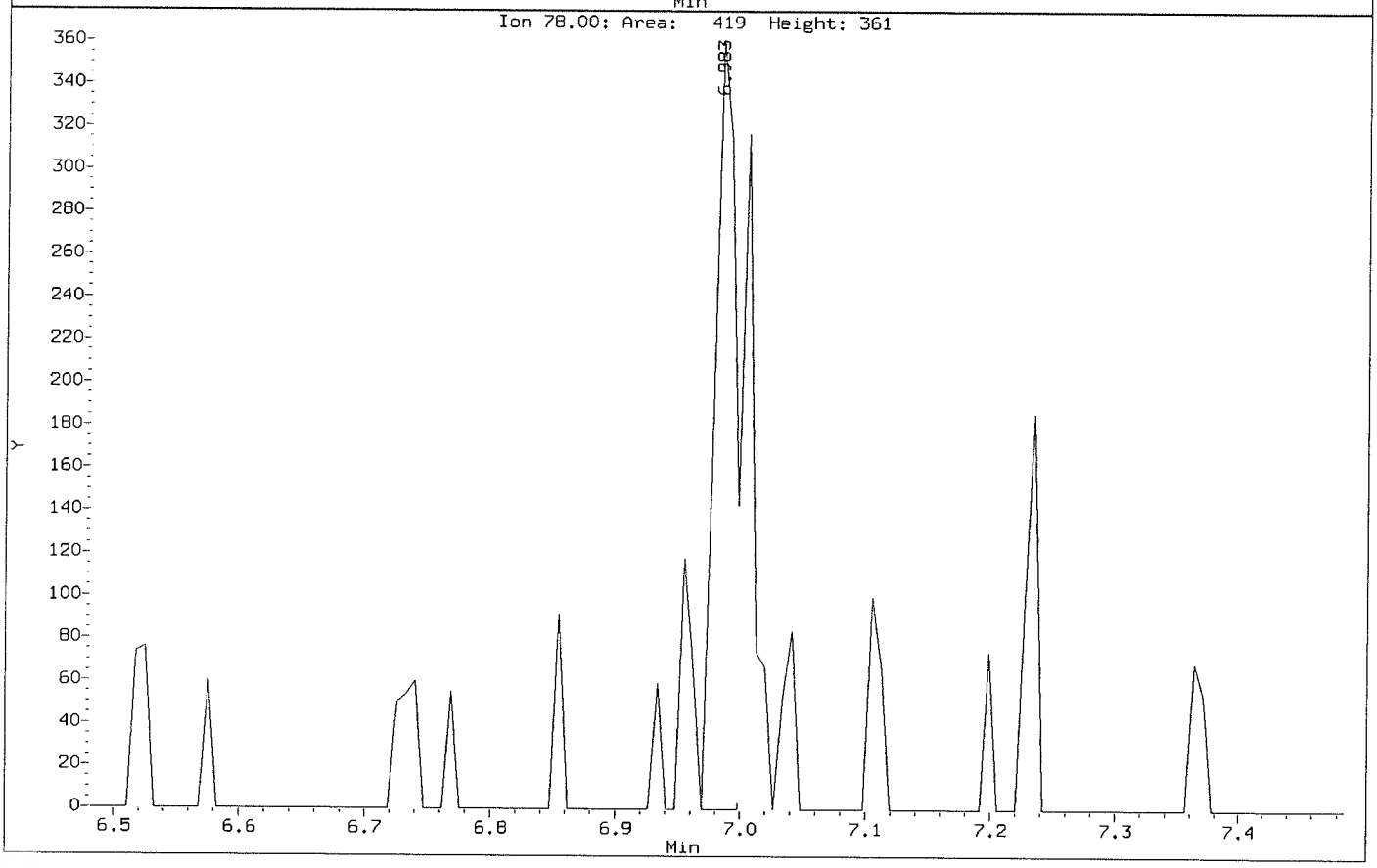




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Client Sample ID: VSTD000.5

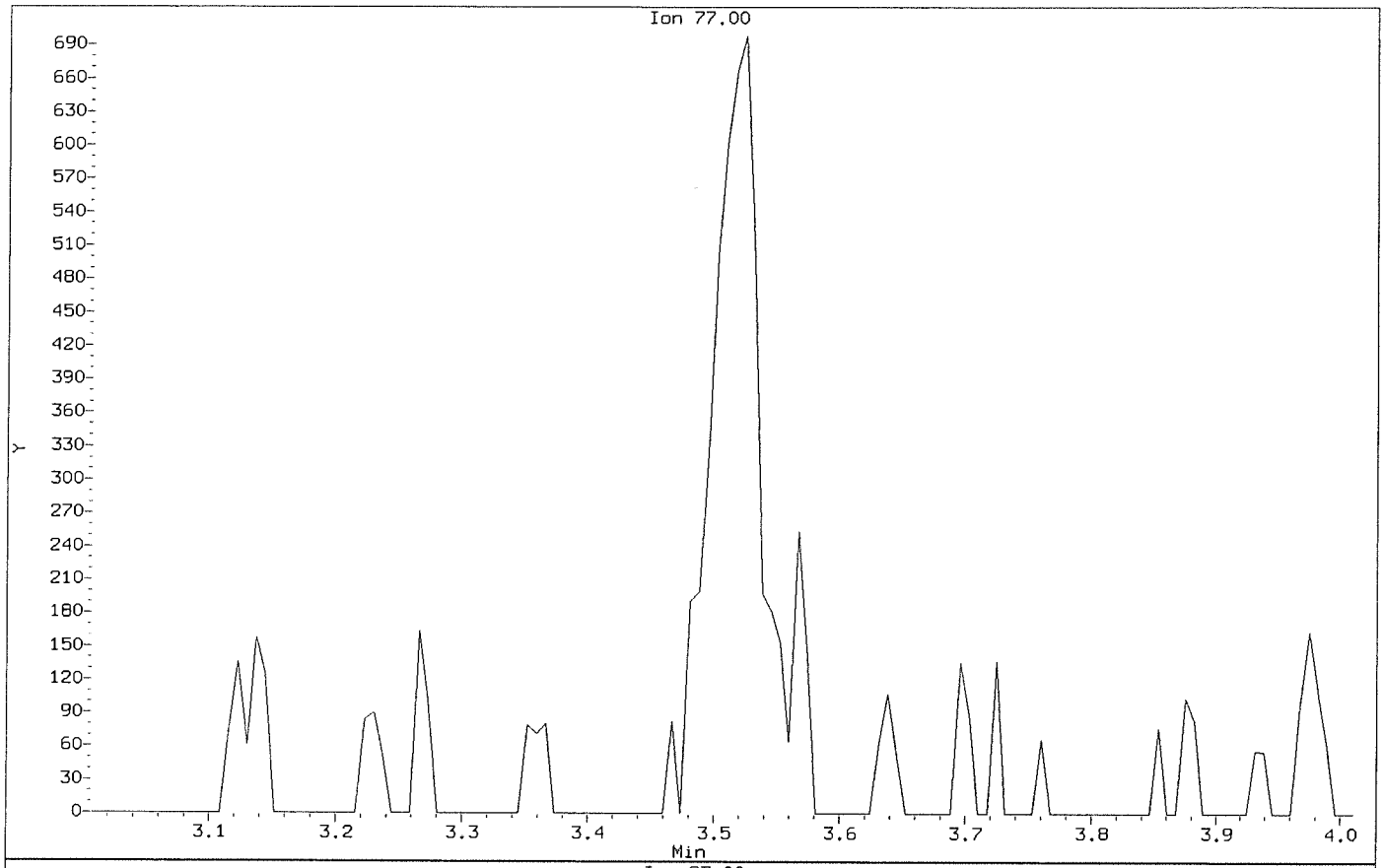
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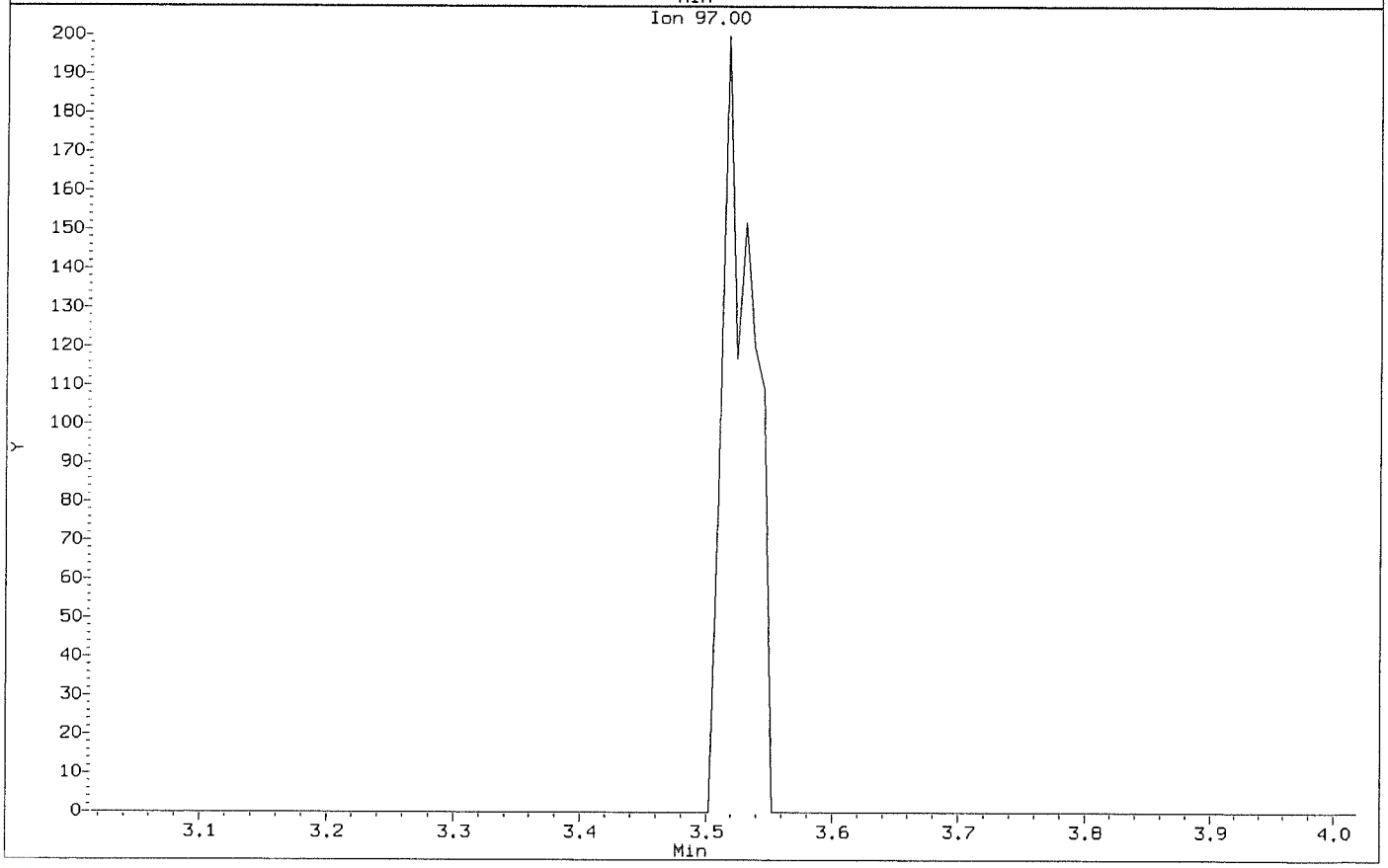




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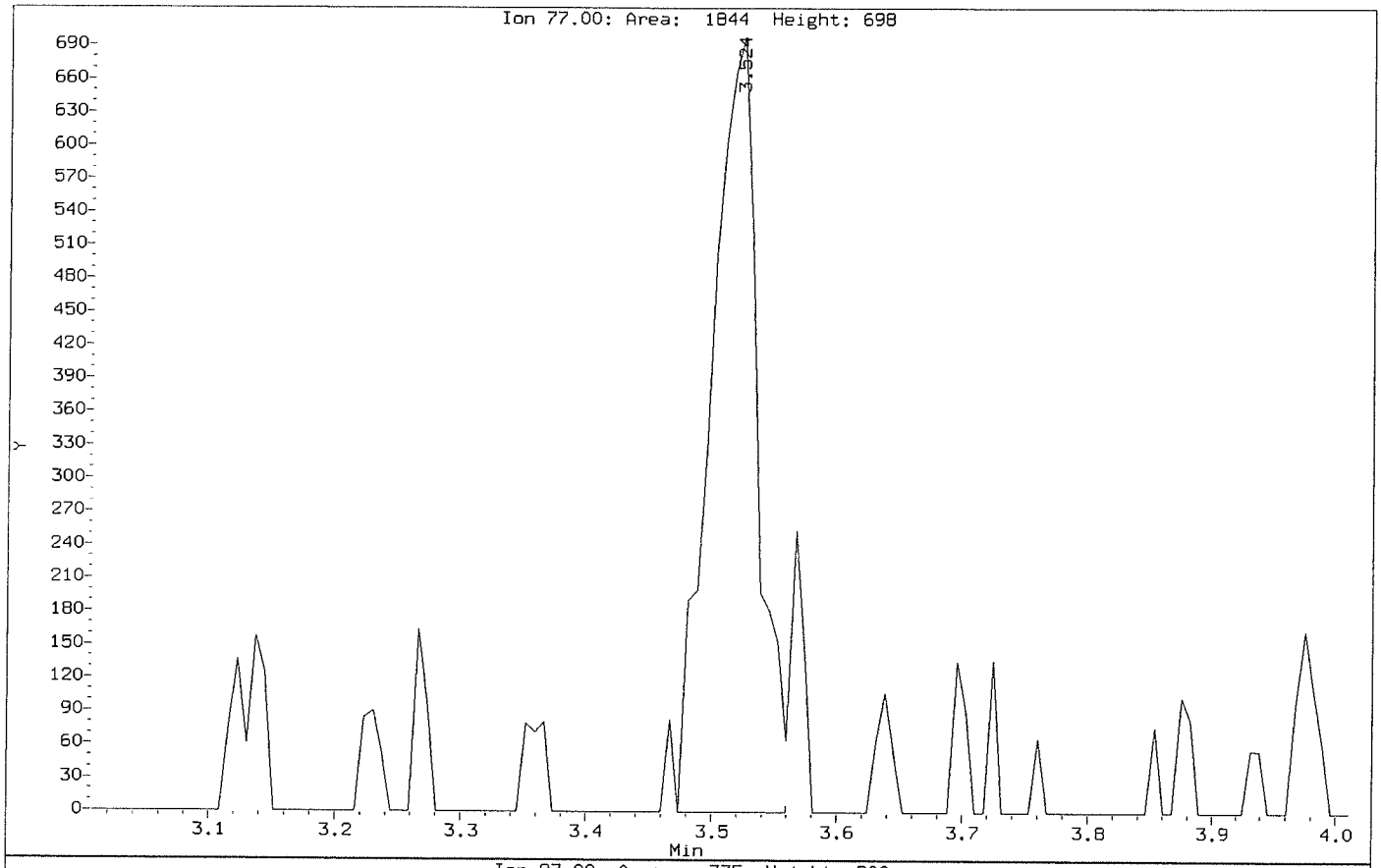
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

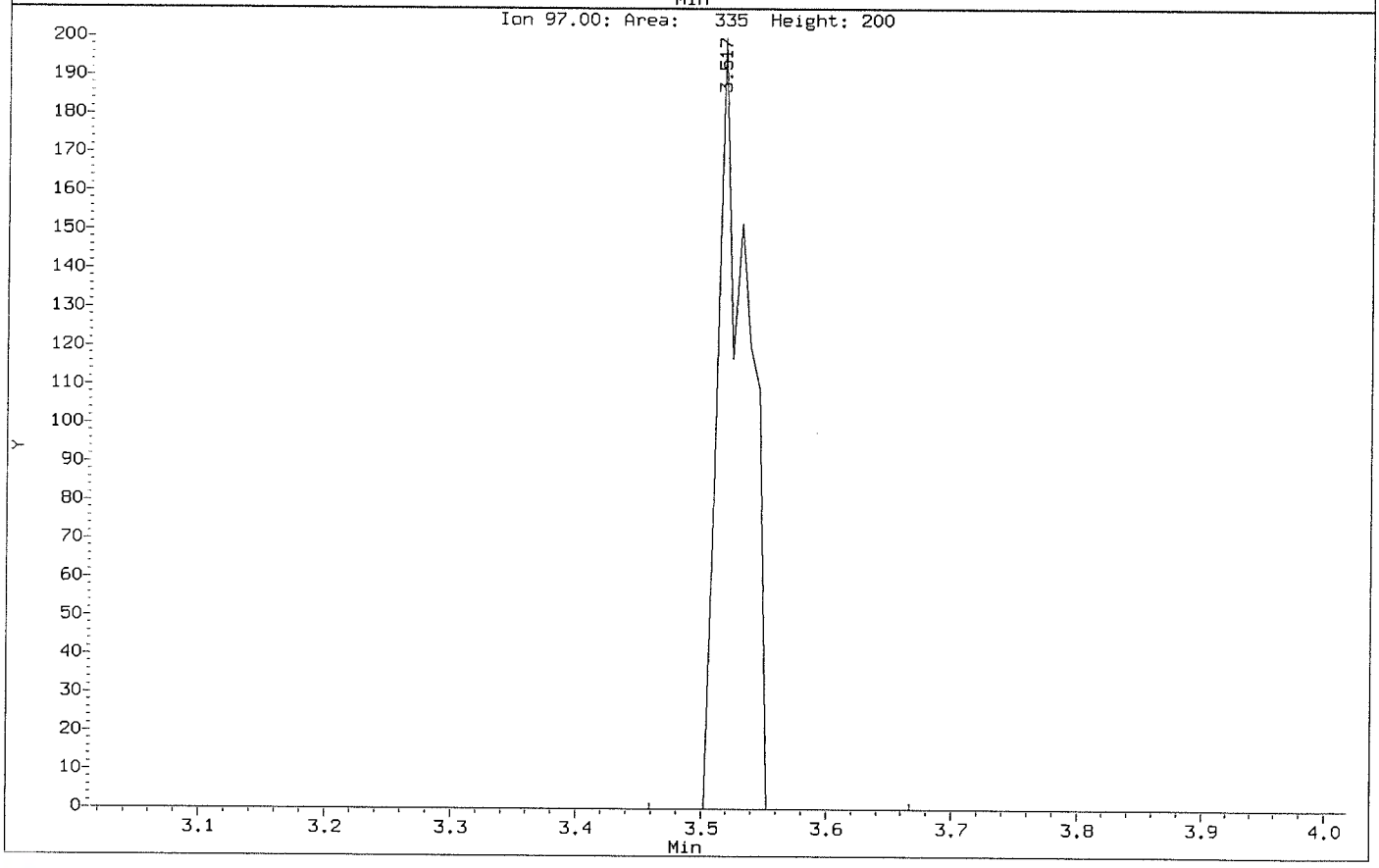




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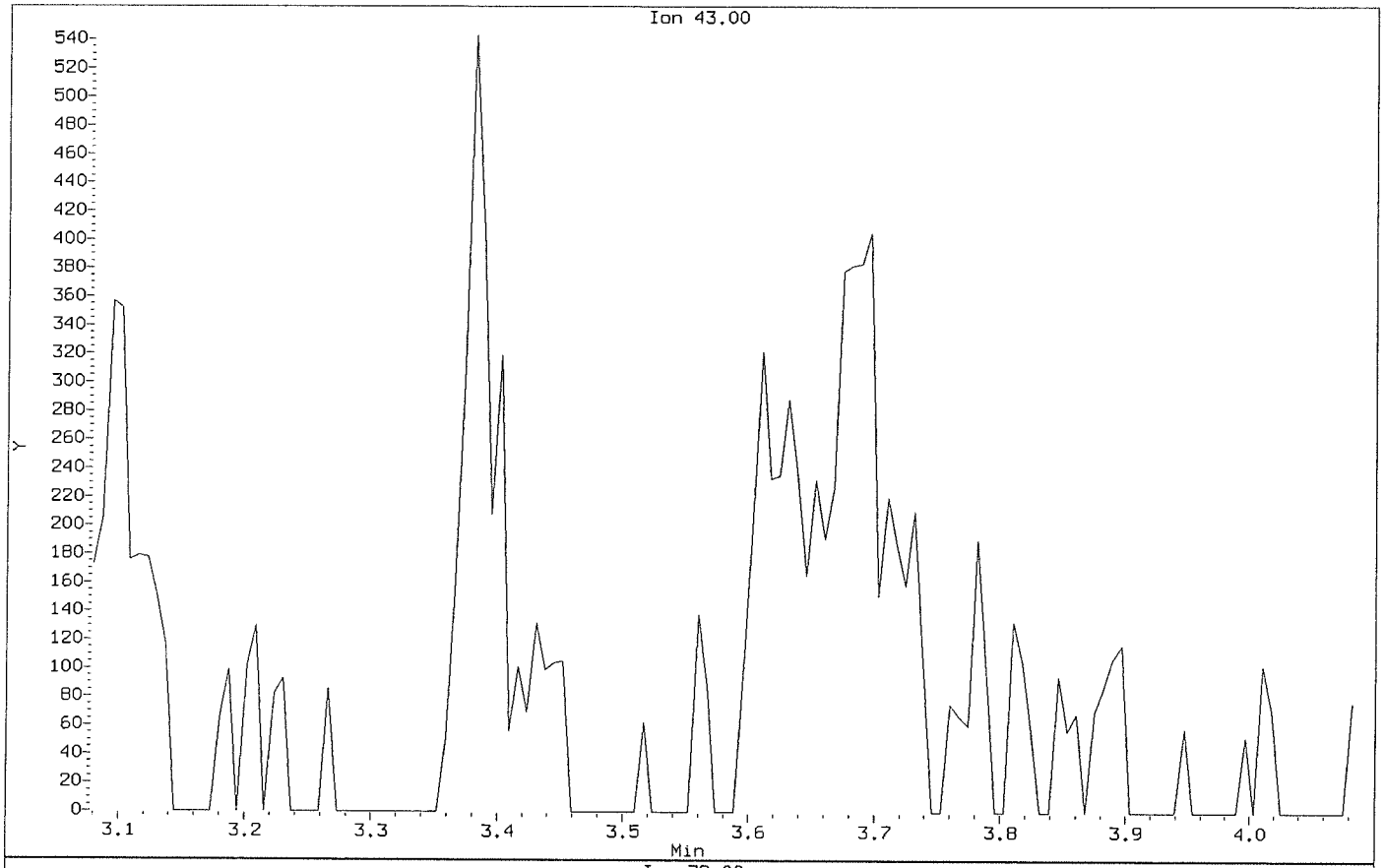
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

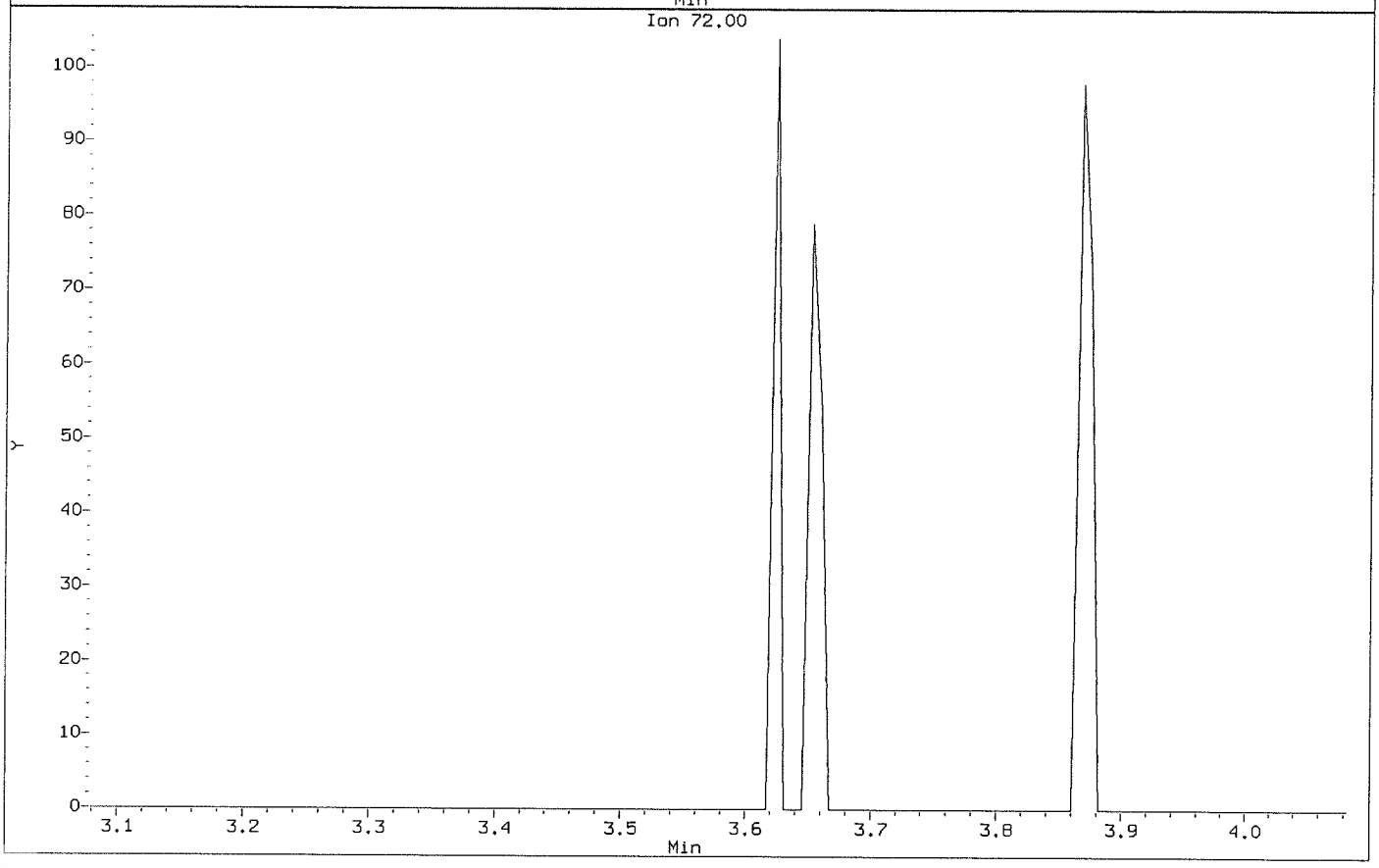




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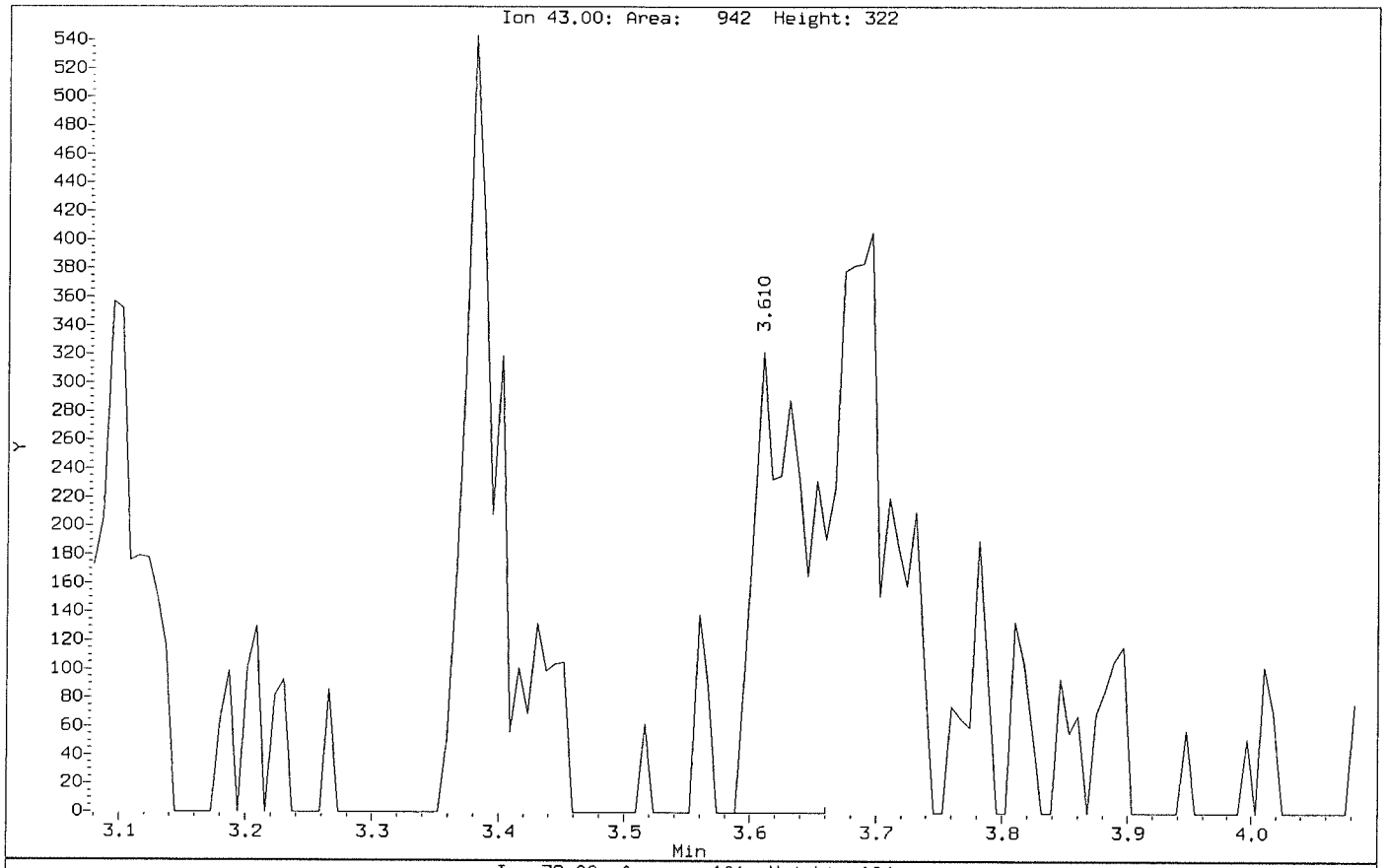
Compound: 2-Butanone
CAS Number: 78-93-3

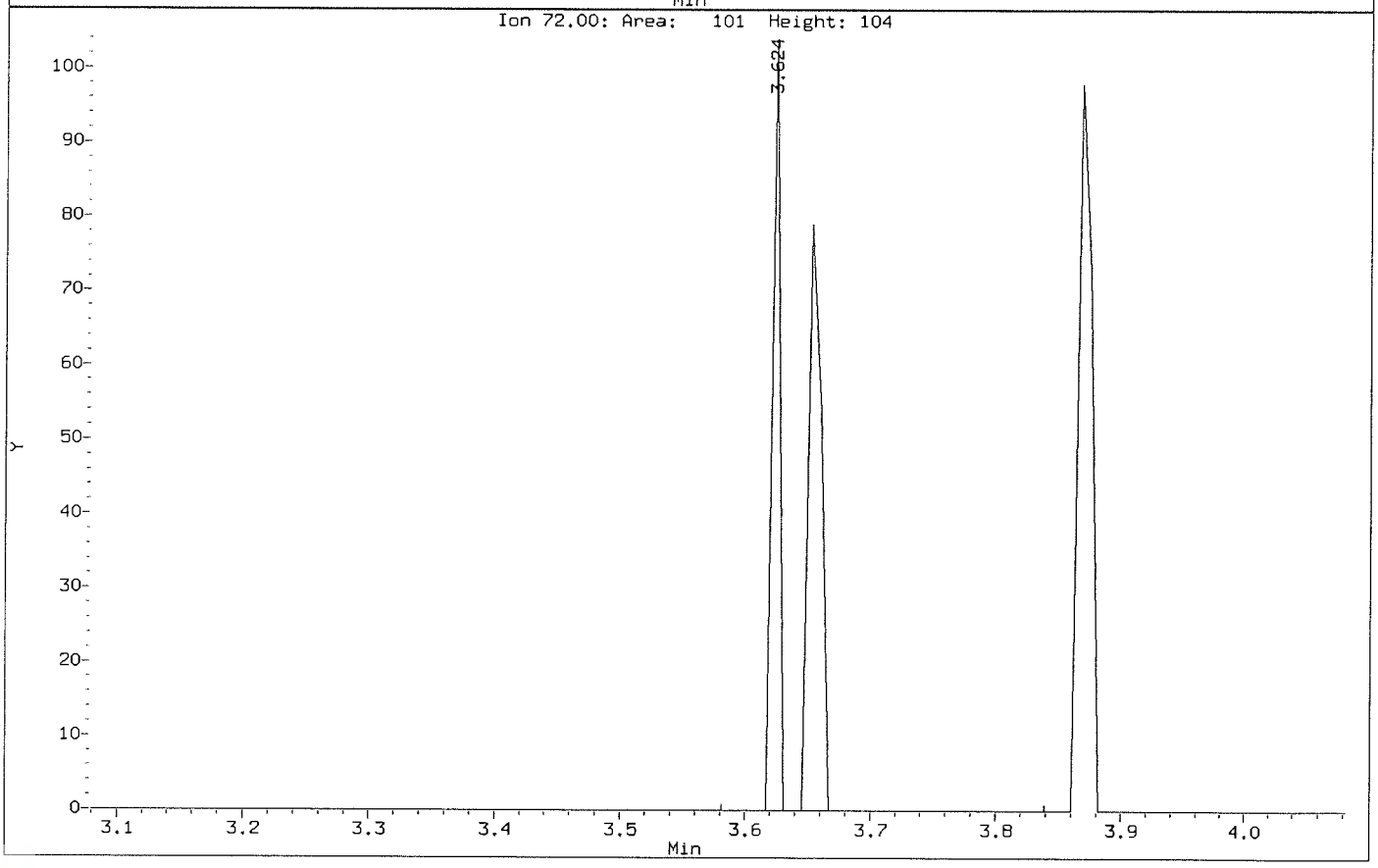




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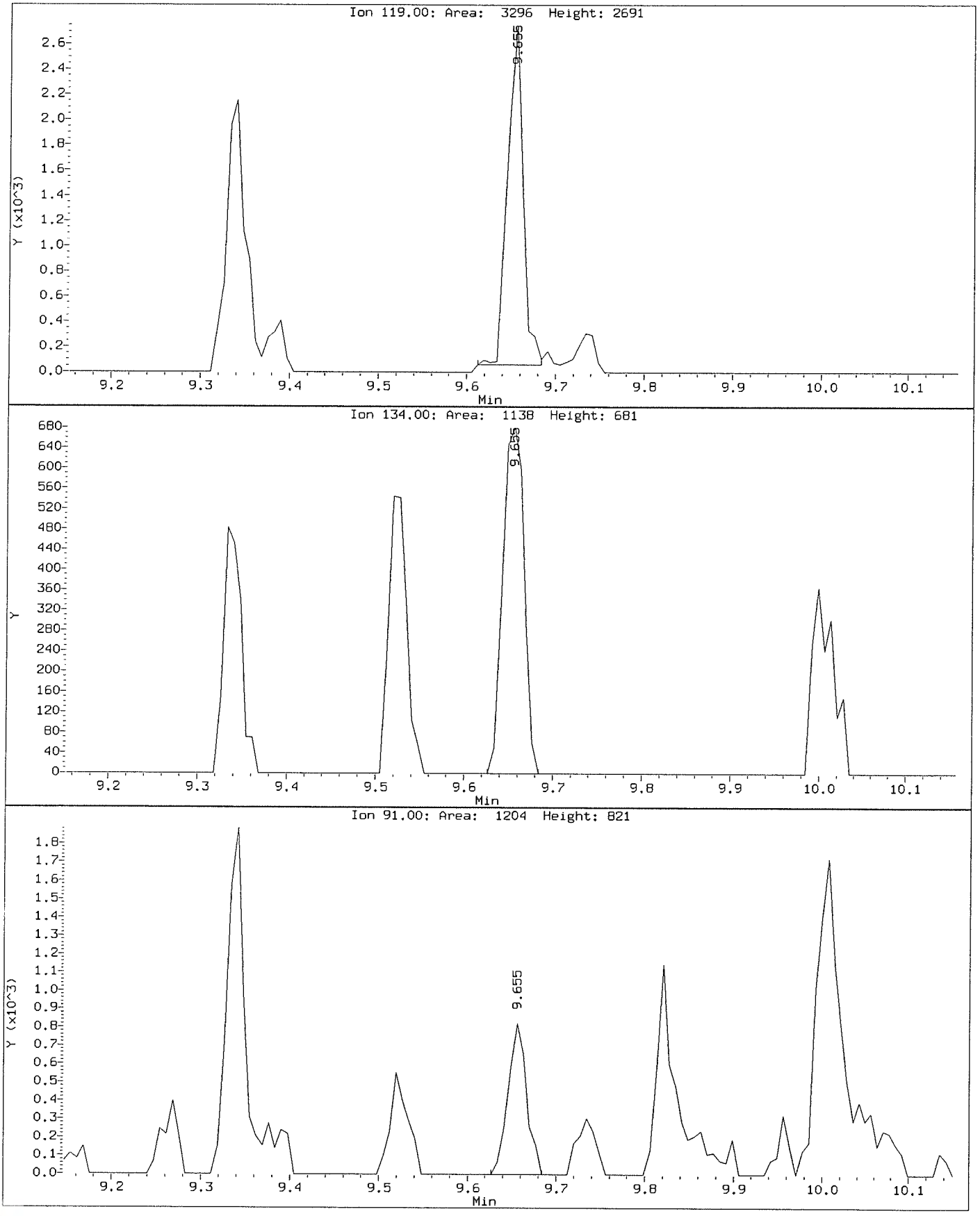
Compound: 2-Butanone
CAS Number: 78-93-3





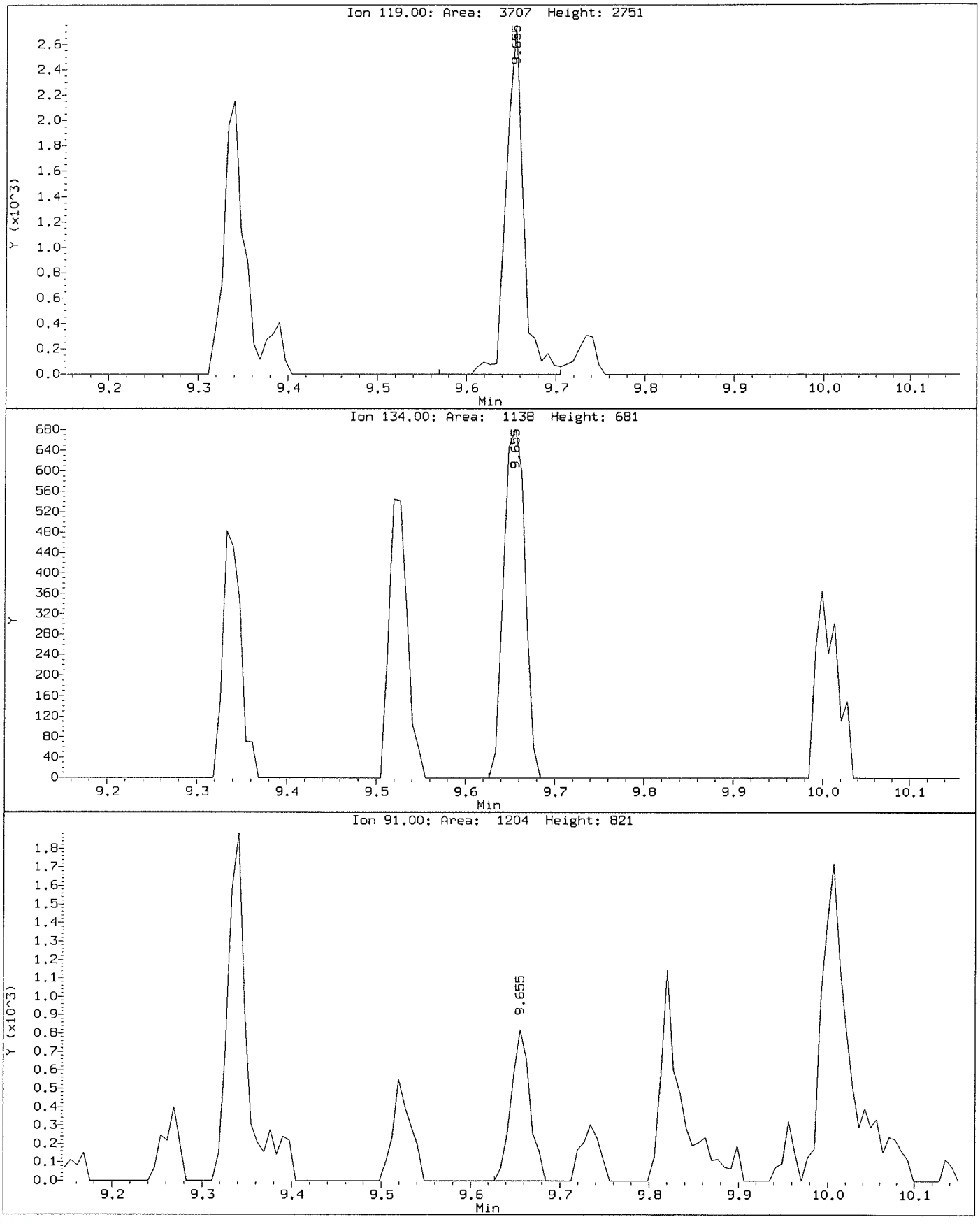
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



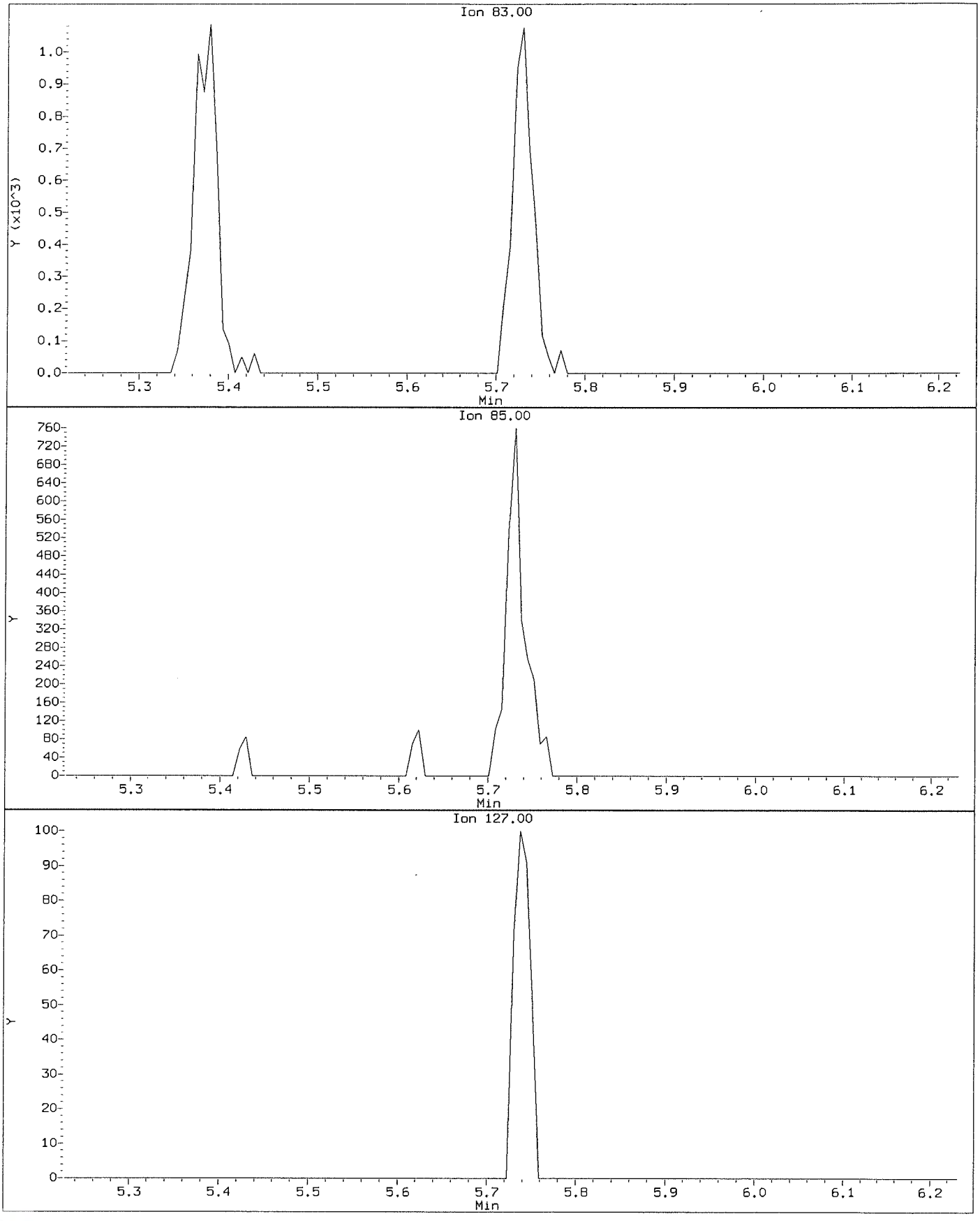
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



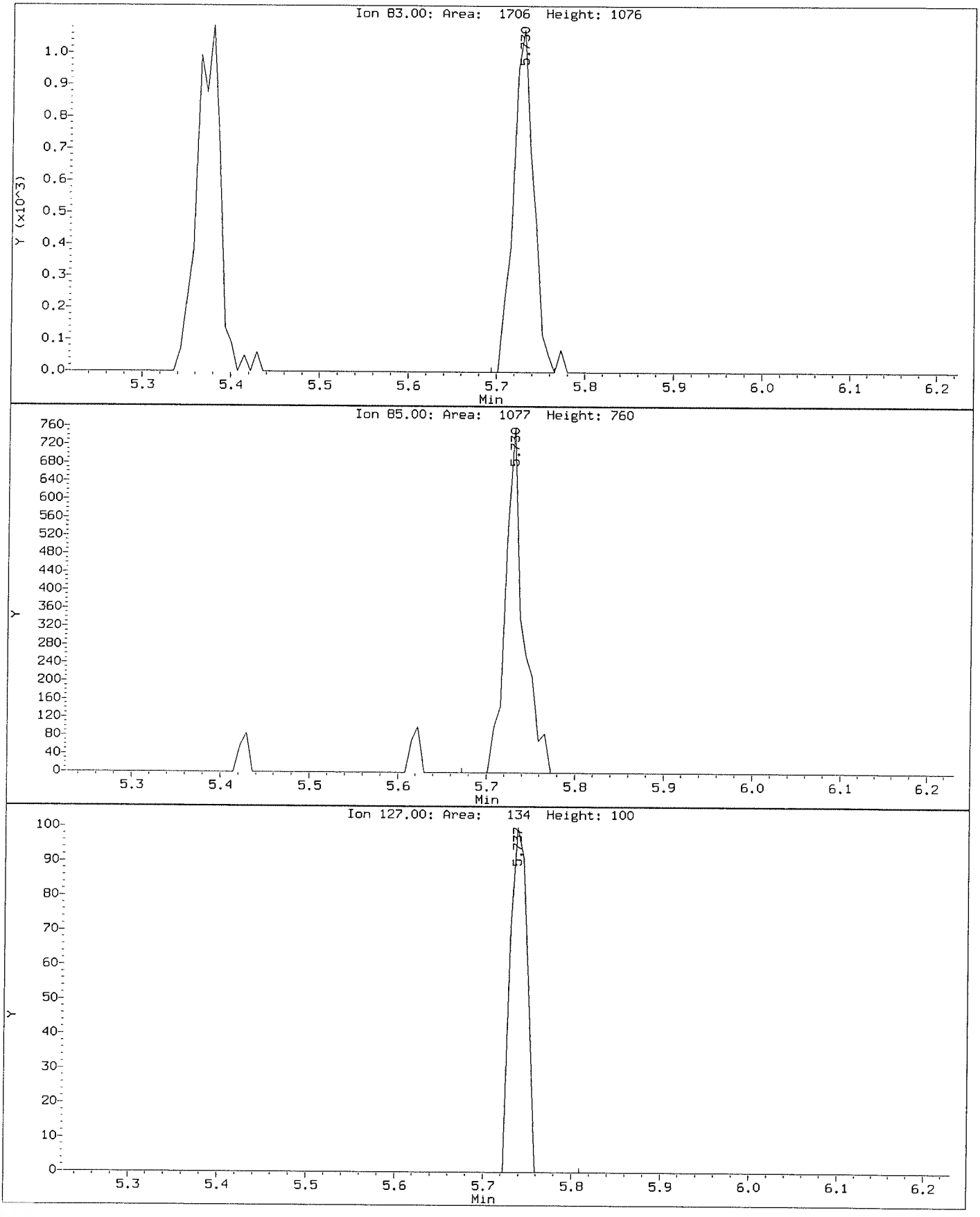
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



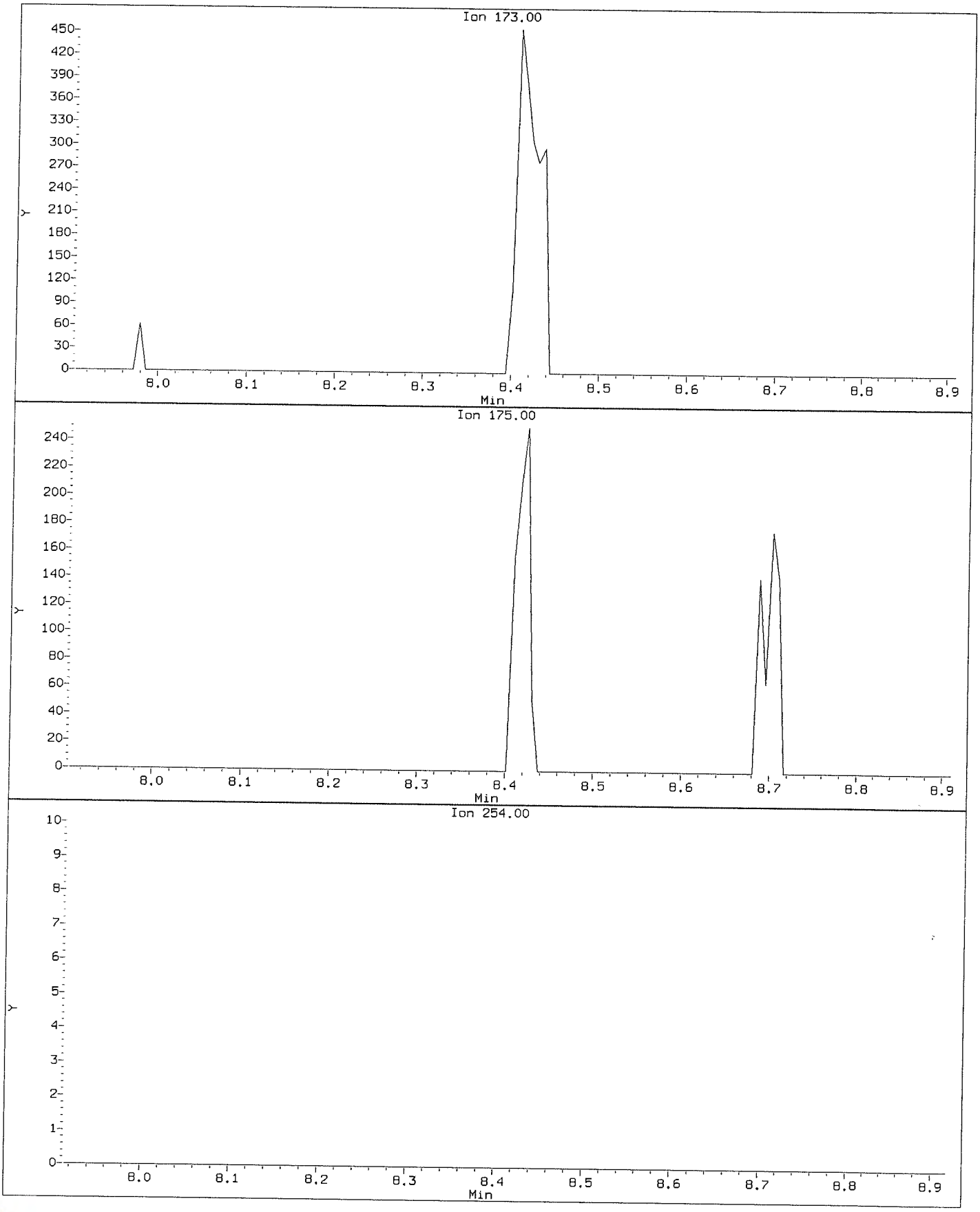
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



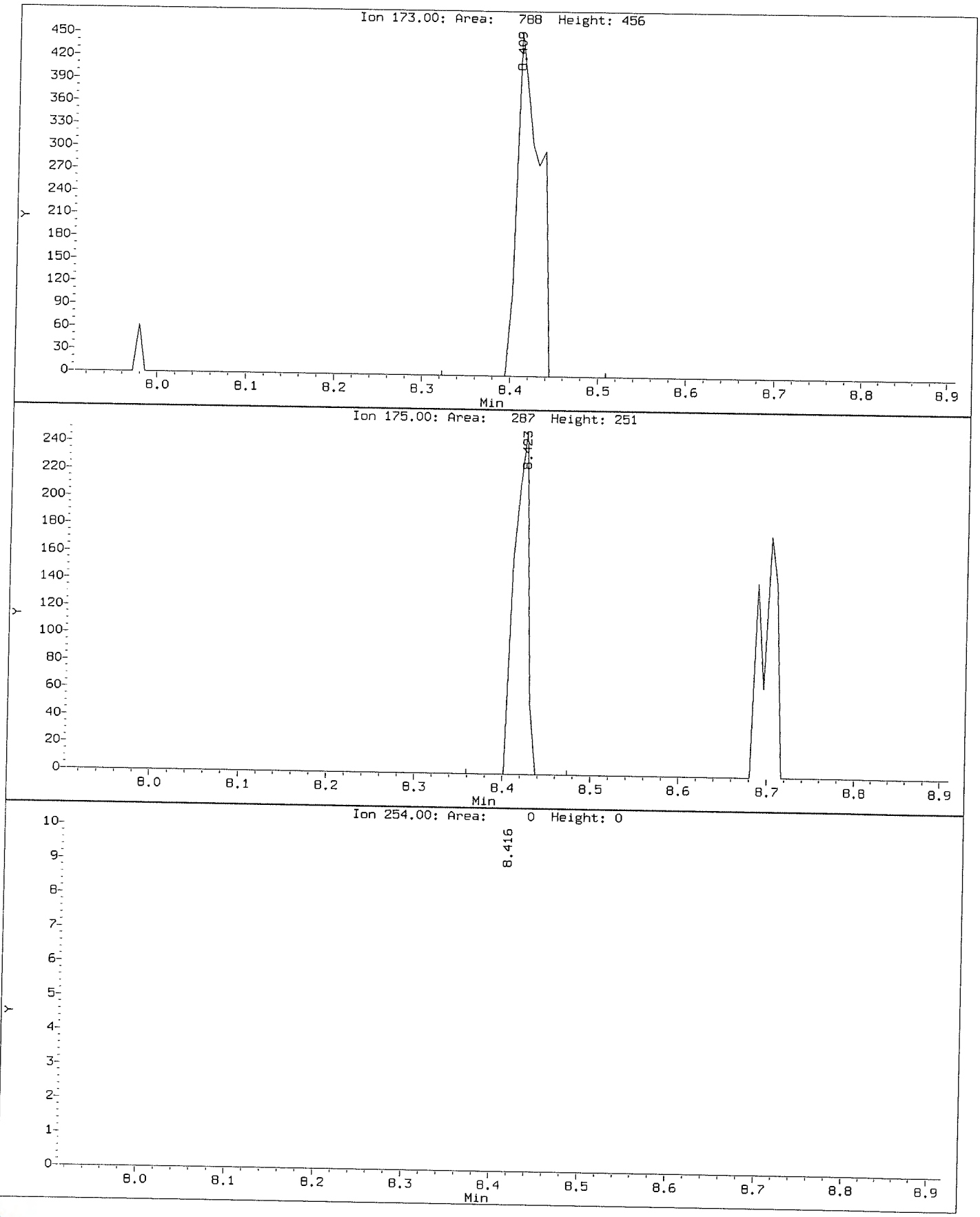
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



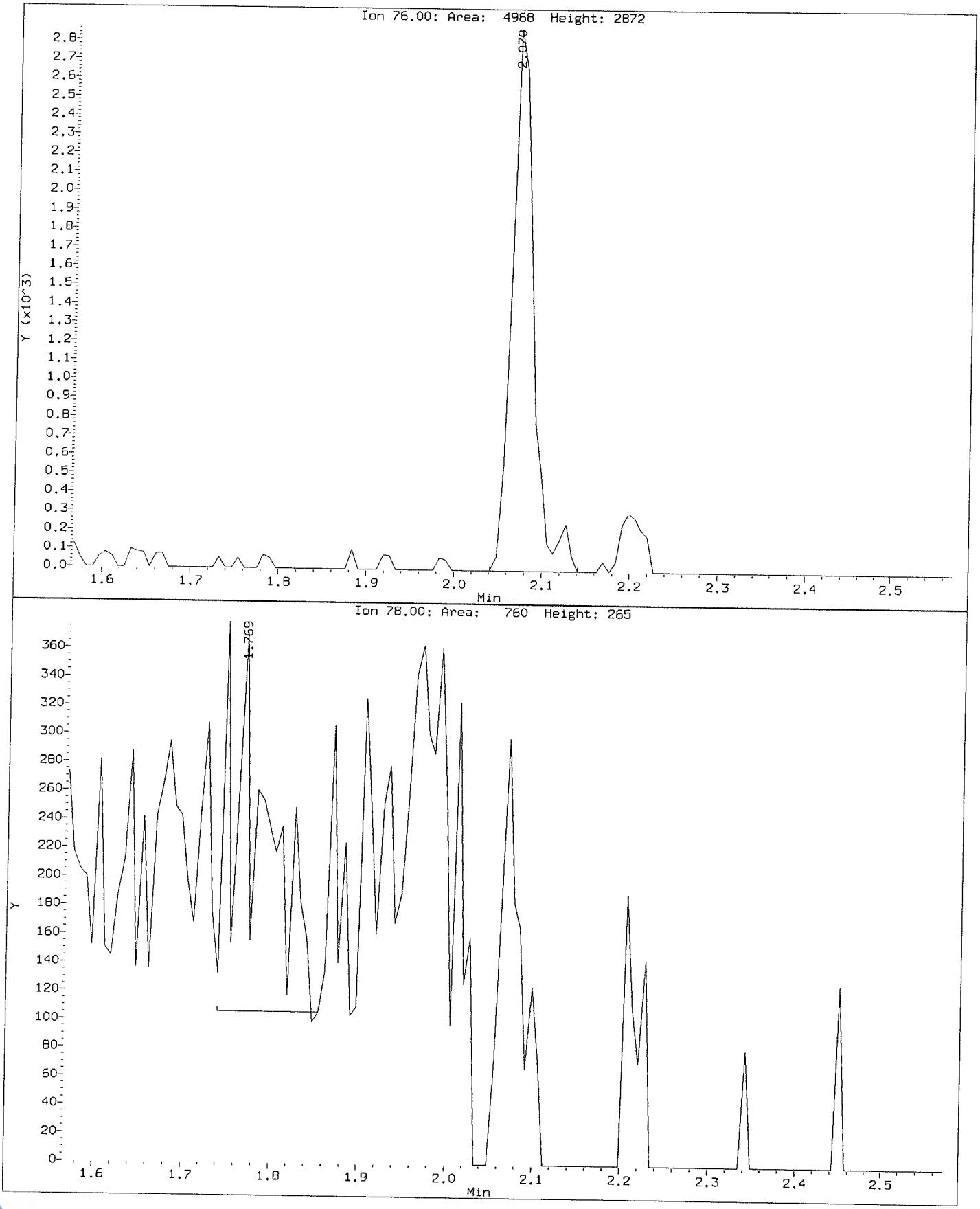
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Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



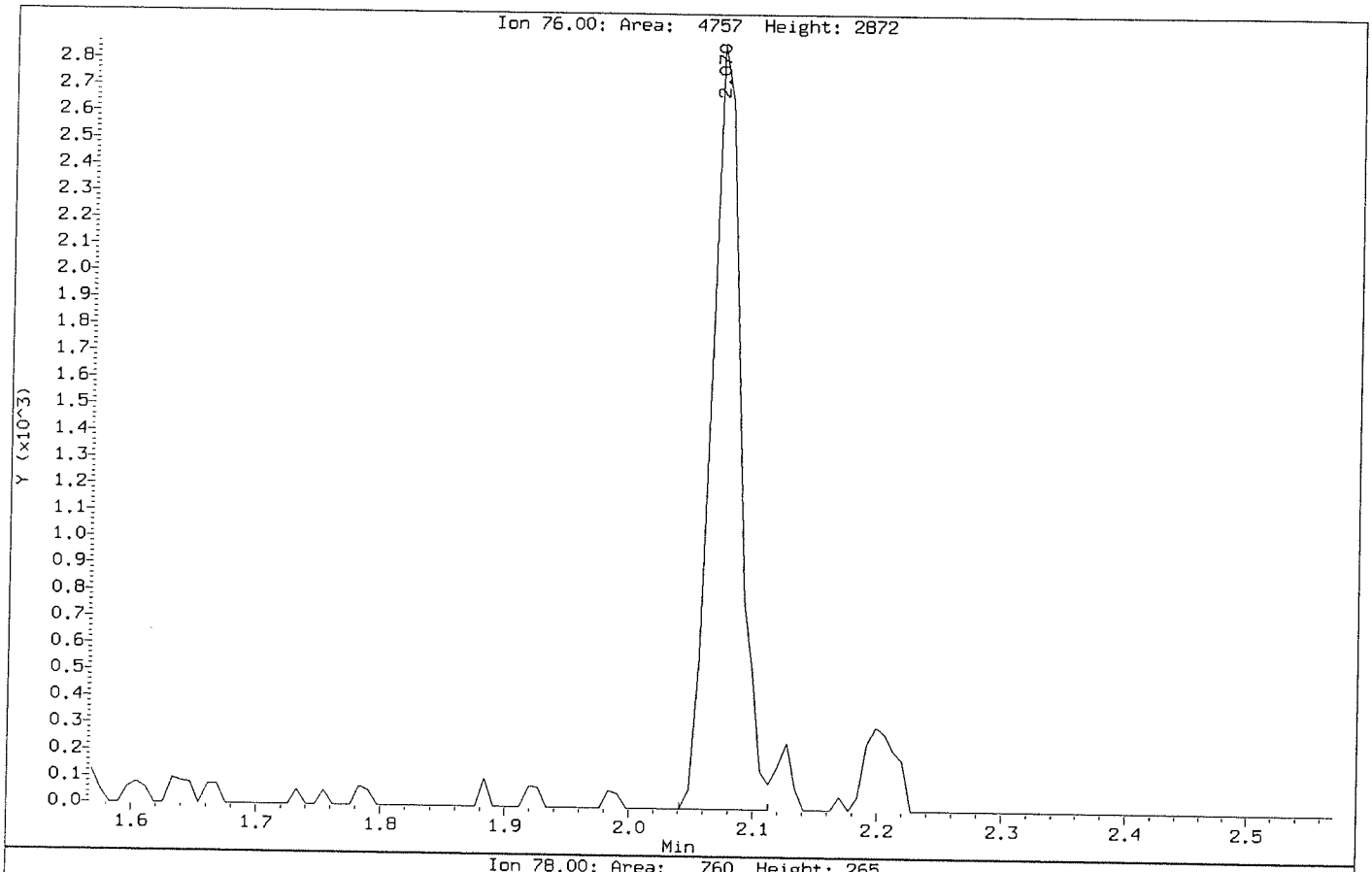
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Client Sample ID: VSTD000.5

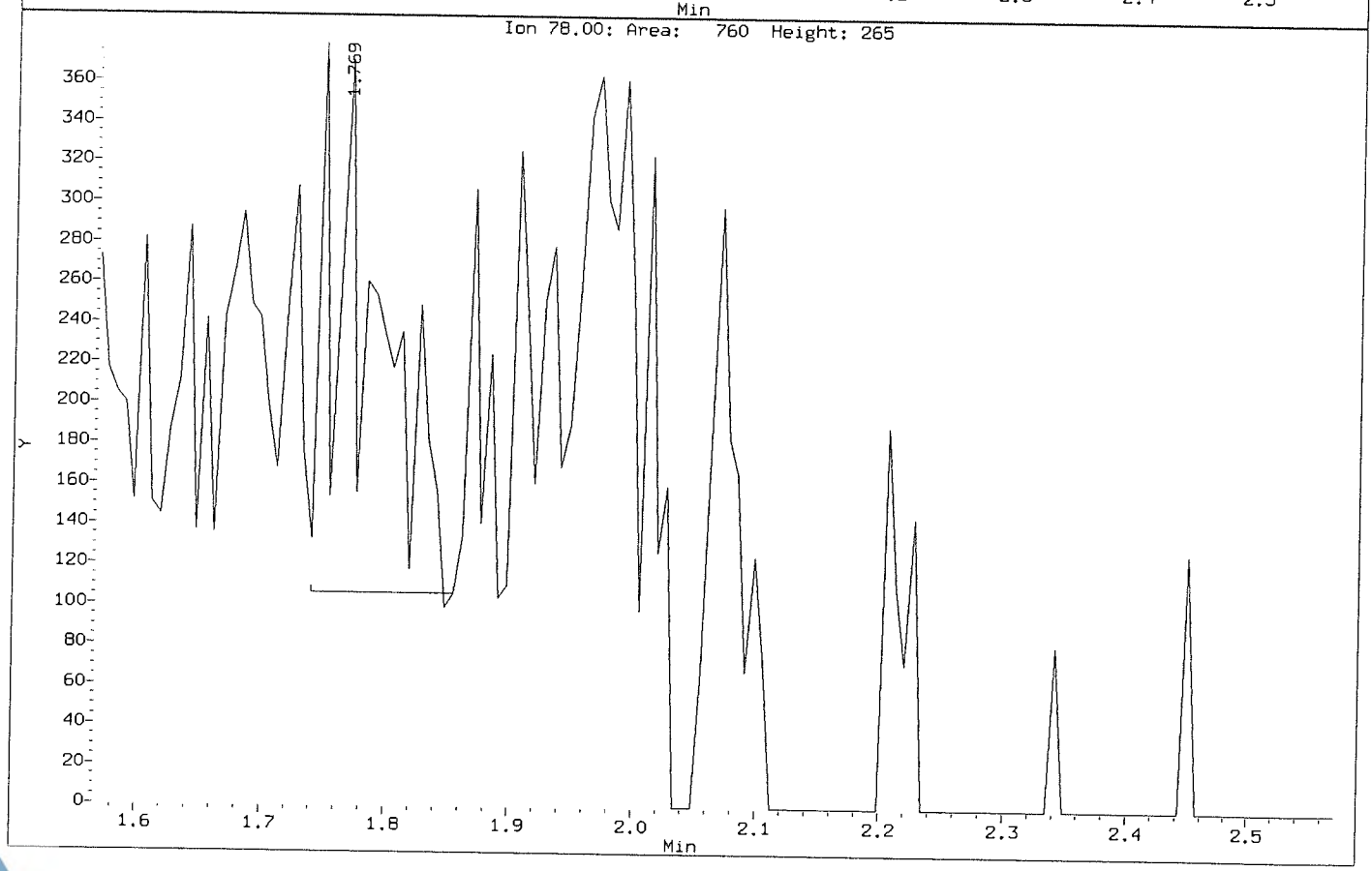
Compound: Carbon Disulfide
CAS Number: 75-15-0



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Instrument: voa6.i
Client Sample ID: VSTD000.5

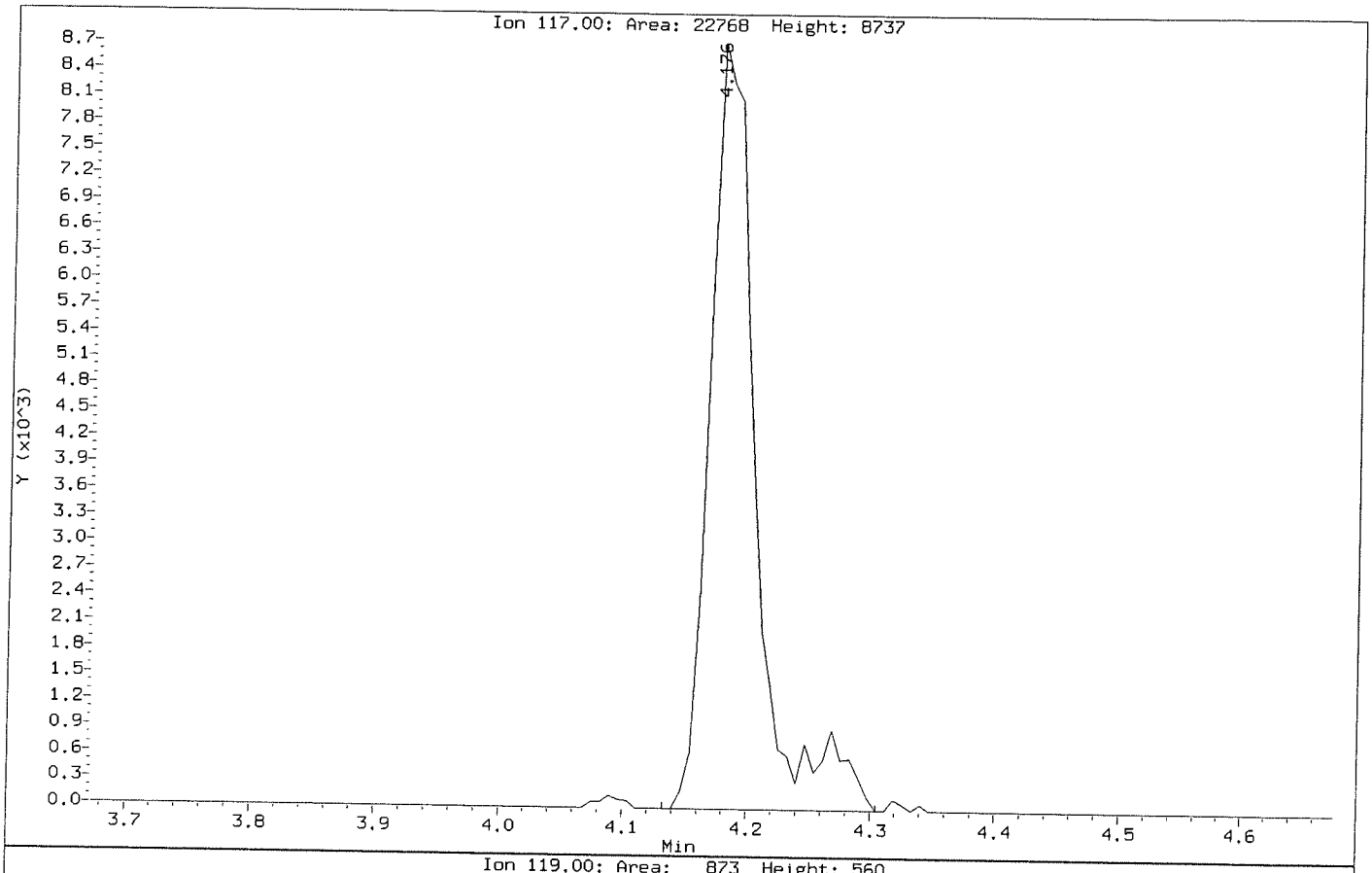
Compound: Carbon Disulfide
CAS Number: 75-15-0

