LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 8

2021

Bate Stamp Numbers
01020566 – 01022521

Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976–2021

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

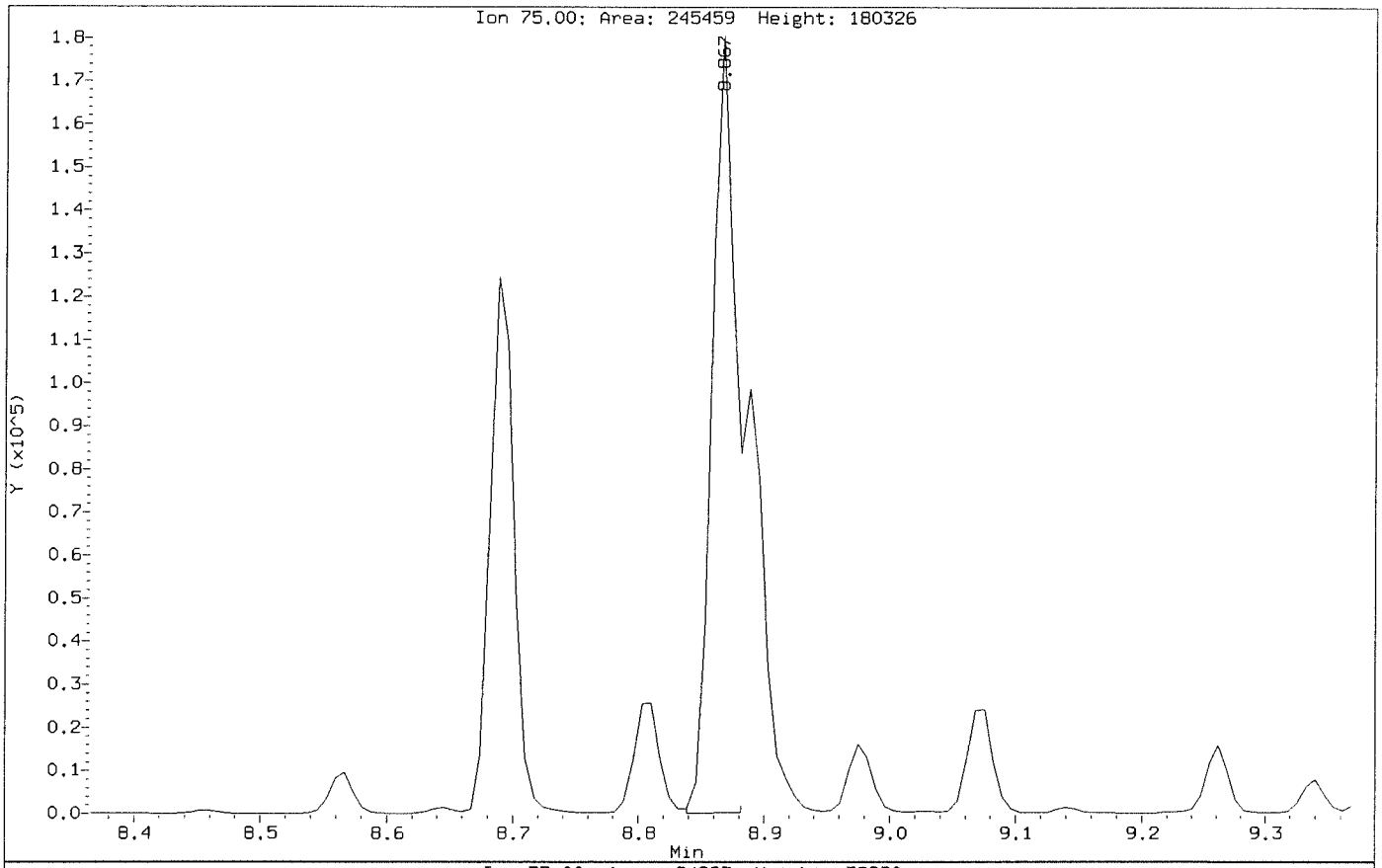
VOLUME 8

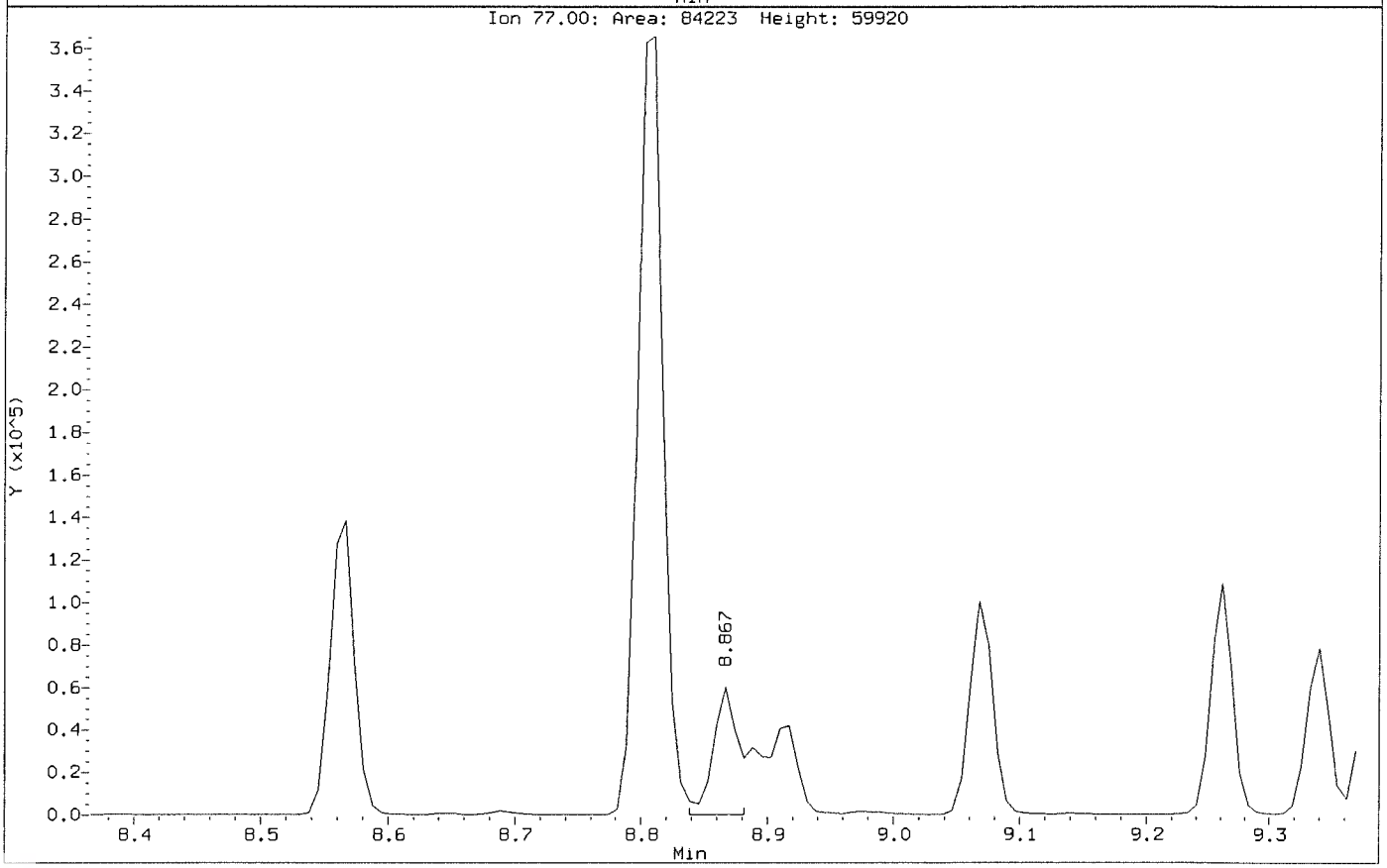
2021

A. Title: (Cont'd) Report – Level IV DoD Analytical to Quarterly Evaluation Report, 4th Quarter (October-December) 2020, Groundwater Treatment Plant, Longhorn Army Ammunition Plant, Karnack, Texas, April 2021
Author(s): Bhate Environmental Associates, Inc.
Recipient: U.S. Army Corps of Engineers
Date: April 7, 2021
Bate Stamp: 01020566 – 01022521

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010802.D
Injection Date: 08-OCT-2020 11:22
Instrument: voa6.i
Client Sample ID: CCV

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





Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010805.D Page 1
Report Date: 07-Nov-2020 10:39

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201008.b\X010805.D
Lab Smp Id: VLCSW-200108 Client Smp ID: VLCSW-200108
Inj Date : 08-OCT-2020 12:34
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200108;VLCSW-200108;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment   :
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Meth Date : 07-Nov-2020 10:39 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

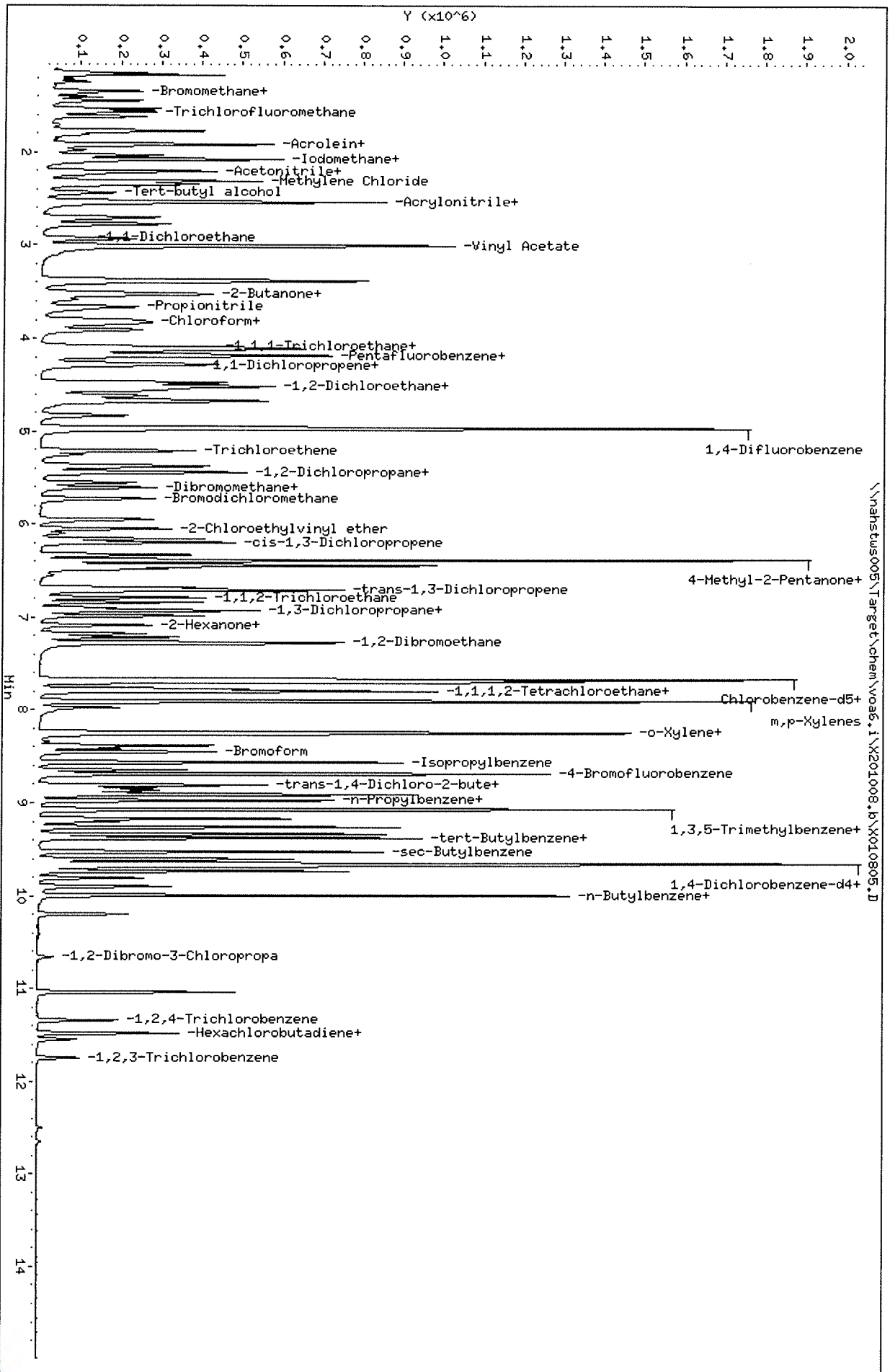
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	600056	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	943112	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	854848	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	367292	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	292244	47.3958	47.39
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	325855	48.3080	48.30
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1076589	47.9024	47.90
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	380354	51.0690	51.06
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	115397	19.4797	19.47
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	182059	19.6993	19.69
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	123072	18.9485	18.94
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	98467	19.5580	19.55
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	242823	19.3709	19.37
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	108072	20.0311	20.03
32 1,1-Dichloropropene	75	4.290	4.282	(0.863)	171990	19.8231	19.82
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	30547	21.5189	21.51
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	104673	19.4822	19.48(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	59002	22.0075	22.00
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	427473	19.5514	19.55
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	8301	18.7287	18.72
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	116660	19.6387	19.63
88 1,2-Dichlorobenzene	146	9.999	9.991	(1.035)	196323	19.1953	19.19

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010805.D Page 2
Report Date: 07-Nov-2020 10:39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	158787	19.5270	19.52
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	139132	19.9236	19.92
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	422556	19.4835	19.48
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	229679	19.4419	19.44
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	200918	19.2925	19.29
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	223739	19.0705	19.07
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	190592	20.2346	20.23
24	2-Butanone	43	3.588	3.580	(0.856)	98234	44.8475	44.84
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	365267	19.1387	19.13
52	2-Hexanone	43	7.090	7.090	(0.924)	157704	41.6042	41.60
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	412402	18.9790	18.97
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	429709	19.6433	19.64
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	236922	39.4829	39.48
10	Acetone	43	1.976	1.976	(0.472)	77327	51.6533	51.65
37	Benzene	78	4.519	4.519	(0.909)	523542	19.4100	19.40
74	Bromobenzene	156	8.809	8.810	(0.912)	143923	19.3915	19.39
29	Bromochloromethane	128	3.802	3.803	(0.908)	70601	18.8267	18.82
39	Bromodichloromethane	83	5.729	5.729	(1.153)	163727	19.1421	19.14
66	Bromoform	173	8.415	8.416	(1.097)	73603	19.7110	19.71
6	Bromomethane	94	1.346	1.346	(0.321)	104956	21.5796	21.57
19	Carbon Disulfide	76	2.076	2.076	(0.496)	739164	39.6631	39.66
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	146674	19.4417	19.44
59	Chlorobenzene	112	7.699	7.699	(1.004)	334826	19.2530	19.25
7	Chloroethane	64	1.410	1.410	(0.337)	93942	19.9855	19.98
28	Chloroform	83	3.917	3.910	(0.935)	227879	19.5918	19.59
3	Chloromethane	50	1.081	1.081	(0.258)	152996	18.6193	18.61
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	143607	19.5345	19.53
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	212308	19.6227	19.62
55	Dibromochloromethane	129	7.176	7.176	(0.936)	119522	19.5664	19.56
44	Dibromomethane	93	5.557	5.557	(1.118)	81516	19.6848	19.68
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	98114	17.4231	17.42
61	Ethylbenzene	106	7.799	7.800	(1.017)	178046	19.6125	19.61
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	58081	23.2345	23.23
67	Isopropylbenzene	105	8.566	8.566	(1.117)	517277	19.5970	19.59
62	m,p-Xylenes	106	7.907	7.907	(1.031)	428411	39.3070	39.30
17	Methylene Chloride	84	2.305	2.305	(0.550)	138101	20.6185	20.61
87	n-Butylbenzene	91	9.999	9.999	(1.035)	384698	20.3264	20.32
73	n-Propylbenzene	91	8.917	8.917	(0.923)	610822	19.4961	19.49
92	Naphthalene	128	11.546	11.546	(1.195)	70658	20.6302	20.63
63	o-Xylene	106	8.244	8.244	(1.075)	207919	19.5354	19.53
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	498193	19.4128	19.41
64	Styrene	104	8.265	8.258	(1.078)	353485	19.4133	19.41
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	352547	19.5008	19.50
56	Tetrachloroethene	164	6.933	6.933	(0.904)	105806	19.5910	19.59
50	Toluene	91	6.453	6.446	(0.841)	541349	19.5648	19.56
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	122624	19.7274	19.72
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	179782	19.9365	19.93
38	Trichloroethene	130	5.214	5.214	(1.049)	131692	19.5223	19.52
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	179302	20.5541	20.55
5	Vinyl Chloride	62	1.145	1.145	(0.273)	151313	19.5213	19.52

QC Flag Legend

M - Compound response manually integrated.

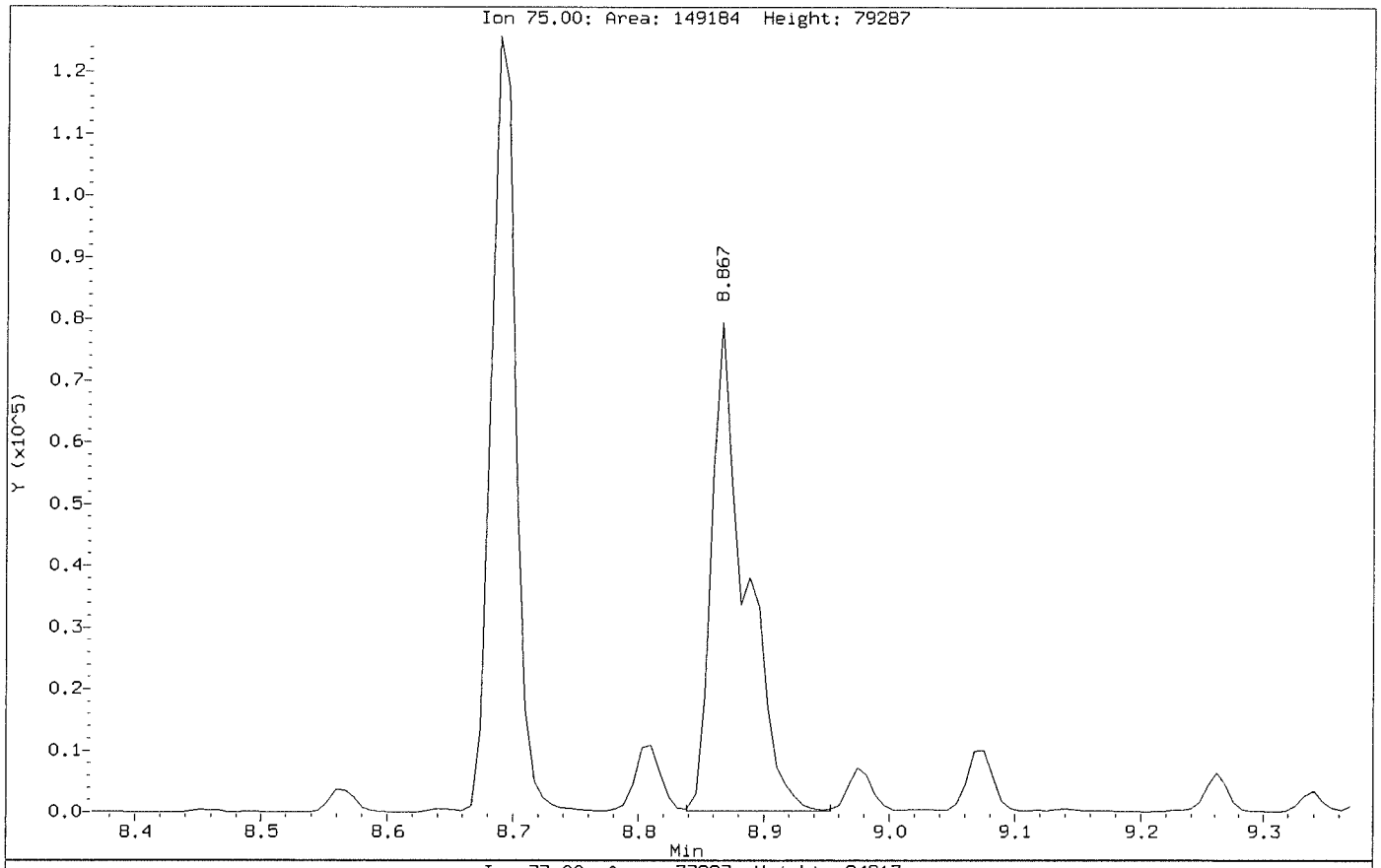


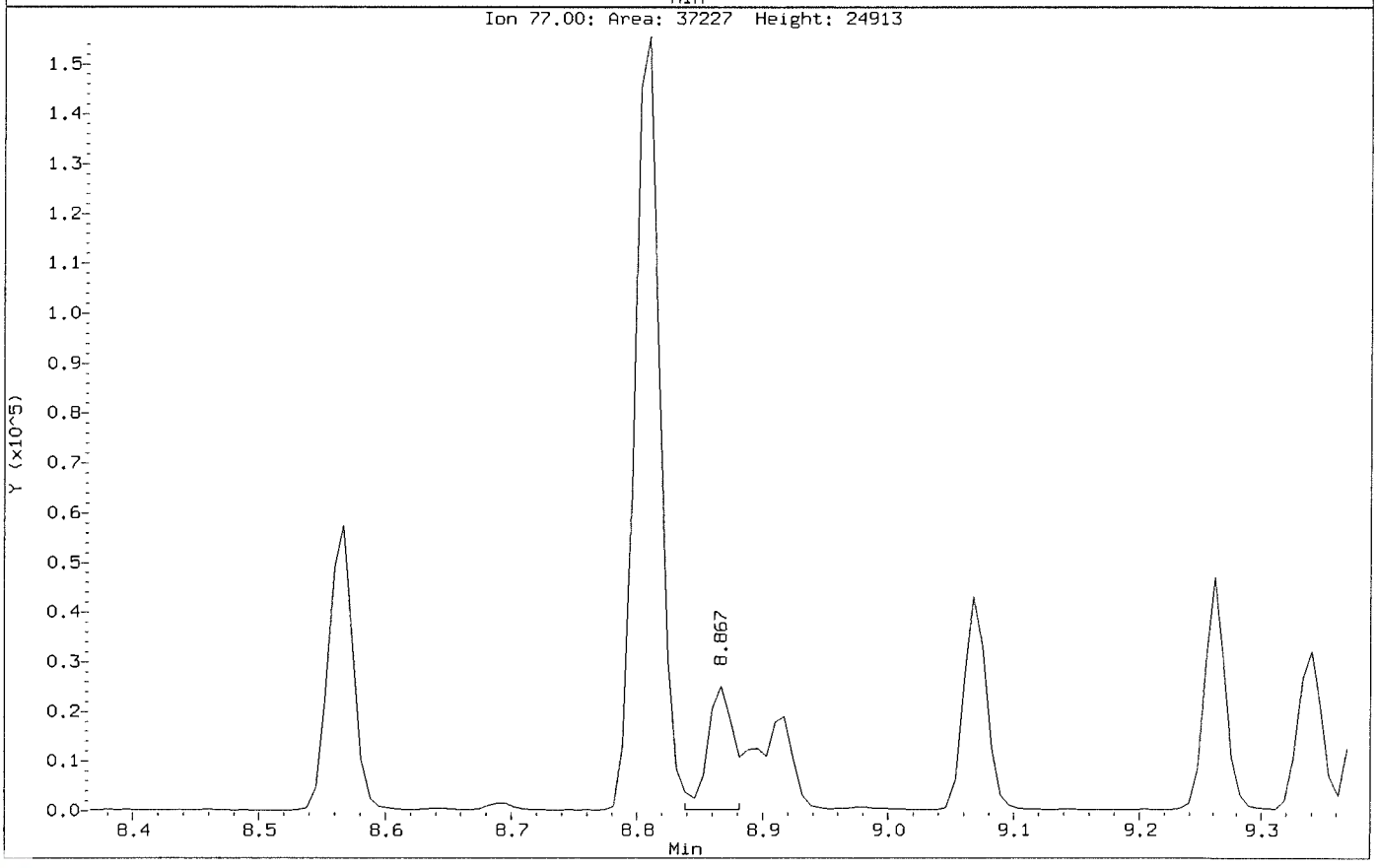
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Sample Info: VLCSW-200108;VLCSW-200108;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\Before\X010805.D
Injection Date: 08-OCT-2020 12:34
Instrument: voa6.i
Client Sample ID: VLCSW-200108

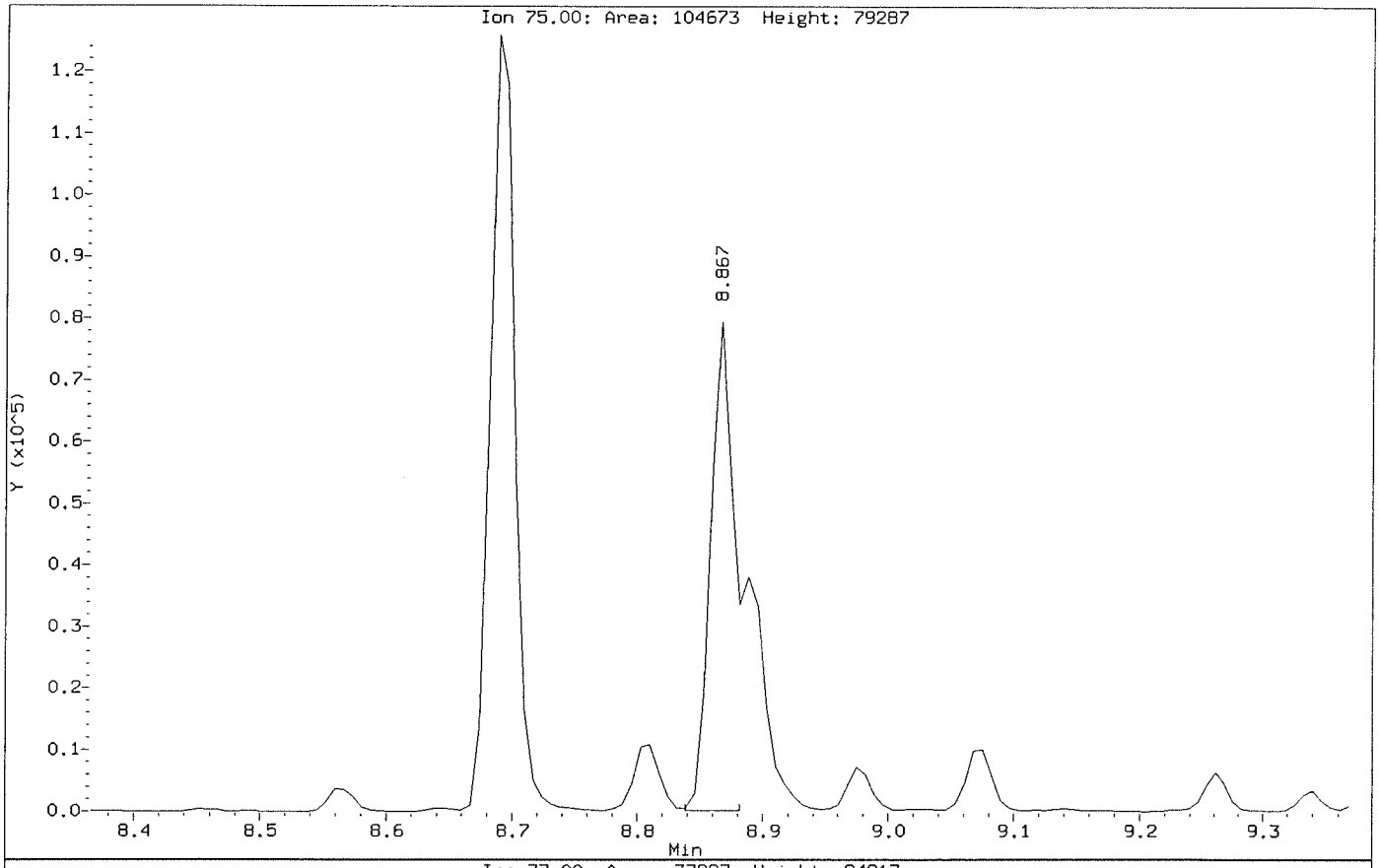
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

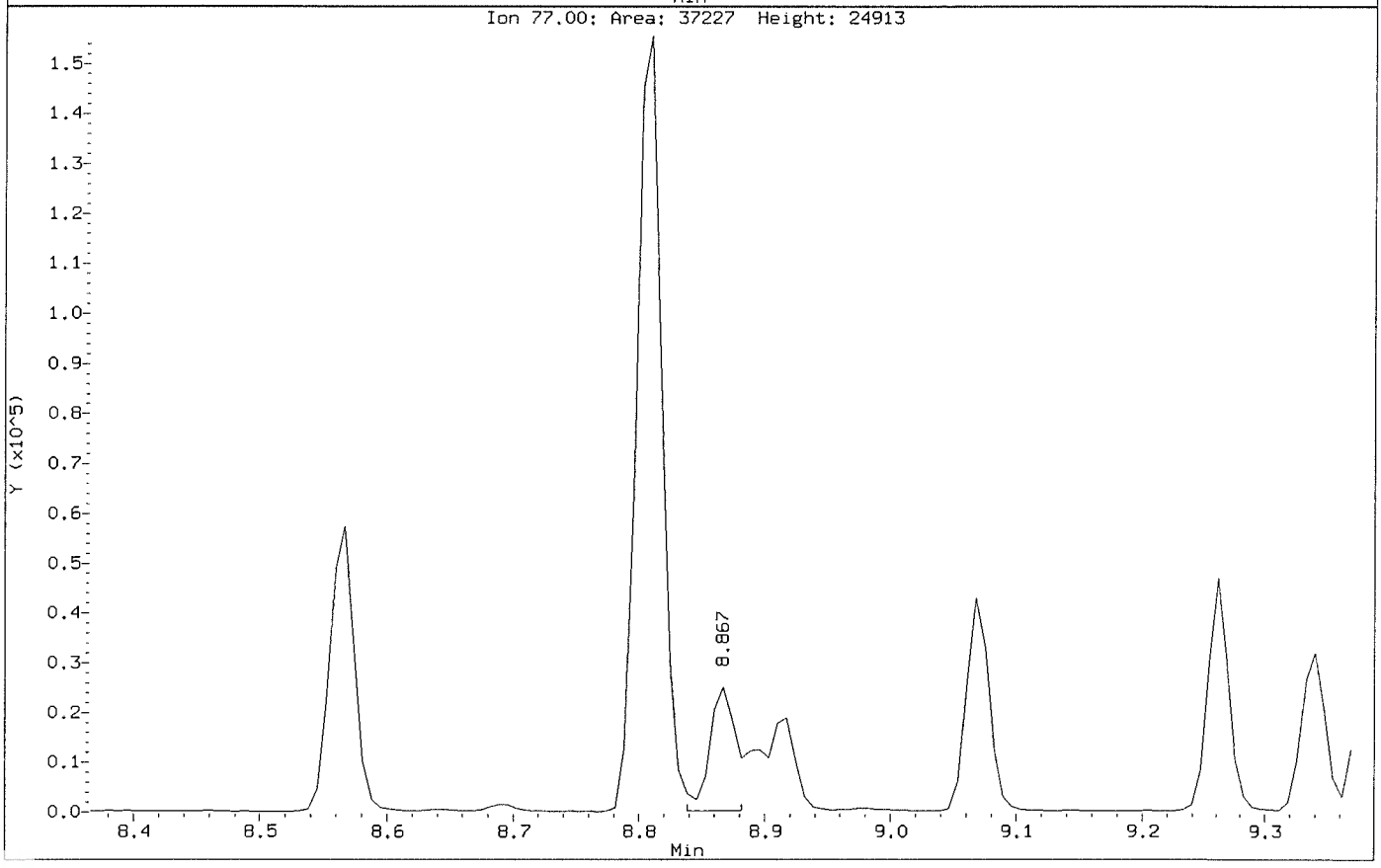




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Injection Date: 08-OCT-2020 12:34
Instrument: voa6.i
Client Sample ID: VLCSW-200108

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





Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010807.D Page 1
Report Date: 07-Nov-2020 10:39

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201008.b\X010807.D
Lab Smp Id: VBLKW-200108 Client Smp ID: VBLKW-200108
Inj Date : 08-OCT-2020 13:22
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200108;VBLKW-200108;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201008.b\8260W.m
Meth Date : 07-Nov-2020 10:39 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
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Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

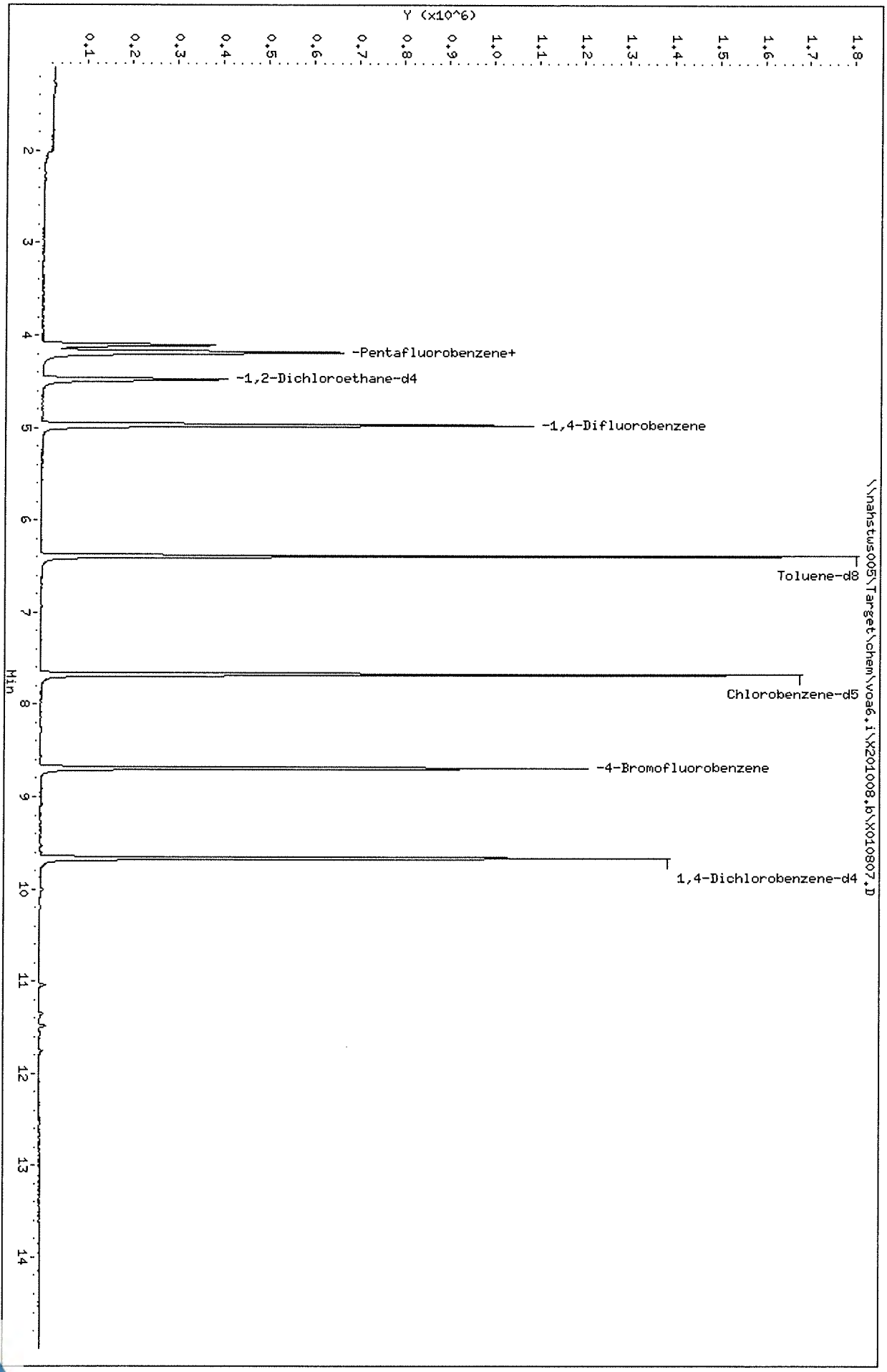
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	567881	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	900112	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	811972	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	350345	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	272865	46.7603	46.76
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	290111	45.4458	45.44
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1052032	49.2816	49.28
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	377722	53.4313	53.43

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010807.D
Date : 08-OCT-2020 13:22
Client ID: VBLKW-200108
Sample Info: VBLKW-200108;VBLKW-200108;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\X201008.b\X010819.D Page 1
Report Date: 07-Nov-2020 10:39

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201008.b\X010819.D
Lab Smp Id: HS20100283-03MS Client Smp ID: HS20100283-03MS
Inj Date : 08-OCT-2020 18:11
Operator : PC Inst ID: voa6.i
Smp Info : HS20100283-03MS;HS20100283-03MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201008.b\8260W.m
Meth Date : 07-Nov-2020 10:39 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 19 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

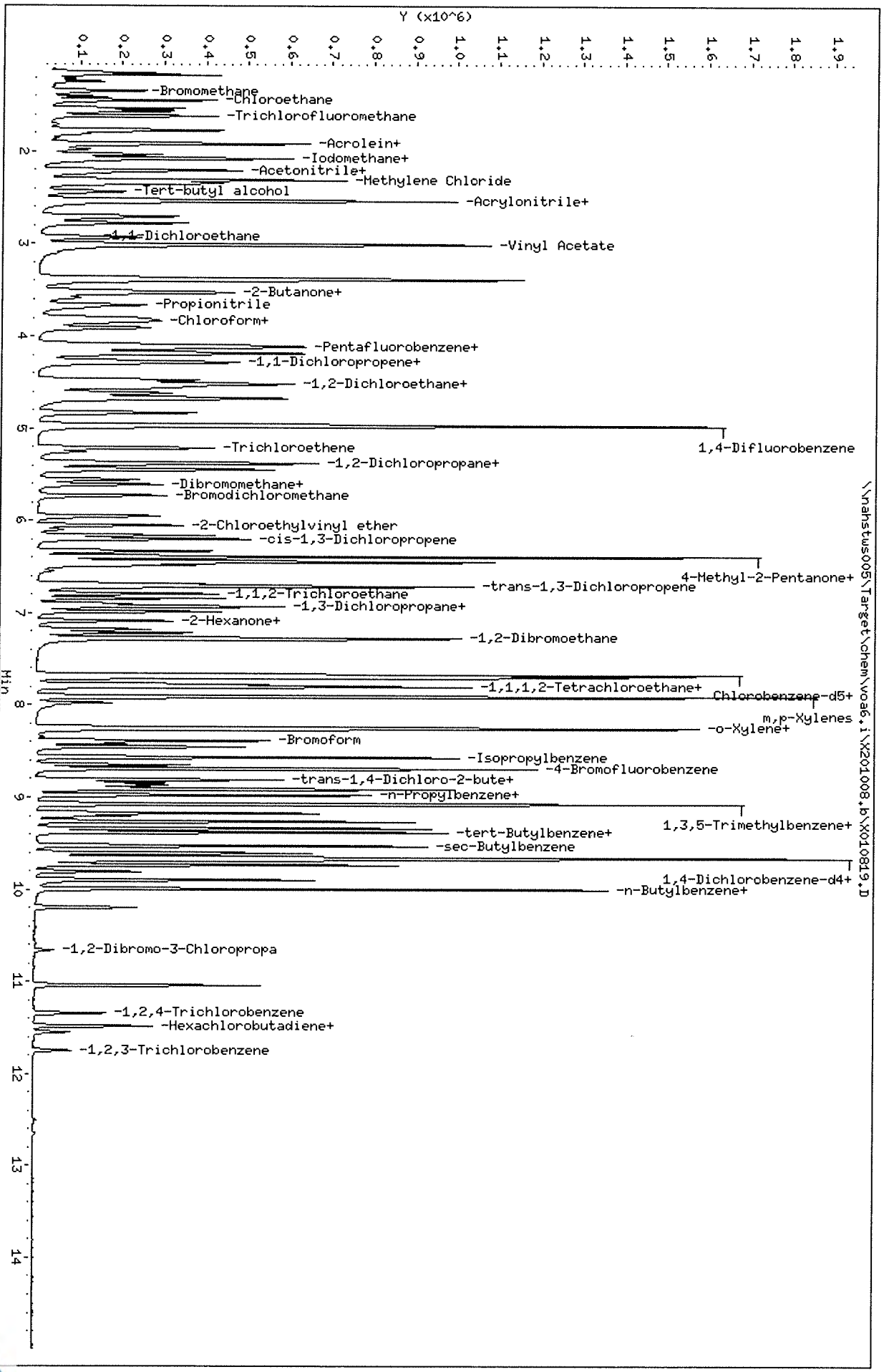
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* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	836047	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	769048	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	331098	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	256433	47.7761	47.77
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	270067	45.9947	45.99
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	975184	48.2314	48.23
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	353488	52.7843	52.78
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	122593	23.0032	23.00
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	200552	24.9291	24.92
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	132028	22.5494	22.54
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	104439	23.0585	23.05
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	254949	23.3644	23.36
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	121540	25.8793	25.87
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	187914	24.4321	24.43
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	26359	20.5985	20.59
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	112425	23.2124	23.21(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	51638	21.4063	21.40
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	446400	22.6490	22.64
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	8898	22.2702	22.27
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	122005	22.8299	22.82
88 1,2-Dichlorobenzene	146	9.999	9.991	(1.035)	201701	21.8769	21.87

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010819.D Page 2
Report Date: 07-Nov-2020 10:39

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	166318	23.0724	23.07
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	146326	23.6372	23.63
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	451317	23.0845	23.08
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	234303	22.0014	22.00
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	211618	22.5870	22.58
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	231834	21.9206	21.92
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	199661	24.3514	24.35
24 2-Butanone	43	3.588	3.580	(0.856)	109260	57.3033	57.30
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	382855	22.2532	22.25
52 2-Hexanone	43	7.090	7.090	(0.924)	181375	53.1872	53.18
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	433961	22.1543	22.15
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	460746	23.3645	23.36
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	267474	49.5474	49.54
10 Acetone	43	1.976	1.976	(0.472)	89110	70.0272	70.02
37 Benzene	78	4.519	4.519	(0.909)	565165	23.6364	23.63
74 Bromobenzene	156	8.810	8.810	(0.912)	149945	22.4113	22.41
29 Bromochloromethane	128	3.803	3.803	(0.908)	74688	22.8800	22.87
39 Bromodichloromethane	83	5.729	5.729	(1.153)	173303	22.8564	22.85
66 Bromoform	173	8.416	8.416	(1.097)	77723	23.1365	23.13
6 Bromomethane	94	1.346	1.346	(0.321)	106145	25.1100	25.10
19 Carbon Disulfide	76	2.076	2.076	(0.496)	761383	46.9343	46.93
34 Carbon Tetrachloride	117	4.275	4.268	(0.860)	164095	24.5363	24.53
59 Chlorobenzene	112	7.699	7.699	(1.004)	350845	22.4249	22.42
7 Chloroethane	64	1.403	1.410	(0.335)	97403	23.8051	23.80
28 Chloroform	83	3.917	3.910	(0.935)	241074	23.8101	23.81
3 Chloromethane	50	1.081	1.081	(0.258)	145561	20.3503	20.35
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	152473	23.8266	23.82
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	218795	22.8120	22.81
55 Dibromochloromethane	129	7.176	7.176	(0.936)	122306	22.2560	22.25
44 Dibromomethane	93	5.557	5.557	(1.118)	83812	22.8312	22.83
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	80211	16.4894	16.48
61 Ethylbenzene	106	7.800	7.800	(1.017)	190819	23.3646	23.36
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	50006	22.2376	22.23
67 Isopropylbenzene	105	8.566	8.566	(1.117)	569985	24.0030	24.00
62 m,p-Xylenes	106	7.907	7.907	(1.031)	458960	46.8079	46.80
17 Methylene Chloride	84	2.305	2.305	(0.550)	145676	25.1354	25.13
87 n-Butylbenzene	91	9.999	9.999	(1.035)	395181	23.1629	23.16
73 n-Propylbenzene	91	8.917	8.917	(0.923)	662433	23.4547	23.45
92 Naphthalene	128	11.546	11.546	(1.195)	63313	20.5064	20.50
63 o-Xylene	106	8.244	8.244	(1.075)	220959	23.0768	23.07
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	541126	23.3907	23.39
64 Styrene	104	8.258	8.258	(1.077)	371153	22.6578	22.65
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	380279	23.3342	23.33
56 Tetrachloroethene	164	6.933	6.933	(0.904)	116567	23.9915	23.99
50 Toluene	91	6.446	6.446	(0.840)	581289	23.3520	23.35
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	132956	24.5722	24.57
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	186065	23.2755	23.27
38 Trichloroethene	130	5.214	5.214	(1.049)	143932	24.0692	24.06
8 Trichlorofluoromethane	101	1.568	1.568	(0.374)	198180	26.0985	26.09
5 Vinyl Chloride	62	1.145	1.145	(0.273)	158747	23.5278	23.52

QC Flag Legend

M - Compound response manually integrated.

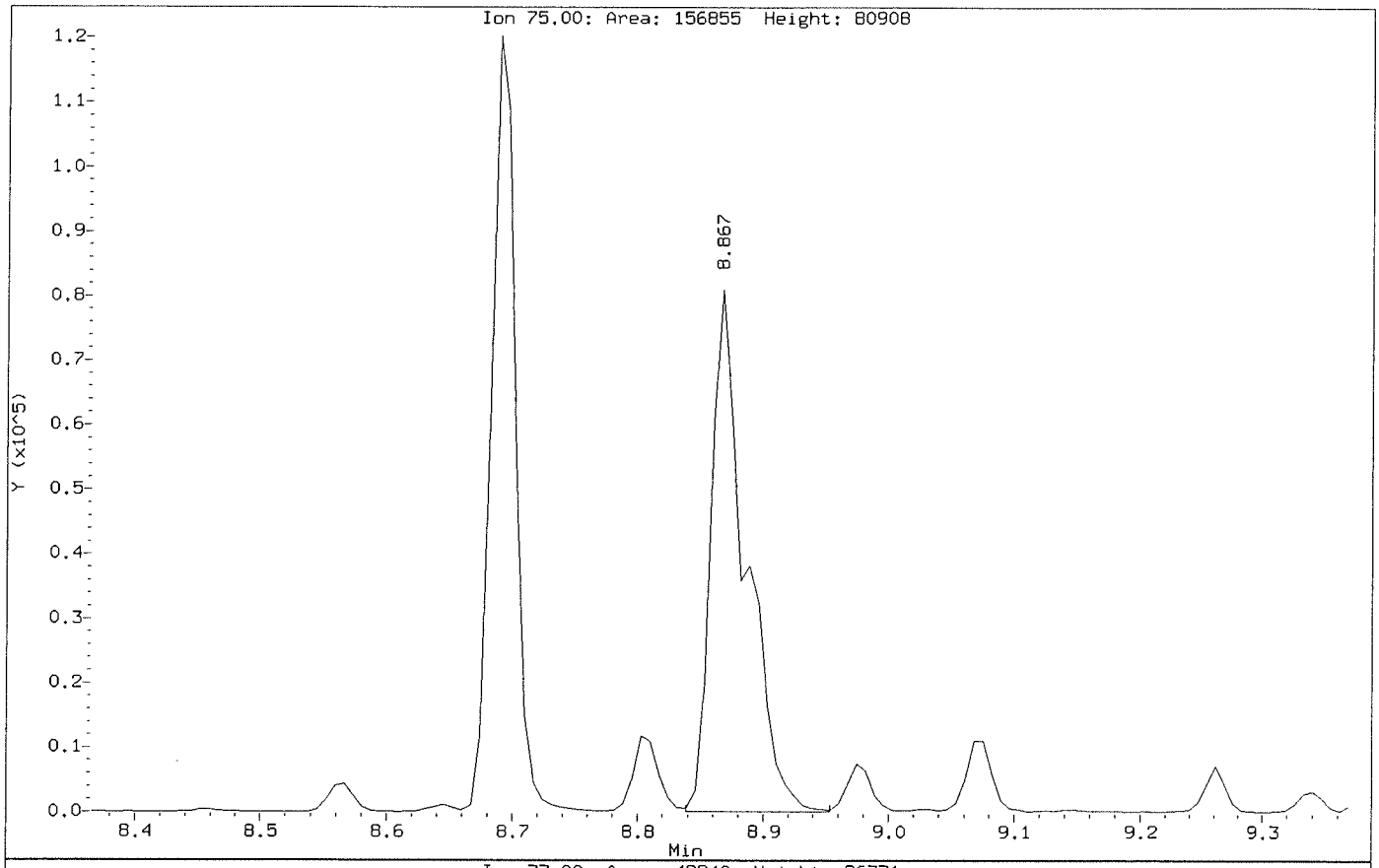


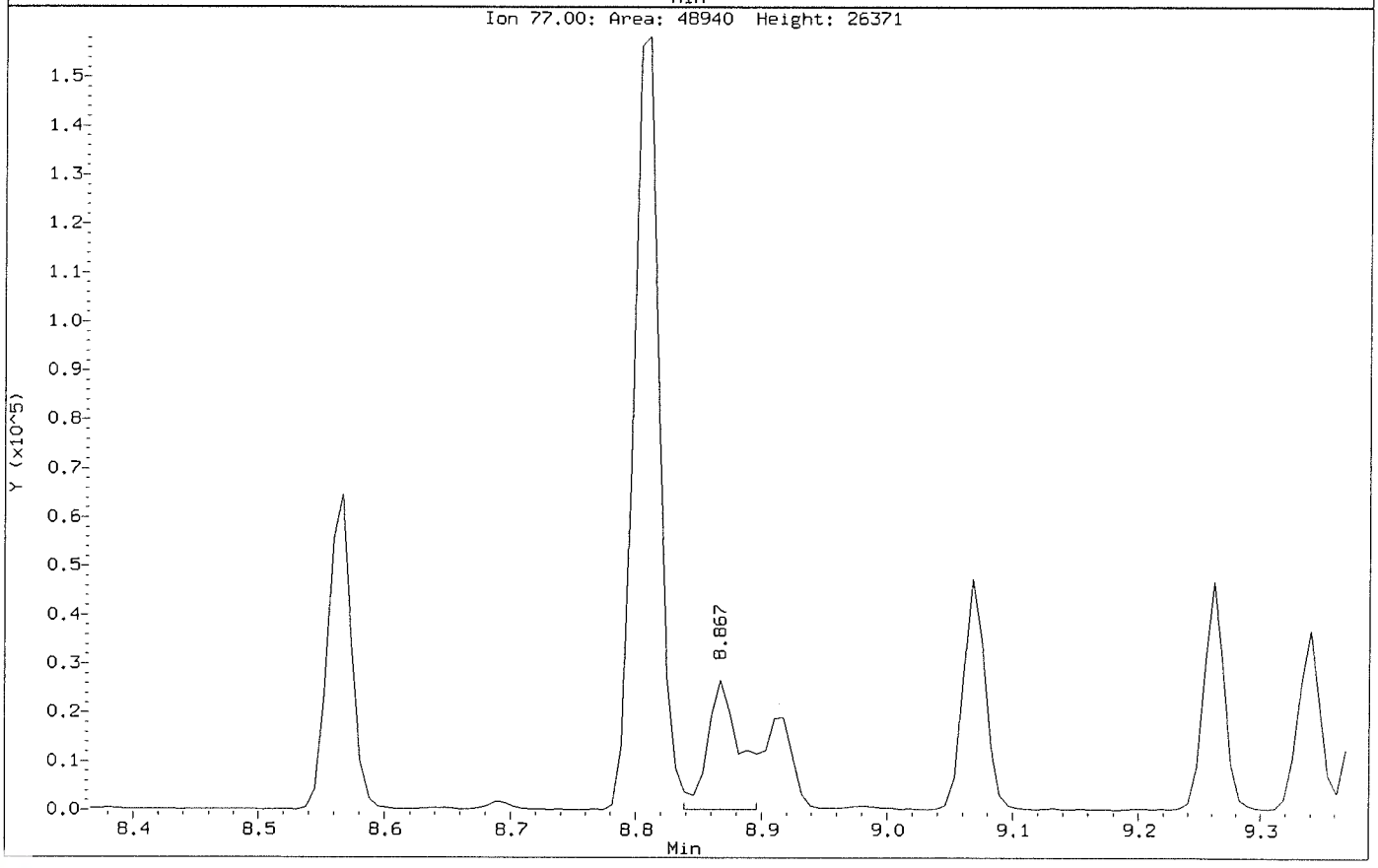
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Date : 08-OCT-2020 18:11
Client ID: HS20100283-03MS
Sample Info: HS20100283-03MS;HS20100283-03MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\Before\X010819.D
Injection Date: 08-OCT-2020 18:11
Instrument: voa6.i
Client Sample ID: HS20100283-03MS

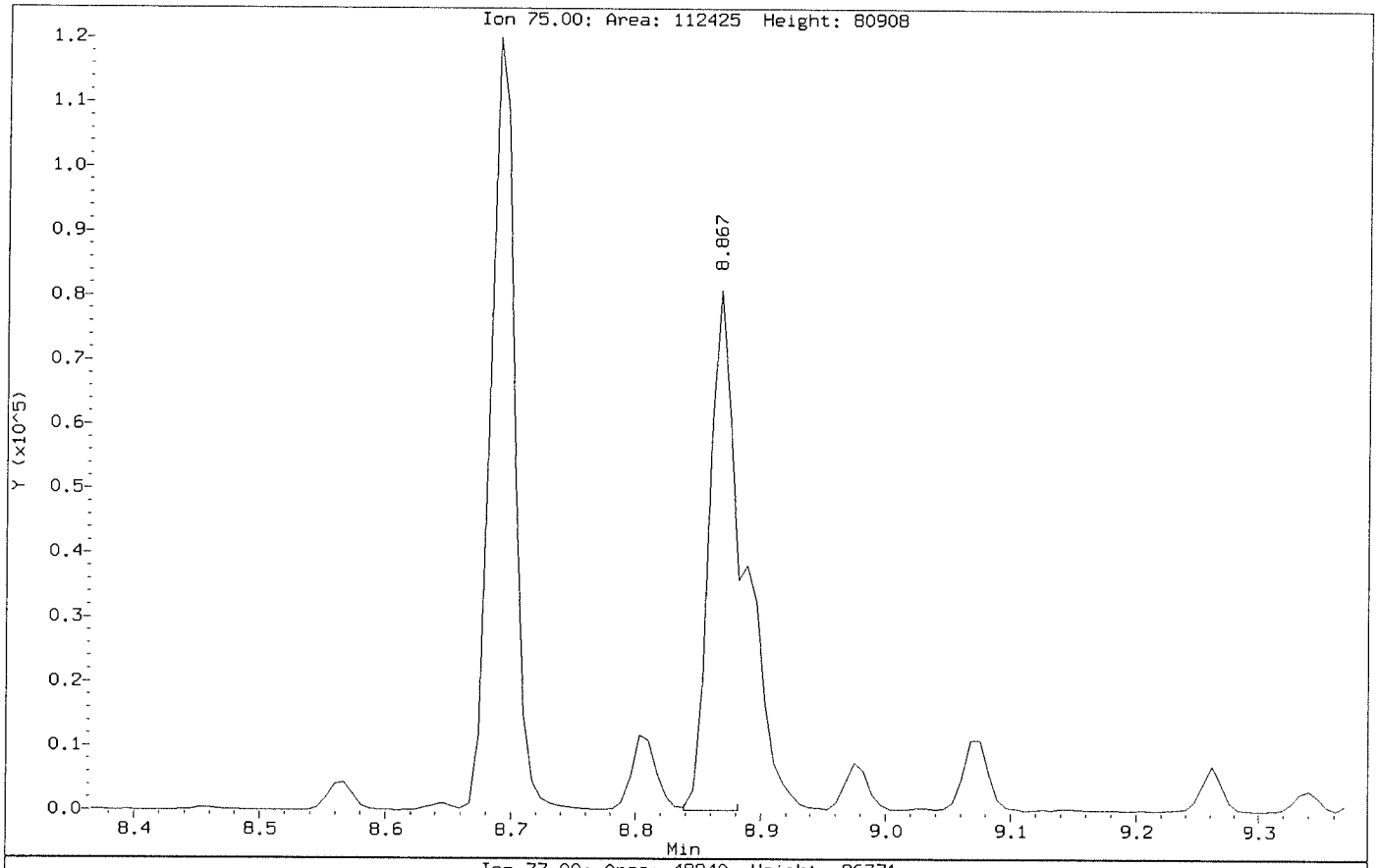
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

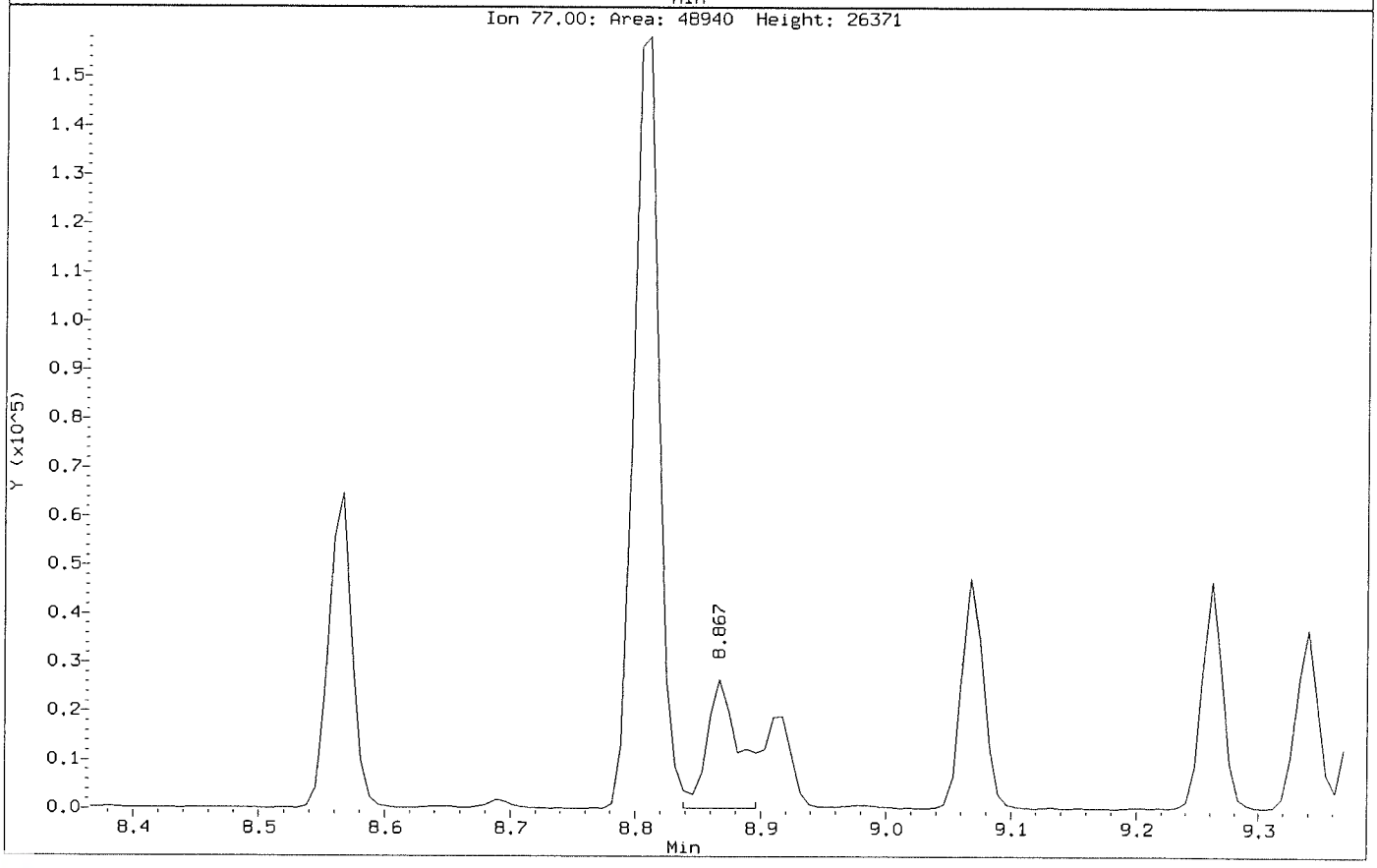




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Injection Date: 08-OCT-2020 18:11
Instrument: voa6.i
Client Sample ID: HS20100283-03MS

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





Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010820.D Page 1
Report Date: 07-Nov-2020 10:39

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Data file : \\nahstws005\Target\chem\voa6.i\X201008.b\X010820.D
Lab Smp Id: HS20100283-03MSD Client Smp ID: HS20100283-04MSD
Inj Date : 08-OCT-2020 18:35
Operator : PC Inst ID: voa6.i
Smp Info : HS20100283-03MSD;HS20100283-03MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201008.b\8260W.m
Meth Date : 07-Nov-2020 10:39 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 19 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

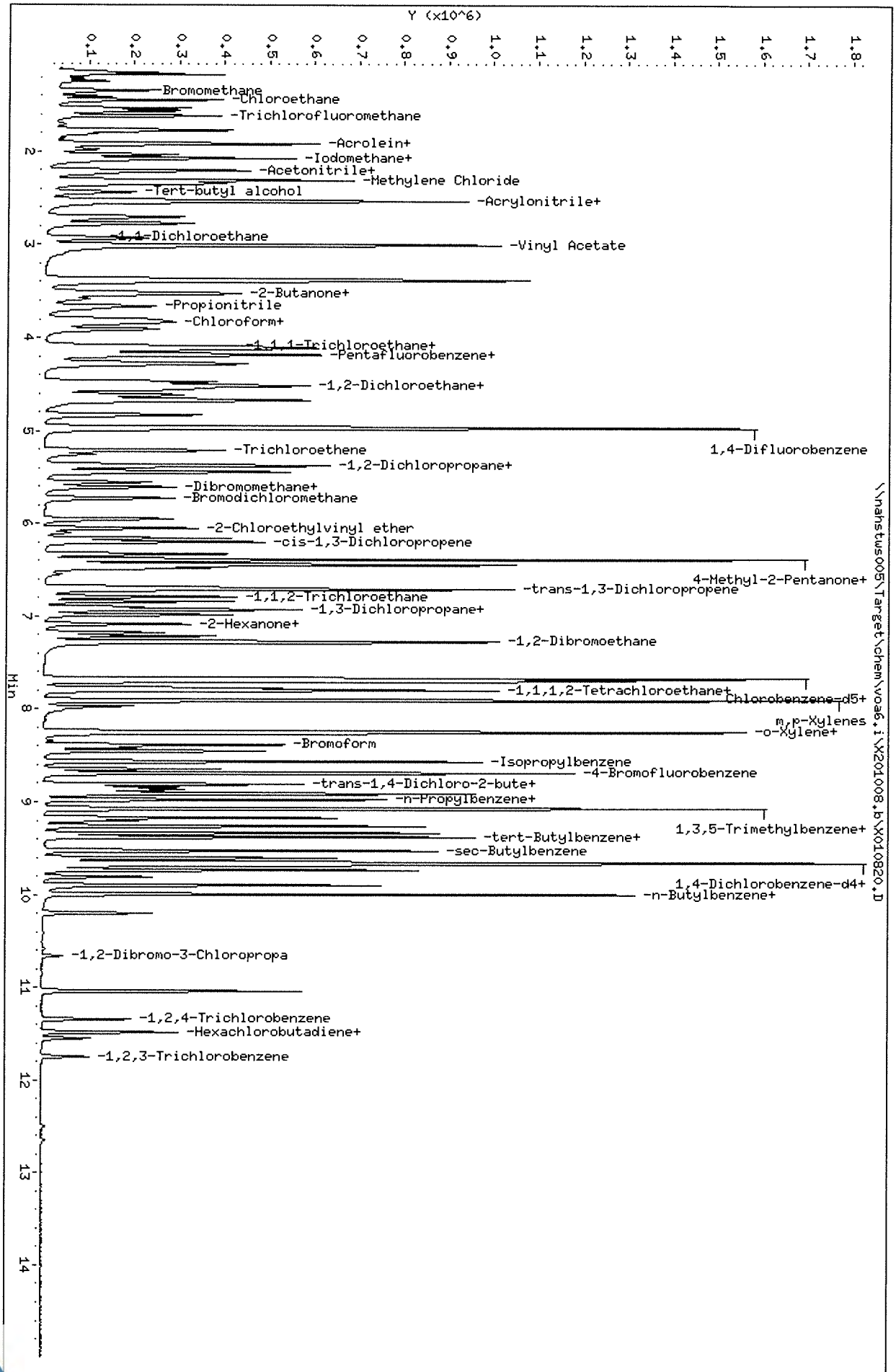
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	512828	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	818524	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	759166	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	329455	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	252735	47.9601	47.96
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	267240	46.3571	46.35
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	958486	48.0226	48.02
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	348849	52.7694	52.76
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	116836	22.2083	22.20
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	187015	23.6774	23.67
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	128775	22.1035	22.10
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	99392	22.2298	22.22
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	243598	22.7381	22.73
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	111441	24.1688	24.16
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	175620	23.3225	23.32
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	30021	23.5772	23.57
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	110099	22.8456	22.84(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	58176	24.0553	24.05
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	434617	22.1611	22.16
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	9337	23.4855	23.48
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	120003	22.7475	22.74
88 1,2-Dichlorobenzene	146	9.998	9.991	(1.035)	198014	21.5841	21.58

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	157441	22.3085	22.30
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	138713	22.8871	22.88
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	433527	22.2851	22.28
83	1,3-Dichlorobenzene	146	9.604	9.605	(0.994)	227580	21.4767	21.47
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	206377	22.3143	22.31
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	226129	21.4878	21.48
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	184621	22.9345	22.93
24	2-Butanone	43	3.588	3.580	(0.856)	108668	58.0494	58.04
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	368857	21.5465	21.54
52	2-Hexanone	43	7.090	7.090	(0.924)	181594	53.9446	53.94
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	414895	21.2866	21.28
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	442474	22.5498	22.54
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	262267	49.2153	49.21
10	Acetone	43	1.976	1.976	(0.472)	90661	72.7514	72.75
37	Benzene	78	4.519	4.519	(0.909)	535123	22.8591	22.85
74	Bromobenzene	156	8.809	8.810	(0.912)	143006	21.4808	21.48
29	Bromochloromethane	128	3.802	3.803	(0.908)	72031	22.4751	22.47
39	Bromodichloromethane	83	5.729	5.729	(1.153)	167096	22.5096	22.50
66	Bromoform	173	8.415	8.416	(1.097)	76294	23.0068	23.00
6	Bromomethane	94	1.346	1.346	(0.321)	96172	23.1541	23.15
19	Carbon Disulfide	76	2.076	2.076	(0.496)	706379	44.3510	44.35
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	152823	23.3400	23.34
59	Chlorobenzene	112	7.699	7.699	(1.004)	334031	21.6281	21.62
7	Chloroethane	64	1.403	1.410	(0.335)	91750	22.8393	22.83
28	Chloroform	83	3.910	3.910	(0.933)	227731	22.9093	22.90
3	Chloromethane	50	1.080	1.081	(0.258)	135972	19.3621	19.36
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	146309	23.2873	23.28
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	209927	22.3560	22.35
55	Dibromochloromethane	129	7.176	7.176	(0.936)	119382	22.0067	22.00
44	Dibromomethane	93	5.557	5.557	(1.118)	82142	22.8553	22.85
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	75053	15.8124	15.81
61	Ethylbenzene	106	7.799	7.800	(1.017)	183365	22.7442	22.74
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	52290	23.3164	23.31
67	Isopropylbenzene	105	8.566	8.566	(1.117)	539304	23.0066	23.00
62	m,p-Xylenes	106	7.907	7.907	(1.031)	433810	44.8189	44.81
17	Methylene Chloride	84	2.305	2.305	(0.550)	137277	24.0970	24.09
87	n-Butylbenzene	91	9.998	9.999	(1.035)	388334	22.8751	22.87
73	n-Propylbenzene	91	8.917	8.917	(0.923)	634195	22.5669	22.56
92	Naphthalene	128	11.546	11.546	(1.195)	76422	24.8757	24.87
63	o-Xylene	106	8.244	8.244	(1.075)	213227	22.5591	22.55
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	524223	22.7731	22.77
64	Styrene	104	8.258	8.258	(1.077)	358945	22.1978	22.19
78	tert-Butylbenzene	119	9.339	9.340	(0.967)	365725	22.5531	22.55
56	Tetrachloroethene	164	6.933	6.933	(0.904)	112524	23.4609	23.46
50	Toluene	91	6.446	6.446	(0.840)	545701	22.2077	22.20
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	124443	23.4253	23.42
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	180129	23.0153	23.01
38	Trichloroethene	130	5.214	5.214	(1.049)	137903	23.5547	23.55
8	Trichlorofluoromethane	101	1.560	1.568	(0.373)	182943	24.5386	24.53
5	Vinyl Chloride	62	1.145	1.145	(0.273)	143544	21.6690	21.66

QC Flag Legend

M - Compound response manually integrated.

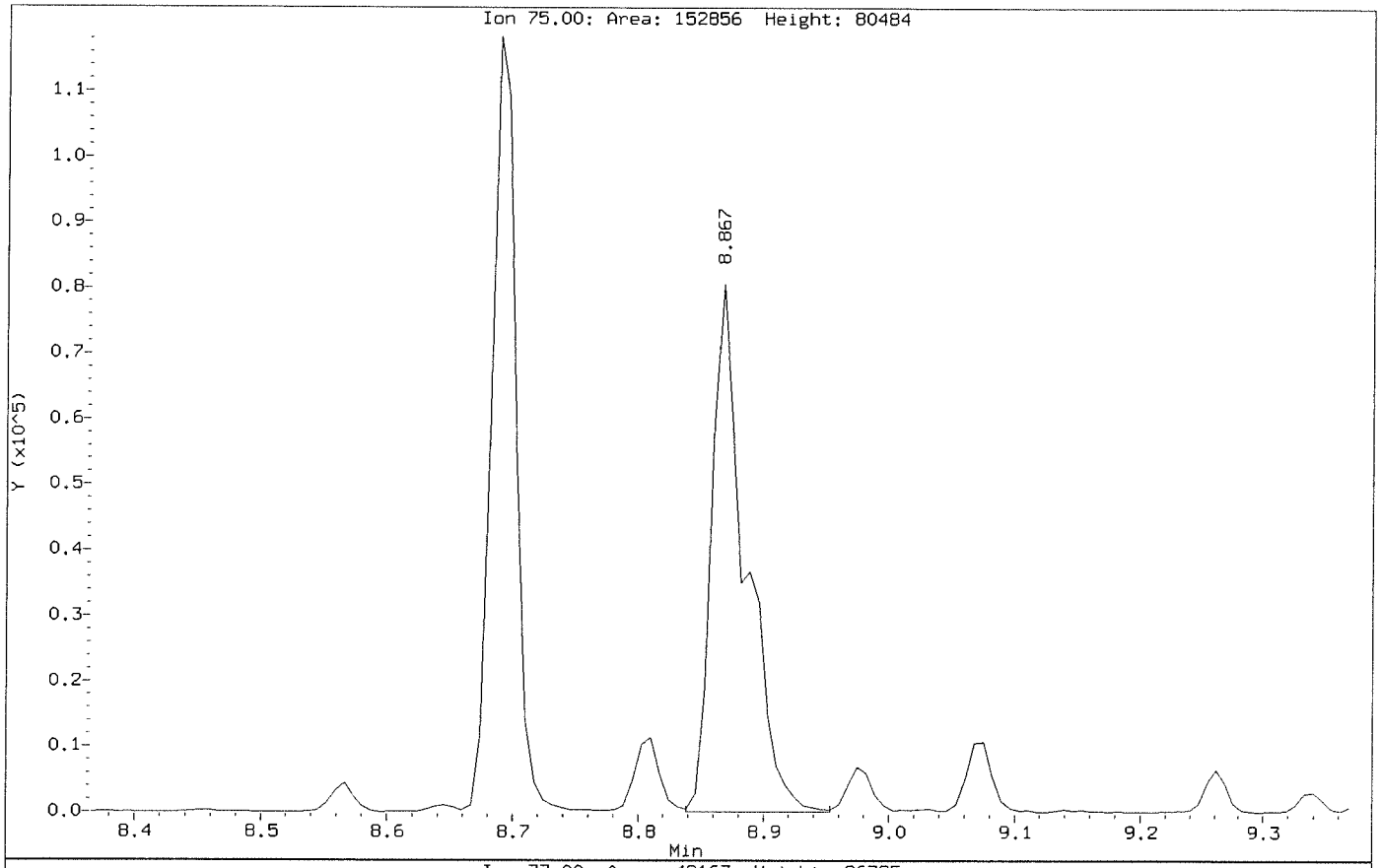


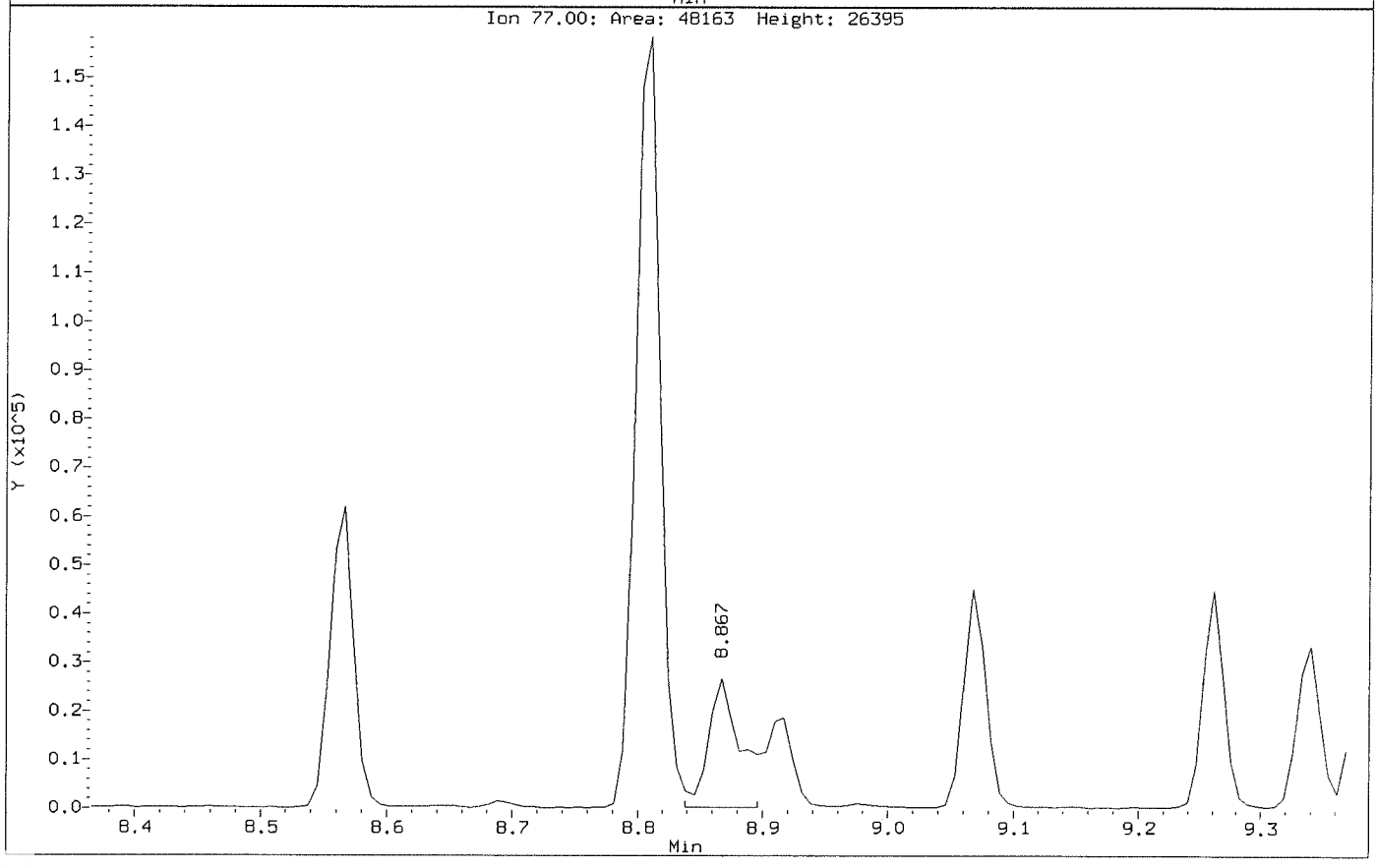
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Sample Info: HS20100283-03HSD;HS20100283-03HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

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

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Instrument: voa6.i
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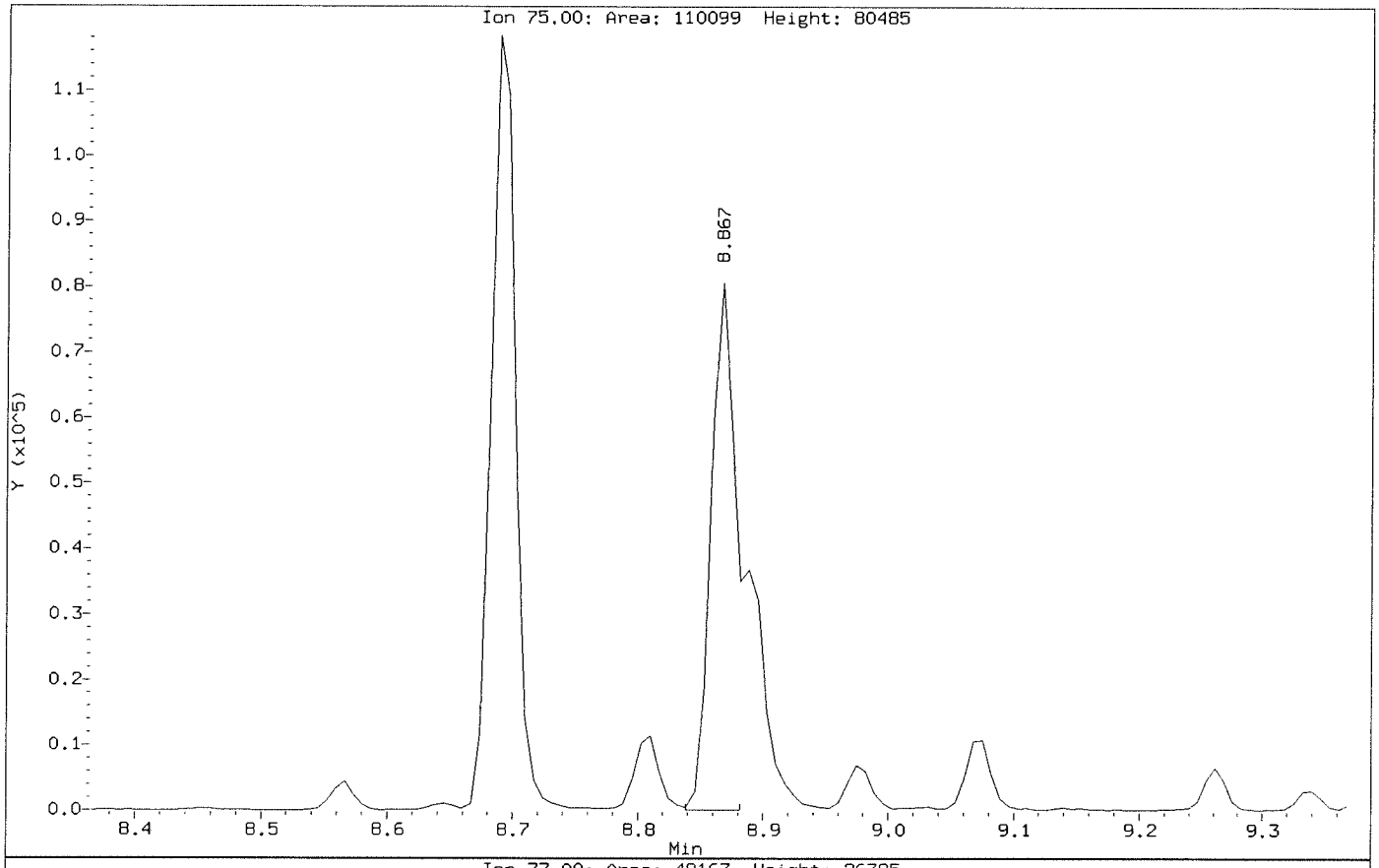
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CAS Number: 96-18-4

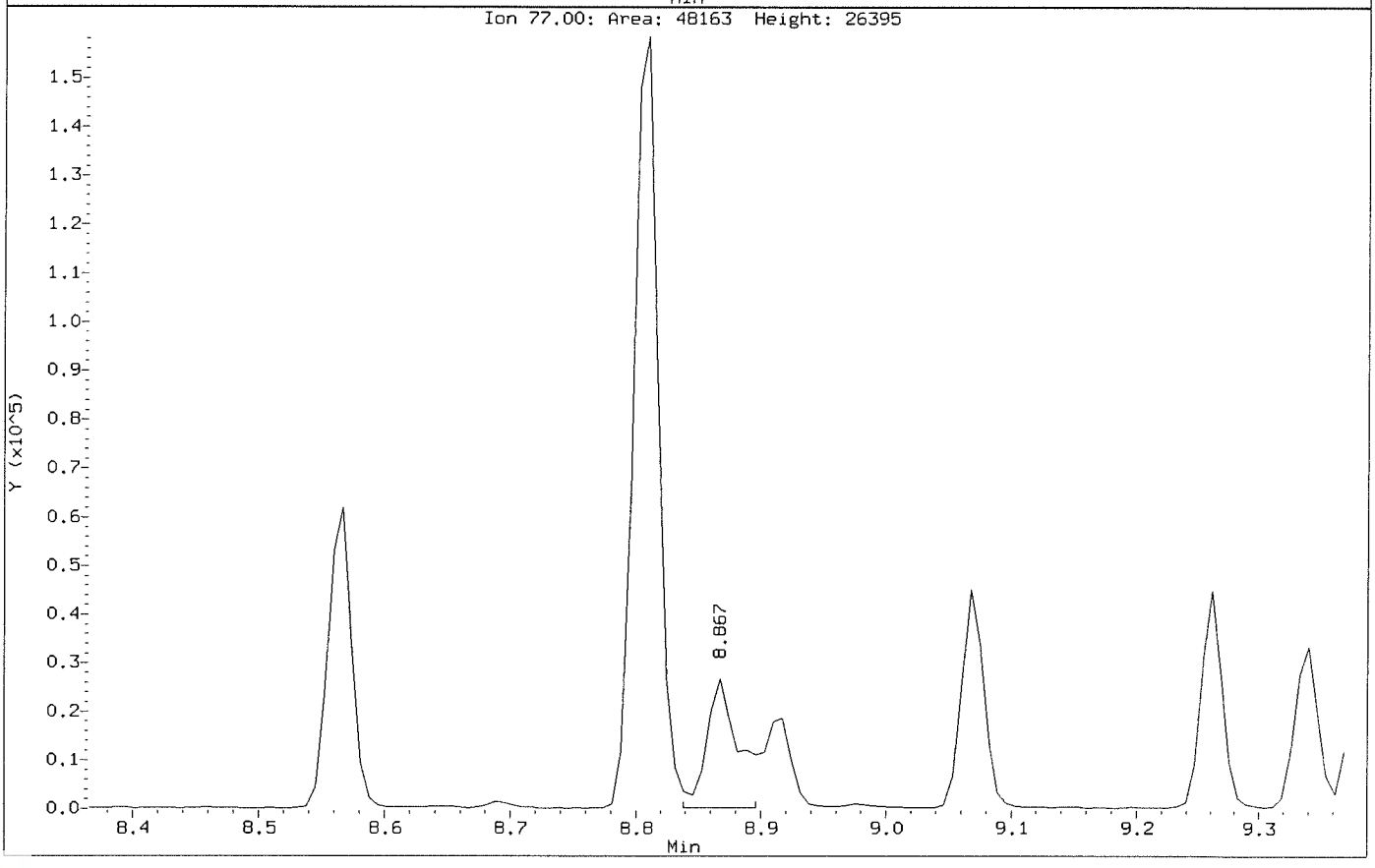




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Injection Date: 08-OCT-2020 18:35
Instrument: voa6.i
Client Sample ID: HS20100283-04MSD

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





Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010823.D Page 1
Report Date: 07-Nov-2020 10:37

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Data file : \\nahstws005\Target\chem\voa6.i\X201008.b\X010823.D
Lab Smp Id: HS20100334-02 Client Smp ID: HS20100334-02
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Operator : PC Inst ID: voa6.i
Smp Info : HS20100334-02;HS20100334-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201008.b\8260W.m
Meth Date : 07-Nov-2020 10:36 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
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Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

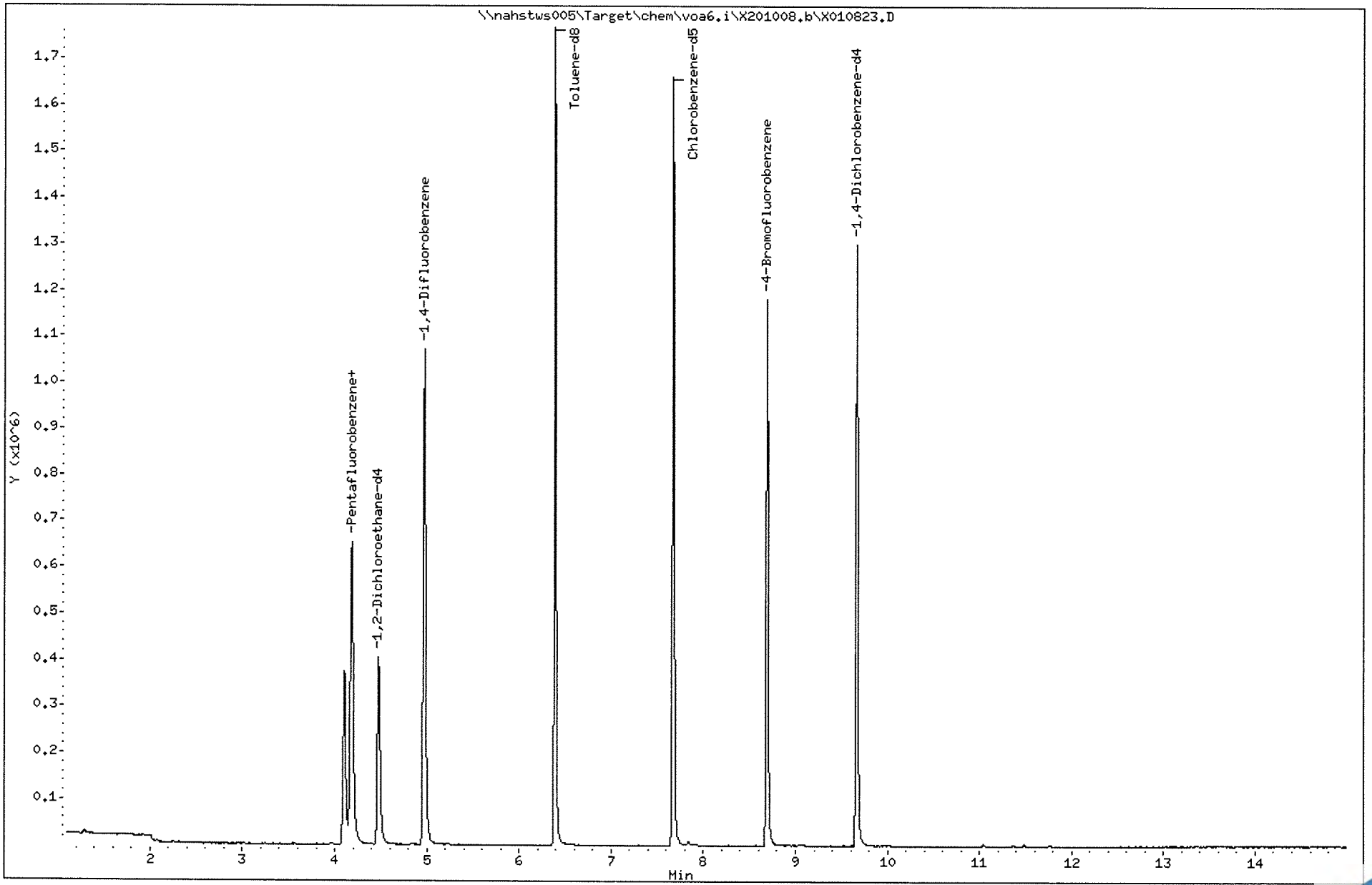
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	551965	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	884600	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	782763	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	326803	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	269881	47.5825	47.58
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	288801	46.5451	46.54
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1029126	50.0075	50.00
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	358714	52.6236	52.62

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010823.D
Date : 08-OCT-2020 19:47
Client ID: HS20100334-02
Sample Info: HS20100334-02;HS20100334-02;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010824.D Page 1
Report Date: 07-Nov-2020 10:37

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201008.b\X010824.D
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Inj Date : 08-OCT-2020 20:11
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Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 07-Nov-2020 10:36 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

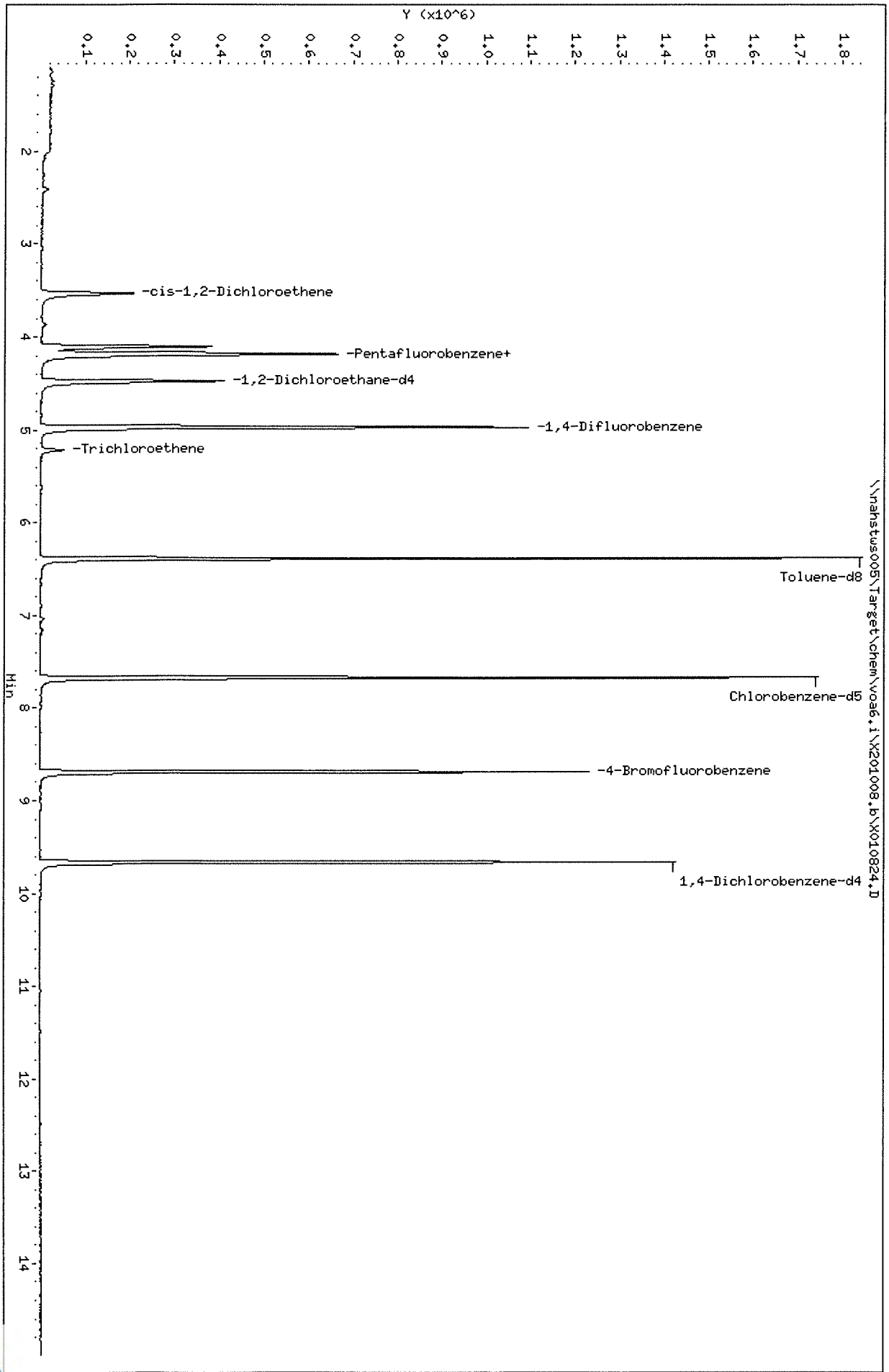
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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

						CONCENTRATIONS	
		QUANT SIG				ON-COLUMN	FINAL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/l)	(ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	570674	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	911744	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	820948	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	352529	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	274409	46.7947	46.79
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	295652	46.0871	46.08
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1057601	49.0007	49.00
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	386091	54.0271	54.02
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	109642	15.6823	15.68
	38 Trichloroethene	130	5.214	5.214	(1.049)	18044	2.76691	2.76(a)
	5 Vinyl Chloride	62	1.145	1.145	(0.273)	3385	0.45919	0.45(a)

QC Flag Legend

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



Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010824.D
Date : 08-OCT-2020 20:11
Client ID: HS20100334-01
Sample Info: HS20100334-01;HS20100334-01;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010824.D

Date : 08-OCT-2020 20:11

Client ID: HS20100334-01

Instrument: voa6.i

Sample Info: HS20100334-01;HS20100334-01;;;

Purge Volume: 5.0

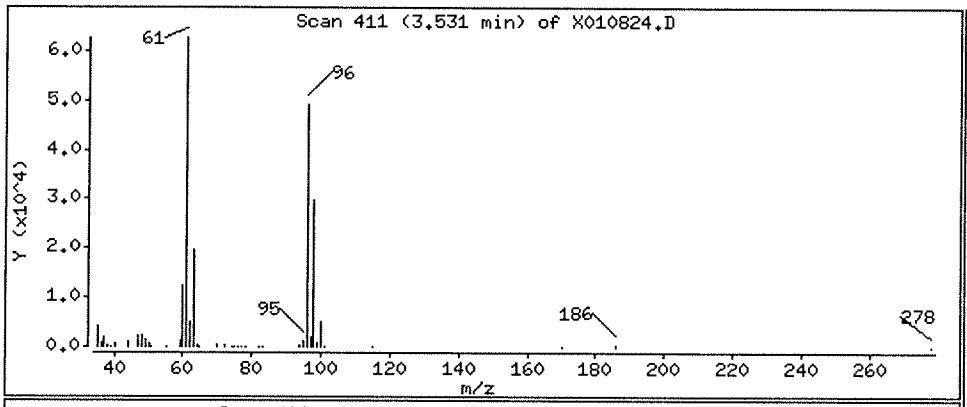
Operator: PC

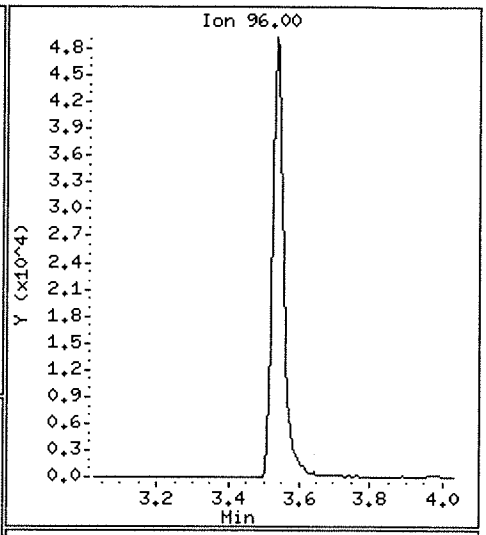
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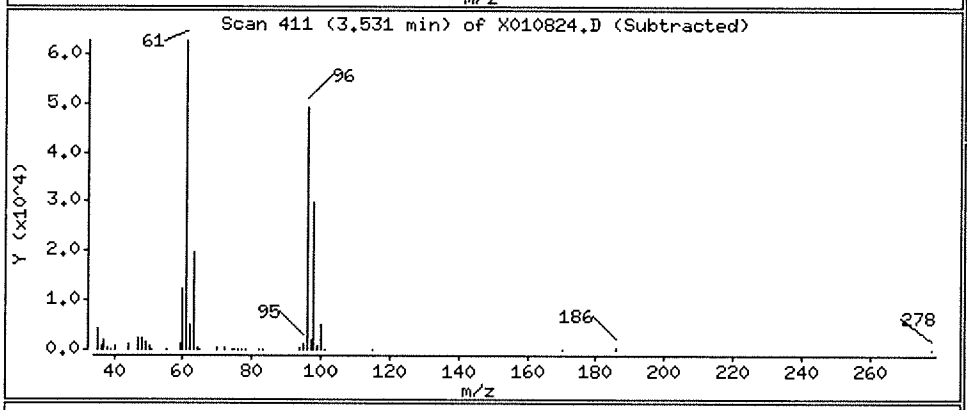
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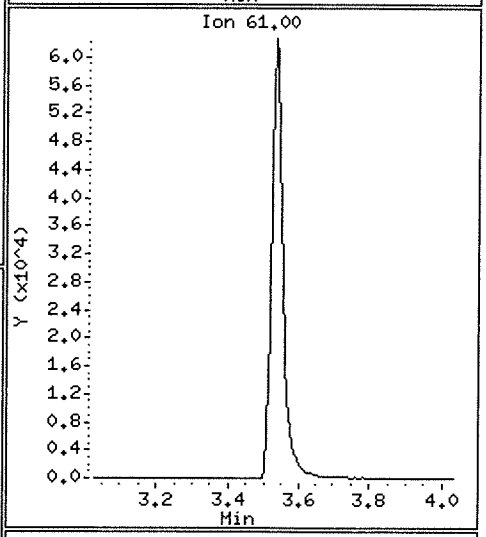
27 cis-1,2-Dichloroethene

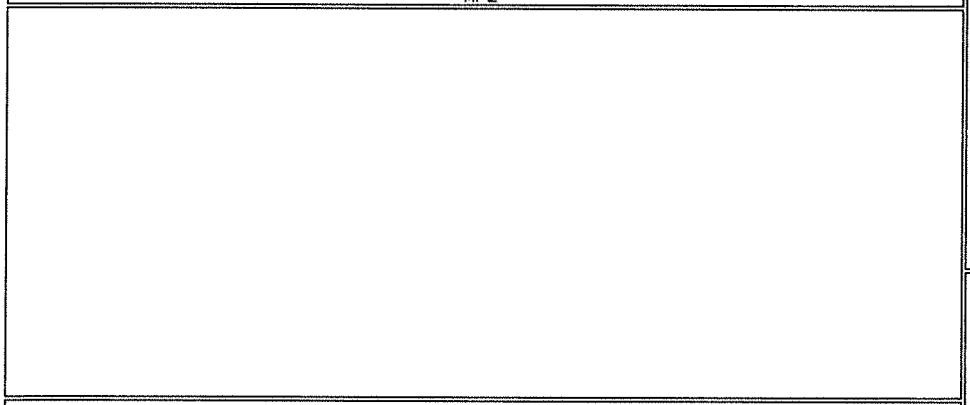
Concentration: 15.68 ug/l

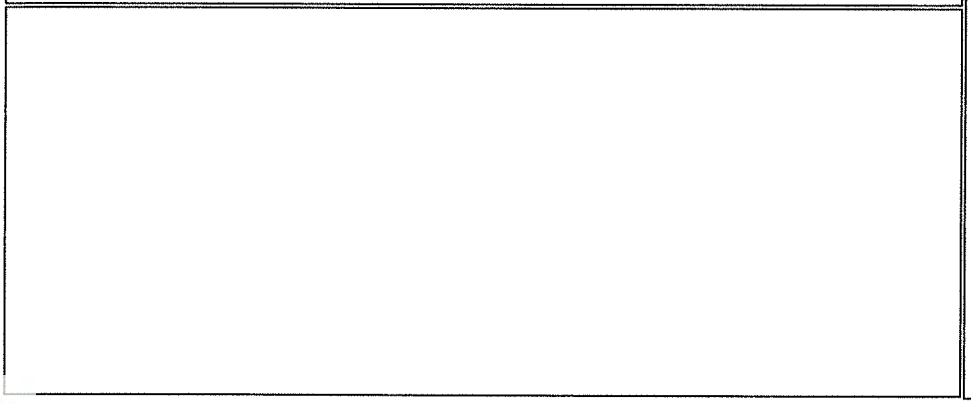


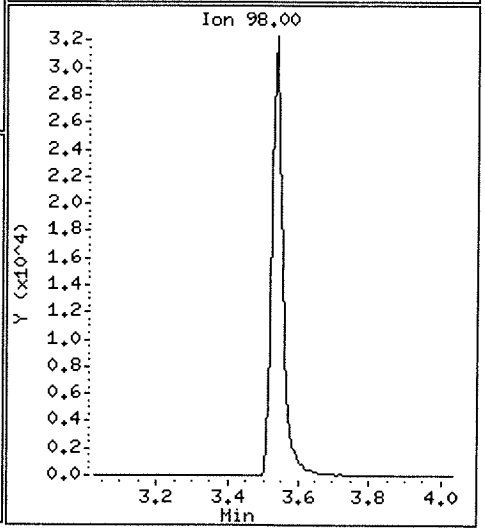












Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010824.D

Date : 08-OCT-2020 20:11

Client ID: HS20100334-01

Instrument: voa6.i

Sample Info: HS20100334-01;HS20100334-01;;;

Purge Volume: 5.0

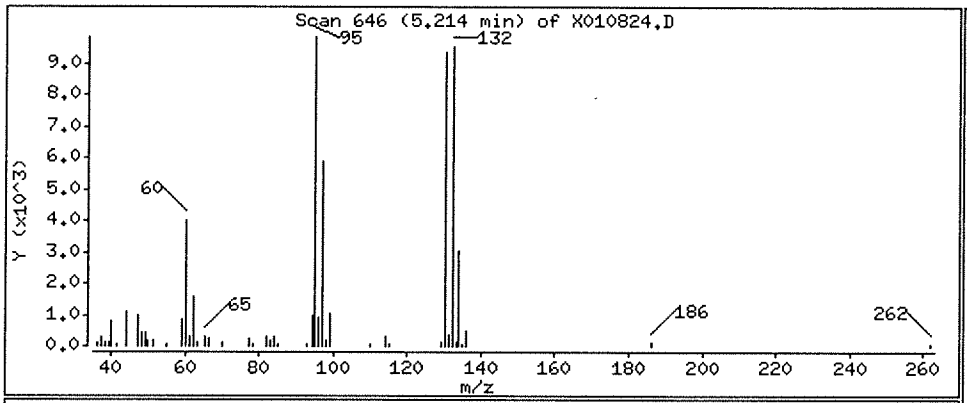
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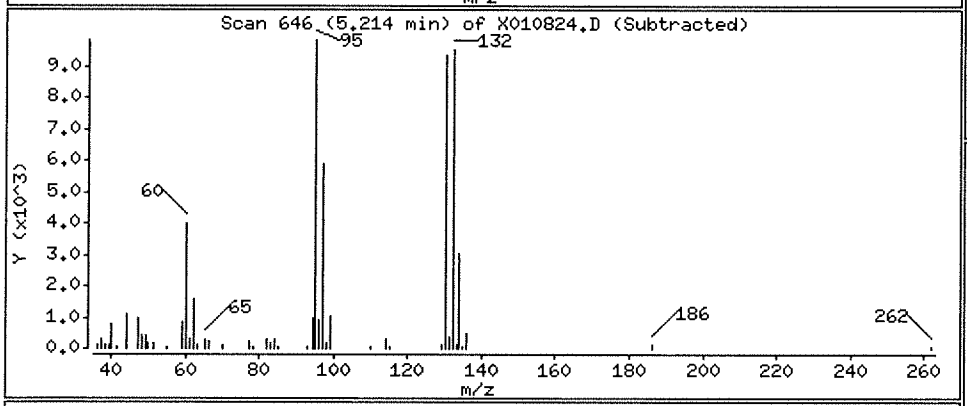
Column phase: DB624

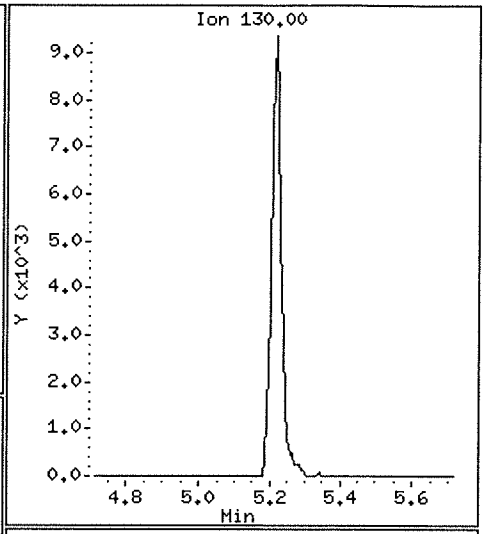
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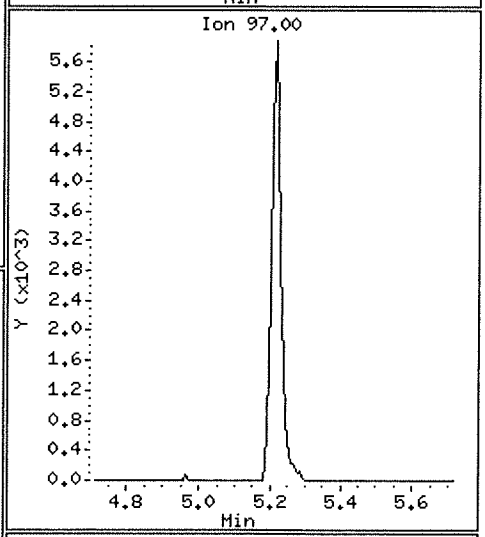
38 Trichloroethene

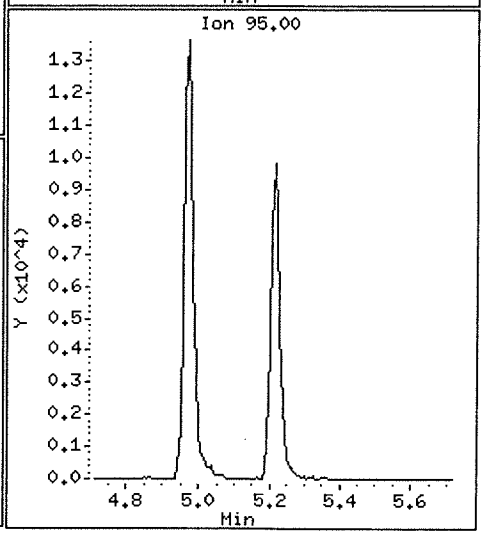
Concentration: 2.76 ug/l











Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010824.D

Date : 08-OCT-2020 20:11

Client ID: HS20100334-01

Instrument: voa6.i

Sample Info: HS20100334-01;HS20100334-01;;;

Purge Volume: 5.0

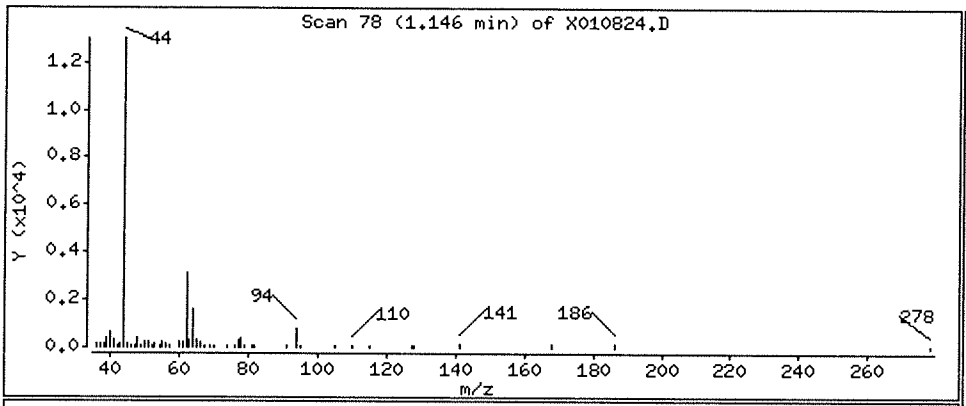
Operator: PC

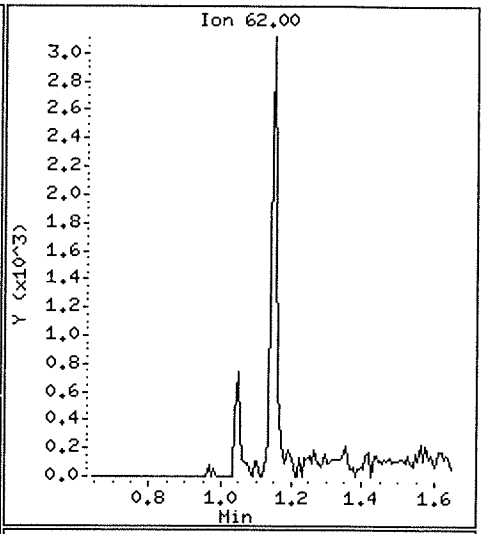
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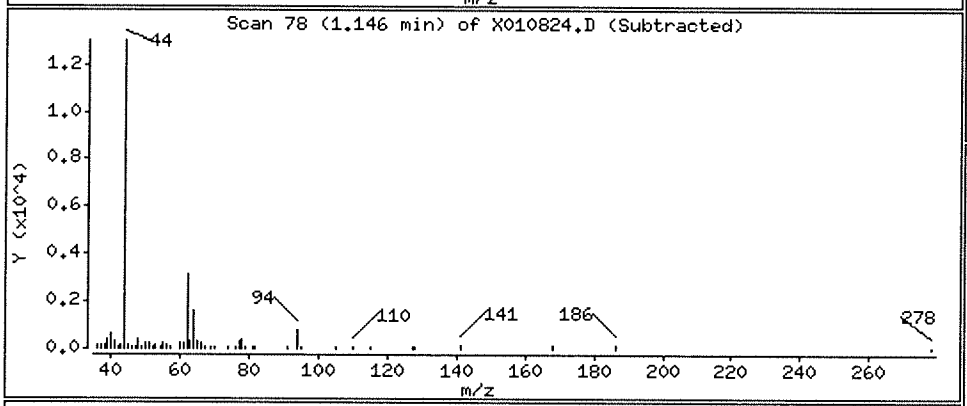
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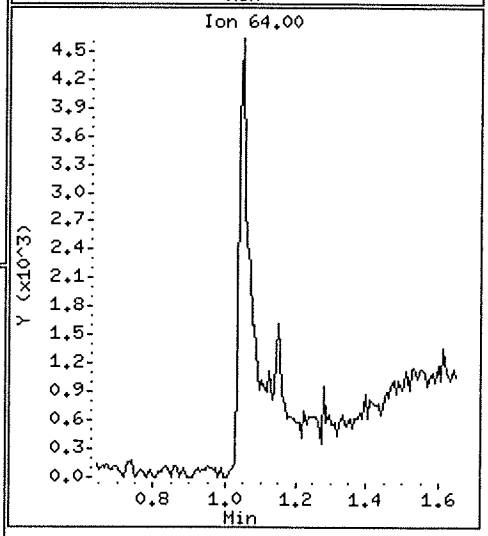
5 Vinyl Chloride

Concentration: 0.45 ug/l









Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010830.D Page 1
Report Date: 07-Nov-2020 10:39

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201008.b\X010830.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 08-OCT-2020 22:35
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\X201008.b\8260W.m
Meth Date : 07-Nov-2020 10:39 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 29 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

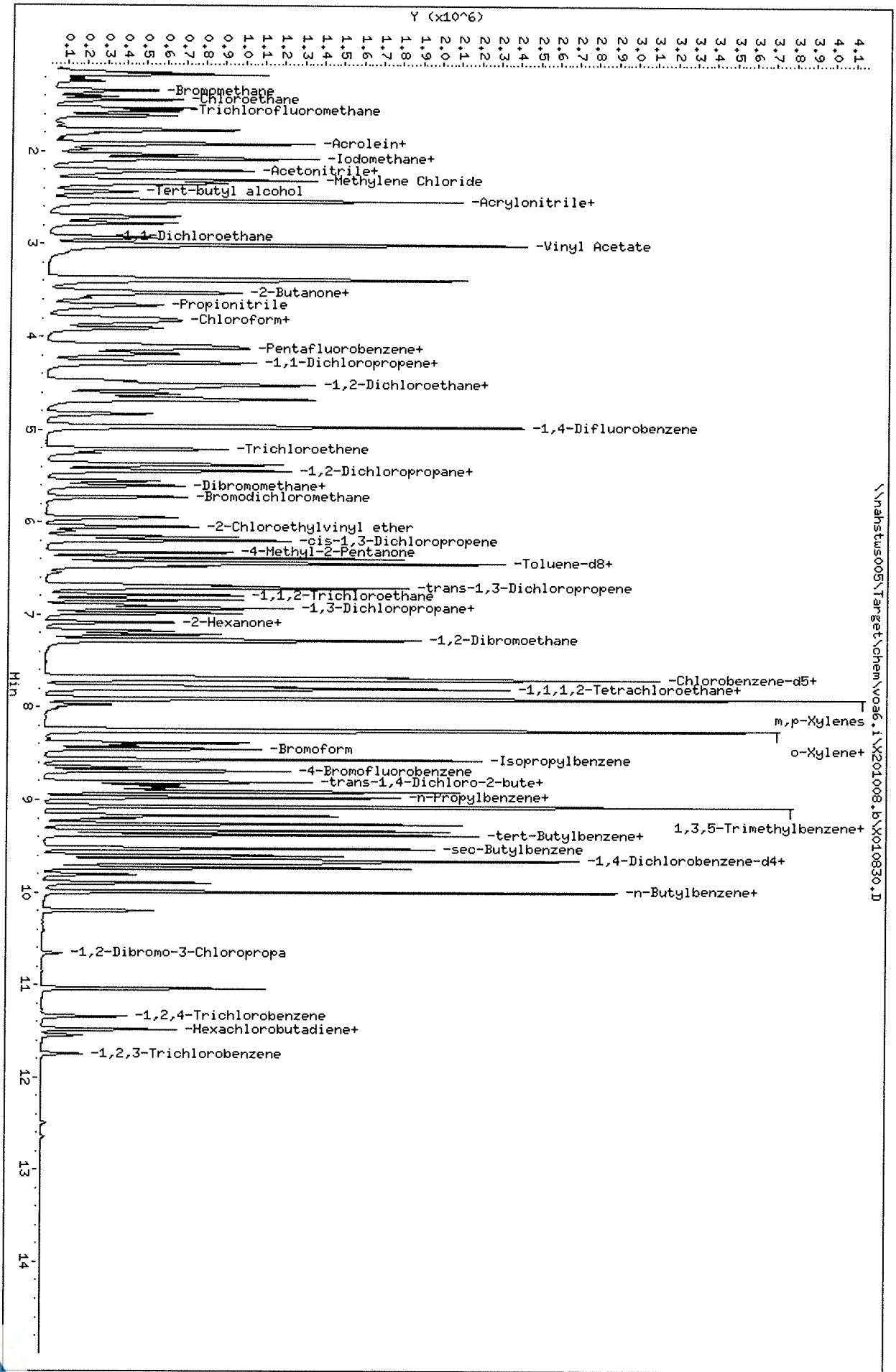
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	544423	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	890204	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	814404	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	343039	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	282731	50.0000	50.53
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	316604	50.0000	51.73
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1031936	50.0000	48.19
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	369613	50.0000	52.10
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	281751	50.0000	49.92
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	436240	50.0000	52.02
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	296966	50.0000	48.95
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	235679	50.0000	49.13
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	576500	50.0000	50.68
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	266200	50.0000	54.38
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	401787	50.0000	49.06
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	58401	50.0000	44.04
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	259314	50.0000	51.67(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	117958	50.0000	45.54
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	1001267	50.0000	49.03
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	19590	50.0000	47.32
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	277895	50.0000	49.10
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	455042	50.0000	47.63

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010830.D Page 2
Report Date: 07-Nov-2020 10:39

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	375221	50.0000	48.88
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	329839	50.0000	50.04
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	999668	50.0000	49.35
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	530315	50.0000	48.06
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	482864	50.0000	48.66
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	522816	50.0000	47.71
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	374241	50.0000	43.79
24 2-Butanone	43	3.581	3.581	(0.855)	236389	100.000	118.94
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	853883	50.0000	47.90
52 2-Hexanone	43	7.083	7.083	(0.923)	376377	100.000	104.22
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	969769	50.0000	47.78
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	991604	50.0000	48.53
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	576575	100.000	100.85
10 Acetone	43	1.976	1.976	(0.472)	159090	100.000	123.57
37 Benzene	78	4.519	4.519	(0.909)	1257613	50.0000	49.39
74 Bromobenzene	156	8.810	8.810	(0.912)	340927	50.0000	49.18
29 Bromochloromethane	128	3.803	3.803	(0.908)	169022	50.0000	49.67
39 Bromodichloromethane	83	5.729	5.729	(1.153)	401210	50.0000	49.69
66 Bromoform	173	8.416	8.416	(1.097)	182344	50.0000	51.25
6 Bromomethane	94	1.346	1.346	(0.321)	245282	50.0000	55.96
19 Carbon Disulfide	76	2.076	2.076	(0.496)	1720078	100.000	101.73
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	354662	50.0000	49.80
59 Chlorobenzene	112	7.699	7.699	(1.004)	797107	50.0000	48.11
7 Chloroethane	64	1.403	1.403	(0.335)	223859	50.0000	52.49
28 Chloroform	83	3.910	3.910	(0.933)	539344	50.0000	51.10
3 Chloromethane	50	1.081	1.081	(0.258)	373620	50.0000	50.11
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	342675	50.0000	51.37
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	495062	50.0000	48.47
55 Dibromochloromethane	129	7.176	7.176	(0.936)	286885	50.0000	49.29
44 Dibromomethane	93	5.558	5.558	(1.118)	191511	50.0000	48.99
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	244362	50.0000	44.21
61 Ethylbenzene	106	7.800	7.800	(1.017)	424421	50.0000	49.07
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	113070	50.0000	47.13
67 Isopropylbenzene	105	8.566	8.566	(1.117)	1243035	50.0000	49.43
62 m,p-Xylenes	106	7.907	7.907	(1.031)	1012134	100.000	97.47
17 Methylene Chloride	84	2.306	2.306	(0.550)	328574	50.0000	55.21
87 n-Butylbenzene	91	9.999	9.999	(1.035)	857824	50.0000	48.52
73 n-Propylbenzene	91	8.917	8.917	(0.923)	1440097	50.0000	49.21
92 Naphthalene	128	11.546	11.546	(1.195)	146555	50.0000	45.81
63 o-Xylene	106	8.244	8.244	(1.075)	498807	50.0000	49.19
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	1174281	50.0000	48.99
64 Styrene	104	8.258	8.258	(1.077)	853394	50.0000	49.19
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	822757	50.0000	48.72
56 Tetrachloroethene	164	6.933	6.933	(0.904)	247678	50.0000	48.13
50 Toluene	91	6.446	6.446	(0.840)	1272855	50.0000	48.28
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	288210	50.0000	51.10
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	417282	50.0000	49.02
38 Trichloroethene	130	5.214	5.214	(1.049)	313582	50.0000	49.24
8 Trichlorofluoromethane	101	1.568	1.568	(0.374)	438785	50.0000	55.43
5 Vinyl Chloride	62	1.145	1.145	(0.273)	379430	50.0000	53.95

QC Flag Legend

M - Compound response manually integrated.

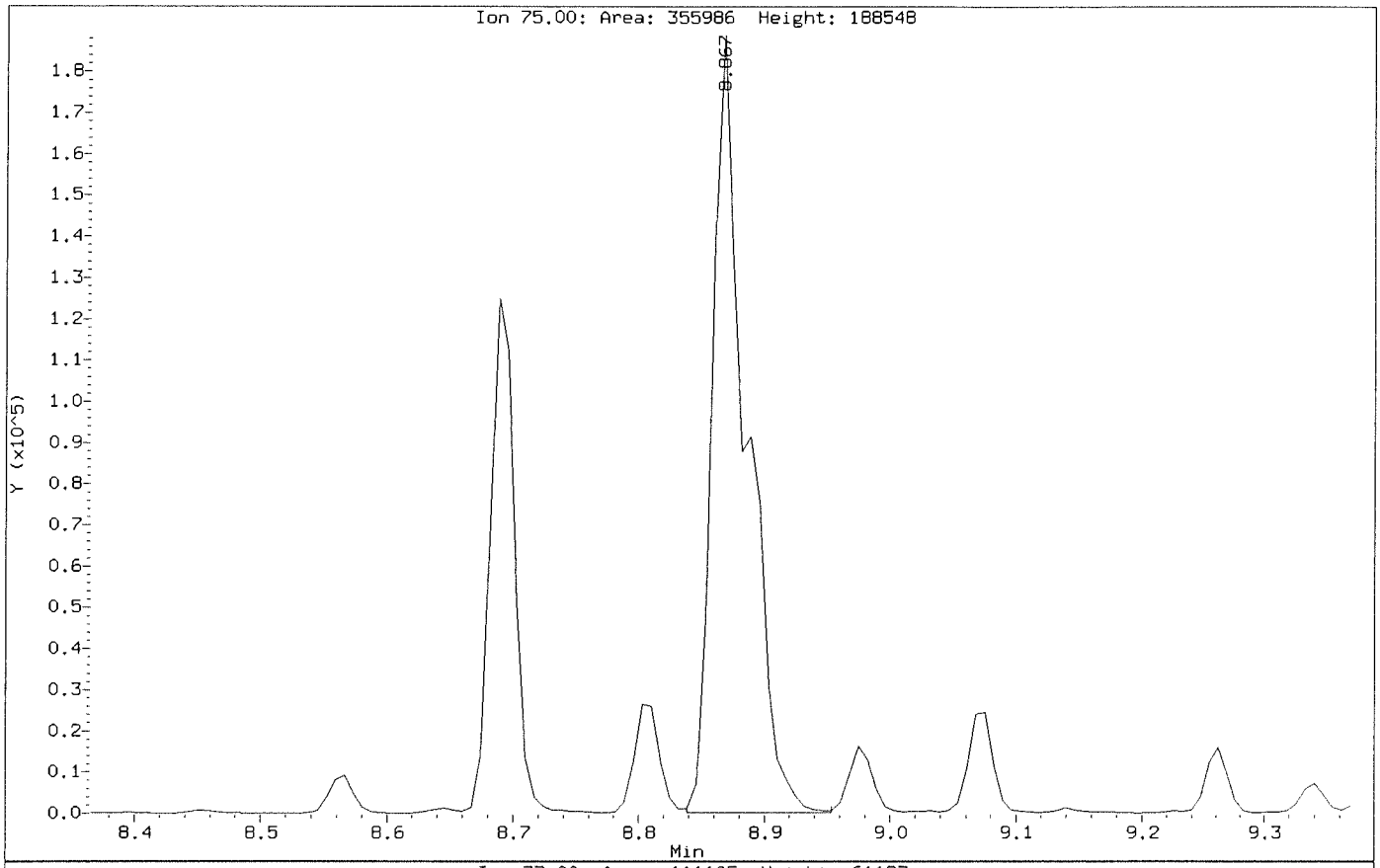


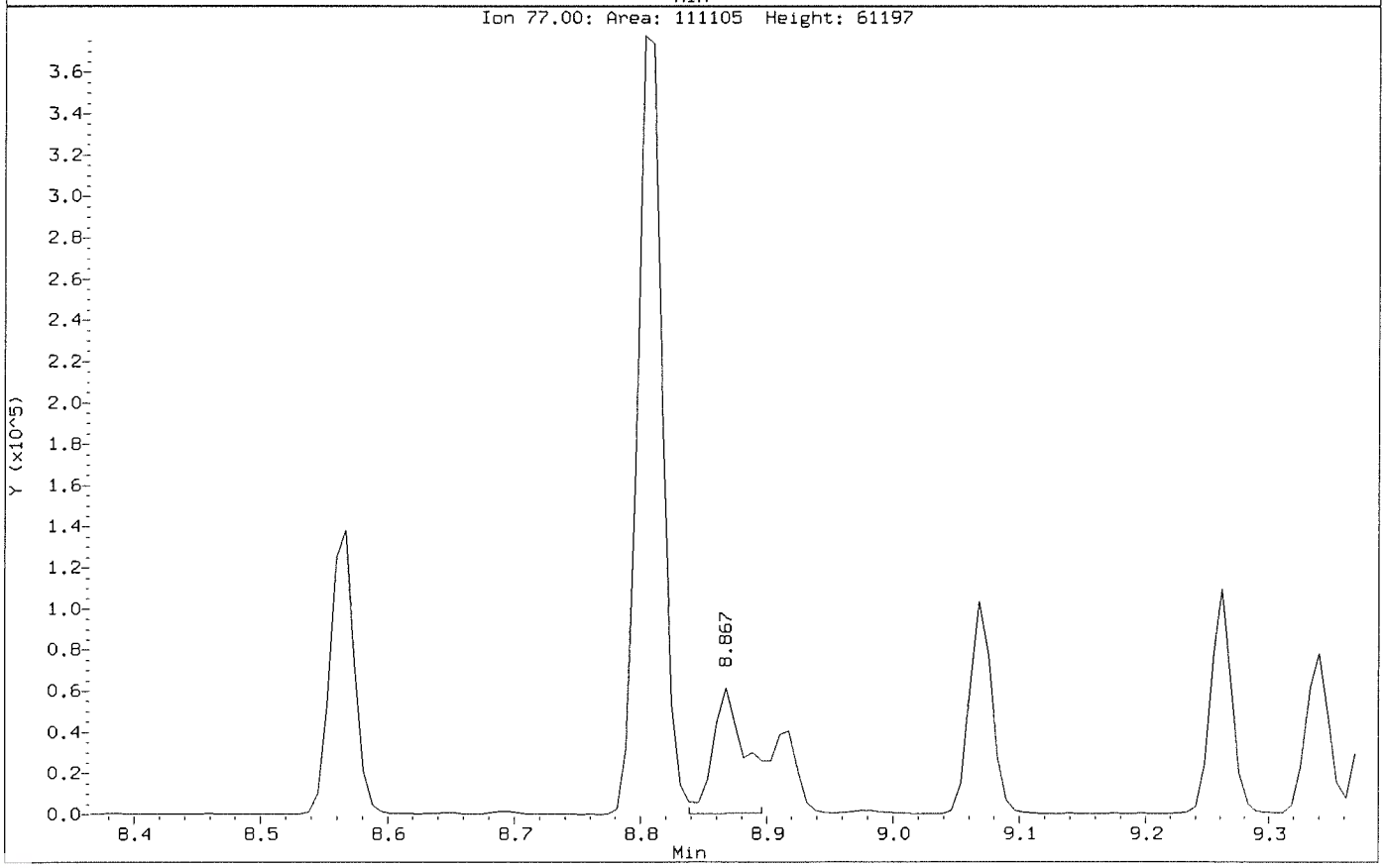
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Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\Before\X010830.D
Injection Date: 08-OCT-2020 22:35
Instrument: voa6.i
Client Sample ID: CCV

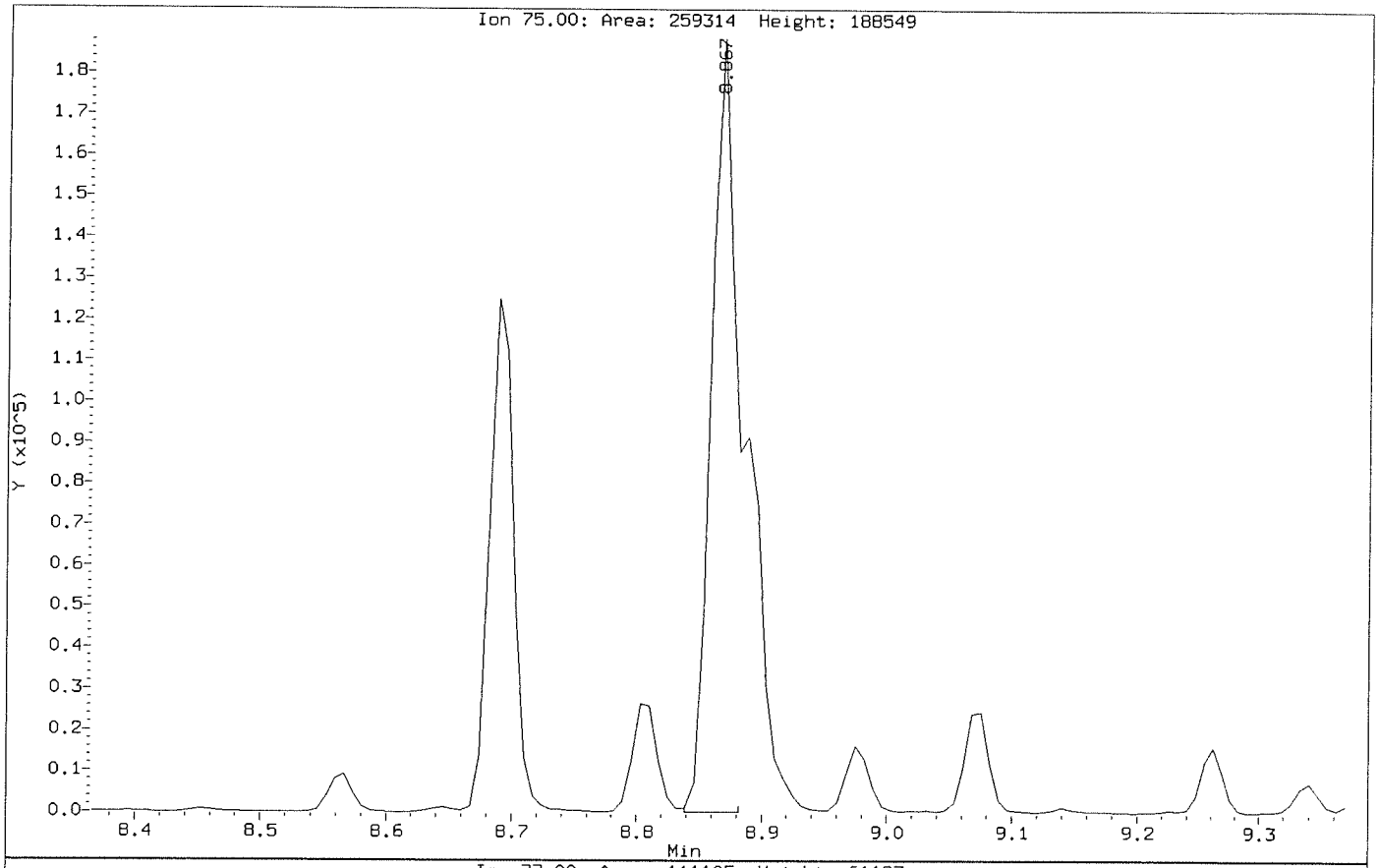
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CAS Number: 96-18-4

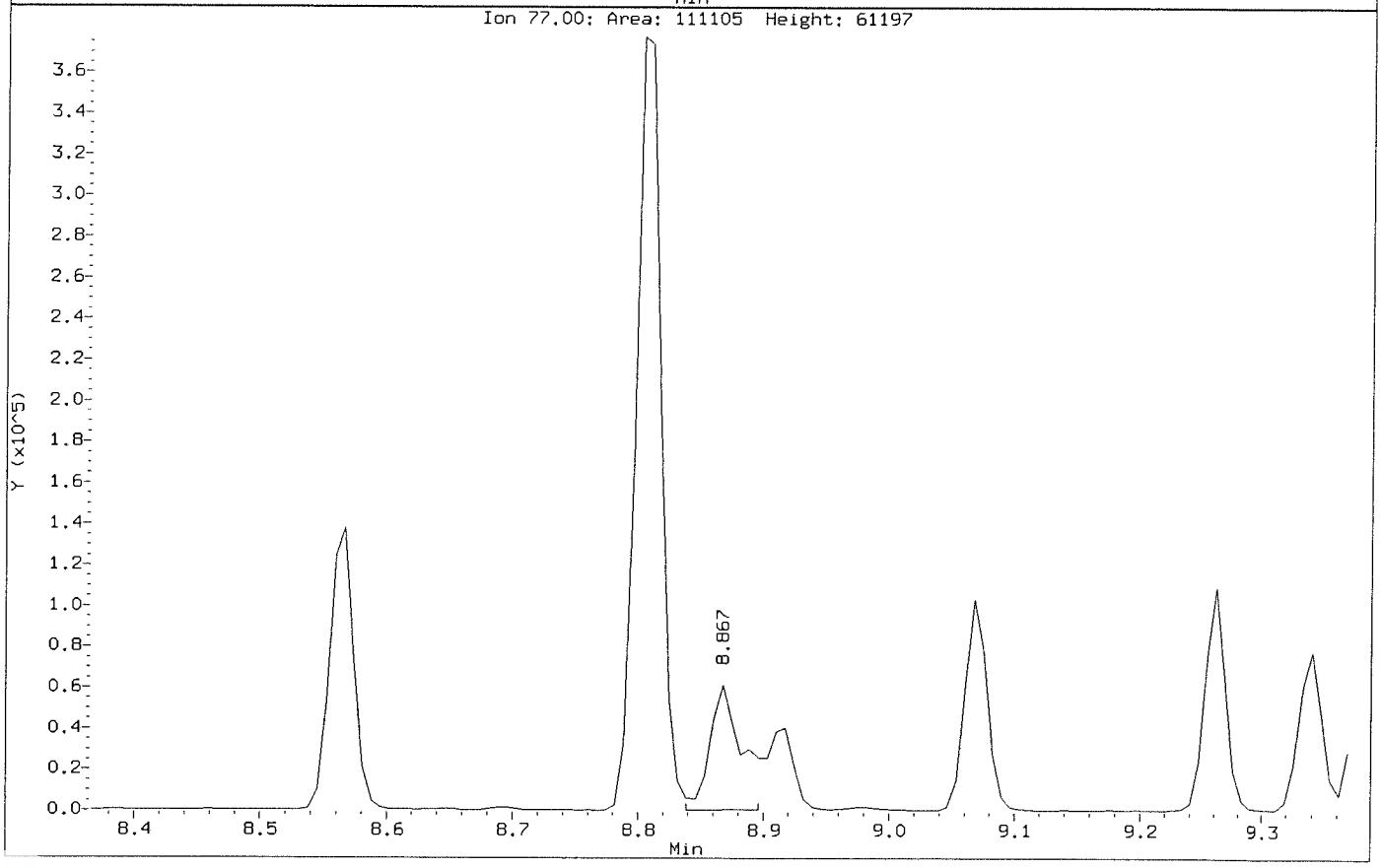




Data File: \\nahstws005\Target\chem\voa6.i\X201008.b\X010830.D
Injection Date: 08-OCT-2020 22:35
Instrument: voa6.i
Client Sample ID: CCV

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

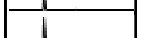
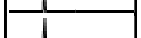




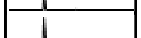
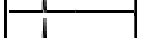
HS20100334 Wet Chem Raw Data (9056_anions_W)

ALS WO# HS20100334

Sequence: 102120
Last Update Operator: ALSHS.NoUser

ECD_1	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method	Volume [µl]
	STD1		Calibration	1	1.0000	01	Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	STD2		Calibration	2	1.0000	02	Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	STD3		Calibration	3	1.0000	03	Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	STD4		Calibration	4	1.0000	04	Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	STD5		Calibration	5	1.0000	05	Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	STD6		Calibration	6	1.0000	06	Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	ICV		Unknown	7	1.0000		Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	ICB		Unknown	8	1.0000		Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	CCV		Unknown	97	1.0000		Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	CCB		Unknown	98	1.0000		Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	MBLK-102120		Unknown	91	1.0000		Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	LCS-102120		Unknown	92	1.0000		Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	HS20100334-01		Unknown	50	1.0000		Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	HS20100334-01MS		Unknown	51	1.0000		Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	HS20100334-01MSD		Unknown	52	1.0000		Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	HS20100334-01DF50		Unknown	53	50.0000		Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	CCV1		Unknown	99	1.0000		Anion 26mM and 149mA	Anion Processing Method 091720	10.0
	CCB		Unknown	100	1.0000		Anion 26mM and 149mA	Anion Processing Method 091720	10.0

Sequence: 102120
Last Update Operator: ALSHS.NoUser

ECD_1	Name	Status	Inject Time
	STD1	Finished	10/1/2020 2:28:13 PM -05:
	STD2	Finished	10/1/2020 2:46:13 PM -05:
	STD3	Finished	10/1/2020 3:04:14 PM -05:
	STD4	Finished	10/1/2020 3:22:15 PM -05:
	STD5	Finished	10/1/2020 3:40:17 PM -05:
	STD6	Finished	10/1/2020 3:58:18 PM -05:
	ICV	Finished	10/1/2020 4:16:20 PM -05:
	ICB	Finished	10/1/2020 4:34:22 PM -05:
	CCV	Finished	10/21/2020 1:14:31 PM -05
	CCB	Finished	10/21/2020 1:32:33 PM -05
	MBLK-102120	Finished	10/21/2020 1:50:34 PM -05
	LCS-102120	Finished	10/21/2020 2:08:35 PM -05
	HS20100334-01	Finished	10/21/2020 3:02:37 PM -05
	HS20100334-01MS	Finished	10/21/2020 3:20:39 PM -05
	HS20100334-01MSD	Finished	10/21/2020 3:38:40 PM -05
	HS20100334-01DF50	Finished	10/21/2020 3:56:41 PM -05
	CCV1	Finished	10/21/2020 4:50:45 PM -05
	CCB	Finished	10/21/2020 5:08:46 PM -05

Sequence: 102120
Injection #6: STD6

Calibration

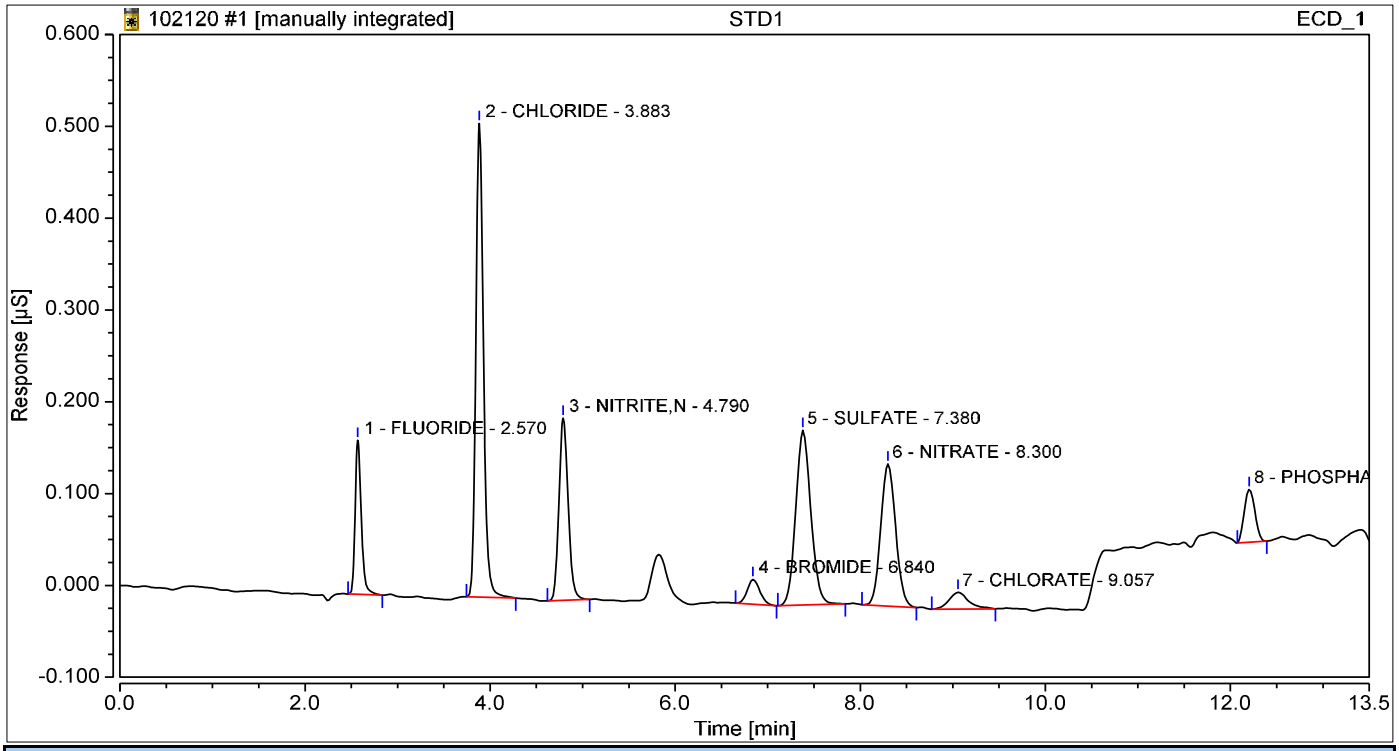
Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
n.a.	*Component 1*	*Lin, WithOffset, 1/*	*Area*	*0*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
1	FLUORIDE	Lin, WithOffset, 1/	Area	6	15.6034	0.99878	-0.0020	0.1561	0.0000
2	CHLORIDE	Lin, WithOffset, 1/	Area	6	7.7243	0.99968	0.0025	0.0967	0.0000
3	NITRITE,N	Lin, WithOffset, 1/	Area	6	21.9194	0.99709	0.0066	0.2093	0.0000
4	BROMIDE	Lin, WithOffset, 1/	Area	6	9.0474	0.99957	-0.0001	0.0412	0.0000
5	SULFATE	Lin, WithOffset, 1/	Area	6	8.2949	0.99963	0.0018	0.0717	0.0000
6	NITRATE	Lin, WithOffset, 1/	Area	6	7.4651	0.99968	0.0045	0.2405	0.0000
7	CHLORATE	Lin, WithOffset, 1/	Area	6	9.2671	0.99953	0.0003	0.0375	0.0000
8	PHOSPHATE	Lin, WithOffset, 1/	Area	6	8.3471	0.99966	-0.0018	0.0955	0.0000
Maximum					**21.9194**	0.99968			
Minimum					7.4651	**0.99709**			

Chromatogram and Results

Injection Details

Injection Name:	**STD1**	***Run Time (min):***	**13.50**
Vial Number:	**1**	***Injection Volume:***	**10.00**
Injection Type:	**Calibration Standard**	***Channel:***	**ECD_1**
Calibration Level:	**01**	***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**01/Oct/20 14:28**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

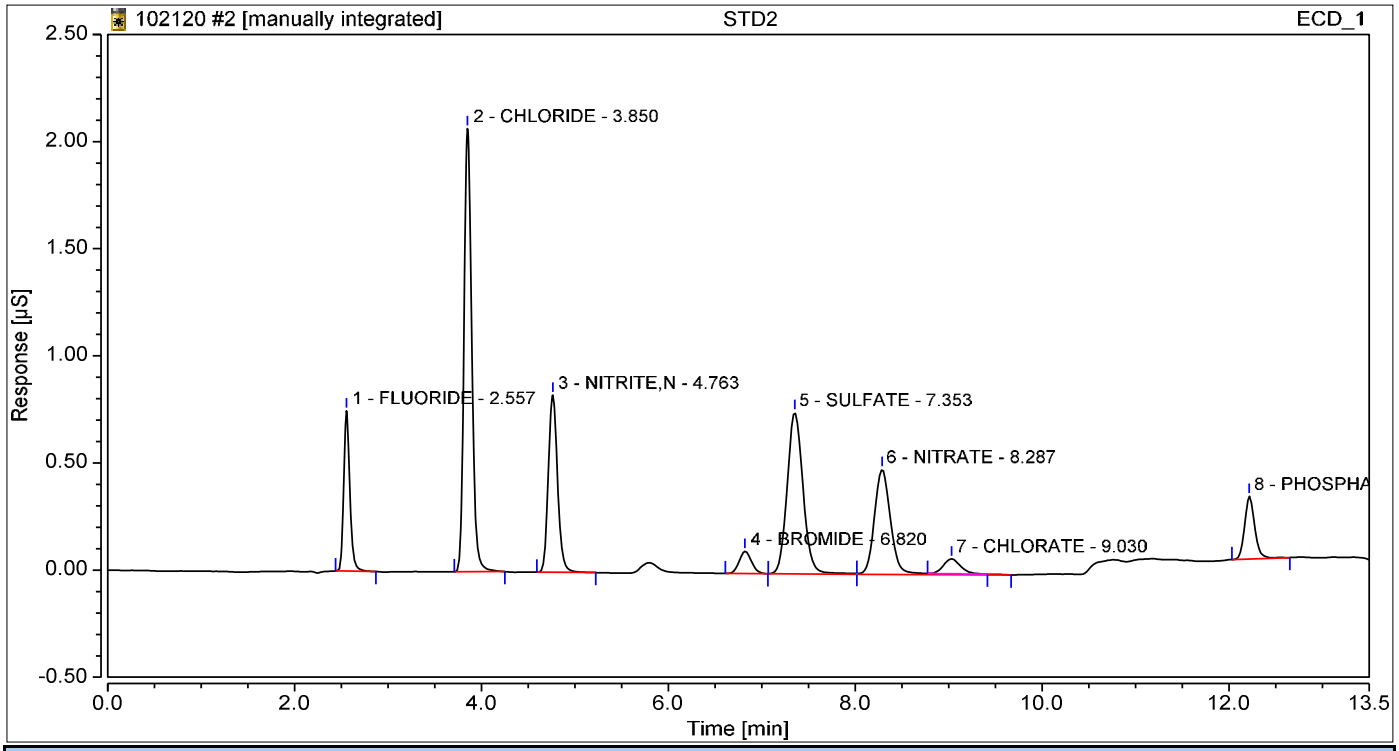
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.570	0.013	0.168	7.75	12.63	0.0952
2	CHLORIDE	3.883	0.049	0.516	29.54	38.80	0.4821
3	NITRITE,N	4.790	0.023	0.198	13.74	14.92	0.0775
4	BROMIDE	6.840	0.004	0.027	2.56	2.02	0.1065
5	SULFATE	7.380	0.036	0.190	21.74	14.31	0.4778
6	NITRATE	8.300	0.029	0.155	17.36	11.64	0.1012
7	CHLORATE	9.057	0.004	0.018	2.66	1.36	0.1097
8	PHOSPHATE	12.203	0.008	0.057	4.64	4.32	0.0996
Total:			**0.166**	**1.330**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2**	***Run Time (min):***	**13.50**
Vial Number:	**2**	***Injection Volume:***	**10.00**
Injection Type:	**Calibration Standard**	***Channel:***	**ECD_1**
Calibration Level:	**02**	***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**01/Oct/20 14:46**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

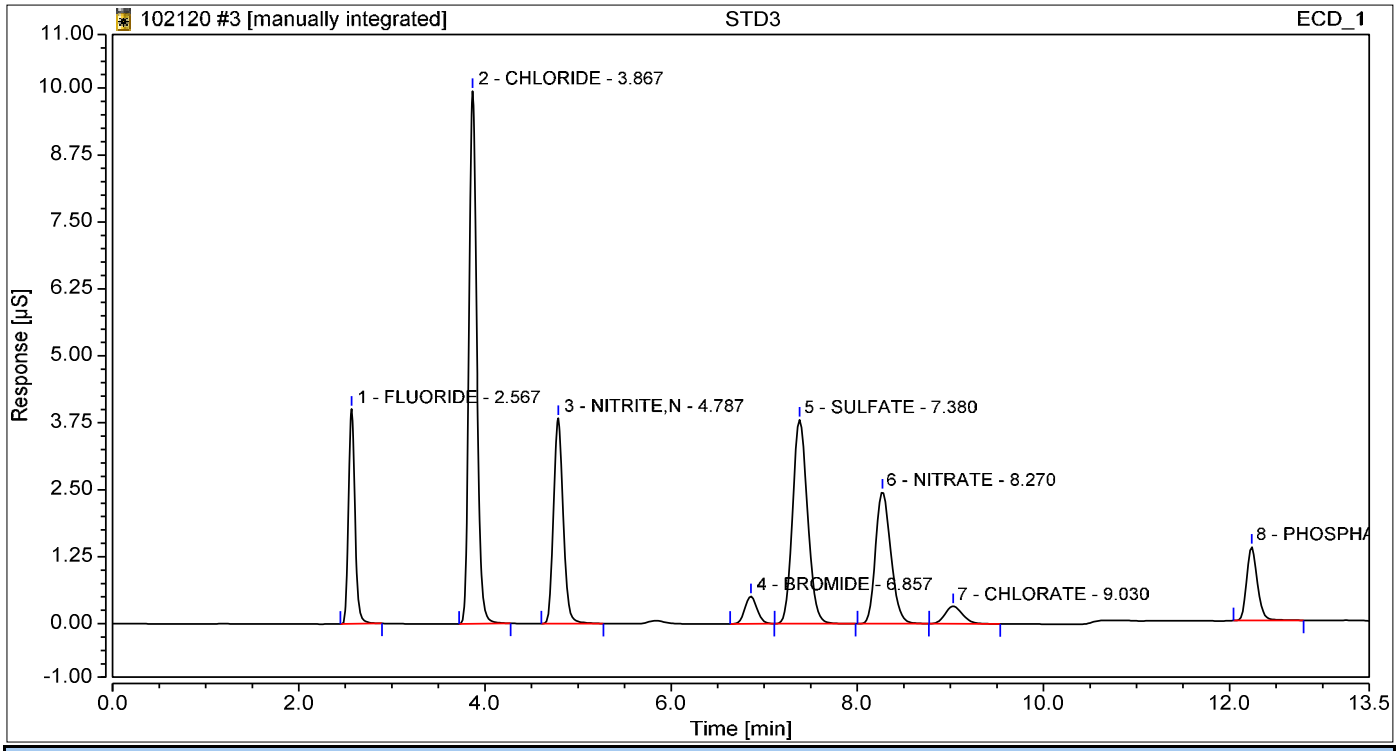
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.557	0.057	0.747	8.62	13.96	0.3803
2	CHLORIDE	3.850	0.198	2.068	29.75	38.65	2.0237
3	NITRITE,N	4.763	0.095	0.828	14.22	15.46	0.4207
4	BROMIDE	6.820	0.016	0.104	2.41	1.94	0.3928
5	SULFATE	7.353	0.148	0.754	22.26	14.09	2.0404
6	NITRATE	8.287	0.100	0.489	15.03	9.14	0.3976
7	CHLORATE	9.030	0.015	0.069	2.20	1.29	0.3821
8	PHOSPHATE	12.217	0.037	0.293	5.51	5.47	0.4030
Total:			**0.666**	**5.352**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3**	***Run Time (min):***	**13.50**
Vial Number:	**3**	***Injection Volume:***	**10.00**
Injection Type:	**Calibration Standard**	***Channel:***	**ECD_1**
Calibration Level:	**03**	***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**01/Oct/20 15:04**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

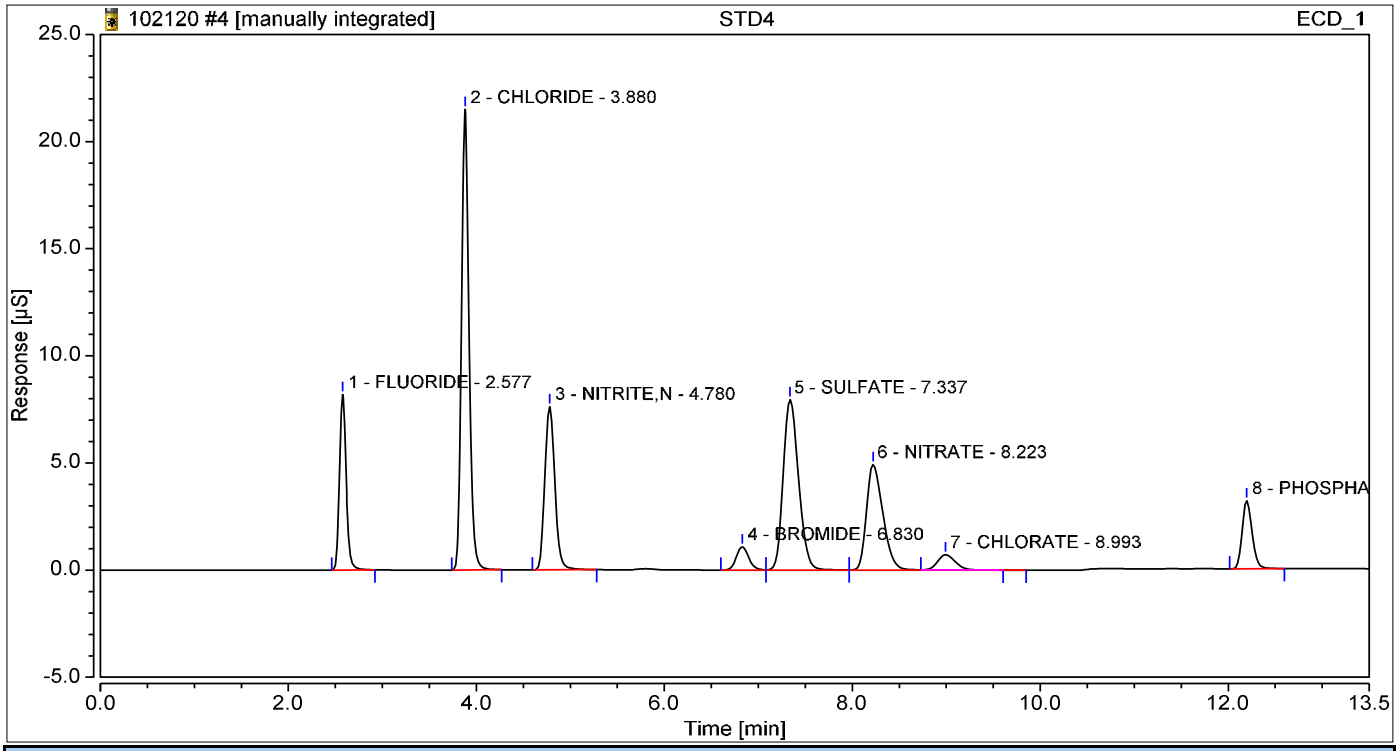
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.567	0.319	4.009	9.77	15.26	2.0568
2	CHLORIDE	3.867	0.968	9.946	29.65	37.85	9.9884
3	NITRITE,N	4.787	0.462	3.837	14.14	14.61	2.1748
4	BROMIDE	6.857	0.078	0.513	2.38	1.95	1.8902
5	SULFATE	7.380	0.714	3.809	21.87	14.50	9.9281
6	NITRATE	8.270	0.470	2.461	14.38	9.37	1.9339
7	CHLORATE	9.030	0.071	0.324	2.18	1.23	1.8847
8	PHOSPHATE	12.237	0.184	1.376	5.64	5.24	1.9453
Total:			**3.265**	**26.275**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4**	***Run Time (min):***	**13.50**
Vial Number:	**4**	***Injection Volume:***	**10.00**
Injection Type:	**Calibration Standard**	***Channel:***	**ECD_1**
Calibration Level:	**04**	***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**01/Oct/20 15:22**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

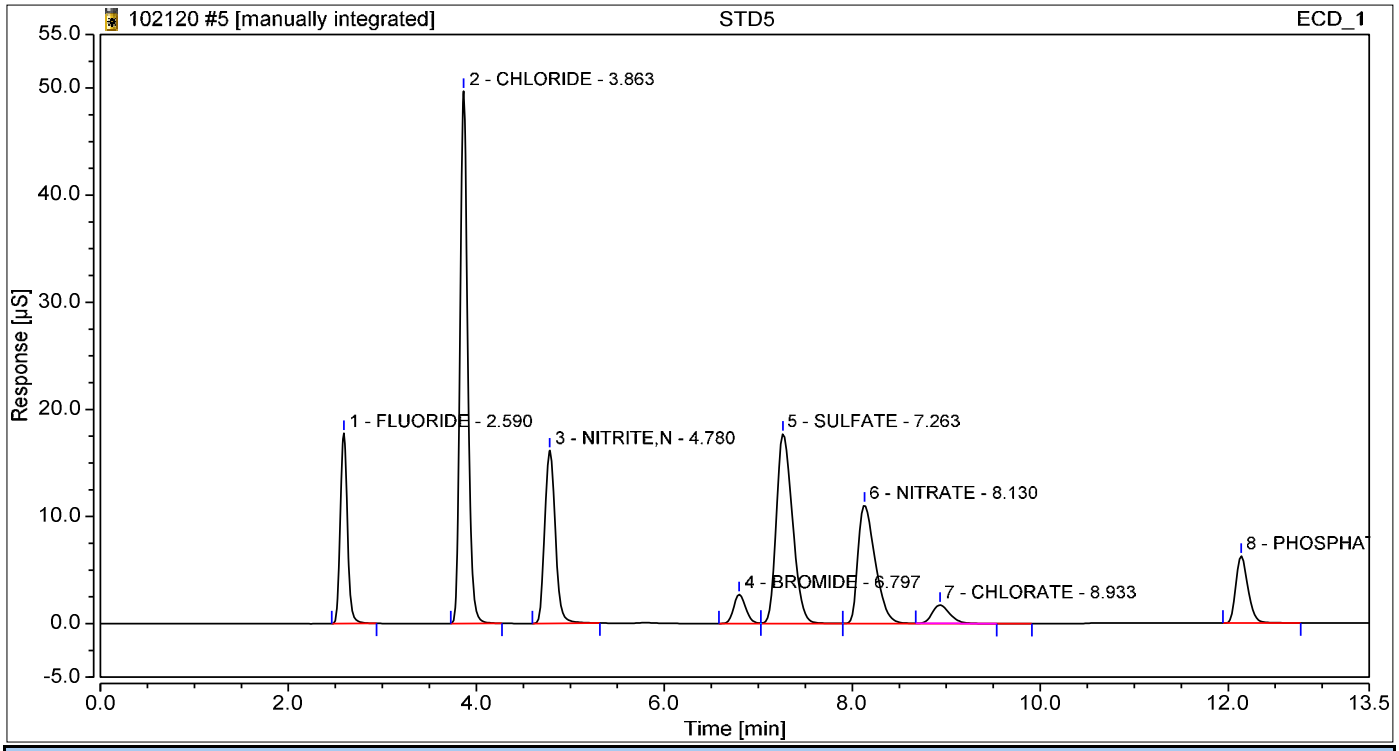
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.577	0.677	8.196	9.86	14.86	4.3471
2	CHLORIDE	3.880	2.019	21.493	29.43	38.95	20.8550
3	NITRITE,N	4.780	0.941	7.623	13.71	13.82	4.4642
4	BROMIDE	6.830	0.167	1.087	2.44	1.97	4.0629
5	SULFATE	7.337	1.506	7.953	21.96	14.41	20.9732
6	NITRATE	8.223	1.004	4.931	14.63	8.94	4.1554
7	CHLORATE	8.993	0.152	0.707	2.22	1.28	4.0425
8	PHOSPHATE	12.197	0.395	3.185	5.76	5.77	4.1533
Total:			**6.860**	**55.175**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5**	***Run Time (min):***	**13.50**
Vial Number:	**5**	***Injection Volume:***	**10.00**
Injection Type:	**Calibration Standard**	***Channel:***	**ECD_1**
Calibration Level:	**05**	***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**01/Oct/20 15:40**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

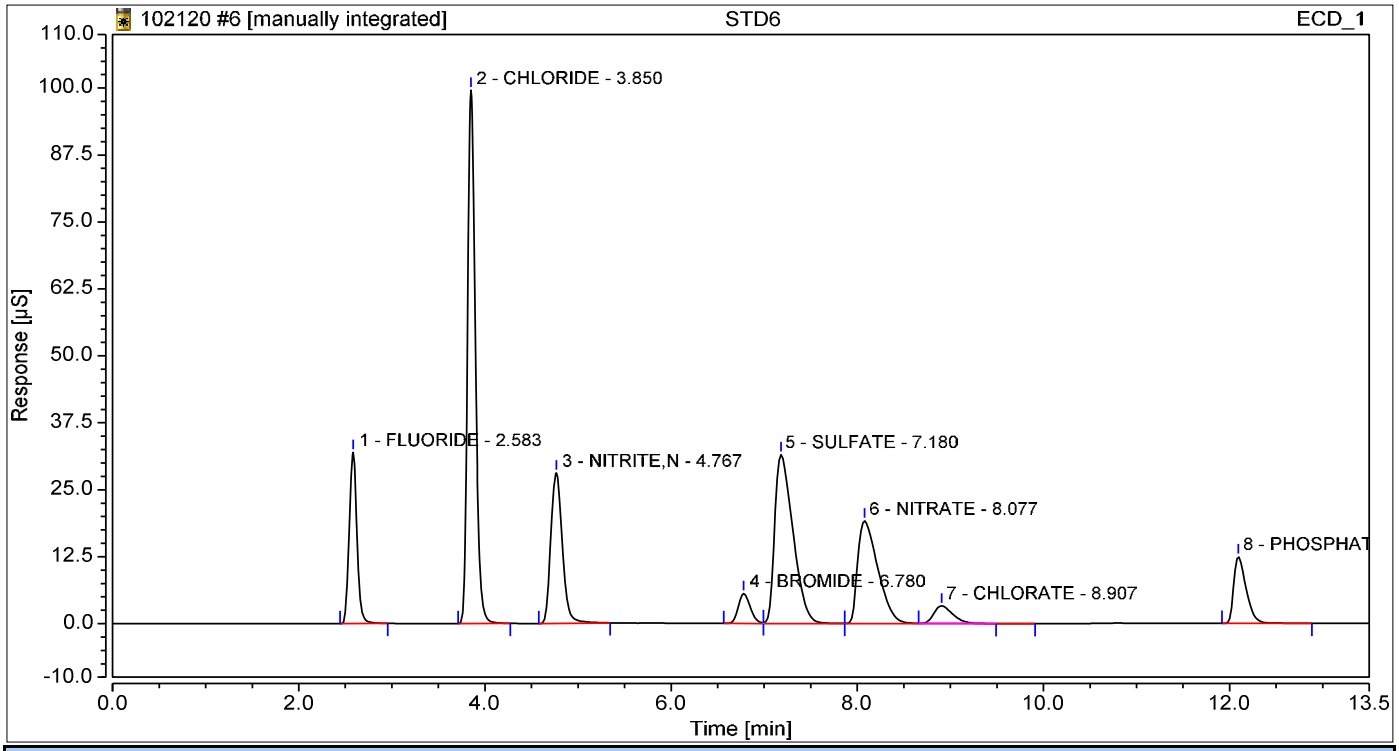
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.590	1.563	17.771	9.75	14.44	10.0248
2	CHLORIDE	3.863	4.747	49.691	29.62	40.39	49.0750
3	NITRITE,N	4.780	2.108	16.129	13.15	13.11	10.0434
4	BROMIDE	6.797	0.403	2.716	2.52	2.21	9.8027
5	SULFATE	7.263	3.530	17.707	22.02	14.39	49.1861
6	NITRATE	8.130	2.372	11.068	14.80	9.00	9.8461
7	CHLORATE	8.933	0.369	1.710	2.30	1.39	9.8128
8	PHOSPHATE	12.137	0.935	6.243	5.84	5.07	9.8091
Total:			**16.028**	**123.035**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6**	***Run Time (min):***	**13.50**
Vial Number:	**6**	***Injection Volume:***	**10.00**
Injection Type:	**Calibration Standard**	***Channel:***	**ECD_1**
Calibration Level:	**06**	***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**01/Oct/20 15:58**	***Sample Weight:***	**1.0000**

Chromatogram



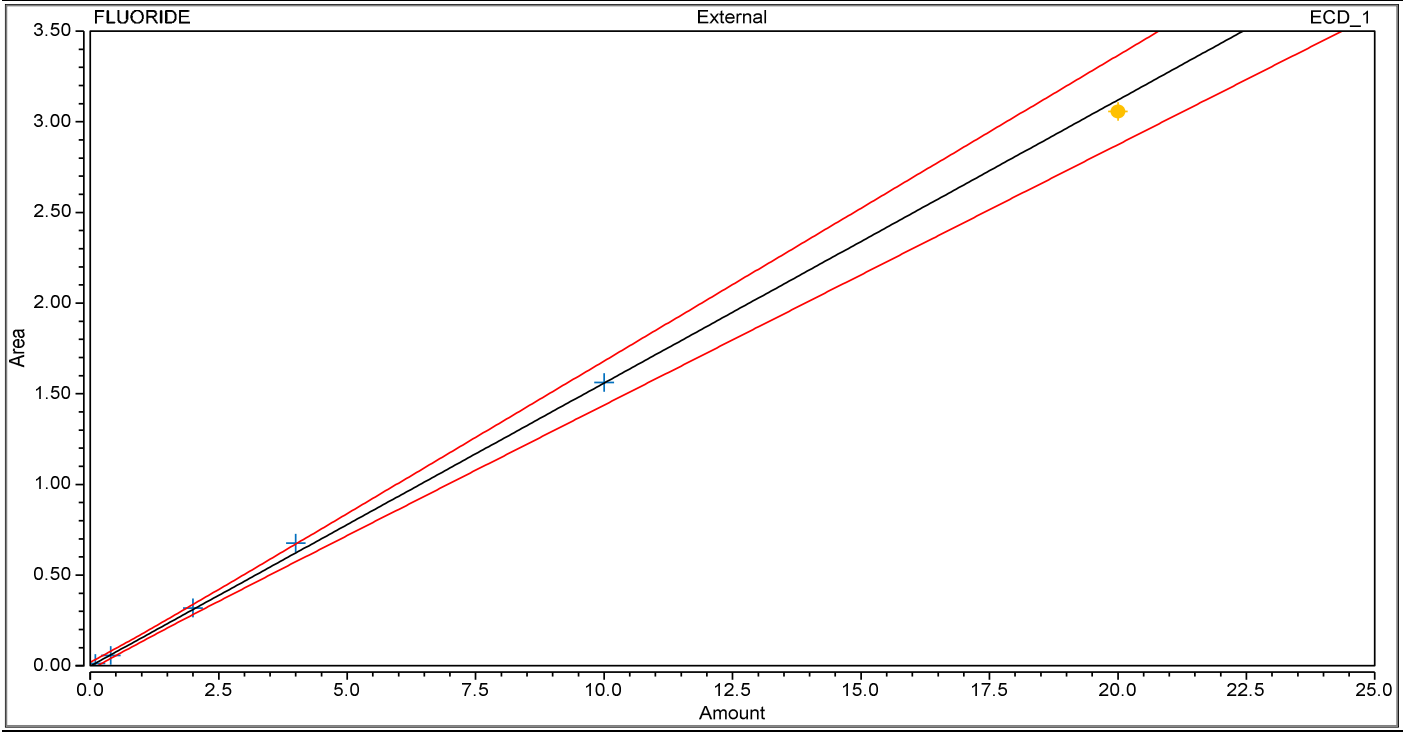
Integration Results

No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.583	3.057	31.952	9.47	13.79	19.5958
2	CHLORIDE	3.850	9.677	99.600	29.97	43.00	100.0757
3	NITRITE,N	4.767	4.049	28.088	12.54	12.13	19.3195
4	BROMIDE	6.780	0.833	5.611	2.58	2.42	20.2449
5	SULFATE	7.180	7.168	31.521	22.20	13.61	99.8943
6	NITRATE	8.077	4.829	19.153	14.95	8.27	20.0658
7	CHLORATE	8.907	0.761	3.263	2.36	1.41	20.2682
8	PHOSPHATE	12.093	1.918	12.436	5.94	5.37	20.0897
Total:			**32.293**	**231.625**	**100.00**	**100.00**	

Calibration

Calibration Details	FLUORIDE		
Calibration Type	Lin, WithOffset, 1/A	***Offset (C0)***	-0.0020
Evaluation Type	Area	***Slope (C1)***	0.1561
Number of Calibration Points	6	***Curve (C2)***	0.0000
Number of disabled Calibration Points	0	***R-Square***	0.9988

Calibration Plot **FLUORIDE**



Calibration Results **FLUORIDE**

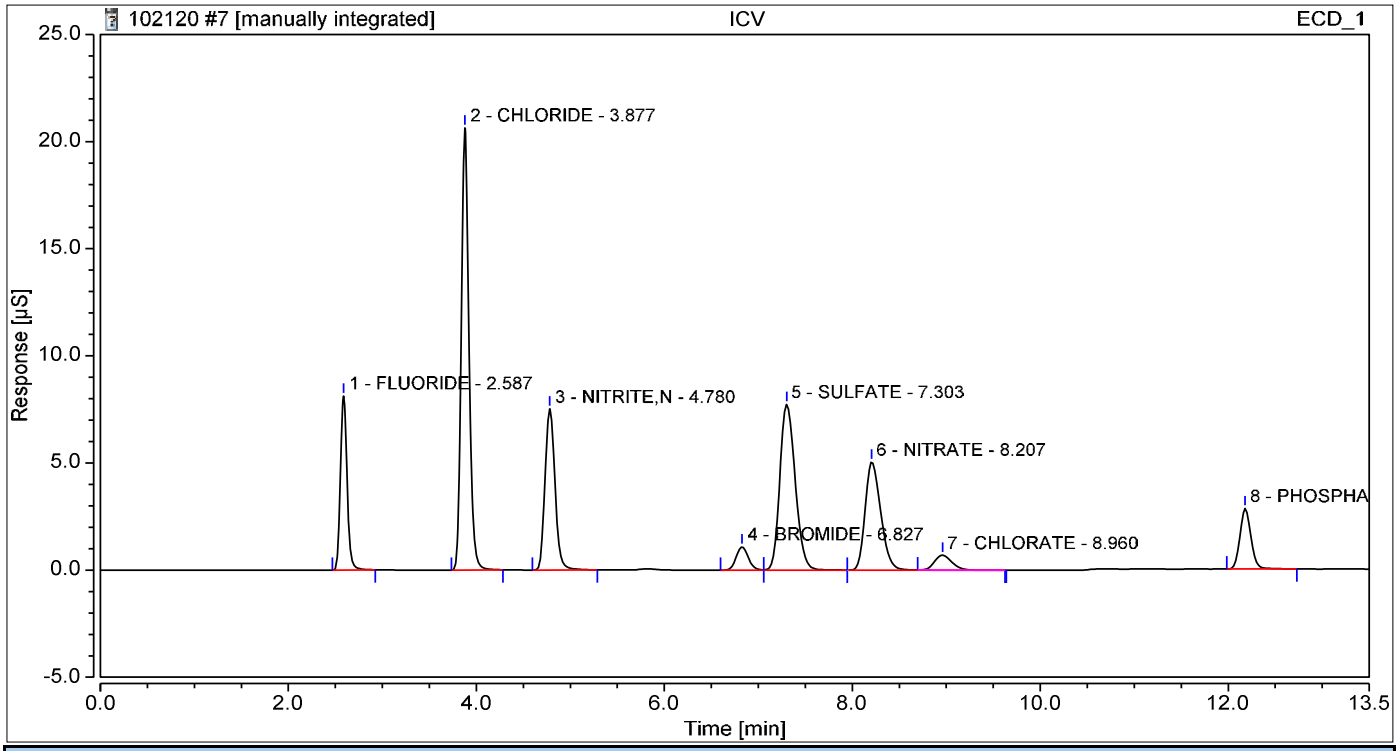
No.	Injection Name	Calibration Level	X Value ECD_1 FLUORIDE	Y Value ECD_1 FLUORIDE	Y Value ECD_1 FLUORIDE	Area µS*min ECD_1 FLUORIDE	Height µS ECD_1 FLUORIDE
1	STD1	01	0.1000	0.0129	0.0129	0.013	0.168
2	STD2	02	0.4000	0.0574	0.0574	0.057	0.747
3	STD3	03	2.0000	0.3191	0.3191	0.319	4.009
4	STD4	04	4.0000	0.6766	0.6766	0.677	8.196
5	STD5	05	10.0000	1.5629	1.5629	1.563	17.771
6	STD6	06	20.0000	3.0570	3.0570	3.057	31.952

Chromatogram and Results

Injection Details

Injection Name:	**ICV**	***Run Time (min):***	**13.50**
Vial Number:	**7**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**01/Oct/20 16:16**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

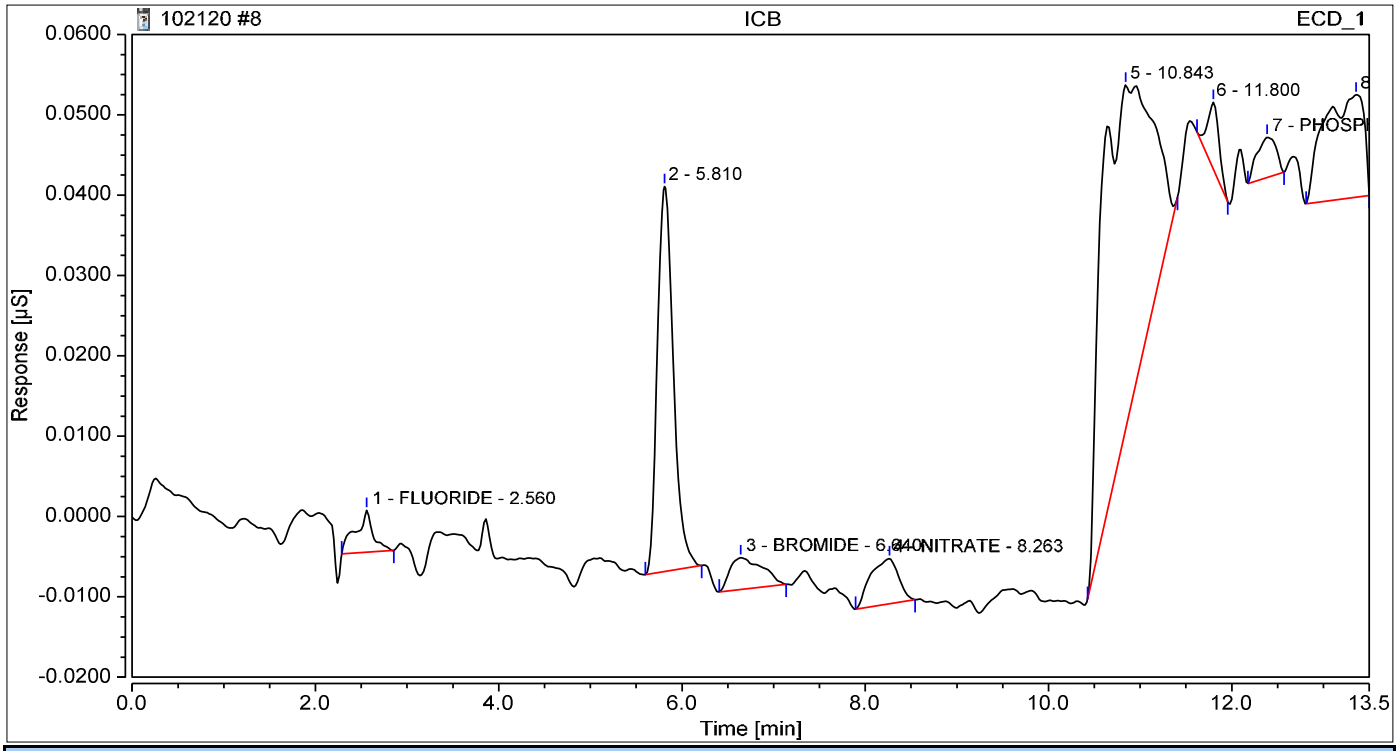
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.587	0.664	8.129	9.90	15.14	4.2668
2	CHLORIDE	3.877	1.975	20.643	29.43	38.46	20.4029
3	NITRITE,N	4.780	0.923	7.514	13.75	14.00	4.3795
4	BROMIDE	6.827	0.164	1.087	2.44	2.02	3.9777
5	SULFATE	7.303	1.470	7.734	21.91	14.41	20.4685
6	NITRATE	8.207	0.981	5.058	14.62	9.42	4.0626
7	CHLORATE	8.960	0.149	0.693	2.22	1.29	3.9552
8	PHOSPHATE	12.180	0.385	2.821	5.74	5.26	4.0479
Total:			**6.711**	**53.679**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB**	***Run Time (min):***	**13.50**
Vial Number:	**8**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**01/Oct/20 16:34**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

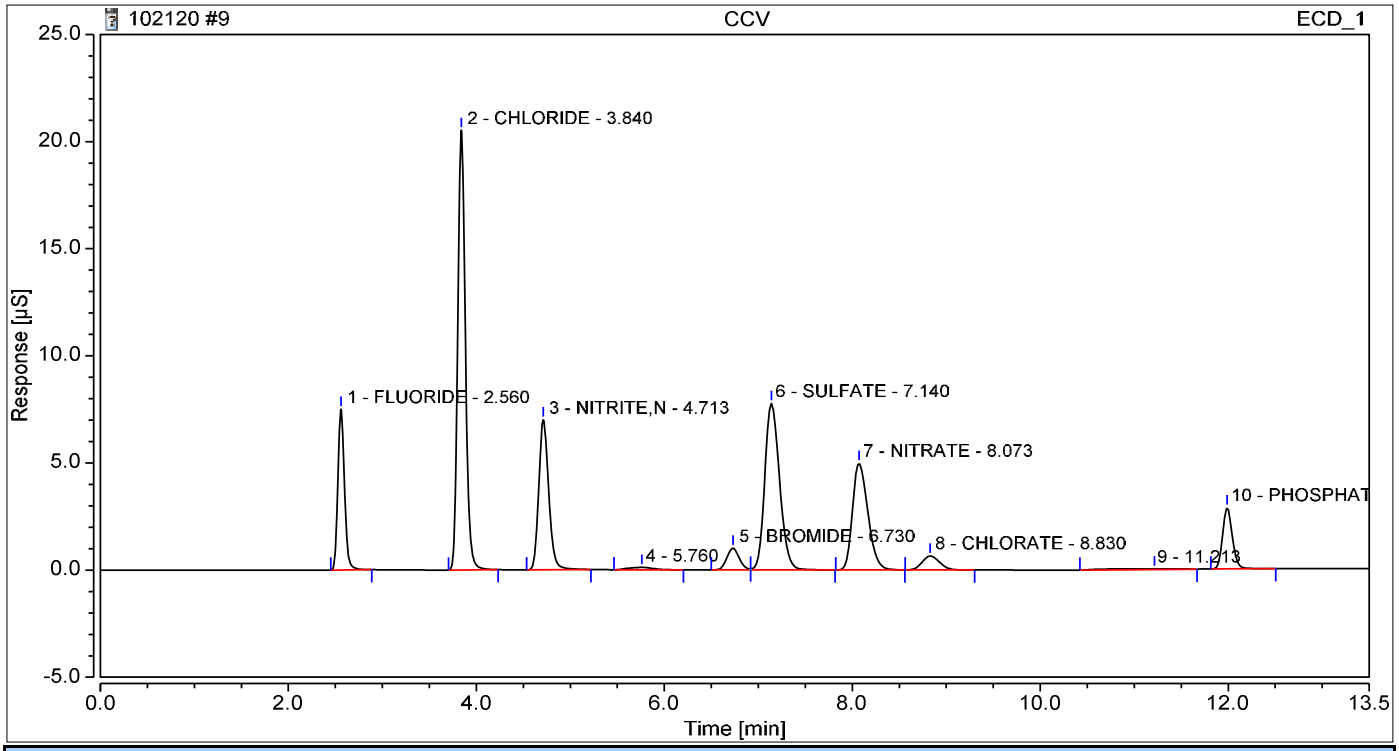
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.560	0.001	0.005	2.27	3.96	0.0201
n.a.	CHLORIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		5.810	0.010	0.048	19.22	36.43	n.a.
3	BROMIDE	6.640	0.002	0.004	3.17	3.02	0.0421
n.a.	SULFATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	NITRATE	8.263	0.002	0.006	3.96	4.29	n.a.
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		10.843	0.027	0.043	53.80	32.48	n.a.
6		11.800	0.001	0.008	2.38	6.35	n.a.
7	PHOSPHATE	12.387	0.001	0.005	2.42	3.79	0.0318
8		13.357	0.006	0.013	12.78	9.68	n.a.
Total:			**0.051**	**0.132**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV**	***Run Time (min):***	**13.50**
Vial Number:	**97**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**21/Oct/20 13:14**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

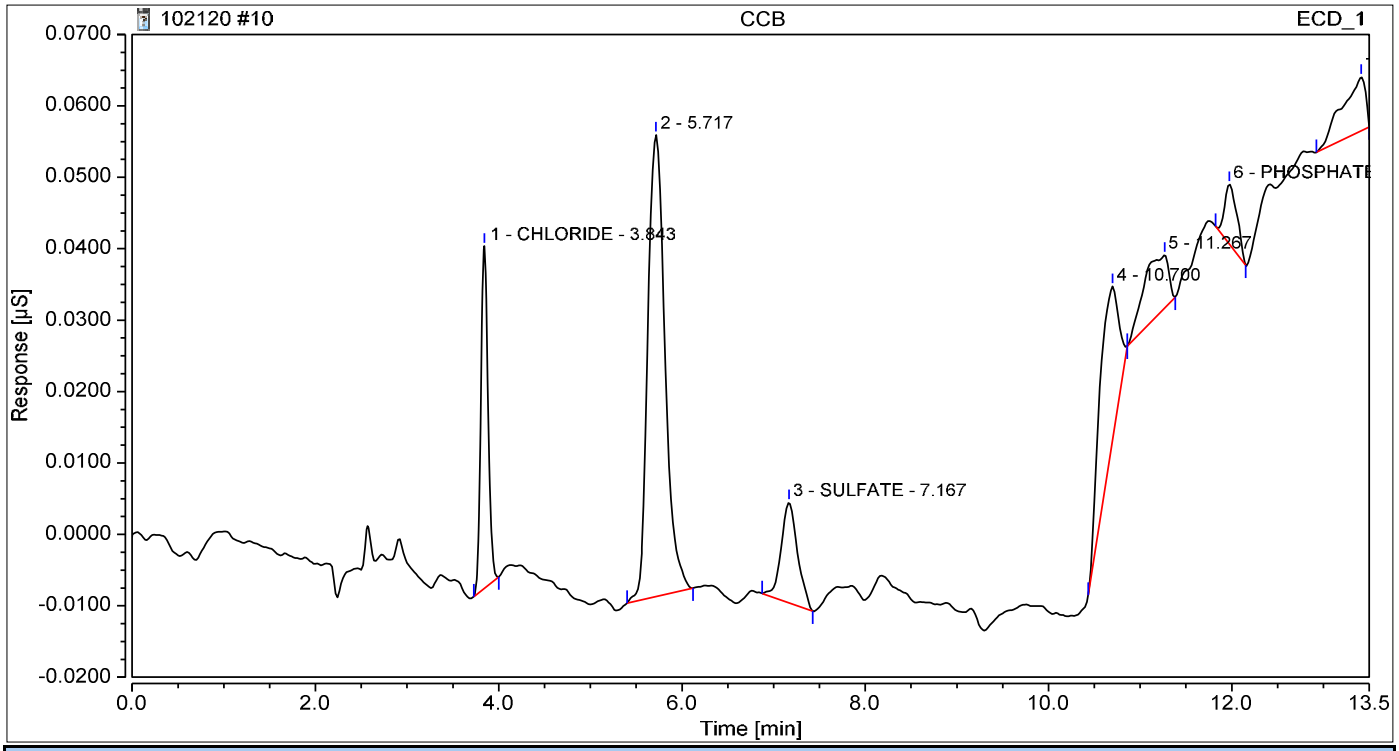
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.560	0.602	7.506	9.34	14.32	3.8710
2	CHLORIDE	3.840	1.919	20.518	29.78	39.14	19.8292
3	NITRITE,N	4.713	0.863	6.997	13.39	13.35	4.0937
4		5.760	0.035	0.110	0.54	0.21	n.a.
5	BROMIDE	6.730	0.155	1.010	2.40	1.93	3.7629
6	SULFATE	7.140	1.414	7.771	21.93	14.83	19.6828
7	NITRATE	8.073	0.943	4.975	14.63	9.49	3.9039
8	CHLORATE	8.830	0.139	0.650	2.16	1.24	3.7044
9		11.213	0.030	0.028	0.47	0.05	n.a.
10	PHOSPHATE	11.987	0.344	2.854	5.34	5.44	3.6216
Total:			**6.445**	**52.418**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB**	***Run Time (min):***	**13.50**
Vial Number:	**98**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**21/Oct/20 13:32**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

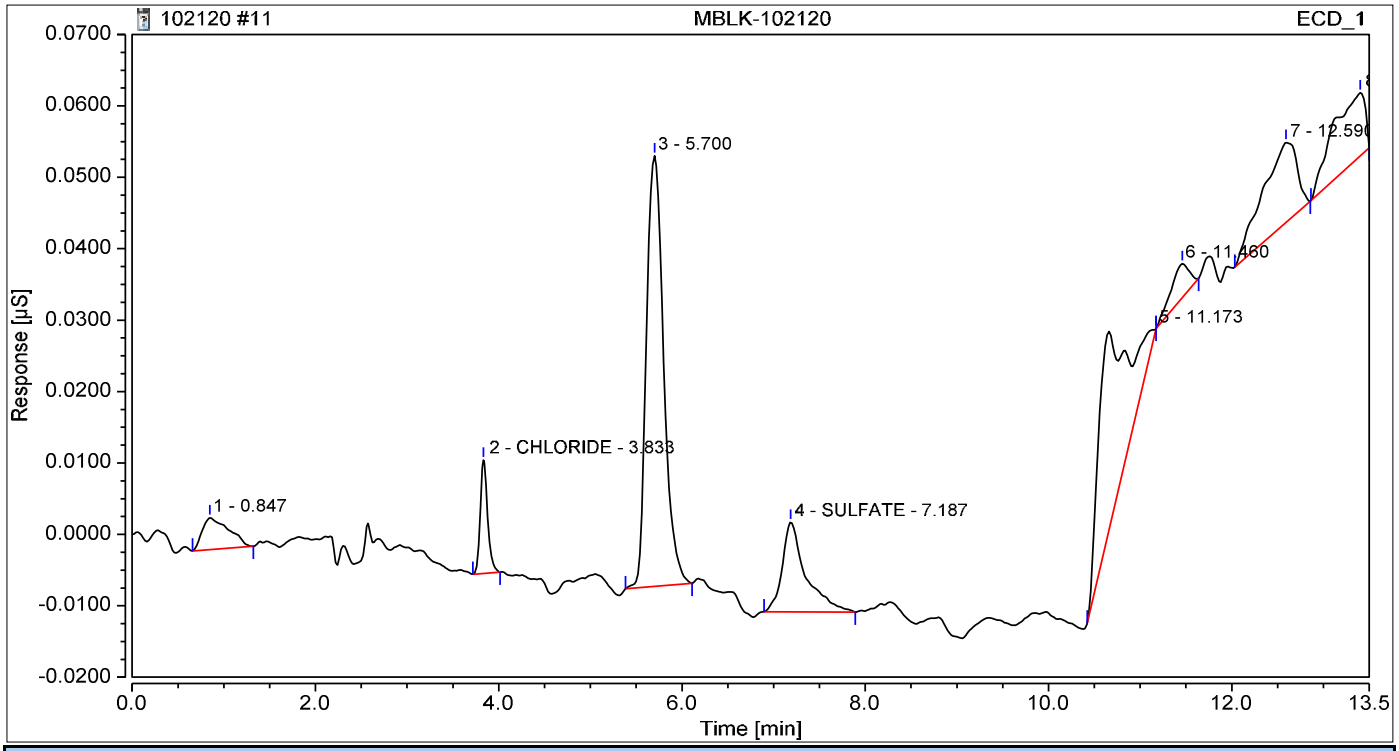
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	FLUORIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	CHLORIDE	3.843	0.004	0.048	13.12	27.93	0.0198
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		5.717	0.014	0.065	42.31	37.73	n.a.
n.a.	BROMIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	SULFATE	7.167	0.003	0.014	8.78	8.20	0.0151
n.a.	NITRATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4		10.700	0.006	0.021	16.97	12.51	n.a.
5		11.267	0.003	0.007	7.91	4.34	n.a.
6	PHOSPHATE	11.973	0.001	0.008	3.98	4.90	0.0329
7		13.413	0.002	0.008	6.93	4.39	n.a.
Total:			**0.033**	**0.171**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MBLK-102120**	***Run Time (min):***	**13.50**
Vial Number:	**91**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**21/Oct/20 13:50**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

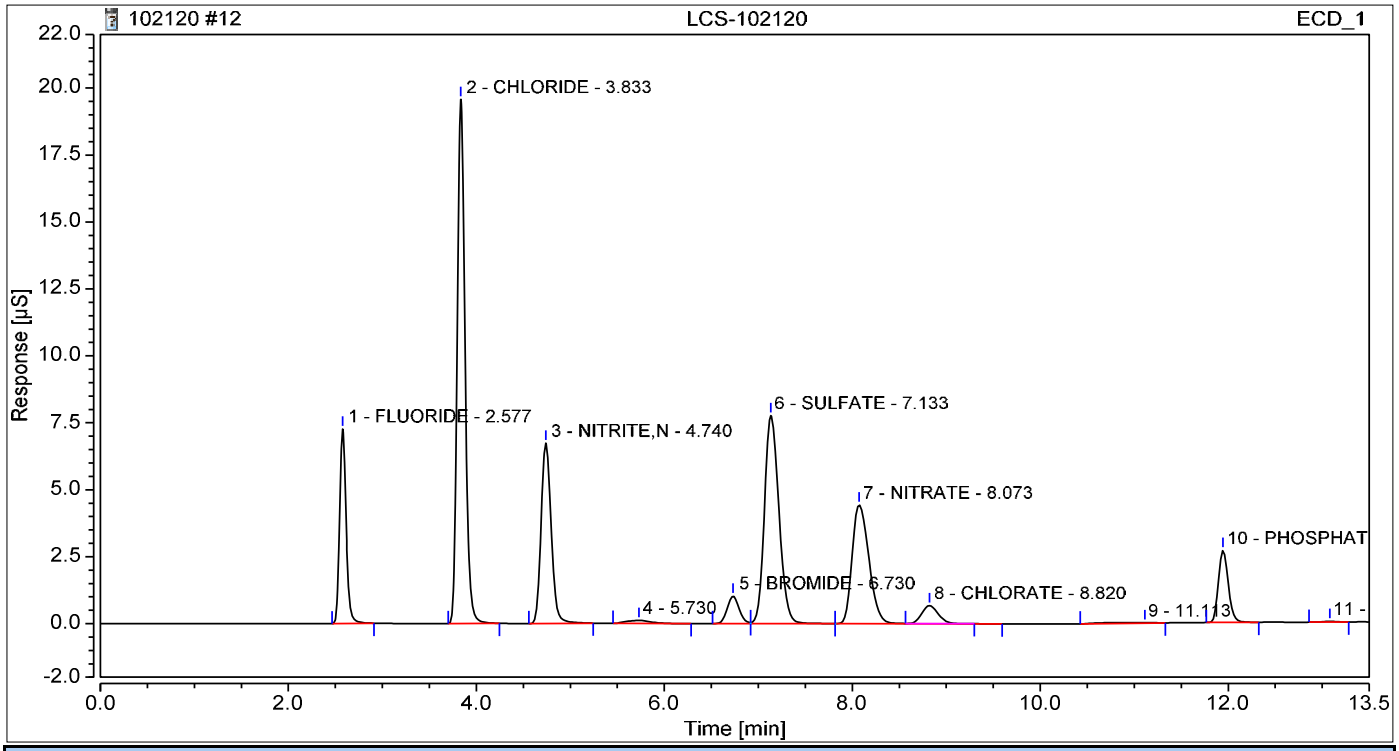
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		0.847	0.001	0.004	3.76	3.80	n.a.
n.a.	FLUORIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	CHLORIDE	3.833	0.001	0.016	3.73	13.45	n.a.
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		5.700	0.013	0.060	33.14	51.10	n.a.
n.a.	BROMIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	SULFATE	7.187	0.004	0.013	9.38	10.65	0.0262
n.a.	NITRATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		11.173	0.010	0.000	24.59	0.00	n.a.
6		11.460	0.001	0.005	2.81	3.99	n.a.
n.a.	PHOSPHATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7		12.590	0.005	0.011	12.56	9.51	n.a.
8		13.403	0.004	0.009	10.03	7.49	n.a.
Total:			**0.040**	**0.118**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-102120**	***Run Time (min):***	**13.50**
Vial Number:	**92**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**21/Oct/20 14:08**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

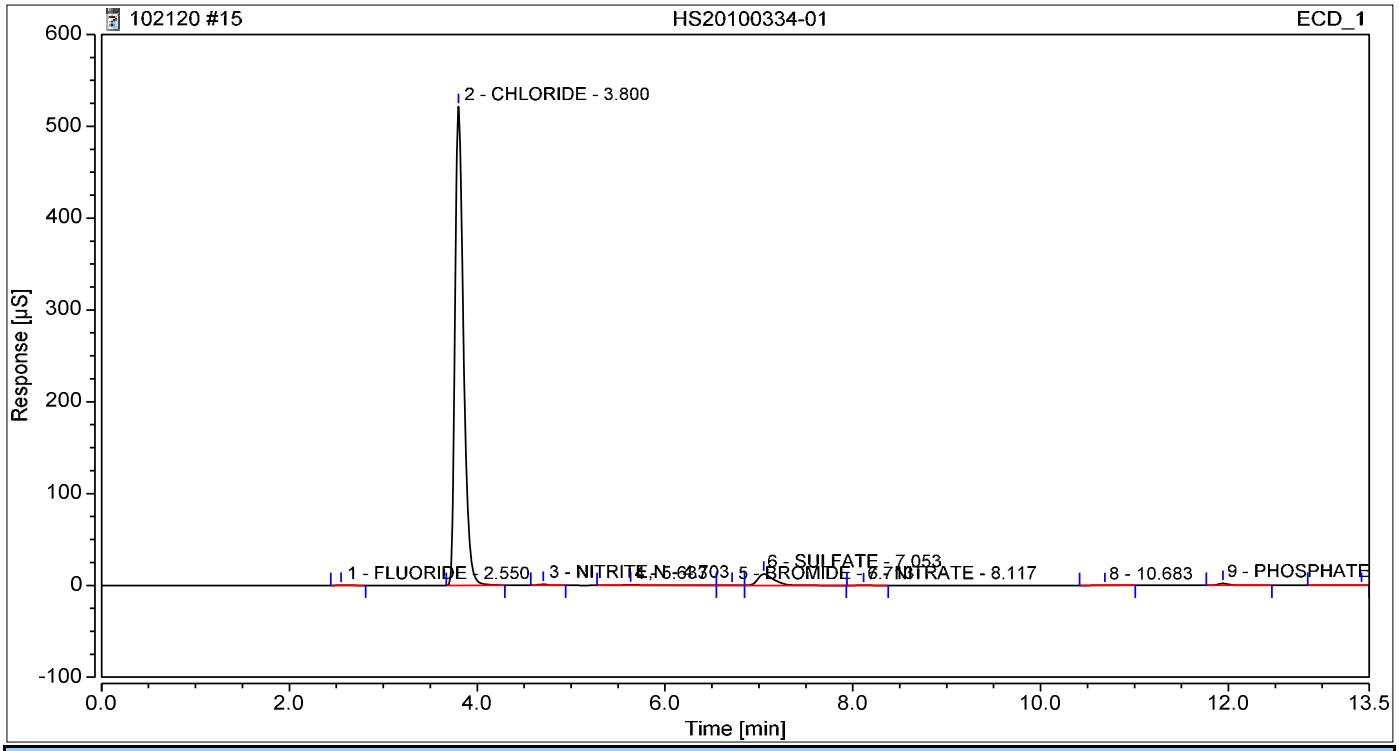
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.577	0.584	7.268	9.31	14.44	3.7552
2	CHLORIDE	3.833	1.867	19.571	29.74	38.88	19.2817
3	NITRITE,N	4.740	0.839	6.733	13.36	13.38	3.9758
4		5.730	0.035	0.114	0.56	0.23	n.a.
5	BROMIDE	6.730	0.151	1.027	2.41	2.04	3.6738
6	SULFATE	7.133	1.389	7.772	22.13	15.44	19.3344
7	NITRATE	8.073	0.928	4.443	14.78	8.83	3.8390
8	CHLORATE	8.820	0.136	0.673	2.16	1.34	3.6038
9		11.113	0.017	0.017	0.27	0.03	n.a.
10	PHOSPHATE	11.943	0.327	2.688	5.21	5.34	3.4406
11		13.080	0.004	0.028	0.07	0.06	n.a.
Total:			**6.276**	**50.334**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**HS20100334-01**	***Run Time (min):***	**13.50**
Vial Number:	**50**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**21/Oct/20 15:02**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

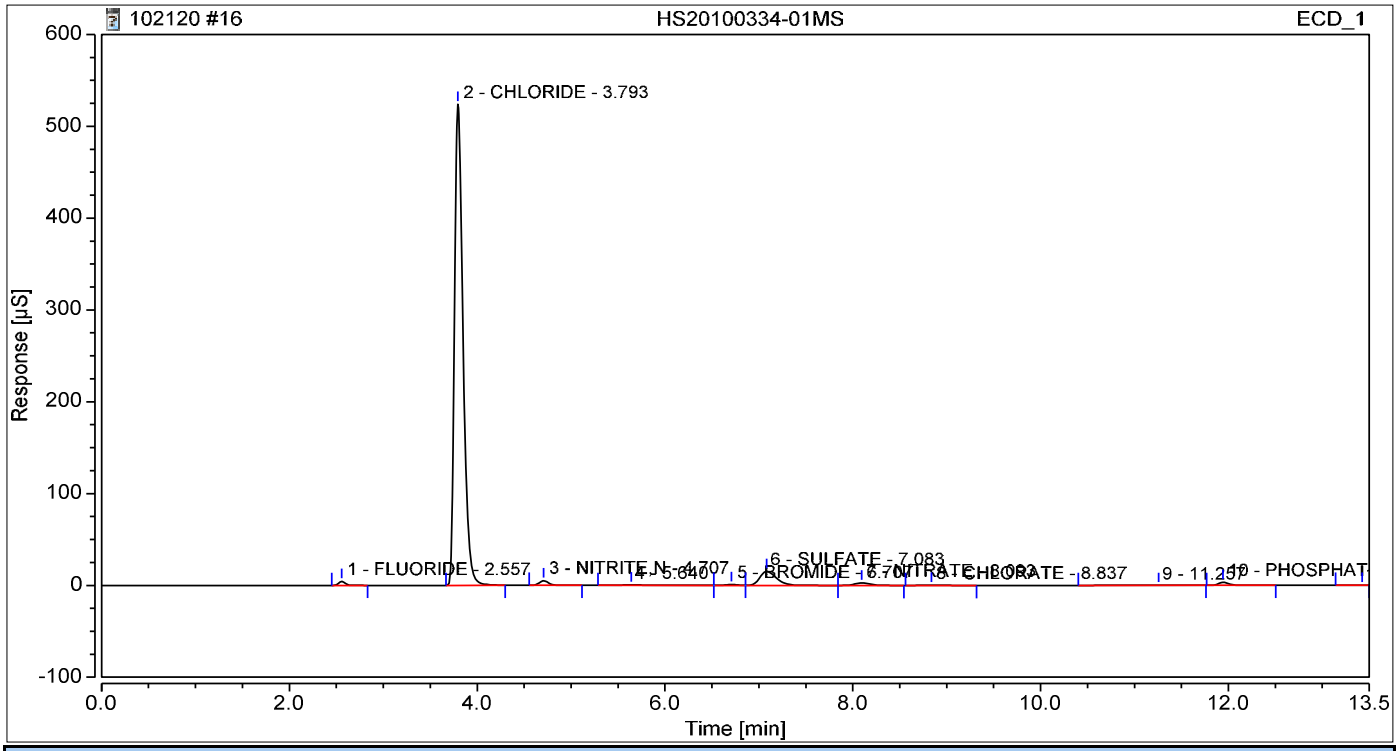
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.550	0.018	0.210	0.03	0.04	0.1276
2	CHLORIDE	3.800	54.530	521.524	94.58	96.91	564.0156
3	NITRITE,N	4.703	0.125	1.153	0.22	0.21	0.5678
4		5.633	0.229	0.372	0.40	0.07	n.a.
5	BROMIDE	6.713	0.043	0.281	0.07	0.05	1.0432
6	SULFATE	7.053	2.428	12.417	4.21	2.31	33.8195
7	NITRATE	8.117	0.006	0.032	0.01	0.01	0.0043
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
8		10.683	0.009	0.027	0.02	0.00	n.a.
9	PHOSPHATE	11.943	0.262	2.104	0.45	0.39	2.7582
10		13.417	0.003	0.008	0.00	0.00	n.a.
Total:			**57.652**	**538.126**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**HS20100334-01MS**	***Run Time (min):***	**13.50**
Vial Number:	**51**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**21/Oct/20 15:20**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

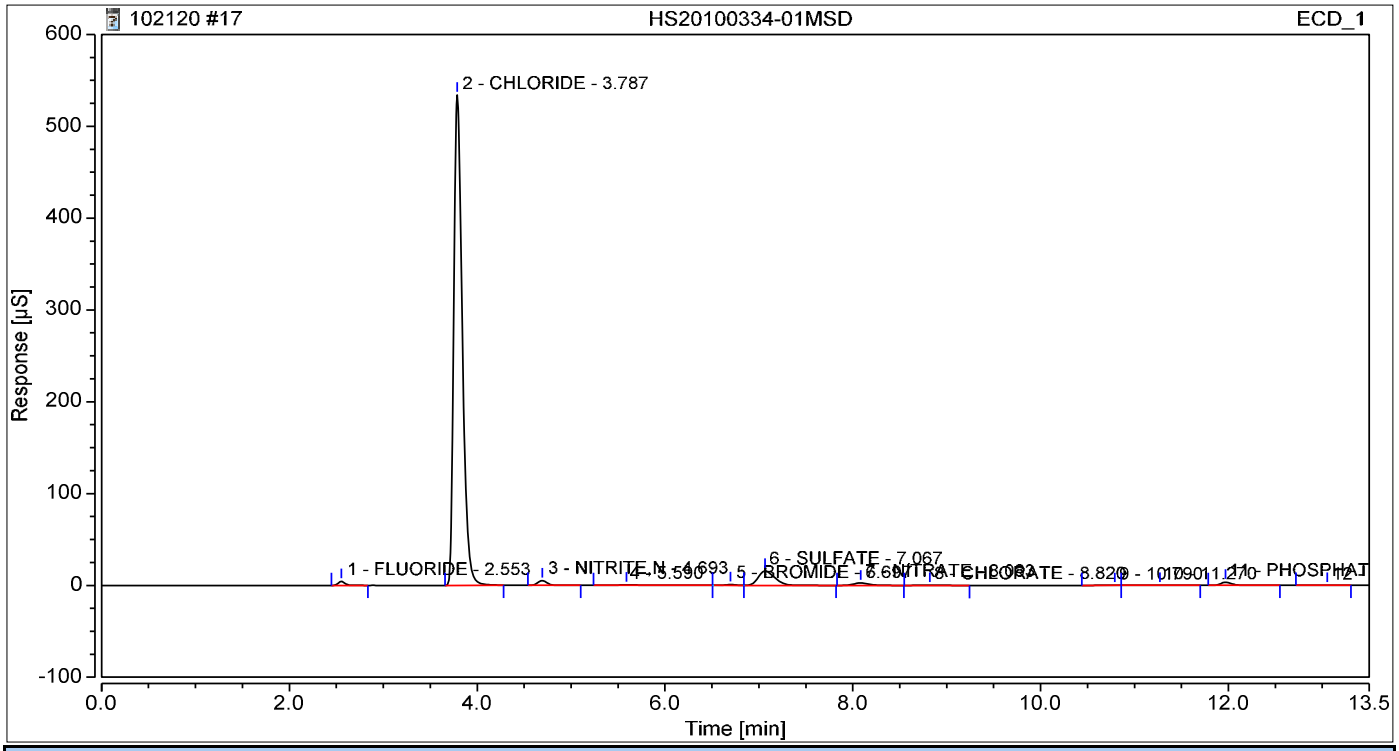
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.557	0.343	4.260	0.57	0.77	2.2074
2	CHLORIDE	3.793	54.809	524.052	90.98	94.20	566.9063
3	NITRITE,N	4.707	0.576	4.957	0.96	0.89	2.7189
4		5.640	0.223	0.380	0.37	0.07	n.a.
5	BROMIDE	6.707	0.123	0.832	0.20	0.15	2.9852
6	SULFATE	7.083	3.133	15.322	5.20	2.75	43.6515
7	NITRATE	8.093	0.485	2.667	0.80	0.48	1.9966
8	CHLORATE	8.837	0.071	0.342	0.12	0.06	1.8801
9		11.257	0.026	0.023	0.04	0.00	n.a.
10	PHOSPHATE	11.943	0.453	3.468	0.75	0.62	4.7592
11		13.423	0.001	0.007	0.00	0.00	n.a.
Total:			**60.242**	**556.310**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**HS20100334-01MSD**	***Run Time (min):***	**13.50**
Vial Number:	**52**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**21/Oct/20 15:38**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

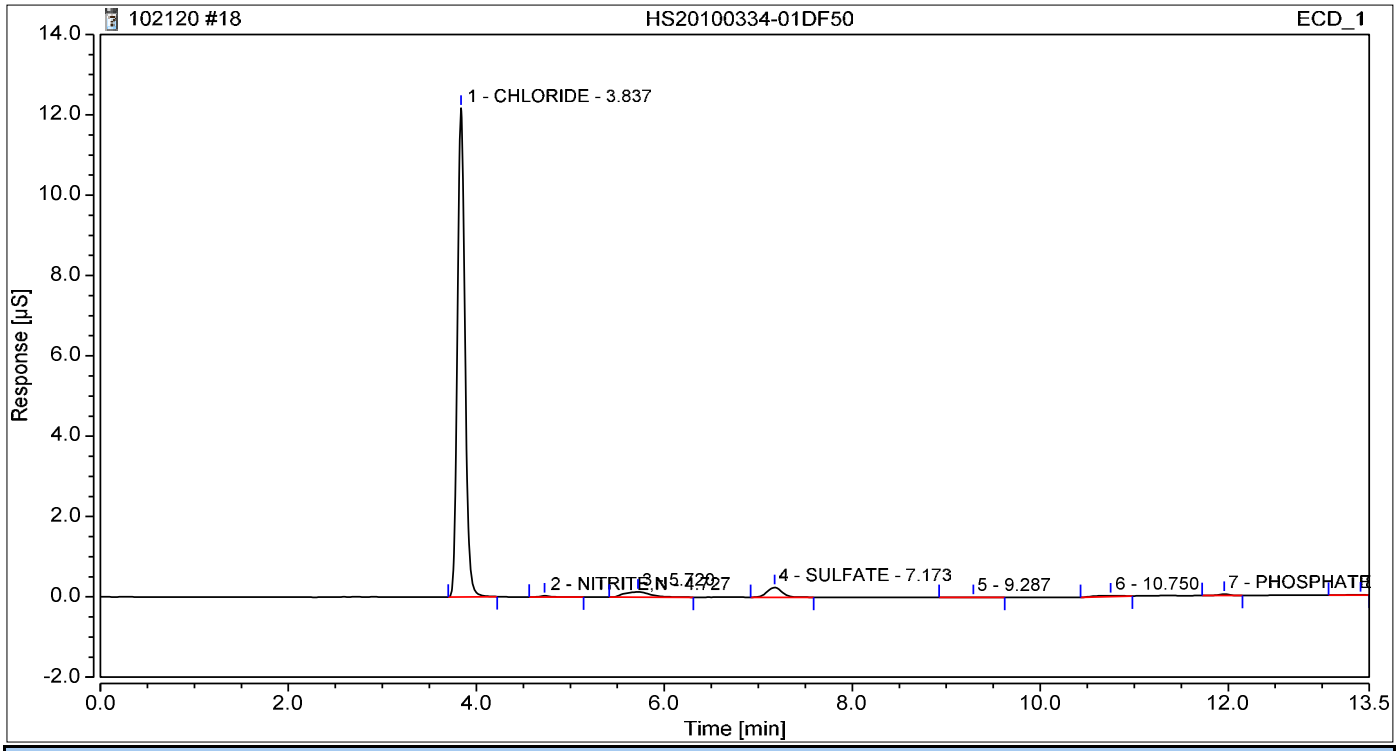
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.553	0.348	4.314	0.57	0.76	2.2417
2	CHLORIDE	3.787	55.581	533.910	91.01	94.22	574.8936
3	NITRITE,N	4.693	0.583	5.072	0.95	0.90	2.7537
4		5.590	0.223	0.368	0.37	0.06	n.a.
5	BROMIDE	6.697	0.122	0.841	0.20	0.15	2.9778
6	SULFATE	7.067	3.183	15.605	5.21	2.75	44.3456
7	NITRATE	8.083	0.491	2.681	0.80	0.47	2.0242
8	CHLORATE	8.820	0.069	0.324	0.11	0.06	1.8315
9		10.790	0.004	0.007	0.01	0.00	n.a.
10		11.270	0.005	0.011	0.01	0.00	n.a.
11	PHOSPHATE	11.970	0.461	3.512	0.75	0.62	4.8410
12		13.053	0.002	0.006	0.00	0.00	n.a.
Total:			**61.073**	**566.651**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**HS20100334-01DF50**	***Run Time (min):***	**13.50**
Vial Number:	**53**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**50.0000**
Injection Date/Time:	**21/Oct/20 15:56**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

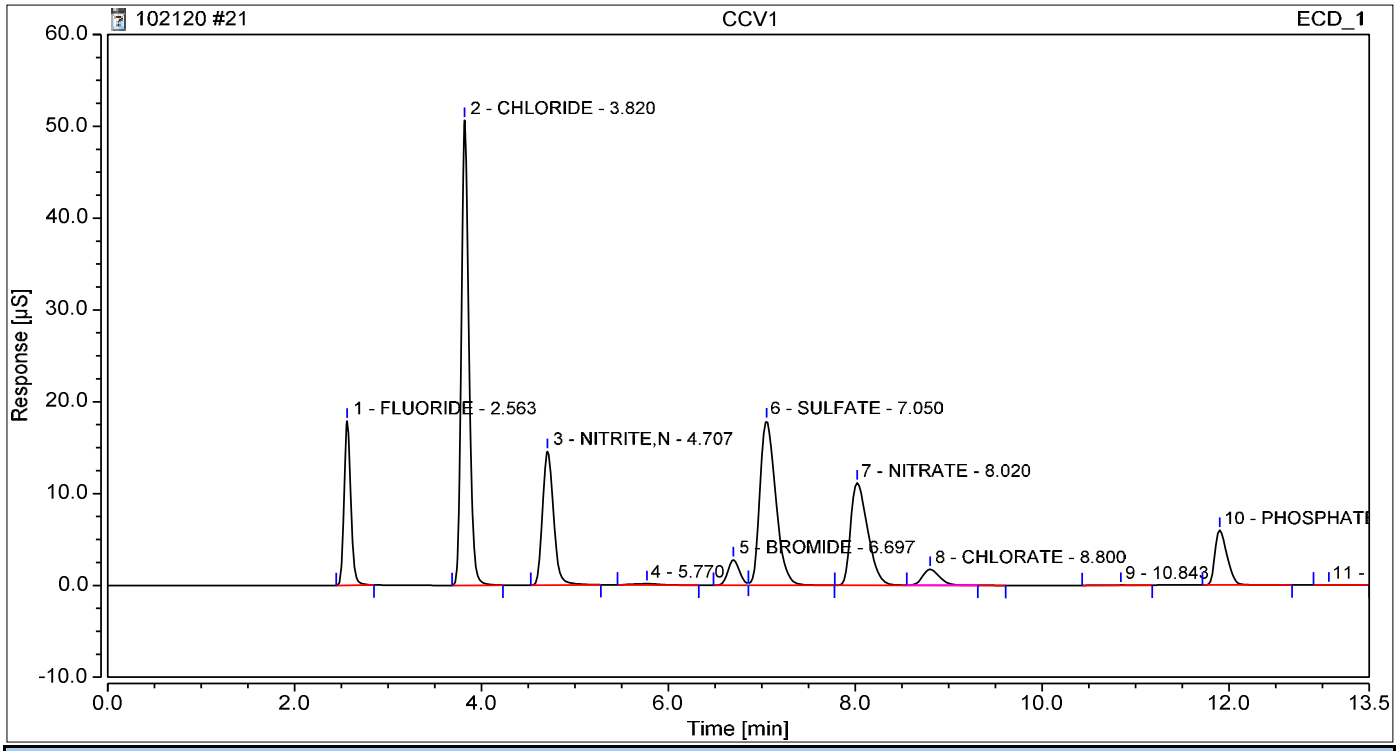
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	FLUORIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	CHLORIDE	3.837	1.129	12.168	91.33	96.27	582.7446
2	NITRITE,N	4.727	0.004	0.029	0.29	0.23	n.a.
3		5.720	0.042	0.130	3.39	1.03	n.a.
n.a.	BROMIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	SULFATE	7.173	0.045	0.243	3.64	1.92	30.0740
n.a.	NITRATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		9.287	0.002	0.003	0.12	0.03	n.a.
6		10.750	0.009	0.023	0.70	0.18	n.a.
7	PHOSPHATE	11.957	0.005	0.036	0.41	0.28	3.6338
8		13.407	0.001	0.007	0.11	0.05	n.a.
Total:			**1.236**	**12.639**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV1**	***Run Time (min):***	**13.50**
Vial Number:	**99**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**21/Oct/20 16:50**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

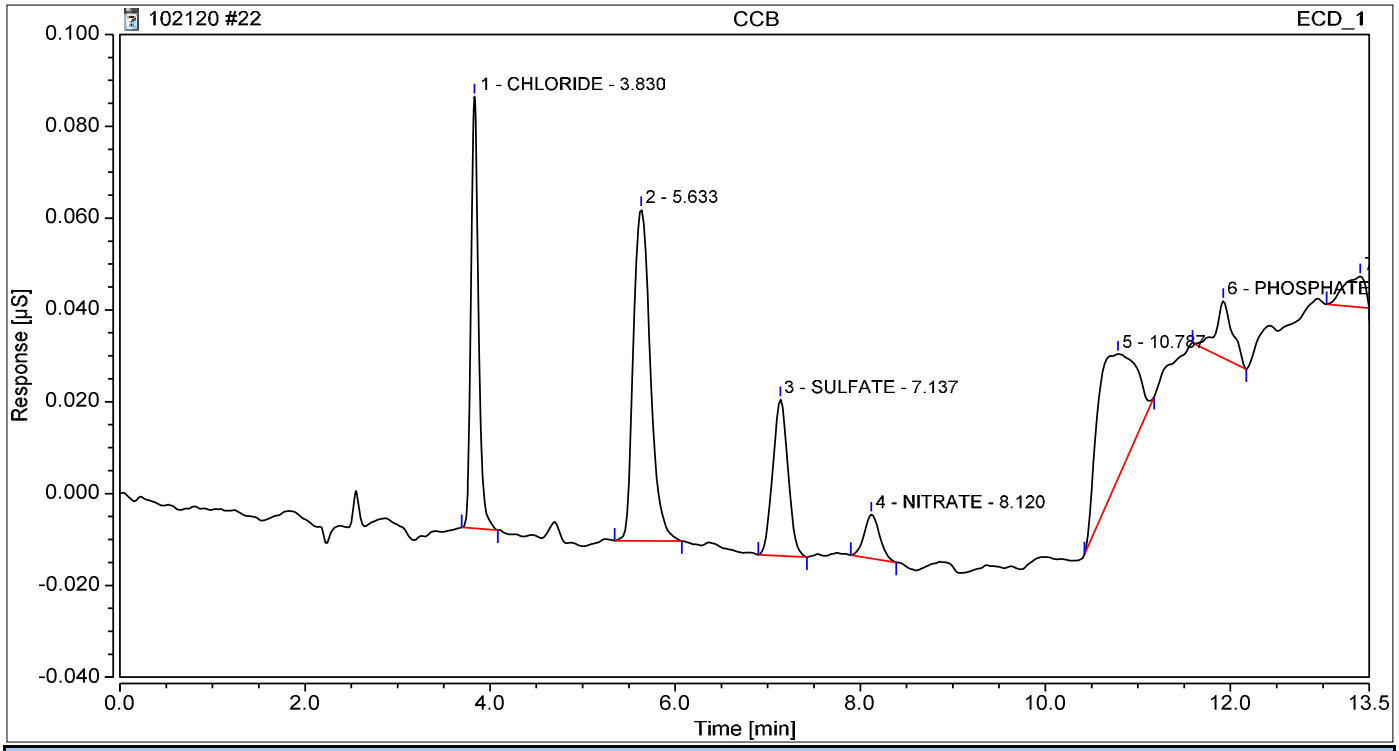
No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	FLUORIDE	2.563	1.496	17.903	9.40	14.57	9.5988
2	CHLORIDE	3.820	4.798	50.637	30.14	41.22	49.6053
3	NITRITE,N	4.707	2.007	14.578	12.61	11.87	9.5587
4		5.770	0.050	0.149	0.31	0.12	n.a.
5	BROMIDE	6.697	0.398	2.774	2.50	2.26	9.6709
6	SULFATE	7.050	3.517	17.915	22.09	14.58	49.0025
7	NITRATE	8.020	2.381	11.144	14.96	9.07	9.8840
8	CHLORATE	8.800	0.361	1.731	2.27	1.41	9.6154
9		10.843	0.010	0.020	0.07	0.02	n.a.
10	PHOSPHATE	11.900	0.895	5.969	5.62	4.86	9.3848
11		13.067	0.006	0.021	0.04	0.02	n.a.
Total:			**15.920**	**122.841**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB**	***Run Time (min):***	**13.50**
Vial Number:	**100**	***Injection Volume:***	**10.00**
Injection Type:	**Unknown**	***Channel:***	**ECD_1**
Calibration Level:		***Wavelength:***	**n.a.**
Instrument Method:	**Anion 26mM and 149mA**	***Bandwidth:***	**n.a.**
Processing Method:	**Anion Processing Method 091720**	***Dilution Factor:***	**1.0000**
Injection Date/Time:	**21/Oct/20 17:08**	***Sample Weight:***	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount
n.a.	Component 1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	FLUORIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	CHLORIDE	3.830	0.009	0.094	17.51	36.71	0.0661
n.a.	NITRITE,N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		5.633	0.015	0.072	30.50	28.20	n.a.
n.a.	BROMIDE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	SULFATE	7.137	0.007	0.034	12.87	13.30	0.0650
4	NITRATE	8.120	0.002	0.010	3.67	3.72	n.a.
n.a.	CHLORATE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		10.787	0.013	0.027	26.65	10.59	n.a.
6	PHOSPHATE	11.923	0.003	0.012	5.26	4.85	0.0468
7		13.403	0.002	0.007	3.54	2.63	n.a.
Total:			**0.051**	**0.256**	**100.00**	**100.00**	

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

WorkOrder: HS20100694

Longhorn GW Treatment Plant Monthly Effluent Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

10-Nov-2020

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

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HS20100694 Longhorn GW Treatment Plant Monthly Effluent Samples Final

ALS WO# HS20100694

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

October 28, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20100694**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Effluent Samples**

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Oct 14, 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: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20100694

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20100694-01	LH18/24-SP650_101320	Water		13-Oct-2020 14:00	14-Oct-2020 09:15	☐
HS20100694-02	LH18/24-SP650_101320_AIX	Water		13-Oct-2020 14:00	14-Oct-2020 09:15	☐
HS20100694-03	Trip Blank	Water		13-Oct-2020 14:00	14-Oct-2020 09:15	☐

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20100694

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 158538

Sample ID: LH18/24-SP650_101320 (HS20100694-01)

• The surrogate recoveries could not be determined due to dilution below the calibration range.

Sample ID: LCSD-158538

• The RPD between the LCS and LCSD was outside of the control limit. Surrogate Nitrobenzene-d5

GCMS Volatiles by Method SW8260

Batch ID: R370645

Sample ID: CCV

• Acetone exceeded %D limits for CCV. Sampples are ND for this compound.

Sample ID: HS20100544-03MS

• MS and MSD are for an unrelated sample

Metals by Method SW6020

Batch ID: 158768

Sample ID: HS20100780-04MS

• MS and MSD are for an unrelated sample

WetChemistry by Method SW7196

Batch ID: R370512

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

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20100694
Sample ID: LH18/24-SP650_101320 Lab ID:HS20100694-01
Collection Date: 13-Oct-2020 14:00 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	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:33
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	16-Oct-2020 10:33
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:33
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:33
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	16-Oct-2020 10:33
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	16-Oct-2020 10:33
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	16-Oct-2020 10:33
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	16-Oct-2020 10:33
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:33
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:33
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	16-Oct-2020 10:33
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	16-Oct-2020 10:33
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:33
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	16-Oct-2020 10:33
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	16-Oct-2020 10:33
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:33
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:33
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:33
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	16-Oct-2020 10:33
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	16-Oct-2020 10:33
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:33
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33

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

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20100694
Sample ID: LH18/24-SP650_101320 Lab ID:HS20100694-01
Collection Date: 13-Oct-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
cis-1,2-Dichloroethene	**15**		**0.20**	**0.50**	**1.0**	**UG/L**	1	16-Oct-2020 10:33
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	16-Oct-2020 10:33
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:33
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	16-Oct-2020 10:33
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	16-Oct-2020 10:33
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	16-Oct-2020 10:33
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:33
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:33
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:33
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:33
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
Trichloroethene	**1.3**		**0.20**	**0.50**	**1.0**	**UG/L**	1	16-Oct-2020 10:33
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:33
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:33
Surr: 1,2-Dichloroethane-d4	*91.6*			**0**	*81-118*	*%REC*	*1*	*16-Oct-2020 10:33*
Surr: 4-Bromofluorobenzene	*106*			**0**	*85-114*	*%REC*	*1*	*16-Oct-2020 10:33*
Surr: Dibromofluoromethane	*89.9*			**0**	*80-119*	*%REC*	*1*	*16-Oct-2020 10:33*
Surr: Toluene-d8	*105*			**0**	*89-112*	*%REC*	*1*	*16-Oct-2020 10:33*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 16-Oct-2020		Analyst: ACN
1,4-Dioxane	**3.0**	a	**1.0**	**1.0**	**1.0**	**ug/L**	100	28-Oct-2020 12:21
Surr: 2-Fluorobiphenyl	*0*	*S*		0	*40-140*	*%REC*	*100*	*28-Oct-2020 12:21*
Surr: 4-Terphenyl-d14	*0*	*S*		0	*40-140*	*%REC*	*100*	*28-Oct-2020 12:21*
Surr: Nitrobenzene-d5	*0*	*S*		0	*40-140*	*%REC*	*100*	*28-Oct-2020 12:21*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 22-Oct-2020		Analyst: JHD
Barium	**0.181**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	28-Oct-2020 11:57
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	28-Oct-2020 11:57
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	28-Oct-2020 11:57
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	28-Oct-2020 11:57

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

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:HS20100694
Sample ID: LH18/24-SP650_101320
Lab ID:HS20100694-01
Collection Date: 13-Oct-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
HEXAVALENT CHROMIUM BY SW7196A	**Method:SW7196**							Analyst: KVL
Chromium, Hexavalent	0.0100	U	0.00600	0.0100	0.0100	mg/L	1	14-Oct-2020 13:00

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

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20100694

Sample ID: LH18/24-SP650_101320_AIX Lab ID:HS20100694-02

Collection Date: 13-Oct-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	22-Oct-2020 13:19

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

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20100694
Sample ID: Trip Blank Lab ID:HS20100694-03
Collection Date: 13-Oct-2020 14:00 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	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:09
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	16-Oct-2020 10:09
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:09
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:09
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	16-Oct-2020 10:09
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	16-Oct-2020 10:09
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	16-Oct-2020 10:09
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	16-Oct-2020 10:09
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:09
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:09
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	16-Oct-2020 10:09
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	16-Oct-2020 10:09
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:09
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	16-Oct-2020 10:09
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	16-Oct-2020 10:09
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:09
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:09
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:09
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	16-Oct-2020 10:09
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	16-Oct-2020 10:09
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09

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

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:HS20100694
Sample ID: Trip Blank
Lab ID:HS20100694-03
Collection Date: 13-Oct-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	16-Oct-2020 10:09
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	16-Oct-2020 10:09
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	16-Oct-2020 10:09
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	16-Oct-2020 10:09
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:09
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	16-Oct-2020 10:09
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	16-Oct-2020 10:09
Surr: 1,2-Dichloroethane-d4	*90.9*			**0**	*81-118*	*%REC*	*1*	*16-Oct-2020 10:09*
Surr: 4-Bromofluorobenzene	*98.1*			**0**	*85-114*	*%REC*	*1*	*16-Oct-2020 10:09*
Surr: Dibromofluoromethane	*90.4*			**0**	*80-119*	*%REC*	*1*	*16-Oct-2020 10:09*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*1*	*16-Oct-2020 10:09*

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

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

Batch ID: 158538 **Start Date:** 16 Oct 2020 08:32 **End Date:** 16 Oct 2020 14:00
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20100694-01		1000 (mL)	1 (mL)	0.001

Batch ID: 158768 **Start Date:** 22 Oct 2020 10:00 **End Date:** 22 Oct 2020 14:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20100694-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 158538 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Water	
HS20100694-01	LH18/24-SP650_101320	13 Oct 2020 14:00		16 Oct 2020 08:32	28 Oct 2020 12:21	100
Batch ID: 158768 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20100694-01	LH18/24-SP650_101320	13 Oct 2020 14:00		22 Oct 2020 14:00	28 Oct 2020 11:57	1
Batch ID: R370512 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Water	
HS20100694-01	LH18/24-SP650_101320	13 Oct 2020 14:00			14 Oct 2020 13:00	1
Batch ID: R370645 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20100694-01	LH18/24-SP650_101320	13 Oct 2020 14:00			16 Oct 2020 10:33	1
HS20100694-03	Trip Blank	13 Oct 2020 14:00			16 Oct 2020 10:09	1
Batch ID: R371062 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20100694-02	LH18/24-SP650_101320_AIX	13 Oct 2020 14:00			22 Oct 2020 13:19	1

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

QC BATCH REPORT

Batch ID: 158768 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-158768** Units: **mg/L** Analysis Date: **28-Oct-2020 11:41**
Client ID: Run ID: **ICPMS06_371455** SeqNo: **5804529** PrepDate: **22-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.00250	0.00500								U
Lead	0.00100	0.00500								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U

LCS Sample ID: **LCS-158768** Units: **mg/L** Analysis Date: **28-Oct-2020 11:43**
Client ID: Run ID: **ICPMS06_371455** SeqNo: **5804530** PrepDate: **22-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.04905	0.00500	0.05	0	98.1	86 - 114				
Lead	0.04932	0.00500	0.05	0	98.6	88 - 115				
Selenium	0.05026	0.00500	0.05	0	101	80 - 120				
Silver	0.05033	0.00500	0.05	0	101	85 - 116				

MS Sample ID: **HS20100780-04MS** Units: **mg/L** Analysis Date: **28-Oct-2020 11:48**
Client ID: Run ID: **ICPMS06_371455** SeqNo: **5804533** PrepDate: **22-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.6007	0.00500	0.05	0.5613	78.8	86 - 114				SO
Lead	0.04714	0.00500	0.05	-0.000056	94.4	88 - 115				
Selenium	0.04746	0.00500	0.05	-0.000131	95.2	80 - 120				
Silver	0.04605	0.00500	0.05	0	92.1	85 - 116				

MSD Sample ID: **HS20100780-04MSD** Units: **mg/L** Analysis Date: **28-Oct-2020 11:50**
Client ID: Run ID: **ICPMS06_371455** SeqNo: **5804534** PrepDate: **22-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.6067	0.00500	0.05	0.5613	90.7	86 - 114	0.6007	0.983	20	O
Lead	0.0483	0.00500	0.05	-0.000056	96.7	88 - 115	0.04714	2.43	20	
Selenium	0.04794	0.00500	0.05	-0.000131	96.1	80 - 120	0.04746	1	20	
Silver	0.0471	0.00500	0.05	0	94.2	85 - 116	0.04605	2.24	20	

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

QC BATCH REPORT

Batch ID: 158768 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20100780-04PDS** Units: **mg/L** Analysis Date: **28-Oct-2020 11:52**
Client ID: Run ID: **ICPMS06_371455** SeqNo: **5804535** PrepDate: **22-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.6633	0.00500	0.1	0.5613	102	80 - 120				O

SD Sample ID: **HS20100780-04SD** Units: **mg/L** Analysis Date: **28-Oct-2020 11:46**
Client ID: Run ID: **ICPMS06_371455** SeqNo: **5804532** PrepDate: **22-Oct-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	0.5775	0.0250					0.5613	2.88	10	
Lead	0.00500	0.0250					-0.000056	0	10	U
Selenium	0.0125	0.0250					-0.000131	0	10	U
Silver	0.00250	0.0250					0	0	10	U

The following samples were analyzed in this batch: HS20100694-01

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

QC BATCH REPORT

Batch ID: 158538 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-158538** Units: **ug/L** Analysis Date: **28-Oct-2020 11:27**
Client ID: Run ID: **SV-6_371483** SeqNo: **5804614** PrepDate: **16-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.010	0.010								U
Surr: 2-Fluorobiphenyl	*0.087*	*0*	*0.08*	*0*	*109*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.09351*	*0*	*0.08*	*0*	*117*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07448*	*0*	*0.08*	*0*	*93.1*	*40 - 140*				

LCS Sample ID: **LCS-158538** Units: **ug/L** Analysis Date: **28-Oct-2020 11:45**
Client ID: Run ID: **SV-6_371483** SeqNo: **5804615** PrepDate: **16-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.06692	0.010	0.08	0	83.6	40 - 140				
Surr: 2-Fluorobiphenyl	*0.1048*	*0*	*0.08*	*0*	*131*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.07888*	*0*	*0.08*	*0*	*98.6*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.05975*	*0*	*0.08*	*0*	*74.7*	*40 - 140*				

LCSD Sample ID: **LCSD-158538** Units: **ug/L** Analysis Date: **28-Oct-2020 12:03**
Client ID: Run ID: **SV-6_371483** SeqNo: **5804616** PrepDate: **16-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.06588	0.010	0.08	0	82.4	40 - 140	0.06692	1.56	20	
Surr: 2-Fluorobiphenyl	*0.09569*	*0*	*0.08*	*0*	*120*	*40 - 140*	*0.1048*	*9.06*	*20*	
Surr: 4-Terphenyl-d14	*0.08376*	*0*	*0.08*	*0*	*105*	*40 - 140*	*0.07888*	*6*	*20*	
Surr: Nitrobenzene-d5	*0.07686*	*0*	*0.08*	*0*	*96.1*	*40 - 140*	*0.05975*	*25.1*	*20*	R

The following samples were analyzed in this batch: HS20100694-01

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

QC BATCH REPORT

Batch ID: R370645 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201014** Units: **UG/L** Analysis Date: **16-Oct-2020 04:08**
Client ID: Run ID: **VOA6_370645** SeqNo: **5785163** 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-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
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

QC BATCH REPORT

Batch ID: R370645 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201014** Units: **UG/L** Analysis Date: **16-Oct-2020 04:08**
Client ID: Run ID: **VOA6_370645** SeqNo: **5785163** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
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	1.0	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	*42.22*	*1.0*	*50*	*0*	*84.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.67*	*1.0*	*50*	*0*	*95.3*	*85 - 114*				
Surr: Dibromofluoromethane	*43.83*	*1.0*	*50*	*0*	*87.7*	*80 - 119*				
Surr: Toluene-d8	*48.21*	*1.0*	*50*	*0*	*96.4*	*89 - 112*				

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

QC BATCH REPORT

Batch ID: R370645 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201014** Units: **UG/L** Analysis Date: **16-Oct-2020 03:20**
Client ID: Run ID: **VOA6_370645** SeqNo: **5785162** 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	20.37	1.0	20	0	102	78 - 124				
1,1,1-Trichloroethane	20.12	1.0	20	0	101	74 - 131				
1,1,2,2-Tetrachloroethane	17.98	1.0	20	0	89.9	71 - 121				
1,1,2-Trichloroethane	20.22	1.0	20	0	101	80 - 119				
1,1-Dichloroethane	21.36	1.0	20	0	107	77 - 125				
1,1-Dichloroethene	20.78	1.0	20	0	104	71 - 131				
1,1-Dichloropropene	18.48	1.0	20	0	92.4	78 - 125				
1,2,3-Trichlorobenzene	21.73	1.0	20	0	109	69 - 129				
1,2,3-Trichloropropane	19.89	1.0	20	0	99.4	73 - 122				
1,2,4-Trichlorobenzene	21.01	1.0	20	0	105	69 - 130				
1,2,4-Trimethylbenzene	20.27	1.0	20	0	101	76 - 124				
1,2-Dibromo-3-chloropropane	18.09	1.0	20	0	90.5	62 - 128				
1,2-Dibromoethane	20.12	1.0	20	0	101	77 - 121				
1,2-Dichlorobenzene	20	1.0	20	0	100.0	80 - 119				
1,2-Dichloroethane	20.53	1.0	20	0	103	73 - 128				
1,2-Dichloropropane	20.82	1.0	20	0	104	78 - 122				
1,3,5-Trimethylbenzene	19.98	1.0	20	0	99.9	75 - 124				
1,3-Dichlorobenzene	20.22	1.0	20	0	101	80 - 119				
1,3-Dichloropropane	19.55	1.0	20	0	97.7	80 - 119				
1,4-Dichlorobenzene	19.82	1.0	20	0	99.1	79 - 118				
2,2-Dichloropropane	18.18	1.0	20	0	90.9	60 - 139				
2-Butanone	44.37	2.0	40	0	111	56 - 143				
2-Chlorotoluene	20.19	1.0	20	0	101	79 - 122				
2-Hexanone	37.9	2.0	40	0	94.8	57 - 139				
4-Chlorotoluene	20.07	1.0	20	0	100	78 - 122				
4-Isopropyltoluene	18.78	1.0	20	0	93.9	77 - 127				
4-Methyl-2-pentanone	36.61	2.0	40	0	91.5	67 - 130				
Acetone	52.36	2.0	40	0	131	39 - 160				
Benzene	19.78	1.0	20	0	98.9	79 - 120				
Bromobenzene	20.8	1.0	20	0	104	80 - 120				
Bromochloromethane	20.67	1.0	20	0	103	78 - 123				
Bromodichloromethane	18.88	1.0	20	0	94.4	79 - 125				
Bromoform	20.04	1.0	20	0	100	66 - 130				
Bromomethane	21.67	1.0	20	0	108	53 - 141				

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

QC BATCH REPORT

Batch ID: R370645 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201014** Units: **UG/L** Analysis Date: **16-Oct-2020 03:20**
Client ID: Run ID: **VOA6_370645** SeqNo: **5785162** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.51	2.0	40	0	93.8	64 - 133				
Carbon tetrachloride	18.06	1.0	20	0	90.3	72 - 136				
Chlorobenzene	19.48	1.0	20	0	97.4	82 - 118				
Chloroethane	21.27	1.0	20	0	106	60 - 138				
Chloroform	22.27	1.0	20	0	111	79 - 124				
Chloromethane	20.38	1.0	20	0	102	50 - 139				
cis-1,2-Dichloroethene	21.93	1.0	20	0	110	78 - 123				
cis-1,3-Dichloropropene	18.36	1.0	20	0	91.8	75 - 124				
Dibromochloromethane	20.01	1.0	20	0	100	74 - 126				
Dibromomethane	19.76	1.0	20	0	98.8	79 - 123				
Dichlorodifluoromethane	18.9	1.0	20	0	94.5	32 - 152				
Ethylbenzene	19.38	1.0	20	0	96.9	79 - 121				
Hexachlorobutadiene	20.34	1.0	20	0	102	66 - 134				
Isopropylbenzene	19.84	1.0	20	0	99.2	72 - 131				
m,p-Xylene	39.82	2.0	40	0	99.6	80 - 121				
Methylene chloride	23.34	2.0	20	0	117	74 - 124				
Naphthalene	22.39	1.0	20	0	112	61 - 128				
n-Butylbenzene	19.11	1.0	20	0	95.6	75 - 128				
n-Propylbenzene	19.45	1.0	20	0	97.2	76 - 126				
o-Xylene	20.76	1.0	20	0	104	78 - 122				
sec-Butylbenzene	18.93	1.0	20	0	94.6	77 - 126				
Styrene	20.94	1.0	20	0	105	78 - 123				
tert-Butylbenzene	19.05	1.0	20	0	95.2	78 - 124				
Tetrachloroethene	18.82	1.0	20	0	94.1	74 - 129				
Toluene	20.67	1.0	20	0	103	80 - 121				
trans-1,2-Dichloroethene	21.8	1.0	20	0	109	75 - 124				
trans-1,3-Dichloropropene	18.31	1.0	20	0	91.6	73 - 127				
Trichloroethene	20.99	1.0	20	0	105	79 - 123				
Trichlorofluoromethane	20.44	1.0	20	0	102	65 - 141				
Vinyl chloride	20.52	1.0	20	0	103	58 - 137				
Surr: 1,2-Dichloroethane-d4	*49.37*	*1.0*	*50*	*0*	*98.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*53.96*	*1.0*	*50*	*0*	*108*	*85 - 114*				
Surr: Dibromofluoromethane	*47.97*	*1.0*	*50*	*0*	*95.9*	*80 - 119*				
Surr: Toluene-d8	*48.76*	*1.0*	*50*	*0*	*97.5*	*89 - 112*				

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

QC BATCH REPORT

Batch ID: R370645 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20100544-03MS** Units: **UG/L** Analysis Date: **16-Oct-2020 04:56**
Client ID: Run ID: **VOA6_370645** SeqNo: **5785165** 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	22.08	1.0	20	0	110	78 - 124				
1,1,1-Trichloroethane	21.4	1.0	20	0	107	74 - 131				
1,1,2,2-Tetrachloroethane	19.43	1.0	20	0	97.1	71 - 121				
1,1,2-Trichloroethane	21.39	1.0	20	0	107	80 - 119				
1,1-Dichloroethane	20.23	1.0	20	0	101	77 - 125				
1,1-Dichloroethene	22.29	1.0	20	0	111	71 - 131				
1,1-Dichloropropene	21.71	1.0	20	0	109	78 - 125				
1,2,3-Trichlorobenzene	13.61	1.0	20	0	68.1	69 - 129				S
1,2,3-Trichloropropane	19.76	1.0	20	0	98.8	73 - 122				
1,2,4-Trichlorobenzene	15.75	1.0	20	0	78.7	69 - 130				
1,2,4-Trimethylbenzene	23.32	1.0	20	0	117	76 - 124				
1,2-Dibromo-3-chloropropane	14.74	1.0	20	0	73.7	62 - 128				
1,2-Dibromoethane	20.8	1.0	20	0	104	77 - 121				
1,2-Dichlorobenzene	20.16	1.0	20	0	101	80 - 119				
1,2-Dichloroethane	20.09	1.0	20	0	100	73 - 128				
1,2-Dichloropropane	21.38	1.0	20	0	107	78 - 122				
1,3,5-Trimethylbenzene	23.66	1.0	20	0	118	75 - 124				
1,3-Dichlorobenzene	21.5	1.0	20	0	108	80 - 119				
1,3-Dichloropropane	21.06	1.0	20	0	105	80 - 119				
1,4-Dichlorobenzene	21.03	1.0	20	0	105	79 - 118				
2,2-Dichloropropane	17.48	1.0	20	0	87.4	60 - 139				
2-Butanone	34.92	2.0	40	0	87.3	56 - 143				
2-Chlorotoluene	22.7	1.0	20	0	114	79 - 122				
2-Hexanone	37.56	2.0	40	0	93.9	57 - 139				
4-Chlorotoluene	22.63	1.0	20	0	113	78 - 122				
4-Isopropyltoluene	23.12	1.0	20	0	116	77 - 127				
4-Methyl-2-pentanone	38.76	2.0	40	0	96.9	67 - 130				
Acetone	38.53	2.0	40	0	96.3	39 - 160				
Benzene	21.15	1.0	20	0	106	79 - 120				
Bromobenzene	22.04	1.0	20	0	110	80 - 120				
Bromochloromethane	19.12	1.0	20	0	95.6	78 - 123				
Bromodichloromethane	20.98	1.0	20	0	105	79 - 125				
Bromoform	19.7	1.0	20	0	98.5	66 - 130				
Bromomethane	22.15	1.0	20	0	111	53 - 141				

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

QC BATCH REPORT

Batch ID: R370645 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20100544-03MS** Units: **UG/L** Analysis Date: **16-Oct-2020 04:56**
Client ID: Run ID: **VOA6_370645** SeqNo: **5785165** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	40.58	2.0	40	0	101	64 - 133				
Carbon tetrachloride	21.98	1.0	20	0	110	72 - 136				
Chlorobenzene	21.83	1.0	20	0	109	82 - 118				
Chloroethane	21.8	1.0	20	0	109	60 - 138				
Chloroform	20.77	1.0	20	0	104	79 - 124				
Chloromethane	19.24	1.0	20	0	96.2	50 - 139				
cis-1,2-Dichloroethene	20.62	1.0	20	0	103	78 - 123				
cis-1,3-Dichloropropene	19.87	1.0	20	0	99.3	75 - 124				
Dibromochloromethane	20.99	1.0	20	0	105	74 - 126				
Dibromomethane	19.94	1.0	20	0	99.7	79 - 123				
Dichlorodifluoromethane	16.51	1.0	20	0	82.6	32 - 152				
Ethylbenzene	22.44	1.0	20	0	112	79 - 121				
Hexachlorobutadiene	19.83	1.0	20	0	99.1	66 - 134				
Isopropylbenzene	24.88	1.0	20	1.985	114	72 - 131				
m,p-Xylene	44.28	2.0	40	0	111	80 - 121				
Methylene chloride	21.36	2.0	20	0	107	74 - 124				
Naphthalene	13.98	1.0	20	0	69.9	61 - 128				
n-Butylbenzene	22.49	1.0	20	0	112	75 - 128				
n-Propylbenzene	23.52	1.0	20	0	118	76 - 126				
o-Xylene	22.4	1.0	20	0	112	78 - 122				
sec-Butylbenzene	24.03	1.0	20	0.6431	117	77 - 126				
Styrene	21.53	1.0	20	0	108	78 - 123				
tert-Butylbenzene	24.29	1.0	20	0	121	78 - 124				
Tetrachloroethene	22.35	1.0	20	0	112	74 - 129				
Toluene	22.96	1.0	20	0	115	80 - 121				
trans-1,2-Dichloroethene	20.63	1.0	20	0	103	75 - 124				
trans-1,3-Dichloropropene	19.85	1.0	20	0	99.3	73 - 127				
Trichloroethene	21.53	1.0	20	0	108	79 - 123				
Trichlorofluoromethane	23.01	1.0	20	0	115	65 - 141				
Vinyl chloride	21.12	1.0	20	0	106	58 - 137				
Surr: 1,2-Dichloroethane-d4	*42.71*	*1.0*	*50*	*0*	*85.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*53.42*	*1.0*	*50*	*0*	*107*	*85 - 114*				
Surr: Dibromofluoromethane	*44*	*1.0*	*50*	*0*	*88.0*	*80 - 119*				
Surr: Toluene-d8	*50.92*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

QC BATCH REPORT

Batch ID: R370645 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20100544-03MSD** Units: **UG/L** Analysis Date: **16-Oct-2020 05:20**
Client ID: Run ID: **VOA6_370645** SeqNo: **5785166** 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	21.57	1.0	20	0	108	78 - 124	22.08	2.35	20	
1,1,1-Trichloroethane	20.21	1.0	20	0	101	74 - 131	21.4	5.7	20	
1,1,2,2-Tetrachloroethane	19.3	1.0	20	0	96.5	71 - 121	19.43	0.662	20	
1,1,2-Trichloroethane	20.66	1.0	20	0	103	80 - 119	21.39	3.47	20	
1,1-Dichloroethane	19.43	1.0	20	0	97.2	77 - 125	20.23	4.01	20	
1,1-Dichloroethene	21.16	1.0	20	0	106	71 - 131	22.29	5.2	20	
1,1-Dichloropropene	20.69	1.0	20	0	103	78 - 125	21.71	4.8	20	
1,2,3-Trichlorobenzene	16.53	1.0	20	0	82.6	69 - 129	13.61	19.3	20	
1,2,3-Trichloropropane	19.16	1.0	20	0	95.8	73 - 122	19.76	3.12	20	
1,2,4-Trichlorobenzene	17.86	1.0	20	0	89.3	69 - 130	15.75	12.5	20	
1,2,4-Trimethylbenzene	22.66	1.0	20	0	113	76 - 124	23.32	2.84	20	
1,2-Dibromo-3-chloropropane	14.73	1.0	20	0	73.6	62 - 128	14.74	0.0875	20	
1,2-Dibromoethane	20.32	1.0	20	0	102	77 - 121	20.8	2.32	20	
1,2-Dichlorobenzene	19.81	1.0	20	0	99.0	80 - 119	20.16	1.77	20	
1,2-Dichloroethane	19.73	1.0	20	0	98.6	73 - 128	20.09	1.82	20	
1,2-Dichloropropane	20.82	1.0	20	0	104	78 - 122	21.38	2.63	20	
1,3,5-Trimethylbenzene	22.34	1.0	20	0	112	75 - 124	23.66	5.77	20	
1,3-Dichlorobenzene	21.16	1.0	20	0	106	80 - 119	21.5	1.59	20	
1,3-Dichloropropane	20.08	1.0	20	0	100	80 - 119	21.06	4.77	20	
1,4-Dichlorobenzene	20.62	1.0	20	0	103	79 - 118	21.03	1.99	20	
2,2-Dichloropropane	16.6	1.0	20	0	83.0	60 - 139	17.48	5.17	20	
2-Butanone	34.51	2.0	40	0	86.3	56 - 143	34.92	1.16	20	
2-Chlorotoluene	21.98	1.0	20	0	110	79 - 122	22.7	3.24	20	
2-Hexanone	36.93	2.0	40	0	92.3	57 - 139	37.56	1.71	20	
4-Chlorotoluene	21.2	1.0	20	0	106	78 - 122	22.63	6.52	20	
4-Isopropyltoluene	22.58	1.0	20	0	113	77 - 127	23.12	2.36	20	
4-Methyl-2-pentanone	36.72	2.0	40	0	91.8	67 - 130	38.76	5.41	20	
Acetone	38.02	2.0	40	0	95.1	39 - 160	38.53	1.32	20	
Benzene	20.39	1.0	20	0	102	79 - 120	21.15	3.62	20	
Bromobenzene	21.35	1.0	20	0	107	80 - 120	22.04	3.18	20	
Bromochloromethane	18.89	1.0	20	0	94.5	78 - 123	19.12	1.22	20	
Bromodichloromethane	20.55	1.0	20	0	103	79 - 125	20.98	2.04	20	
Bromoform	19.71	1.0	20	0	98.5	66 - 130	19.7	0.0217	20	
Bromomethane	20.67	1.0	20	0	103	53 - 141	22.15	6.91	20	

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

QC BATCH REPORT

Batch ID: R370645 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20100544-03MSD** Units: **UG/L** Analysis Date: **16-Oct-2020 05:20**
Client ID: Run ID: **VOA6_370645** SeqNo: **5785166** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	38.46	2.0	40	0	96.1	64 - 133	40.58	5.36	20	
Carbon tetrachloride	21.08	1.0	20	0	105	72 - 136	21.98	4.19	20	
Chlorobenzene	21.23	1.0	20	0	106	82 - 118	21.83	2.81	20	
Chloroethane	20.32	1.0	20	0	102	60 - 138	21.8	7.06	20	
Chloroform	19.71	1.0	20	0	98.5	79 - 124	20.77	5.24	20	
Chloromethane	18.26	1.0	20	0	91.3	50 - 139	19.24	5.23	20	
cis-1,2-Dichloroethene	19.87	1.0	20	0	99.4	78 - 123	20.62	3.69	20	
cis-1,3-Dichloropropene	19.73	1.0	20	0	98.6	75 - 124	19.87	0.697	20	
Dibromochloromethane	20.18	1.0	20	0	101	74 - 126	20.99	3.93	20	
Dibromomethane	19.94	1.0	20	0	99.7	79 - 123	19.94	0.0153	20	
Dichlorodifluoromethane	15.54	1.0	20	0	77.7	32 - 152	16.51	6.07	20	
Ethylbenzene	21.74	1.0	20	0	109	79 - 121	22.44	3.17	20	
Hexachlorobutadiene	21.28	1.0	20	0	106	66 - 134	19.83	7.09	20	
Isopropylbenzene	23.7	1.0	20	1.985	109	72 - 131	24.88	4.85	20	
m,p-Xylene	43.29	2.0	40	0	108	80 - 121	44.28	2.25	20	
Methylene chloride	20.39	2.0	20	0	102	74 - 124	21.36	4.64	20	
Naphthalene	16.72	1.0	20	0	83.6	61 - 128	13.98	17.8	20	
n-Butylbenzene	21.87	1.0	20	0	109	75 - 128	22.49	2.76	20	
n-Propylbenzene	22.43	1.0	20	0	112	76 - 126	23.52	4.75	20	
o-Xylene	21.63	1.0	20	0	108	78 - 122	22.4	3.49	20	
sec-Butylbenzene	23.3	1.0	20	0.6431	113	77 - 126	24.03	3.07	20	
Styrene	21	1.0	20	0	105	78 - 123	21.53	2.49	20	
tert-Butylbenzene	23.57	1.0	20	0	118	78 - 124	24.29	3.01	20	
Tetrachloroethene	21.21	1.0	20	0	106	74 - 129	22.35	5.23	20	
Toluene	21.61	1.0	20	0	108	80 - 121	22.96	6.05	20	
trans-1,2-Dichloroethene	19.89	1.0	20	0	99.5	75 - 124	20.63	3.65	20	
trans-1,3-Dichloropropene	19.18	1.0	20	0	95.9	73 - 127	19.85	3.44	20	
Trichloroethene	20.82	1.0	20	0	104	79 - 123	21.53	3.36	20	
Trichlorofluoromethane	21.5	1.0	20	0	107	65 - 141	23.01	6.78	20	
Vinyl chloride	20.18	1.0	20	0	101	58 - 137	21.12	4.58	20	
Surr: 1,2-Dichloroethane-d4	*42.33*	*1.0*	*50*	*0*	*84.7*	*81 - 118*	*42.71*	*0.902*	*20*	
Surr: 4-Bromofluorobenzene	*52.53*	*1.0*	*50*	*0*	*105*	*85 - 114*	*53.42*	*1.68*	*20*	
Surr: Dibromofluoromethane	*44.06*	*1.0*	*50*	*0*	*88.1*	*80 - 119*	*44*	*0.15*	*20*	
Surr: Toluene-d8	*49.52*	*1.0*	*50*	*0*	*99.0*	*89 - 112*	*50.92*	*2.79*	*20*	

ALS Houston, US Date: 28-Oct-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:	HS20100694

QC BATCH REPORT

Batch ID:	**R370645 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20100694-01 HS20100694-03

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

QC BATCH REPORT

Batch ID: R370512 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-R370512** Units: **mg/L** Analysis Date: **14-Oct-2020 13:00**
Client ID: Run ID: **UV-2450_370512** SeqNo: **5782019** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.0100	0.0100								U

LCS Sample ID: **LCS-R370512** Units: **mg/L** Analysis Date: **14-Oct-2020 13:00**
Client ID: Run ID: **UV-2450_370512** SeqNo: **5782018** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.252	0.0100	0.25	0	101	90 - 111				

MS Sample ID: **HS20100694-01MS** Units: **mg/L** Analysis Date: **14-Oct-2020 13:00**
Client ID: **LH18/24-SP650_101320** Run ID: **UV-2450_370512** SeqNo: **5782021** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.255	0.0100	0.25	0	102	90 - 111				

MSD Sample ID: **HS20100694-01MSD** Units: **mg/L** Analysis Date: **14-Oct-2020 13:00**
Client ID: **LH18/24-SP650_101320** Run ID: **UV-2450_370512** SeqNo: **5782020** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.253	0.0100	0.25	0	101	90 - 111	0.255	0.787	20	

The following samples were analyzed in this batch: HS20100694-01

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: **HS20100694**

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: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20100694

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20100694-01	LH18/24-SP650_101320	Login	10/14/2020 10:38:20 AM	JRM	EXT055
HS20100694-01	LH18/24-SP650_101320	Login	10/14/2020 10:38:20 AM	JRM	WET015
HS20100694-01	LH18/24-SP650_101320	Login	10/14/2020 10:38:20 AM	JRM	MET026
HS20100694-01	LH18/24-SP650_101320	Login	10/14/2020 10:38:20 AM	JRM	VOA124
HS20100694-02	LH18/24-SP650_101320_AIX	Login	10/14/2020 10:38:20 AM	JRM	Sub
HS20100694-03	Trip Blank	Login	10/14/2020 10:38:20 AM	JRM	VOA124

ALS Houston, US Date: 28-Oct-20

Sample Receipt Checklist

Work Order ID: HS20100694 **Date/Time Received:** 14-Oct-2020 09:15

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Jared R. Makan	14-Oct-2020 10:41	**Reviewed by:**	/S/ RJ Modashia	14-Oct-2020 13:57
	eSignature	Date/Time		eSignature	Date/Time

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

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

Temperature(s)/Thermometer(s):	1.3°C/1.3°C UC/C	IR31
Cooler(s)/Kit(s):	45942	
Date/Time sample(s) sent to storage:	10/14/2020 10:45	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

HS20100694

Bhate Environmental Associates, Inc.

Longhorn GW Treatment Plant Monthly Effluent Sam

CHAIN OF CUSTODY

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

Project: BHATE LONGHORN ARMY AMMN. PLANT (LHAAP) GROUNDWATER TREATMENT PLANT (GWTP) KARNACK, TEXAS	**Project No.** NWO1312.0150.0 16.0001
Job: **GROUNDWATER TREATMENT PLANT MONTHLY EFFLUENT SAMPLES**	
Prepared By: Scott Beesinger	**P.O. Number**

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOLATILES	SILVER, SELENIUM, LEAD, BARIUM	HEXAVALENT CHROMIUM	1, 4 - DIOXANE	PERCHLORATE						Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_101320	Water	10/13/20 / 14:00		3	X										HCL	
LH18/24-SP650_101320	Water	10/13/20 / 14:00		2			X	X							NONE	
LH18/24-SP650_101320_AIX	Water	10/13/20 / 14:00		1					X						NONE	
LH18/24-SP650_101320	Water	10/13/20 / 14:00		1		X									HNO3	
Trip Blank	Water	10/13/20		2	X										HCL	

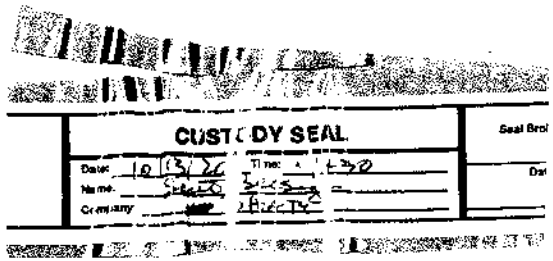
Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	10/13/20	14:30									

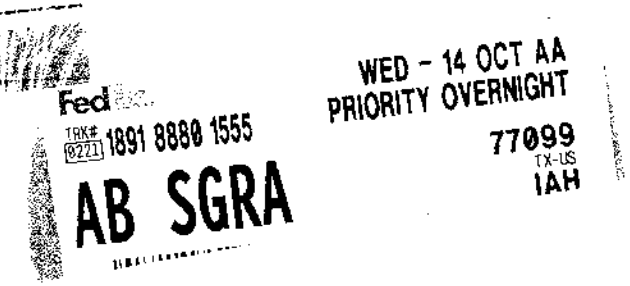
For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Mancuso	10/14/20	09:15							

Remarks: Cooler 45942 1N31
Temp 1.3°C CFO


CUSTODY SEAL
Seal Broken
Date
Time
Name
Company


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


FedEx
TRK# 9221 1891 8880 1555
AB SGRA
WED - 14 OCT AA
PRIORITY OVERNIGHT
77099
TX-US
IAH

October 22, 2020 Service Request No:E2000981

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

Laboratory Results for: HS20100694

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 14, 2020
For your reference, these analyses have been assigned our service request number **E2000981.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000981
Project:	HS20100694	**Date Received:**	10/14/20
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 10/14/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000513: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits. The MS/MSD was performed on an unrelated sample.

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

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

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

Client: ALS Environmental - US **Service Request:**E2000981
Project: HS20100694

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000981-001	LH18/24-SP650_101320-AIX	10/13/2020	1400

Service Request Summary

Folder #: **E2000981**
Client Name: ALS Environmental - US
Project Name: HS20100694
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/14/20
Internal Due Date: 10/28/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20100694
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 1E
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000981-001	LH18/24-SP650_101320-AIX	Water	10/13/20 1400	**IV**

Service Request Summary

Folder #: **E2000981**
Client Name: ALS Environmental - US
Project Name: HS20100694
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/14/20
Internal Due Date: 10/28/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20100694
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 1E
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 10/28,level IV 11/4

Data Qualifiers

Lab Standard

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

Data Qualifiers

Lab Standard

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

ALS Laboratory Group

Acronyms

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

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

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

ALS

Chain of Custody

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

E2000981 5
ALS Laboratory Group
HS20100694

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:** **14925**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100694
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20100694-02**	**LH18/24-SP650_101320_AIX**	**Water**	**13 Oct 2020 14:00**
	SUB_Perch-6850			21 Oct 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: J. Lawal Date/Time:

Received By: Date/Time: 10/14/20 1200

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID IR#1

Date/Time Received: 10/14/20 Initials: CH

Date/Time Logged in: 10/14/20 Initials CH

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

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

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

Were they intact? ○ Yes ○ No ✓ N/A

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

If yes, how many and where?

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
-		10/14/20	1200	CH	1.0	☒
						☐
						☐
						☐

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

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

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

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

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

Notes, Discrepancies, & Resolutions:

Service request Label: E2000981 5

ALS Laboratory Group
HS20100694

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

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 368005 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 10/19/20 09:34

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000981-001	LH18/24-SP650_101320-AIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000982-001	LH18/24-SP140_101320	.01	6850/ClO4 DOD			Water	10mL	
3	E2000984-001	LH18/24-SP650_101320-AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2000985-001	16WW36-201013	.01	6850/ClO4 DOD			Water	10mL	
5	E2000985-002	16WW35-201013	.01	6850/ClO4 DOD			Water	10mL	
6	E2000985-003	16IW09-201013	.01	6850/ClO4 DOD			Water	10mL	
7	E2000985-004	16WW55-201013	.01	6850/ClO4 DOD			Water	10mL	
8	E2000985-005	16IW03-201013	.01	6850/ClO4 DOD			Water	10mL	
9	E2000985-006	16IW10-201013	.01	6850/ClO4 DOD			Water	10mL	
10	E2000996-001	16WW25-201014	.01	6850/ClO4 DOD			Water	10mL	
11	E2000996-002	16WW26-201014	.01	6850/ClO4 DOD			Water	10mL	
12	E2000996-003	16WW30-201014	.01	6850/ClO4 DOD			Water	10mL	
13	E2000996-004	16WW29-201014	.01	6850/ClO4 DOD			Water	10mL	
14	E2000996-005	16WW22-201014	.01	6850/ClO4 DOD			Water	10mL	
15	E2000996-006	16WW41-201014	.01	6850/ClO4 DOD			Water	10mL	
16	E2000996-007	16WW21-201014	.01	6850/ClO4 DOD			Water	10mL	
17	E2000996-008	16WW21-201014-FD	.01	6850/ClO4 DOD			Water	10mL	
18	E2000996-009	16WW39-201014	.01	6850/ClO4 DOD			Water	10mL	
19	EQ2000513-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000513-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000513-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000513-04	16IW03-201013 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2000513-05	16IW03-201013 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000513-02	1.00µL	EQ2000513-03	1.00µL	EQ2000513-04	1.00µL	EQ2000513-05	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2000981-001	100.00µL	E2000982-001	100.00µL	E2000984-001	100.00µL	E2000985-001	100.00µL	E2000985-002	100.00µL	E2000985-003	100.00µL
E2000985-004	100.00µL	E2000985-005	100.00µL	E2000985-006	100.00µL	E2000996-001	100.00µL	E2000996-002	100.00µL	E2000996-003	100.00µL
E2000996-004	100.00µL	E2000996-005	100.00µL	E2000996-006	100.00µL	E2000996-007	100.00µL	E2000996-008	100.00µL	E2000996-009	100.00µL
EQ2000513-01	100.00µL	EQ2000513-02	100.00µL	EQ2000513-03	100.00µL	EQ2000513-04	100.00µL	EQ2000513-05	100.00µL		

Preparation Information Benchsheet

Prep Run#: 368005 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 10/19/20 09:34

Preparation Steps

Step: Preparation
Started: 10/19/20 09:34
Finished: 10/19/20 14:58
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 10/19/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000981
Project:	HS20100694	**Date Collected:**	10/13/20 1400
Sample Matrix:	Water	**Date Received:**	10/14/20
		Date Extracted:	10/19/20
		Date Analyzed:	10/21/20 11:11
Sample Name:	LH18/24-SP650_101320-AIX	**Units:**	µg/L
Lab Code:	E2000981-001	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	700177
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201021\20201021_013	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**1.04**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000981
Project:	HS20100694	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/19/20 20:15
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000513-01	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	700168
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201019\20201019_041	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

Accuracy & Precision

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000981
Project:	HS20100694	**Date Analyzed:**	10/20/20
Sample Matrix:	Water		

Lab Control Sample Summary

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

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	NA
		Extraction Lot:	368005

	Lab Control Sample EQ2000513-02			Duplicate Lab Control Sample EQ2000513-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.105	0.100	105	0.108	0.100	108	84 - 119	3	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000981
Project:	HS20100694	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:04
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000513-02	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_032	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.105**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000981
Project:	HS20100694	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:12
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000513-03	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_033	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.108**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000981
Project:	HS20100694	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	10/20/20

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

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2000985-005	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS Matrix Spike EQ2000513-04				Batch QCDMS Duplicate Matrix Spike EQ2000513-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0876	0.194	0.100	106	0.193	0.100	105	84 - 119	<1	15

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

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000981
Project:	HS20100694	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:20
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000513-04	**Basis:**	NA
Run Type:	Matrix Spike		

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_034	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.194**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000981
Project:	HS20100694	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:28
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000513-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_035	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.193**		0.100	0.0500	0.0250	

HS20100694 8260_W_DOD Raw Data

ALS WO# HS20100694

MSVOA06 -Logbook

Batch: 41874 **Analyst:** Presenta Cabascango

Date: 09-24-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	09-24-2020 11:10 am	1.00	50 mL	50 mL	X092401.D	Liquid	Y	NA
	Auto find/ purged									
2	VSTD000.25	ICAL1	09-24-2020 11:34 am	1.00	50 mL	50 mL	X092402.D	Liquid	Y	NA
	0.10 uL cal std/100 mL DI									
3	VSTD000.5	ICAL2	09-24-2020 11:58 am	1.00	50 mL	50 mL	X092403.D	Liquid	Y	NA
	0.10 uL cal std/50 mL DI									
4	VSTD001	ICAL3	09-24-2020 12:46 pm	1.00	50 mL	50 mL	X092404.D	Liquid	Y	NA
	0.20 uL cal std/50 mL DI									
5	VSTD002	ICAL4	09-24-2020 01:10 pm	1.00	50 mL	50 mL	X092405.D	Liquid	Y	NA
	0.40 uL cal std/50 mL DI									
6	VSTD005	ICAL5	09-24-2020 01:33 pm	1.00	50 mL	50 mL	X092406.D	Liquid	Y	NA
	1.0 uL cal std/50 mL DI									
7	VSTD020	ICAL6	09-24-2020 01:57 pm	1.00	50 mL	50 mL	X092407.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
8	VSTD050	ICAL7	09-24-2020 02:21 pm	1.00	50 mL	50 mL	X092408.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
9	VSTD100	ICAL8	09-24-2020 02:45 pm	1.00	50 mL	50 mL	X092409.D	Liquid	Y	NA
	20 uL cal std/50 mL DI									
10	VSTD150	ICAL9	09-24-2020 03:09 pm	1.00	50 mL	50 mL	X092410.D	Liquid	Y	NA
	30 uL cal std/50 mL DI									
11	VSTD200	ICAL	09-24-2020 03:33 pm	1.00	50 mL	50 mL	X092411.D	Liquid	Y	NA
	40 uL cal std/50 mL DI									
12	BLANK	SAMP	09-24-2020 03:57 pm	1.00	50 mL	50 mL	X092412.D	Liquid	Y	NA
13	BLANK	SAMP	09-24-2020 04:21 pm	1.00	50 mL	50 mL	X092413.D	Liquid	Y	NA
14	VSTD050	ICV	09-24-2020 04:45 pm	1.00	50 mL	50 mL	X092414.D	Liquid	Y	NA
	10 uL ical std/50 mL DI									
15	CCB	SAMP	09-24-2020 05:09 pm	1.00	50 mL	50 mL	X092415.D	Liquid	Y	NA
16	VLCSW-200924	LCS	09-24-2020 05:33 pm	1.00	50 mL	50 mL	X092416.D	Liquid	Y	na
	4.0 uL cal std/50 mL DI									
17	BLK	SAMP	09-24-2020 05:57 pm	1.00	50 mL	50 mL	X092417.D	Liquid	Y	na
18	BLK	SAMP	09-24-2020 06:21 pm	1.00	50 mL	50 mL	X092418.D	Liquid	Y	na
19	VBLKW-200924	MBLK	09-24-2020 06:45 pm	1.00	50 mL	50 mL	X092419.D	Liquid	Y	na
20	HS20090748-03	SAMP	09-24-2020 07:09 pm	1.00	50 mL	50 mL	X092420.D	Liquid	Y	<2
21	HS20091030-02	SAMP	09-24-2020 07:33 pm	1.00	50 mL	50 mL	X092421.D	Liquid	Y	<2
22	HS20090748-01	SAMP	09-24-2020 07:58 pm	1.00	50 mL	50 mL	X092422.D	Liquid	Y	<2
23	HS20091030-01	SAMP	09-24-2020 08:22 pm	1.00	50 mL	50 mL	X092423.D	Liquid	Y	<2
24	HS20090796-01	SAMP	09-24-2020 08:46 pm	1.00	50 mL	50 mL	X092424.D	Liquid	Y	<2
25	HS20090748-01MS	MS	09-24-2020 09:10 pm	1.00	50 mL	50 mL	X092425.D	Liquid	Y	<2
	3.5 uL cal std/40 mL amp									
26	HS20090748-01MSD	MSD	09-24-2020 09:34 pm	1.00	50 mL	50 mL	X092426.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
27	CCV-END	CCV	09-24-2020 09:58 pm	1.00	50 mL	50 mL	X092427.D	Liquid	Y	na
	10 uL cal std/50 mL DI									

Chemical	Value
SURR SPK ID	31106-47-06
IS ID	31106-47-06
CAL STD ID	31106-48-01/02
BFB ID	31106-47-06
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.: HS20100694

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	46.28	92	80-120
trans-1,3-Dichloroprope	50.00	46.89	94	80-120
1,3-Dichlorobenzene	50.00	44.85	90	80-120
2,2-Dichloropropane	50.00	44.62	89	80-120
1,1-Dichloropropene	50.00	42.22	84	80-120
Dibromomethane	50.00	45.44	91	80-120
1,2-Dibromoethane	50.00	45.33	91	80-120
trans-1,2-Dichloroethen	50.00	45.27	90	80-120
1,1,1,2-Tetrachloroetha	50.00	45.52	91	80-120
1,1,1-Trichloroethane	50.00	43.54	87	80-120
1,1,2,2-Tetrachloroetha	50.00	44.71	89	80-120
1,1,2-Trichloroethane	50.00	44.55	89	80-120
1,1-Dichloroethane	50.00	44.26	88	80-120
1,1-Dichloroethene	50.00	43.02	86	80-120
Trichloroethene	50.00	44.33	89	80-120
1,2,3-Trichlorobenzene	50.00	51.26	102	80-120
Trichlorofluoromethane	50.00	41.97	84	80-120
1,2,4-Trichlorobenzene	50.00	49.34	99	80-120
1,2,4-Trimethylbenzene	50.00	44.00	88	80-120
Tetrachloroethene	50.00	41.29	82	80-120
1,2-Dichlorobenzene	50.00	45.04	90	80-120
1,2-Dichloroethane	50.00	45.12	90	80-120
1,2-Dichloropropane	50.00	46.11	92	80-120
1,3,5-Trimethylbenzene	50.00	43.20	86	80-120
1,3-Dichloropropane	50.00	44.68	89	80-120
1,4-Dichlorobenzene	50.00	44.16	88	80-120
Toluene	50.00	43.58	87	80-120
2-Butanone	100.00	108.02	108	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.: HS20100694

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	43.08	86	80-120
2-Hexanone	100.00	95.15	95	80-120
4-Chlorotoluene	50.00	43.22	86	80-120
tert-Butylbenzene	50.00	40.89	82	80-120
4-Methyl-2-Pentanone	100.00	91.36	91	80-120
Acetone	100.00	109.54	110	80-120
Benzene	50.00	44.84	90	80-120
Bromobenzene	50.00	45.66	91	80-120
Bromochloromethane	50.00	43.92	88	80-120
Bromodichloromethane	50.00	45.59	91	80-120
Bromoform	50.00	47.84	96	80-120
Bromomethane	50.00	47.86	96	80-120
Carbon Disulfide	100.00	89.81	90	80-120
Carbon Tetrachloride	50.00	41.93	84	80-120
Chlorobenzene	50.00	43.59	87	80-120
Chloroethane	50.00	42.99	86	80-120
Chloroform	50.00	44.56	89	80-120
Chloromethane	50.00	45.59	91	80-120
cis-1,2-Dichloroethene	50.00	44.88	90	80-120
Dibromochloromethane	50.00	45.50	91	80-120
Dichlorodifluoromethane	50.00	41.03	82	80-120
Ethylbenzene	50.00	42.63	85	80-120
Hexachlorobutadiene	50.00	45.33	91	80-120
Isopropylbenzene	50.00	41.73	83	80-120
m,p-Xylenes	100.00	87.22	87	80-120
Methylene Chloride	50.00	48.15	96	80-120
n-Butylbenzene	50.00	42.35	85	80-120
n-Propylbenzene	50.00	42.33	85	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.: HS20100694

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	51.91	104	80-120
o-Xylene	50.00	44.49	89	80-120
sec-Butylbenzene	50.00	40.27	80	80-120
Styrene	50.00	46.11	92	80-120
Vinyl Chloride	50.00	43.77	88	80-120
1,2,3-Trichloropropane	50.00	47.51	95	80-120
p-Isopropyltoluene	50.00	41.31	83	80-120
1,2-Dibromo-3-Chloropro	50.00	44.96	90	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: Case No.: SAS No.: SDG No.: HS20100694

Lab File ID: X092401 BFB Injection Date: 09/24/20

Instrument ID: VOA6 BFB Injection Time: 1110

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.0
75	30.0 - 60.0% of mass 95	50.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.5 (0.9)1
174	Greater than 50.0% of mass 95	61.7
175	5.0 - 9.0% of mass 174	4.5 (7.4)1
176	95.0 - 101.0% of mass 174	59.2 (95.9)1
177	5.0 - 9.0% of mass 176	4.1 (7.0)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X092402	09/24/20	1134
02	VSTD000.5	VSTD000.5	X092403	09/24/20	1158
03	VSTD001	VSTD001	X092404	09/24/20	1246
04	VSTD002	VSTD002	X092405	09/24/20	1310
05	VSTD005	VSTD005	X092406	09/24/20	1333
06	VSTD020	VSTD020	X092407	09/24/20	1357
07	VSTD050	VSTD050	X092408	09/24/20	1421
08	VSTD100	VSTD100	X092409	09/24/20	1445
09	VSTD150	VSTD150	X092410	09/24/20	1509
10	VSTD200	VSTD200	X092411	09/24/20	1533
11	ICV	ICV	X092414	09/24/20	1645
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

LAB FILE ID: RF0.25: X092402 RF0.5: X092403 RF1: X092404
RF2: X092405 RF5: X092406 RF20: X092407

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.604	0.628	0.568	0.604	0.541
trans-1,3-Dichloropropene		0.493	0.544	0.449	0.488	0.454
1,3-Dichlorobenzene		1.748	1.889	1.644	1.680	1.520
2,2-Dichloropropane		0.861	0.919	0.796	0.818	0.755
1,1-Dichloropropene		0.527	0.482	0.495	0.471	0.433
Dibromomethane		0.239	0.252	0.223	0.235	0.206
1,2-Dibromoethane		0.381	0.414	0.336	0.379	0.333
trans-1,2-Dichloroethene		0.537	0.588	0.521	0.545	0.506
1,1,1,2-Tetrachloroethane		0.377	0.392	0.346	0.354	0.332
1,1,1-Trichloroethane		0.761	0.888	0.781	0.820	0.738
1,1,2,2-Tetrachloroethane		0.972	1.064	0.959	0.972	0.806
1,1,2-Trichloroethane		0.329	0.353	0.304	0.315	0.282
1,1-Dichloroethane		1.171	1.218	1.028	1.103	0.991
1,1-Dichloroethene		0.476	0.539	0.431	0.448	0.435
Trichloroethene		0.372	0.414	0.359	0.376	0.338
1,2,3-Trichlorobenzene		0.212	0.229	0.179	0.207	0.172
Trichlorofluoromethane		0.757	0.831	0.697	0.720	0.706
1,2,4-Trichlorobenzene		2229	2921	5479	14272	49391
1,2,4-Trimethylbenzene		3.253	3.430	3.000	3.122	2.892
Tetrachloroethene		0.330	0.385	0.342	0.326	0.303
1,2-Dichlorobenzene		1.582	1.610	1.410	1.464	1.310
1,2-Dichloroethane		0.464	0.540	0.412	0.472	0.402
1,2-Dichloropropane		0.349	0.428	0.384	0.397	0.357
1,3,5-Trimethylbenzene		3.204	3.443	2.987	3.074	2.846
1,3-Dichloropropane		0.675	0.751	0.610	0.667	0.574
1,4-Dichlorobenzene		1.942	1.823	1.606	1.670	1.478
Toluene		1.763	1.942	1.682	1.757	1.559
2-Butanone		0.159	0.163	0.163	0.188	0.182
2-Chlorotoluene		2.978	3.094	2.683	2.737	2.473
2-Hexanone		0.236	0.214	0.234	0.236	0.212
4-Chlorotoluene		3.311	3.565	3.106	3.156	2.760
tert-Butylbenzene		2.792	2.908	2.555	2.536	2.344
4-Methyl-2-Pentanone		0.403	0.380	0.356	0.375	0.329
Acetone		4284	6768	9048	17679	61351
Benzene		1.490	1.723	1.410	1.500	1.365
Bromobenzene		1.061	1.189	1.028	1.073	0.964
Bromochloromethane		0.353	0.379	0.328	0.323	0.295
Bromodichloromethane		0.508	0.505	0.447	0.466	0.426
Bromoform		0.214	0.238	0.211	0.232	0.207
Bromomethane		3098	7731	11427	28439	96280
Carbon Disulfide		1.618	1.837	1.489	1.545	1.490
Carbon Tetrachloride		0.450	0.410	0.425	0.402	0.374
Chlorobenzene		1.160	1.233	1.044	1.068	0.953
Chloroethane		0.468	0.445	0.392	0.414	0.365

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010069

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

LAB FILE ID: RF0.25: X092402 RF0.5: X092403 RF1: X092404
RF2: X092405 RF5: X092406 RF20: X092407

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		0.973	1.141	0.992	1.044	0.936
Chloromethane		0.732	0.710	0.650	0.686	0.643
cis-1,2-Dichloroethene		0.624	0.717	0.604	0.661	0.596
Dibromochloromethane		0.378	0.421	0.354	0.371	0.337
Dichlorodifluoromethane		2901	6629	12034	28274	113538
Ethylbenzene		0.570	0.644	0.540	0.559	0.508
Hexachlorobutadiene		3351	3302	5496	12681	49814
Isopropylbenzene		1.678	1.831	1.584	1.626	1.476
m,p-Xylenes		0.696	0.760	0.654	0.678	0.614
Methylene Chloride		5505	9684	16648	39690	137362
n-Butylbenzene		2.993	2.947	2.400	2.488	2.487
n-Propylbenzene		4.661	4.835	4.262	4.396	4.114
Naphthalene		0.532	0.476	0.478	0.463	0.420
o-Xylene		0.650	0.742	0.643	0.665	0.599
sec-Butylbenzene		4.025	3.986	3.550	3.514	3.338
Styrene		1.181	1.221	1.038	1.129	1.027
Vinyl Chloride		0.636	0.723	0.606	0.632	0.612
1,2,3-Trichloropropane		0.736	0.868	0.803	0.779	0.679
p-Isopropyltoluene		3.578	3.306	2.975	2.940	2.823
1,2-Dibromo-3-Chloropropane		0.058	0.078	0.056	0.065	0.056
1,2-Dichloroethane-d4		0.637	0.580	0.541	0.589	0.547
Dibromofluoromethane		0.609	0.515	0.484	0.562	0.504
Toluene-d8		1.586	1.355	1.300	1.446	1.276
4-Bromofluorobenzene		6772	10018	18232	43900	154353

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010069

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

LAB FILE ID: RF50: X092408 RF100: X092409 RF150: X092410
RF200: X092411

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.531	0.554	0.562	0.570
trans-1,3-Dichloropropene	0.450	0.465	0.478	0.480
1,3-Dichlorobenzene	1.386	1.553	1.537	1.516
2,2-Dichloropropane	0.678	0.750	0.745	0.743
1,1-Dichloropropene	0.383	0.447	0.452	0.449
Dibromomethane	0.201	0.206	0.207	0.207
1,2-Dibromoethane	0.318	0.318	0.326	0.320
trans-1,2-Dichloroethene	0.468	0.502	0.498	0.497
1,1,1,2-Tetrachloroethane	0.315	0.332	0.335	0.334
1,1,1-Trichloroethane	0.665	0.757	0.758	0.763
1,1,2,2-Tetrachloroethane	0.793	0.790	0.812	0.789
1,1,2-Trichloroethane	0.267	0.267	0.269	0.265
1,1-Dichloroethane	0.940	0.990	0.979	0.982
1,1-Dichloroethene	0.402	0.438	0.438	0.436
Trichloroethene	0.312	0.346	0.350	0.351
1,2,3-Trichlorobenzene	0.166	0.178	0.198	0.197
Trichlorofluoromethane	0.622	0.737	0.739	0.735
1,2,4-Trichlorobenzene	124784	247364	386588	497987
1,2,4-Trimethylbenzene	2.510	2.888	2.846	2.846
Tetrachloroethene	0.253	0.302	0.303	0.299
1,2-Dichlorobenzene	1.213	1.315	1.322	1.304
1,2-Dichloroethane	0.392	0.397	0.401	0.401
1,2-Dichloropropane	0.342	0.357	0.358	0.359
1,3,5-Trimethylbenzene	2.440	2.900	2.851	2.826
1,3-Dichloropropane	0.548	0.549	0.557	0.551
1,4-Dichlorobenzene	1.360	1.498	1.505	1.492
Toluene	1.388	1.491	1.504	1.480
2-Butanone	0.206	0.191	0.196	0.193
2-Chlorotoluene	2.151	2.449	2.412	2.404
2-Hexanone	0.214	0.214	0.219	0.215
4-Chlorotoluene	2.445	2.790	2.754	2.736
tert-Butylbenzene	1.924	2.379	2.368	2.343
4-Methyl-2-Pentanone	0.328	0.322	0.335	0.330
Acetone	153009	255829	368697	468128
Benzene	1.277	1.365	1.367	1.372
Bromobenzene	0.889	0.967	0.962	0.959
Bromochloromethane	0.279	0.285	0.284	0.285
Bromodichloromethane	0.413	0.436	0.439	0.443
Bromoform	0.210	0.214	0.221	0.218
Bromomethane	218171	446857	643333	822601
Carbon Disulfide	1.386	1.542	1.534	1.534
Carbon Tetrachloride	0.324	0.399	0.407	0.408
Chlorobenzene	0.877	0.936	0.944	0.940
Chloroethane	0.344	0.372	0.362	0.363