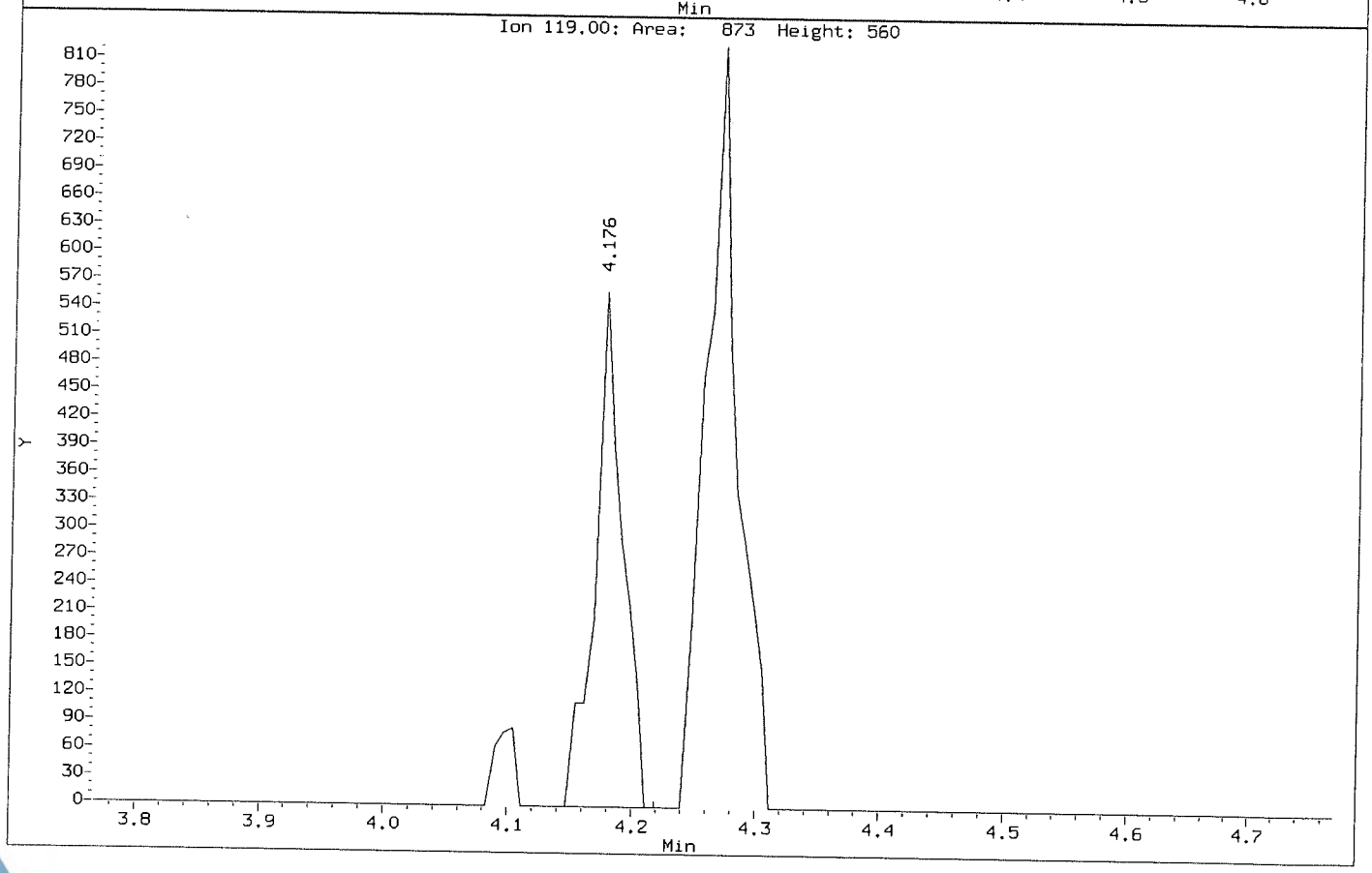




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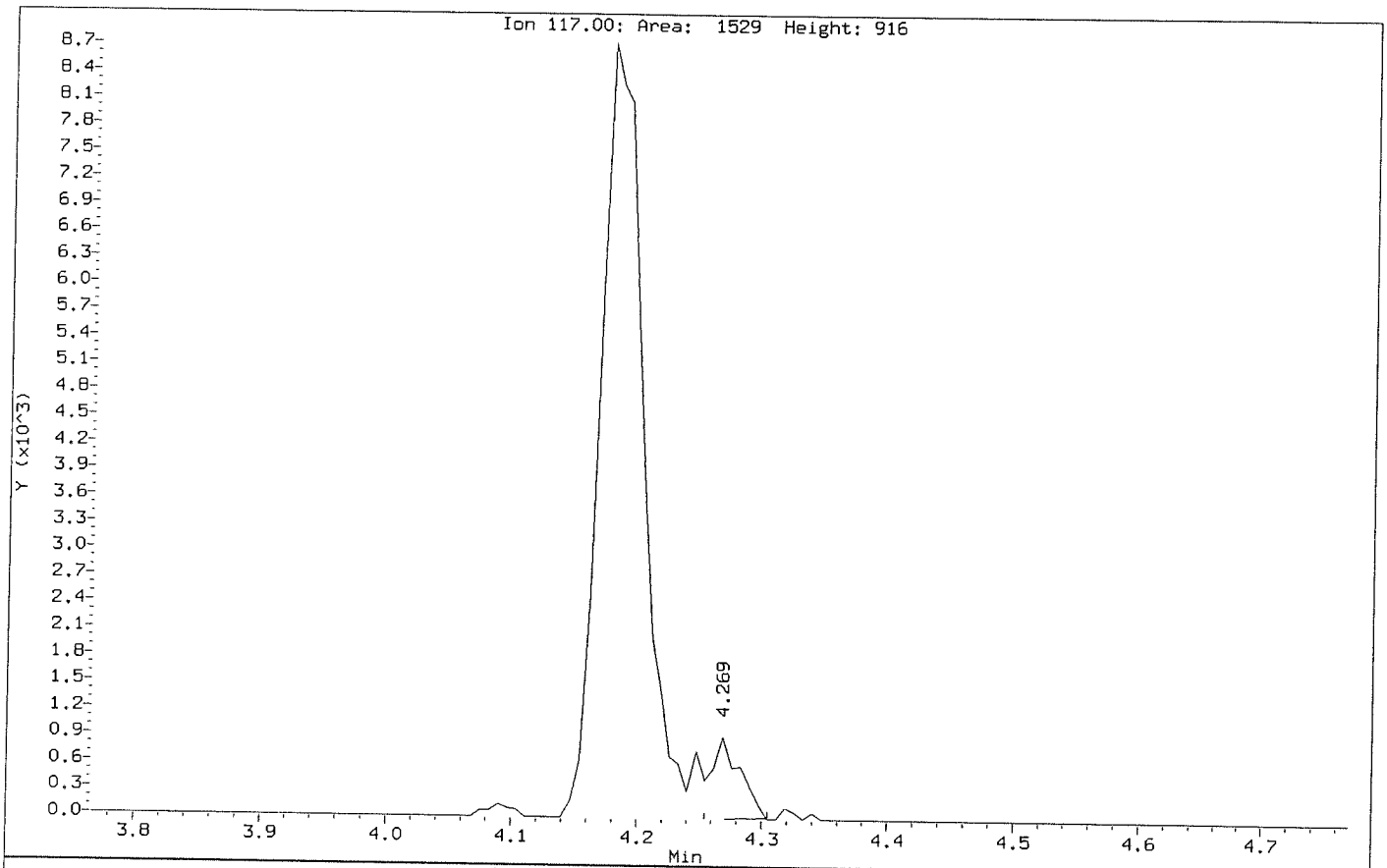
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

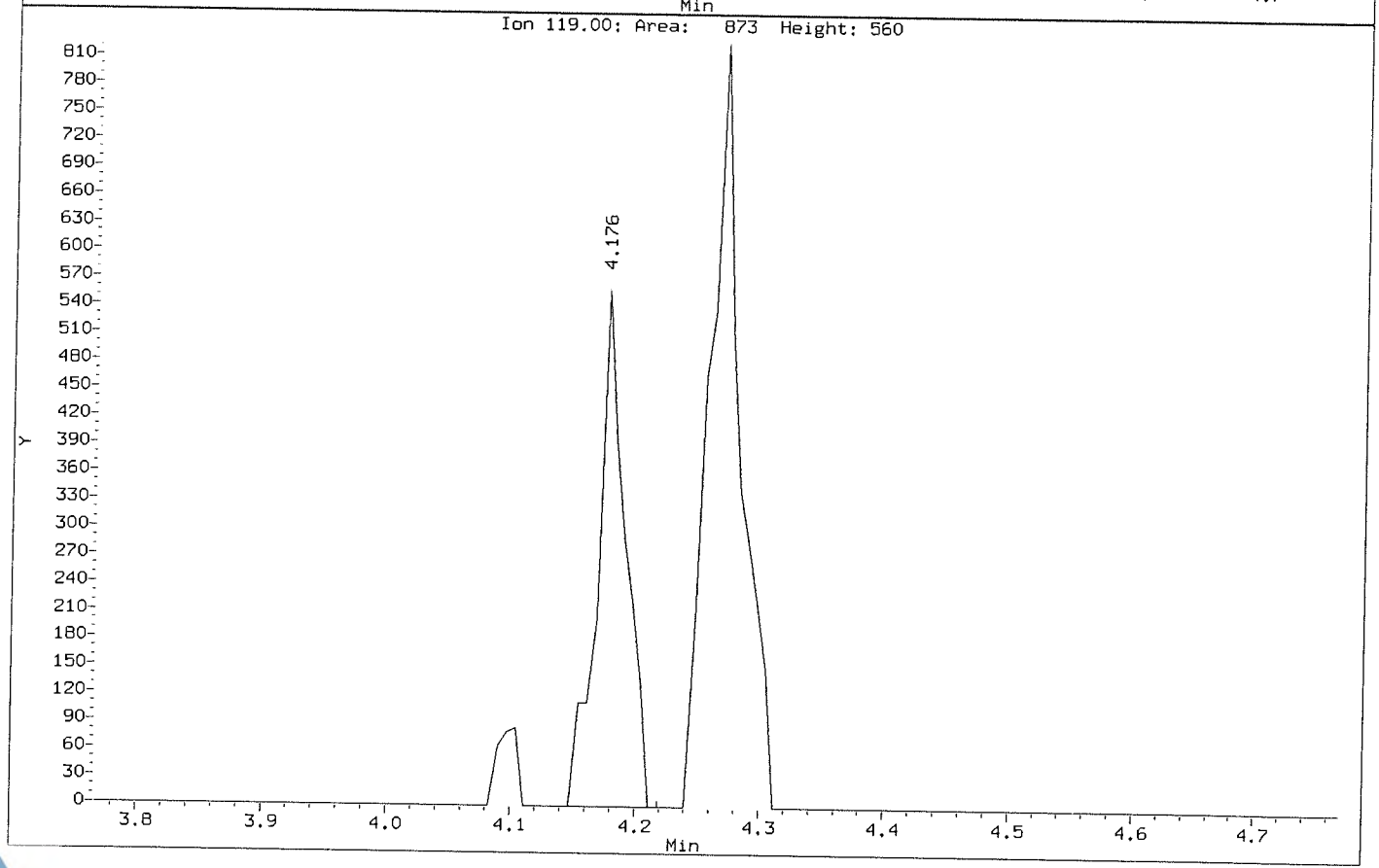




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Client Sample ID: VSTD000.5

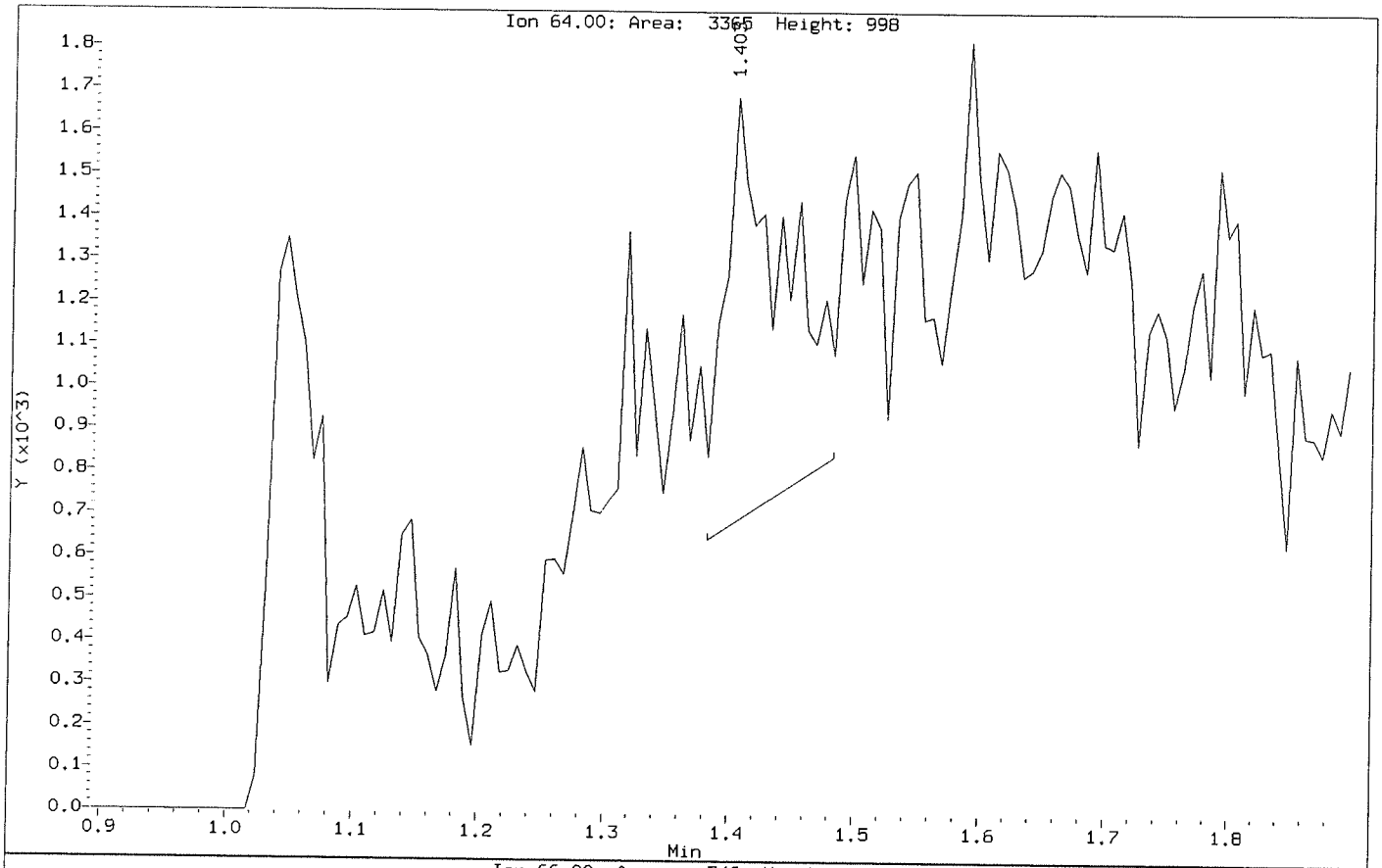
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

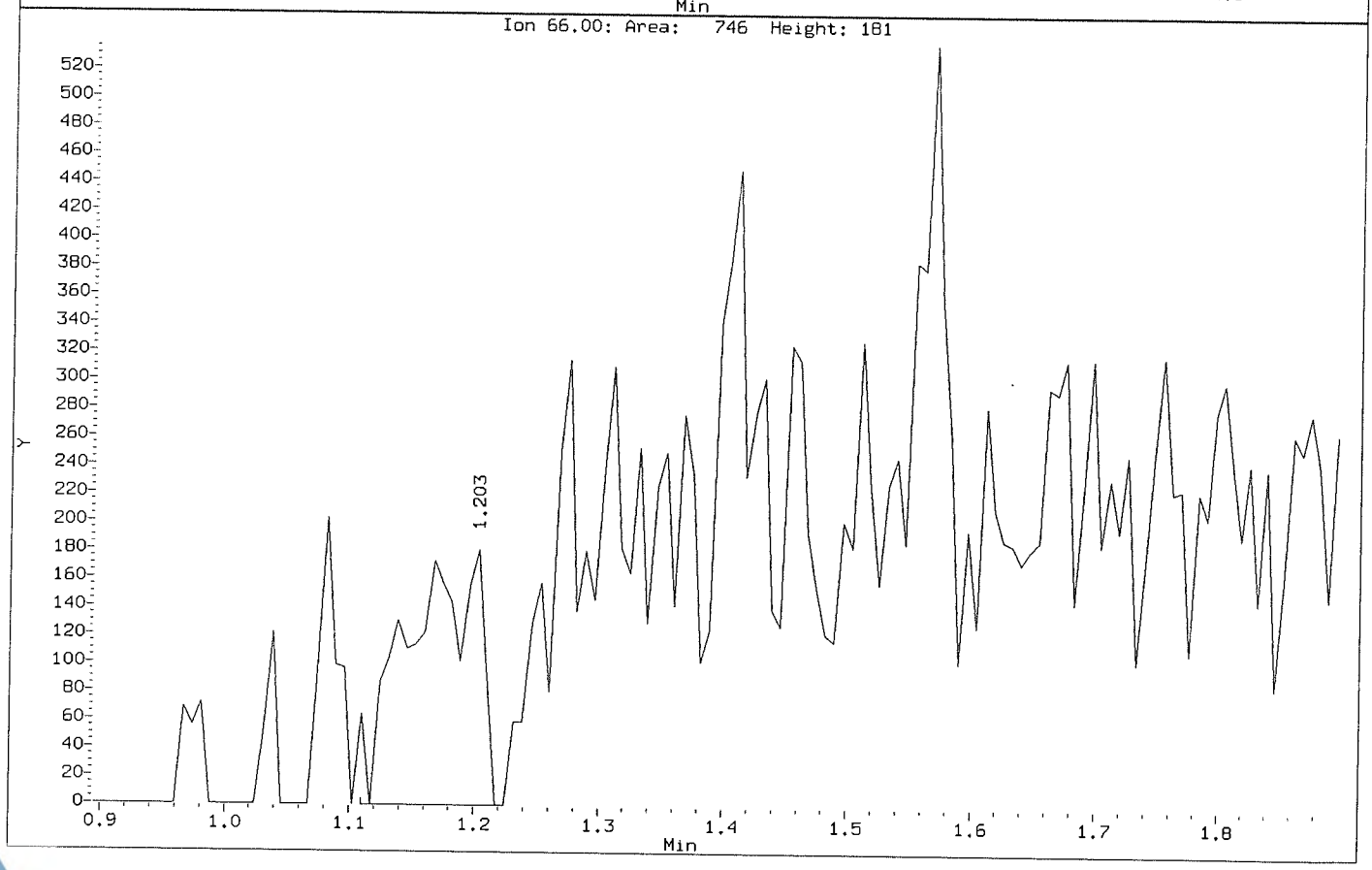




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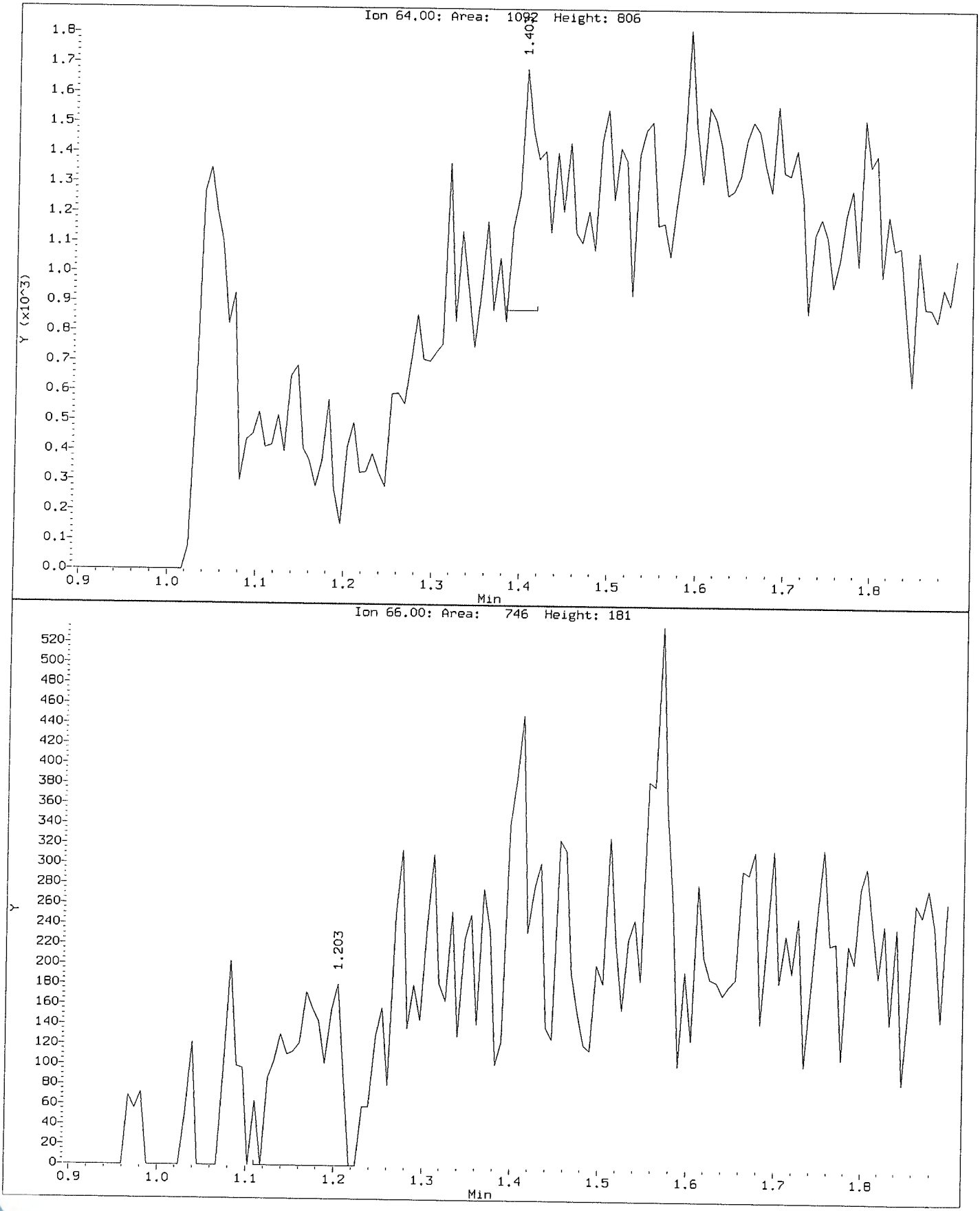
Compound: Chloroethane
CAS Number: 75-00-3





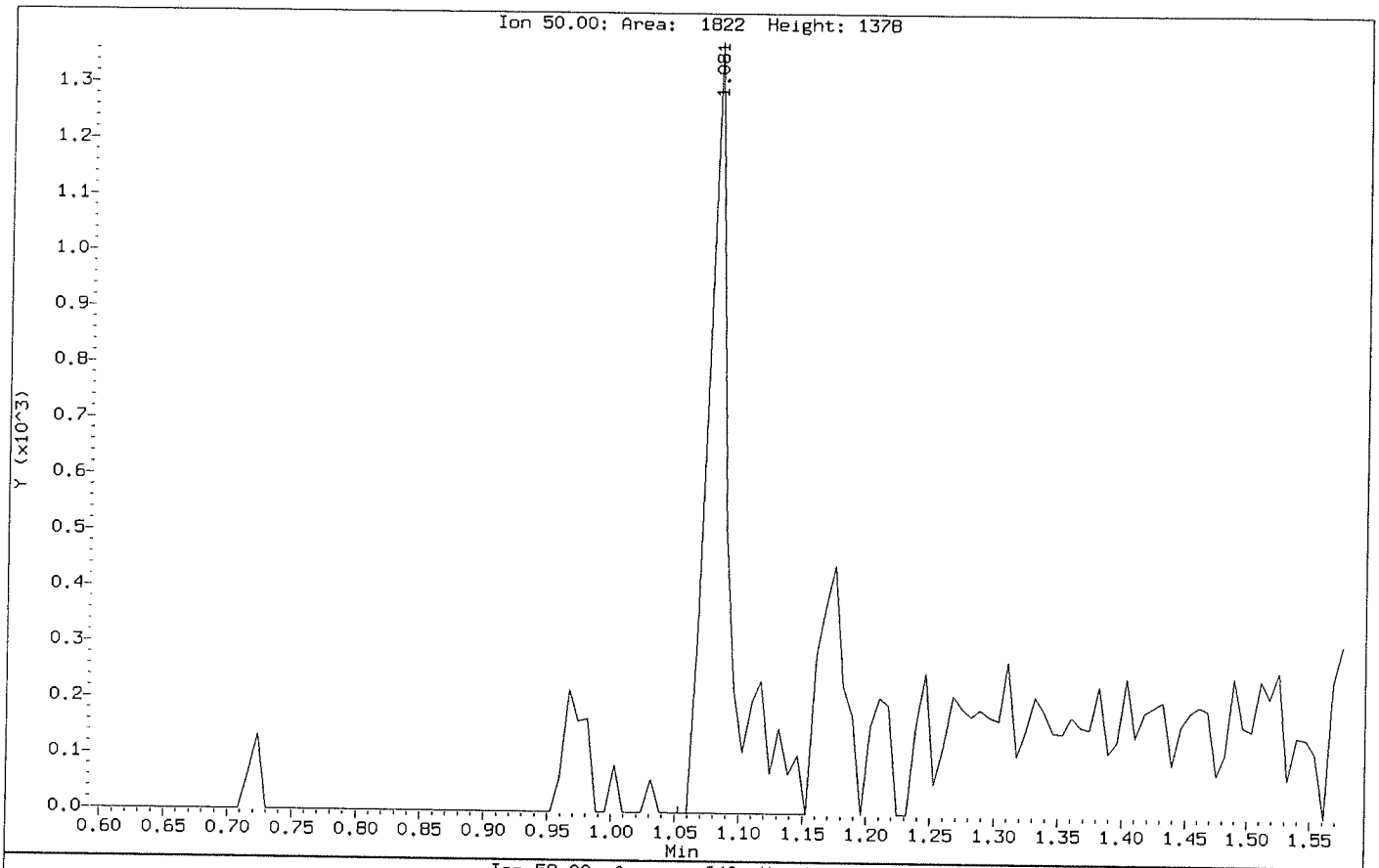
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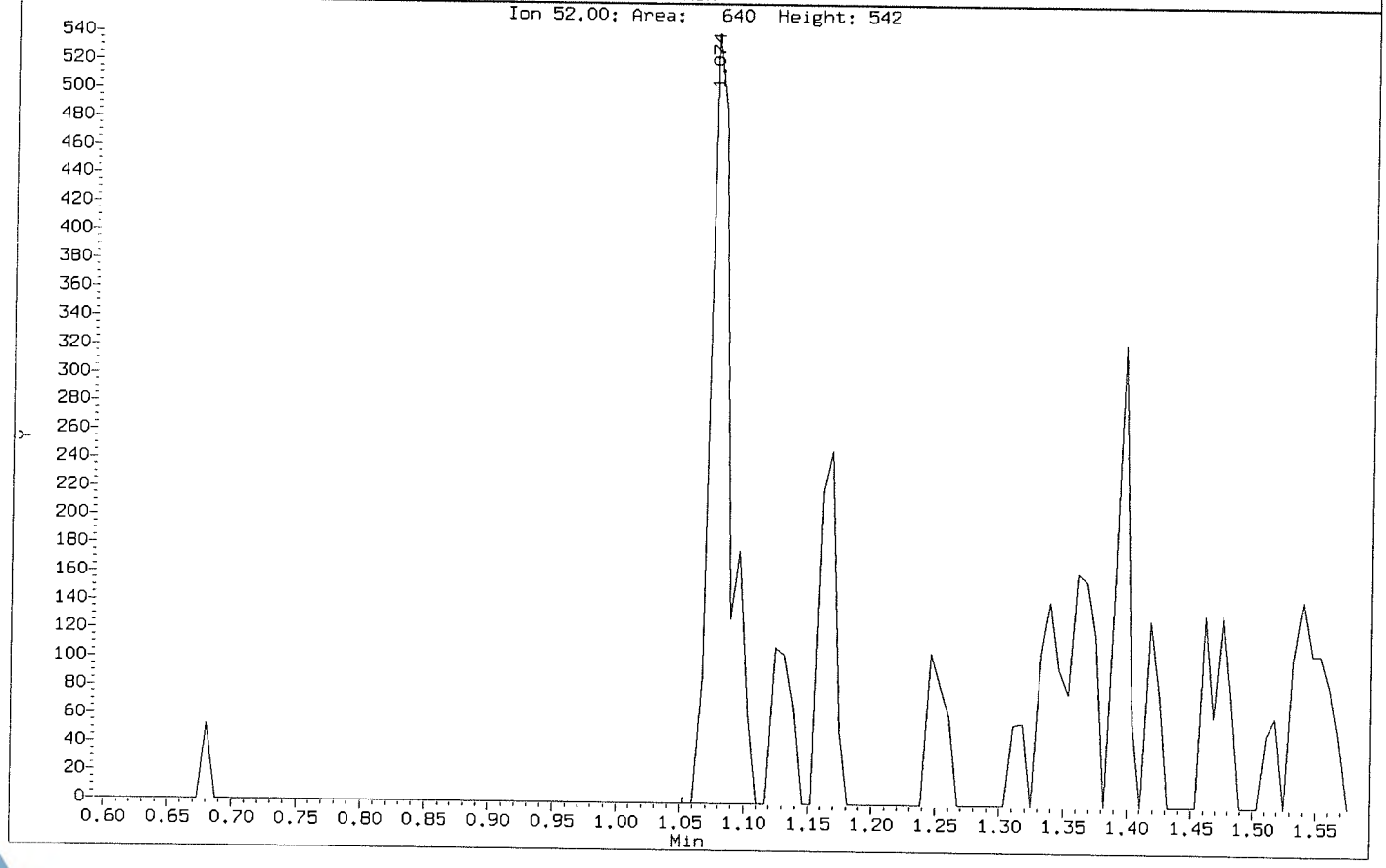
Compound: Chloroethane
CAS Number: 75-00-3



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Instrument: voa6.i
Client Sample ID: VSTD000.5

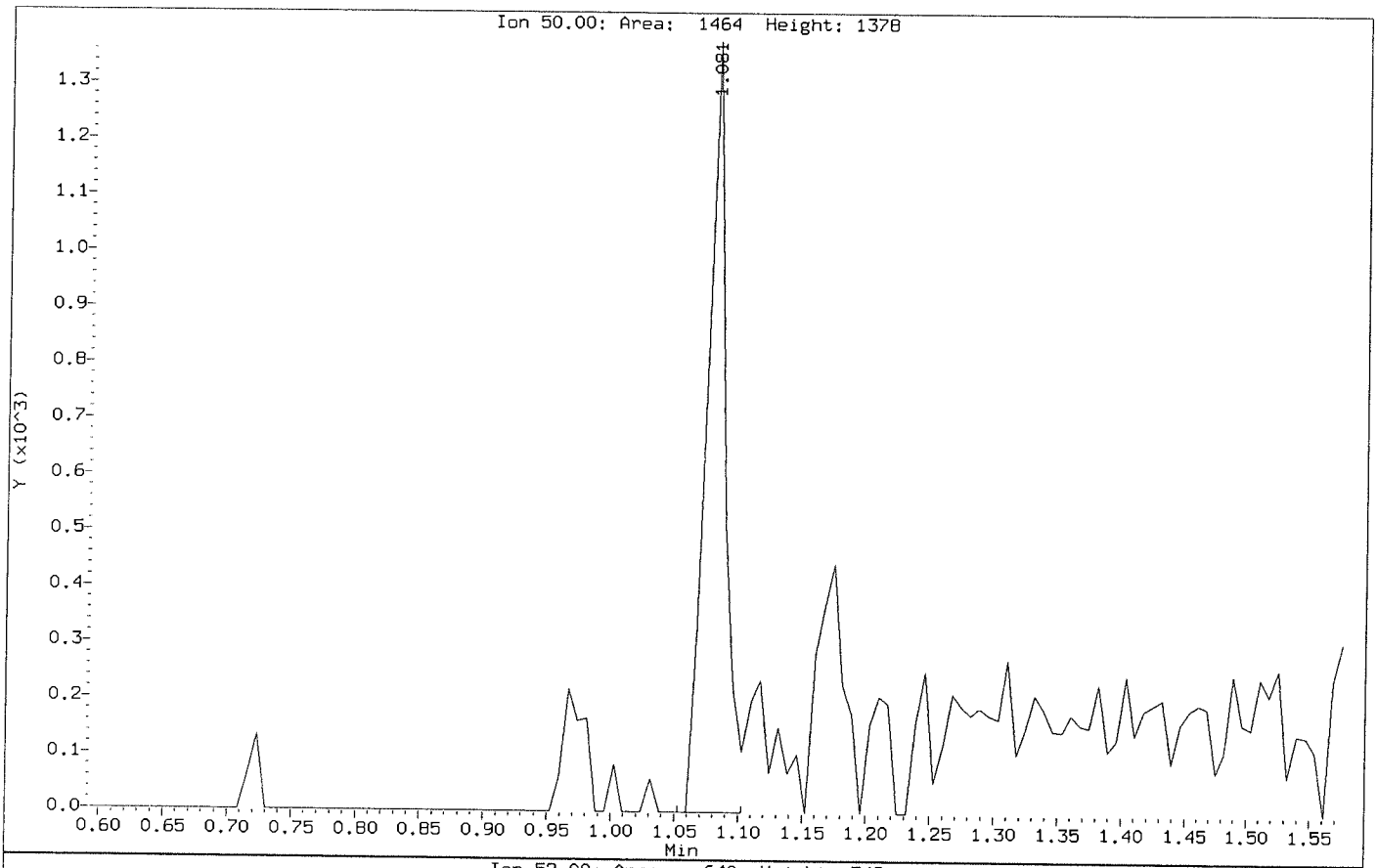
Compound: Chloromethane
CAS Number: 74-87-3

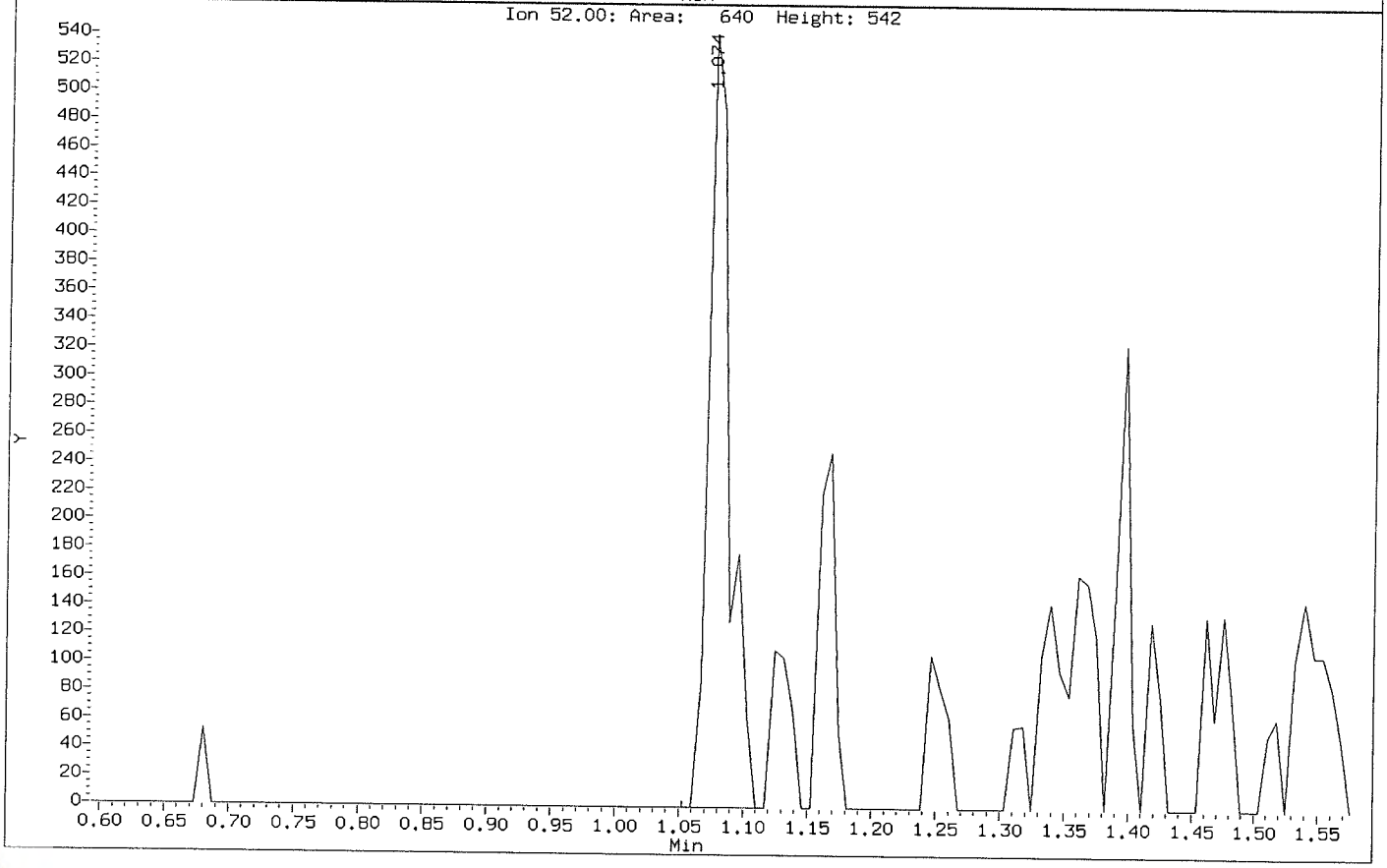




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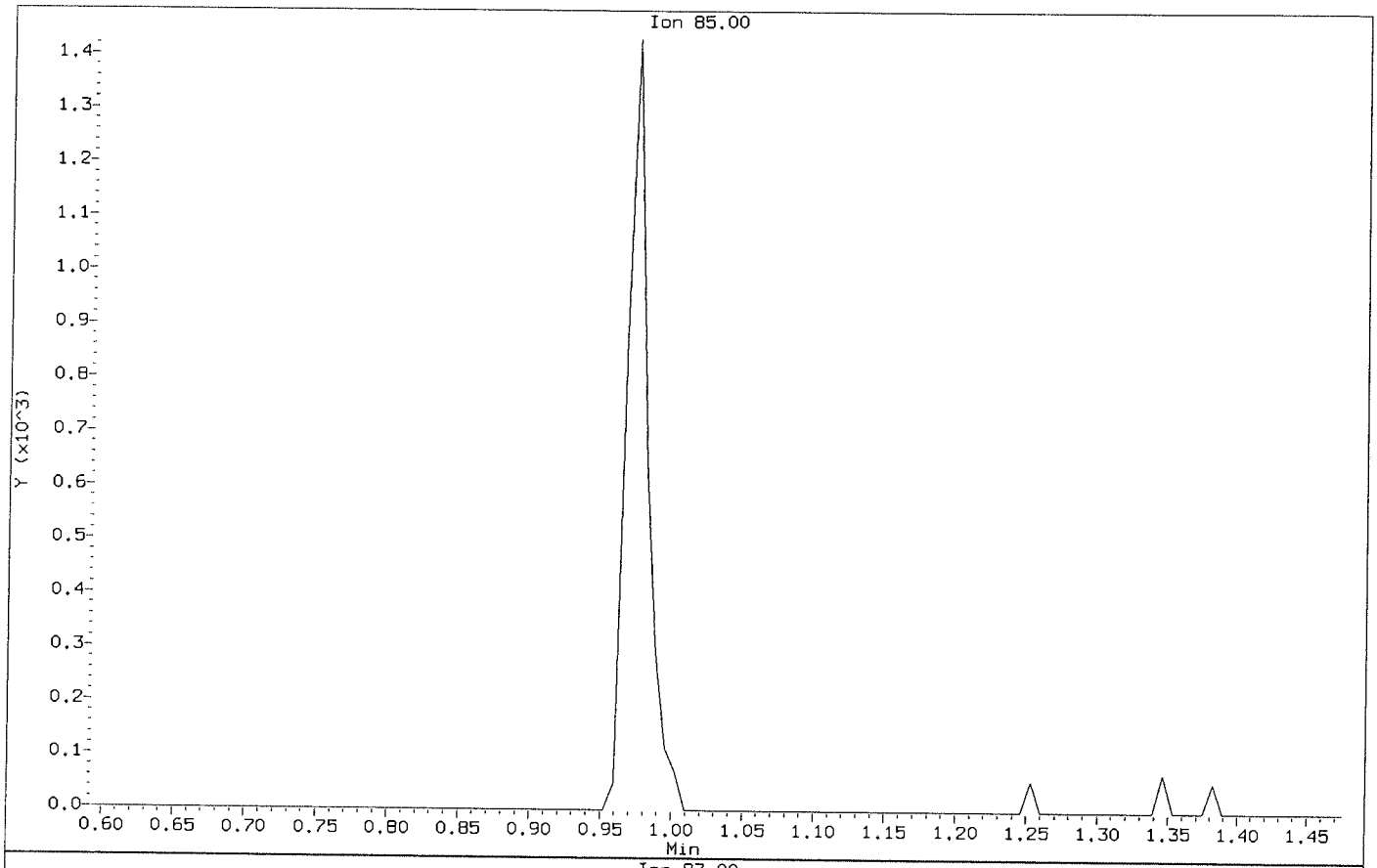
Compound: Chloromethane
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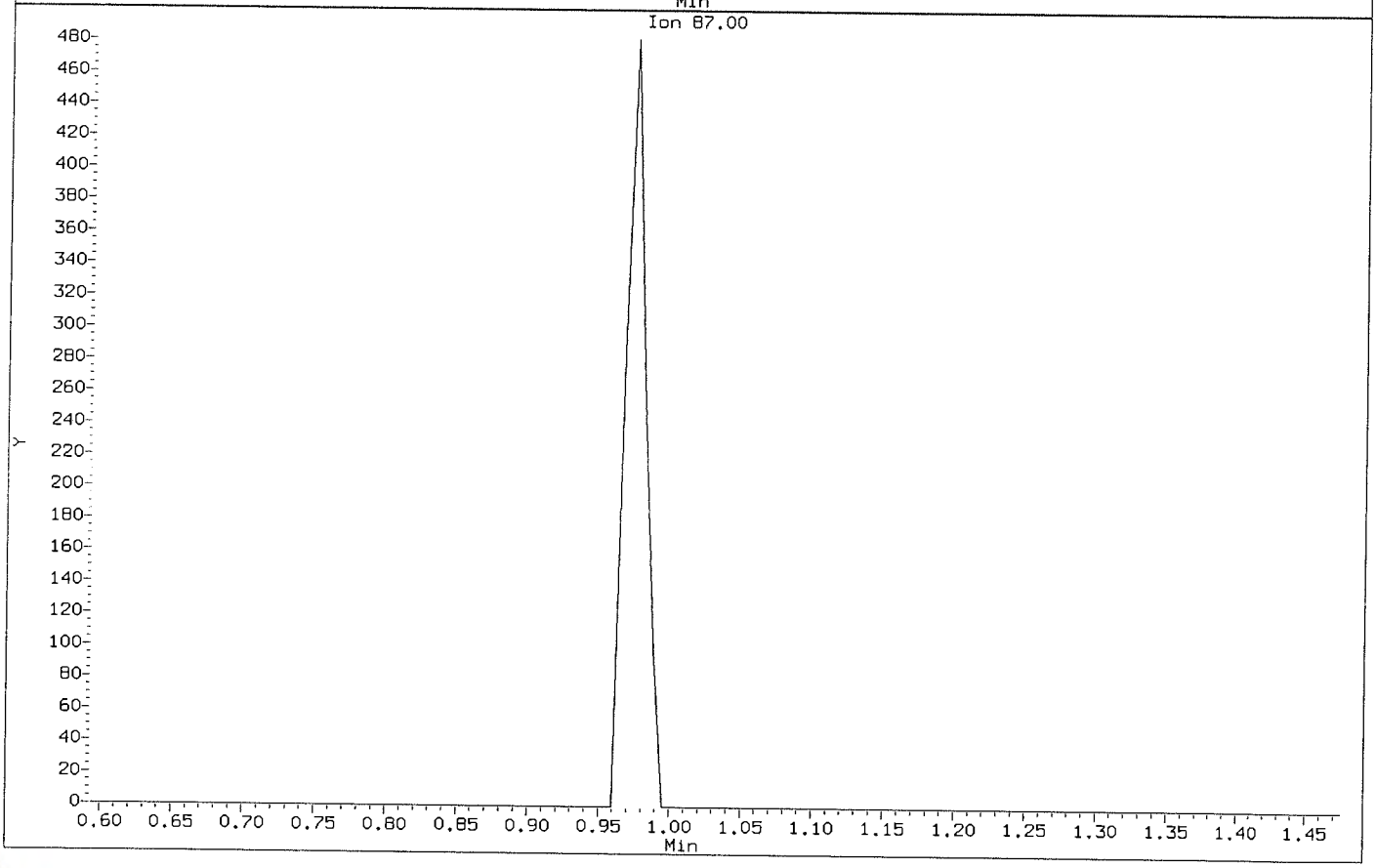




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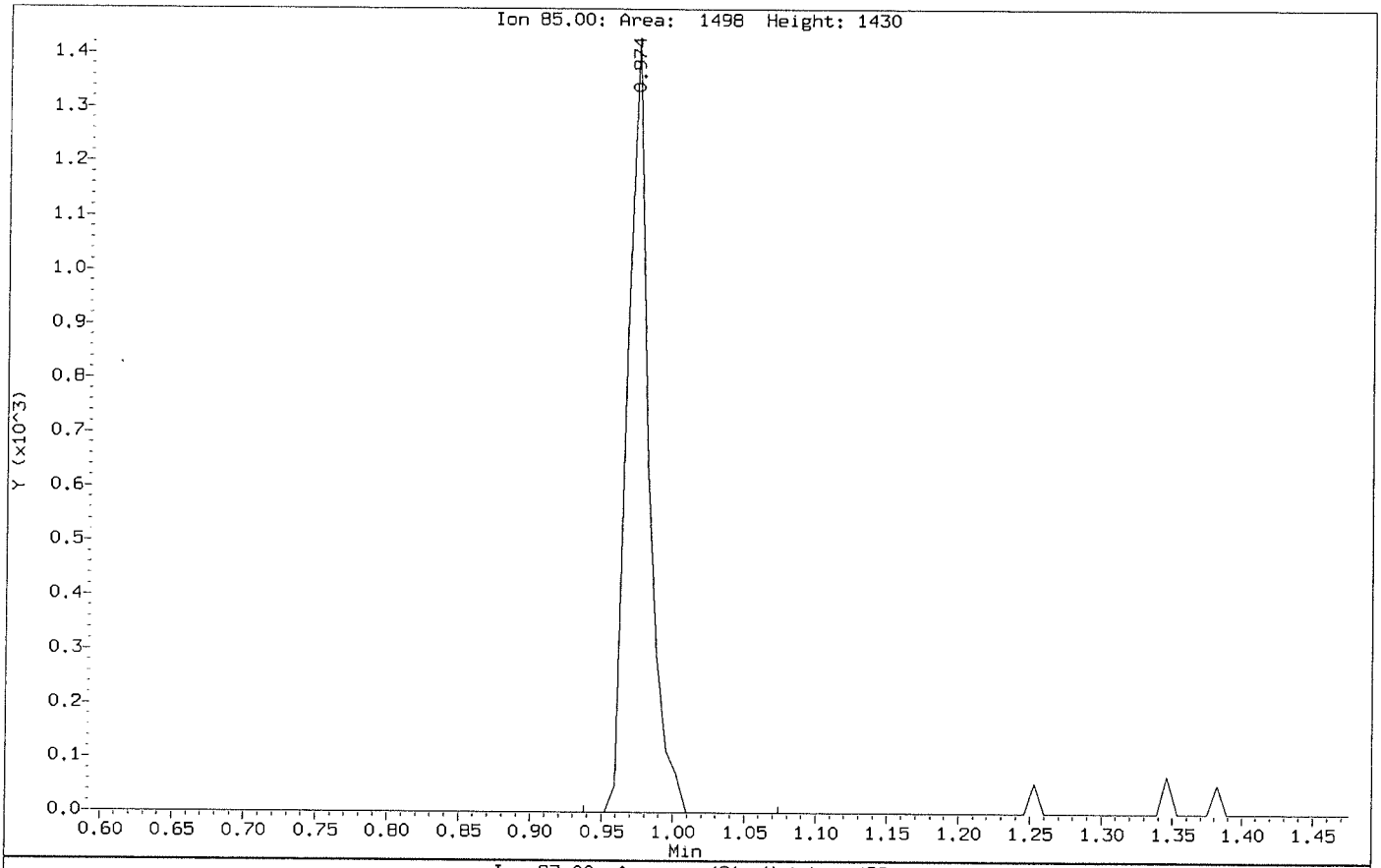
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8

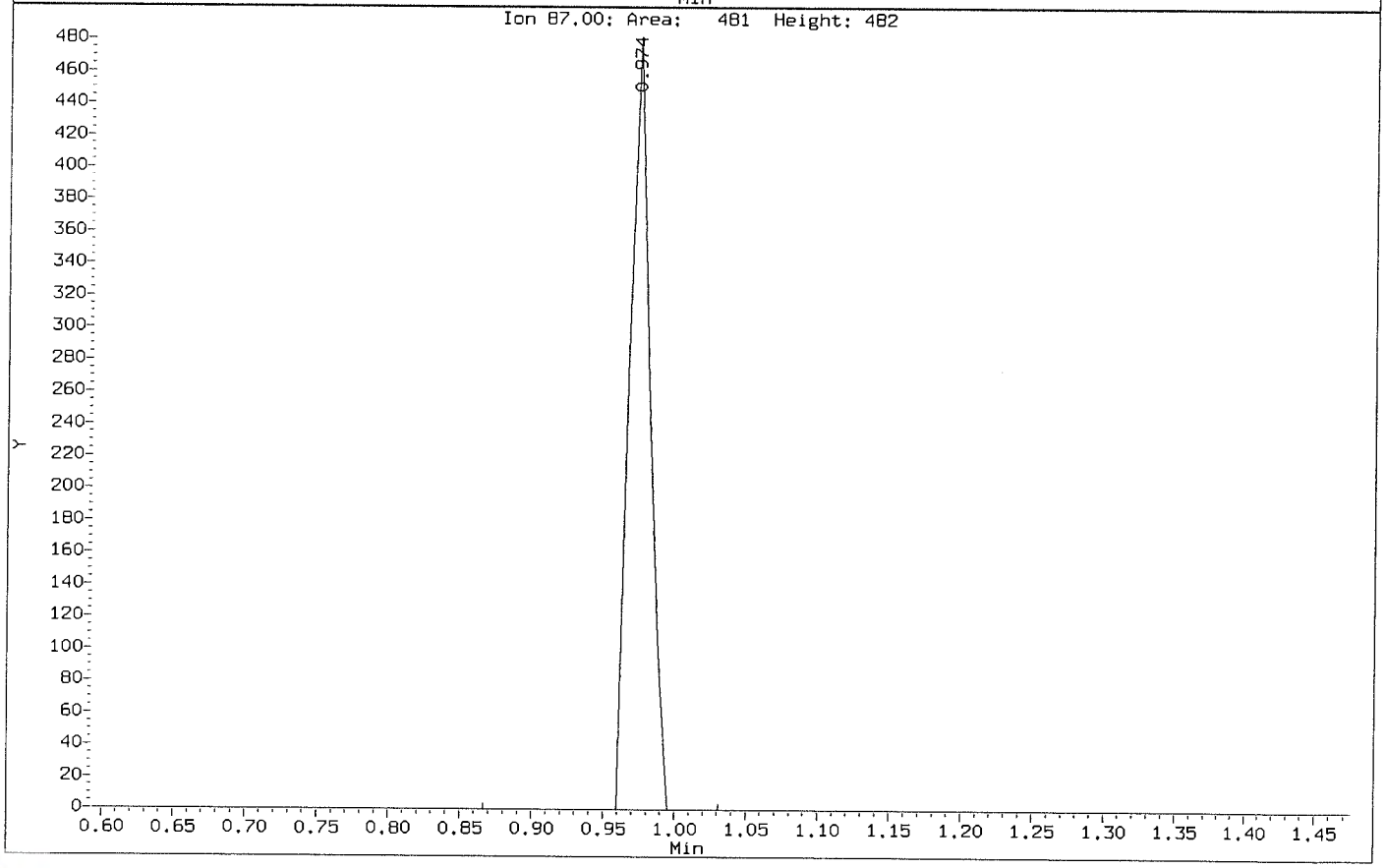




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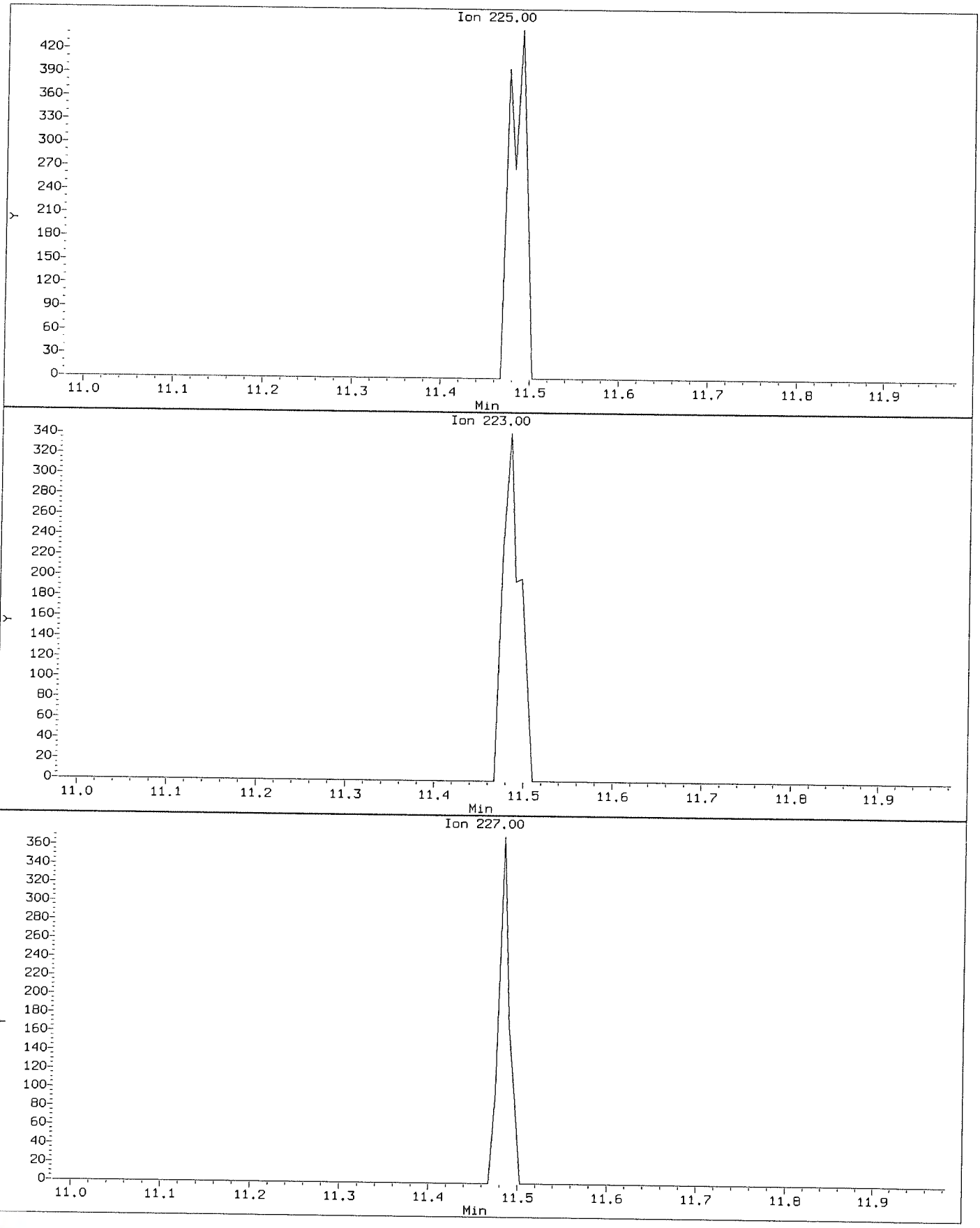
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8





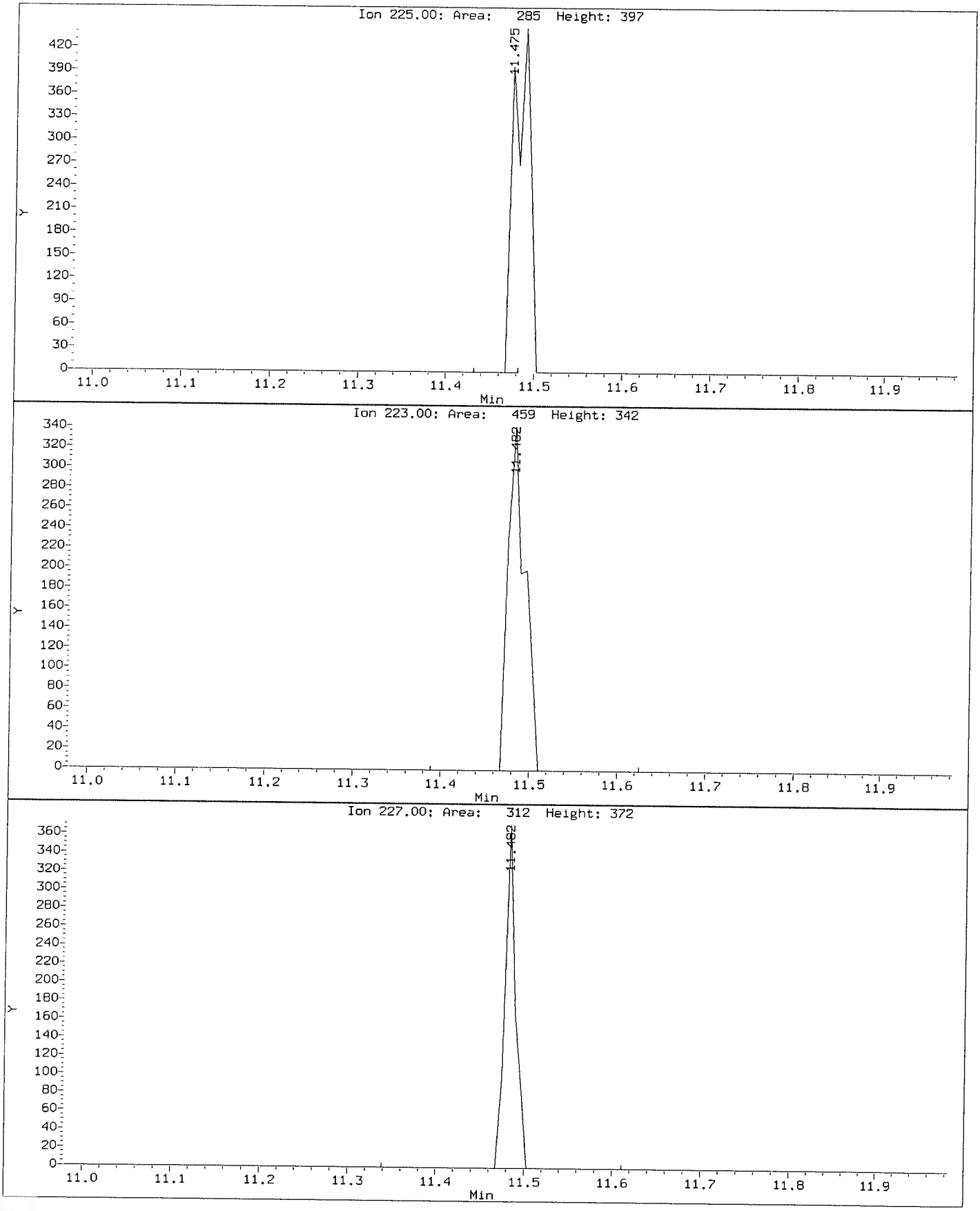
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



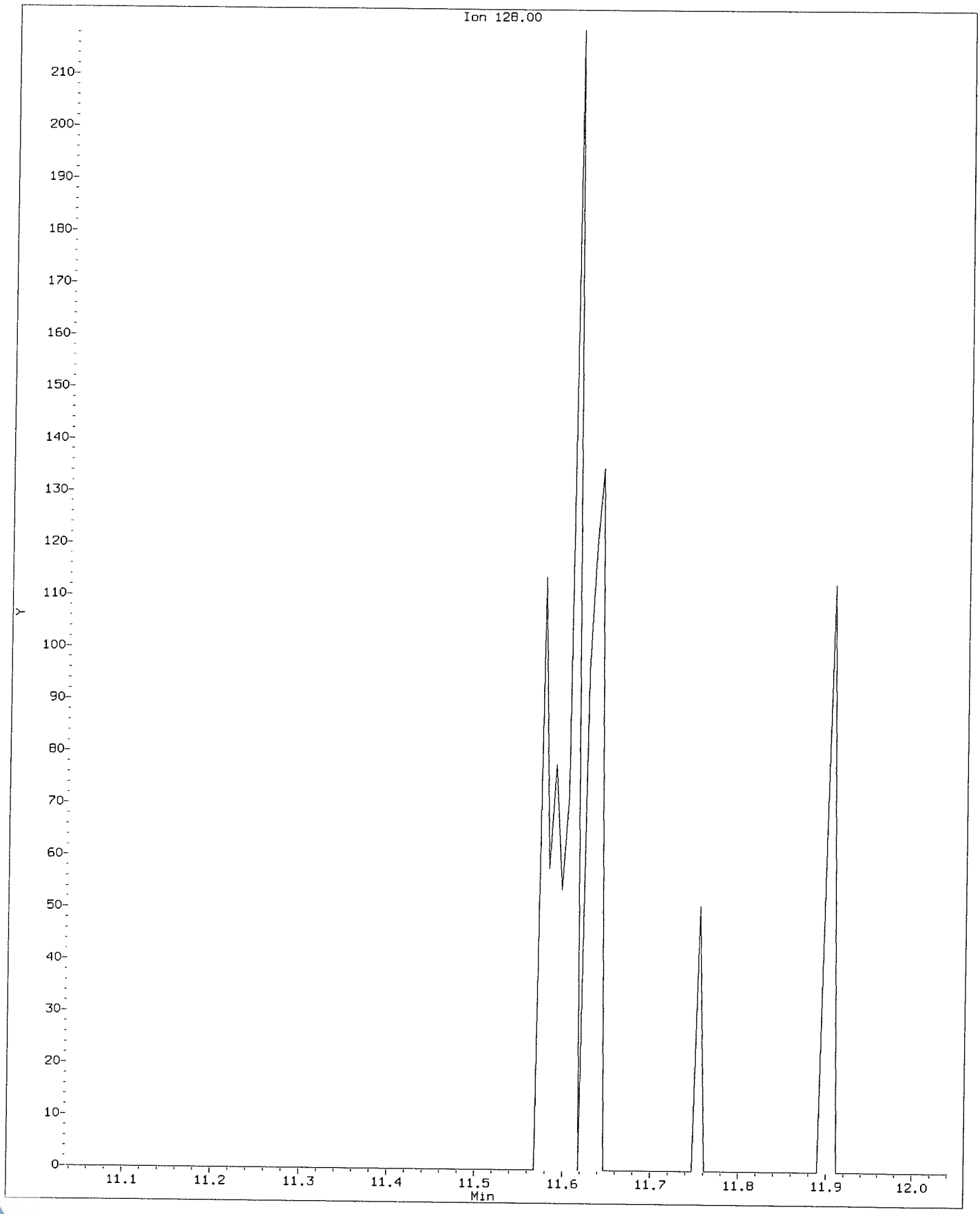
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Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



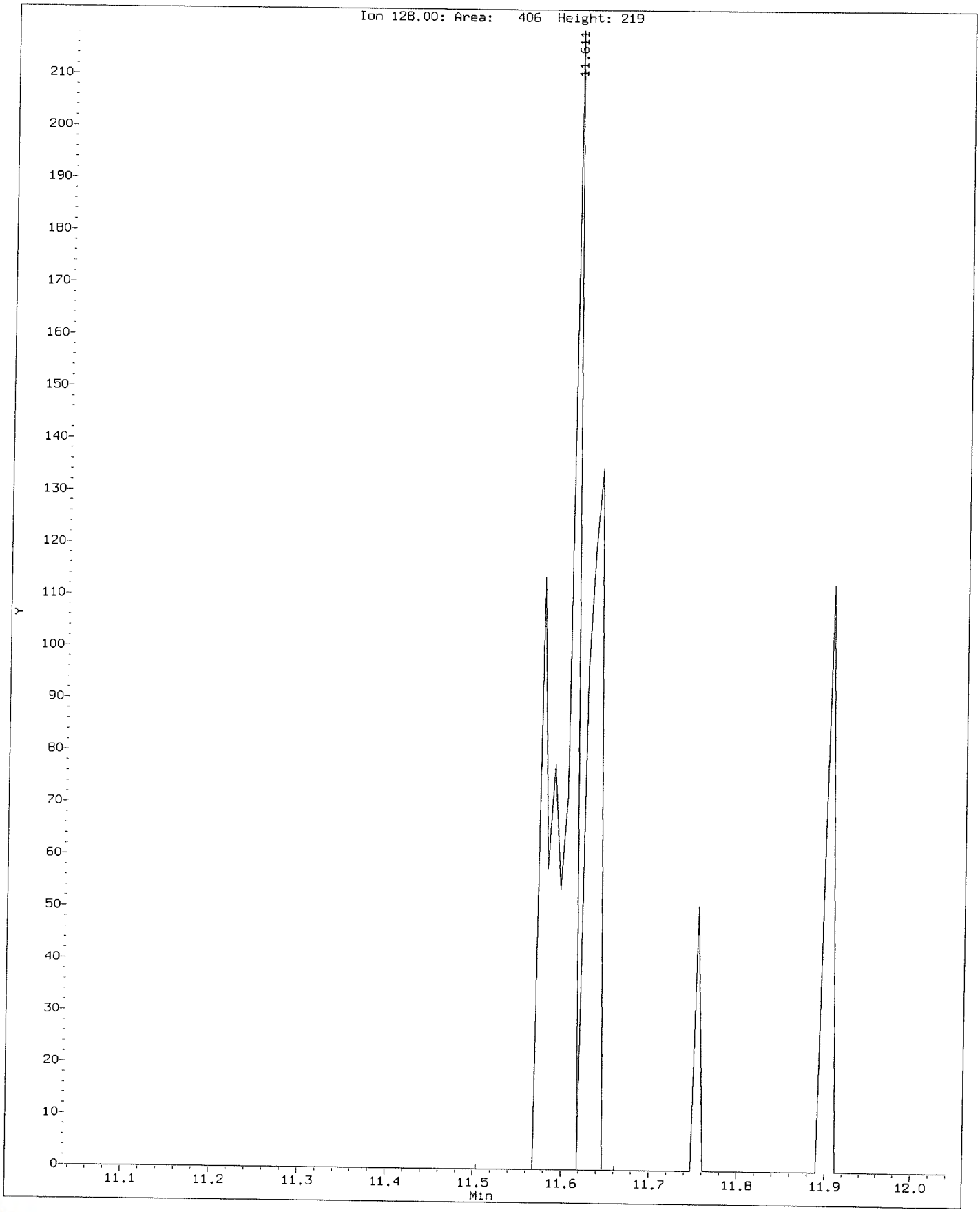
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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