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010069

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

LAB FILE ID: RF50: X092408 RF100: X092409 RF150: X092410
RF200: X092411

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	0.890	0.916	0.913	0.918
Chloromethane	0.611	0.690	0.702	0.738
cis-1,2-Dichloroethene	0.564	0.583	0.581	0.582
Dibromochloromethane	0.328	0.340	0.345	0.342
Dichlorodifluoromethane	235600	565982	843912	1091943
Ethylbenzene	0.448	0.501	0.506	0.502
Hexachlorobutadiene	102822	246513	372303	468444
Isopropylbenzene	1.252	1.488	1.497	1.463
m,p-Xylenes	0.536	0.600	0.602	0.596
Methylene Chloride	303593	605902	861961	1112263
n-Butylbenzene	2.066	2.630	2.602	2.574
n-Propylbenzene	3.438	4.273	4.216	4.190
Naphthalene	0.431	0.435	0.482	0.479
o-Xylene	0.540	0.589	0.591	0.584
sec-Butylbenzene	2.708	3.473	3.444	3.403
Styrene	0.962	1.004	1.008	1.014
Vinyl Chloride	0.579	0.668	0.670	0.686
1,2,3-Trichloropropane	0.688	0.684	0.685	0.661
p-Isopropyltoluene	2.366	2.953	2.951	2.908
1,2-Dibromo-3-Chloropropane	0.058	0.054	0.058	0.059
1,2-Dichloroethane-d4	0.545	0.544	0.536	0.539
Dibromofluoromethane	0.491	0.491	0.483	0.485
Toluene-d8	1.241	1.226	1.208	1.191
4-Bromofluorobenzene	368645	706326	1011330	1311827

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010069

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.57360540		5.610	15.000
trans-1,3-Dichloropropene	AVRG		0.47808495		6.216	15.000
1,3-Dichlorobenzene	AVRG		1.60820005		9.290	15.000
2,2-Dichloropropane	AVRG		0.78485479		9.213	15.000
1,1-Dichloropropene	AVRG		0.45997920		8.917	15.000
Dibromomethane	AVRG		0.21954206		8.424	15.000
1,2-Dibromoethane	AVRG		0.34744899		10.056	15.000
trans-1,2-Dichloroethene	AVRG		0.51794510		6.732	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.34649256		7.010	15.000
1,1,1-Trichloroethane	AVRG		0.77008815		7.853	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.88418602		12.031	15.000
1,1,2-Trichloroethane	AVRG		0.29447500		10.989	15.000
1,1-Dichloroethane	AVRG		1.04452475		9.239	15.000
1,1-Dichloroethene	AVRG		0.44955963		8.570	15.000
Trichloroethene	AVRG		0.35763128		7.969	15.000
1,2,3-Trichlorobenzene	AVRG		0.19324402		10.853	15.000
Trichlorofluoromethane	AVRG		0.72688377		7.613	15.000
1,2,4-Trichlorobenzene	LINR	2.746e-002	2.56905140		0.9990136	0.9900000
1,2,4-Trimethylbenzene	AVRG		2.97638251		8.970	15.000
Tetrachloroethene	AVRG		0.31588869		11.507	15.000
1,2-Dichlorobenzene	AVRG		1.39230756		9.714	15.000
1,2-Dichloroethane	AVRG		0.43110842		11.681	15.000
1,2-Dichloropropane	AVRG		0.37022435		7.462	15.000
1,3,5-Trimethylbenzene	AVRG		2.95239803		9.456	15.000
1,3-Dichloropropane	AVRG		0.60913171		11.944	15.000
1,4-Dichlorobenzene	AVRG		1.59712325		11.610	15.000
Toluene	AVRG		1.61839272		11.010	15.000
2-Butanone	AVRG		0.18251644		9.154	15.000
2-Chlorotoluene	AVRG		2.59810067		11.606	15.000
2-Hexanone	AVRG		0.22171060		4.753	15.000
4-Chlorotoluene	AVRG		2.95805584		11.804	15.000
tert-Butylbenzene	AVRG		2.46106150		11.636	15.000
4-Methyl-2-Pentanone	AVRG		0.35097560		8.234	15.000
Acetone	LINR	-0.1016719	8.80554020		0.9985929	0.9900000
Benzene	AVRG		1.42999265		9.055	15.000
Bromobenzene	AVRG		1.01036504		8.748	15.000
Bromochloromethane	AVRG		0.31247517		11.396	15.000
Bromodichloromethane	AVRG		0.45345872		7.310	15.000
Bromoform	AVRG		0.21840761		4.729	15.000
Bromomethane	LINR	-4.77e-003	2.49479317		0.9998004	0.9900000
Carbon Disulfide	AVRG		1.55286116		7.945	15.000
Carbon Tetrachloride	AVRG		0.39996836		8.725	15.000
Chlorobenzene	AVRG		1.01718815		11.612	15.000
Chloroethane	AVRG		0.39167182		10.785	15.000

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010069

Instrument ID: VOA6 Calibration Date(s): 09/24/20 09/24/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1134 1533

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		0.96918894		8.302	15.000
Chloromethane	AVRG		0.68469210		6.196	15.000
cis-1,2-Dichloroethene	AVRG		0.61256258		7.953	15.000
Dibromochloromethane	AVRG		0.35728688		8.083	15.000
Dichlorodifluoromethane	LINR	4.145e-002	1.87764616		0.9978779	0.9900000
Ethylbenzene	AVRG		0.53098194		10.520	15.000
Hexachlorobutadiene	2ORDR	1.818e-002	2.84082074	-0.1088007	0.9976659	0.9900000
Isopropylbenzene	AVRG		1.54388319		10.527	15.000
m,p-Xylenes	AVRG		0.63748802		10.458	15.000
Methylene Chloride	LINR	-1.42e-002	1.85325576		0.9998633	0.9900000
n-Butylbenzene	AVRG		2.57642229		10.827	15.000
n-Propylbenzene	AVRG		4.26505902		9.136	15.000
Naphthalene	AVRG		0.46624710		7.340	15.000
o-Xylene	AVRG		0.62252020		9.561	15.000
sec-Butylbenzene	AVRG		3.49356204		10.998	15.000
Styrene	AVRG		1.06500599		8.405	15.000
Vinyl Chloride	AVRG		0.64586993		6.955	15.000
1,2,3-Trichloropropane	AVRG		0.73140081		9.692	15.000
p-Isopropyltoluene	AVRG		2.97795815		11.100	15.000
1,2-Dibromo-3-Chloropropane	AVRG		6.034e-002		11.963	15.000
1,2-Dichloroethane-d4	AVRG		0.56206107		6.062	15.000
Dibromofluoromethane	AVRG		0.51378762		8.475	15.000
Toluene-d8	AVRG		1.31453904		9.856	15.000
4-Bromofluorobenzene	LINR	-1.66e-002	2.33275892		0.9999120	0.9900000

FORM VI VOA

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092401.D

Date : 24-SEP-2020 11:10

Client ID: BFB

Instrument: voa6.i

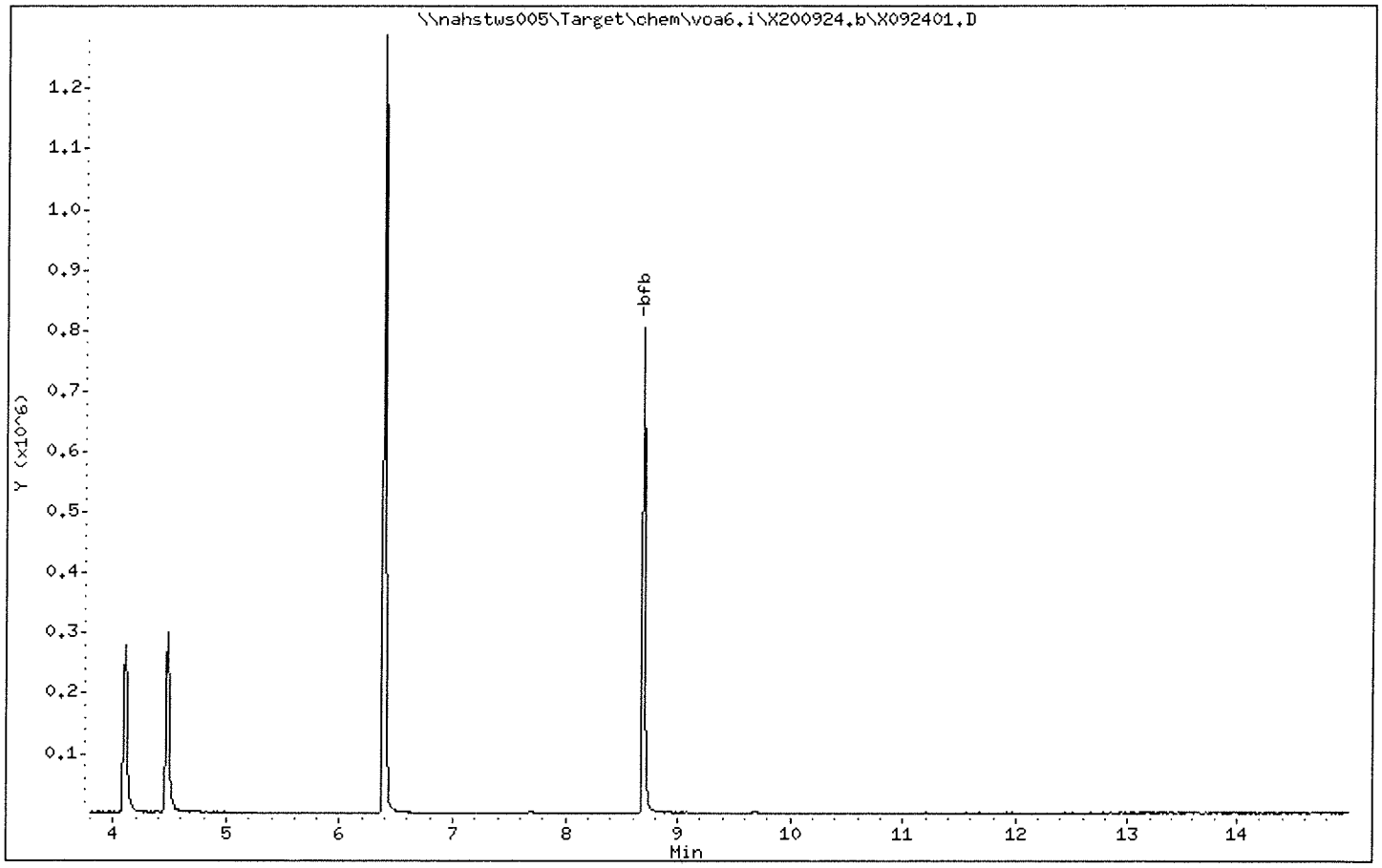
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092401.D

Date : 24-SEP-2020 11:10

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

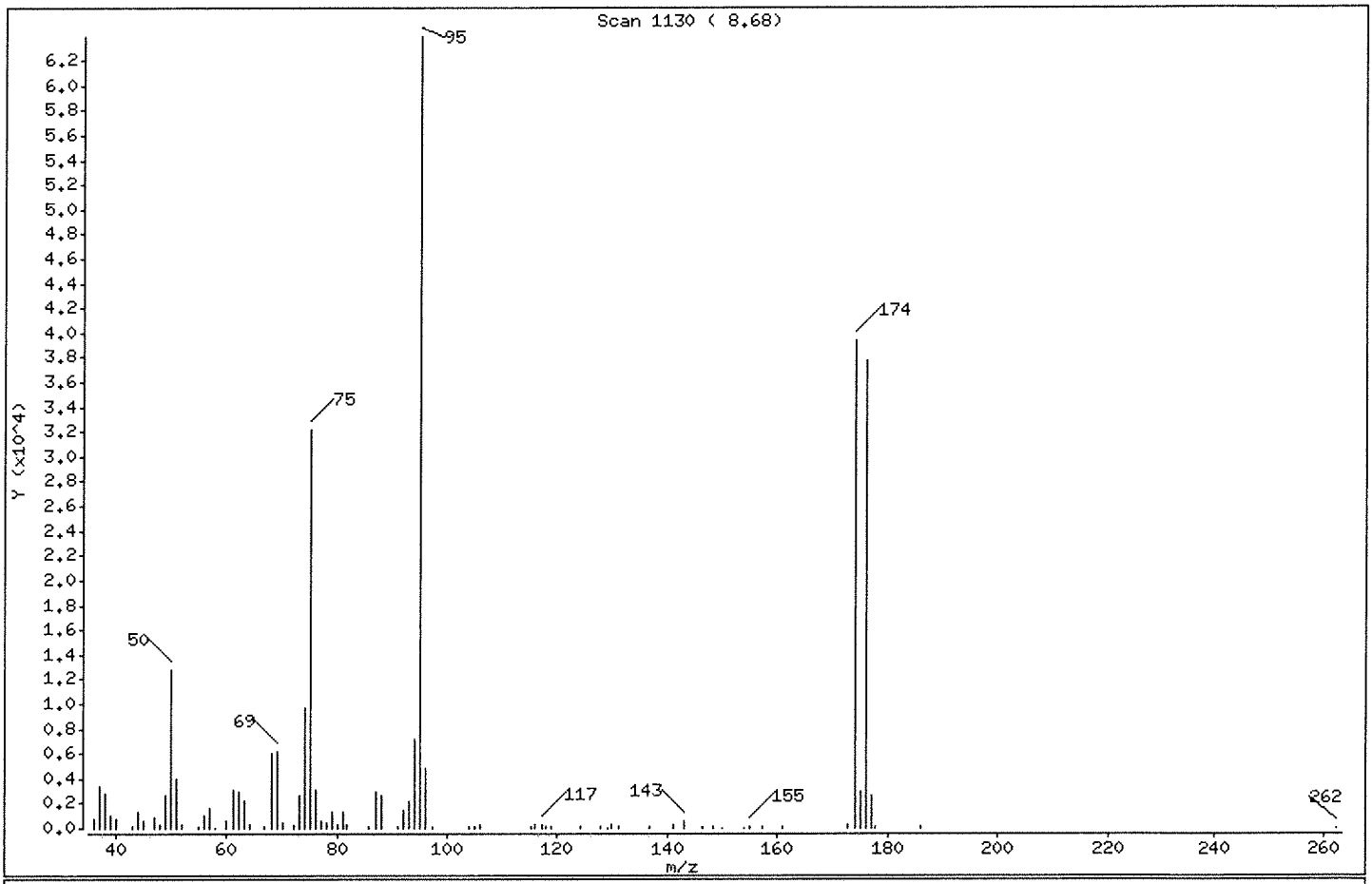
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.97
75	30.00 - 60.00% of mass 95	50.32
96	5.00 - 9.00% of mass 95	7.53
173	Less than 2.00% of mass 174	0.54 (0.87)
174	Greater than 50.00% of mass 95	61.71
175	5.00 - 9.00% of mass 174	4.54 (7.36)
176	95.00 - 101.00% of mass 174	59.18 (95.90)
177	5.00 - 9.00% of mass 176	4.14 (6.99)

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092401.D

Date : 24-SEP-2020 11:10

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: X092401.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.10
Number of points: 79

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	680	62.10	2916	88.00	2589	131.00	177
37.10	3328	63.10	2146	90.90	197	136.90	95
38.10	2848	64.20	251	92.10	1499	141.00	363
39.10	1092	67.00	144	93.10	2228	143.00	535
40.10	702	68.10	6060	94.10	7204	146.20	84
43.20	90	69.10	6113	95.10	63928	148.20	88
44.10	1373	70.10	387	96.10	4811	149.90	62
45.10	600	72.10	357	97.20	145	153.90	52
47.10	929	73.10	2682	104.00	204	155.00	162
48.00	358	74.10	9632	105.00	136	157.10	128
49.10	2668	75.10	32168	105.80	273	160.80	100
50.10	12768	76.10	3061	115.20	130	172.90	344
51.10	4025	77.00	582	116.00	238	174.00	39448
52.10	271	78.10	388	117.10	274	175.10	2905
55.00	135	79.00	1342	117.90	175	176.00	37832
56.10	1094	80.00	329	119.00	202	177.00	2644
57.10	1650	81.10	1363	124.00	76	177.90	81
58.10	54	81.90	267	127.90	200	186.10	193
60.00	635	85.90	78	129.00	73	262.20	52
61.10	3138	87.10	3005	129.90	222		

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092402.D Page 1
Report Date: 13-Oct-2020 11:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092402.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 24-SEP-2020 11:34
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 15:33 Cal File: X092411.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

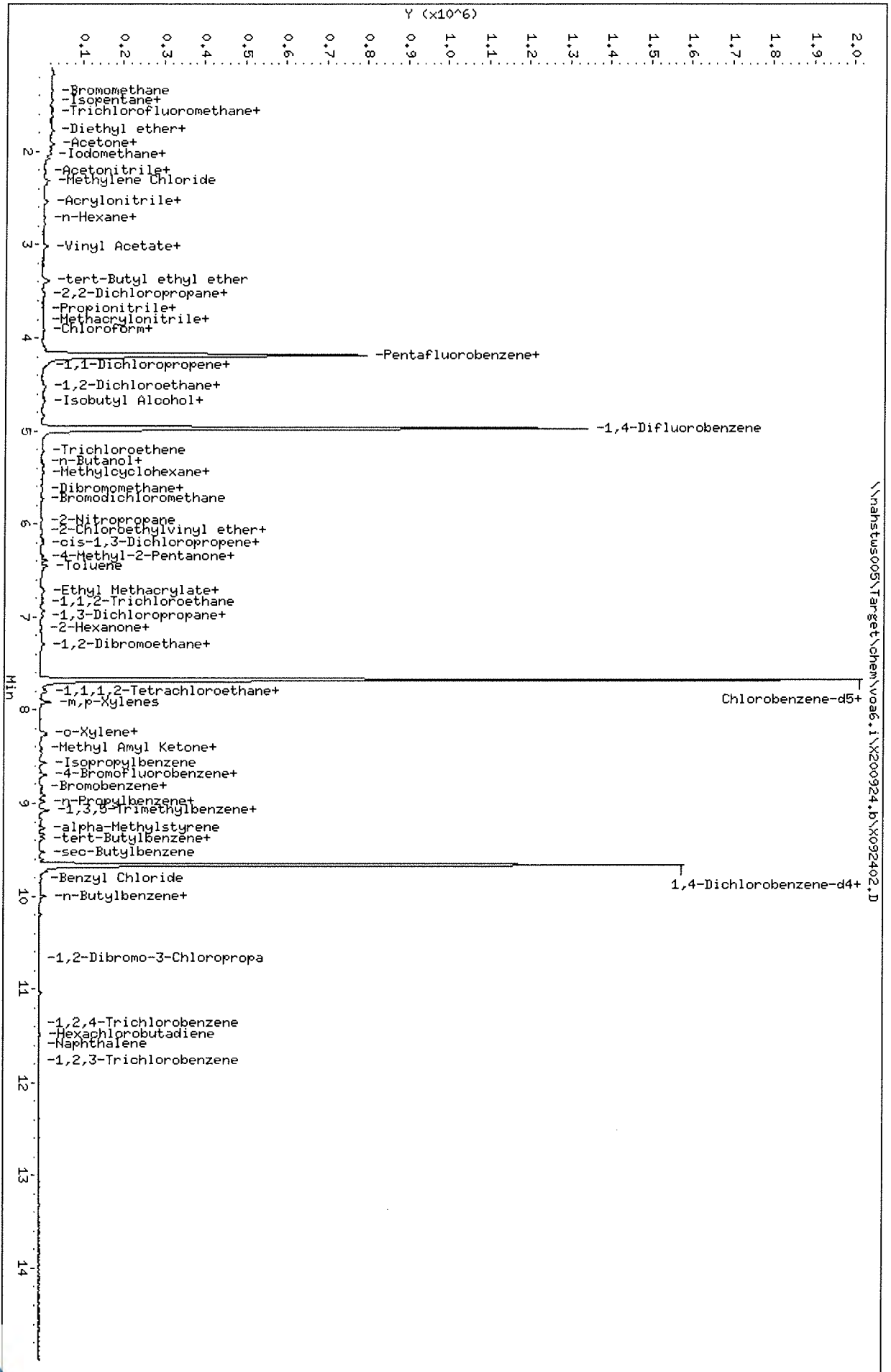
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	689255	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1110772	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	970158	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	403723	50.0000	
$ 30 Dibromofluoromethane	113	4.110	4.110	(0.981)	2163	0.25000	0.30(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	3033	0.25000	0.39(Ta)
$ 48 Toluene-d8	98	6.395	6.395	(0.834)	9651	0.25000	0.37(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	5599	0.25000	(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	2084	0.25000	0.30(a)
31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	3047	0.25000	0.28(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	2033	0.25000	0.28(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1754	0.25000	0.30(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	4149	0.25000	0.28(Ta)
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	1960	0.25000	0.31(a)
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	4394	0.25000	0.43(a)
93 1,2,3-Trichlorobenzene	180	11.761	11.761	(1.216)	209	0.25000	0.13(aM)
71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	1939	0.25000	0.32(aM)
90 1,2,4-Trichlorobenzene	180	11.359	11.359	(1.175)	629	0.25000	1.57(aM)
79 1,2,4-Trimethylbenzene	105	9.390	9.390	(0.971)	6923	0.25000	0.28(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	24	0.25000	0.04(aM)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	2205	0.25000	0.32(a)
88 1,2-Dichlorobenzene	146	10.006	10.006	(1.035)	3283	0.25000	0.29(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092402.D Page 2
Report Date: 13-Oct-2020 11:23

	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	4.576	4.576	(0.921)	3037	0.25000	0.31(aM)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	2261	0.25000	0.27(aM)
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	6914	0.25000	0.29(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	3732	0.25000	0.28(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	3561	0.25000	0.30(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	4213	0.25000	0.32(a)
26	2,2-Dichloropropane	77	3.509	3.509	(0.838)	3427	0.25000	0.31(a)
24	2-Butanone	43	3.623	3.623	(0.865)	834	0.50000	0.33(aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	6603	0.25000	0.31(a)
52	2-Hexanone	43	7.126	7.126	(0.929)	2395	0.50000	0.55(a)
77	4-Chlorotoluene	91	9.082	9.082	(0.939)	6800	0.25000	0.28(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	6876	0.25000	0.28(a)
45	4-Methyl-2-Pentanone	43	6.345	6.345	(0.827)	4043	0.50000	0.59(a)
10	Acetone	43	1.983	1.983	(0.473)	3858	0.50000	(a)
37	Benzene	78	4.526	4.526	(0.911)	9036	0.25000	0.28(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	2319	0.25000	0.28(a)
29	Bromochloromethane	128	3.810	3.810	(0.909)	1564	0.25000	0.36(aM)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	2701	0.25000	0.26(aM)
66	Bromoform	173	8.415	8.415	(1.097)	1037	0.25000	0.24(aM)
6	Bromomethane	94	1.345	1.345	(0.321)	2296	0.25000	0.17(aM)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	13194	0.50000	0.61(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	2765	0.25000	0.31(aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	6427	0.25000	0.32(a)
7	Chloroethane	64	1.410	1.410	(0.337)	1828	0.25000	0.33(aM)
28	Chloroform	83	3.917	3.917	(0.935)	4124	0.25000	0.30(a)
3	Chloromethane	50	1.080	1.080	(0.258)	2721	0.25000	0.28(aM)
27	cis-1,2-Dichloroethene	96	3.545	3.545	(0.846)	2548	0.25000	0.30(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	3539	0.25000	0.27(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	2043	0.25000	0.29(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	1356	0.25000	0.27(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	1988	0.25000	2.34(aM)
61	Ethylbenzene	106	7.807	7.807	(1.018)	2951	0.25000	0.28(a)
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	750	0.25000	1.17(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	9283	0.25000	0.30(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	7240	0.50000	0.58(a)
17	Methylene Chloride	84	2.312	2.312	(0.552)	4057	0.25000	(a)
87	n-Butylbenzene	91	9.998	9.998	(1.034)	5273	0.25000	0.25(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	10348	0.25000	0.30(a)
92	Naphthalene	128	11.589	11.589	(1.199)	788	0.25000	0.20(a)
63	o-Xylene	106	8.251	8.251	(1.076)	3465	0.25000	0.28(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	8177	0.25000	0.28(a)
64	Styrene	104	8.265	8.265	(1.078)	5747	0.25000	0.27(a)
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	5920	0.25000	0.29(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	1901	0.25000	0.31(a)
50	Toluene	91	6.453	6.453	(0.841)	9946	0.25000	0.31(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	2138	0.25000	0.29(a)
51	trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	2811	0.25000	0.26(a)
38	Trichloroethene	130	5.221	5.221	(1.050)	2204	0.25000	0.27(a)
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	2639	0.25000	0.26(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	2201	0.25000	0.24(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\X200924.b\X092403.D Page 1
Report Date: 13-Oct-2020 11:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092403.D
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Inj Date : 24-SEP-2020 11:58
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 11:34 Cal File: X092402.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

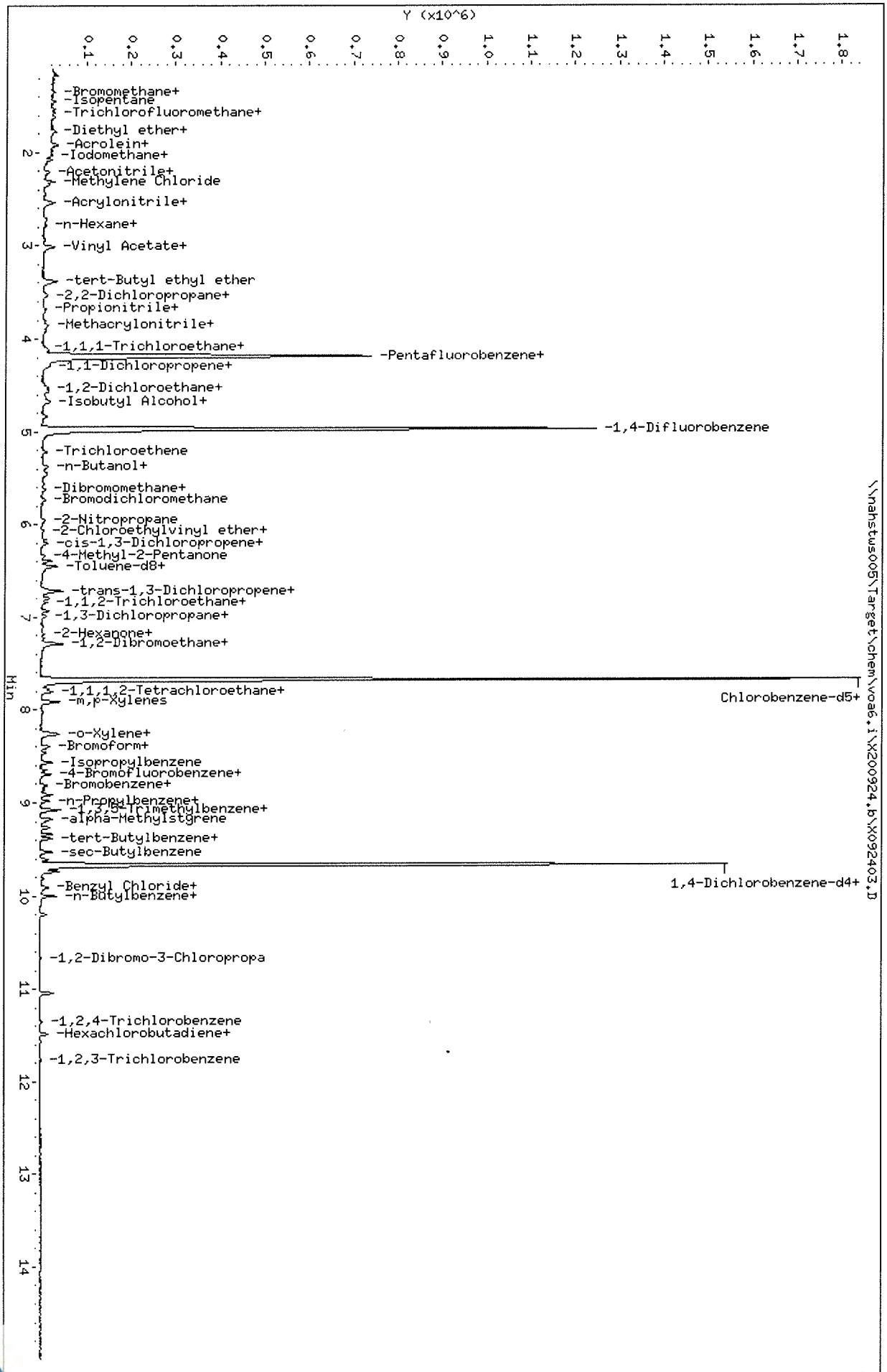
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	642784	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1019136	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	901245	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	392686	50.0000	
$ 30 Dibromofluoromethane	113	4.111	4.111	(0.981)	3913	0.50000	0.59(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	4097	0.50000	0.56(a)
$ 48 Toluene-d8	98	6.396	6.396	(0.834)	14296	0.50000	0.60(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	6772	0.50000	0.04(aM)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	3395	0.50000	0.54(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	4890	0.50000	0.49(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	3817	0.50000	0.54(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2965	0.50000	0.55(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	7525	0.50000	0.56(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	3062	0.50000	0.52(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	5375	0.50000	0.57(a)
93 1,2,3-Trichlorobenzene	180	11.761	11.761	(1.216)	833	0.50000	0.54(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	2889	0.50000	0.50(aM)
90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	2229	0.50000	2.10(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	12774	0.50000	0.54(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	230	0.50000	0.48(aM)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	3438	0.50000	0.54(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	6211	0.50000	0.56(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092403.D Page 2
Report Date: 13-Oct-2020 11:23

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	4729	0.50000	0.53(aM)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	3559	0.50000	0.47(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	12580	0.50000	0.54(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	6864	0.50000	0.54(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	6082	0.50000	0.55(a)
84	1,4-Dichlorobenzene	146	9.691	9.691	(1.002)	7626	0.50000	0.60(a)
26	2,2-Dichloropropane	77	3.523	3.523	(0.841)	5532	0.50000	0.54(a)
24	2-Butanone	43	3.638	3.638	(0.868)	2048	1.00000	0.87(a)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	11695	0.50000	0.57(a)
52	2-Hexanone	43	7.105	7.105	(0.926)	4262	1.00000	1.06(a)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	13001	0.50000	0.55(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	14051	0.50000	0.60(a)
45	4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	7266	1.00000	1.14(a)
10	Acetone	43	1.983	1.983	(0.473)	4284	1.00000	(a)
37	Benzene	78	4.526	4.526	(0.911)	15191	0.50000	0.52(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	4166	0.50000	0.52(a)
29	Bromochloromethane	128	3.810	3.810	(0.909)	2272	0.50000	0.56(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	5173	0.50000	0.55(aM)
66	Bromoform	173	8.416	8.416	(1.097)	1929	0.50000	0.48(Ta)
6	Bromomethane	94	1.346	1.346	(0.321)	3098	0.50000	0.36(a)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	20804	1.00000	1.04(a)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	4583	0.50000	0.56(aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	10454	0.50000	0.57(a)
7	Chloroethane	64	1.410	1.410	(0.337)	3007	0.50000	0.59(a)
28	Chloroform	83	3.917	3.917	(0.935)	6256	0.50000	0.50(a)
3	Chloromethane	50	1.081	1.081	(0.258)	4707	0.50000	0.53(a)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.844)	4012	0.50000	0.50(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	6161	0.50000	0.52(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	3409	0.50000	0.52(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	2436	0.50000	0.54(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	2901	0.50000	2.49(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	5137	0.50000	0.53(a)
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	3351	0.50000	2.12(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	15126	0.50000	0.54(a)
62	m,p-Xylenes	106	7.914	7.914	(1.032)	12539	1.00000	1.09(a)
17	Methylene Chloride	84	2.313	2.313	(0.552)	5505	0.50000	0.08(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	11754	0.50000	0.58(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	18305	0.50000	0.54(a)
92	Naphthalene	128	11.574	11.574	(1.197)	2091	0.50000	0.57(aM)
63	o-Xylene	106	8.251	8.251	(1.076)	5859	0.50000	0.52(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	15807	0.50000	0.57(a)
64	Styrene	104	8.272	8.272	(1.078)	10644	0.50000	0.55(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	10963	0.50000	0.56(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	2972	0.50000	0.52(a)
50	Toluene	91	6.453	6.453	(0.841)	15888	0.50000	0.54(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	3450	0.50000	0.51(a)
51	trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	5027	0.50000	0.51(a)
38	Trichloroethene	130	5.221	5.221	(1.050)	3796	0.50000	0.52(a)
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	4865	0.50000	0.52(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	4088	0.50000	0.49(a)

QC Flag Legend

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



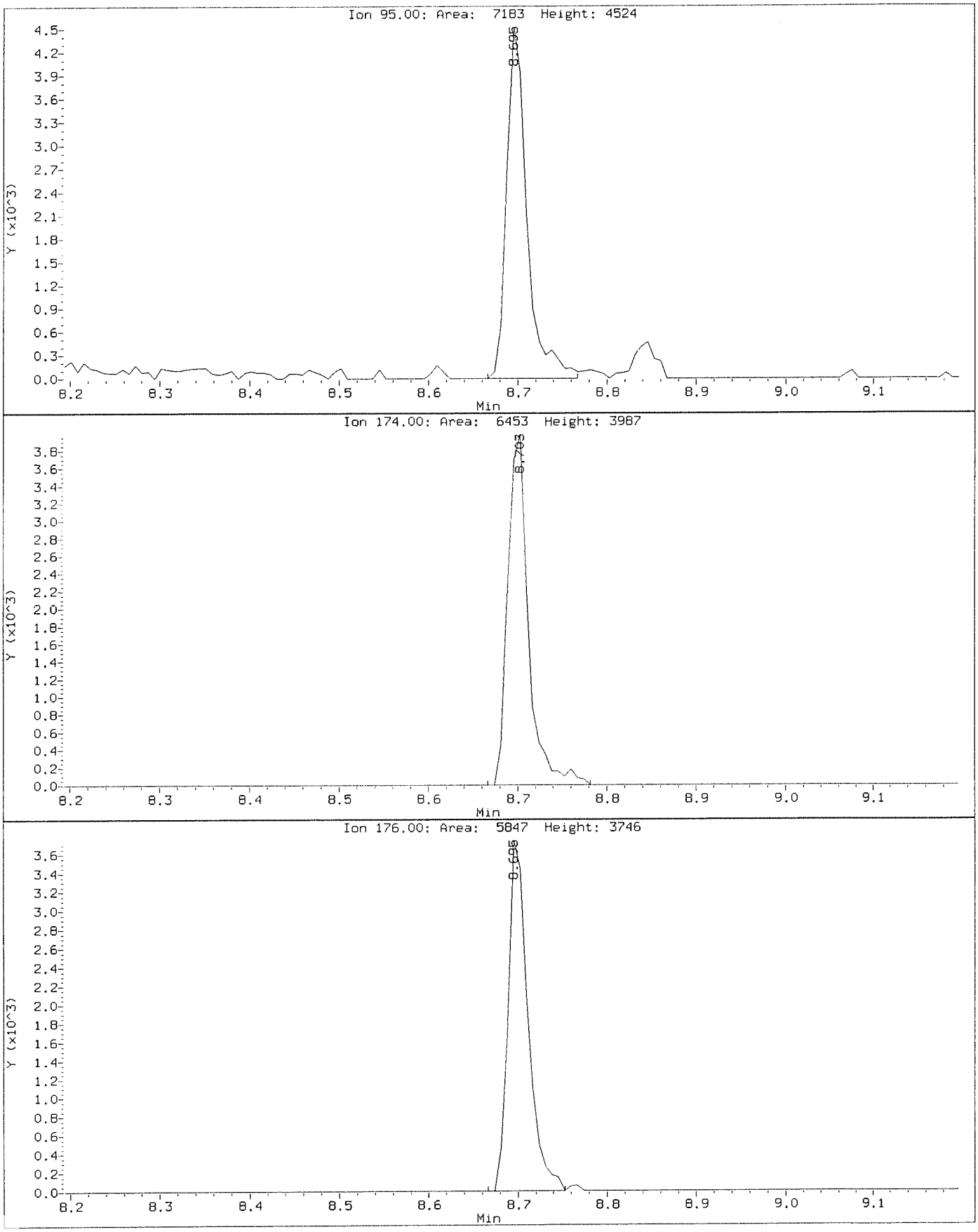
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Instrument: voa6.i
Operator: PC
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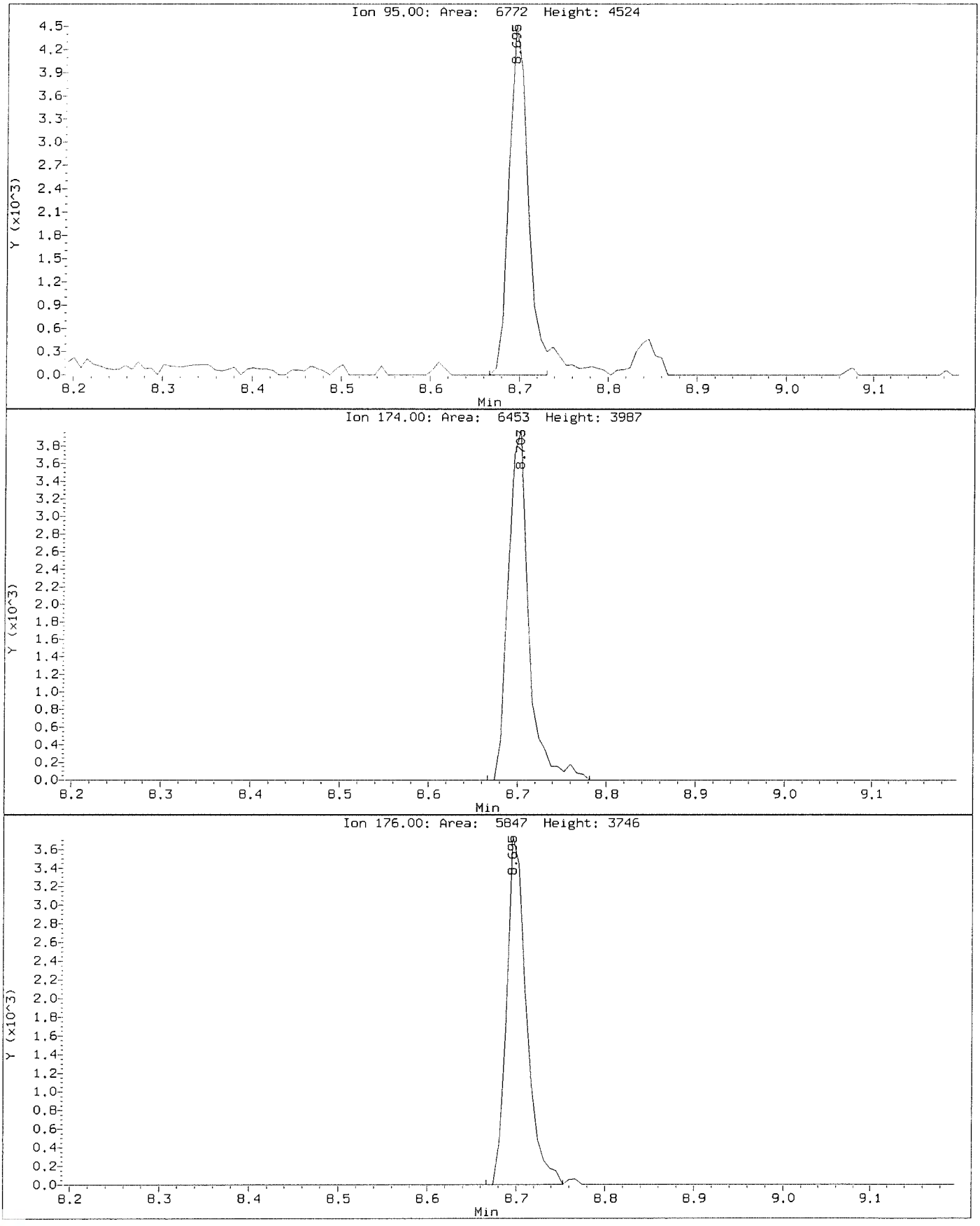
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Client Sample ID: VSTD000.5

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



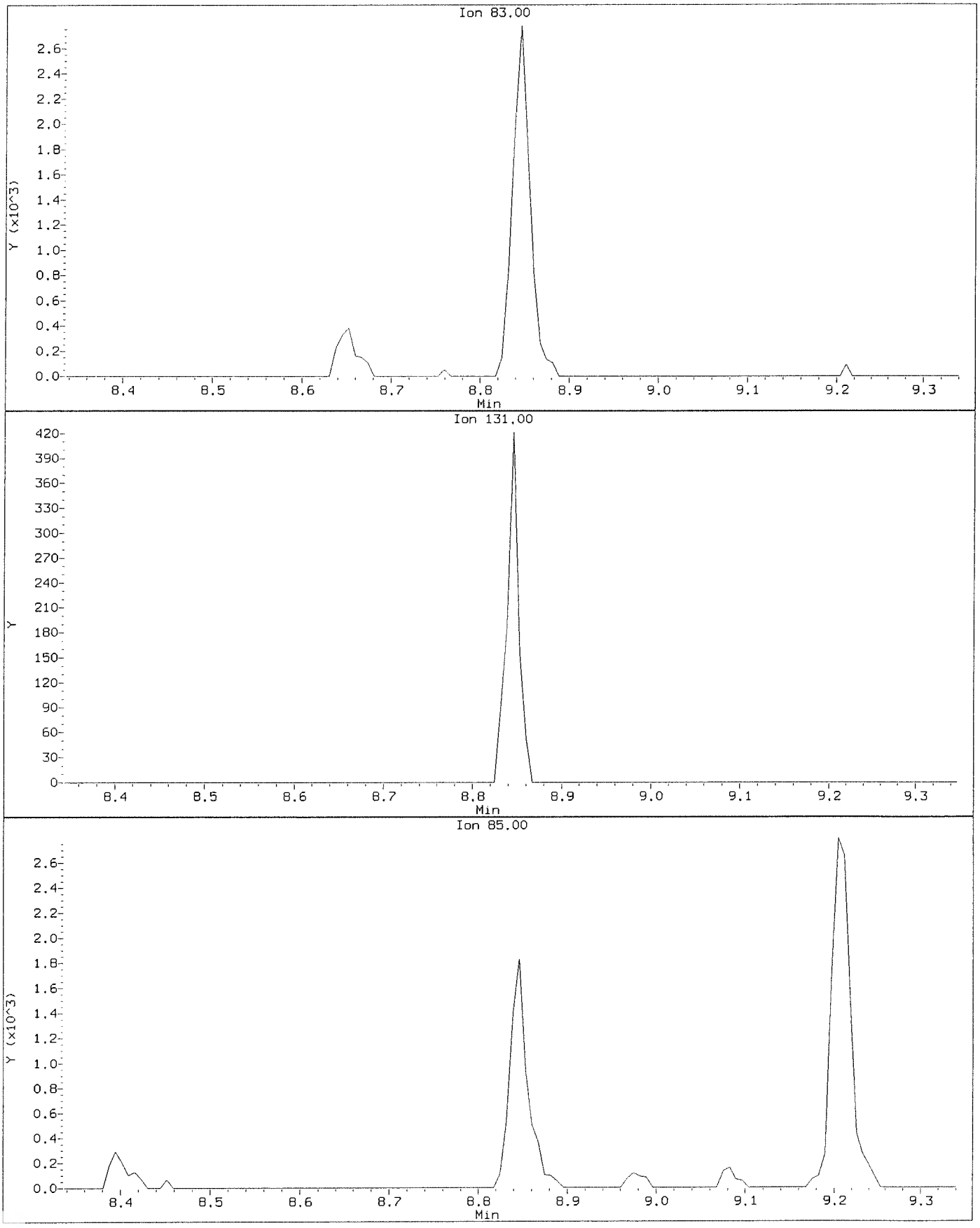
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Client Sample ID: VSTD000.5

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



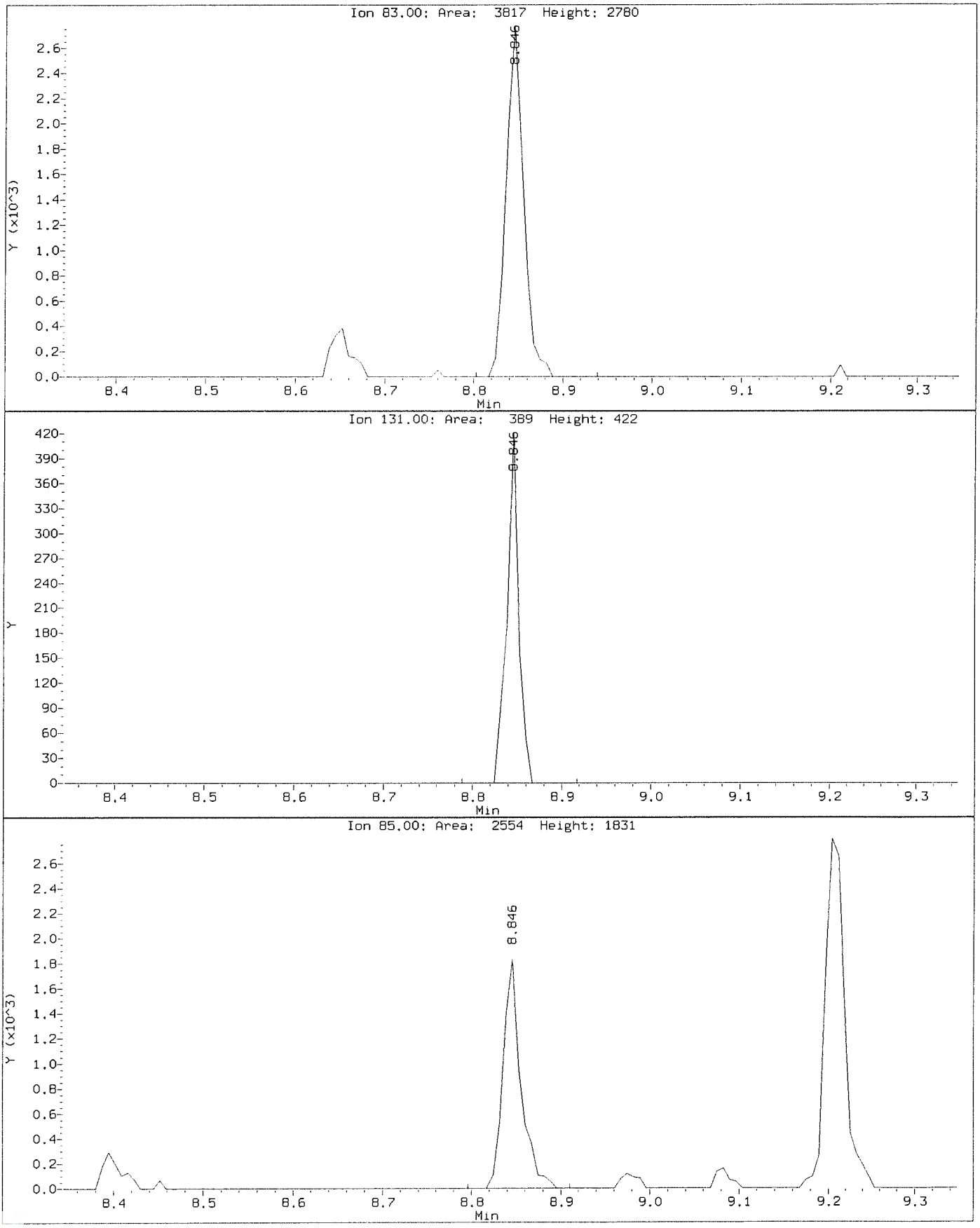
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Instrument: voa6.i
Client Sample ID: VSTD000.5

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



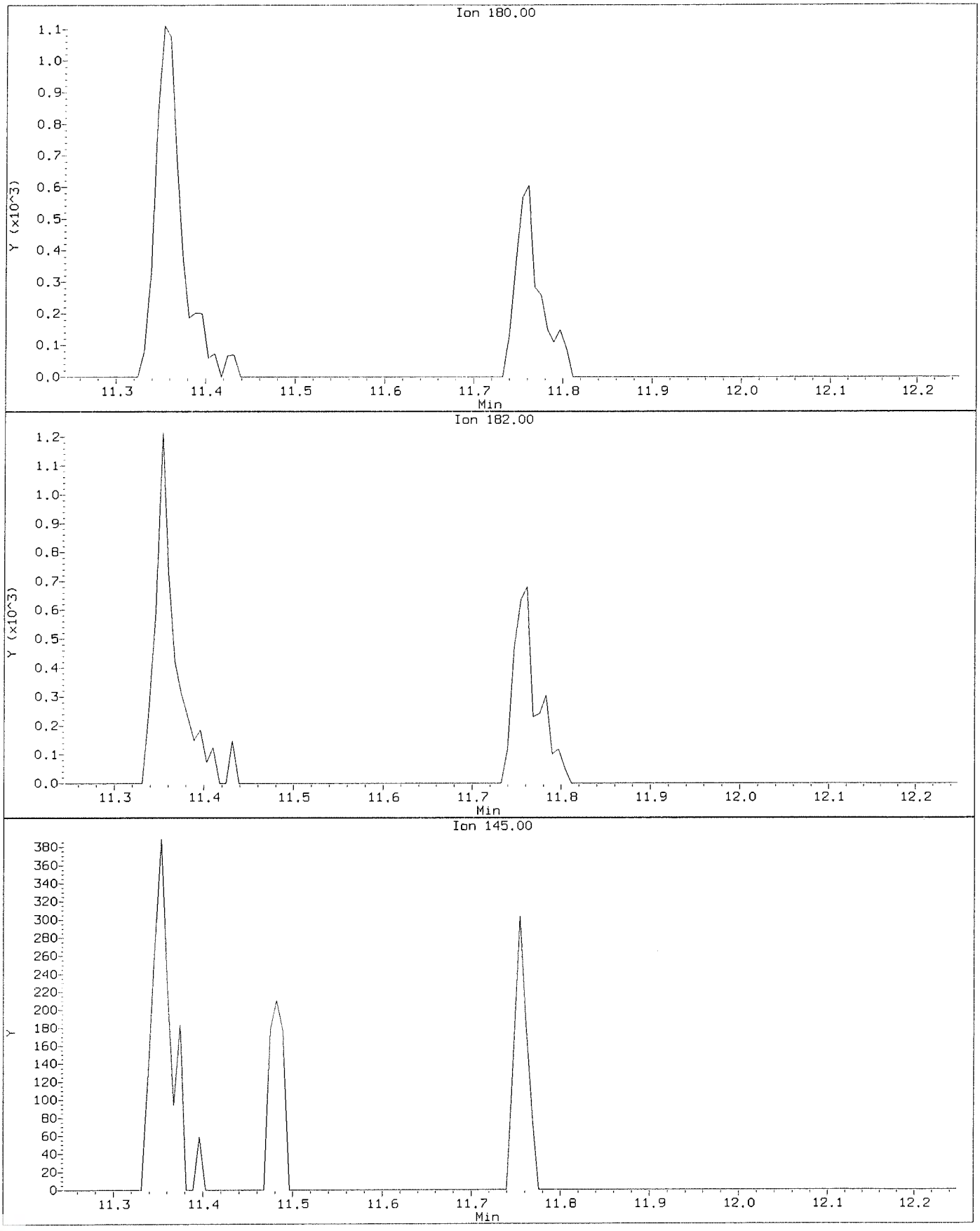
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Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



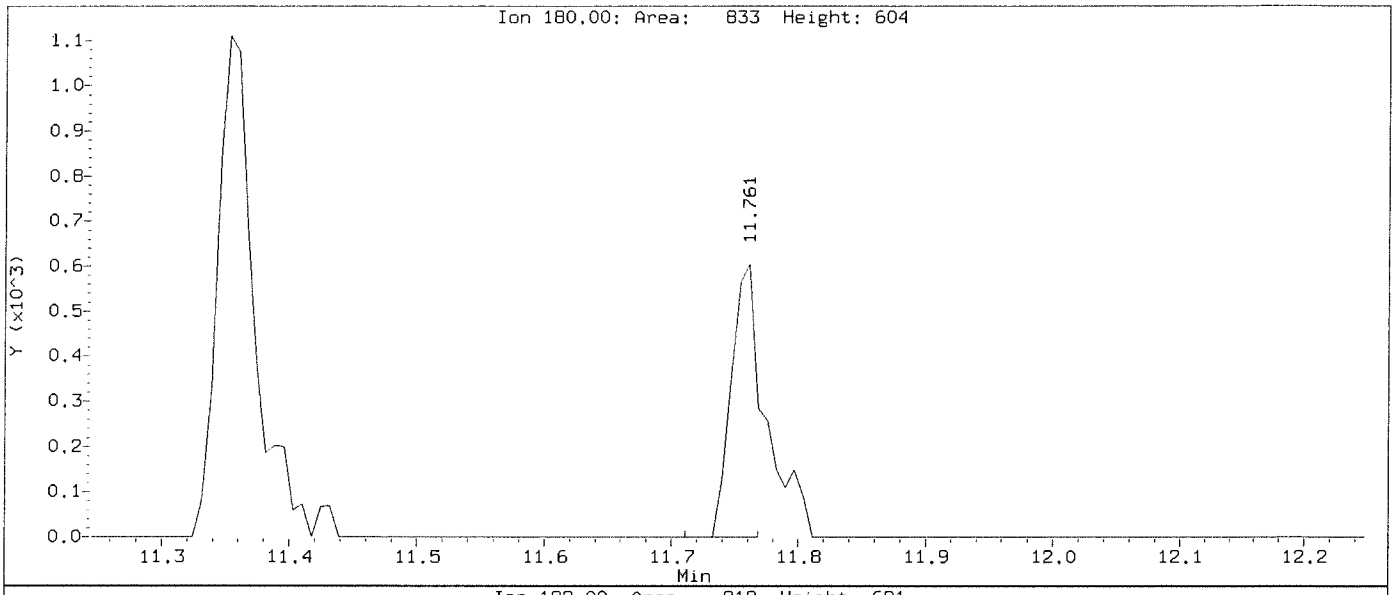
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Instrument: voa6.i
Client Sample ID: VSTD000.5

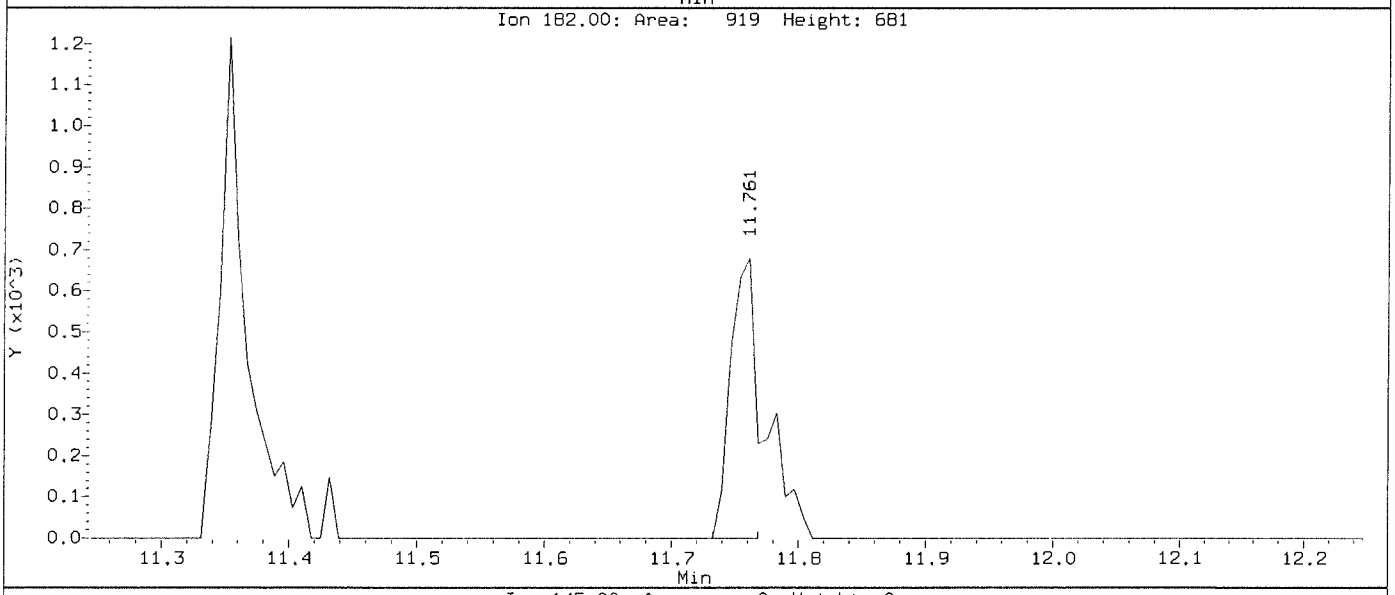
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

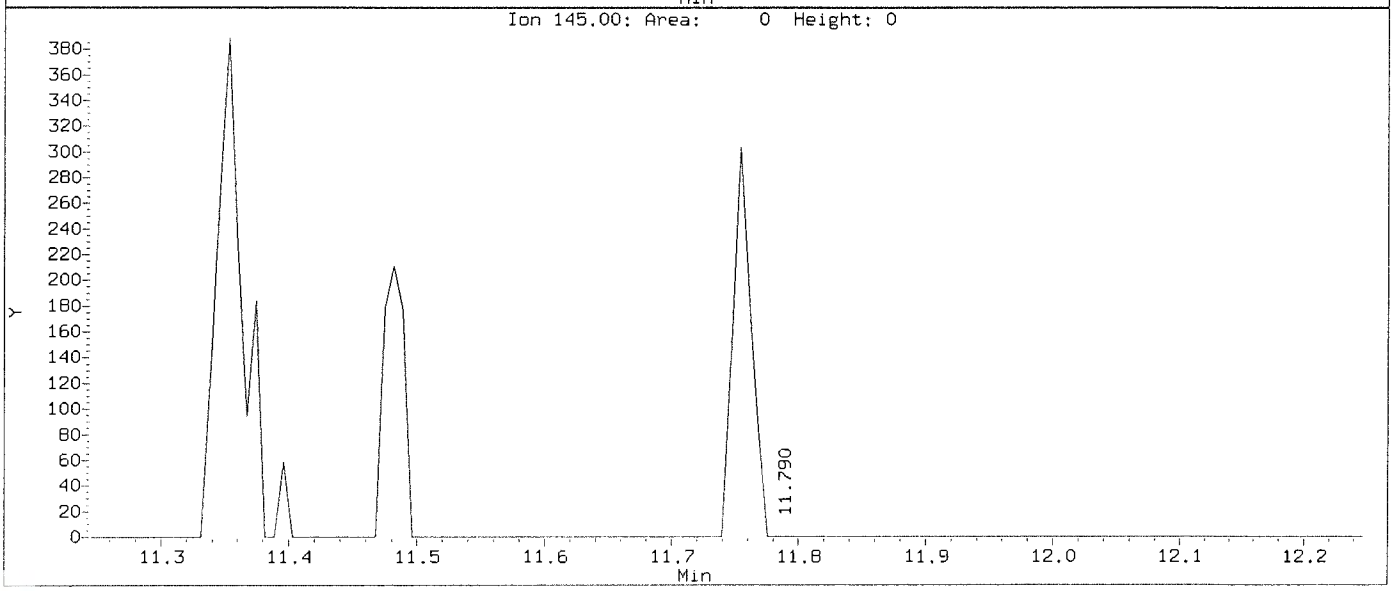


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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

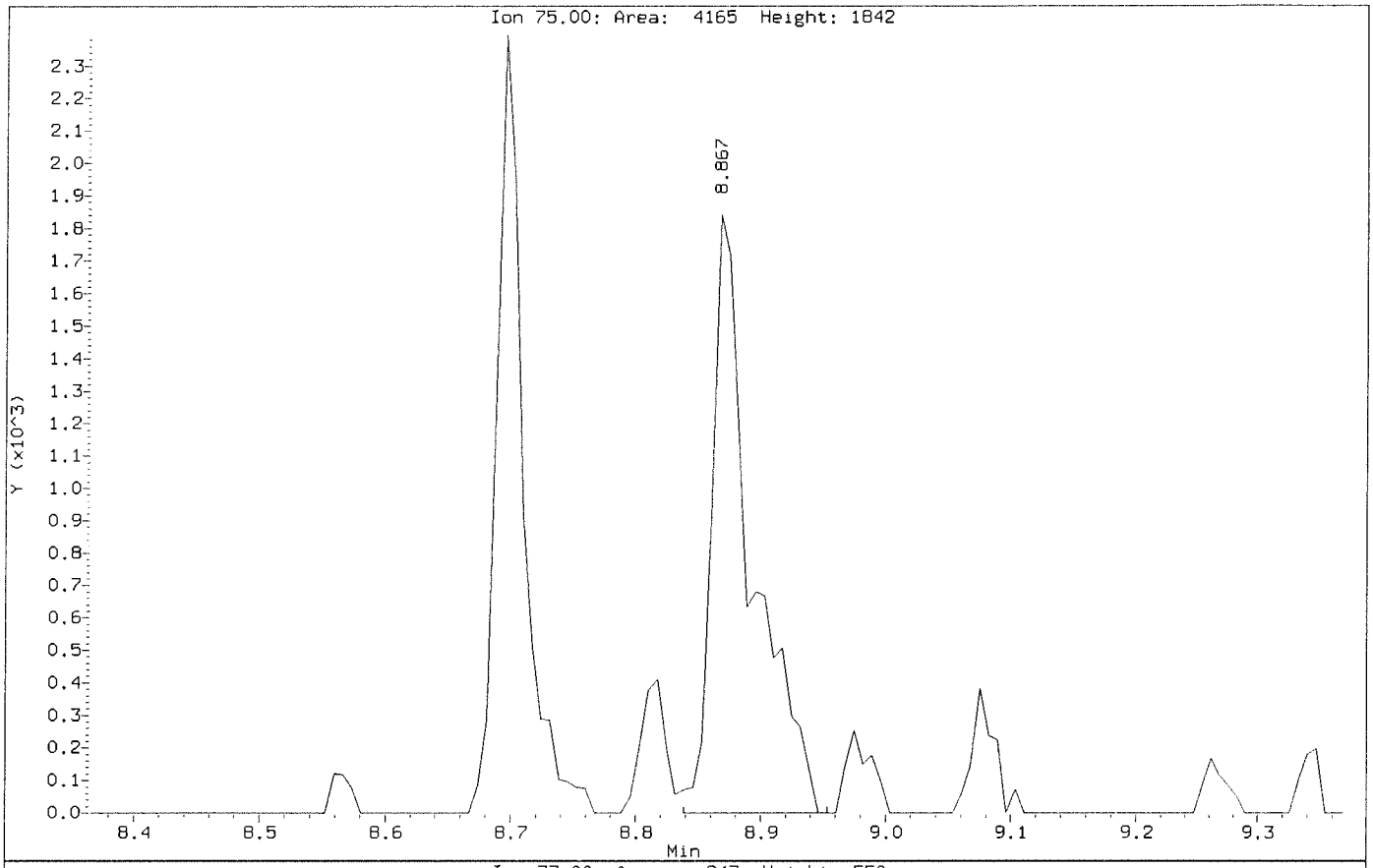


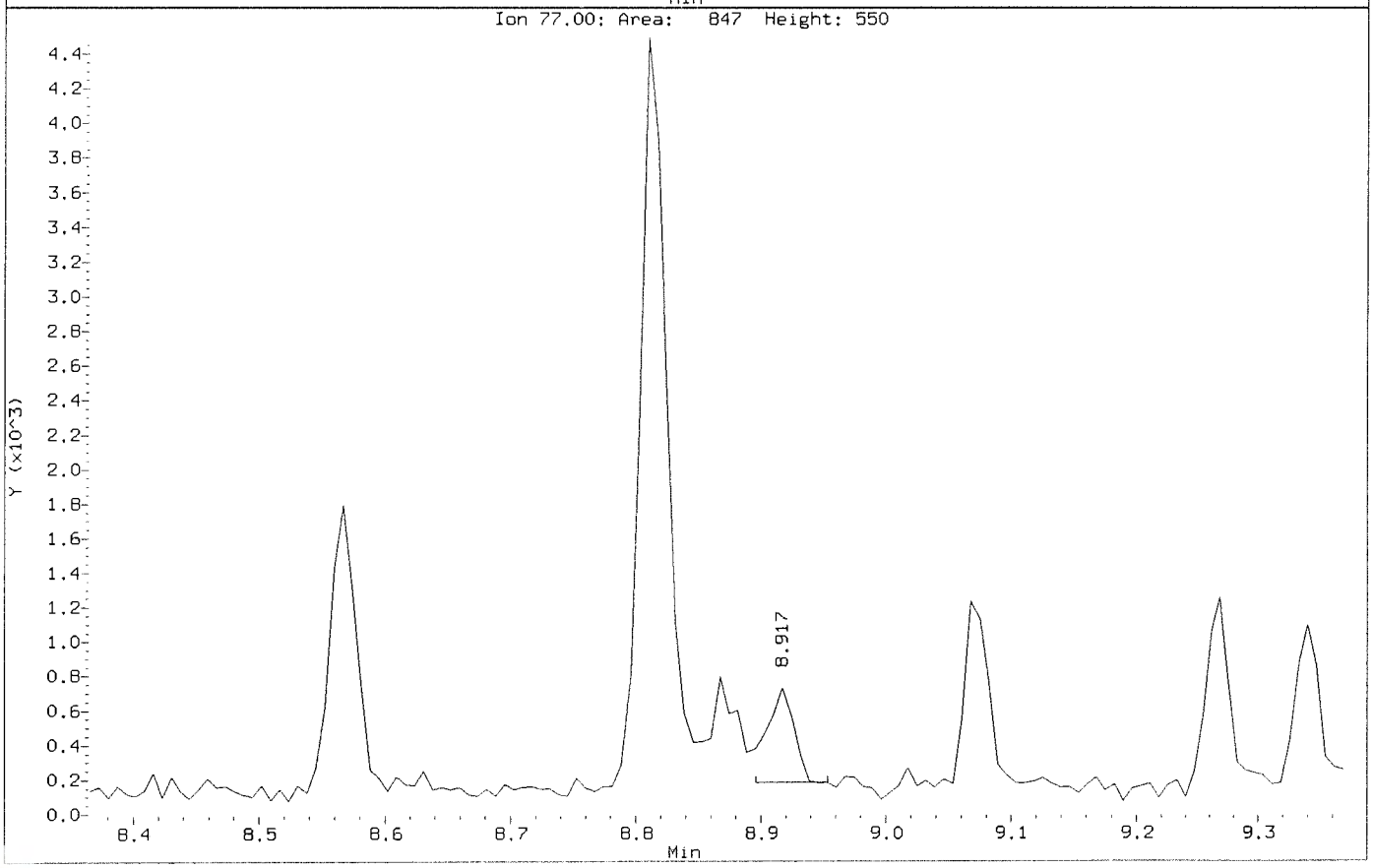




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Client Sample ID: VSTD000.5

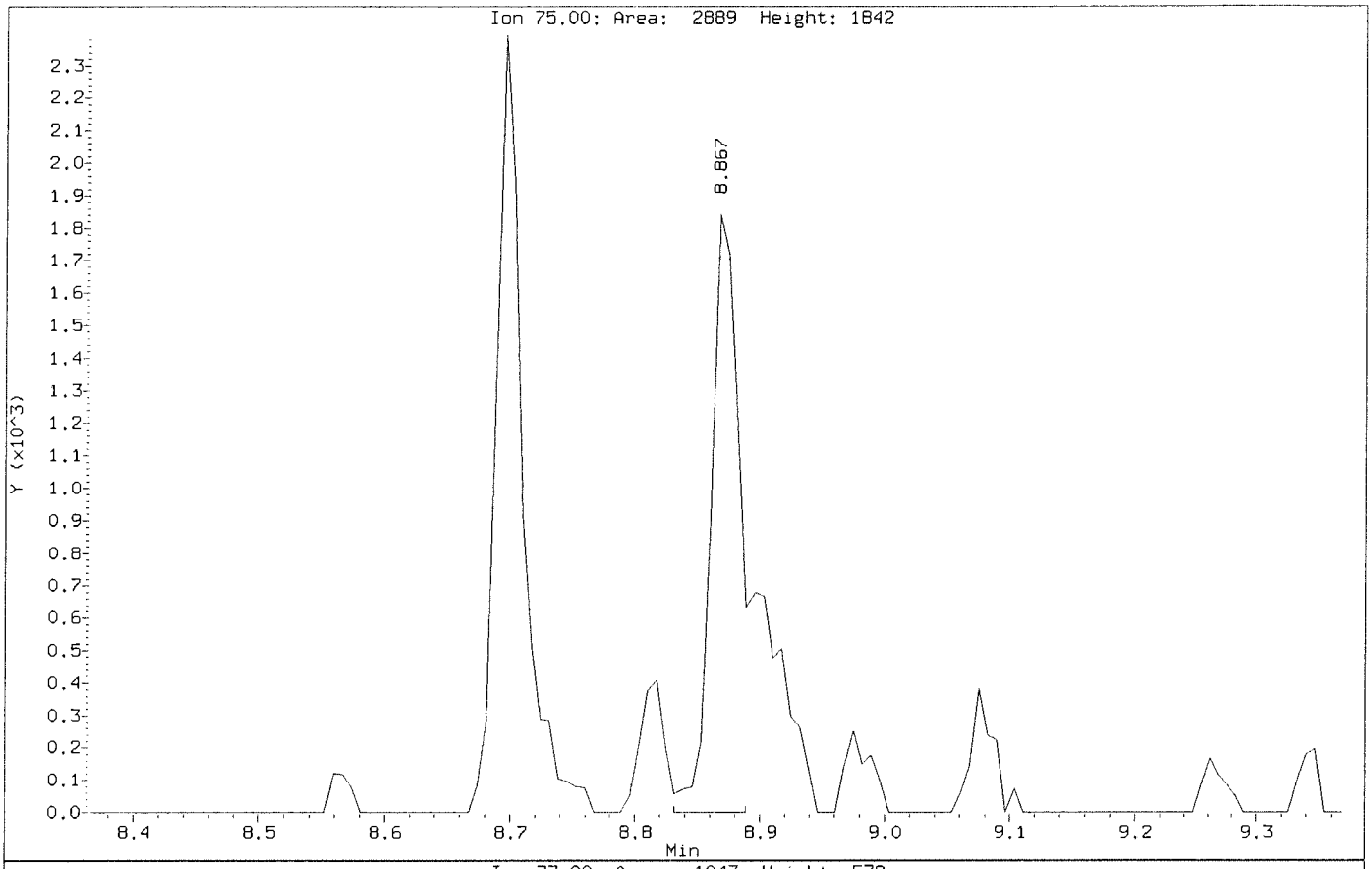
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

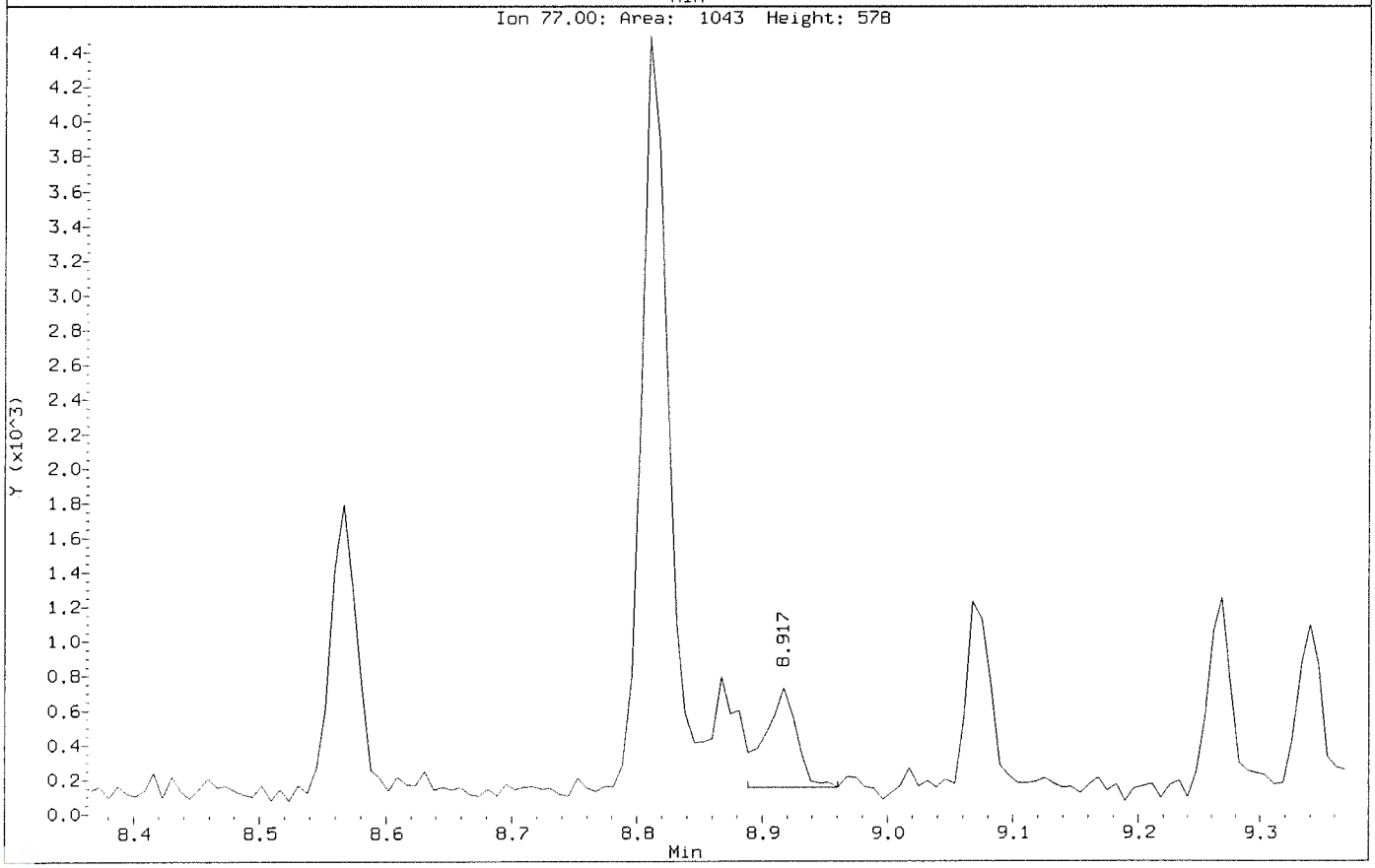




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Instrument: voa6.i
Client Sample ID: VSTD000.5

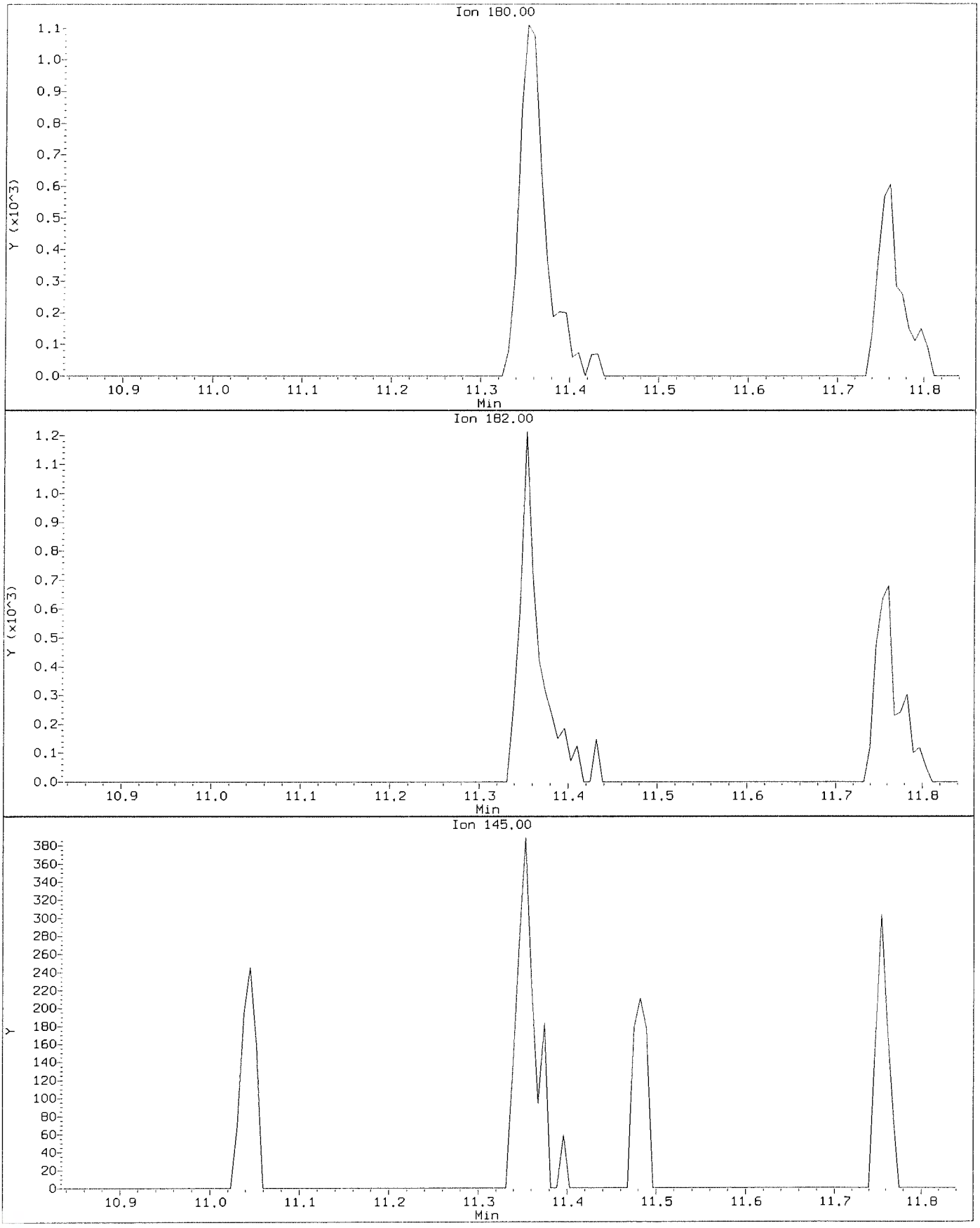
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





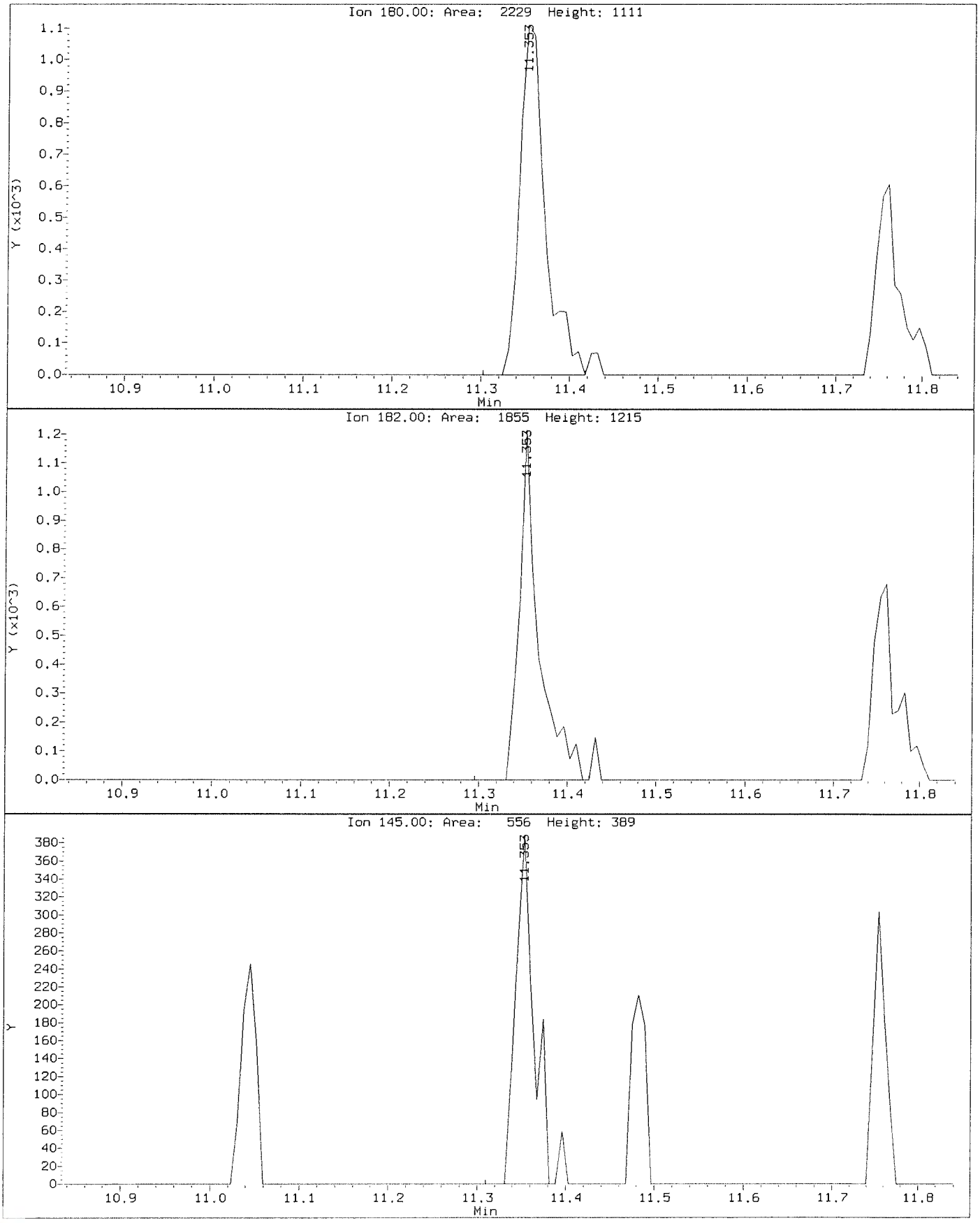
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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



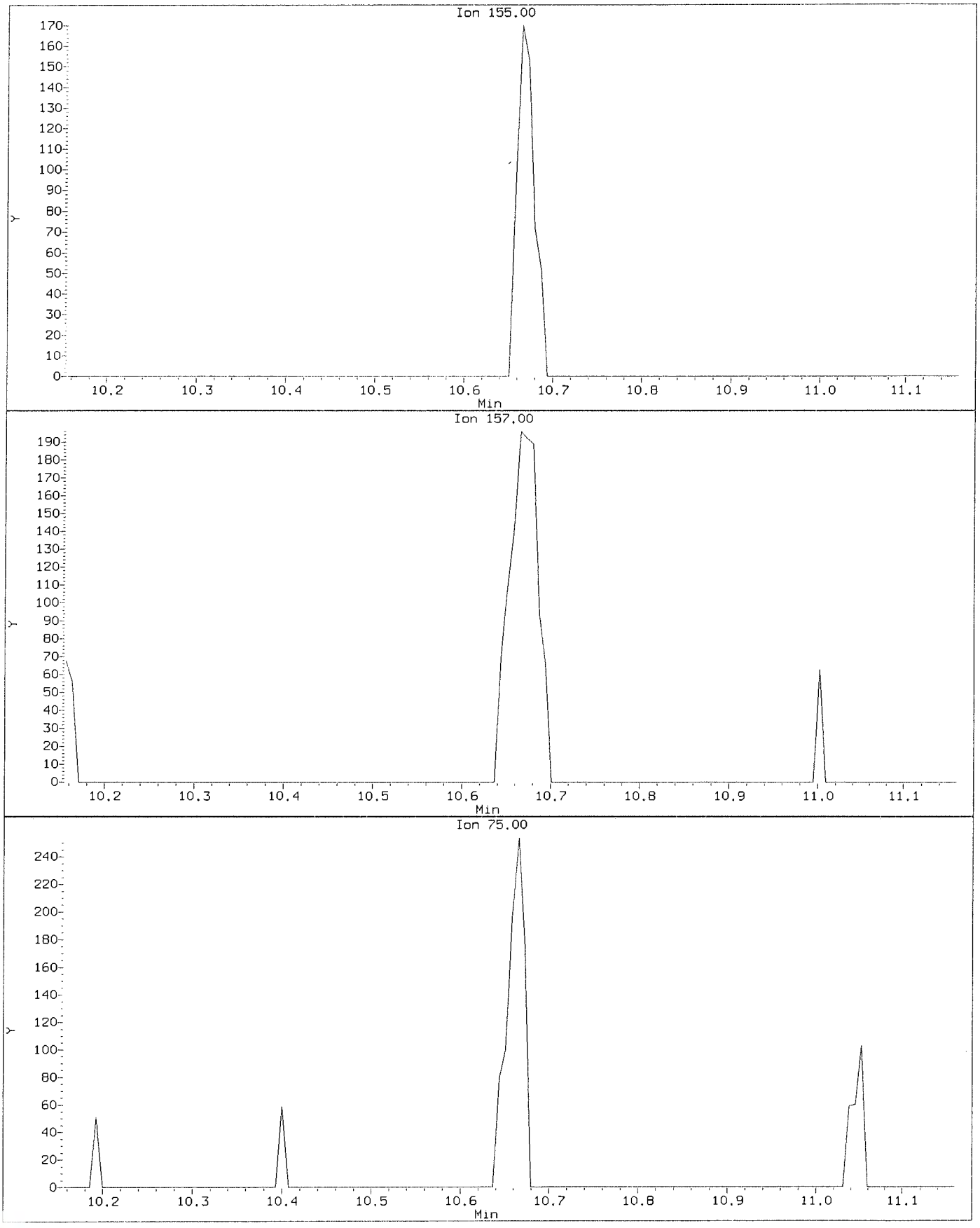
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Client Sample ID: VSTD000.5

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



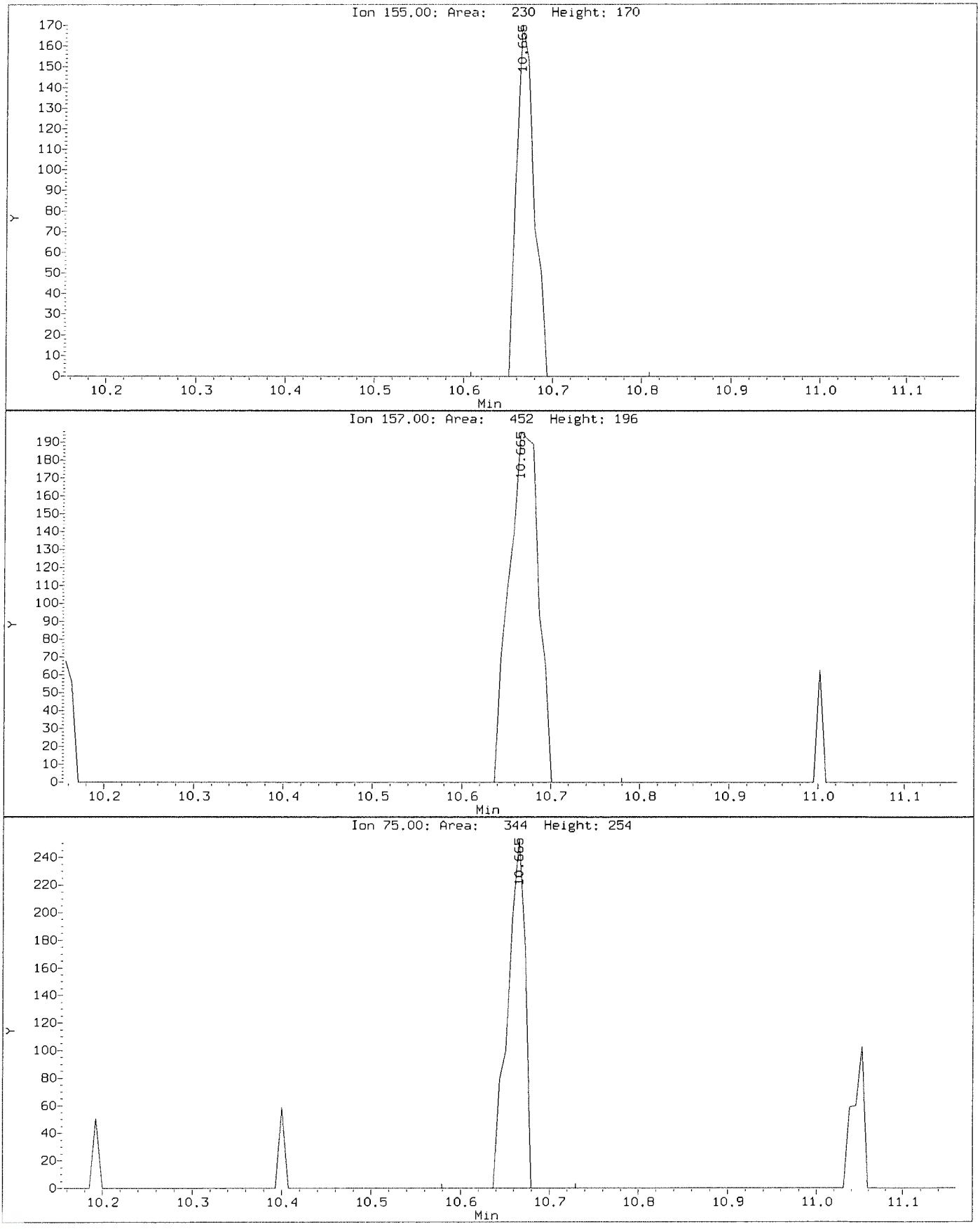
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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



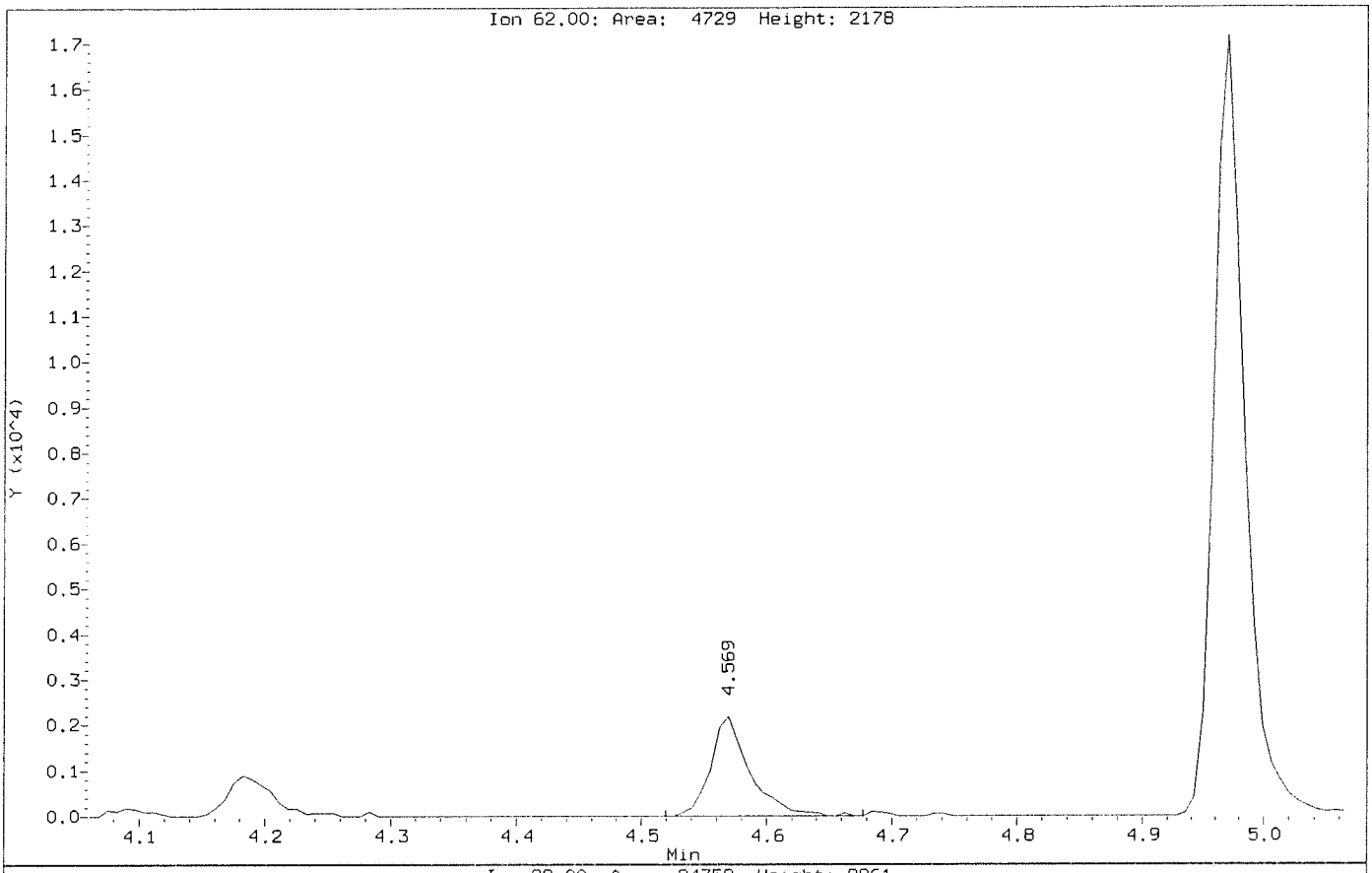
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Client Sample ID: VSTD000.5

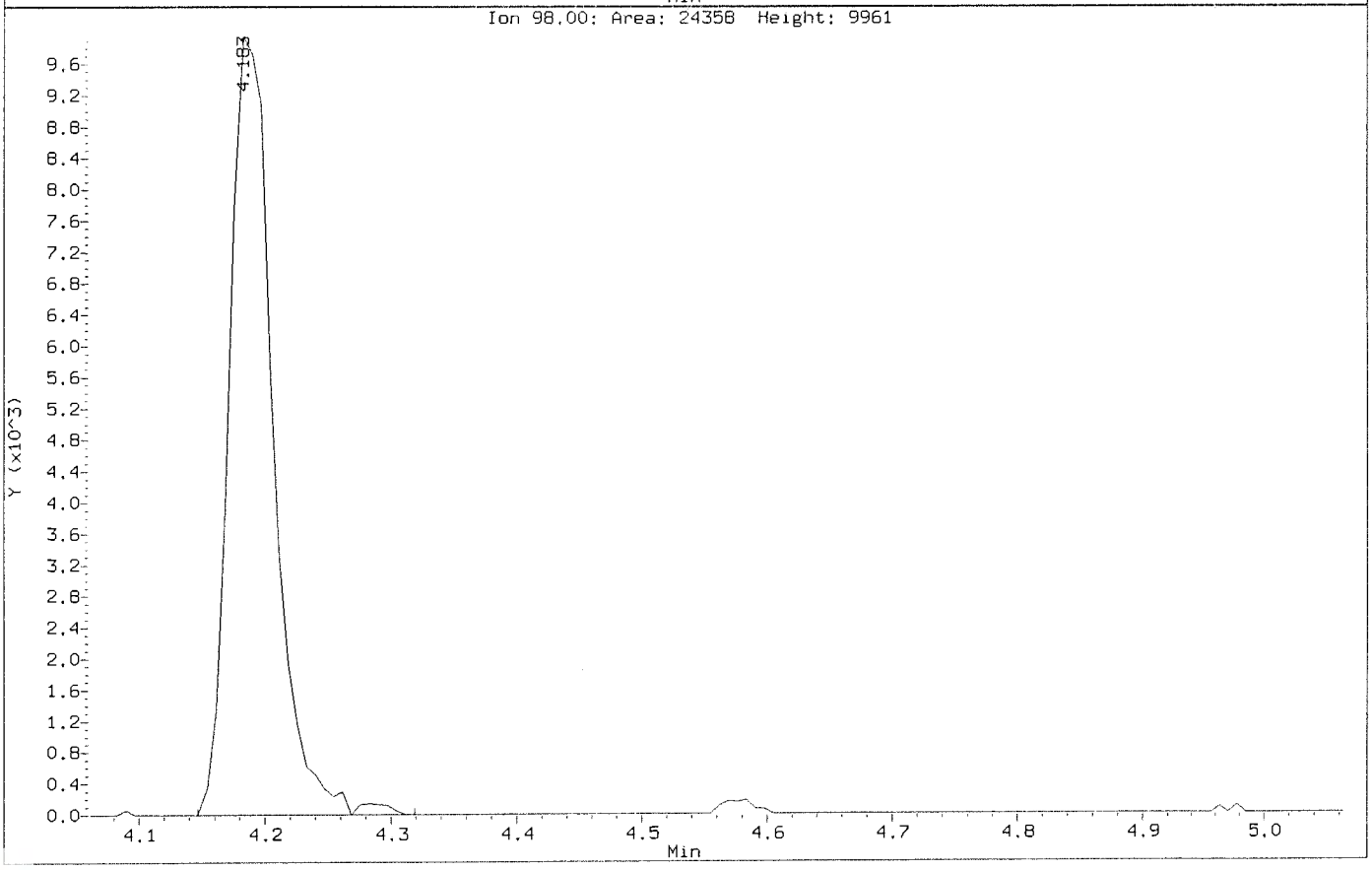
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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

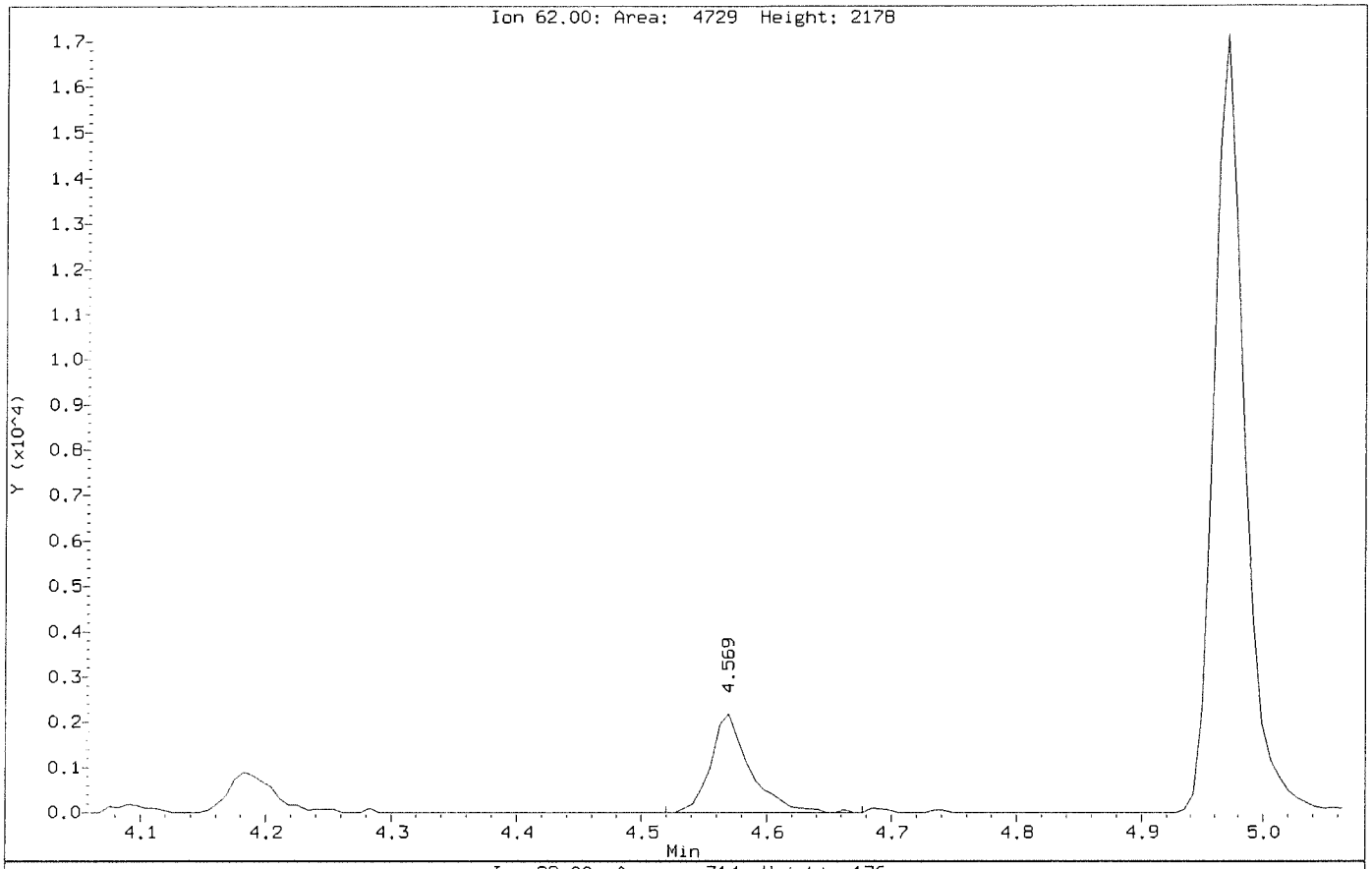
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

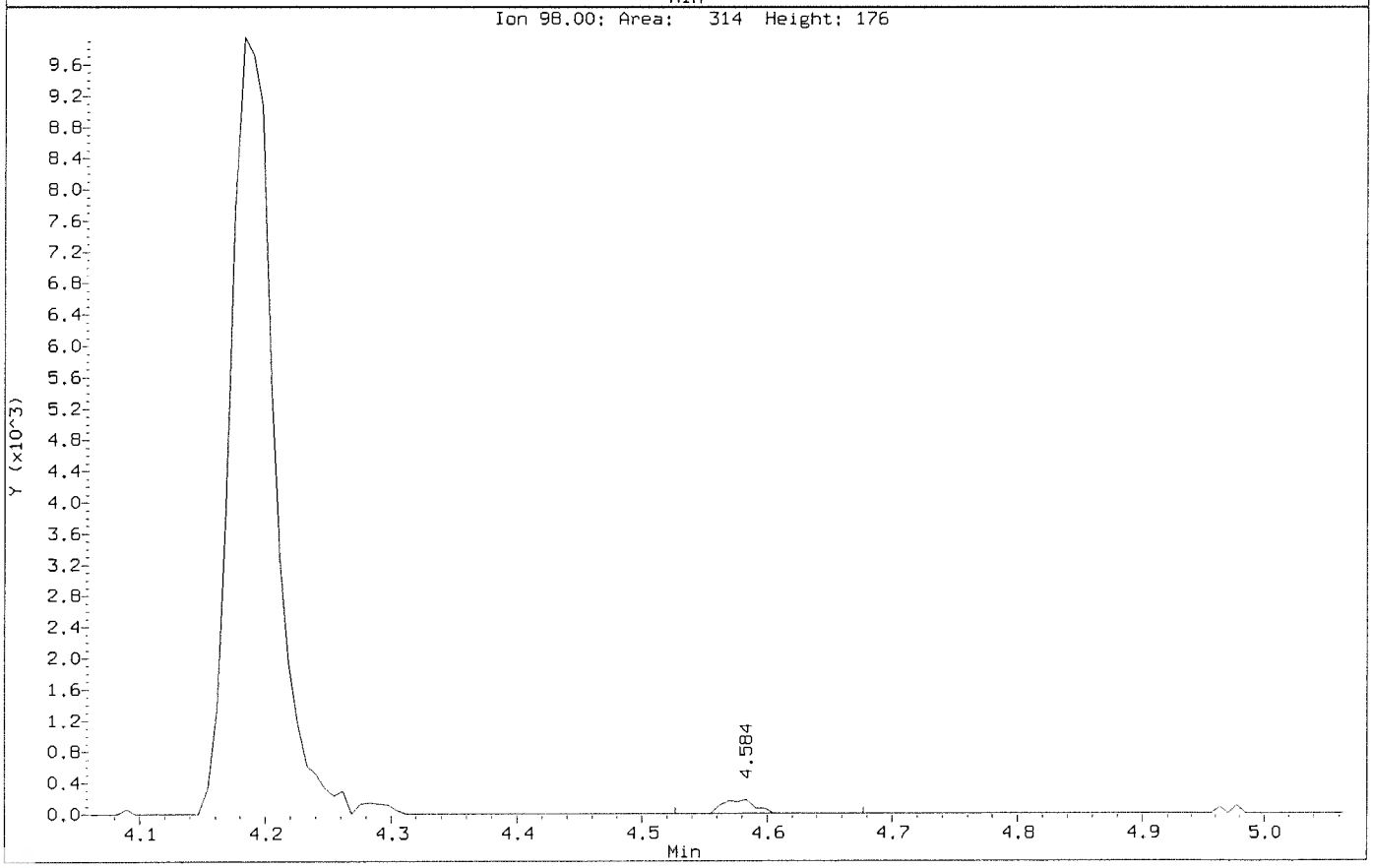




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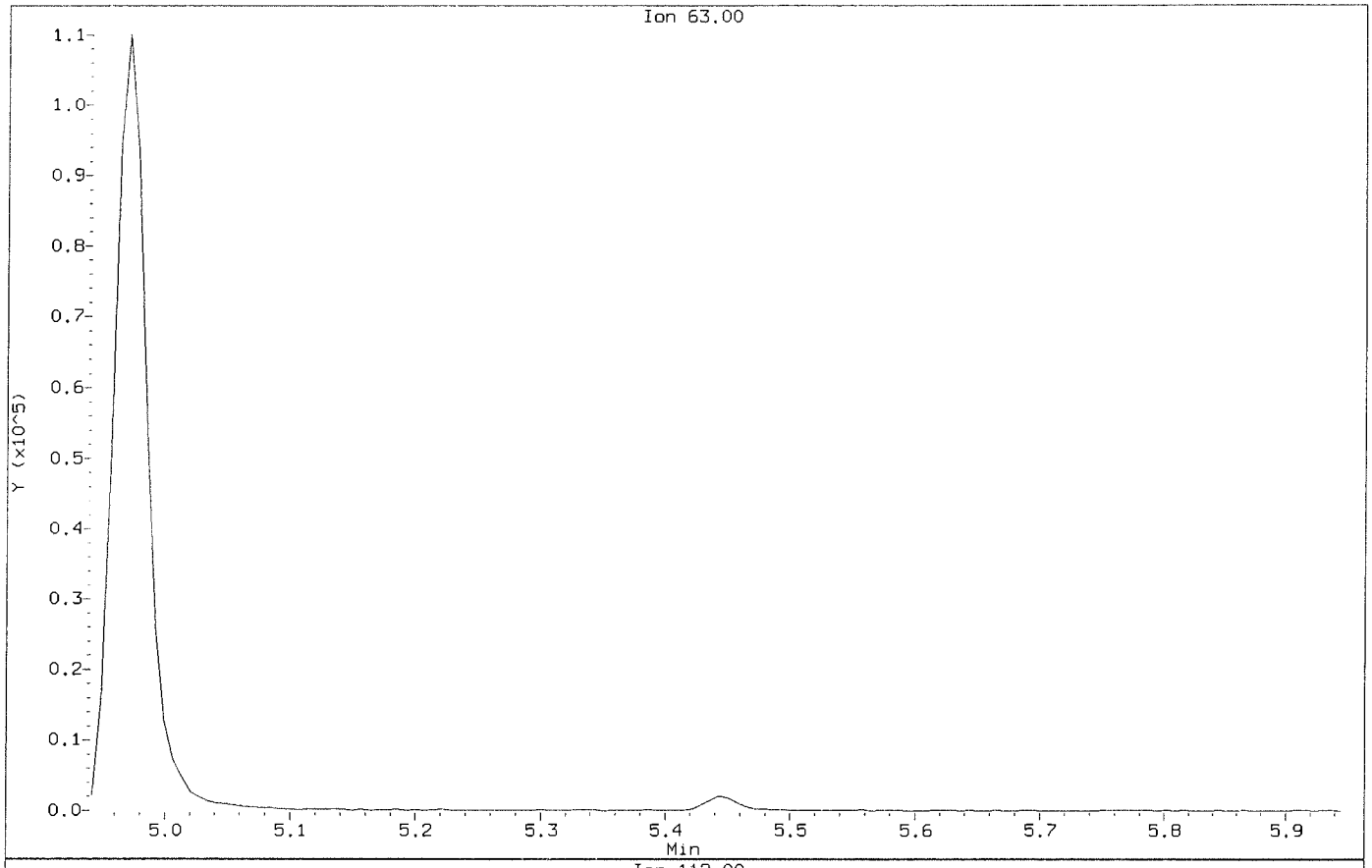
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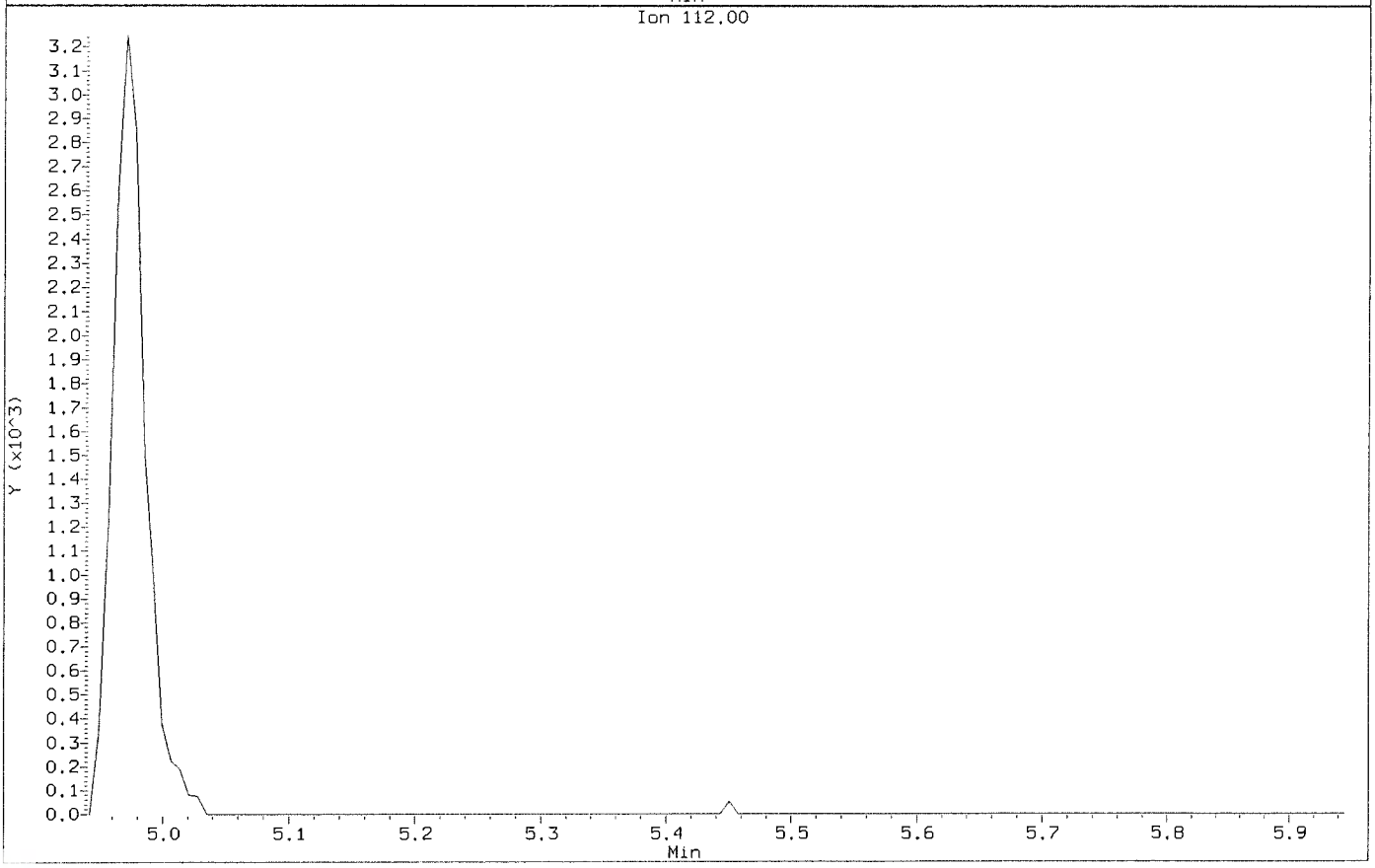




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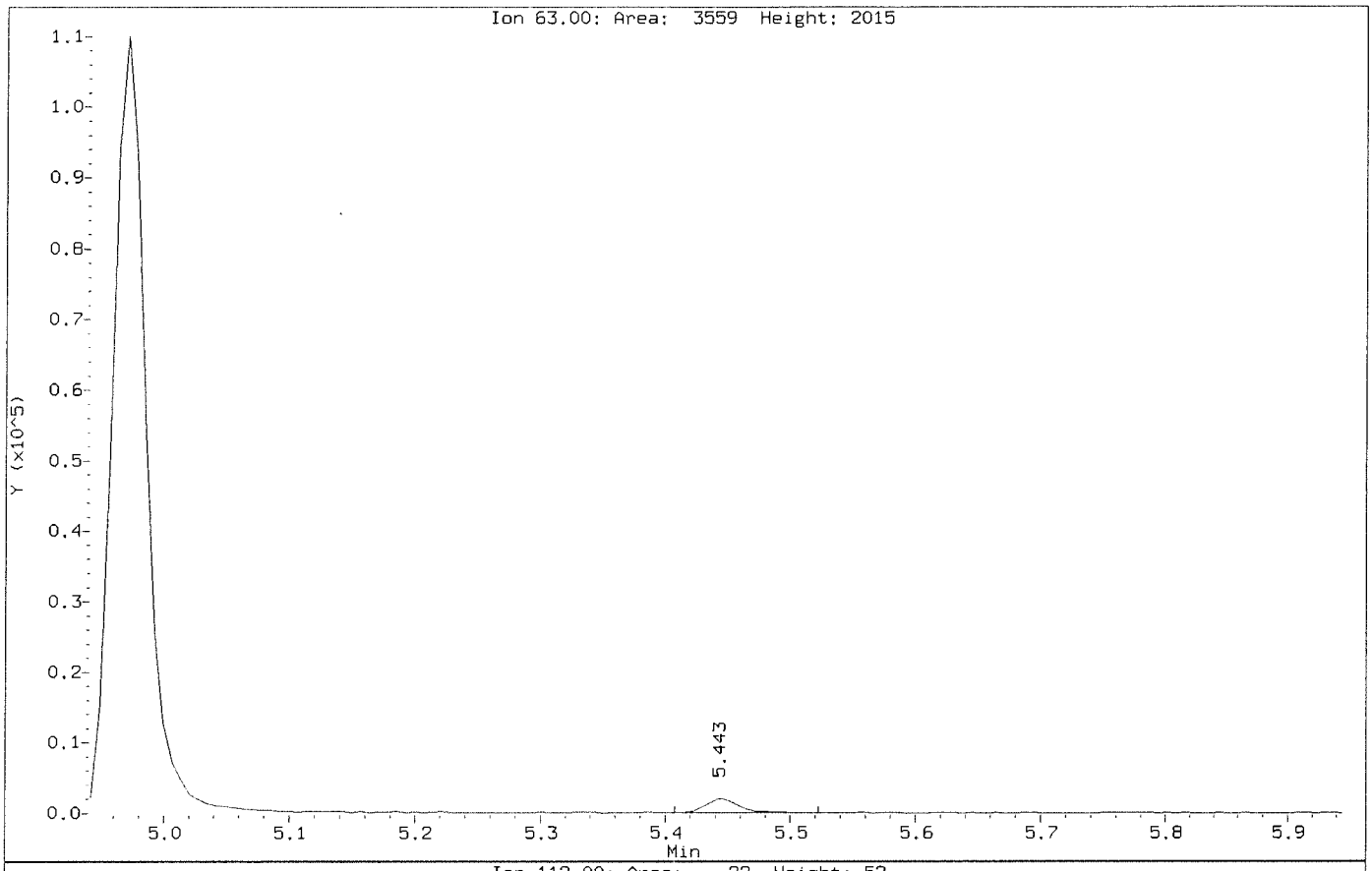
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

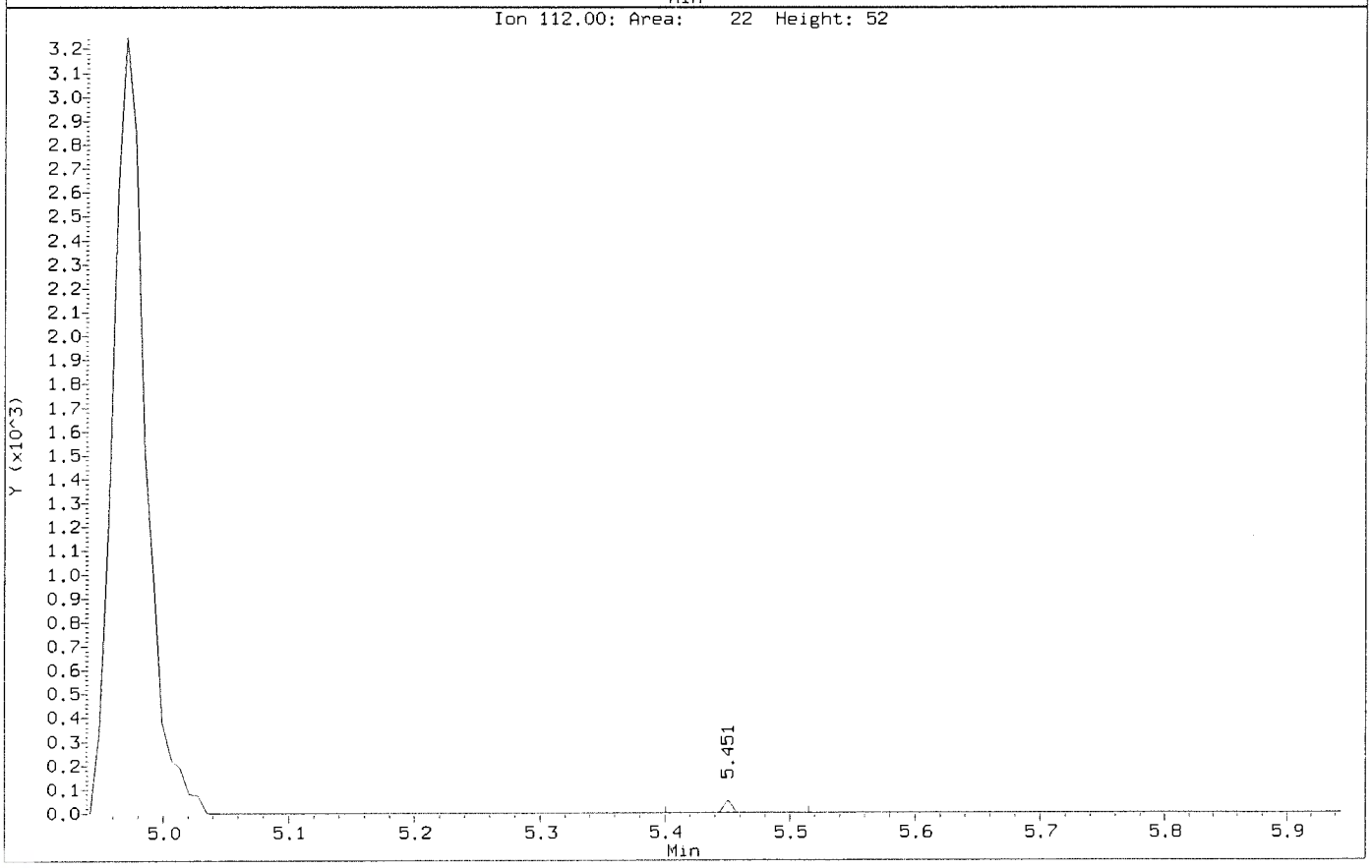




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Client Sample ID: VSTD000.5

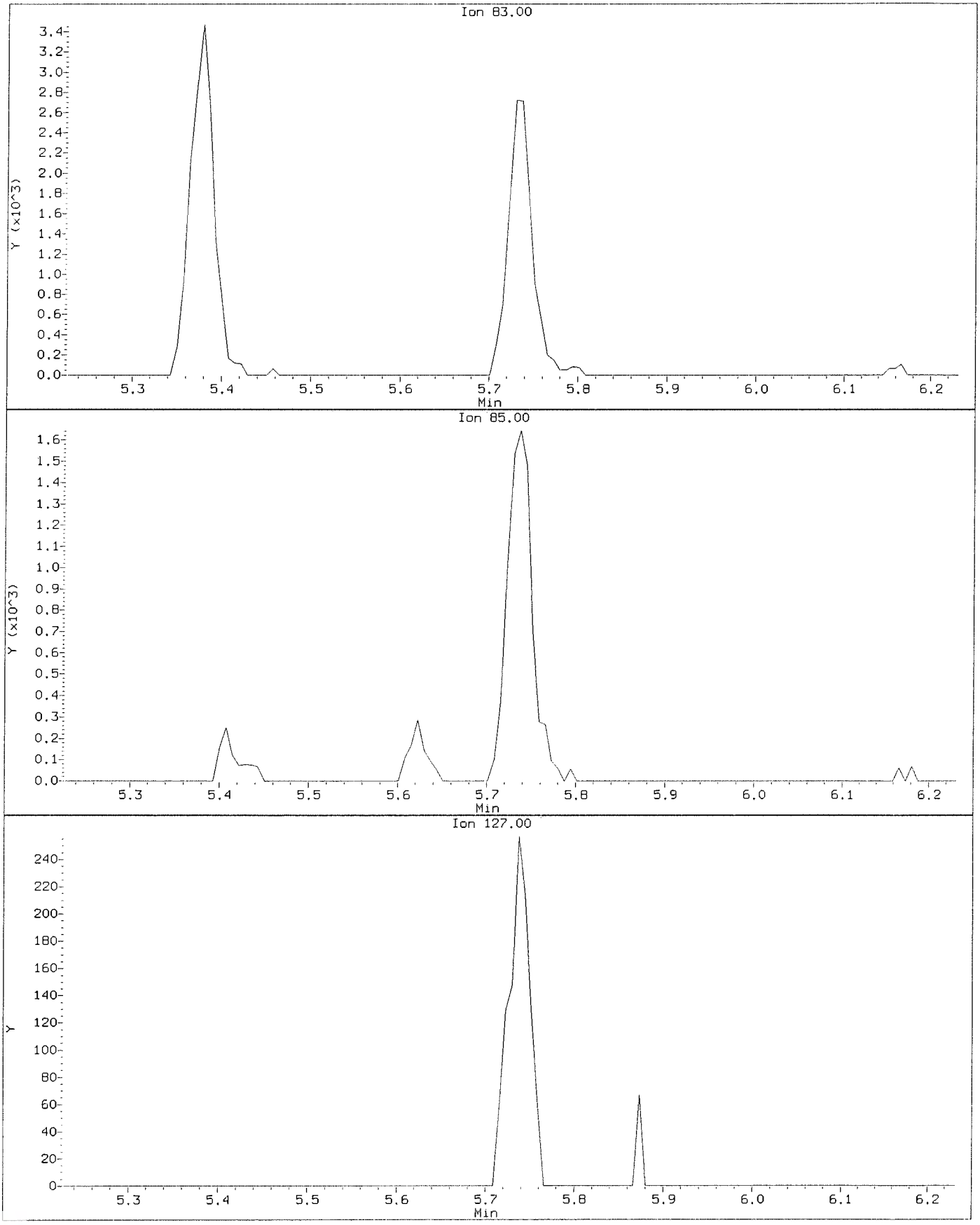
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





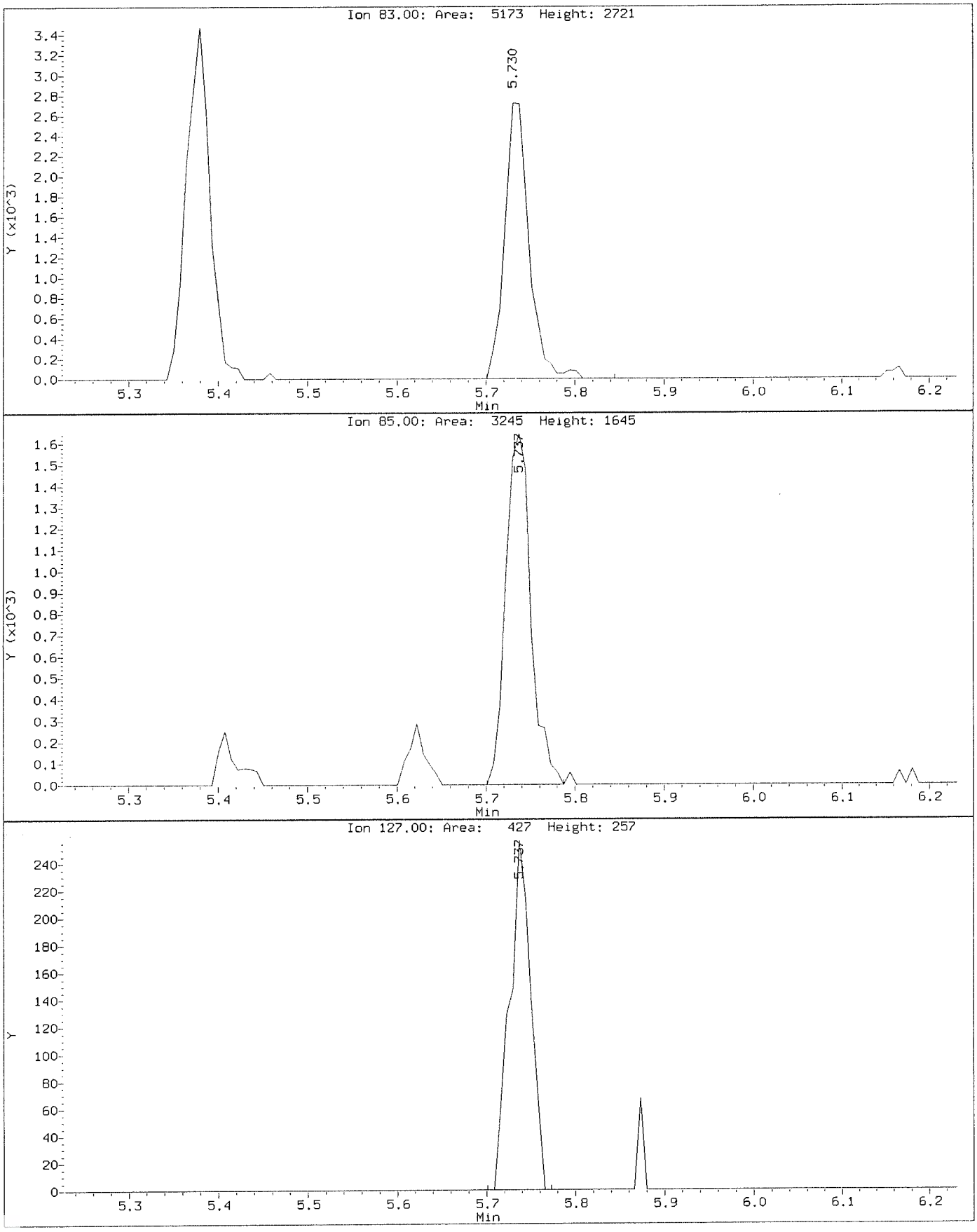
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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



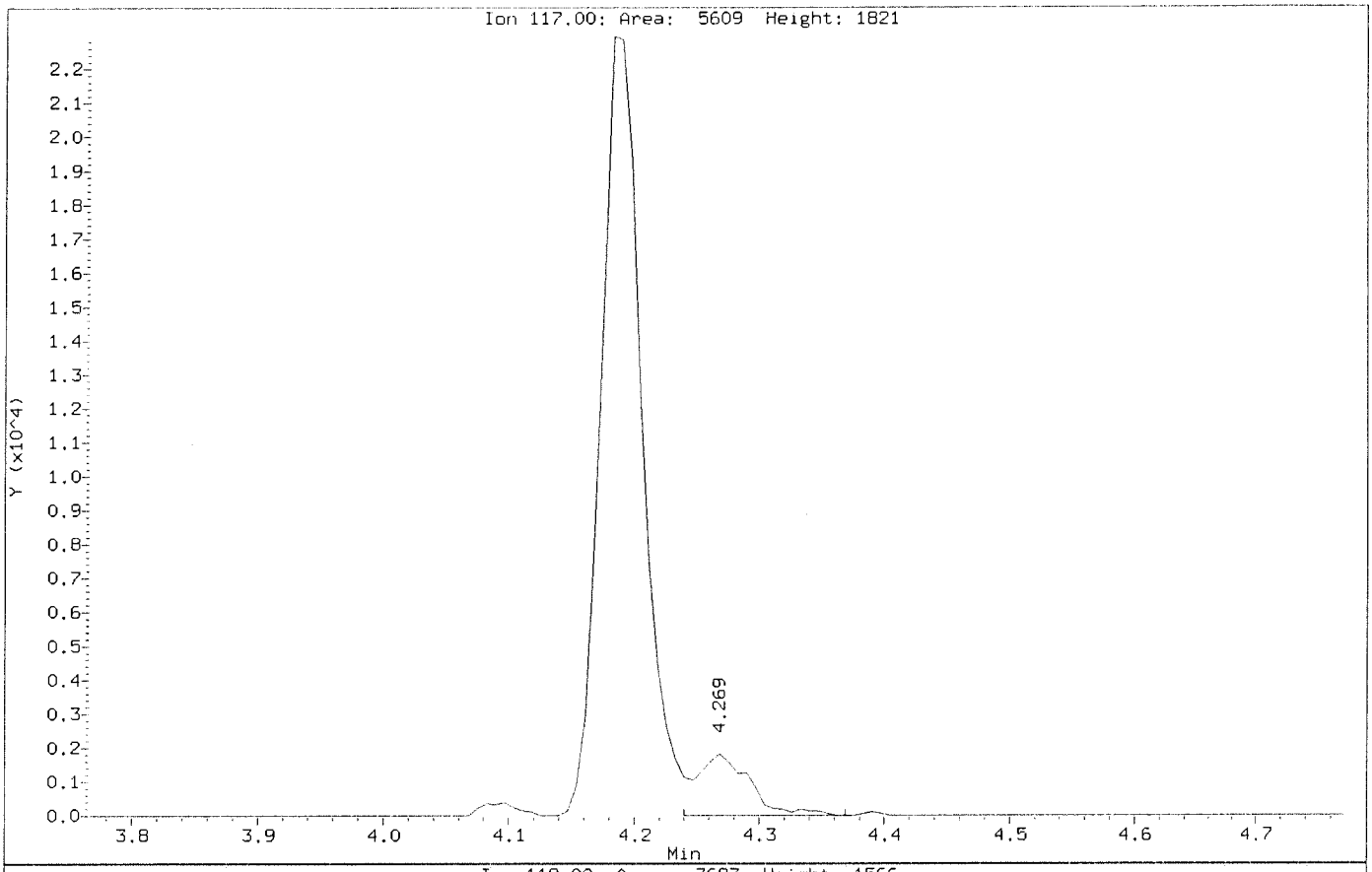
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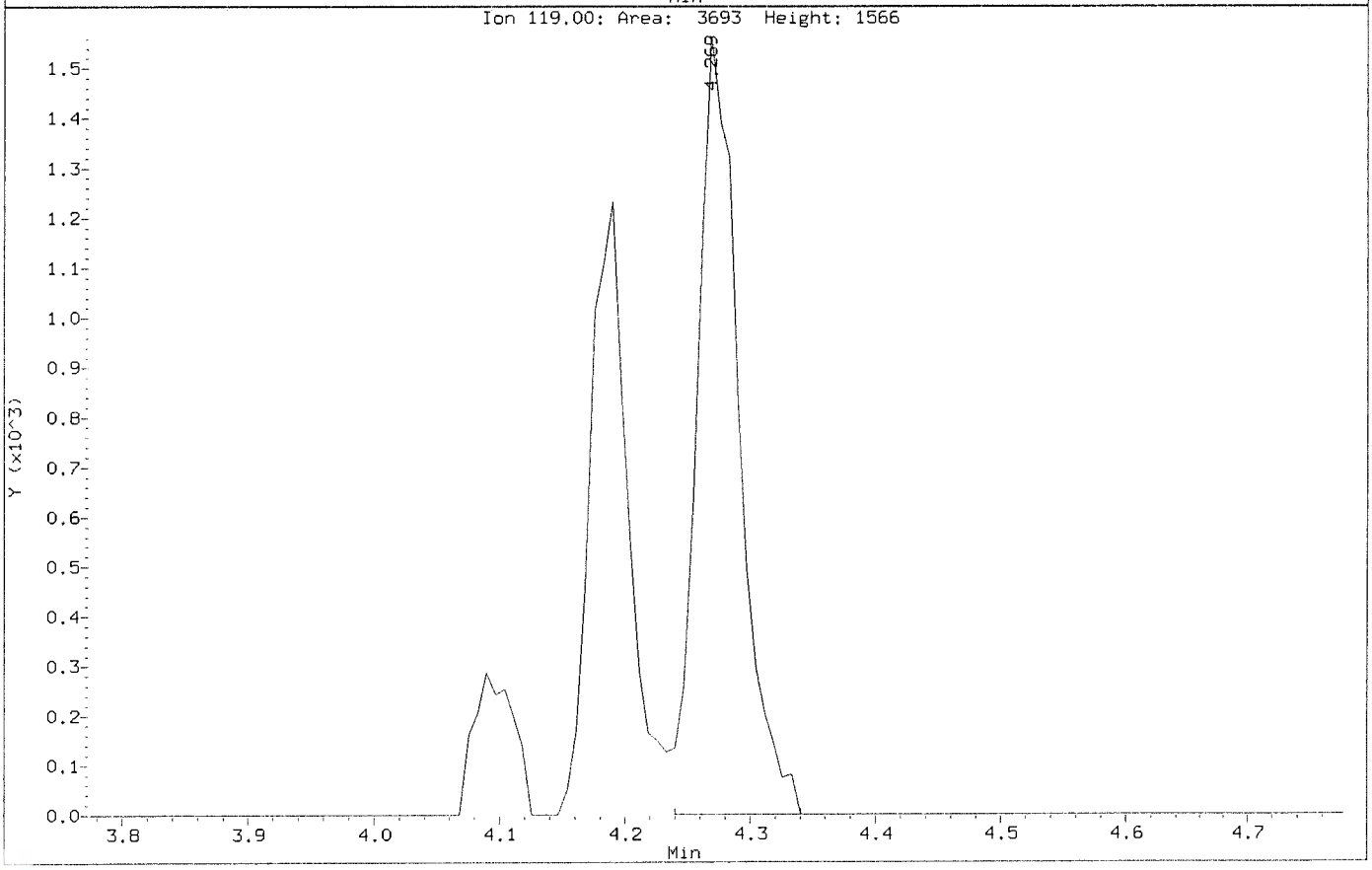
Compound: Bromodichloromethane
CAS Number: 75-27-4



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092403.D
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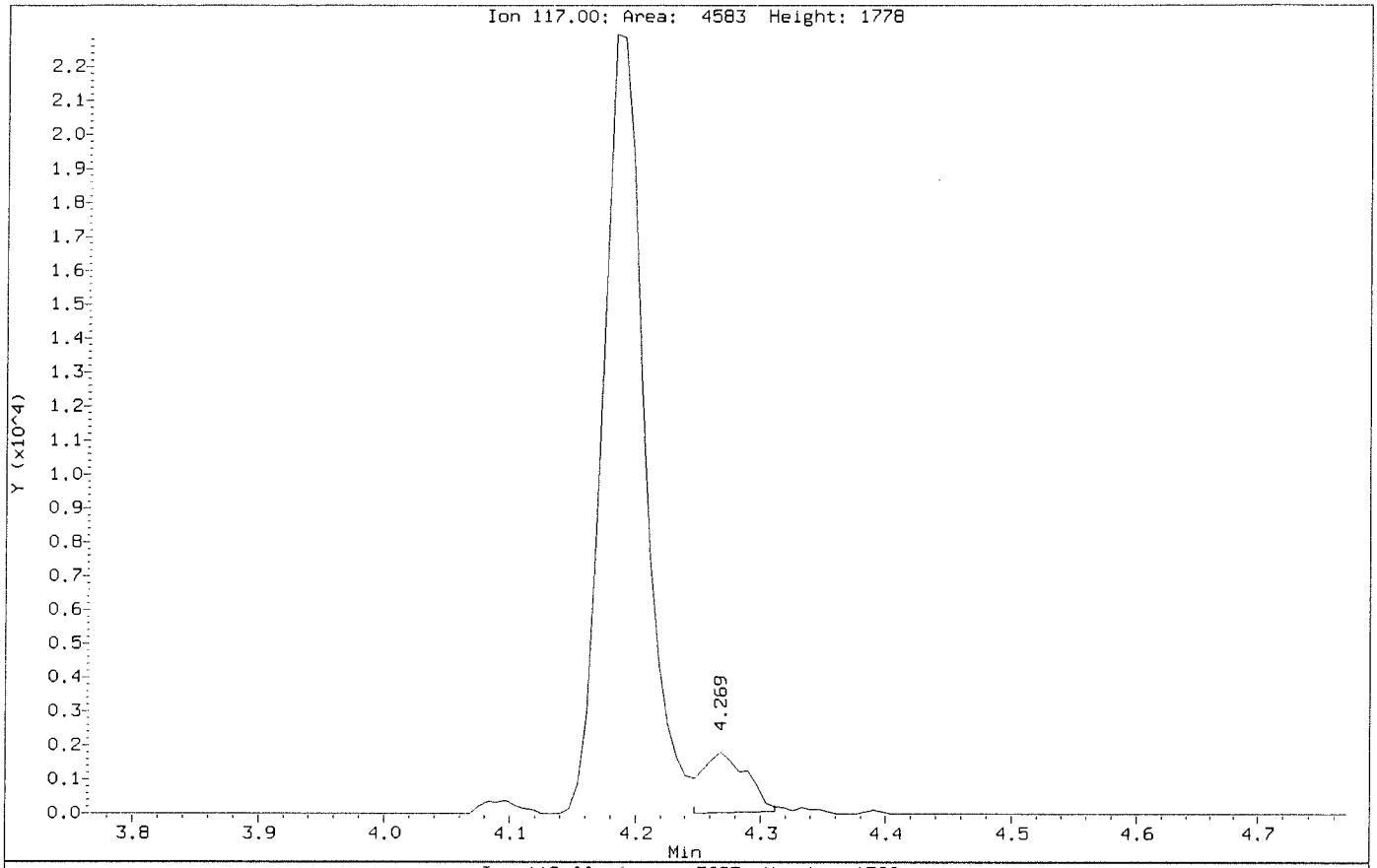
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

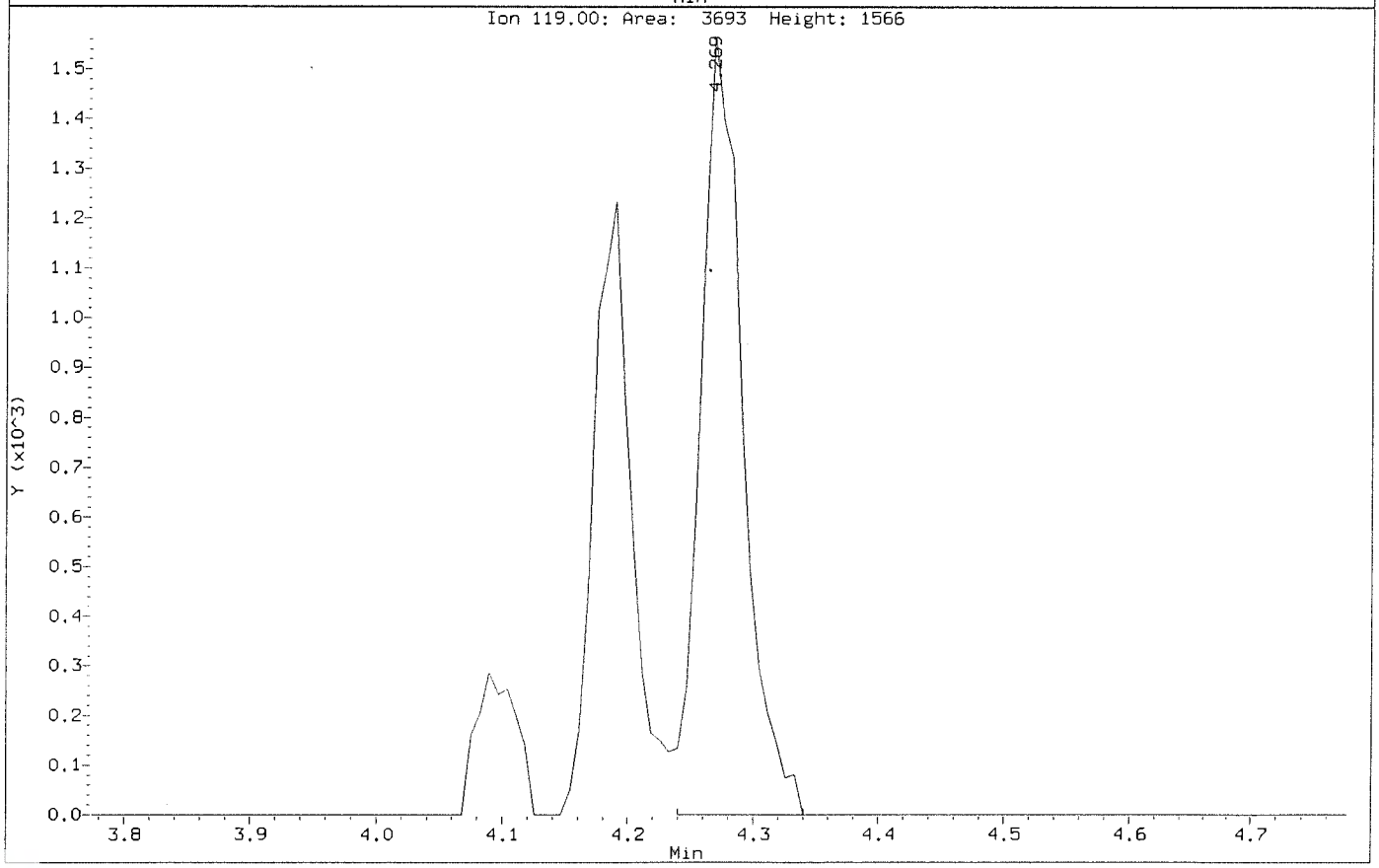




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Instrument: voa6.i
Client Sample ID: VSTD000.5