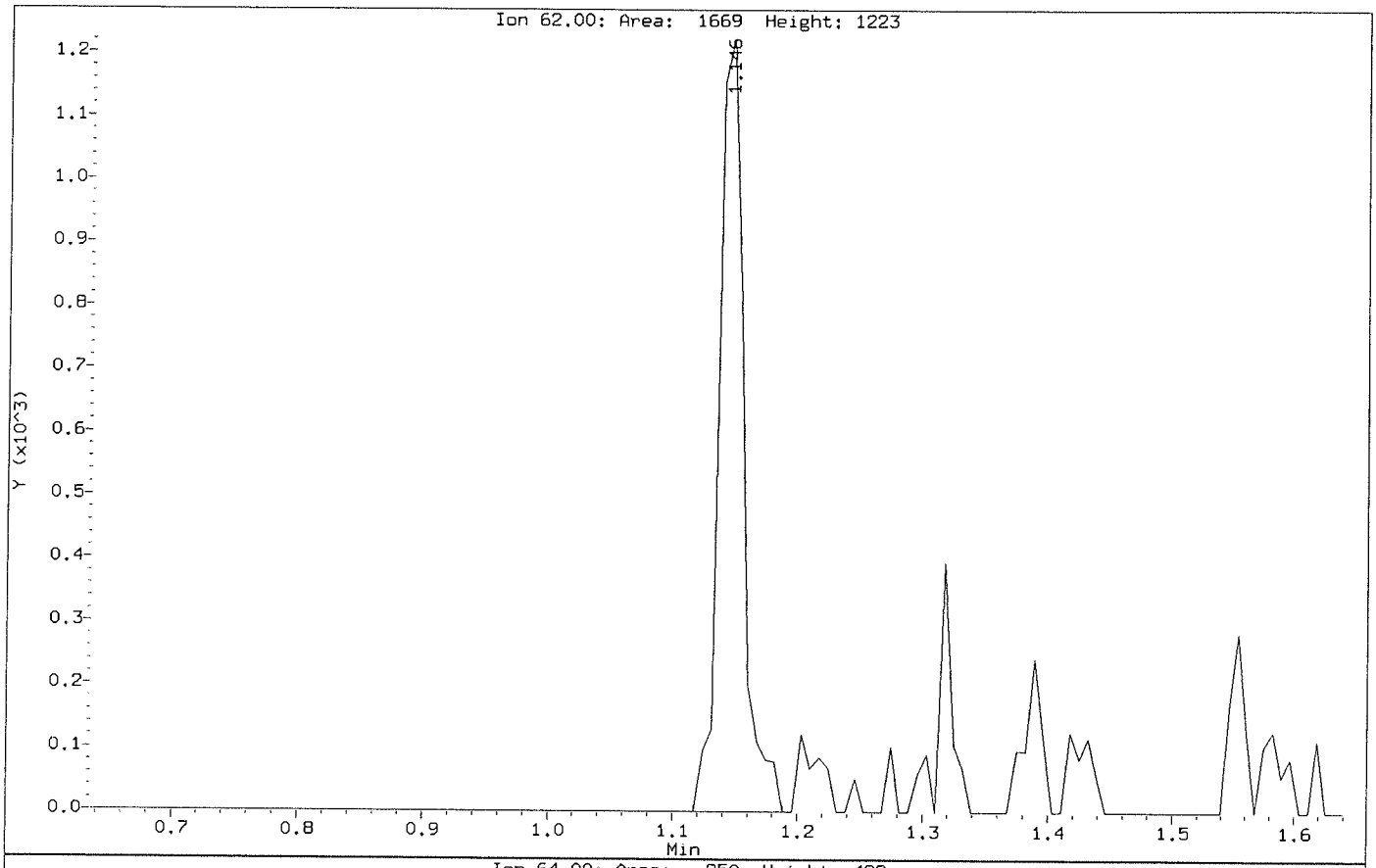
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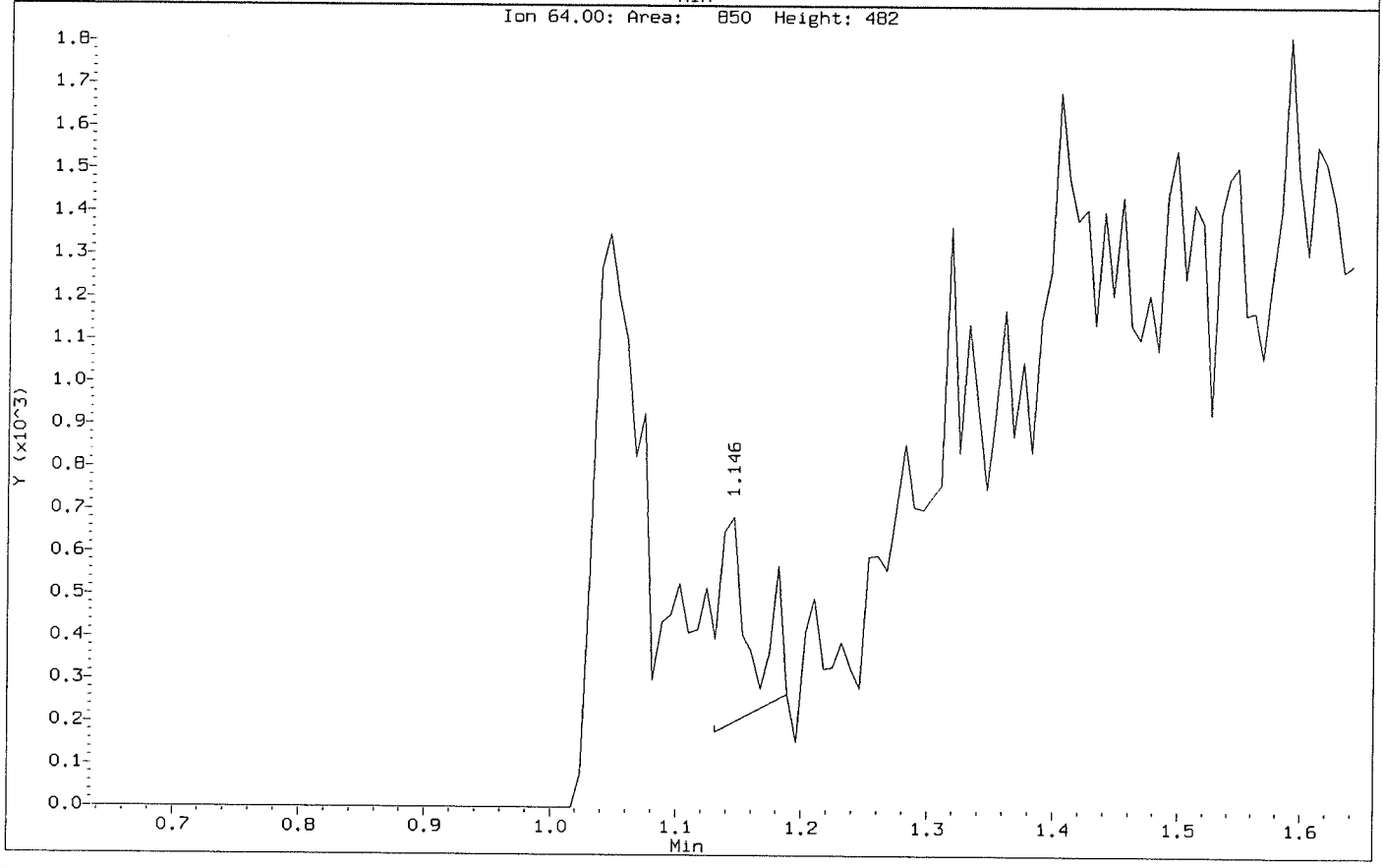
Compound: Naphthalene
CAS Number: 91-20-3



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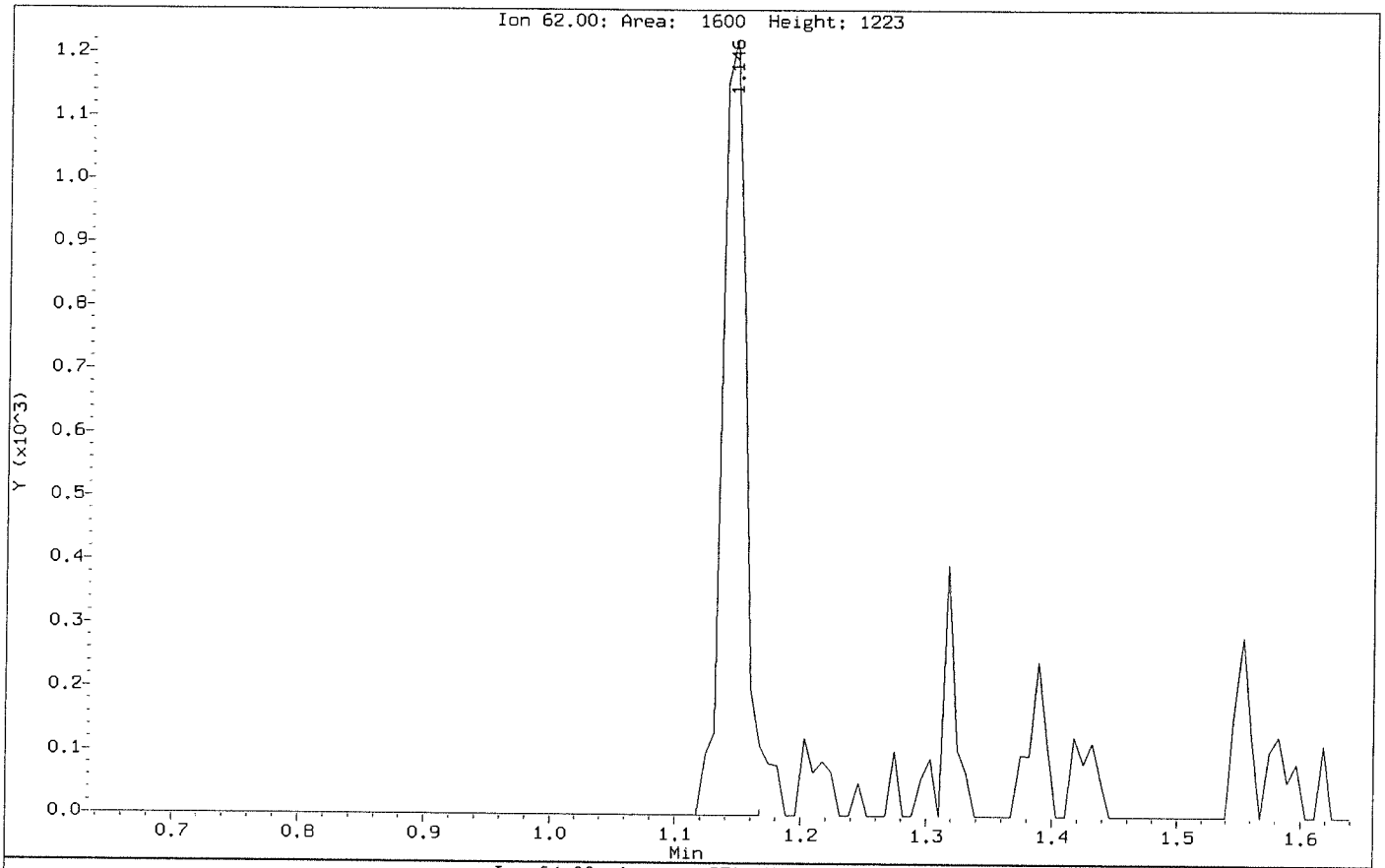
Compound: Vinyl Chloride
CAS Number: 75-01-4

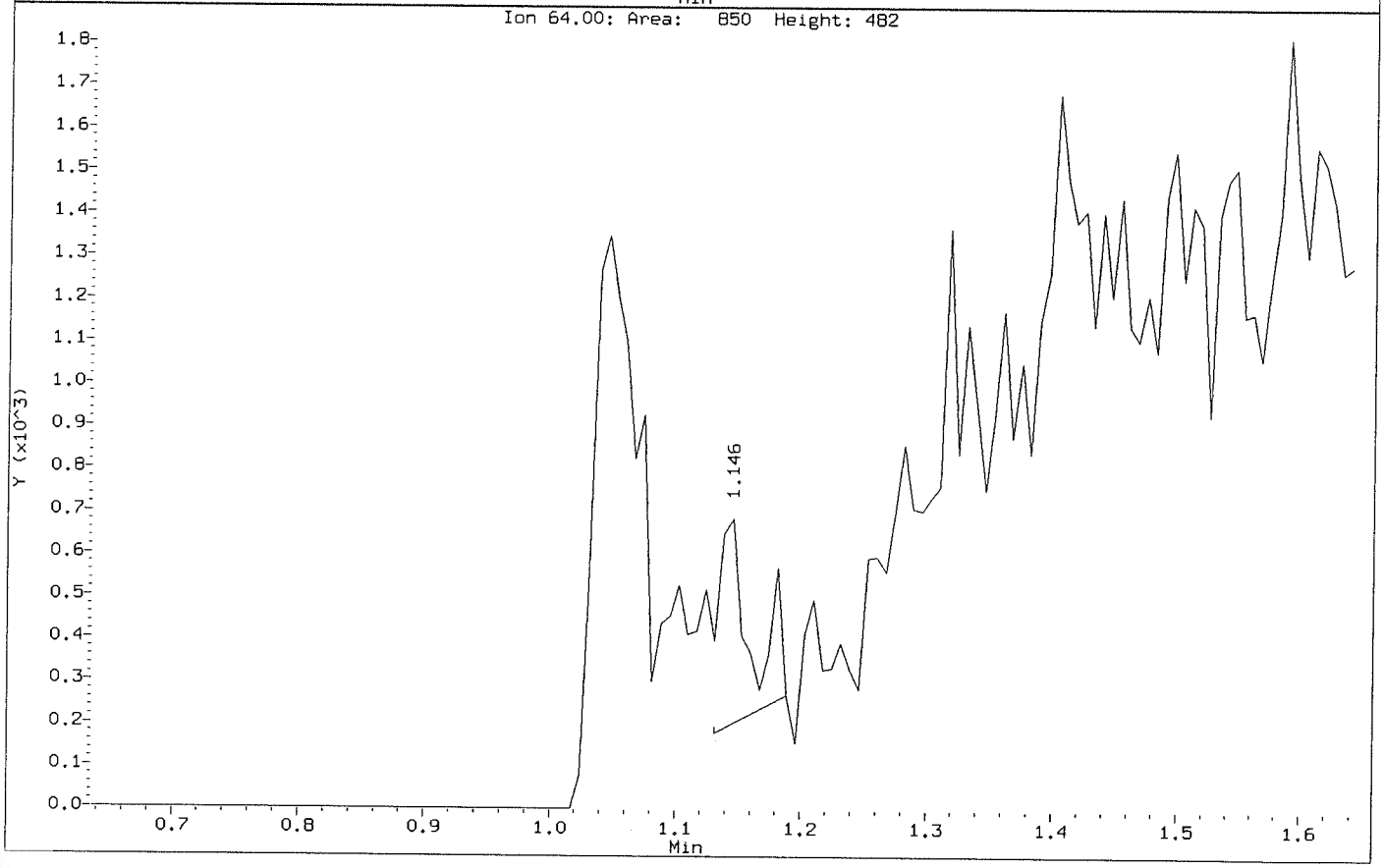




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Injection Date: 18-MAY-2021 11:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051804.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051804.D
Lab Smp Id: VSDT001 Client Smp ID: VSTD001
Inj Date : 18-MAY-2021 12:25
Operator : PC Inst ID: voa6.i
Smp Info : VSDT001;VSTD001;1;3;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 11:43 Cal File: X051803.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

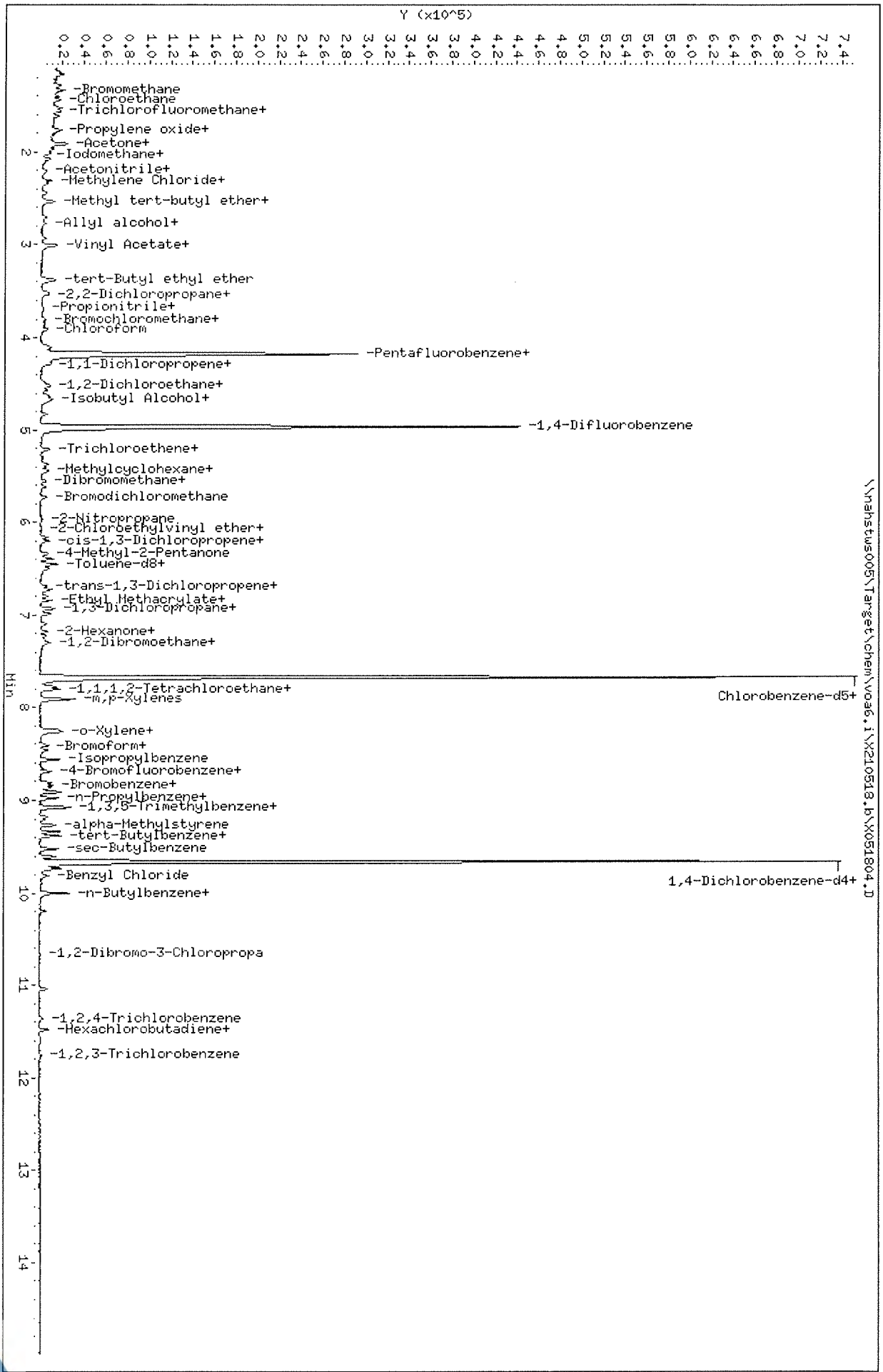
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	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)	219851	50.0000	
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	365818	50.0000	
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	338329	50.0000	
* 70	1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	153566	50.0000	
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	3259	1.00000	(Ta)
$ 69	4-Bromofluorobenzene	95	8.695	8.695	(1.134)	2729	1.00000	0.97(a)
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.981)	2671	1.00000	0.86(a)
$ 48	Toluene-d8	98	6.396	6.396	(0.834)	7865	1.00000	1.94(a)
60	1,1,1,2-Tetrachloroethane	131	7.771	7.771	(1.013)	2501	1.00000	1.01(a)
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	3645	1.00000	0.97(a)
68	1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	3942	1.00000	1.03(aM)
138	Freon TF	101	1.926	1.926	(0.461)	2045	1.00000	0.98(a)
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	2388	1.00000	1.21(a)
22	1,1-Dichloroethane	63	2.929	2.929	(0.700)	4505	1.00000	1.10(a)
11	1,1-Dichloroethene	96	1.912	1.912	(0.457)	2439	1.00000	1.10(a)
32	1,1-Dichloropropene	75	4.290	4.290	(0.863)	3437	1.00000	1.09(a)
93	1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	800	1.00000	1.59(aM)
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	3361	1.00000	1.01(aMH)
90	1,2,4-Trichlorobenzene	180	11.360	11.360	(1.176)	1337	1.00000	3.38(aM)
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	9246	1.00000	1.18(a)
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	283	1.00000	2.92(aM)
57	1,2-Dibromoethane	107	7.270	7.270	(0.948)	2509	1.00000	1.06(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	5563	1.00000	1.29(a)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	4020	1.00000	1.11(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	2590	1.00000	1.05(aM)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	8467	1.00000	1.10(a)
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	5480	1.00000	1.24(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	4419	1.00000	1.14(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	6628	1.00000	1.71(a)
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	3735	1.00000	1.02(a)
24	2-Butanone	43	3.609	3.609	(0.863)	1748	2.00000	2.15(aM)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	8473	1.00000	1.23(aM)
52	2-Hexanone	43	7.098	7.098	(0.925)	4644	2.00000	2.97(a)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	9387	1.00000	1.17(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	8833	1.00000	1.16(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	6100	2.00000	2.91(a)
10	Acetone	43	1.976	1.976	(0.473)	2806	2.00000	0.15(a)
37	Benzene	78	4.519	4.519	(0.909)	9079	1.00000	1.00(a)
74	Bromobenzene	156	8.810	8.810	(0.912)	3170	1.00000	1.23(a)
29	Bromochloromethane	128	3.803	3.803	(0.909)	1376	1.00000	1.02(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	3683	1.00000	1.04(aM)
66	Bromoform	173	8.416	8.416	(1.097)	1736	1.00000	1.06(Ta)
6	Bromomethane	94	1.339	1.339	(0.320)	3018	1.00000	0.84(aM)
19	Carbon Disulfide	76	2.076	2.076	(0.497)	10496	2.00000	2.02(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	3274	1.00000	1.02(aH)
59	Chlorobenzene	112	7.692	7.692	(1.003)	7182	1.00000	1.08(a)
7	Chloroethane	64	1.403	1.403	(0.336)	1604	1.00000	0.96(aM)
28	Chloroform	83	3.917	3.917	(0.937)	4735	1.00000	1.01(a)
3	Chloromethane	50	1.073	1.073	(0.257)	3160	1.00000	1.56(aM)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	2814	1.00000	1.11(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	4187	1.00000	1.04(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	3082	1.00000	1.16(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	1945	1.00000	1.10(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	2403	1.00000	2.91(a)
61	Ethylbenzene	106	7.800	7.800	(1.017)	3237	1.00000	0.98(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	1107	1.00000	4.31(aM)
67	Isopropylbenzene	105	8.559	8.559	(1.116)	10338	1.00000	1.03(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	8386	2.00000	1.98(a)
17	Methylene Chloride	84	2.306	2.306	(0.551)	2091	1.00000	0.94(a)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	8481	1.00000	1.17(a)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	12352	1.00000	1.13(a)
92	Naphthalene	128	11.567	11.567	(1.197)	1471	1.00000	3.78(aM)
63	o-Xylene	106	8.244	8.244	(1.075)	4167	1.00000	1.01(a)
81	sec-Butylbenzene	105	9.519	9.519	(0.985)	9907	1.00000	1.10(a)
64	Styrene	104	8.265	8.265	(1.078)	6890	1.00000	2.62(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	7755	1.00000	1.19(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	1738	1.00000	0.92(a)
50	Toluene	91	6.446	6.446	(0.840)	9931	1.00000	1.01(a)
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	1937	1.00000	0.91(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	3517	1.00000	1.00(a)
38	Trichloroethene	130	5.207	5.207	(1.048)	2724	1.00000	1.12(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	4657	1.00000	1.10(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	2800	1.00000	1.05(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.
H - Operator selected an alternate compound hit.



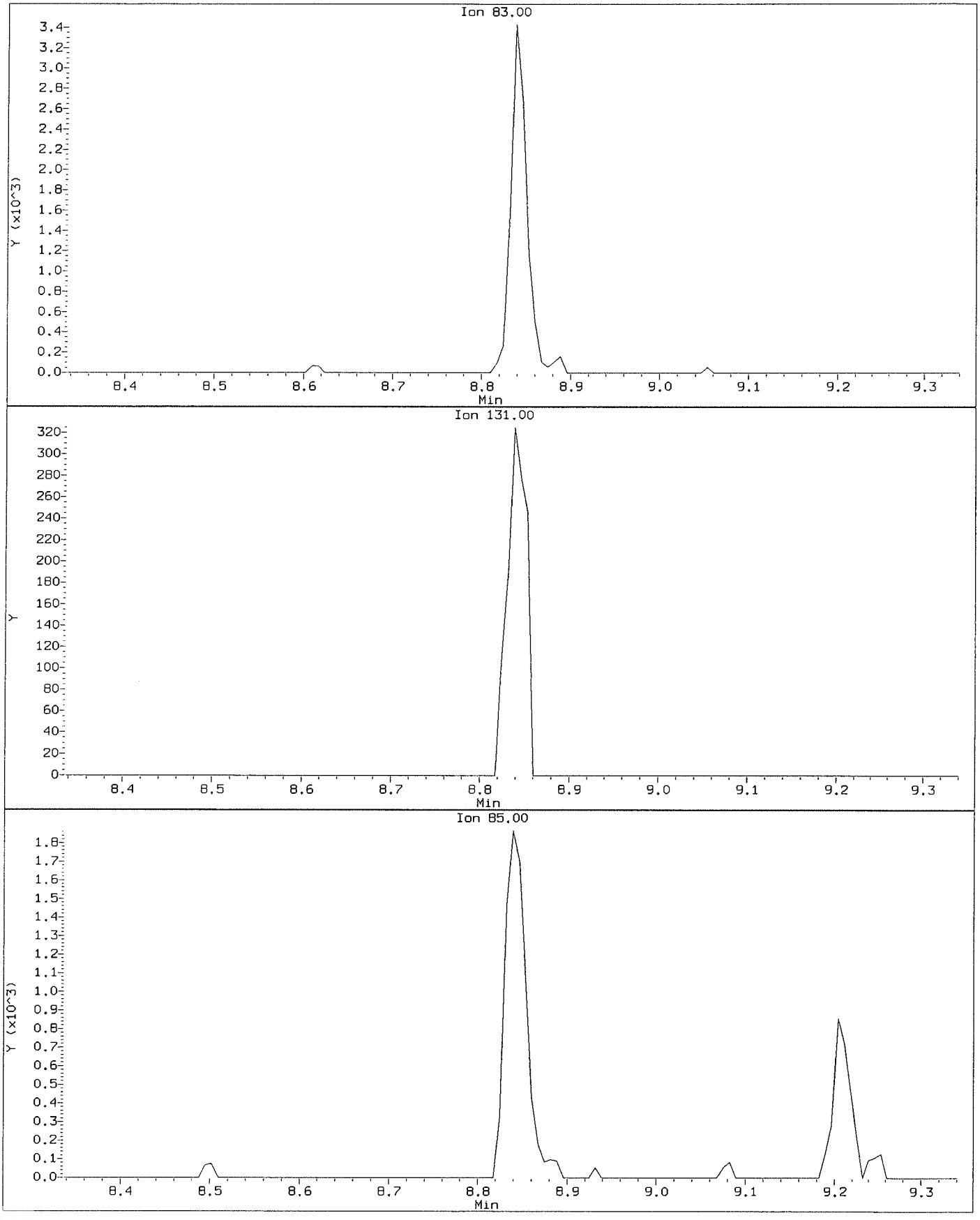
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Client ID: VSTD001
Sample Info: VSDT001;VSTD001;1;3;;
Purge Volume: 5.0
Column phase: DB624

\\nahstws005\Target\chem\voa6.i\X210518.b\X051804.D

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

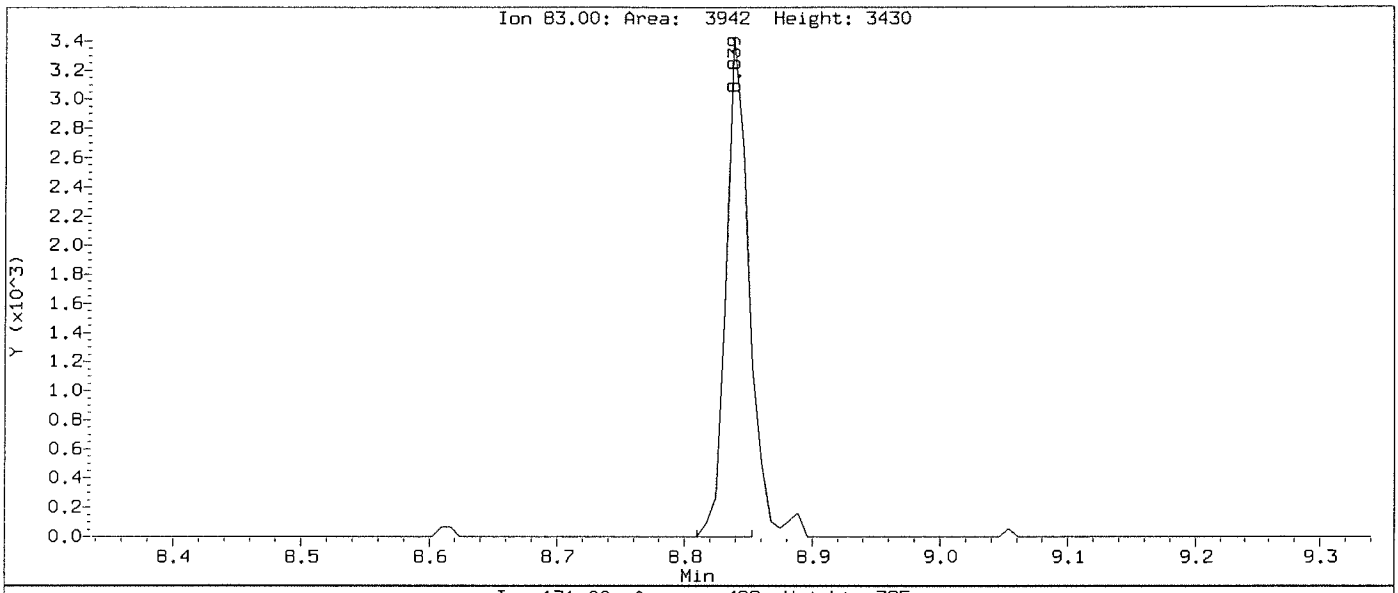
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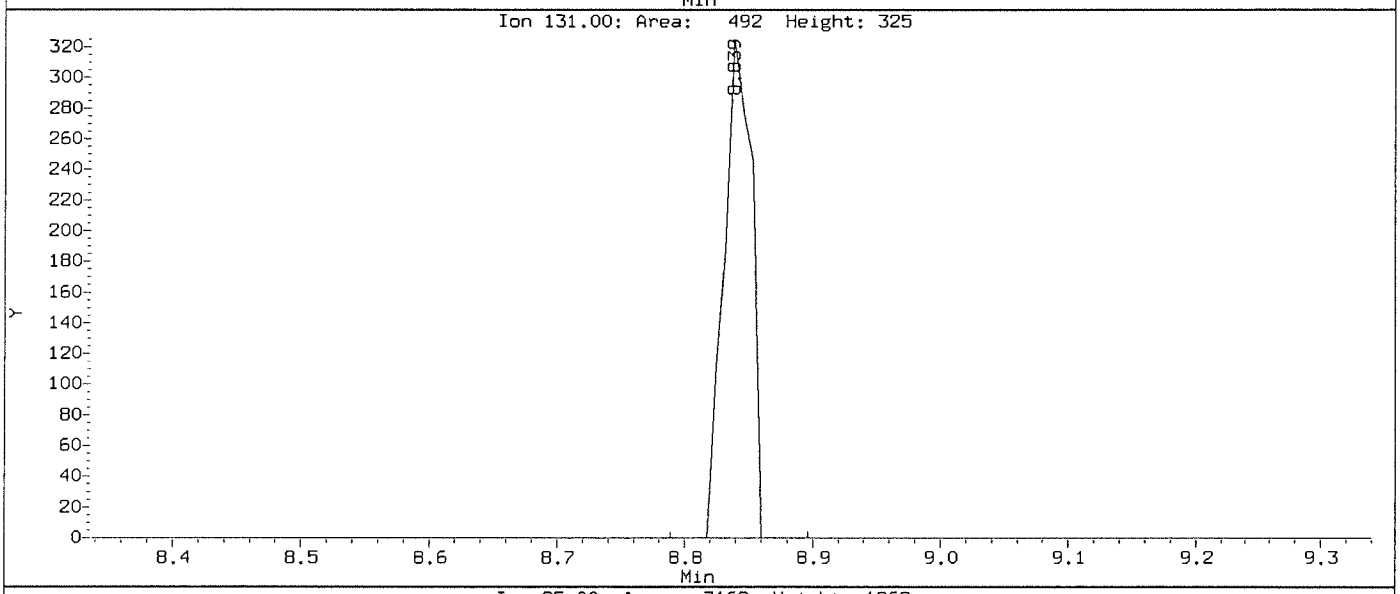
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CAS Number: 79-34-5

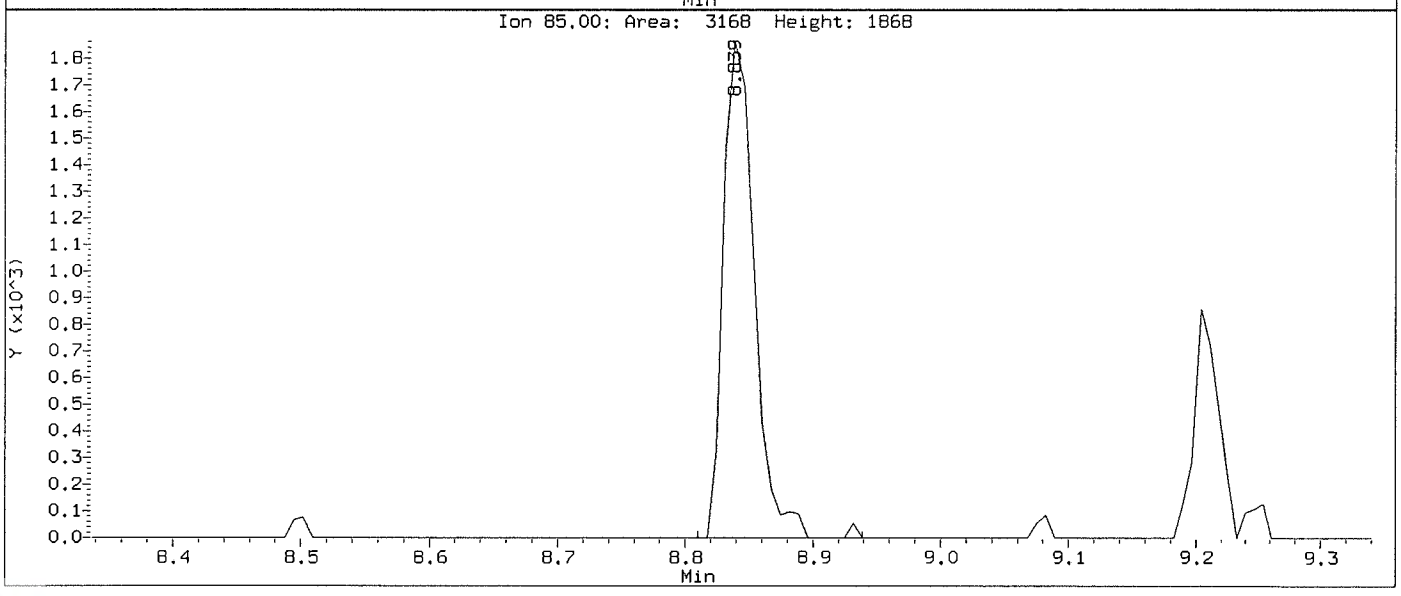


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Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

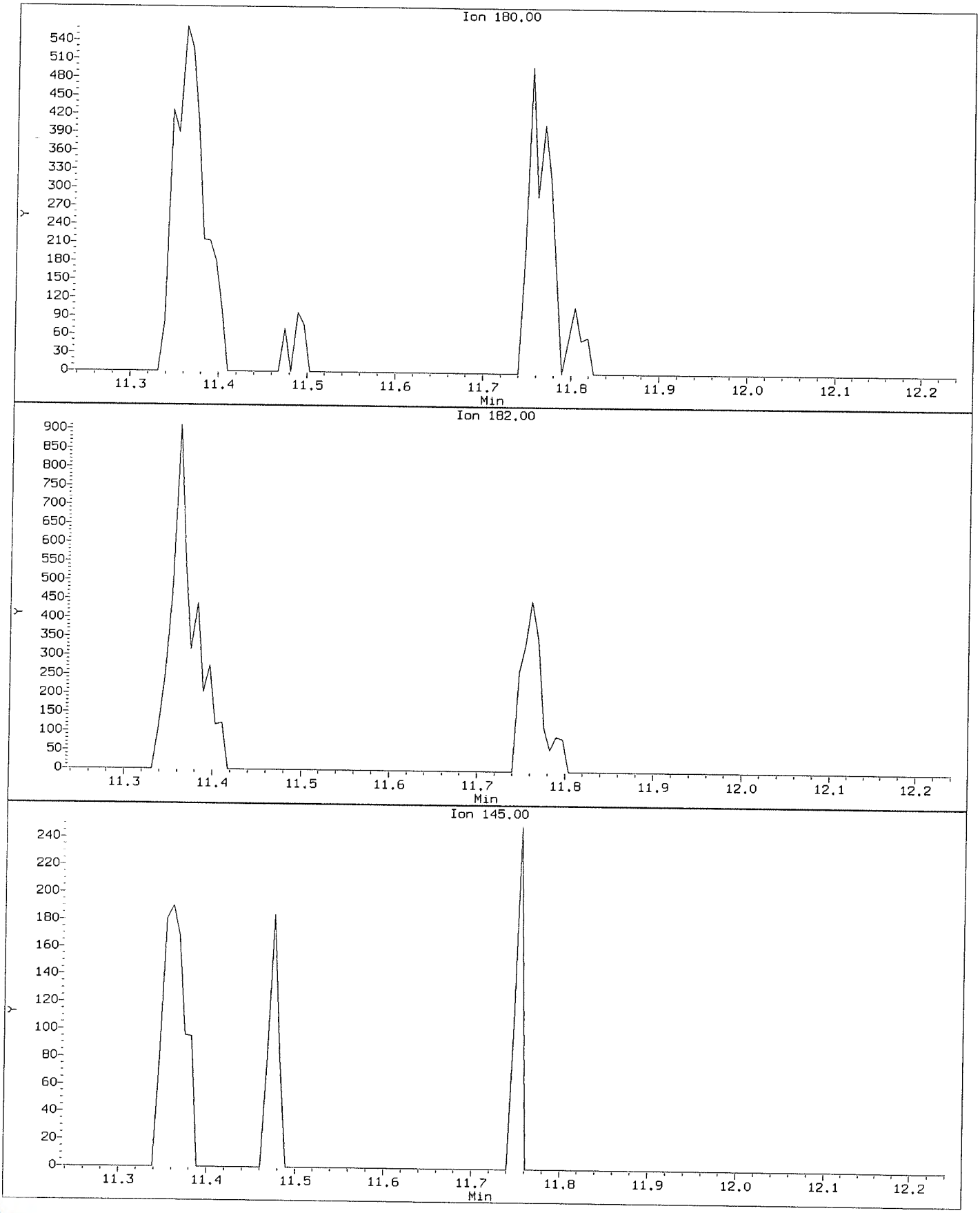






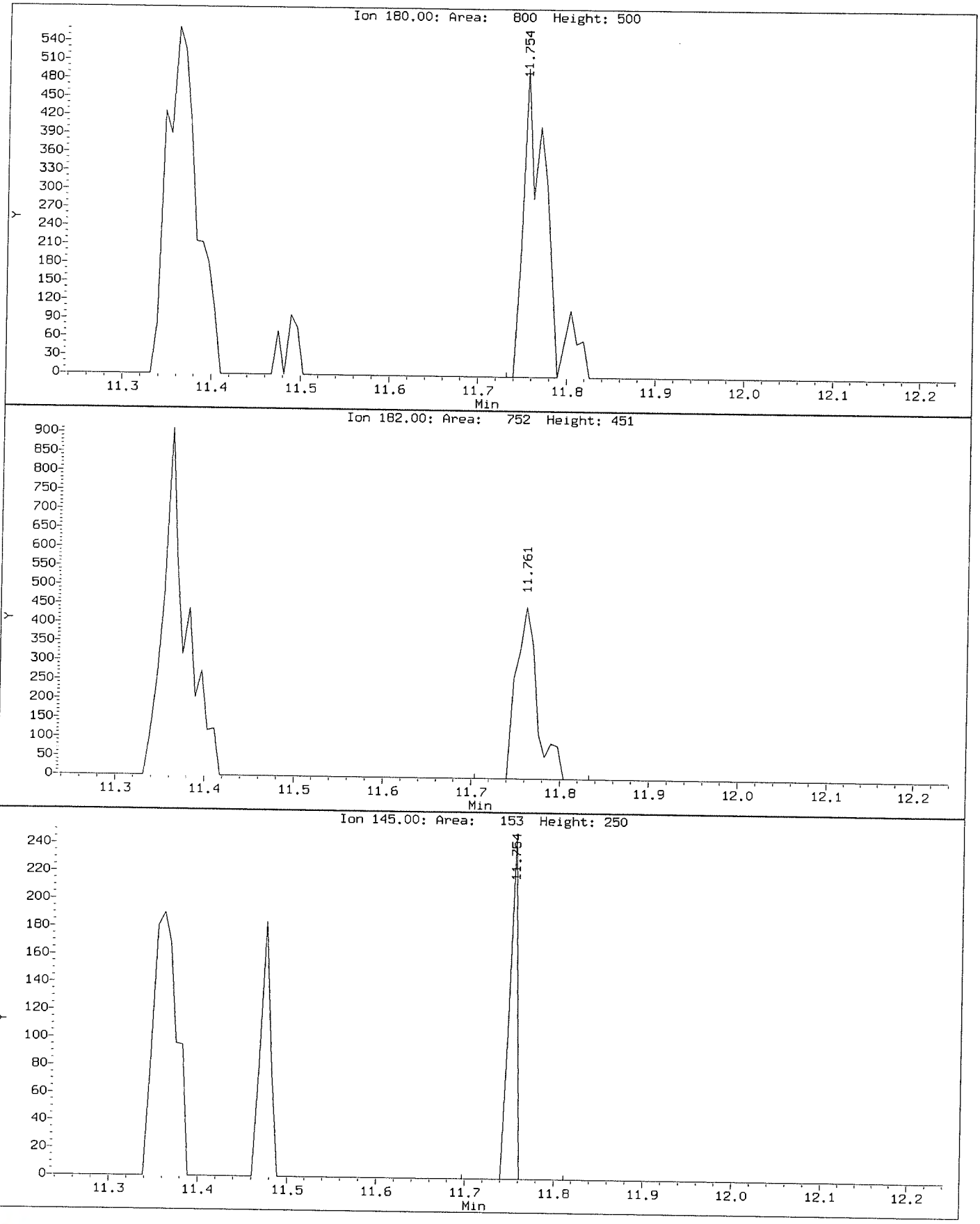
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



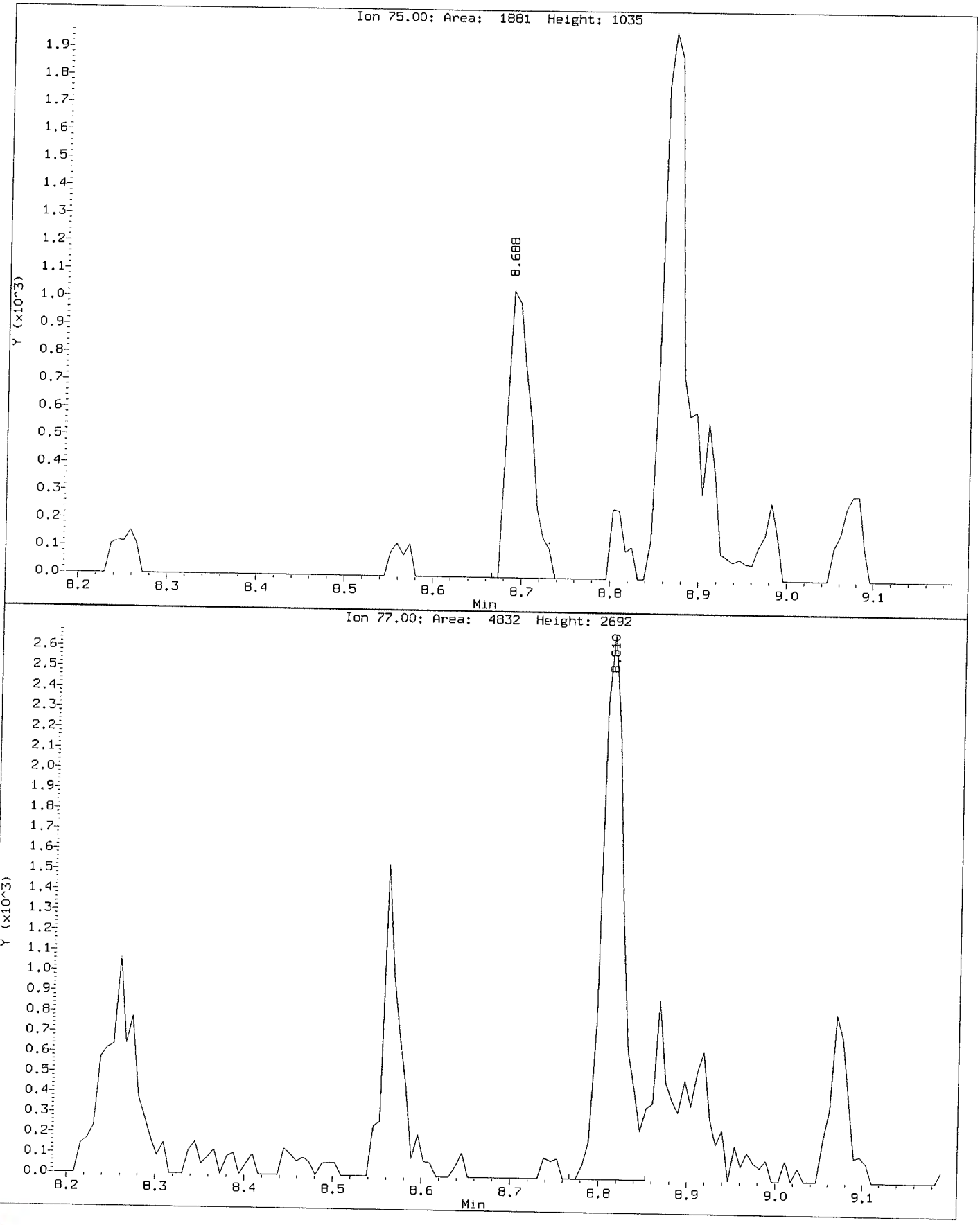
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Client Sample ID: VSTD001

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



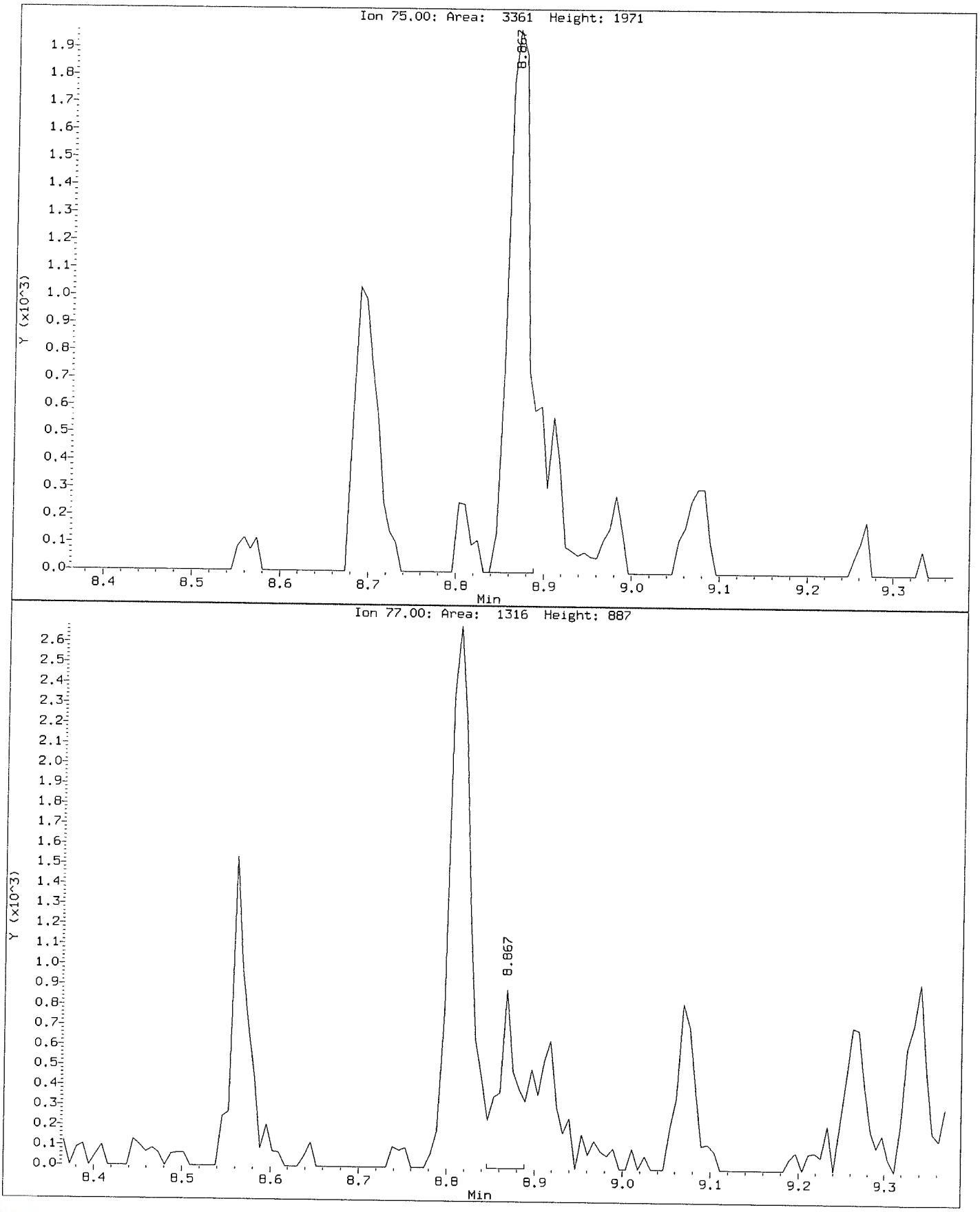
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



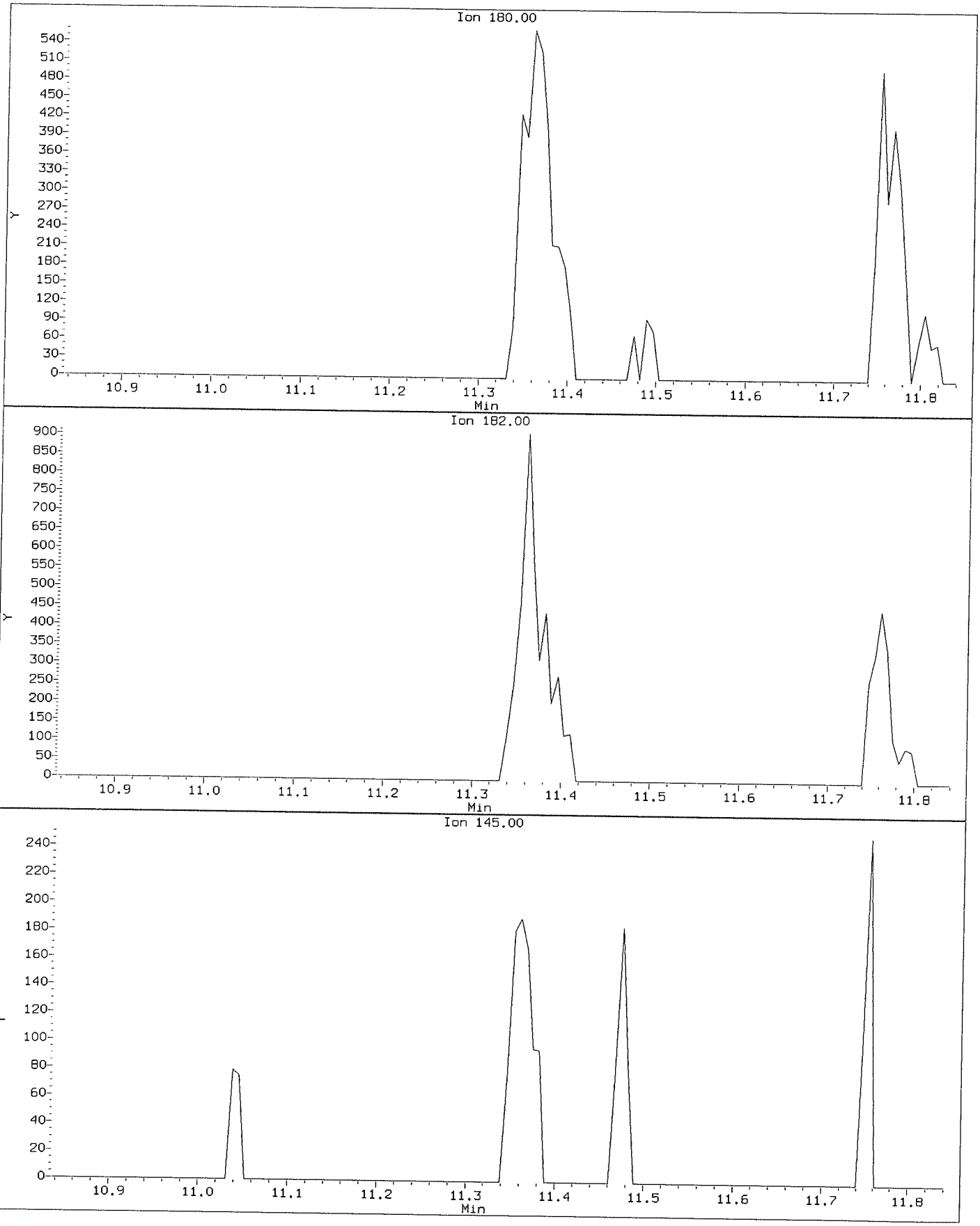
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Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



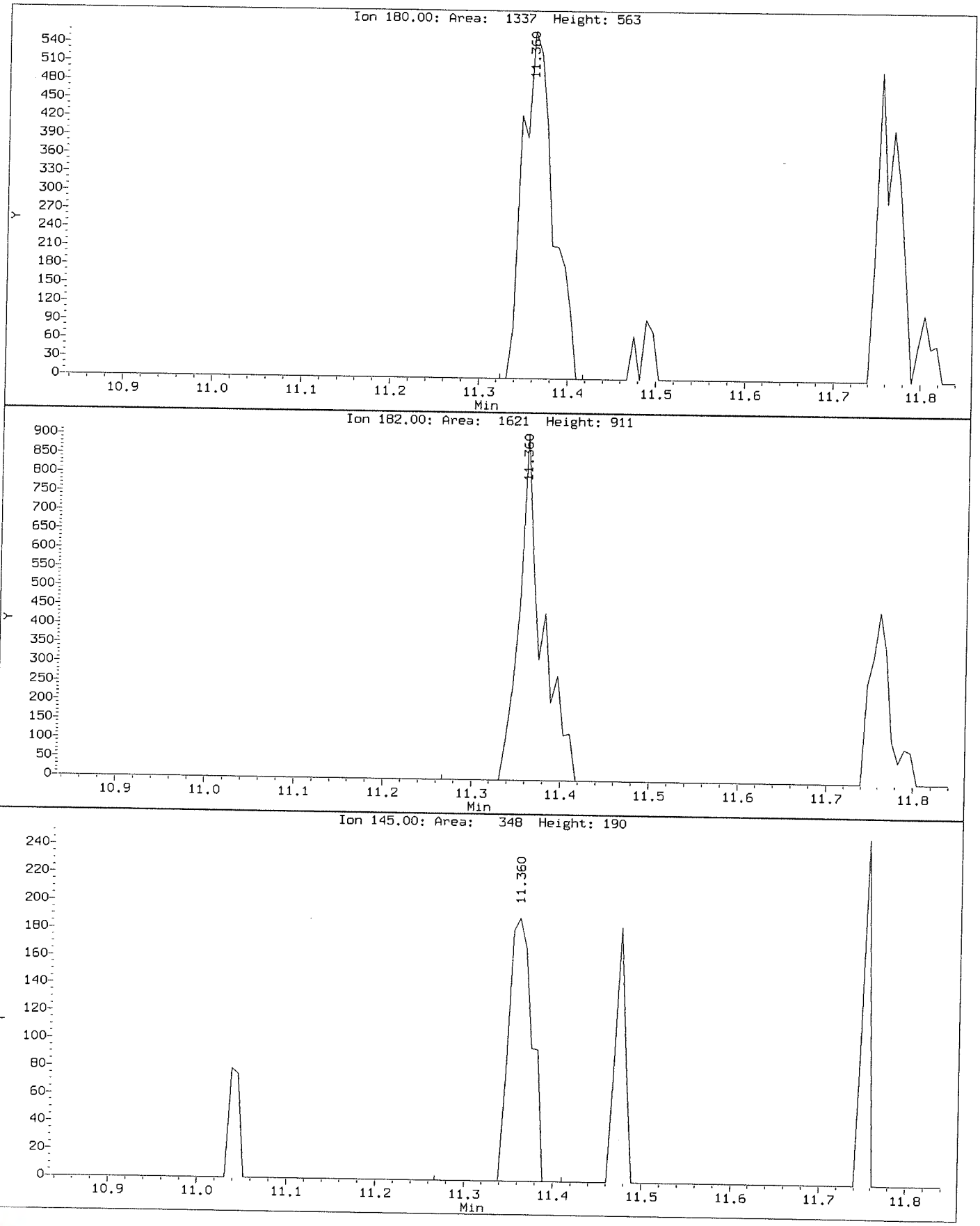
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



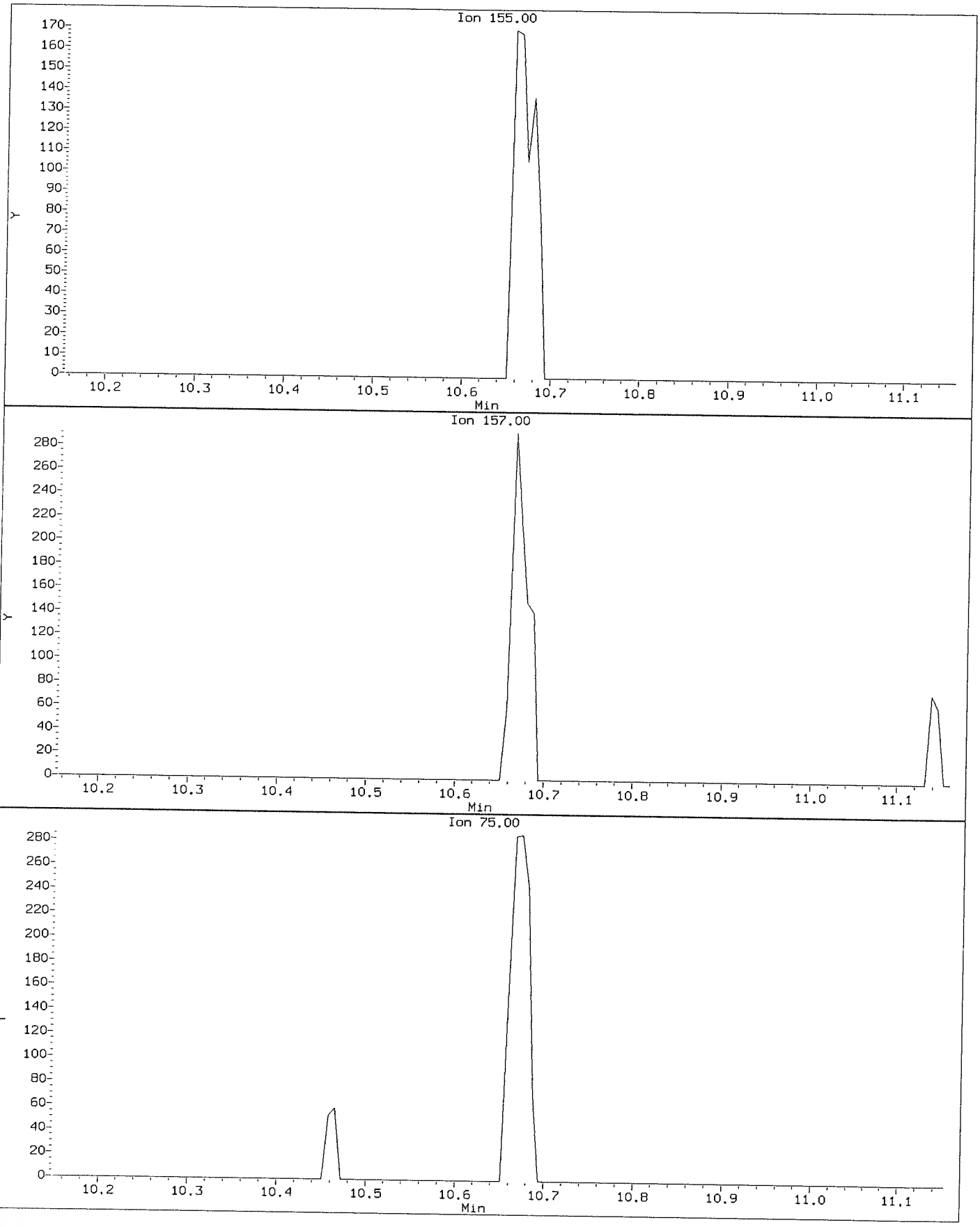
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Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



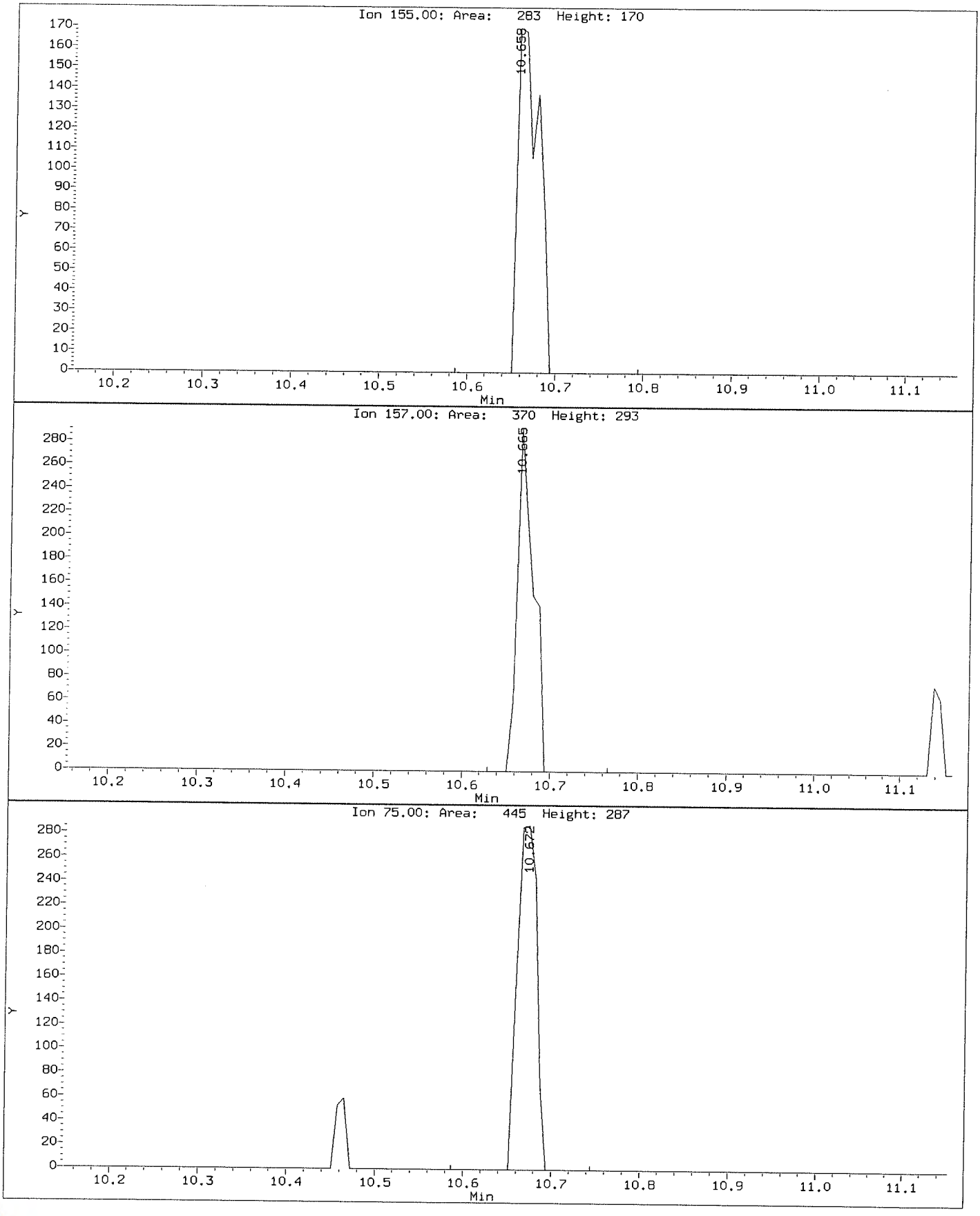
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



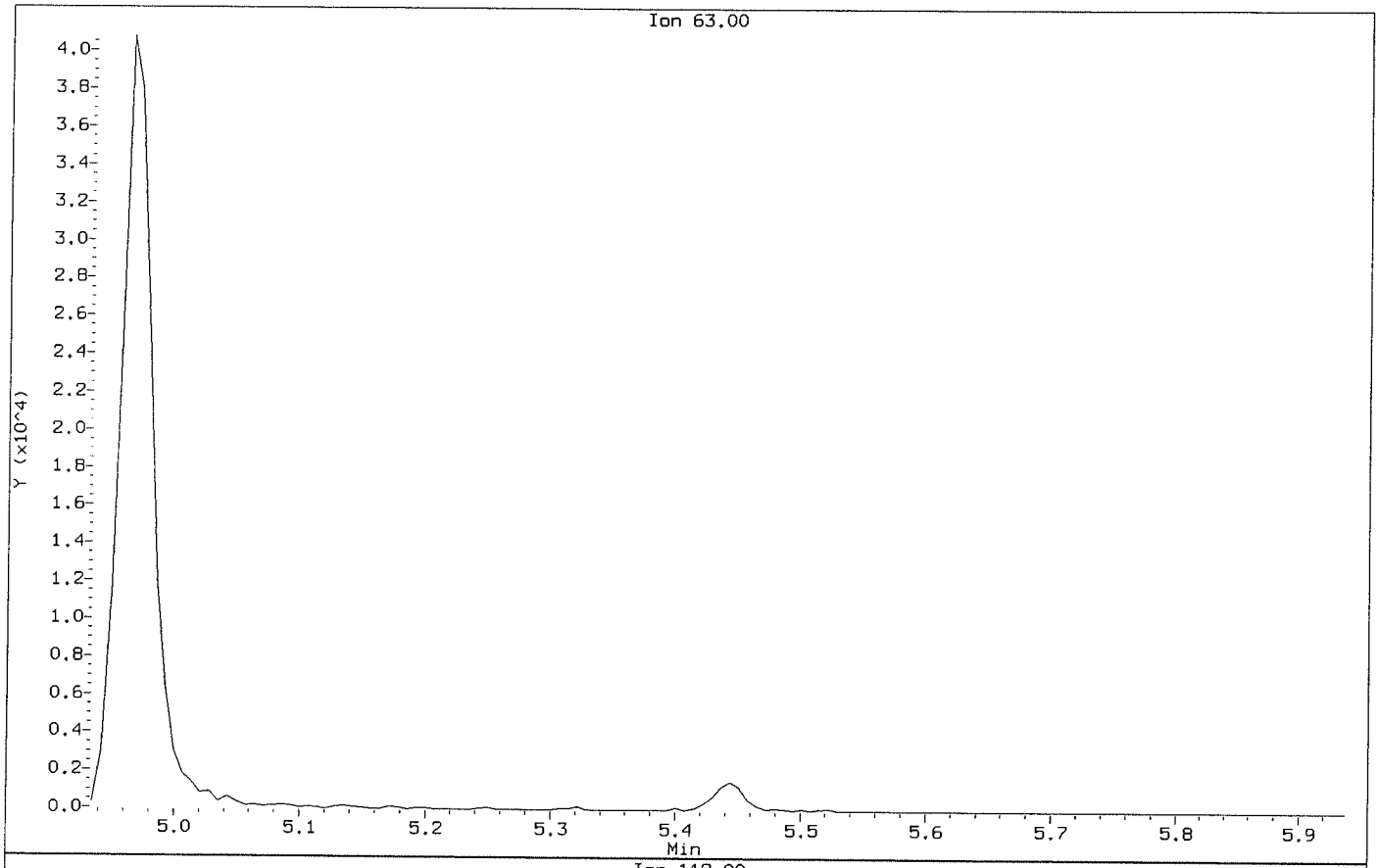
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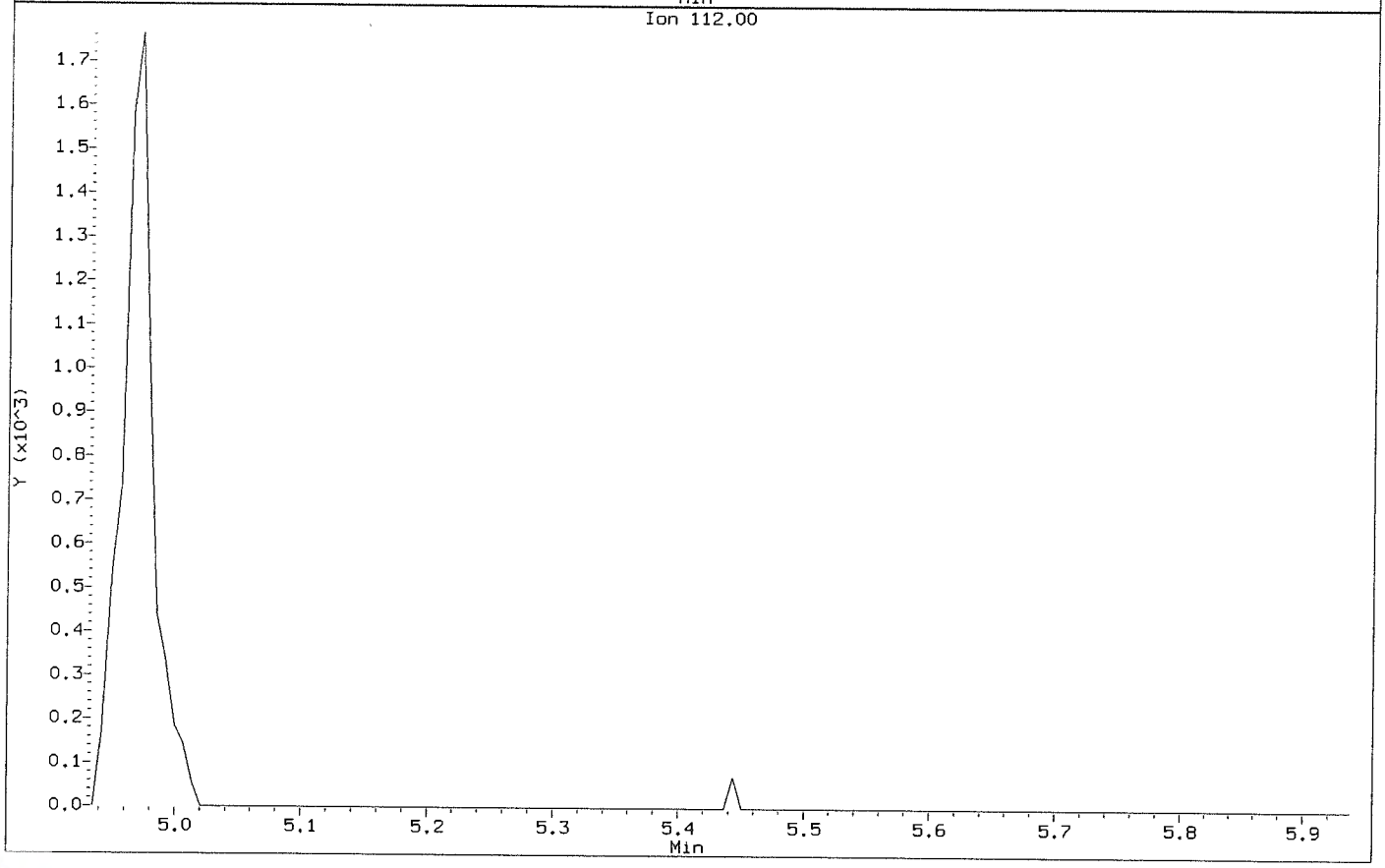
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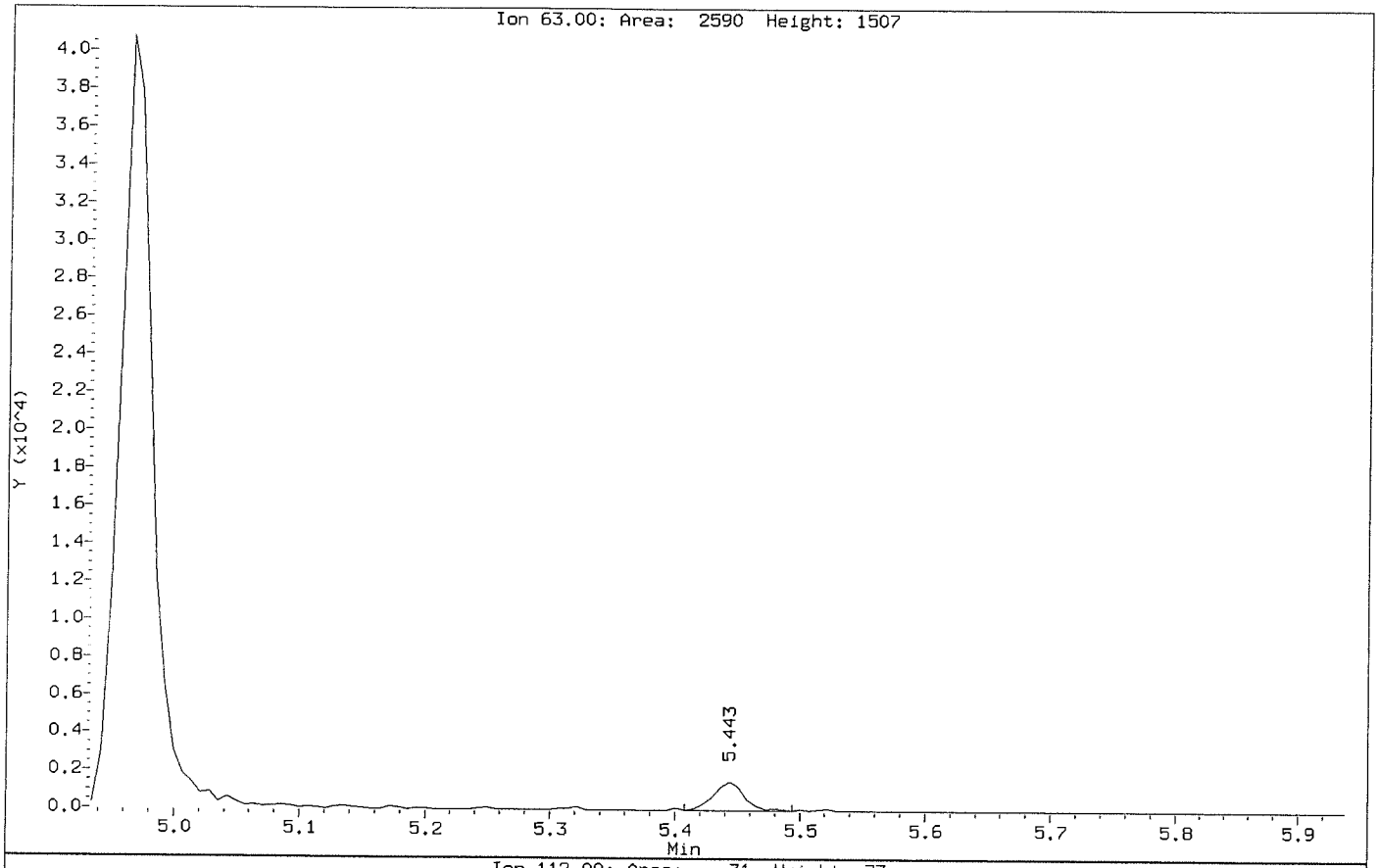
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