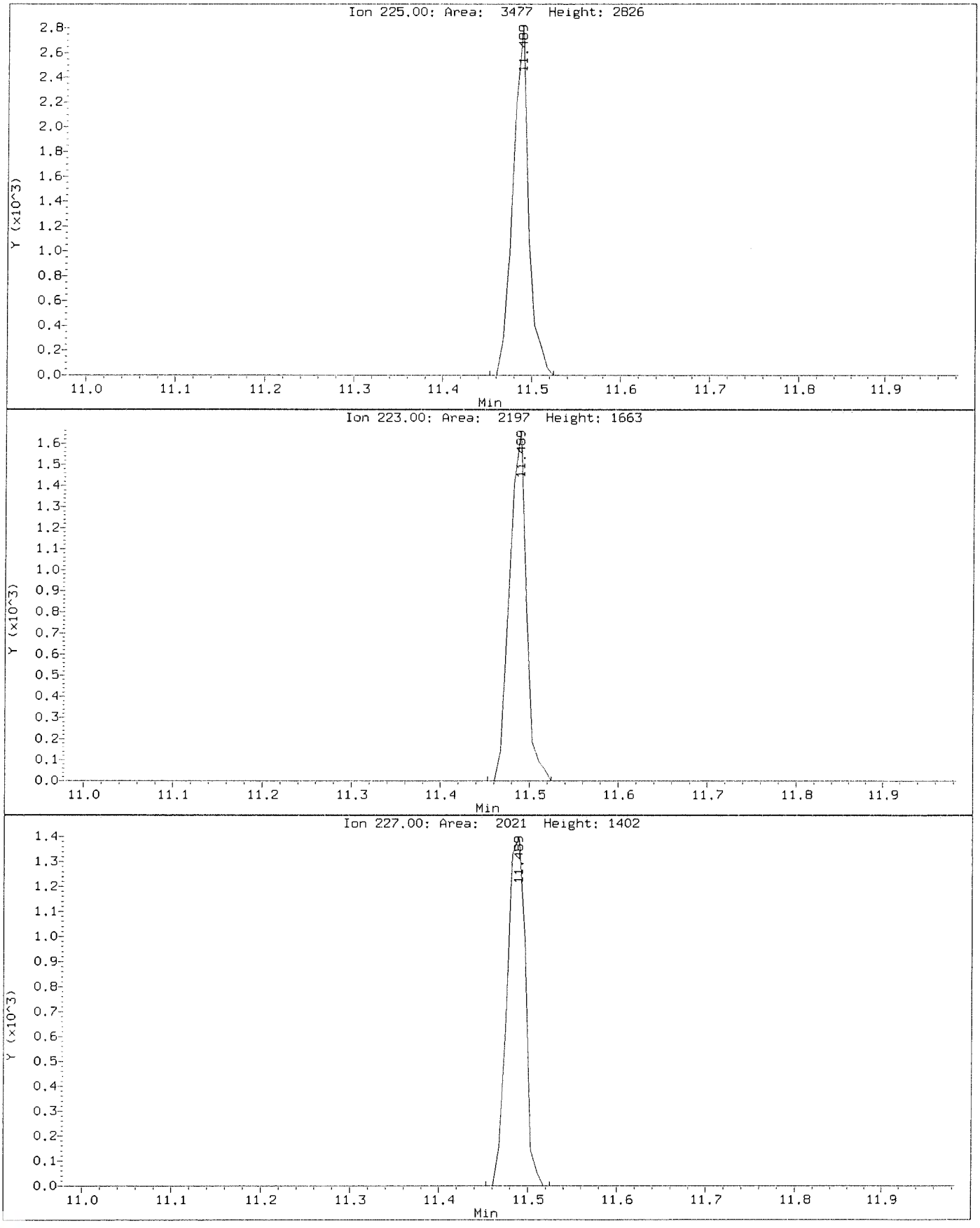
Compound: Carbon Tetrachloride
CAS Number: 56-23-5





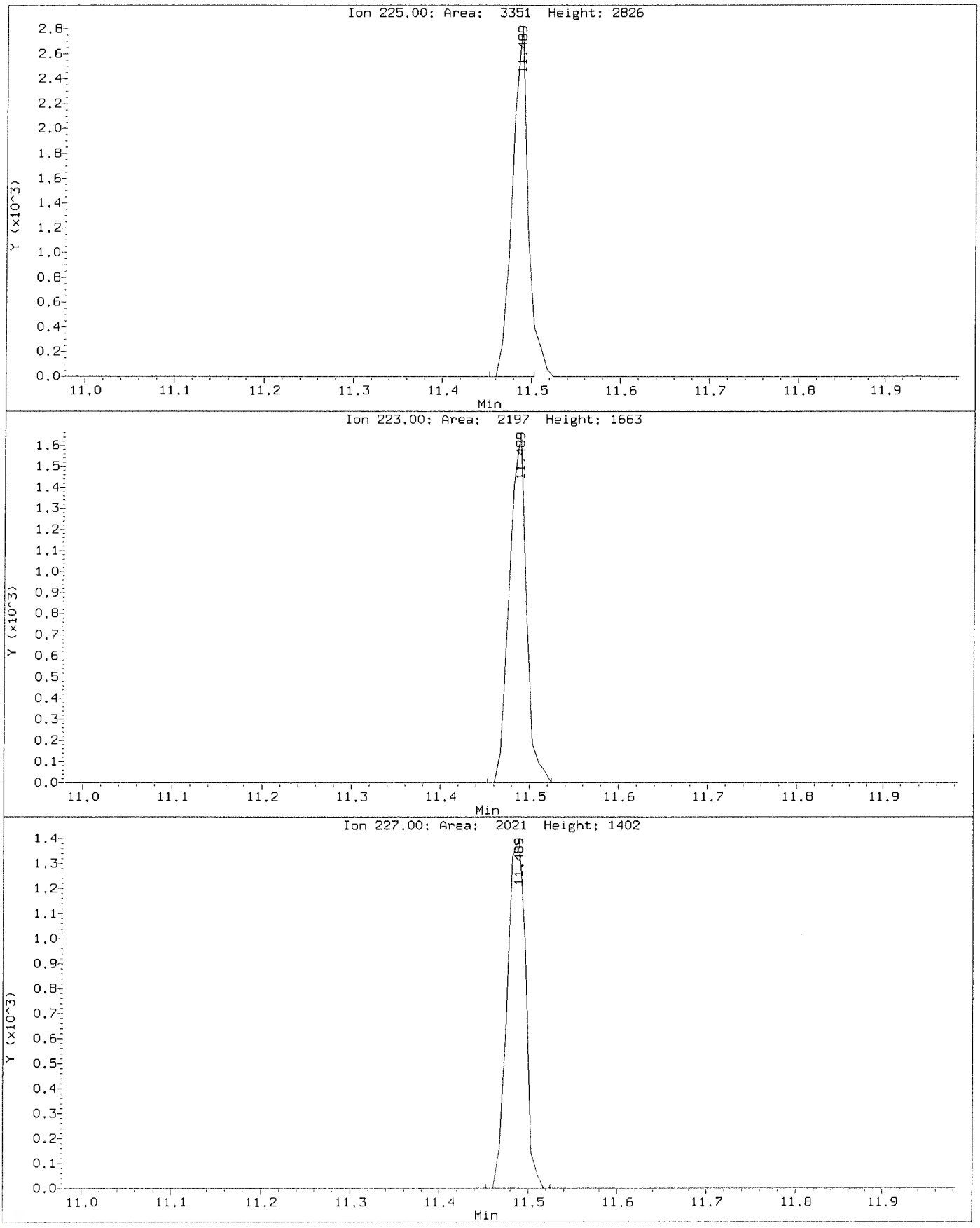
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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



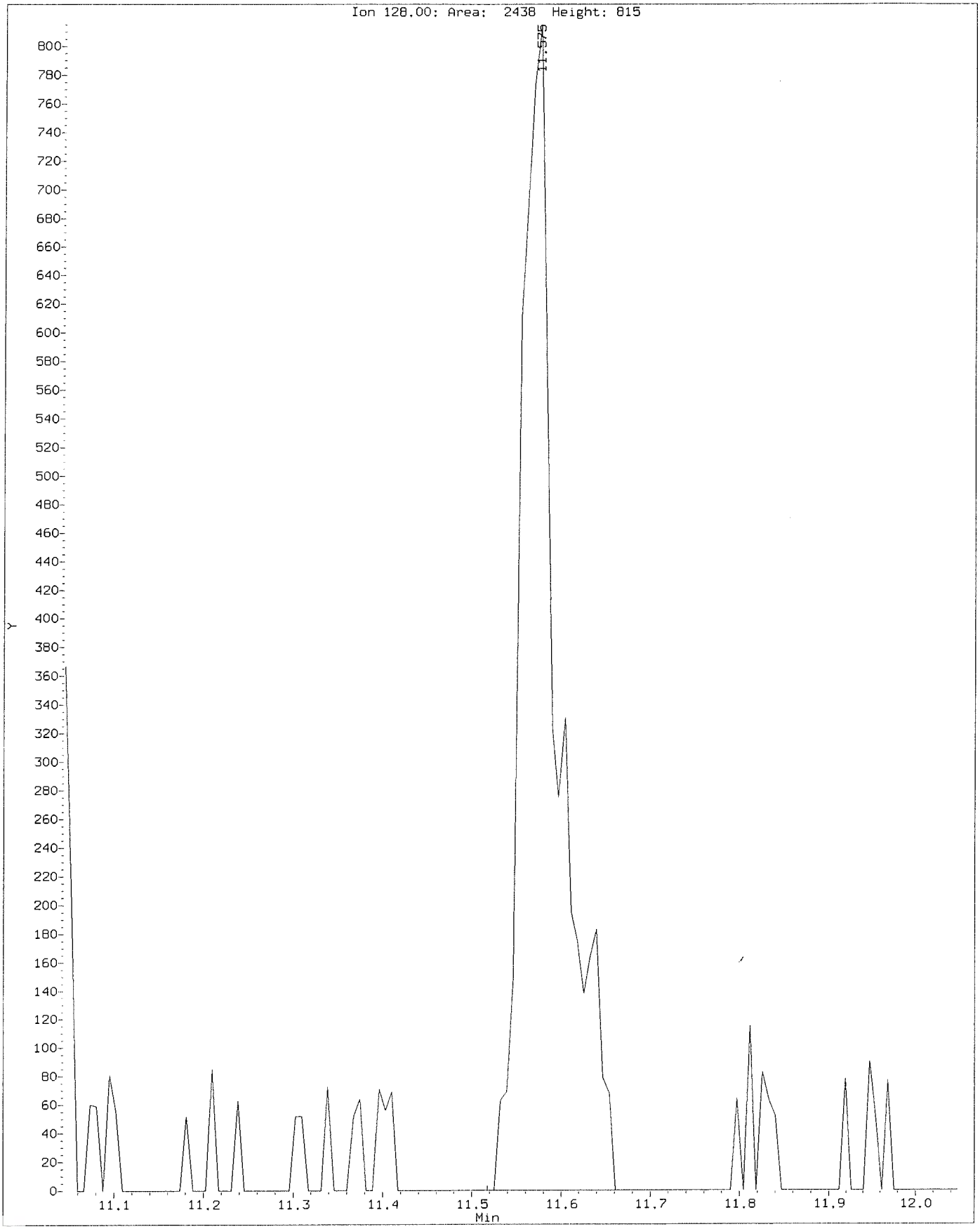
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



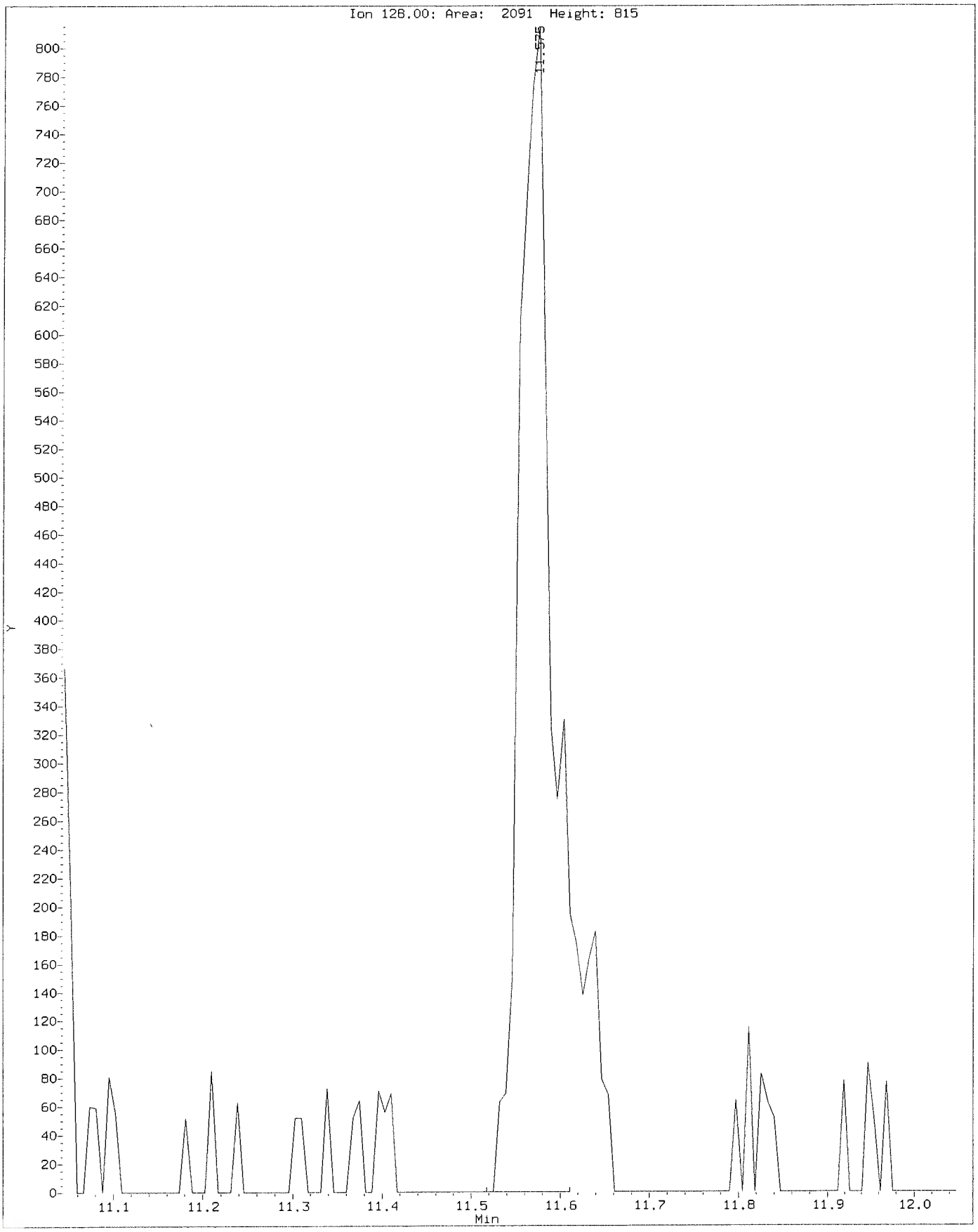
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Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092403.D
Injection Date: 24-SEP-2020 11:58
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092404.D Page 1
Report Date: 13-Oct-2020 11:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092404.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 24-SEP-2020 12:46
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 11:58 Cal File: X092403.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

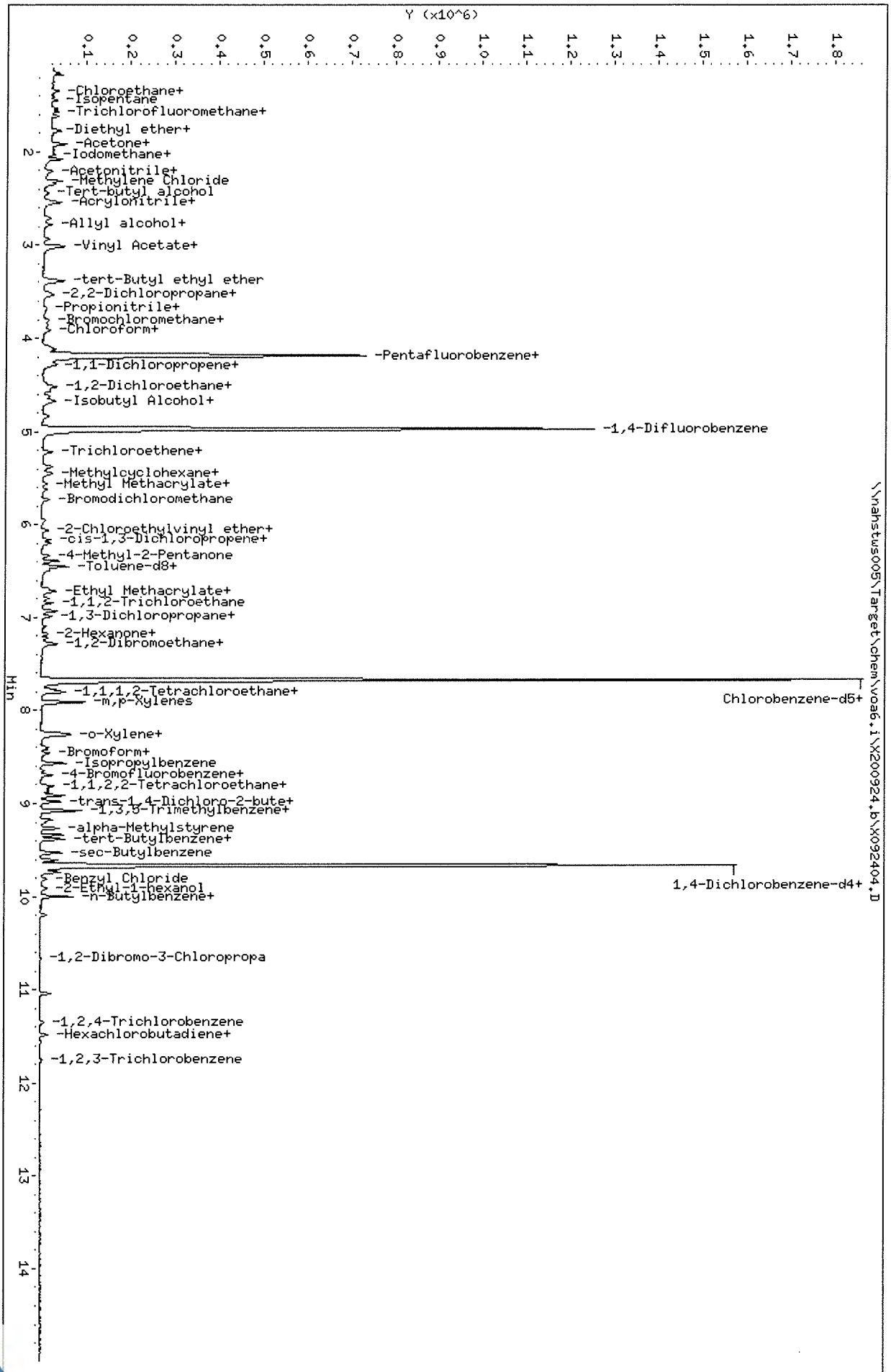
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	632214	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1010972	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	898139	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	383057	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	6507	1.00000	1.00(a)
$	35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.072)	7341	1.00000	1.03(a)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	24343	1.00000	1.03(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	10018	1.00000	0.47(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	7049	1.00000	1.13(a)
	31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	11235	1.00000	1.15(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	8149	1.00000	1.20(a)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	6343	1.00000	1.19(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	15395	1.00000	1.16(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	6814	1.00000	1.19(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	9757	1.00000	1.04(aM)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	1757	1.00000	1.18(a)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	6651	1.00000	1.18(aM)
	90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	2921	1.00000	2.35(a)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	26280	1.00000	1.15(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.672	10.672	(1.104)	597	1.00000	1.29(aM)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	7429	1.00000	1.19(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	12334	1.00000	1.15(a)

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092404.D Page 2
Report Date: 13-Oct-2020 11:23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	10910	1.00000	1.25(a)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	8653	1.00000	1.15(aM)
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	26381	1.00000	1.16(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	14475	1.00000	1.17(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	13486	1.00000	1.23(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	13966	1.00000	1.14(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	11616	1.00000	1.17(a)
24 2-Butanone	43	3.616	3.616	(0.863)	4126	2.00000	1.78(a)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	23708	1.00000	1.19(a)
52 2-Hexanone	43	7.098	7.098	(0.925)	7700	2.00000	1.93(a)
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	27312	1.00000	1.20(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	25331	1.00000	1.11(a)
45 4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	13653	2.00000	2.16(a)
10 Acetone	43	1.976	1.976	(0.472)	6768	2.00000	(a)
37 Benzene	78	4.519	4.519	(0.909)	34840	1.00000	1.20(a)
74 Bromobenzene	156	8.817	8.817	(0.912)	9112	1.00000	1.17(a)
29 Bromochloromethane	128	3.803	3.803	(0.908)	4791	1.00000	1.21(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	10203	1.00000	1.11(a)
66 Bromoform	173	8.416	8.416	(1.097)	4274	1.00000	1.08(aM)
6 Bromomethane	94	1.346	1.346	(0.321)	7731	1.00000	1.28(aM)
19 Carbon Disulfide	76	2.076	2.076	(0.496)	46459	2.00000	2.36(a)
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	8300	1.00000	1.02(aM)
59 Chlorobenzene	112	7.699	7.699	(1.004)	22145	1.00000	1.21(a)
7 Chloroethane	64	1.410	1.410	(0.337)	5632	1.00000	1.13(a)
28 Chloroform	83	3.917	3.917	(0.935)	14431	1.00000	1.17(a)
3 Chloromethane	50	1.081	1.081	(0.258)	8974	1.00000	1.03(a)
27 cis-1,2-Dichloroethene	96	3.537	3.537	(0.844)	9071	1.00000	1.17(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	12704	1.00000	1.09(a)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	7560	1.00000	1.17(a)
44 Dibromomethane	93	5.557	5.557	(1.118)	5100	1.00000	1.14(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	6629	1.00000	3.05(a)
61 Ethylbenzene	106	7.807	7.807	(1.018)	11569	1.00000	1.21(a)
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	3302	1.00000	2.13(a)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	32898	1.00000	1.18(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	27318	2.00000	2.38(a)
17 Methylene Chloride	84	2.313	2.313	(0.552)	9684	1.00000	0.71(a)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	22581	1.00000	1.14(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	37045	1.00000	1.13(a)
92 Naphthalene	128	11.560	11.560	(1.196)	3645	1.00000	1.02(a)
63 o-Xylene	106	8.251	8.251	(1.076)	13335	1.00000	1.19(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	30538	1.00000	1.14(a)
64 Styrene	104	8.265	8.265	(1.078)	21938	1.00000	1.14(a)
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	22282	1.00000	1.18(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	6913	1.00000	1.21(a)
50 Toluene	91	6.453	6.453	(0.841)	34881	1.00000	1.19(a)
20 trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	7431	1.00000	1.13(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	11002	1.00000	1.13(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	8381	1.00000	1.15(a)
8 Trichlorofluoromethane	101	1.568	1.568	(0.374)	10504	1.00000	1.14(a)
5 Vinyl Chloride	62	1.145	1.145	(0.273)	9143	1.00000	1.11(a)

QC Flag Legend

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

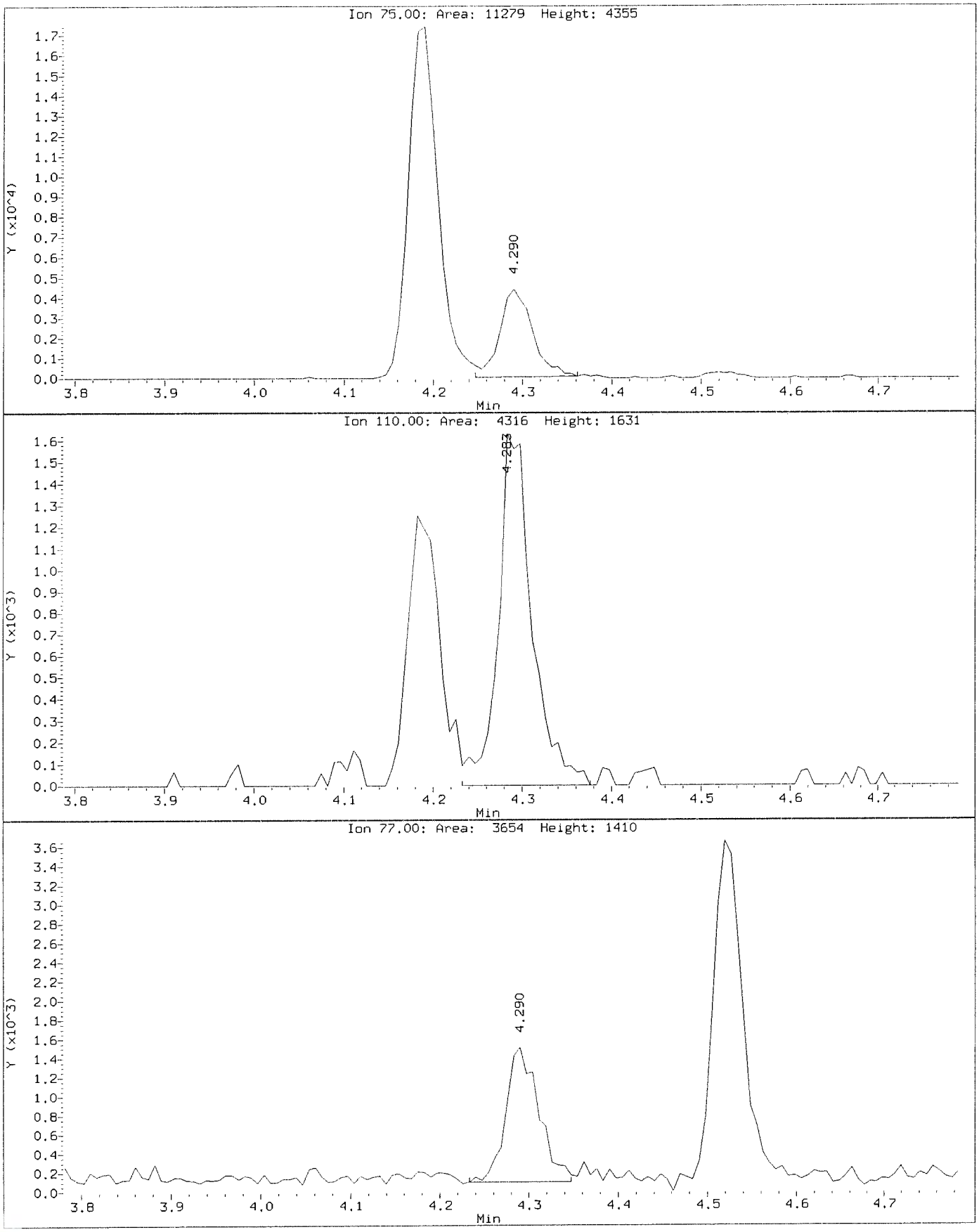


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Date : 24-SEP-2020 12:46
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

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

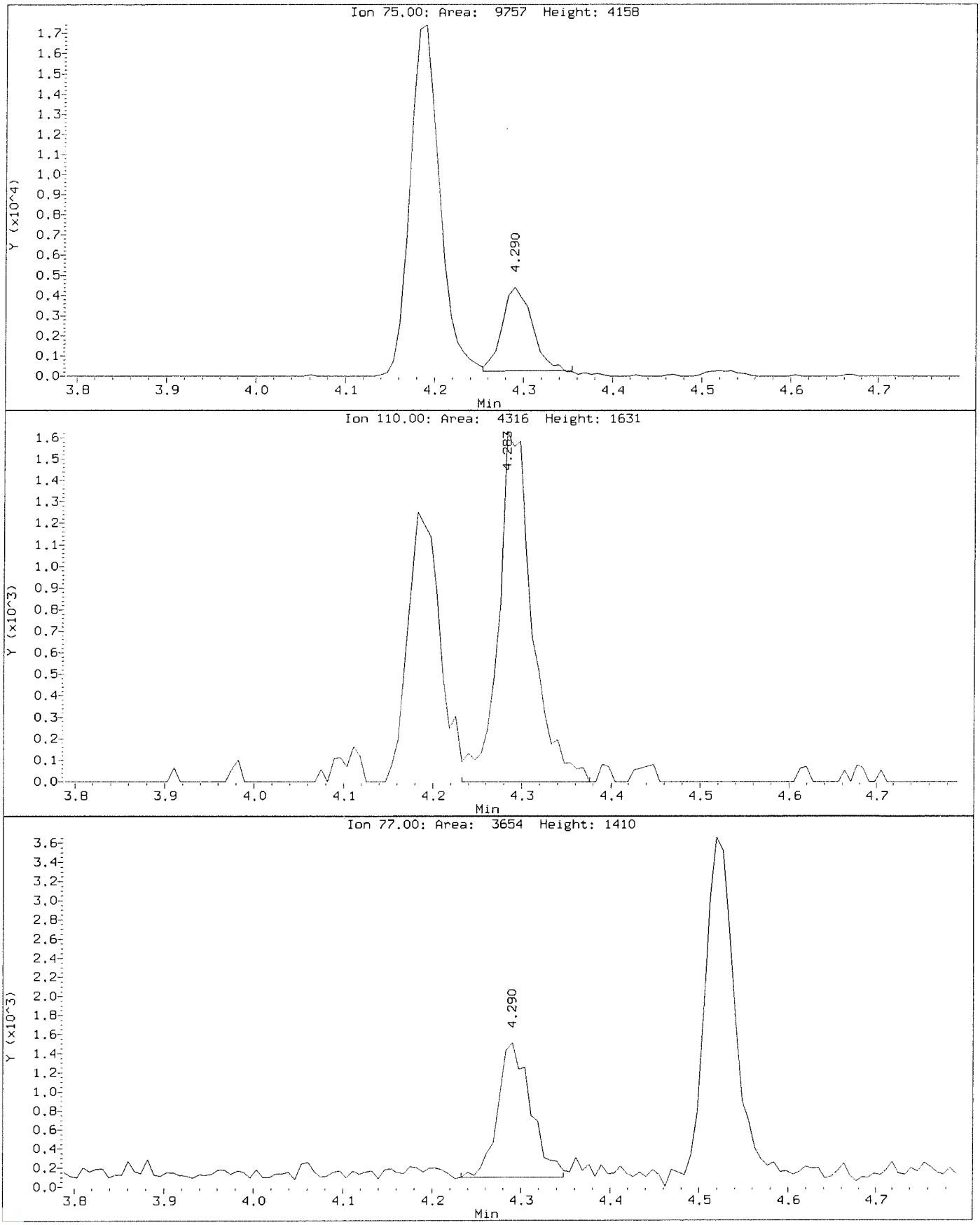
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



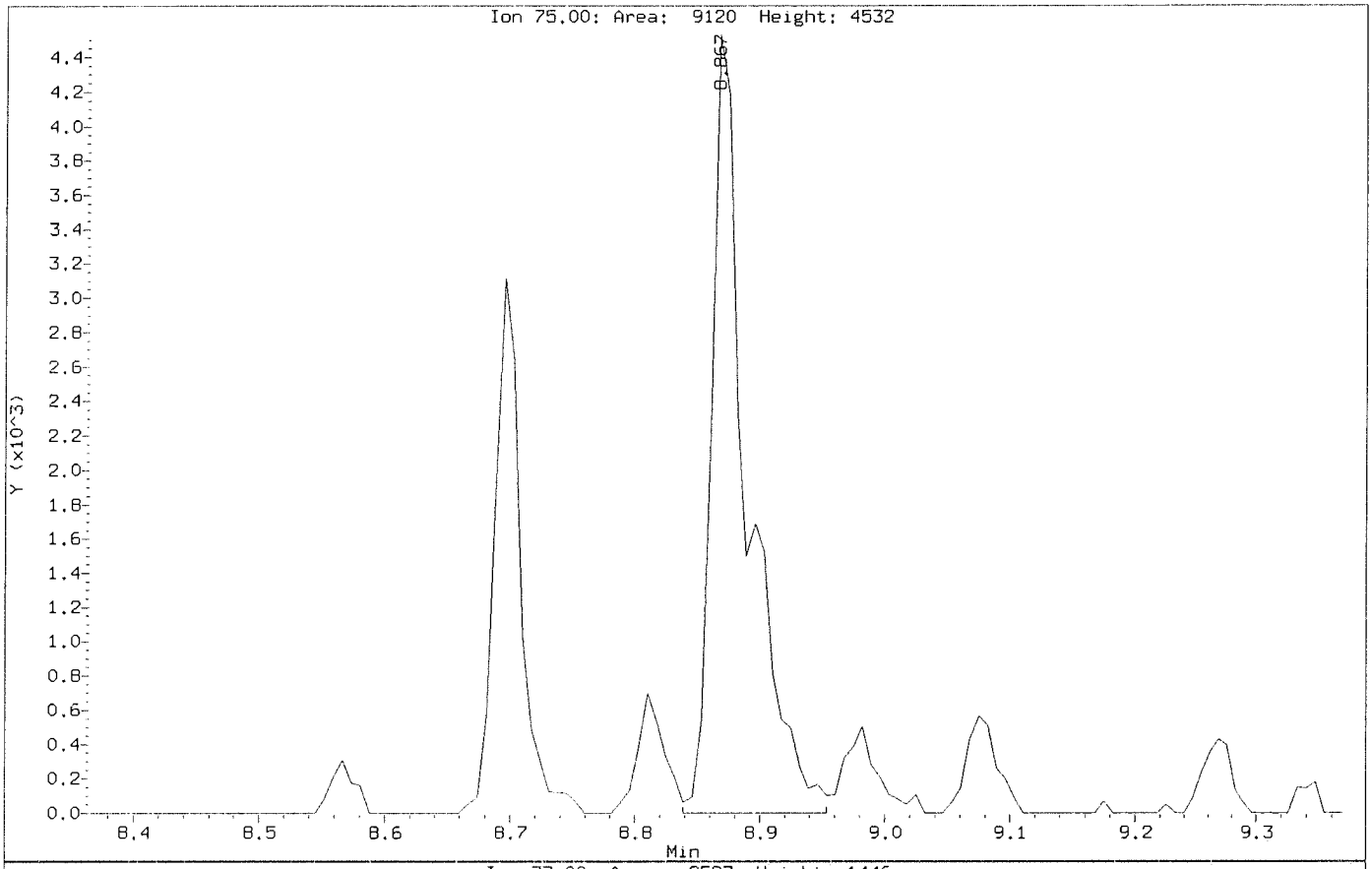
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Client Sample ID: VSTD001

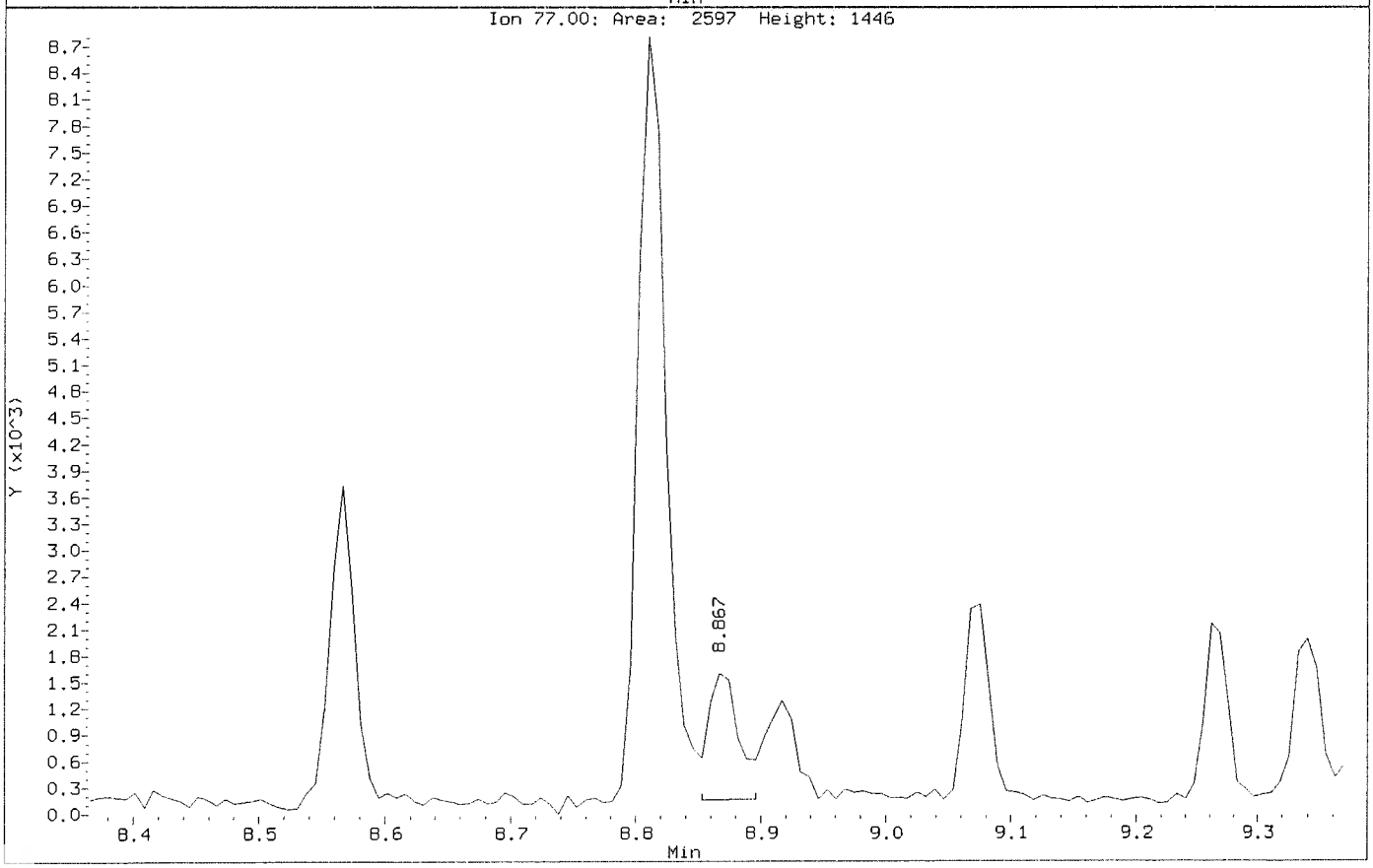
Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



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Instrument: voa6.i
Client Sample ID: VSTD001

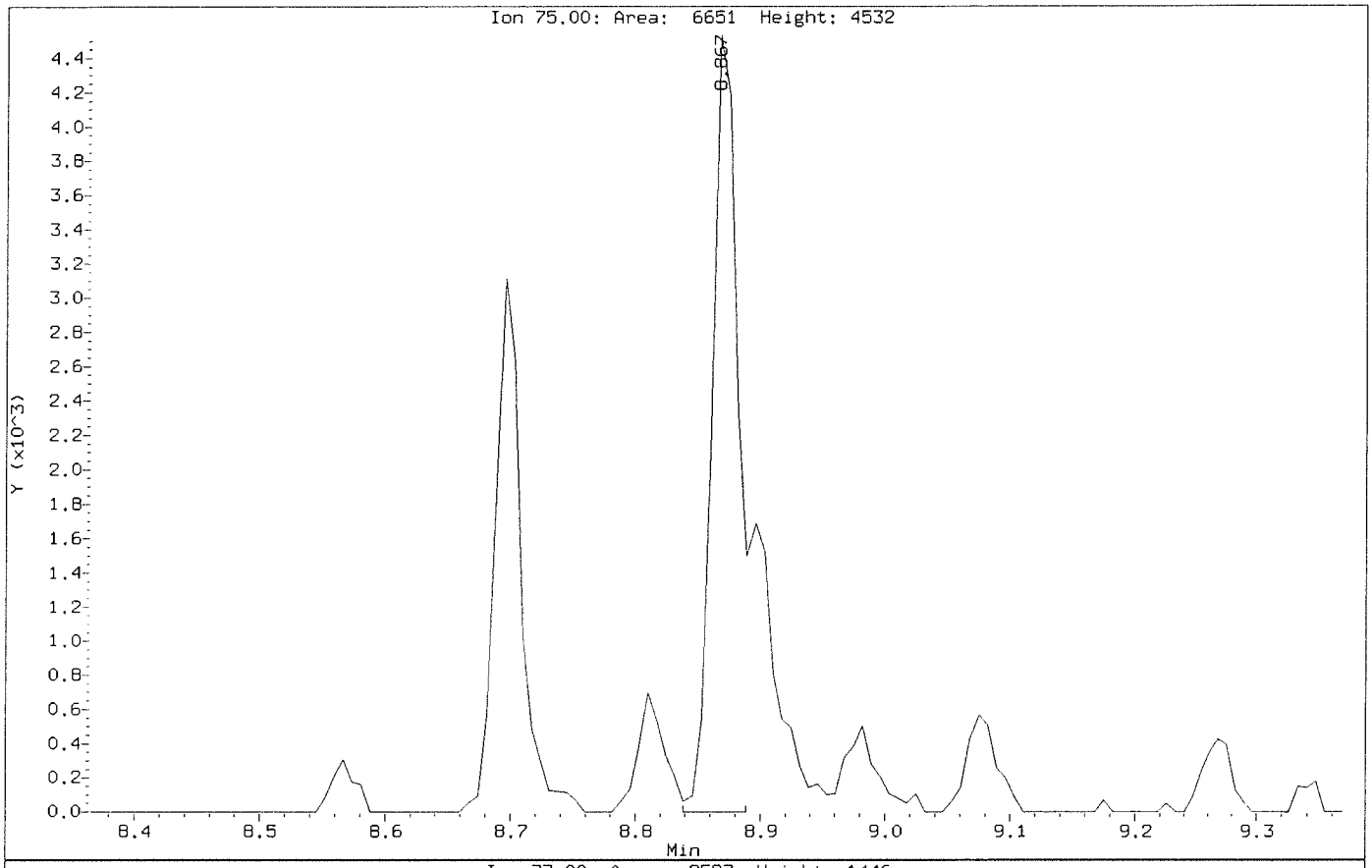
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

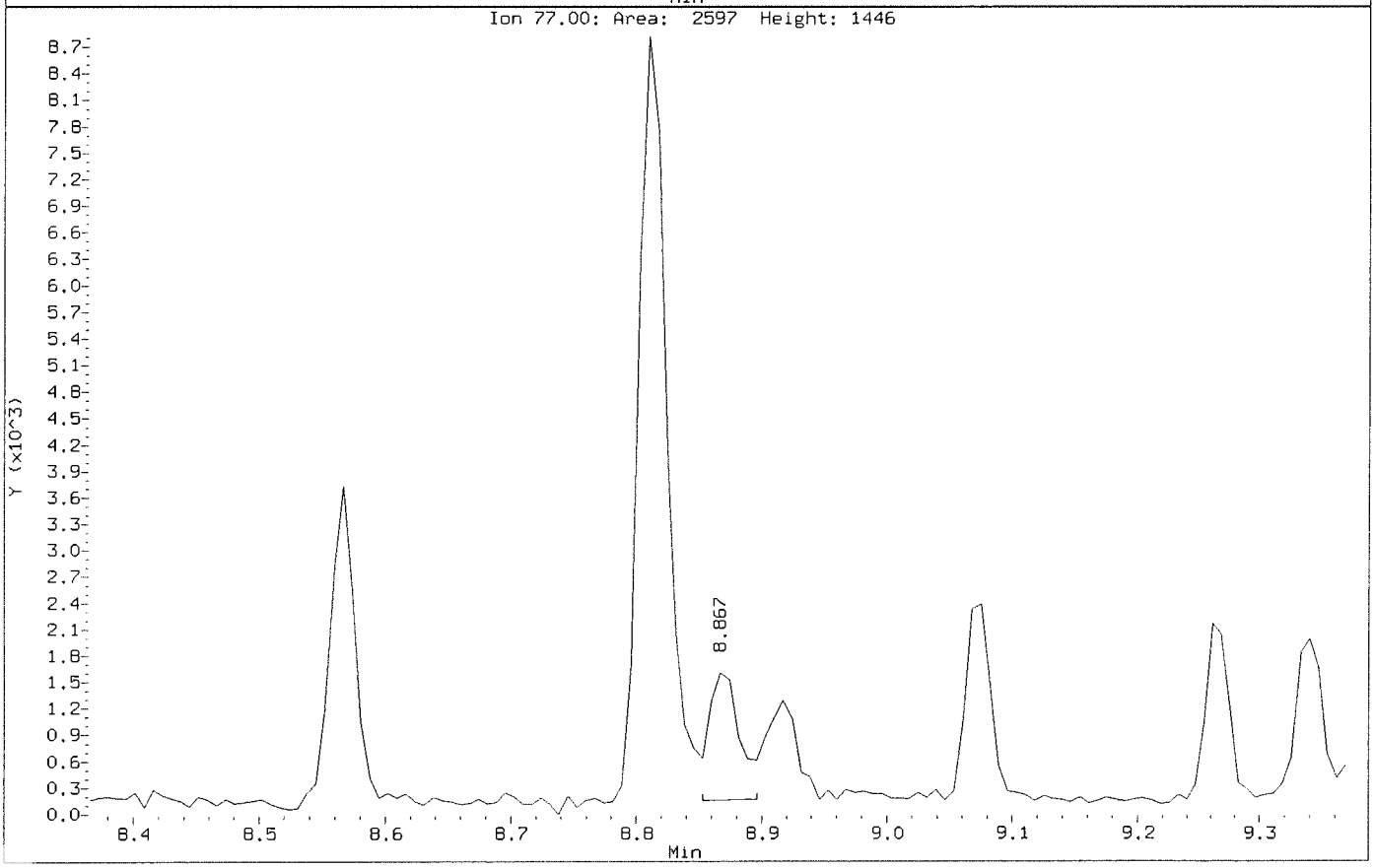




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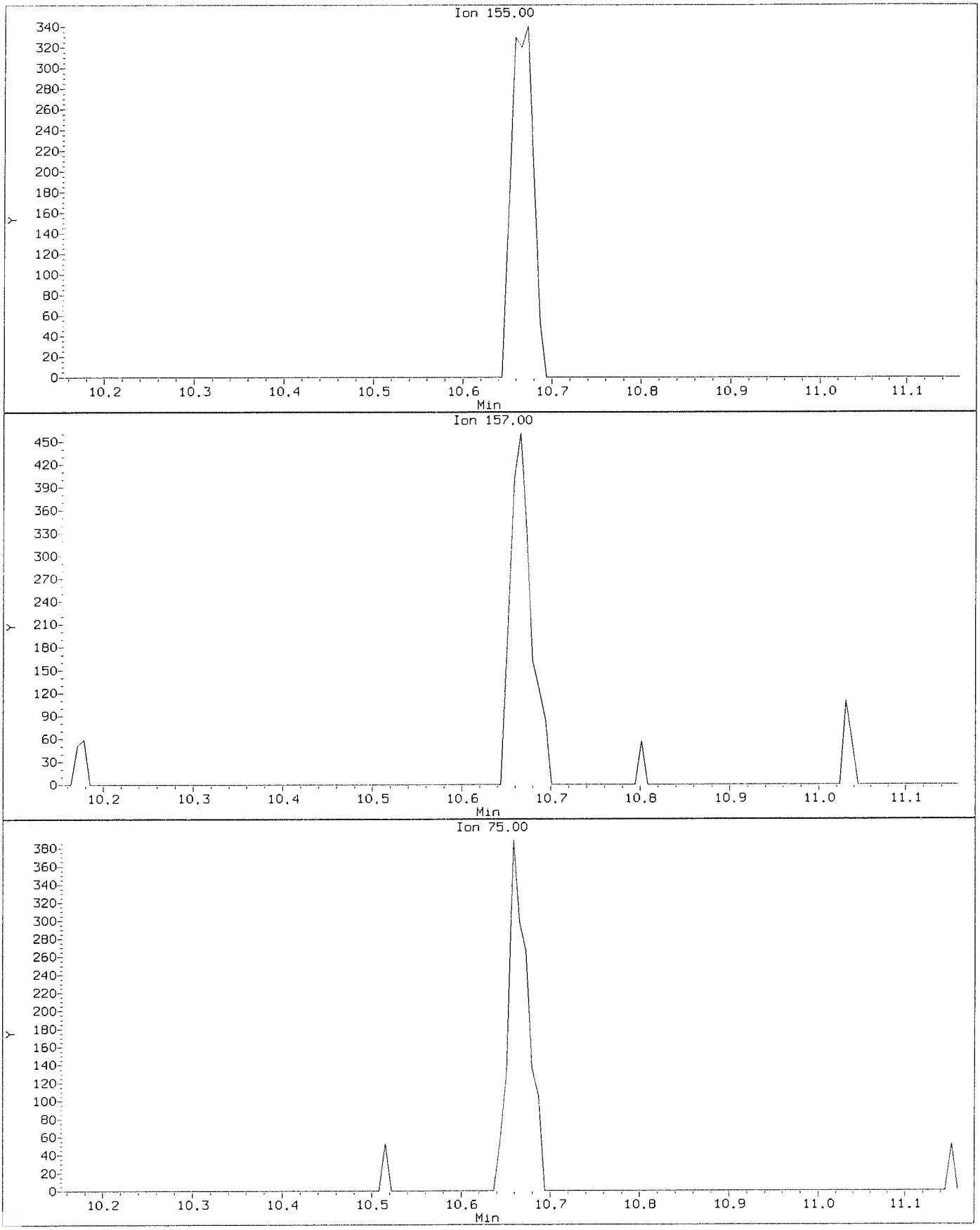
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CAS Number: 96-18-4





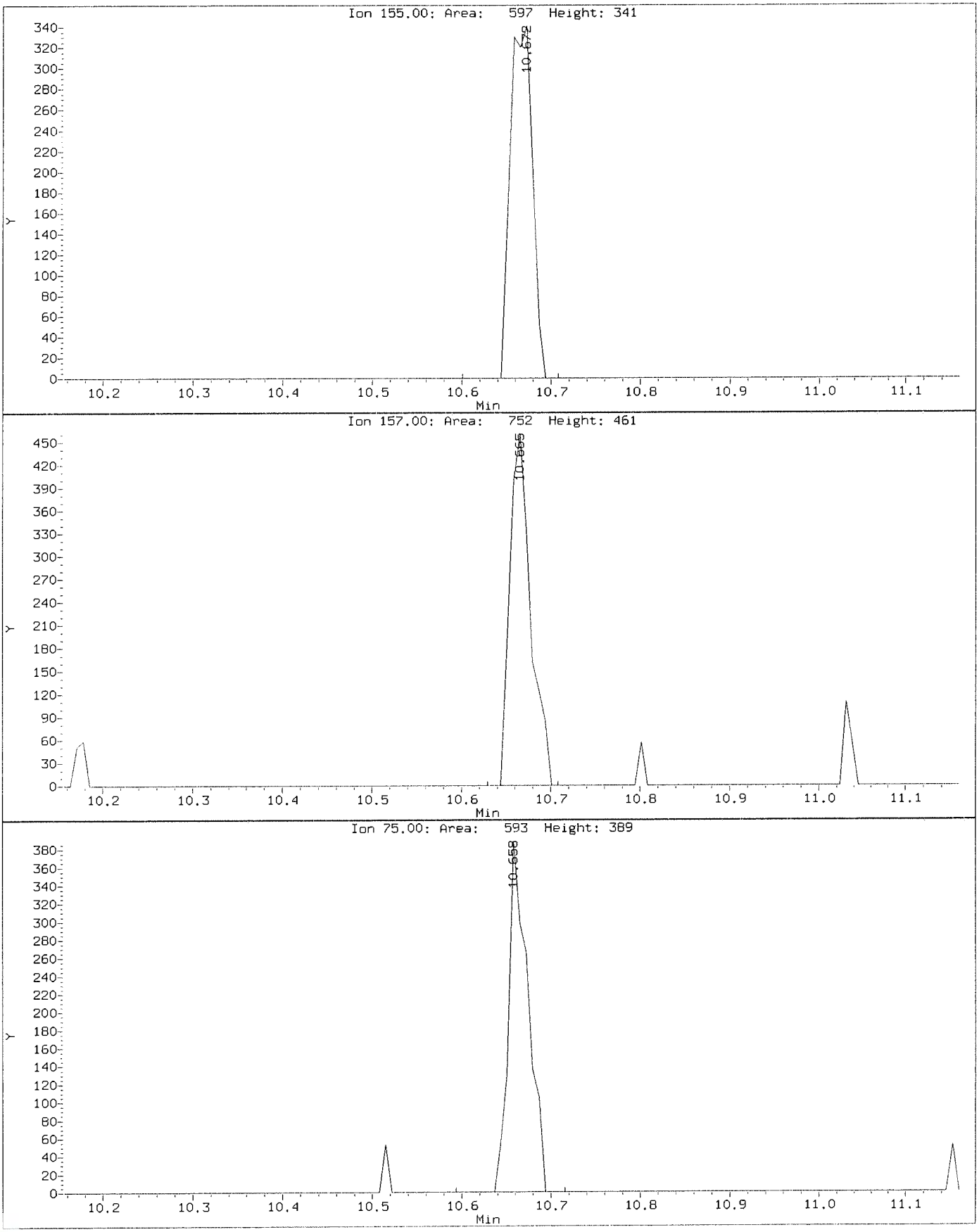
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Instrument: voa6.i
Client Sample ID: VSTD001

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



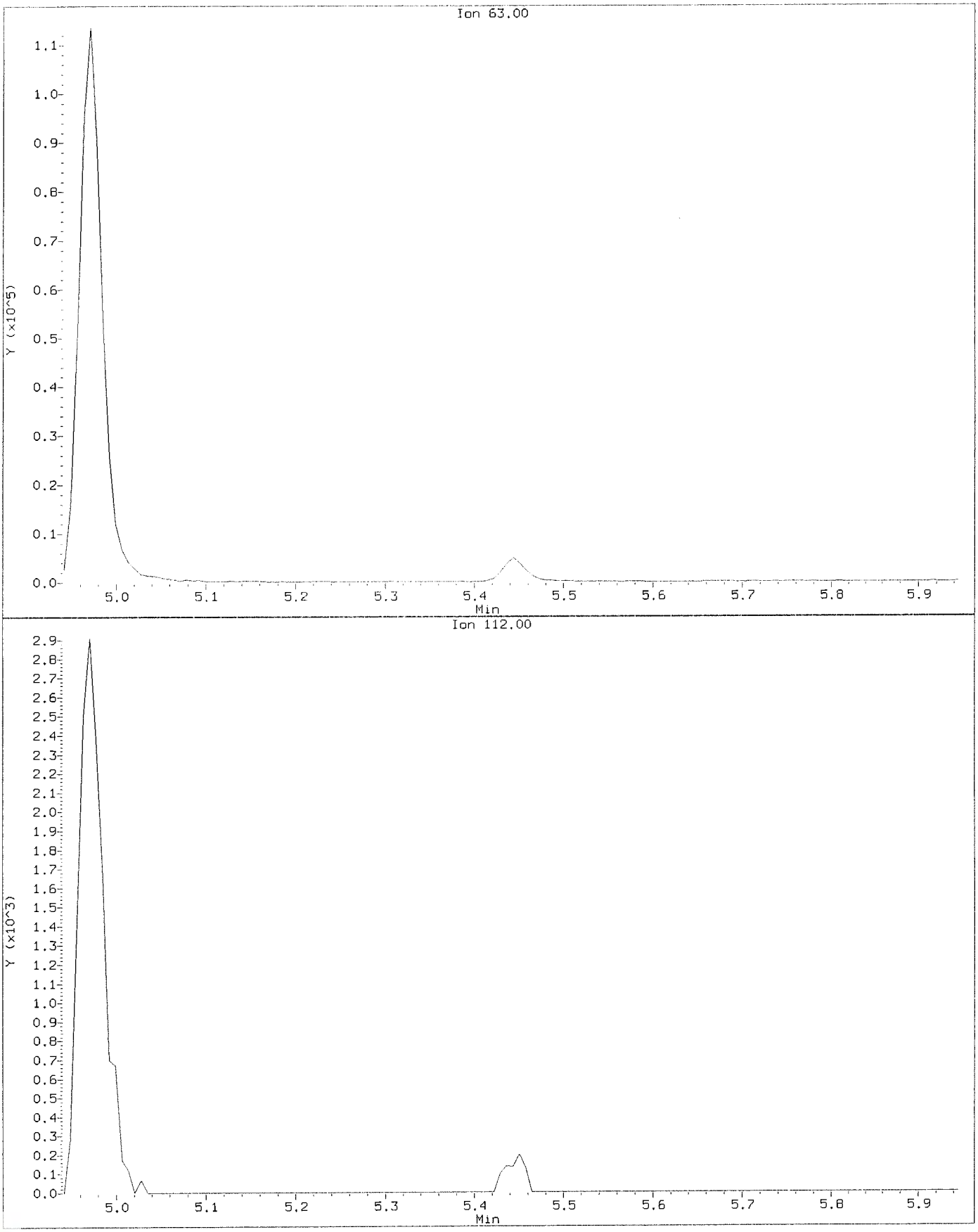
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Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

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



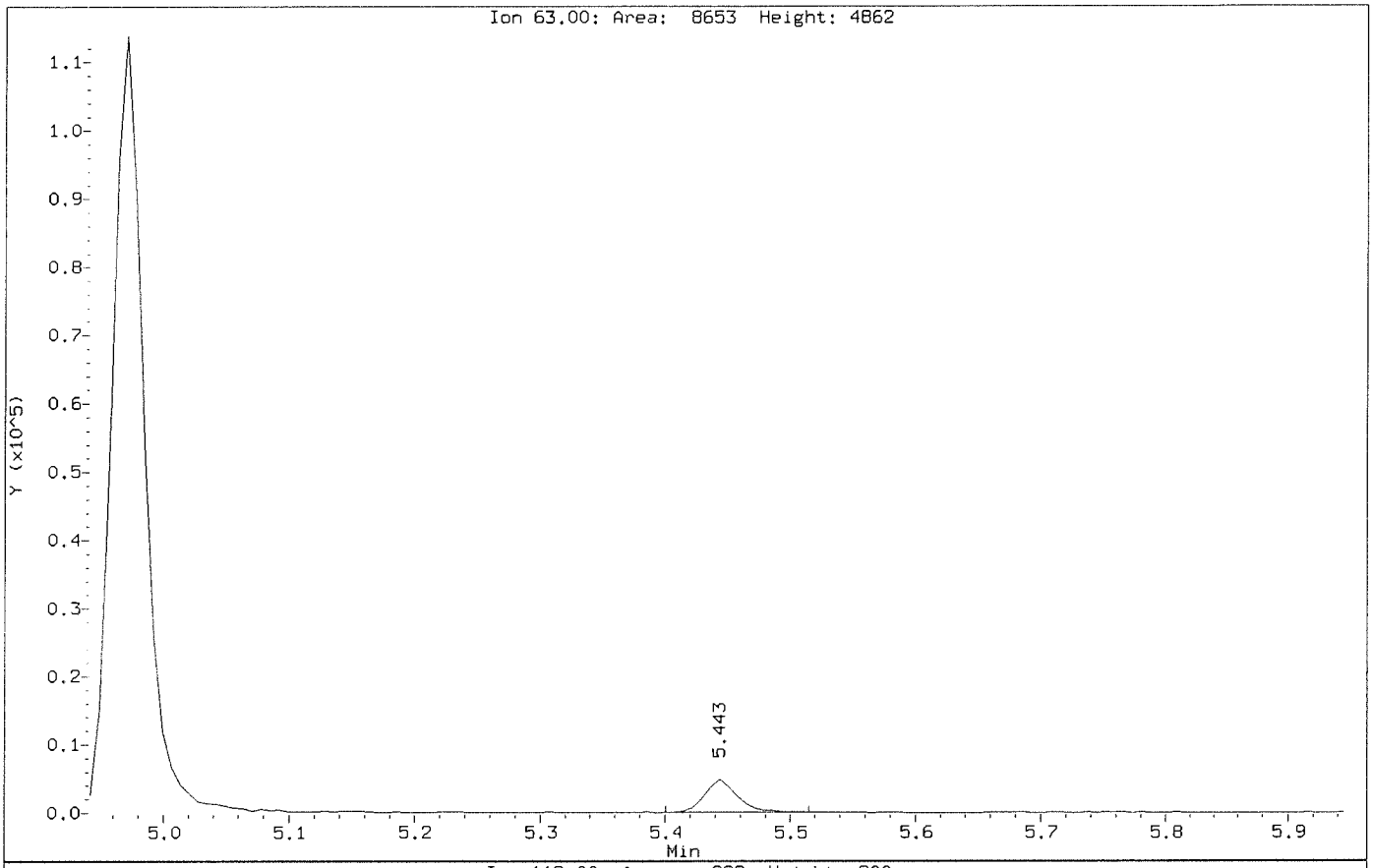
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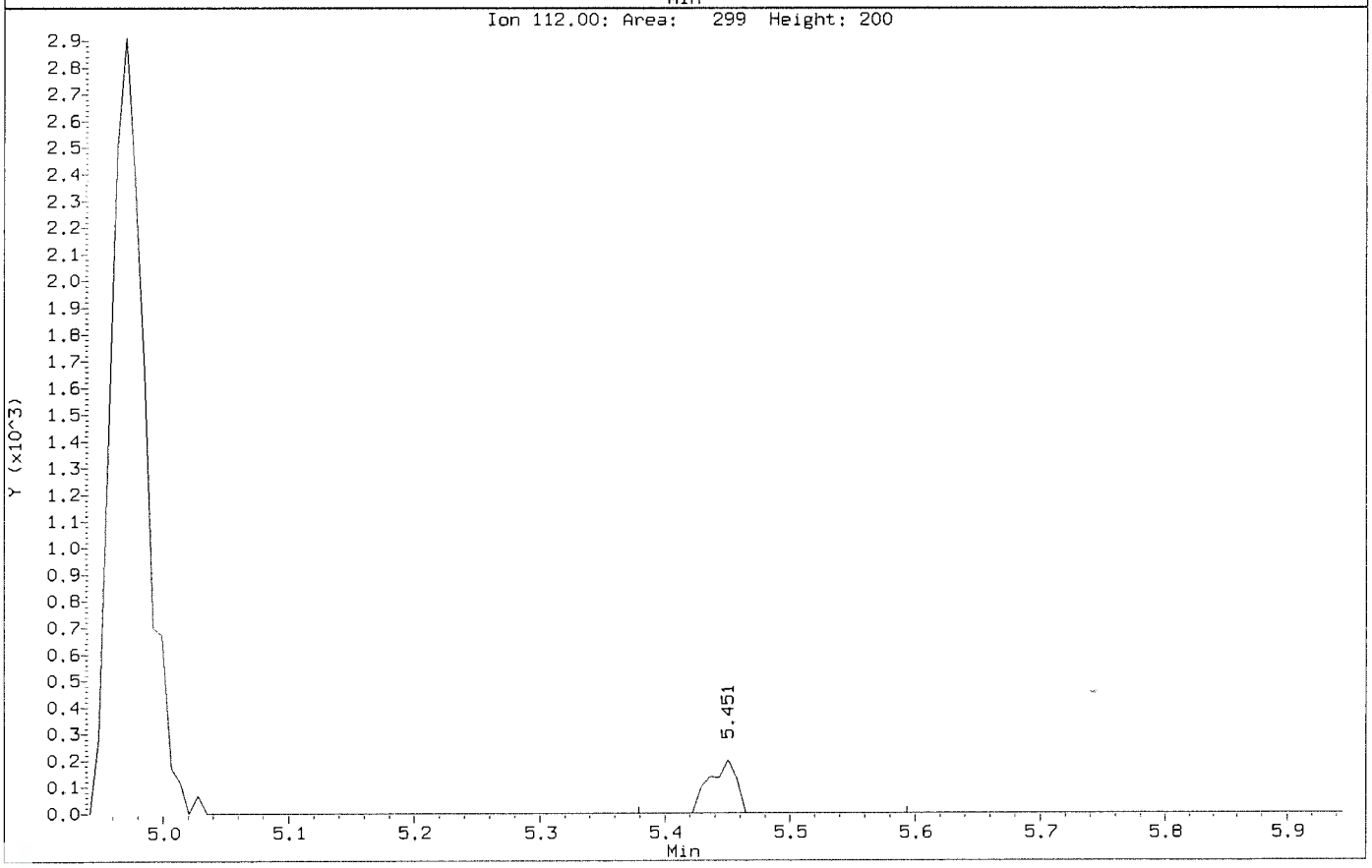
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5



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Instrument: voa6.i
Client Sample ID: VSTD001

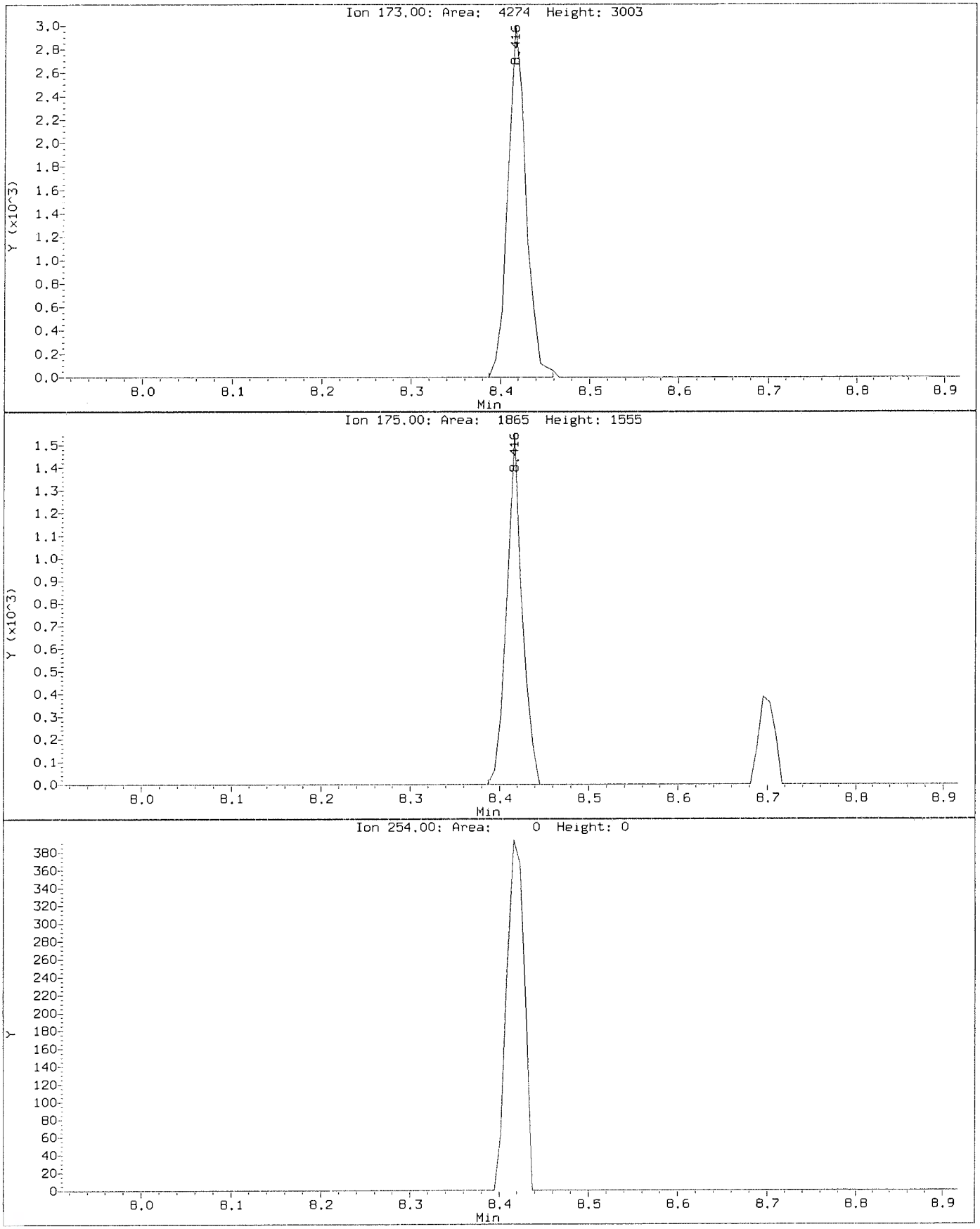
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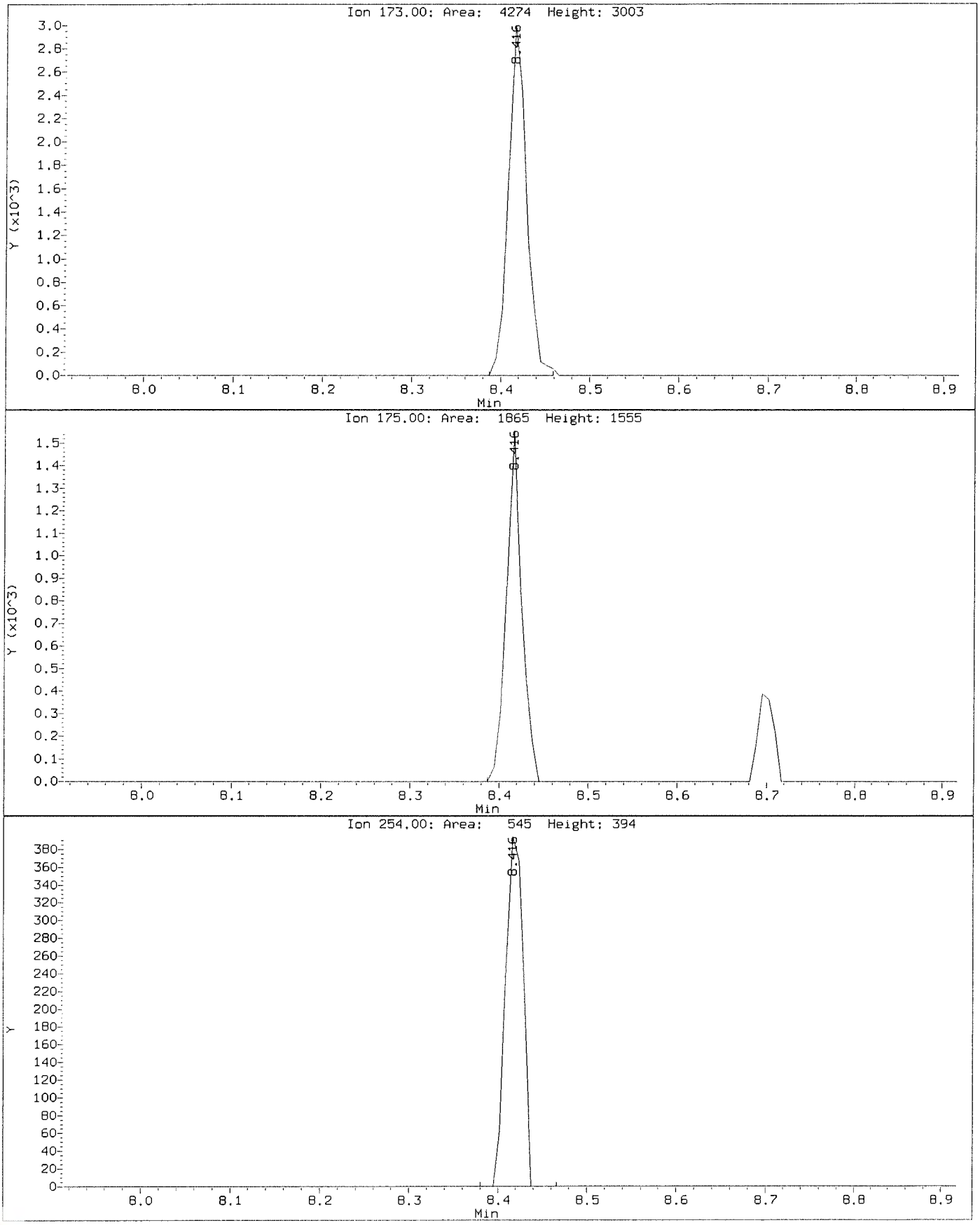
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Client Sample ID: VSTD001

Compound: Bromoform
CAS Number: 75-25-2



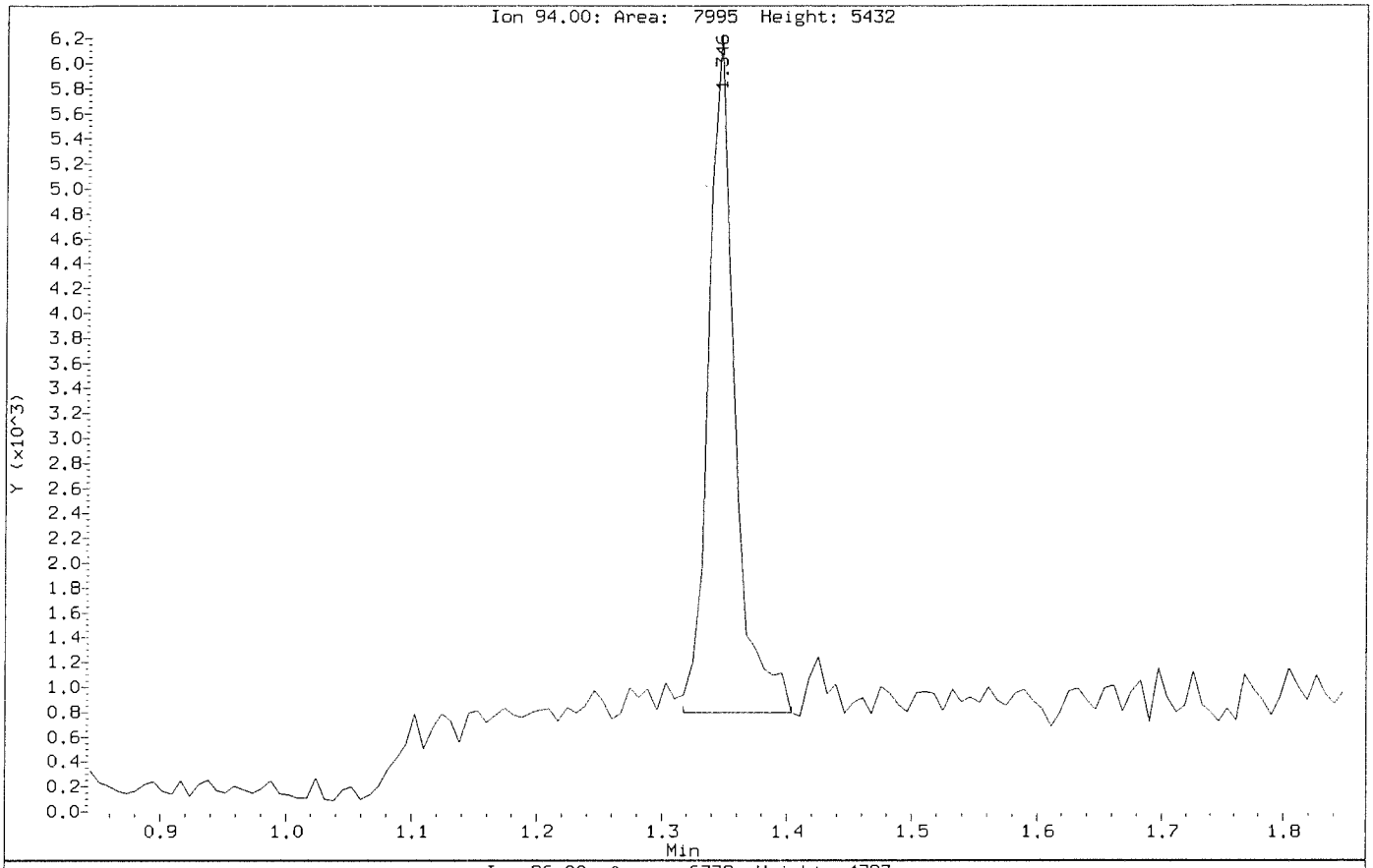
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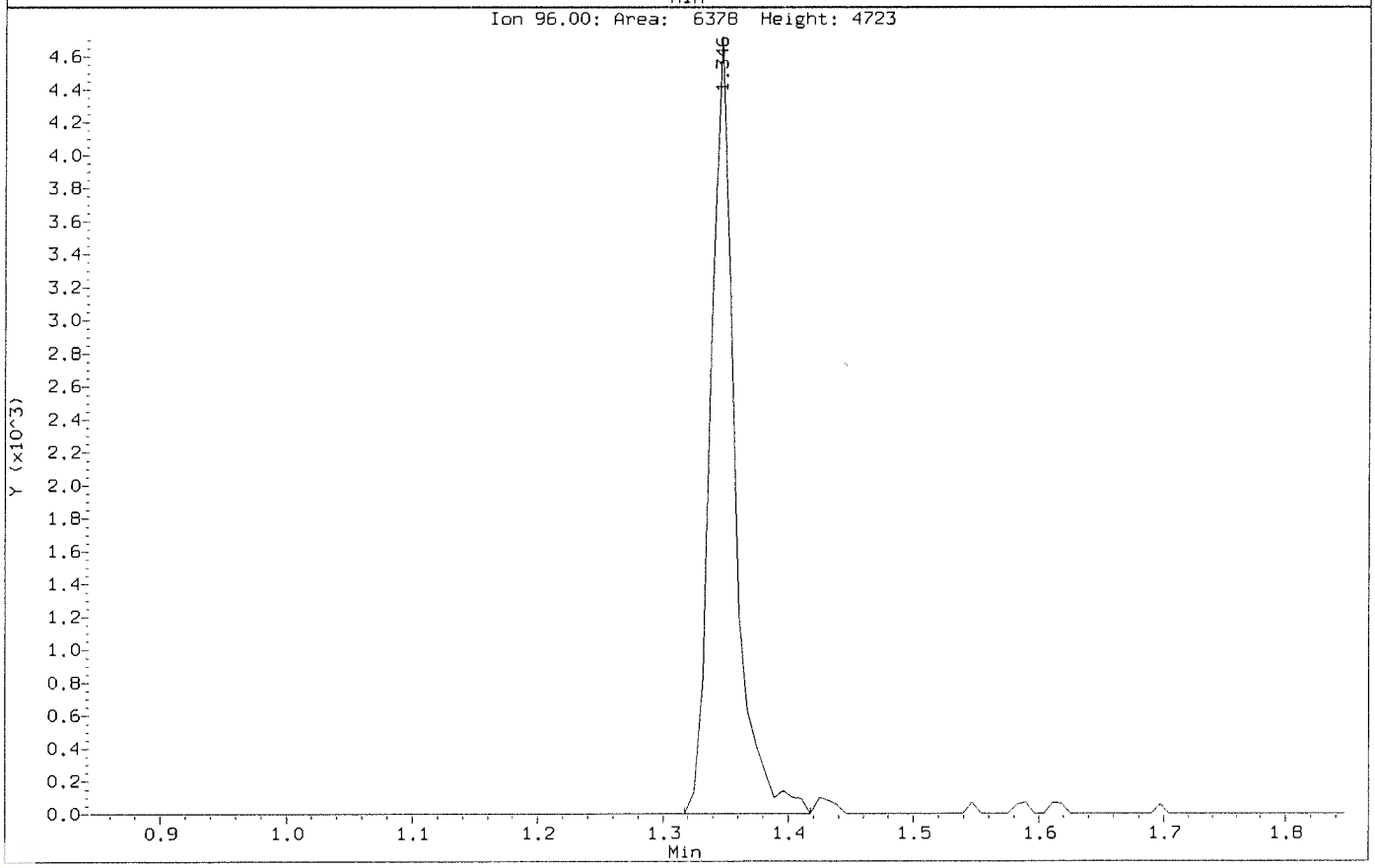
Compound: Bromoform
CAS Number: 75-25-2



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Instrument: voa6.i
Client Sample ID: VSTD001

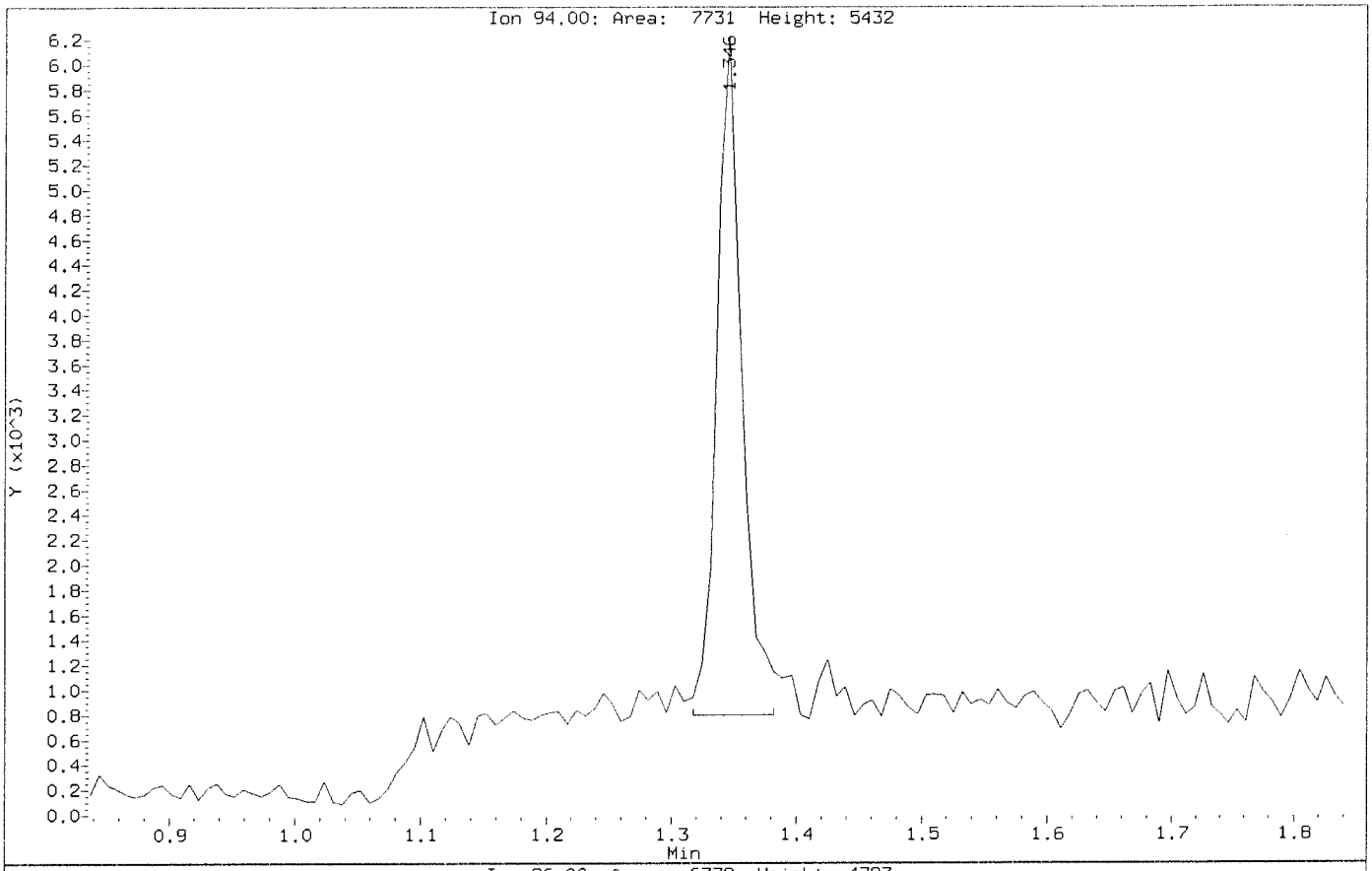
Compound: Bromomethane
CAS Number: 74-83-9

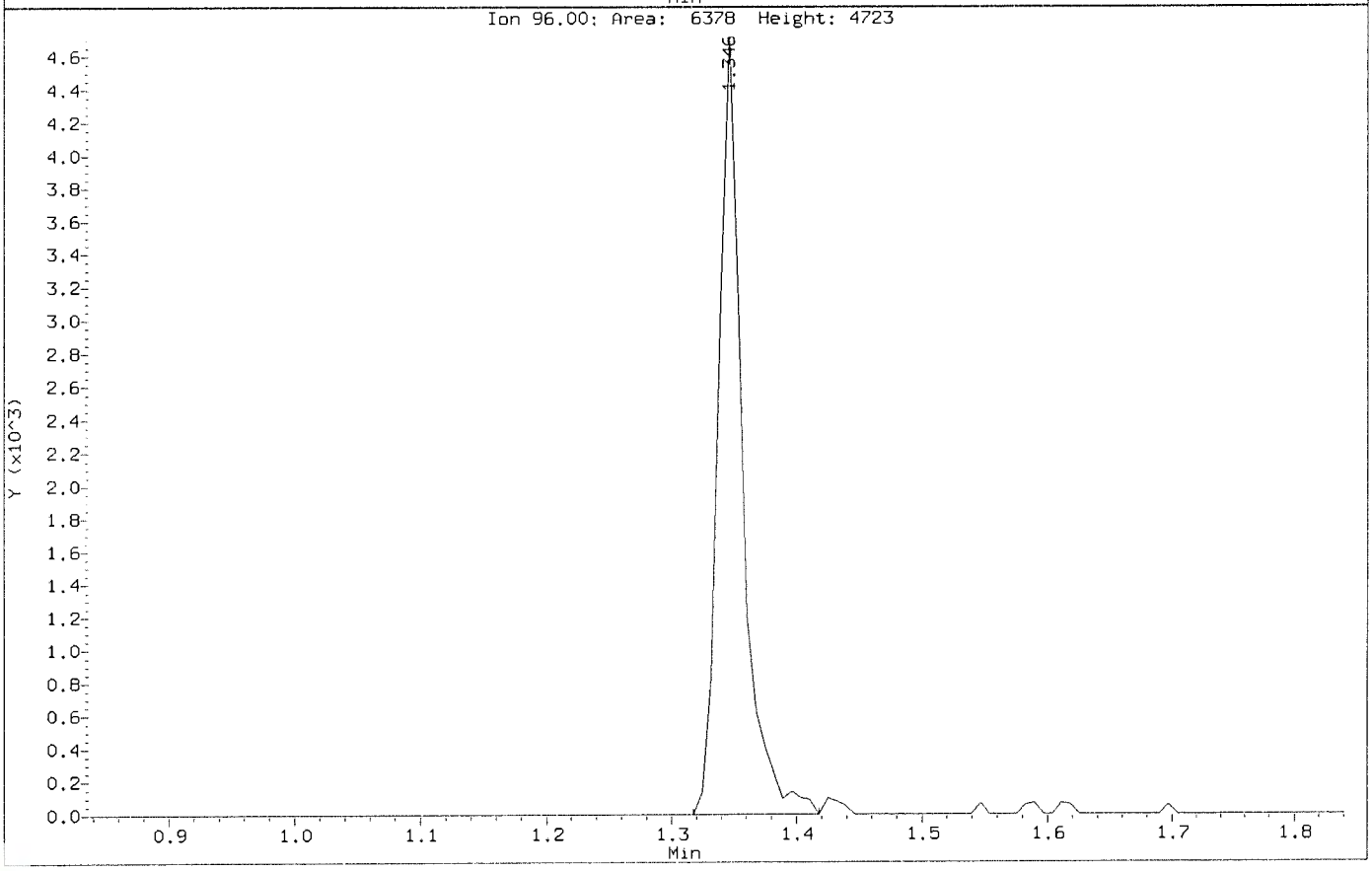




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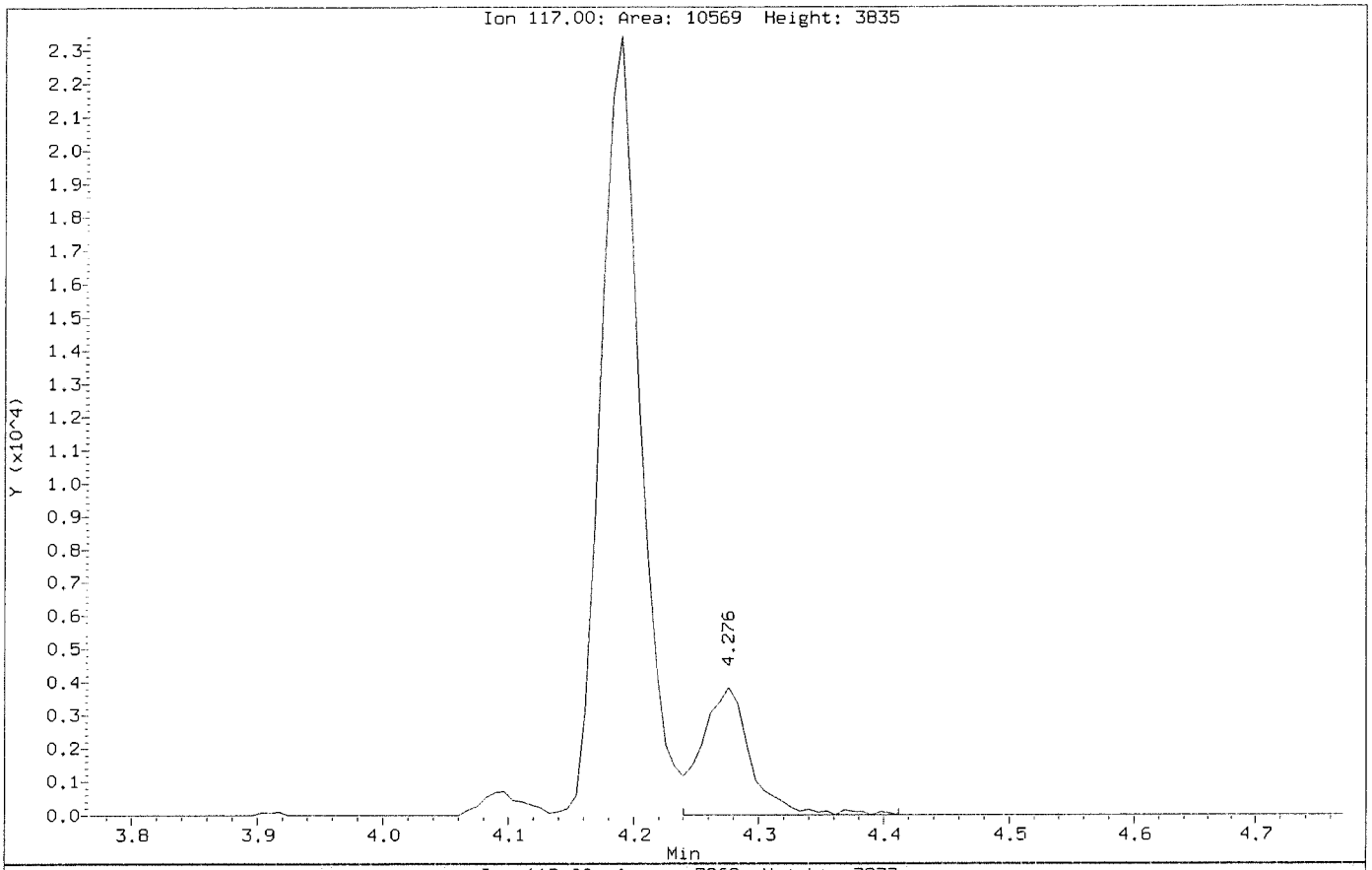
Compound: Bromomethane
CAS Number: 74-83-9

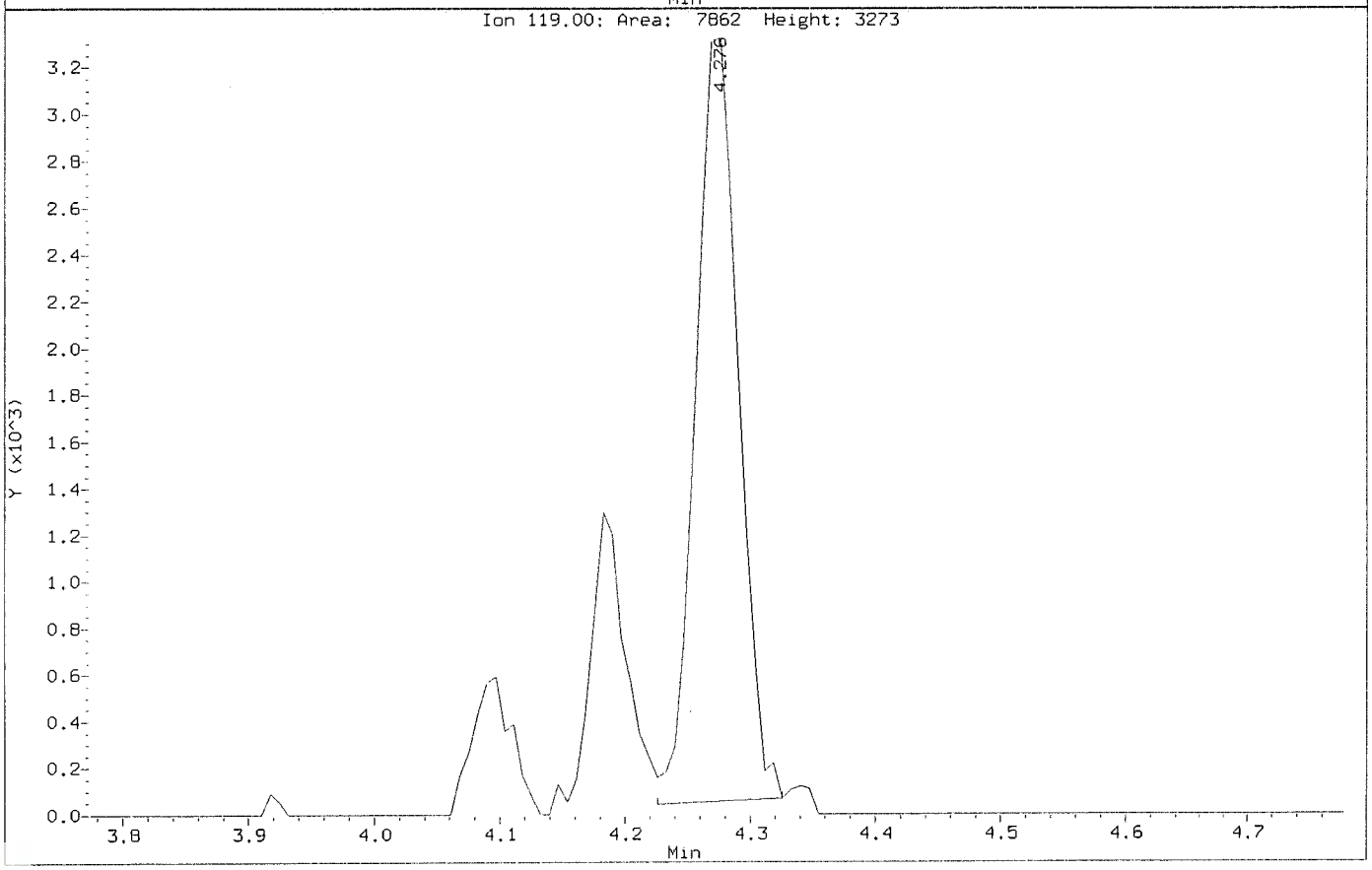




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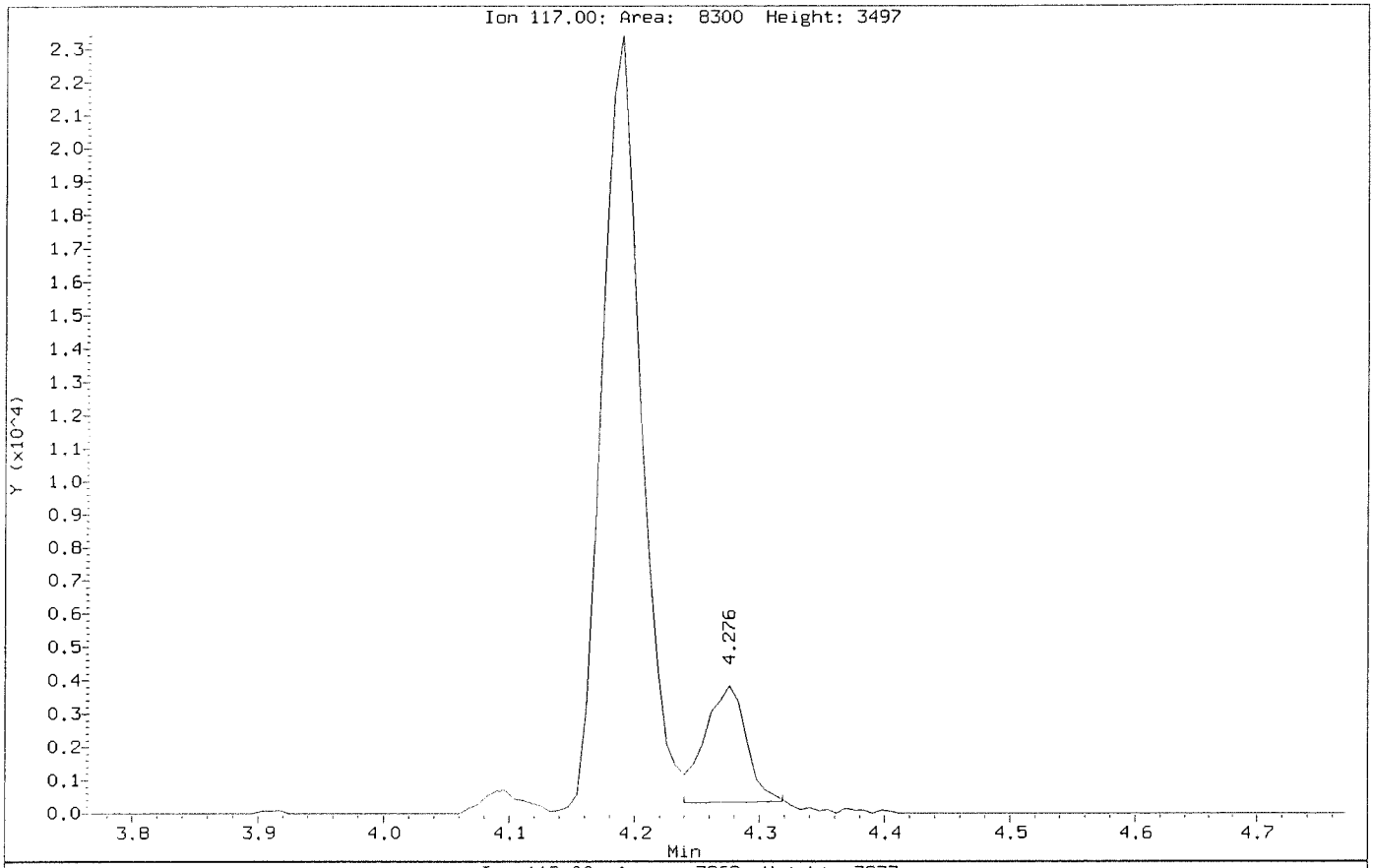
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

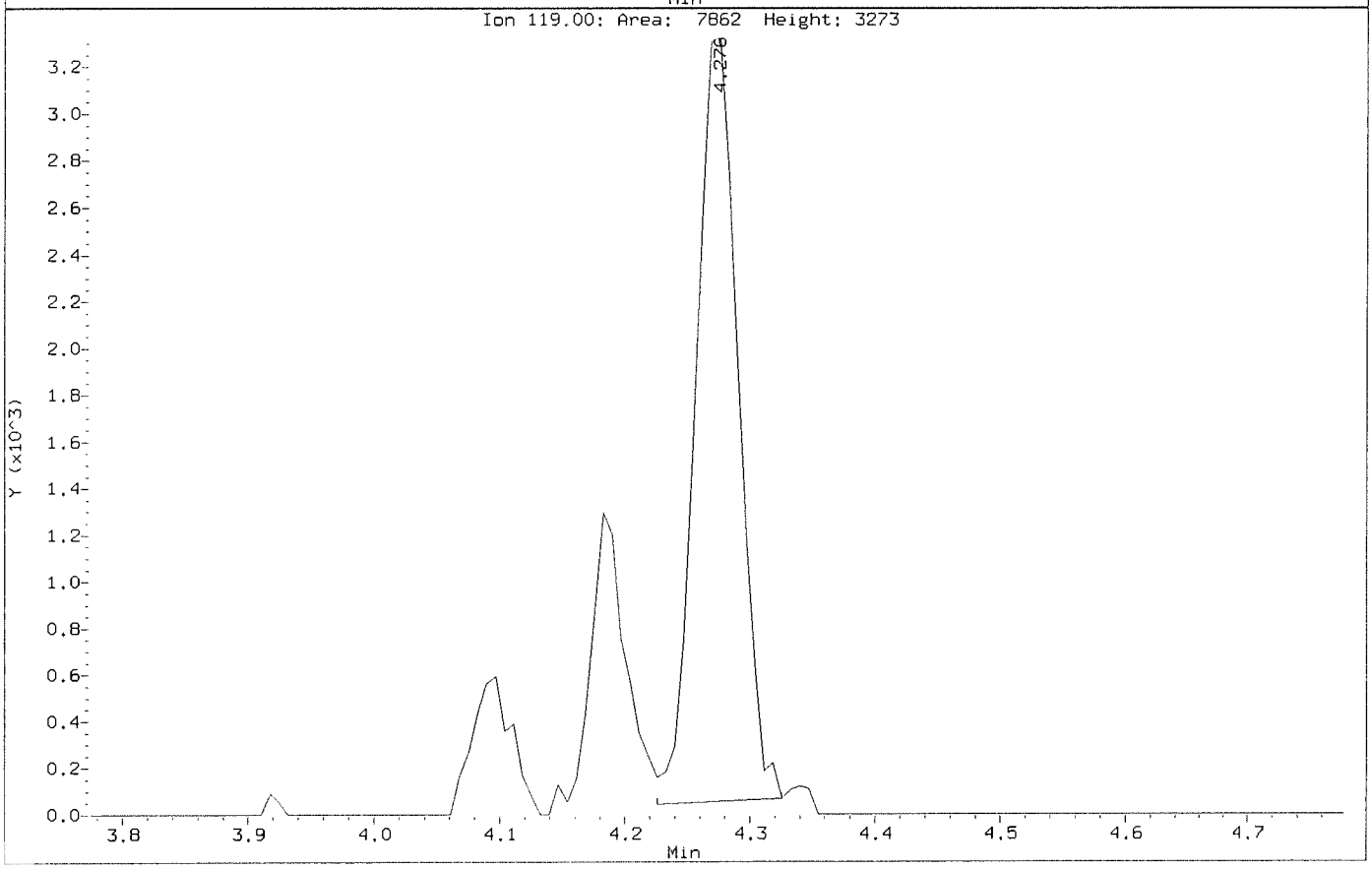




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Injection Date: 24-SEP-2020 12:46
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Carbon Tetrachloride
CAS Number: 56-23-5





Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092405.D Page 1
Report Date: 13-Oct-2020 11:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092405.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 24-SEP-2020 13:10
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 12:46 Cal File: X092404.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

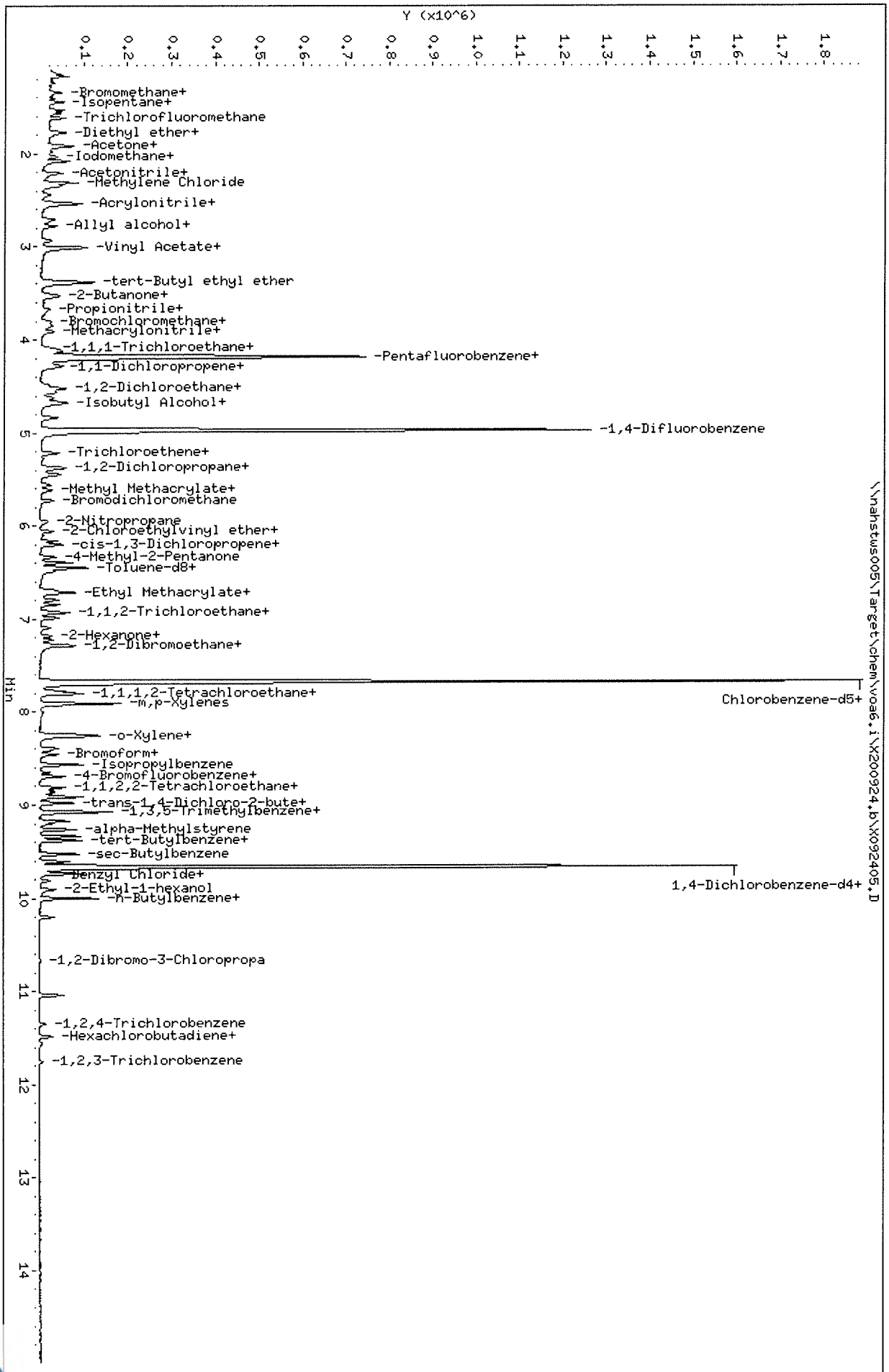
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	644357	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	1019524	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	903632	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	382631	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	12469	2.00000	1.88(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	13937	2.00000	1.92(a)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	46992	2.00000	1.97(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	18232	2.00000	1.52(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	12510	2.00000	1.99(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	20125	2.00000	2.02(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	14679	2.00000	2.16(a)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	10973	2.00000	2.06(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	26490	2.00000	1.96(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	11109	2.00000	1.91(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	20197	2.00000	2.15(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	2737	2.00000	1.85(a)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	12294	2.00000	2.19(aM)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	5479	2.00000	3.21(a)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	45912	2.00000	2.01(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	862	2.00000	1.86(a)
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	12165	2.00000	1.93(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	21583	2.00000	2.02(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	16818	2.00000	1.91(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	15682	2.00000	2.07(a)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	45721	2.00000	2.02(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	25155	2.00000	2.04(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	22062	2.00000	2.00(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	24589	2.00000	2.01(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	20525	2.00000	2.02(a)
24	2-Butanone	43	3.602	3.602	(0.860)	8427	4.00000	3.58(a)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	41065	2.00000	2.06(a)
52	2-Hexanone	43	7.098	7.098	(0.925)	16923	4.00000	4.22(a)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	47538	2.00000	2.10(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	45536	2.00000	1.99(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	25721	4.00000	4.05(a)
10	Acetone	43	1.983	1.983	(0.473)	9048	4.00000	1.09(a)
37	Benzene	78	4.519	4.519	(0.909)	57516	2.00000	1.97(a)
74	Bromobenzene	156	8.810	8.810	(0.911)	15741	2.00000	2.03(a)
29	Bromochloromethane	128	3.810	3.810	(0.909)	8453	2.00000	2.09(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	18226	2.00000	1.97(a)
66	Bromoform	173	8.416	8.416	(1.097)	7643	2.00000	1.93(a)
6	Bromomethane	94	1.346	1.346	(0.321)	11427	2.00000	1.97(a)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	76740	4.00000	3.83(a)
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	17342	2.00000	2.12(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	37718	2.00000	2.05(a)
7	Chloroethane	64	1.410	1.410	(0.337)	10093	2.00000	1.99(a)
28	Chloroform	83	3.917	3.917	(0.935)	25563	2.00000	2.04(a)
3	Chloromethane	50	1.081	1.081	(0.258)	16756	2.00000	1.89(a)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.844)	15564	2.00000	1.97(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	23162	2.00000	1.98(a)
55	Dibromochloromethane	129	7.184	7.184	(0.937)	12783	2.00000	1.97(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	9079	2.00000	2.02(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	12034	2.00000	3.82(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	19509	2.00000	2.03(a)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	5496	2.00000	2.94(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	57275	2.00000	2.05(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	47303	4.00000	4.10(a)
17	Methylene Chloride	84	2.313	2.313	(0.552)	16648	2.00000	1.68(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	36734	2.00000	1.86(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	65226	2.00000	1.99(a)
92	Naphthalene	128	11.553	11.553	(1.195)	7312	2.00000	2.04(a)
63	o-Xylene	106	8.244	8.244	(1.075)	23228	2.00000	2.06(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	54335	2.00000	2.03(a)
64	Styrene	104	8.265	8.265	(1.078)	37510	2.00000	1.94(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	39109	2.00000	2.07(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	12381	2.00000	2.16(a)
50	Toluene	91	6.453	6.453	(0.841)	60795	2.00000	2.07(a)
20	trans-1,2-Dichloroethene	96	2.542	2.542	(0.607)	13424	2.00000	2.01(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	18306	2.00000	1.87(a)
38	Trichloroethene	130	5.214	5.214	(1.049)	14627	2.00000	2.00(a)
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	17957	2.00000	1.91(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	15623	2.00000	1.87(a)

QC Flag Legend

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

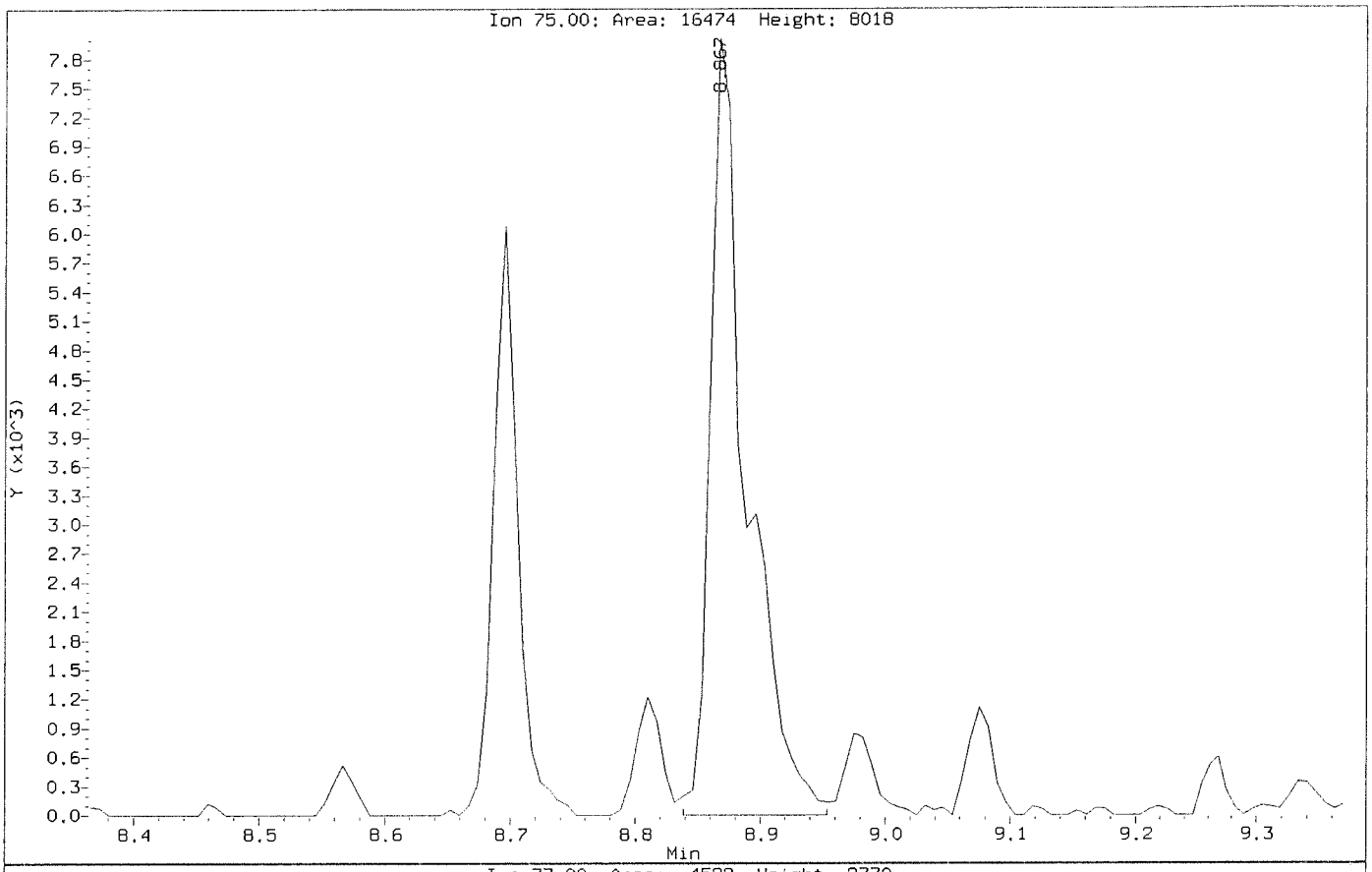


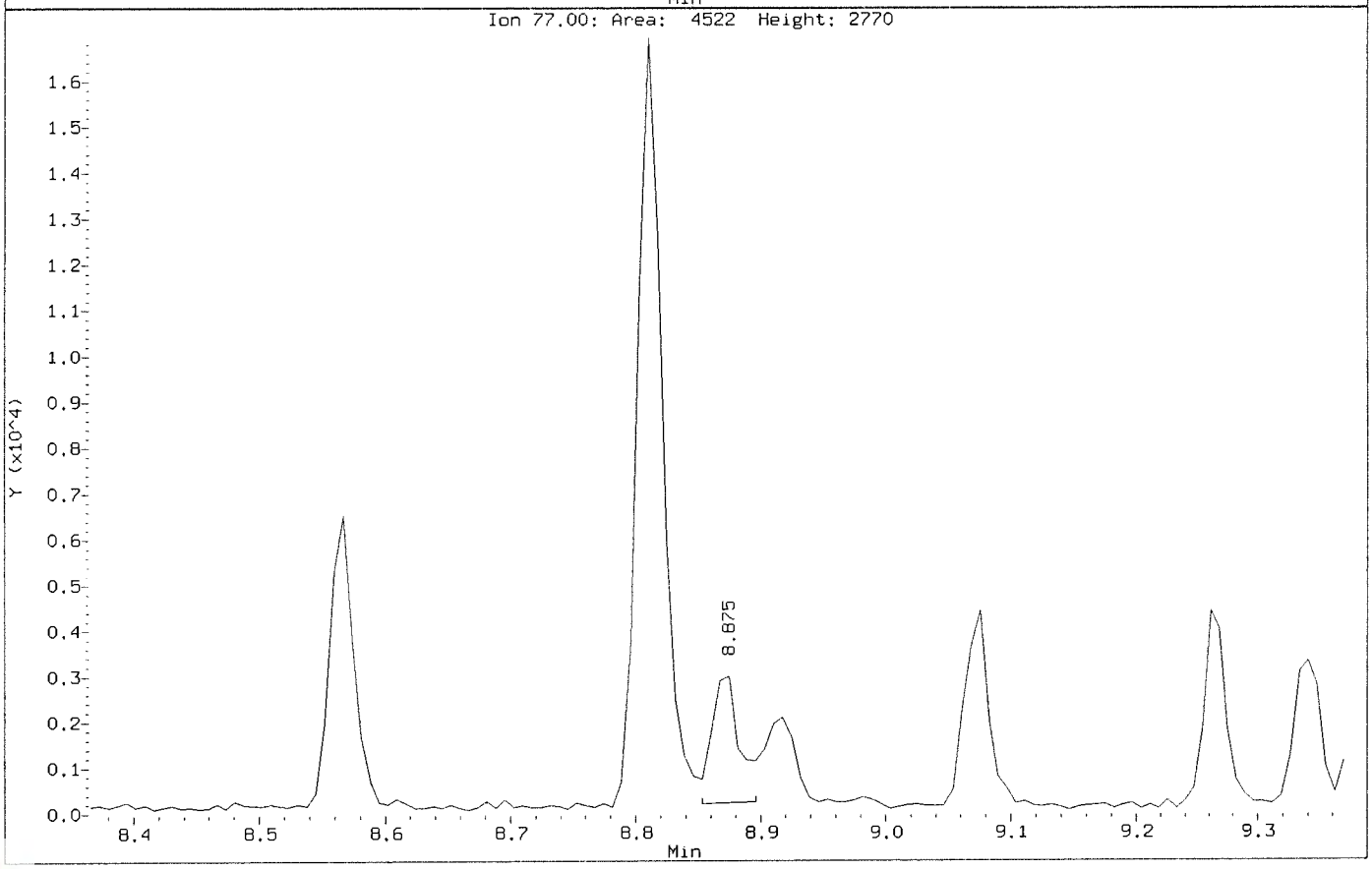
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Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092405.D
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Instrument: voa6.i
Client Sample ID: VSTD002

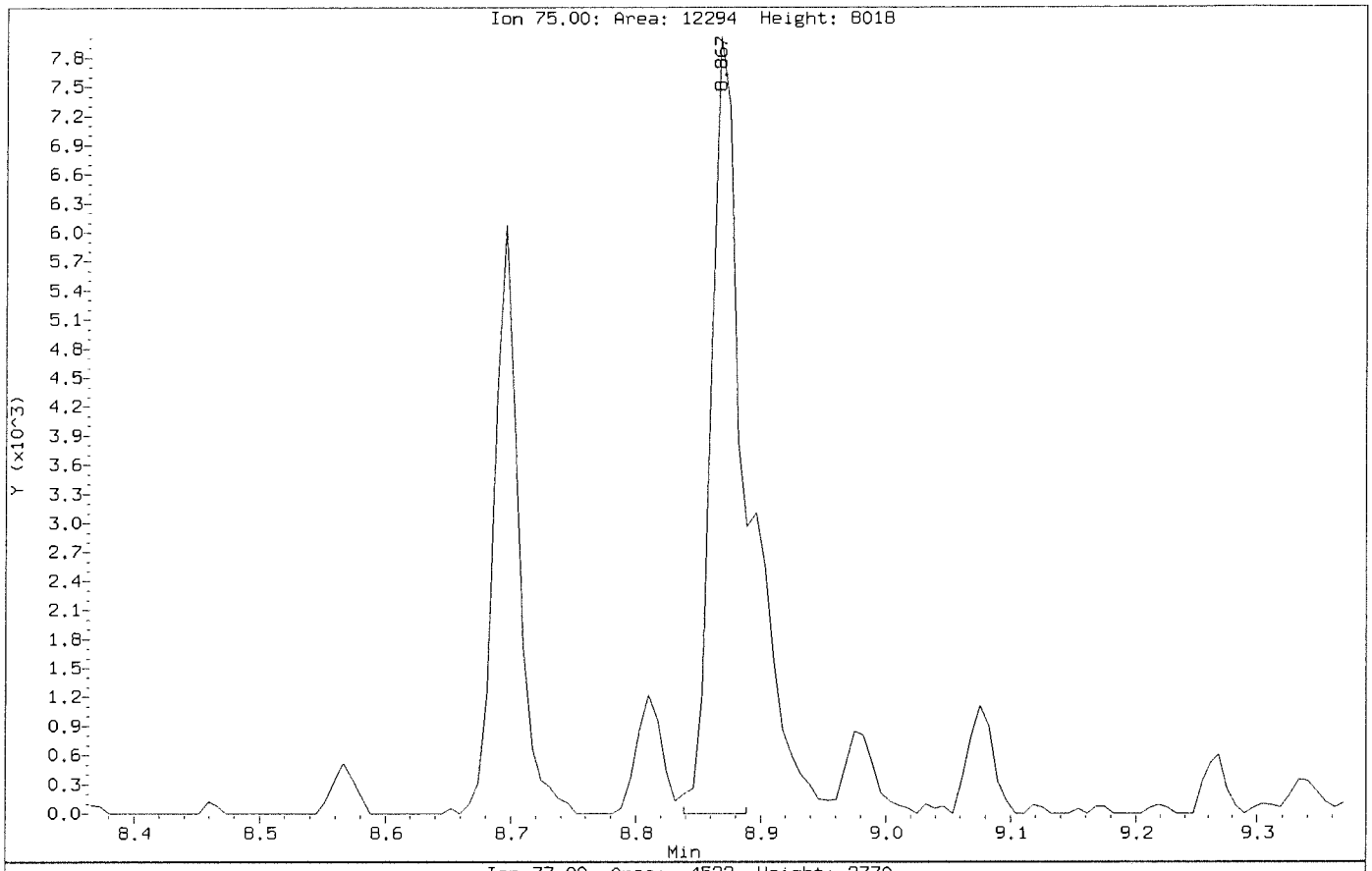
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

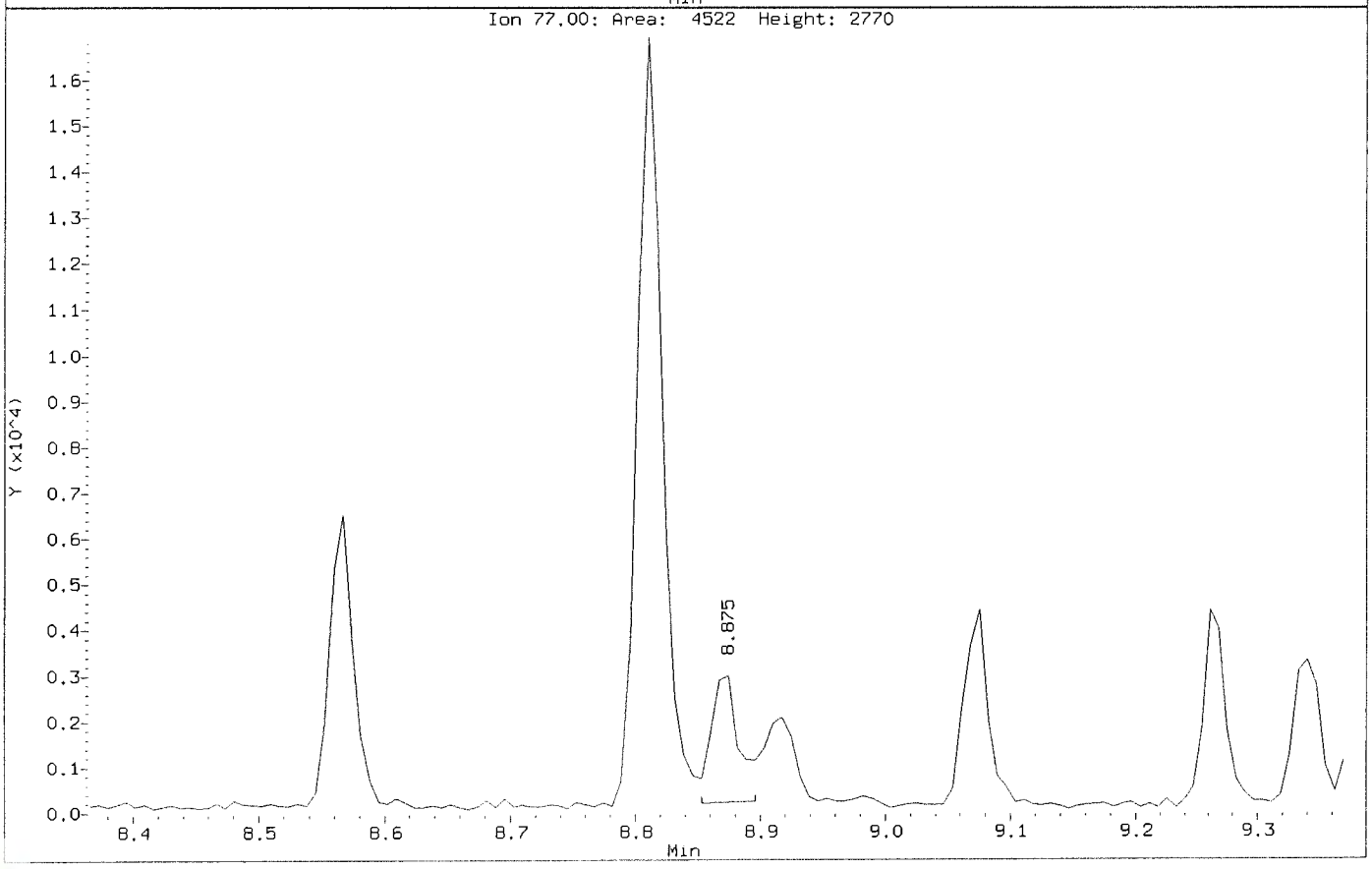




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Instrument: voa6.i
Client Sample ID: VSTD002

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





a File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092406.D Page 1
ort Date: 13-Oct-2020 11:23

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Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092406.D
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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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 13:10 Cal File: X092405.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

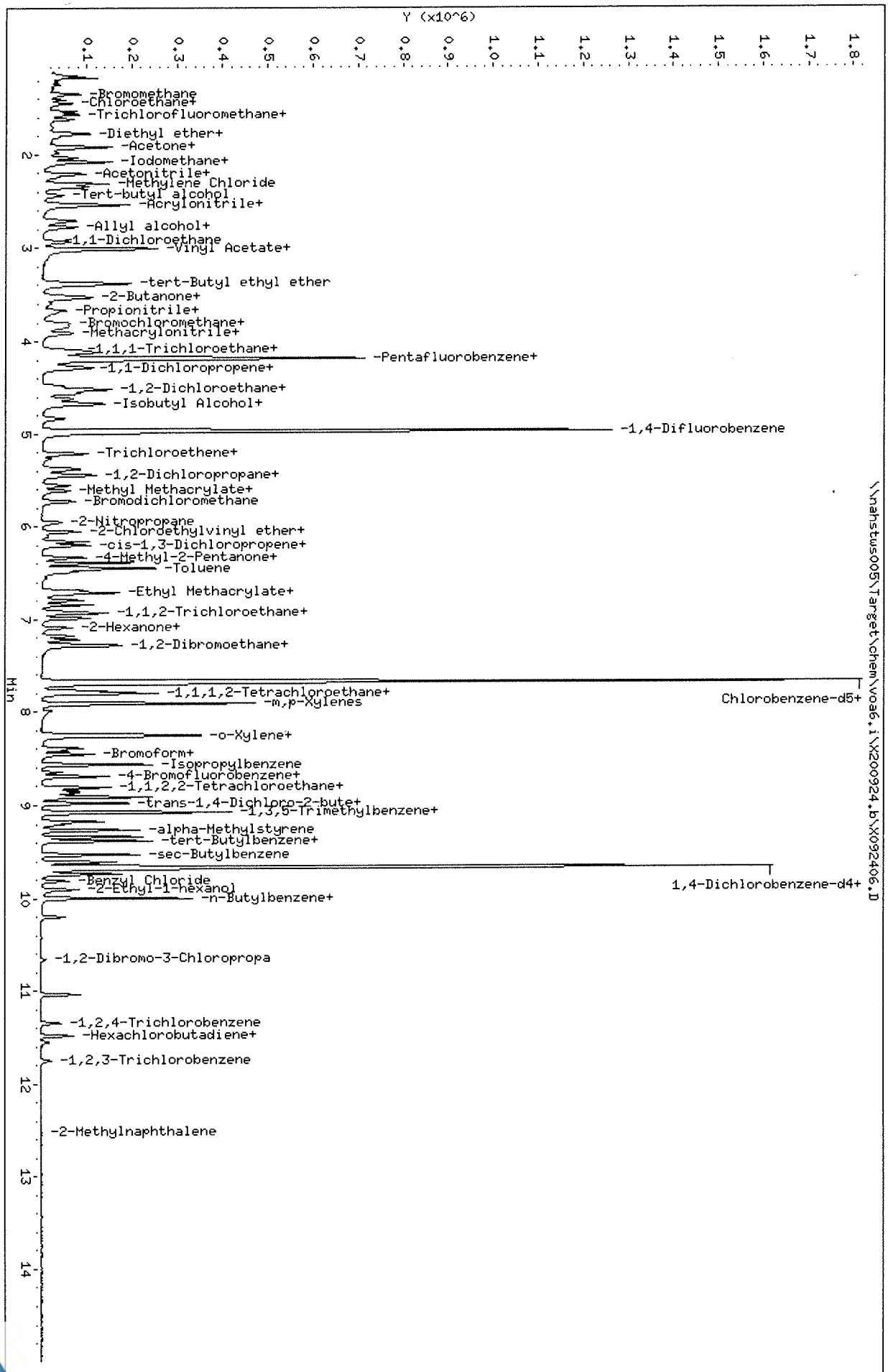
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	604947	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	968132	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	862629	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	366206	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	34017	5.00000	5.47
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.070)	35655	5.00000	5.24
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	124776	5.00000	5.50
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	43900	5.00000	5.10
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	30508	5.00000	5.10
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	49631	5.00000	5.32
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	35579	5.00000	5.49
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	27209	5.00000	5.35
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	66717	5.00000	5.27
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	27129	5.00000	4.98(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	45564	5.00000	5.11
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	7596	5.00000	5.36
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	28529	5.00000	5.32(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	14272	5.00000	6.37
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	114323	5.00000	5.24
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	2370	5.00000	5.36
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	32725	5.00000	5.45
18 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	53633	5.00000	5.25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	45690	5.00000	5.47
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	38422	5.00000	5.35
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	112577	5.00000	5.20
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	61531	5.00000	5.22
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	57519	5.00000	5.47
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	61140	5.00000	5.22
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	49490	5.00000	5.21
24	2-Butanone	43	3.595	3.595	(0.858)	22783	10.0000	10.31
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	100230	5.00000	5.26
52	2-Hexanone	43	7.090	7.090	(0.924)	40720	10.0000	10.64
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	115574	5.00000	5.33
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	107669	5.00000	4.93(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	64724	10.0000	10.68
10	Acetone	43	1.976	1.976	(0.472)	17679	10.0000	7.78
37	Benzene	78	4.519	4.519	(0.909)	145224	5.00000	5.24
74	Bromobenzene	156	8.809	8.809	(0.911)	39295	5.00000	5.31
29	Bromochloromethane	128	3.802	3.802	(0.908)	19555	5.00000	5.17
39	Bromodichloromethane	83	5.729	5.729	(1.153)	45076	5.00000	5.13
66	Bromoform	173	8.415	8.415	(1.097)	19994	5.00000	5.30
6	Bromomethane	94	1.346	1.346	(0.321)	28439	5.00000	5.62
19	Carbon Disulfide	76	2.076	2.076	(0.496)	186941	10.0000	9.95
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	38907	5.00000	5.02
59	Chlorobenzene	112	7.699	7.699	(1.004)	92091	5.00000	5.24
7	Chloroethane	64	1.410	1.410	(0.337)	25052	5.00000	5.28
28	Chloroform	83	3.917	3.917	(0.935)	63153	5.00000	5.38
3	Chloromethane	50	1.081	1.081	(0.258)	41522	5.00000	5.01
27	cis-1,2-Dichloroethene	96	3.537	3.537	(0.844)	40006	5.00000	5.39
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	58436	5.00000	5.26
55	Dibromochloromethane	129	7.176	7.176	(0.936)	32041	5.00000	5.19
44	Dibromomethane	93	5.557	5.557	(1.118)	22782	5.00000	5.35
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	28274	5.00000	6.46
61	Ethylbenzene	106	7.799	7.799	(1.017)	48263	5.00000	5.26
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	12681	5.00000	5.82
67	Isopropylbenzene	105	8.566	8.566	(1.117)	140289	5.00000	5.26
62	m,p-Xylenes	106	7.907	7.907	(1.031)	117010	10.0000	10.63
17	Methylene Chloride	84	2.313	2.313	(0.552)	39690	5.00000	5.37
87	n-Butylbenzene	91	9.998	9.998	(1.034)	91095	5.00000	4.82(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	160991	5.00000	5.15
92	Naphthalene	128	11.553	11.553	(1.195)	16943	5.00000	4.96(a)
63	o-Xylene	106	8.244	8.244	(1.075)	57363	5.00000	5.34
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	128686	5.00000	5.02
64	Styrene	104	8.265	8.265	(1.078)	97357	5.00000	5.29
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	92883	5.00000	5.15
56	Tetrachloroethene	164	6.933	6.933	(0.904)	28143	5.00000	5.16
50	Toluene	91	6.453	6.453	(0.841)	151563	5.00000	5.42
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	32989	5.00000	5.26
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	47268	5.00000	5.10
38	Trichloroethene	130	5.214	5.214	(1.049)	36421	5.00000	5.25
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	43540	5.00000	4.95(a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	38248	5.00000	4.89(a)

QC Flag Legend

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

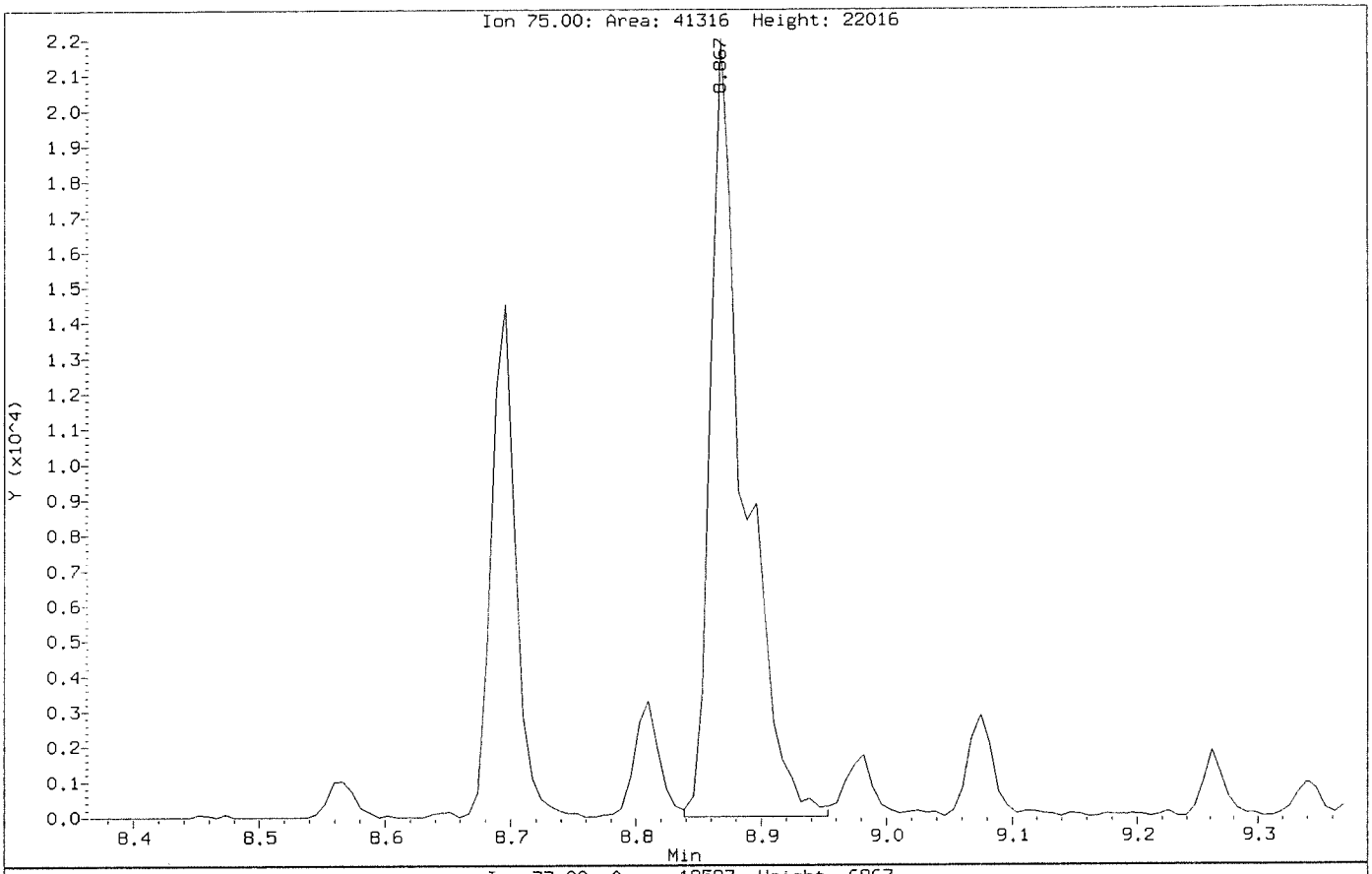


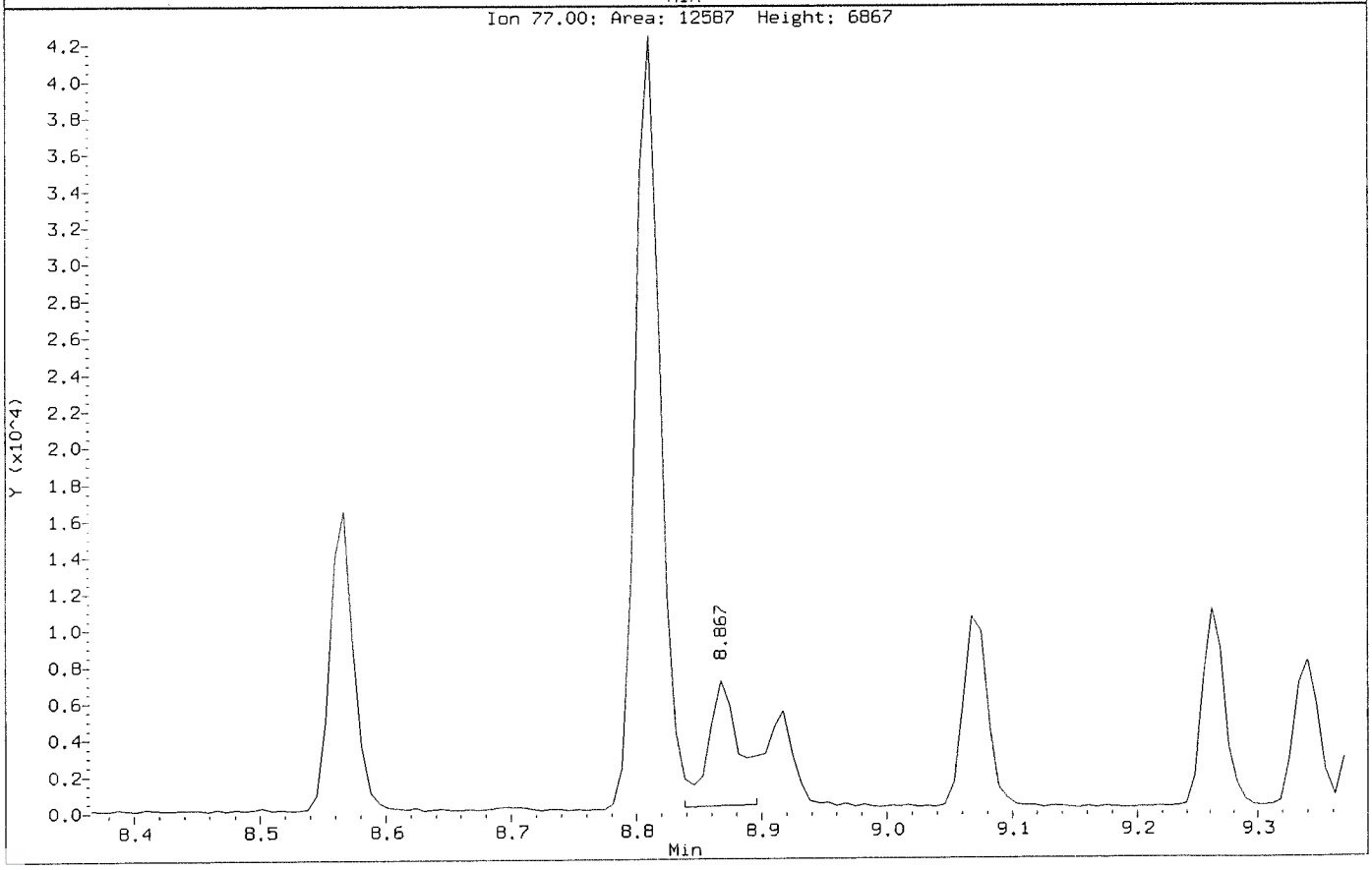
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Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092406.D
Injection Date: 24-SEP-2020 13:33
Instrument: voa6.i
Client Sample ID: VSTD005

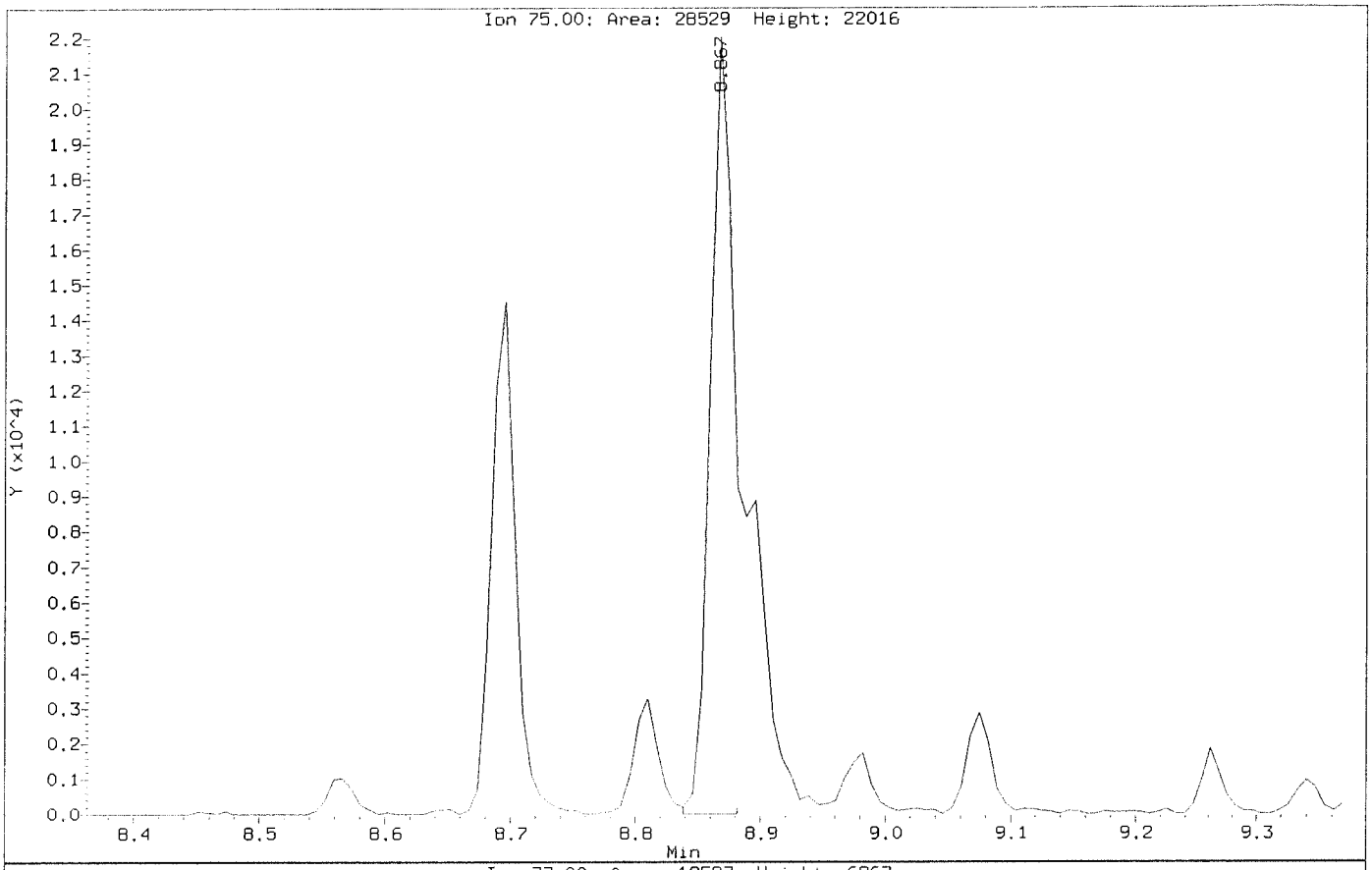
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

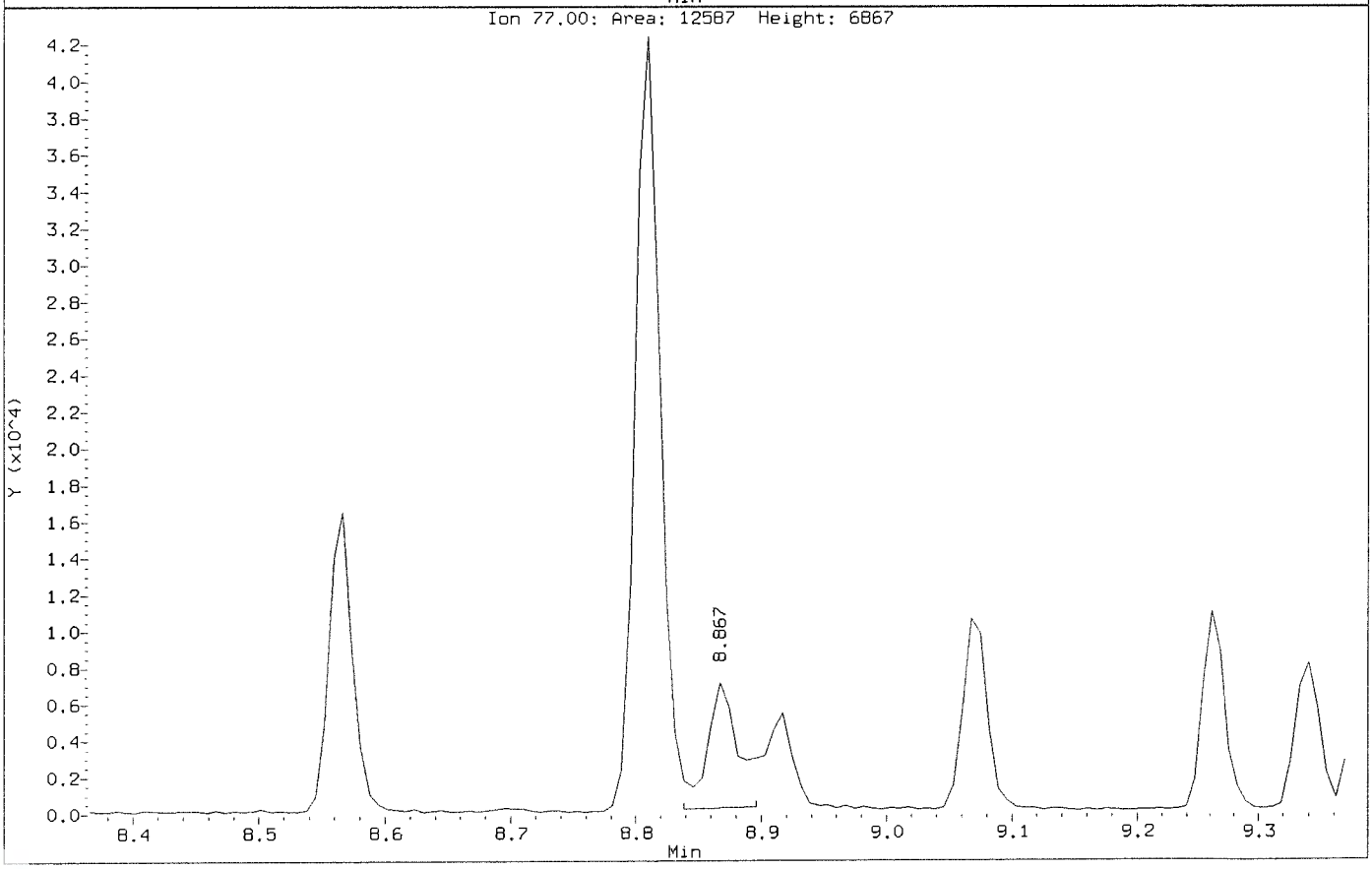




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Instrument: voa6.i
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Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092407.D Page 1
Report Date: 13-Oct-2020 11:23

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Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092407.D
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Dil Factor: 1.00000
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Target Version: 4.14
Processing Host: NAHSTW7056

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

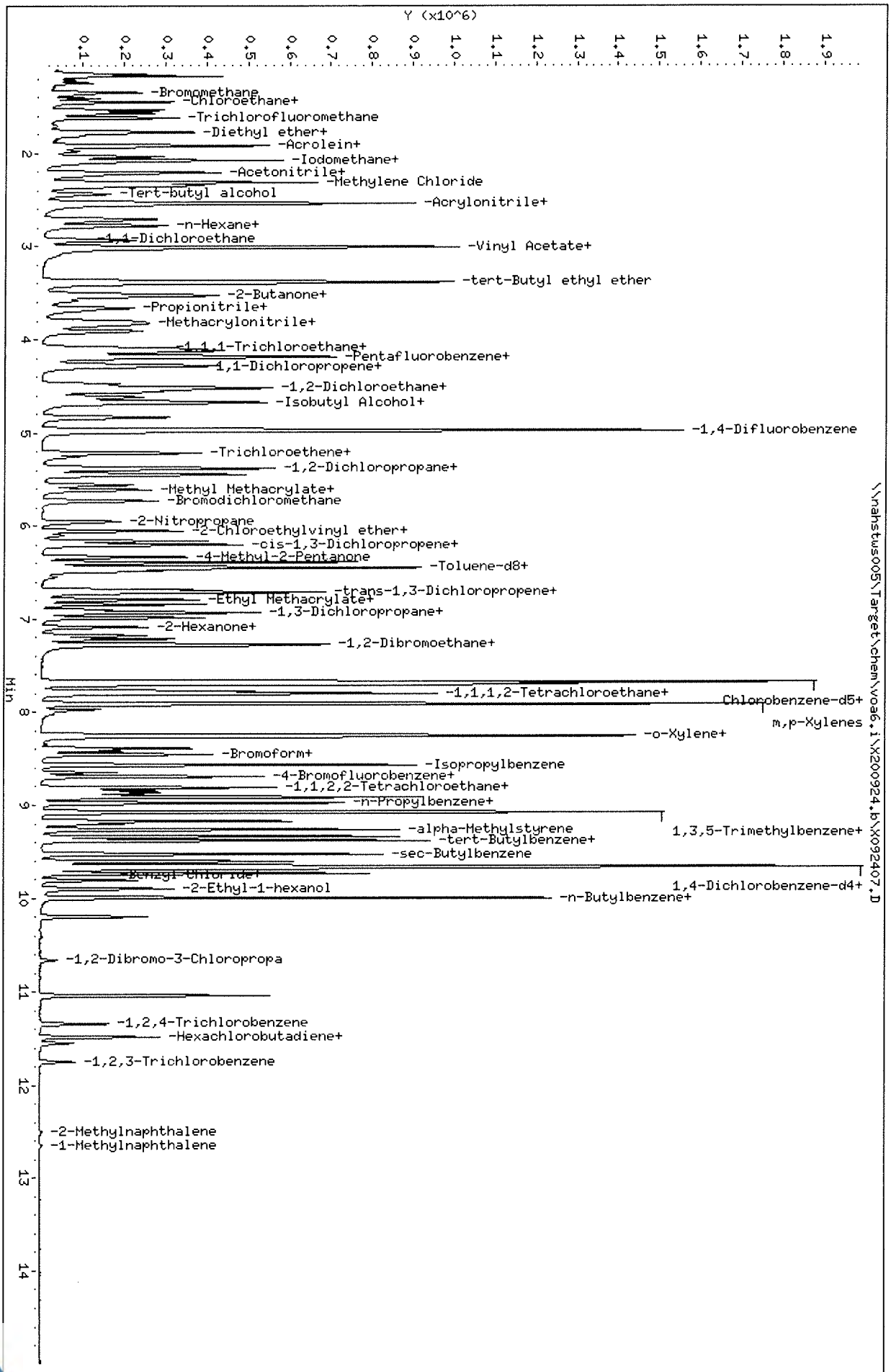
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	597686	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	958262	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	861110	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	364939	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	120544	20.0000	19.62
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	130718	20.0000	19.45
$	48 Toluene-d8	98	6.388	6.388	(0.833)	439641	20.0000	19.41
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	154353	20.0000	20.07
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	114469	20.0000	19.18
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	176318	20.0000	19.15
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	117650	20.0000	18.23
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	97092	20.0000	19.14
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	236851	20.0000	18.96
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	104067	20.0000	19.36
	32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	165987	20.0000	18.82
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	25160	20.0000	17.83
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	99152	20.0000	18.57(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	49391	20.0000	18.75
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	422220	20.0000	19.43
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	8129	20.0000	18.45
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	114808	20.0000	19.18
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	191275	20.0000	18.82

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	153916	20.0000	18.62
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	136853	20.0000	19.28
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	415398	20.0000	19.27
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	221882	20.0000	18.90
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	197702	20.0000	18.84
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	215720	20.0000	18.50
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	180409	20.0000	19.22
24 2-Butanone	43	3.588	3.588	(0.856)	87144	40.0000	39.94
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	361041	20.0000	19.03
52 2-Hexanone	43	7.090	7.090	(0.924)	146255	40.0000	38.30
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	402829	20.0000	18.65
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	412064	20.0000	18.95
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	226622	40.0000	37.49
10 Acetone	43	1.976	1.976	(0.472)	61351	40.0000	40.10
37 Benzene	78	4.519	4.519	(0.909)	523094	20.0000	19.08
74 Bromobenzene	156	8.809	8.809	(0.912)	140723	20.0000	19.08
29 Bromochloromethane	128	3.802	3.802	(0.908)	70448	20.0000	18.86
39 Bromodichloromethane	83	5.729	5.729	(1.153)	163173	20.0000	18.77
66 Bromoform	173	8.415	8.415	(1.097)	71380	20.0000	18.97
6 Bromomethane	94	1.345	1.345	(0.321)	96280	20.0000	19.85
19 Carbon Disulfide	76	2.076	2.076	(0.496)	712494	40.0000	38.38
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	143505	20.0000	18.72
59 Chlorobenzene	112	7.699	7.699	(1.004)	328244	20.0000	18.73
7 Chloroethane	64	1.410	1.410	(0.337)	87182	20.0000	18.62
28 Chloroform	83	3.917	3.917	(0.935)	223718	20.0000	19.31
3 Chloromethane	50	1.080	1.080	(0.258)	153741	20.0000	18.78
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	142521	20.0000	19.46
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	207519	20.0000	18.87
55 Dibromochloromethane	129	7.176	7.176	(0.936)	116110	20.0000	18.86
44 Dibromomethane	93	5.557	5.557	(1.118)	79007	20.0000	18.77
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	113538	20.0000	19.90
61 Ethylbenzene	106	7.799	7.799	(1.017)	174975	20.0000	19.13
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	49814	20.0000	20.19
67 Isopropylbenzene	105	8.566	8.566	(1.117)	508270	20.0000	19.11
62 m,p-Xylenes	106	7.907	7.907	(1.031)	423076	40.0000	38.53
17 Methylene Chloride	84	2.305	2.305	(0.550)	137362	20.0000	20.58
87 n-Butylbenzene	91	9.998	9.998	(1.035)	363106	20.0000	19.30
73 n-Propylbenzene	91	8.917	8.917	(0.923)	600477	20.0000	19.28
92 Naphthalene	128	11.546	11.546	(1.195)	61326	20.0000	18.02
63 o-Xylene	106	8.243	8.243	(1.075)	206196	20.0000	19.23
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	487237	20.0000	19.10
64 Styrene	104	8.265	8.265	(1.078)	353788	20.0000	19.28
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	342131	20.0000	19.04
56 Tetrachloroethene	164	6.933	6.933	(0.904)	104308	20.0000	19.17
50 Toluene	91	6.453	6.453	(0.841)	537067	20.0000	19.26
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	121098	20.0000	19.55
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	174041	20.0000	18.99
38 Trichloroethene	130	5.214	5.214	(1.049)	129379	20.0000	18.87
8 Trichlorofluoromethane	101	1.568	1.568	(0.374)	168693	20.0000	19.41
5 Vinyl Chloride	62	1.145	1.145	(0.273)	146437	20.0000	18.96

QC Flag Legend

M - Compound response manually integrated.