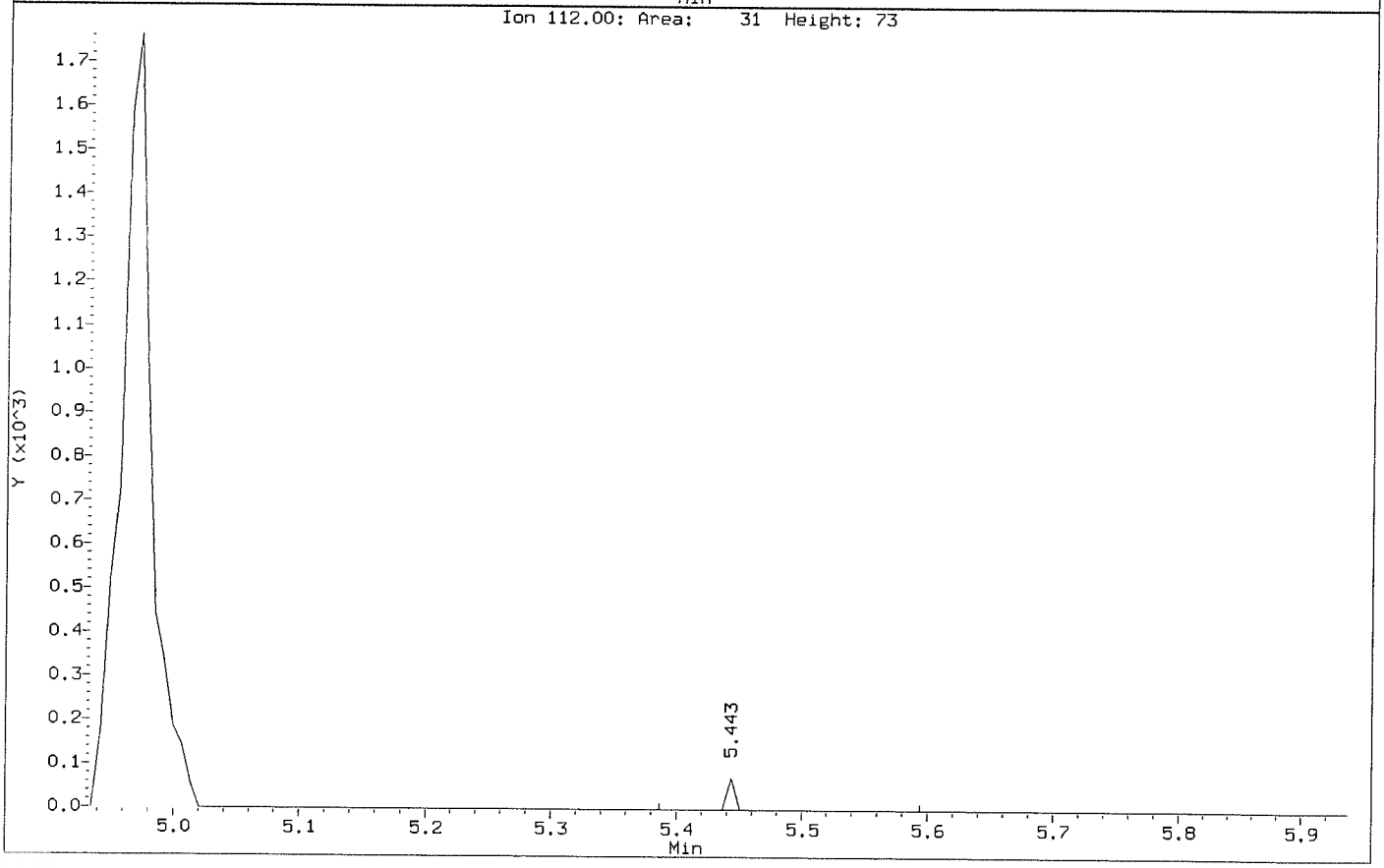




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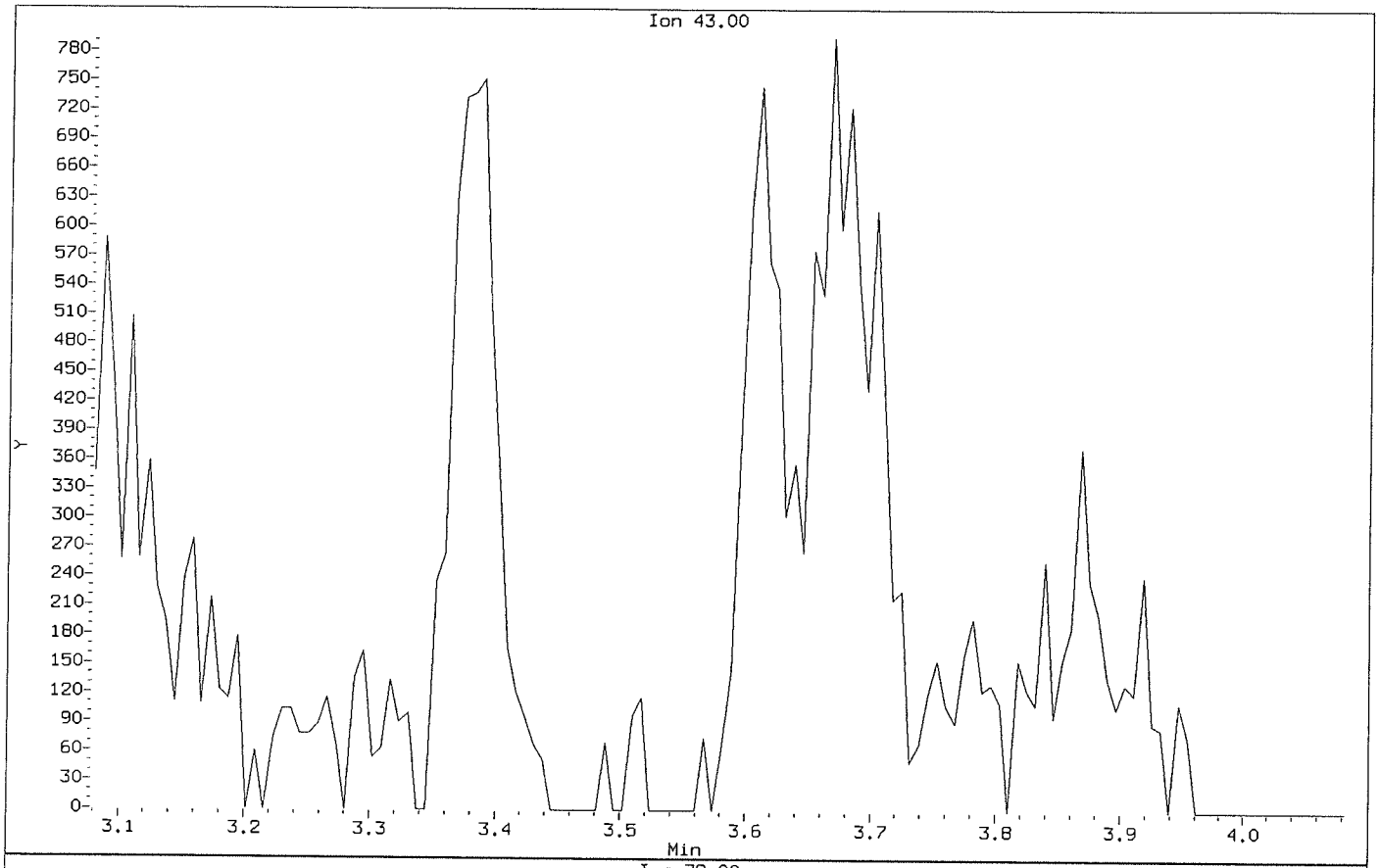
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

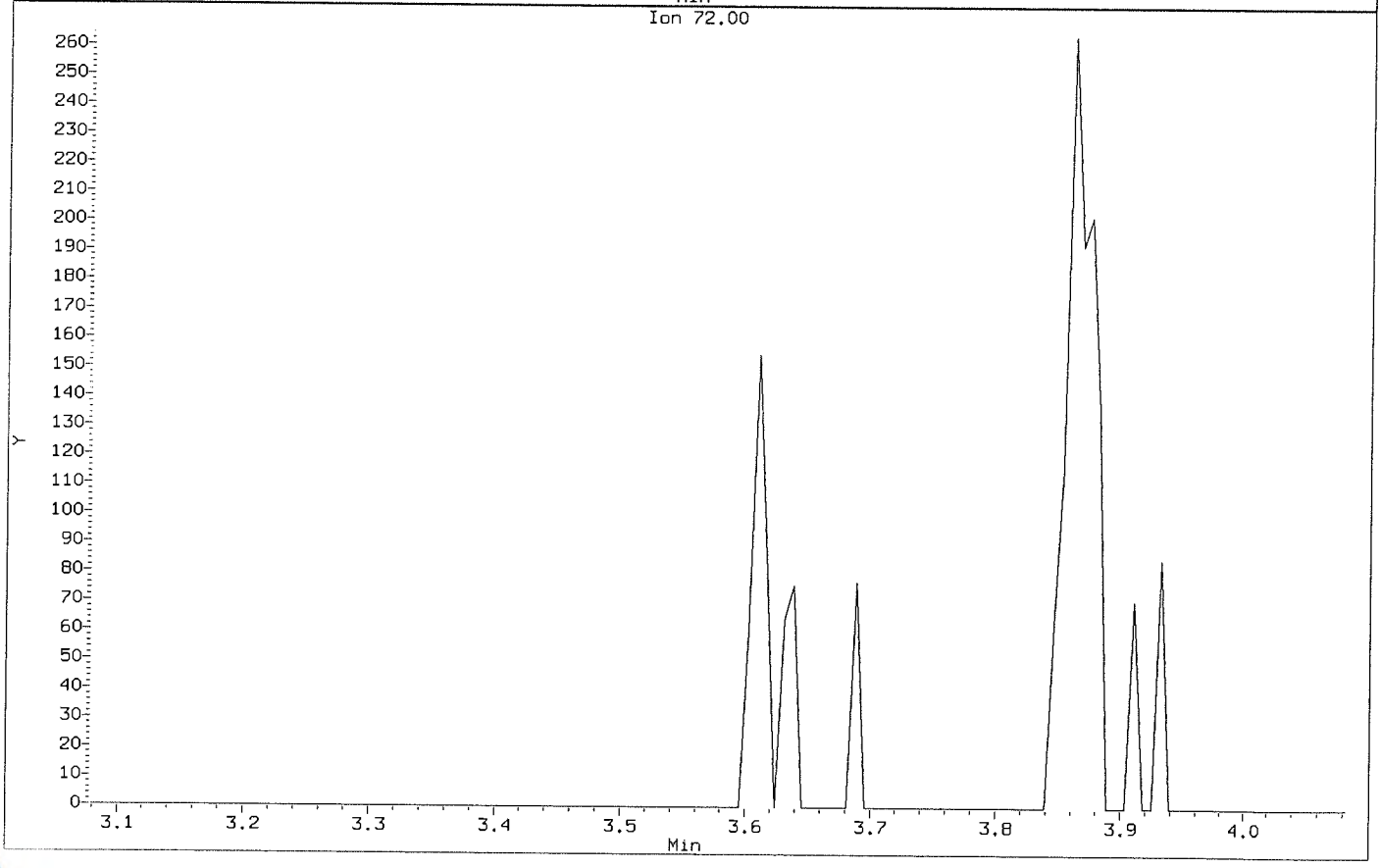




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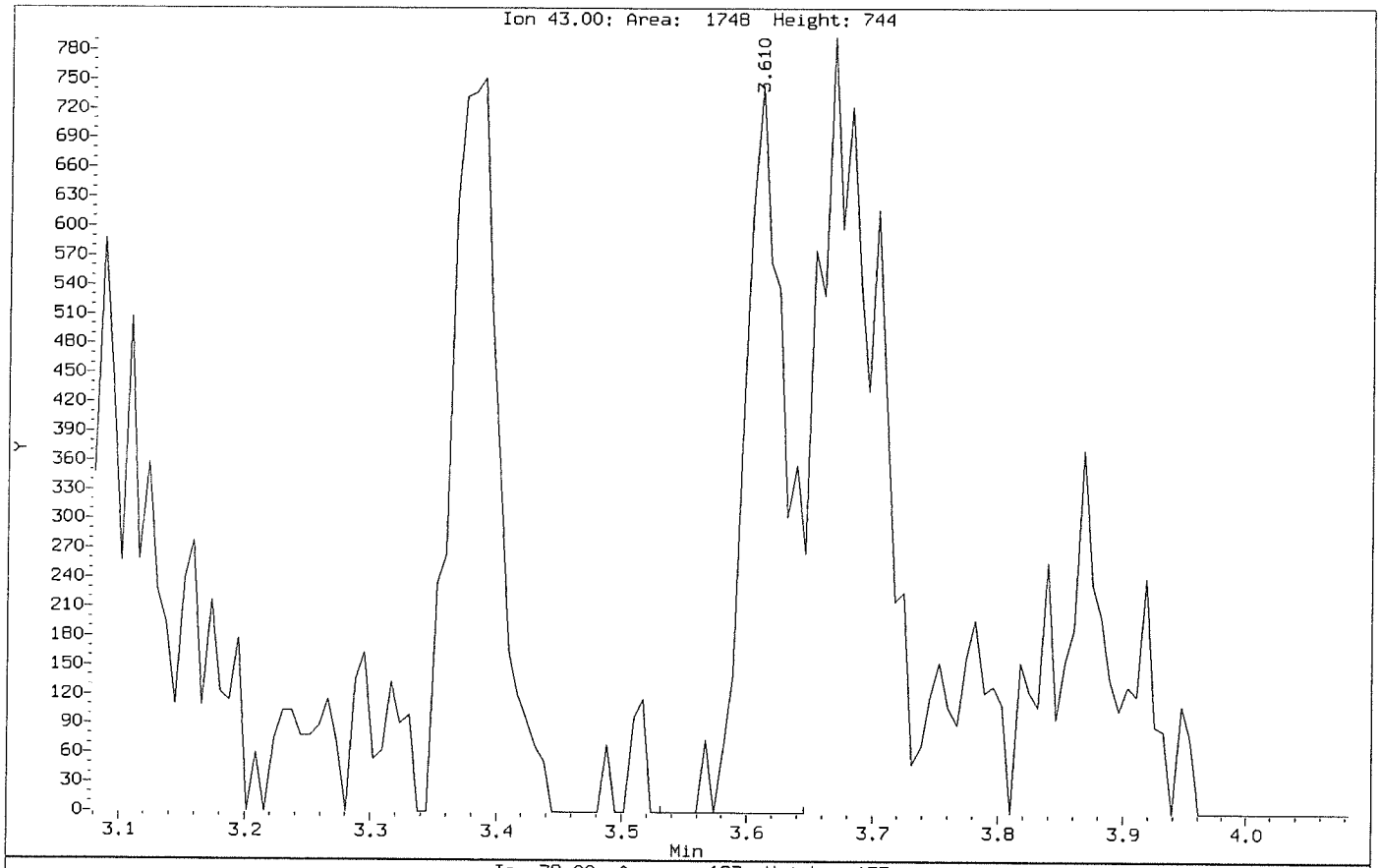
Compound: 2-Butanone
CAS Number: 78-93-3

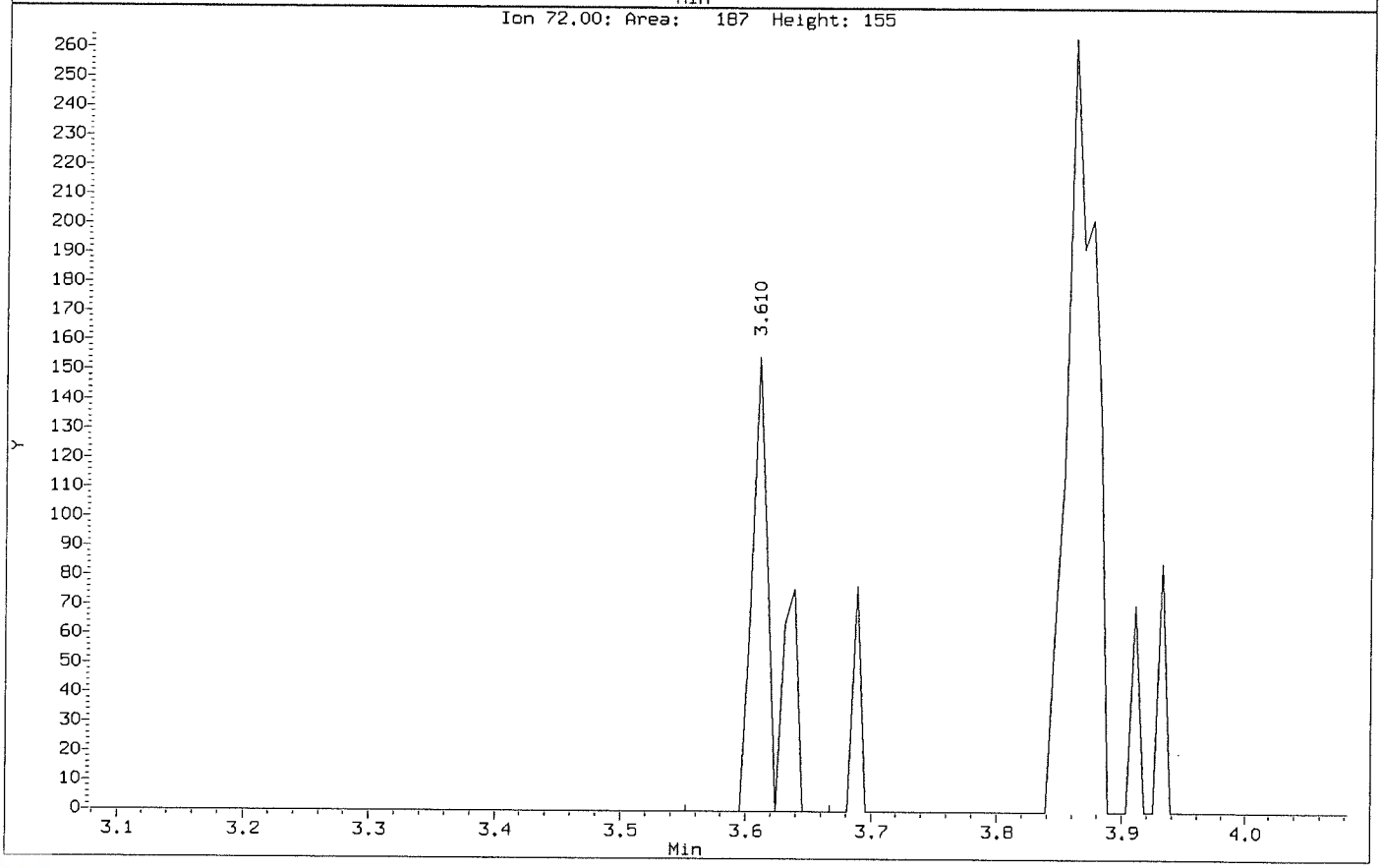




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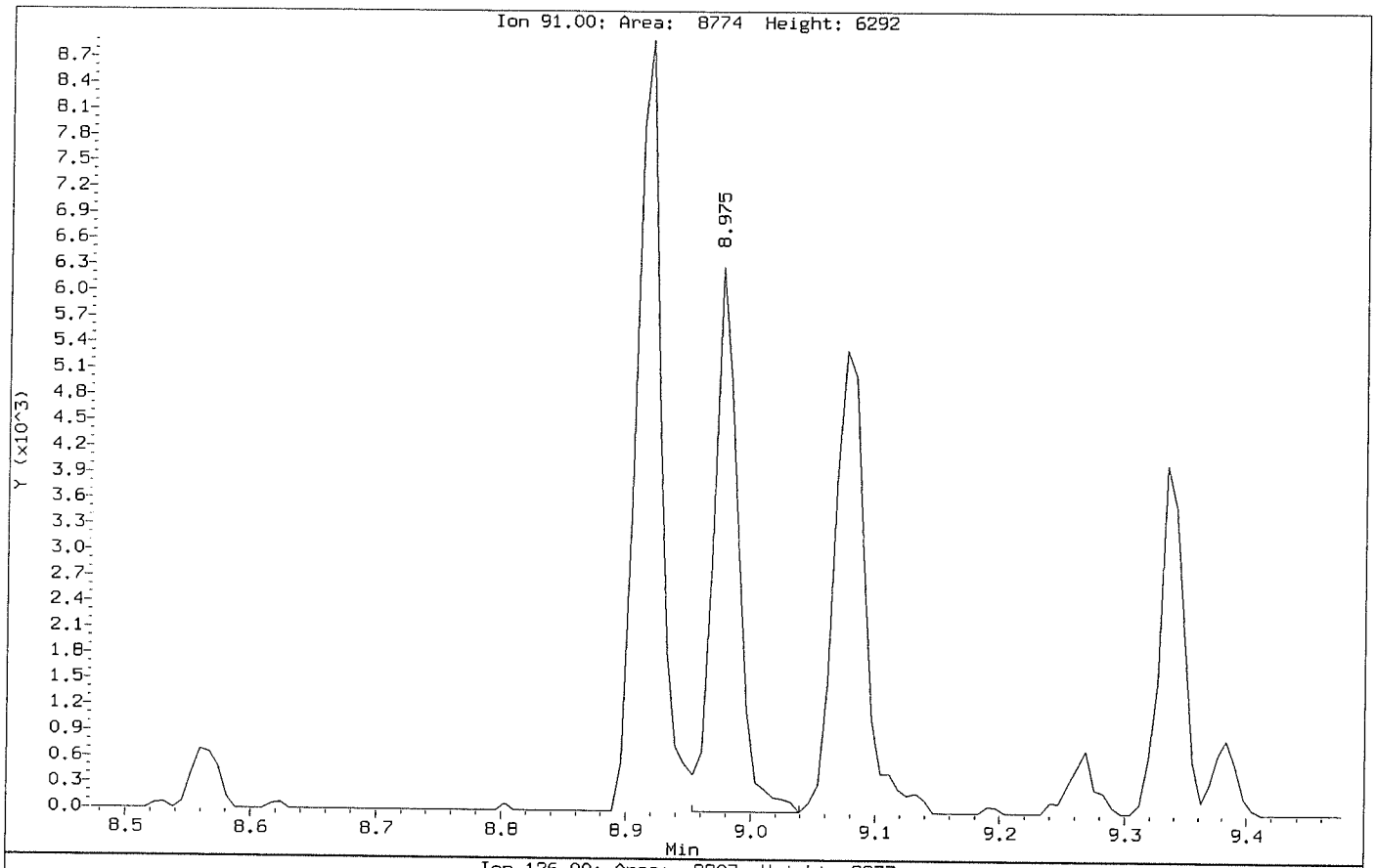
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CAS Number: 78-93-3

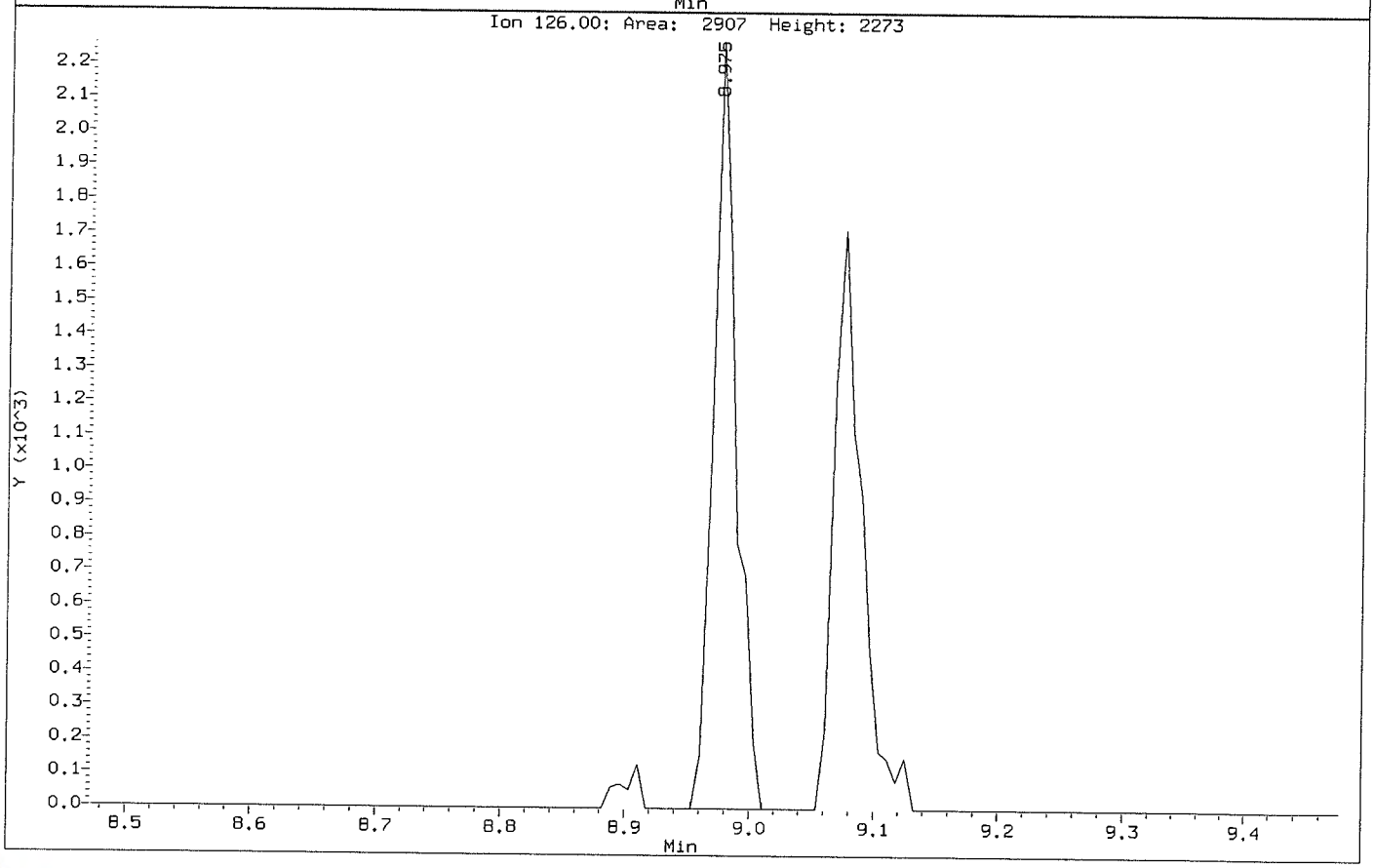




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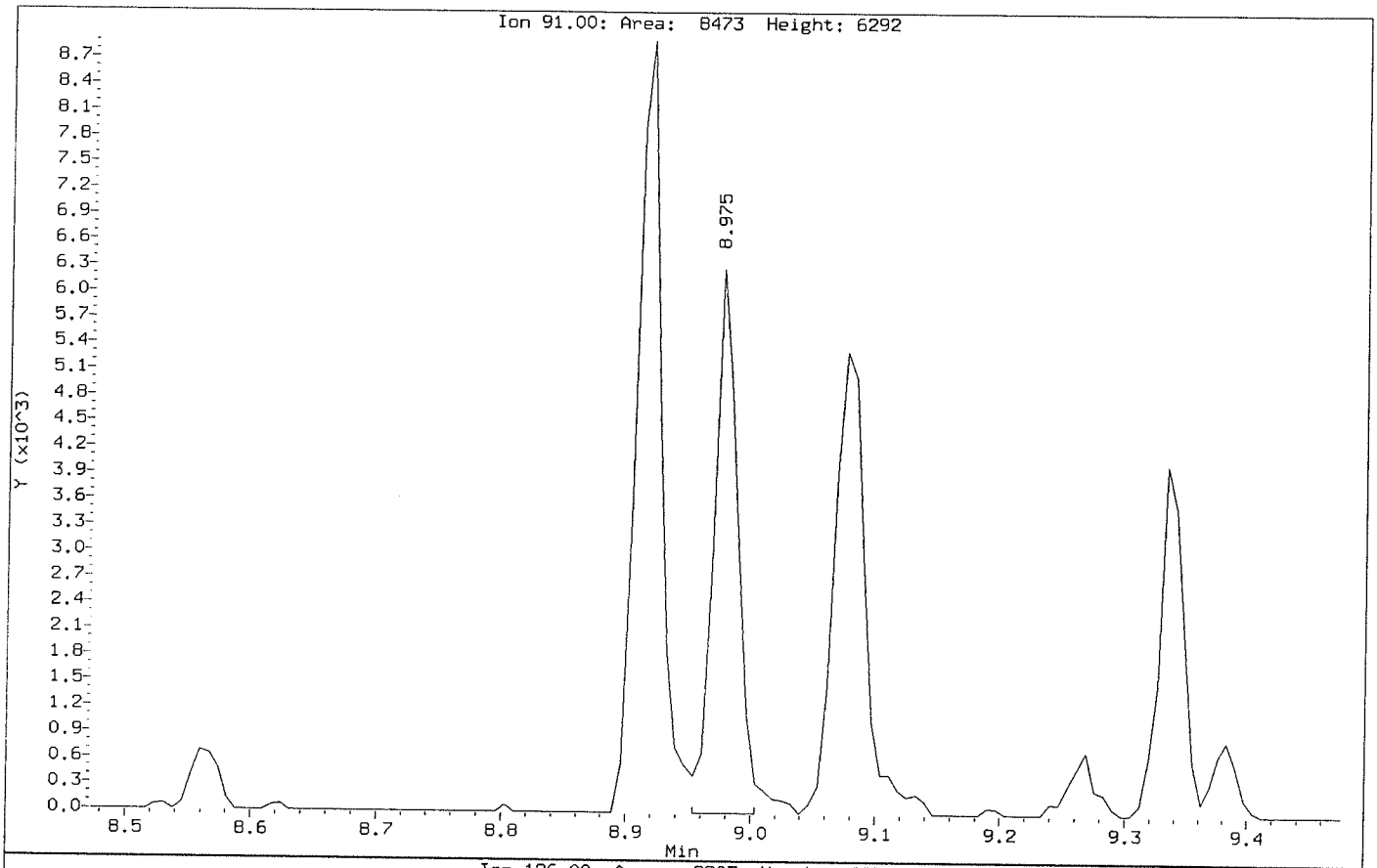
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

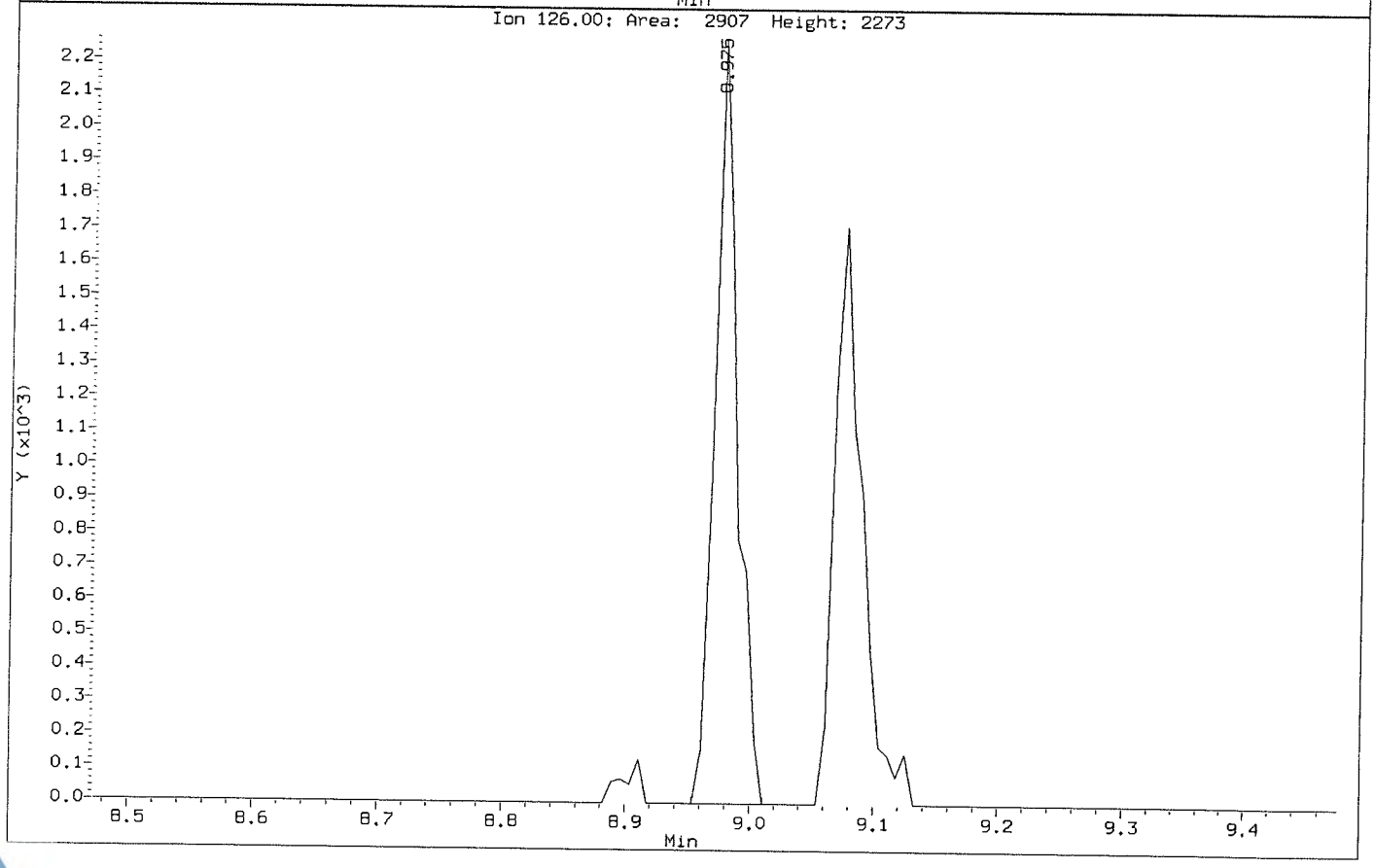




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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

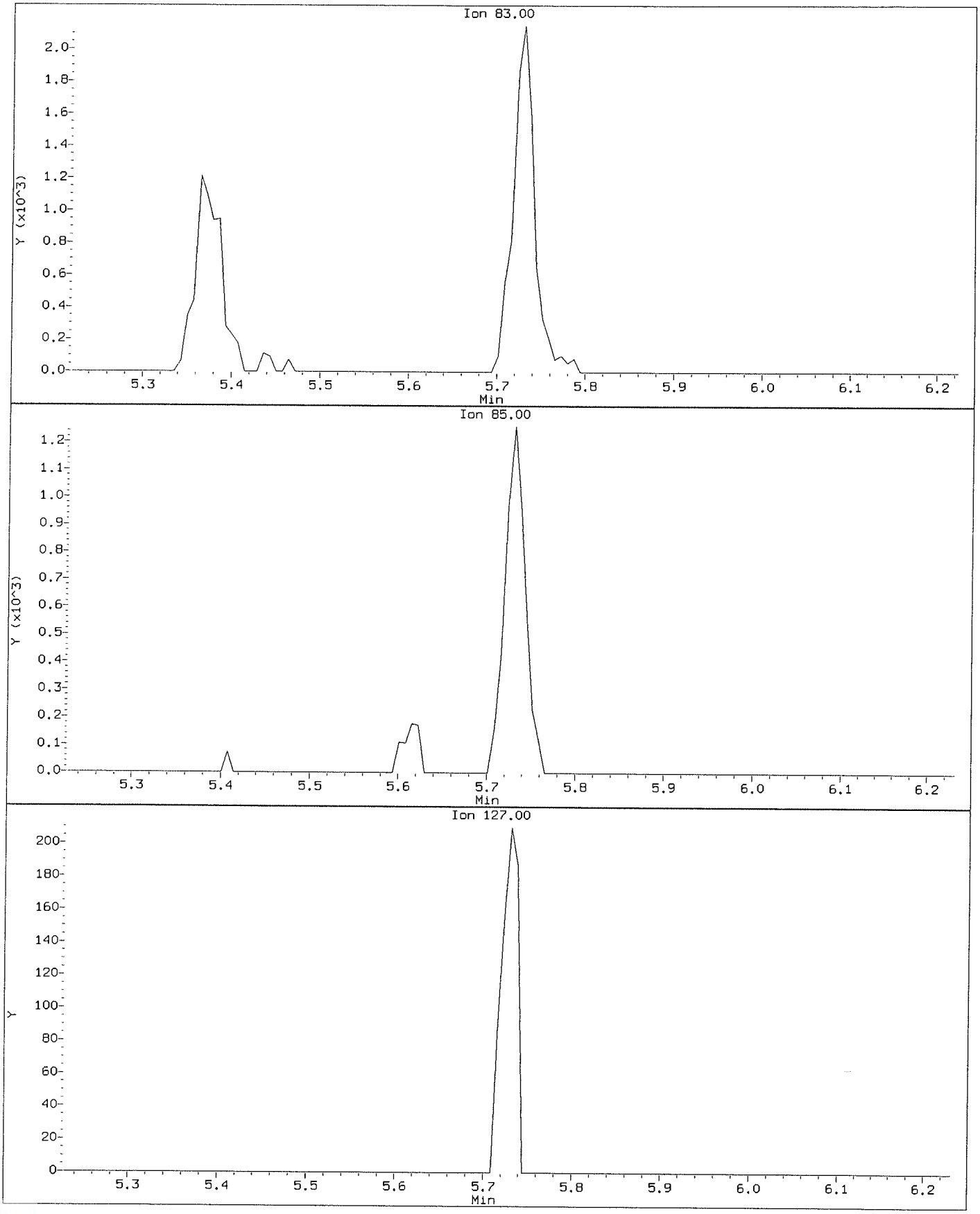
Compound: 2-Chlorotoluene
CAS Number: 95-49-8





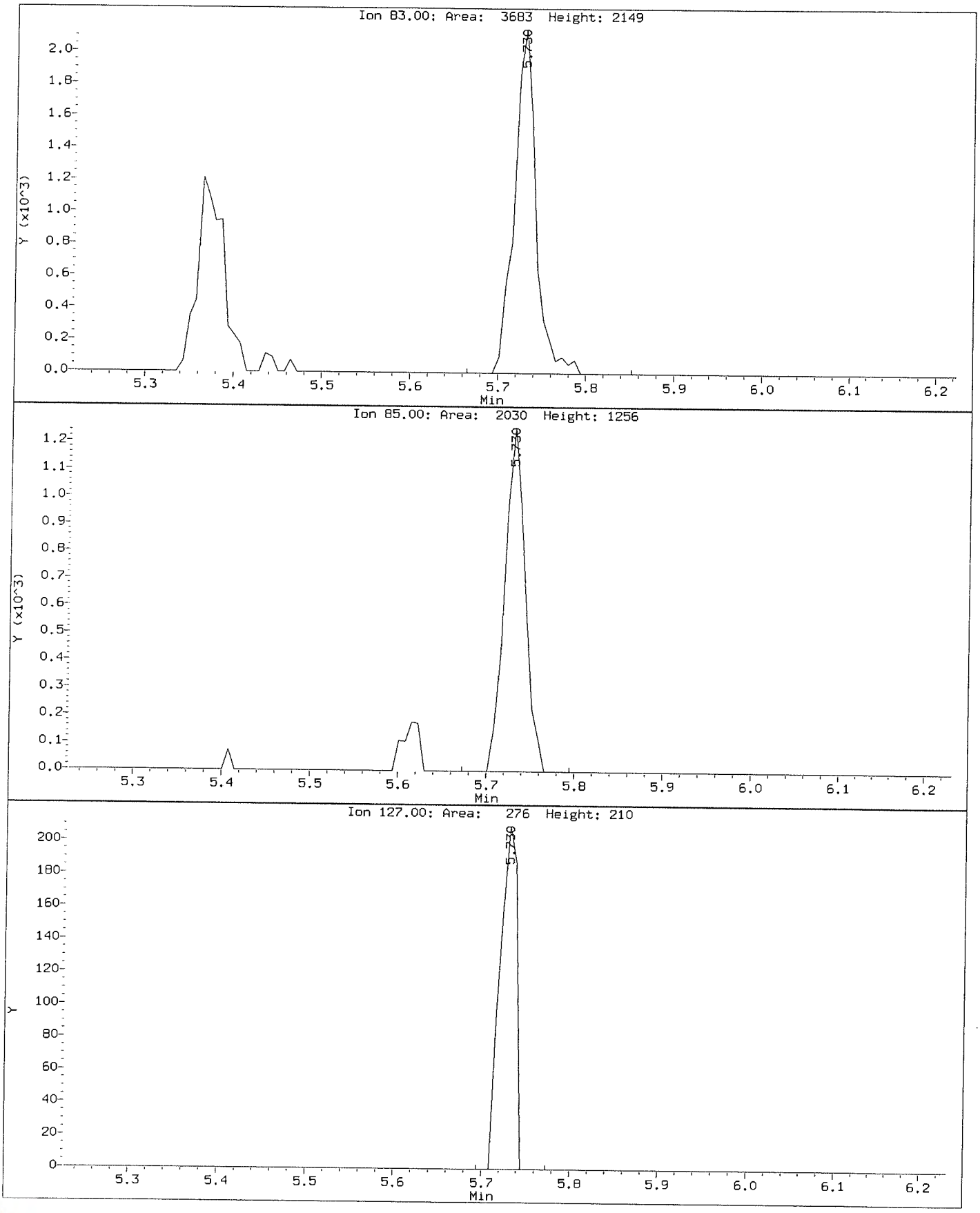
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



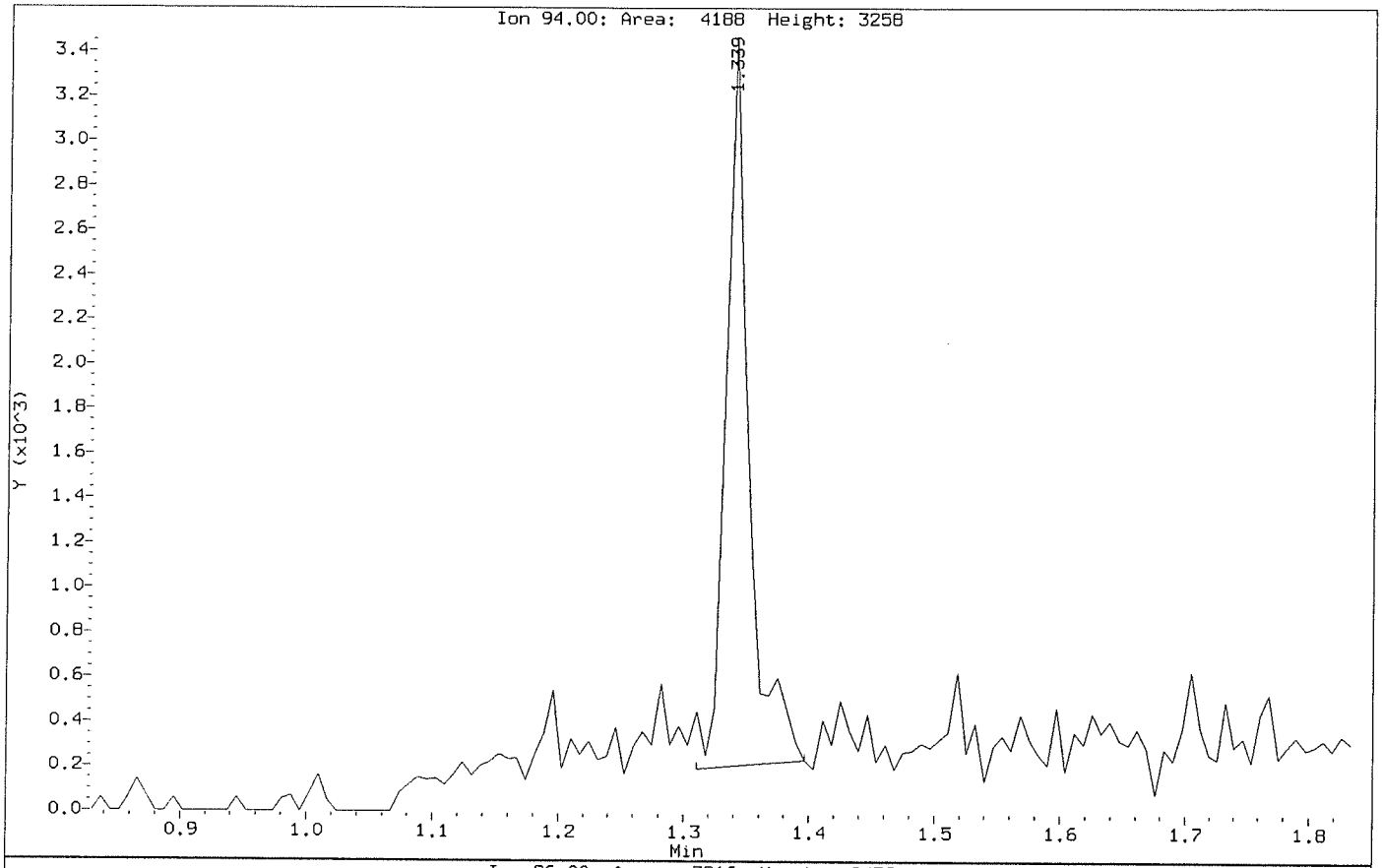
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Instrument: voa6.i
Client Sample ID: VSTD001

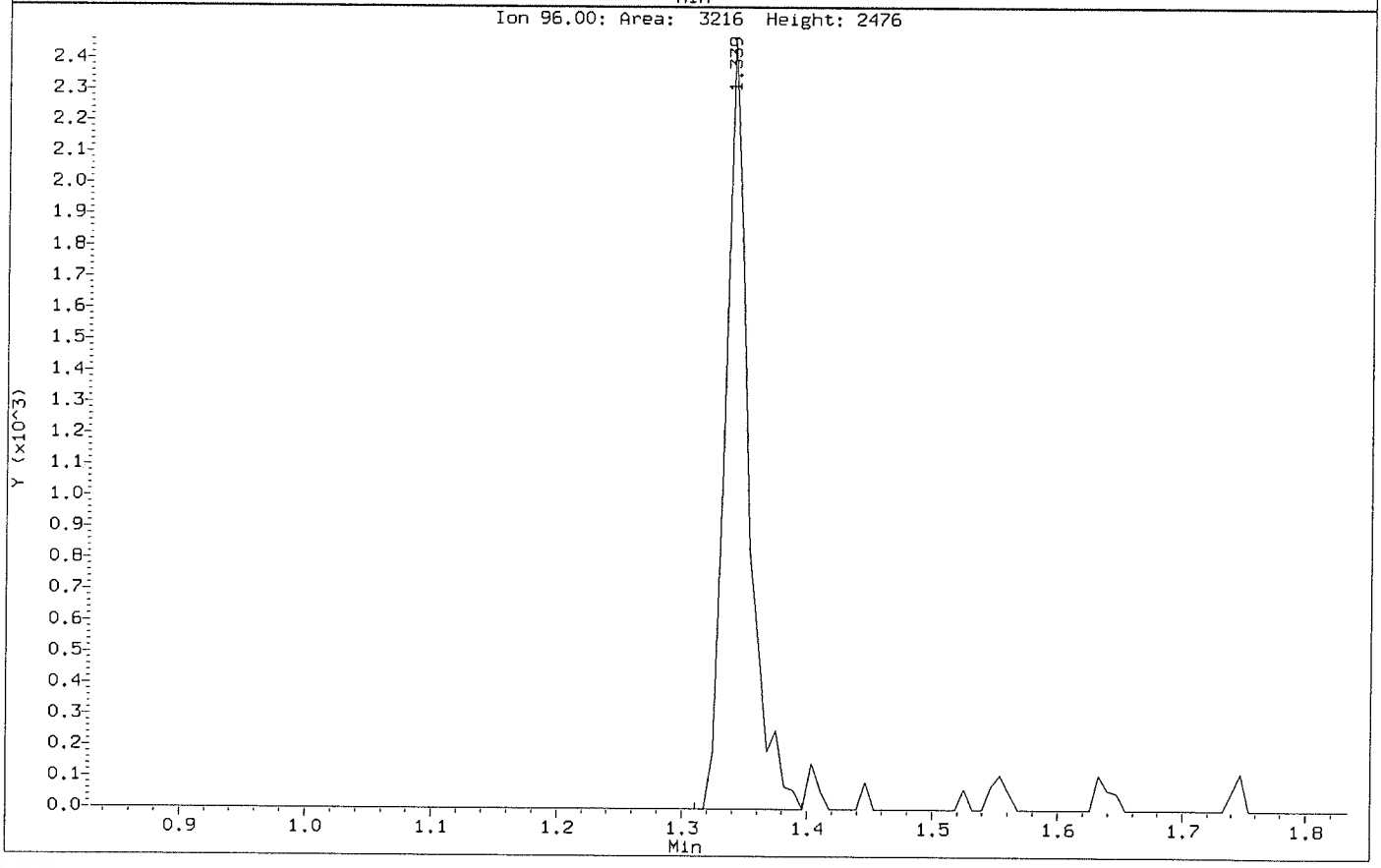
Compound: Bromodichloromethane
CAS Number: 75-27-4



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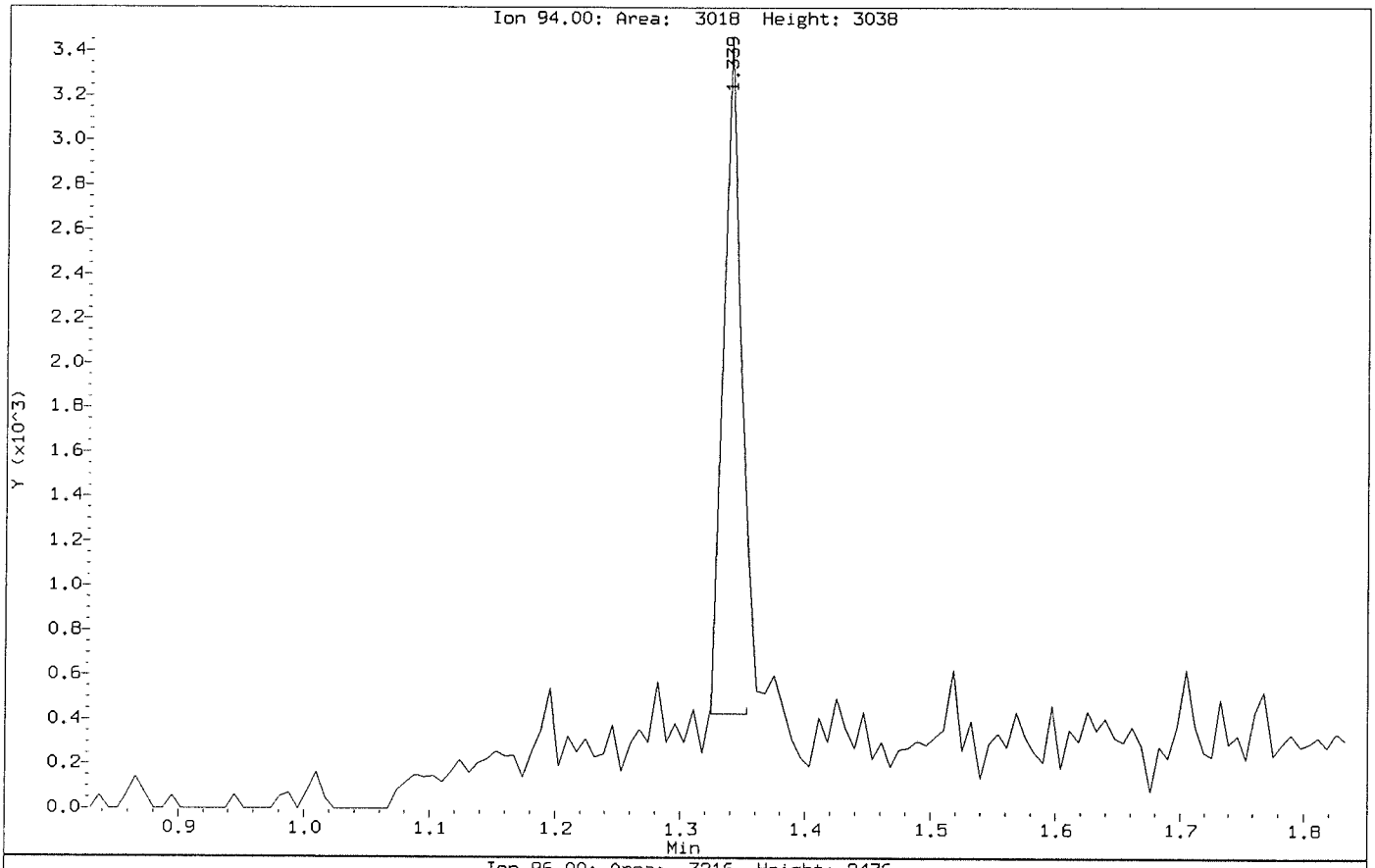
Compound: Bromomethane
CAS Number: 74-83-9

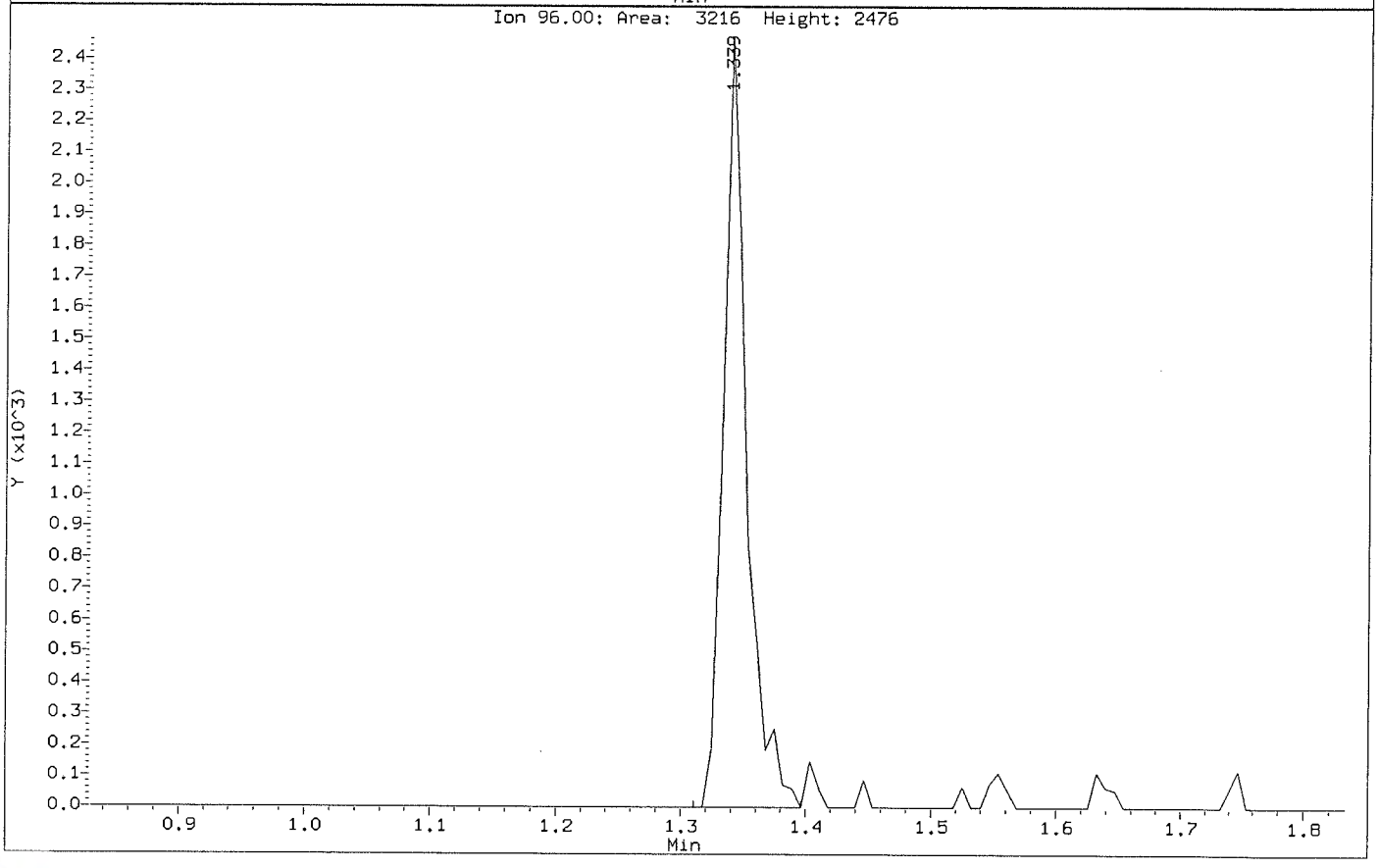




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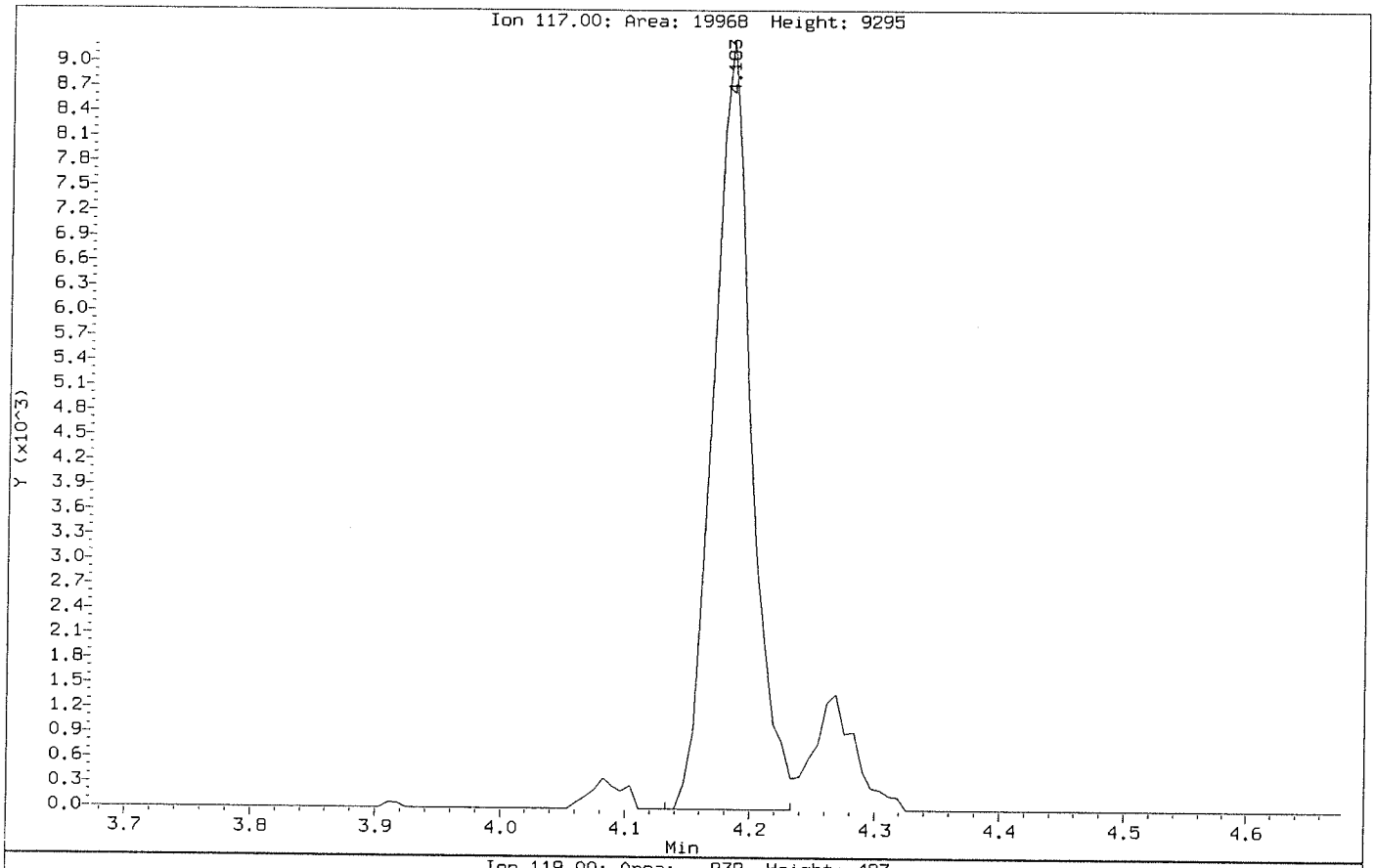
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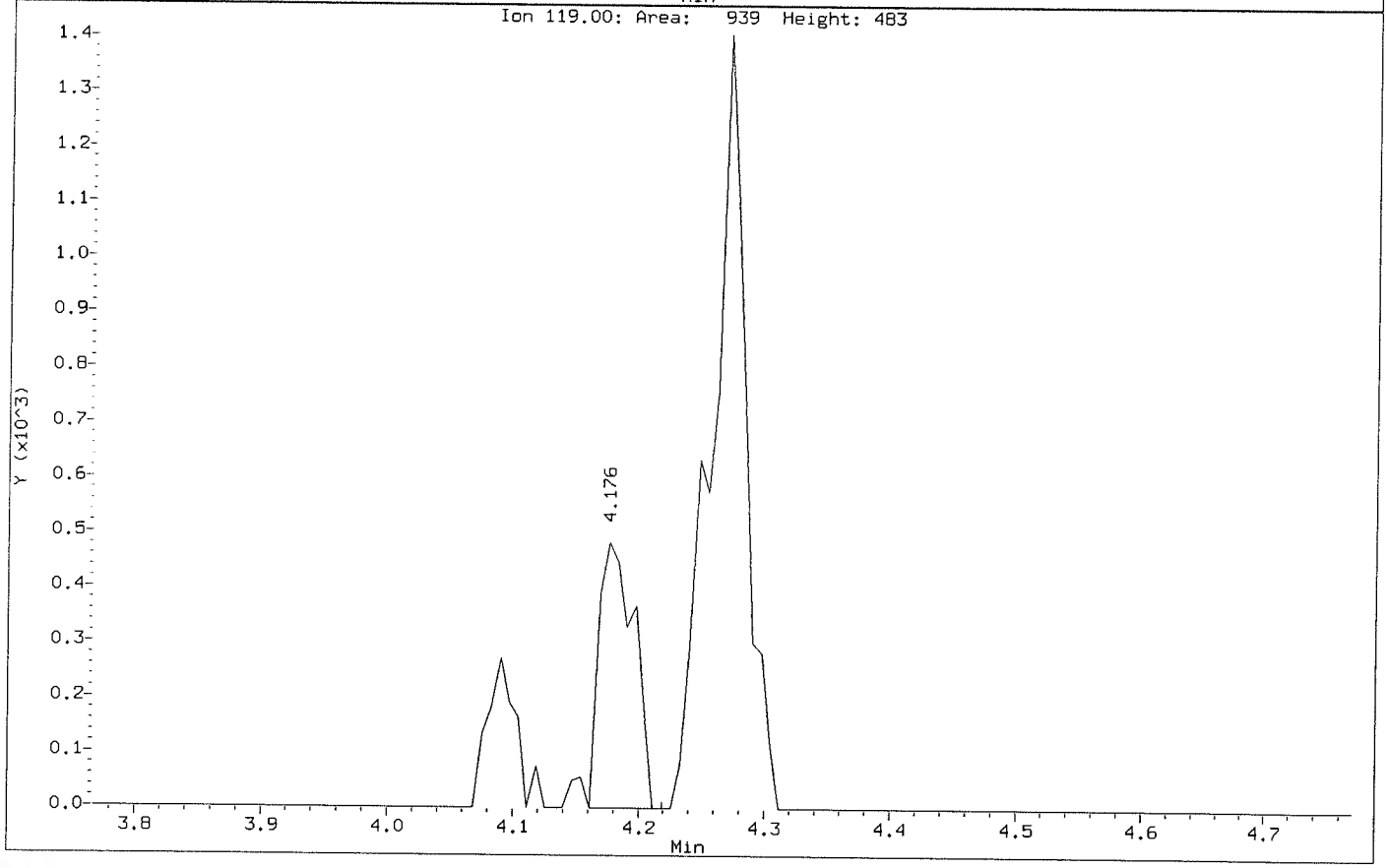




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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

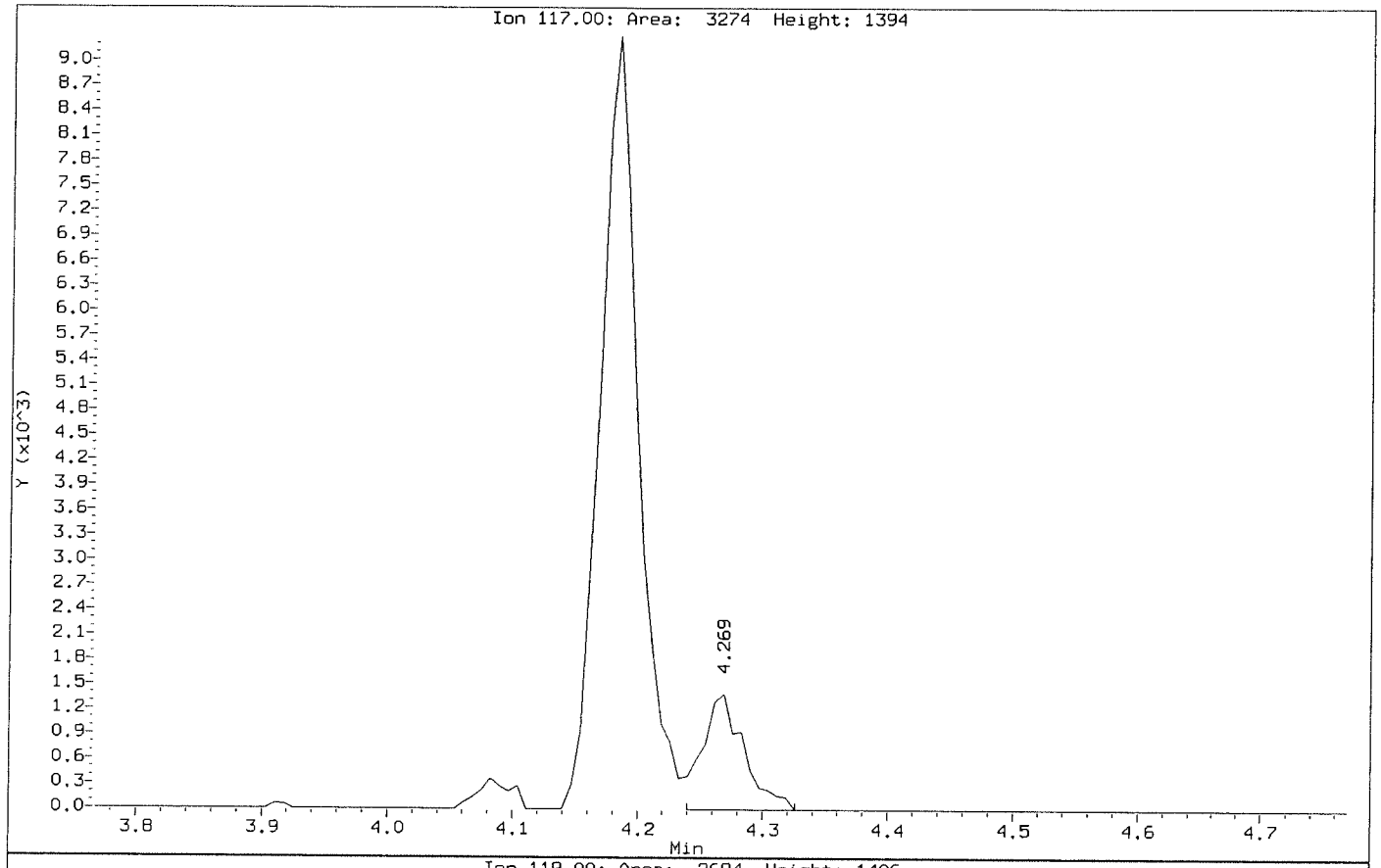
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

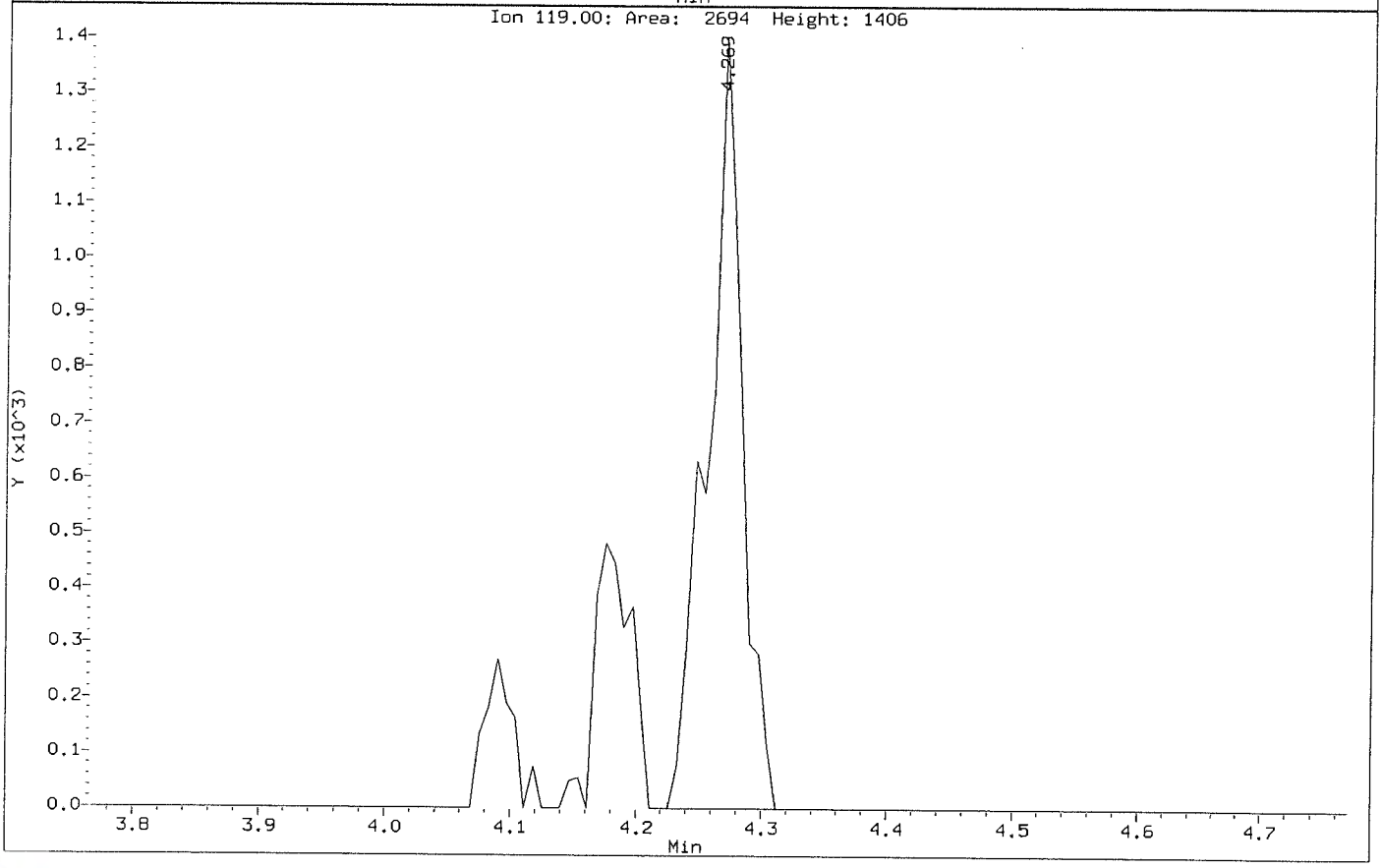




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Client Sample ID: VSTD001

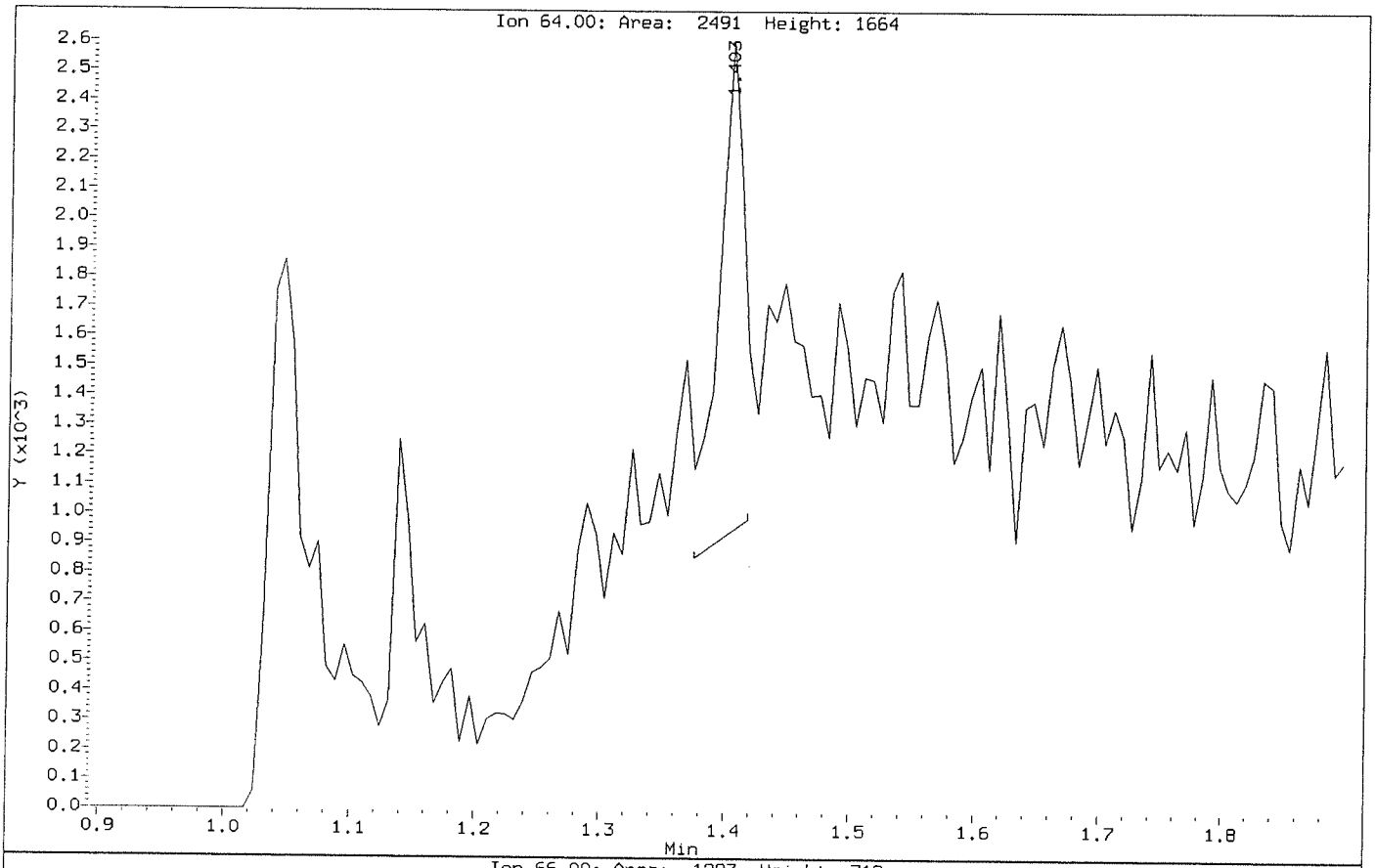
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

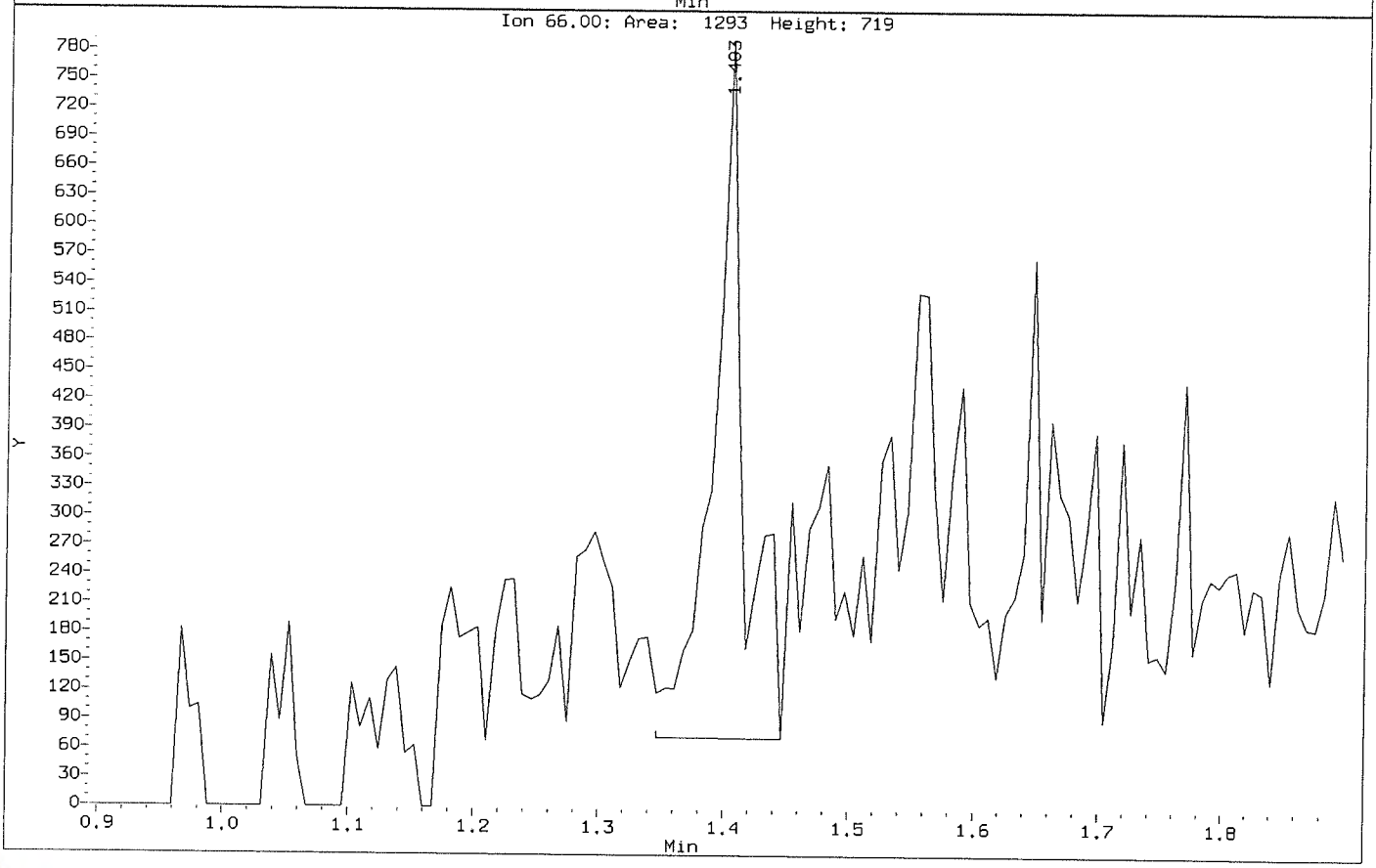




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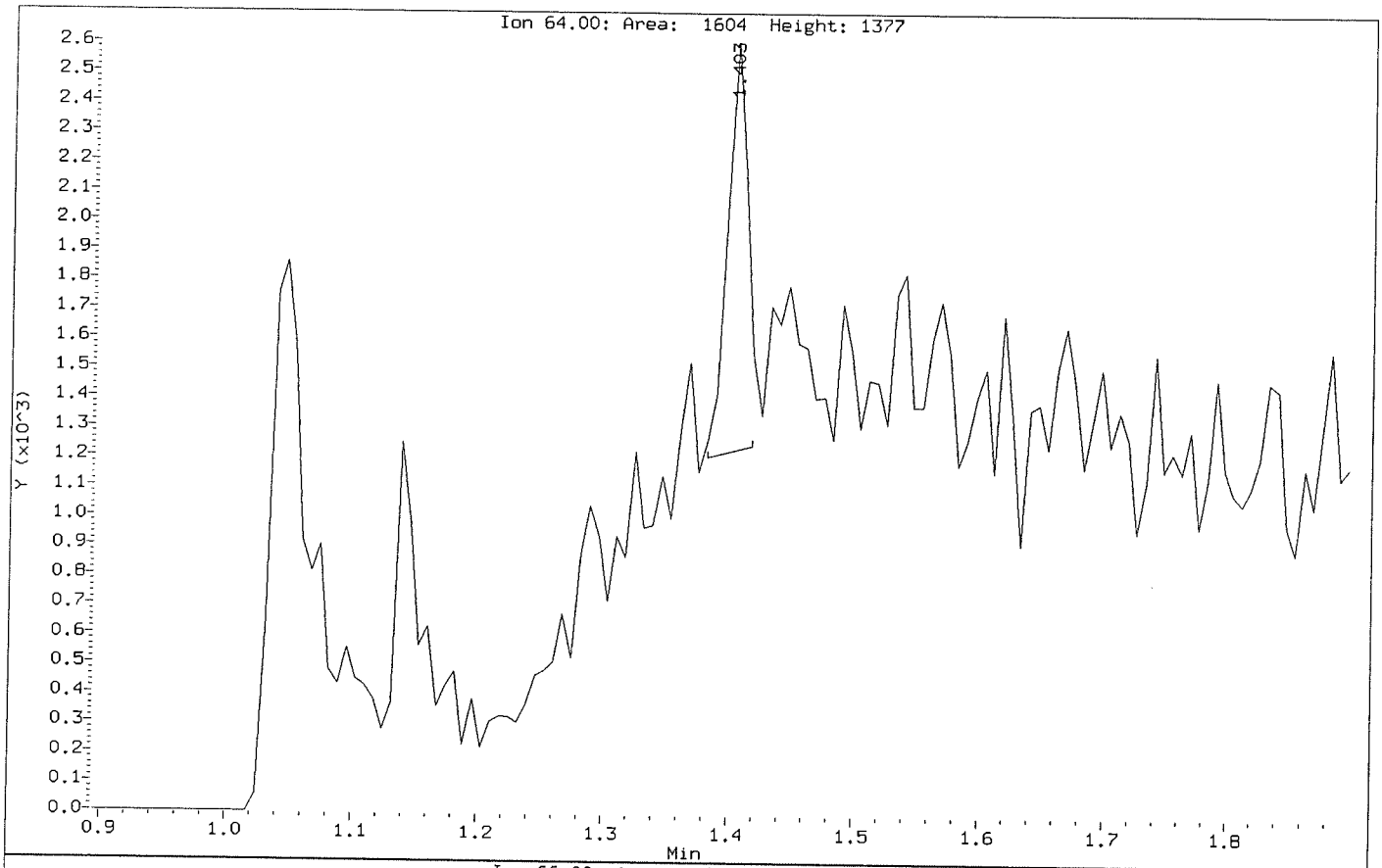
Compound: Chloroethane
CAS Number: 75-00-3

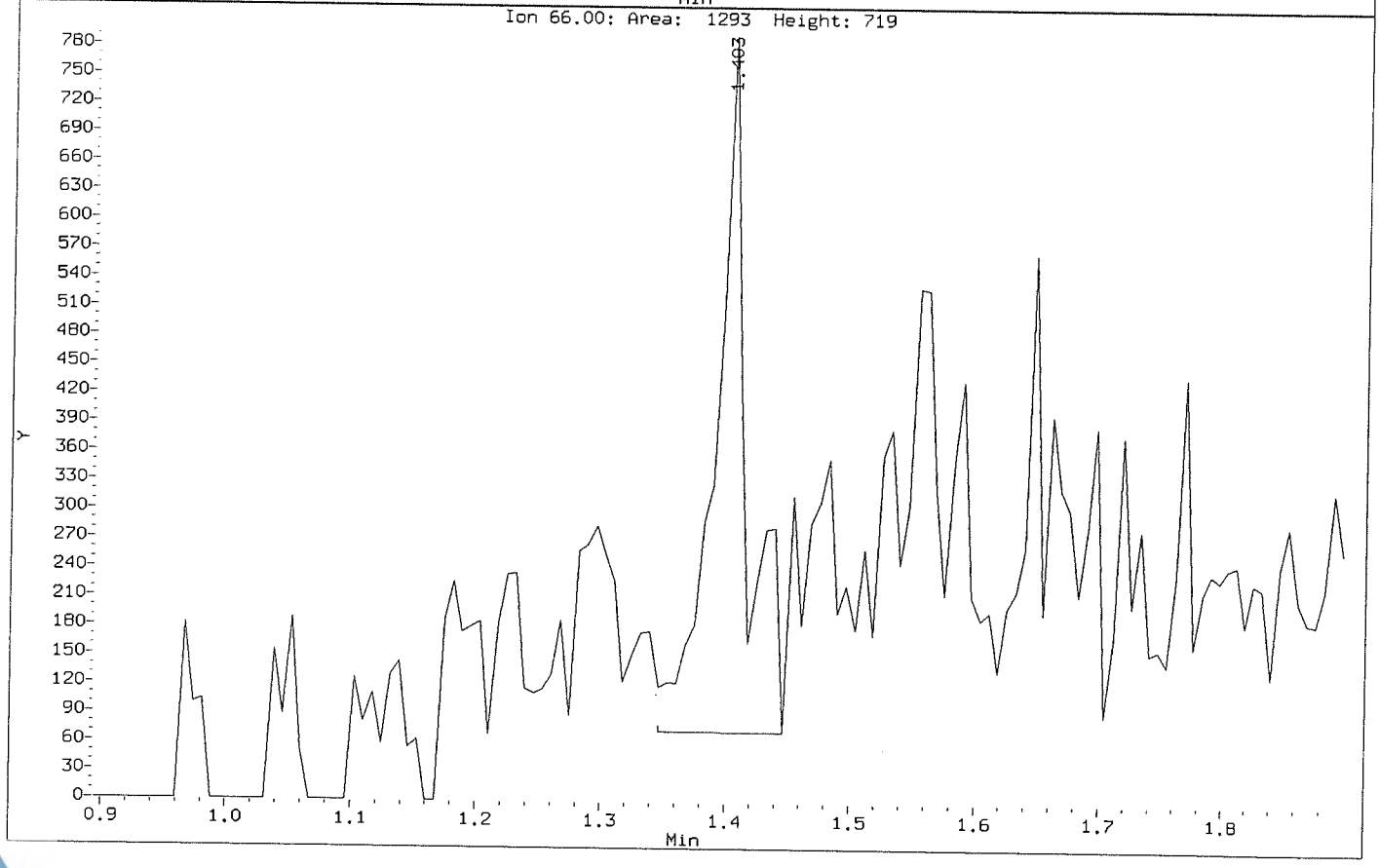




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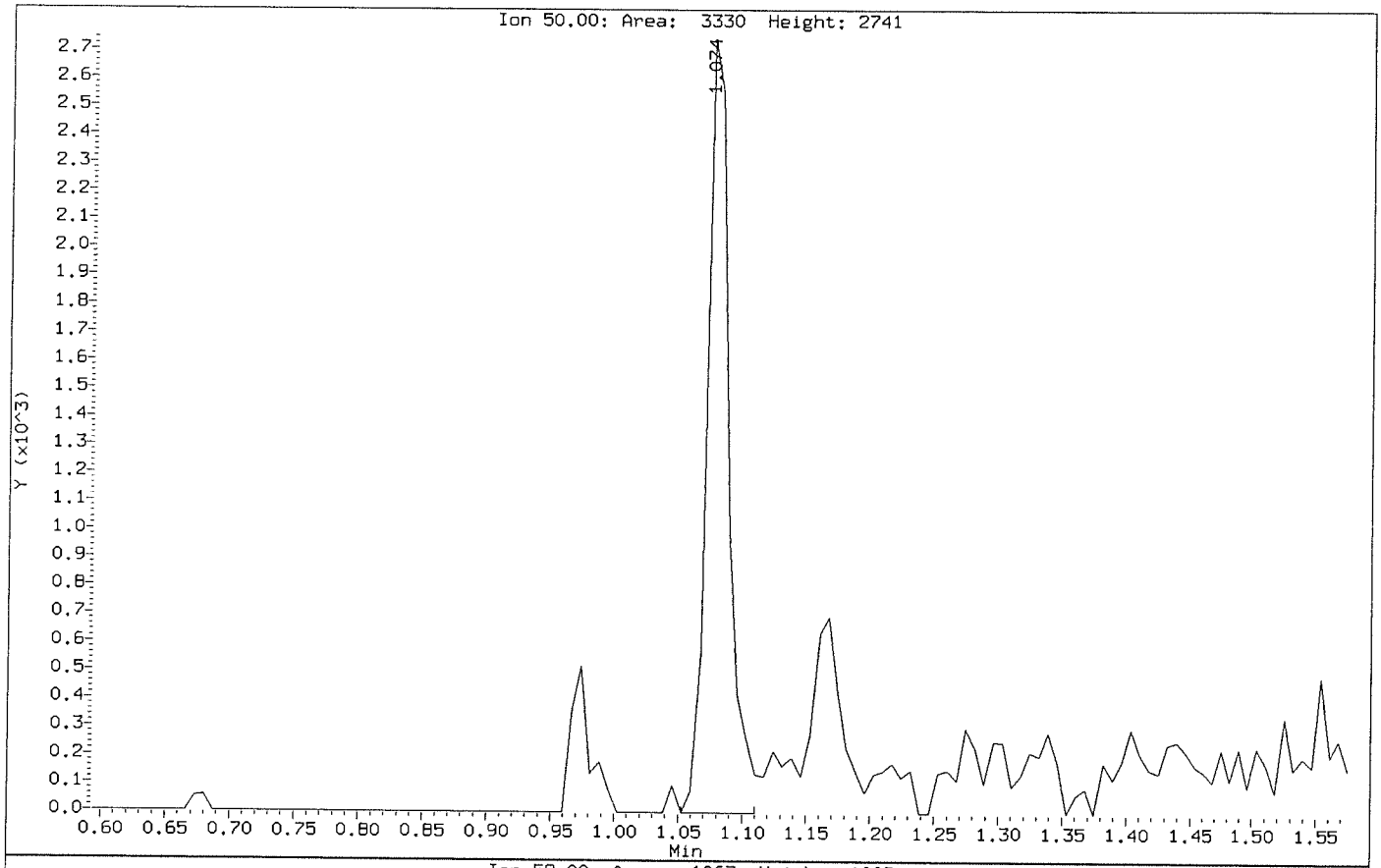
Compound: Chloroethane
CAS Number: 75-00-3

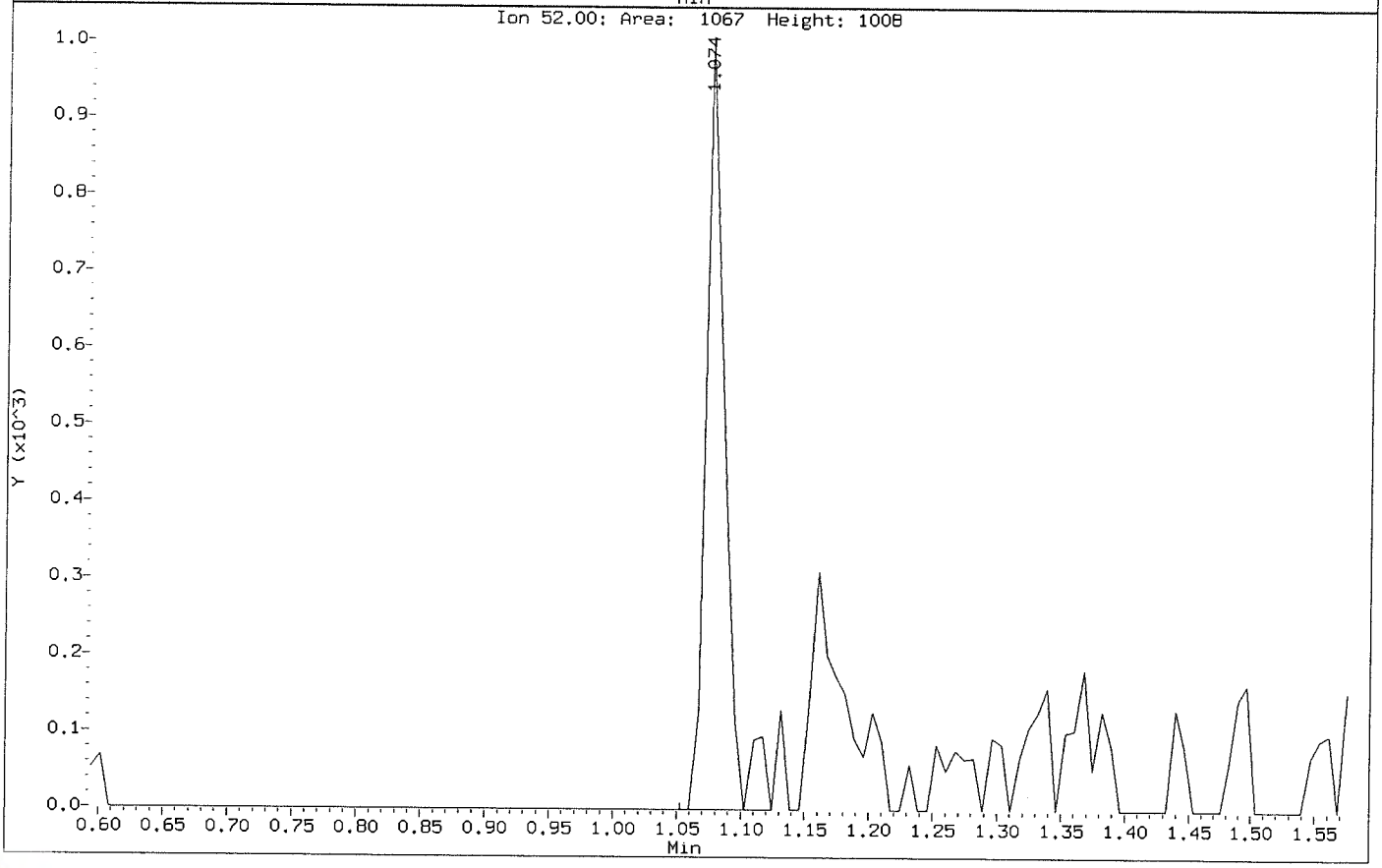




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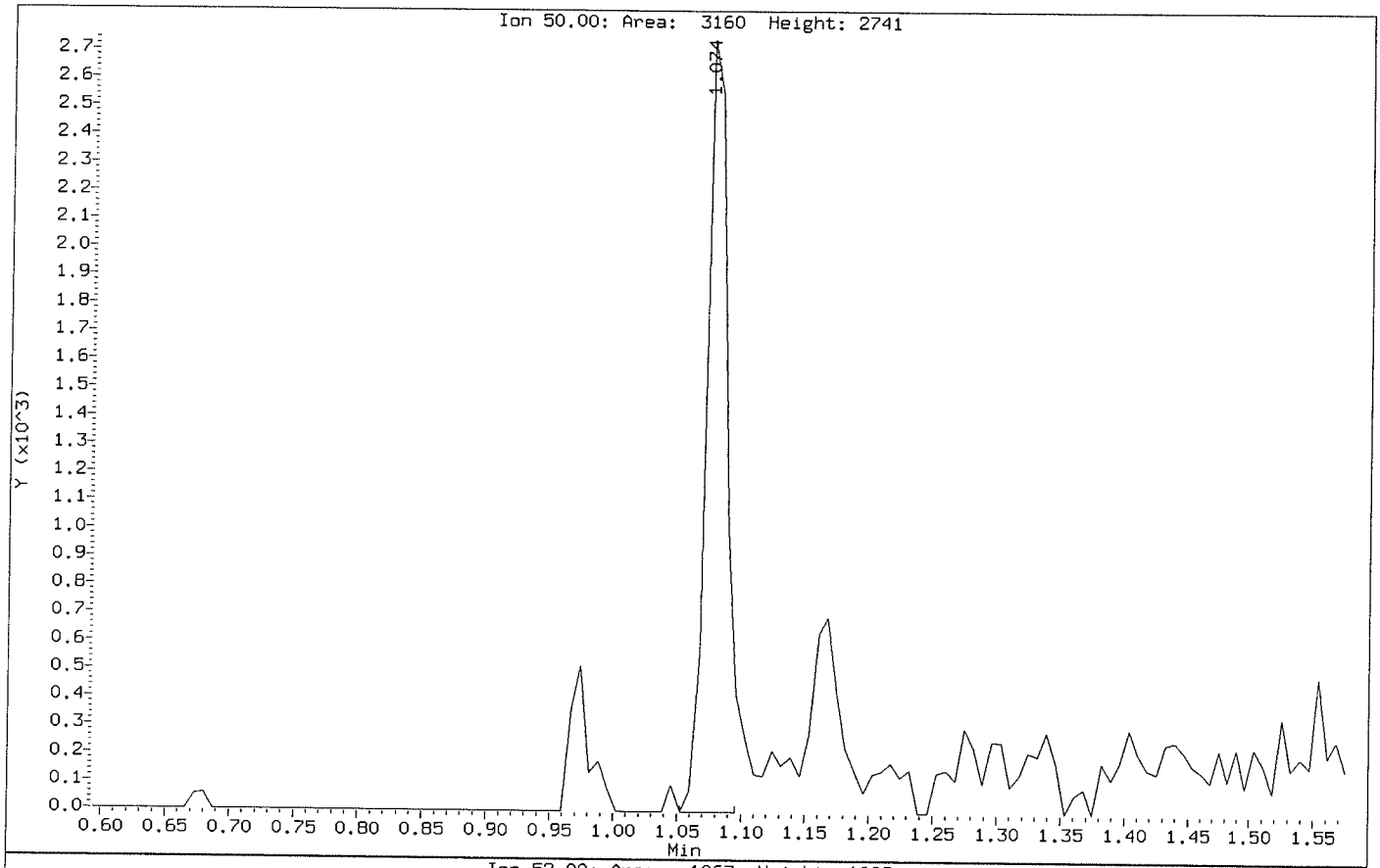
Compound: Chloromethane
CAS Number: 74-87-3

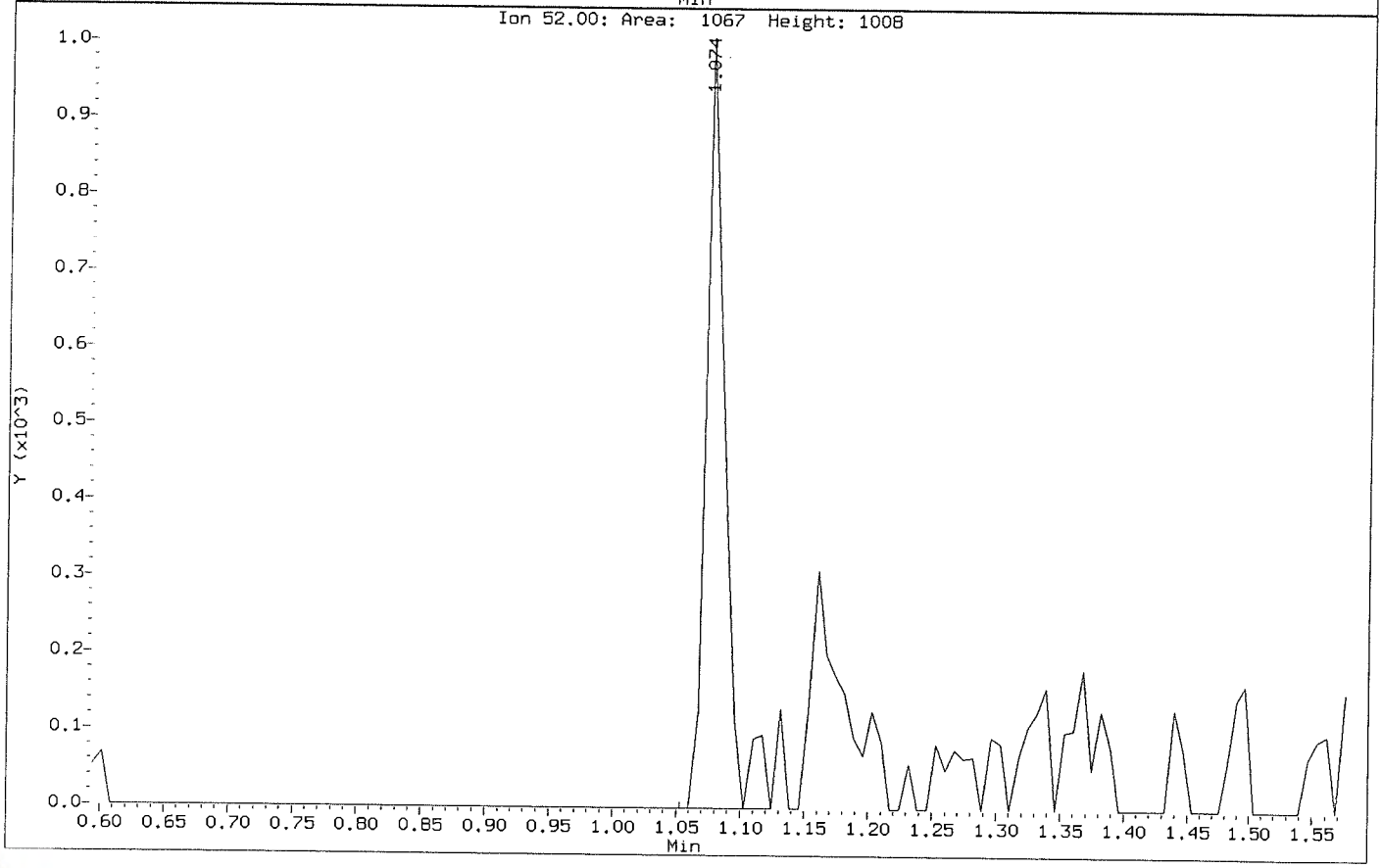




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Injection Date: 18-MAY-2021 12:25
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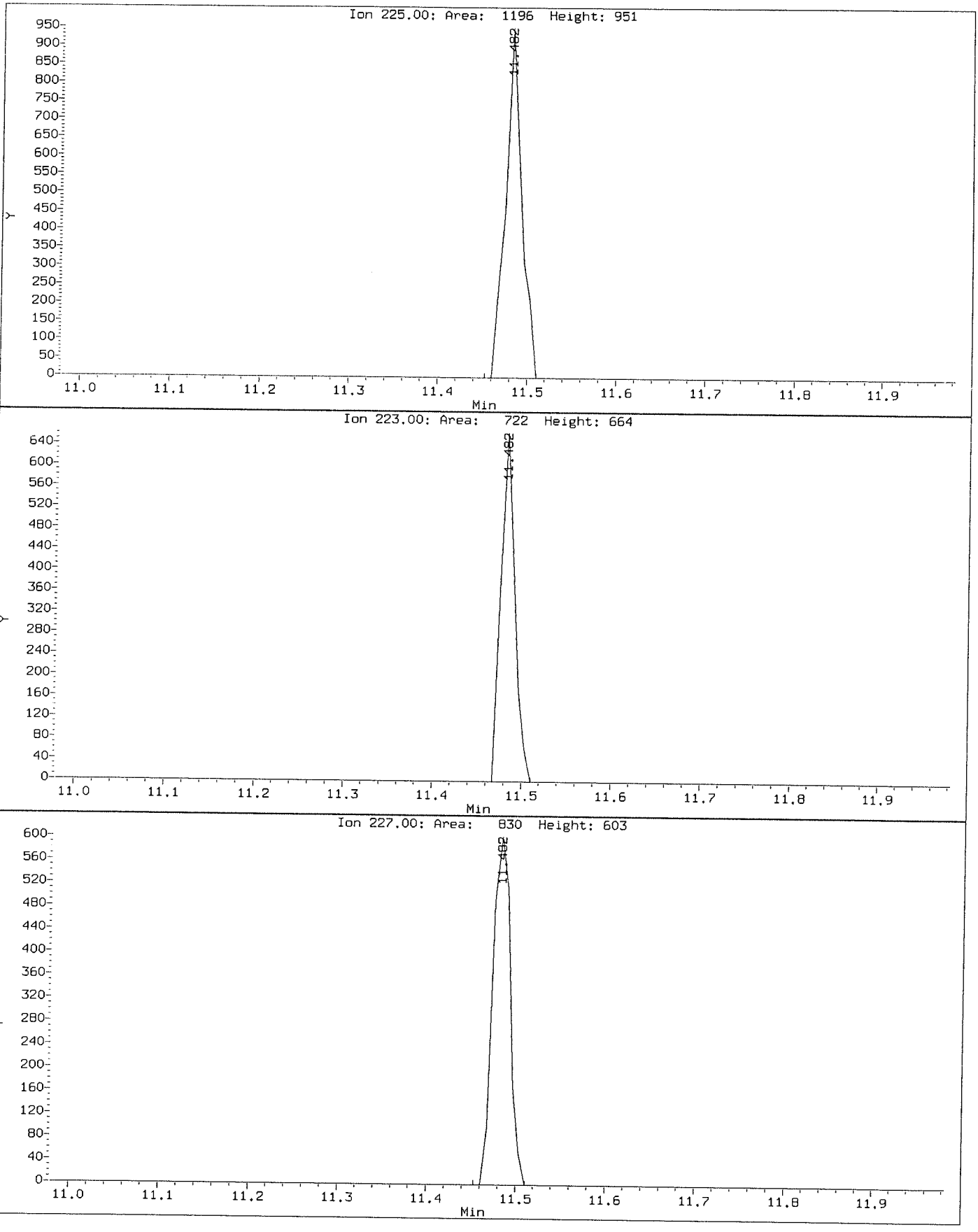
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CAS Number: 74-87-3





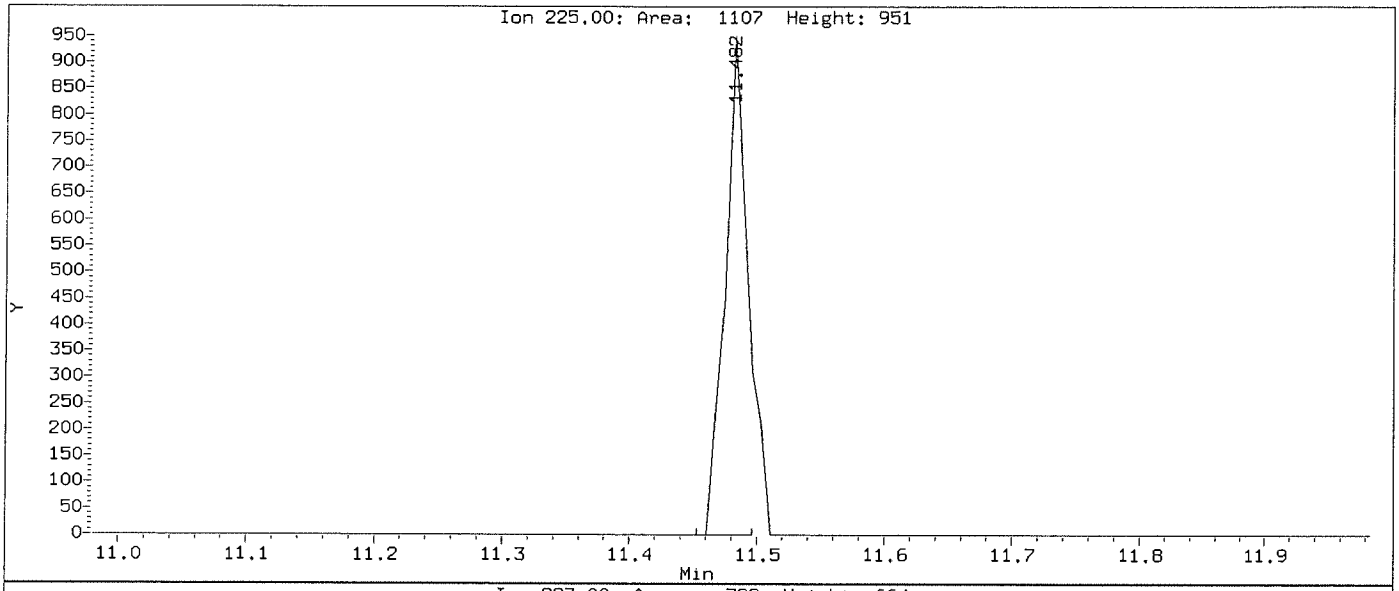
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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

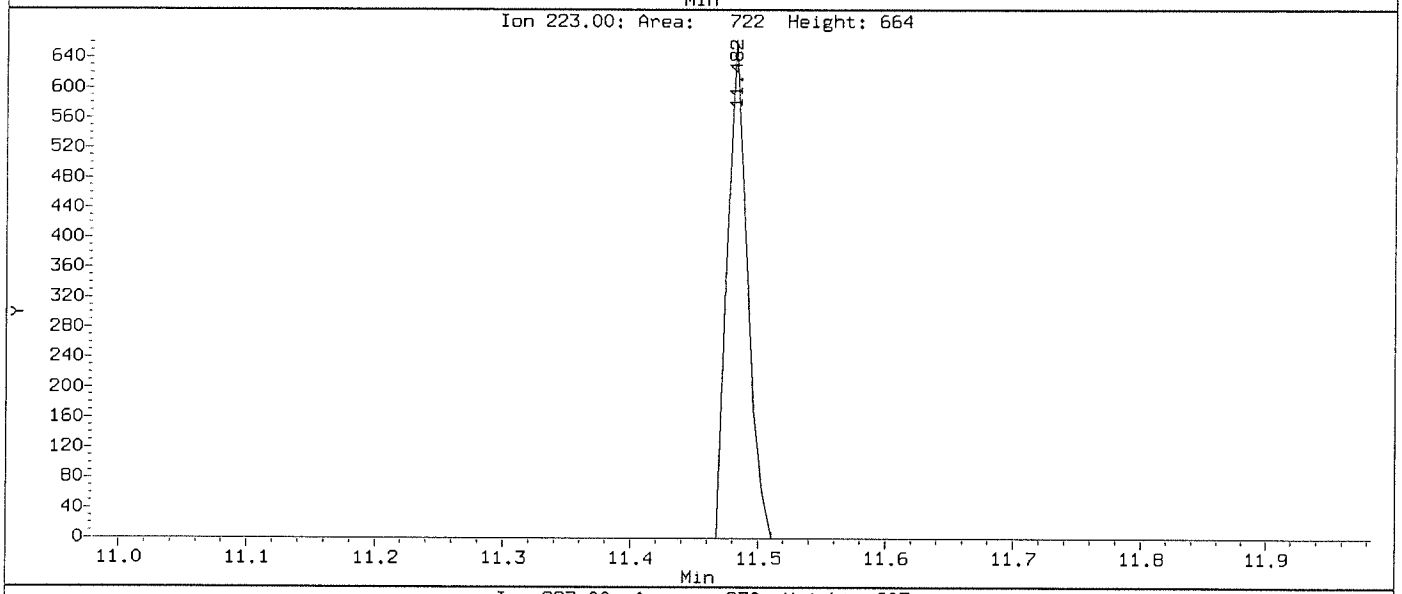
Compound: Hexachlorobutadiene
CAS Number: 87-68-3

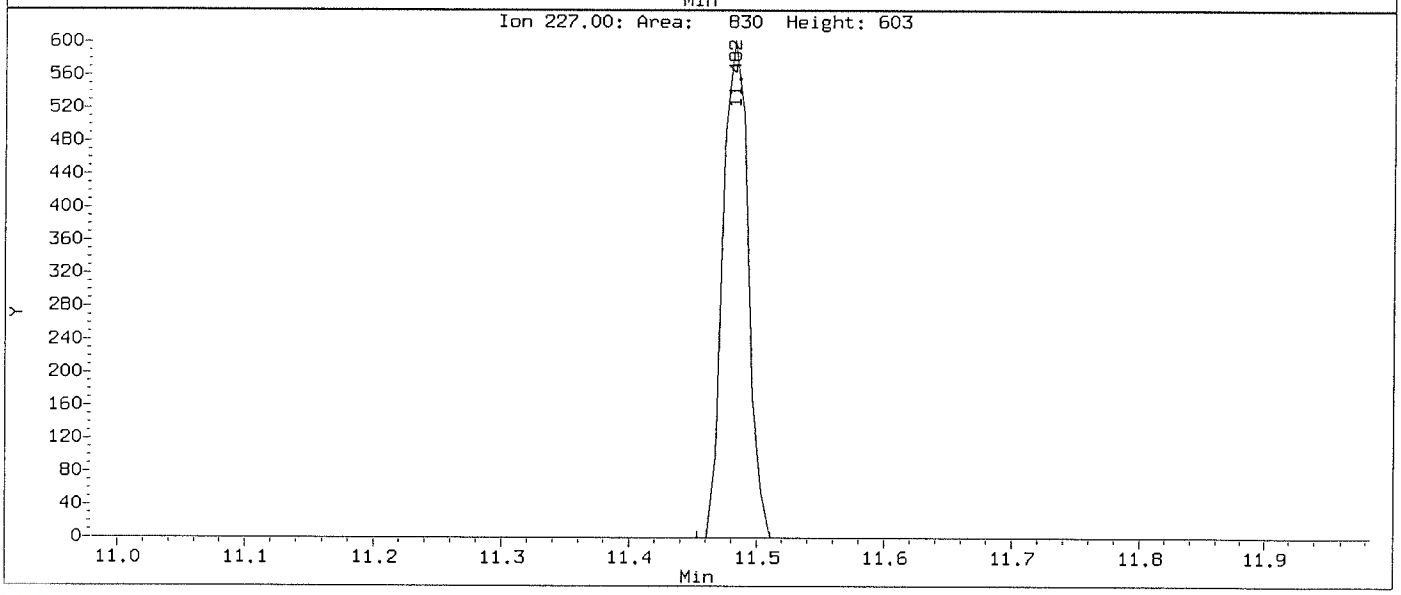


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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

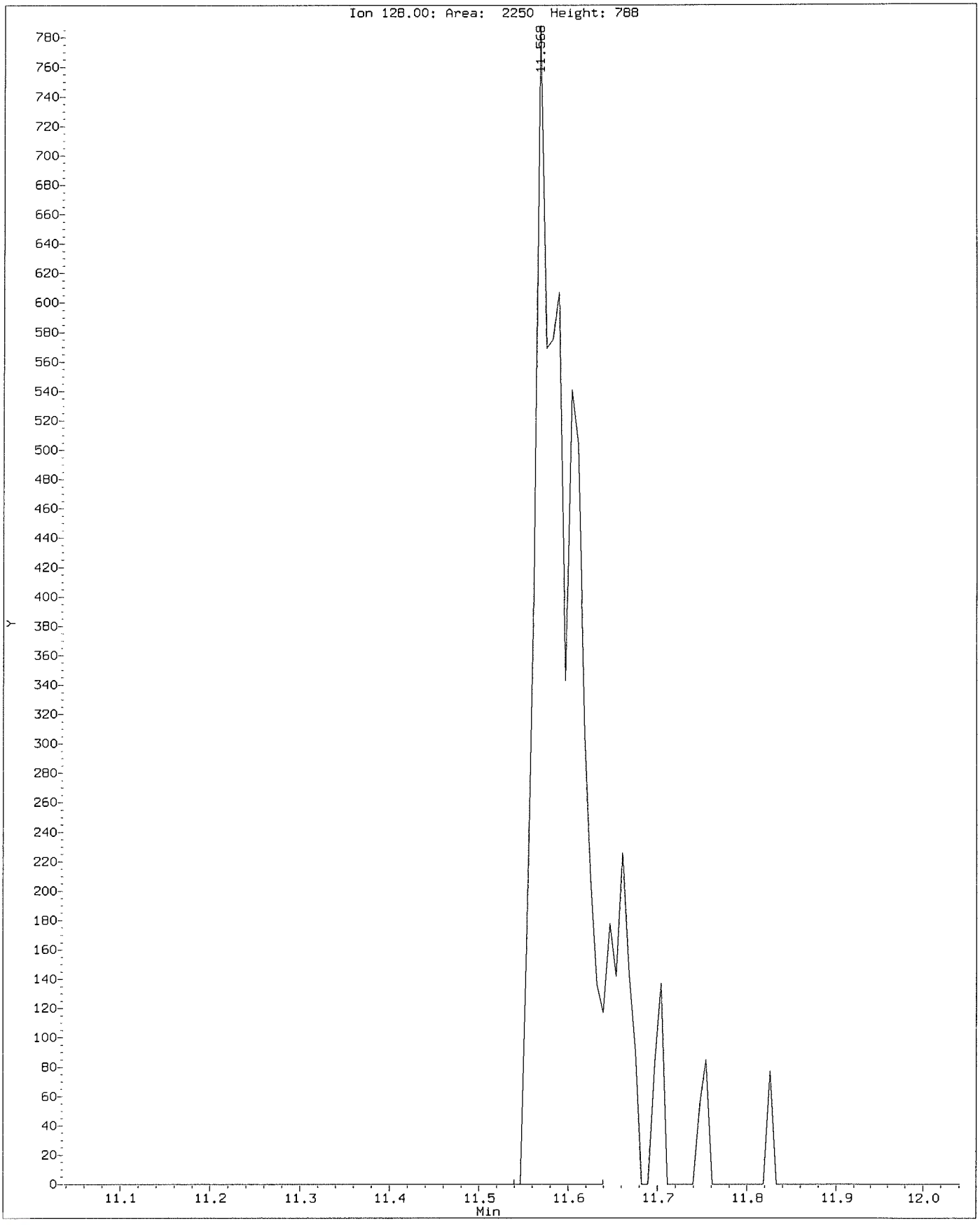






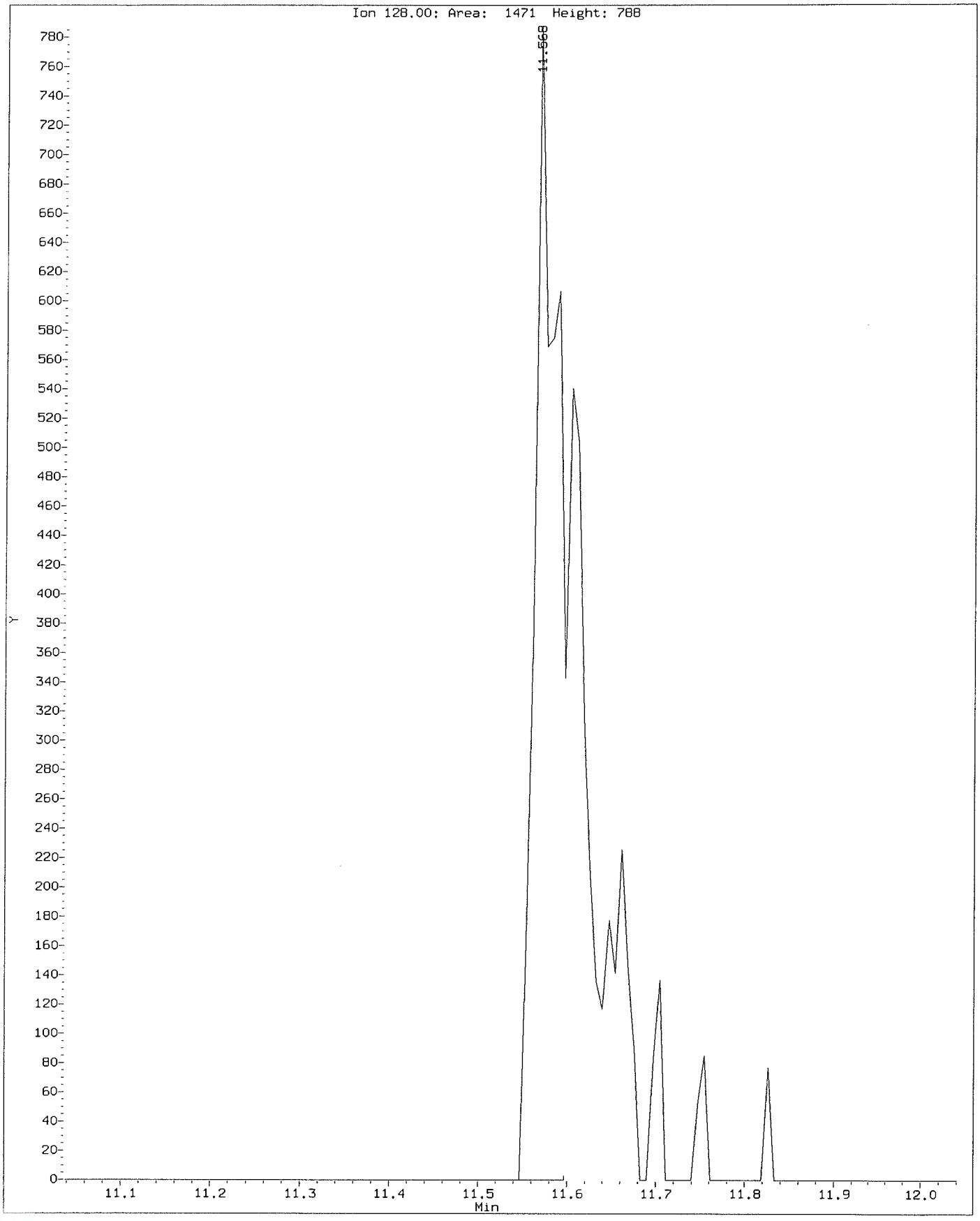
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Client Sample ID: VSTD001

Compound: Naphthalene
CAS Number: 91-20-3



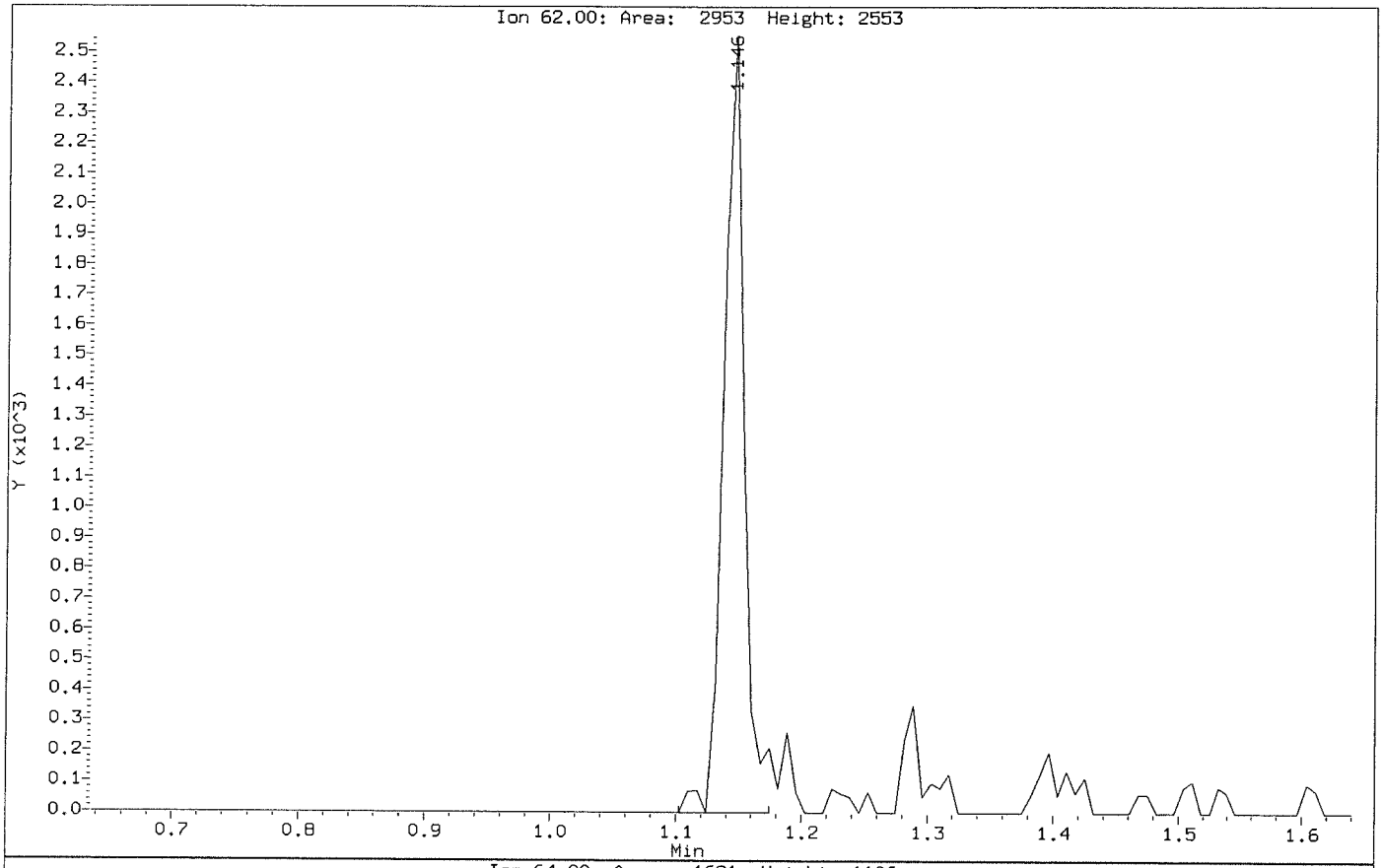
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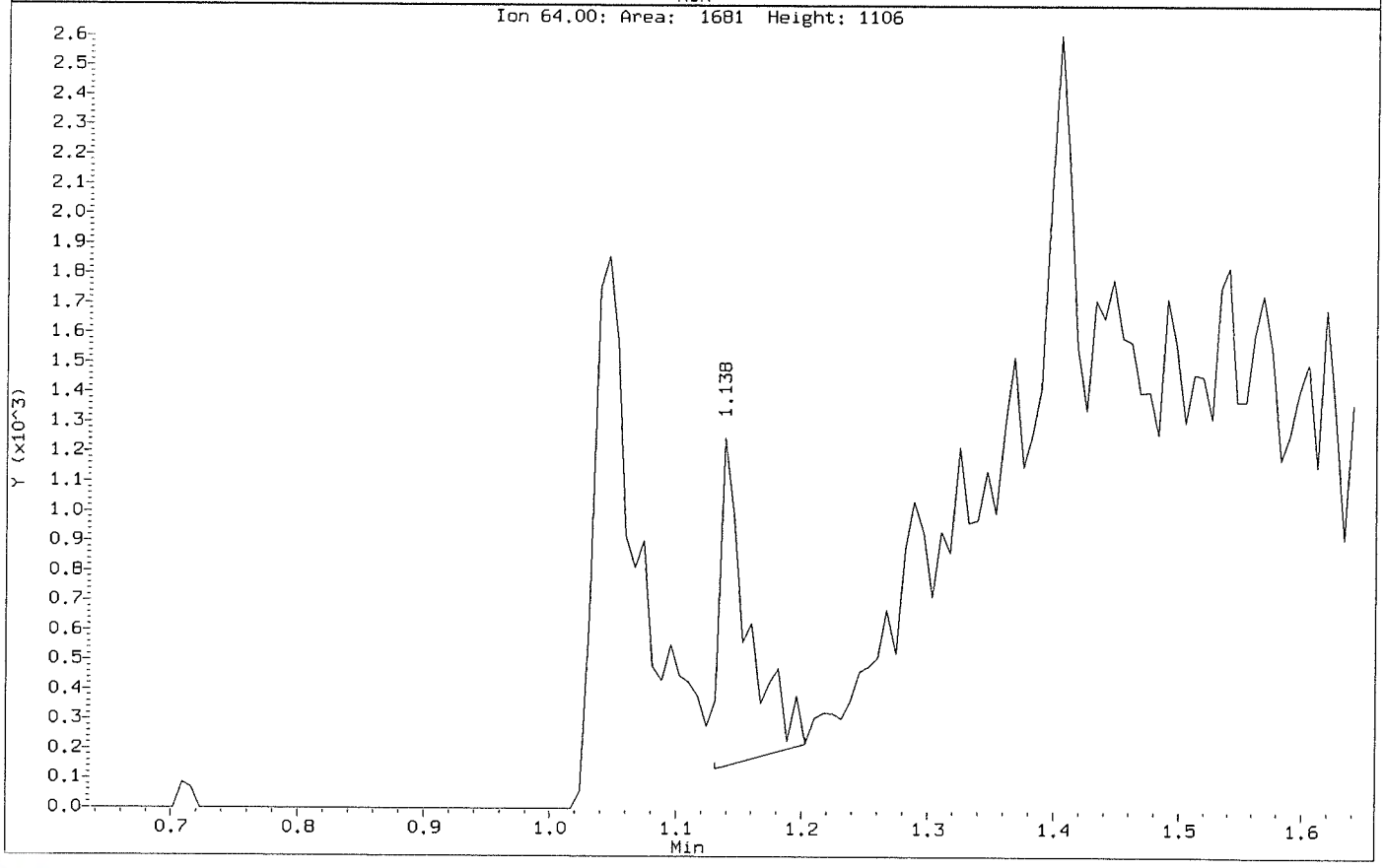
Compound: Naphthalene
CAS Number: 91-20-3



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Instrument: voa6.i
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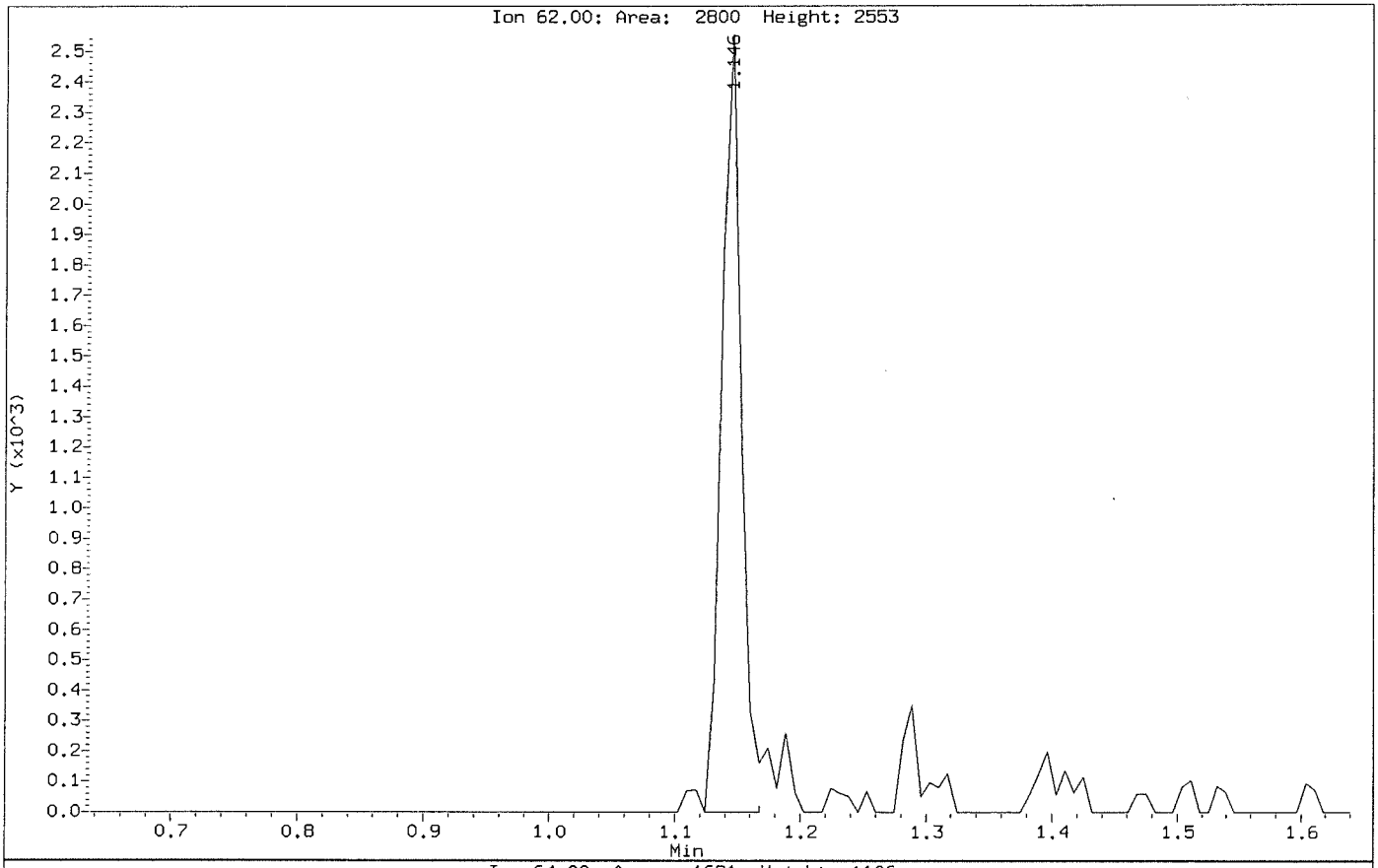
Compound: Vinyl Chloride
CAS Number: 75-01-4

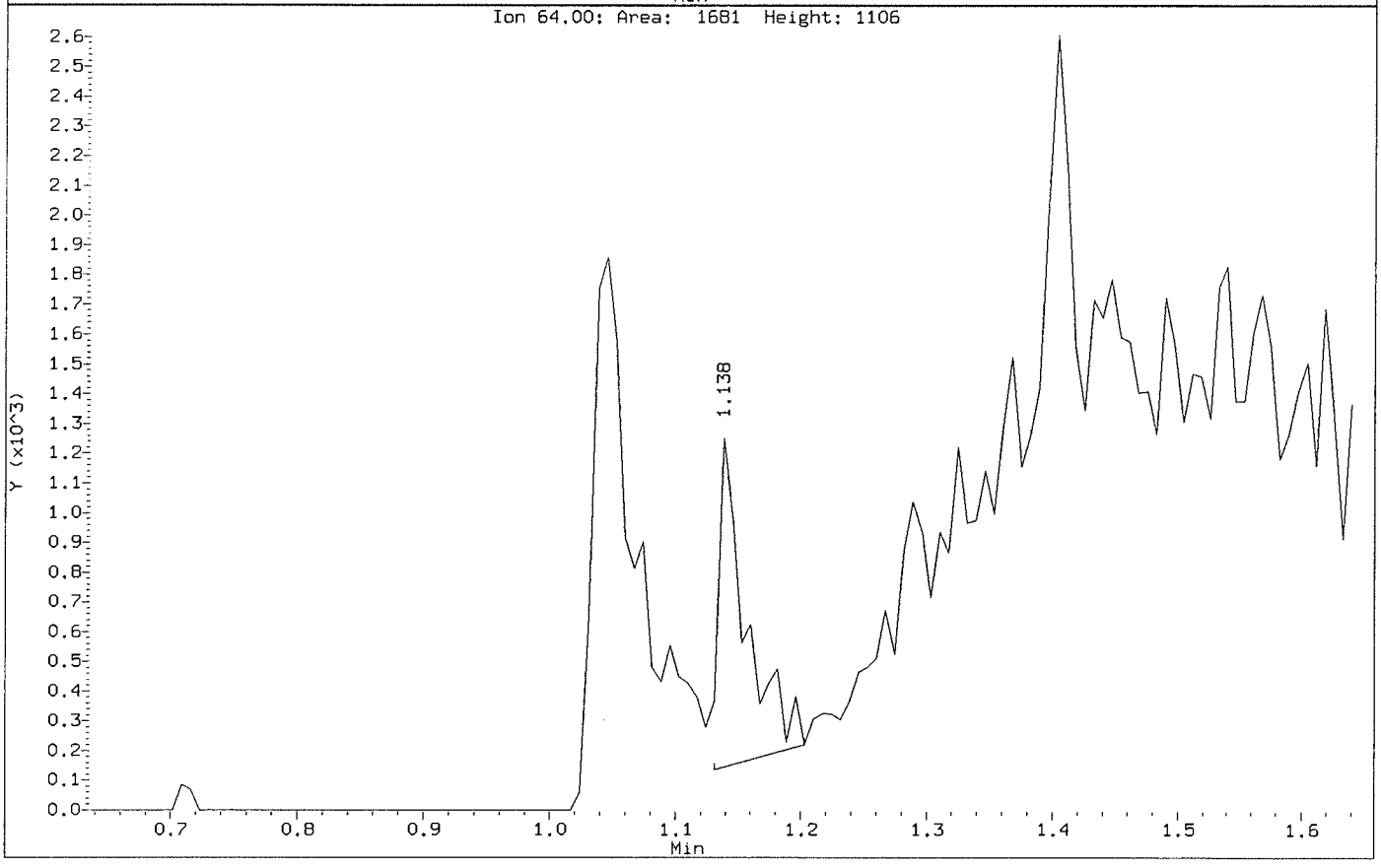




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Injection Date: 18-MAY-2021 12:25
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Vinyl Chloride
CAS Number: 75-01-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051805.D
Lab Smp Id: VSDT002 Client Smp ID: VSTD002
Inj Date : 18-MAY-2021 12:46
Operator : PC Inst ID: voa6.i
Smp Info : VSDT002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 12:25 Cal File: X051804.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

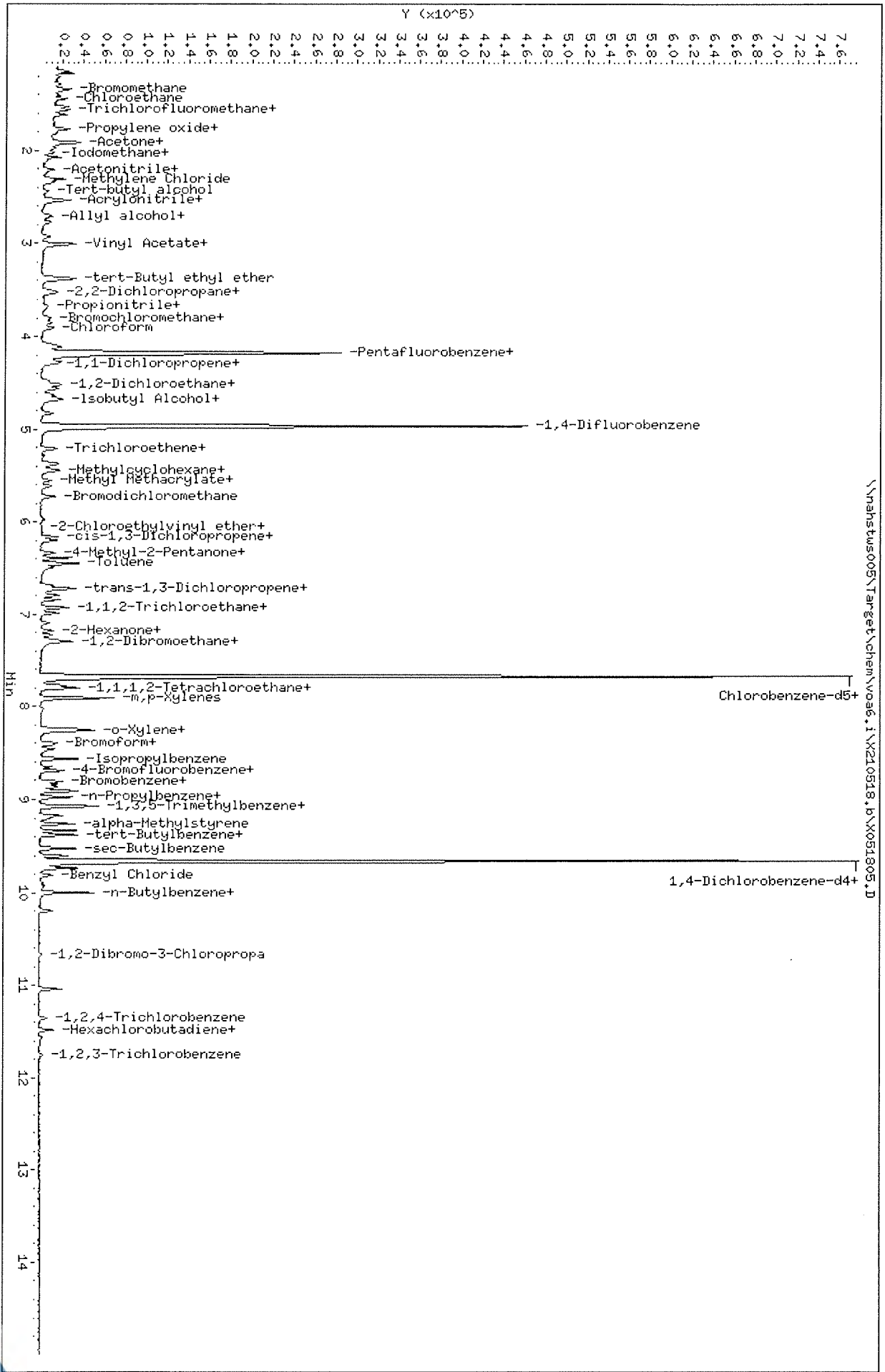
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	223222	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	372877	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	342499	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	158694	50.0000	
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	6073	2.00000	0.87(a)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	7059	2.00000	2.29(a)
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	5073	2.00000	1.82(a)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	16788	2.00000	2.96(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	5404	2.00000	2.16(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	7117	2.00000	1.87(a)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	6612	2.00000	2.01(aM)
138 Freon TF	101	1.919	1.919	(0.459)	4737	2.00000	2.23(aM)
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	4027	2.00000	2.02(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	7473	2.00000	1.80(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	4857	2.00000	2.17(a)
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	5889	2.00000	1.84(a)
93 1,2,3-Trichlorobenzene	180	11.753	11.753	(1.216)	1755	2.00000	2.84(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	4744	2.00000	1.61(aMH)
90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.175)	2176	2.00000	3.91(a)
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	15828	2.00000	1.96(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	511	2.00000	3.91(aM)
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	4934	2.00000	2.06(a)

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051805.D Page 2
Report Date: 22-Jun-2021 08:20

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	8926	2.00000	2.00(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	7371	2.00000	2.01(a)
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	4723	2.00000	1.88(aM)
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	16203	2.00000	2.04(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	9167	2.00000	2.01(a)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	7822	2.00000	2.00(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	10925	2.00000	2.58(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	7384	2.00000	1.99(a)
24 2-Butanone	43	3.609	3.609	(0.863)	2680	4.00000	3.25(aM)
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	14113	2.00000	1.99(a)
52 2-Hexanone	43	7.090	7.090	(0.924)	6265	4.00000	4.05(a)
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	16392	2.00000	1.98(a)
82 p-Isopropyltoluene	119	9.647	9.647	(0.999)	15308	2.00000	1.95(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	9786	4.00000	4.57(a)
10 Acetone	43	1.976	1.976	(0.473)	4685	4.00000	3.57(a)
37 Benzene	78	4.519	4.519	(0.909)	17777	2.00000	1.92(a)
74 Bromobenzene	156	8.809	8.809	(0.912)	5025	2.00000	1.89(a)
29 Bromochloromethane	128	3.802	3.802	(0.909)	2725	2.00000	2.00(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	6957	2.00000	1.93(aM)
66 Bromoform	173	8.415	8.415	(1.097)	2721	2.00000	1.64(Ta)
6 Bromomethane	94	1.338	1.338	(0.320)	5999	2.00000	2.10(aM)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	20321	4.00000	3.86(a)
34 Carbon Tetrachloride	117	4.254	4.254	(0.856)	6956	2.00000	2.14(aH)
59 Chlorobenzene	112	7.692	7.692	(1.003)	13639	2.00000	2.03(a)
7 Chloroethane	64	1.403	1.403	(0.336)	3185	2.00000	1.88(aM)
28 Chloroform	83	3.917	3.917	(0.937)	8858	2.00000	1.86(a)
3 Chloromethane	50	1.080	1.080	(0.258)	5348	2.00000	2.44(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	5045	2.00000	1.96(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	7191	2.00000	1.75(a)
55 Dibromochloromethane	129	7.176	7.176	(0.936)	5007	2.00000	1.87(a)
44 Dibromomethane	93	5.557	5.557	(1.118)	3596	2.00000	2.00(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	5548	2.00000	3.97(a)
61 Ethylbenzene	106	7.799	7.799	(1.017)	6867	2.00000	2.06(a)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	2099	2.00000	5.24(M)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	19138	2.00000	1.88(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	16590	4.00000	3.87(a)
17 Methylene Chloride	84	2.305	2.305	(0.551)	4803	2.00000	2.14(a)
87 n-Butylbenzene	91	9.998	9.998	(1.035)	13346	2.00000	1.79(a)
73 n-Propylbenzene	91	8.917	8.917	(0.923)	24073	2.00000	2.14(a)
92 Naphthalene	128	11.553	11.553	(1.196)	3094	2.00000	4.49(aM)
63 o-Xylene	106	8.243	8.243	(1.075)	8148	2.00000	1.95(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	20210	2.00000	2.17(a)
64 Styrene	104	8.265	8.265	(1.078)	12689	2.00000	3.33(a)
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	14096	2.00000	2.09(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	4009	2.00000	2.10(a)
50 Toluene	91	6.446	6.446	(0.840)	19645	2.00000	1.98(a)
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	4458	2.00000	2.07(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	6893	2.00000	1.92(a)
38 Trichloroethene	130	5.206	5.206	(1.048)	4850	2.00000	1.96(a)
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	9673	2.00000	2.25(a)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	5963	2.00000	2.21(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.
H - Operator selected an alternate compound hit.