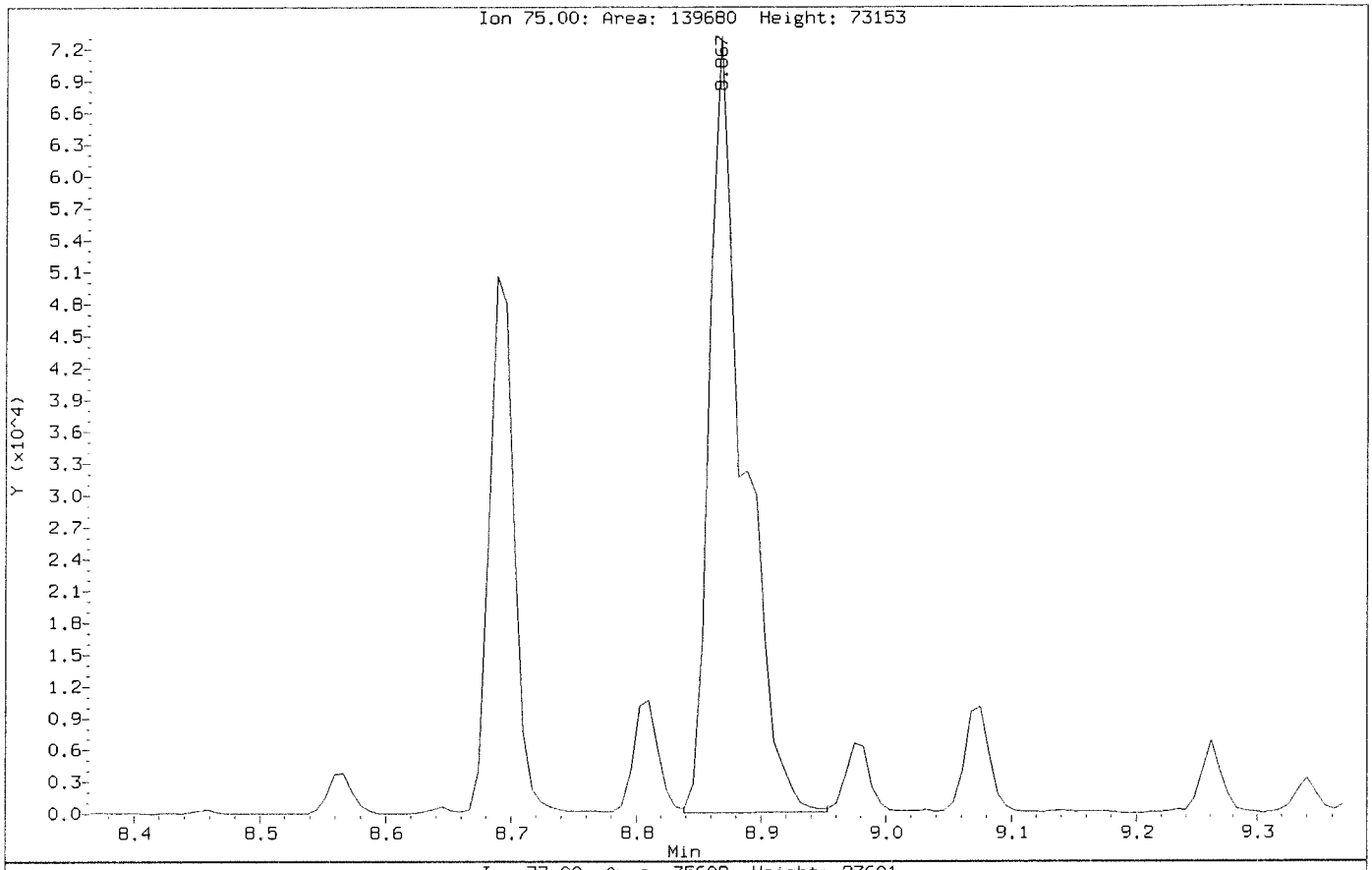


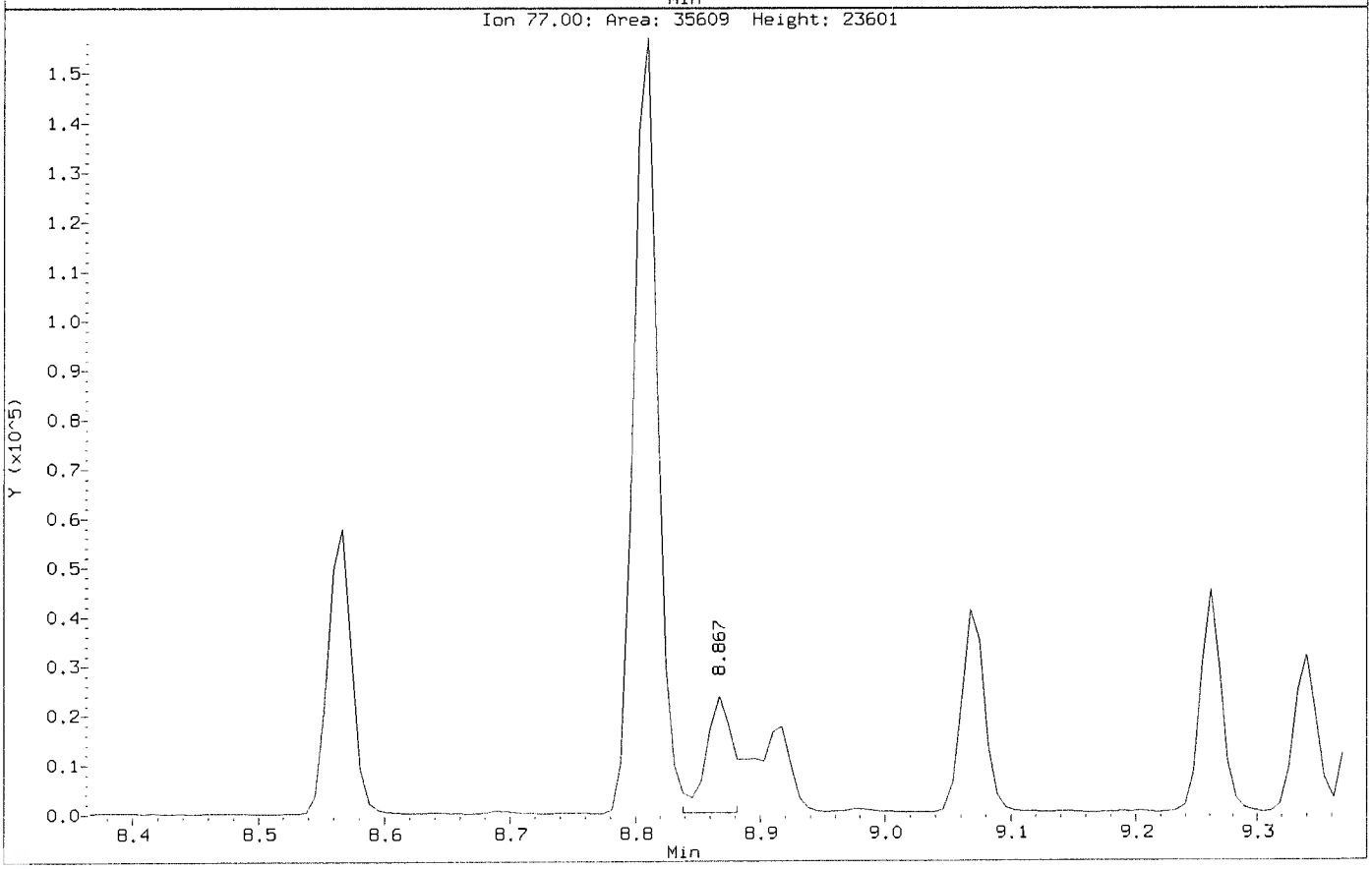
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Date : 24-SEP-2020 13:57
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092407.D
Injection Date: 24-SEP-2020 13:57
Instrument: voa6.i
Client Sample ID: VSTD020

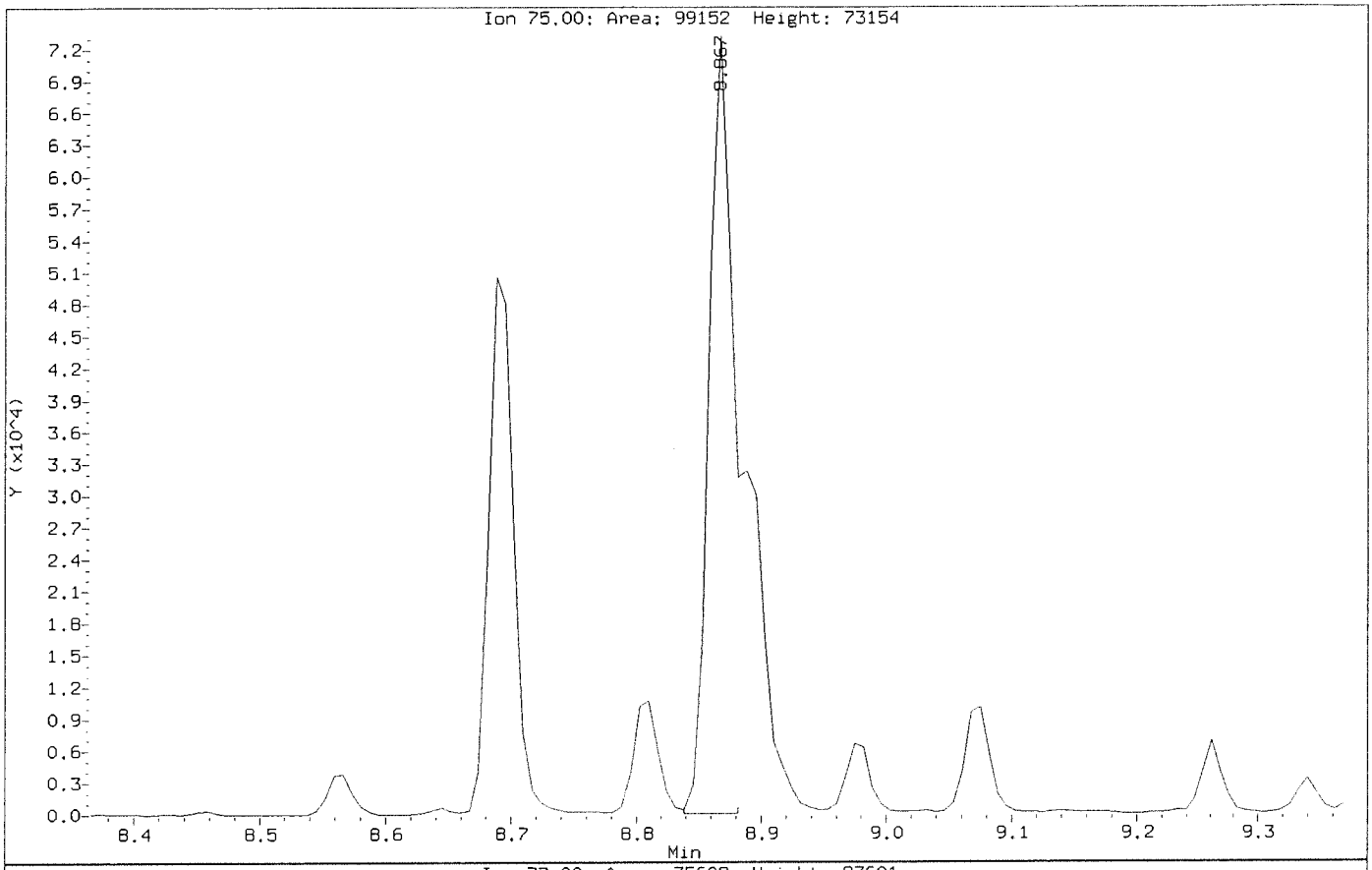
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

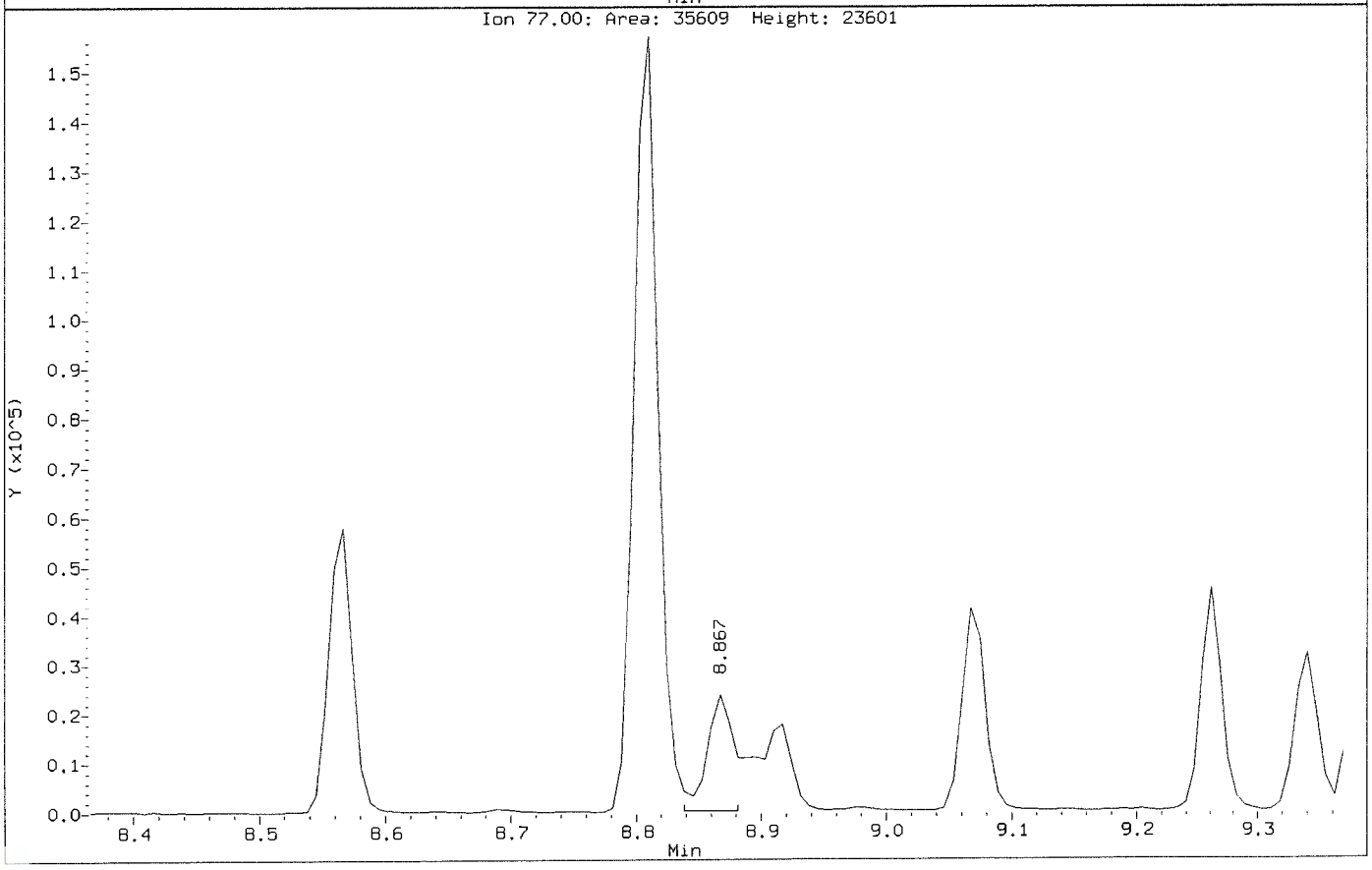




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Injection Date: 24-SEP-2020 13:57
Instrument: voa6.i
Client Sample ID: VSTD020

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092408.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 24-SEP-2020 14:21
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 13:57 Cal File: X092407.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

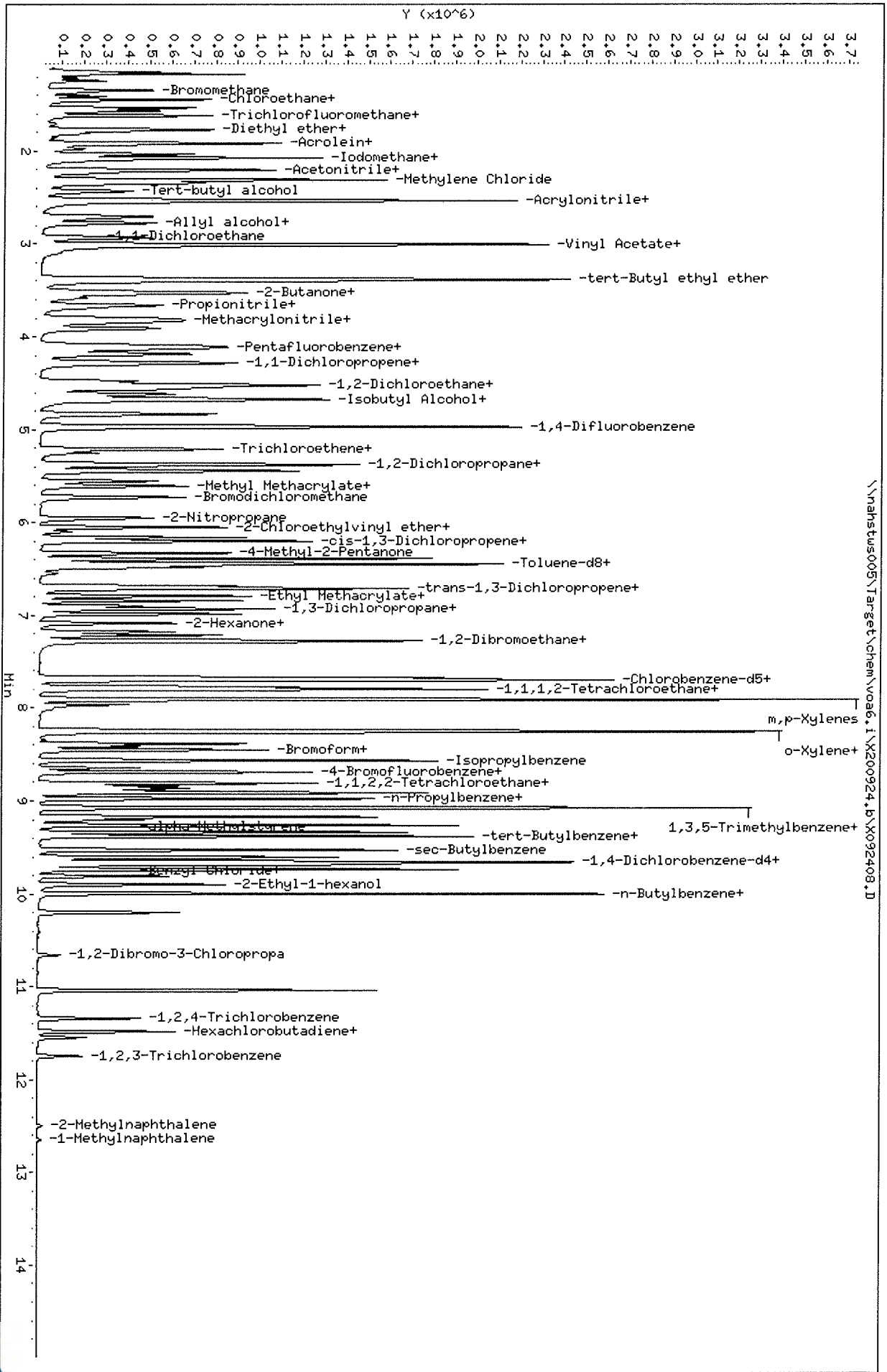
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	565166	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	910705	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	829935	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	353927	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	277712	50.0000	47.81
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	307872	50.0000	48.45
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1029825	50.0000	47.19
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	368645	50.0000	50.98
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	261758	50.0000	45.51
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	375794	50.0000	43.17
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	280829	50.0000	44.86
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	221270	50.0000	45.26
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	531332	50.0000	45.00
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	227518	50.0000	44.77
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	348526	50.0000	41.59
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	58736	50.0000	42.93
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	243402	50.0000	47.01(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	124784	50.0000	46.66
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	888516	50.0000	42.17
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	20616	50.0000	48.27
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	264089	50.0000	45.79
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	429312	50.0000	43.56

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092408.D Page 2
Report Date: 13-Oct-2020 11:23

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	356652	50.0000	45.42
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	311284	50.0000	46.16
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	863451	50.0000	41.31
83	1,3-Dichlorobenzene	146	9.604	9.604	(0.994)	490714	50.0000	43.10
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	455083	50.0000	45.00
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	481319	50.0000	42.57
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	383156	50.0000	43.18
24	2-Butanone	43	3.580	3.580	(0.855)	233034	100.000	112.95
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	761189	50.0000	41.38
52	2-Hexanone	43	7.090	7.090	(0.924)	356053	100.000	96.75
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	865469	50.0000	41.33
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	837442	50.0000	39.72
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	544400	100.000	93.44
10	Acetone	43	1.976	1.976	(0.472)	153009	100.000	114.11
37	Benzene	78	4.519	4.519	(0.909)	1162667	50.0000	44.63
74	Bromobenzene	156	8.809	8.809	(0.912)	314740	50.0000	44.00
29	Bromochloromethane	128	3.802	3.802	(0.908)	157955	50.0000	44.72
39	Bromodichloromethane	83	5.729	5.729	(1.153)	375833	50.0000	45.50
66	Bromoform	173	8.415	8.415	(1.097)	174123	50.0000	48.03
6	Bromomethane	94	1.345	1.345	(0.321)	218171	50.0000	47.91
19	Carbon Disulfide	76	2.076	2.076	(0.496)	1567013	100.000	89.27
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	295202	50.0000	40.52
59	Chlorobenzene	112	7.699	7.699	(1.004)	728183	50.0000	43.12
7	Chloroethane	64	1.403	1.403	(0.335)	194264	50.0000	43.87
28	Chloroform	83	3.917	3.917	(0.935)	502736	50.0000	45.89
3	Chloromethane	50	1.080	1.080	(0.258)	345422	50.0000	44.63
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	318945	50.0000	46.06
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	483233	50.0000	46.25
55	Dibromochloromethane	129	7.176	7.176	(0.936)	272125	50.0000	45.88
44	Dibromomethane	93	5.557	5.557	(1.118)	183392	50.0000	45.86
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	235600	50.0000	41.20
61	Ethylbenzene	106	7.799	7.799	(1.017)	371688	50.0000	42.17
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	102822	50.0000	41.71
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1038705	50.0000	40.53
62	m,p-Xylenes	106	7.907	7.907	(1.031)	890486	100.000	84.15
17	Methylene Chloride	84	2.305	2.305	(0.550)	303593	50.0000	49.06
87	n-Butylbenzene	91	9.998	9.998	(1.035)	731188	50.0000	40.09
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1216787	50.0000	40.30
92	Naphthalene	128	11.546	11.546	(1.195)	152719	50.0000	46.27
63	o-Xylene	106	8.243	8.243	(1.075)	447984	50.0000	43.35
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	958531	50.0000	38.76
64	Styrene	104	8.258	8.258	(1.077)	798852	50.0000	45.18
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	680800	50.0000	39.07
56	Tetrachloroethene	164	6.933	6.933	(0.904)	209713	50.0000	39.99
50	Toluene	91	6.446	6.446	(0.840)	1151574	50.0000	42.86
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	264379	50.0000	45.15
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	410118	50.0000	47.09
38	Trichloroethene	130	5.214	5.214	(1.049)	284429	50.0000	43.66
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	351293	50.0000	42.75
5	Vinyl Chloride	62	1.145	1.145	(0.273)	327079	50.0000	44.80

QC Flag Legend

M - Compound response manually integrated.

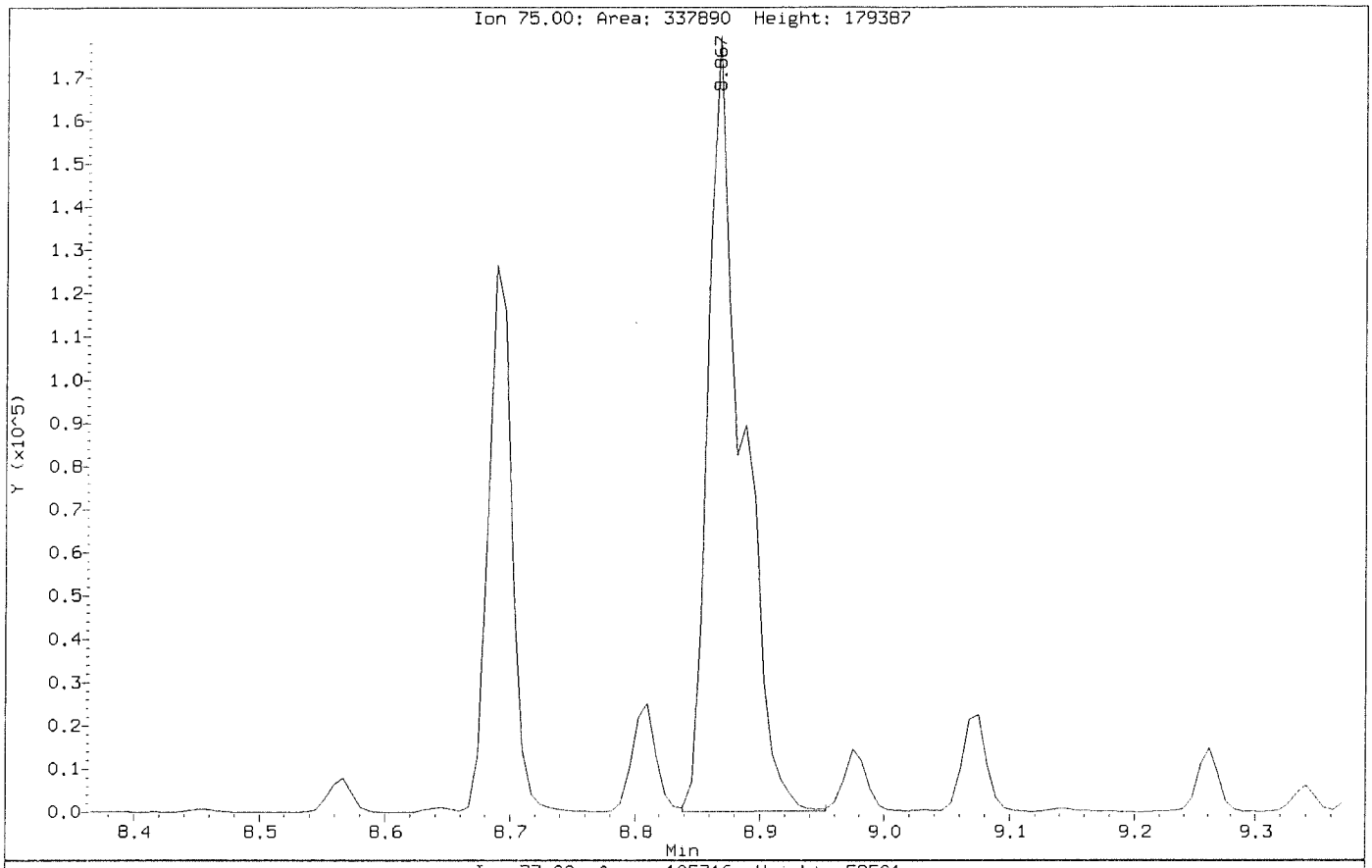


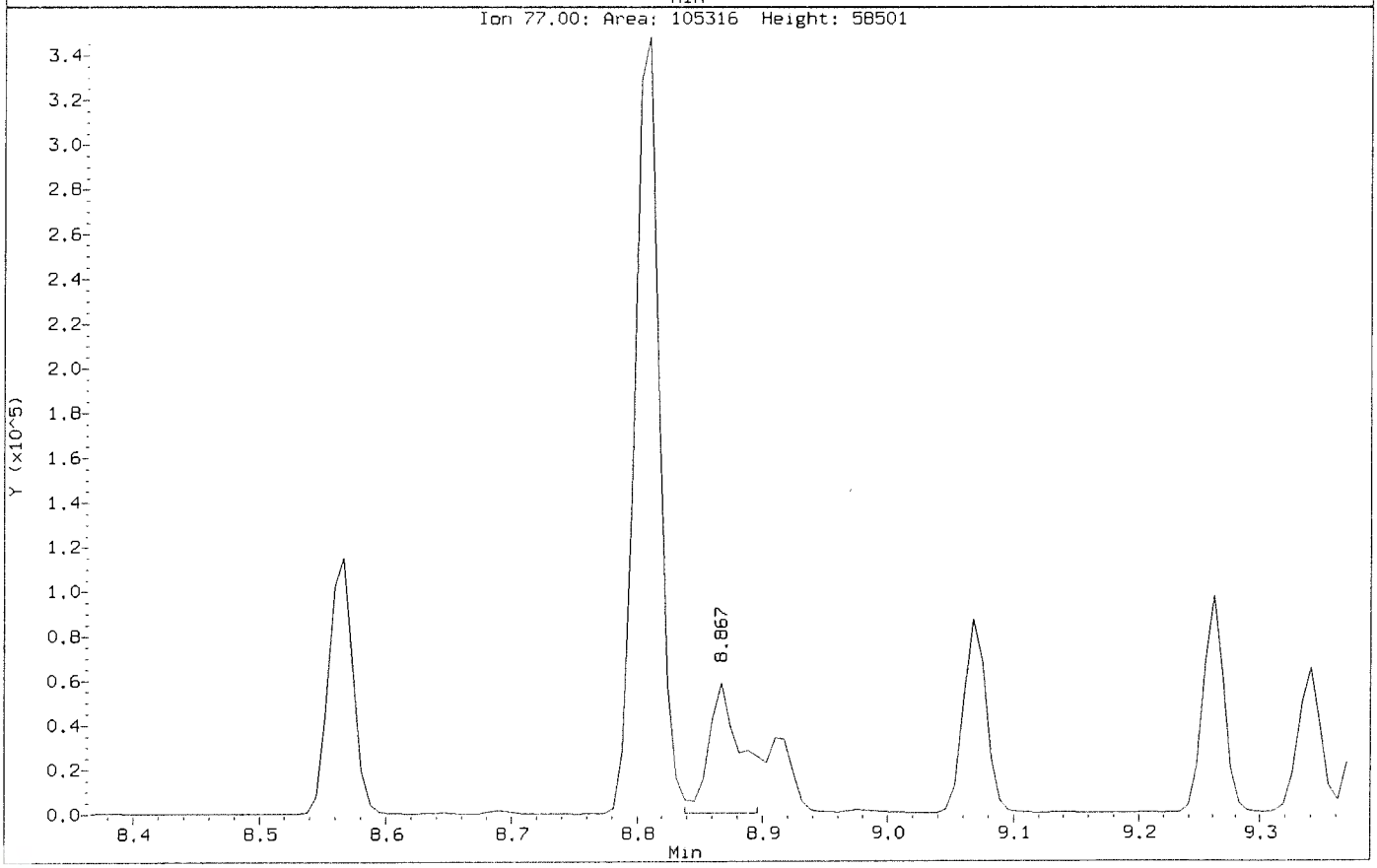
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Date : 24-SEP-2020 14:21
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Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092408.D
Injection Date: 24-SEP-2020 14:21
Instrument: voa6.i
Client Sample ID: VSTD050

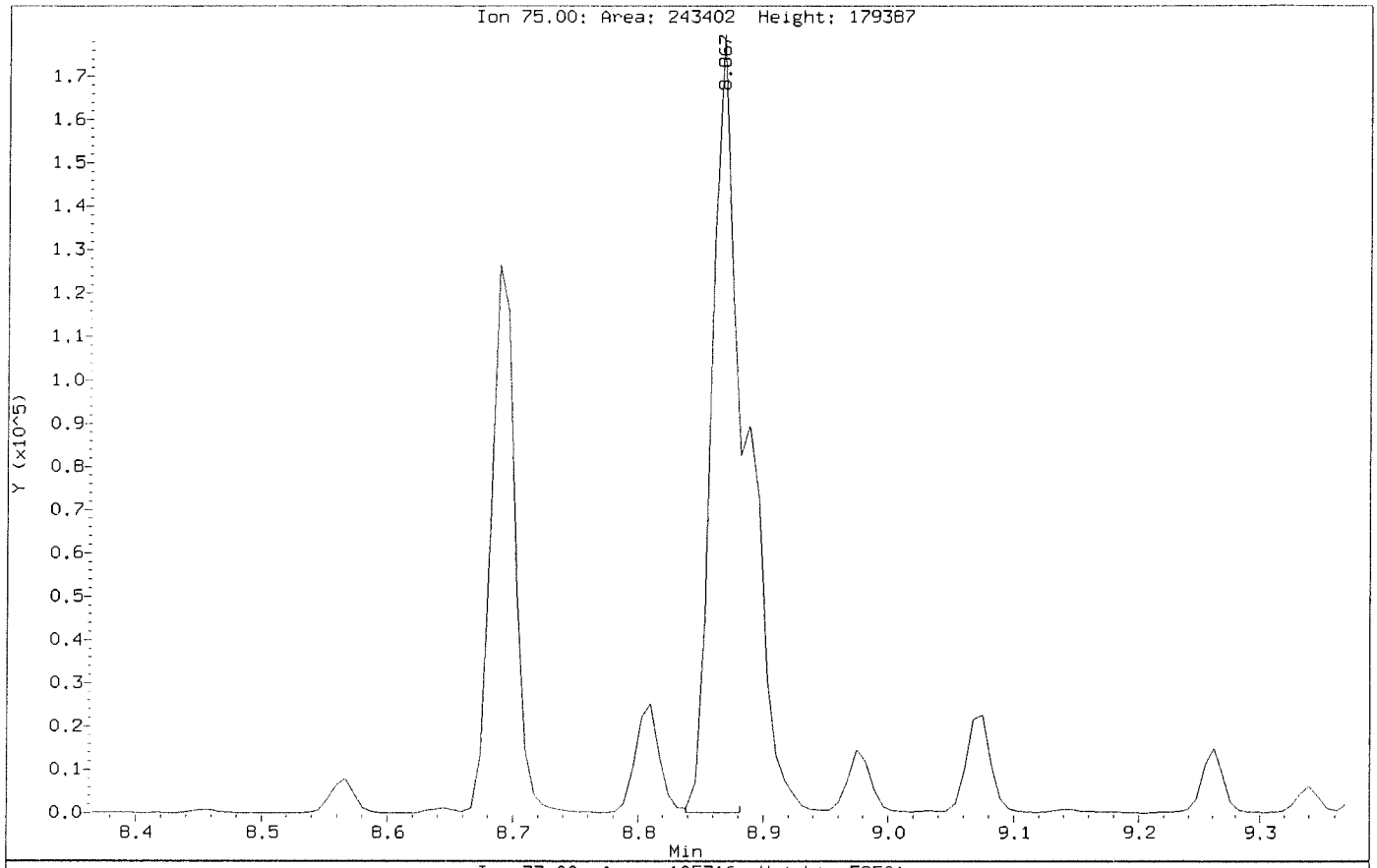
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

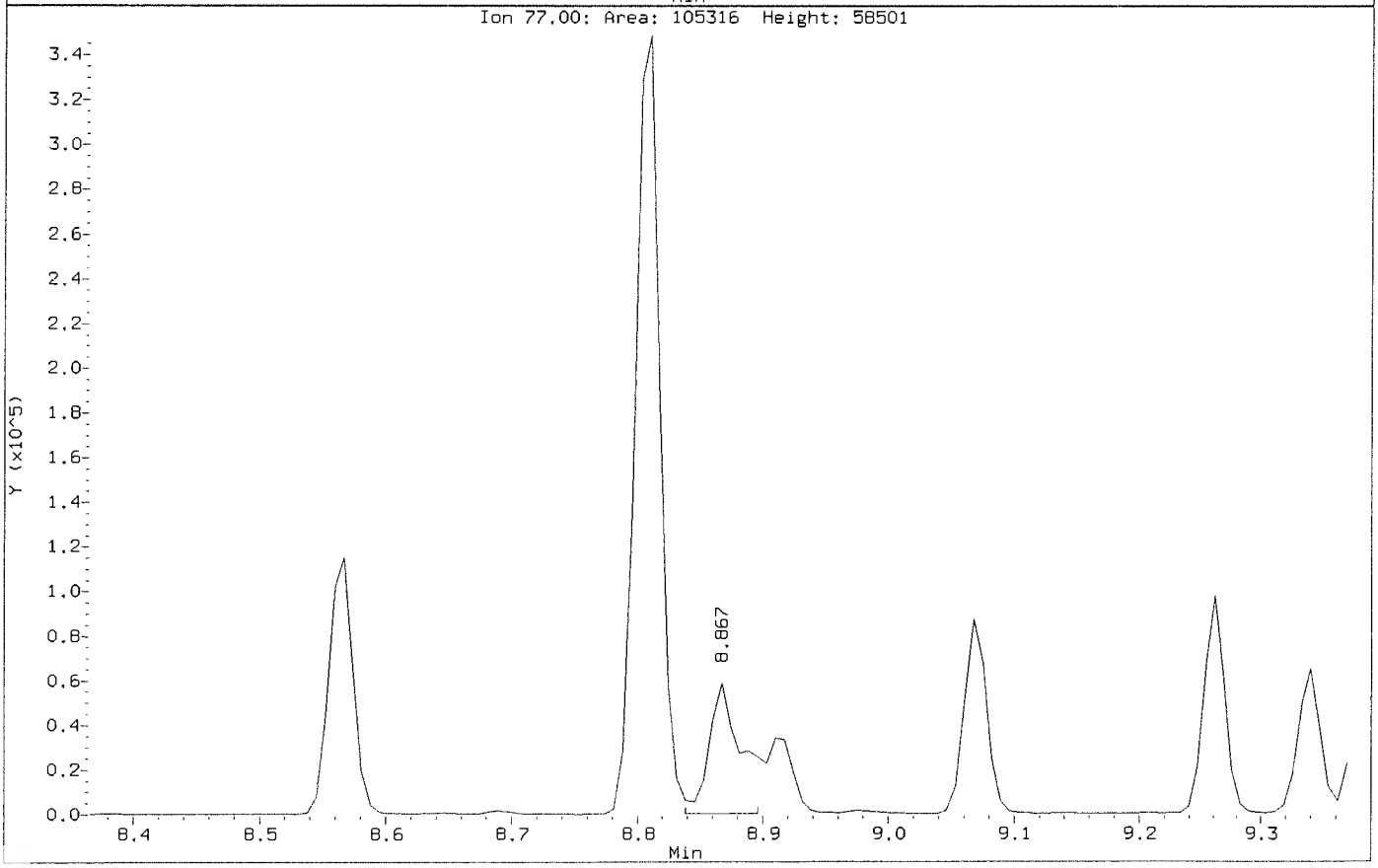




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Injection Date: 24-SEP-2020 14:21
Instrument: voa6.i
Client Sample ID: VSTD050

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092409.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 24-SEP-2020 14:45
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

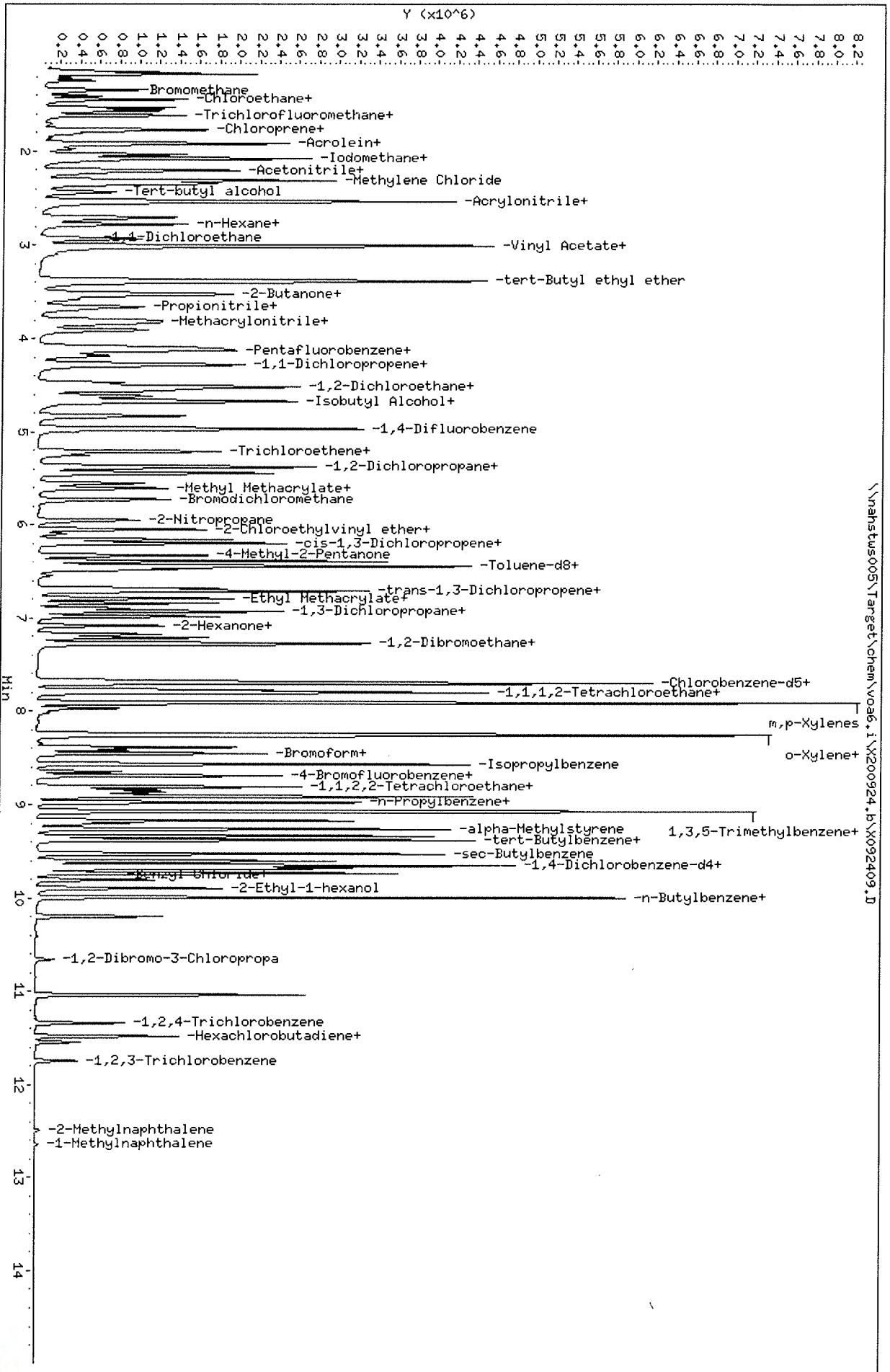
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	546812	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	873571	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	810573	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	336603	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	537287	100.000	95.62
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	594732	100.000	96.75
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1988260	100.000	93.29
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	706326	100.000	100.80
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	538620	100.000	95.88
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	828059	100.000	98.32
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	532212	100.000	89.41
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	433386	100.000	90.78
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	1082912	100.000	94.79
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	479537	100.000	97.53
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	781119	100.000	97.19
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	119849	100.000	92.12
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	460144	100.000	93.45(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	247364	100.000	95.77
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1944092	100.000	97.02
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	36517	100.000	89.90
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	516275	100.000	91.65
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	885366	100.000	94.45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	692994	100.000	92.00
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	624040	100.000	96.47
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1952542	100.000	98.23
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	1045261	100.000	96.54
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	889978	100.000	90.12
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1008581	100.000	93.80
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	819698	100.000	95.49
24	2-Butanone	43	3.581	3.581	(0.855)	417435	200.000	209.13(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	1648682	100.000	94.26
52	2-Hexanone	43	7.090	7.090	(0.924)	693153	200.000	192.85
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1878301	100.000	94.32
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1988284	100.000	99.17
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	1045952	200.000	183.82
10	Acetone	43	1.976	1.976	(0.472)	255829	200.000	200.90(A)
37	Benzene	78	4.519	4.519	(0.909)	2385190	100.000	95.46
74	Bromobenzene	156	8.810	8.810	(0.911)	651117	100.000	95.72
29	Bromochloromethane	128	3.803	3.803	(0.908)	312045	100.000	91.31
39	Bromodichloromethane	83	5.729	5.729	(1.153)	761611	100.000	96.13
66	Bromoform	173	8.416	8.416	(1.097)	347277	100.000	98.08
6	Bromomethane	94	1.346	1.346	(0.321)	446857	100.000	101.69
19	Carbon Disulfide	76	2.076	2.076	(0.496)	3373538	200.000	198.64
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	697129	100.000	99.76
59	Chlorobenzene	112	7.699	7.699	(1.004)	1517748	100.000	92.03
7	Chloroethane	64	1.403	1.403	(0.335)	407389	100.000	95.10
28	Chloroform	83	3.910	3.910	(0.933)	1002276	100.000	94.56
3	Chloromethane	50	1.081	1.081	(0.258)	754195	100.000	100.72
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	637736	100.000	95.19
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	968365	100.000	96.62
55	Dibromochloromethane	129	7.176	7.176	(0.936)	550586	100.000	95.05
44	Dibromomethane	93	5.558	5.558	(1.118)	359271	100.000	93.66
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	565982	100.000	99.24
61	Ethylbenzene	106	7.800	7.800	(1.017)	812673	100.000	94.40
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	246513	100.000	102.01
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2411893	100.000	96.36
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1946449	200.000	188.34
17	Methylene Chloride	84	2.306	2.306	(0.550)	605902	100.000	101.96
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1770652	100.000	102.08
73	n-Propylbenzene	91	8.917	8.917	(0.922)	2876371	100.000	100.17
92	Naphthalene	128	11.546	11.546	(1.194)	292674	100.000	93.24
63	o-Xylene	106	8.244	8.244	(1.075)	955661	100.000	94.69
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2338282	100.000	99.42
64	Styrene	104	8.258	8.258	(1.077)	1628033	100.000	94.29
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	1601570	100.000	96.66
56	Tetrachloroethene	164	6.933	6.933	(0.904)	489193	100.000	95.52
50	Toluene	91	6.453	6.453	(0.841)	2417385	100.000	92.13
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	548910	100.000	96.90
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	812915	100.000	97.32
38	Trichloroethene	130	5.214	5.214	(1.049)	604179	100.000	96.69
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	806123	100.000	101.40
5	Vinyl Chloride	62	1.145	1.145	(0.273)	730234	100.000	103.38

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

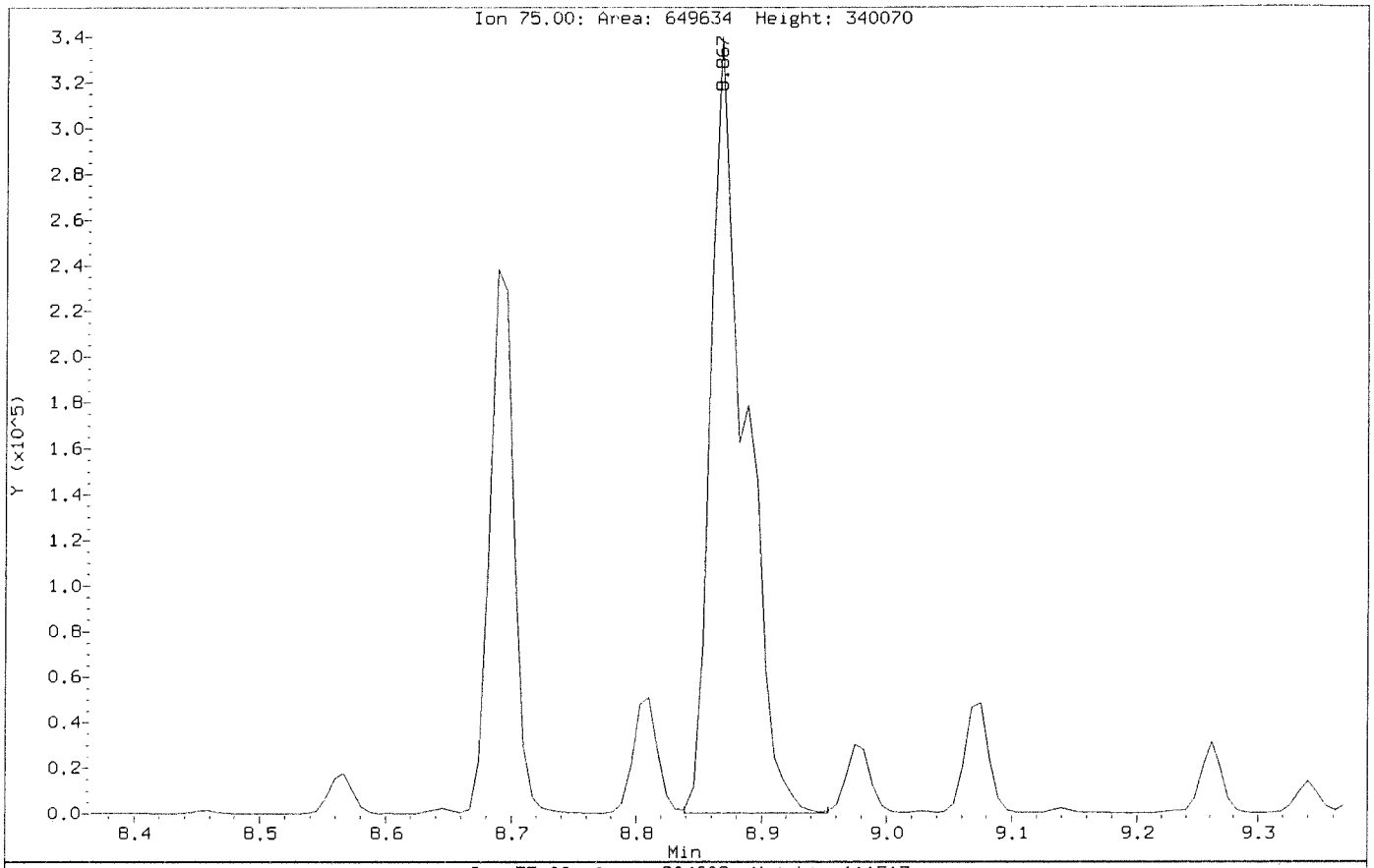


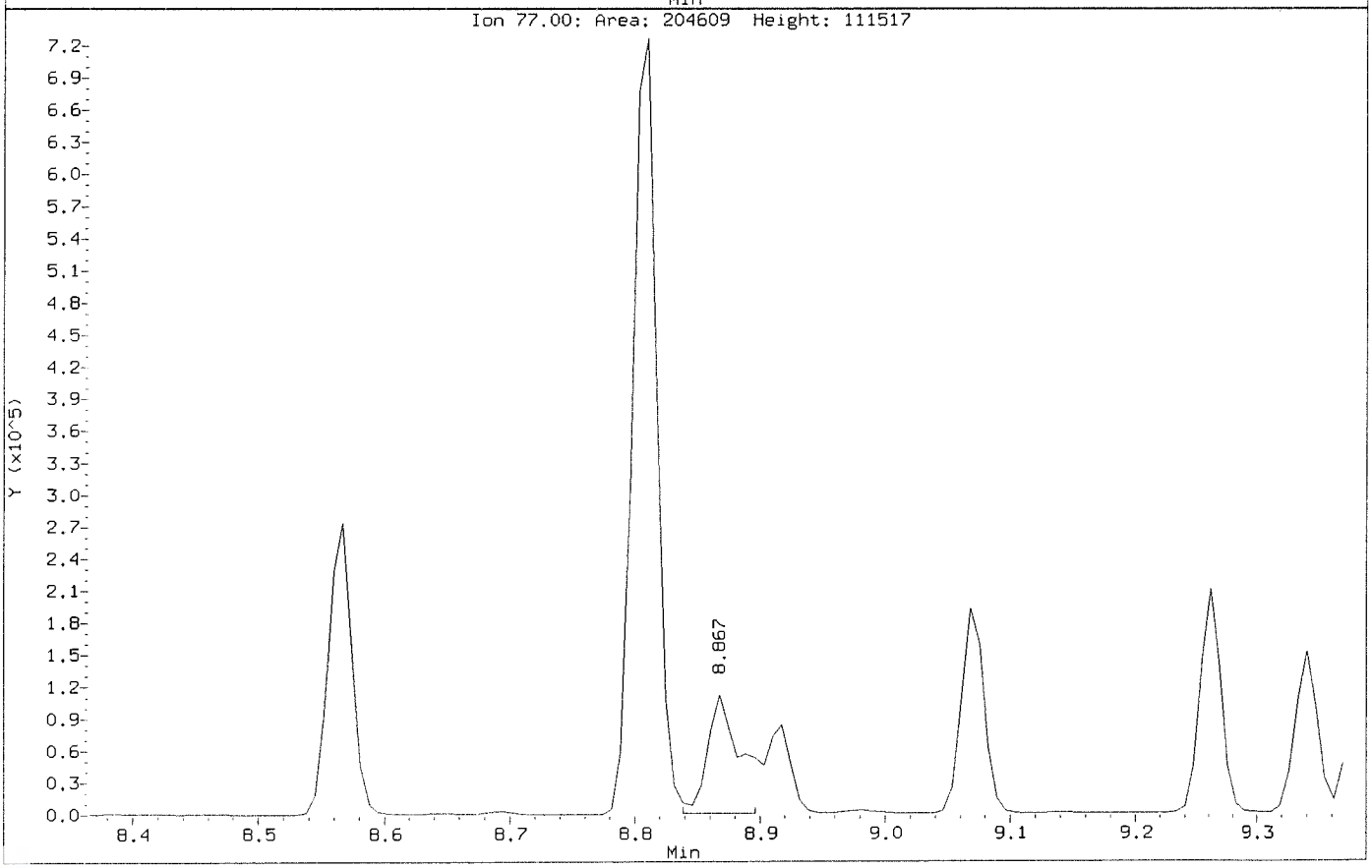
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Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092409.D
Injection Date: 24-SEP-2020 14:45
Instrument: voa6.i
Client Sample ID: VSTD100

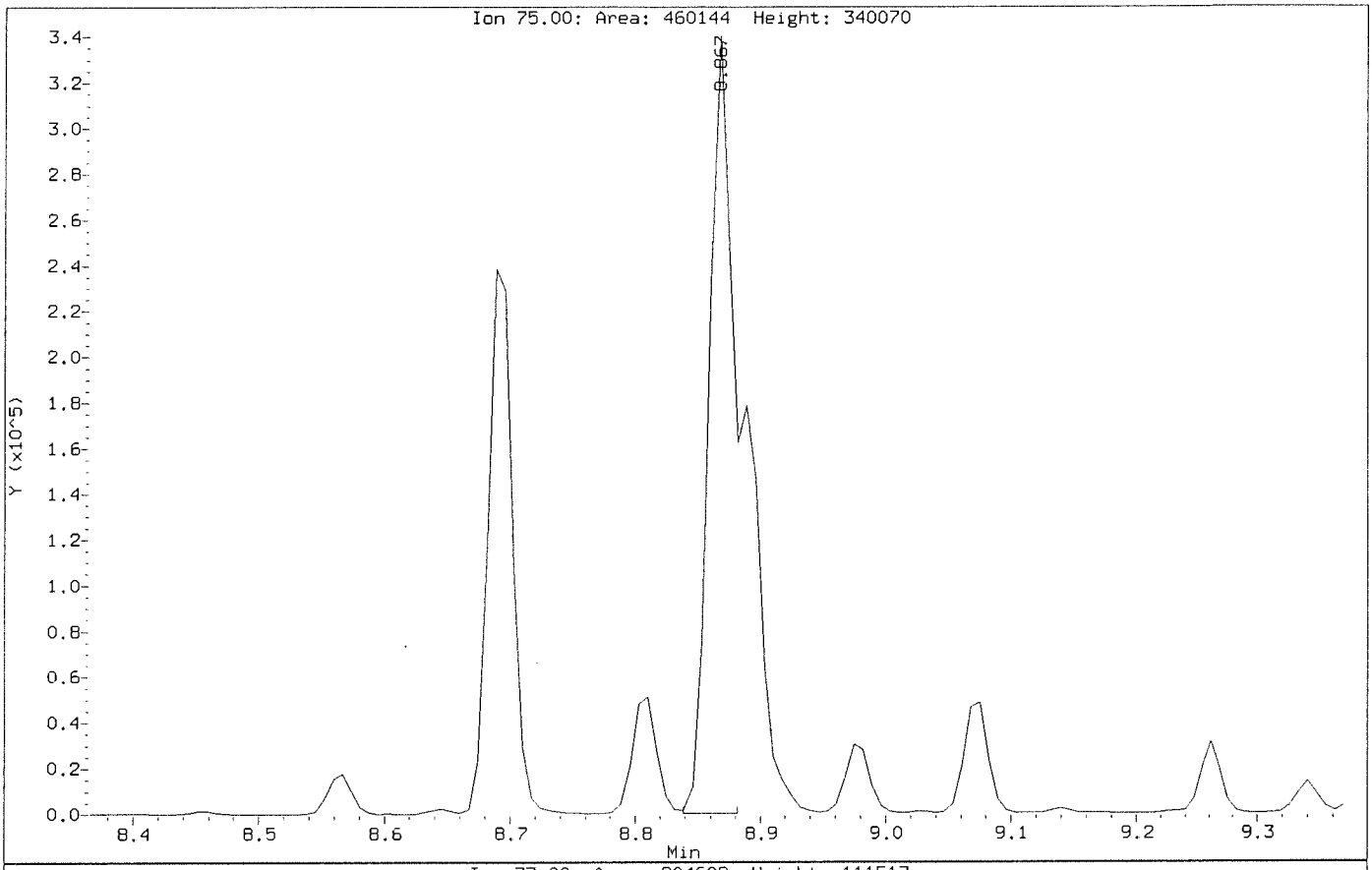
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

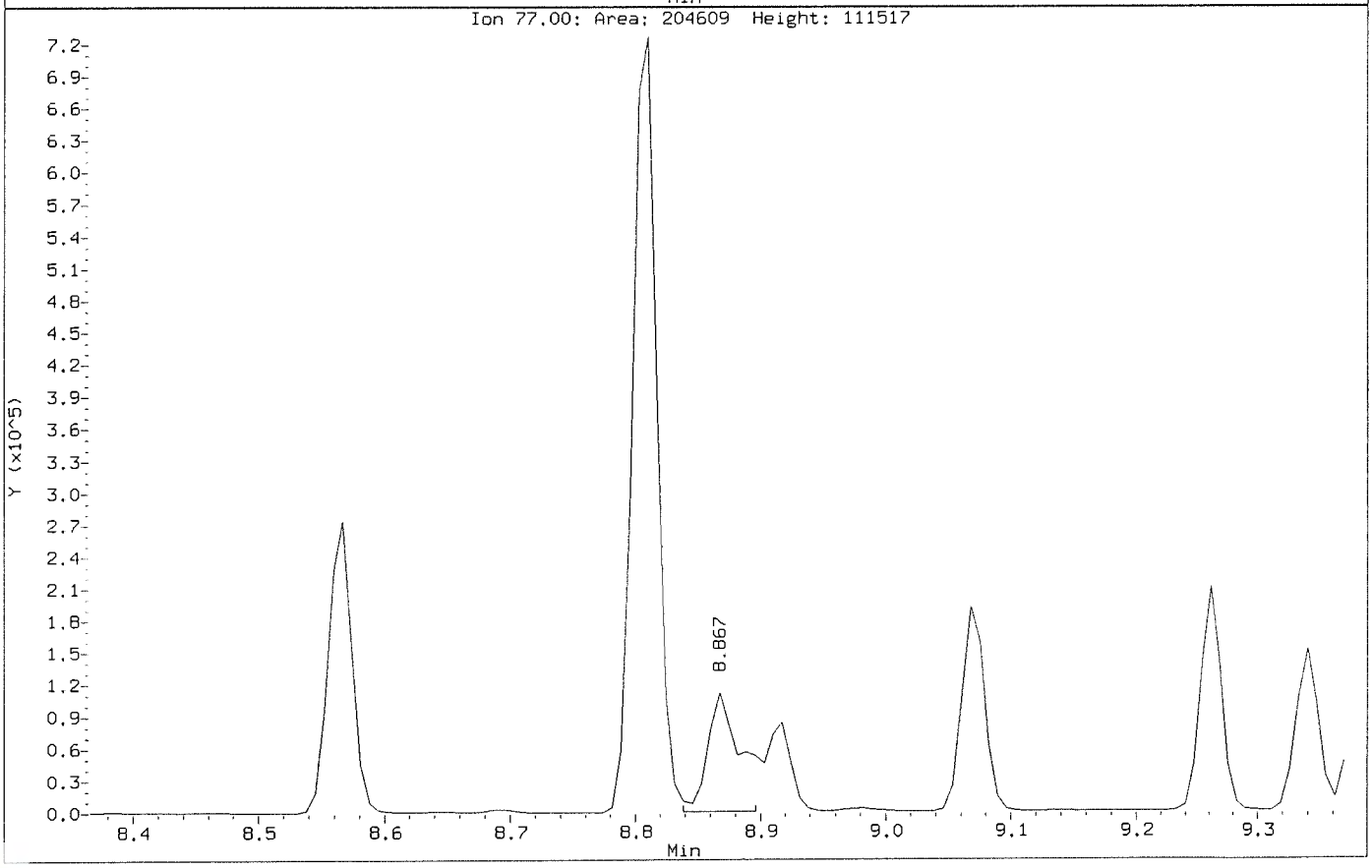




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Injection Date: 24-SEP-2020 14:45
Instrument: voa6.i
Client Sample ID: VSTD100

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





Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092410.D Page 1
Report Date: 13-Oct-2020 11:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092410.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 24-SEP-2020 15:09
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\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:45 Cal File: X092409.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

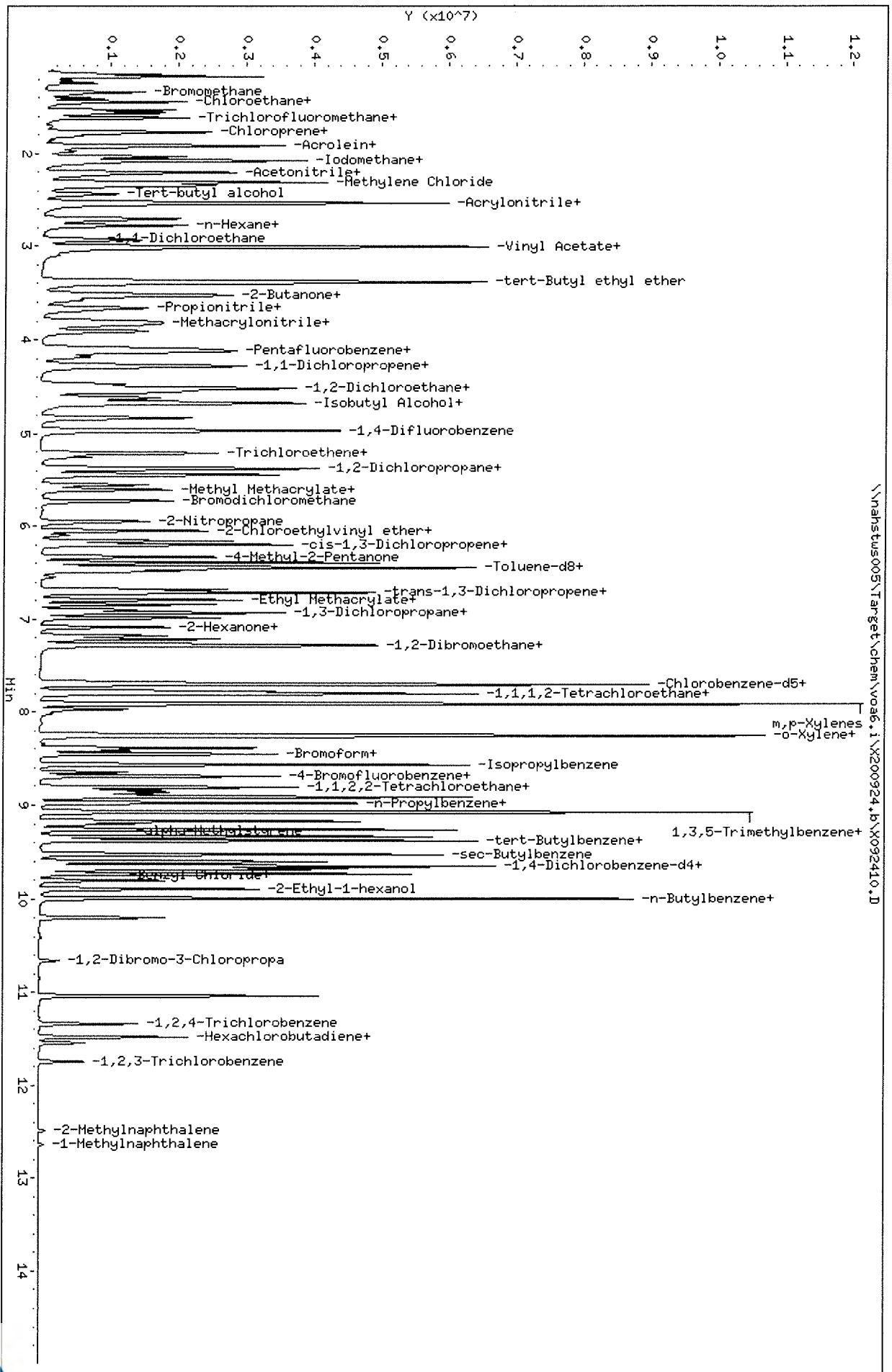
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	531920	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	840978	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	779079	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	329958	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	770629	150.000	140.98
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	856168	150.000	143.18
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	2823072	150.000	137.82
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	1011330	150.000	150.58
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	783989	150.000	145.21
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1209503	150.000	147.63
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	804309	150.000	137.84
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	627933	150.000	136.85
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	1562221	150.000	140.58
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	699764	150.000	146.31
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	1139618	150.000	147.30
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	196114	150.000	153.78
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	678354	150.000	140.54(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	386588	150.000	151.87
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	2817092	150.000	143.42
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	57707	150.000	144.92
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	761017	150.000	140.56
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	1308650	150.000	142.42

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092410.D Page 2
Report Date: 13-Oct-2020 11:23

						AMOUNTS	
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	1012585	150.000	139.64
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	904655	150.000	145.27
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	2822481	150.000	144.86
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1521632	150.000	143.37
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	1302913	150.000	137.27
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1489597	150.000	141.33
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	1188510	150.000	142.34
24 2-Butanone	43	3.581	3.581	(0.855)	625735	300.000	322.26(A)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	2388112	150.000	139.28
52 2-Hexanone	43	7.090	7.090	(0.924)	1024572	300.000	296.58(A)
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	2725898	150.000	139.64
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	2920943	150.000	148.63
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1567164	300.000	286.56(A)
10 Acetone	43	1.976	1.976	(0.472)	368697	300.000	300.09(A)
37 Benzene	78	4.519	4.519	(0.909)	3448252	150.000	143.36
74 Bromobenzene	156	8.810	8.810	(0.911)	951989	150.000	142.77
29 Bromochloromethane	128	3.803	3.803	(0.908)	454072	150.000	136.59
39 Bromodichloromethane	83	5.729	5.729	(1.153)	1108506	150.000	145.34
66 Bromoform	173	8.416	8.416	(1.097)	517500	150.000	152.06
6 Bromomethane	94	1.338	1.338	(0.320)	643333	150.000	150.62
19 Carbon Disulfide	76	2.076	2.076	(0.496)	4895270	300.000	296.32(A)
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	1027004	150.000	152.66
59 Chlorobenzene	112	7.699	7.699	(1.004)	2206389	150.000	139.20
7 Chloroethane	64	1.403	1.403	(0.335)	578170	150.000	138.75
28 Chloroform	83	3.910	3.910	(0.933)	1456902	150.000	141.30
3 Chloromethane	50	1.081	1.081	(0.258)	1119689	150.000	153.71
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	926983	150.000	142.24
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1418593	150.000	147.03
55 Dibromochloromethane	129	7.176	7.176	(0.936)	806662	150.000	144.89
44 Dibromomethane	93	5.558	5.558	(1.118)	521767	150.000	141.30
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	843912	150.000	151.02
61 Ethylbenzene	106	7.800	7.800	(1.017)	1183946	150.000	143.10
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	372303	150.000	154.25
67 Isopropylbenzene	105	8.566	8.566	(1.117)	3498166	150.000	145.41
62 m,p-Xylenes	106	7.907	7.907	(1.031)	2812643	300.000	283.15(A)
17 Methylene Chloride	84	2.305	2.305	(0.550)	861961	150.000	149.44
87 n-Butylbenzene	91	9.999	9.999	(1.034)	2576017	150.000	151.51
73 n-Propylbenzene	91	8.917	8.917	(0.922)	4173432	150.000	148.27
92 Naphthalene	128	11.546	11.546	(1.194)	477401	150.000	155.15
63 o-Xylene	106	8.244	8.244	(1.075)	1381156	150.000	142.38
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	3408972	150.000	147.86
64 Styrene	104	8.265	8.265	(1.078)	2356658	150.000	142.01
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	2344446	150.000	144.35
56 Tetrachloroethene	164	6.933	6.933	(0.904)	708095	150.000	143.86
50 Toluene	91	6.453	6.453	(0.841)	3514507	150.000	139.36
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	794499	150.000	144.18
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1206197	150.000	150.00
38 Trichloroethene	130	5.207	5.207	(1.048)	882316	150.000	146.68
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	1178939	150.000	152.45
5 Vinyl Chloride	62	1.145	1.145	(0.273)	1069212	150.000	155.61

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

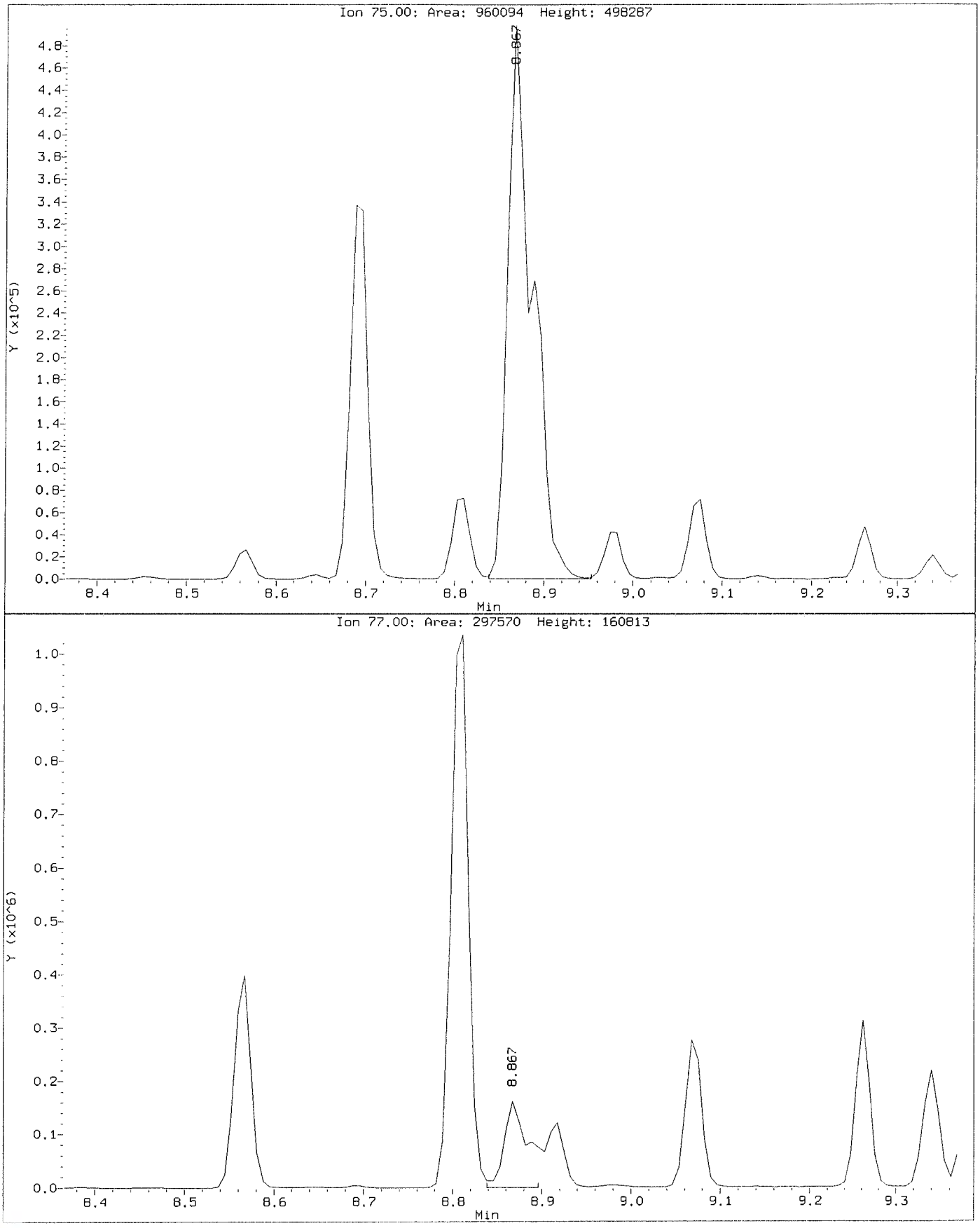


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Purge Volume: 5.0
Column phase: DB624

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

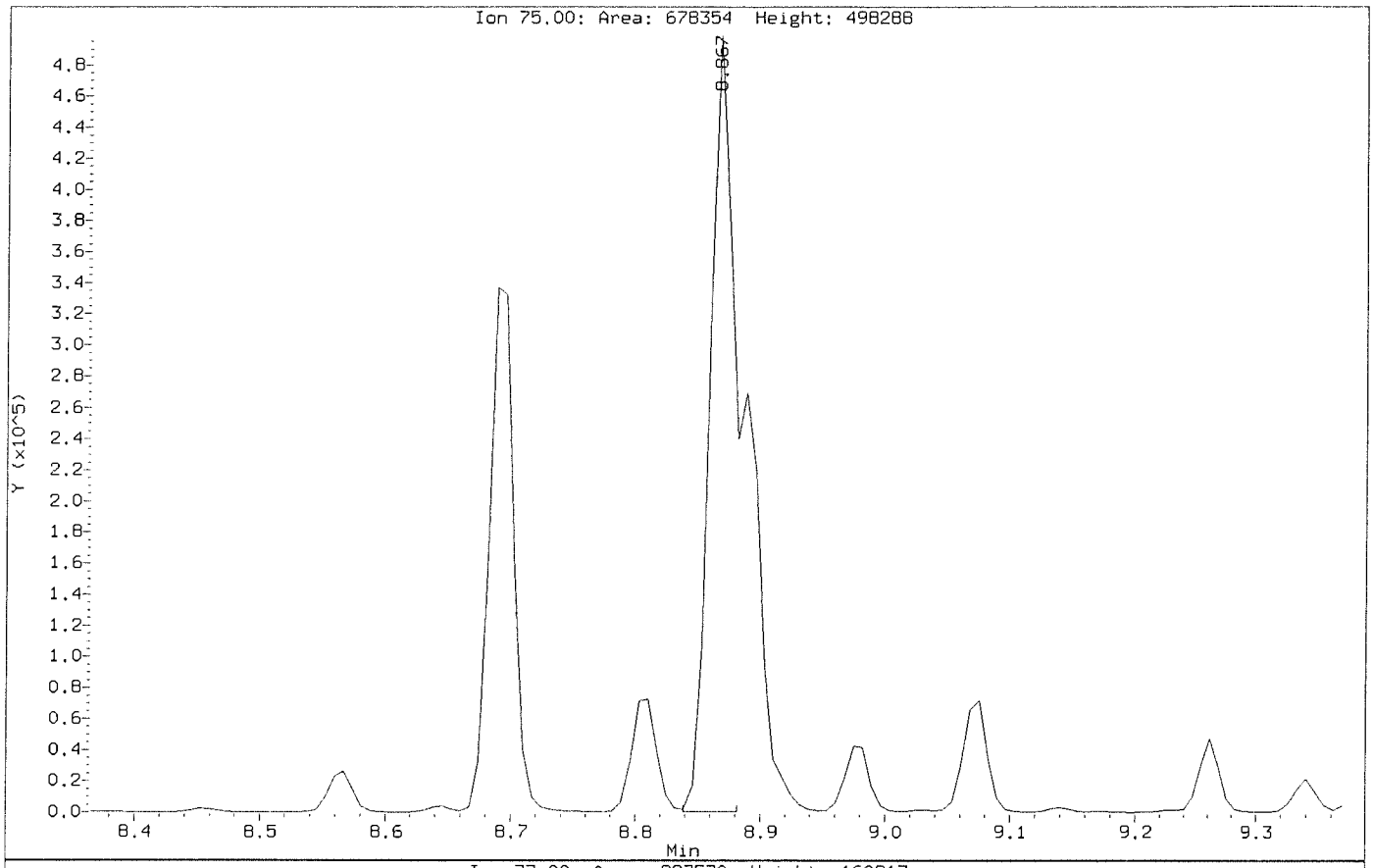
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Instrument: voa6.i
Client Sample ID: VSTD150

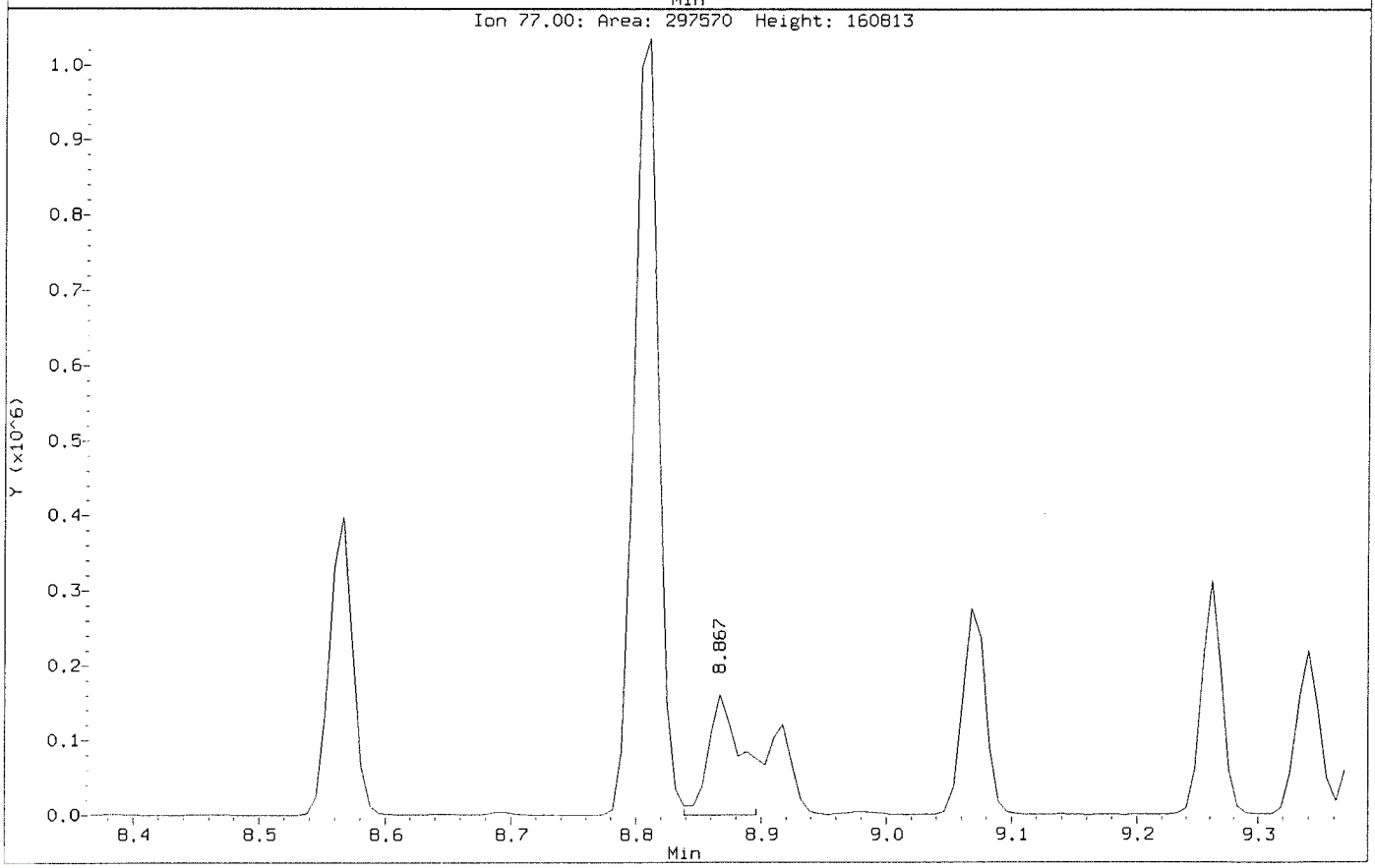
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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Injection Date: 24-SEP-2020 15:09
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\X200924.b\X092411.D
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Inj Date : 24-SEP-2020 15:33
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 15:09 Cal File: X092410.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

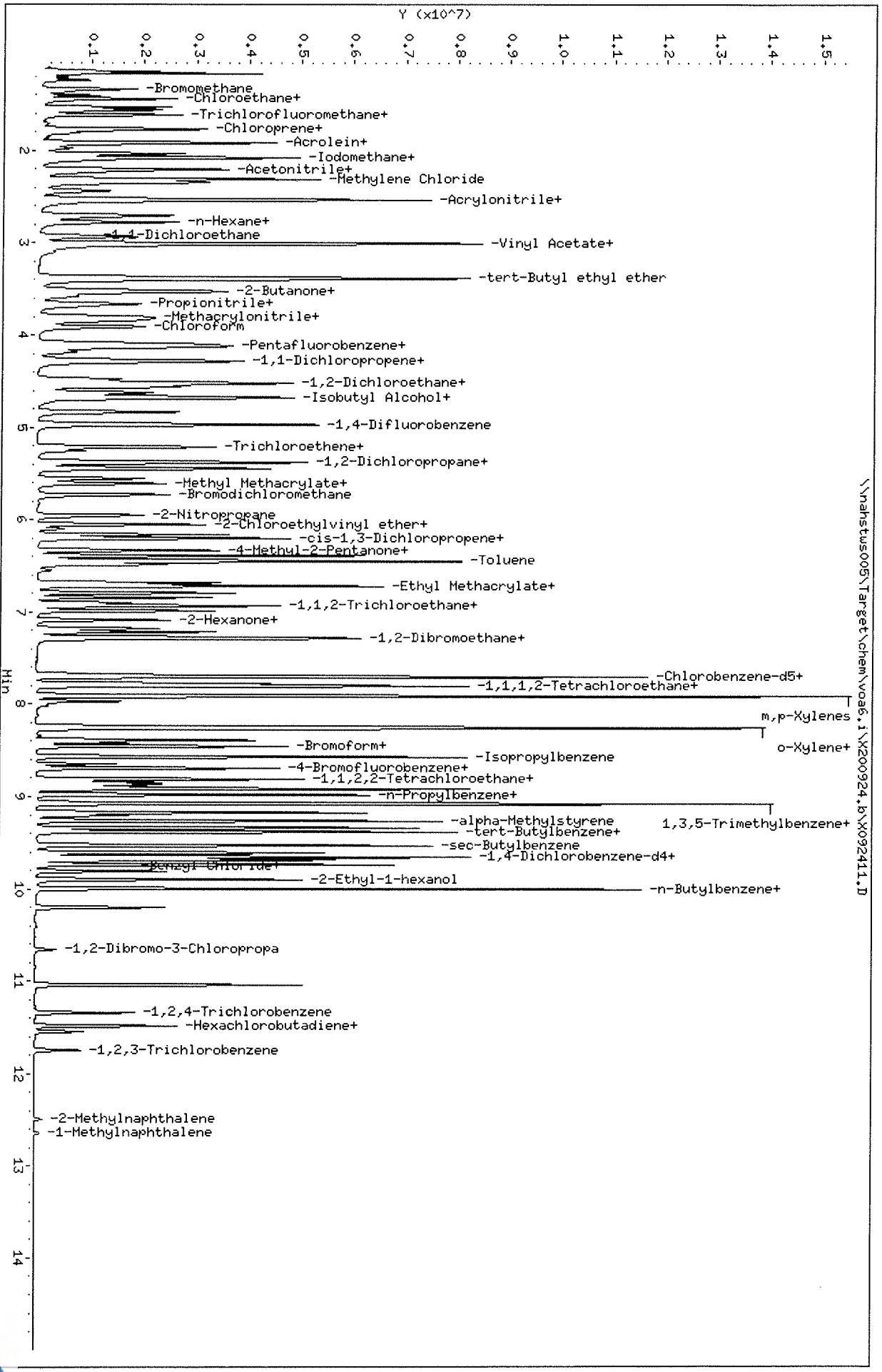
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	514617	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	818151	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	766117	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	319805	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	997974	200.000	188.72
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	1108704	200.000	191.65
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	3650737	200.000	181.25
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	1311827	200.000	198.89
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1023952	200.000	192.86
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	1570020	200.000	198.08
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1009059	200.000	178.42
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	811095	200.000	179.76
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	2021086	200.000	187.99
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	898417	200.000	194.16
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	1470799	200.000	195.41
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	252027	200.000	203.90(A)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	845182	200.000	180.66(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	497987	200.000	201.39(A)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	3640675	200.000	191.23
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	75498	200.000	195.63
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	982108	200.000	184.47
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	1668003	200.000	187.30

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092411.D Page 2
Report Date: 13-Oct-2020 11:23

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	1311886	200.000	185.97
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	1174366	200.000	193.85
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	3615186	200.000	191.44
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1939698	200.000	188.57
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1687479	200.000	180.80
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1908950	200.000	186.87
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	1529599	200.000	189.35
24	2-Butanone	43	3.580	3.580	(0.855)	794870	400.000	423.13(A)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	3075929	200.000	185.09
52	2-Hexanone	43	7.090	7.090	(0.924)	1315951	400.000	387.37(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	3499907	200.000	184.98
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	3720558	200.000	195.33
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	2021801	400.000	375.95(A)
10	Acetone	43	1.976	1.976	(0.472)	468128	400.000	395.42(A)
37	Benzene	78	4.519	4.519	(0.909)	4491768	200.000	191.96
74	Bromobenzene	156	8.809	8.809	(0.911)	1227148	200.000	189.89
29	Bromochloromethane	128	3.803	3.803	(0.908)	585962	200.000	182.19
39	Bromodichloromethane	83	5.729	5.729	(1.153)	1448888	200.000	195.26
66	Bromoform	173	8.416	8.416	(1.097)	667425	200.000	199.43
6	Bromomethane	94	1.338	1.338	(0.320)	822601	200.000	199.15
19	Carbon Disulfide	76	2.076	2.076	(0.496)	6314905	400.000	395.11(A)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	1334523	200.000	203.90(A)
59	Chlorobenzene	112	7.699	7.699	(1.004)	2881341	200.000	184.87
7	Chloroethane	64	1.403	1.403	(0.335)	746987	200.000	185.30
28	Chloroform	83	3.910	3.910	(0.933)	1888897	200.000	189.35
3	Chloromethane	50	1.081	1.081	(0.258)	1519539	200.000	215.62(A)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	1197643	200.000	189.96
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1863781	200.000	198.57
55	Dibromochloromethane	129	7.176	7.176	(0.936)	1046893	200.000	191.23
44	Dibromomethane	93	5.557	5.557	(1.118)	676562	200.000	188.33
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	1091943	200.000	201.27(A)
61	Ethylbenzene	106	7.807	7.807	(1.018)	1537966	200.000	189.03
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	468444	200.000	197.29
67	Isopropylbenzene	105	8.566	8.566	(1.117)	4482158	200.000	189.47
62	m,p-Xylenes	106	7.907	7.907	(1.031)	3653571	400.000	374.04(A)
17	Methylene Chloride	84	2.305	2.305	(0.550)	1112263	200.000	199.56
87	n-Butylbenzene	91	9.999	9.999	(1.034)	3292137	200.000	199.77
73	n-Propylbenzene	91	8.917	8.917	(0.922)	5360526	200.000	196.50
92	Naphthalene	128	11.546	11.546	(1.194)	612632	200.000	205.43(A)
63	o-Xylene	106	8.244	8.244	(1.075)	1788902	200.000	187.54
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	4353469	200.000	194.82
64	Styrene	104	8.265	8.265	(1.078)	3107739	200.000	190.44
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	2997110	200.000	190.39
56	Tetrachloroethene	164	6.933	6.933	(0.904)	917390	200.000	189.53
50	Toluene	91	6.453	6.453	(0.841)	4536037	200.000	182.92
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	1022675	200.000	191.84
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1572450	200.000	201.00(A)
38	Trichloroethene	130	5.214	5.214	(1.049)	1150173	200.000	196.54
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	1512632	200.000	202.18(A)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	1412833	200.000	212.53(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

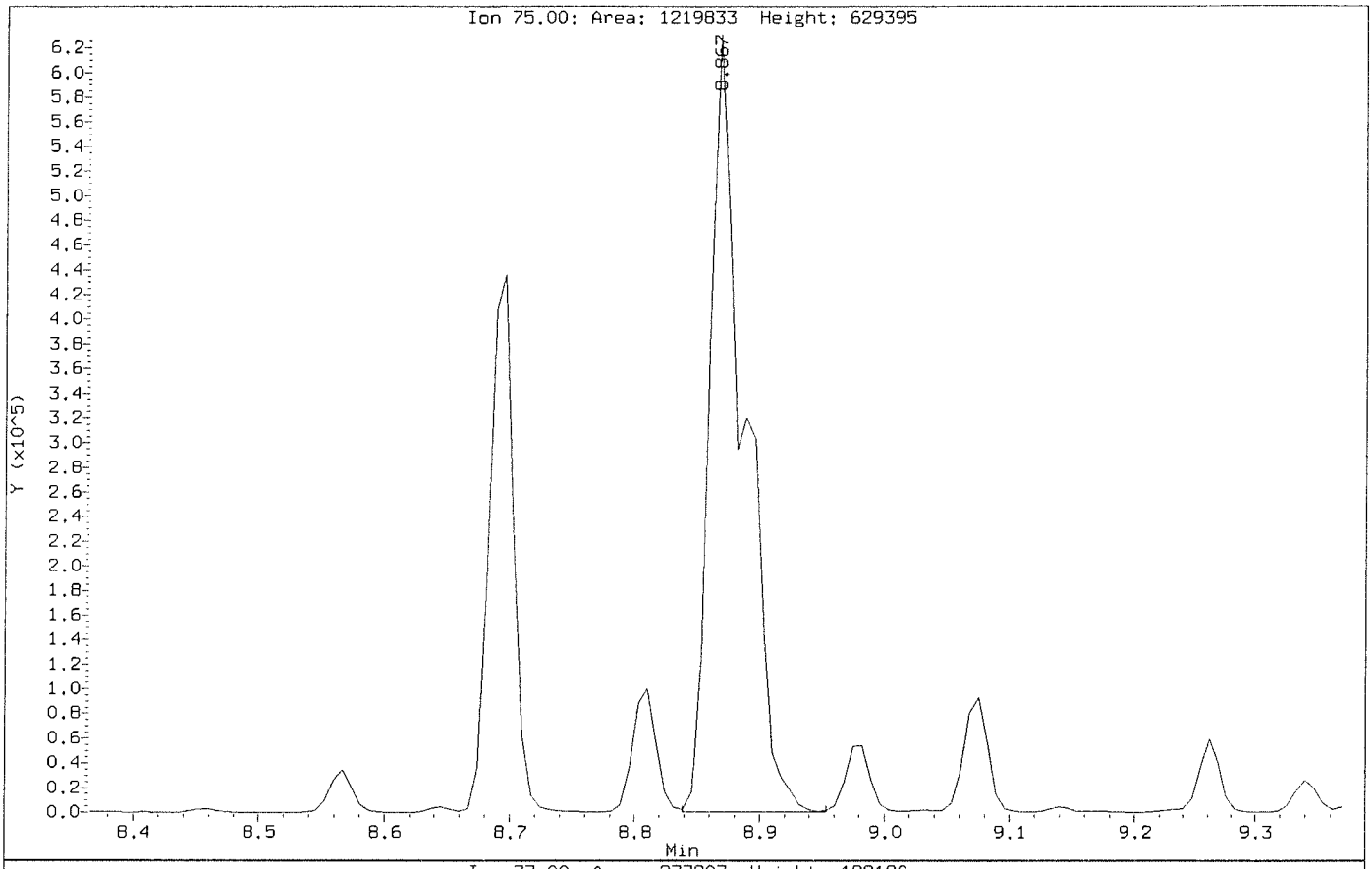


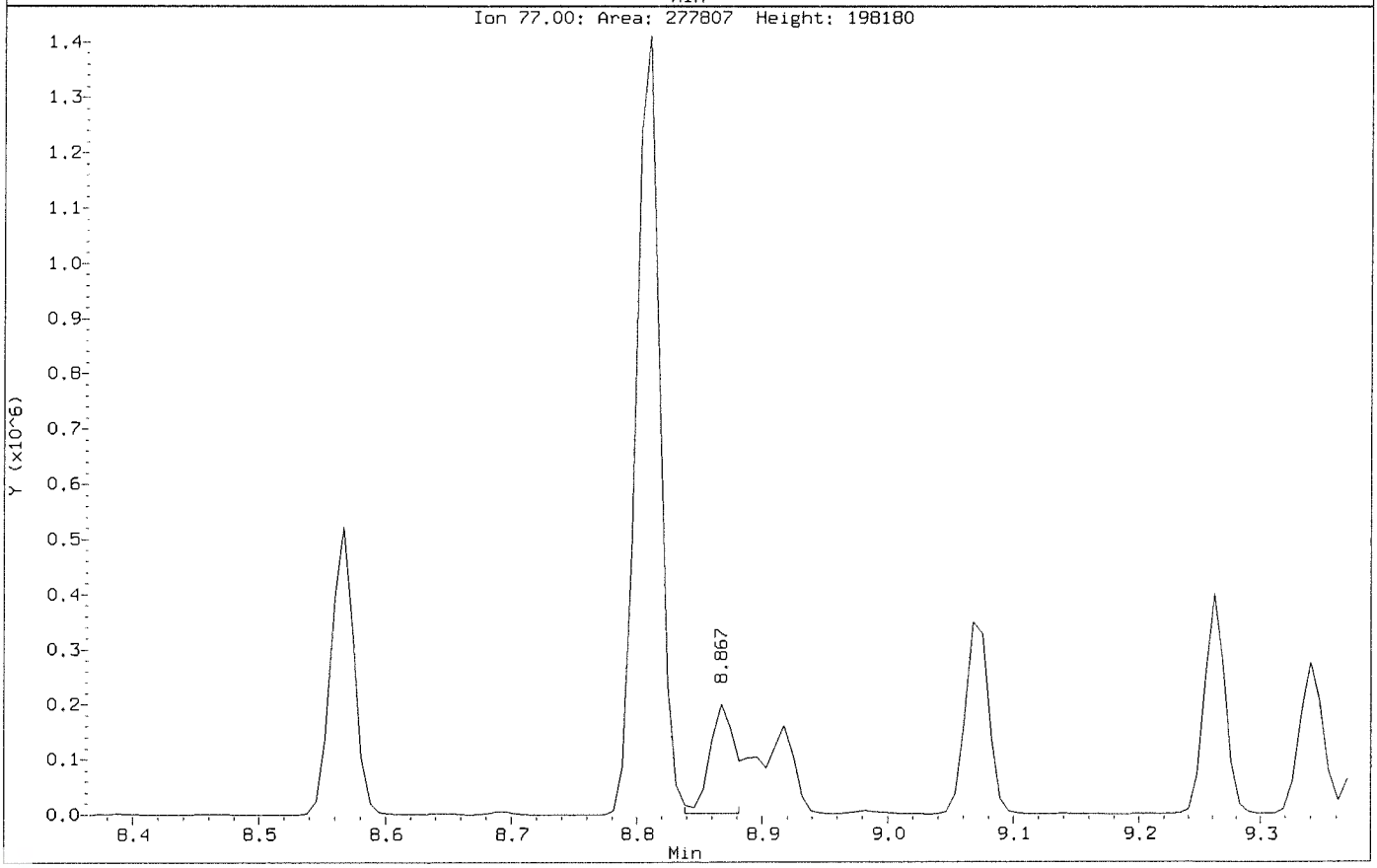
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Date : 24-SEP-2020 15:33
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092411.D
Injection Date: 24-SEP-2020 15:33
Instrument: voa6.i
Client Sample ID: VSTD200

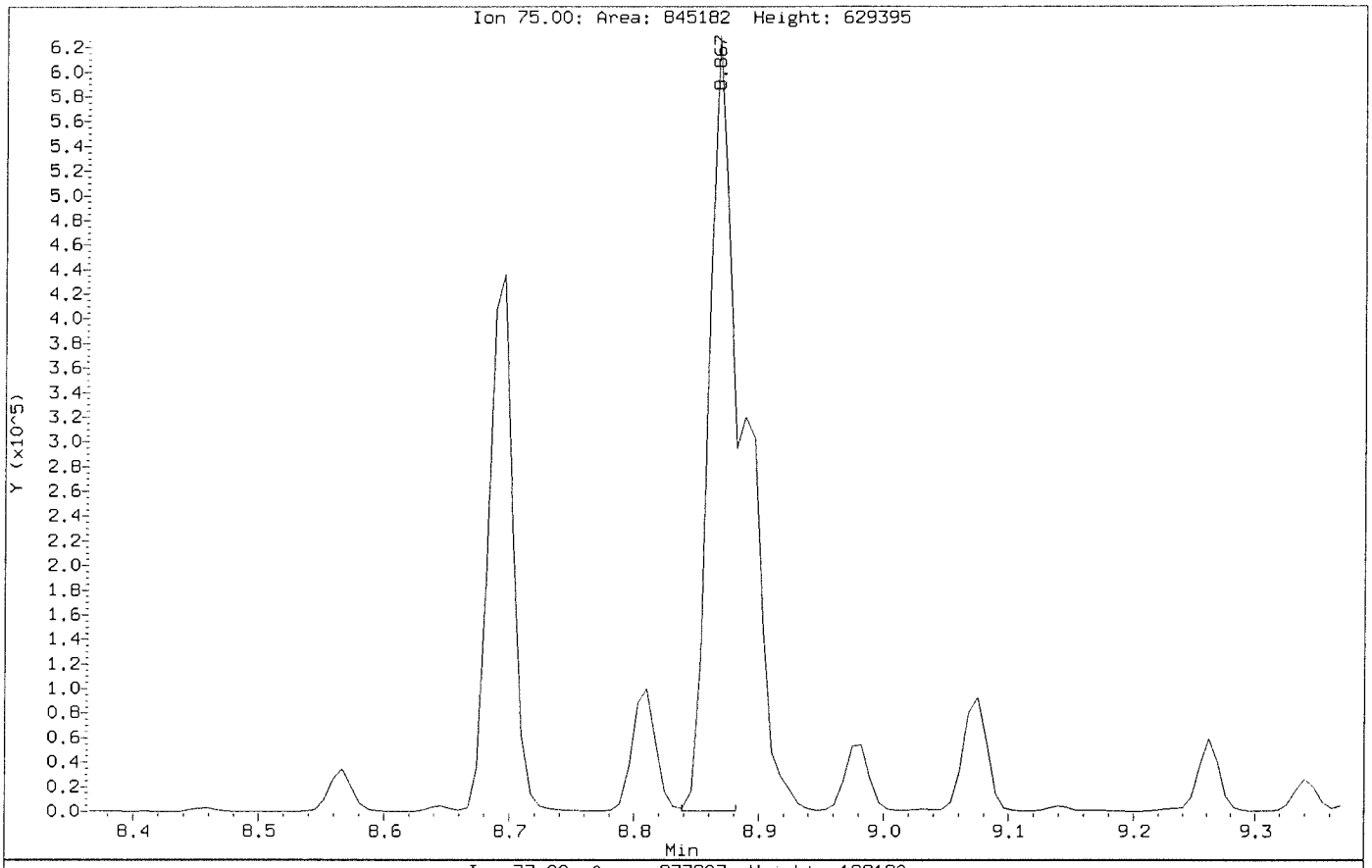
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

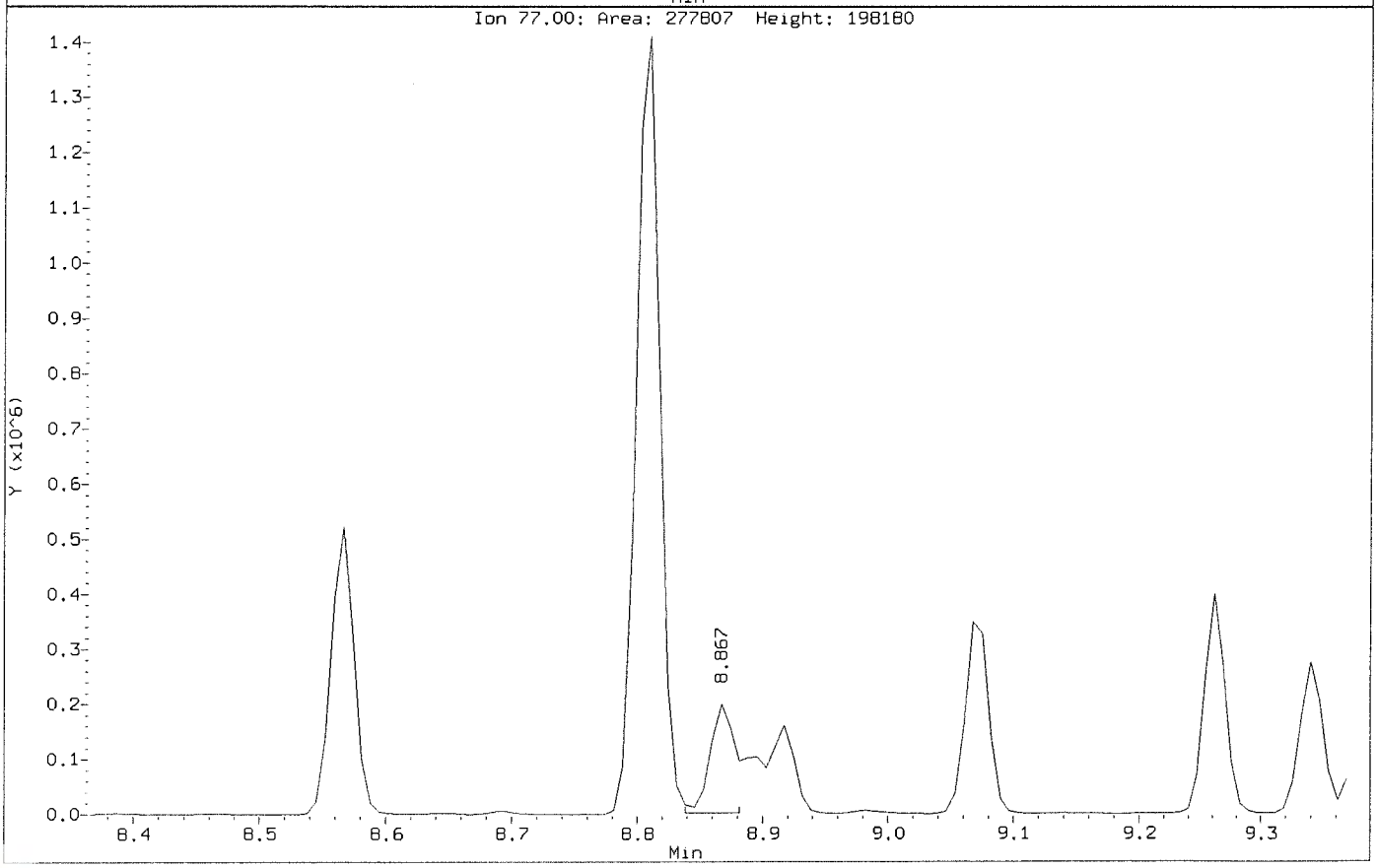




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Injection Date: 24-SEP-2020 15:33
Instrument: voa6.i
Client Sample ID: VSTD200

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





Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092414.D Page 1
Report Date: 13-Oct-2020 11:23

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X200924.b\X092414.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 24-SEP-2020 16:45
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;2;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200924.b\8260W.m
Meth Date : 13-Oct-2020 11:23 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 15:33 Cal File: X092411.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

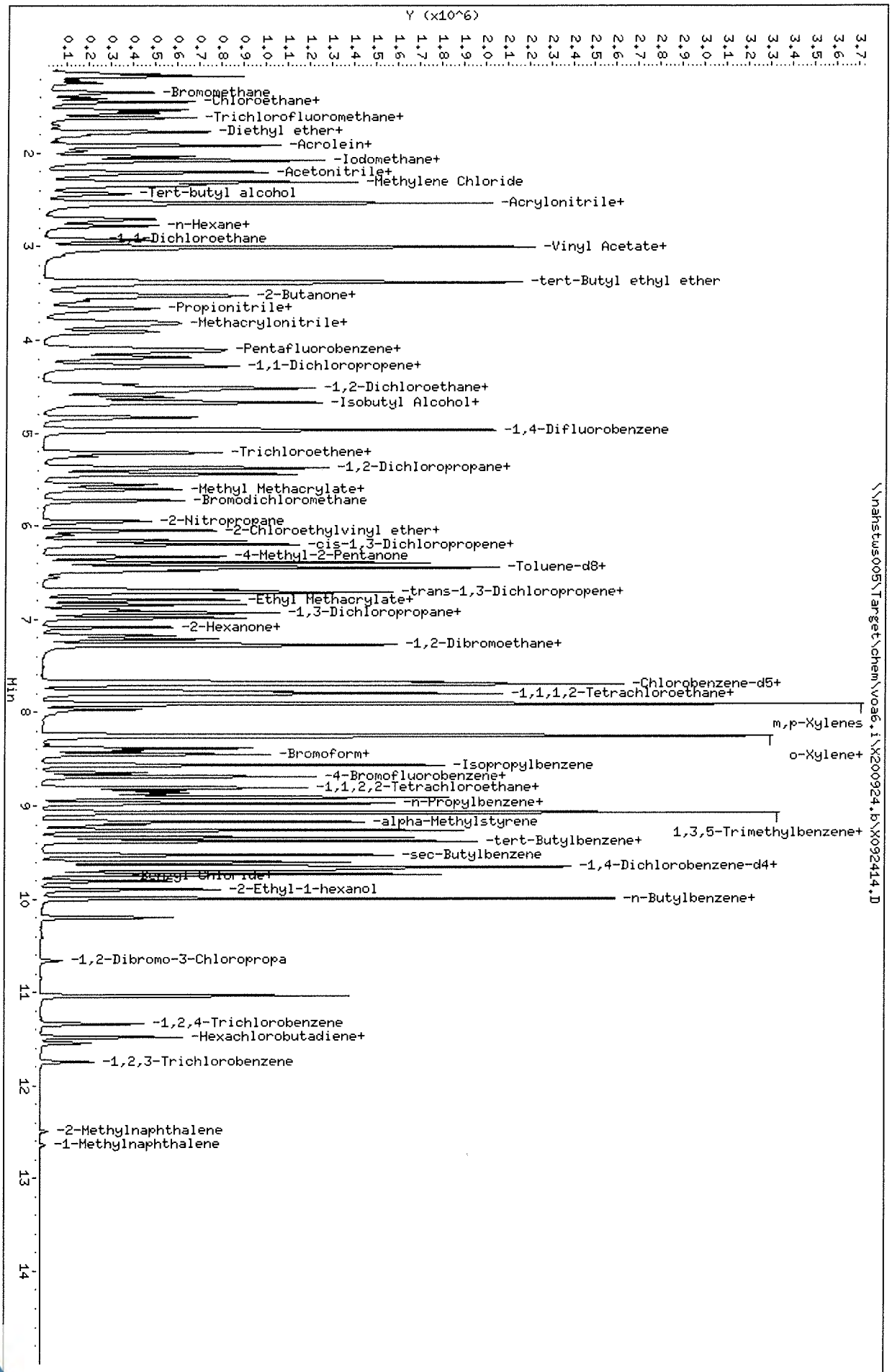
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	555853	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	880879	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	809143	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	340955	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	270370	47.3353	47.33
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	292397	46.7950	46.79
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	992617	46.6609	46.66
$ 69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	357664	50.7296	50.72
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	255261	45.5235	45.52
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	372773	43.5426	43.54
68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	269578	44.7109	44.71
53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	212341	44.5585	44.55
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	513975	44.2622	44.26
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	215034	43.0259	43.02
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	342196	42.2270	42.22
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	67558	51.2677	51.26
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	237004	47.5196	47.51(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	127322	49.3405	49.34
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	893102	44.0033	44.00
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	18502	44.9686	44.96
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	254893	45.3327	45.33
88 1,2-Dichlorobenzene	146	9.992	9.999	(1.034)	427645	45.0424	45.04

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\X092414.D Page 2
Report Date: 13-Oct-2020 11:23

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	342758	45.1289	45.12
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	300814	46.1197	46.11
75	1,3,5-Trimethylbenzene	105	9.067	9.075	(0.938)	869784	43.2026	43.20
83	1,3-Dichlorobenzene	146	9.605	9.612	(0.994)	491942	44.8587	44.85
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	440493	44.6861	44.68
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	480988	44.1640	44.16
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	389339	44.6220	44.62
24	2-Butanone	43	3.581	3.580	(0.855)	219196	108.029	108.02
76	2-Chlorotoluene	91	8.974	8.981	(0.929)	763308	43.0841	43.08
52	2-Hexanone	43	7.090	7.090	(0.924)	341403	95.1537	95.15
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	871870	43.2233	43.22
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	839031	41.3173	41.31
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	518916	91.3618	91.36
10	Acetone	43	1.976	1.976	(0.472)	144721	109.546	109.54
37	Benzene	78	4.519	4.519	(0.909)	1129724	44.8428	44.84
74	Bromobenzene	156	8.810	8.809	(0.912)	314637	45.6672	45.66
29	Bromochloromethane	128	3.803	3.803	(0.908)	152577	43.9222	43.92
39	Bromodichloromethane	83	5.729	5.729	(1.153)	364239	45.5934	45.59
66	Bromoform	173	8.416	8.416	(1.097)	169090	47.8404	47.84
6	Bromomethane	94	1.346	1.338	(0.321)	214339	47.8614	47.86
19	Carbon Disulfide	76	2.076	2.076	(0.496)	1550506	89.8154	89.81
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	295499	41.9357	41.93
59	Chlorobenzene	112	7.699	7.699	(1.004)	717662	43.5977	43.59
7	Chloroethane	64	1.410	1.403	(0.337)	187221	42.9974	42.99
28	Chloroform	83	3.917	3.910	(0.935)	480173	44.5656	44.56
3	Chloromethane	50	1.081	1.081	(0.258)	347050	45.5939	45.59
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	305678	44.8873	44.88
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	467703	46.2818	46.28
55	Dibromochloromethane	129	7.176	7.176	(0.936)	263131	45.5092	45.50
44	Dibromomethane	93	5.558	5.557	(1.118)	175762	45.4424	45.44
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	230691	41.0358	41.03
61	Ethylbenzene	106	7.800	7.807	(1.017)	366397	42.6400	42.63
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	107937	45.3302	45.33
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1042703	41.7341	41.73
62	m,p-Xylenes	106	7.907	7.907	(1.031)	899893	87.2295	87.22
17	Methylene Chloride	84	2.306	2.305	(0.550)	293086	48.1510	48.15
87	n-Butylbenzene	91	9.999	9.999	(1.035)	744175	42.3576	42.35
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1231158	42.3313	42.33
92	Naphthalene	128	11.546	11.546	(1.195)	165067	51.9179	51.91
63	o-Xylene	106	8.244	8.244	(1.075)	448211	44.4912	44.49
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	959537	40.2778	40.27
64	Styrene	104	8.258	8.265	(1.077)	794863	46.1195	46.11
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	686333	40.8964	40.89
56	Tetrachloroethene	164	6.933	6.933	(0.904)	211119	41.2989	41.29
50	Toluene	91	6.446	6.453	(0.840)	1141578	43.5879	43.58
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	260688	45.2738	45.27
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	394997	46.8967	46.89
38	Trichloroethene	130	5.214	5.214	(1.049)	279338	44.3352	44.33
8	Trichlorofluoromethane	101	1.568	1.560	(0.374)	339177	41.9731	41.97
5	Vinyl Chloride	62	1.145	1.145	(0.273)	314294	43.7725	43.77

QC Flag Legend

M - Compound response manually integrated.