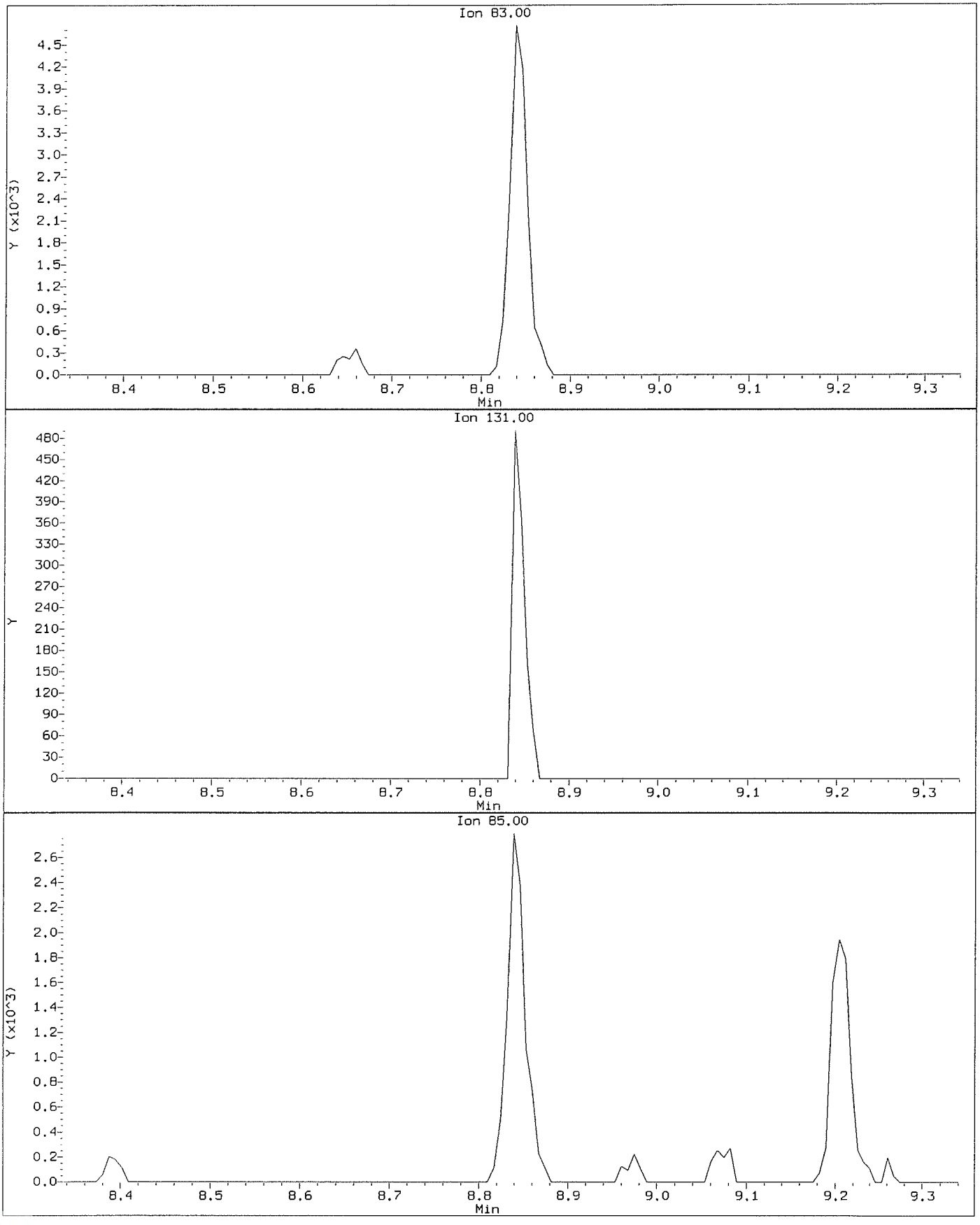


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Date : 18-MAY-2021 12:46
Client ID: VSTD002
Sample Info: VSDT002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

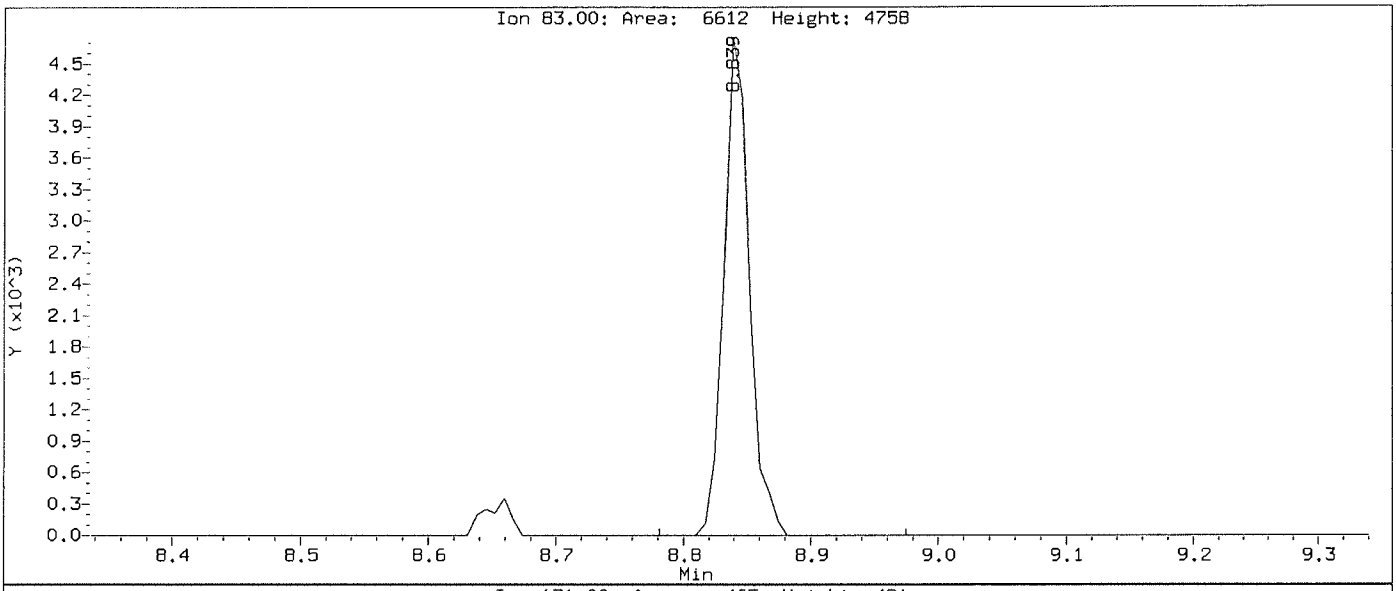
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Instrument: voa6.i
Client Sample ID: VSTD002

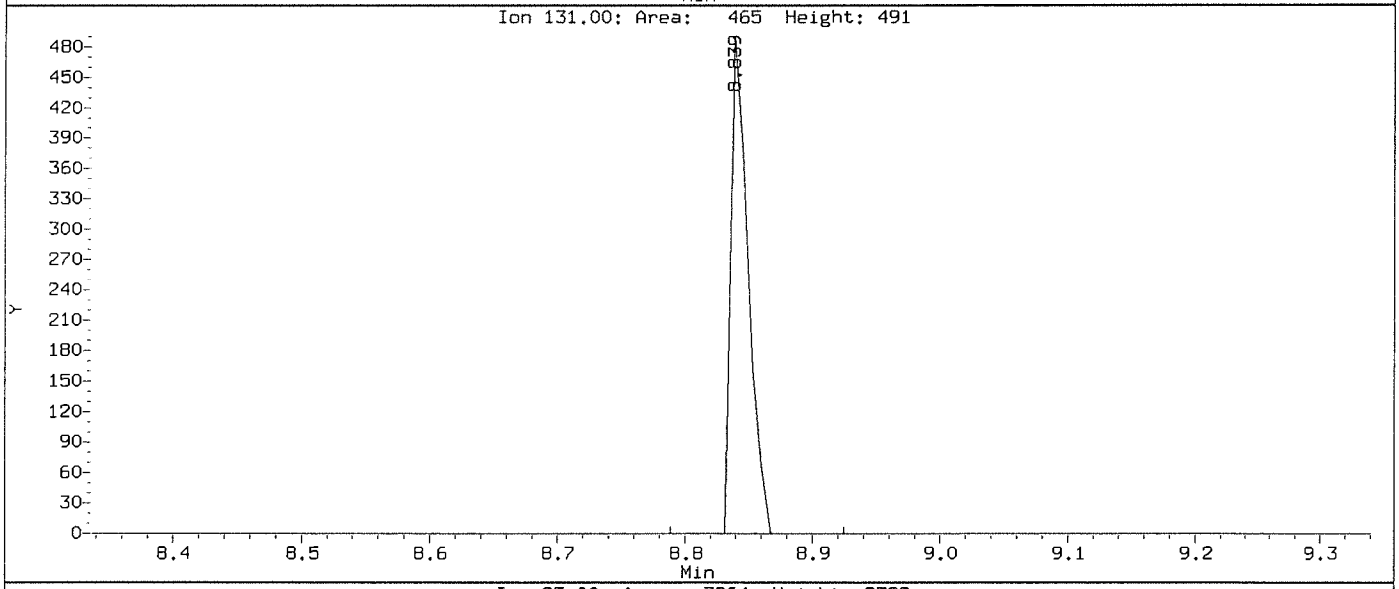
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

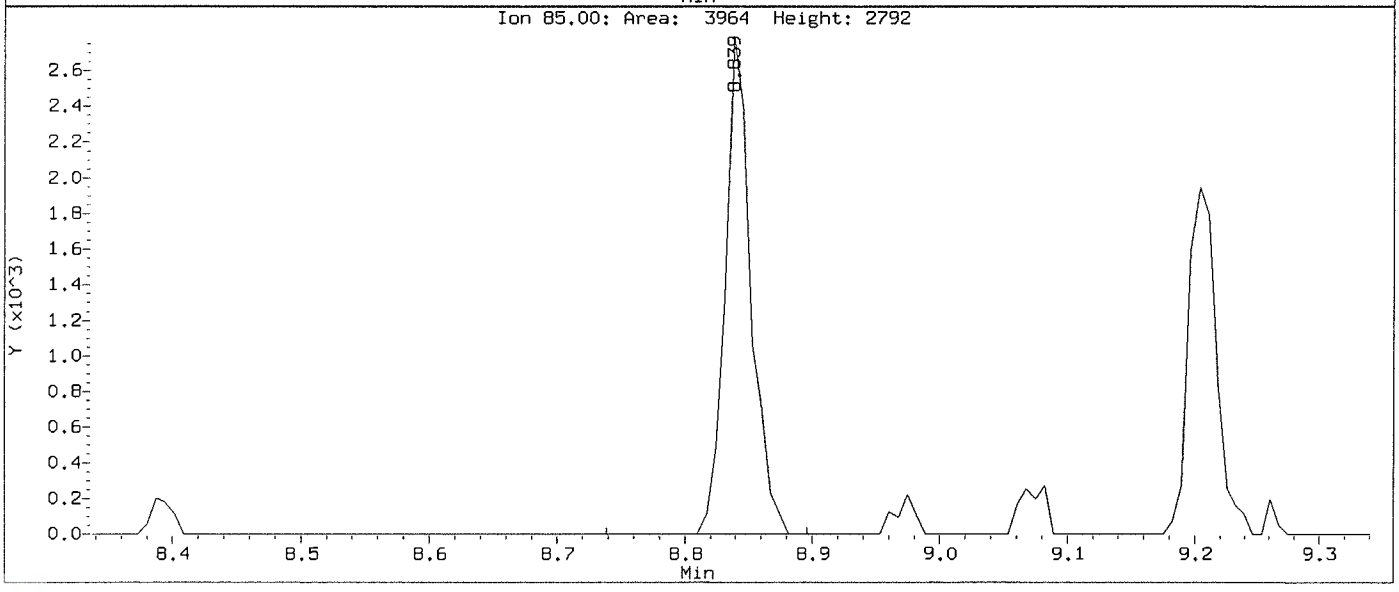


Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051805.D
Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5

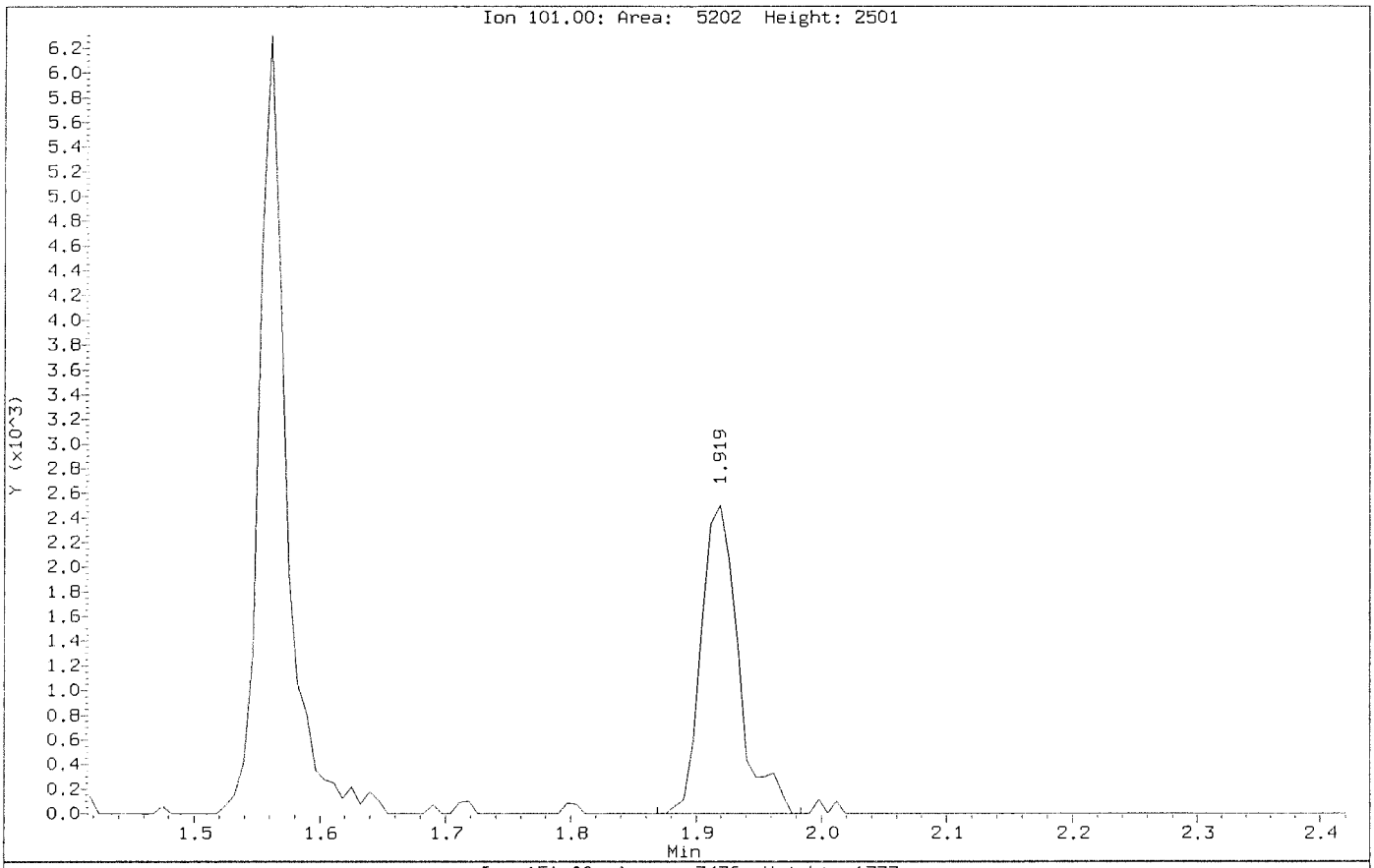


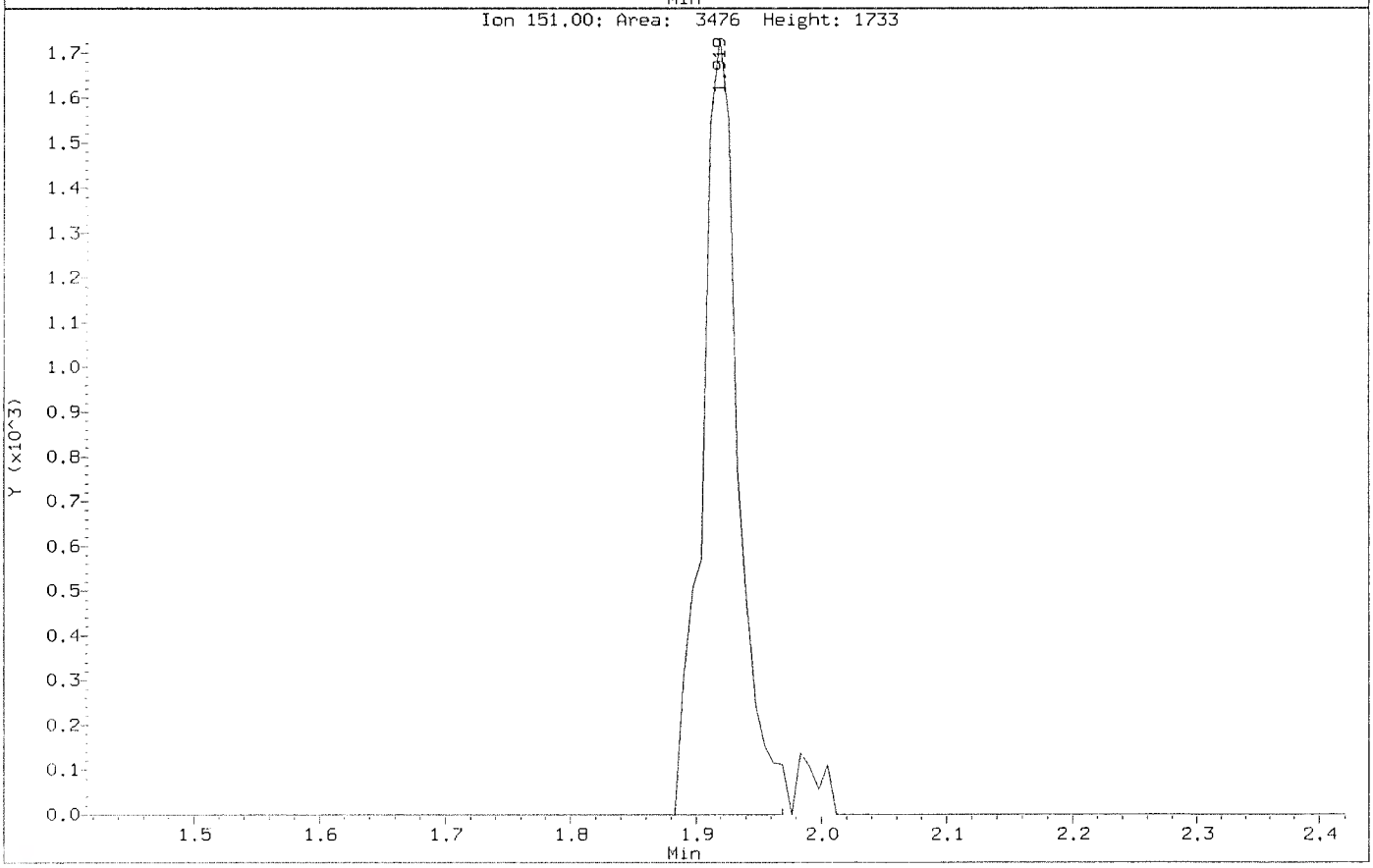




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Instrument: voa6.i
Client Sample ID: VSTD002

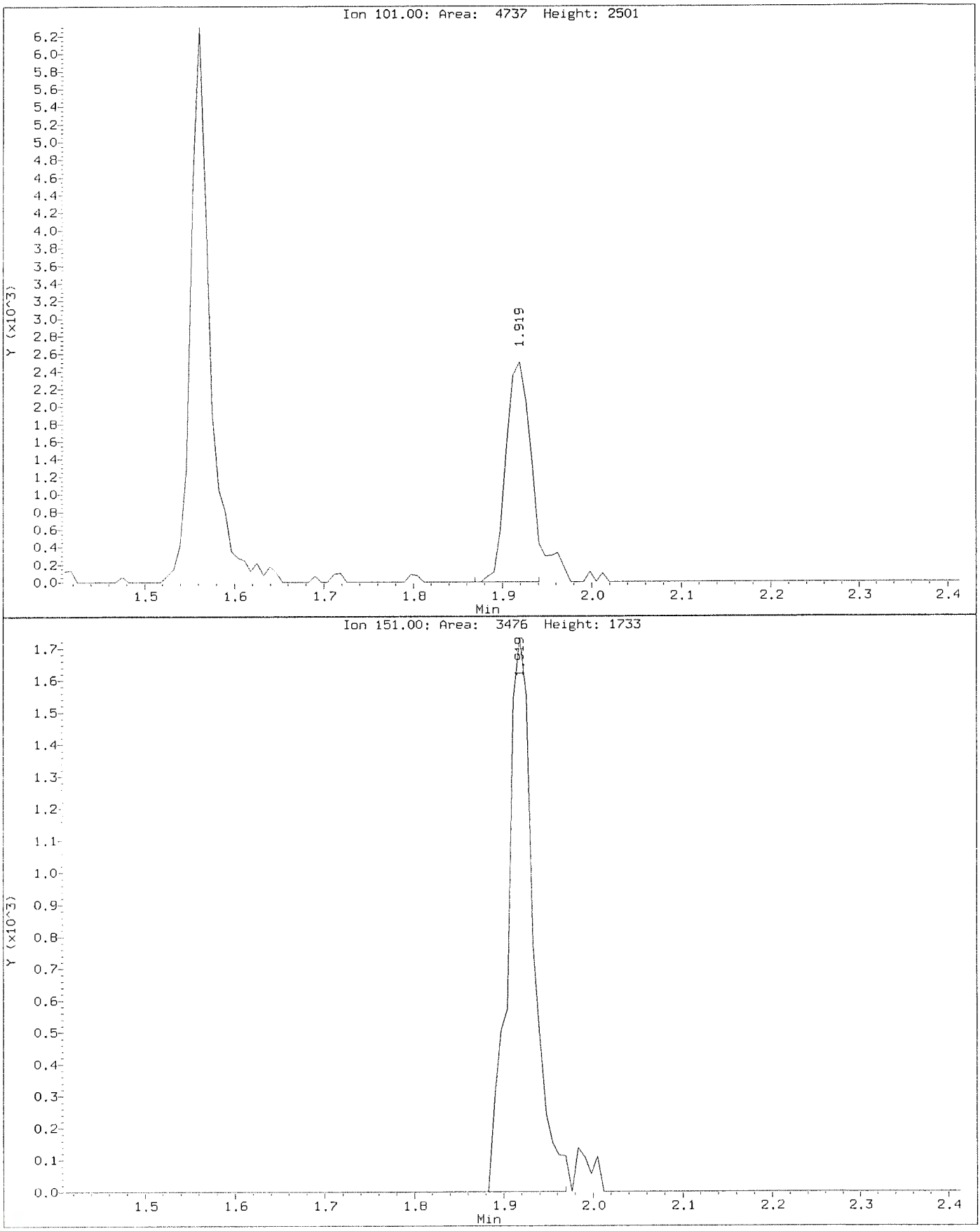
Compound: Freon TF
CAS Number: 76-13-1





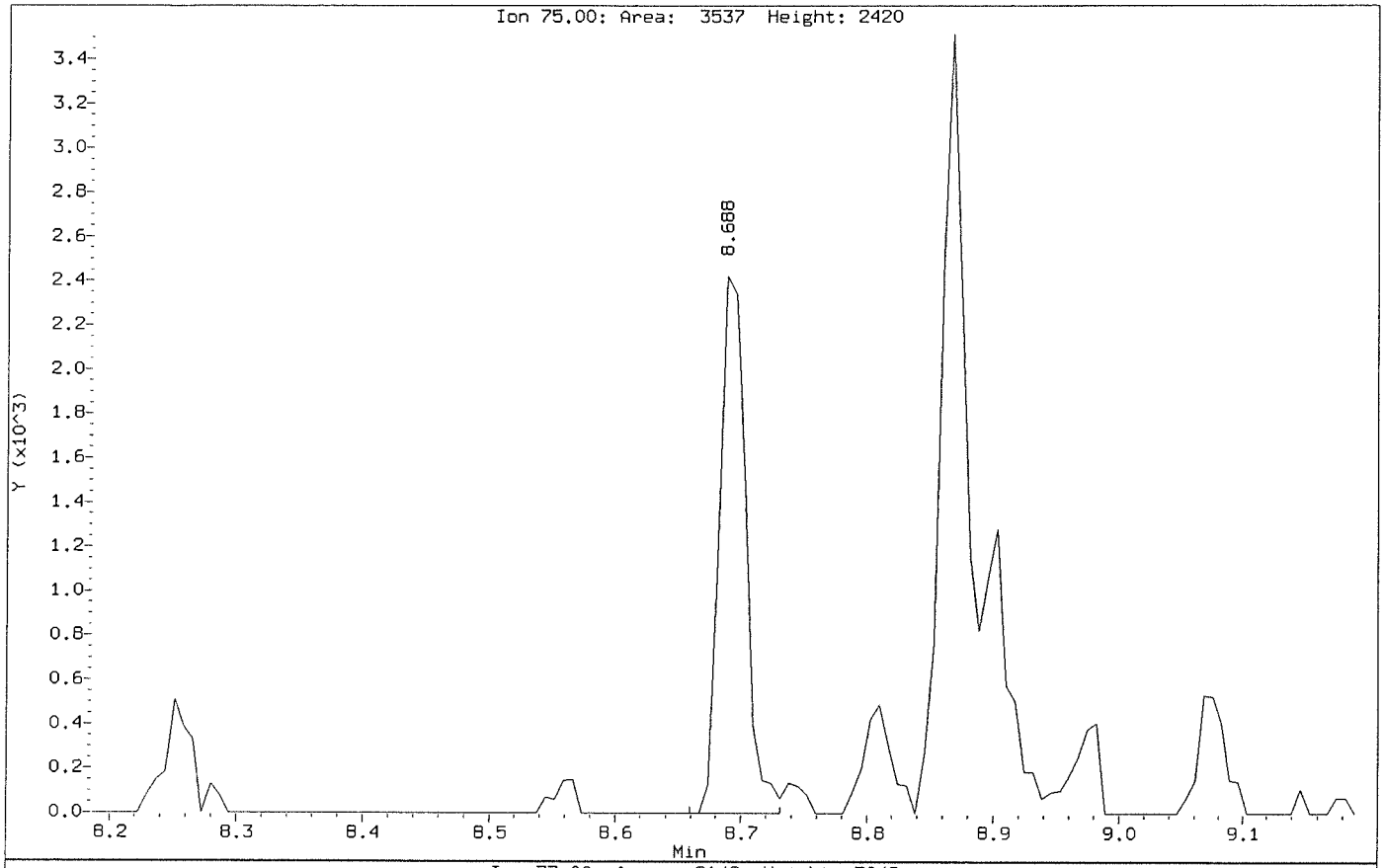
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

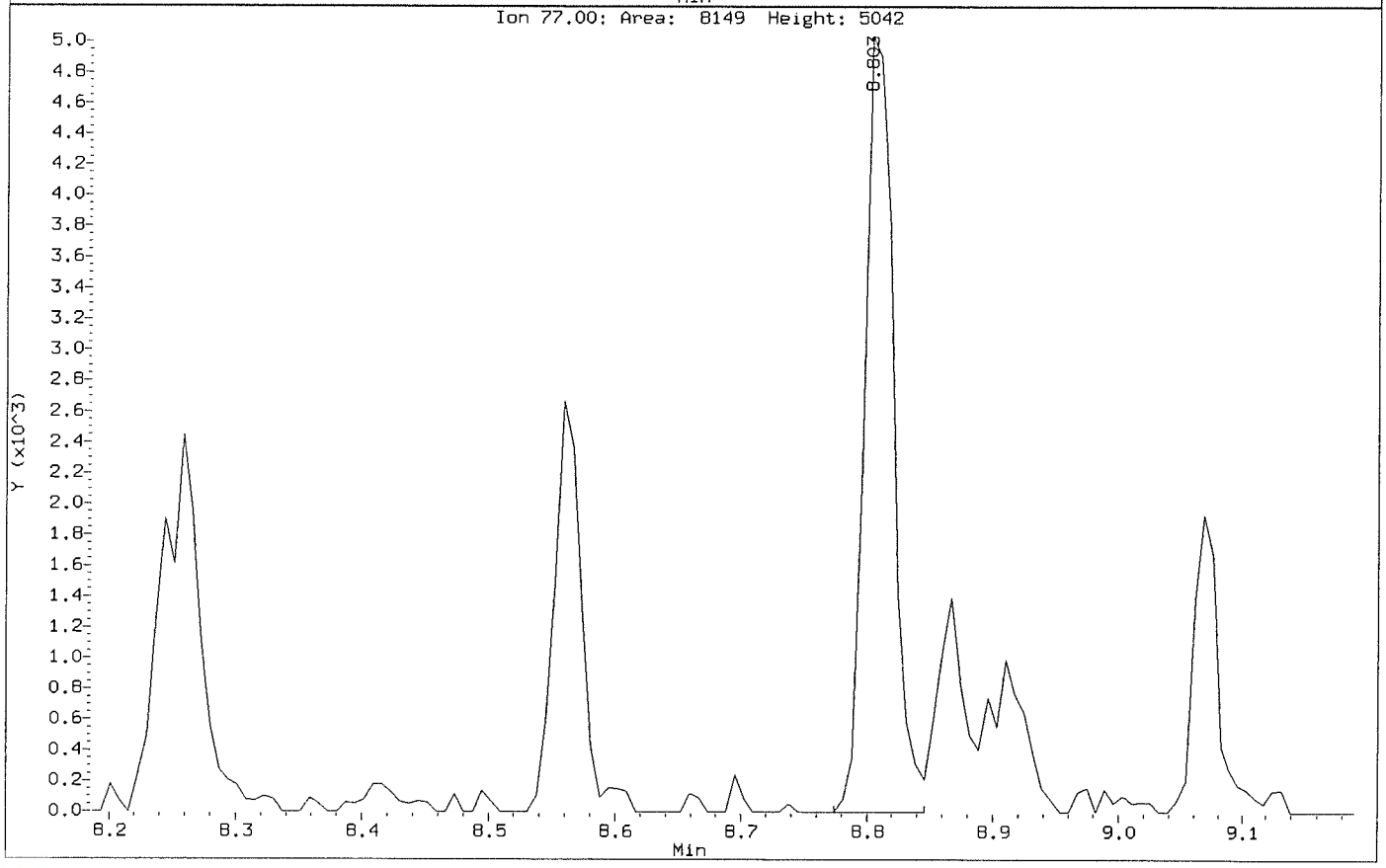
Compound: Freon TF
CAS Number: 76-13-1



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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

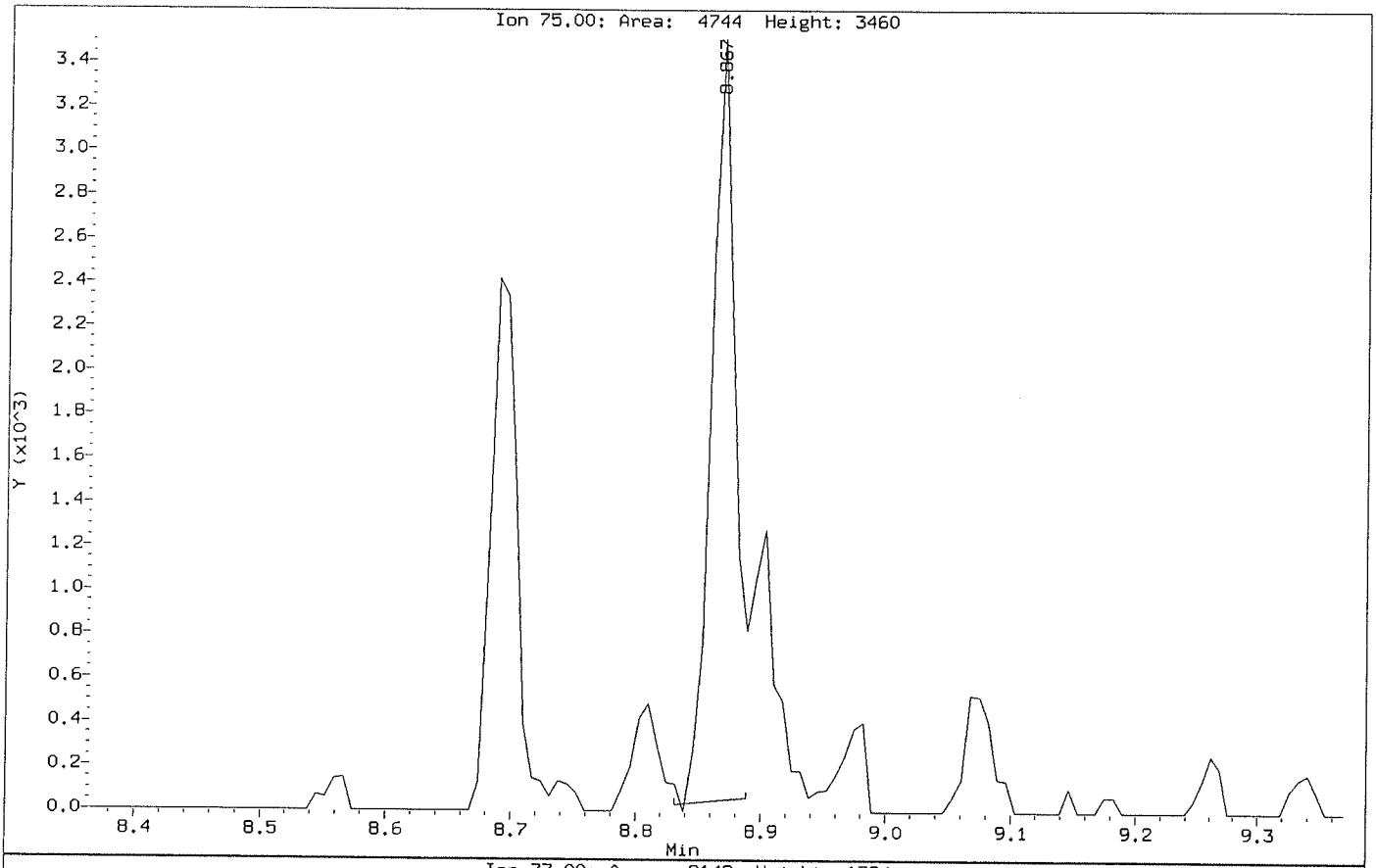
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

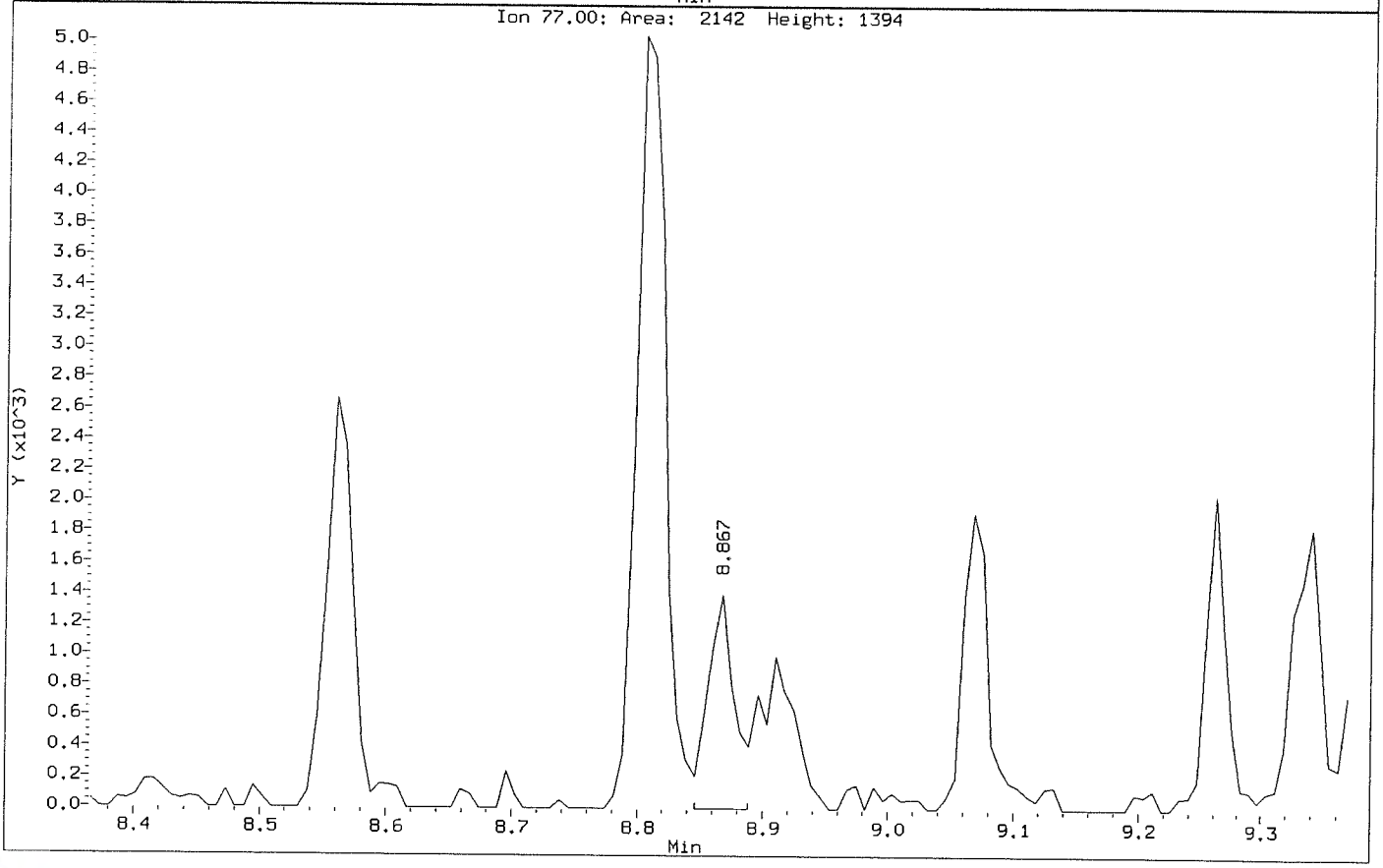




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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

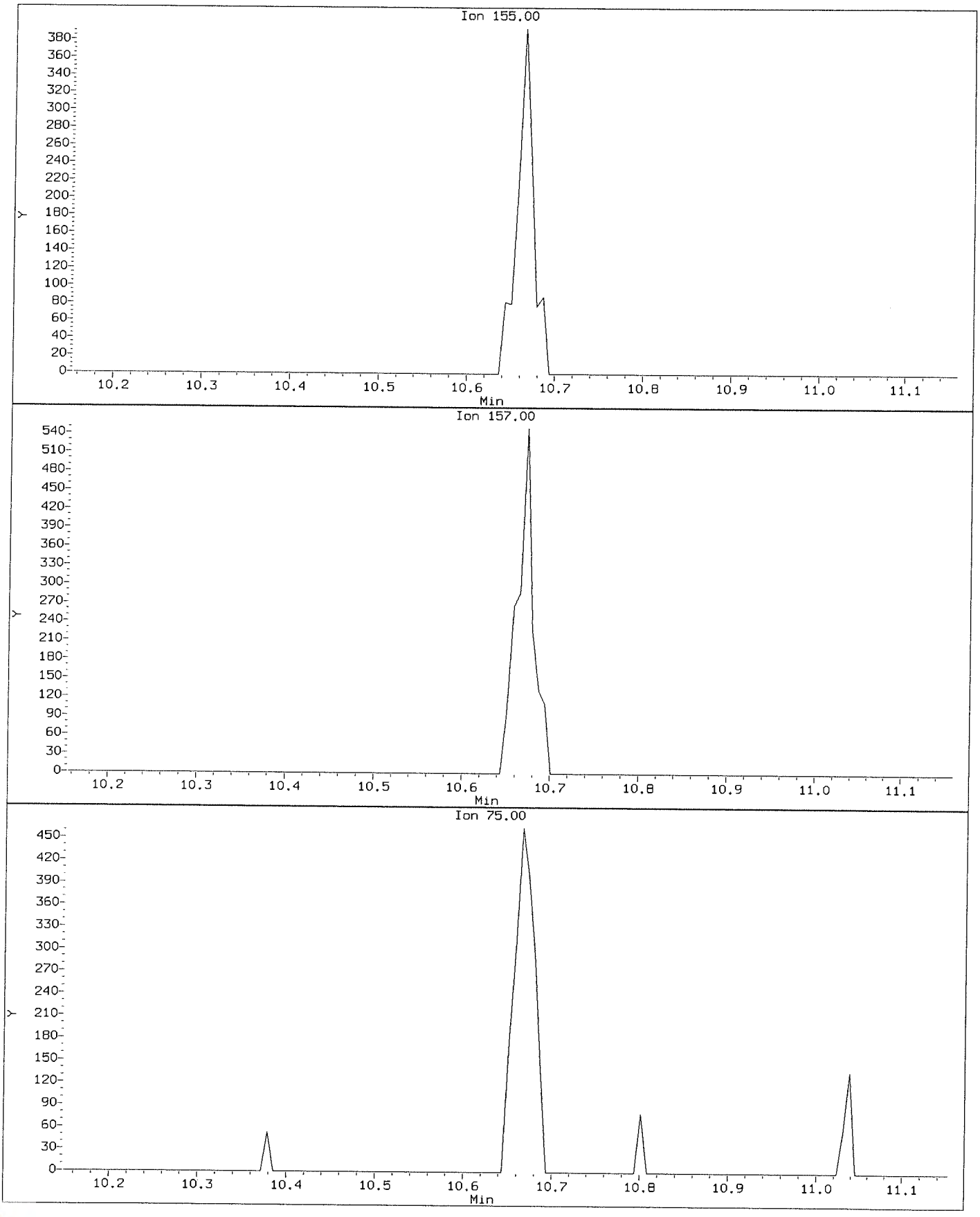
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





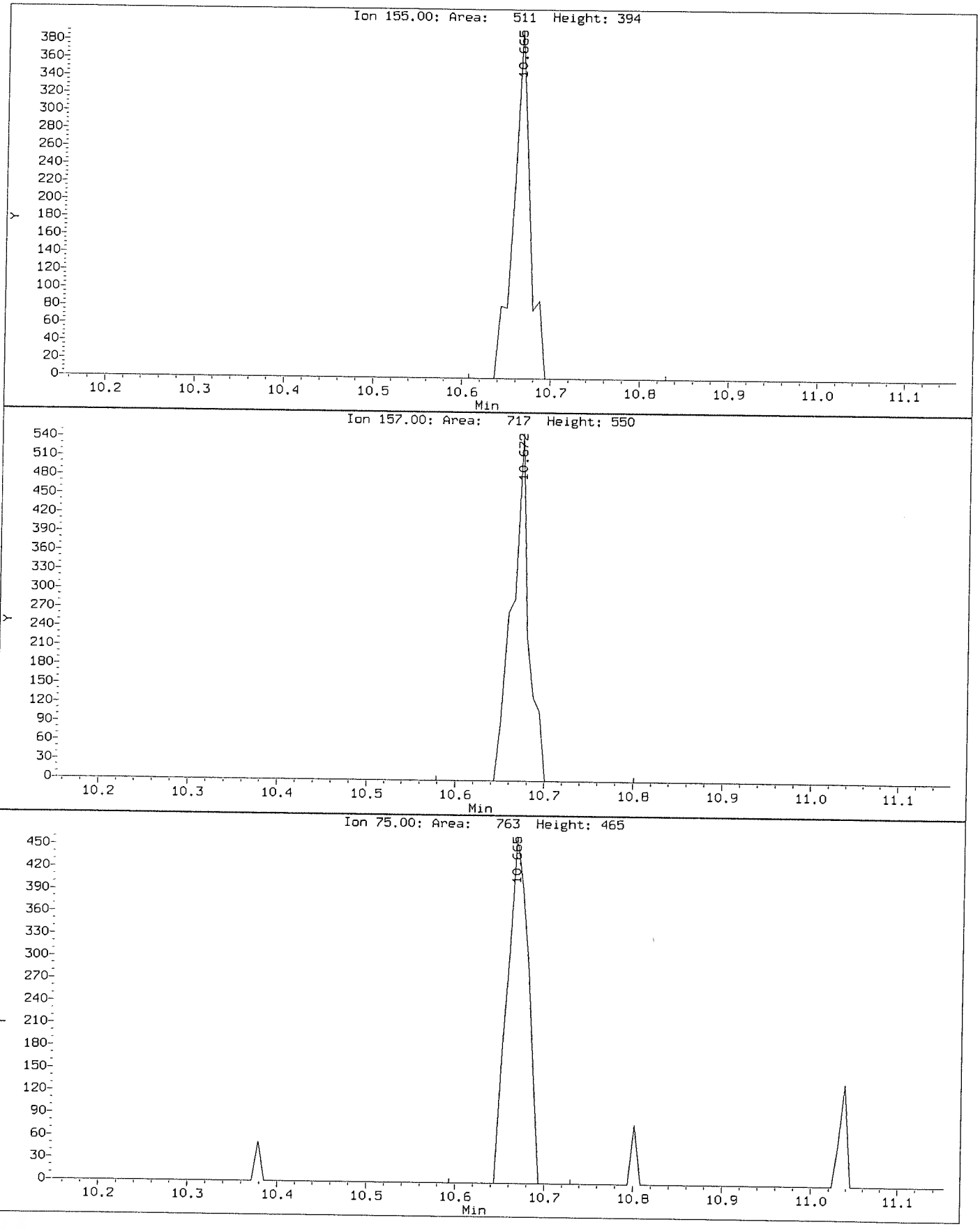
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



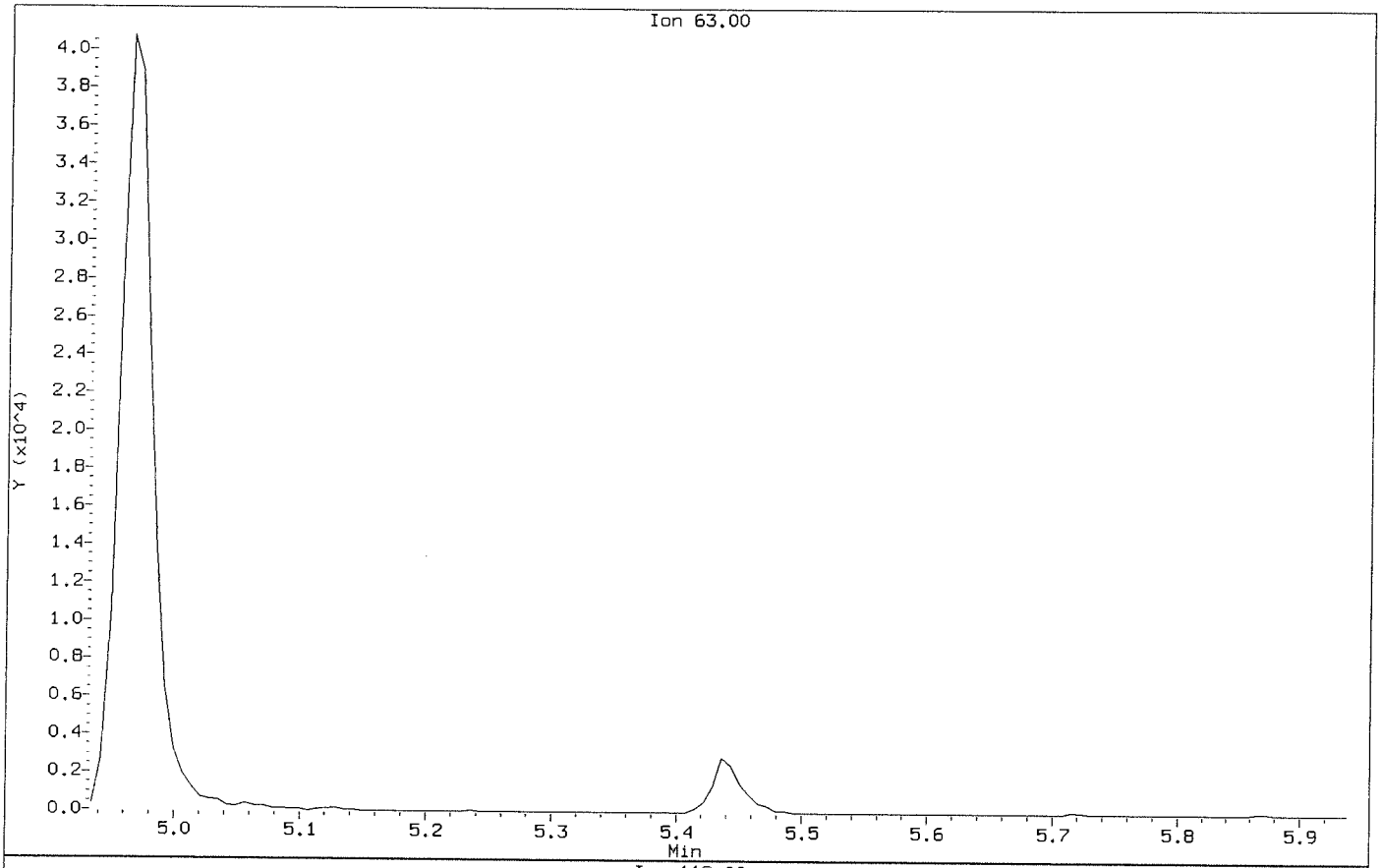
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

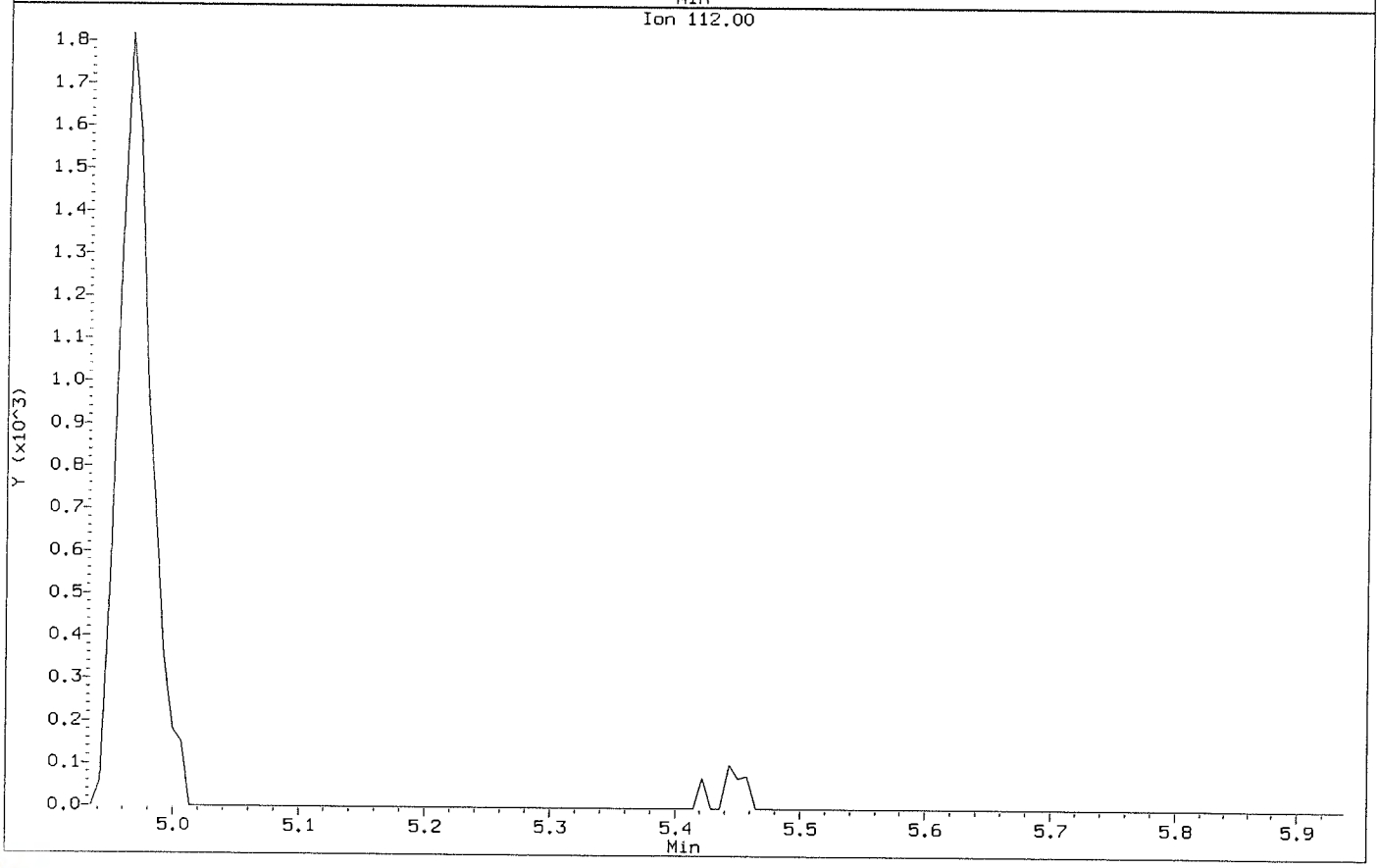
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

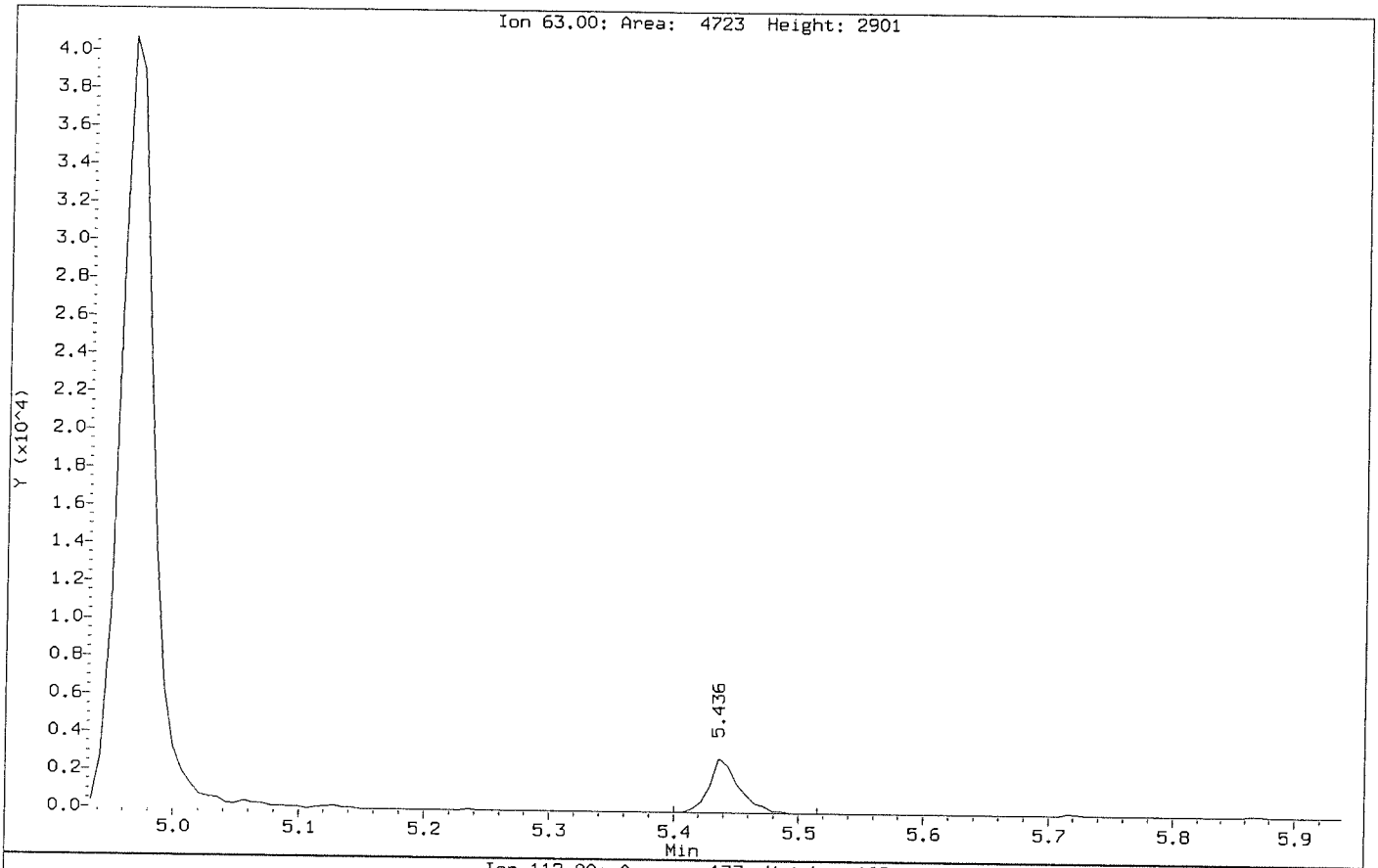
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

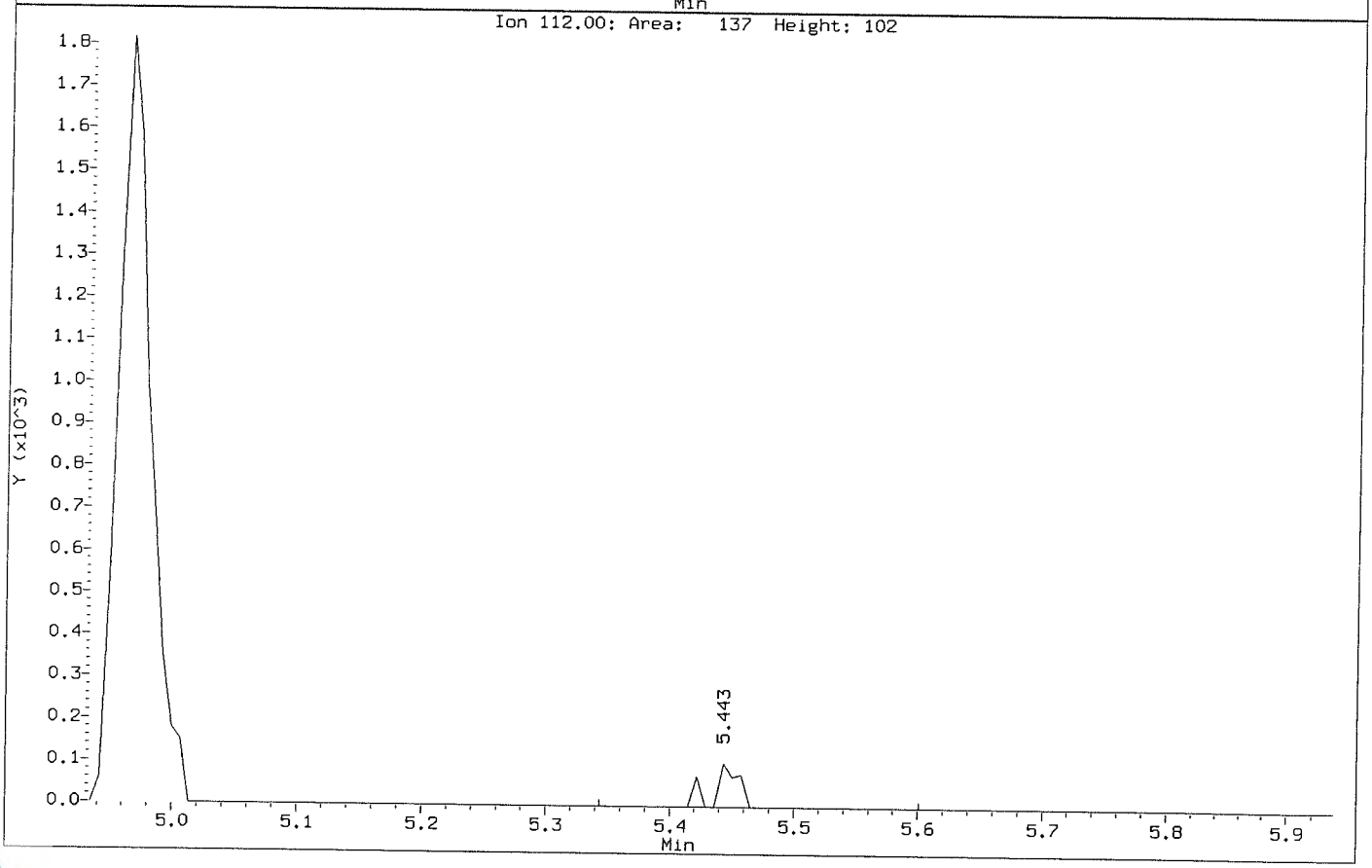




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Client Sample ID: VSTD002

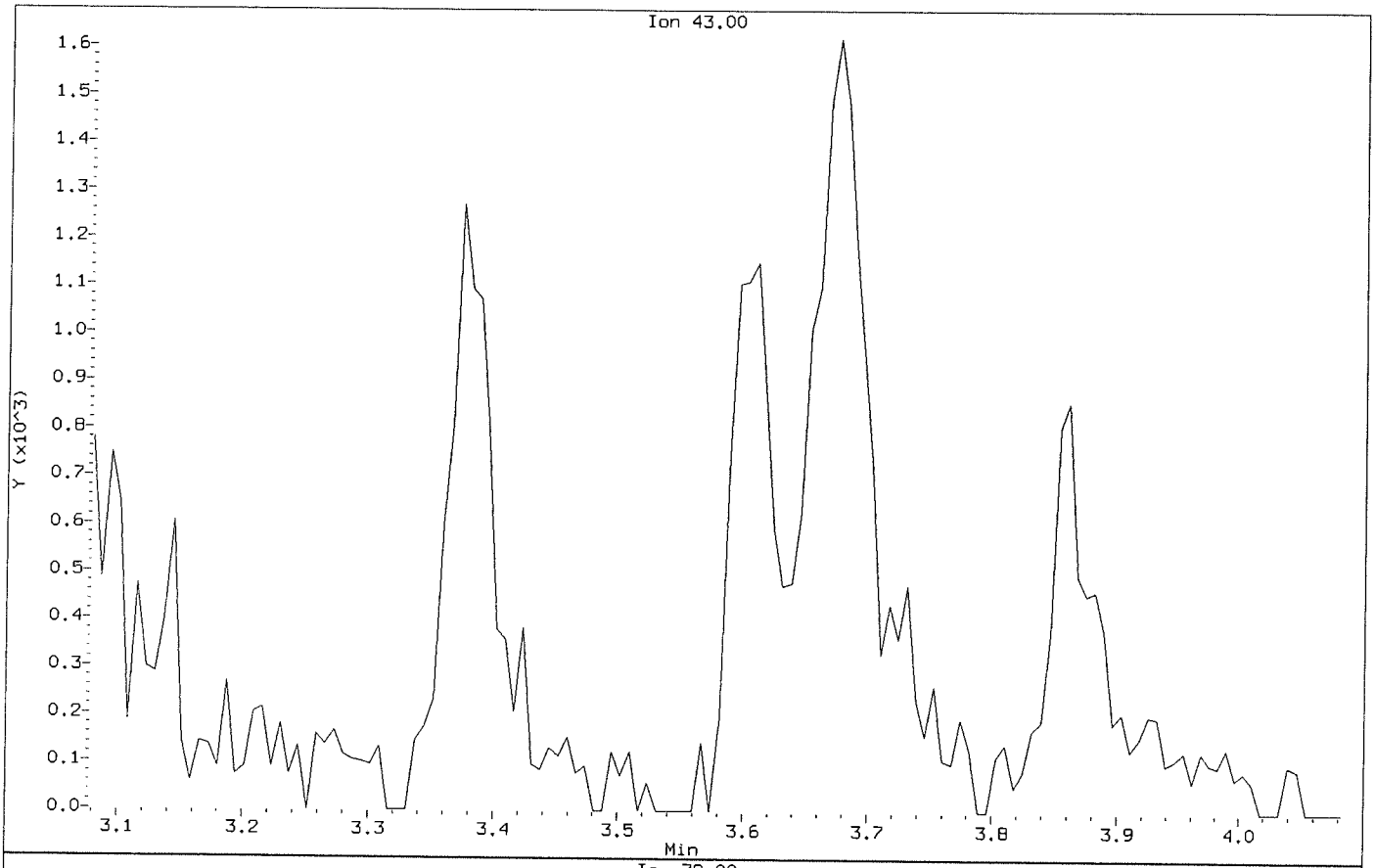
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

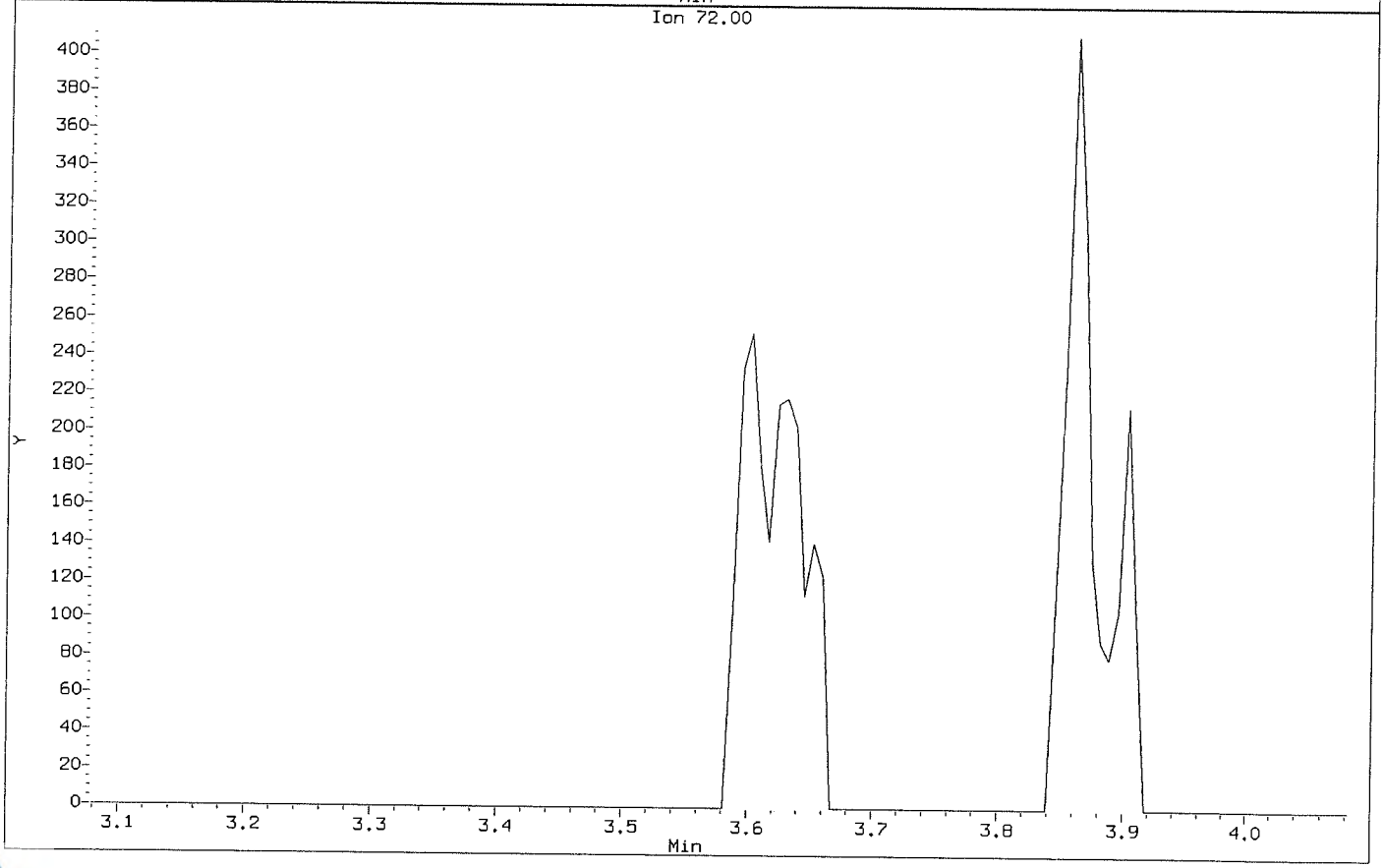




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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

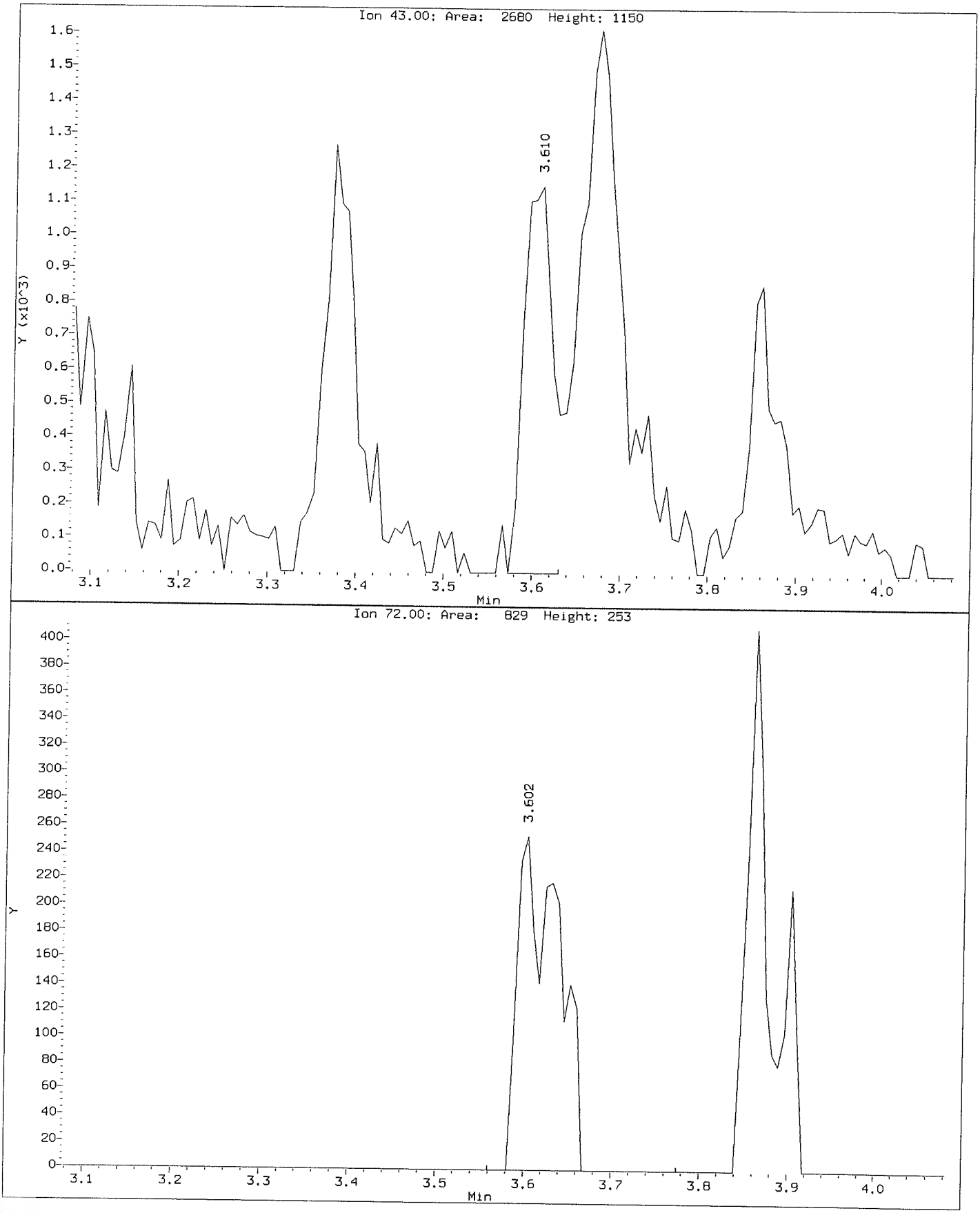
Compound: 2-Butanone
CAS Number: 78-93-3





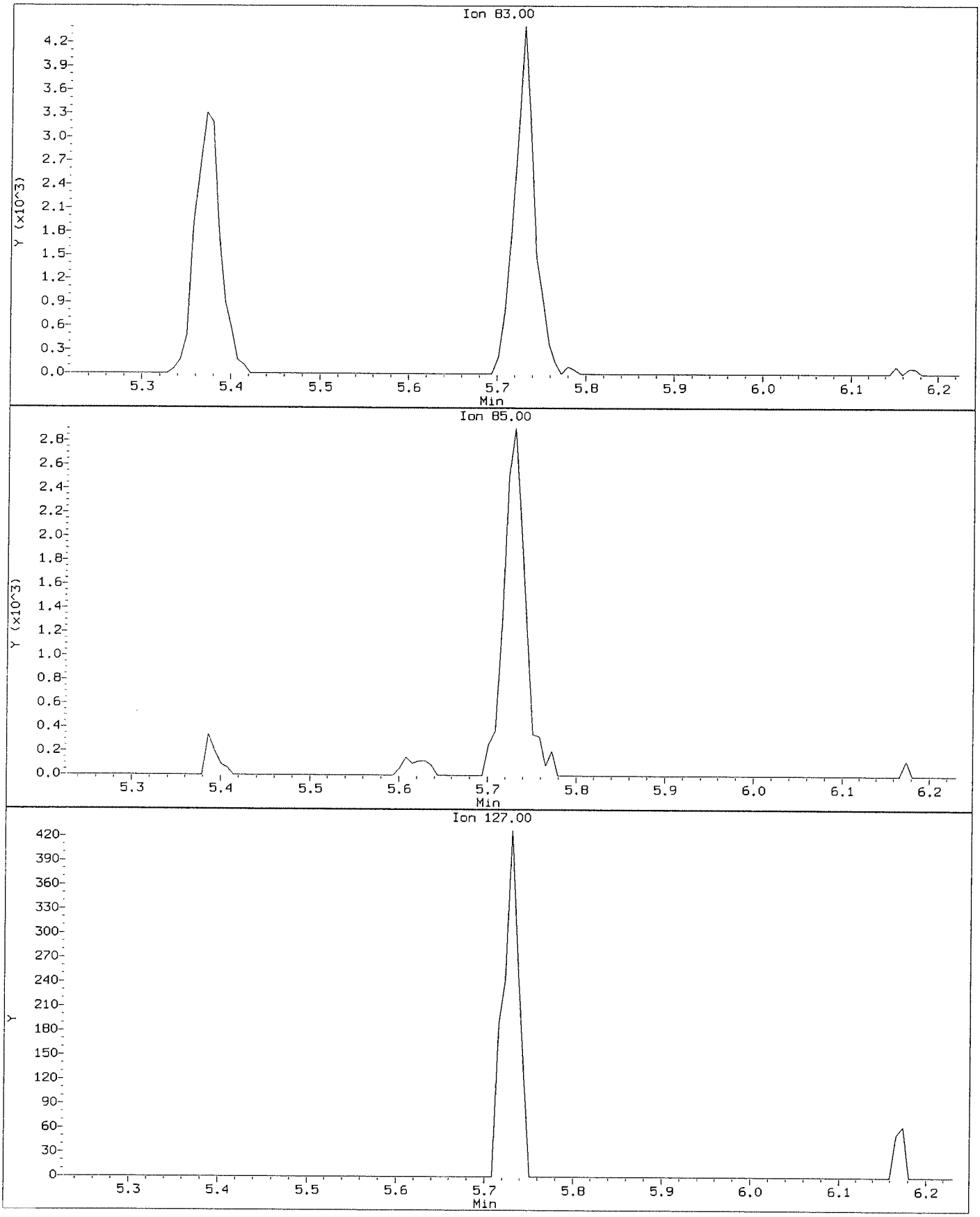
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 2-Butanone
CAS Number: 78-93-3



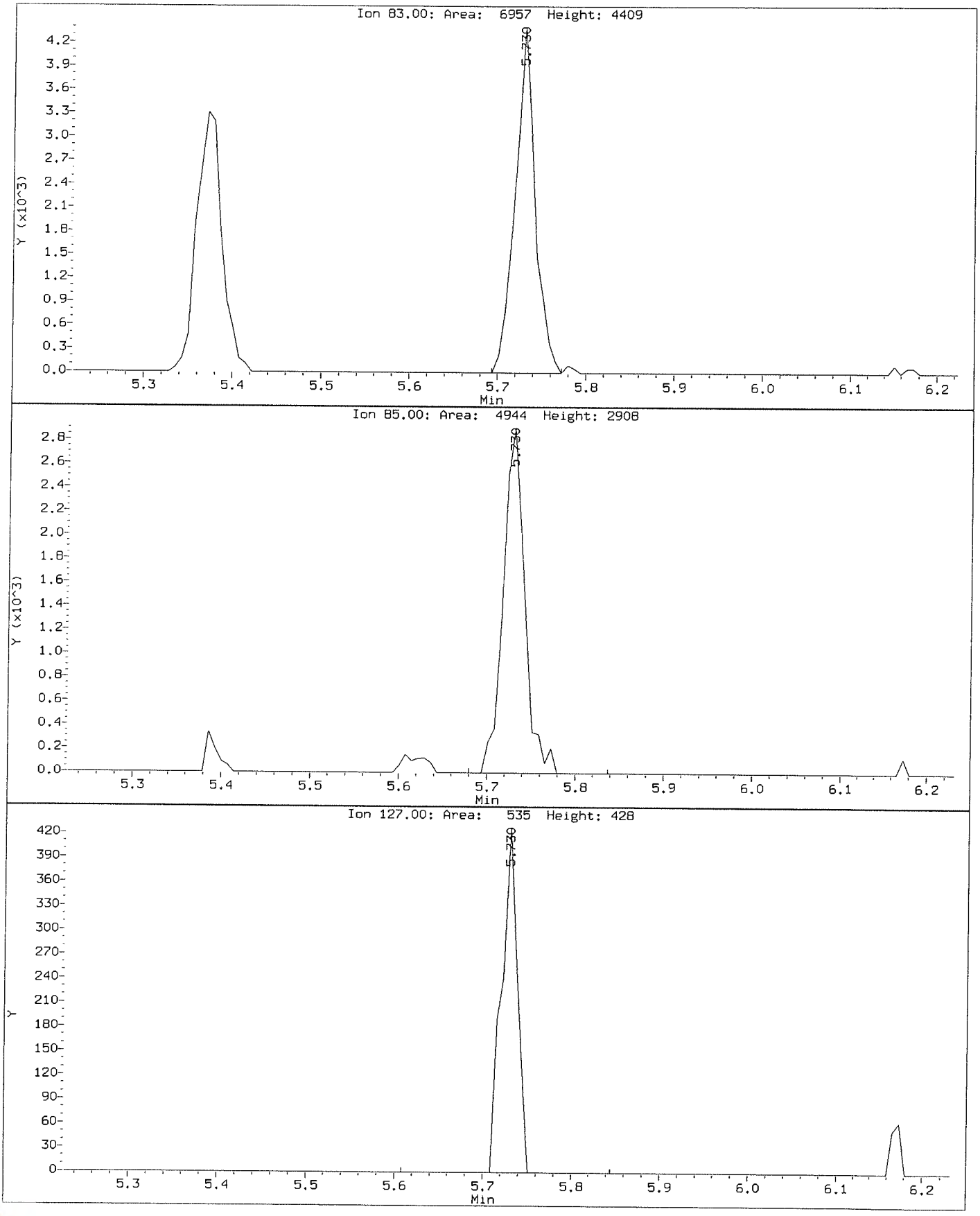
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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Bromodichloromethane
CAS Number: 75-27-4



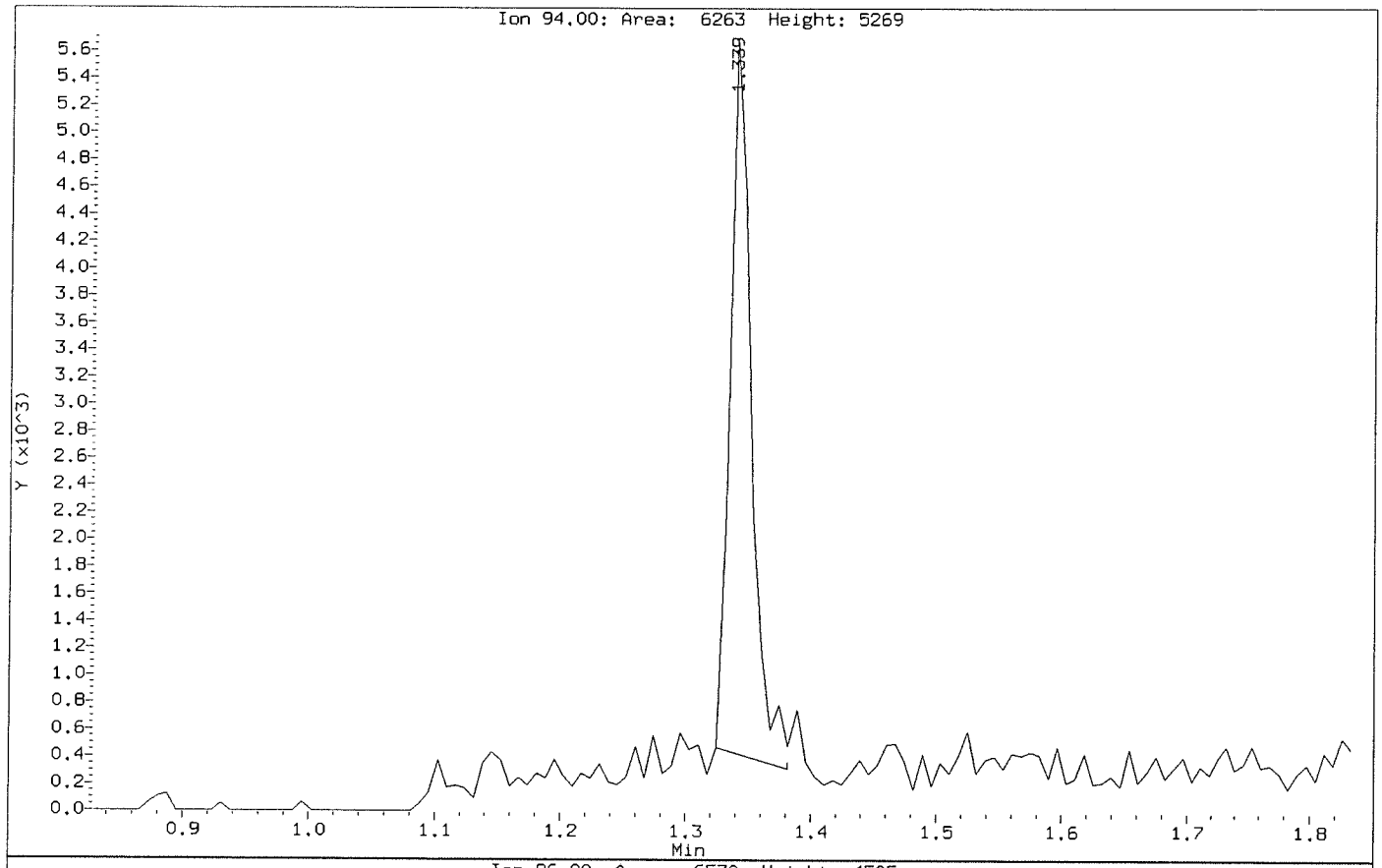
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Client Sample ID: VSTD002

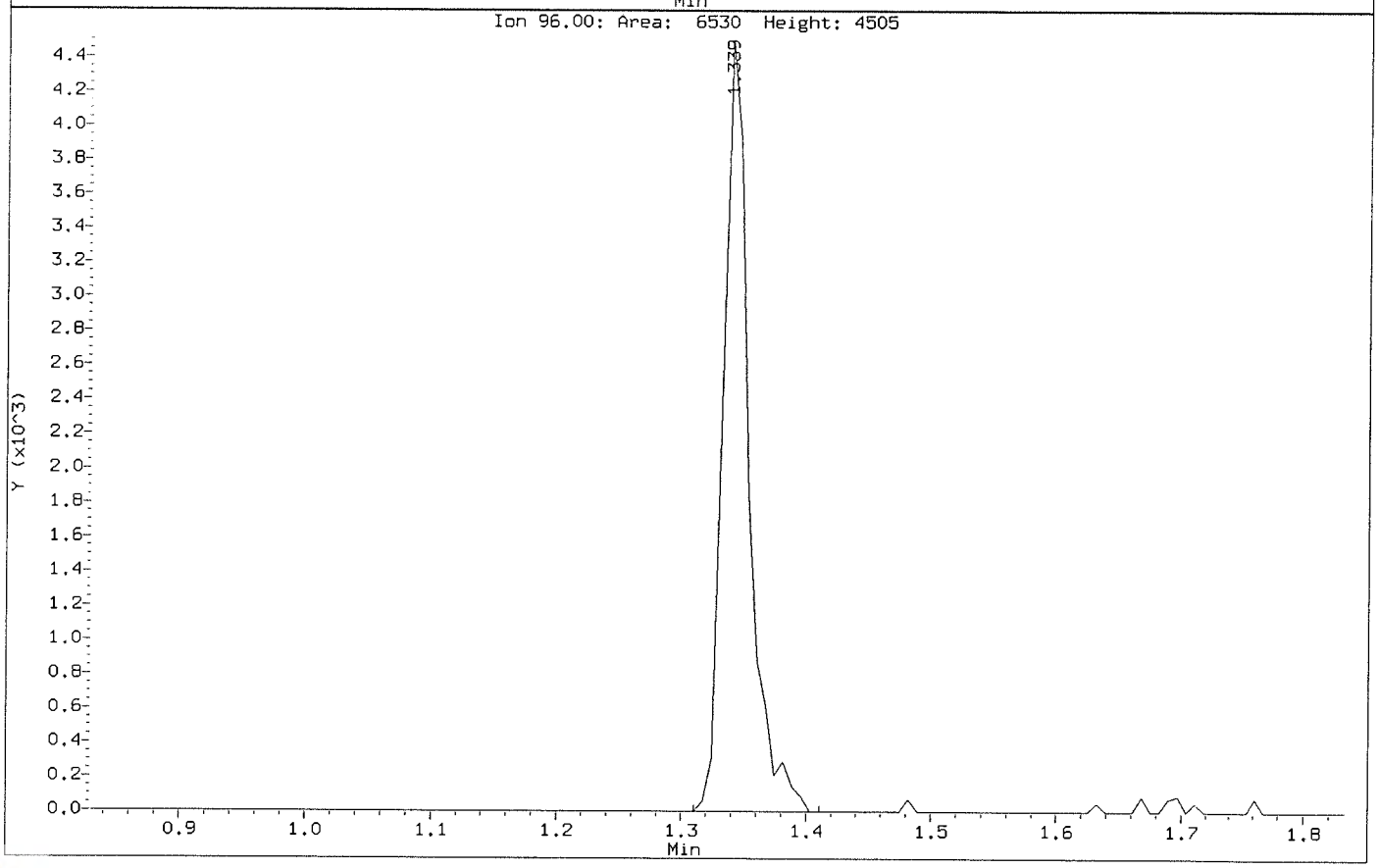
Compound: Bromodichloromethane
CAS Number: 75-27-4



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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

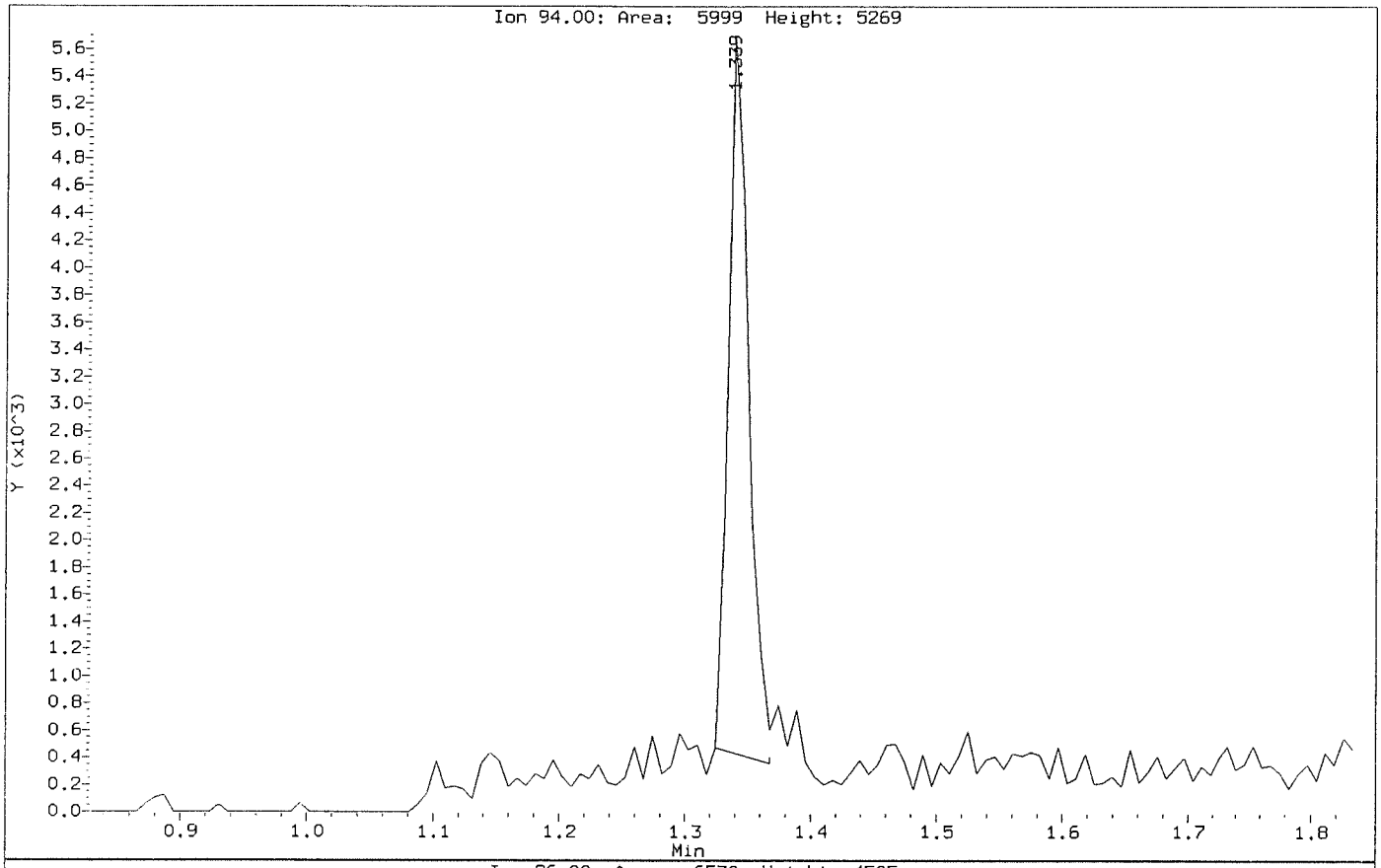
Compound: Bromomethane
CAS Number: 74-83-9

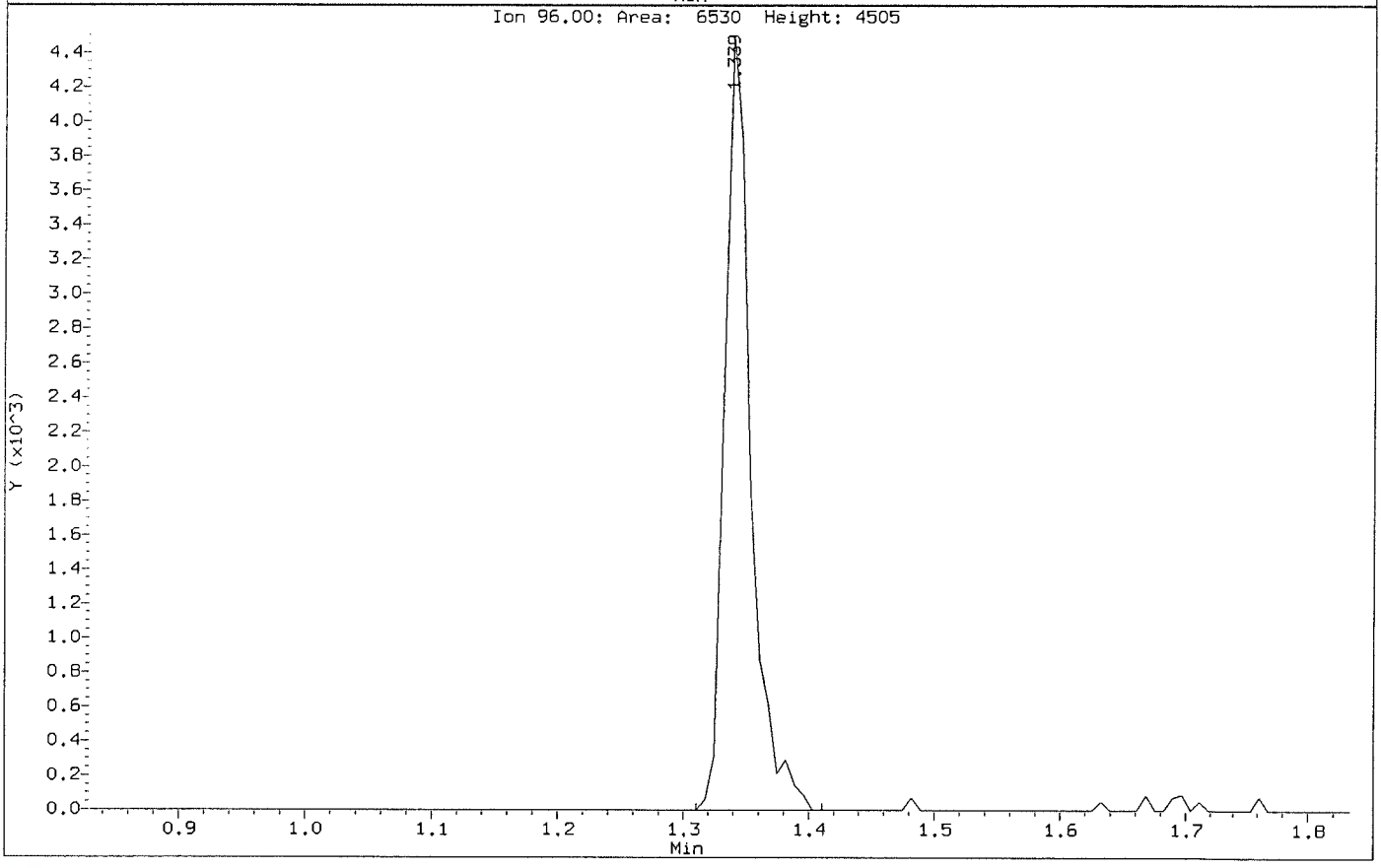




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Client Sample ID: VSTD002

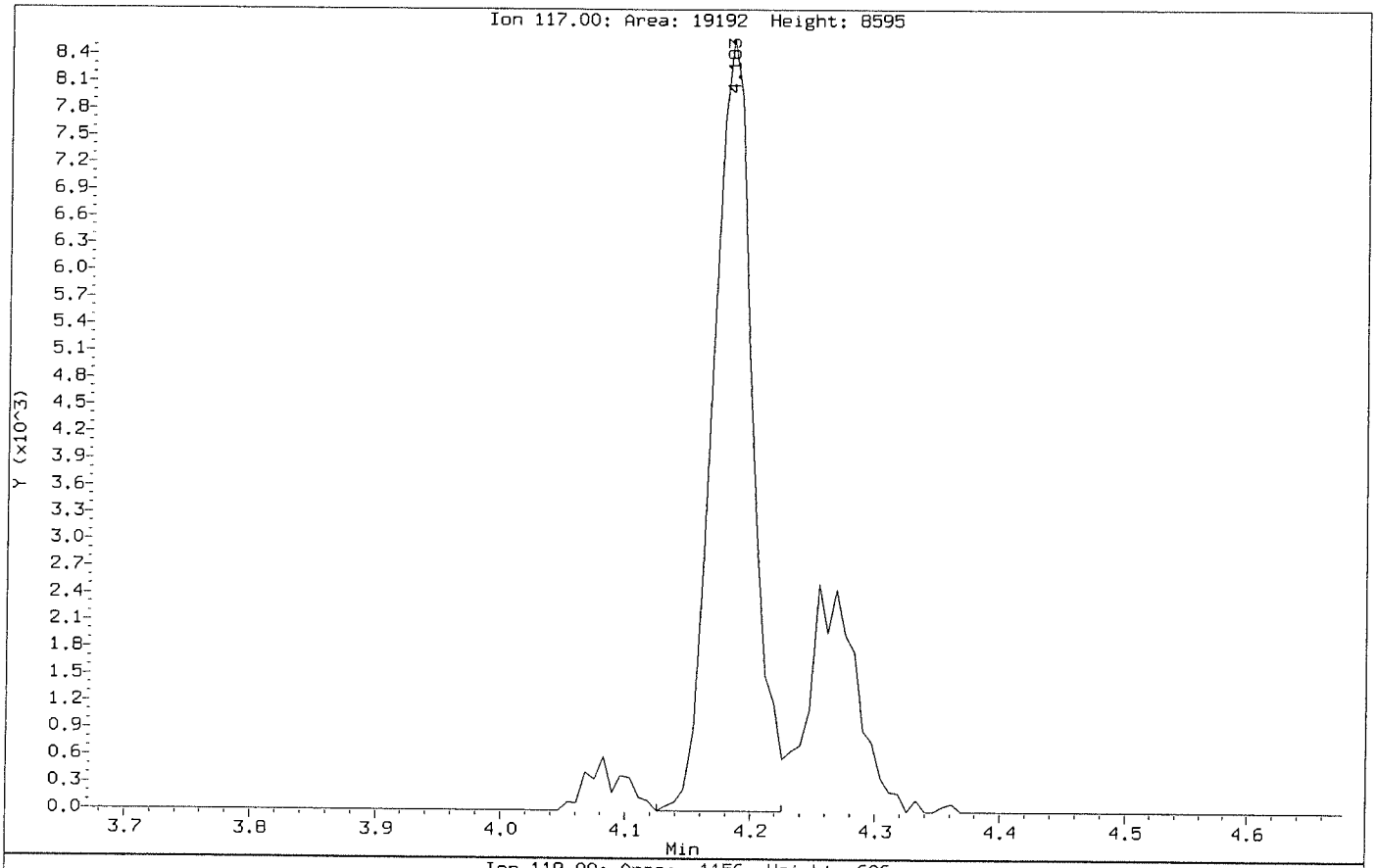
Compound: Bromomethane
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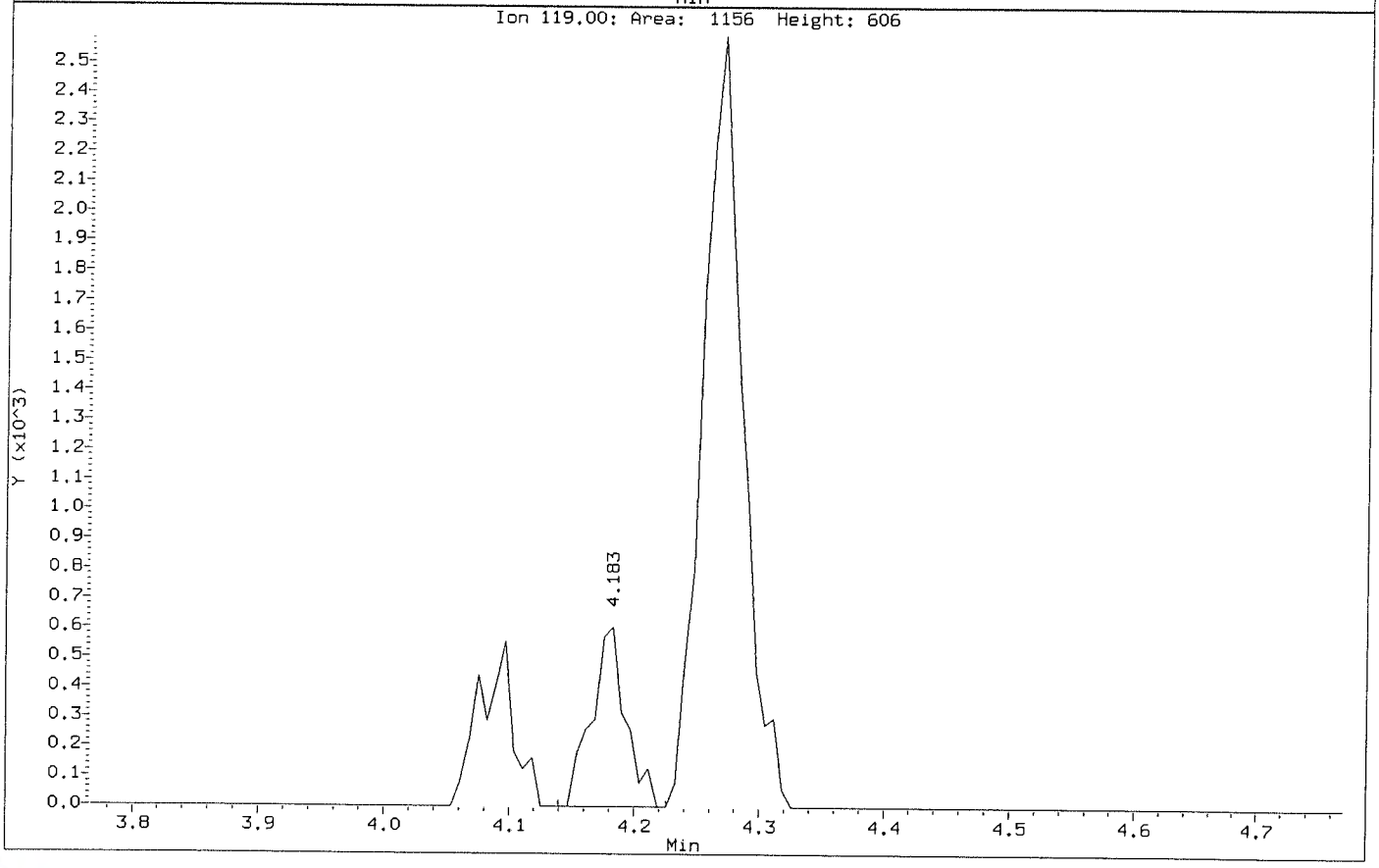




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Client Sample ID: VSTD002

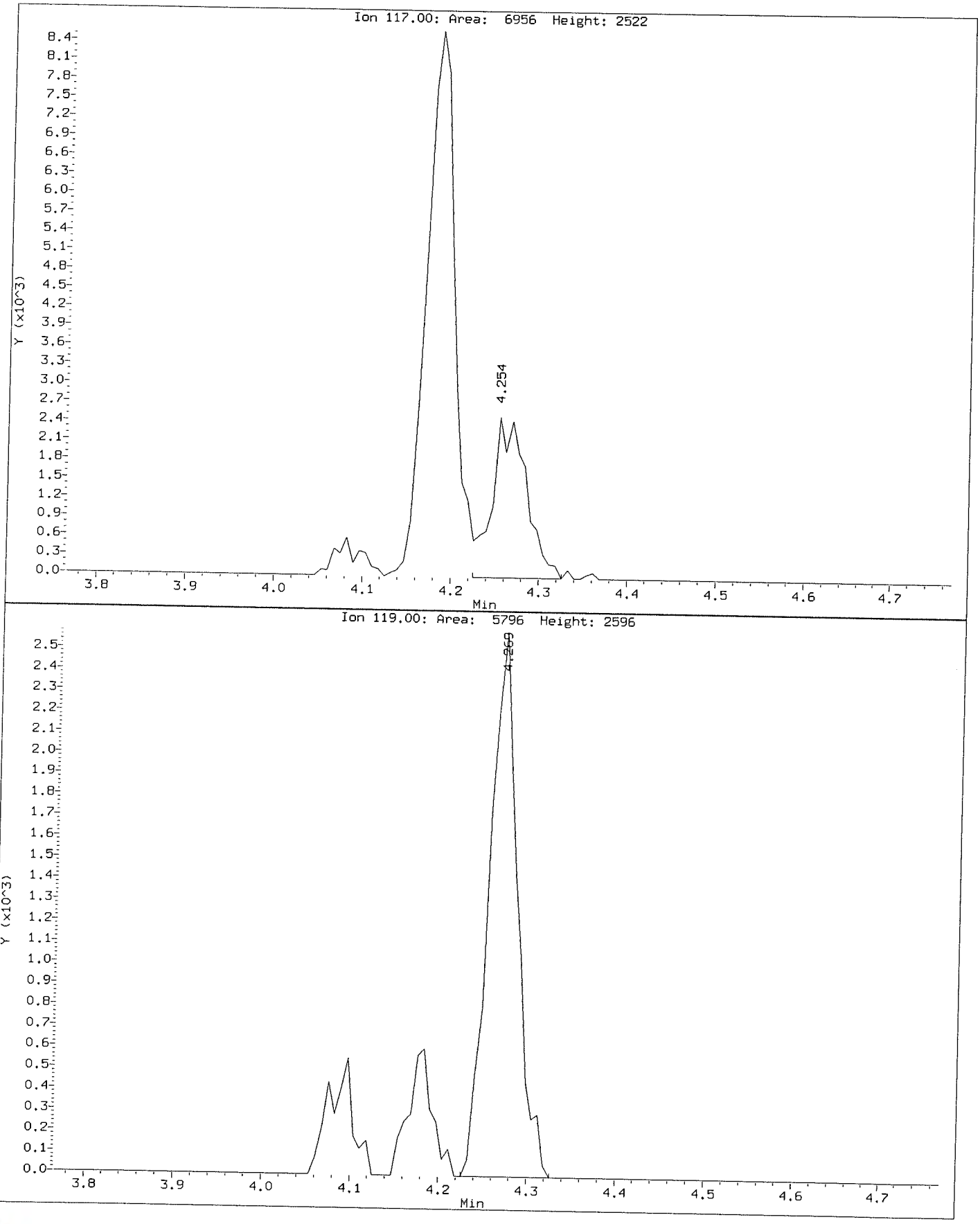
Compound: Carbon Tetrachloride
CAS Number: 56-23-5





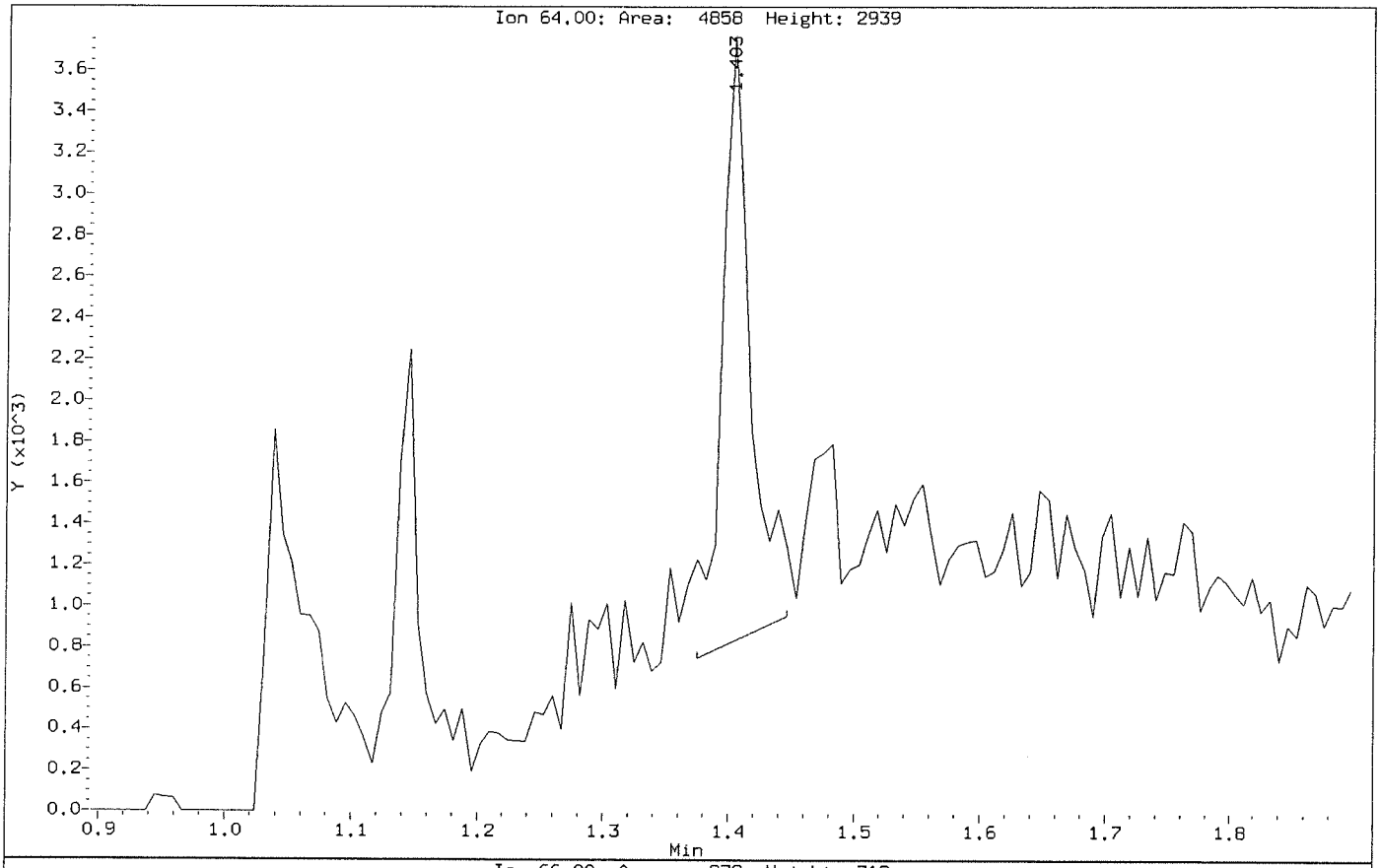
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Instrument: voa6.i
Client Sample ID: VSTD002

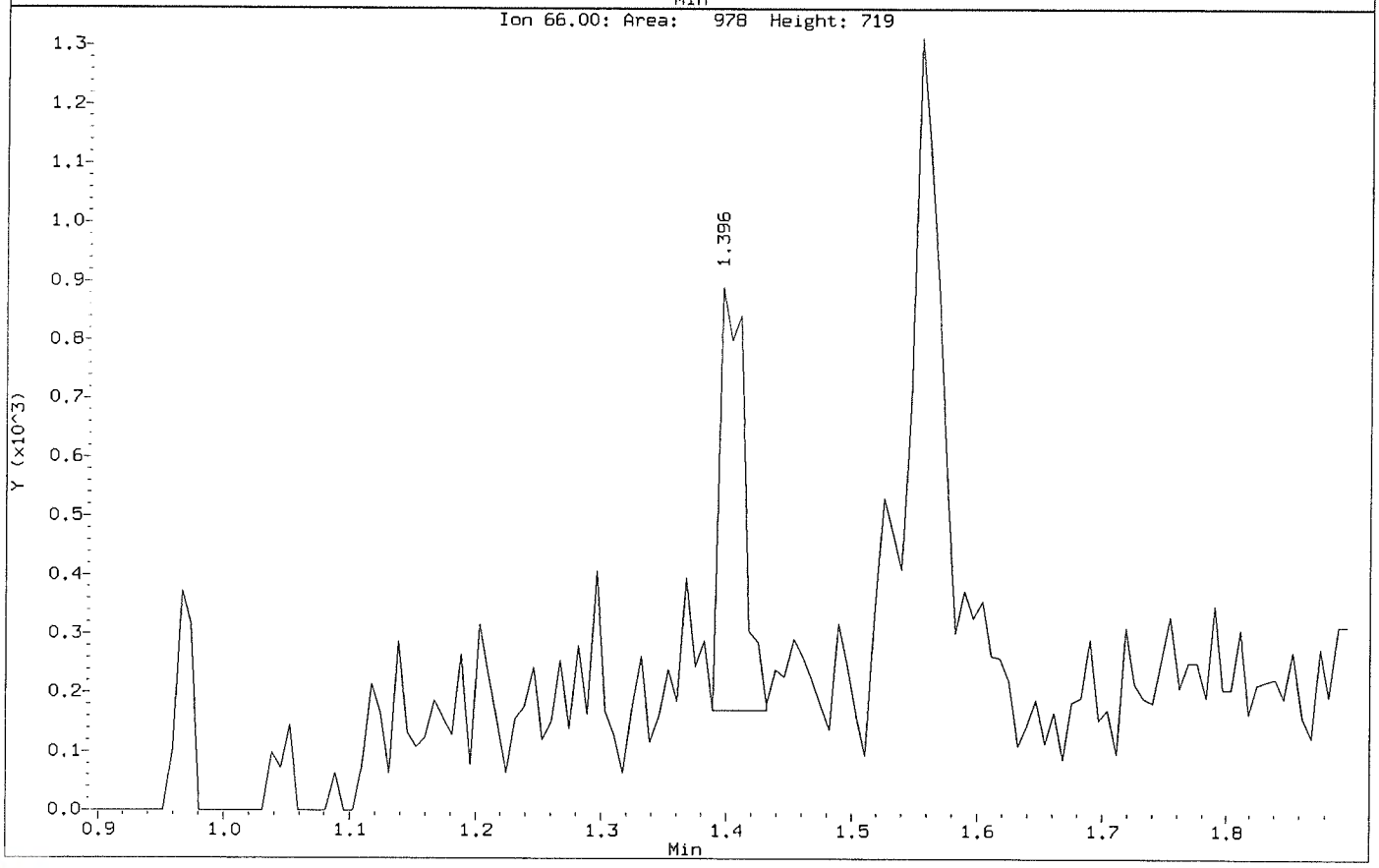
Compound: Carbon Tetrachloride
CAS Number: 56-23-5



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Instrument: voa6.i
Client Sample ID: VSTD002

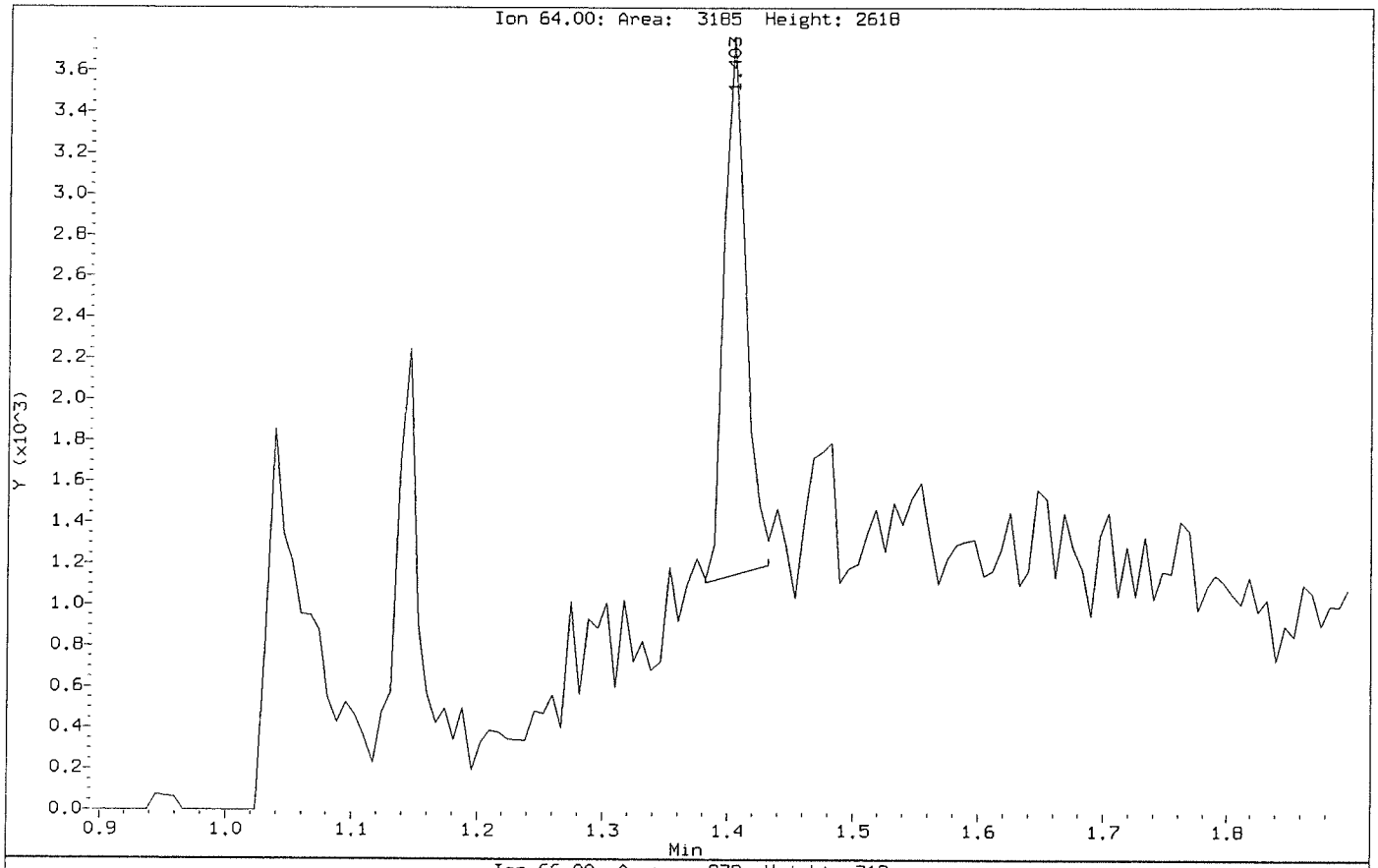
Compound: Chloroethane
CAS Number: 75-00-3

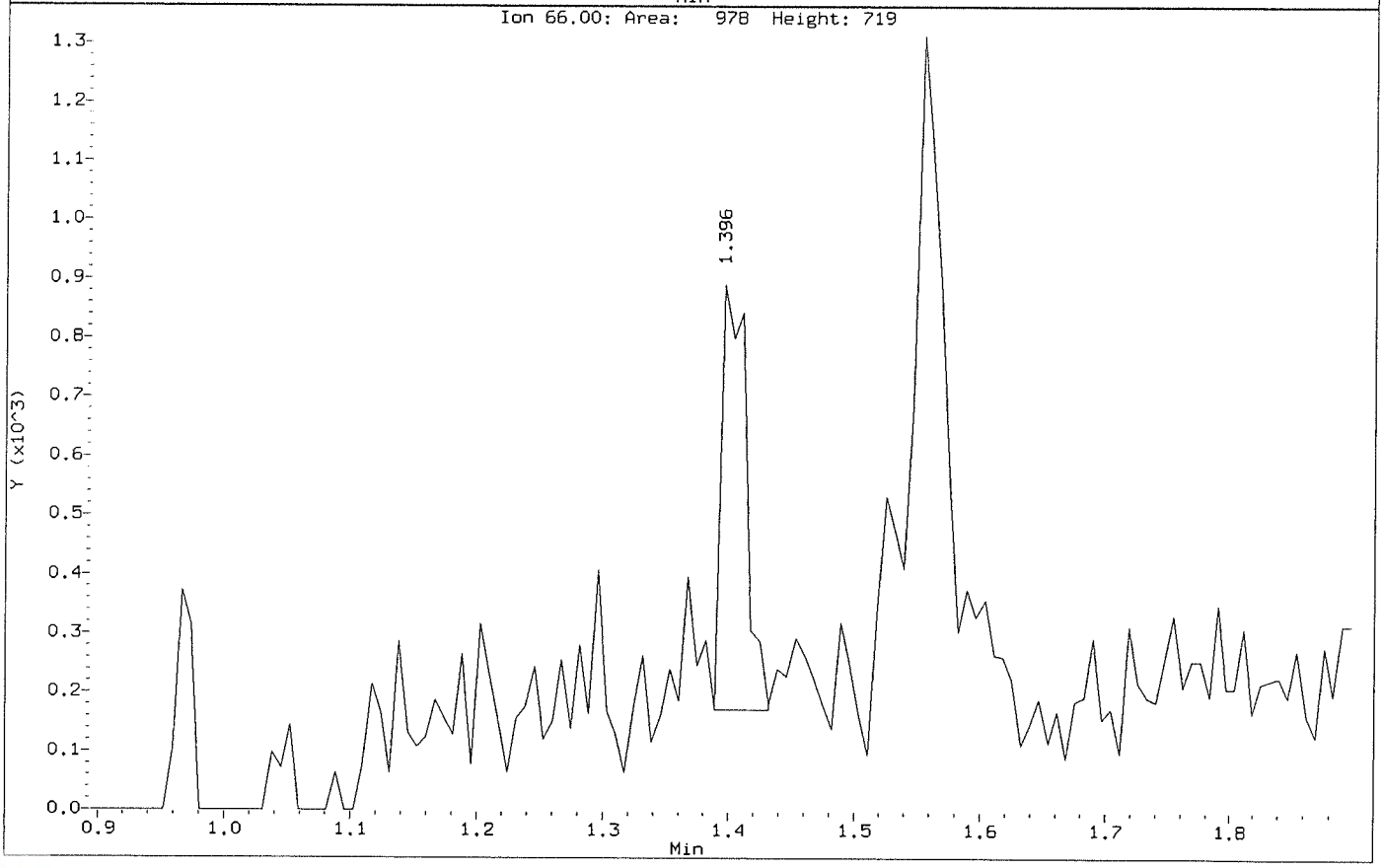




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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

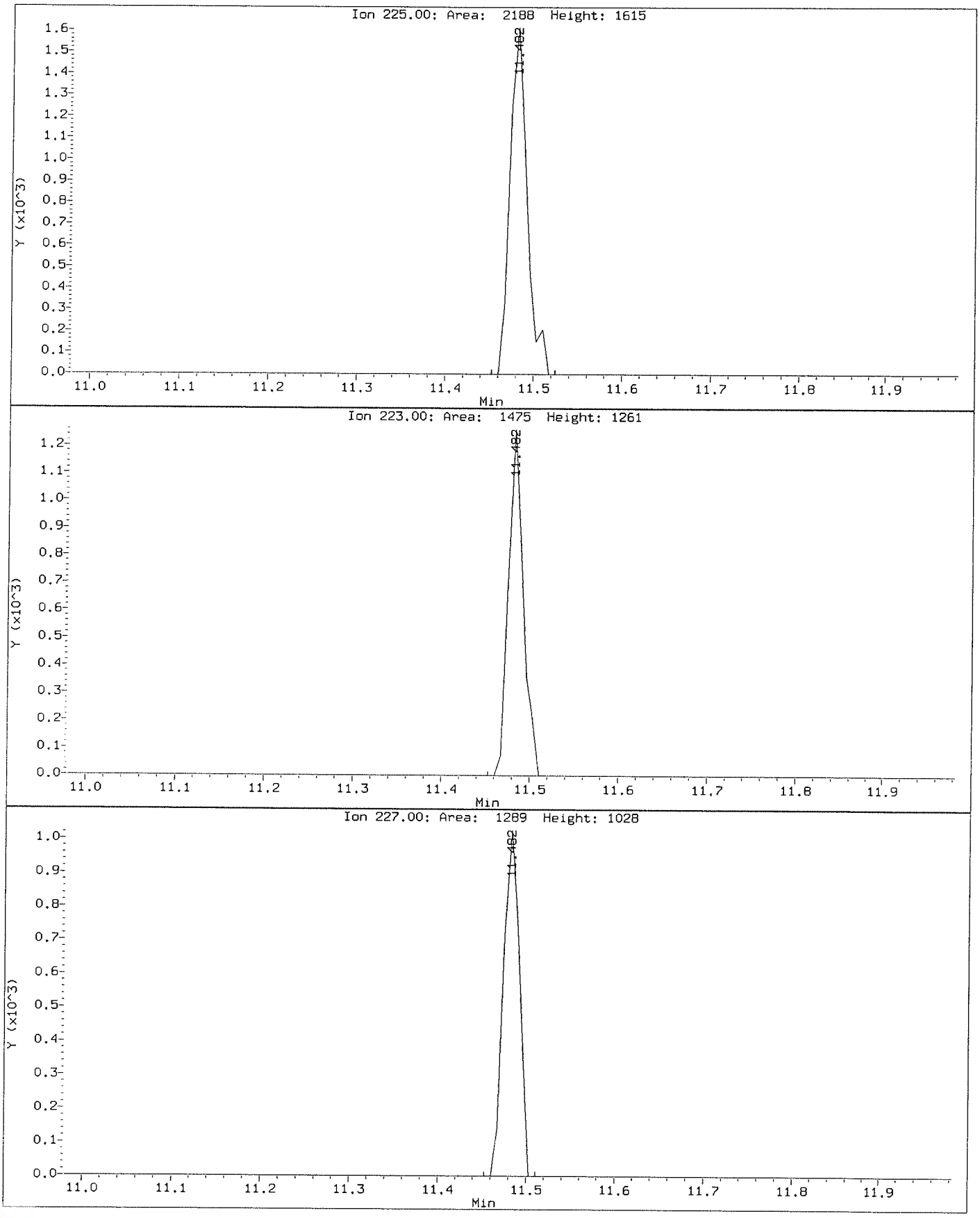
Compound: Chloroethane
CAS Number: 75-00-3





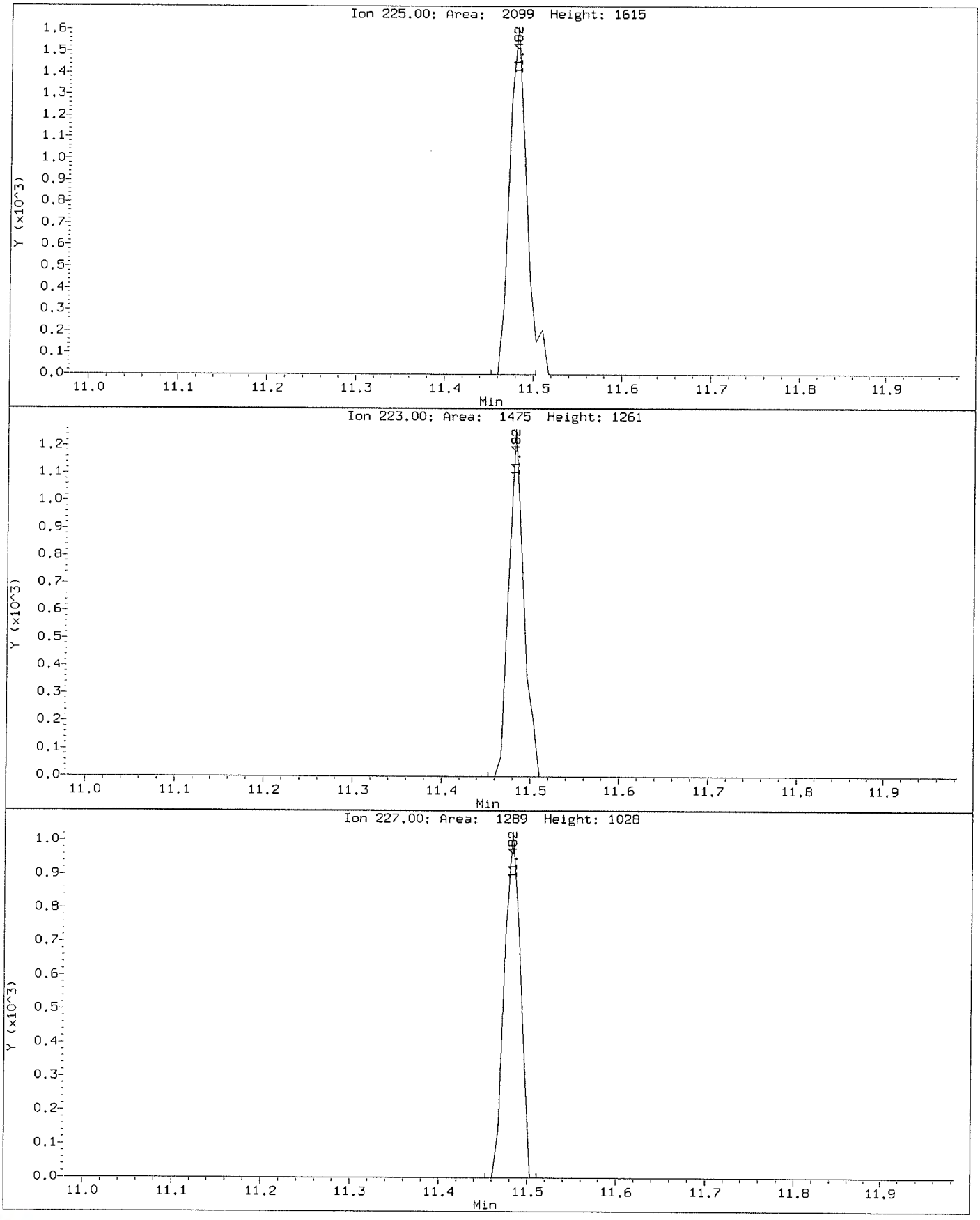
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



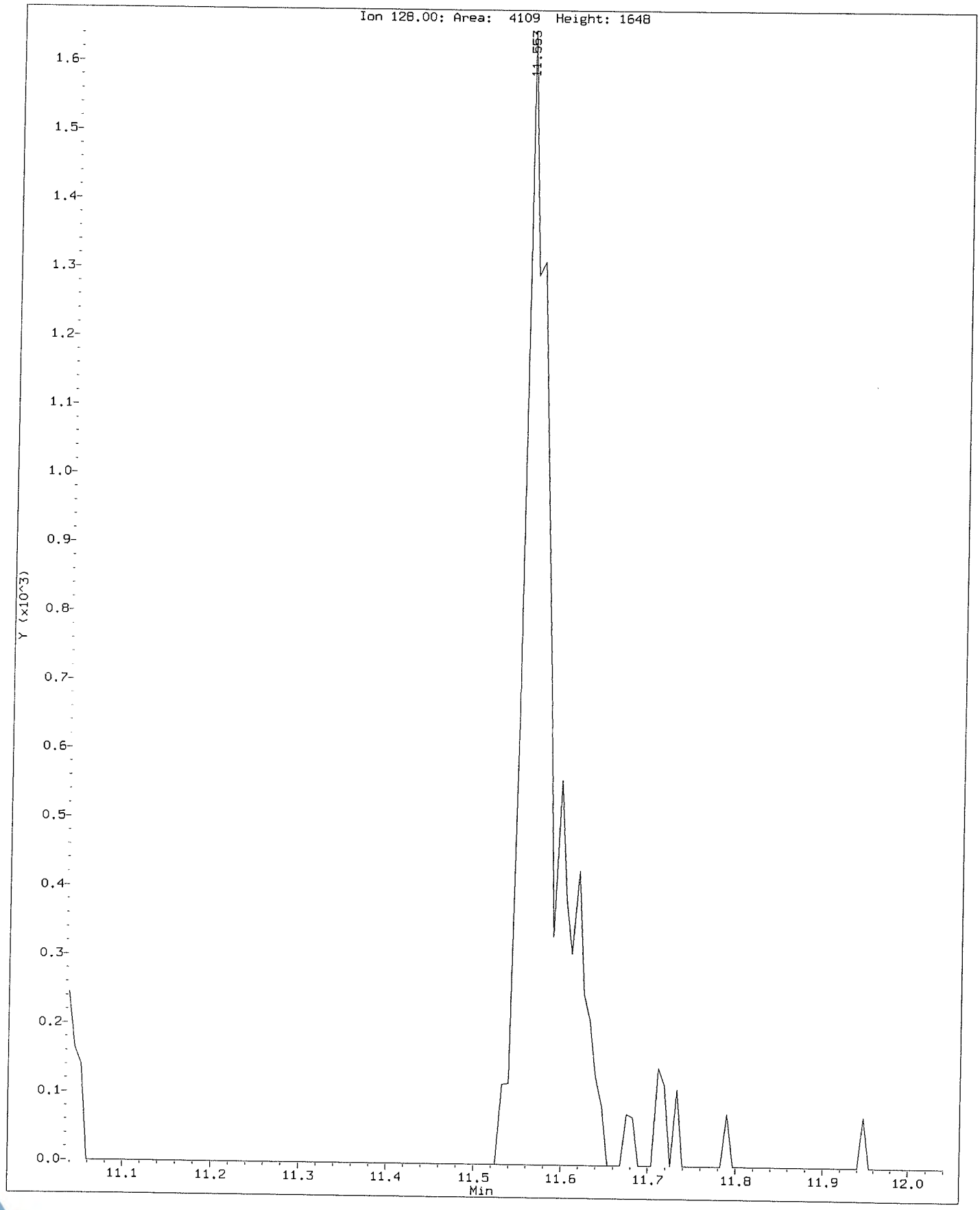
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