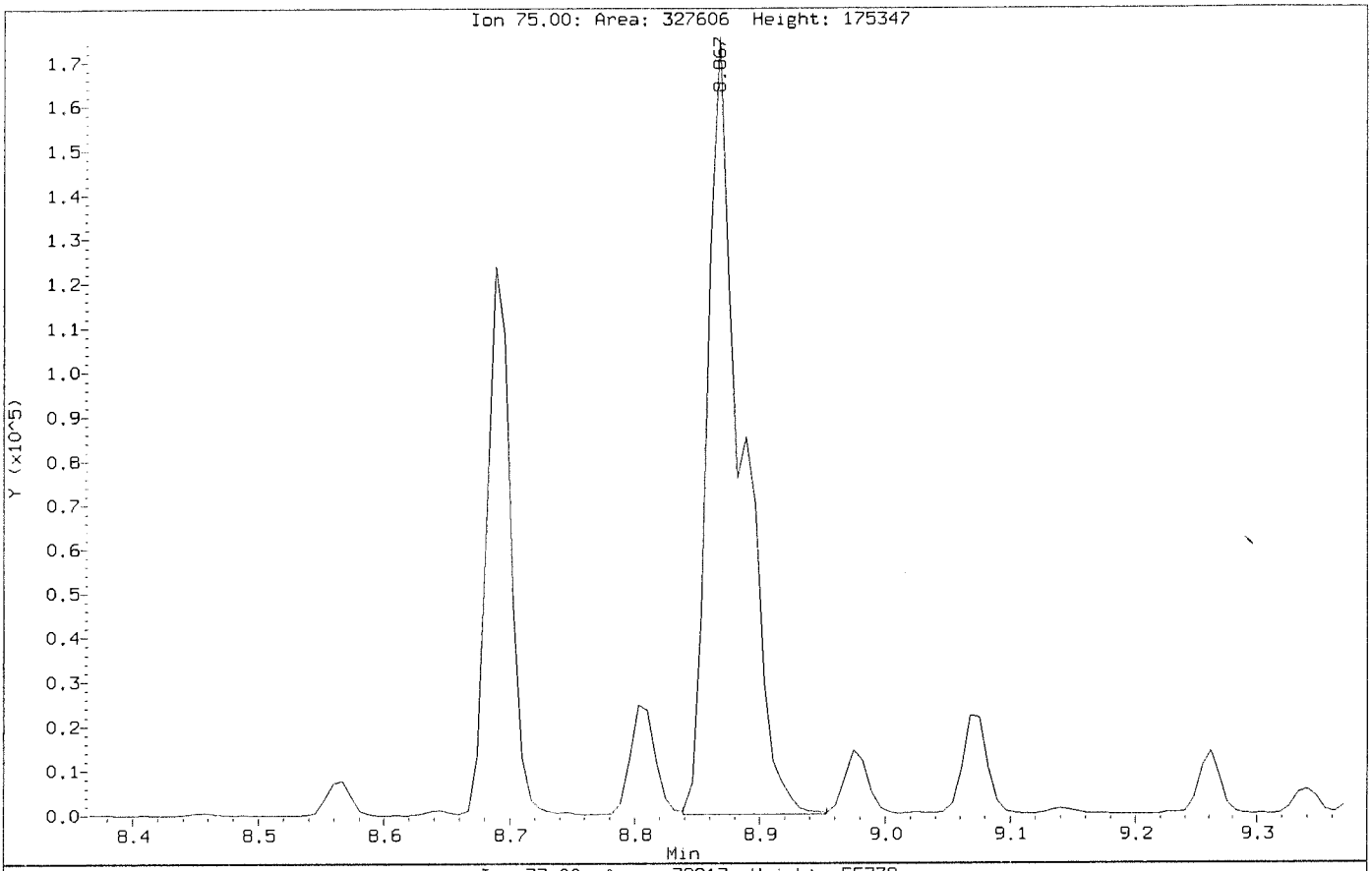


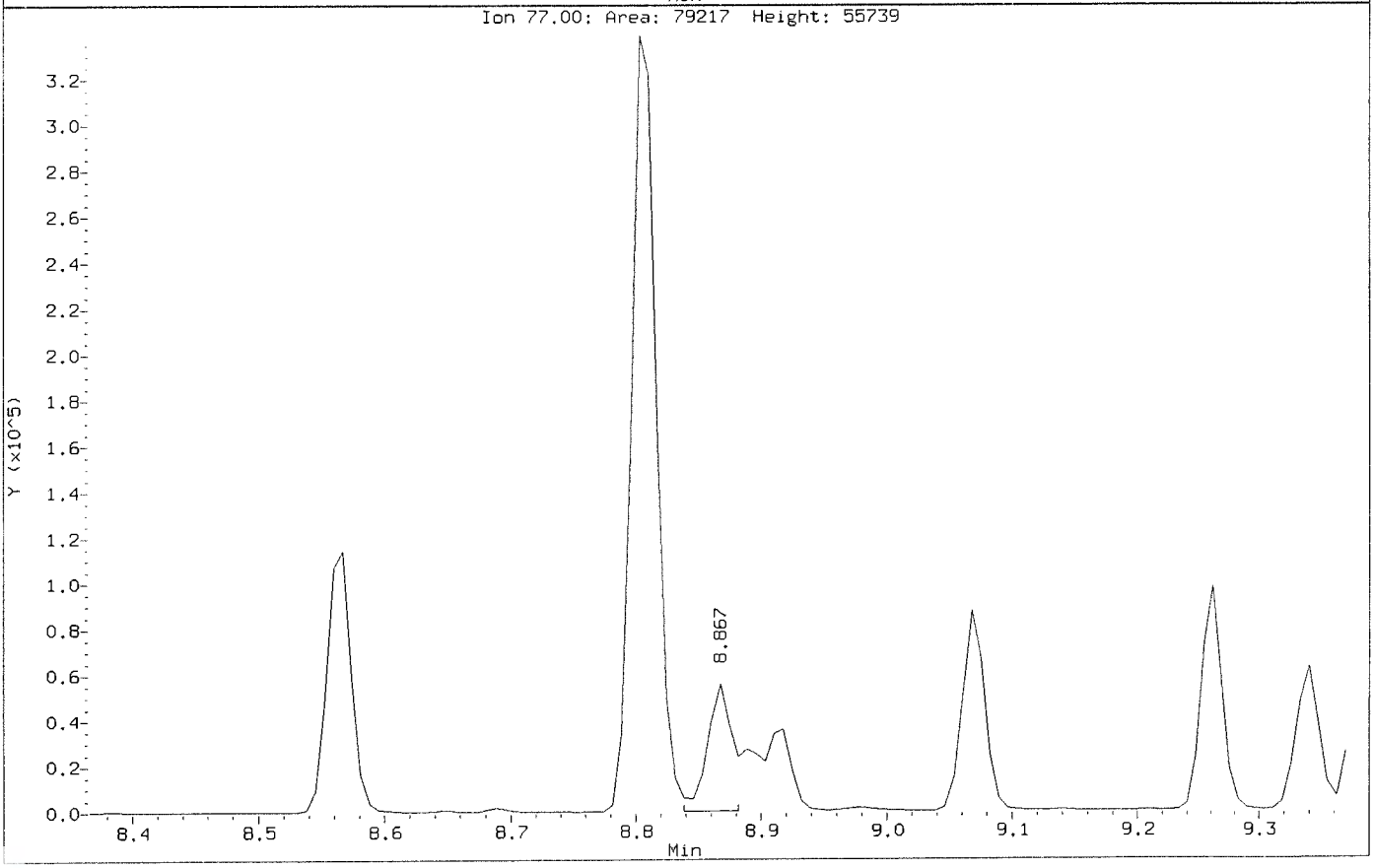
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Sample Info: VSTD050;VSTD050;2;;ICV
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X200924.b\Before\X092414.D
Injection Date: 24-SEP-2020 16:45
Instrument: voa6.i
Client Sample ID: ICV

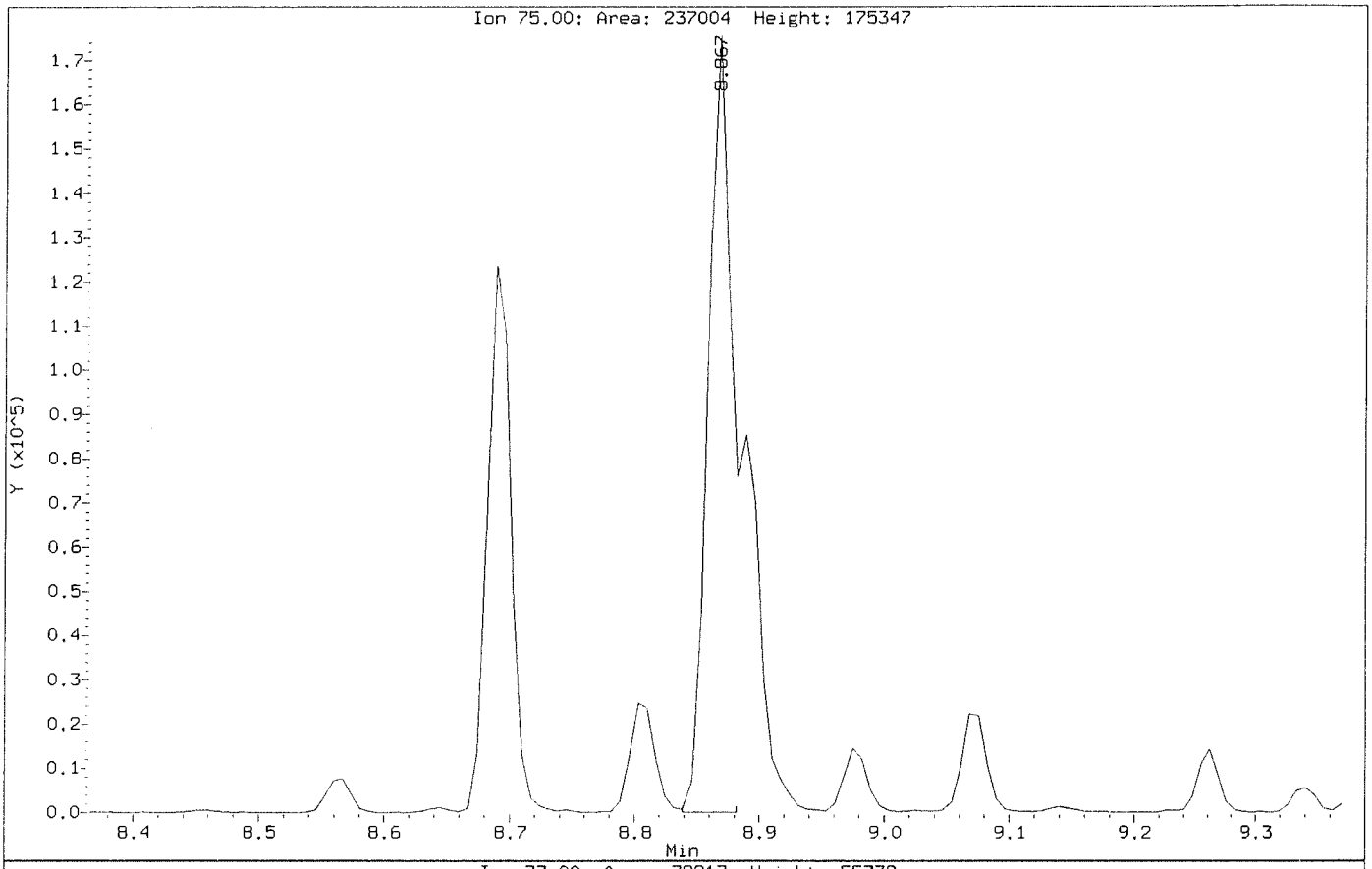
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

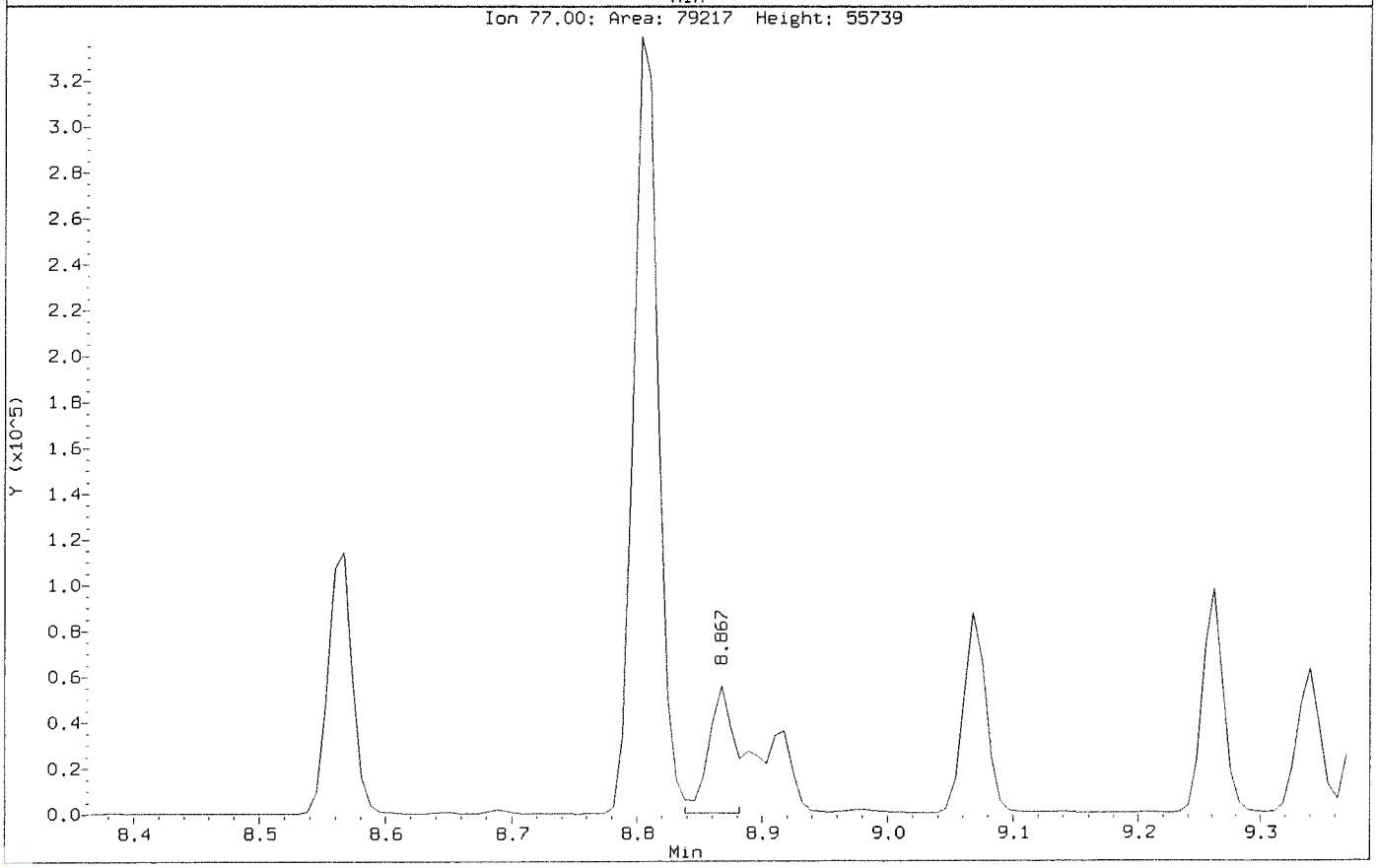




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Injection Date: 24-SEP-2020 16:45
Instrument: voa6.i
Client Sample ID: ICV

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





MSVOA06 -Logbook

Batch: 42114 **Analyst:** Presenta Cabascango

Date: 10-15-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	10-15-2020 02:31 pm	1.00	50 mL	50 mL	X011501.D	Liquid	Y	NA
	Auti find/ purged									
2	CCV	CCV	10-15-2020 02:55 pm	1.00	50 mL	50 mL	X011502a.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	CCV	CCV	10-15-2020 03:19 pm	1.00	50 mL	50 mL	X011503.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
4	CCB	SAMP	10-15-2020 03:43 pm	1.00	50 mL	50 mL	X011504.D	Liquid	Y	NA
5	VLCSW-201014	LCS	10-15-2020 04:07 pm	1.00	50 mL	50 mL	X011505.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	10-15-2020 04:31 pm	1.00	50 mL	50 mL	X011506.D	Liquid	Y	NA
7	VBLKW-201014	MBLK	10-15-2020 04:55 pm	1.00	50 mL	50 mL	X011507.D	Liquid	Y	NA
8	HS20100702-01	SAMP	10-15-2020 05:19 pm	1.00	50 mL	50 mL	X011508.D	Liquid	Y	NA
9	HS20100530-01	SAMP	10-15-2020 05:43 pm	1.00	50 mL	50 mL	X011509.D	Liquid	Y	<2
10	HS20100702-01MS	MS	10-15-2020 06:07 pm	1.00	50 mL	50 mL	X011510.D	Liquid	Y	NA
11	HS20100702-01MSD	MSD	10-15-2020 06:31 pm	1.00	50 mL	50 mL	X011511.D	Liquid	Y	NA
	3.5 uL cal std/50 mL samp									
12	HS20100525-01	SAMP	10-15-2020 06:55 pm	25.00	2 mL	50 mL	X011512.D	Liquid	Y	NA
	3.5 uL cal std/40 mL samp									
13	HS20100613-01	SAMP	10-15-2020 07:19 pm	1.00	50 mL	50 mL	X011513.D	Liquid	Y	NA
14	HS20100595-01	SAMP	10-15-2020 07:43 pm	20.00	2.5 mL	50 mL	X011514.D	Liquid	Y	NA
	tclps									
15	HS20100603-01	SAMP	10-15-2020 08:07 pm	20.00	2.5 mL	50 mL	X011515.D	Liquid	Y	NA
16	HS20100604-01	SAMP	10-15-2020 08:31 pm	20.00	2.5 mL	50 mL	X011516.D	Liquid	Y	NA
17	HS20100670-01	SAMP	10-15-2020 08:55 pm	20.00	2.5 mL	50 mL	X011517.D	Liquid	Y	NA
18	HS20100704-01	SAMP	10-15-2020 09:19 pm	20.00	2.5 mL	50 mL	X011518.D	Liquid	Y	NA
19	HS20100549-01	SAMP	10-15-2020 09:43 pm	20.00	2.5 mL	50 mL	X011519.D	Liquid	Y	NA
20	HS20100519-01	SAMP	10-15-2020 10:07 pm	20.00	2.5 mL	50 mL	X011520.D	Liquid	Y	NA
21	HS20100543-03	SAMP	10-15-2020 10:31 pm	1.00	50 mL	50 mL	X011521.D	Liquid	Y	NA
22	HS20100541-04	SAMP	10-15-2020 10:56 pm	1.00	50 mL	50 mL	X011522.D	Liquid	Y	NA
23	HS20100541-01	SAMP	10-15-2020 11:20 pm	1.00	50 mL	50 mL	X011523.D	Liquid	Y	NA
24	HS20100541-02	SAMP	10-15-2020 11:44 pm	1.00	50 mL	50 mL	X011524.D	Liquid	Y	NA
25	HS20100541-03	SAMP	10-16-2020 12:08 am	1.00	50 mL	50 mL	X011525.D	Liquid	Y	NA
26	HS20100543-01	SAMP	10-16-2020 12:32 am	1.00	50 mL	50 mL	X011526.D	Liquid	Y	NA
27	HS20100543-02	SAMP	10-16-2020 12:56 am	1.00	50 mL	50 mL	X011527.D	Liquid	Y	NA
28	HS20100544-01	SAMP	10-16-2020 01:20 am	1.00	50 mL	50 mL	X011528.D	Liquid	Y	NA
29	HS20100544-02	SAMP	10-16-2020 01:44 am	1.00	50 mL	50 mL	X011529.D	Liquid	Y	NA
30	BFB	TUNE	10-16-2020 02:08 am	1.00	50 mL	50 mL	Y011501.D	Liquid	Y	NA
	Aut ofind/ purged									
31	CCV	CCV	10-16-2020 02:32 am	1.00	50 mL	50 mL	Y011502a.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
32	CCV	CCV	10-16-2020 02:56 am	1.00	50 mL	50 mL	Y011503.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
33	VLCSW-201014	LCS	10-16-2020 03:20 am	1.00	50 mL	50 mL	Y011504.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
34	BLANK	SAMP	10-16-2020 03:44 am	1.00	50 mL	50 mL	Y011505.D	Liquid	Y	NA
35	VBLKW-201014	MBLK	10-16-2020 04:08 am	1.00	50 mL	50 mL	Y011506.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
36	HS20100544-03	SAMP	10-16-2020 04:32 am	1.00	50 mL	50 mL	Y011507.D	Liquid	Y	<2
37	HS20100544-03MS	MS	10-16-2020 04:56 am	1.00	50 mL	50 mL	Y011508.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
38	HS20100544-03MSD	MSD	10-16-2020 05:20 am	1.00	50 mL	50 mL	Y011509.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
39	HS20100614-04	SAMP	10-16-2020 05:44 am	1.00	50 mL	50 mL	Y011510.D	Liquid	Y	<2
40	HS20100614-05	SAMP	10-16-2020 06:08 am	1.00	50 mL	50 mL	Y011511.D	Liquid	Y	<2
41	HS20100611-01	SAMP	10-16-2020 06:32 am	1.00	50 mL	50 mL	Y011512.D	Liquid	Y	<2
42	HS20100611-03	SAMP	10-16-2020 06:56 am	50.00	1 mL	50 mL	Y011513.D	Liquid	Y	<2
43	HS20100611-04	SAMP	10-16-2020 07:20 am	200.0(	250 µL	50 mL	Y011514.D	Liquid	Y	<2
44	HS20100561-01	SAMP	10-16-2020 07:44 am	1.00	50 mL	50 mL	Y011515.D	Liquid	Y	<2
45	HS20100561-02	SAMP	10-16-2020 08:08 am	1.00	50 mL	50 mL	Y011516.D	Liquid	Y	<2
46	HS20100561-03	SAMP	10-16-2020 08:33 am	1.00	50 mL	50 mL	Y011517.D	Liquid	Y	<2
47	HS20100561-04	SAMP	10-16-2020 08:57 am	1.00	50 mL	50 mL	Y011518.D	Liquid	Y	<2
48	HS20100561-05	SAMP	10-16-2020 09:21 am	1.00	50 mL	50 mL	Y011519.D	Liquid	Y	<2
49	HS20100544-04	SAMP	10-16-2020 09:45 am	1.00	50 mL	50 mL	Y011520.D	Liquid	Y	<2
50	HS20100694-03	SAMP	10-16-2020 10:09 am	1.00	50 mL	50 mL	Y011521.D	Liquid	Y	<2
51	HS20100694-01	SAMP	10-16-2020 10:33 am	1.00	50 mL	50 mL	Y011522.D	Liquid	Y	<2
52	CCV-END	CCV	10-16-2020 10:57 am	1.00	50 mL	50 mL	Y011523.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
53	MBLK-158458	MBLK	10-16-2020 11:21 am	20.00	2.5 mL	50 mL	Y011524.D	Liquid	Y	<2
	tclps									
54	HS20100665-01	SAMP	10-16-2020 11:45 am	20.00	2.5 mL	50 mL	Y011525.D	Liquid	Y	<2
55	HS20100671-01	SAMP	10-16-2020 12:09 pm	20.00	2.5 mL	50 mL	Y011526.D	Liquid	Y	<2
56	HS20100666-01	SAMP	10-16-2020 12:33 pm	20.00	2.5 mL	50 mL	Y011527.D	Liquid	Y	<2
57	HS20100667-01	SAMP	10-16-2020 12:57 pm	20.00	2.5 mL	50 mL	Y011528.D	Liquid	Y	<2
58	HS20100669-01	SAMP	10-16-2020 01:21 pm	20.00	2.5 mL	50 mL	Y011529.D	Liquid	Y	<2

Chemical	Value
SURR SPK ID	31106-51-06
IS ID	31106-51-06
CAL STD ID	31106-51-01/02
BFB ID	31106-51-6
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.: HS20100694

	CLIENT SAMPLE NO.	SMC1 (DCE)#	SMC2 #	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-201014	99	96	98	108	0
02	VBLKW-201014	84	88	96	95	0
03	HS20100544-03	85	88	102	107	0
04	HS20100544-03	85	88	99	105	0
05	HS20100694-03	91	90	101	98	0
06	HS20100694-01	92	90	105	106	0
07						
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		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-201014

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Lab File ID: Y011506 Lab Sample ID: VBLKW-201014

Date Analyzed: 10/16/20 Time Analyzed: 0408

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-201014	VLCSW-201014	Y011504	0320
02	HS20100544-0	HS20100544-03M	Y011508	0456
03	HS20100544-0	HS20100544-03M	Y011509	0520
04	HS20100694-0	HS20100694-03	Y011521	1009
05	HS20100694-0	HS20100694-01	Y011522	1033
06				
07				
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30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Lab File ID: Y011501 BFB Injection Date: 10/16/20

Instrument ID: VOA6 BFB Injection Time: 0208

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.3
75	30.0 - 60.0% of mass 95	49.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.6 (0.9)1
174	Greater than 50.0% of mass 95	64.0
175	5.0 - 9.0% of mass 174	5.2 (8.1)1
176	95.0 - 101.0% of mass 174	60.8 (95.0)1
177	5.0 - 9.0% of mass 176	4.2 (6.8)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	Y011503	10/16/20	0256
02	VLCSW-201014	VLCSW-201014	Y011504	10/16/20	0320
03	VBLKW-201014	VBLKW-201014	Y011506	10/16/20	0408
04	HS20100544-0	HS20100544-03M	Y011508	10/16/20	0456
05	HS20100544-0	HS20100544-03M	Y011509	10/16/20	0520
06	HS20100694-0	HS20100694-03	Y011521	10/16/20	1009
07	HS20100694-0	HS20100694-01	Y011522	10/16/20	1033
08	CCV-END	CCV-END	Y011523	10/16/20	1057
09					
10					
11					
12					
13					
14					
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.: HS20100694

Instrument ID: VOA6 Calibration Date: 10/16/20 Time: 0256

Lab File ID: Y011503 Init. Calib. Date(s): 09/24/20 09/24/20

Init. Calib. Times: 1134 1533

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	0.5740000	0.5908661	0.5908661	0.2	-2.94	20.00	AVRG	
trans-1,3-Dichloropropene	0.4780000	0.4727125	0.4727125	0.1	1.11	20.00	AVRG	
1,3-Dichlorobenzene	1.6080000	1.5325559	1.5325559	0.6	4.69	20.00	AVRG	
2,2-Dichloropropane	0.7850000	0.7017787	0.7017787	0.1	10.60	20.00	AVRG	
1,1-Dichloropropene	0.4600000	0.4664584	0.4664584	0.1	-1.40	20.00	AVRG	
Dibromomethane	0.2200000	0.2272411	0.2272411	0.1	-3.29	20.00	AVRG	
1,2-Dibromoethane	0.3470000	0.3349068	0.3349068	0.1	3.48	20.00	AVRG	
trans-1,2-Dichloroethene	0.5180000	0.5524373	0.5524373	0.1	-6.65	20.00	AVRG	
1,1,1,2-Tetrachloroethane	0.3460000	0.3395034	0.3395034	0.1	1.88	20.00	AVRG	
1,1,1-Trichloroethane	0.7700000	0.7956684	0.7956684	0.1	-3.33	20.00	AVRG	
1,1,2,2-Tetrachloroethane	0.8840000	0.7497774	0.7497774	0.3	15.18	20.00	AVRG	
1,1,2-Trichloroethane	0.2940000	0.2840914	0.2840914	0.1	3.37	20.00	AVRG	
1,1-Dichloroethane	1.0450000	1.0691137	1.0691137	0.2	-2.31	20.00	AVRG	
1,1-Dichloroethene	0.4490000	0.4753912	0.4753912	0.1	-5.88	20.00	AVRG	
Trichloroethene	0.3580000	0.3749408	0.3749408	0.2	-4.73	20.00	AVRG	
1,2,3-Trichlorobenzene	0.1930000	0.1670385	0.1670385	0.01	13.45	20.00	AVRG	
Trichlorofluoromethane	0.7270000	0.7582859	0.7582859	0.1	-4.30	20.00	AVRG	
1,2,4-Trichlorobenzene	44.908471	50.000000	0.3389240	0.1	10.18	20.00	LINR	
1,2,4-Trimethylbenzene	2.9760000	2.8797062	2.8797062	0.1	3.24	20.00	AVRG	
Tetrachloroethene	0.3160000	0.2907965	0.2907965	0.2	7.98	20.00	AVRG	
1,2-Dichlorobenzene	1.3920000	1.3100034	1.3100034	0.4	5.89	20.00	AVRG	
1,2-Dichloroethane	0.4310000	0.4532800	0.4532800	0.1	-5.17	20.00	AVRG	
1,2-Dichloropropane	0.3700000	0.3939755	0.3939755	0.1	-6.48	20.00	AVRG	
1,3,5-Trimethylbenzene	2.9520000	2.7864557	2.7864557	0.1	5.61	20.00	AVRG	
1,3-Dichloropropane	0.6090000	0.5823989	0.5823989	0.1	4.37	20.00	AVRG	
1,4-Dichlorobenzene	1.5970000	1.4848834	1.4848834	0.4	7.02	20.00	AVRG	
Toluene	1.6180000	1.6553054	1.6553054	0.4	-2.30	20.00	AVRG	
2-Butanone	0.1820000	0.2046240	0.2046240	0.1	-12.43	20.00	AVRG	
2-Chlorotoluene	2.5980000	2.4198740	2.4198740	0.1	6.86	20.00	AVRG	
2-Hexanone	0.2220000	0.2091298	0.2091298	0.1	5.80	20.00	AVRG	
4-Chlorotoluene	2.9580000	2.8022472	2.8022472	0.1	5.26	20.00	AVRG	
tert-Butylbenzene	2.4610000	2.2675875	2.2675875	0.1	7.86	20.00	AVRG	
4-Methyl-2-Pentanone	0.3510000	0.3338180	0.3338180	0.1	4.90	20.00	AVRG	
Acetone	131.77417	100.00000	0.1554223	0.1	-31.77	20.00	LINR	<-
Benzene	1.4300000	1.4984185	1.4984185	0.5	-4.78	20.00	AVRG	
Bromobenzene	1.0100000	0.9722554	0.9722554	0.1	3.74	20.00	AVRG	
Bromochloromethane	0.3120000	0.3102861	0.3102861	0.1	0.55	20.00	AVRG	
Bromodichloromethane	0.4540000	0.4822844	0.4822844	0.2	-6.23	20.00	AVRG	
Bromoform	0.2180000	0.2109867	0.2109867	0.1	3.22	20.00	AVRG	
Bromomethane	52.602408	50.000000	0.4236106	0.1	-5.20	20.00	LINR	
Carbon Disulfide	1.5530000	1.4236498	1.4236498	0.1	8.33	20.00	AVRG	
Carbon Tetrachloride	0.4000000	0.4124396	0.4124396	0.1	-3.11	20.00	AVRG	

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010069

Instrument ID: VOA6 Calibration Date: 10/16/20 Time: 0256

Lab File ID: Y011503 Init. Calib. Date(s): 09/24/20 09/24/20

Init. Calib. Times: 1134 1533

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	1.0170000	0.9879850	0.9879850	0.5	2.85	20.00	AVRG
Chloroethane	0.3920000	0.3922324	0.3922324	0.1	-0.06	20.00	AVRG
Chloroform	0.9690000	1.0145121	1.0145121	0.2	-4.70	20.00	AVRG
Chloromethane	0.6850000	0.7073478	0.7073478	0.1	-3.26	20.00	AVRG
cis-1,2-Dichloroethene	0.6120000	0.6324240	0.6324240	0.1	-3.34	20.00	AVRG
Dibromochloromethane	0.3570000	0.3462399	0.3462399	0.1	3.01	20.00	AVRG
Dichlorodifluoromethane	46.675746	50.000000	0.4750961	0.1	6.65	20.00	LINR
Ethylbenzene	0.5310000	0.4915794	0.4915794	0.1	7.42	20.00	AVRG
Hexachlorobutadiene	43.486827	50.000000	0.3032790	0.1	13.03	20.00	2RDR
Isopropylbenzene	1.5440000	1.3817986	1.3817986	0.1	10.50	20.00	AVRG
m,p-Xylenes	0.6370000	0.5947536	0.5947536	0.1	6.63	20.00	AVRG
Methylene Chloride	56.653203	50.000000	0.6190272	0.1	-13.31	20.00	LINR
n-Butylbenzene	2.5760000	2.4176056	2.4176056	0.5	6.15	20.00	AVRG
n-Propylbenzene	4.2650000	3.8703442	3.8703442	0.1	9.25	20.00	AVRG
Naphthalene	0.4660000	0.4424147	0.4424147	0.2	5.06	20.00	AVRG
o-Xylene	0.6220000	0.5837642	0.5837642	0.3	6.15	20.00	AVRG
sec-Butylbenzene	3.4930000	3.2175783	3.2175783	0.1	7.88	20.00	AVRG
Styrene	1.0650000	1.0081969	1.0081969	0.3	5.33	20.00	AVRG
Vinyl Chloride	0.6460000	0.6764236	0.6764236	0.1	-4.71	20.00	AVRG
1,2,3-Trichloropropane	0.7310000	0.6854816	0.6854816	0.1	6.23	20.00	AVRG
p-Isopropyltoluene	2.9780000	2.7534142	2.7534142	0.1	7.54	20.00	AVRG
1,2-Dibromo-3-Chloropropane	6.e-002	5.41e-002	5.41e-002	0.05	9.83	20.00	AVRG
1,2-Dichloroethane-d4	0.5620000	0.5598989	0.5598989	0.1	0.37	20.00	AVRG
Dibromofluoromethane	0.5140000	0.4983495	0.4983495	0.1	3.04	20.00	AVRG
Toluene-d8	1.3140000	1.2748278	1.2748278	0.1	2.98	20.00	AVRG
4-Bromofluorobenzene	49.199629	50.000000	0.4289107	0.1	1.60	20.00	LINR

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Instrument ID: VOA6 Calibration Date: 10/16/20 Time: 1057

Lab File ID: Y011523 Init. Calib. Date(s): 09/24/20 09/24/20

Init. Calib. Times: 1134 1533

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	0.5740000	0.5583415	0.5583415	0.2	2.73	50.00	AVRG
trans-1,3-Dichloropropene	0.4780000	0.4813890	0.4813890	0.1	-0.71	50.00	AVRG
1,3-Dichlorobenzene	1.6080000	1.5614933	1.5614933	0.6	2.89	50.00	AVRG
2,2-Dichloropropane	0.7850000	0.8220153	0.8220153	0.1	-4.72	50.00	AVRG
1,1-Dichloropropene	0.4600000	0.4715274	0.4715274	0.1	-2.50	50.00	AVRG
Dibromomethane	0.2200000	0.2009045	0.2009045	0.1	8.68	50.00	AVRG
1,2-Dibromoethane	0.3470000	0.3328830	0.3328830	0.1	4.07	50.00	AVRG
trans-1,2-Dichloroethene	0.5180000	0.5354379	0.5354379	0.1	-3.37	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3460000	0.3373948	0.3373948	0.1	2.49	50.00	AVRG
1,1,1-Trichloroethane	0.7700000	0.7762770	0.7762770	0.1	-0.82	50.00	AVRG
1,1,2,2-Tetrachloroethane	0.8840000	0.8213420	0.8213420	0.3	7.09	50.00	AVRG
1,1,2-Trichloroethane	0.2940000	0.2828845	0.2828845	0.1	3.78	50.00	AVRG
1,1-Dichloroethane	1.0450000	1.0479151	1.0479151	0.2	-0.28	50.00	AVRG
1,1-Dichloroethene	0.4490000	0.4797075	0.4797075	0.1	-6.84	50.00	AVRG
Trichloroethene	0.3580000	0.3522630	0.3522630	0.2	1.60	50.00	AVRG
1,2,3-Trichlorobenzene	0.1930000	0.1459602	0.1459602	0.01	24.37	50.00	AVRG
Trichlorofluoromethane	0.7270000	0.8134341	0.8134341	0.1	-11.89	50.00	AVRG
1,2,4-Trichlorobenzene	40.500471	50.000000	0.3046079	0.1	19.00	50.00	LINR
1,2,4-Trimethylbenzene	2.9760000	3.0269769	3.0269769	0.1	-1.71	50.00	AVRG
Tetrachloroethene	0.3160000	0.3202020	0.3202020	0.2	-1.33	50.00	AVRG
1,2-Dichlorobenzene	1.3920000	1.2970667	1.2970667	0.4	6.82	50.00	AVRG
1,2-Dichloroethane	0.4310000	0.4319835	0.4319835	0.1	-0.23	50.00	AVRG
1,2-Dichloropropane	0.3700000	0.3538622	0.3538622	0.1	4.36	50.00	AVRG
1,3,5-Trimethylbenzene	2.9520000	3.0127677	3.0127677	0.1	-2.06	50.00	AVRG
1,3-Dichloropropane	0.6090000	0.5878213	0.5878213	0.1	3.48	50.00	AVRG
1,4-Dichlorobenzene	1.5970000	1.5152092	1.5152092	0.4	5.12	50.00	AVRG
Toluene	1.6180000	1.5874173	1.5874173	0.4	1.89	50.00	AVRG
2-Butanone	0.1820000	0.1749807	0.1749807	0.1	3.86	50.00	AVRG
2-Chlorotoluene	2.5980000	2.5608866	2.5608866	0.1	1.43	50.00	AVRG
2-Hexanone	0.2220000	0.1924377	0.1924377	0.1	13.32	50.00	AVRG
4-Chlorotoluene	2.9580000	2.9182636	2.9182636	0.1	1.34	50.00	AVRG
tert-Butylbenzene	2.4610000	2.4887203	2.4887203	0.1	-1.13	50.00	AVRG
4-Methyl-2-Pentanone	0.3510000	0.2944492	0.2944492	0.1	16.11	50.00	AVRG
Acetone	102.20569	100.00000	0.1218429	0.1	-2.20	50.00	LINR
Benzene	1.4300000	1.4363642	1.4363642	0.5	-0.44	50.00	AVRG
Bromobenzene	1.0100000	1.0440208	1.0440208	0.1	-3.37	50.00	AVRG
Bromochloromethane	0.3120000	0.3008876	0.3008876	0.1	3.56	50.00	AVRG
Bromodichloromethane	0.4540000	0.4317351	0.4317351	0.2	4.90	50.00	AVRG
Bromoform	0.2180000	0.1974498	0.1974498	0.1	9.43	50.00	AVRG
Bromomethane	51.138384	50.000000	0.4118739	0.1	-2.28	50.00	LINR
Carbon Disulfide	1.5530000	1.4415428	1.4415428	0.1	7.18	50.00	AVRG
Carbon Tetrachloride	0.4000000	0.4090542	0.4090542	0.1	-2.26	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010069

Instrument ID: VOA6 Calibration Date: 10/16/20 Time: 1057

Lab File ID: Y011523 Init. Calib. Date(s): 09/24/20 09/24/20

Init. Calib. Times: 1134 1533

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	1.0170000	0.9816440	0.9816440	0.5	3.48	50.00	AVRG
Chloroethane	0.3920000	0.3992359	0.3992359	0.1	-1.84	50.00	AVRG
Chloroform	0.9690000	0.9894961	0.9894961	0.2	-2.12	50.00	AVRG
Chloromethane	0.6850000	0.6946201	0.6946201	0.1	-1.40	50.00	AVRG
cis-1,2-Dichloroethene	0.6120000	0.6233747	0.6233747	0.1	-1.86	50.00	AVRG
Dibromochloromethane	0.3570000	0.3491627	0.3491627	0.1	2.20	50.00	AVRG
Dichlorodifluoromethane	49.717553	50.000000	0.5074963	0.1	0.56	50.00	LINR
Ethylbenzene	0.5310000	0.5264577	0.5264577	0.1	0.86	50.00	AVRG
Hexachlorobutadiene	50.095028	50.000000	0.3509979	0.1	-0.19	50.00	2RDR
Isopropylbenzene	1.5440000	1.5035449	1.5035449	0.1	2.62	50.00	AVRG
m,p-Xylenes	0.6370000	0.6264791	0.6264791	0.1	1.65	50.00	AVRG
Methylene Chloride	52.378338	50.000000	0.5728936	0.1	-4.76	50.00	LINR
n-Butylbenzene	2.5760000	2.6816099	2.6816099	0.5	-4.10	50.00	AVRG
n-Propylbenzene	4.2650000	4.3952981	4.3952981	0.1	-3.06	50.00	AVRG
Naphthalene	0.4660000	0.3355849	0.3355849	0.2	27.99	50.00	AVRG
o-Xylene	0.6220000	0.6088880	0.6088880	0.3	2.11	50.00	AVRG
sec-Butylbenzene	3.4930000	3.5314923	3.5314923	0.1	-1.10	50.00	AVRG
Styrene	1.0650000	1.0263764	1.0263764	0.3	3.63	50.00	AVRG
Vinyl Chloride	0.6460000	0.7075158	0.7075158	0.1	-9.52	50.00	AVRG
1,2,3-Trichloropropane	0.7310000	0.7082465	0.7082465	0.1	3.11	50.00	AVRG
p-Isopropyltoluene	2.9780000	3.0265082	3.0265082	0.1	-1.63	50.00	AVRG
1,2-Dibromo-3-Chloropropane	6.e-002	4.48e-002	4.48e-002	0.05	25.33	50.00	AVRG
1,2-Dichloroethane-d4	0.5620000	0.5455810	0.5455810	0.1	2.92	50.00	AVRG
Dibromofluoromethane	0.5140000	0.4847151	0.4847151	0.1	5.70	50.00	AVRG
Toluene-d8	1.3140000	1.2502414	1.2502414	0.1	4.85	50.00	AVRG
4-Bromofluorobenzene	48.197821	50.000000	0.4203216	0.1	3.60	50.00	LINR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Lab File ID (Standard): Y011503 Date Analyzed: 10/16/20

Instrument ID: VOA6 Time Analyzed: 0256

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

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	766873	7.67	834321	4.97	322261	9.67
	UPPER LIMIT	1533746	8.17	1668642	5.47	644522	10.17
	LOWER LIMIT	383437	7.17	417161	4.47	161131	9.17
	CLIENT SAMPLE NO.						
01	VLCSW-201014	765016	7.67	908437	4.97	325469	9.67
02	VBLKW-201014	800634	7.67	909871	4.97	291735	9.67
03	HS20100544-03	721673	7.67	842192	4.97	301989	9.67
04	HS20100544-03	726291	7.67	821067	4.97	300284	9.67
05	HS20100694-03	802482	7.67	959039	4.97	297753	9.67
06	HS20100694-01	786496	7.67	948202	4.97	316511	9.67
07							
08							
09							
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19							
20							

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

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

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

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Lab File ID (Standard): Y011503 Date Analyzed: 10/16/20

Instrument ID: VOA6 Time Analyzed: 0256

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

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	535277	4.19				
	UPPER LIMIT	1070554	4.69				
	LOWER LIMIT	267639	3.69				
	CLIENT SAMPLE NO.						
01	VLCSW-201014	539560	4.19				
02	VBLKW-201014	607985	4.19				
03	HS20100544-03	550134	4.19				
04	HS20100544-03	538431	4.19				
05	HS20100694-03	609629	4.19				
06	HS20100694-01	607836	4.19				
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\X201015.b\Y011501.D

Date : 16-OCT-2020 02:08

Client ID: BFB

Instrument: voa6.i

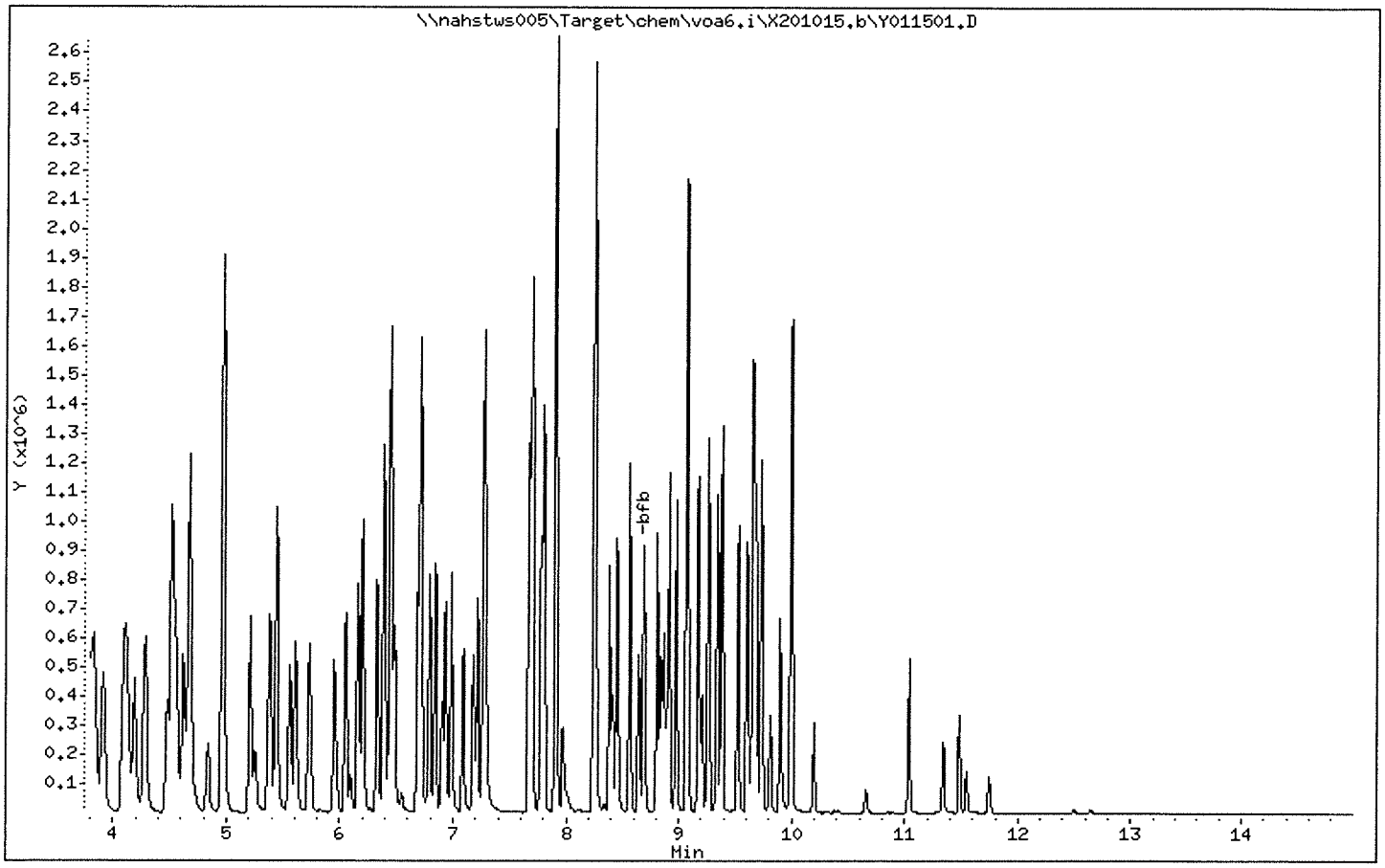
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011501.D

Date : 16-OCT-2020 02:08

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

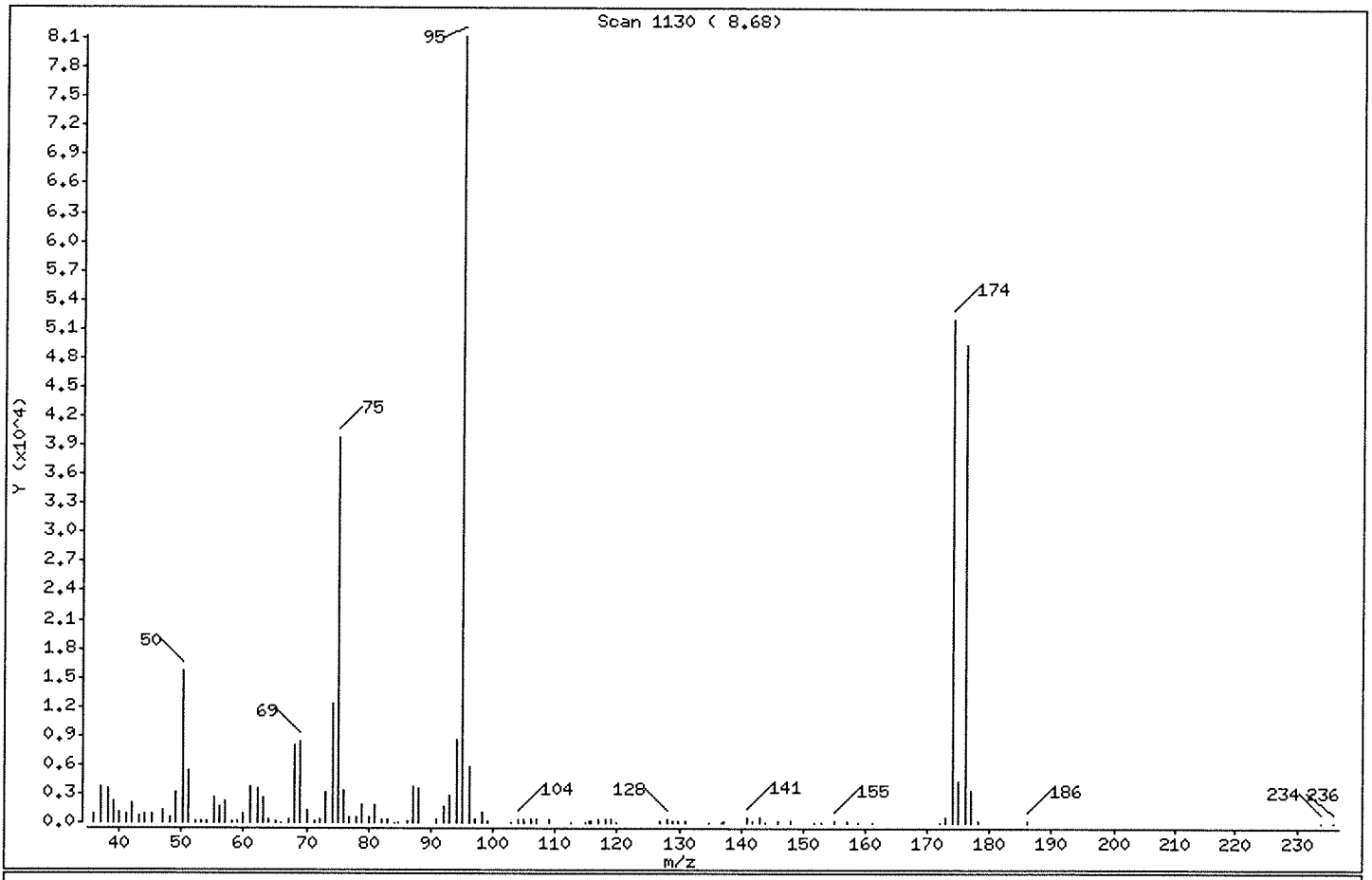
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.27
75	30.00 - 60.00% of mass 95	49.04
96	5.00 - 9.00% of mass 95	7.02
173	Less than 2.00% of mass 174	0.58 (0.90)
174	Greater than 50.00% of mass 95	64.04
175	5.00 - 9.00% of mass 174	5.18 (8.10)
176	95.00 - 101.00% of mass 174	60.84 (95.00)
177	5.00 - 9.00% of mass 176	4.17 (6.85)

Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011501.D

Date : 16-OCT-2020 02:08

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: Y011501.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.10
Number of points: 105

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	884	64.10	328	93.10	2798	136.80	90
37.10	3798	65.10	138	94.10	8560	137.20	106
38.10	3480	66.10	51	95.10	81216	141.10	572
39.10	2164	67.10	294	96.10	5699	141.90	129
40.10	1168	68.10	8084	97.10	289	142.90	474
41.10	861	69.10	8394	98.10	1070	144.00	66
42.10	2006	70.10	1302	99.10	125	145.90	106
43.10	839	71.20	192	103.00	59	147.90	141
44.10	1000	72.10	447	104.00	427	151.80	63
45.10	853	73.10	3257	105.10	343	153.10	80
47.10	1366	74.10	12298	106.00	289	154.90	235
48.10	503	75.10	39832	106.90	381	157.20	120
49.10	3248	76.10	3405	109.00	351	158.90	82
50.10	15651	77.00	614	112.70	61	161.10	53
51.10	5350	78.00	467	114.80	92	172.00	51
52.20	268	79.00	1815	115.40	105	172.90	470
53.10	161	80.00	622	115.90	223	174.00	52008
54.10	225	81.00	1907	116.90	323	175.00	4211
55.10	2574	82.00	315	118.00	299	176.00	49408
56.10	1681	83.10	306	119.00	400	177.00	3383
57.10	2261	84.10	51	120.00	86	178.10	175
58.00	276	84.90	53	126.90	166	186.00	133
59.10	155	86.10	114	128.00	318	233.90	53
60.00	914	87.00	3693	129.00	134	235.70	56
61.00	3717	88.00	3558	129.80	238		
62.10	3551	91.00	331	130.90	120		
63.00	2689	92.10	1656	134.70	84		

Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011503.D Page 1
Report Date: 07-Nov-2020 11:04

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201015.b\Y011503.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 16-OCT-2020 02:56
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201015.b\8260W.m
Meth Date : 07-Nov-2020 11:04 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

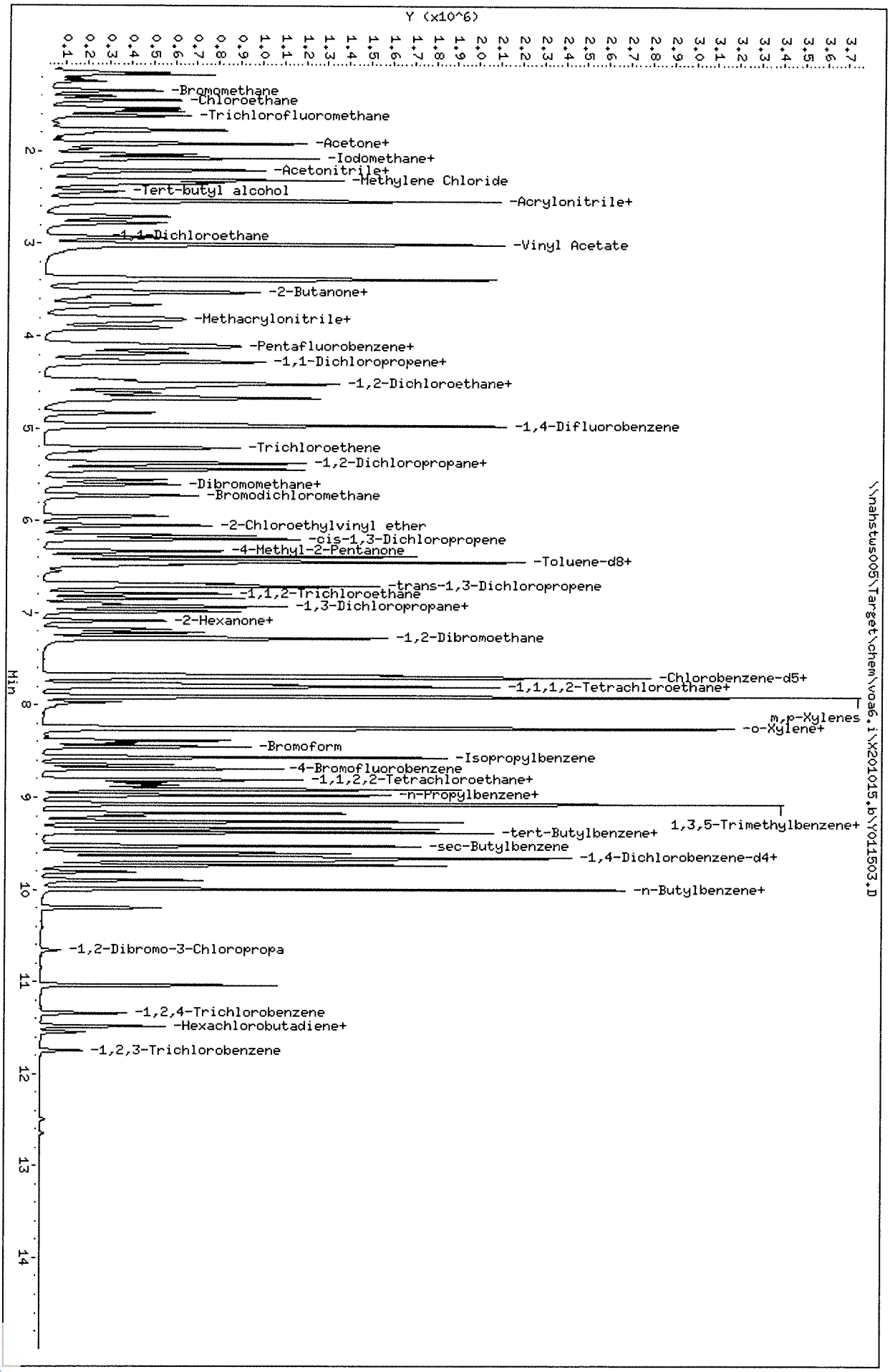
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	535277	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	834321	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	766873	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	322261	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	266755	50.0000	48.49
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	299701	50.0000	49.80
$	48 Toluene-d8	98	6.388	6.388	(0.833)	977631	50.0000	48.48
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	328920	50.0000	49.19
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	260356	50.0000	48.99
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	425903	50.0000	51.66
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	241624	50.0000	42.39
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	217862	50.0000	48.23
	22 1,1-Dichloroethane	63	2.928	2.928	(0.699)	572272	50.0000	51.17
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	254466	50.0000	52.87
	32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	389176	50.0000	50.70
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	53830	50.0000	43.21
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	220904	50.0000	46.86(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	109222	50.0000	44.90
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	928017	50.0000	48.37
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	17432	50.0000	44.82
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	256831	50.0000	48.19
	88 1,2-Dichlorobenzene	146	9.991	9.991	(1.033)	422163	50.0000	47.04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	378181	50.0000	52.57
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	328702	50.0000	53.20
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	897966	50.0000	47.18
83	1,3-Dichlorobenzene	146	9.604	9.604	(0.993)	493883	50.0000	47.64
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	446626	50.0000	47.80
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	478520	50.0000	46.48
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	375646	50.0000	44.70
24	2-Butanone	43	3.580	3.580	(0.855)	219061	100.000	112.11
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	779831	50.0000	46.57
52	2-Hexanone	43	7.090	7.090	(0.924)	320752	100.000	94.32
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	903055	50.0000	47.36
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	887318	50.0000	46.22
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	511992	100.000	95.11
10	Acetone	43	1.976	1.976	(0.472)	166388	100.000	131.77
37	Benzene	78	4.519	4.519	(0.909)	1250162	50.0000	52.39
74	Bromobenzene	156	8.809	8.809	(0.911)	313320	50.0000	48.11
29	Bromochloromethane	128	3.802	3.802	(0.908)	166089	50.0000	49.64
39	Bromodichloromethane	83	5.729	5.729	(1.153)	402380	50.0000	53.17
66	Bromoform	173	8.415	8.415	(1.097)	161800	50.0000	48.30
6	Bromomethane	94	1.345	1.345	(0.321)	226749	50.0000	52.60
19	Carbon Disulfide	76	2.076	2.076	(0.496)	1524094	100.000	91.67
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	344107	50.0000	51.55
59	Chlorobenzene	112	7.699	7.699	(1.004)	757659	50.0000	48.56
7	Chloroethane	64	1.410	1.410	(0.337)	209953	50.0000	50.07
28	Chloroform	83	3.917	3.917	(0.935)	543045	50.0000	52.33
3	Chloromethane	50	1.080	1.080	(0.258)	378627	50.0000	51.65
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	338522	50.0000	51.62
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	492972	50.0000	51.50
55	Dibromochloromethane	129	7.176	7.176	(0.936)	265522	50.0000	48.45
44	Dibromomethane	93	5.557	5.557	(1.118)	189592	50.0000	51.75
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	254308	50.0000	46.67
61	Ethylbenzene	106	7.799	7.799	(1.017)	376979	50.0000	46.28
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	97735	50.0000	43.48
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1059664	50.0000	44.75
62	m,p-Xylenes	106	7.907	7.907	(1.031)	912201	100.000	93.29
17	Methylene Chloride	84	2.312	2.312	(0.552)	331351	50.0000	56.65
87	n-Butylbenzene	91	9.998	9.998	(1.034)	779100	50.0000	46.91
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1247261	50.0000	45.37
92	Naphthalene	128	11.546	11.546	(1.194)	142573	50.0000	47.44
63	o-Xylene	106	8.243	8.243	(1.075)	447673	50.0000	46.88
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	1036900	50.0000	46.05
64	Styrene	104	8.258	8.258	(1.077)	773159	50.0000	47.33
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	730755	50.0000	46.06
56	Tetrachloroethene	164	6.933	6.933	(0.904)	223004	50.0000	46.02
50	Toluene	91	6.453	6.453	(0.841)	1269409	50.0000	51.14
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	295707	50.0000	53.32
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	394394	50.0000	49.43
38	Trichloroethene	130	5.214	5.214	(1.049)	312821	50.0000	52.42
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	405893	50.0000	52.16
5	Vinyl Chloride	62	1.145	1.145	(0.273)	362074	50.0000	52.36

QC Flag Legend

M - Compound response manually integrated.

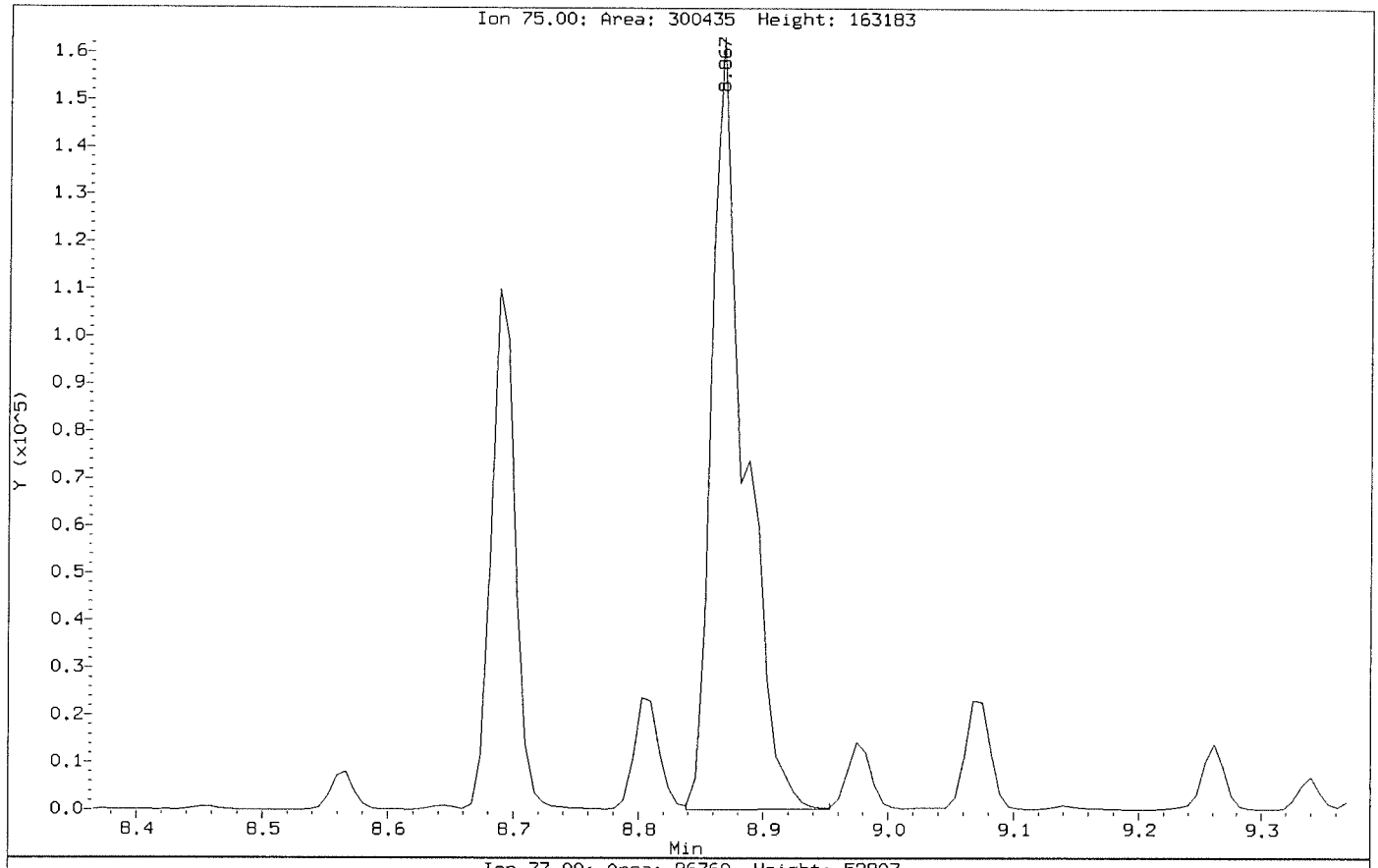


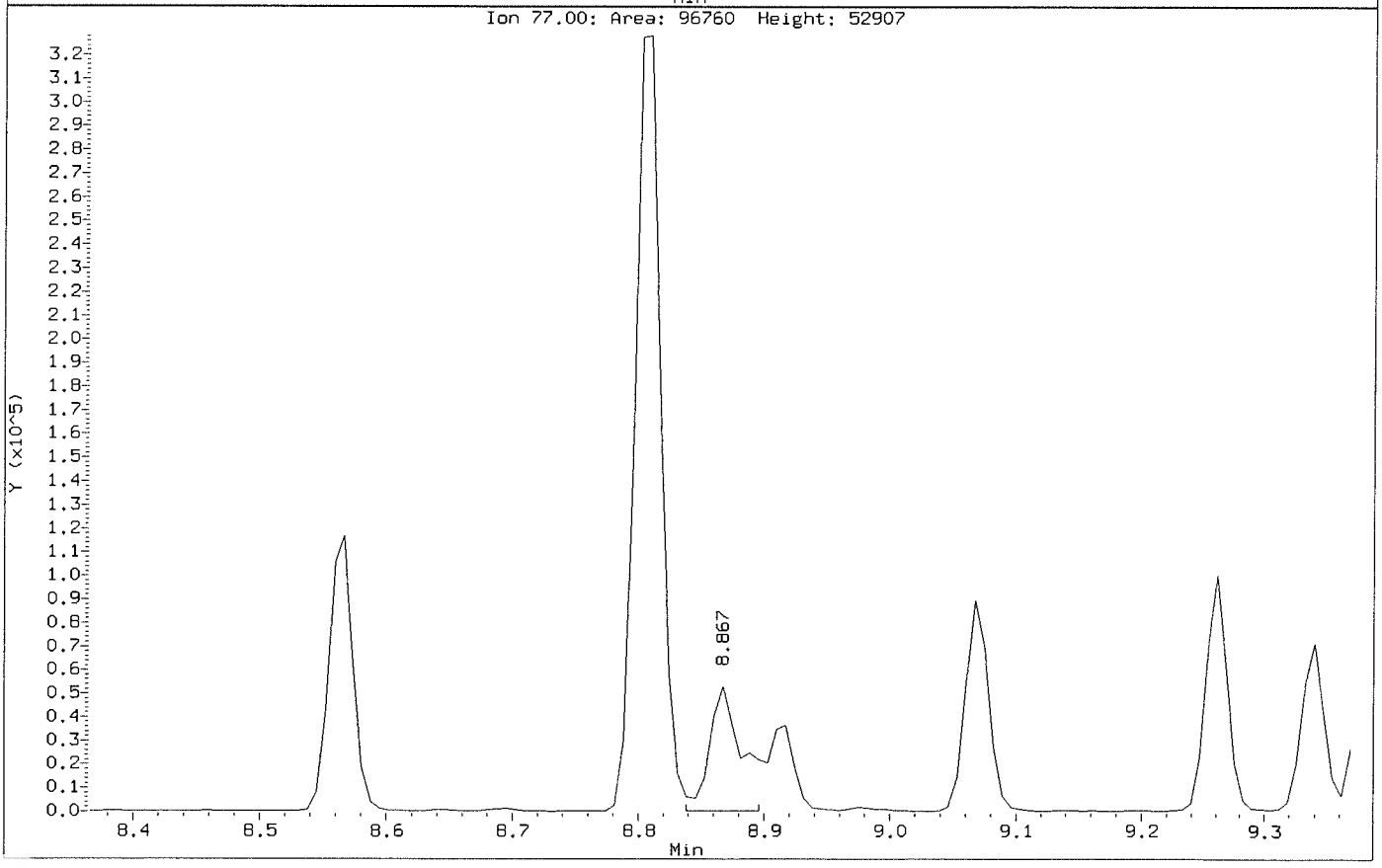
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Date : 16-OCT-2020 02:56
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Before\Y011503.D
Injection Date: 16-OCT-2020 02:56
Instrument: voa6.i
Client Sample ID: CCV

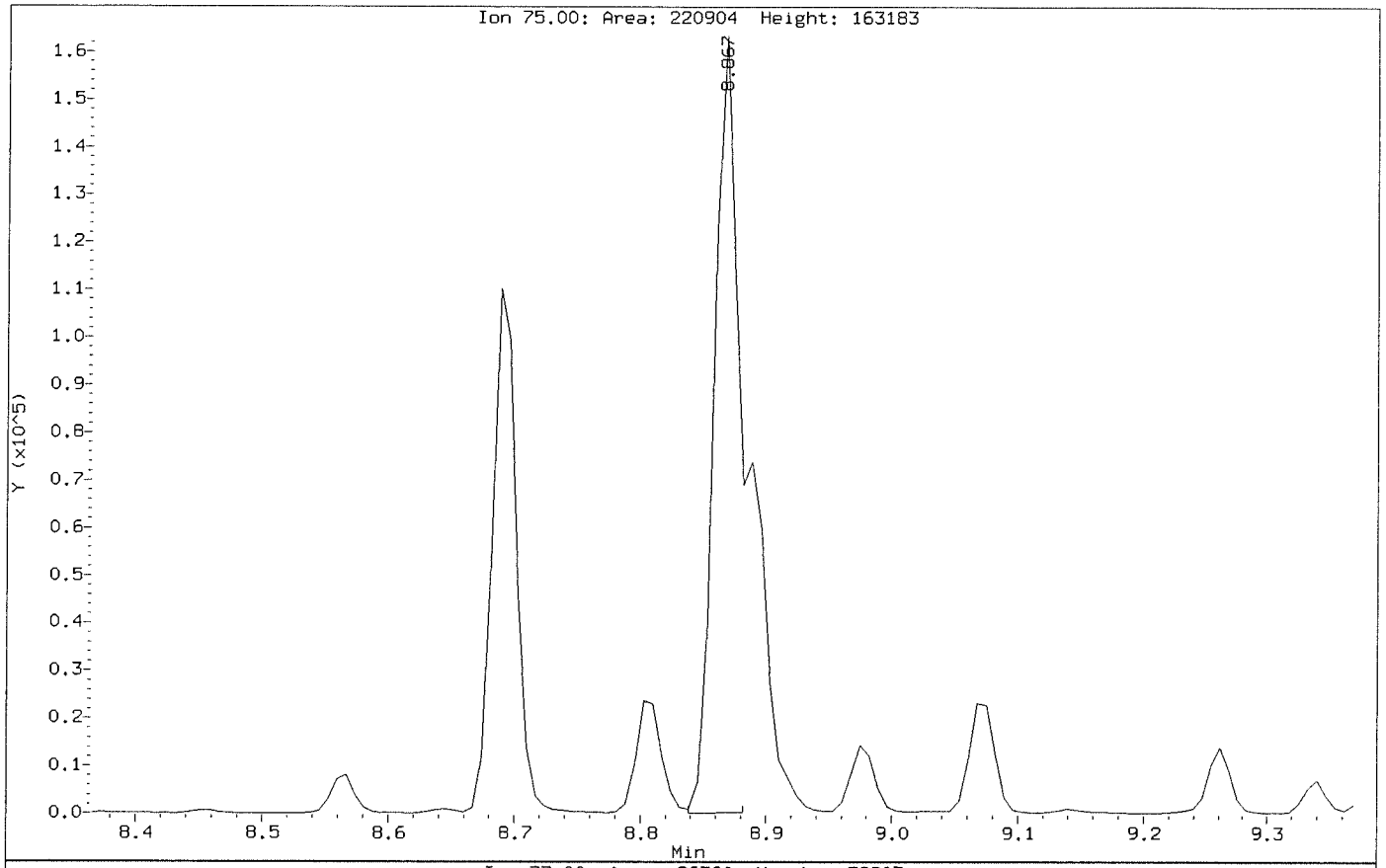
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

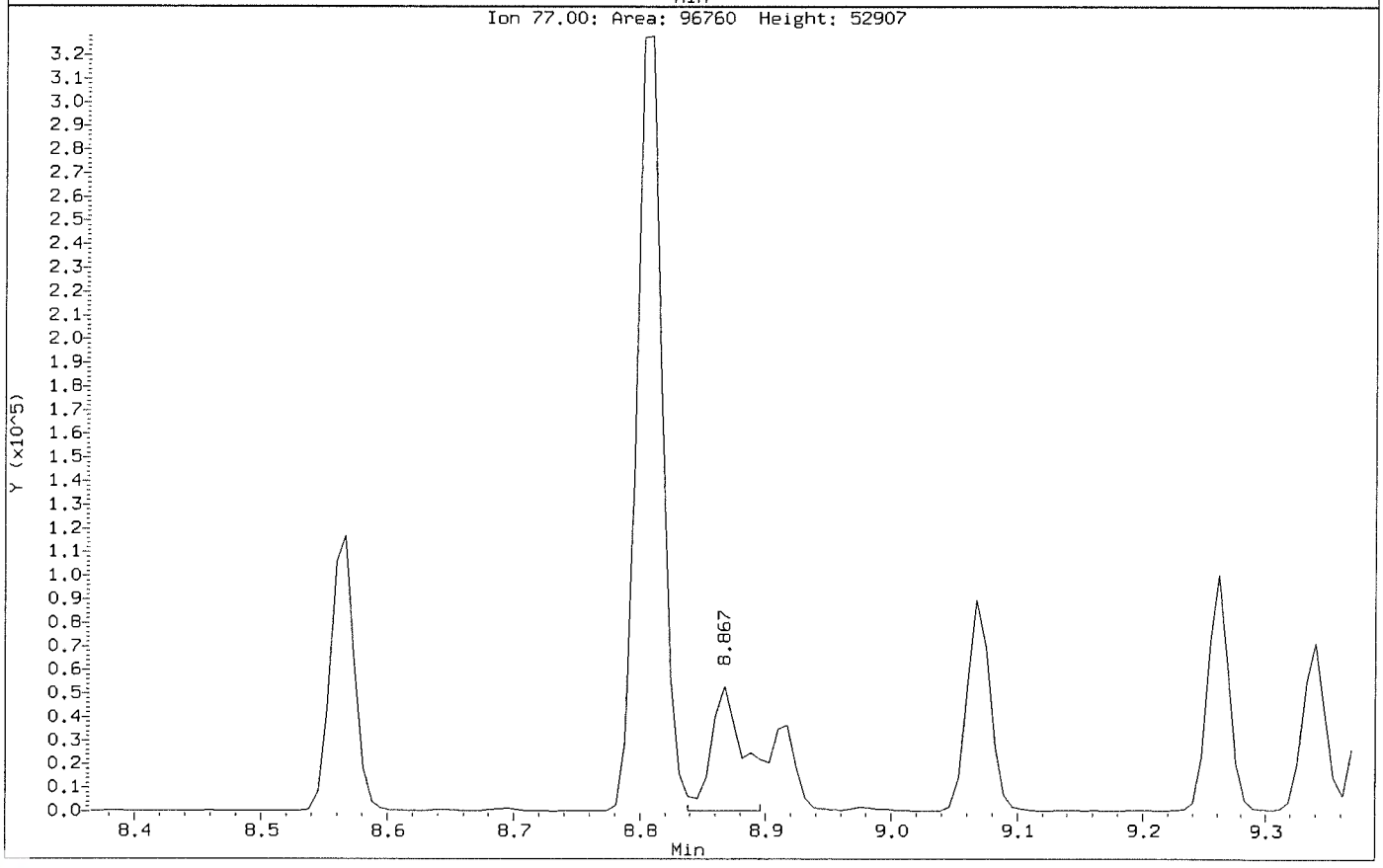




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Injection Date: 16-OCT-2020 02:56
Instrument: voa6.i
Client Sample ID: CCV

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201015.b\Y011504.D
Lab Smp Id: VLCSW-201014 Client Smp ID: VLCSW-201014
Inj Date : 16-OCT-2020 03:20
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-201014;VLCSW-201014;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201015.b\8260W.m
Meth Date : 07-Nov-2020 11:04 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 32 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

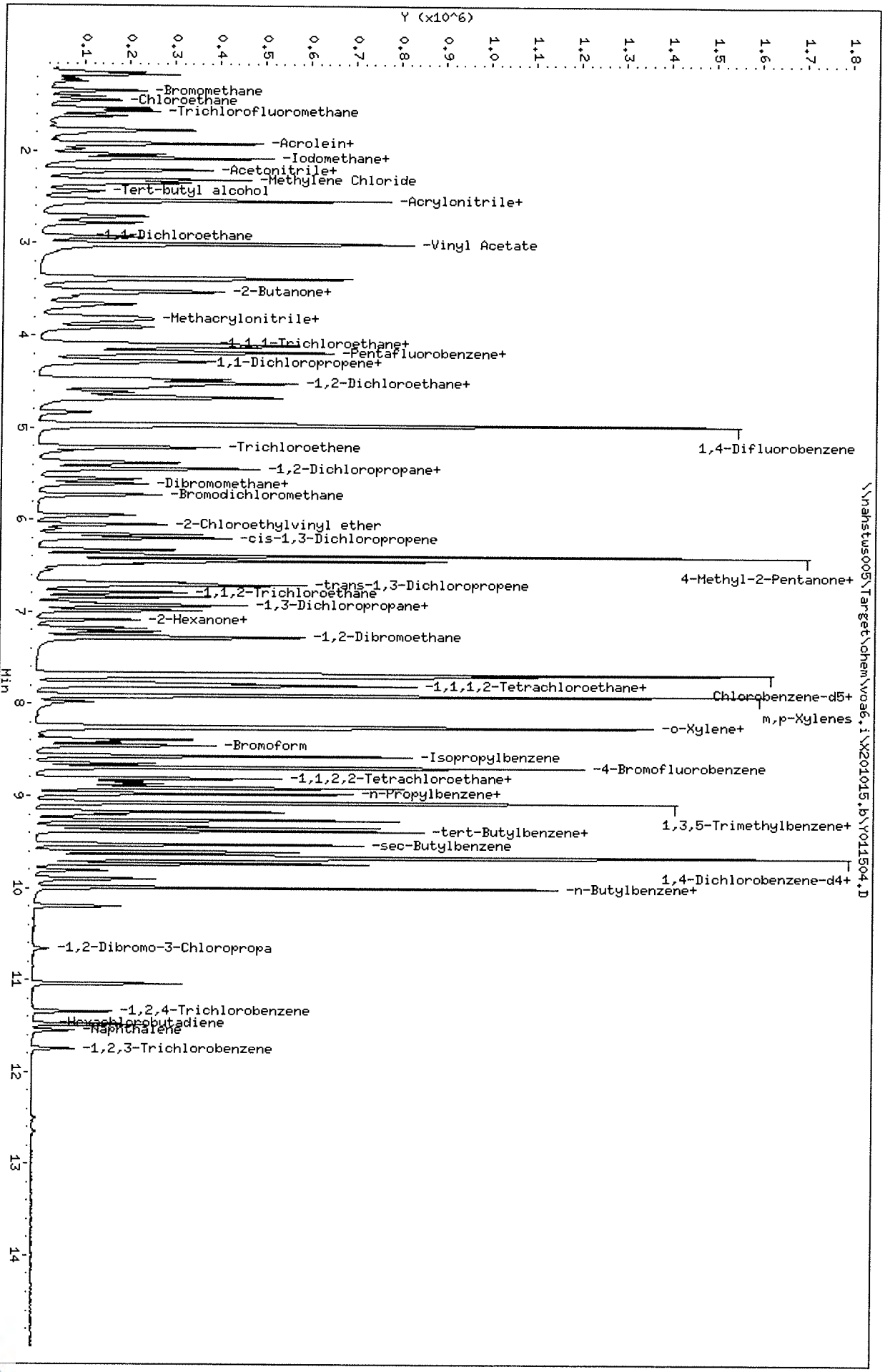
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	539560	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	908437	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	765016	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	325469	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	265942	47.9660	47.96
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	299460	49.3726	49.37
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	980743	48.7620	48.76
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	359329	53.9574	53.95
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	107964	20.3650	20.36
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	167204	20.1204	20.12
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	103497	17.9823	17.98
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	91115	20.2228	20.22
22 1,1-Dichloroethane	63	2.929	2.928	(0.699)	240721	21.3563	21.35
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	100819	20.7819	20.78
32 1,1-Dichloropropene	75	4.290	4.289	(0.863)	154464	18.4827	18.48
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	27330	21.7267	21.72
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	94695	19.8899	19.88(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	49749	21.0072	21.00
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	392653	20.2666	20.26
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	7105	18.0902	18.09
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	106986	20.1250	20.12
88 1,2-Dichlorobenzene	146	9.999	9.991	(1.034)	181254	19.9992	19.99

Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011504.D Page 2
Report Date: 07-Nov-2020 11:04

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	160773	20.5259	20.52
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	140070	20.8236	20.82
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	383890	19.9753	19.97
83 1,3-Dichlorobenzene	146	9.605	9.604	(0.993)	211691	20.2219	20.22
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	182179	19.5473	19.54
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	206053	19.8199	19.81
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	154005	18.1834	18.18
24 2-Butanone	43	3.588	3.580	(0.856)	87392	44.3711	44.37
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	341482	20.1917	20.19
52 2-Hexanone	43	7.090	7.090	(0.924)	128576	37.9029	37.90
77 4-Chlorotoluene	91	9.075	9.074	(0.939)	386384	20.0666	20.06
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	364134	18.7846	18.78
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	196603	36.6111	36.61
10 Acetone	43	1.976	1.976	(0.472)	70400	52.3623	52.36
37 Benzene	78	4.519	4.519	(0.909)	513985	19.7830	19.78
74 Bromobenzene	156	8.810	8.809	(0.911)	136816	20.8027	20.80
29 Bromochloromethane	128	3.803	3.802	(0.908)	69710	20.6733	20.67
39 Bromodichloromethane	83	5.729	5.729	(1.153)	155581	18.8840	18.88
66 Bromoform	173	8.416	8.415	(1.097)	66973	20.0416	20.04
6 Bromomethane	94	1.346	1.345	(0.321)	94755	21.6676	21.66
19 Carbon Disulfide	76	2.076	2.076	(0.496)	628617	37.5132	37.51
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	131216	18.0566	18.05
59 Chlorobenzene	112	7.699	7.699	(1.004)	303103	19.4755	19.47
7 Chloroethane	64	1.410	1.410	(0.337)	89910	21.2724	21.27
28 Chloroform	83	3.917	3.917	(0.935)	232892	22.2678	22.26
3 Chloromethane	50	1.081	1.080	(0.258)	150562	20.3775	20.37
27 cis-1,2-Dichloroethene	96	3.538	3.530	(0.844)	144931	21.9251	21.92
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	191291	18.3551	18.35
55 Dibromochloromethane	129	7.176	7.176	(0.936)	109411	20.0144	20.01
44 Dibromomethane	93	5.558	5.557	(1.118)	78824	19.7613	19.76
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	96696	18.8975	18.89
61 Ethylbenzene	106	7.800	7.799	(1.017)	157487	19.3849	19.38
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	44755	20.3382	20.33
67 Isopropylbenzene	105	8.566	8.566	(1.117)	468770	19.8447	19.84
62 m,p-Xylenes	106	7.907	7.907	(1.031)	388398	39.8203	39.82
17 Methylene Chloride	84	2.313	2.312	(0.552)	140015	23.3383	23.33
87 n-Butylbenzene	91	9.999	9.998	(1.034)	320527	19.1121	19.11
73 n-Propylbenzene	91	8.917	8.917	(0.922)	539928	19.4478	19.44
92 Naphthalene	128	11.546	11.546	(1.194)	67963	22.3932	22.39
63 o-Xylene	106	8.244	8.243	(1.075)	197695	20.7559	20.75
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	430417	18.9270	18.92
64 Styrene	104	8.265	8.258	(1.078)	341248	20.9420	20.94
78 tert-Butylbenzene	119	9.340	9.339	(0.966)	305174	19.0496	19.04
56 Tetrachloroethene	164	6.933	6.933	(0.904)	90982	18.8244	18.82
50 Toluene	91	6.446	6.453	(0.840)	511922	20.6738	20.67
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	121833	21.7977	21.79
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	159081	18.3142	18.31
38 Trichloroethene	130	5.214	5.214	(1.049)	136395	20.9912	20.99
8 Trichlorofluoromethane	101	1.568	1.568	(0.374)	160293	20.4352	20.43
5 Vinyl Chloride	62	1.145	1.145	(0.273)	143004	20.5179	20.51

QC Flag Legend

M - Compound response manually integrated.

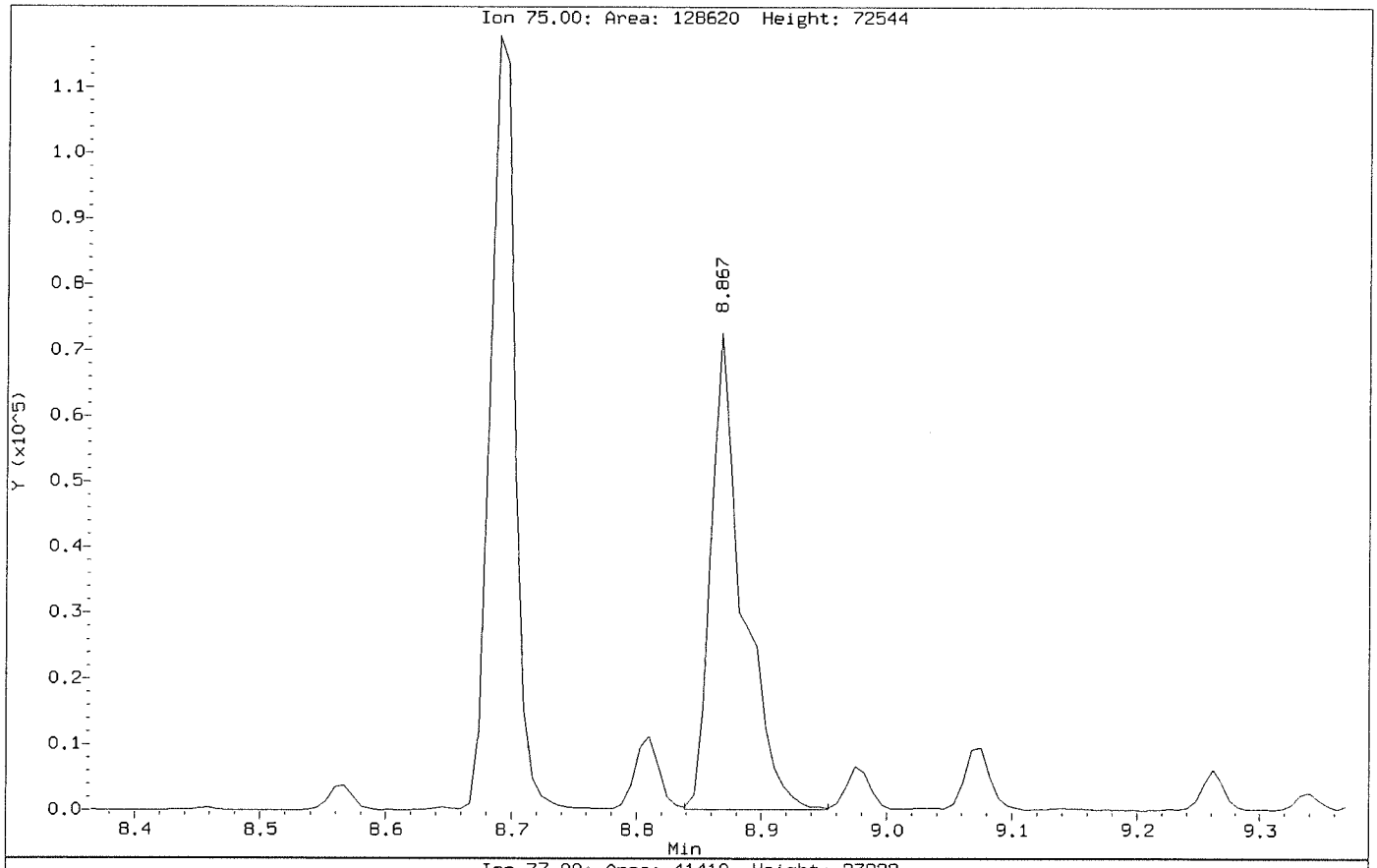


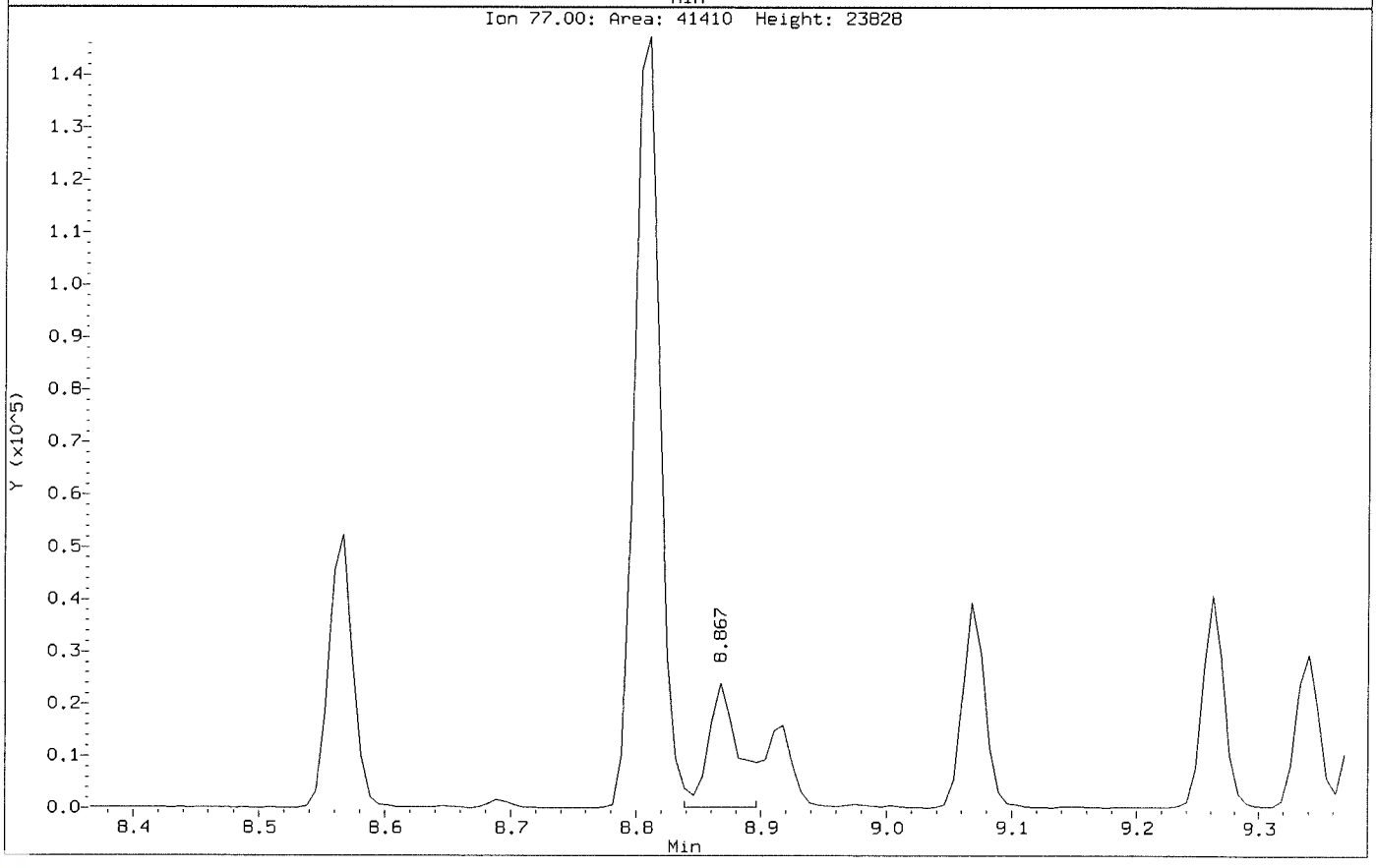
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Sample Info: VLCSW-201014;VLCSW-201014;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Before\Y011504.D
Injection Date: 16-OCT-2020 03:20
Instrument: voa6.i
Client Sample ID: VLCSW-201014

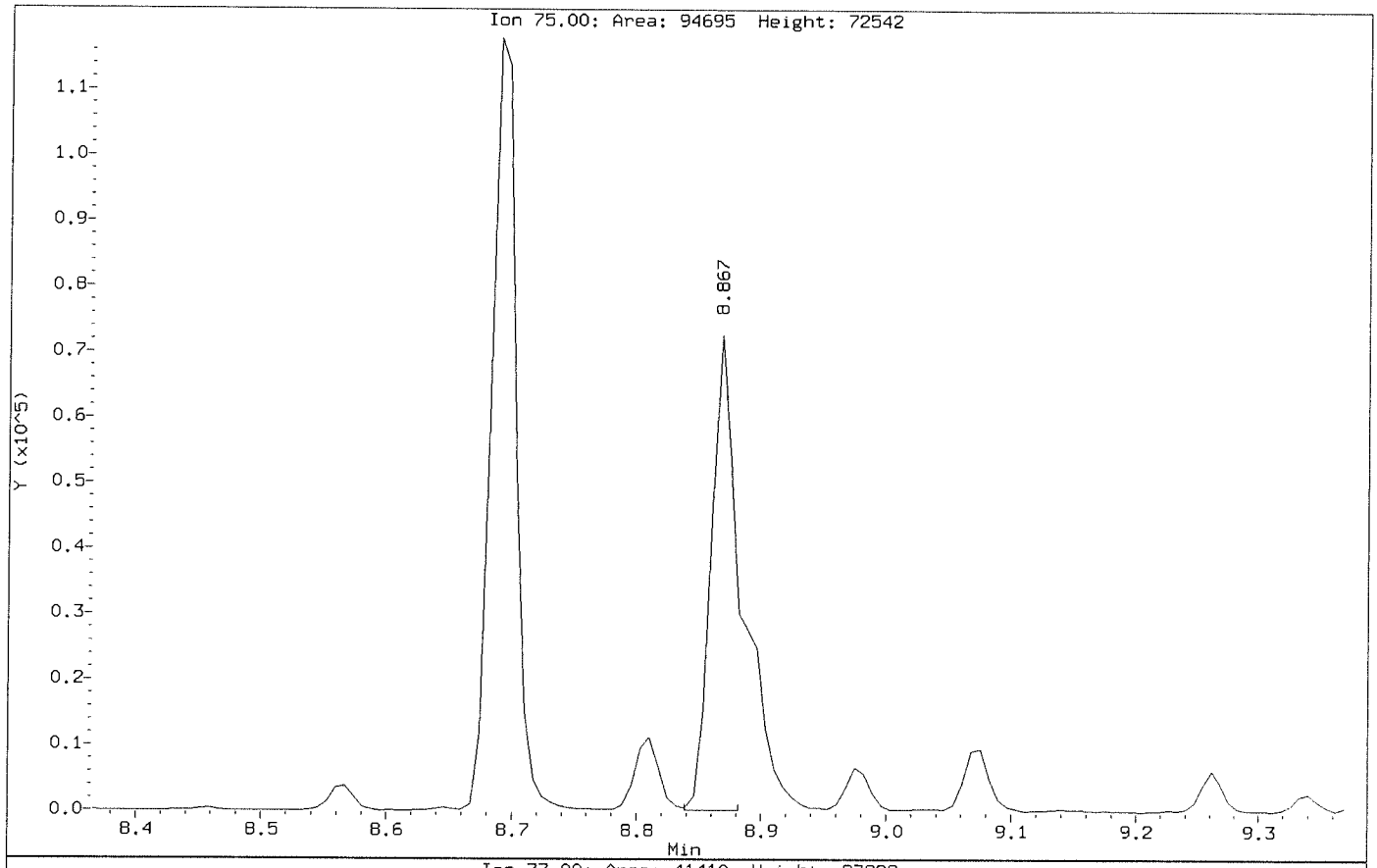
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

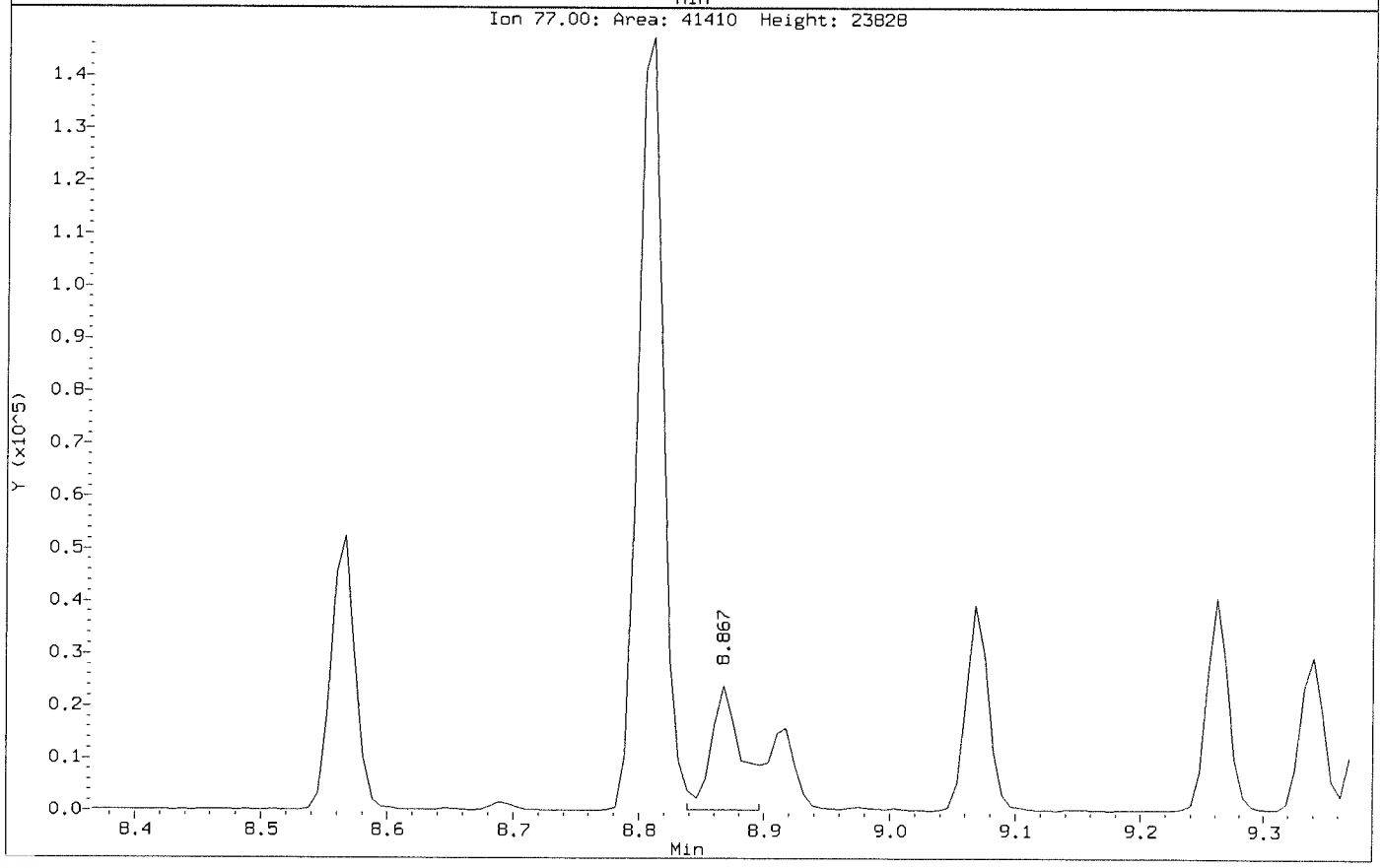




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Injection Date: 16-OCT-2020 03:20
Instrument: voa6.i
Client Sample ID: VLCSW-201014

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





Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011506.D Page 1
Report Date: 07-Nov-2020 11:04

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201015.b\Y011506.D
Lab Smp Id: VBLKW-201014 Client Smp ID: VBLKW-201014
Inj Date : 16-OCT-2020 04:08
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-201014;VBLKW-201014;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201015.b\8260W.m
Meth Date : 07-Nov-2020 11:04 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 34 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

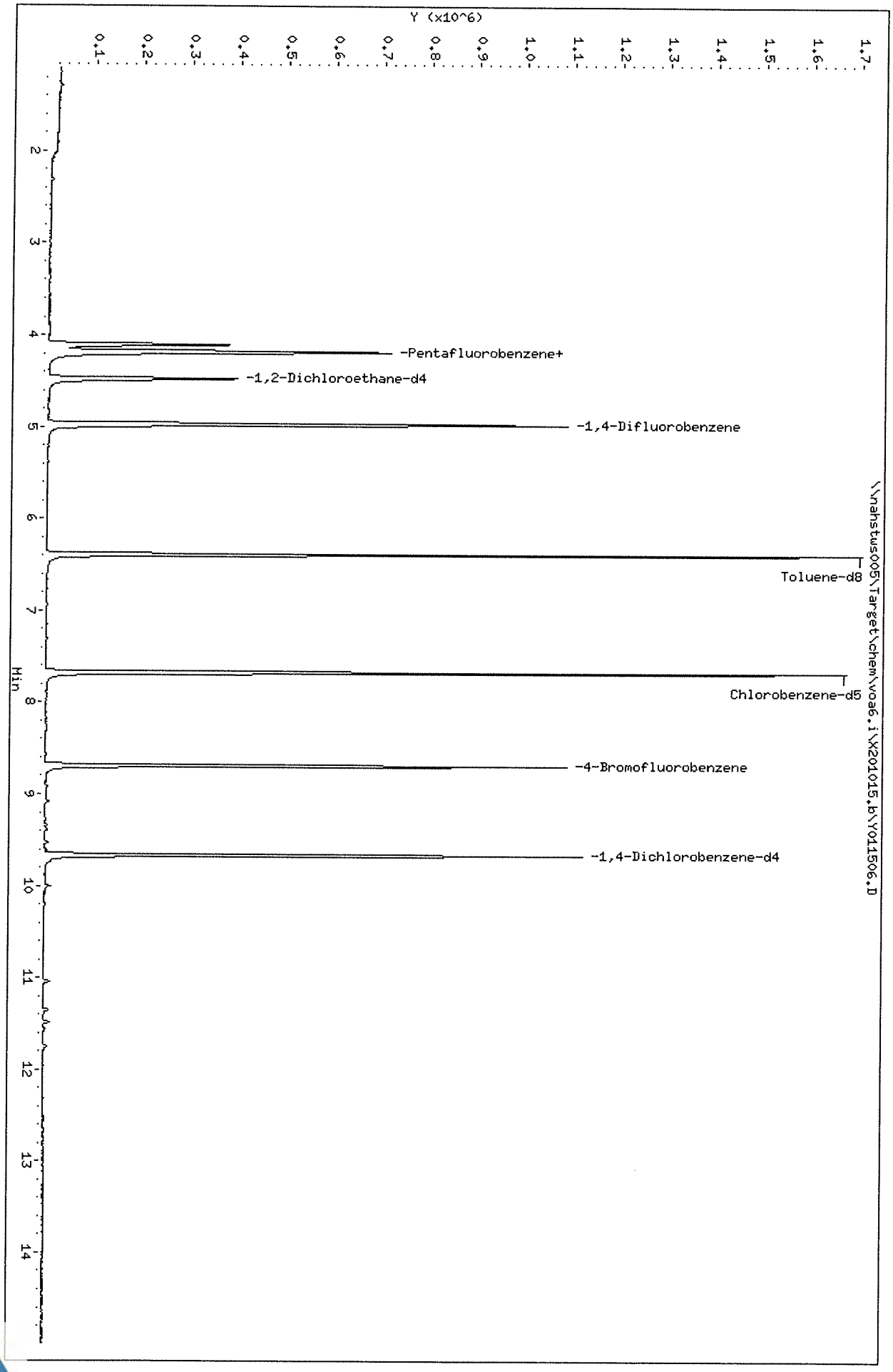
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	607985	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	909871	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	800634	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	291735	50.0000	
$ 30 Dibromofluoromethane	113	4.110	4.103	(0.981)	273859	43.8350	43.83
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	288583	42.2245	42.22
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1014697	48.2058	48.20
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	332889	47.6683	47.66

Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011506.D
Date : 16-OCT-2020 04:08
Client ID: VBLKW-201014
Sample Info: VBLKW-201014;VBLKW-201014;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\X201015.b\Y011508.D
Lab Smp Id: HS20100544-03MS Client Smp ID: HS20100544-03MS
Inj Date : 16-OCT-2020 04:56
Operator : PC Inst ID: voa6.i
Smp Info : HS20100544-03MS;HS20100544-03MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201015.b\8260W.m
Meth Date : 07-Nov-2020 11:04 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 36 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

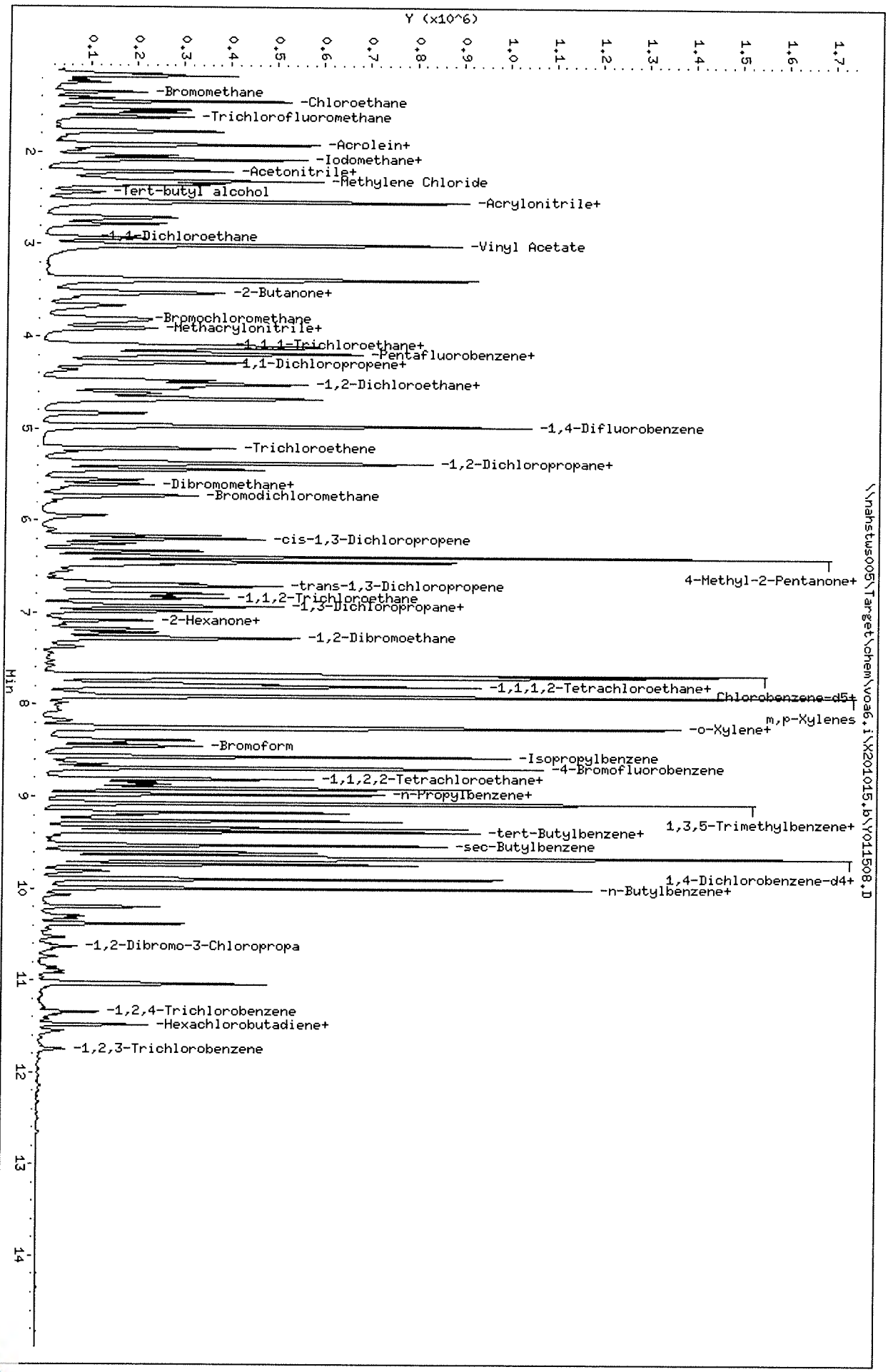
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	550134	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	842192	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	721673	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	301989	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	248725	43.9984	43.99
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	264130	42.7106	42.71
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	966153	50.9216	50.92
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	335628	53.4171	53.41
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	110417	22.0786	22.07
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	181303	21.3976	21.39
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	103742	19.4263	19.42
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	90904	21.3877	21.38
22 1,1-Dichloroethane	63	2.929	2.928	(0.699)	232456	20.2266	20.22
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	110269	22.2930	22.29
32 1,1-Dichloropropene	75	4.290	4.289	(0.863)	168210	21.7106	21.71
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	15887	13.6118	13.61
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	87309	19.7643	19.76(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	33799	15.7494	15.74
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	419154	23.3165	23.31
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	5372	14.7412	14.74
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	104302	20.7985	20.79
88 1,2-Dichlorobenzene	146	9.999	9.991	(1.034)	169538	20.1609	20.16

Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011508.D Page 2
Report Date: 07-Nov-2020 11:04

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	145873	20.0885	20.08
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	133314	21.3781	21.37
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	421964	23.6635	23.66
83 1,3-Dichlorobenzene	146	9.612	9.604	(0.994)	208840	21.5007	21.50
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	185157	21.0600	21.06
84 1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	202894	21.0334	21.03
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	150981	17.4837	17.48
24 2-Butanone	43	3.588	3.580	(0.856)	70119	34.9169	34.91
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	356242	22.7022	22.70
52 2-Hexanone	43	7.090	7.090	(0.924)	120207	37.5641	37.56
77 4-Chlorotoluene	91	9.075	9.074	(0.939)	404356	22.6327	22.63
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	415840	23.1199	23.11
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	196353	38.7606	38.76
10 Acetone	43	1.976	1.976	(0.472)	54495	38.5292	38.52
37 Benzene	78	4.519	4.519	(0.909)	509324	21.1456	21.14
74 Bromobenzene	156	8.810	8.809	(0.911)	134500	22.0406	22.04
29 Bromochloromethane	128	3.803	3.802	(0.908)	65750	19.1241	19.12
39 Bromodichloromethane	83	5.730	5.729	(1.153)	160222	20.9770	20.97
66 Bromoform	173	8.416	8.415	(1.097)	62107	19.7016	19.70
6 Bromomethane	94	1.346	1.345	(0.321)	98721	22.1458	22.14
19 Carbon Disulfide	76	2.076	2.076	(0.496)	693305	40.5782	40.57
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	148066	21.9780	21.97
59 Chlorobenzene	112	7.699	7.699	(1.004)	320521	21.8316	21.83
7 Chloroethane	64	1.410	1.410	(0.337)	93967	21.8049	21.80
28 Chloroform	83	3.917	3.917	(0.935)	221437	20.7655	20.76
3 Chloromethane	50	1.081	1.080	(0.258)	144915	19.2362	19.23
27 cis-1,2-Dichloroethene	96	3.538	3.530	(0.844)	138951	20.6164	20.61
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	191937	19.8657	19.86
55 Dibromochloromethane	129	7.176	7.176	(0.936)	108247	20.9908	20.99
44 Dibromomethane	93	5.558	5.557	(1.118)	73755	19.9449	19.94
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	84622	16.5137	16.51
61 Ethylbenzene	106	7.800	7.799	(1.017)	171960	22.4376	22.43
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	40425	19.8256	19.82
67 Isopropylbenzene	105	8.566	8.566	(1.117)	554389	24.8788	24.87
62 m,p-Xylenes	106	7.907	7.907	(1.031)	407417	44.2789	44.27
17 Methylene Chloride	84	2.313	2.312	(0.552)	130988	21.3556	21.35
87 n-Butylbenzene	91	9.999	9.998	(1.034)	349896	22.4854	22.48
73 n-Propylbenzene	91	8.917	8.917	(0.922)	605937	23.5224	23.52
92 Naphthalene	128	11.546	11.546	(1.194)	39380	13.9842	13.98
63 o-Xylene	106	8.244	8.243	(1.075)	201262	22.3995	22.39
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	506964	24.0263	24.02
64 Styrene	104	8.265	8.258	(1.078)	330949	21.5297	21.52
78 tert-Butylbenzene	119	9.340	9.339	(0.966)	361018	24.2876	24.28
56 Tetrachloroethene	164	6.933	6.933	(0.904)	101918	22.3535	22.35
50 Toluene	91	6.453	6.453	(0.841)	536343	22.9609	22.96
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	117567	20.6302	20.63
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	159868	19.8525	19.85
38 Trichloroethene	130	5.214	5.214	(1.049)	129689	21.5291	21.52
8 Trichlorofluoromethane	101	1.568	1.568	(0.374)	184000	23.0067	23.00
5 Vinyl Chloride	62	1.145	1.145	(0.273)	150109	21.1234	21.12

QC Flag Legend

M - Compound response manually integrated.

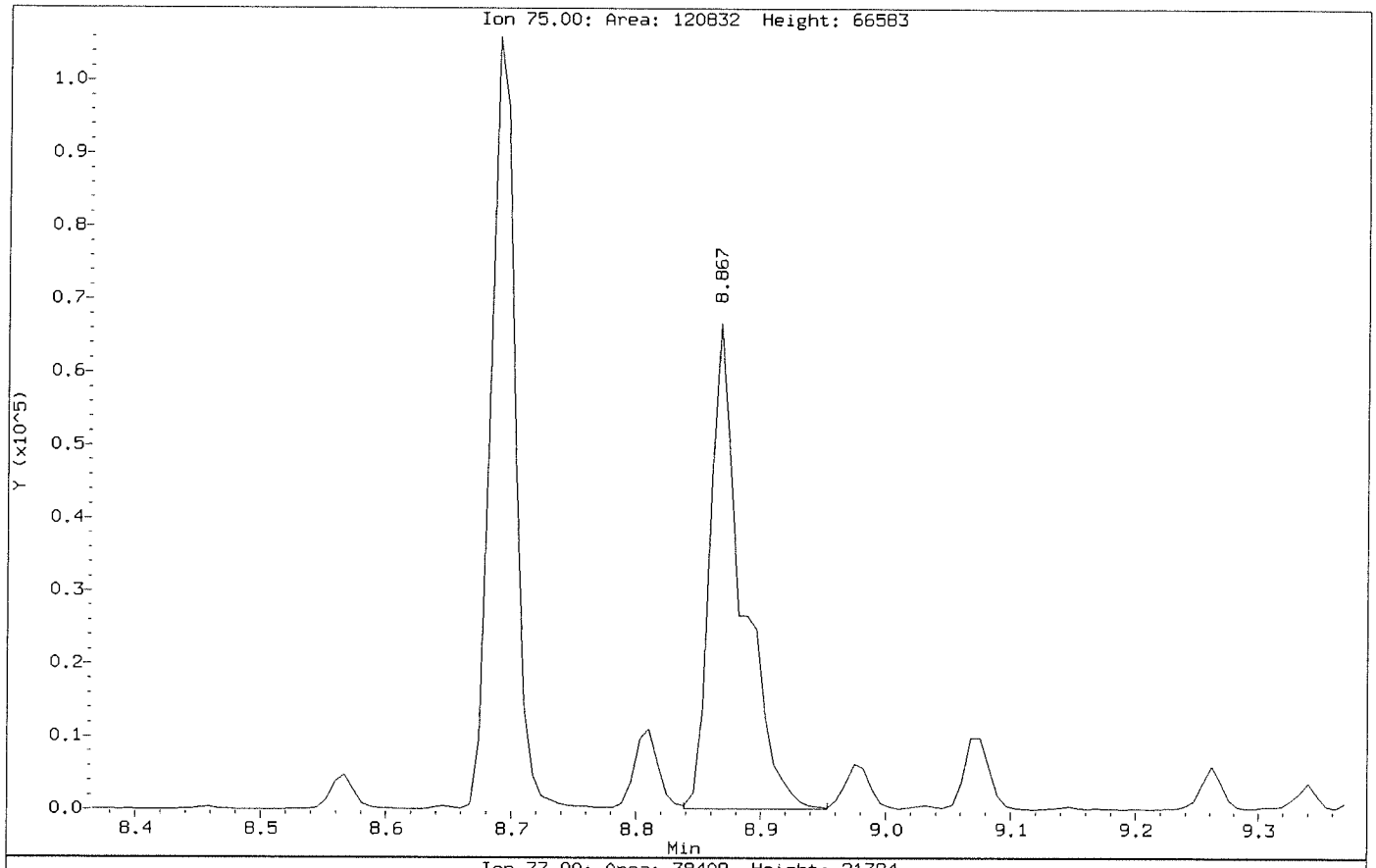


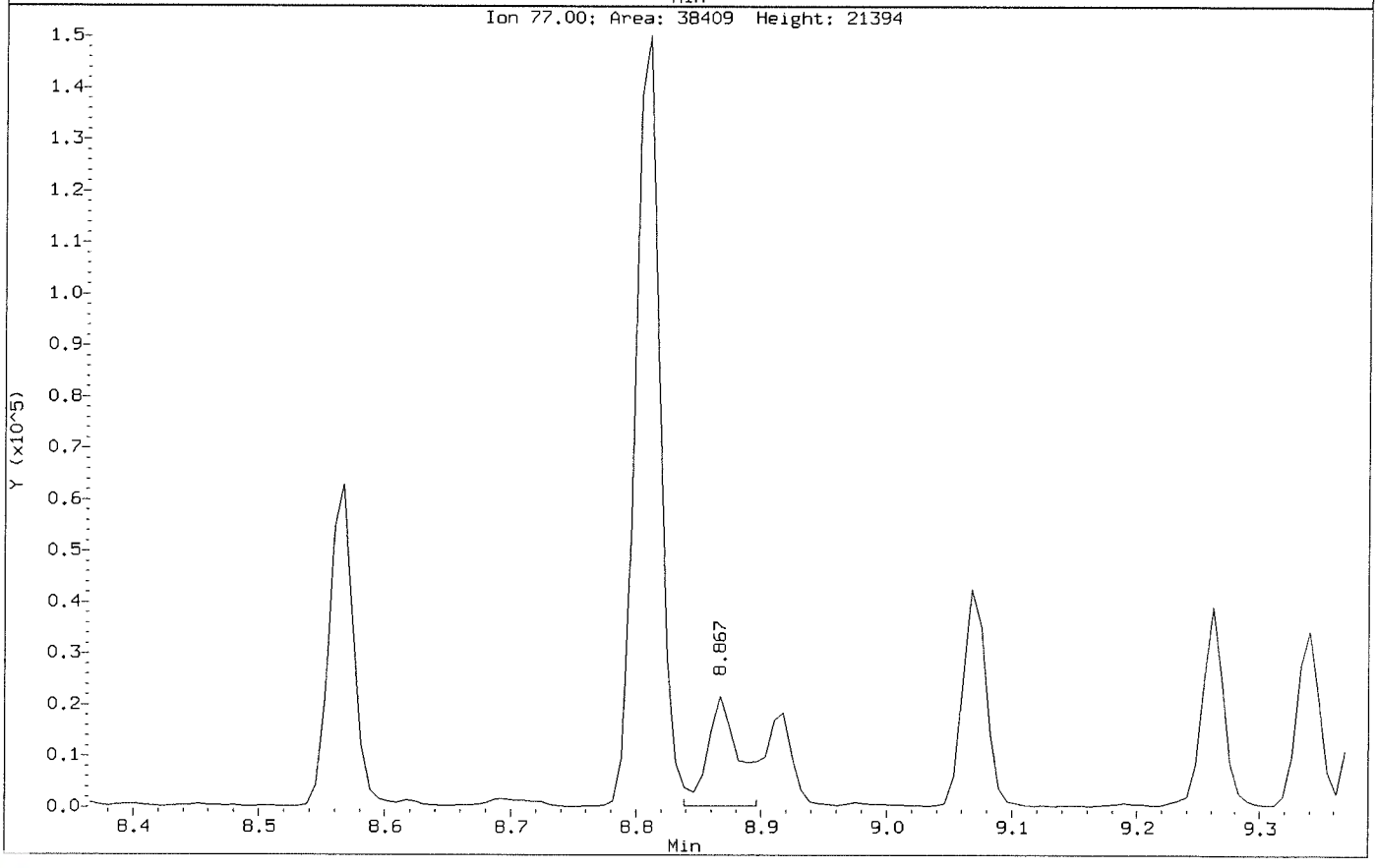
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Sample Info: HS20100544-03MS;HS20100544-03MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

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Injection Date: 16-OCT-2020 04:56
Instrument: voa6.i
Client Sample ID: HS20100544-03MS

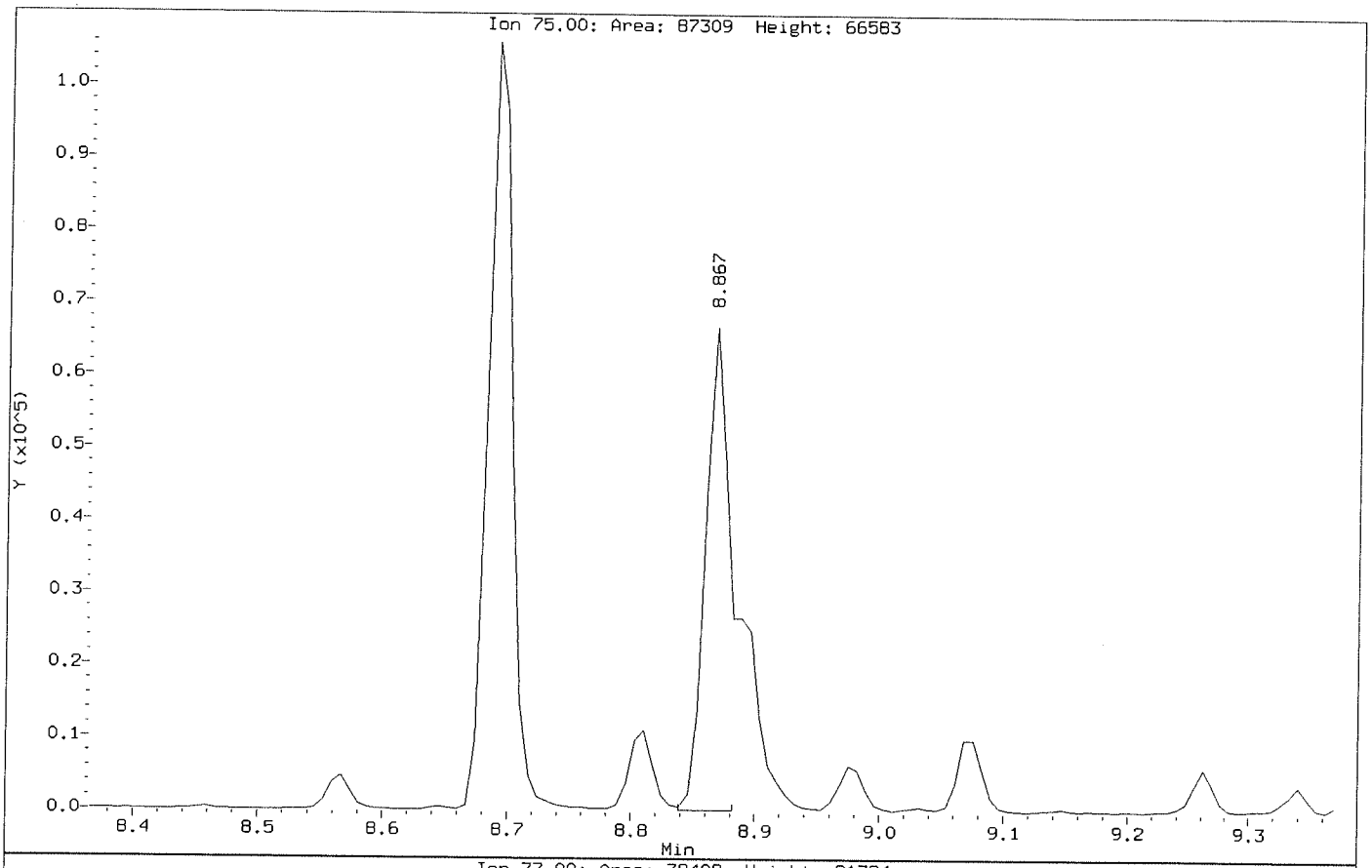
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

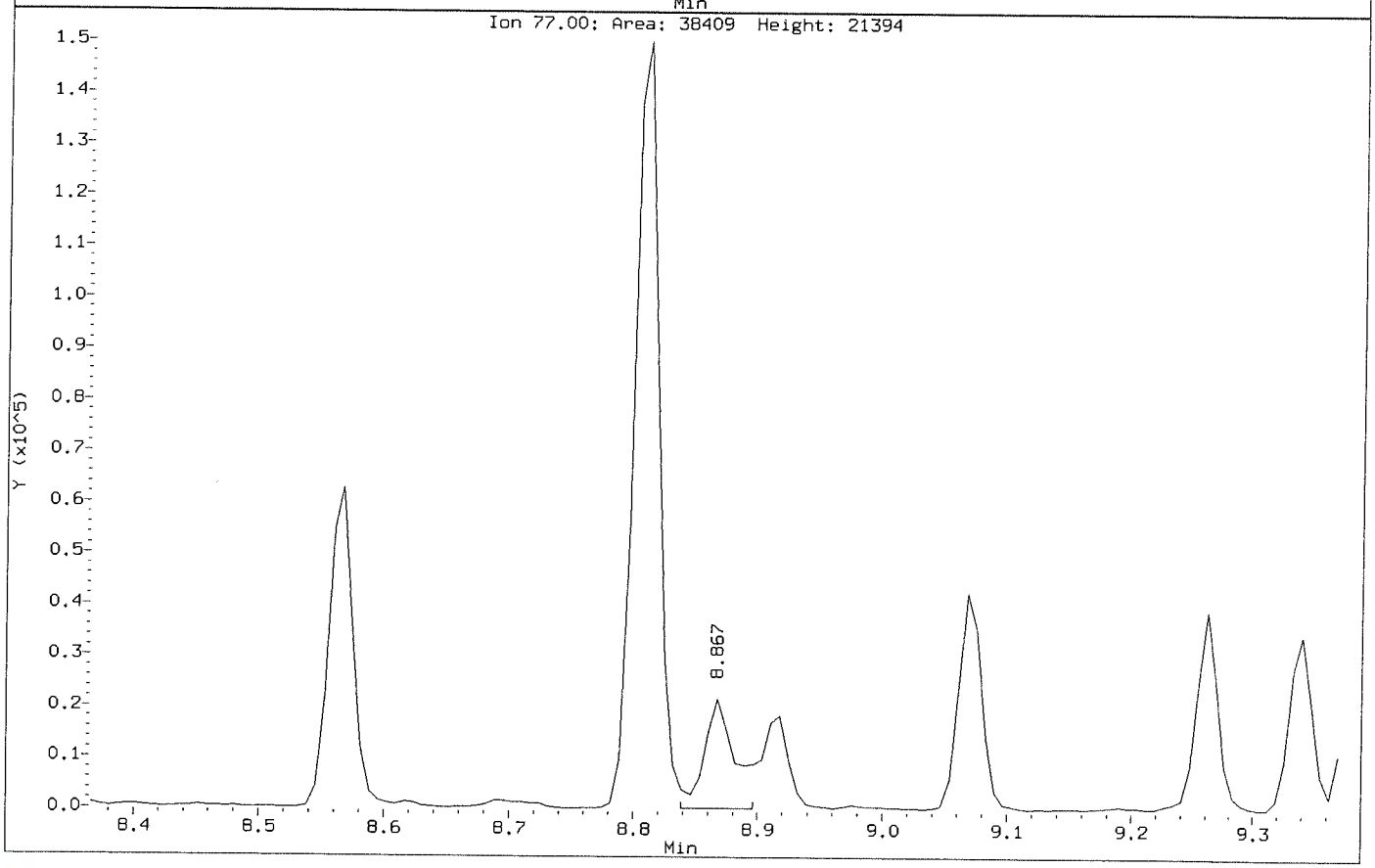




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Injection Date: 16-OCT-2020 04:56
Instrument: voa6.i
Client Sample ID: HS20100544-03MS

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201015.b\Y011509.D
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Inj Date : 16-OCT-2020 05:20
Operator : PC Inst ID: voa6.i
Smp Info : HS20100544-03MSD;HS20100544-03MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201015.b\8260W.m
Meth Date : 07-Nov-2020 11:04 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 36 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

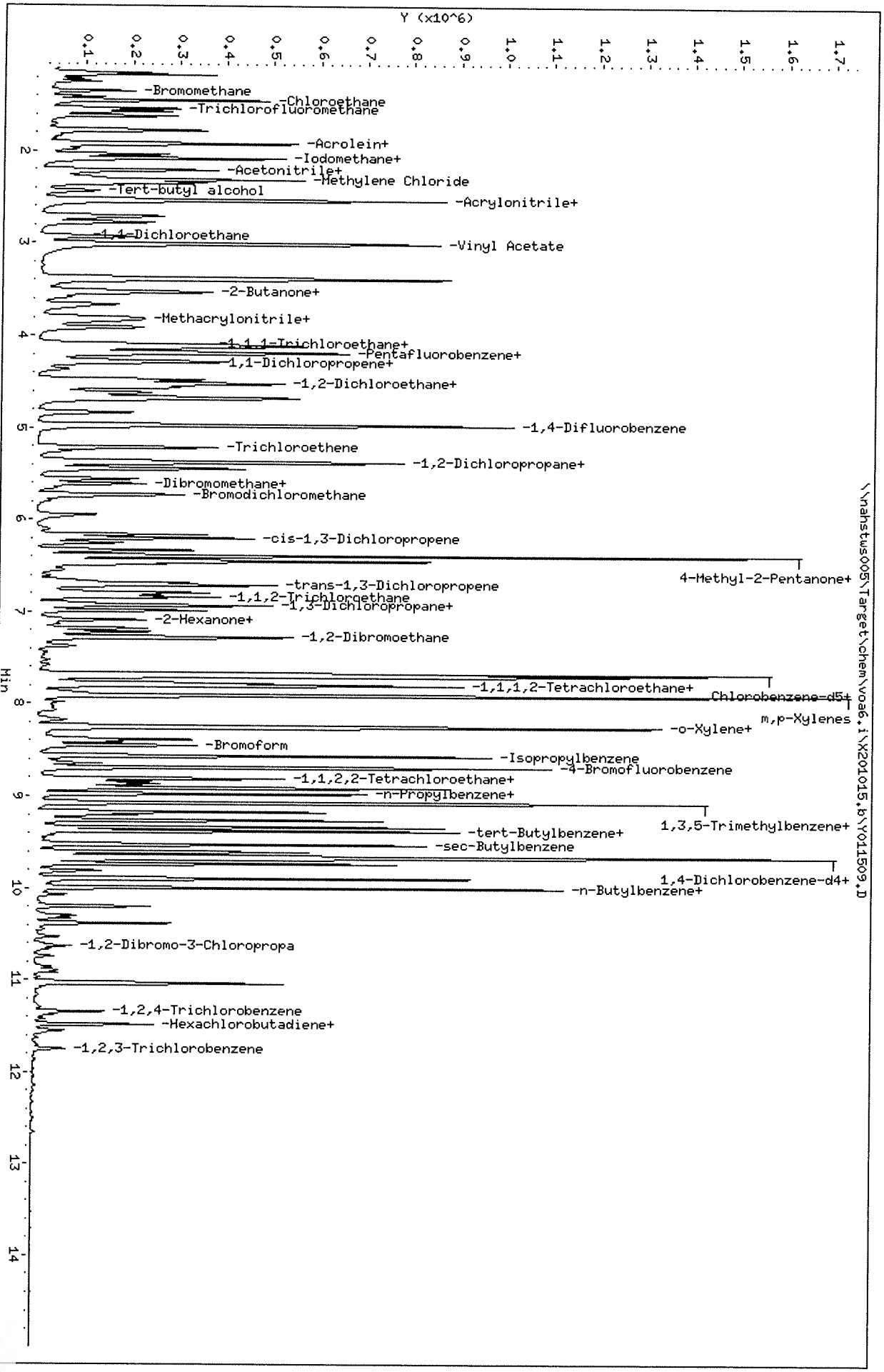
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	538431	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	821067	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	726291	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	300284	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	243800	44.0646	44.06
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	256191	42.3273	42.32
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	945615	49.5222	49.52
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	332226	52.5259	52.52
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	108546	21.5665	21.56
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	167618	20.2125	20.21
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	102476	19.2982	19.29
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	88361	20.6572	20.65
22 1,1-Dichloroethane	63	2.929	2.928	(0.699)	218564	19.4312	19.43
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	102455	21.1634	21.16
32 1,1-Dichloropropene	75	4.290	4.289	(0.863)	156297	20.6921	20.69
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	19179	16.5256	16.52
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	84148	19.1569	19.15(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	38535	17.8569	17.85
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	405120	22.6638	22.66
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	5337	14.7283	14.72
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	102557	20.3205	20.32
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.033)	165615	19.8063	19.80

Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011509.D Page 2
Report Date: 07-Nov-2020 11:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	139646	19.7257	19.72
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	126599	20.8236	20.82
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	396044	22.3360	22.33
83	1,3-Dichlorobenzene	146	9.605	9.604	(0.993)	204375	21.1605	21.16
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	177653	20.0780	20.07
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	197767	20.6183	20.61
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	140318	16.6021	16.60
24	2-Butanone	43	3.588	3.580	(0.856)	67837	34.5147	34.51
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	342932	21.9781	21.97
52	2-Hexanone	43	7.090	7.090	(0.924)	118931	36.9290	36.92
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	376683	21.2035	21.20
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	403851	22.5809	22.58
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	187192	36.7172	36.71
10	Acetone	43	1.976	1.976	(0.472)	52716	38.0225	38.02
37	Benzene	78	4.519	4.519	(0.909)	478901	20.3940	20.39
74	Bromobenzene	156	8.809	8.809	(0.911)	129557	21.3511	21.35
29	Bromochloromethane	128	3.802	3.802	(0.908)	63569	18.8916	18.89
39	Bromodichloromethane	83	5.729	5.729	(1.153)	153051	20.5537	20.55
66	Bromoform	173	8.415	8.415	(1.097)	62518	19.7059	19.70
6	Bromomethane	94	1.346	1.345	(0.321)	90236	20.6666	20.66
19	Carbon Disulfide	76	2.076	2.076	(0.496)	643109	38.4585	38.45
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	138428	21.0761	21.07
59	Chlorobenzene	112	7.699	7.699	(1.004)	313620	21.2257	21.22
7	Chloroethane	64	1.410	1.410	(0.337)	85693	20.3172	20.31
28	Chloroform	83	3.917	3.917	(0.935)	205661	19.7053	19.70
3	Chloromethane	50	1.081	1.080	(0.258)	134609	18.2566	18.25
27	cis-1,2-Dichloroethene	96	3.537	3.530	(0.844)	131074	19.8704	19.87
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	185823	19.7278	19.72
55	Dibromochloromethane	129	7.176	7.176	(0.936)	104744	20.1823	20.18
44	Dibromomethane	93	5.557	5.557	(1.118)	71894	19.9419	19.94
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	77242	15.5408	15.54
61	Ethylbenzene	106	7.799	7.799	(1.017)	167653	21.7366	21.73
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	43313	21.2840	21.28
67	Isopropylbenzene	105	8.566	8.566	(1.117)	531512	23.7005	23.70
62	m,p-Xylenes	106	7.907	7.907	(1.031)	400906	43.2942	43.29
17	Methylene Chloride	84	2.313	2.312	(0.552)	122571	20.3866	20.38
87	n-Butylbenzene	91	9.999	9.998	(1.034)	338451	21.8734	21.87
73	n-Propylbenzene	91	8.917	8.917	(0.922)	574550	22.4306	22.43
92	Naphthalene	128	11.546	11.546	(1.194)	46828	16.7235	16.72
63	o-Xylene	106	8.244	8.243	(1.075)	195605	21.6315	21.63
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	488878	23.3007	23.30
64	Styrene	104	8.265	8.258	(1.078)	324890	21.0012	21.00
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	348352	23.5686	23.56
56	Tetrachloroethene	164	6.933	6.933	(0.904)	97343	21.2144	21.21
50	Toluene	91	6.453	6.453	(0.841)	508081	21.6127	21.61
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	110941	19.8906	19.89
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	150581	19.1803	19.18
38	Trichloroethene	130	5.214	5.214	(1.049)	122261	20.8182	20.81
8	Trichlorofluoromethane	101	1.568	1.568	(0.374)	168277	21.4981	21.49
5	Vinyl Chloride	62	1.145	1.145	(0.273)	140335	20.1772	20.17

QC Flag Legend

M - Compound response manually integrated.