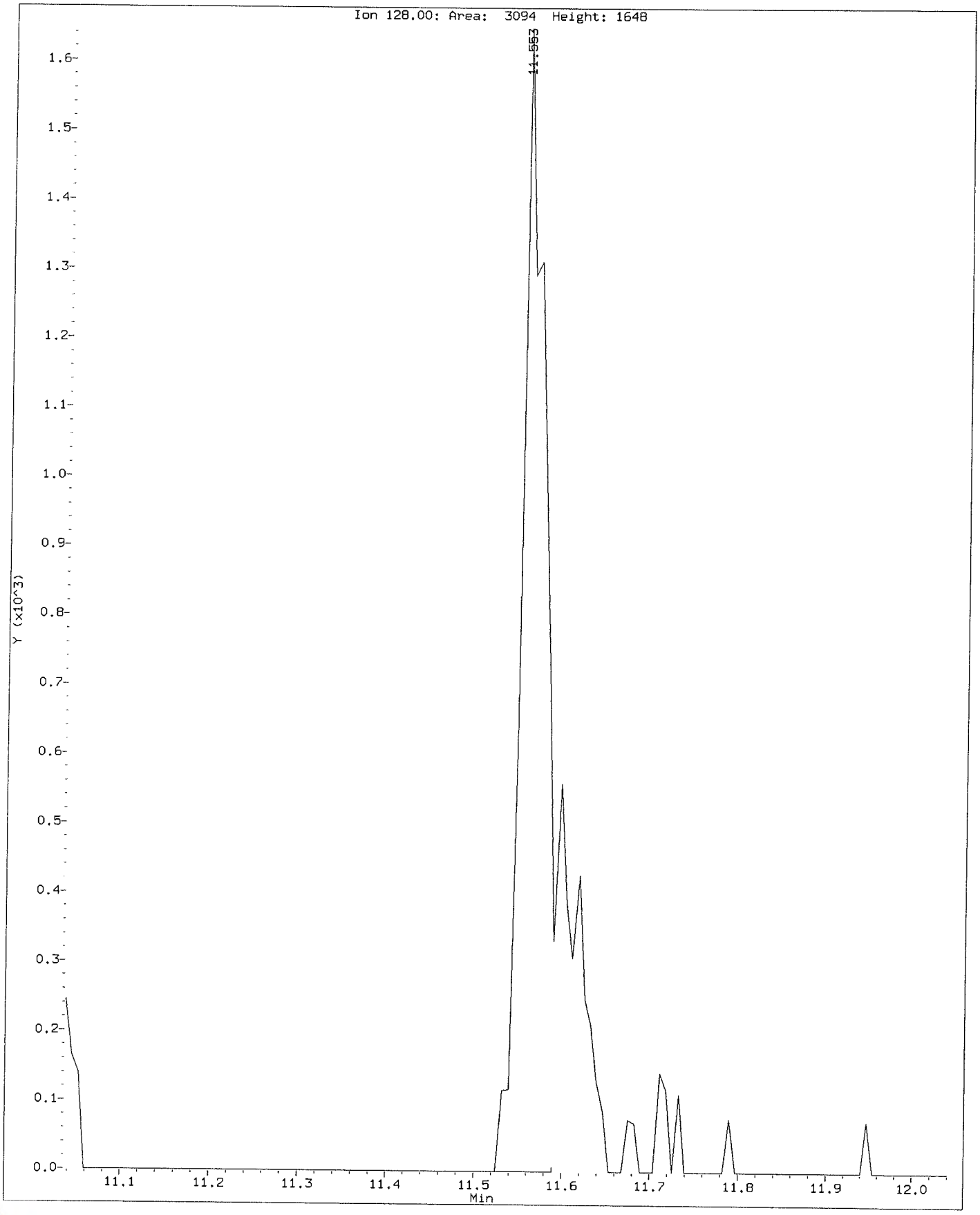
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Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\X051805.D
Injection Date: 18-MAY-2021 12:46
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051806.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051806.D
Lab Smp Id: VSDT005 Client Smp ID: VSTD005
Inj Date : 18-MAY-2021 13:07
Operator : PC Inst ID: voa6.i
Smp Info : VSDT005;VSTD005;1;5;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\nahstws005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 12:46 Cal File: X051805.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

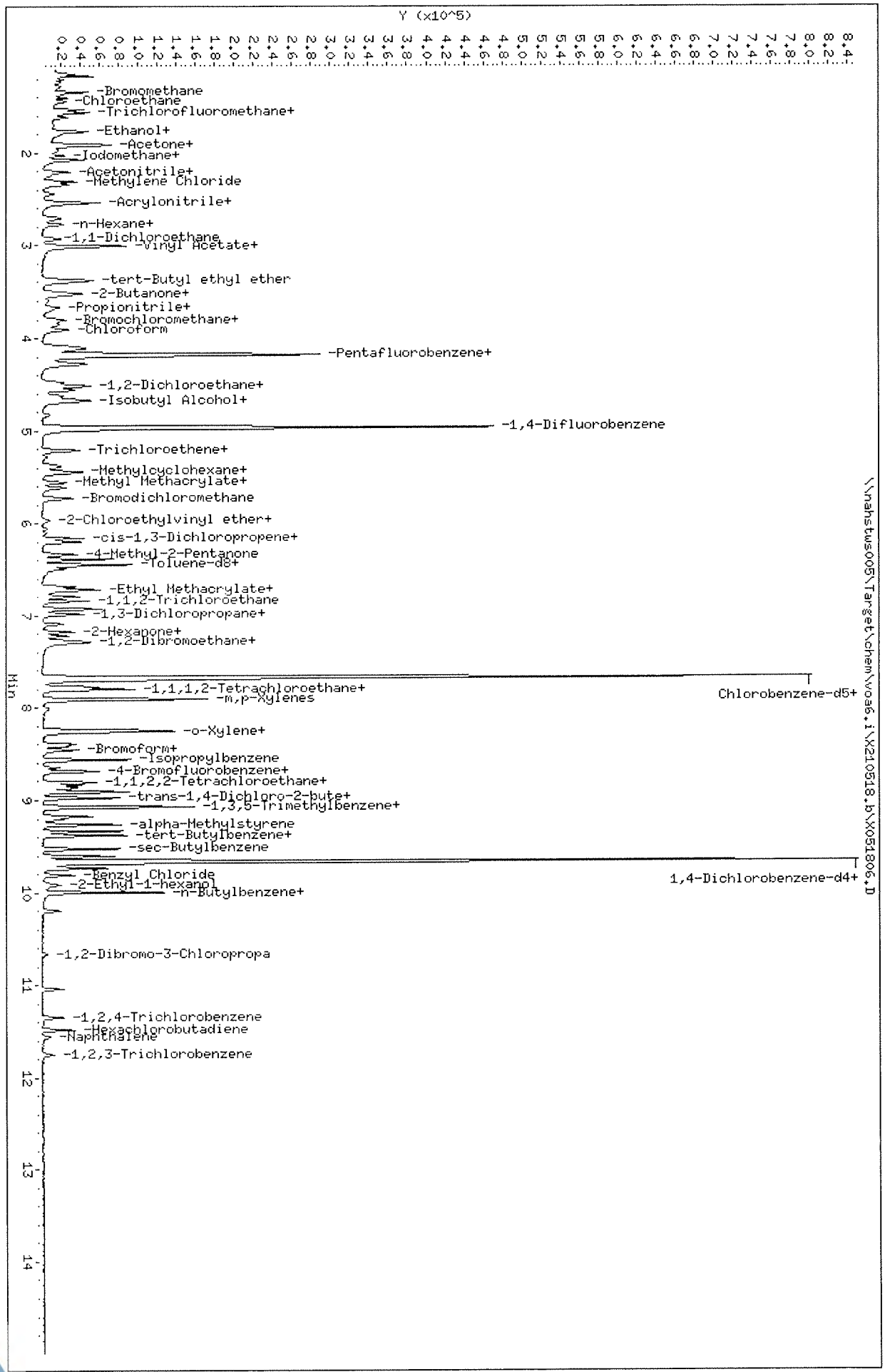
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	225058	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	374386	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	349203	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	167006	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	16438	5.00000	4.48(a)
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	15616	5.00000	4.84(a)
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	12495	5.00000	4.77(a)
$	48 Toluene-d8	98	6.388	6.388	(0.833)	42740	5.00000	5.89
	60 1,1,1,2-Tetrachloroethane	131	7.771	7.771	(1.013)	12874	5.00000	5.06
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	19150	5.00000	5.00
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	14932	5.00000	4.92(a)
	138 Freon TF	101	1.919	1.919	(0.459)	11140	5.00000	5.21
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	9408	5.00000	4.63(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	19958	5.00000	4.78(a)
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	11117	5.00000	4.93(a)
	32 1,1-Dichloropropene	75	4.275	4.275	(0.860)	15980	5.00000	4.98(a)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	3826	5.00000	5.37
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	9928	5.00000	3.81(aMH)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	7168	5.00000	7.00
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	40866	5.00000	4.81(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	1184	5.00000	6.69
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	11790	5.00000	4.83(a)

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051806.D Page 2
Report Date: 22-Jun-2021 08:20

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	22875	5.00000	4.88(a)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	18828	5.00000	5.11
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	12574	5.00000	4.99(aM)
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	38648	5.00000	4.63(a)
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	23137	5.00000	4.82(a)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	20253	5.00000	5.10
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	24844	5.00000	5.29
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	18465	5.00000	4.95(a)
24 2-Butanone	43	3.588	3.588	(0.858)	7505	10.0000	9.03
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	35922	5.00000	4.82(a)
52 2-Hexanone	43	7.097	7.097	(0.925)	15257	10.0000	10.06
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	41267	5.00000	4.75(a)
82 p-Isopropyltoluene	119	9.648	9.648	(0.999)	38993	5.00000	4.72(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	23491	10.0000	10.64
10 Acetone	43	1.983	1.983	(0.474)	8158	10.0000	9.92
37 Benzene	78	4.512	4.512	(0.908)	46553	5.00000	5.02
74 Bromobenzene	156	8.809	8.809	(0.912)	14708	5.00000	5.28
29 Bromochloromethane	128	3.802	3.802	(0.909)	7065	5.00000	5.15
39 Bromodichloromethane	83	5.729	5.729	(1.153)	18096	5.00000	5.00
66 Bromoform	173	8.415	8.415	(1.097)	7918	5.00000	4.68(Ta)
6 Bromomethane	94	1.338	1.338	(0.320)	15785	5.00000	6.25
19 Carbon Disulfide	76	2.069	2.069	(0.495)	49473	10.0000	9.33
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	16315	5.00000	4.99(aH)
59 Chlorobenzene	112	7.692	7.692	(1.003)	32631	5.00000	4.76(a)
7 Chloroethane	64	1.403	1.403	(0.336)	8398	5.00000	4.92(aM)
28 Chloroform	83	3.910	3.910	(0.935)	24324	5.00000	5.08
3 Chloromethane	50	1.081	1.081	(0.258)	14179	5.00000	6.05
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	12551	5.00000	4.83(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	20073	5.00000	4.89(a)
55 Dibromochloromethane	129	7.176	7.176	(0.936)	12858	5.00000	4.71(a)
44 Dibromomethane	93	5.557	5.557	(1.118)	8941	5.00000	4.95(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	14123	5.00000	6.85
61 Ethylbenzene	106	7.799	7.799	(1.017)	16617	5.00000	4.91(a)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	4641	5.00000	7.52
67 Isopropylbenzene	105	8.559	8.559	(1.116)	49325	5.00000	4.76(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	41694	10.0000	9.56
17 Methylene Chloride	84	2.305	2.305	(0.551)	11006	5.00000	4.87(a)
87 n-Butylbenzene	91	9.991	9.991	(1.034)	34349	5.00000	4.38(a)
73 n-Propylbenzene	91	8.910	8.910	(0.922)	56986	5.00000	4.81(a)
92 Naphthalene	128	11.553	11.553	(1.196)	8781	5.00000	6.84
63 o-Xylene	106	8.244	8.244	(1.075)	20375	5.00000	4.80(a)
81 sec-Butylbenzene	105	9.519	9.519	(0.985)	45656	5.00000	4.66(a)
64 Styrene	104	8.258	8.258	(1.077)	31296	5.00000	5.55
78 tert-Butylbenzene	119	9.332	9.332	(0.966)	34739	5.00000	4.91(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	9252	5.00000	4.76(a)
50 Toluene	91	6.446	6.446	(0.840)	49788	5.00000	4.94(a)
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	10258	5.00000	4.73(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	16774	5.00000	4.67(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	13273	5.00000	5.35
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	22800	5.00000	5.27
5 Vinyl Chloride	62	1.145	1.145	(0.274)	14191	5.00000	5.22

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.
H - Operator selected an alternate compound hit.

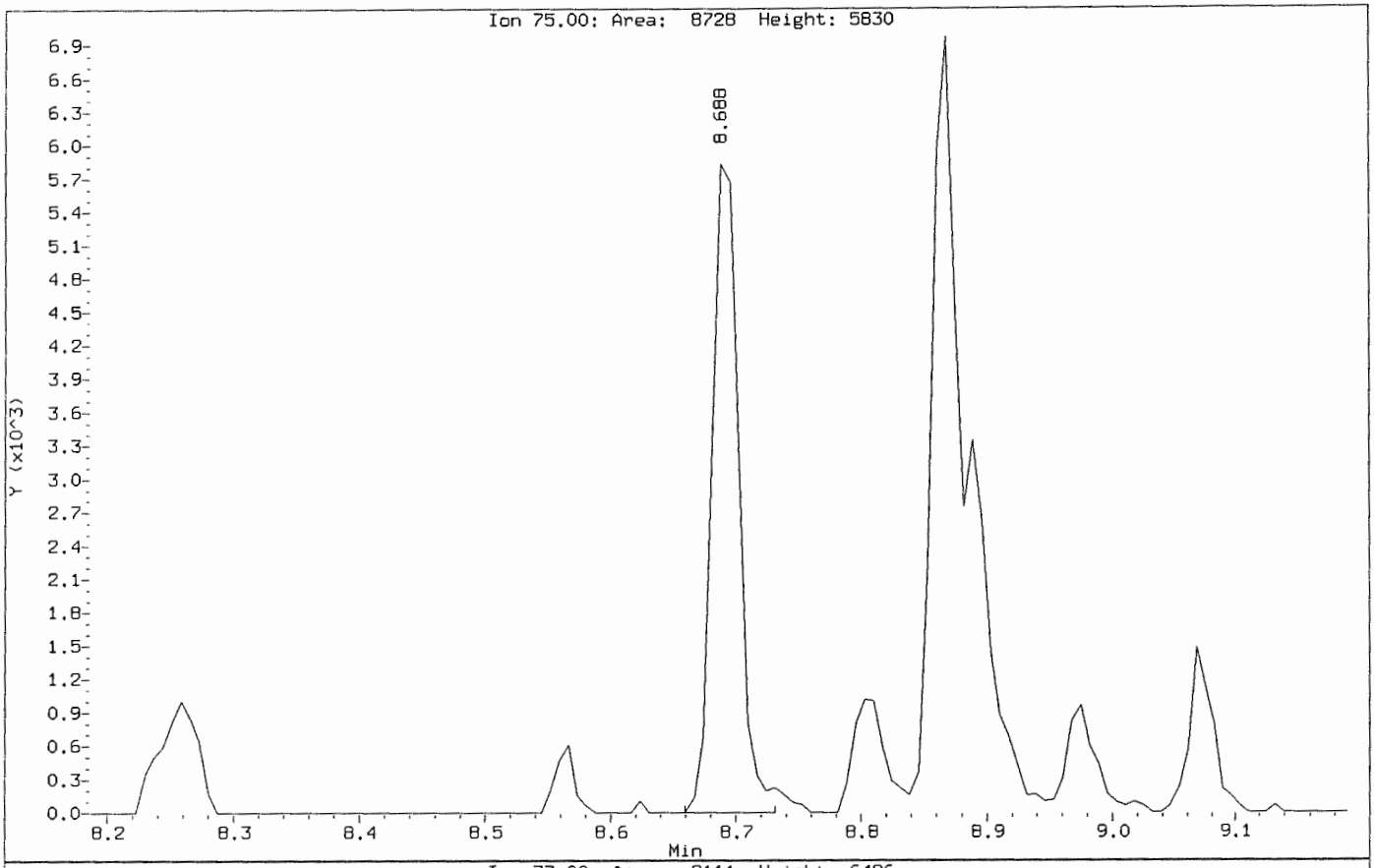


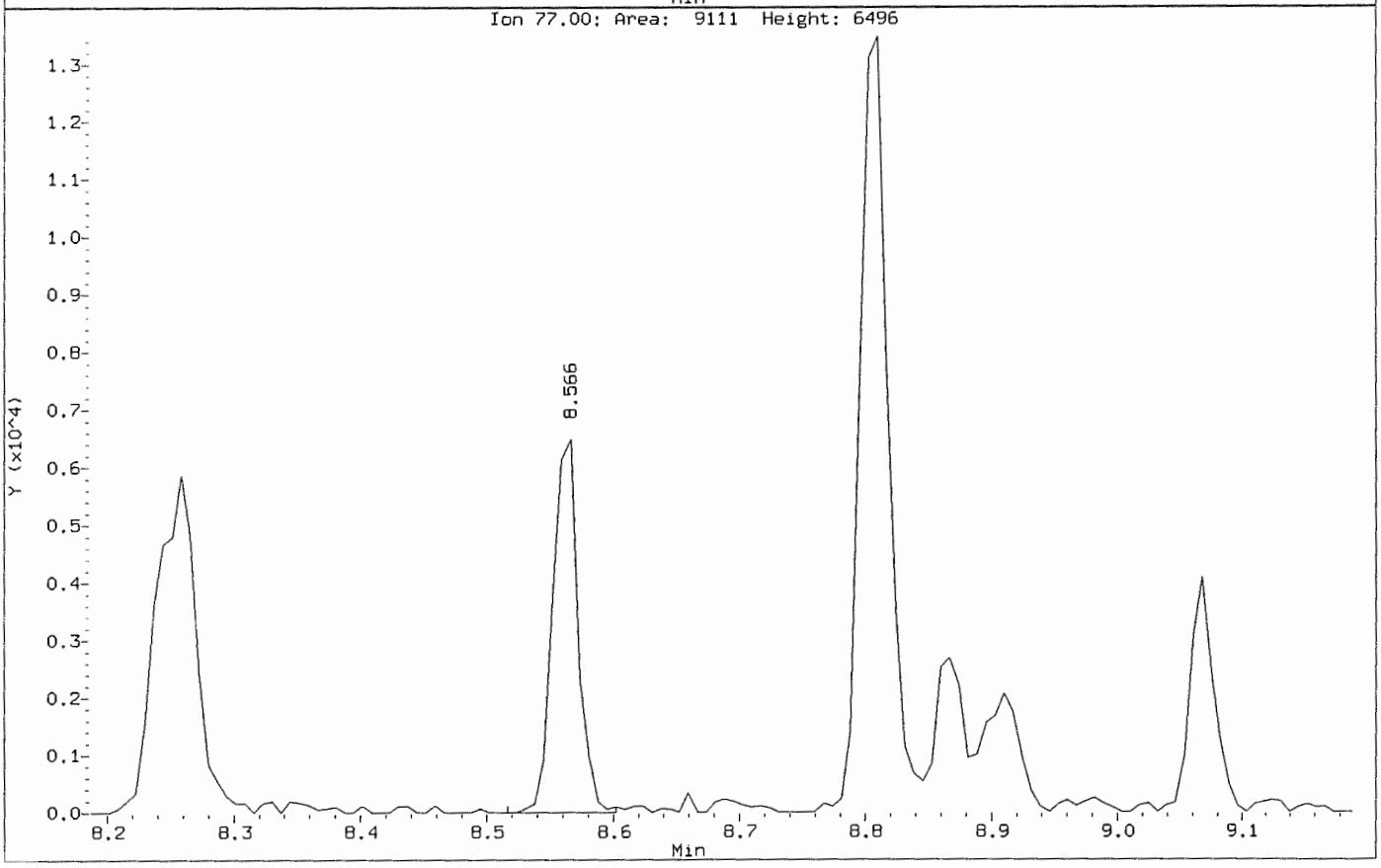
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Client ID: VSTD005
Sample Info: VSDT005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X210518.b\Before\X051806.D
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Instrument: voa6.i
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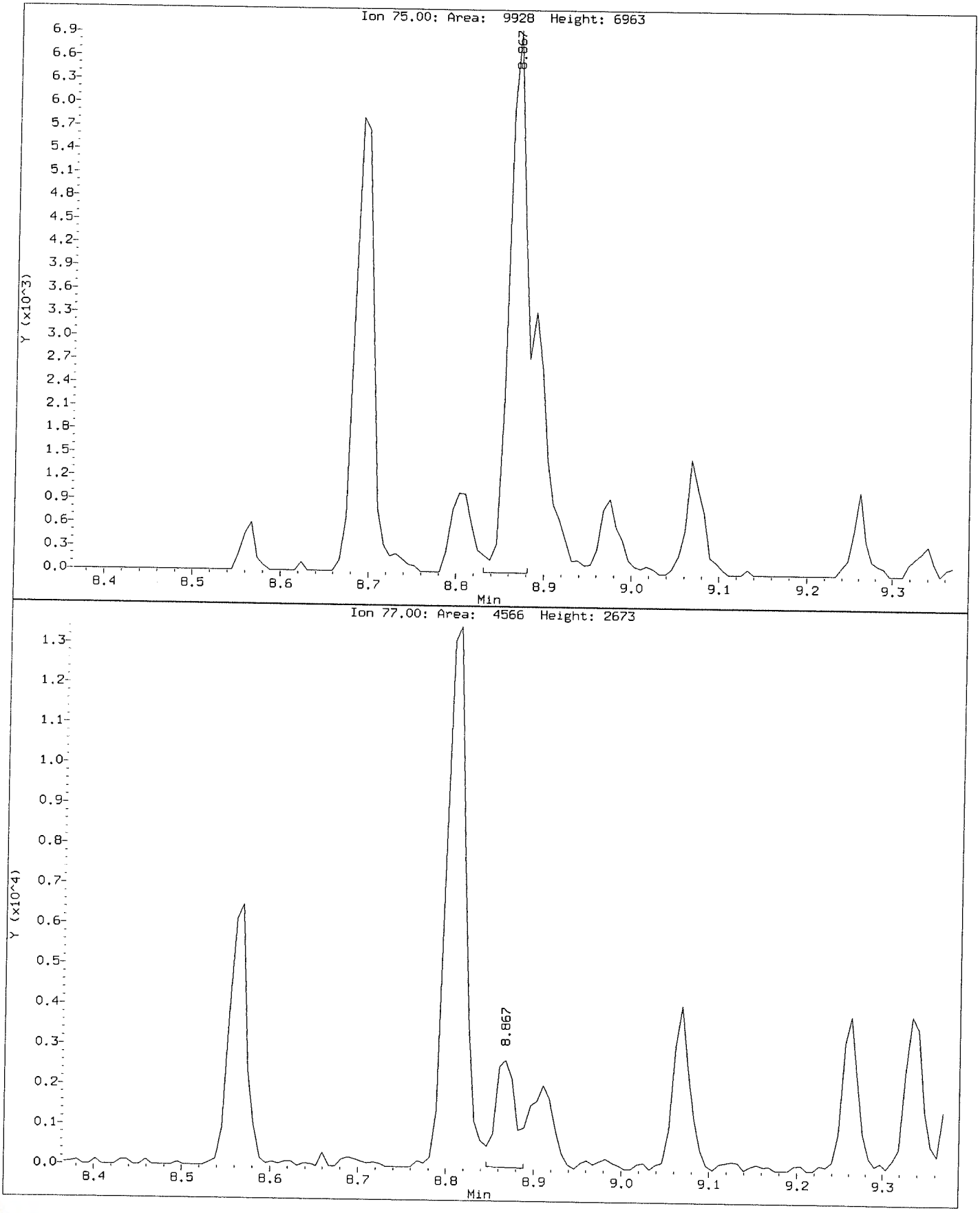
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CAS Number: 96-18-4





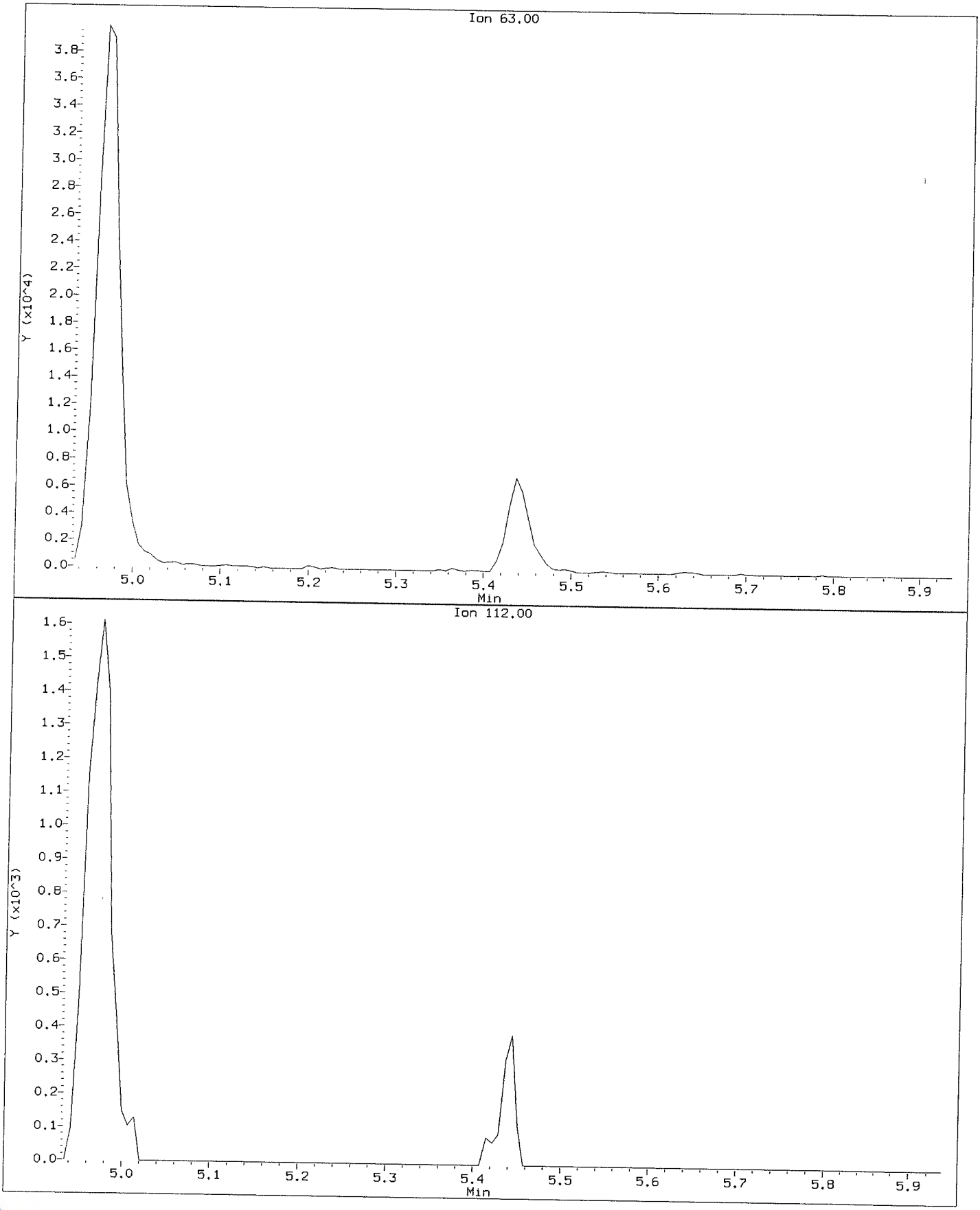
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Client Sample ID: VSTD005

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



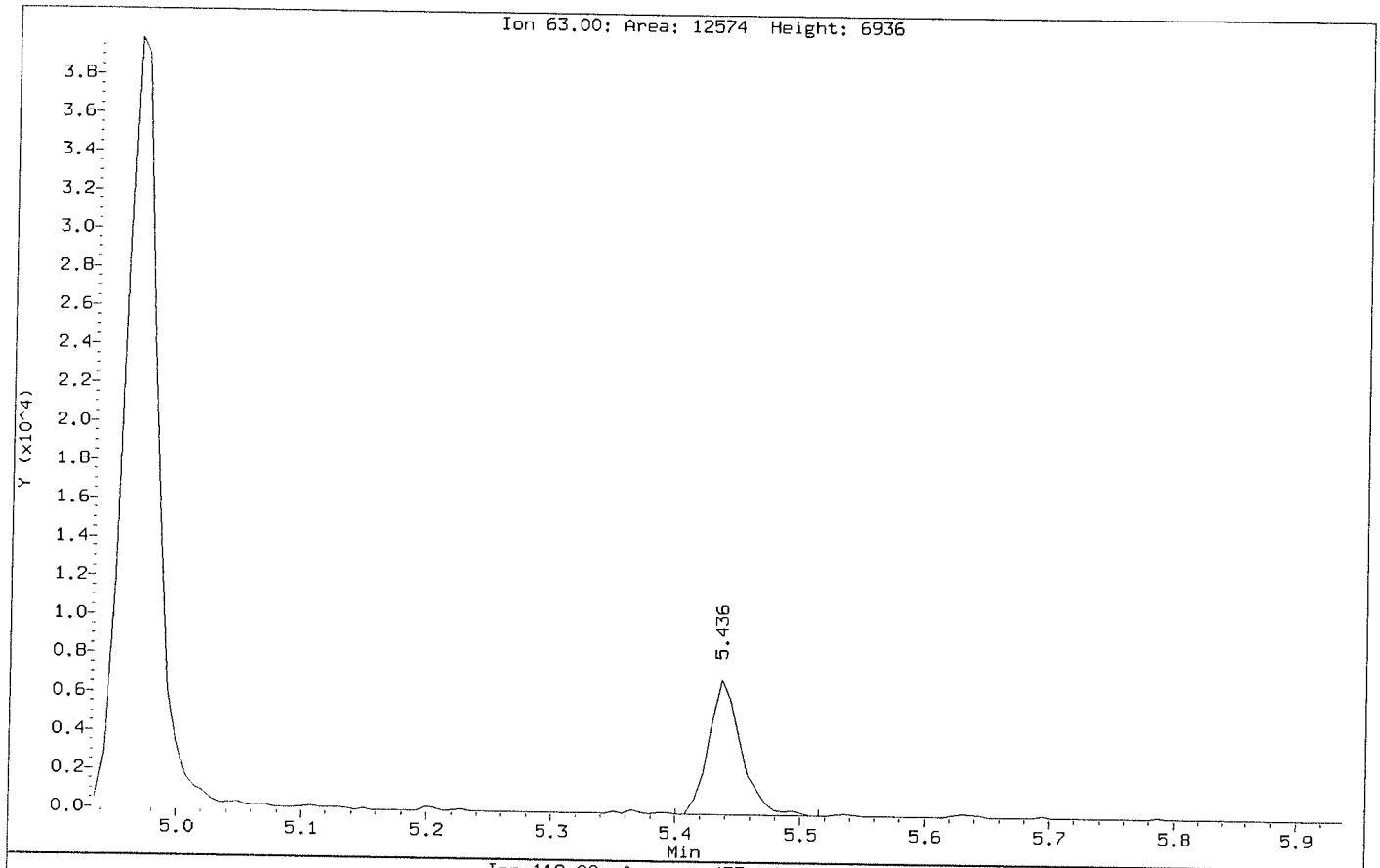
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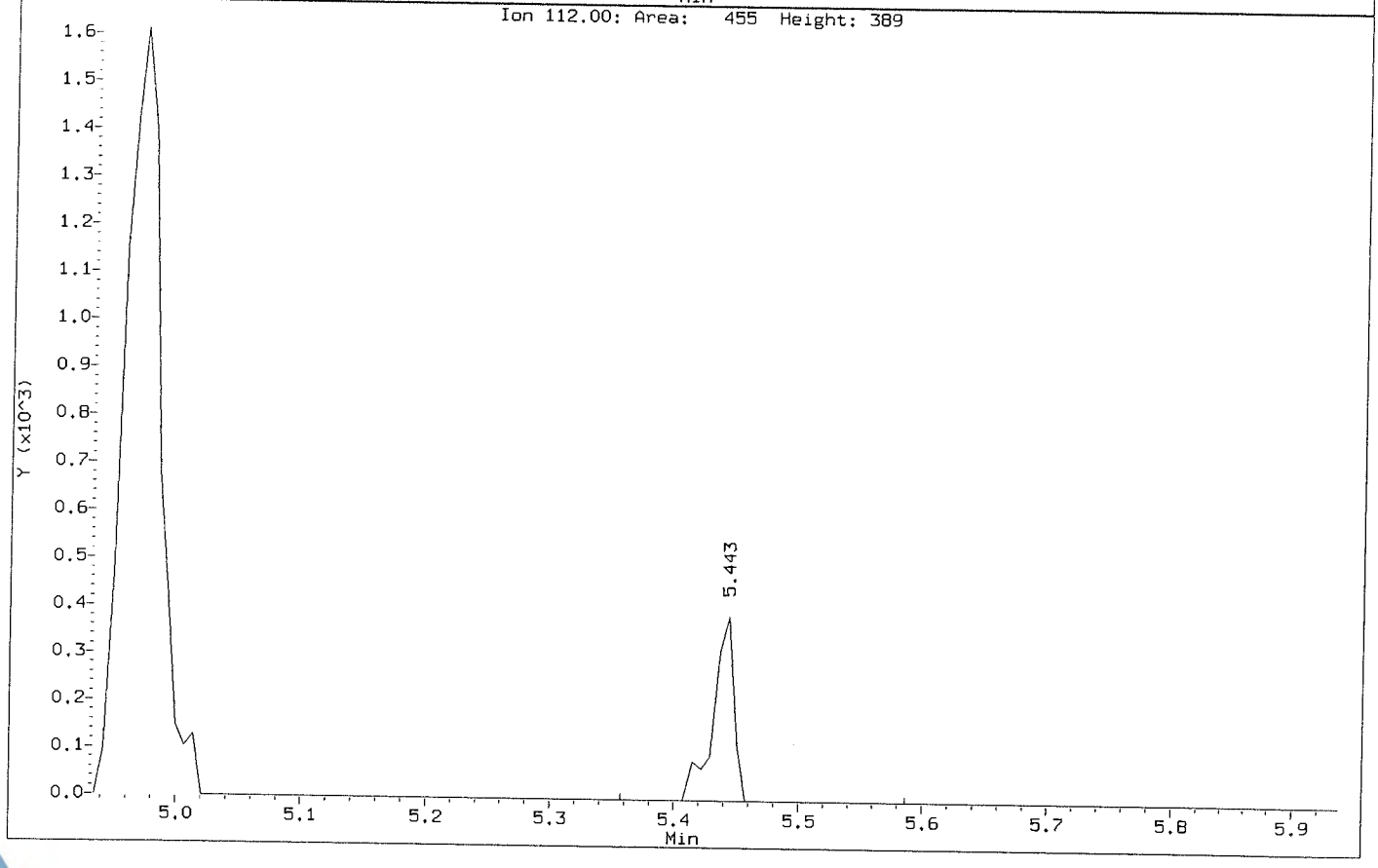
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CAS Number: 78-87-5



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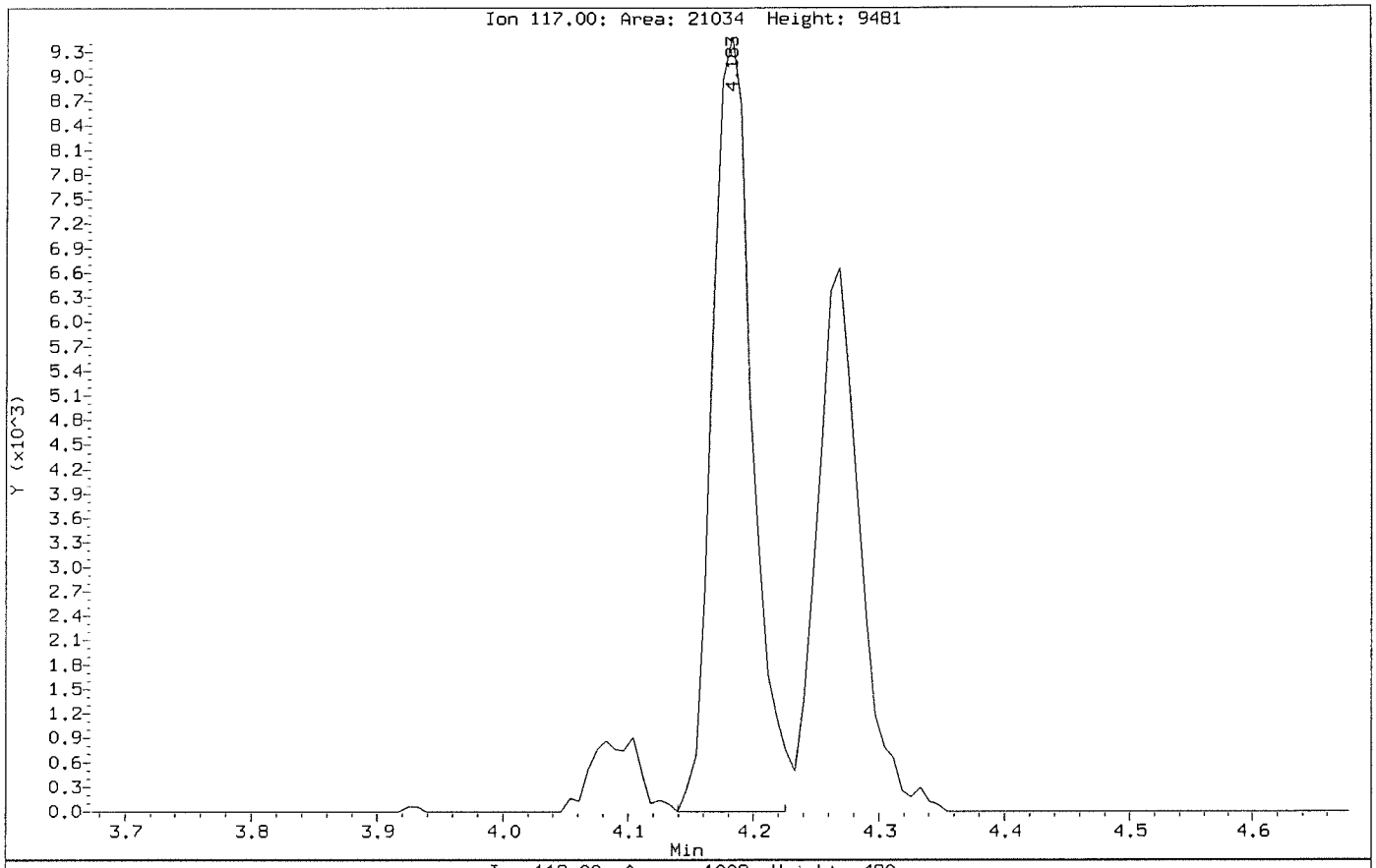
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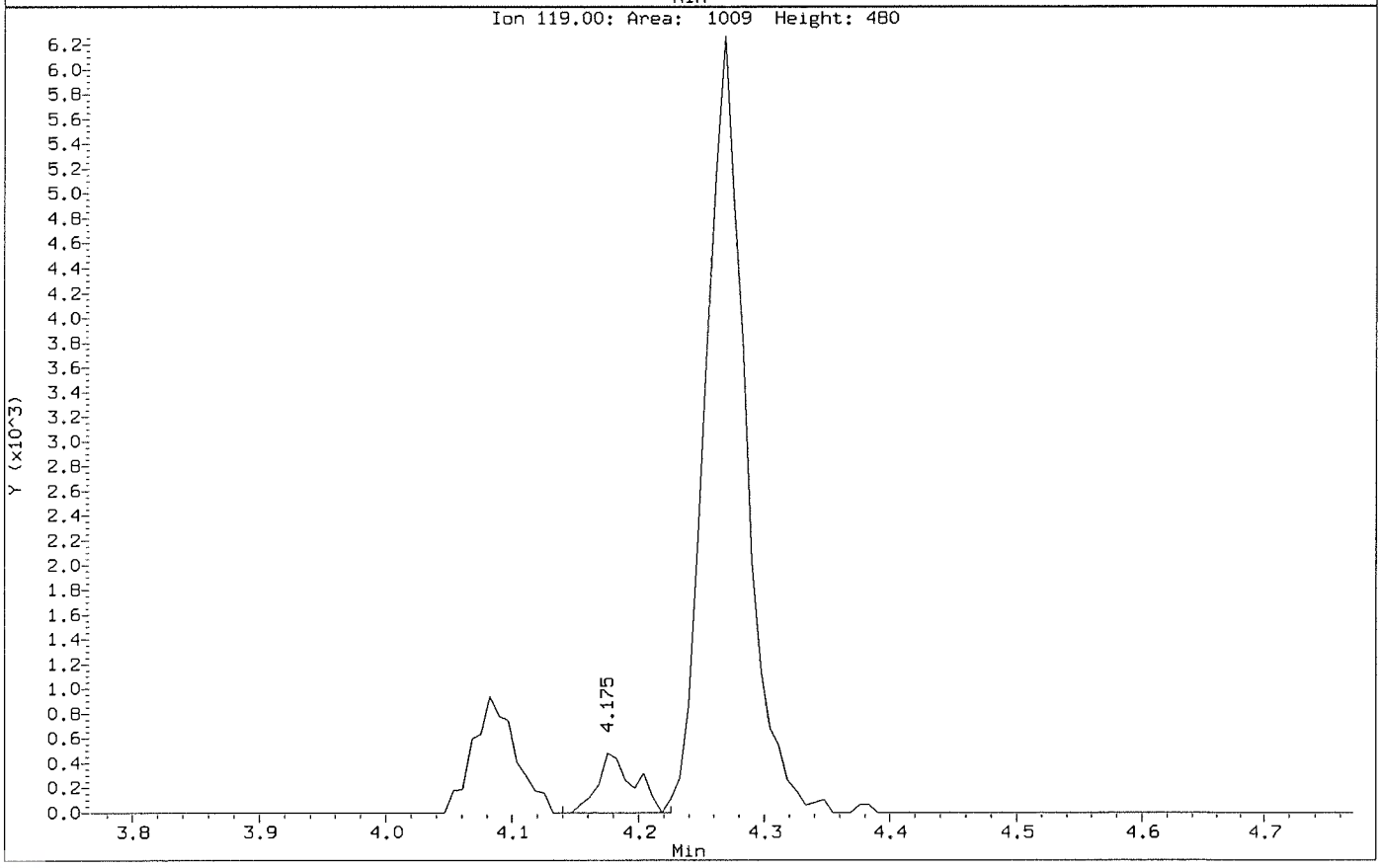




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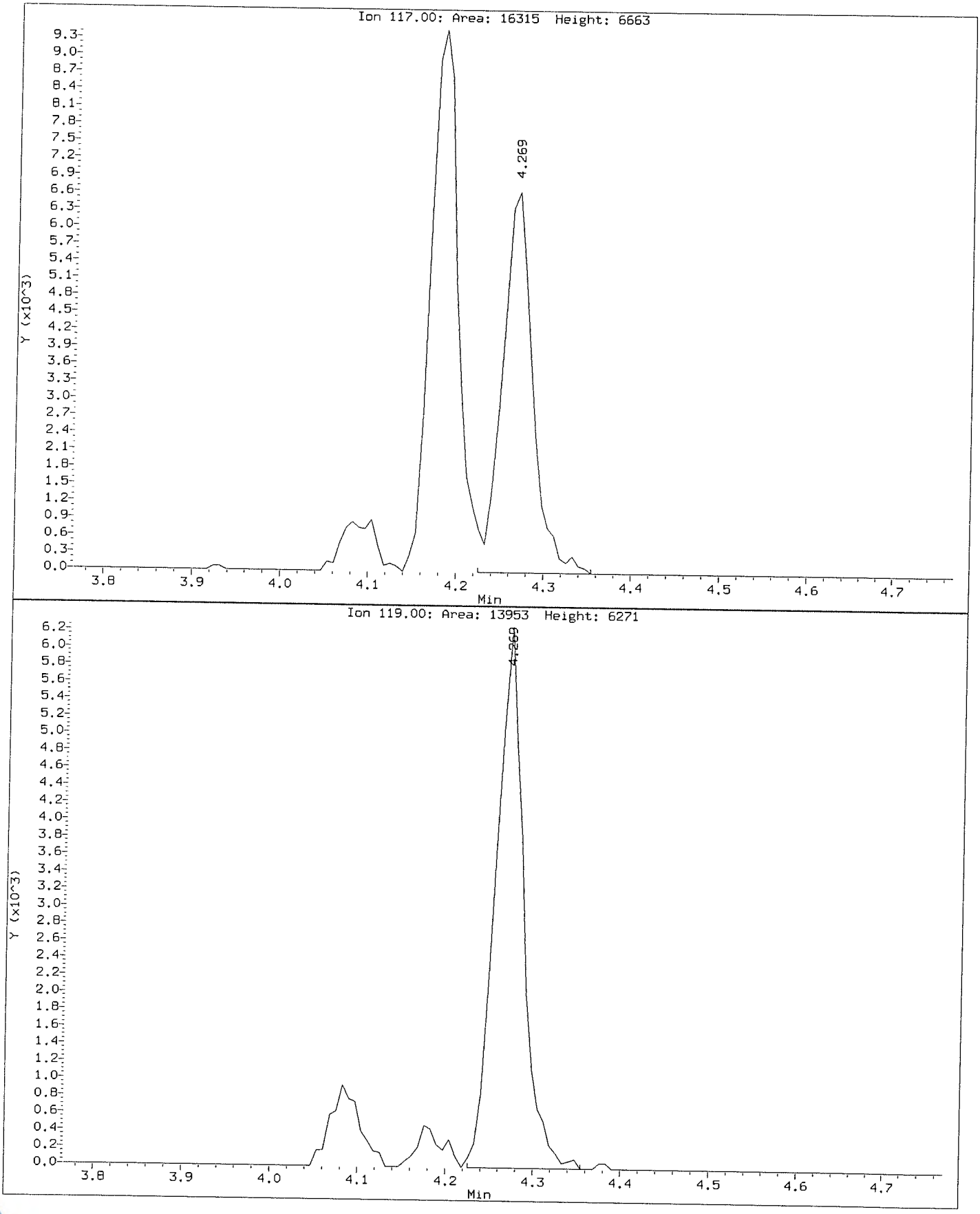
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CAS Number: 56-23-5





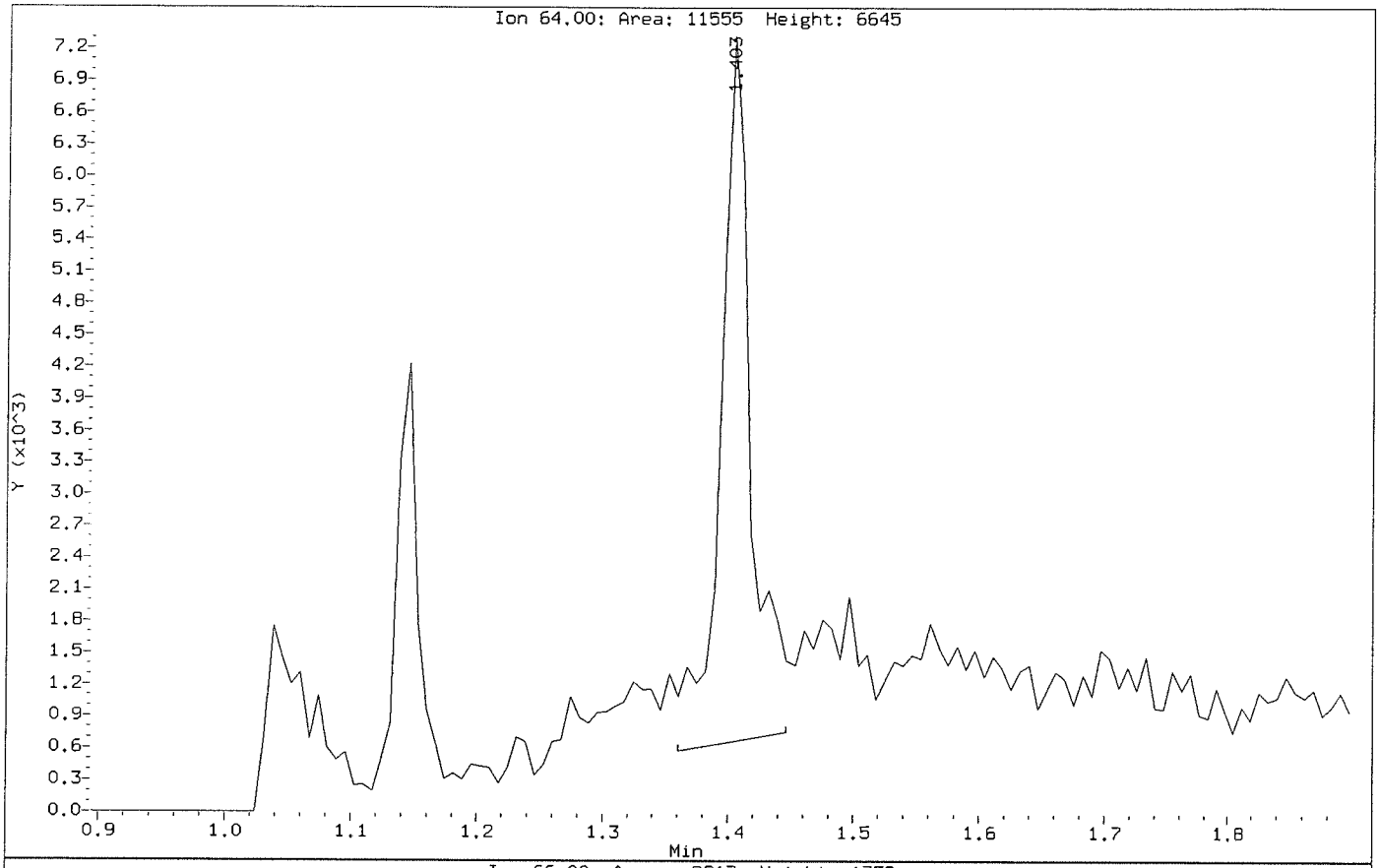
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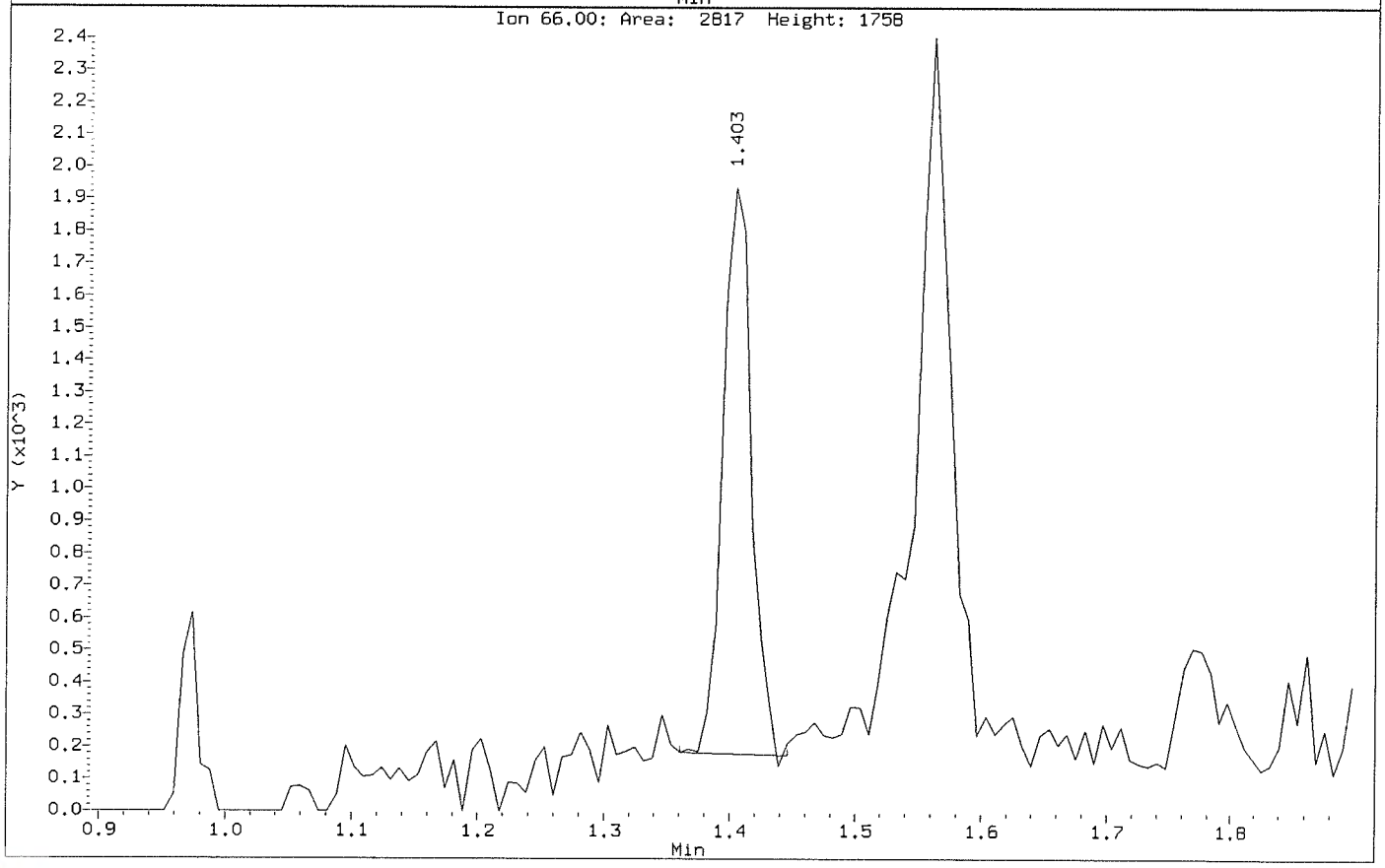
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CAS Number: 56-23-5



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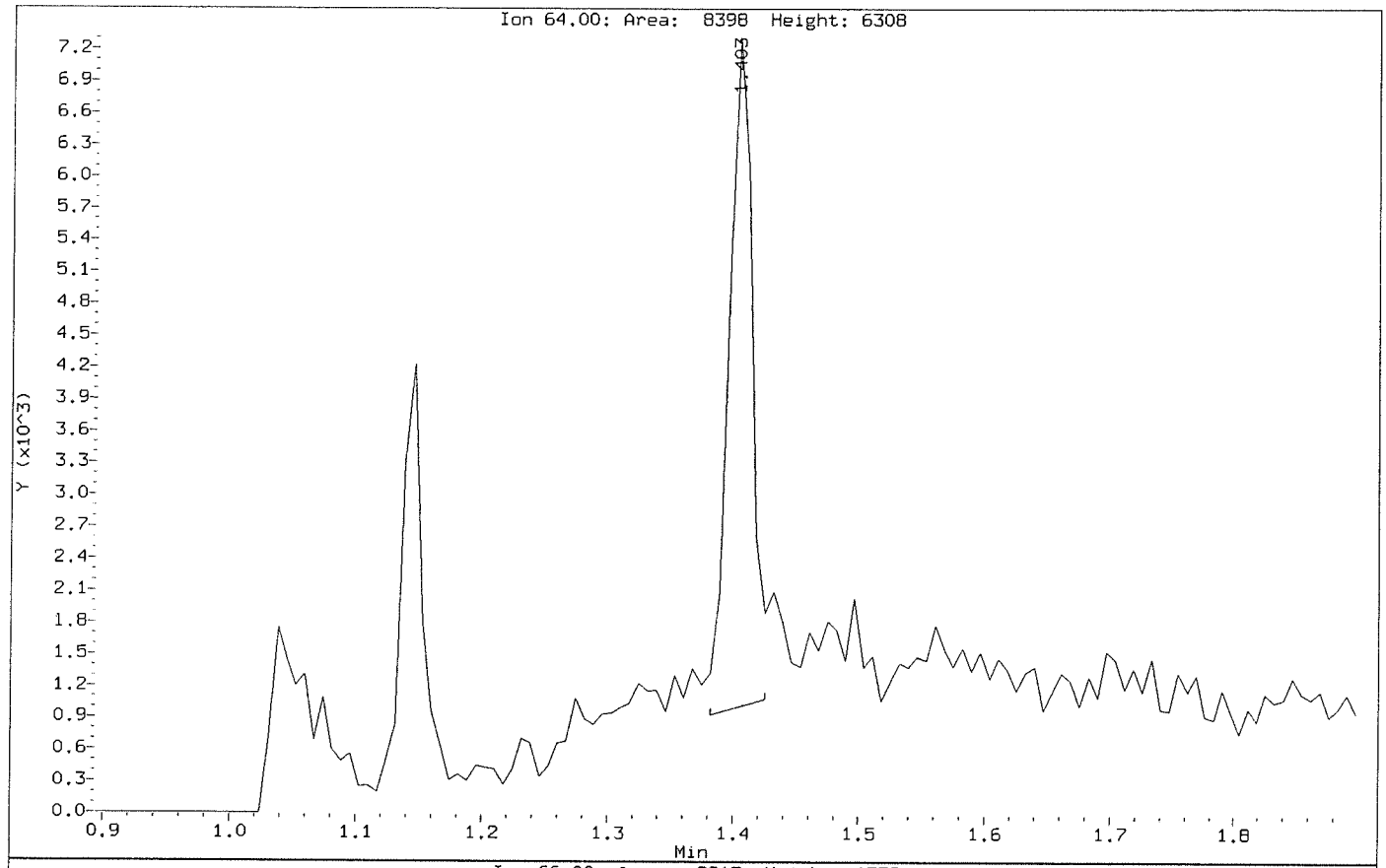
Compound: Chloroethane
CAS Number: 75-00-3

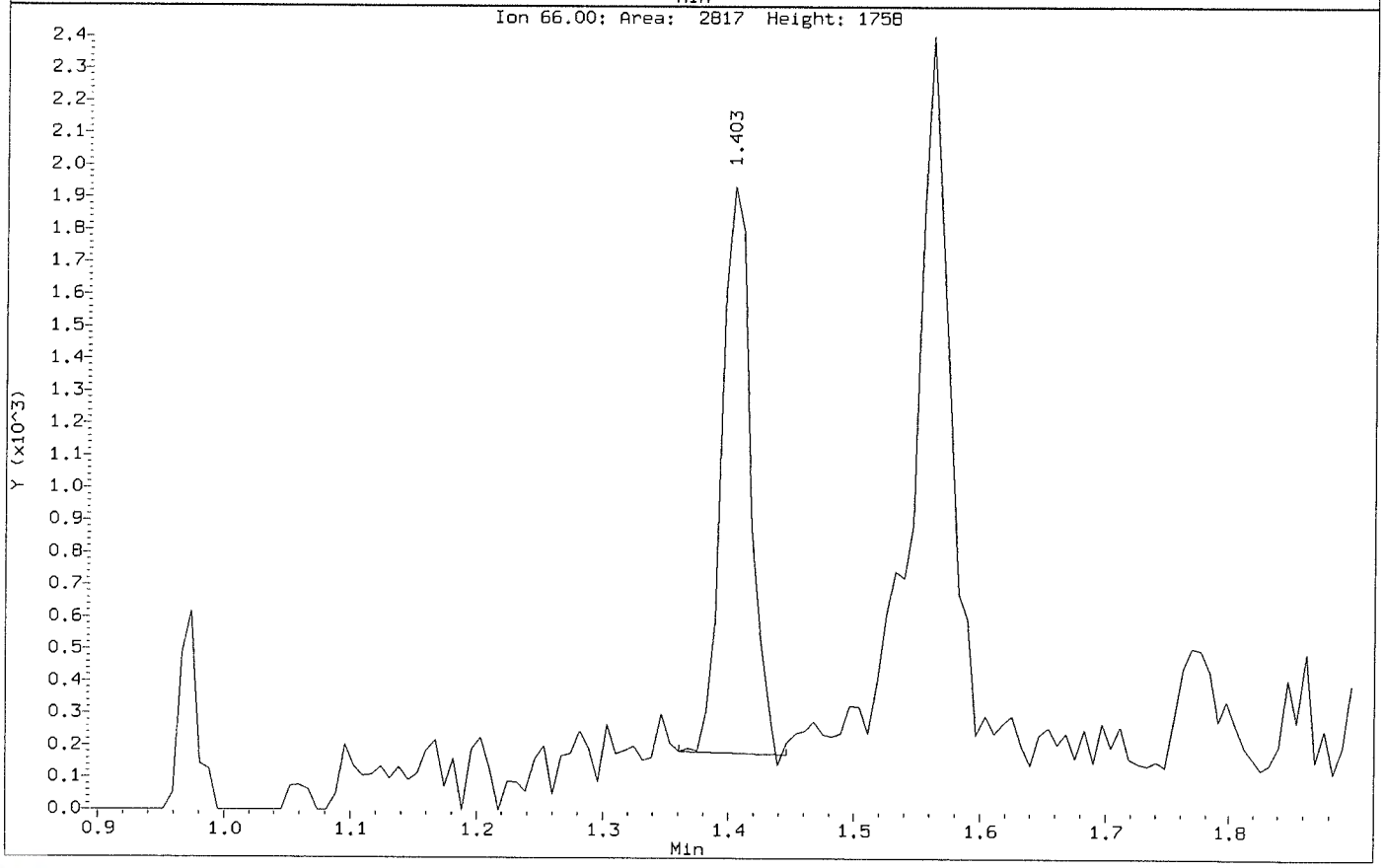




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Injection Date: 18-MAY-2021 13:07
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051807.D Page 1
Report Date: 22-Jun-2021 08:20

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X210518.b\X051807.D
Lab Smp Id: VSDT020 Client Smp ID: VSTD020
Inj Date : 18-MAY-2021 13:28
Operator : PC Inst ID: voa6.i
Smp Info : VSDT020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment   :
Method   : \\NAHSTWS005\Target\chem\voa6.i\X210518.b\8260W.m
Meth Date : 22-Jun-2021 08:20 voa6.i Quant Type: ISTD
Cal Date : 18-MAY-2021 13:07 Cal File: X051806.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CBIHOUSTONDOD.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

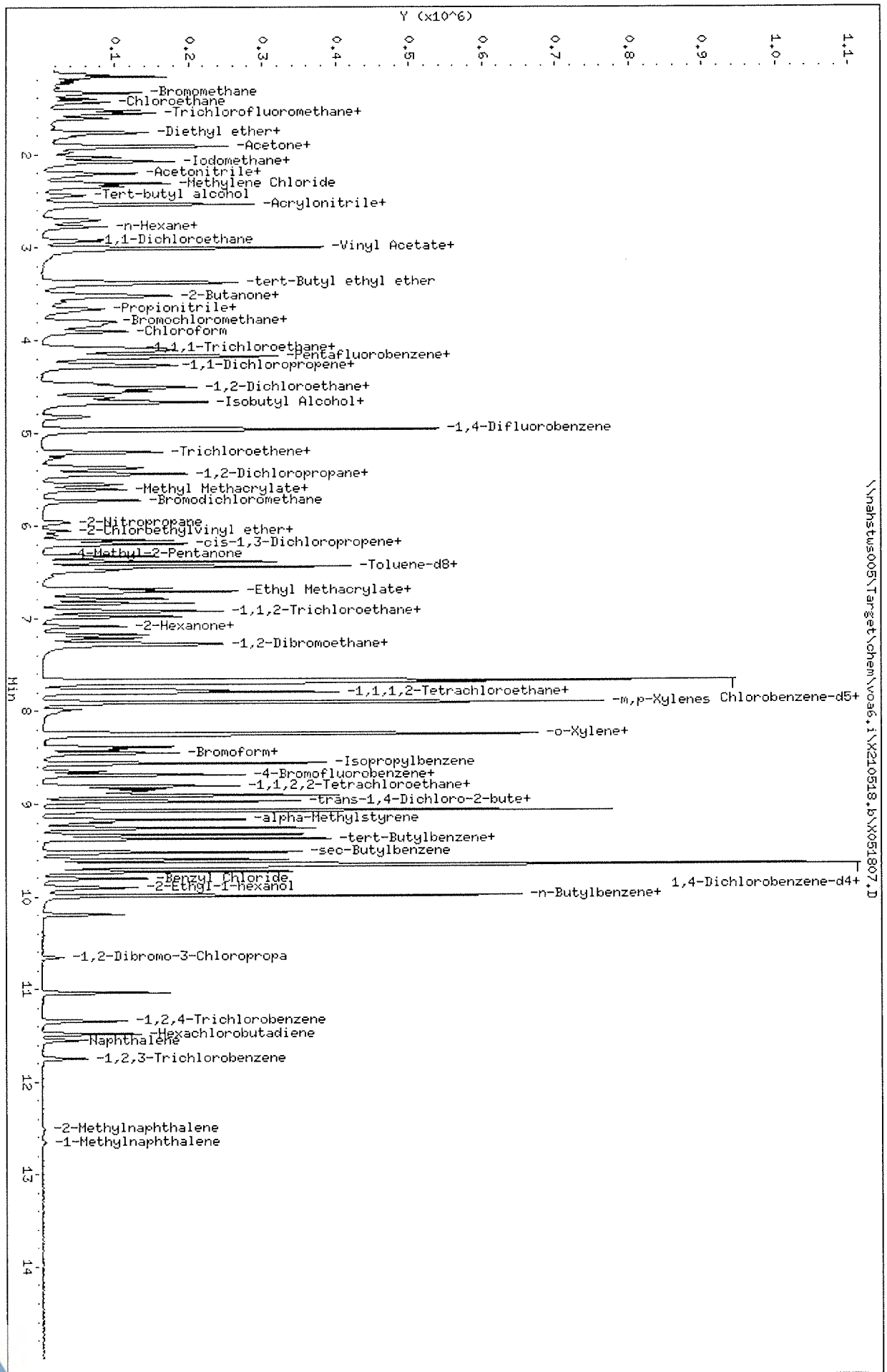
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	239147	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	395431	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	387314	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	196242	50.0000	
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	67187	20.0000	20.87
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	68387	20.0000	18.78
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	55528	20.0000	20.71
$	48 Toluene-d8	98	6.388	6.388	(0.833)	177650	20.0000	19.30
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	53138	20.0000	18.83
	31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	79461	20.0000	19.53
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	63561	20.0000	19.23
	138 Freon TF	101	1.919	1.919	(0.459)	43285	20.0000	19.07
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	42865	20.0000	19.05
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	85085	20.0000	19.21
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	44209	20.0000	18.48
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	63118	20.0000	18.63
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	17129	20.0000	18.97
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	50993	20.0000	18.76 (MH)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	30700	20.0000	19.01
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	177707	20.0000	17.80
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	4660	20.0000	18.65
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	53873	20.0000	19.92

Data File: \\nahstws005\Target\chem\voa6.i\X210518.b\X051807.D Page 2
Report Date: 22-Jun-2021 08:20

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
88	1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	102122	20.0000	18.56
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	79057	20.0000	20.33
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	53324	20.0000	20.06
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	174662	20.0000	17.83
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	103039	20.0000	18.27
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	87802	20.0000	19.93
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	112231	20.0000	19.62
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	74977	20.0000	18.92
24	2-Butanone	43	3.581	3.581	(0.856)	35815	40.0000	40.57
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	154565	20.0000	17.67
52	2-Hexanone	43	7.090	7.090	(0.924)	64652	40.0000	39.20
77	4-Chlorotoluene	91	9.067	9.067	(0.938)	187764	20.0000	18.41
82	p-Isopropyltoluene	119	9.648	9.648	(0.999)	167380	20.0000	17.27
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	96386	40.0000	39.12
10	Acetone	43	1.976	1.976	(0.473)	27873	40.0000	43.32
37	Benzene	78	4.512	4.512	(0.908)	188446	20.0000	19.26
74	Bromobenzene	156	8.802	8.802	(0.911)	63498	20.0000	19.41
29	Bromochloromethane	128	3.795	3.795	(0.908)	27530	20.0000	18.88
39	Bromodichloromethane	83	5.729	5.729	(1.153)	74633	20.0000	19.53
66	Bromoform	173	8.408	8.408	(1.096)	34786	20.0000	18.57
6	Bromomethane	94	1.339	1.339	(0.320)	51157	20.0000	20.06
19	Carbon Disulfide	76	2.069	2.069	(0.495)	208910	40.0000	37.07
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	62631	20.0000	18.17(H)
59	Chlorobenzene	112	7.692	7.692	(1.003)	141615	20.0000	18.64
7	Chloroethane	64	1.403	1.403	(0.336)	39588	20.0000	21.86
28	Chloroform	83	3.910	3.910	(0.935)	101443	20.0000	19.96
3	Chloromethane	50	1.073	1.073	(0.257)	54108	20.0000	21.11
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	52610	20.0000	19.08
46	cis-1,3-Dichloropropene	75	6.152	6.152	(1.238)	88923	20.0000	20.51
55	Dibromochloromethane	129	7.176	7.176	(0.936)	58237	20.0000	19.23
44	Dibromomethane	93	5.558	5.558	(1.118)	38557	20.0000	20.24
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	57043	20.0000	20.24
61	Ethylbenzene	106	7.800	7.800	(1.017)	67752	20.0000	18.05
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	20104	20.0000	19.17
67	Isopropylbenzene	105	8.559	8.559	(1.116)	203782	20.0000	17.76
62	m,p-Xylenes	106	7.907	7.907	(1.031)	179924	40.0000	37.19
17	Methylene Chloride	84	2.306	2.306	(0.551)	46728	20.0000	19.48
87	n-Butylbenzene	91	9.991	9.991	(1.034)	158021	20.0000	17.14
73	n-Propylbenzene	91	8.910	8.910	(0.922)	240606	20.0000	17.31
92	Naphthalene	128	11.546	11.546	(1.195)	42386	20.0000	18.49
63	o-Xylene	106	8.244	8.244	(1.075)	85643	20.0000	18.20
81	sec-Butylbenzene	105	9.519	9.519	(0.985)	198389	20.0000	17.24
64	Styrene	104	8.258	8.258	(1.077)	151430	20.0000	18.31
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	140248	20.0000	16.87
56	Tetrachloroethene	164	6.926	6.926	(0.903)	39827	20.0000	18.50
50	Toluene	91	6.446	6.446	(0.840)	211082	20.0000	18.88
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	42462	20.0000	18.45
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	76644	20.0000	20.20
38	Trichloroethene	130	5.207	5.207	(1.048)	50471	20.0000	19.27
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	89444	20.0000	19.45
5	Vinyl Chloride	62	1.145	1.145	(0.274)	54952	20.0000	19.03

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\nahstws005\Target\chem\voa6,i\X210518,b\X051807,D
Date : 18-MAY-2021 13:28
Client ID: VSTD020
Sample Info: VSDT020;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\X210518.b\Before\X051807.D
Injection Date: 18-MAY-2021 13:28
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