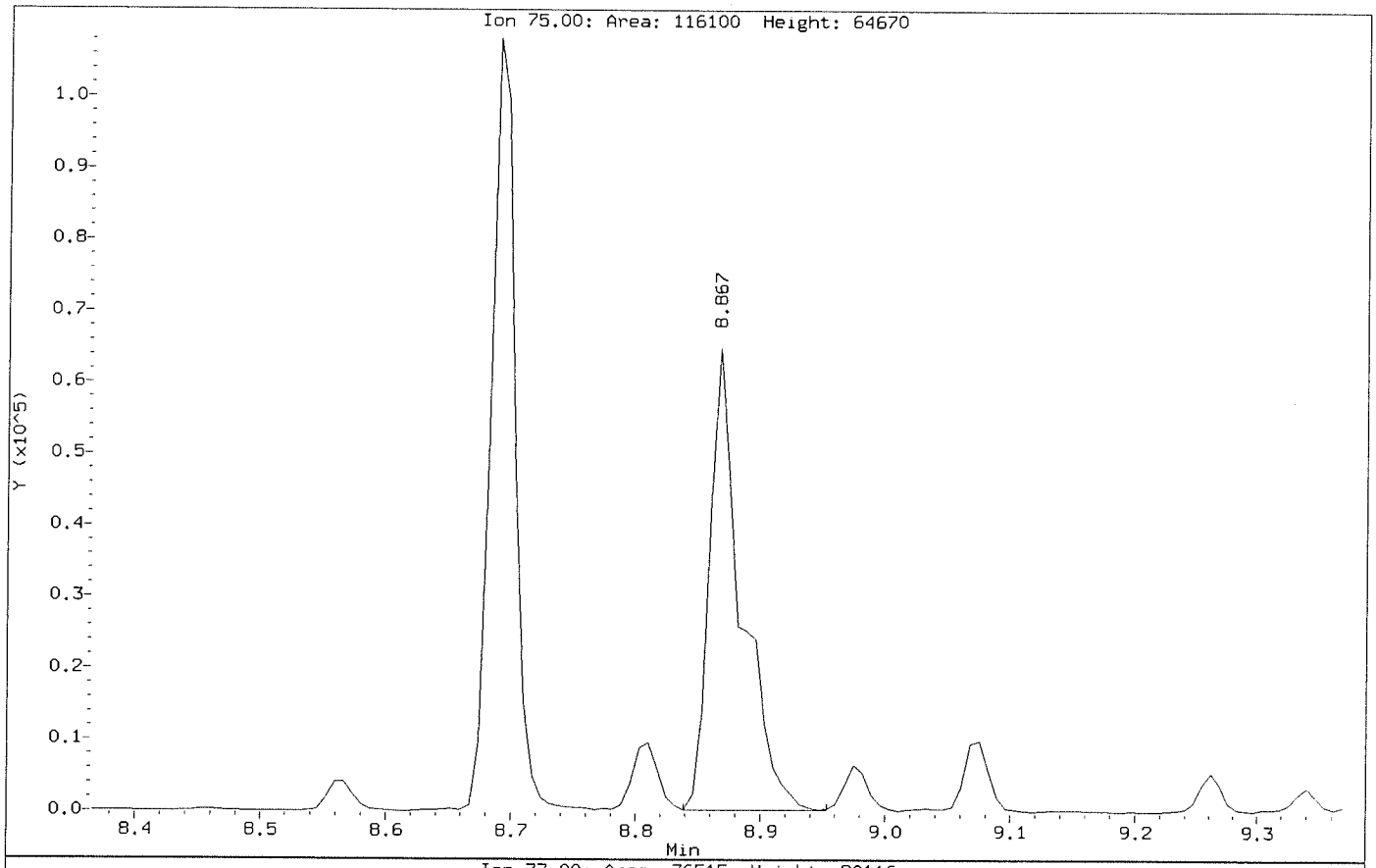


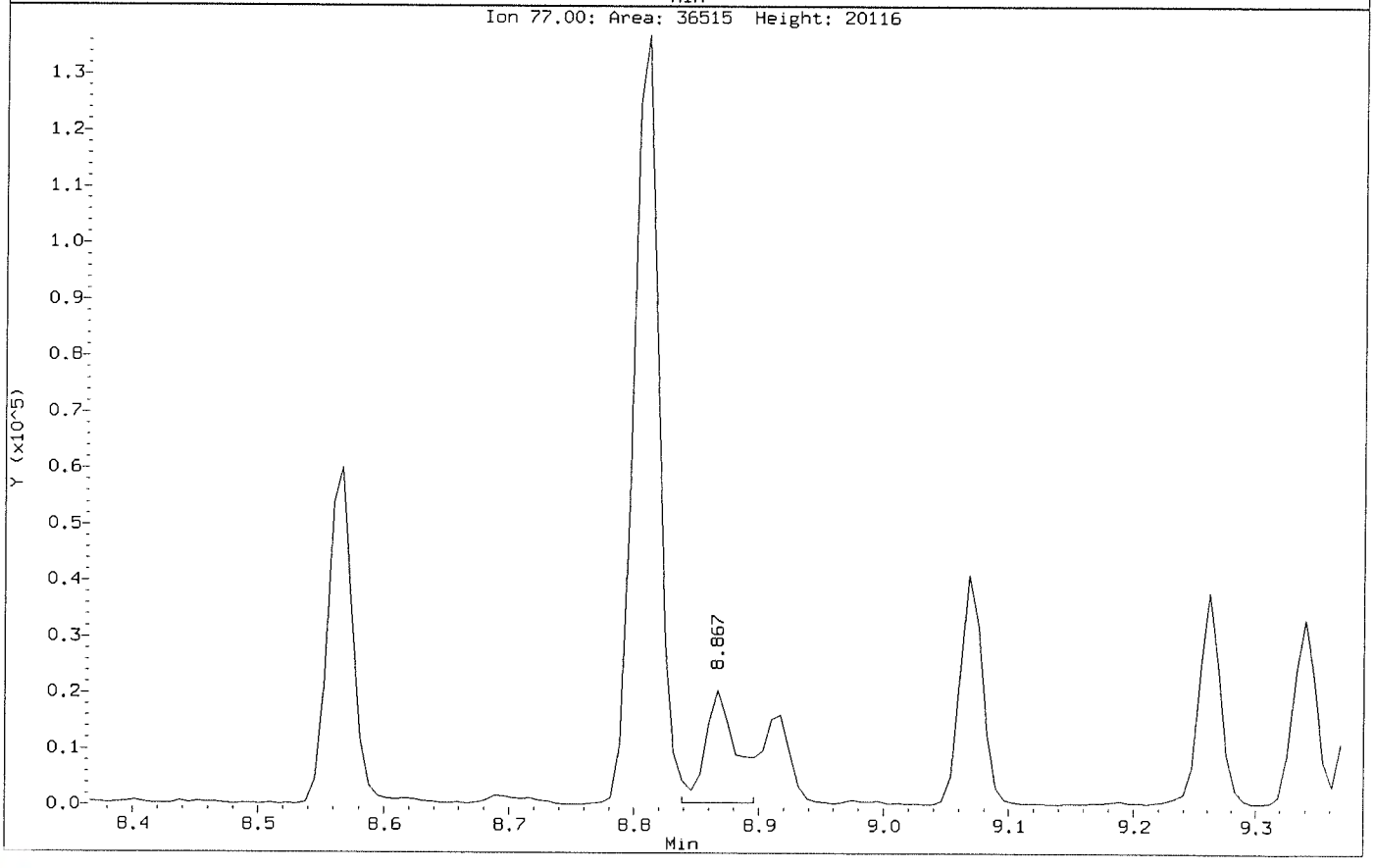
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Purge Volume: 5.0
Column phase: DB624

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

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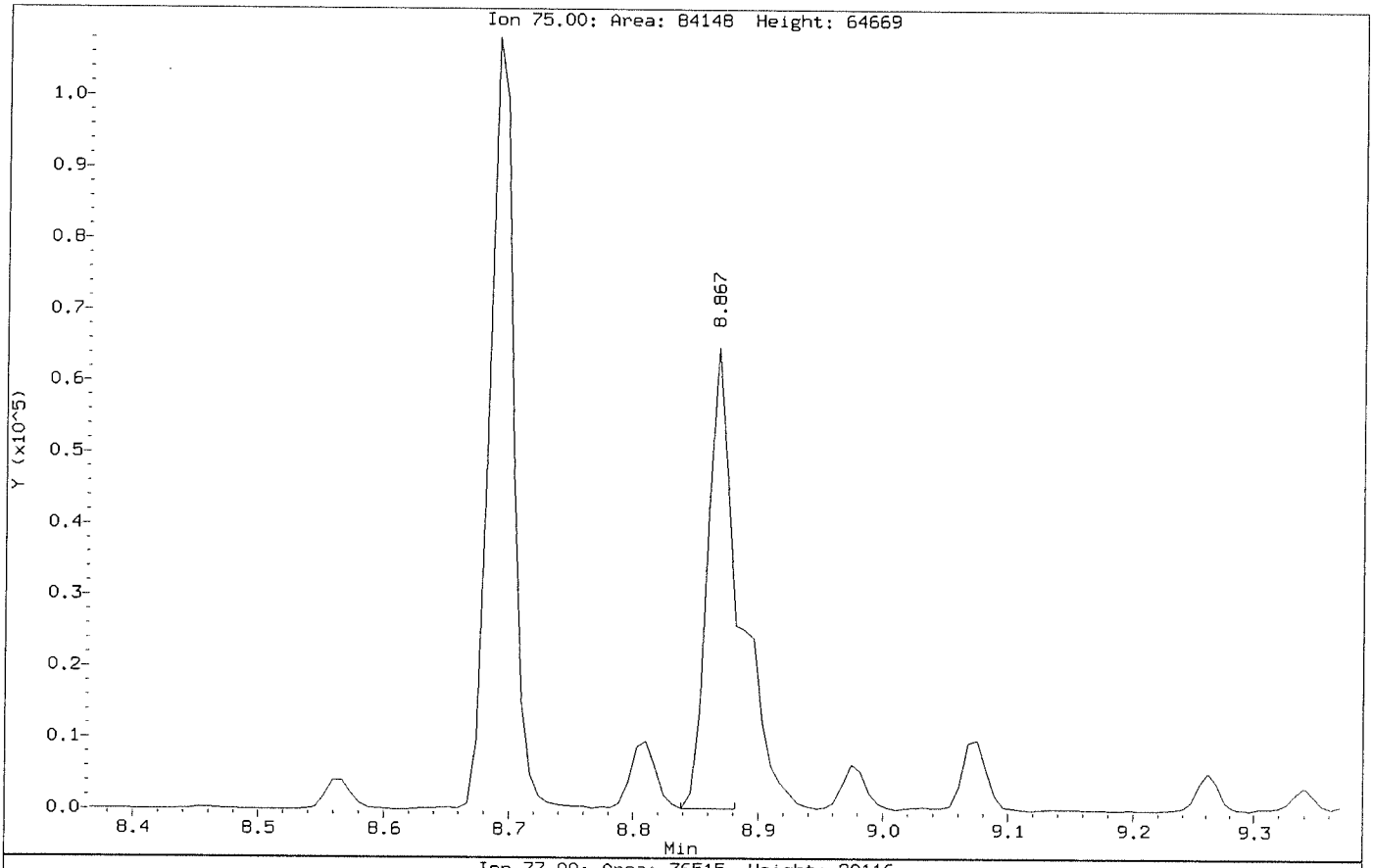
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CAS Number: 96-18-4

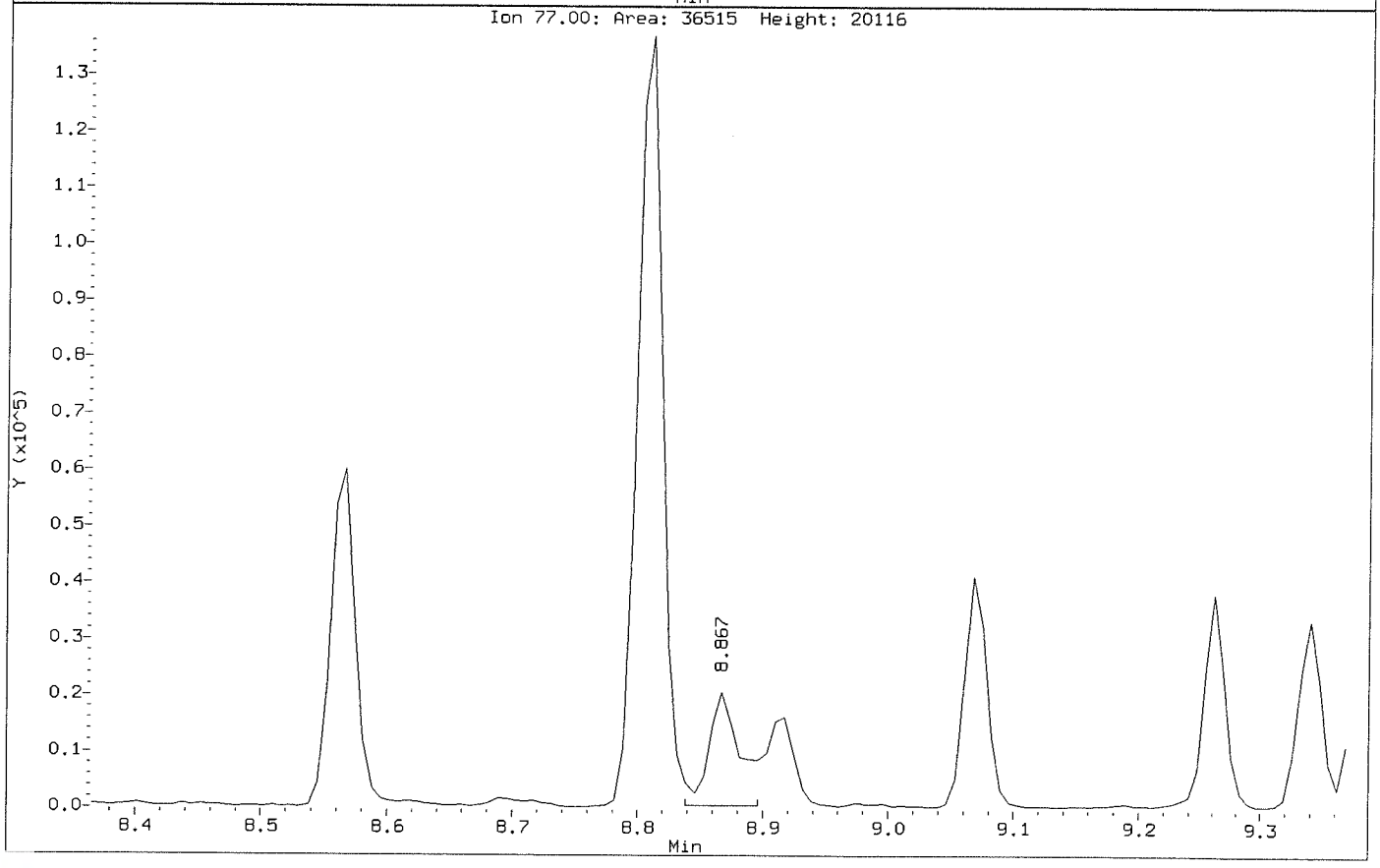




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Instrument: voa6.i
Client Sample ID: HS20100544-03MSD

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201015.b\Y011521.D
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Inj Date : 16-OCT-2020 10:09
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Misc Info : HS18090001;WATER;0;1;
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Target Version: 4.14
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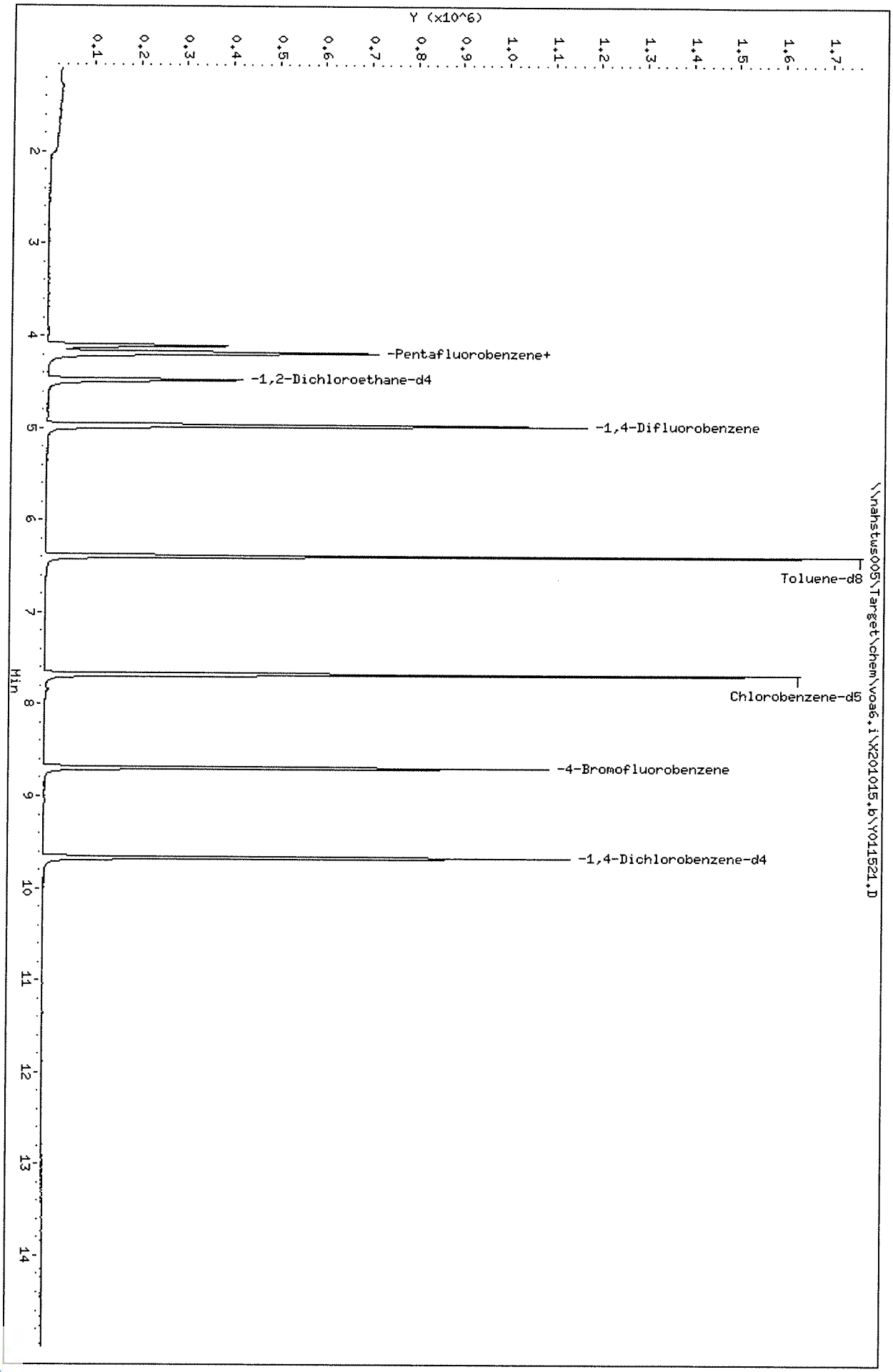
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	609629	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	959039	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	802482	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	297753	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	283125	45.1959	45.19
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	311307	45.4266	45.42
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1062423	50.3569	50.35
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	343330	49.0742	49.07

Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011521.D
Date : 16-OCT-2020 10:09
Client ID: HS20100694-03
Sample Info: HS20100694-03;HS20100694-03;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011522.D Page 1
Report Date: 07-Nov-2020 10:57

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201015.b\Y011522.D
Lab Smp Id: HS20100694-01 Client Smp ID: HS20100694-01
Inj Date : 16-OCT-2020 10:33
Operator : PC Inst ID: voa6.i
Smp Info : HS20100694-01;HS20100694-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201015.b\8260W.m
Meth Date : 07-Nov-2020 10:53 dev.giga Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 49
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

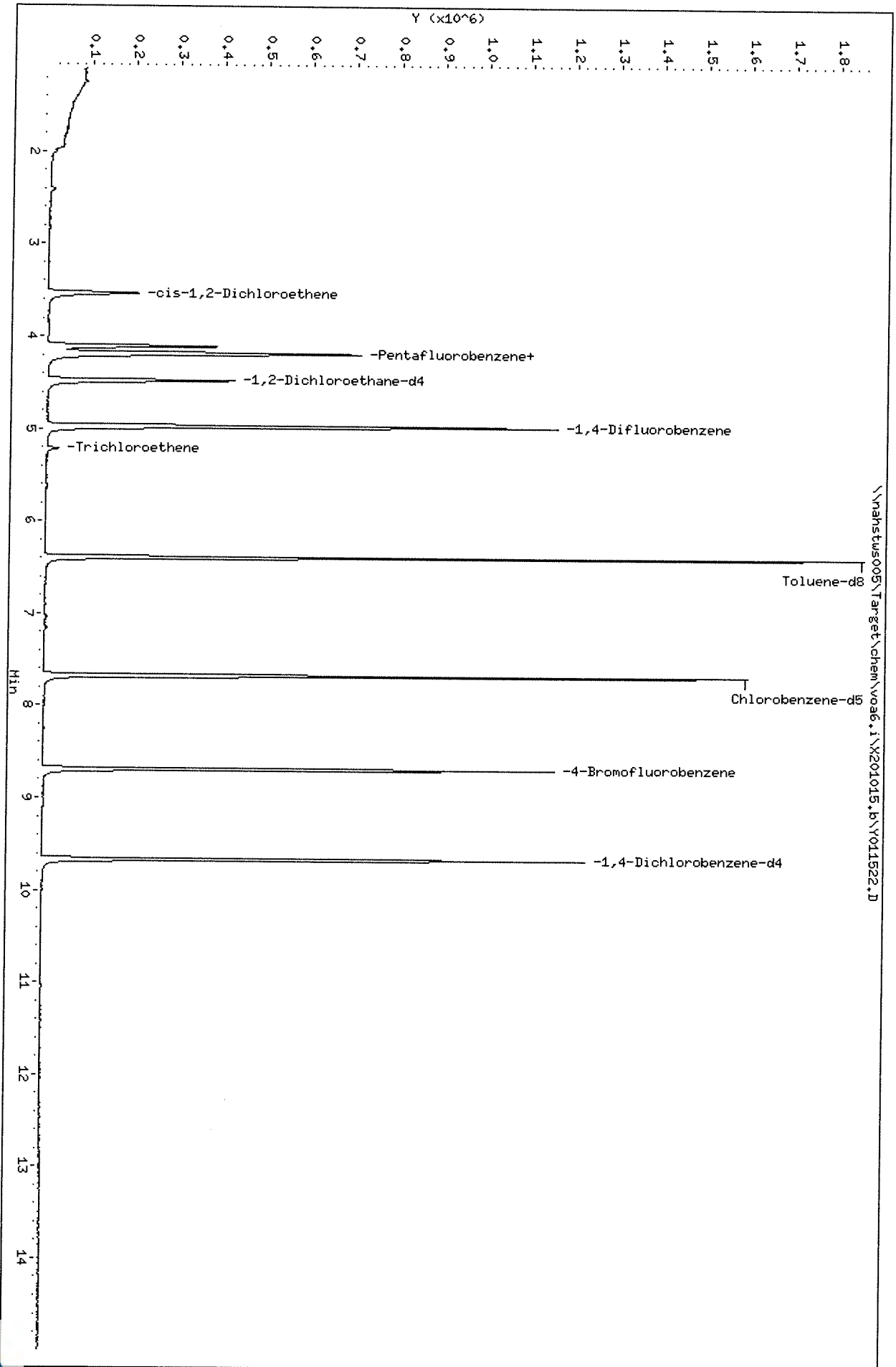
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	607836	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	948202	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	786496	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	316511	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	280872	44.9685	44.96
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	312966	45.8033	45.80
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1085395	52.4914	52.49
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	361297	52.7530	52.75
27 cis-1,2-Dichloroethene	96	3.537	3.530	(0.844)	111513	14.9747	14.97
38 Trichloroethene	130	5.214	5.214	(1.049)	8917	1.31478	1.31(a)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011522.D
Date : 16-OCT-2020 10:33
Client ID: HS201006694-01
Sample Info: HS201006694-01;HS201006694-01;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011522.D

Date : 16-OCT-2020 10:33

Client ID: HS20100694-01

Instrument: voa6.i

Sample Info: HS20100694-01;HS20100694-01;;;

Purge Volume: 5.0

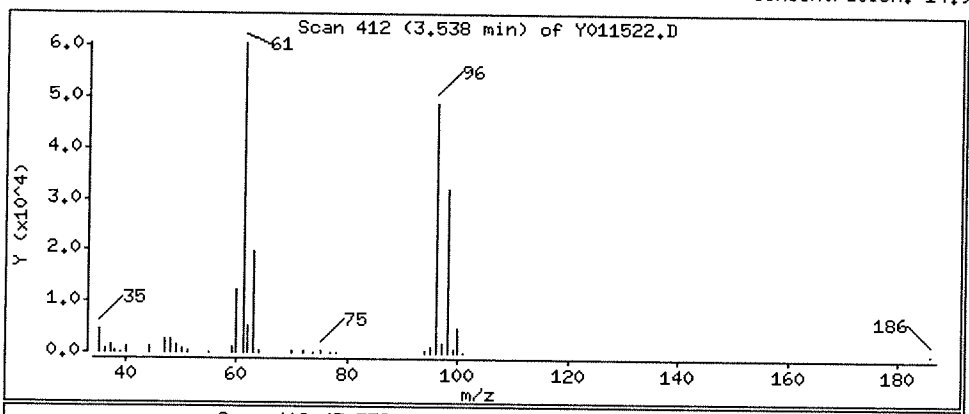
Operator: PC

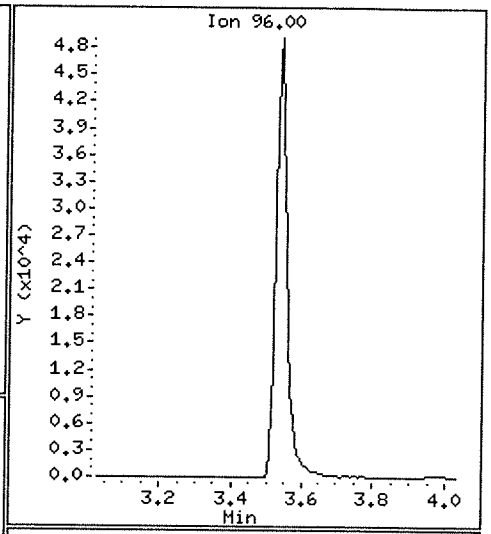
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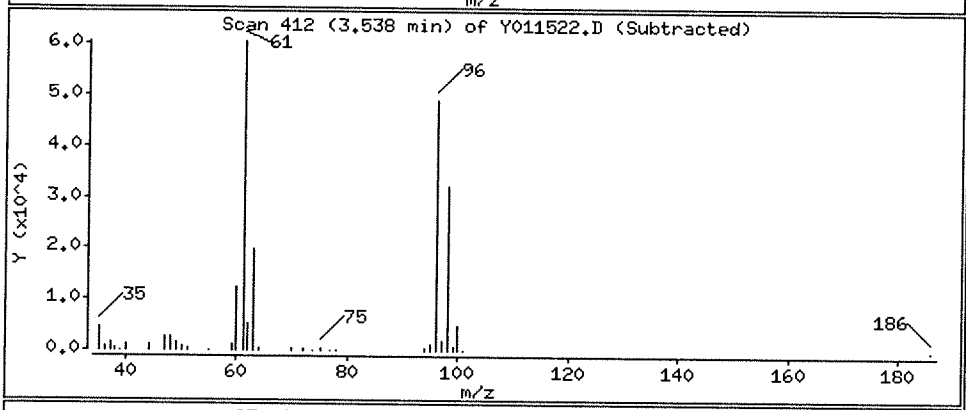
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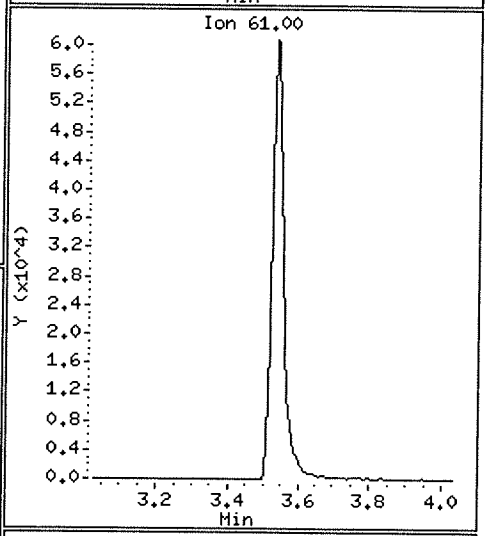
27 cis-1,2-Dichloroethene

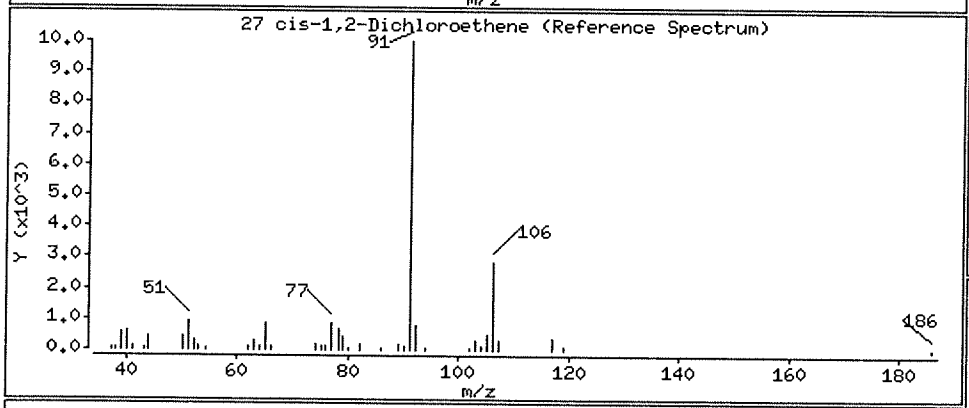
Concentration: 14.97 ug/l

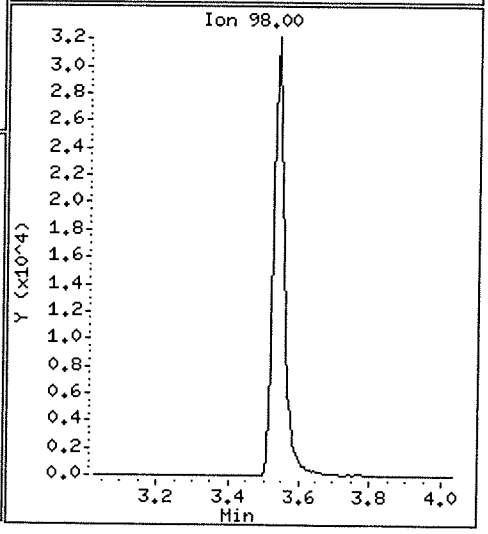


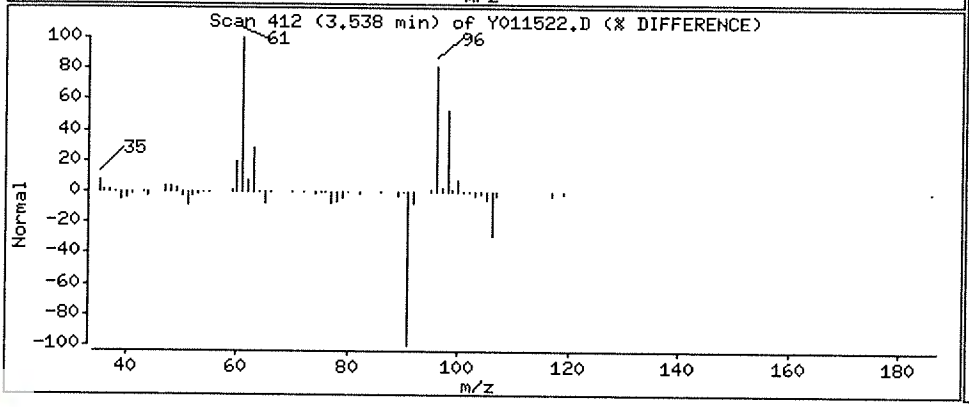












Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011522.D

Date : 16-OCT-2020 10:33

Client ID: HS20100694-01

Instrument: voa6.i

Sample Info: HS20100694-01;HS20100694-01;;;

Purge Volume: 5.0

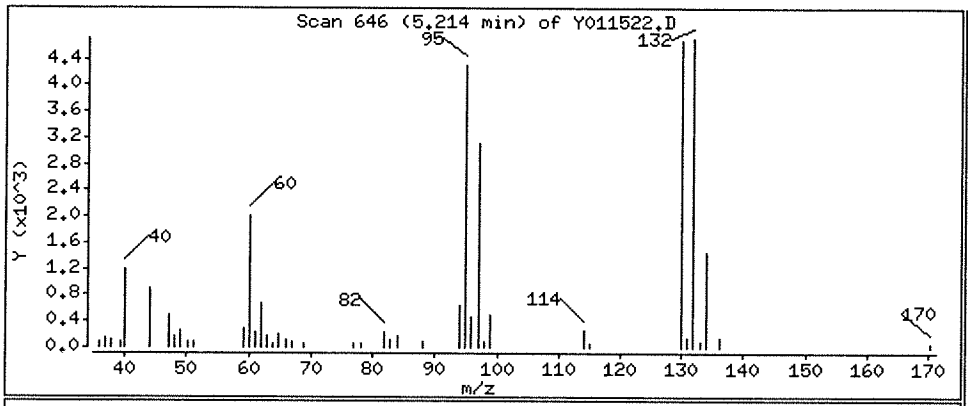
Operator: PC

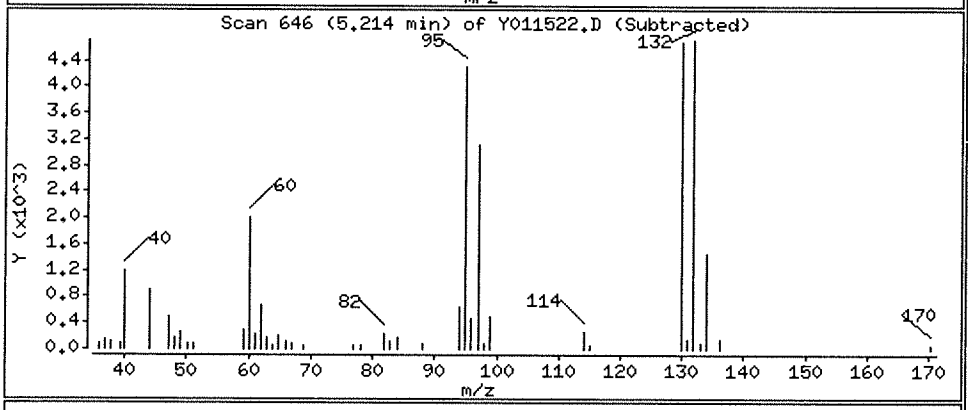
Column phase: DB624

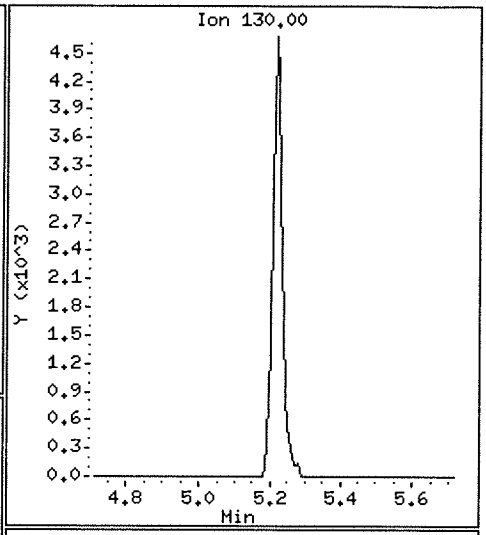
Column diameter: 0.18

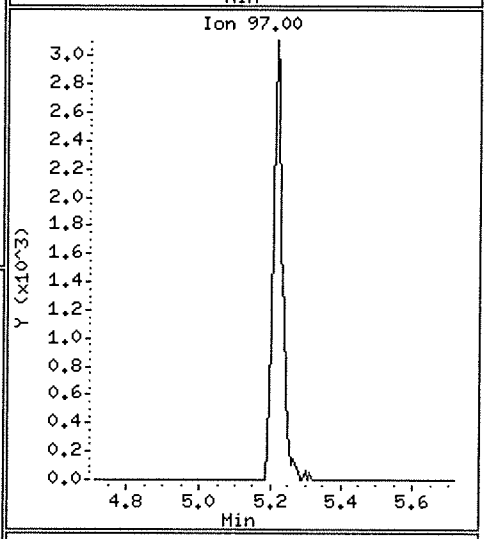
38 Trichloroethene

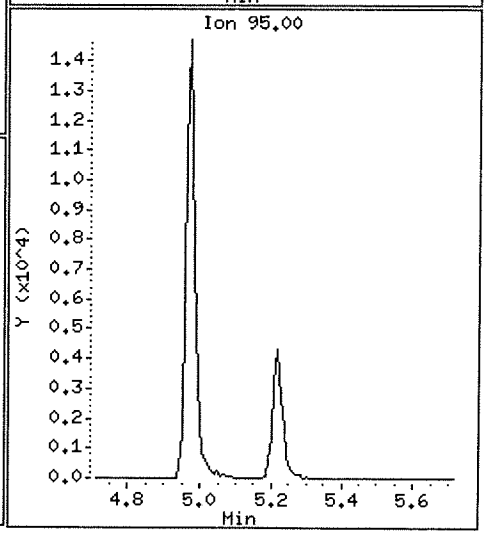
Concentration: 1.31 ug/l











Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011523.D Page 1
Report Date: 07-Nov-2020 11:05

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201015.b\Y011523.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 16-OCT-2020 10:57
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\X201015.b\8260W.m
Meth Date : 07-Nov-2020 11:05 voa6.i Quant Type: ISTD
Cal Date : 24-SEP-2020 14:21 Cal File: X092408.D
Als bottle: 50 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

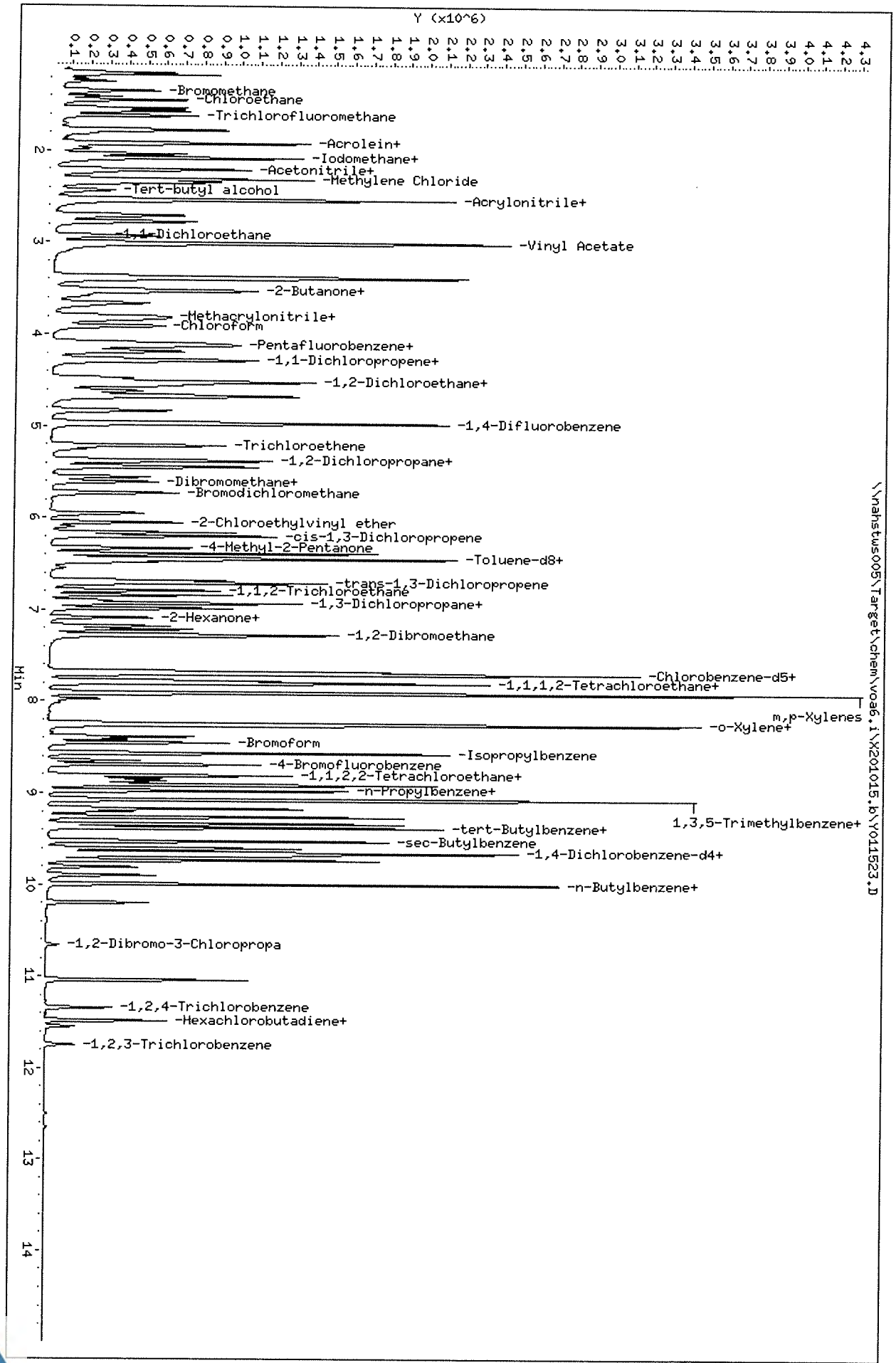
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	562745	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	889821	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	799464	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	311489	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	272771	50.0000	47.17
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	307023	50.0000	48.53
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	999523	50.0000	47.55
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	336032	50.0000	48.19
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	269735	50.0000	48.68
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	436846	50.0000	50.40
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	255839	50.0000	46.44
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	226156	50.0000	48.03
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	589709	50.0000	50.16
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	269953	50.0000	53.35
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	419575	50.0000	51.25
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	45465	50.0000	37.76
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	220611	50.0000	48.41(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	94882	50.0000	40.50
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	942870	50.0000	50.84
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	13957	50.0000	37.13
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	266128	50.0000	47.90
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	404022	50.0000	46.57

Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011523.D Page 2
Report Date: 07-Nov-2020 11:05

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	384388	50.0000	50.10
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	314874	50.0000	47.79
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	938444	50.0000	51.02
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	486388	50.0000	48.54
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	469942	50.0000	48.25
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	471971	50.0000	47.43
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	462585	50.0000	52.36
24 2-Butanone	43	3.580	3.580	(0.855)	196939	100.000	95.87
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	797688	50.0000	49.28
52 2-Hexanone	43	7.090	7.090	(0.924)	307694	100.000	86.79
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	909007	50.0000	49.32
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	942724	50.0000	50.81
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	470803	100.000	83.89
10 Acetone	43	1.976	1.976	(0.472)	137133	100.000	102.20
37 Benzene	78	4.519	4.519	(0.909)	1278107	50.0000	50.22
74 Bromobenzene	156	8.809	8.809	(0.911)	325201	50.0000	51.66
29 Bromochloromethane	128	3.802	3.802	(0.908)	169323	50.0000	48.14
39 Bromodichloromethane	83	5.729	5.729	(1.153)	384167	50.0000	47.60
66 Bromoform	173	8.415	8.415	(1.097)	157854	50.0000	45.20
6 Bromomethane	94	1.346	1.346	(0.321)	231780	50.0000	51.13
19 Carbon Disulfide	76	2.076	2.076	(0.496)	1622442	100.000	92.83
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	363985	50.0000	51.13
59 Chlorobenzene	112	7.699	7.699	(1.004)	784789	50.0000	48.25
7 Chloroethane	64	1.410	1.410	(0.337)	224668	50.0000	50.96 (M)
28 Chloroform	83	3.917	3.917	(0.935)	556834	50.0000	51.04
3 Chloromethane	50	1.081	1.081	(0.258)	390894	50.0000	50.72
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	350801	50.0000	50.88
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	496824	50.0000	48.66
55 Dibromochloromethane	129	7.176	7.176	(0.936)	279143	50.0000	48.86
44 Dibromomethane	93	5.557	5.557	(1.118)	178769	50.0000	45.75
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	285591	50.0000	49.71
61 Ethylbenzene	106	7.799	7.799	(1.017)	420884	50.0000	49.57
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	109332	50.0000	50.09
67 Isopropylbenzene	105	8.566	8.566	(1.117)	1202030	50.0000	48.69
62 m,p-Xylenes	106	7.907	7.907	(1.031)	1001695	100.000	98.27
17 Methylene Chloride	84	2.313	2.313	(0.552)	322393	50.0000	52.37
87 n-Butylbenzene	91	9.998	9.998	(1.034)	835292	50.0000	52.04
73 n-Propylbenzene	91	8.917	8.917	(0.922)	1369087	50.0000	51.52
92 Naphthalene	128	11.546	11.546	(1.194)	104531	50.0000	35.98
63 o-Xylene	106	8.244	8.244	(1.075)	486784	50.0000	48.90
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	1100021	50.0000	50.54
64 Styrene	104	8.258	8.258	(1.077)	820551	50.0000	48.18
78 tert-Butylbenzene	119	9.339	9.339	(0.966)	775209	50.0000	50.56
56 Tetrachloroethene	164	6.933	6.933	(0.904)	255990	50.0000	50.68
50 Toluene	91	6.453	6.453	(0.841)	1269083	50.0000	49.04
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	301315	50.0000	51.68
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	428350	50.0000	50.34
38 Trichloroethene	130	5.214	5.214	(1.049)	313451	50.0000	49.24
8 Trichlorofluoromethane	101	1.568	1.568	(0.374)	457756	50.0000	55.95
5 Vinyl Chloride	62	1.145	1.145	(0.273)	398151	50.0000	54.77

QC Flag Legend

M - Compound response manually integrated.

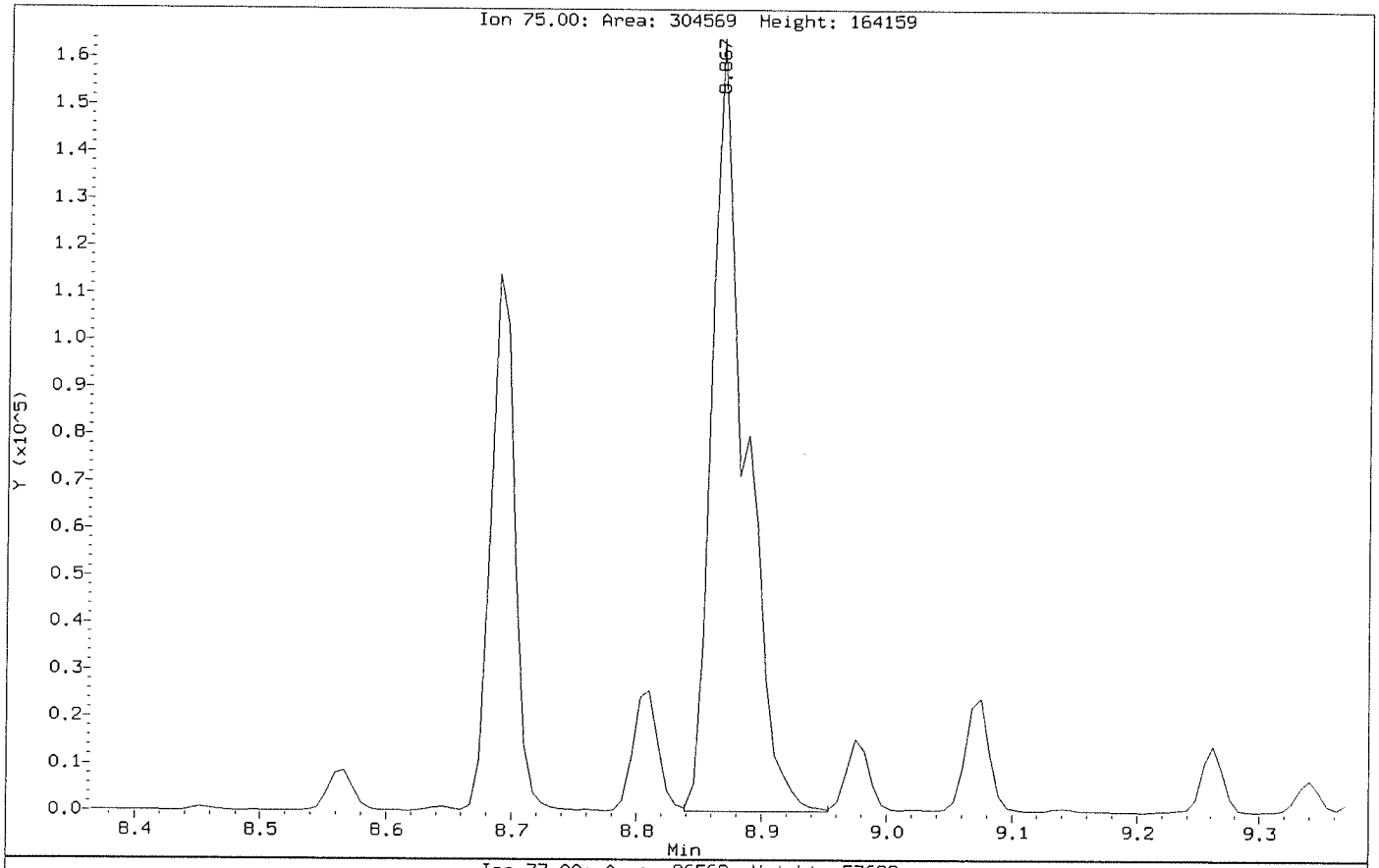


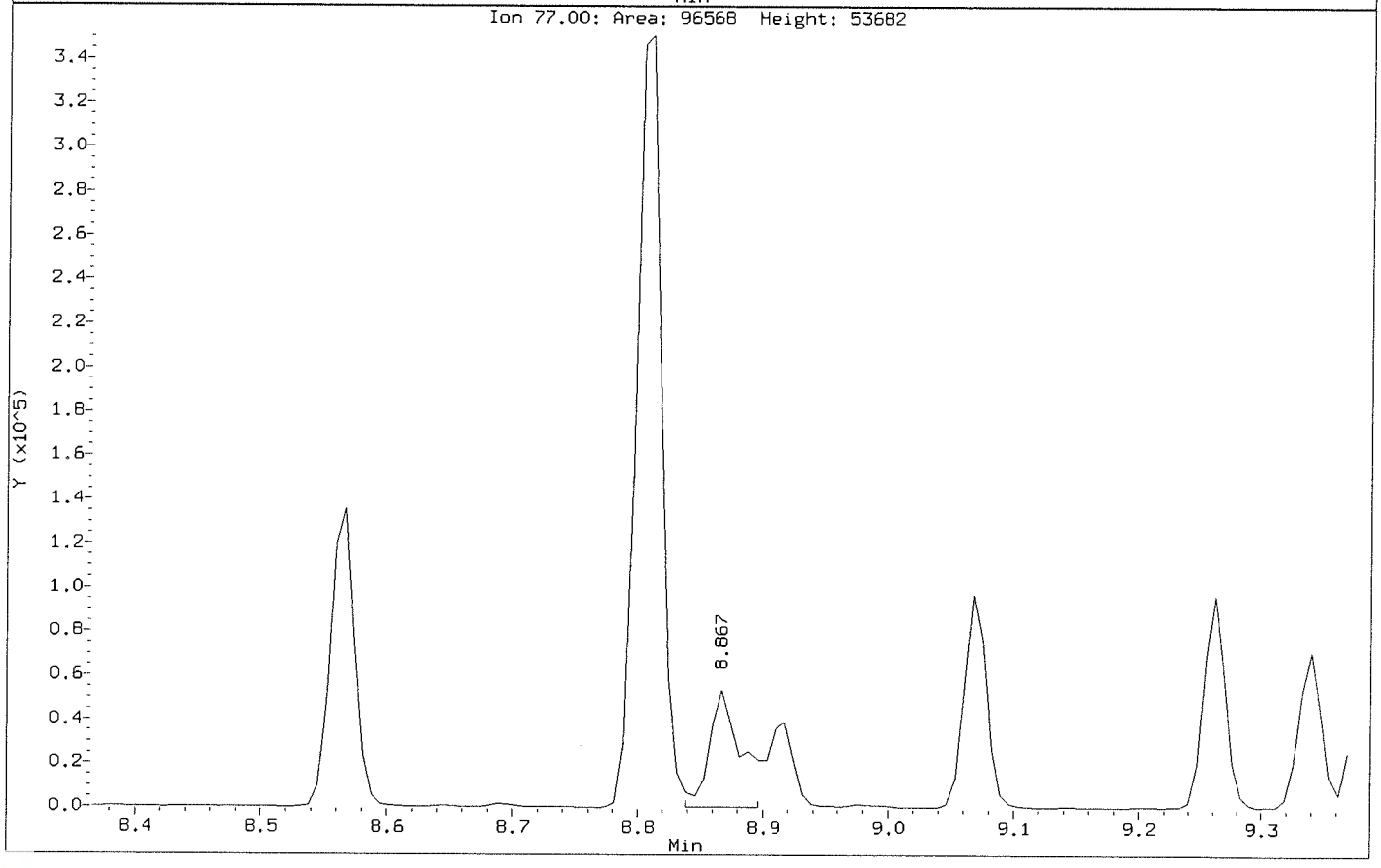
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Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Before\Y011523.D
Injection Date: 16-OCT-2020 10:57
Instrument: voa6.i
Client Sample ID: CCV-END

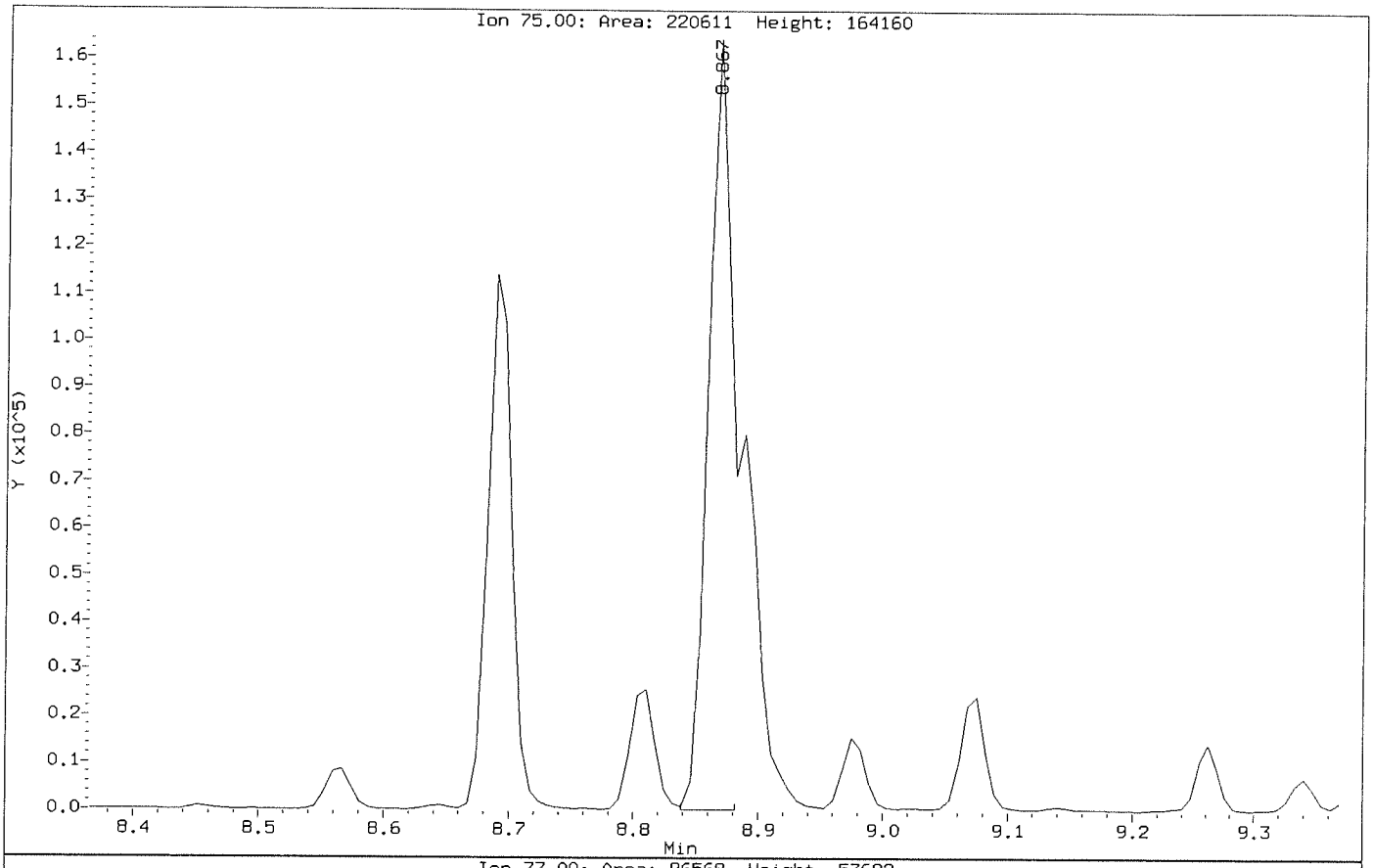
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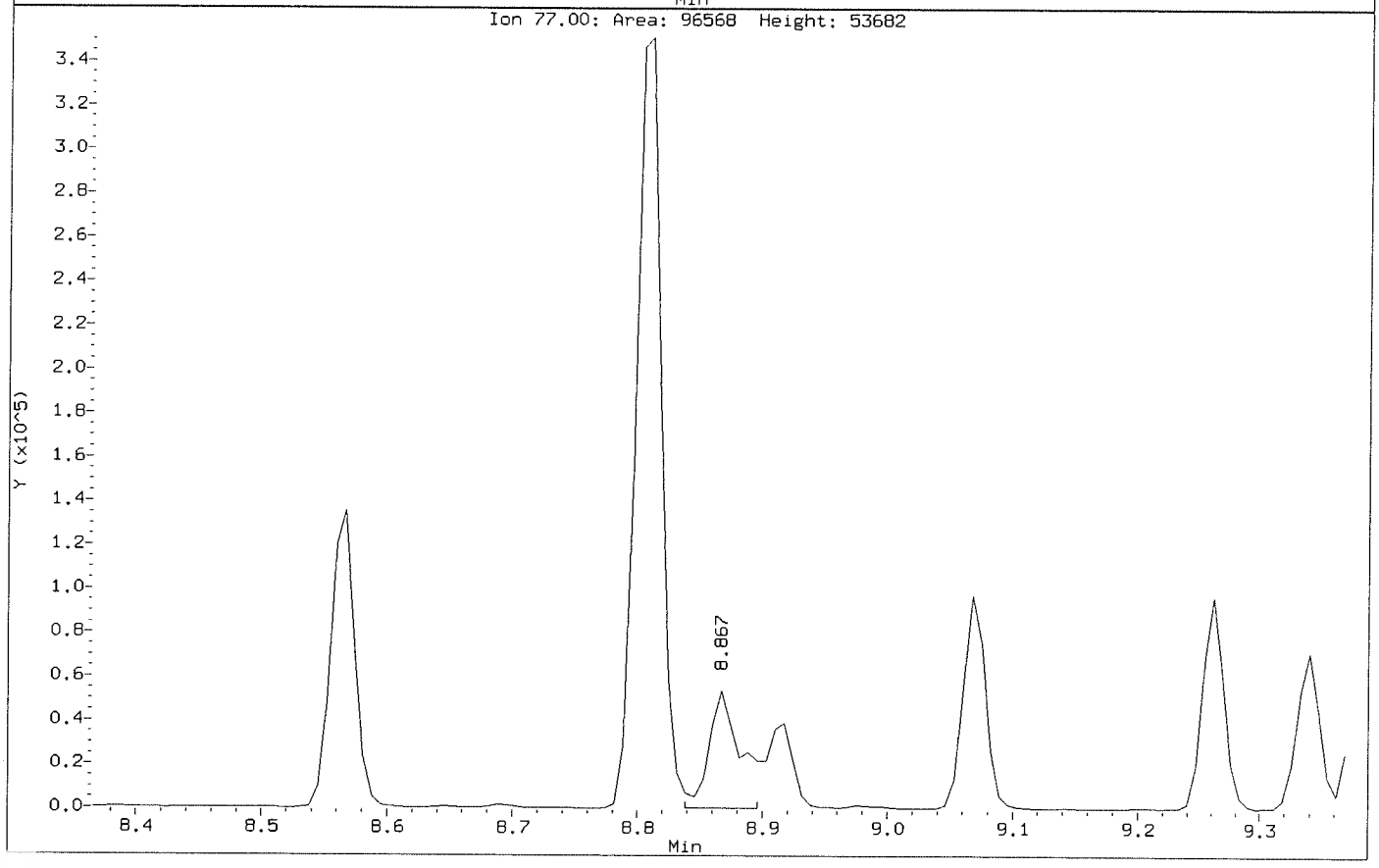




Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011523.D
Injection Date: 16-OCT-2020 10:57
Instrument: voa6.i
Client Sample ID: CCV-END

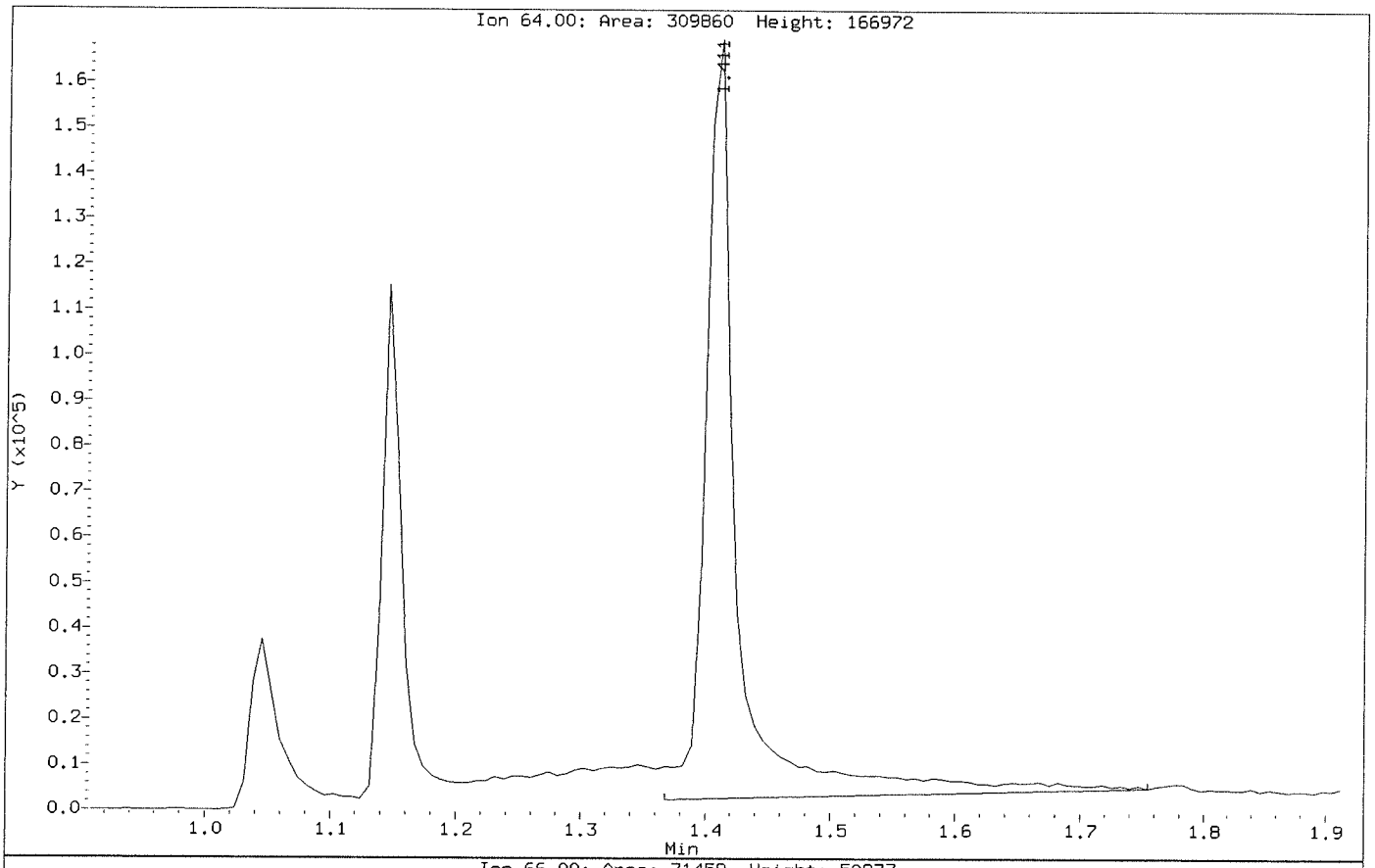
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

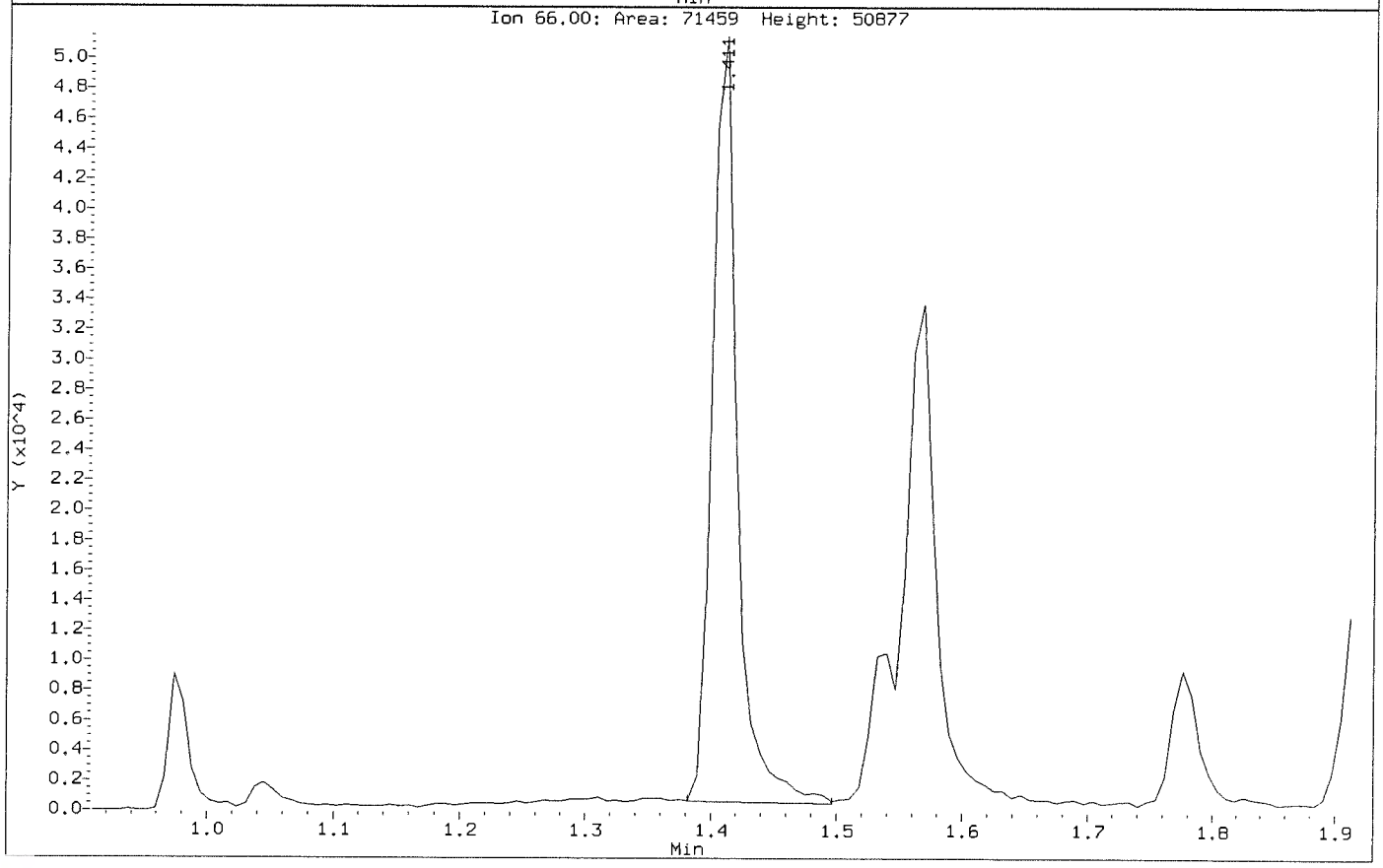




Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Before\Y011523.D
Injection Date: 16-OCT-2020 10:57
Instrument: voa6.i
Client Sample ID: CCV-END

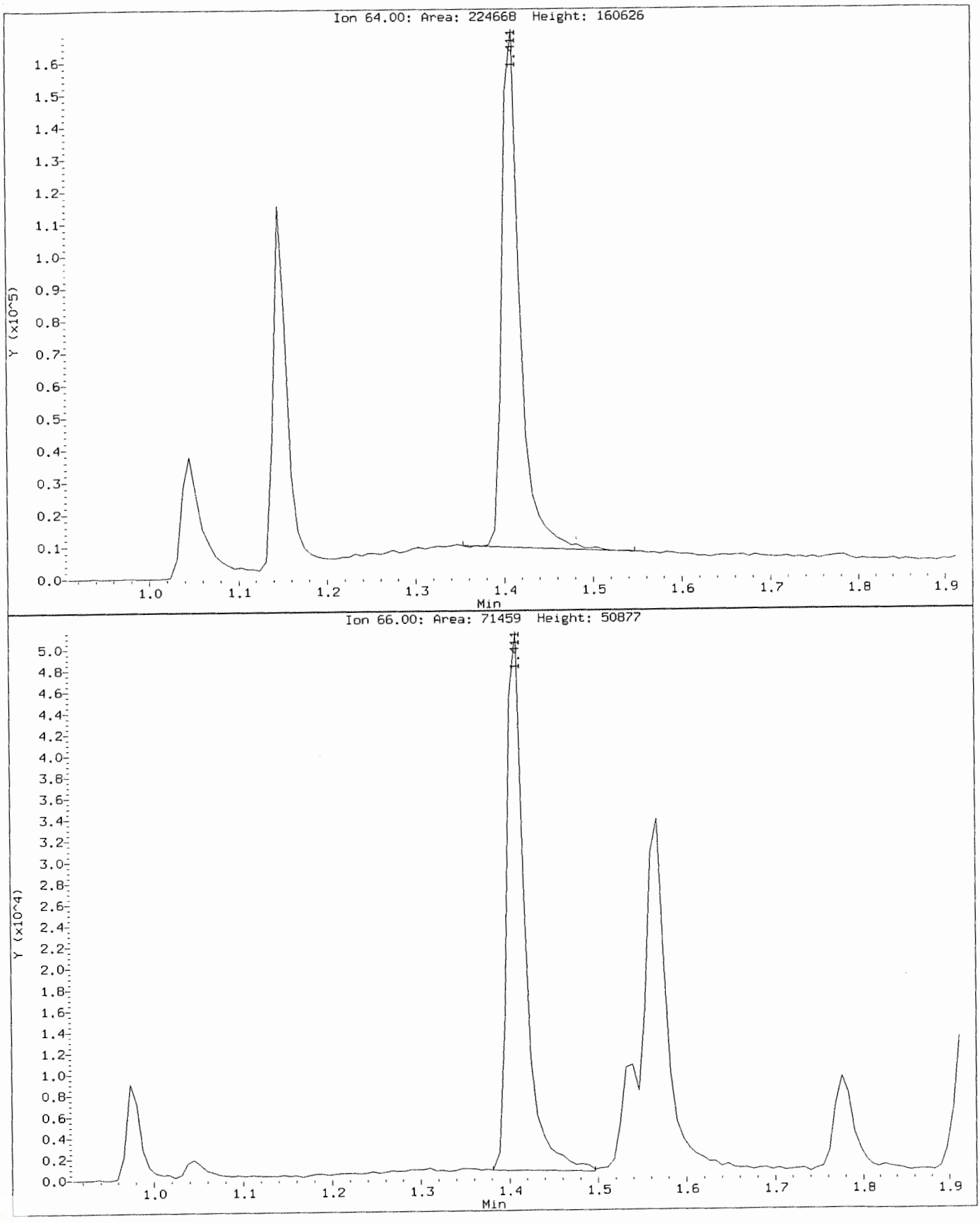
Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X201015.b\Y011523.D
Injection Date: 16-OCT-2020 10:57
Instrument: voa6.i
Client Sample ID: CCV-END

Compound: Chloroethane
CAS Number: 75-00-3



HS20100694 8270SIM_W Raw Data

ALS WO# HS20100694

Prep Batch Report

Batch ID: 158538
Prep Code: 3510_B_SIM
Start Date: 16 Oct 2020 08:32 AM
End Date: 16 Oct 2020 02:00 PM
Technician: Todi Lala

Init Sample Weight / Volume: 1000
Final Sample Volume: 1
Original Factor: 0.001
Prep Unit Factor: 1
Prep Unit: mL

Sample ID	Fraction	Matrix	pH	Initial Weight / Volume	Final Volume	Prep Factor	Spike Factor	Fail Safe	Due Date	Comments
HS20100694-01	C	Water	5	1000	1	0.001	1	23 Oct 2020	28 Oct 2020	ph adj 1/13
LCS-158538	A		5	1000	1	0.001	1			ph adj 1/13
LCSD-158538	A		5	1000	1	0.001	1			ph adj 1/13
MBLK-158538	A		5	1000	1	0.001	1			ph adj 1/13

SV06 -Logbook

Batch: 41634 **Analyst:** Andrew Neir

Date: 09-01-2020 **Reviewer:**

Method: 8270DLL **Laboratory:** Houston

Comments: MSSV003

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	DFTPP	TUNE	09-01-2020 01:52 pm	1.00			001.D		Y	NA
2	SLSTD-2.5	CCV	09-01-2020 02:04 pm	1.00			002.D		Y	NA
3	DXSIM-0.08	SAMP	09-01-2020 02:41 pm	1.00			003.D		Y	NA
4	DXSIM-0.01	SAMP	09-01-2020 03:03 pm	1.00			004.D		Y	NA
5	DXSIM-0.03	SAMP	09-01-2020 03:22 pm	1.00			005.D		Y	NA
6	DXSIM-0.05	SAMP	09-01-2020 03:41 pm	1.00			006.D		Y	NA
7	DXSIM-0.10	SAMP	09-01-2020 04:00 pm	1.00			007.D		Y	NA
8	DXSIM-0.15	SAMP	09-01-2020 04:19 pm	1.00			008.D		Y	NA
9	DXSIM-0.2	SAMP	09-01-2020 04:38 pm	1.00			009.D		Y	NA
10	DXSIM-0.5	SAMP	09-01-2020 04:57 pm	1.00			010.D		Y	NA
11	DXSIM-ICV	SAMP	09-01-2020 05:16 pm	1.00			011.D		Y	NA
12	MBLK-156910	MBLK	09-01-2020 05:36 pm	1.00	1000.00 mL	1.00 mL	012.D	Liquid	Y	NA
13	LCS-156910	LCS	09-01-2020 05:55 pm	1.00	1000.00 mL	1.00 mL	013.D	Liquid	Y	NA
14	LCSD-156910	LCSD	09-01-2020 06:15 pm	1.00	1000.00 mL	1.00 mL	014.D	Liquid	Y	NA
15	HS20090012-01	SAMP	09-01-2020 06:34 pm	1.00	1000.00 mL	1.00 mL	015.D	Liquid	Y	NA
16	HS20070585-01	SAMP	09-01-2020 06:53 pm	1.00	1000.00 mL	1.00 mL	016.D	Liquid	Y	NA
17	HS20070585-02	SAMP	09-01-2020 07:13 pm	1.00	1000.00 mL	1.00 mL	017.D	Liquid	Y	NA
18	HS20070585-09	SAMP	09-01-2020 07:33 pm	1.00	1000.00 mL	1.00 mL	018.D	Liquid	Y	NA
19	HS20070585-10	SAMP	09-01-2020 07:52 pm	1.00	1000.00 mL	1.00 mL	019.D	Liquid	Y	NA
20	HS20070586-01	SAMP	09-01-2020 08:11 pm	1.00	30.00 gm	1.00 mL	020.D	Solid	Y	NA
21	HS20070586-02	SAMP	09-01-2020 08:31 pm	1.00	30.00 gm	1.00 mL	021.D	Solid	Y	NA
22	HS20070586-05	SAMP	09-01-2020 08:50 pm	1.00	30.00 gm	1.00 mL	022.D	Solid	Y	NA
23	HS20070586-06	SAMP	09-01-2020 09:10 pm	1.00	30.00 gm	1.00 mL	023.D	Solid	Y	NA
24	MBLK-156817	MBLK	09-01-2020 09:29 pm	1.00	1000.00 mL	1.00 mL	024.D	Liquid	Y	NA
25	LCS-156817	LCS	09-01-2020 09:48 pm	1.00	1000.00 mL	1.00 mL	025.D	Liquid	Y	NA
26	LCSD-156817	LCSD	09-01-2020 10:07 pm	1.00	1000.00 mL	1.00 mL	026.D	Liquid	Y	NA
27	HS20081150-01	SAMP	09-01-2020 10:26 pm	1.00	1000.00 mL	1.00 mL	027.D	Liquid	Y	NA
28	HS20081150-01	SAMP	09-01-2020 10:45 pm	100.0(	1000.00 mL	1.00 mL	028.D	Liquid	Y	NA
29	HS20081151-01	SAMP	09-01-2020 11:04 pm	1.00	1000.00 mL	1.00 mL	029.D	Liquid	Y	NA
30	HS20081151-01	SAMP	09-01-2020 11:23 pm	100.0(	1000.00 mL	1.00 mL	030.D	Liquid	Y	NA
31	DXSIM-0.08	SAMP	09-01-2020 11:42 pm	100.0(	1000.00 mL	1.00 mL	031.D	Liquid	Y	NA
32	HS20081309-03	SAMP	09-02-2020 12:02 am	1.00	1000.00 mL	1.00 mL	032.D	Liquid	Y	NA
33	HS20081238-01	SAMP	09-02-2020 12:21 am	1.00	1000.00 mL	1.00 mL	033.D	Liquid	Y	NA
34	HS20081238-02	SAMP	09-02-2020 12:40 am	1.00	1000.00 mL	1.00 mL	034.D	Liquid	Y	NA
35	HS20081238-03	SAMP	09-02-2020 01:00 am	1.00	1000.00 mL	1.00 mL	035.D	Liquid	Y	NA
36	HS20081238-04	SAMP	09-02-2020 01:19 am	1.00	1000.00 mL	1.00 mL	036.D	Liquid	Y	NA
37	HS20081238-05	SAMP	09-02-2020 01:39 am	1.00	1000.00 mL	1.00 mL	037.D	Liquid	Y	NA
38	HS20081238-06	SAMP	09-02-2020 01:58 am	1.00	1000.00 mL	1.00 mL	038.D	Liquid	Y	NA
39	HS20081238-07	SAMP	09-02-2020 02:18 am	1.00	1000.00 mL	1.00 mL	039.D	Liquid	Y	NA
40	HS20081238-08	SAMP	09-02-2020 02:37 am	1.00	1000.00 mL	1.00 mL	040.D	Liquid	Y	NA
41	HS20081238-09	SAMP	09-02-2020 02:57 am	1.00	1000.00 mL	1.00 mL	041.D	Liquid	Y	NA

SV06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS20081238-10	SAMP	09-02-2020 03:16 am	1.00	1000.00 mL	1.00 mL	042.D	Liquid	Y	NA
43	HS20081238-11	SAMP	09-02-2020 03:35 am	1.00	1000.00 mL	1.00 mL	043.D	Liquid	Y	NA
44	HS20081238-12	SAMP	09-02-2020 03:55 am	1.00	1000.00 mL	1.00 mL	044.D	Liquid	Y	NA
45	HS20081238-13	SAMP	09-02-2020 04:14 am	1.00	1000.00 mL	1.00 mL	045.D	Liquid	Y	NA
46	HS20081238-14	SAMP	09-02-2020 04:34 am	1.00	1000.00 mL	1.00 mL	046.D	Liquid	Y	NA
47	HS20081238-15	SAMP	09-02-2020 04:53 am	1.00	1000.00 mL	1.00 mL	047.D	Liquid	Y	NA
48	HS20081238-16	SAMP	09-02-2020 05:13 am	1.00	1000.00 mL	1.00 mL	048.D	Liquid	Y	NA
49	HS20081238-17	SAMP	09-02-2020 05:32 am	1.00	1000.00 mL	1.00 mL	049.D	Liquid	Y	NA
50	HS20081238-18	SAMP	09-02-2020 05:52 am	1.00	1000.00 mL	1.00 mL	050.D	Liquid	Y	NA

Chemical	Value
IS ID	3111842-01
CAL STD ID	3111832-06
DFTPP ID	3111843-07
PCP Tailing	0.82
Benz. Tailing	0.78
Routine SOP Maintenance	ACN

FORM 3
WATER SEMIVOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Matrix Spike - Sample No.: DXSIM-ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	% REC #	QC. LIMITS REC.
1,4-Dioxane	0.08000	0.07779	97	75-125

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

_____

FORM III SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Lab File ID: 001 DFTPP Injection Date: 09/01/20

Instrument ID: SV6 DFTPP Injection Time: 1352

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	46.9
68	Less than 2.0% of mass 69	0.5 (0.9)1
69	Mass 69 relative abundance	50.7
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	57.0
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	25.7
365	1.0 - 100.0% of mass 198	4.0
441	Present, but less than mass 443	14.5
442	50.0 - 150.0% of mass 198	97.1
443	15.0 - 24.0% of mass 442	18.6 (19.1)2

1-Value is % mass 69 2-Value is % mass 442

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	DXSIM-0.08	DXSIM-0.08	003	09/01/20	1441
02	DXSIM-0.01	DXSIM-0.01	004	09/01/20	1503
03	DXSIM-0.03	DXSIM-0.03	005	09/01/20	1522
04	DXSIM-0.05	DXSIM-0.05	006	09/01/20	1541
05	DXSIM-0.10	DXSIM-0.10	007	09/01/20	1600
06	DXSIM-0.15	DXSIM-0.15	008	09/01/20	1619
07	DXSIM-0.2	DXSIM-0.2	009	09/01/20	1638
08	DXSIM-0.5	DXSIM-0.5	010	09/01/20	1657
09	DXSIM-ICV	DXSIM-ICV	011	09/01/20	1716
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Instrument ID: SV6 Calibration Date(s): 09/01/20 09/01/20

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1441 1657

LAB FILE ID: RF0.01: 004 RF0.03: 005 RF0.05: 006
RF0.08: 003 RF0.1: 007 RF0.15: 008

COMPOUND	RF0.01	RF0.03	RF0.05	RF0.08	RF0.1	RF0.15
1,4-Dioxane	0.301	0.225	0.233	0.205	0.272	0.298
Nitrobenzene-d5	0.475	0.356	0.285	0.364	0.296	0.373
4-Terphenyl-d14	0.997	0.901	0.769	0.929	0.708	0.713
2-Fluorobiphenyl	1.354	1.207	1.318	1.119	1.138	1.054

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010069

Instrument ID: SV6 Calibration Date(s): 09/01/20 09/01/20

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1441 1657

LAB FILE ID: RF0.2: 009 RF0.5: 010

COMPOUND	RF0.2	RF0.5	CURVE	COEFFICENT A1	%RSD OR R^2	MAX %RSD OR R^2
1,4-Dioxane	0.332	0.280	AVRG	0.26820713	16.222	20.000
Nitrobenzene-d5	0.330	0.356	AVRG	0.35440929	16.461	20.000
4-Terphenyl-d14	0.774	0.841	AVRG	0.82891532	12.765	20.000
2-Fluorobiphenyl	1.123	1.017	AVRG	1.16642898	10.235	20.000

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\001.D

Date : 01-SEP-2020 13:52

Client ID: DFTPP

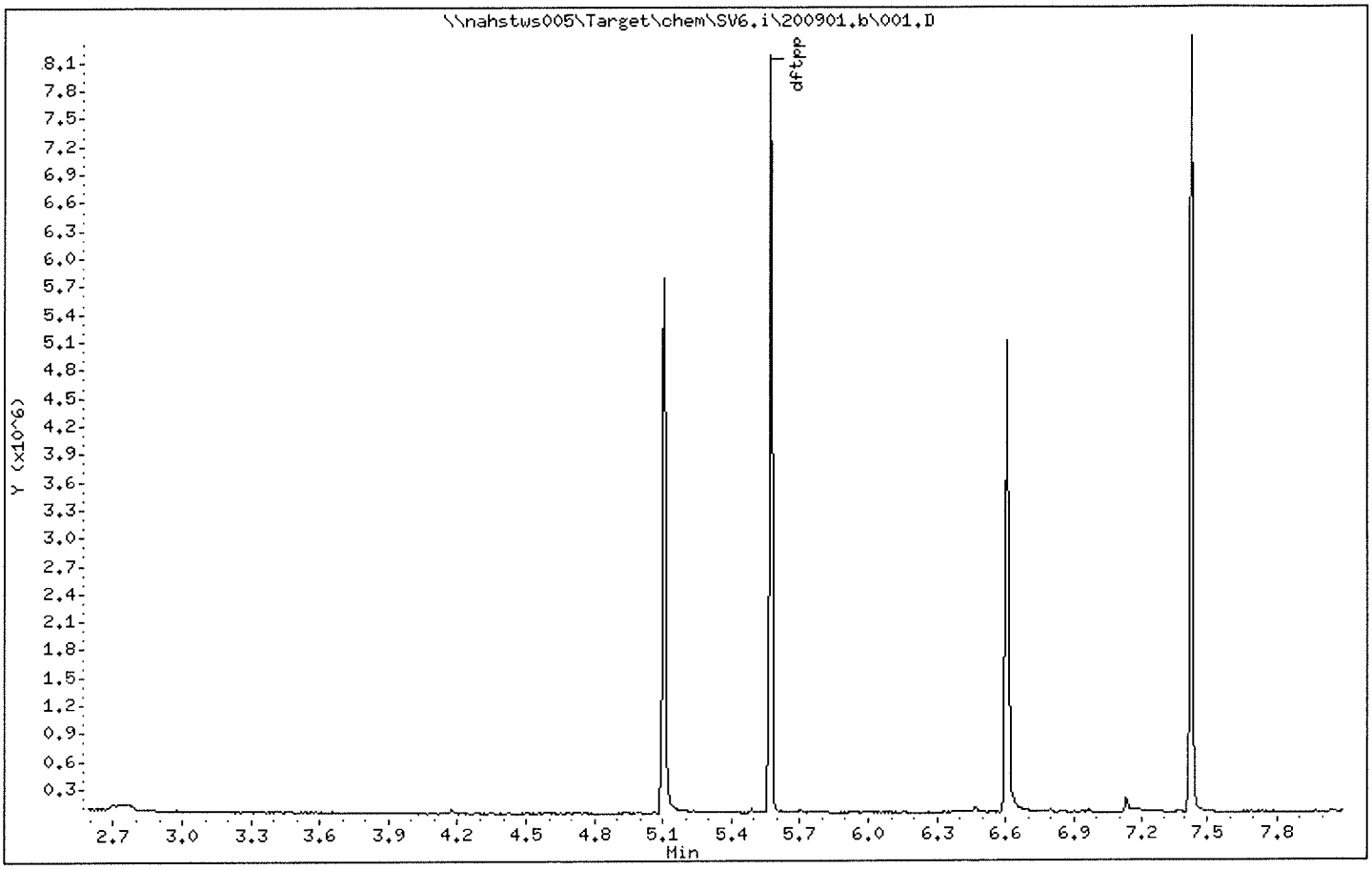
Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\001.D

Date : 01-SEP-2020 13:52

Client ID: DFTPP

Instrument: SV6.i

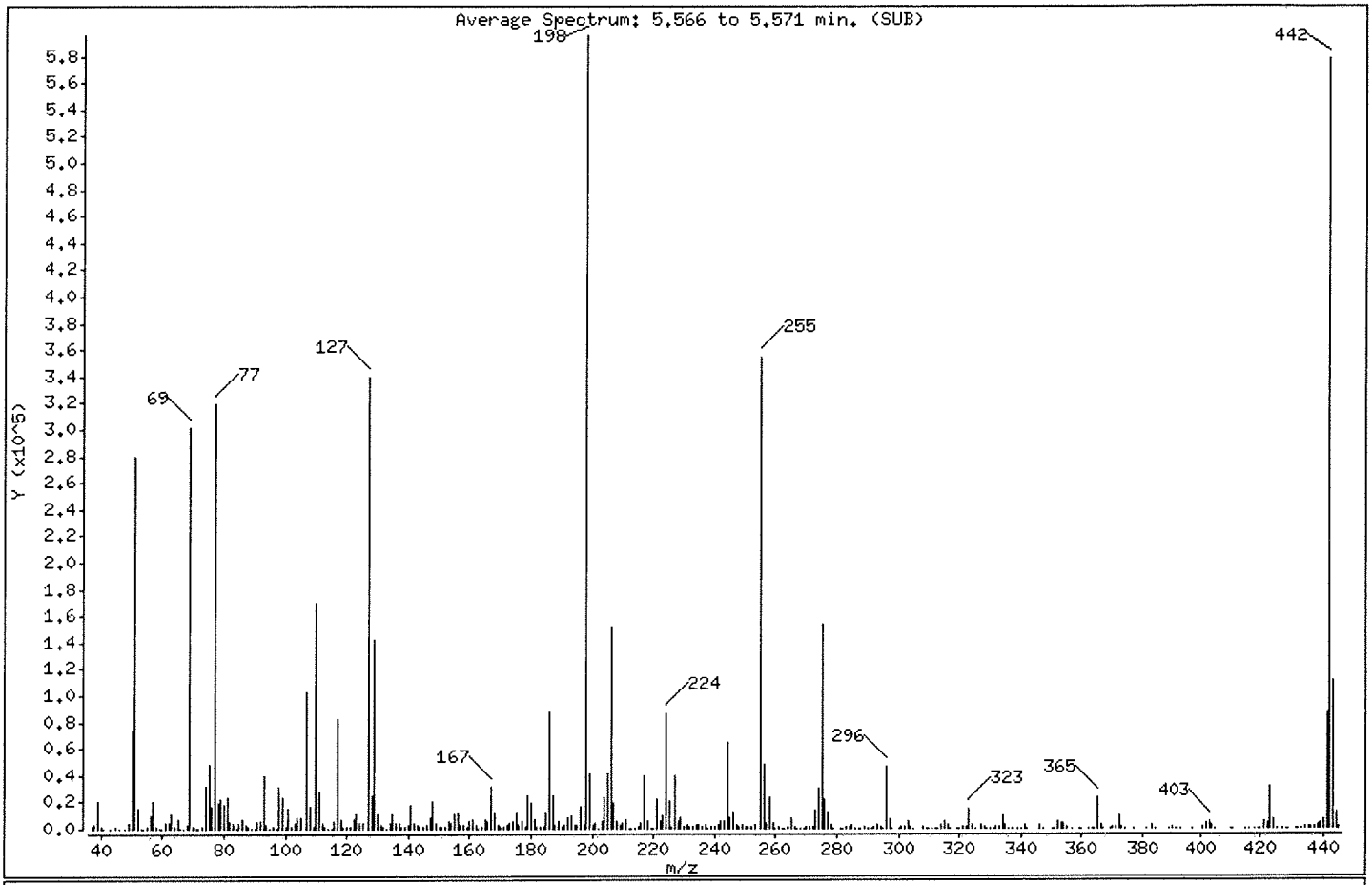
Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	46.88
68	Less than 2.00% of mass 69	0.48 (0.94)
69	Mass 69 relative abundance	50.68
70	Less than 2.00% of mass 69	0.31 (0.60)
127	10.00 - 80.00% of mass 198	56.99
197	Less than 2.00% of mass 198	0.41
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 60.00% of mass 198	25.68
365	1.00 - 100.00% of mass 198	4.01
441	Present, but less than mass 443	14.46
442	50.00 - 150.00% of mass 198	97.09
443	15.00 - 24.00% of mass 442	18.56 (19.12)

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\001.D

Date : 01-SEP-2020 13:52

Client ID: DFTPP

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.566 to 5.571 min. (SUB)
Location of Maximum: 198.00
Number of points: 361

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1132	133.00	523	224.00	85920	321.00	1936
38.00	3168	134.00	3567	225.00	20560	322.00	1358
39.00	20240	135.00	10509	226.00	1905	323.00	14582
40.00	847	136.00	4080	227.00	40272	324.00	3093
41.00	359	137.00	4659	228.00	6109	325.00	247
43.00	637	138.00	1176	229.00	8104	327.00	2927
45.00	726	139.00	691	230.00	865	328.00	1591
46.00	246	140.00	2173	231.00	3342	329.00	359
48.00	286	141.00	17232	232.00	803	330.00	103
49.00	3524	142.00	4786	233.00	880	331.00	218
50.00	74392	143.00	3273	234.00	2655	332.00	1451
51.00	279360	144.00	1143	235.00	3054	333.00	1368
52.00	14715	145.00	1076	236.00	1716	334.00	9177
53.00	159	146.00	3257	237.00	2356	335.00	2757
54.00	143	147.00	8842	238.00	432	336.00	112
55.00	1240	148.00	20160	239.00	1632	337.00	81
56.00	9103	149.00	3787	240.00	840	339.00	506
57.00	20872	150.00	1314	241.00	2253	340.00	133
58.00	1121	151.00	1875	242.00	5114	341.00	2506
59.00	664	152.00	1877	243.00	5015	342.00	537
60.00	26	153.00	5718	244.00	65016	346.00	3406
61.00	3531	154.00	4312	245.00	8277	347.00	505
62.00	3772	155.00	11251	246.00	11826	350.00	102
63.00	11375	156.00	12646	247.00	2935	351.00	344
64.00	1278	157.00	2476	248.00	921	352.00	5264
65.00	6226	158.00	2412	249.00	3014	353.00	3632
66.00	463	159.00	1824	250.00	749	354.00	4465
67.00	118	160.00	5511	251.00	954	355.00	955
68.00	2831	161.00	7151	252.00	1849	357.00	279
69.00	302016	162.00	2988	253.00	2849	359.00	276
70.00	1818	163.00	269	255.00	355200	360.00	121
71.00	296	164.00	816	256.00	47456	362.00	107
72.00	314	165.00	7317	257.00	3953	363.00	617
73.00	1963	166.00	5545	258.00	23384	364.00	541
74.00	30928	167.00	31856	259.00	3869	365.00	23912

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\001.D

Date : 01-SEP-2020 13:52

Client ID: DFTPP

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.566 to 5.571 min. (SUB)
Location of Maximum: 198.00
Number of points: 361

m/z	Y	m/z	Y	m/z	Y	m/z	Y
75.00	48584	168.00	12438	260.00	547	366.00	2559
76.00	16219	169.00	2506	261.00	696	367.00	373
77.00	318912	170.00	1228	262.00	171	369.00	84
78.00	19664	171.00	1246	263.00	152	370.00	770
79.00	21776	172.00	2840	264.00	715	371.00	1471
80.00	17632	173.00	4122	265.00	8690	372.00	10099
81.00	23216	174.00	5776	266.00	1098	373.00	1794
82.00	5569	175.00	12113	267.00	359	374.00	159
83.00	4711	176.00	3068	268.00	471	377.00	136
84.00	622	177.00	5288	269.00	197	381.00	77
85.00	4731	178.00	1999	270.00	890	383.00	2249
86.00	7005	179.00	24752	271.00	1141	384.00	683
87.00	3268	180.00	18880	272.00	1967	389.00	169
88.00	1411	181.00	6948	273.00	13049	390.00	1414
89.00	683	182.00	2055	274.00	30776	391.00	520
90.00	327	183.00	718	275.00	152960	392.00	477
91.00	5418	184.00	1986	276.00	21272	393.00	139
92.00	5846	185.00	11921	277.00	12978	397.00	447
93.00	39760	186.00	87664	278.00	2659	401.00	836
94.00	2446	187.00	24008	279.00	628	402.00	4295
95.00	461	188.00	3104	281.00	567	403.00	5624
96.00	1877	189.00	5095	282.00	547	404.00	2205
97.00	570	190.00	857	283.00	1874	405.00	159
98.00	31608	191.00	2656	284.00	1318	410.00	82
99.00	22912	192.00	7627	285.00	3378	411.00	82
100.00	2053	193.00	9015	286.00	376	415.00	105
101.00	14676	194.00	2583	287.00	107	416.00	235
102.00	994	195.00	2733	288.00	123	418.00	200
103.00	3962	196.00	16172	289.00	862	419.00	258
104.00	8895	197.00	2436	290.00	416	420.00	272
105.00	7876	198.00	595968	291.00	335	421.00	5352
107.00	102624	199.00	40792	292.00	773	422.00	4268
108.00	16204	200.00	3416	293.00	2950	423.00	31088
109.00	1647	201.00	4505	294.00	931	424.00	6308
110.00	170432	202.00	32	295.00	485	425.00	681

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\001.D

Date : 01-SEP-2020 13:52

Client ID: DFTPP

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.566 to 5.571 min. (SUB)
Location of Maximum: 198.00
Number of points: 361

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	27200	203.00	5754	296.00	46784	427.00	276
112.00	4383	204.00	23032	297.00	6214	428.00	255
113.00	1212	205.00	41664	298.00	580	429.00	278
114.00	601	206.00	152320	300.00	320	431.00	536
115.00	615	207.00	19016	301.00	981	432.00	96
116.00	5674	208.00	5811	302.00	1252	433.00	459
117.00	81968	209.00	2446	303.00	5202	434.00	1073
118.00	6322	210.00	3435	304.00	1503	435.00	1536
119.00	751	211.00	6291	305.00	88	436.00	1880
120.00	1445	212.00	214	308.00	1015	437.00	1700
121.00	773	213.00	353	309.00	672	438.00	3309
122.00	6206	214.00	404	310.00	442	439.00	4207
123.00	10790	215.00	1996	311.00	195	440.00	6195
124.00	4730	216.00	3882	312.00	263	441.00	86192
125.00	4622	217.00	40296	313.00	551	442.00	578624
127.00	339648	218.00	5802	314.00	2613	443.00	110608
128.00	24424	219.00	597	315.00	5016	444.00	12237
129.00	142400	220.00	249	316.00	2249	445.00	721
130.00	10696	221.00	21896	317.00	530		
131.00	2236	222.00	5339	319.00	175		
132.00	1119	223.00	9504	320.00	160		

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\003.D Page 1
Report Date: 14-Oct-2020 17:04

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\003.D
Lab Smp Id: DXSIM-0.08 Client Smp ID: DXSIM-0.08
Inj Date : 01-SEP-2020 14:41 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.08;DXSIM-0.08
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 14-Oct-2020 17:04 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:57 Cal File: 010.D
Als bottle: 3 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

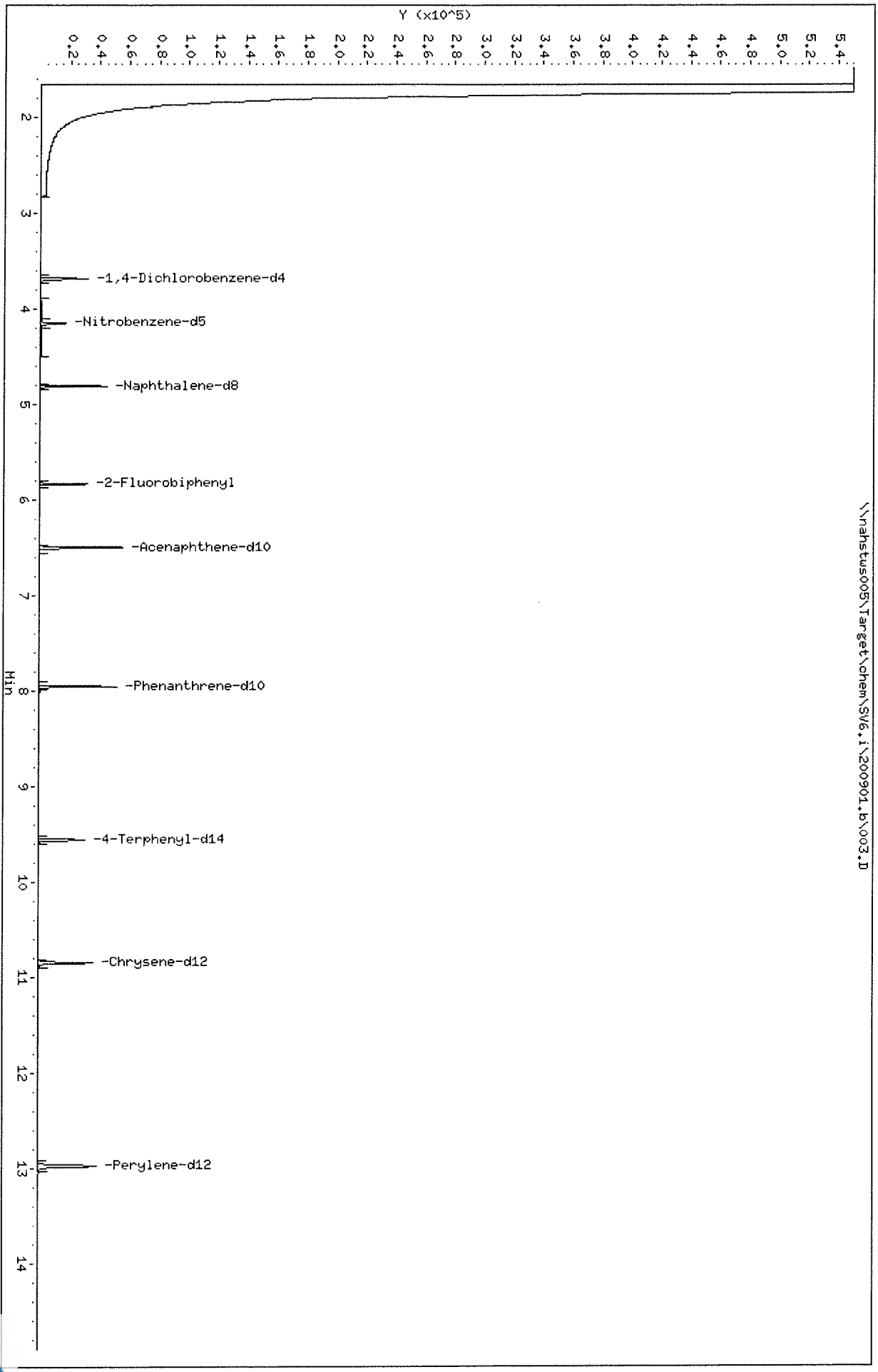
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.683	3.683	(1.000)	8895	0.10000		(aH)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	35367	0.10000		(H)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.902)	10301	0.08000	0.08218	(QH)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	22159	0.10000		(H)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.945)	19840	0.08000	0.07676	(QH)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	43559	0.10000		(H)
* 182 Chrysene-d12	240	10.845	10.845	(1.000)	35410	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.937)	26311	0.08000	0.08964	
* 198 Perylene-d12	264	12.972	12.972	(1.000)	41042	0.10000		
1 1,4-Dioxane	58	1.895	1.895	(0.583)	1458	0.08000	0.06111	(aQH)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\003.D
Date : 01-SEP-2020 14:41
Client ID: DXSIM-0.08
Sample Info: DXSIM-0.08;DXSIM-0.08
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\004.D
Lab Smp Id: DXSIM-0.01 Client Smp ID: DXSIM-0.01
Inj Date : 01-SEP-2020 15:03 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.01;DXSIM-0.01
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 14-Oct-2020 17:04 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 14:41 Cal File: 003.D
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

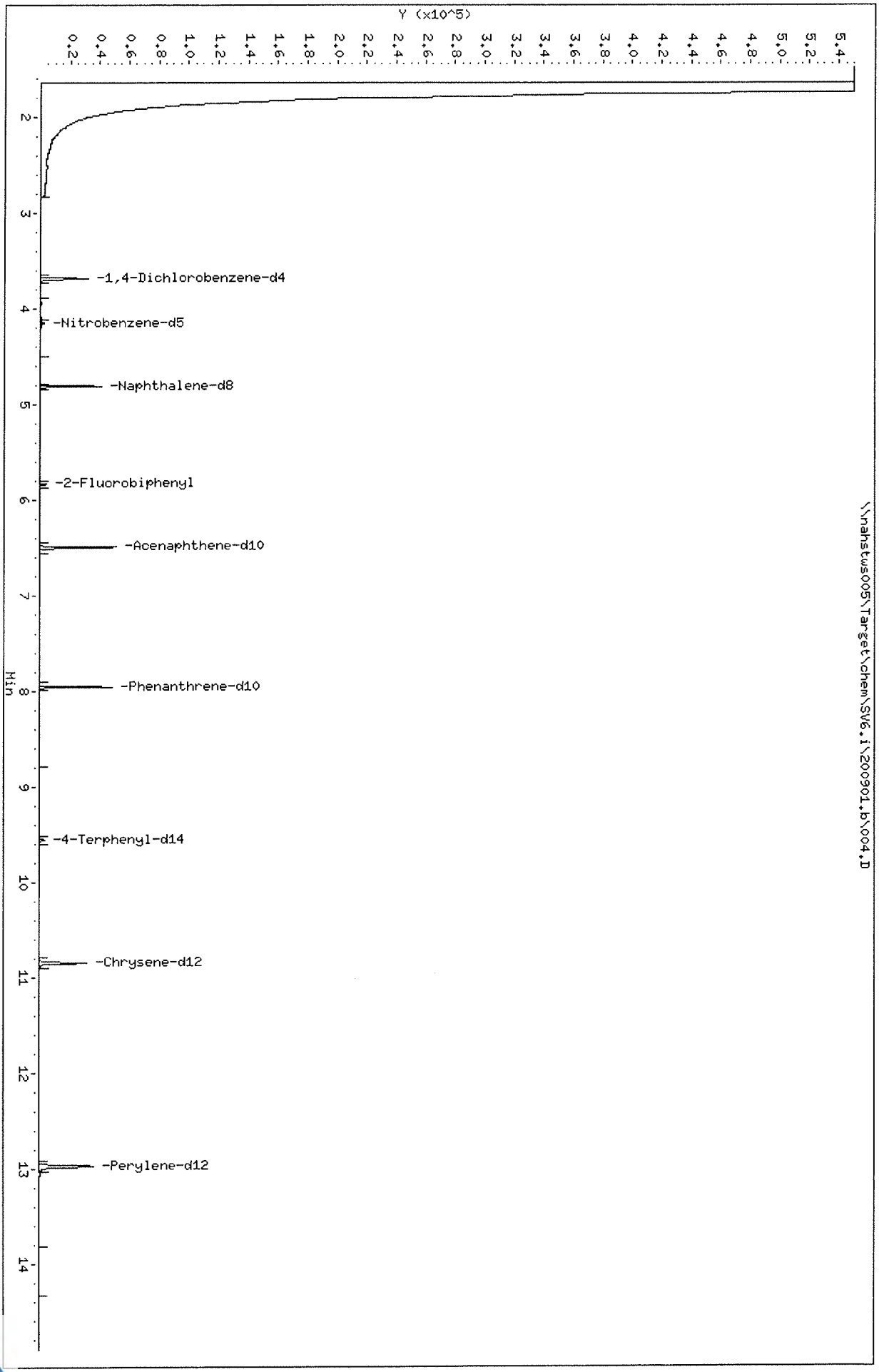
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.683	3.683	(1.000)	8796	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	32119	0.10000		(H)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	1526	0.01000	0.01340	(QM)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	19919	0.10000		
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.898)	2697	0.01000	0.01161	(M)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	38069	0.10000		
* 182 Chrysene-d12	240	10.845	10.845	(1.000)	32361	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.881)	3227	0.01000	0.01203	(M)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	42122	0.10000		(M)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\004.D
Date : 01-SEP-2020 15:03
Client ID: DXSIM-0.01
Sample Info: DXSIM-0.01;DXSIM-0.01
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\005.D Page 1
Report Date: 14-Oct-2020 17:04

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\005.D
Lab Smp Id: DXSIM-0.03 Client Smp ID: DXSIM-0.03
Inj Date : 01-SEP-2020 15:22 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.03;DXSIM-0.03
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 14-Oct-2020 17:04 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 15:03 Cal File: 004.D
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	11206	0.10000		(aQ)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	37822	0.10000		
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	4046	0.03000	0.03018	(QM)
* 86 Acenaphthene-d10	164	6.491	6.491	(1.000)	24426	0.10000		(M)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	8846	0.03000	0.03105	(QM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	45805	0.10000		(M)
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	35939	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.549	(0.927)	9716	0.03000	0.03261	
* 198 Perylene-d12	264	12.967	12.967	(1.000)	49371	0.10000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\005.D

Date : 01-SEP-2020 15:22

Client ID: DXSIM-0.03

Instrument: SV6.i

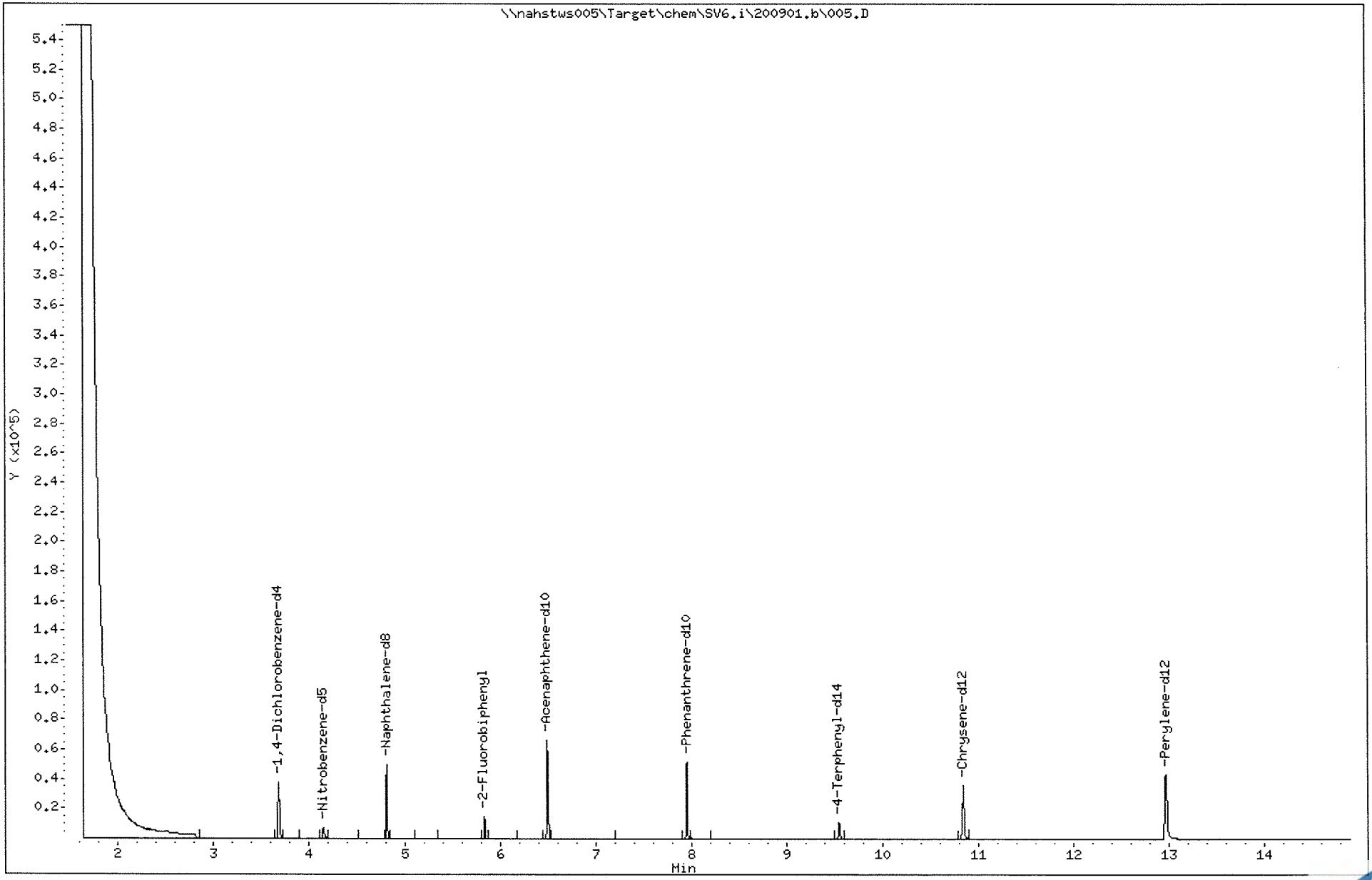
Sample Info: DXSIM-0.03;DXSIM-0.03

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\006.D
Lab Smp Id: DXSIM-0.05 Client Smp ID: DXSIM-0.05
Inj Date : 01-SEP-2020 15:41 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.05;DXSIM-0.05
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 14-Oct-2020 17:04 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 15:22 Cal File: 005.D
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

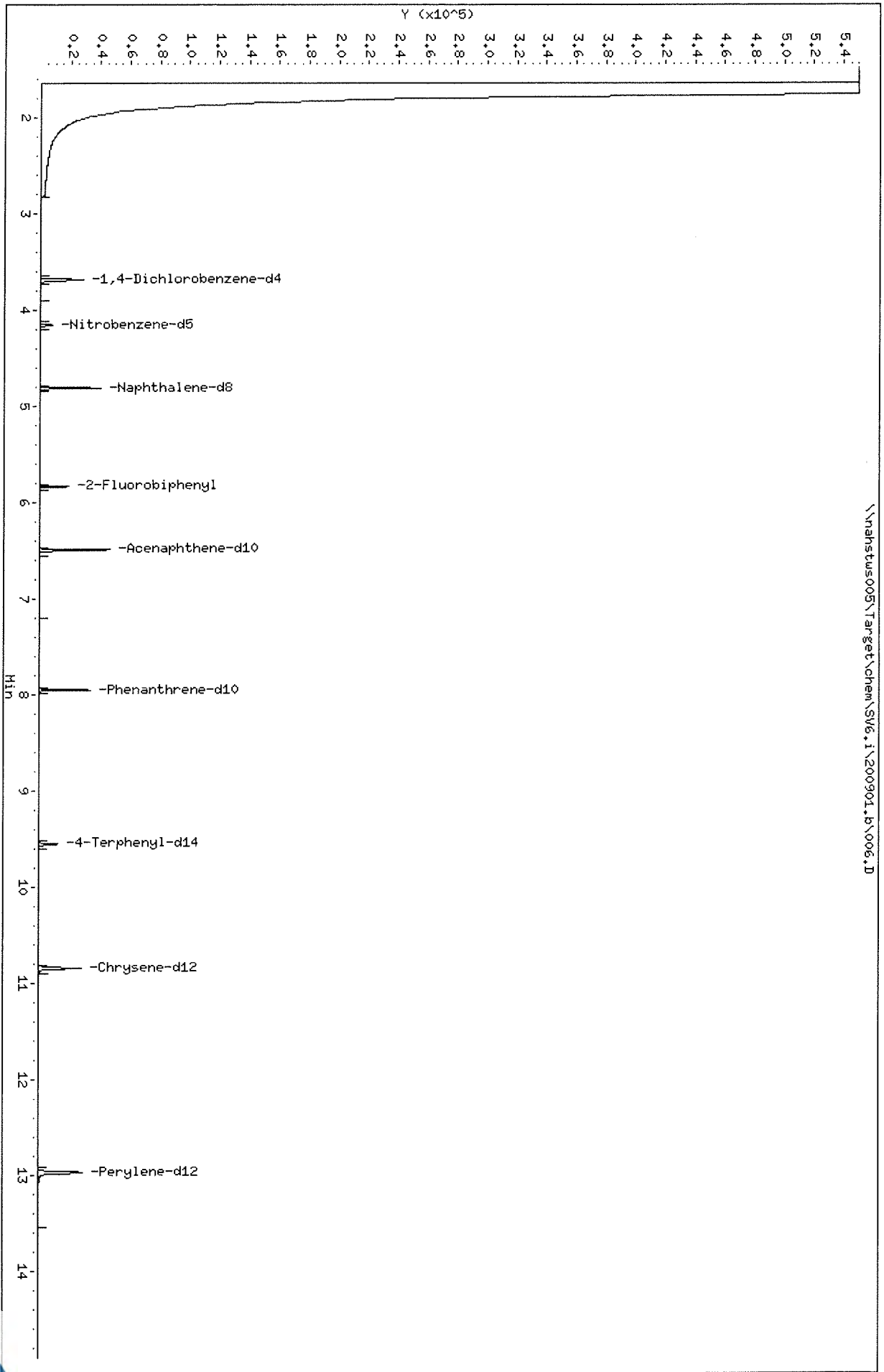
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	8859	0.10000		(aQ)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	32258	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	4593	0.05000	0.04017	(M)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	17615	0.10000		(M)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.898)	11613	0.05000	0.05652	(QM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	28977	0.10000		
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	28714	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.549	(0.934)	11038	0.05000	0.04638	
* 198 Perylene-d12	264	12.967	12.967	(1.000)	33234	0.10000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\006.D
Date : 01-SEP-2020 15:41
Client ID: DXSIM-0.05
Sample Info: DXSIM-0.05;DXSIM-0.05
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\007.D Page 1
Report Date: 14-Oct-2020 17:04

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\007.D
Lab Smp Id: DXSIM-0.10 Client Smp ID: DXSIM-0.10
Inj Date : 01-SEP-2020 16:00 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.10;DXSIM-0.10
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 14-Oct-2020 17:04 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 15:41 Cal File: 006.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

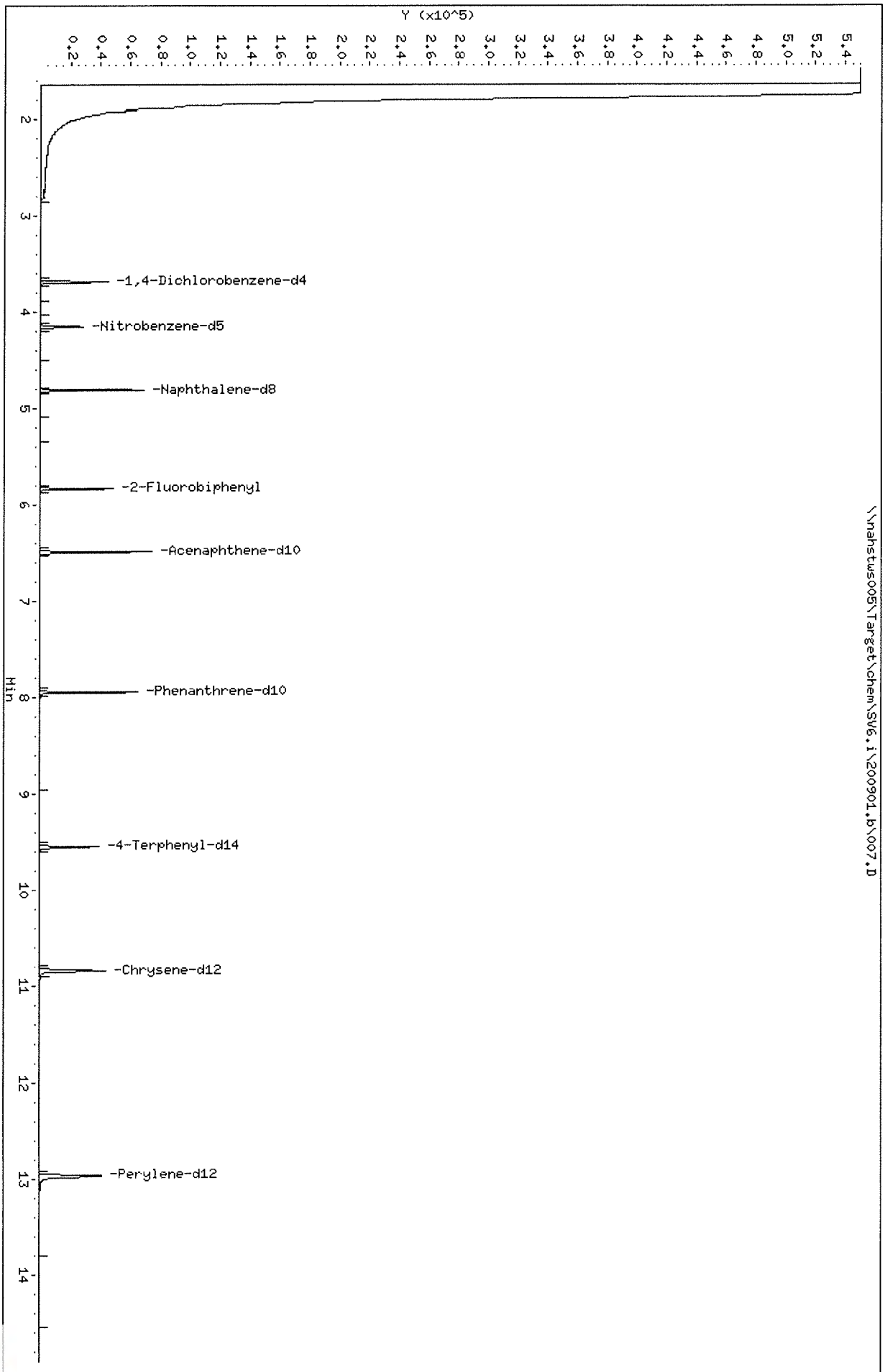
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	11640	0.10000	(aM)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	55315	0.10000	
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	16389	0.10000	0.08360(M)
* 86 Acenaphthene-d10	164	6.491	6.491	(1.000)	27614	0.10000	(QM)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	31424	0.10000	0.09756(M)
* 126 Phenanthrene-d10	188	7.946	7.946	(1.000)	55479	0.10000	
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	48676	0.10000	(M)
$ 158 4-Terphenyl-d14	244	9.549	9.549	(1.000)	34456	0.10000	0.08540
* 198 Perylene-d12	264	12.962	12.962	(1.000)	53866	0.10000	
1 1,4-Dioxane	58	1.918	1.918	(0.567)	3169	0.10000	0.1015(aQH)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\007.D
Date : 01-SEP-2020 16:00
Client ID: DXSIM-0.10
Sample Info: DXSIM-0.10;DXSIM-0.10
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\008.D Page 1
Report Date: 14-Oct-2020 17:04

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\008.D
Lab Smp Id: DXSIM-0.15 Client Smp ID: DXSIM-0.15
Inj Date : 01-SEP-2020 16:19 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.15;DXSIM-0.15
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 14-Oct-2020 17:04 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:00 Cal File: 007.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

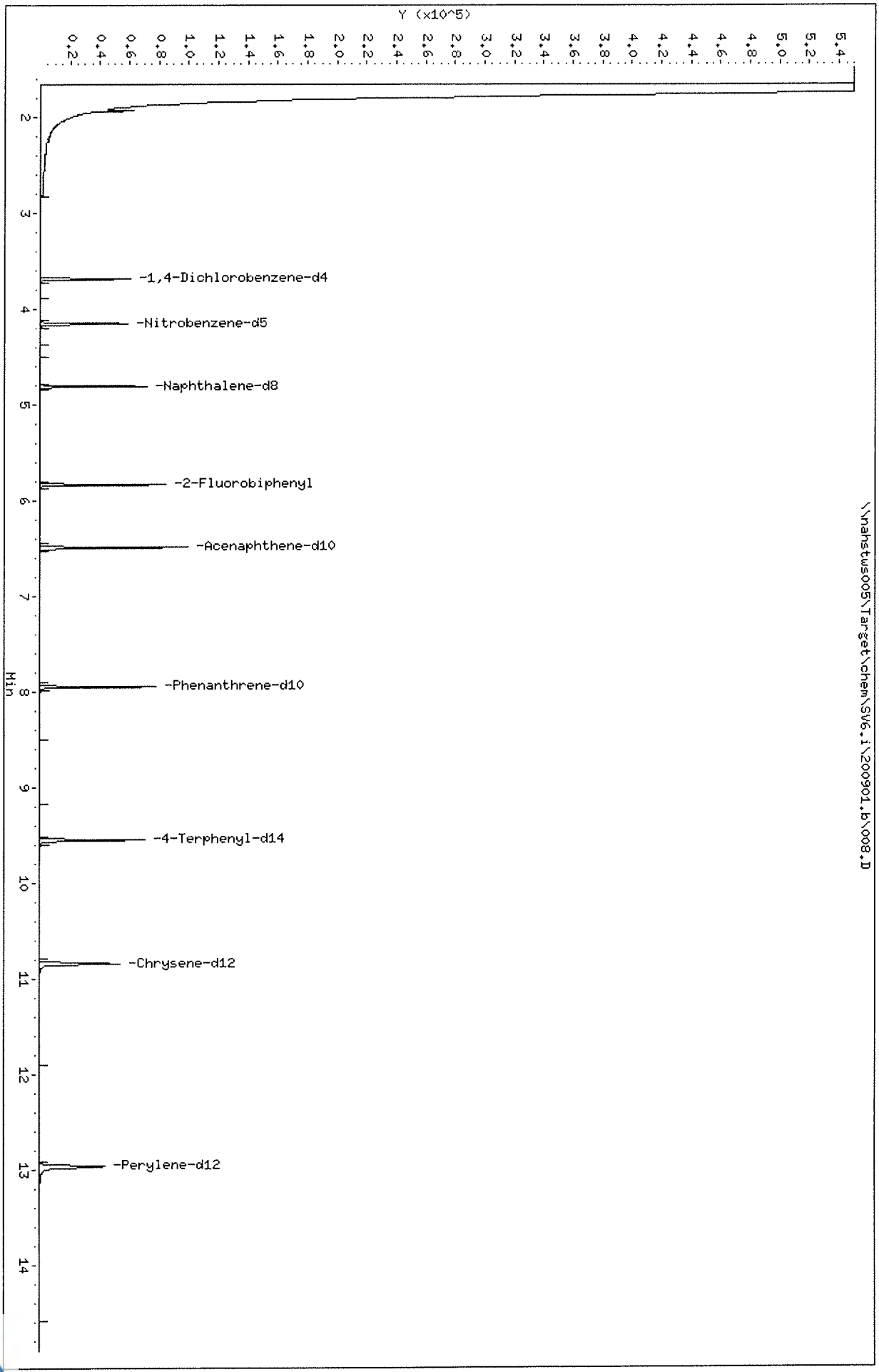
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	15270	0.10000	(aQM)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	61912	0.10000	
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	34608	0.15000	0.1577(AM)
* 86 Acenaphthene-d10	164	6.491	6.491	(1.000)	37191	0.10000	(M)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	58798	0.15000	0.1355(M)
* 126 Phenanthrene-d10	188	7.946	7.946	(1.000)	72506	0.10000	
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	63837	0.10000	(M)
$ 158 4-Terphenyl-d14	244	9.549	9.549	(0.881)	68288	0.15000	0.1290(M)
* 198 Perylene-d12	264	12.961	12.961	(1.000)	62319	0.10000	(M)
1 1,4-Dioxane	58	1.932	1.932	(0.555)	6821	0.15000	0.1665(aQH)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\008.D
Date : 01-SEP-2020 16:19
Client ID: DXSIM-0.15
Sample Info: DXSIM-0.15;DXSIM-0.15
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\009.D
Lab Smp Id: DXSIM-0.2 Client Smp ID: DXSIM-0.2
Inj Date : 01-SEP-2020 16:38 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.2;DXSIM-0.2
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 14-Oct-2020 17:04 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:19 Cal File: 008.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

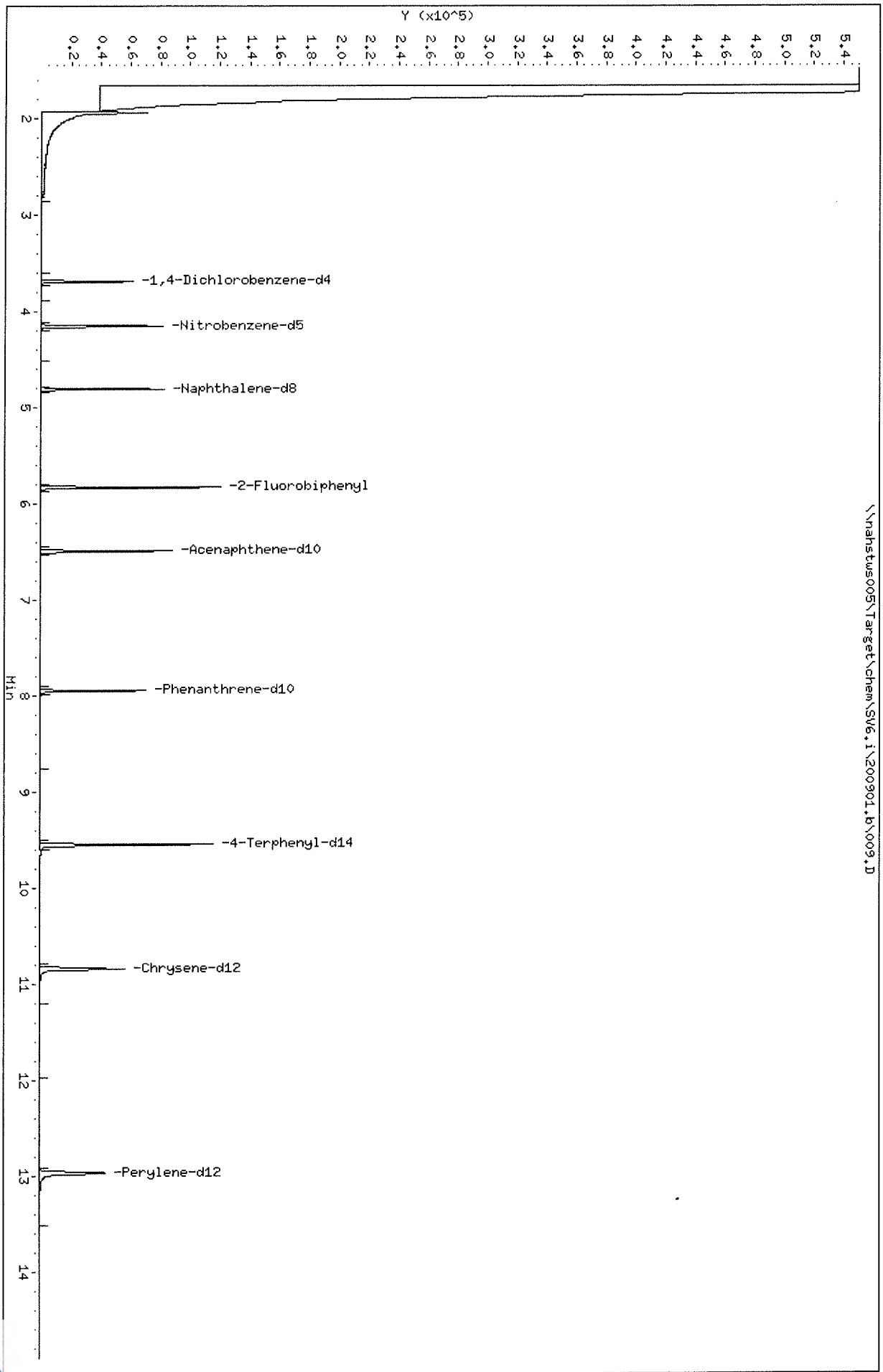
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.694	3.694	(1.000)	16191	0.10000	(aQ)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	71876	0.10000	
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	47444	0.20000	0.1862(AM)
* 86 Acenaphthene-d10	164	6.491	6.491	(1.000)	37058	0.10000	(Q)
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.899)	83257	0.20000	0.1926(A)
* 126 Phenanthrene-d10	188	7.946	7.946	(1.000)	66839	0.10000	
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	69577	0.10000	(M)
$ 158 4-Terphenyl-d14	244	9.549	9.549	(0.933)	107656	0.20000	0.1867(A)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	67389	0.10000	(M)
1 1,4-Dioxane	58	1.943	1.943	(0.526)	10742	0.20000	0.2474(QM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\009.D
Date : 01-SEP-2020 16:38
Client ID: DXSIM-0.2
Sample Info: DXSIM-0.2;DXSIM-0.2
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\010.D Page 1
Report Date: 14-Oct-2020 17:04

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\010.D
Lab Smp Id: DXSIM-0.5 Client Smp ID: DXSIM-0.5
Inj Date : 01-SEP-2020 16:57 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.5;DXSIM-0.5
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 14-Oct-2020 17:04 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:38 Cal File: 009.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

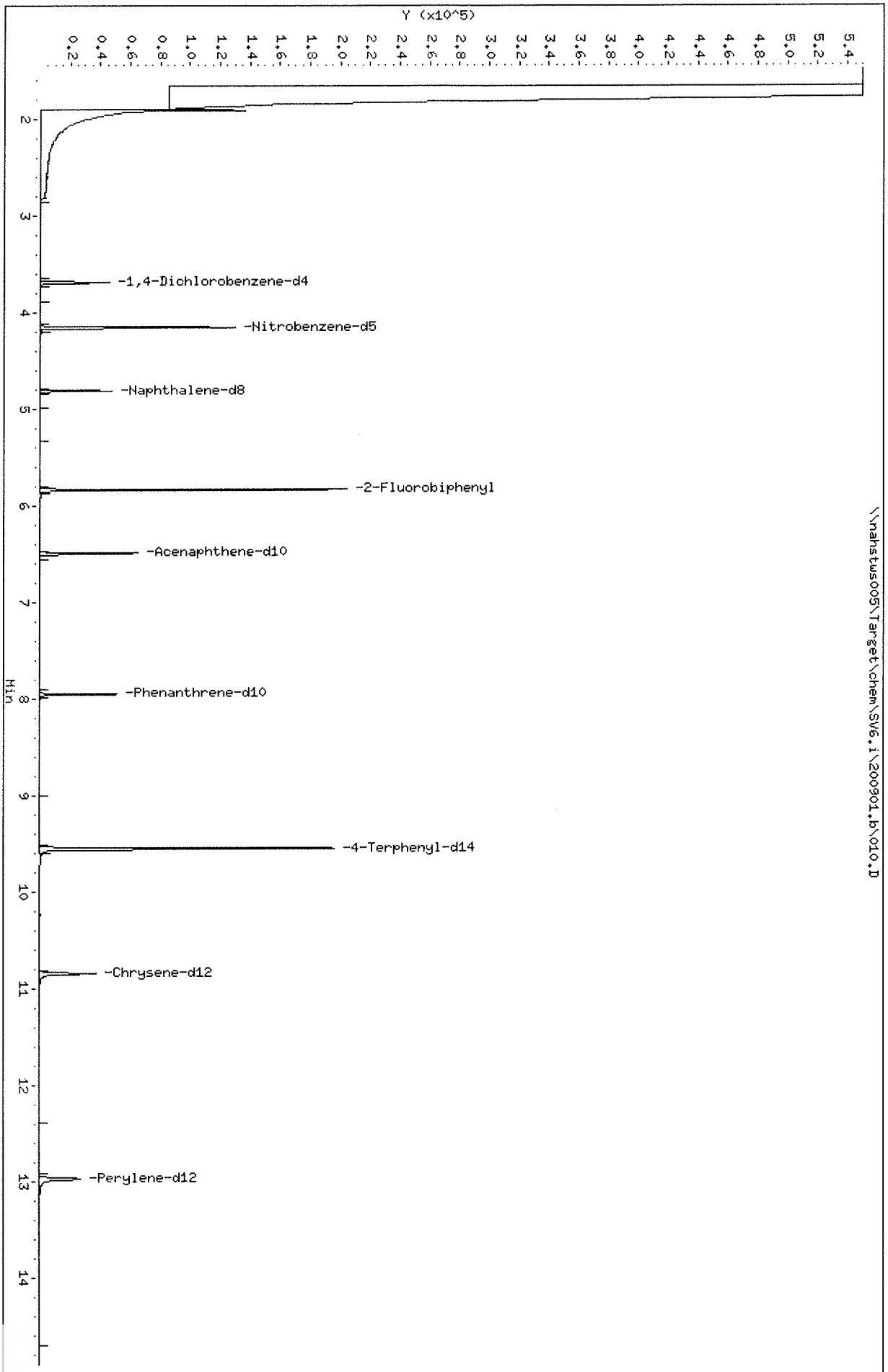
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	12162	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	42331	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	75298	0.50000	0.5019	(AM)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	25766	0.10000		
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.898)	131053	0.50000	0.4360	(AQM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	46874	0.10000		
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	42265	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.554	9.554	(0.934)	177660	0.50000	0.5071	(A)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	40372	0.10000		(M)
1 1,4-Dioxane	58	1.910	1.910	(0.518)	17000	0.50000	0.5212	(AQH)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\010.D
Date : 01-SEP-2020 16:57
Client ID: DXSIM-0.5
Sample Info: DXSIM-0.5;DXSIM-0.5
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\200901.b\011.D Page 1
Report Date: 14-Oct-2020 17:04

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\200901.b\011.D
Lab Smp Id: DXSIM-ICV Client Smp ID: DXSIM-ICV
Inj Date : 01-SEP-2020 17:16 MS Autotune Date: 31-JUL-2020 09:35
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-ICV;DXSIM-ICV
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\200901.b\DXSIM.m
Meth Date : 14-Oct-2020 17:04 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:57 Cal File: 010.D
Als bottle: 11 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.688	3.688	(1.000)	8963	0.10000		(a)
* 45 Naphthalene-d8	136	4.809	4.809	(1.000)	36304	0.10000		(M)
$ 33 Nitrobenzene-d5	82	4.155	4.155	(0.864)	1344	0.01045	0.01044	(RM)
* 86 Acenaphthene-d10	164	6.496	6.496	(1.000)	20841	0.10000		
$ 69 2-Fluorobiphenyl	172	5.834	5.834	(0.898)	2375	0.00977	0.009770	(RM)
* 126 Phenanthrene-d10	188	7.951	7.951	(1.000)	29957	0.10000		
* 182 Chrysene-d12	240	10.840	10.840	(1.000)	32572	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.549	9.554	(0.881)	3102	0.01149	0.01149	(RM)
* 198 Perylene-d12	264	12.967	12.967	(1.000)	29891	0.10000		(M)
1 1,4-Dioxane	58	1.906	1.910	(0.517)	1870	0.07779	0.07779	(aQH)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\SV6.i\200901.b\011.D

Date : 01-SEP-2020 17:16

Client ID: DXSIM-ICV

Instrument: SV6.i

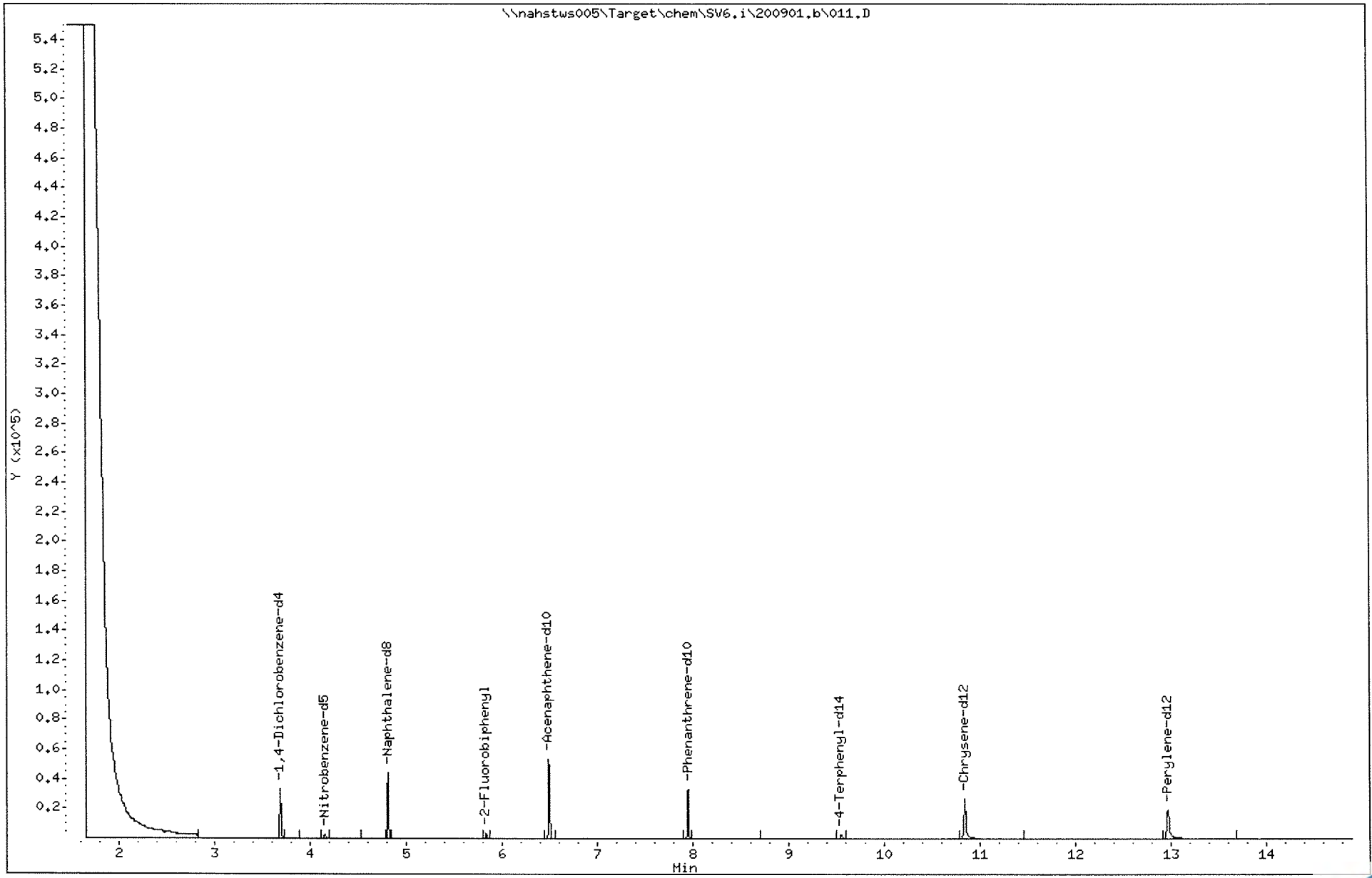
Sample Info: DXSIM-ICV;DXSIM-ICV

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



SV06 -Logbook

Batch: 42231 **Analyst:** Andrew Neir

Date: 10-28-2020 **Reviewer:**

Method: 8270DLL **Laboratory:** Houston

Comments: MSSV003

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	DFTPP	TUNE	10-28-2020 09:40 am	1.00			001.D		Y	NA
2	SLSTD-2.5	CCV	10-28-2020 09:53 am	1.00			002.D		Y	NA
3	DXSIM-0.08	CCV	10-28-2020 10:22 am	1.00			003.D		Y	NA
4	LVIPAH-0.025	CCV	10-28-2020 10:48 am	1.00			004.D		Y	NA
5	CCB	SAMP	10-28-2020 11:10 am	1.00			005.D		Y	NA
6	MBLK-158538	MBLK	10-28-2020 11:27 am	1.00	1000.00 mL	1.00 mL	006.D	Liquid	Y	NA
7	LCS-158538	LCS	10-28-2020 11:45 am	1.00	1000.00 mL	1.00 mL	007.D	Liquid	Y	NA
8	LCSD-158538	LCSD	10-28-2020 12:03 pm	1.00	1000.00 mL	1.00 mL	008.D	Liquid	Y	NA
9	HS20100694-01	SAMP	10-28-2020 12:21 pm	100.0(	1000.00 mL	1.00 mL	009.D	Liquid	Y	NA
10	DXSIM-0.08	SAMP	10-28-2020 12:45 pm	1.00	1000.00 mL	1.00 mL	010.D	Liquid	Y	NA
11	HS20100920-03	SAMP	10-28-2020 01:05 pm	100.0(	33.00 mL	2.00 mL	011.D	Liquid	Y	NA
12	MBLK-158801	MBLK	10-28-2020 01:24 pm	1.00	33.00 mL	2.00 mL	012.D	Liquid	Y	NA
13	LCS-158801	LCS	10-28-2020 01:44 pm	1.00	33.00 mL	2.00 mL	013.D	Liquid	Y	NA
14	HS20101122-03	SAMP	10-28-2020 02:03 pm	1.00	33.00 mL	2.00 mL	014.D	Liquid	Y	NA
15	HS20101122-03	SAMP	10-28-2020 02:23 pm	10.00	33.00 mL	2.00 mL	015.D	Liquid	Y	NA
16	HS20100950-04	SAMP	10-28-2020 02:42 pm	1.00	33.00 mL	2.00 mL	016.D	Liquid	Y	NA
17	HS20101113-02	SAMP	10-28-2020 03:02 pm	1.00	33.00 mL	2.00 mL	017.D	Liquid	Y	NA
18	HS20101113-03	SAMP	10-28-2020 03:21 pm	1.00	33.00 mL	2.00 mL	018.D	Liquid	Y	NA
19	HS20101113-04	SAMP	10-28-2020 03:41 pm	1.00	33.00 mL	2.00 mL	019.D	Liquid	Y	NA
20	HS20101113-05	SAMP	10-28-2020 04:00 pm	1.00	33.00 mL	2.00 mL	020.D	Liquid	Y	NA
21	HS20101113-06	SAMP	10-28-2020 04:20 pm	1.00	33.00 mL	2.00 mL	021.D	Liquid	Y	NA
22	HS20101113-06MS	MS	10-28-2020 04:39 pm	1.00	33.00 mL	2.00 mL	022.D	Liquid	Y	NA
23	HS20101113-06MSD	MSD	10-28-2020 04:59 pm	1.00	33.00 mL	2.00 mL	023.D	Liquid	Y	NA
24	HS20100952-02	SAMP	10-28-2020 05:18 pm	1.00	33.00 mL	2.00 mL	024.D	Liquid	Y	NA
25	HS20100952-03	SAMP	10-28-2020 05:38 pm	1.00	33.00 mL	2.00 mL	025.D	Liquid	Y	NA
26	HS20100952-04	SAMP	10-28-2020 05:57 pm	1.00	33.00 mL	2.00 mL	026.D	Liquid	Y	NA
27	HS20100952-05	SAMP	10-28-2020 06:17 pm	1.00	33.00 mL	2.00 mL	027.D	Liquid	Y	NA
28	HS20100952-06	SAMP	10-28-2020 06:36 pm	1.00	33.00 mL	2.00 mL	028.D	Liquid	Y	NA
29	HS20101057-02	SAMP	10-28-2020 06:56 pm	1.00	33.00 mL	2.00 mL	029.D	Liquid	Y	NA
30	HS20101057-03	SAMP	10-28-2020 07:15 pm	1.00	33.00 mL	2.00 mL	030.D	Liquid	Y	NA
31	HS20101057-04	SAMP	10-28-2020 07:35 pm	1.00	33.00 mL	2.00 mL	031.D	Liquid	Y	NA
32	HS20101057-05	SAMP	10-28-2020 07:54 pm	1.00	33.00 mL	2.00 mL	032.D	Liquid	Y	NA
33	HS20100923-08	SAMP	10-28-2020 08:11 pm	1.00	30.00 gm	1.00 mL	033.D	Solid	Y	NA
34	HS20101050-01	SAMP	10-28-2020 08:31 pm	1.00	30.00 gm	1.00 mL	034.D	Solid	Y	NA
35	HS20101050-02	SAMP	10-28-2020 08:50 pm	1.00	30.00 gm	1.00 mL	035.D	Solid	Y	NA
36	HS20101050-03	SAMP	10-28-2020 09:10 pm	1.00	30.00 gm	1.00 mL	036.D	Solid	Y	NA
37	HS20101050-04	SAMP	10-28-2020 09:29 pm	1.00	30.00 gm	1.00 mL	037.D	Solid	Y	NA
38	HS20101050-05	SAMP	10-28-2020 09:49 pm	1.00	30.00 gm	1.00 mL	038.D	Solid	Y	NA
39	CHECH	SAMP	10-28-2020 10:11 pm	1.00	0.00 gm	1.00 mL	039.D	Gas	Y	NA

SV06 -Logbook

Chemical	Value
IS ID	31111852-01/31111853-02/3111852-11
CAL STD ID	3111854-06/ 3111856-03/31111835-03
DFTPP ID	31111859-10
PCP Tailing	0.67
Benz. Tailing	0.68
Routine SOP Maintenance	ACN

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

	CLIENT SAMPLE NO.	S1 (NBZ)#	S2 #	S3 (FBP)#	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	MBLK-158538	93	117	109						0
02	LCS-158538	75	99	131						0
03	LCSD-158538	96	105	120						0
04	HS20100694-01	0D	0D	0D						0
05										
06										
07										
08										
09										
10										
11										
12										
13										
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17										
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21										
22										
23										
24										
25										
26										
27										
28										

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(40-140)
S2 = 4-Terphenyl-d14	(40-140)
S3 (FBP) = 2-Fluorobiphenyl	(40-140)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MBLK-158538

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Lab File ID: 006 Lab Sample ID: MBLK-158538

Instrument ID: SV6 Date Extracted:

Matrix: (soil/water) WATER Date Analyzed: 10/28/20

Level: (low/med) LOW Time Analyzed: 1127

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS-158538	LCS-158538	007	10/28/20
02	LCSD-158538	LCSD-158538	008	10/28/20
03	HS20100694-0	HS20100694-01	009	10/28/20
04				
05				
06				
07				
08				
09				
10				
11				
12				
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14				
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COMMENTS:

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Lab File ID: 001 DFTPP Injection Date: 10/28/20

Instrument ID: SV6 DFTPP Injection Time: 0940

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	22.1
68	Less than 2.0% of mass 69	0.4 (1.2)1
69	Mass 69 relative abundance	33.3
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	51.7
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	27.2
365	1.0 - 100.0% of mass 198	3.4
441	Present, but less than mass 443	15.6
442	50.0 - 150.0% of mass 198	109.9
443	15.0 - 24.0% of mass 442	21.4 (19.5)2

1-Value is % mass 69 2-Value is % mass 442

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	DXSIM-0.08	DXSIM-0.08	003	10/28/20	1022
02	MBLK-158538	MBLK-158538	006	10/28/20	1127
03	LCS-158538	LCS-158538	007	10/28/20	1145
04	LCSD-158538	LCSD-158538	008	10/28/20	1203
05	HS20100694-0	HS20100694-01	009	10/28/20	1221
06	DXSIM-0.08	DXSIM-0.08	010	10/28/20	1245
07					
08					
09					
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17					
18					
19					
20					
21					
22					

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Instrument ID: SV6 Calibration Date: 10/28/20 Time: 1022

Lab File ID: 003 Init. Calib. Date(s): 09/01/20 09/01/20

Init. Calib. Times: 1441 1657

GC Column: RTX-5SIL MS ID: 0.28 (mm)

COMPOUND	RRF or AMOUNT	RRF8e-002 or AMOUNT	CCAL RRF8e-002	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,4-Dioxane	6.87e-002	8.e-002	0.2376812	0.01	-14.12	20.00	2RDR
Nitrobenzene-d5	0.3540000	0.3335528	0.3335528	0.01	-5.78	20.00	AVRG
4-Terphenyl-d14	0.8290000	0.9190621	0.9190621	0.01	10.86	20.00	AVRG
2-Fluorobiphenyl	1.1660000	1.1283792	1.1283792	0.01	-3.23	20.00	AVRG

FORM VII SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Instrument ID: SV6 Calibration Date: 10/28/20 Time: 1245

Lab File ID: 010 Init. Calib. Date(s): 09/01/20 09/01/20

Init. Calib. Times: 1441 1657

GC Column: RTX-5SIL MS ID: 0.28 (mm)

COMPOUND	RRF OR AMOUNT	RRF8e-002 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
1,4-Dioxane	0.2680000	0.1765811	0.01	-34.11	50.00	AVRG
Nitrobenzene-d5	0.3540000	0.2477805	0.01	-30.00	50.00	AVRG
4-Terphenyl-d14	0.8290000	0.8213846	0.01	-0.92	50.00	AVRG
2-Fluorobiphenyl	1.1660000	1.2861534	0.01	10.30	50.00	AVRG

FORM VII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Lab File ID (Standard): 003 Date Analyzed: 10/28/20

Instrument ID: SV6 Time Analyzed: 1022

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	17250	3.21	72155	4.31	39765	5.97
	UPPER LIMIT	34500	3.71	144310	4.81	79530	6.47
	LOWER LIMIT	8625	2.71	36078	3.81	19883	5.47
	CLIENT SAMPLE NO.						
01	MBLK-158538	23330	3.21	81625	4.31	41853	5.97
02	LCS-158538	32151	3.22	124736	4.31	64510	5.97
03	LCSD-158538	27995	3.22	102568	4.31	47421	5.97
04	HS20100694-01	30346	3.21	82651	4.31	51540	5.97
05							
06							
07							
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09							
10							
11							
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17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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 internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20100694

Lab File ID (Standard): 003 Date Analyzed: 10/28/20

Instrument ID: SV6 Time Analyzed: 1022

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	67786	7.41	70100	10.13	83760	12.08
	UPPER LIMIT	135572	7.91	140200	10.63	167520	12.58
	LOWER LIMIT	33893	6.91	35050	9.63	41880	11.58
	CLIENT SAMPLE NO.						
01	MBLK-158538	76458	7.41	60711	10.12	57972	12.07
02	LCS-158538	129448	7.41	125550	10.12	114992	12.07
03	LCSD-158538	84229	7.41	73798	10.12	83601	12.07
04	HS20100694-01	80938	7.41	65375	10.12	63741	12.08
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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 internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Data File: \\nahstws005\Target\chem\SV6.i\201028.b\001.D

Date : 28-OCT-2020 09:40

Client ID: DFTPP

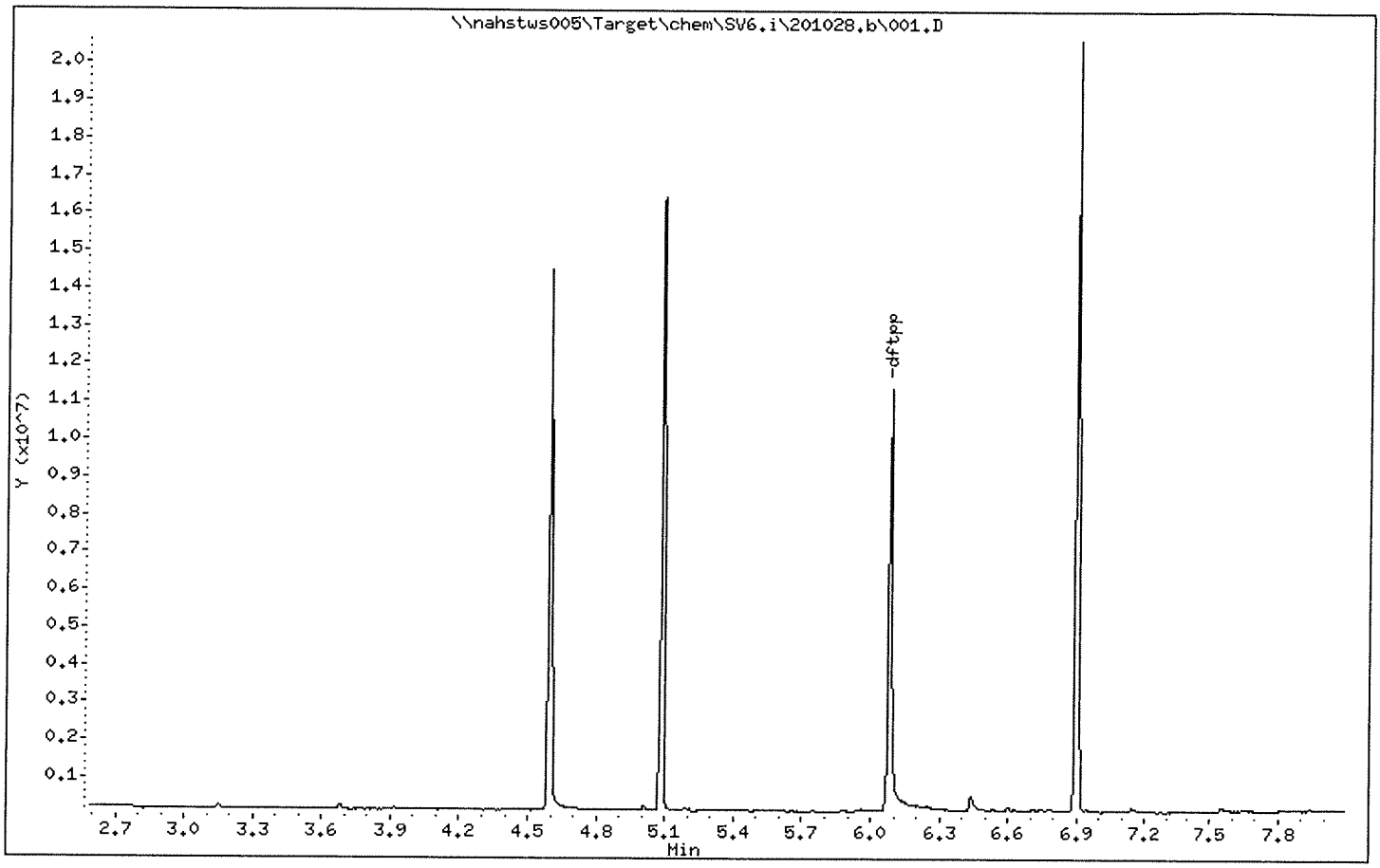
Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\SV6.i\201028.b\001.D

Date : 28-OCT-2020 09:40

Client ID: DFTPP

Instrument: SV6.i

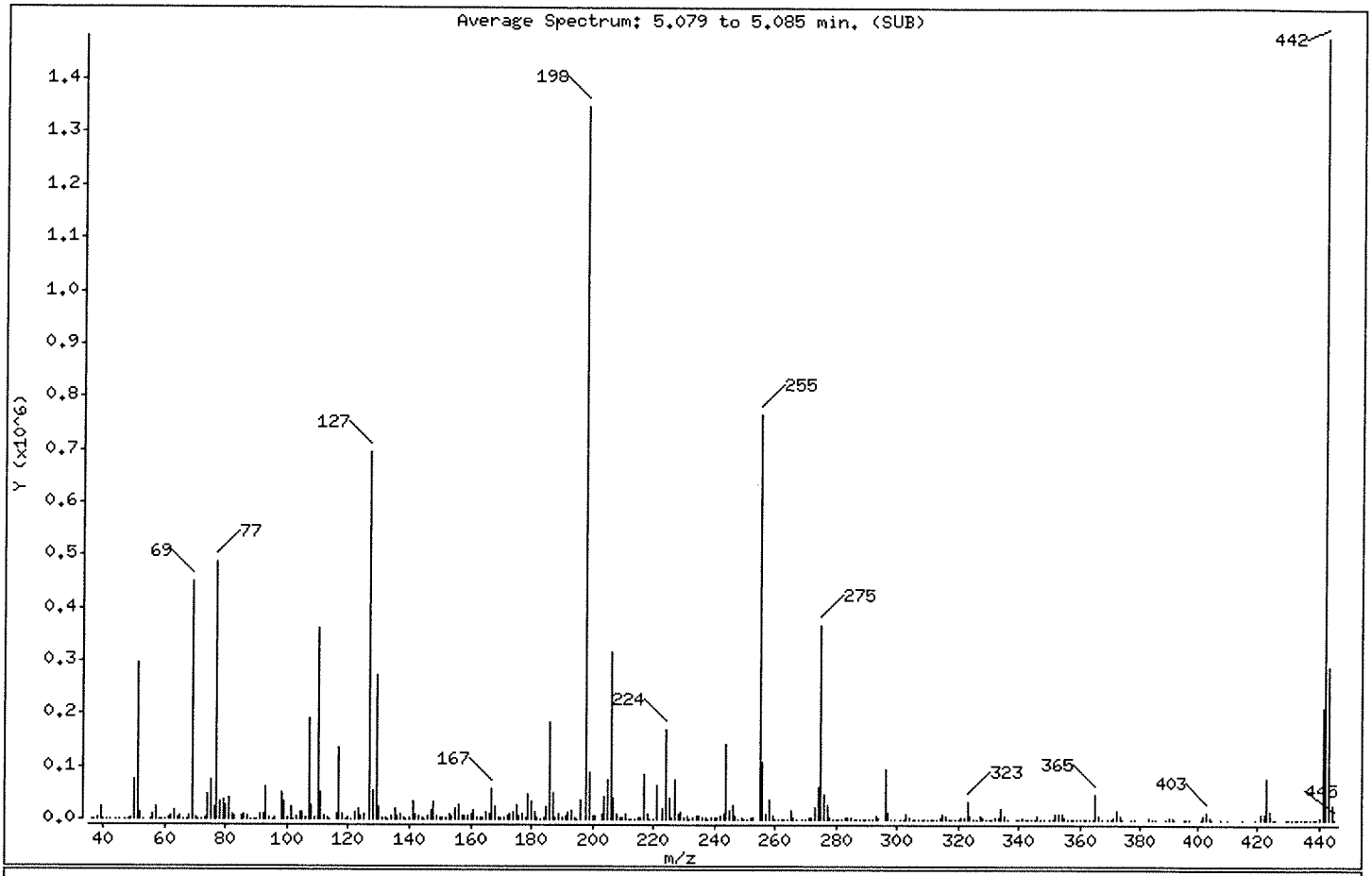
Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	22.09
68	Less than 2.00% of mass 69	0.41 (1.24)
69	Mass 69 relative abundance	33.33
70	Less than 2.00% of mass 69	0.15 (0.45)
127	10.00 - 80.00% of mass 198	51.66
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.59
275	10.00 - 60.00% of mass 198	27.24
365	1.00 - 100.00% of mass 198	3.43
441	Present, but less than mass 443	15.63
442	50.00 - 150.00% of mass 198	109.95
443	15.00 - 24.00% of mass 442	21.44 (19.50)

Data File: \\nahstws005\Target\chem\SV6.i\201028.b\001.D

Date : 28-OCT-2020 09:40

Client ID: DFTPP

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.079 to 5.085 min. (SUB)
Location of Maximum: 442.00
Number of points: 365

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	148	135.00	21864	230.00	1933	326.00	1346
37.00	616	136.00	7492	231.00	6039	327.00	6246
38.00	3241	137.00	9955	232.00	1076	328.00	2868
39.00	22672	138.00	2736	233.00	1858	329.00	619
40.00	1183	139.00	1241	234.00	5399	330.00	421
41.00	575	140.00	3408	235.00	5146	331.00	99
42.00	90	141.00	33992	236.00	3823	332.00	2993
44.00	207	142.00	11039	237.00	4736	333.00	3333
45.00	977	143.00	7127	238.00	854	334.00	21776
47.00	91	144.00	2121	239.00	2843	335.00	5348
48.00	545	145.00	1589	240.00	2112	336.00	758
49.00	4840	146.00	5544	241.00	3567	339.00	465
50.00	76664	147.00	16944	242.00	7440	340.00	550
51.00	297856	148.00	33080	243.00	10234	341.00	3743
52.00	14943	149.00	7171	244.00	141440	342.00	929
53.00	432	150.00	2033	245.00	18312	343.00	166
55.00	1439	151.00	4561	246.00	28184	344.00	106
56.00	10102	152.00	2402	247.00	5425	345.00	107
57.00	25096	153.00	10450	248.00	981	346.00	7087
58.00	1122	154.00	6282	249.00	4439	347.00	1426
59.00	580	155.00	19944	250.00	1405	348.00	232
60.00	100	156.00	27168	251.00	1439	350.00	348
61.00	4779	157.00	6073	252.00	2713	351.00	393
62.00	5877	158.00	5923	253.00	3224	352.00	10225
63.00	16624	159.00	5472	255.00	766144	353.00	8527
64.00	2158	160.00	10303	256.00	110416	354.00	10595
65.00	7252	161.00	16936	257.00	8994	355.00	2642
66.00	734	162.00	3736	258.00	38944	356.00	348
67.00	772	163.00	2080	259.00	6863	357.00	188
68.00	5592	164.00	1823	260.00	1059	358.00	81
69.00	449408	165.00	12335	261.00	1489	359.00	746
70.00	2027	166.00	8956	262.00	99	360.00	101
71.00	212	167.00	58072	263.00	485	361.00	340
72.00	51	168.00	23400	264.00	1243	362.00	194
73.00	3393	169.00	4559	265.00	16736	363.00	156

Data File: \\nahstws005\Target\chem\SV6.i\201028.b\001.D

Date : 28-OCT-2020 09:40

Client ID: DFTPP

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.079 to 5.085 min. (SUB)
Location of Maximum: 442.00
Number of points: 365

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	46768	170.00	2128	266.00	1871	364.00	670
75.00	75440	171.00	3262	267.00	26	365.00	46192
76.00	23984	172.00	5285	269.00	356	366.00	5978
77.00	487296	173.00	8612	270.00	513	367.00	644
78.00	33800	174.00	13589	271.00	1805	369.00	87
79.00	37032	175.00	25576	272.00	2369	370.00	1305
80.00	28680	176.00	6949	273.00	23728	371.00	2704
81.00	39720	177.00	10719	274.00	61720	372.00	18088
82.00	8898	178.00	4651	275.00	367360	373.00	5330
83.00	7343	179.00	46312	276.00	46064	374.00	598
85.00	7860	180.00	32520	277.00	28848	377.00	441
86.00	10760	181.00	15124	278.00	3951	378.00	92
87.00	5450	182.00	2419	279.00	838	383.00	5025
88.00	1211	183.00	1601	280.00	179	384.00	1568
89.00	1164	184.00	3761	281.00	99	385.00	248
90.00	249	185.00	23816	282.00	931	389.00	193
91.00	9225	186.00	183232	283.00	3275	390.00	2774
92.00	10940	187.00	50240	284.00	2233	391.00	2309
93.00	61392	188.00	4829	285.00	4459	392.00	1407
94.00	4247	189.00	11614	286.00	1301	395.00	201
95.00	821	190.00	1949	287.00	218	396.00	244
96.00	2920	191.00	5162	288.00	314	397.00	285
98.00	51376	192.00	14039	289.00	1375	401.00	1447
99.00	34992	193.00	15958	290.00	1065	402.00	7964
100.00	3421	194.00	3944	291.00	593	403.00	12581
101.00	22856	195.00	1577	292.00	1675	404.00	4136
102.00	1481	196.00	38176	293.00	6005	405.00	751
103.00	7828	198.00	1348096	294.00	1726	408.00	276
104.00	15309	199.00	88848	296.00	96392	410.00	422
105.00	14567	200.00	7691	297.00	12395	415.00	656
106.00	4457	201.00	5618	298.00	1089	419.00	485
107.00	190208	203.00	8528	299.00	290	421.00	10356
108.00	26888	204.00	43472	301.00	1588	422.00	11523
109.00	2481	205.00	76568	302.00	1556	423.00	79672
110.00	360064	206.00	318080	303.00	11738	424.00	17712

Data File: \\nahstws005\Target\chem\SV6.i\201028.b\001.D

Date : 28-OCT-2020 09:40

Client ID: DFTPP

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.079 to 5.085 min. (SUB)
Location of Maximum: 442.00
Number of points: 365

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	50960	207.00	40736	304.00	3304	425.00	1299
112.00	6574	208.00	11333	305.00	363	426.00	219
113.00	2981	209.00	2858	306.00	222	429.00	183
114.00	448	210.00	2700	307.00	408	430.00	106
116.00	10709	211.00	11526	308.00	1207	431.00	103
117.00	134976	212.00	1013	309.00	1182	432.00	245
118.00	8743	213.00	1082	310.00	1272	433.00	395
119.00	891	214.00	460	311.00	203	434.00	482
120.00	2113	215.00	3264	312.00	337	435.00	483
121.00	591	216.00	4121	313.00	652	436.00	1281
122.00	13128	217.00	83568	314.00	4094	437.00	1509
123.00	20312	218.00	11022	315.00	10940	438.00	1322
124.00	8114	219.00	1099	316.00	5369	439.00	760
125.00	8730	220.00	875	317.00	1387	440.00	3708
127.00	696576	221.00	64400	318.00	87	441.00	210816
128.00	53416	223.00	19808	319.00	162	442.00	1482240
129.00	272704	224.00	171264	320.00	297	443.00	289024
130.00	24264	225.00	40360	321.00	3991	444.00	26848
131.00	5046	226.00	4648	322.00	1924	445.00	1625
132.00	2136	227.00	73488	323.00	33312		
133.00	713	228.00	10514	324.00	6783		
134.00	6545	229.00	15264	325.00	683		

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\201028.b\003.D
Lab Smp Id: DXSIM-0.08 Client Smp ID: DXSIM-0.08
Inj Date : 28-OCT-2020 10:22 MS Autotune Date: 27-OCT-2020 09:03
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.08;DXSIM-0.08
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\201028.b\DXSIM.m
Meth Date : 07-Nov-2020 11:23 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 14:41 Cal File: 003.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

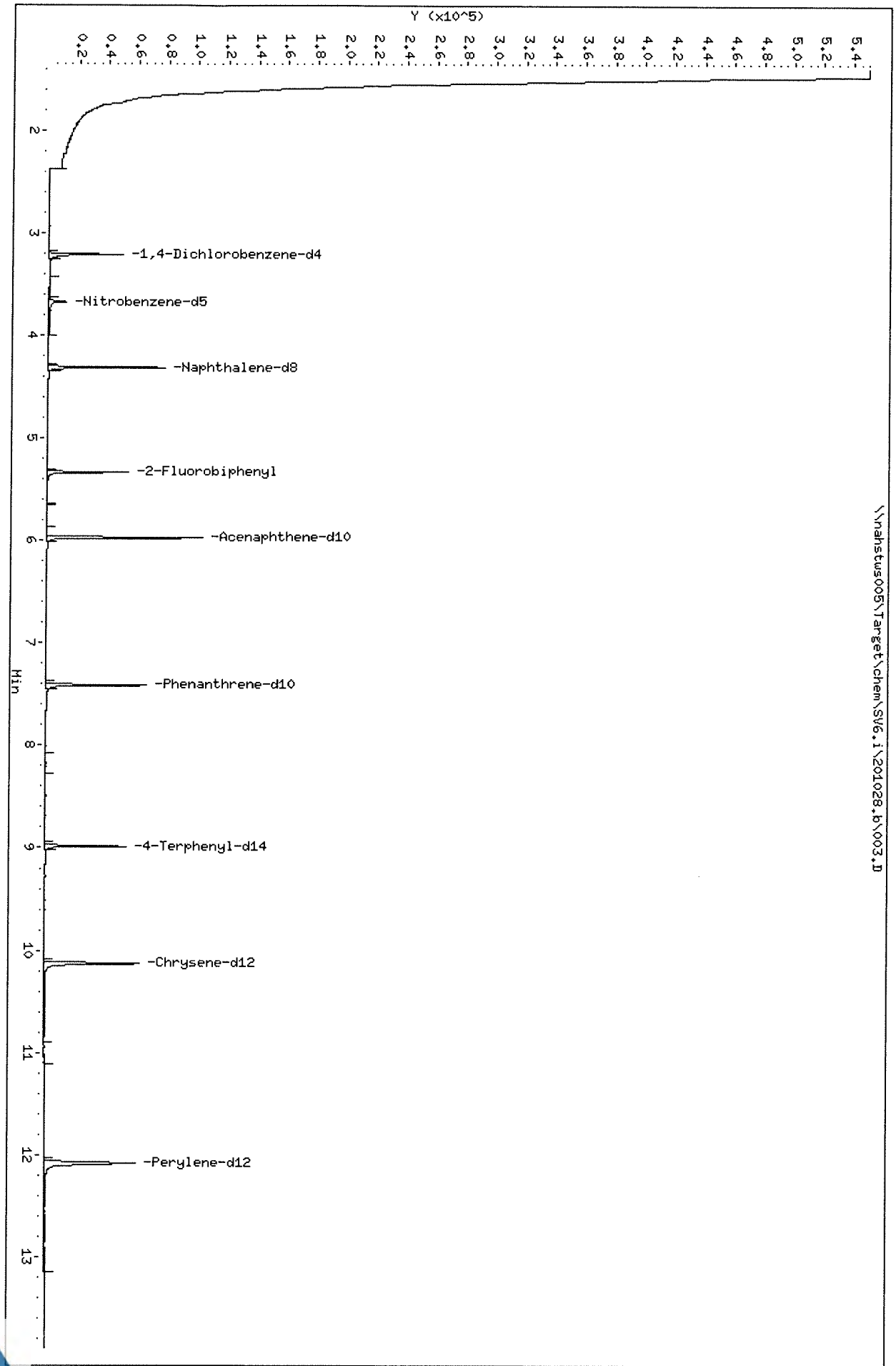
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.211	3.211	(1.000)	17250	0.10000		(aMH)
* 45 Naphthalene-d8	136	4.311	4.311	(1.000)	72155	0.10000		(M)
$ 33 Nitrobenzene-d5	82	3.673	3.673	(0.852)	19254	0.08000	0.07529	(M)
* 86 Acenaphthene-d10	164	5.972	5.972	(1.000)	39765	0.10000		
$ 69 2-Fluorobiphenyl	172	5.332	5.332	(0.893)	35896	0.08000	0.07739	
* 126 Phenanthrene-d10	188	7.411	7.411	(1.000)	67786	0.10000		(M)
* 182 Chrysene-d12	240	10.128	10.128	(1.000)	70100	0.10000		(M)
$ 158 4-Terphenyl-d14	244	8.987	8.987	(0.887)	51541	0.08000	0.08870	(M)
* 198 Perylene-d12	264	12.083	12.083	(1.000)	83760	0.10000		(M)
1 1,4-Dioxane	58	1.504	1.504	(0.468)	3280	0.08000	0.06866	(aQMH)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\SV6.i\201028.b\003.D
Date : 28-OCT-2020 10:22
Client ID: DXSIM-0.08
Sample Info: DXSIM-0.08;DXSIM-0.08
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\201028.b\006.D Page 1
Report Date: 07-Nov-2020 11:21

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\201028.b\006.D
Lab Smp Id: MBLK-158538 Client Smp ID: MBLK-158538
Inj Date : 28-OCT-2020 11:27 MS Autotune Date: 27-OCT-2020 09:03
Operator : LG Inst ID: SV6.i
Smp Info : MBLK-158538;MBLK-158538;3;;BLANK
Misc Info : HS20100694;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\201028.b\DXSIM.m
Meth Date : 07-Nov-2020 11:20 dev.giga Quant Type: ISTD
Cal Date : 01-SEP-2020 14:41 Cal File: 003.D
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

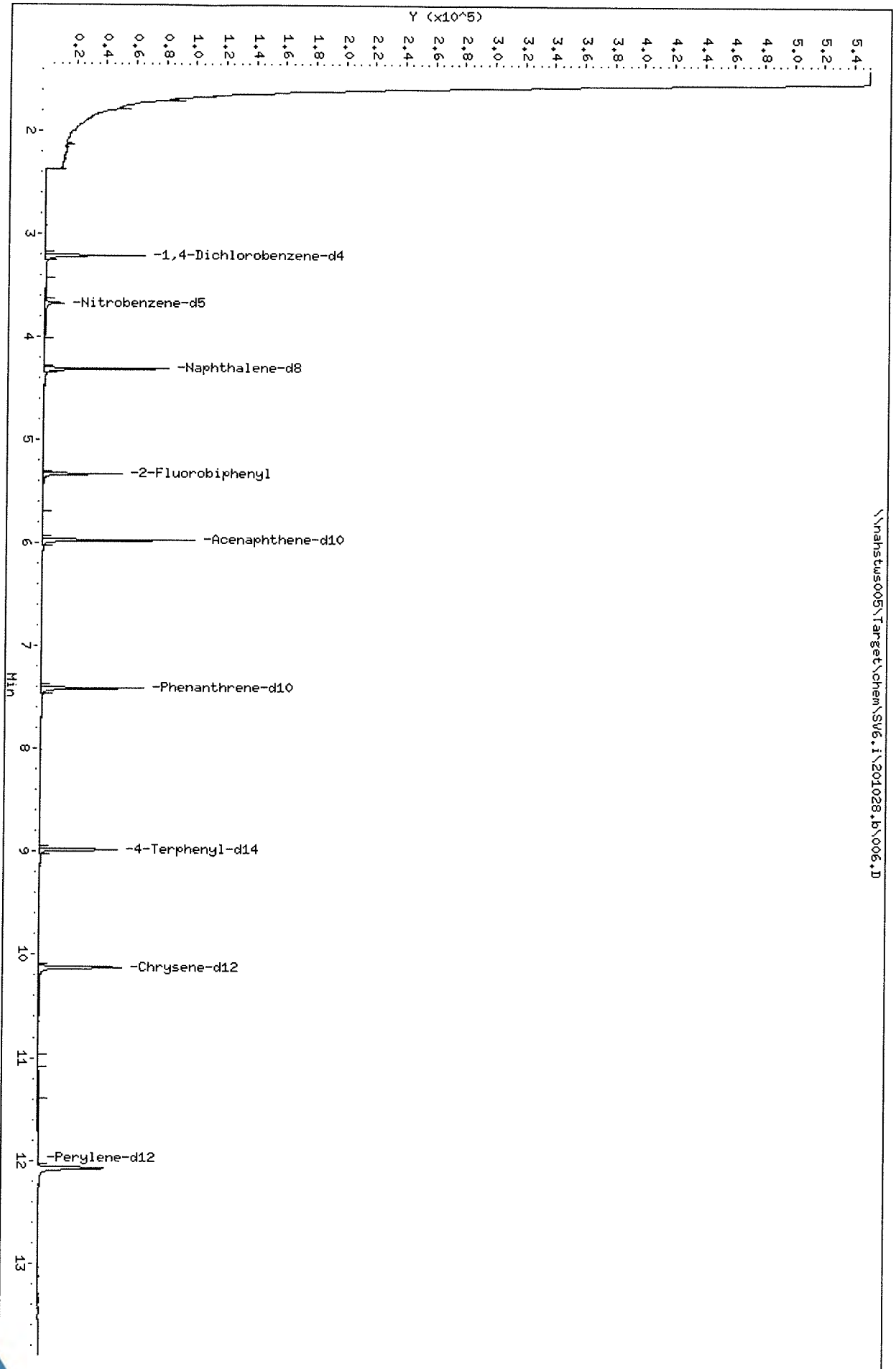
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.211	3.211	(1.000)	23330	0.10000		(a)
* 45 Naphthalene-d8	136	4.311	4.311	(1.000)	81625	0.10000		
$ 33 Nitrobenzene-d5	82	3.673	3.673	(0.852)	21547	0.07448	0.07448	(Q)
* 86 Acenaphthene-d10	164	5.974	5.972	(1.000)	41853	0.10000		
$ 69 2-Fluorobiphenyl	172	5.332	5.332	(0.893)	42473	0.08700	0.08700	
* 126 Phenanthrene-d10	188	7.413	7.411	(1.000)	76458	0.10000		
* 182 Chrysene-d12	240	10.124	10.128	(1.000)	60711	0.10000		(M)
$ 158 4-Terphenyl-d14	244	8.984	8.987	(0.887)	47057	0.09351	0.09351	(M)
* 198 Perylene-d12	264	12.074	12.083	(1.000)	57972	0.10000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\SV6.i\201028.b\006.D
Date : 28-OCT-2020 11:27
Client ID: MBLK-158538
Sample Info: MBLK-158538;MBLK-158538;3;;BLANK
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\201028.b\007.D Page 1
Report Date: 07-Nov-2020 11:21

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\201028.b\007.D
Lab Smp Id: LCS-158538 Client Smp ID: LCS-158538
Inj Date : 28-OCT-2020 11:45 MS Autotune Date: 27-OCT-2020 09:03
Operator : LG Inst ID: SV6.i
Smp Info : LCS-158538;LCS-158538;3;;LCS
Misc Info : HS20100694;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\201028.b\DXSIM.m
Meth Date : 07-Nov-2020 11:20 dev.giga Quant Type: ISTD
Cal Date : 01-SEP-2020 14:41 Cal File: 003.D
Als bottle: 7 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

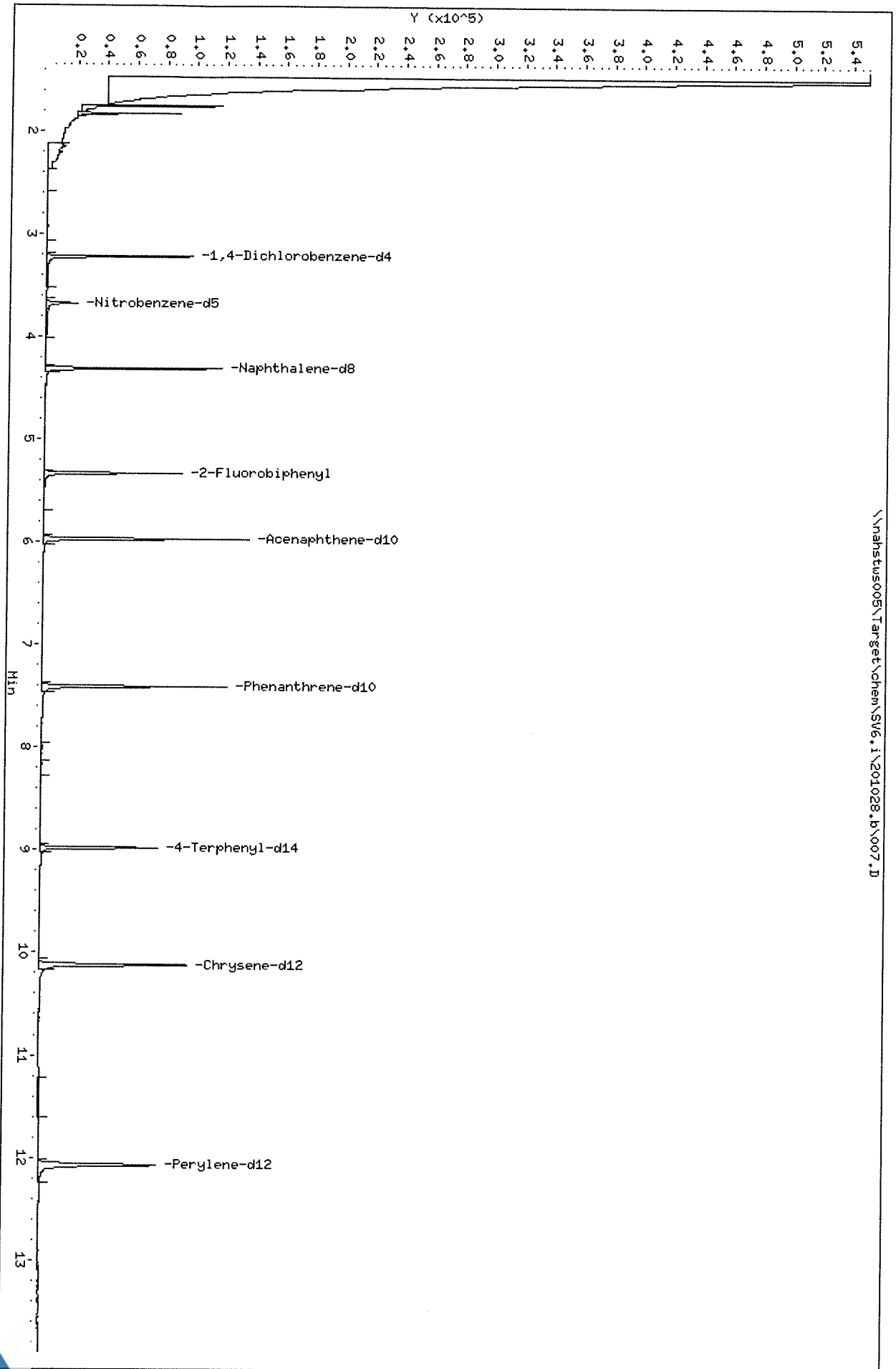
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.222	3.211	(1.000)	32151	0.10000		(aM)
* 45 Naphthalene-d8	136	4.311	4.311	(1.000)	124736	0.10000		
$ 33 Nitrobenzene-d5	82	3.678	3.673	(0.853)	26413	0.05975	0.05975	
* 86 Acenaphthene-d10	164	5.968	5.972	(1.000)	64510	0.10000		(QM)
$ 69 2-Fluorobiphenyl	172	5.332	5.332	(0.941)	78838	0.10477	0.1048	
* 126 Phenanthrene-d10	188	7.408	7.411	(1.000)	129448	0.10000		(M)
* 182 Chrysene-d12	240	10.124	10.128	(1.000)	125550	0.10000		(M)
$ 158 4-Terphenyl-d14	244	8.978	8.987	(0.887)	82094	0.07888	0.07888	(M)
* 198 Perylene-d12	264	12.074	12.083	(1.000)	114992	0.10000		
1 1,4-Dioxane	58	1.534	1.505	(0.476)	5914	0.06692	0.06692	(aMH)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\SV6.i\201028.b\007.D
Date : 28-OCT-2020 11:45
Client ID: LCS-158538
Sample Info: LCS-158538;LCS-158538;3;;LCS
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\201028.b\008.D Page 1
Report Date: 07-Nov-2020 11:21

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\201028.b\008.D
Lab Smp Id: LCSD-158538 Client Smp ID: LCSD-158538
Inj Date : 28-OCT-2020 12:03 MS Autotune Date: 27-OCT-2020 09:03
Operator : LG Inst ID: SV6.i
Smp Info : LCSD-158538;LCSD-158538;3;;LCSD
Misc Info : HS20100694;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\201028.b\DXSIM.m
Meth Date : 07-Nov-2020 11:20 dev.giga Quant Type: ISTD
Cal Date : 01-SEP-2020 14:41 Cal File: 003.D
Als bottle: 8 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

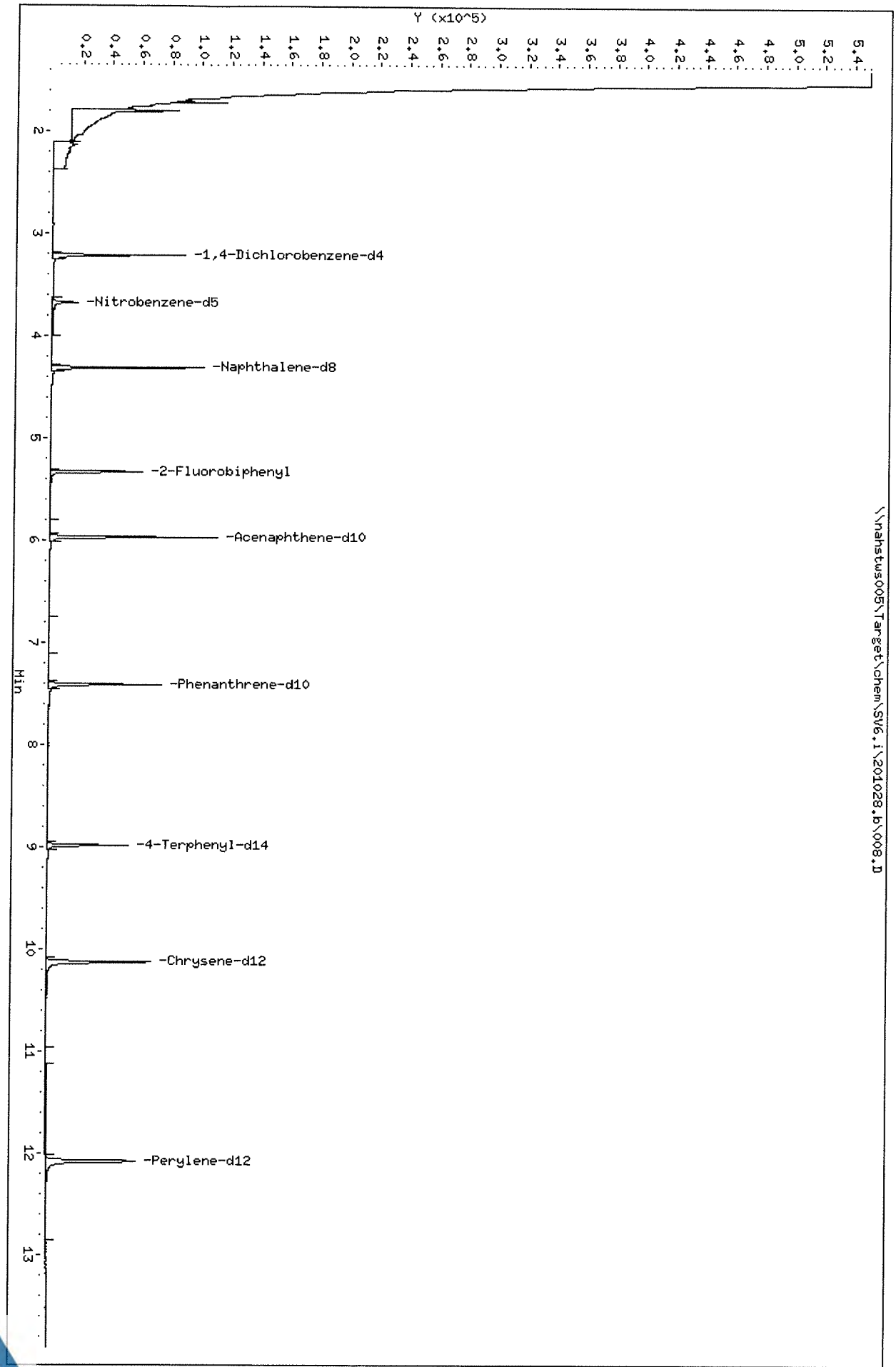
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)
* 20 1,4-Dichlorobenzene-d4	152	3.217	3.211	(1.000)	27995	0.10000	(aM)
* 45 Naphthalene-d8	136	4.310	4.311	(1.000)	102568	0.10000	
$ 33 Nitrobenzene-d5	82	3.673	3.673	(0.852)	27939	0.07686	0.07686
* 86 Acenaphthene-d10	164	5.972	5.972	(1.000)	47421	0.10000	
$ 69 2-Fluorobiphenyl	172	5.332	5.332	(0.893)	52928	0.09569	0.09569
* 126 Phenanthrene-d10	188	7.411	7.411	(1.000)	84229	0.10000	
* 182 Chrysene-d12	240	10.122	10.128	(1.000)	73798	0.10000	(M)
$ 158 4-Terphenyl-d14	244	8.982	8.987	(0.000)	51240	0.08376	0.08376 (M)
* 198 Perylene-d12	264	12.072	12.083	(1.000)	83601	0.10000	
1 1,4-Dioxane	58	1.497	1.505	(0.465)	5046	0.06588	0.06588 (aMH)

QC Flag Legend

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\SV6.i\201028.b\008.D
Date : 28-OCT-2020 12:03
Client ID: LCSD-158538
Sample Info: LCSD-158538;LCSD-158538;3;;LCSD
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\201028.b\009.D Page 1
Report Date: 07-Nov-2020 11:20

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\201028.b\009.D
Lab Smp Id: HS20100694-01 Client Smp ID: HS20100694-01
Inj Date : 28-OCT-2020 12:21 MS Autotune Date: 27-OCT-2020 09:03
Operator : LG Inst ID: SV6.i
Smp Info : HS20100694-01;HS2010694-01
Misc Info : HS20100694;1;0;100
Comment :
Method : \\nahstws005\Target\chem\SV6.i\201028.b\DXSIM.m
Meth Date : 07-Nov-2020 11:20 dev.giga Quant Type: ISTD
Cal Date : 01-SEP-2020 14:41 Cal File: 003.D
Als bottle: 9
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

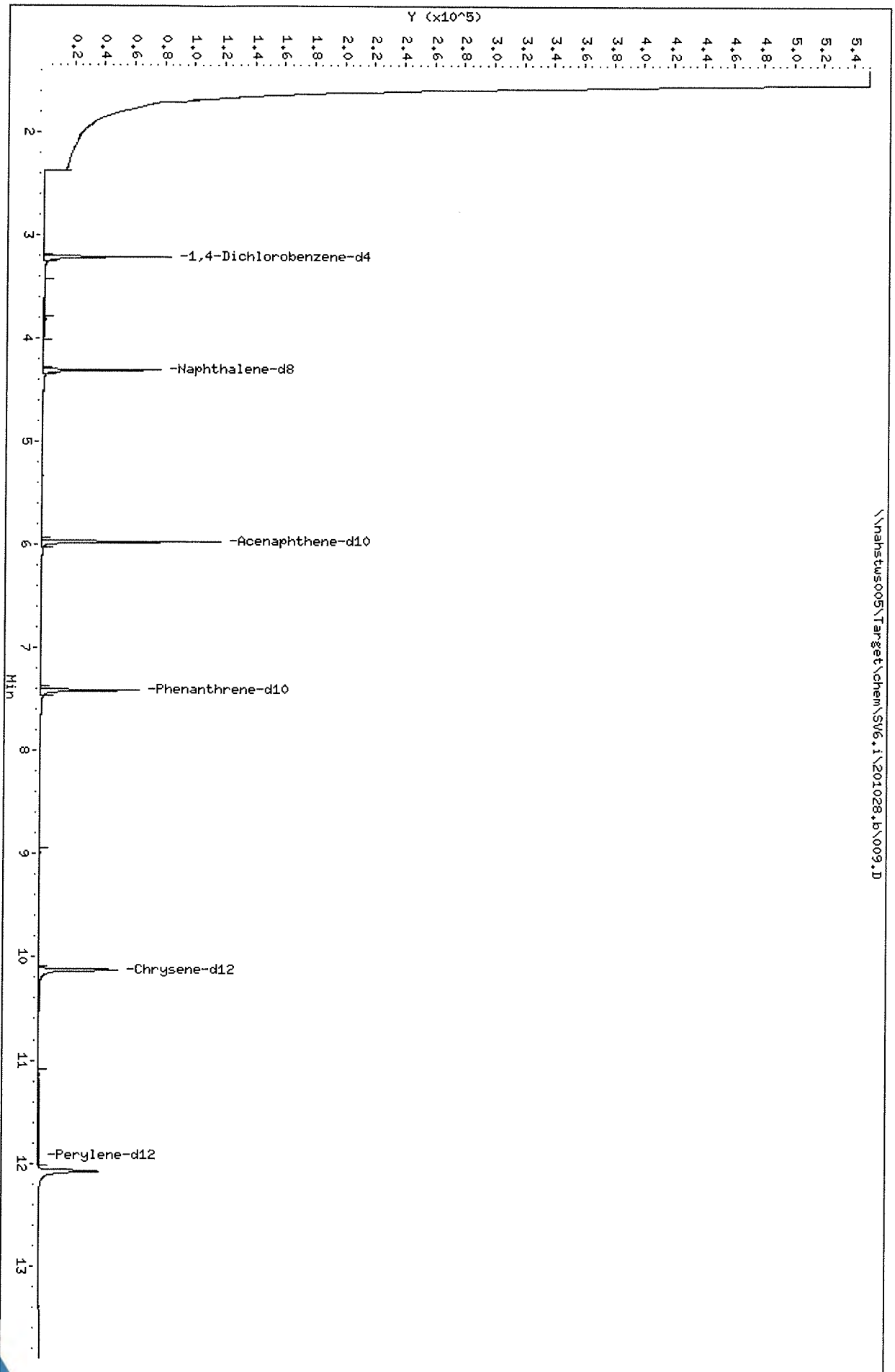
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.211	3.211	(1.000)	30346	0.10000		(a)
* 45 Naphthalene-d8	136	4.311	4.311	(1.000)	82651	0.10000		(H)
* 86 Acenaphthene-d10	164	5.974	5.972	(1.000)	51540	0.10000		(Q)
* 126 Phenanthrene-d10	188	7.413	7.411	(1.000)	80938	0.10000		
* 182 Chrysene-d12	240	10.124	10.128	(1.000)	65375	0.10000		(M)
* 198 Perylene-d12	264	12.079	12.083	(1.000)	63741	0.10000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\nahstws005\Target\chem\SV6.i\201028.b\009.D
Date : 28-OCT-2020 12:21
Client ID: HS20100694-01
Sample Info: HS20100694-01;HS20100694-01
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\nahstws005\Target\chem\SV6.i\201028.b\010.D Page 1
Report Date: 07-Nov-2020 11:25

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\nahstws005\Target\chem\SV6.i\201028.b\010.D
Lab Smp Id: DXSIM-0.08 Client Smp ID: DXSIM-0.08
Inj Date : 28-OCT-2020 12:45 MS Autotune Date: 27-OCT-2020 09:03
Operator : LG Inst ID: SV6.i
Smp Info : DXSIM-0.08;DXSIM-0.08
Misc Info : ;1;0;1
Comment :
Method : \\nahstws005\Target\chem\SV6.i\201028.b\DXSIMEND.m
Meth Date : 07-Nov-2020 11:25 SV6.i Quant Type: ISTD
Cal Date : 01-SEP-2020 16:57 Cal File: 010.D
Als bottle: 10 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

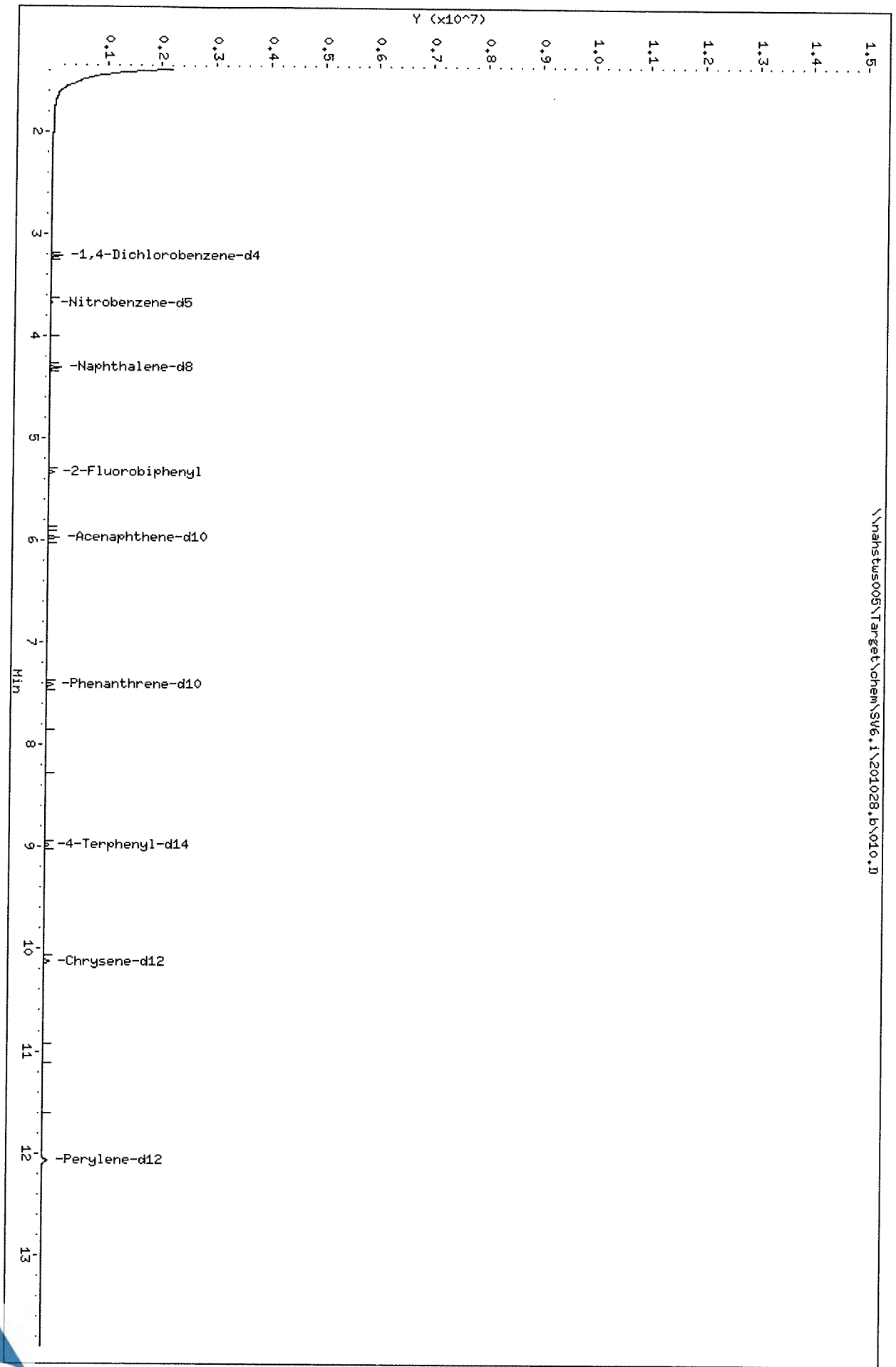
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.217	3.217	(1.000)	54012	0.10000		(aM)
* 45 Naphthalene-d8	136	4.311	4.311	(1.000)	210070	0.10000		(M)
$ 33 Nitrobenzene-d5	82	3.673	3.673	(0.852)	41641	0.08000	0.05593	(M)
* 86 Acenaphthene-d10	164	5.969	5.969	(1.000)	100613	0.10000		(Q)
$ 69 2-Fluorobiphenyl	172	5.332	5.332	(0.893)	103523	0.08000	0.08821	(Q)
* 126 Phenanthrene-d10	188	7.413	7.413	(1.000)	181964	0.10000		
* 182 Chrysene-d12	240	10.124	10.124	(1.000)	142972	0.10000		(M)
$ 158 4-Terphenyl-d14	244	8.983	8.983	(0.887)	93948	0.08000	0.07927	(M)
* 198 Perylene-d12	264	12.074	12.074	(1.000)	148029	0.10000		
1 1,4-Dioxane	58	1.574	1.574	(0.489)	7630	0.08000	0.05267	(aQM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\nahstws005\Target\chem\SV6.i\201028.b\010.D
Date : 28-OCT-2020 12:45
Client ID: DXSIM-0.08
Sample Info: DXSIM-0.08;DXSIM-0.08
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



HS20100694 - ME - ICP_W_DOD

ALS WO# HS20100694

ALS Houston, US

Date: 06-Nov-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694
Start Date: 22-Oct-2020 10:00 End Date: 22-Oct-2020 14:00

Batch ID: 158768
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20100694-01	LH18/24-SP650_101320	Water		10	10	1
HS20100780-04MS				10	10	1
HS20100780-04MSD				10	10	1
HS20100780-04PDS				10	10	1
HS20100780-04SD				10	10	1
LCS-158768				10	10	1
MBLK-158768				10	10	1

ALS Houston, US

Date: 06-Nov-20

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694
Start Date: 28-Oct-2020 End Date: 28-Oct-2020

Run ID:ICPMS06_371455
Instrument:ICPMS06
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS06_371455_Tune	1	28-Oct-2020 00:00	ICPMS06_371455_Tune_1	
CAL BLK	1	28-Oct-2020 10:13	010CALB.d_5804093	AG BA PB SE
2/10/200	1	28-Oct-2020 10:15	011CALS.d_5804094	AG BA PB SE
5/25/500	1	28-Oct-2020 10:17	012CALS.d_5804095	AG BA PB SE
10/50/100	1	28-Oct-2020 10:19	013CALS.d_5804096	AG BA PB SE
100/500/10K	1	28-Oct-2020 10:21	014CALS.d_5804097	AG BA PB SE
200/1000/20K	1	28-Oct-2020 10:22	015CALS.d_5804098	AG BA PB SE
ICV	1	28-Oct-2020 10:40	017_ICV.d_5804100	AG BA PB SE
LLICV2	1	28-Oct-2020 10:42	018LCV2.d_5804101	AG BA PB SE
LLICV5	1	28-Oct-2020 10:44	019LCV5.d_5804102	AG BA PB SE
ICB	1	28-Oct-2020 10:45	020_ICB.d_5804103	AG BA PB SE
ICSA	1	28-Oct-2020 10:47	021ICSA.d_5804104	AG BA PB SE
ICSAB	1	28-Oct-2020 10:49	022ICSB.d_5804105	AG BA PB SE
CCV 1	1	28-Oct-2020 11:34	040_CCV.d_5804527	AG BA PB SE
CCB 1	1	28-Oct-2020 11:36	041_CCB.d_5804528	AG BA PB SE
MBLK-158768	1	28-Oct-2020 11:41	042SMPL.d_5804529	AG BA PB SE
LCS-158768	1	28-Oct-2020 11:43	043SMPL.d_5804530	AG BA PB SE
ZZZZZZSD	5	28-Oct-2020 11:46	045SMPL.d_5804532	AG BA PB SE
ZZZZZZMS	1	28-Oct-2020 11:48	046SMPL.d_5804533	AG BA PB SE
ZZZZZZMSD	1	28-Oct-2020 11:50	047SMPL.d_5804534	AG BA PB SE
ZZZZZZPDS	1	28-Oct-2020 11:52	048SMPL.d_5804535	BA
LH18/24-SP650_101320	1	28-Oct-2020 11:57	049SMPL.d_5804536	AG BA PB SE
CCV 2	1	28-Oct-2020 12:03	052_CCV.d_5804539	AG BA PB SE
CCB 2	1	28-Oct-2020 12:05	053_CCB.d_5804540	AG BA PB SE
CCV 3	1	28-Oct-2020 12:26	064_CCV.d_5804550	AG BA PB SE
CCB 3	1	28-Oct-2020 12:28	065_CCB.d_5804551	AG BA PB SE
CCV 4	1	28-Oct-2020 12:48	076_CCV.d_5804562	AG BA PB SE
CCB 4	1	28-Oct-2020 12:50	077_CCB.d_5804563	AG BA PB SE
CCV 5	1	28-Oct-2020 13:18	088_CCV.d_5804737	AG BA PB SE
CCB 5	1	28-Oct-2020 13:20	089_CCB.d_5804738	AG BA PB SE
CCV 6	1	28-Oct-2020 13:36	097_CCV.d_5804746	AG BA PB SE
CCB 6	1	28-Oct-2020 13:38	098_CCB.d_5804747	AG BA PB SE

ALS Houston, US Date: 06-Nov-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

Run ID: ICPMS06_371455
Instrument: ICPMS06
Method: SW6020

ICV Date: 28-Oct-2020 10:40 Seq: 5804100 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	102.526	103	90-110	
Lead	100	103.478	103	90-110	
Selenium	100	101.034	101	90-110	
Silver	100	104.068	104	90-110	

CCV1 Date: 28-Oct-2020 11:34 Seq: 5804527 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	96.25	96	90-110	
Lead	100	97.947	98	90-110	
Selenium	100	98.395	98	90-110	
Silver	100	96.715	97	90-110	

CCV2 Date: 28-Oct-2020 12:03 Seq: 5804539 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	99.42	99	90-110	
Lead	100	99.914	100	90-110	
Selenium	100	99.298	99	90-110	
Silver	100	99.122	99	90-110	

CCV3 Date: 28-Oct-2020 12:26 Seq: 5804550 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	100.576	101	90-110	
Lead	100	102.67	103	90-110	
Selenium	100	98.404	98	90-110	
Silver	100	100.428	100	90-110	

CCV4 Date: 28-Oct-2020 12:48 Seq: 5804562 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	99.711	100	90-110	
Lead	100	101.938	102	90-110	
Selenium	100	97.948	98	90-110	
Silver	100	96.666	97	90-110	

CCV5 Date: 28-Oct-2020 13:18 Seq: 5804737 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	96.95	97	90-110	
Lead	100	98.379	98	90-110	
Selenium	100	92.749	93	90-110	
Silver	100	97.047	97	90-110	

CCV6 Date: 28-Oct-2020 13:36 Seq: 5804746 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	99.731	100	90-110	
Lead	100	99.475	100	90-110	
Selenium	100	92.714	93	90-110	
Silver	100	97.064	97	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

Run ID: ICPMS06_371455
Instrument: ICPMS06
Method: SW6020

ICB	Date: 28-Oct-2020 10:45		Seq: 5804103	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	5	1.9	5	U	
Lead	5	0.6	5	U	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	

CCB1	Date: 28-Oct-2020 11:36		Seq: 5804528	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

MBLK-158768	Date: 28-Oct-2020 11:41		Seq: 5804529	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	5	1.9	5	U	
Lead	5	0.6	5	U	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	

CCB2	Date: 28-Oct-2020 12:05		Seq: 5804540	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB3	Date: 28-Oct-2020 12:28		Seq: 5804551	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB4	Date: 28-Oct-2020 12:50		Seq: 5804563	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB5	Date: 28-Oct-2020 13:20		Seq: 5804738	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB6	Date: 28-Oct-2020 13:38		Seq: 5804747	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

ALS Houston, US

Date: 06-Nov-20

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

Run ID: ICPMS06_371455
Instrument: ICPMS06
Method: SW6020

ICSA	Date: 28-Oct-2020 10:47	Seq: 5804104	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium		0.048	0	
Lead		0.021	0	
Selenium		0.188	0	
Silver		0.011	0	

ICSAB	Date: 28-Oct-2020 10:49	Seq: 5804105	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium	100	97.31	97.3	
Lead	100	98.89	98.9	
Selenium	100	99.34	99.3	
Silver	100	93.78	93.8	

ALS Houston, US Date: 06-Nov-20

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

Date Analyzed: 28-Oct-2020 11:50
Date Extracted: 22-Oct-2020 14:00
Units: ug/L

Matrix Spike: HS20100780-04MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Barium	561.3	600.7	50.00	78.8	606.7	50.00	90.7	86-114	0.983	20
Lead	5.000	47.14	50.00	94.4	48.30	50.00	96.7	88-115	2.43	20
Selenium	5.000	47.46	50.00	95.2	47.94	50.00	96.1	80-120	1.00	20
Silver	5.000	46.05	50.00	92.1	47.10	50.00	94.2	85-116	2.24	20

ALS Houston, US Date: 06-Nov-20

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

Date Analyzed: 28-Oct-2020 11:52
Date Extracted: 22-Oct-2020 14:00
Units: ug/L

Lab Sample ID: HS20100780-04PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Barium	561.3	663.3	100	102	80-120

ALS Houston, US

Date: 06-Nov-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20100694

Date Analyzed: 28-Oct-2020 11:43
Date Extracted: 22-Oct-2020 14:00
Units: ug/L

Lab Sample ID: LCS-158768

Analysis Method: SW6020

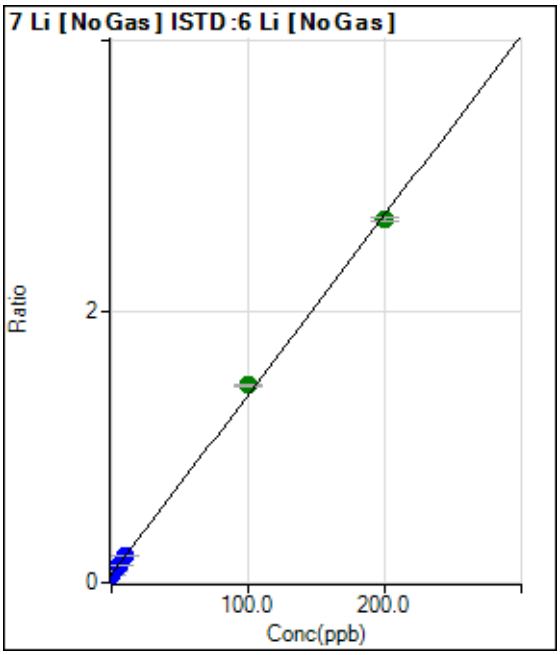
Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Barium	50	49.05	98	86-114
Lead	50	49.32	99	88-115
Selenium	50	50.26	101	80-120
Silver	50	50.33	101	85-116

Calibration for 234_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\102820A.b\
Analysis File: 102820A.batch.bin
DA Date-Time: 10/28/2020 11:11:21 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	227CALB.d	CAL BLK	10/28/2020 10:57:53 PM
2	228CALS.d	2/10/200	10/28/2020 10:59:47 PM
3	229CALS.d	5/25/500	10/28/2020 11:01:38 PM
4	230CALS.d	10/50/100	10/28/2020 11:03:29 PM
5	231CALS.d	100/500/10K	10/28/2020 11:05:21 PM
6	232CALS.d	200/1000/20K	10/28/2020 11:07:06 PM

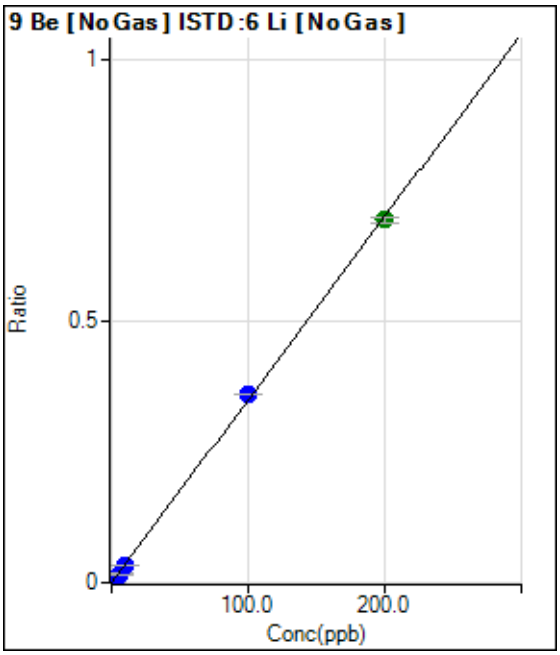
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	105340.47	0.0601	P	0.8
2	☐	2.000	1.945	151317.17	0.0859	P	4.1
3	☐	5.000	5.016	218233.37	0.1266	P	0.6
4	☐	10.000	10.221	334385.37	0.1955	P	0.9
5	☐	100.000	105.344	2399111.53	1.4551	A	1.4
6	☐	200.000	197.317	4183681.19	2.6730	A	1.1

y = 0.0132 * x + 0.0601
R = 0.9995
DL = 0.1031
BEC = 4.541

Weight: <None>
Min Conc: <None>

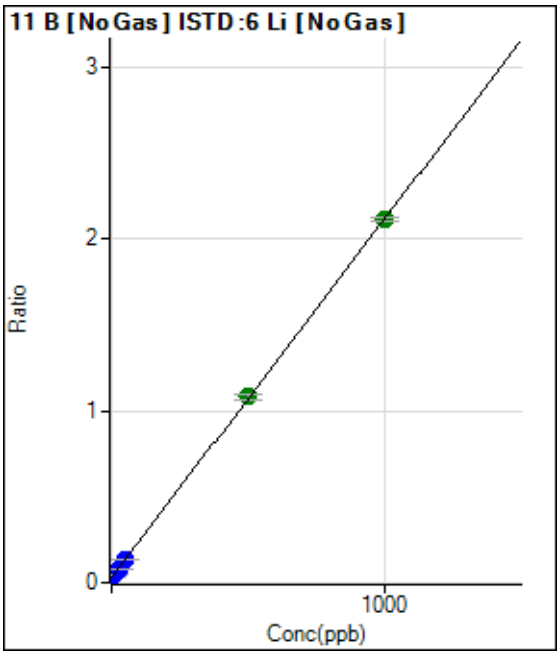


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	65.00	0.0000	P	16.3
2	☐	2.000	1.851	11461.37	0.0065	P	5.3
3	☐	5.000	4.712	28463.80	0.0165	P	0.5
4	☐	10.000	9.569	57274.35	0.0335	P	1.9
5	☐	100.000	103.377	595799.72	0.3614	P	0.1
6	☐	200.000	198.342	1084999.13	0.6933	A	1.7

y = 0.0035 * x + 3.7147E-005
R = 0.9998
DL = 0.005192
BEC = 0.01063

Weight: <None>
Min Conc: <None>

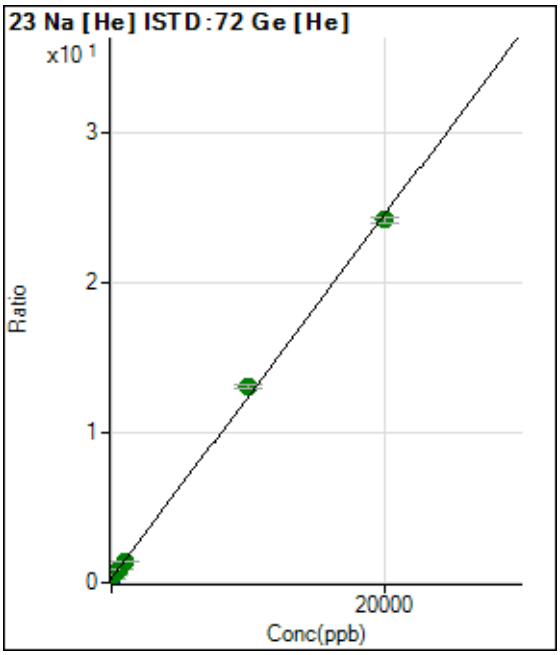
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	51134.30	0.0292	P	2.2
2	☐	10.000	9.087	84830.70	0.0481	P	3.5
3	☐	25.000	23.503	134853.27	0.0782	P	1.8
4	☐	50.000	48.388	222570.78	0.1301	P	1.0
5	☐	500.000	504.298	1782285.49	1.0810	A	2.5
6	☐	1000.000	997.978	3303496.10	2.1107	A	1.0

y = 0.0021 * x + 0.0292
R = 1.0000
DL = 0.9414
BEC = 14

Weight: <None>
Min Conc: <None>

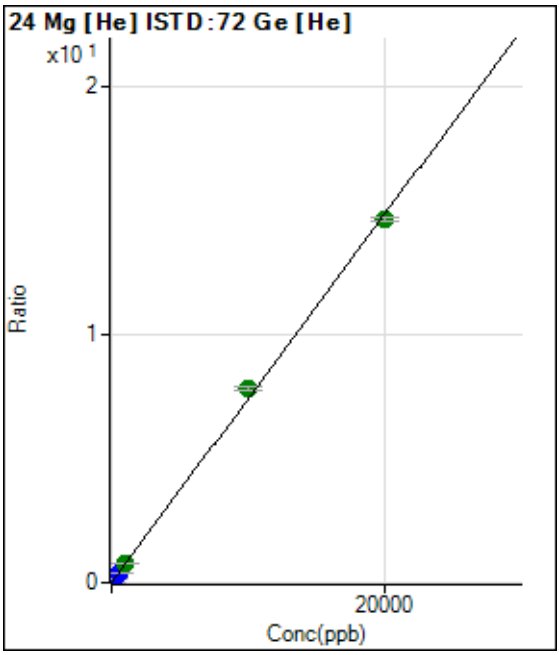


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	578154.51	0.2862	P	1.7
2	☐	200.000	190.100	1035302.43	0.5169	A	2.0
3	☐	500.000	468.586	1730601.22	0.8548	A	0.8
4	☐	1000.000	964.365	2931387.98	1.4564	A	0.6
5	☐	10000.00	10575.10	25517246.29	13.1181	A	2.3
6	☐	20000.00	19715.11	46503057.64	24.2087	A	1.3

y = 0.0012 * x + 0.2862
R = 0.9994
DL = 12.2
BEC = 235.9

Weight: <None>
Min Conc: <None>

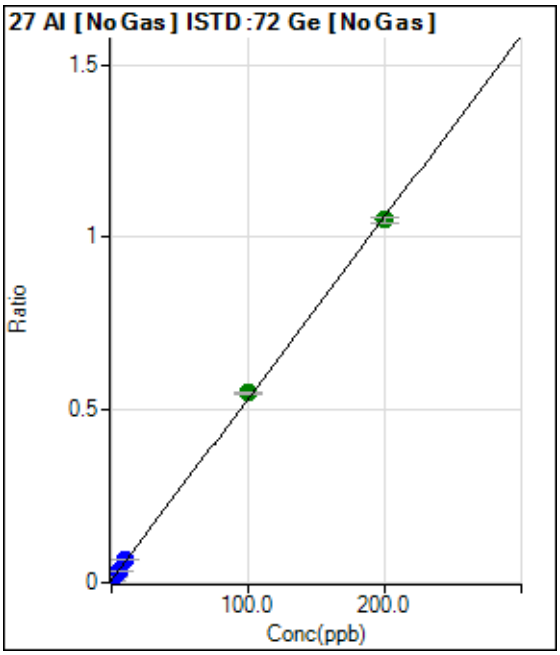
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2443.59	0.0012	P	2.7
2	☐	200.000	213.041	319080.09	0.1593	P	1.1
3	☐	500.000	507.722	765366.81	0.3780	P	0.9
4	☐	1000.000	1018.463	1523973.20	0.7571	A	0.8
5	☐	10000.00	10587.03	15287938.94	7.8589	A	1.8
6	☐	20000.00	19705.23	28096686.25	14.6264	A	1.0

y = 7.4220E-004 * x + 0.0012
R = 0.9994
DL = 0.1321
BEC = 1.63

Weight: <None>
Min Conc: <None>

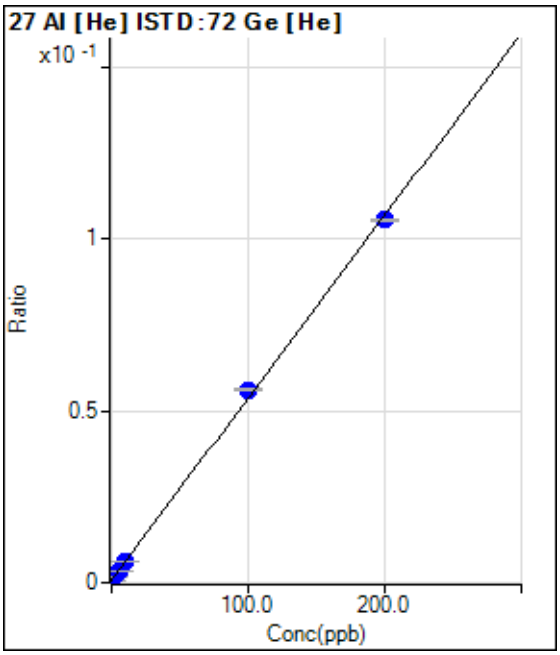


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37320.49	0.0073	P	2.8
2	☐	2.000	2.143	95137.33	0.0186	P	1.1
3	☐	5.000	5.337	183214.18	0.0354	P	1.0
4	☐	10.000	11.293	336495.79	0.0667	P	0.7
5	☐	100.000	103.010	2769027.67	0.5489	A	1.3
6	☐	200.000	198.420	5097772.53	1.0506	A	1.4

y = 0.0053 * x + 0.0073
R = 0.9998
DL = 0.1189
BEC = 1.395

Weight: <None>
Min Conc: <None>

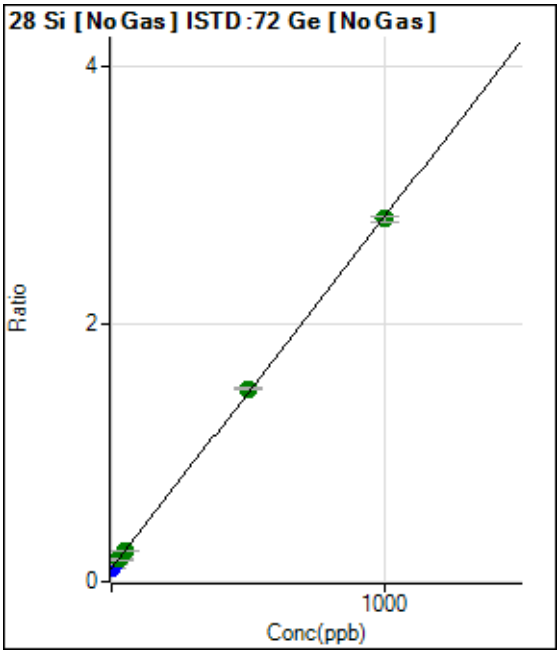
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1463.45	0.0007	P	10.3
2	☐	2.000	2.041	3613.88	0.0018	P	5.6
3	☐	5.000	5.146	6985.25	0.0035	P	4.1
4	☐	10.000	10.220	12355.70	0.0061	P	4.8
5	☐	100.000	104.621	109230.23	0.0561	P	0.7
6	☐	200.000	197.674	202544.31	0.1054	P	0.3

y = 5.2972E-004 * x + 7.2411E-004
R = 0.9996
DL = 0.4222
BEC = 1.367

Weight: <None>
Min Conc: <None>

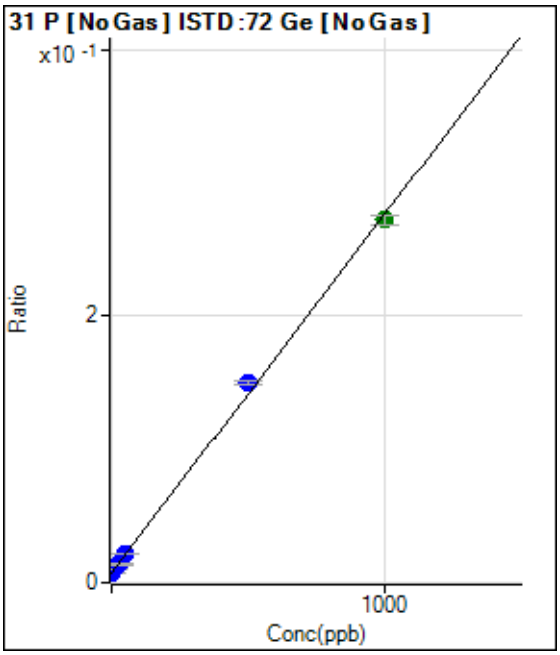


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	527550.30	0.1037	P	2.8
2	☐	10.000	9.748	666132.43	0.1303	P	1.7
3	☐	25.000	24.893	887923.01	0.1715	A	0.6
4	☐	50.000	50.660	1219317.82	0.2417	A	1.4
5	☐	500.000	511.591	7554155.72	1.4976	A	0.7
6	☐	1000.000	994.177	13644896.47	2.8124	A	1.3

y = 0.0027 * x + 0.1037
R = 0.9999
DL = 3.146
BEC = 38.07

Weight: <None>
Min Conc: <None>

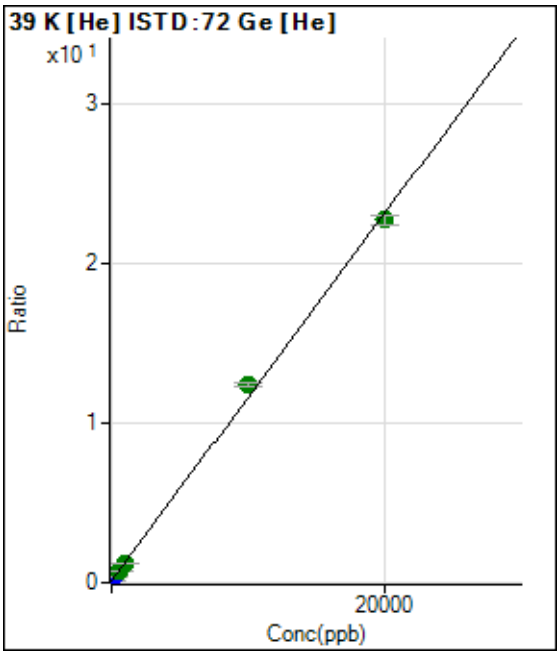
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37247.06	0.0073	P	1.3
2	☐	10.000	9.698	50773.16	0.0099	P	2.1
3	☐	25.000	23.802	71021.59	0.0137	P	1.0
4	☐	50.000	52.087	107555.27	0.0213	P	2.2
5	☐	500.000	529.488	754864.60	0.1497	P	1.6
6	☐	1000.000	985.184	1320337.14	0.2722	A	2.5

y = 2.6881E-004 * x + 0.0073
R = 0.9994
DL = 1.034
BEC = 27.24

Weight: <None>
Min Conc: <None>

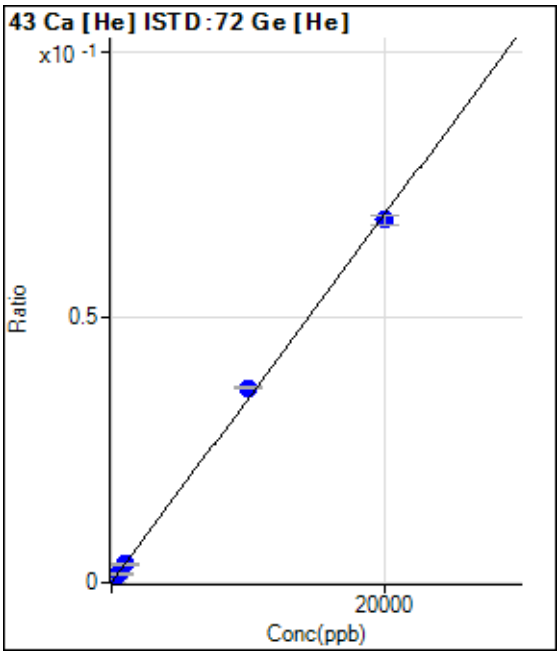


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	241556.14	0.1196	P	1.7
2	☐	200.000	207.504	716893.45	0.3580	P	1.5
3	☐	500.000	484.291	1368568.26	0.6760	A	1.1
4	☐	1000.000	987.883	2525275.85	1.2546	A	0.6
5	☐	10000.00	10686.05	24118492.98	12.3969	A	1.2
6	☐	20000.00	19657.89	43611442.68	22.7048	A	2.4

y = 0.0011 * x + 0.1196
R = 0.9992
DL = 5.295
BEC = 104.1

Weight: <None>
Min Conc: <None>

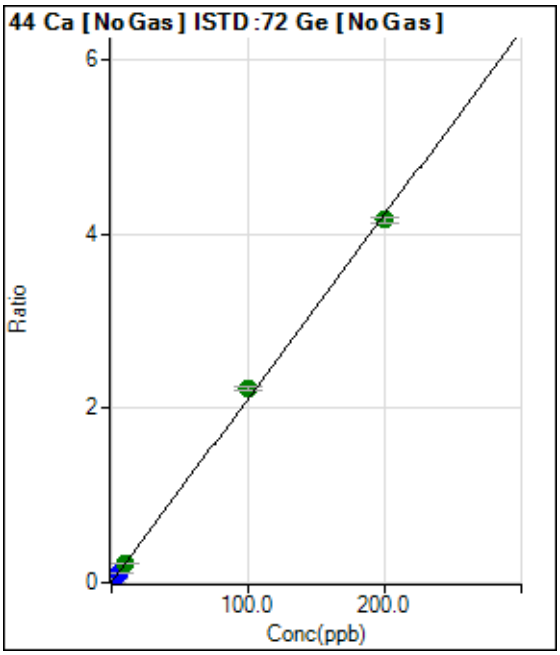
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	36.4
2	☐	200.000	201.065	1443.44	0.0007	P	14.4
3	☐	500.000	476.690	3393.82	0.0017	P	6.5
4	☐	1000.000	994.448	6985.24	0.0035	P	2.1
5	☐	10000.00	10567.29	71287.83	0.0366	P	0.8
6	☐	20000.00	19717.20	131268.78	0.0683	P	2.7

y = 3.4648E-006 * x + 2.4844E-005
R = 0.9994
DL = 7.836
BEC = 7.17

Weight: <None>
Min Conc: <None>

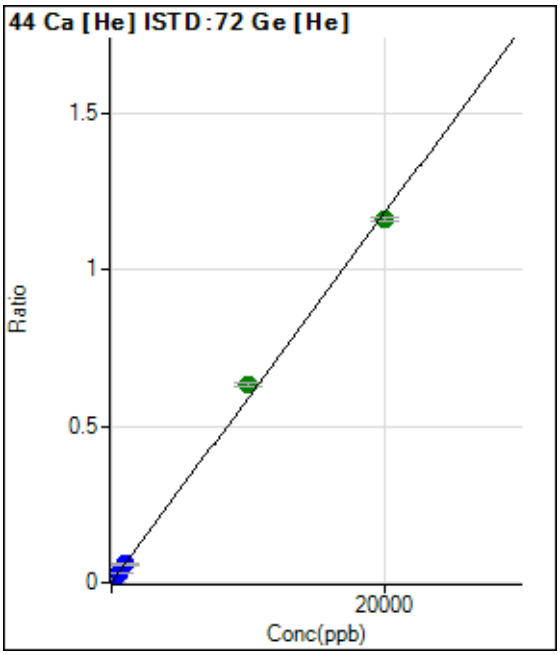


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20852.90	0.0041	P	3.9
2	☐	2.000	2.047	241881.91	0.0473	P	0.9
3	☐	5.000	4.862	552222.15	0.1067	P	0.7
4	☐	10.000	10.210	1107444.88	0.2196	A	1.5
5	☐	100.000	105.663	11268722.75	2.2339	A	2.0
6	☐	200.000	197.161	20205760.53	4.1648	A	1.8

y = 0.0211 * x + 0.0041
R = 0.9994
DL = 0.02255
BEC = 0.1943

Weight: <None>
Min Conc: <None>

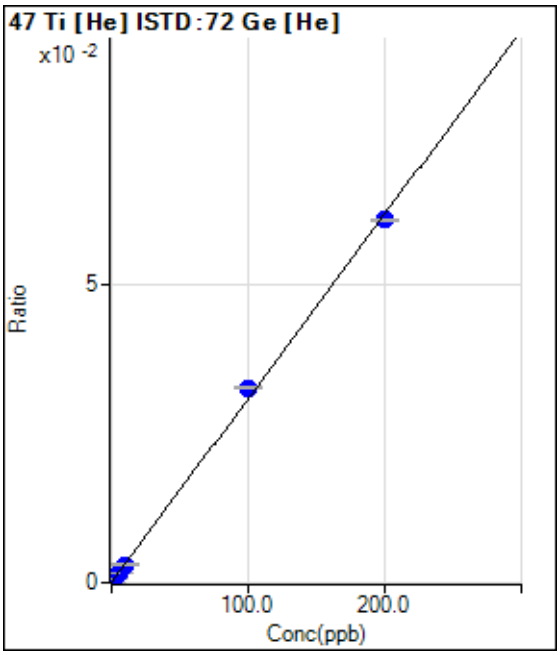
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1086.73	0.0005	P	12.2
2	☐	200.000	198.901	24602.27	0.0123	P	4.4
3	☐	500.000	480.041	58500.86	0.0289	P	1.3
4	☐	1000.000	983.768	118060.69	0.0587	P	1.4
5	☐	10000.00	10734.78	1234584.67	0.6347	A	2.0
6	☐	20000.00	19633.93	2228968.98	1.1604	A	0.9

y = 5.9072E-005 * x + 5.3850E-004
R = 0.9990
DL = 3.346
BEC = 9.116

Weight: <None>
Min Conc: <None>

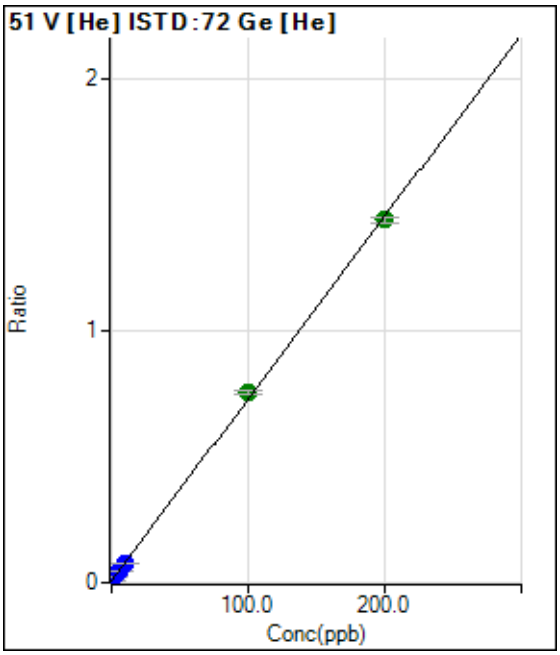


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0000	P	74.0
2	☐	2.000	1.918	1230.08	0.0006	P	16.9
3	☐	5.000	4.907	3117.08	0.0015	P	4.7
4	☐	10.000	9.804	6148.16	0.0031	P	2.3
5	☐	100.000	105.843	63737.93	0.0328	P	1.5
6	☐	200.000	197.091	117166.71	0.0610	P	0.5

y = 3.0935E-004 * x + 2.1466E-005
R = 0.9994
DL = 0.154
BEC = 0.06939

Weight: <None>
Min Conc: <None>

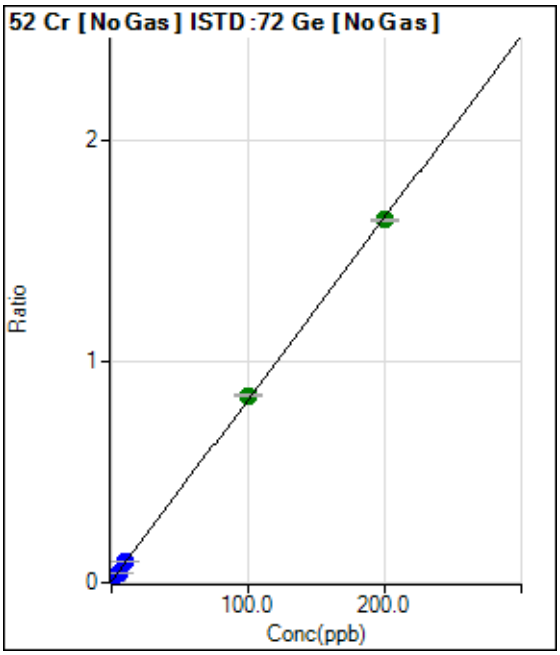
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13828.16	0.0068	P	3.9
2	☐	2.000	2.083	43922.30	0.0219	P	1.6
3	☐	5.000	4.976	86803.90	0.0429	P	0.9
4	☐	10.000	10.093	160866.74	0.0799	P	0.5
5	☐	100.000	103.570	1472145.84	0.7567	A	1.7
6	☐	200.000	198.210	2769979.96	1.4419	A	1.8

y = 0.0072 * x + 0.0068
R = 0.9998
DL = 0.1119
BEC = 0.9457

Weight: <None>
Min Conc: <None>

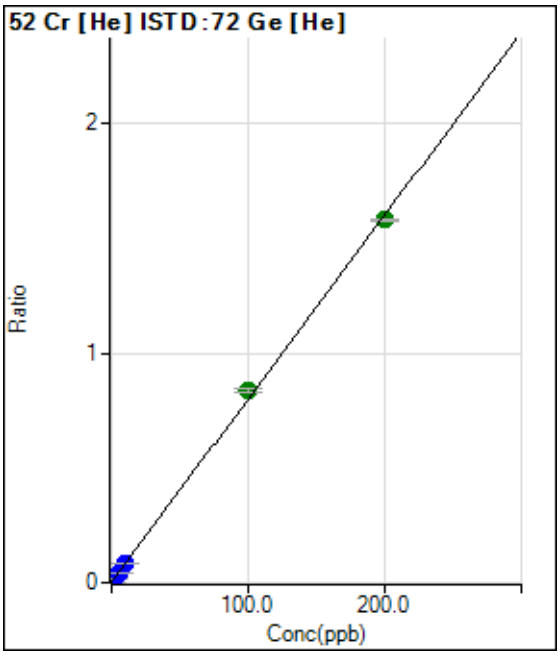


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33701.79	0.0066	P	0.2
2	☐	2.000	2.085	121324.25	0.0237	P	0.7
3	☐	5.000	4.949	244379.44	0.0472	P	1.5
4	☐	10.000	10.448	465677.99	0.0923	P	1.5
5	☐	100.000	102.347	4268081.60	0.8461	A	0.8
6	☐	200.000	198.805	7944190.09	1.6373	A	0.7

y = 0.0082 * x + 0.0066
R = 0.9999
DL = 0.004251
BEC = 0.8079

Weight: <None>
Min Conc: <None>

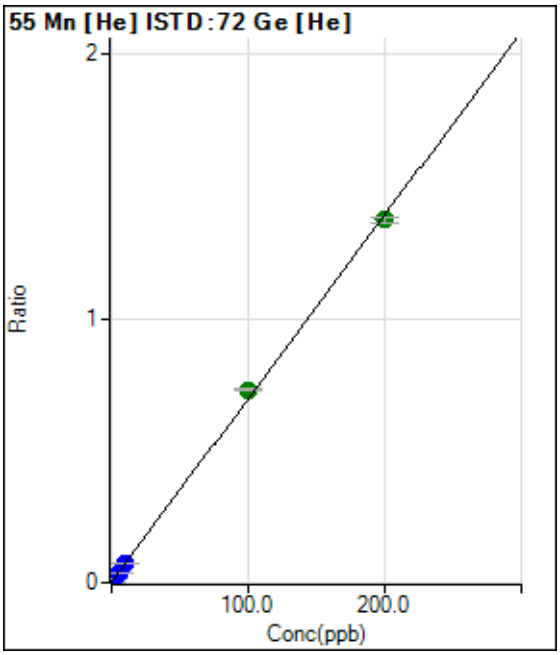
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4167.39	0.0021	P	3.6
2	☐	2.000	2.059	37077.19	0.0185	P	3.0
3	☐	5.000	5.001	85087.10	0.0420	P	2.1
4	☐	10.000	10.161	167616.25	0.0833	P	1.3
5	☐	100.000	104.724	1632124.40	0.8390	A	2.2
6	☐	200.000	197.629	3038067.45	1.5815	A	0.6

y = 0.0080 * x + 0.0021
R = 0.9996
DL = 0.02804
BEC = 0.2581

Weight: <None>
Min Conc: <None>

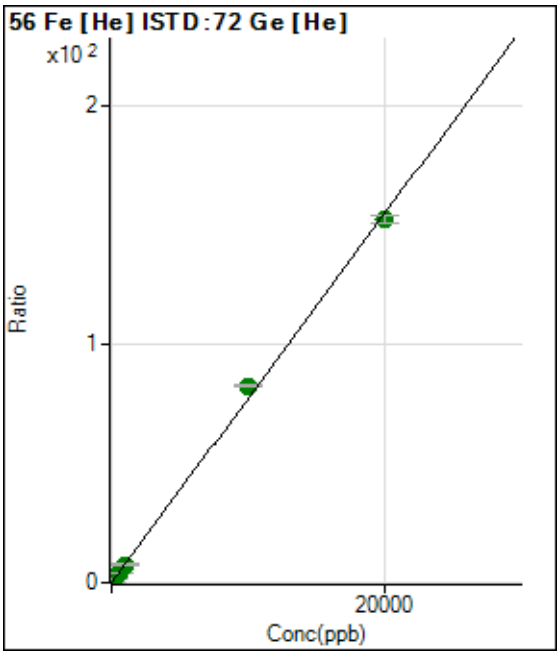


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5004.35	0.0025	P	4.5
2	☐	2.000	2.031	33187.23	0.0166	P	3.0
3	☐	5.000	4.927	74258.19	0.0367	P	0.2
4	☐	10.000	10.079	145812.66	0.0724	P	0.1
5	☐	100.000	104.953	1422404.56	0.7310	A	0.9
6	☐	200.000	197.521	2638668.55	1.3736	A	1.5

y = 0.0069 * x + 0.0025
R = 0.9996
DL = 0.04794
BEC = 0.3569

Weight: <None>
Min Conc: <None>

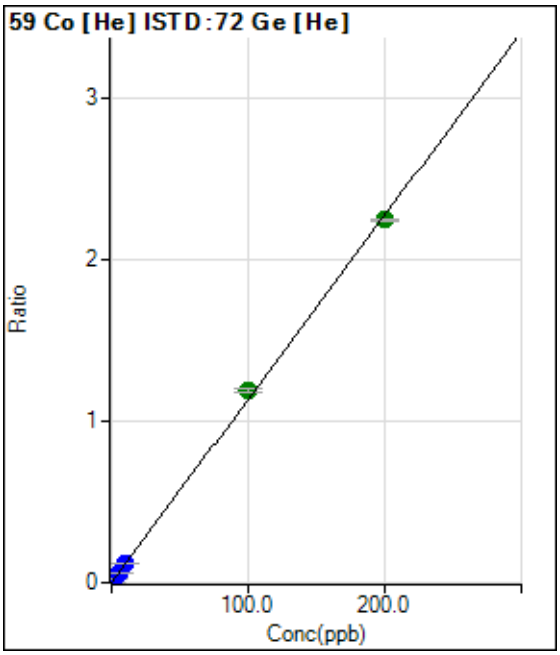
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35847.80	0.0177	P	9.7
2	☐	200.000	203.552	3193958.81	1.5948	A	1.6
3	☐	500.000	489.303	7711056.55	3.8087	A	0.4
4	☐	1000.000	981.477	15341290.19	7.6220	A	2.0
5	☐	10000.00	10659.99	160705140.9	82.6086	A	1.4
6	☐	20000.00	19671.16	292795535.6	152.424	A	2.2

y = 0.0077 * x + 0.0177
R = 0.9992
DL = 0.6655
BEC = 2.29

Weight: <None>
Min Conc: <None>

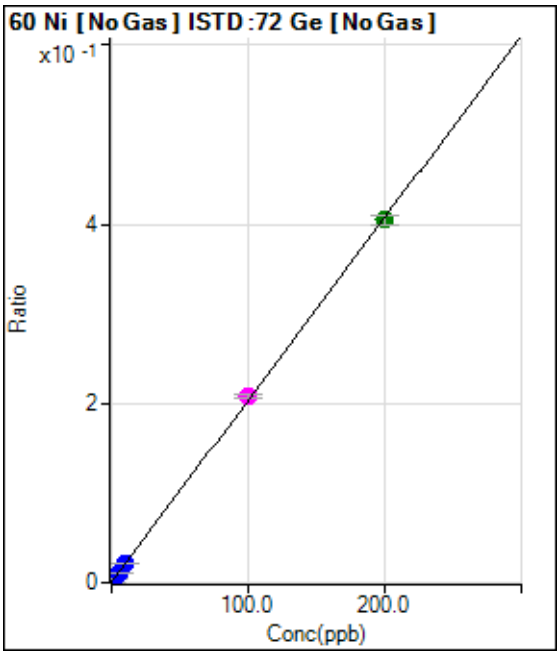


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	450.02	0.0002	P	13.3
2	☐	2.000	2.102	48272.51	0.0241	P	2.4
3	☐	5.000	5.072	117144.21	0.0579	P	0.5
4	☐	10.000	10.317	236401.40	0.1175	P	1.9
5	☐	100.000	104.602	2312531.06	1.1888	A	2.3
6	☐	200.000	197.680	4315420.87	2.2465	A	0.7

y = 0.0114 * x + 2.2306E-004
R = 0.9996
DL = 0.007841
BEC = 0.01963

Weight: <None>
Min Conc: <None>

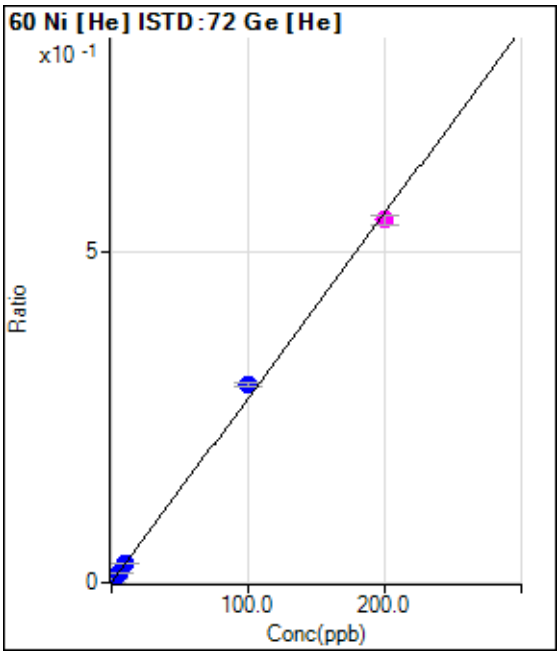
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2376.92	0.0005	P	6.0
2	☐	2.000	2.121	24445.61	0.0048	P	2.7
3	☐	5.000	5.054	55613.73	0.0107	P	1.7
4	☐	10.000	10.419	109225.76	0.0217	P	0.8
5	☐	100.000	102.083	1049551.42	0.2081	M	2.9
6	☐	200.000	198.935	1964848.62	0.4050	A	2.6

y = 0.0020 * x + 4.6724E-004
R = 0.9999
DL = 0.04112
BEC = 0.2298

Weight: <None>
Min Conc: <None>

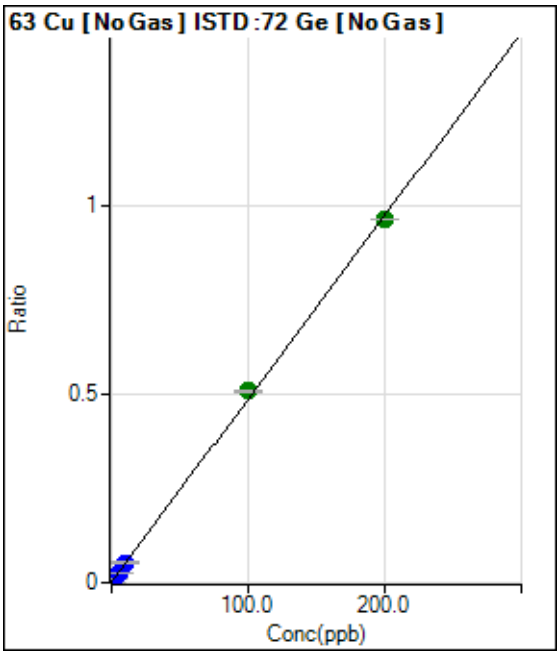


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	473.35	0.0002	P	12.6
2	☐	2.000	2.098	12182.34	0.0061	P	2.6
3	☐	5.000	5.179	29706.12	0.0147	P	2.0
4	☐	10.000	10.433	59014.86	0.0293	P	1.4
5	☐	100.000	106.875	580088.43	0.2982	P	1.9
6	☐	200.000	196.536	1053094.20	0.5482	M	2.4

y = 0.0028 * x + 2.3403E-004
R = 0.9992
DL = 0.03181
BEC = 0.08394

Weight: <None>
Min Conc: <None>

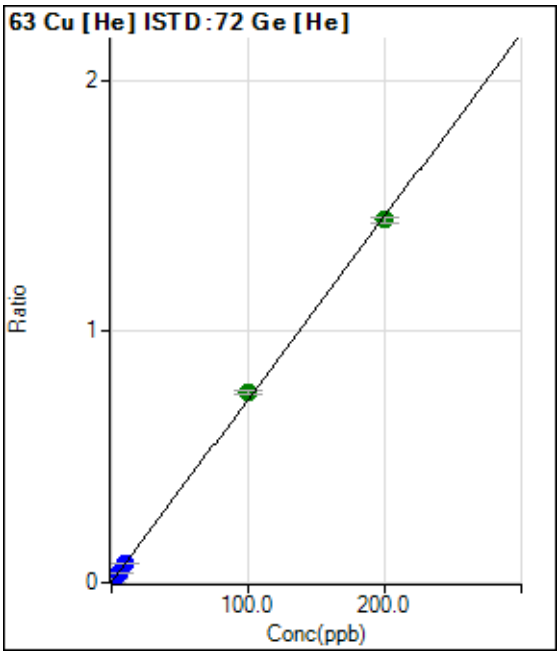
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9623.54	0.0019	P	4.0
2	☐	2.000	2.123	62449.88	0.0122	P	1.3
3	☐	5.000	5.090	137871.17	0.0266	P	2.5
4	☐	10.000	10.623	270029.83	0.0535	P	2.3
5	☐	100.000	104.291	2566969.28	0.5089	A	1.6
6	☐	200.000	197.820	4675770.76	0.9636	A	0.0

y = 0.0049 * x + 0.0019
R = 0.9997
DL = 0.04673
BEC = 0.3893

Weight: <None>
Min Conc: <None>

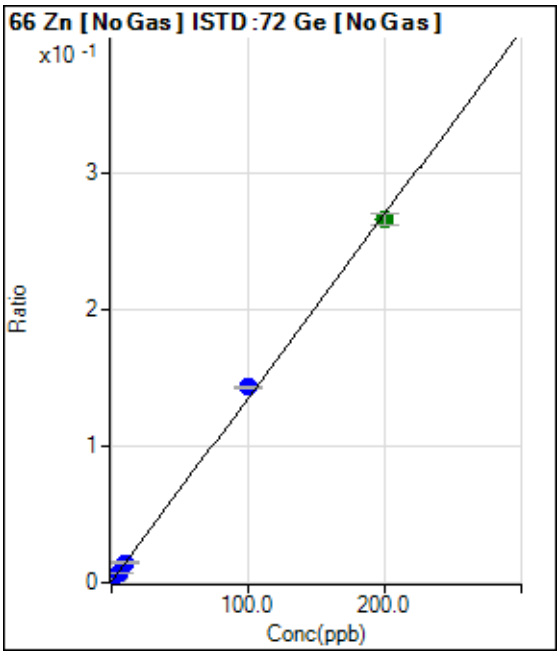


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3677.24	0.0018	P	4.4
2	☐	2.000	2.089	34129.90	0.0170	P	3.5
3	☐	5.000	5.005	77517.06	0.0383	P	2.0
4	☐	10.000	10.239	153837.03	0.0764	P	0.3
5	☐	100.000	103.813	1474940.19	0.7583	A	2.9
6	☐	200.000	198.080	2776100.06	1.4452	A	1.3

y = 0.0073 * x + 0.0018
R = 0.9997
DL = 0.03322
BEC = 0.2497

Weight: <None>
Min Conc: <None>

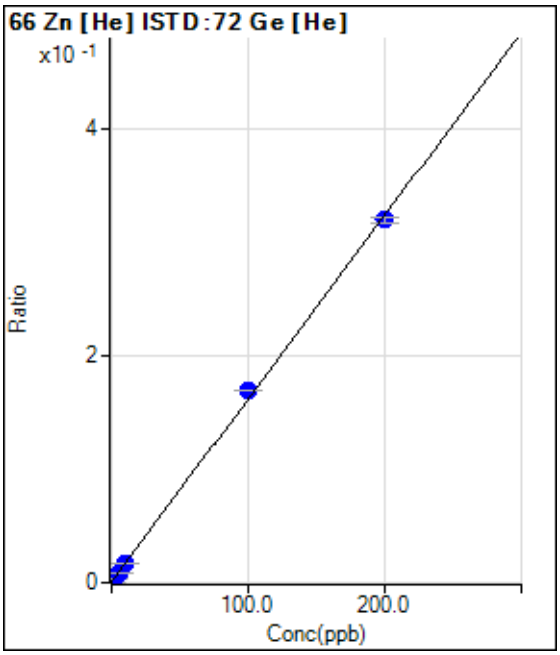
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3813.95	0.0008	P	5.2
2	☐	2.000	2.062	17995.48	0.0035	P	1.7
3	☐	5.000	5.093	39277.05	0.0076	P	2.5
4	☐	10.000	10.385	74118.37	0.0147	P	2.5
5	☐	100.000	106.024	721955.64	0.1431	P	1.0
6	☐	200.000	196.966	1286697.51	0.2652	A	3.1

y = 0.0013 * x + 7.5006E-004
R = 0.9994
DL = 0.0875
BEC = 0.5586

Weight: <None>
Min Conc: <None>

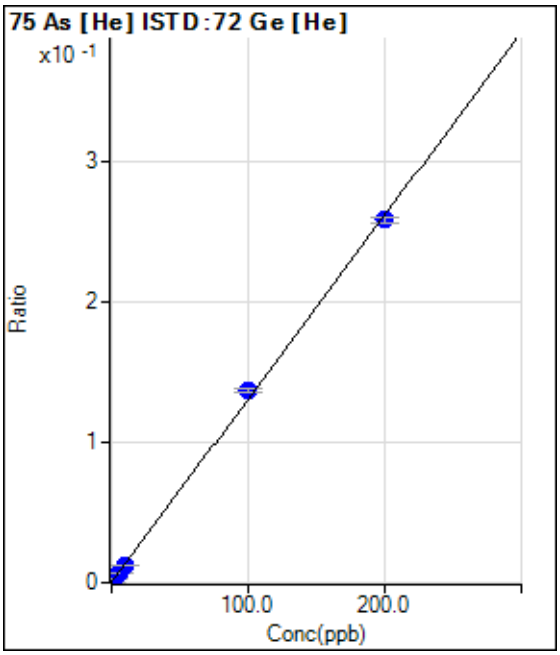


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1376.76	0.0007	P	6.6
2	☐	2.000	1.939	7645.60	0.0038	P	4.5
3	☐	5.000	4.990	17708.51	0.0087	P	0.4
4	☐	10.000	9.802	33264.52	0.0165	P	2.7
5	☐	100.000	104.588	330198.38	0.1697	P	1.0
6	☐	200.000	197.717	615136.21	0.3202	P	1.5

y = 0.0016 * x + 6.8195E-004
R = 0.9996
DL = 0.08363
BEC = 0.4219

Weight: <None>
Min Conc: <None>

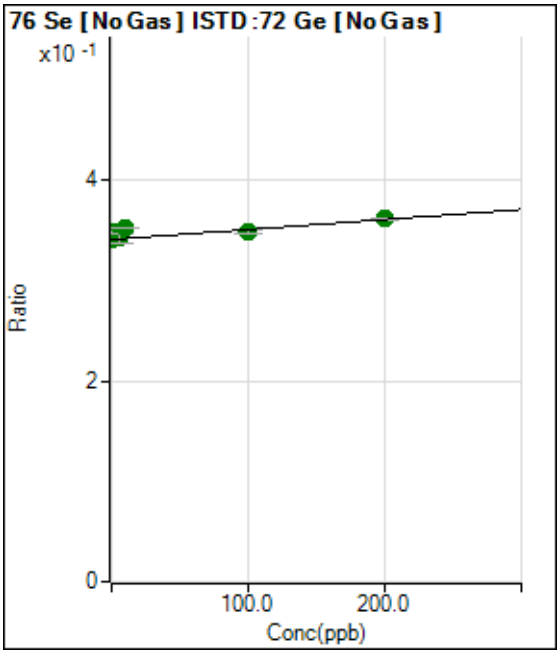
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	474.46	0.0002	P	9.5
2	☐	2.000	1.999	5713.46	0.0029	P	0.7
3	☐	5.000	4.833	13285.46	0.0066	P	0.4
4	☐	10.000	9.734	26126.41	0.0130	P	0.5
5	☐	100.000	104.738	267214.85	0.1374	P	1.7
6	☐	200.000	197.648	497527.25	0.2590	P	1.4

y = 0.0013 * x + 2.3508E-004
R = 0.9996
DL = 0.051
BEC = 0.1796

Weight: <None>
Min Conc: <None>

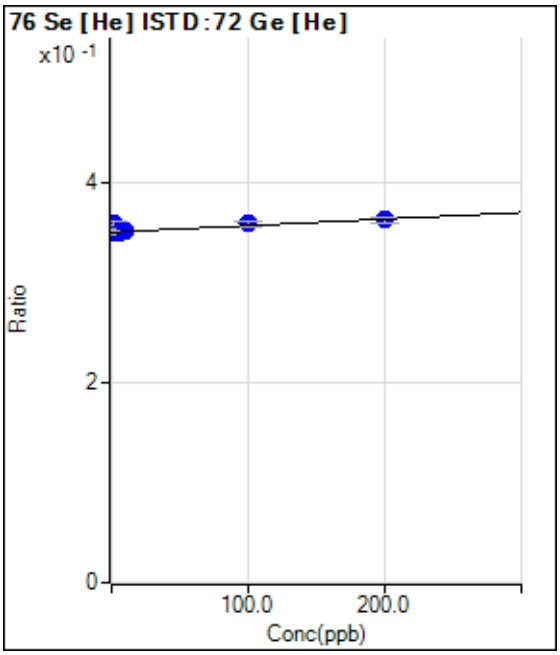


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1734734.45	0.3411	A	1.8
2	☐	2.000	70.274	1780057.37	0.3481	A	0.8
3	☐	5.000	12.656	1771834.61	0.3424	A	2.8
4	☐	10.000	113.599	1777832.06	0.3525	A	0.4
5	☐	100.000	77.230	1759610.24	0.3488	A	0.7
6	☐	200.000	205.331	1754840.18	0.3616	A	0.2

y = 1.0009E-004 * x + 0.3411
R = 0.8136
DL = 181.6
BEC = 3408

Weight: <None>
Min Conc: <None>

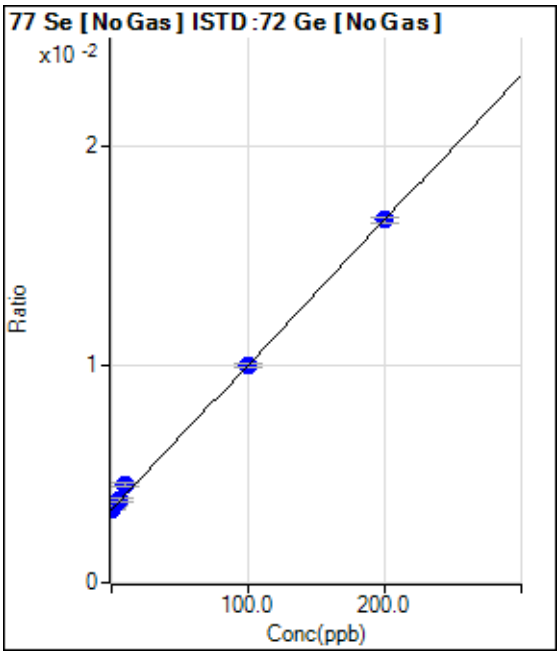
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	708533.66	0.3508	P	2.3
2	☐	2.000	132.130	719911.06	0.3595	P	1.4
3	☐	5.000	1.521	710374.73	0.3509	P	1.6
4	☐	10.000	27.500	709698.66	0.3526	P	0.3
5	☐	100.000	123.823	698261.76	0.3589	P	1.5
6	☐	200.000	185.999	697353.74	0.3630	P	1.6

y = 6.5892E-005 * x + 0.3508
R = 0.7826
DL = 368.3
BEC = 5324

Weight: <None>
Min Conc: <None>

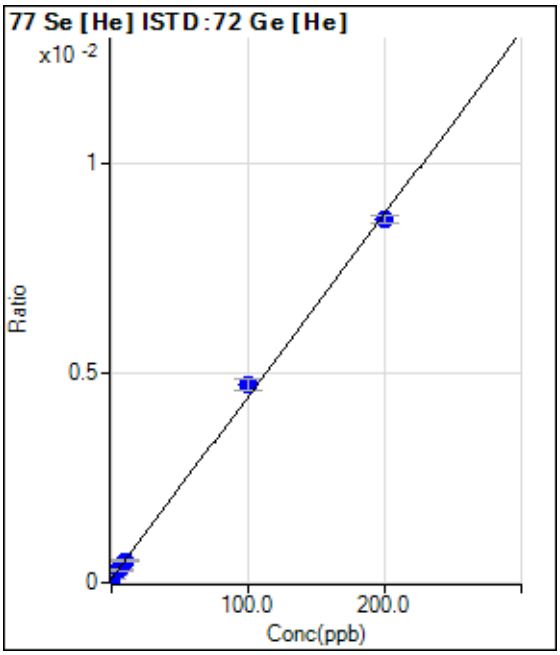


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17064.44	0.0034	P	2.6
2	☐	2.000	2.600	18039.13	0.0035	P	1.2
3	☐	5.000	6.606	19637.96	0.0038	P	3.0
4	☐	10.000	16.690	22522.43	0.0045	P	3.8
5	☐	100.000	99.504	50320.69	0.0100	P	1.1
6	☐	200.000	199.867	80795.18	0.0167	P	1.6

y = 6.6535E-005 * x + 0.0034
R = 0.9995
DL = 3.962
BEC = 50.42

Weight: <None>
Min Conc: <None>

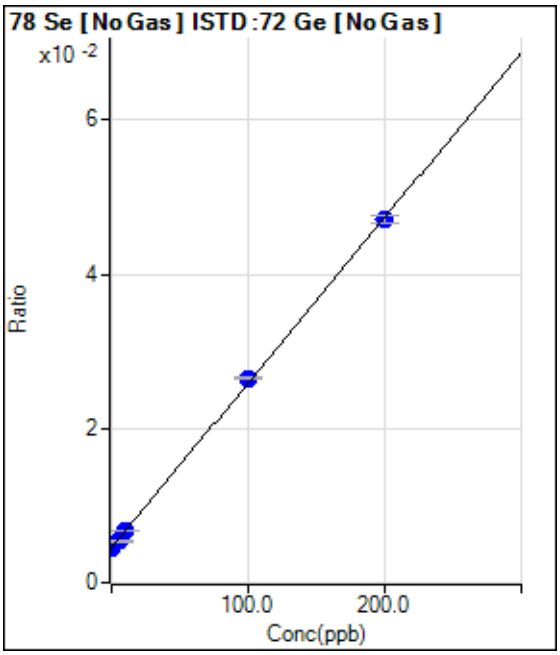
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	183.34	0.0001	P	24.7
2	☐	2.000	2.856	430.02	0.0002	P	13.7
3	☐	5.000	4.965	620.02	0.0003	P	11.9
4	☐	10.000	10.036	1060.07	0.0005	P	5.4
5	☐	100.000	106.465	9173.27	0.0047	P	5.4
6	☐	200.000	196.758	16600.46	0.0086	P	2.1

y = 4.3461E-005 * x + 9.0542E-005
R = 0.9993
DL = 1.545
BEC = 2.083

Weight: <None>
Min Conc: <None>

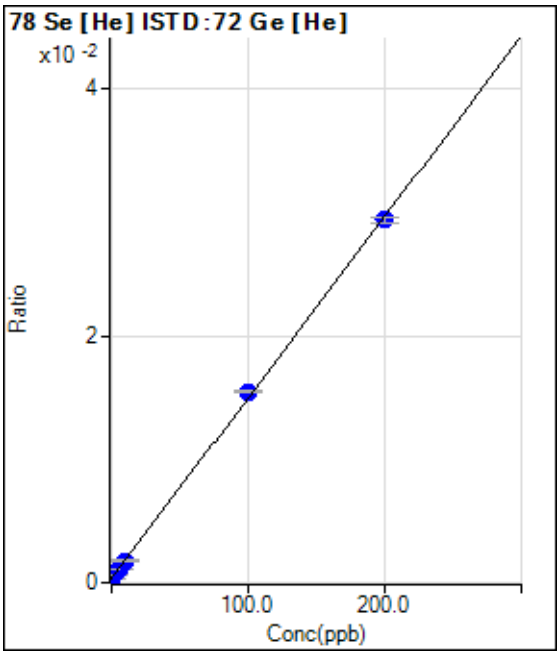


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22916.47	0.0045	P	0.4
2	☐	2.000	2.314	25567.91	0.0050	P	3.2
3	☐	5.000	4.389	28176.43	0.0054	P	4.9
4	☐	10.000	10.299	33842.73	0.0067	P	1.1
5	☐	100.000	102.570	133442.71	0.0265	P	0.8
6	☐	200.000	198.712	228144.41	0.0470	P	2.0

y = 2.1398E-004 * x + 0.0045
R = 0.9999
DL = 0.227
BEC = 21.06

Weight: <None>
Min Conc: <None>

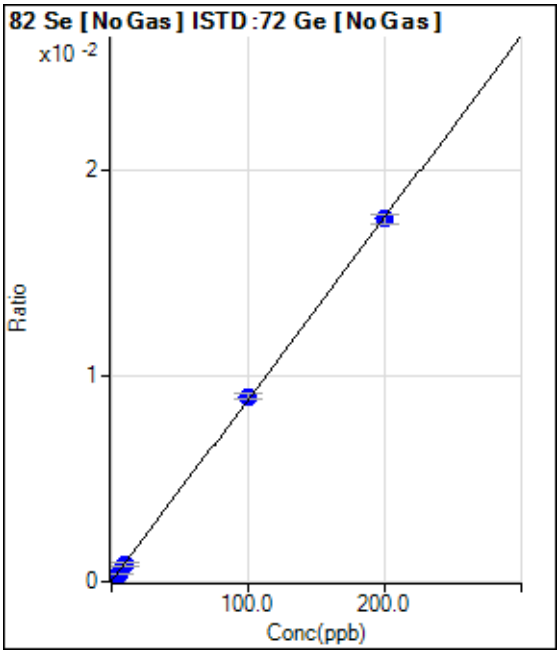
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	682.02	0.0003	P	8.5
2	☐	2.000	2.116	1296.07	0.0006	P	3.8
3	☐	5.000	4.883	2130.84	0.0011	P	2.5
4	☐	10.000	9.871	3588.49	0.0018	P	2.8
5	☐	100.000	103.328	30093.48	0.0155	P	1.5
6	☐	200.000	198.344	56443.47	0.0294	P	1.4

y = 1.4645E-004 * x + 3.3735E-004
R = 0.9998
DL = 0.5873
BEC = 2.304

Weight: <None>
Min Conc: <None>

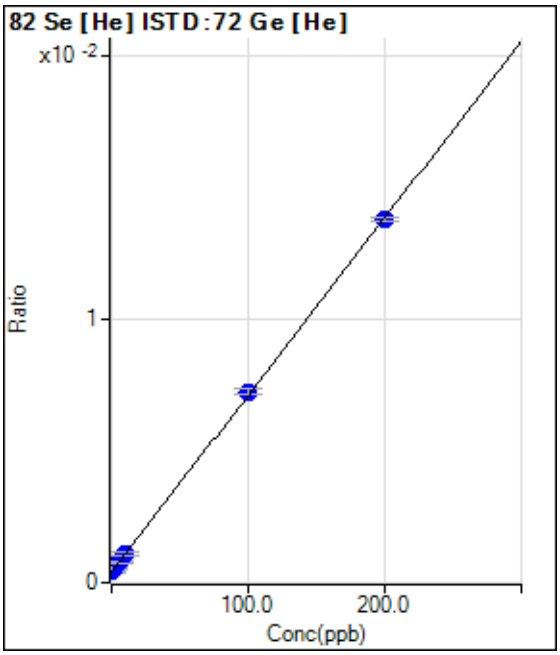


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	98.69	0.0000	P	10.0
2	☐	2.000	1.909	964.16	0.0002	P	11.0
3	☐	5.000	4.119	1989.31	0.0004	P	7.9
4	☐	10.000	9.046	4142.85	0.0008	P	19.6
5	☐	100.000	101.543	45461.04	0.0090	P	2.8
6	☐	200.000	199.299	85733.34	0.0177	P	2.8

y = 8.8578E-005 * x + 1.9409E-005
R = 0.9999
DL = 0.06597
BEC = 0.2191

Weight: <None>
Min Conc: <None>

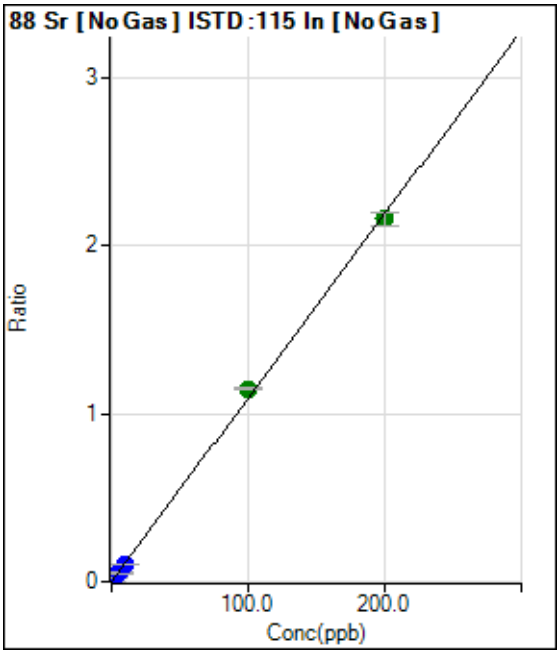
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	813.37	0.0004	P	5.0
2	☐	2.000	2.091	1086.73	0.0005	P	11.5
3	☐	5.000	5.410	1550.11	0.0008	P	2.5
4	☐	10.000	10.202	2186.88	0.0011	P	11.9
5	☐	100.000	101.873	14077.61	0.0072	P	3.5
6	☐	200.000	199.042	26419.67	0.0138	P	1.2

y = 6.7075E-005 * x + 4.0276E-004
R = 0.9999
DL = 0.8941
BEC = 6.005

Weight: <None>
Min Conc: <None>

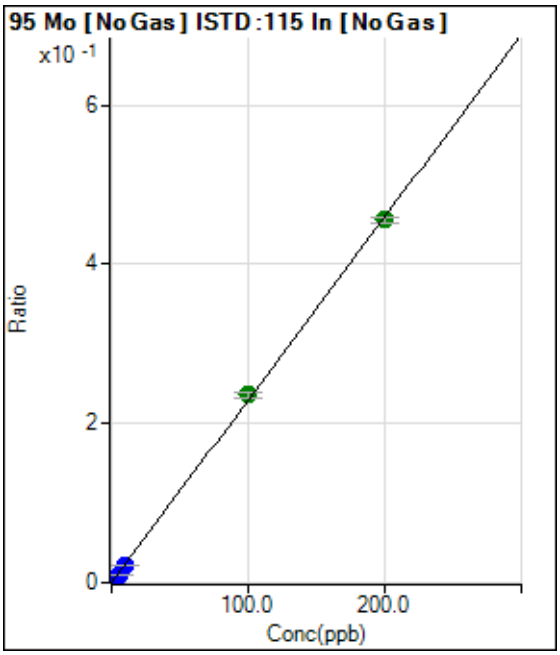


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2066.87	0.0003	P	3.2
2	☐	2.000	1.935	133448.69	0.0215	P	1.8
3	☐	5.000	4.704	323979.46	0.0518	P	1.2
4	☐	10.000	9.609	652425.72	0.1054	P	0.3
5	☐	100.000	105.136	6826925.53	1.1501	A	0.8
6	☐	200.000	197.460	12592817.31	2.1597	A	3.9

y = 0.0109 * x + 3.3836E-004
R = 0.9995
DL = 0.002968
BEC = 0.03094

Weight: <None>
Min Conc: <None>

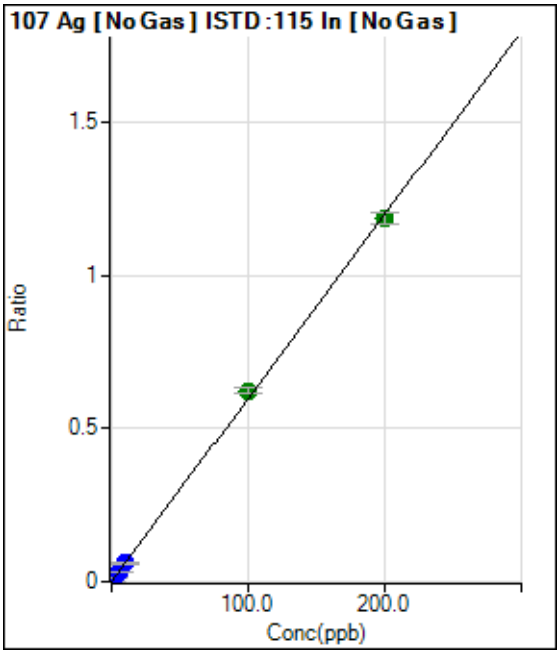
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	240.01	0.0000	P	17.7
2	☐	2.000	1.905	27378.70	0.0044	P	3.3
3	☐	5.000	4.636	66784.27	0.0107	P	3.4
4	☐	10.000	9.635	137048.06	0.0221	P	0.9
5	☐	100.000	102.855	1400358.88	0.2360	A	2.9
6	☐	200.000	198.601	2657691.94	0.4557	A	1.4

y = 0.0023 * x + 3.9327E-005
R = 0.9998
DL = 0.009081
BEC = 0.01714

Weight: <None>
Min Conc: <None>

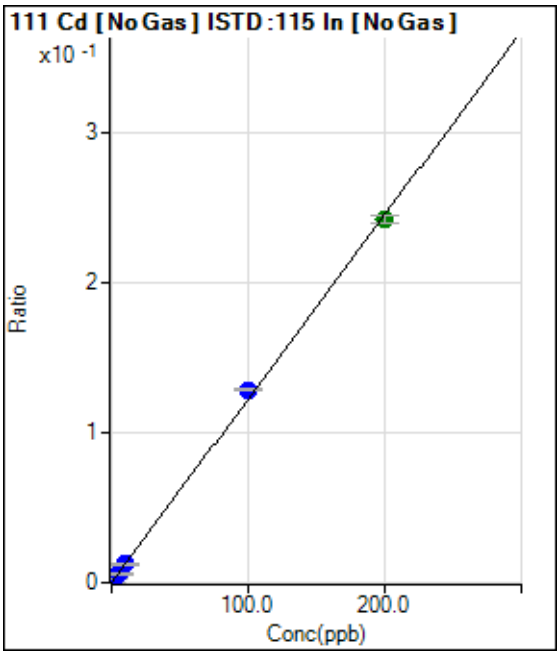


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	426.68	0.0001	P	12.2
2	☐	2.000	2.052	76601.85	0.0123	P	3.1
3	☐	5.000	4.876	182872.21	0.0292	P	1.2
4	☐	10.000	9.988	370002.25	0.0598	P	2.3
5	☐	100.000	104.305	3701998.28	0.6238	A	2.1
6	☐	200.000	197.851	6898677.19	1.1831	A	3.2

y = 0.0060 * x + 6.9803E-005
R = 0.9997
DL = 0.004276
BEC = 0.01167

Weight: <None>
Min Conc: <None>

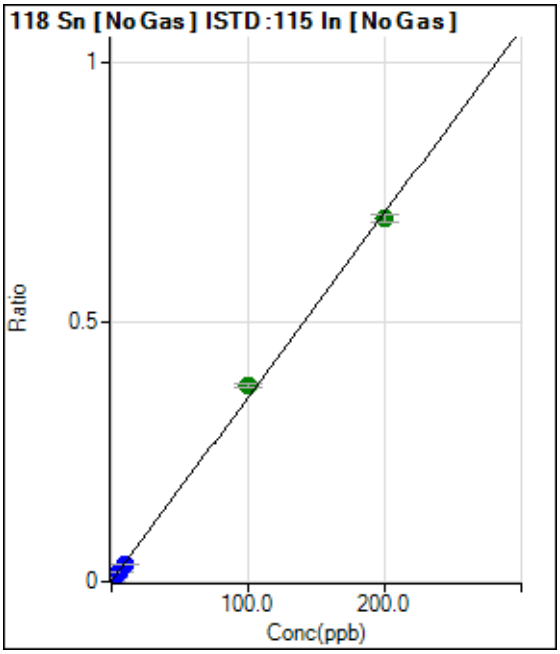
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	115.2
2	☐	2.000	1.982	15072.19	0.0024	P	2.4
3	☐	5.000	4.717	36140.10	0.0058	P	1.3
4	☐	10.000	9.969	75519.39	0.0122	P	1.8
5	☐	100.000	105.122	763591.42	0.1287	P	0.9
6	☐	200.000	197.448	1409401.18	0.2417	A	2.0

y = 0.0012 * x + 2.2021E-006
R = 0.9995
DL = 0.00622
BEC = 0.001799

Weight: <None>
Min Conc: <None>

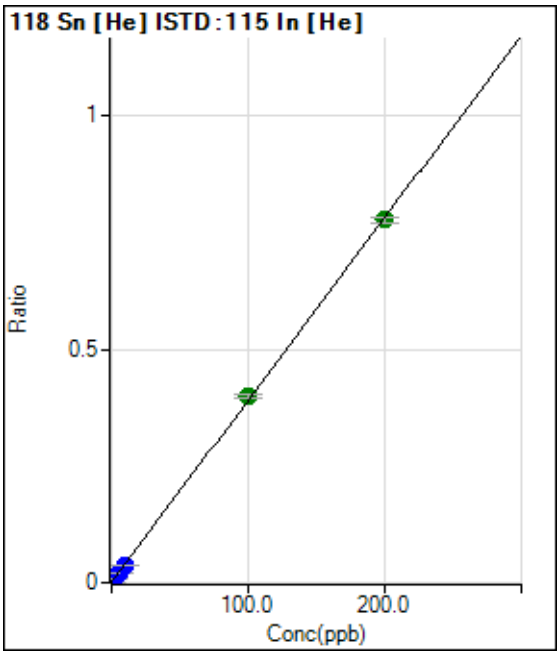


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4677.60	0.0008	P	3.7
2	☐	2.000	1.903	46733.74	0.0075	P	0.3
3	☐	5.000	4.644	108040.41	0.0173	P	2.2
4	☐	10.000	9.588	215604.82	0.0348	P	1.5
5	☐	100.000	106.513	2250187.26	0.3792	A	2.2
6	☐	200.000	196.774	4081829.00	0.7000	A	2.3

y = 0.0036 * x + 7.6568E-004
R = 0.9992
DL = 0.02367
BEC = 0.2155

Weight: <None>
Min Conc: <None>

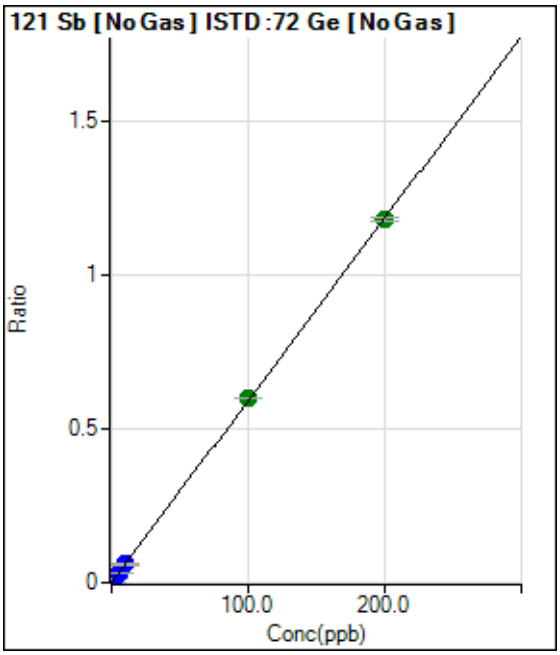
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3003.73	0.0008	P	6.2
2	☐	2.000	1.867	30328.78	0.0081	P	0.2
3	☐	5.000	4.646	70730.75	0.0189	P	1.1
4	☐	10.000	9.492	139021.73	0.0379	P	0.5
5	☐	100.000	102.165	1450665.50	0.3997	A	1.6
6	☐	200.000	198.953	2737508.50	0.7777	A	1.4

y = 0.0039 * x + 8.0410E-004
R = 0.9999
DL = 0.03839
BEC = 0.2059

Weight: <None>
Min Conc: <None>

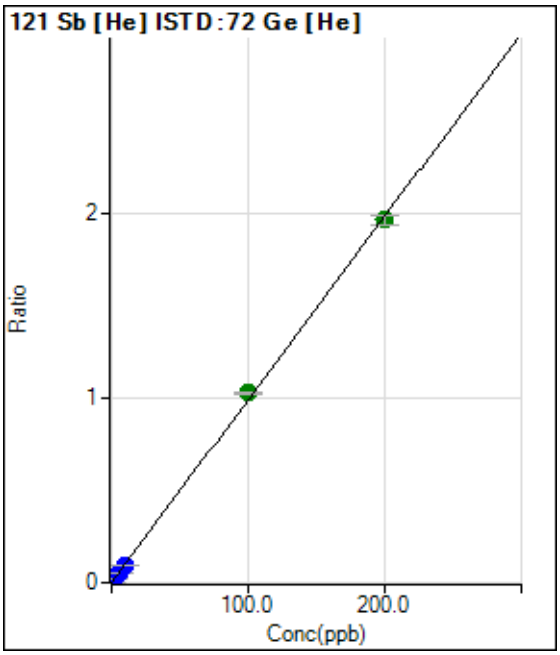


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1693.48	0.0003	P	7.1
2	☐	2.000	1.948	60710.67	0.0119	P	1.7
3	☐	5.000	4.796	148818.16	0.0288	P	2.1
4	☐	10.000	9.985	300120.59	0.0595	P	1.0
5	☐	100.000	101.488	3035424.33	0.6017	A	0.4
6	☐	200.000	199.263	5730698.66	1.1811	A	1.2

y = 0.0059 * x + 3.3290E-004
R = 1.0000
DL = 0.01199
BEC = 0.05618

Weight: <None>
Min Conc: <None>

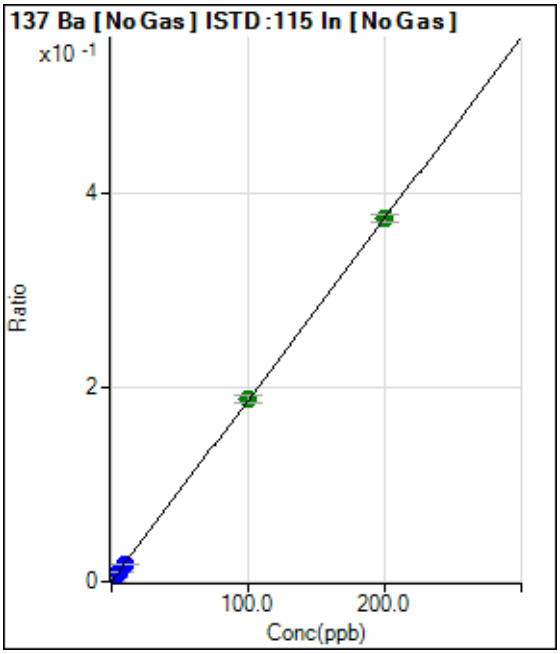
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1396.76	0.0007	P	4.4
2	☐	2.000	1.919	39466.35	0.0197	P	2.2
3	☐	5.000	4.719	96047.79	0.0474	P	1.4
4	☐	10.000	9.500	190839.02	0.0948	P	1.4
5	☐	100.000	103.534	1996982.16	1.0264	A	1.0
6	☐	200.000	198.266	3774382.24	1.9650	A	2.4

y = 0.0099 * x + 6.9132E-004
R = 0.9998
DL = 0.009254
BEC = 0.06978

Weight: <None>
Min Conc: <None>

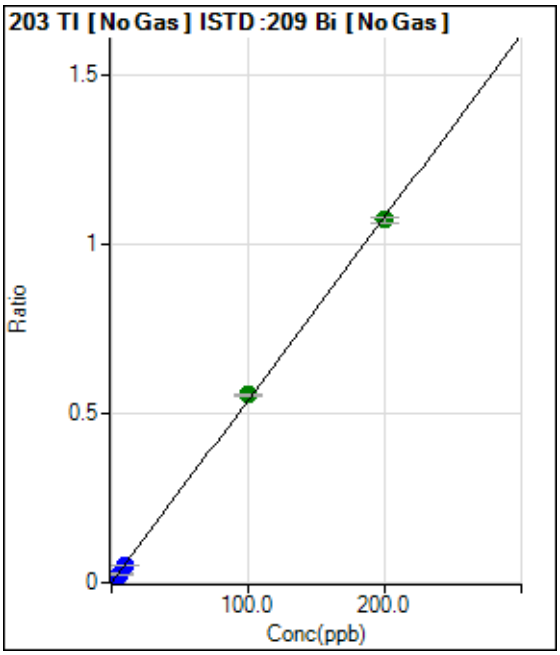


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1640.13	0.0003	P	9.6
2	☐	2.000	1.894	23635.21	0.0038	P	1.9
3	☐	5.000	4.843	58271.48	0.0093	P	3.5
4	☐	10.000	9.811	115086.00	0.0186	P	0.7
5	☐	100.000	100.193	1111845.79	0.1874	A	4.0
6	☐	200.000	199.918	2179443.25	0.3737	A	2.3

y = 0.0019 * x + 2.6827E-004
R = 1.0000
DL = 0.04147
BEC = 0.1436

Weight: <None>
Min Conc: <None>

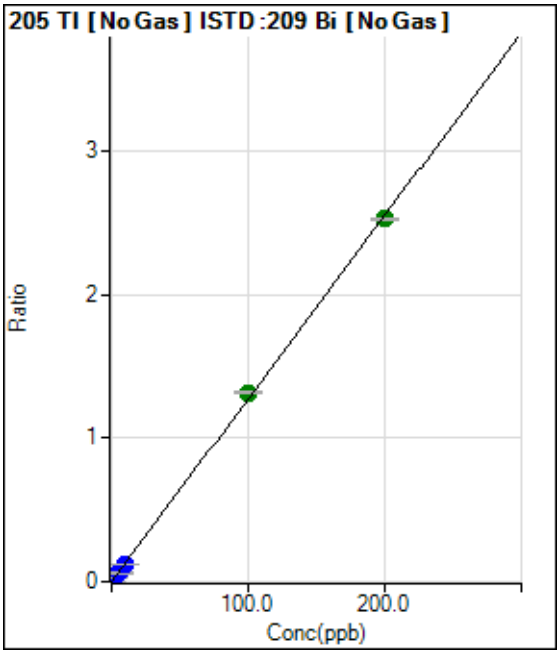
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	290.01	0.0001	P	16.3
2	☐	2.000	1.918	51440.48	0.0104	P	2.9
3	☐	5.000	4.721	125250.22	0.0255	P	3.3
4	☐	10.000	9.738	258108.07	0.0526	P	1.4
5	☐	100.000	102.901	2689955.48	0.5549	A	1.0
6	☐	200.000	198.570	5072174.20	1.0708	A	1.5

y = 0.0054 * x + 6.0607E-005
R = 0.9998
DL = 0.005509
BEC = 0.01124

Weight: <None>
Min Conc: <None>

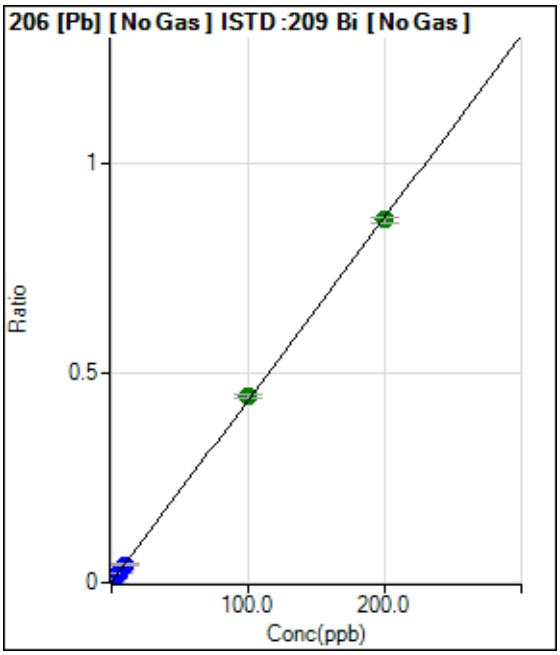


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	740.04	0.0002	P	5.6
2	☐	2.000	1.914	121340.81	0.0245	P	2.5
3	☐	5.000	4.732	296796.45	0.0605	P	1.3
4	☐	10.000	9.649	604419.25	0.1231	P	2.8
5	☐	100.000	103.361	6385103.03	1.3172	A	1.5
6	☐	200.000	198.345	11974139.82	2.5276	A	0.6

y = 0.0127 * x + 1.5425E-004
R = 0.9998
DL = 0.002039
BEC = 0.01211

Weight: <None>
Min Conc: <None>

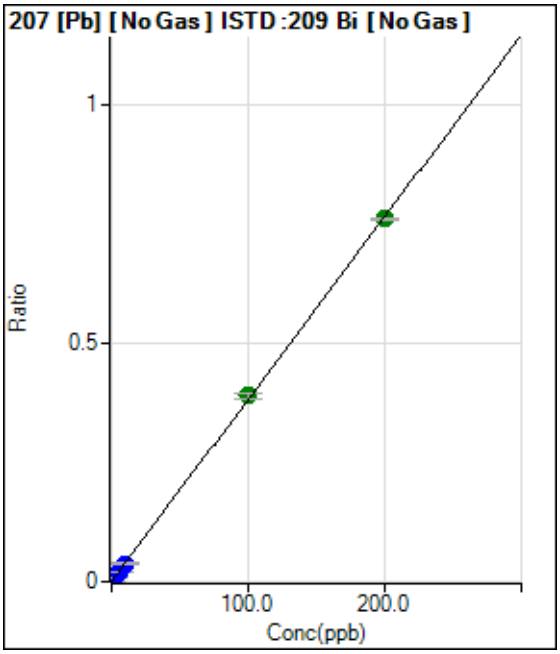
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2520.30	0.0005	P	4.5
2	☐	2.000	1.947	44526.96	0.0090	P	2.0
3	☐	5.000	4.867	106637.80	0.0217	P	1.7
4	☐	10.000	9.825	212667.26	0.0433	P	3.4
5	☐	100.000	102.423	2164537.52	0.4466	A	1.9
6	☐	200.000	198.801	4104198.17	0.8663	A	1.9

y = 0.0044 * x + 5.2626E-004
R = 0.9999
DL = 0.01645
BEC = 0.1208

Weight: <None>
Min Conc: <None>

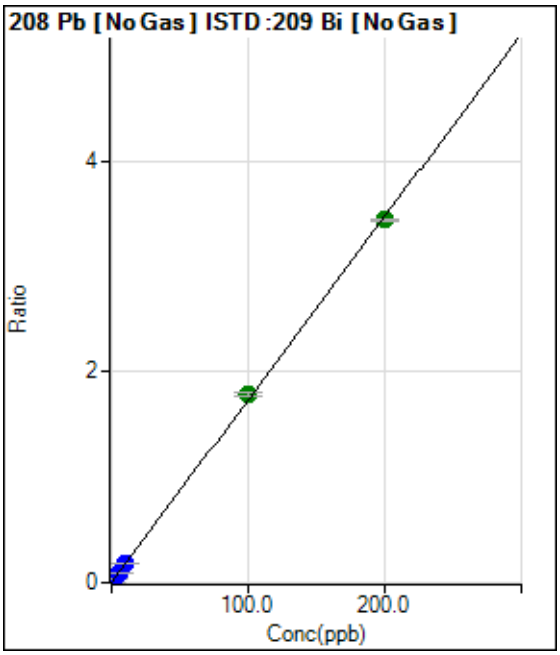


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2070.22	0.0004	P	1.7
2	☐	2.000	1.959	39072.34	0.0079	P	2.3
3	☐	5.000	4.902	93892.11	0.0191	P	2.7
4	☐	10.000	9.864	186820.64	0.0381	P	1.9
5	☐	100.000	101.930	1886278.93	0.3892	A	2.5
6	☐	200.000	199.045	3598491.51	0.7596	A	0.9

y = 0.0038 * x + 4.3178E-004
R = 0.9999
DL = 0.00579
BEC = 0.1132

Weight: <None>
Min Conc: <None>

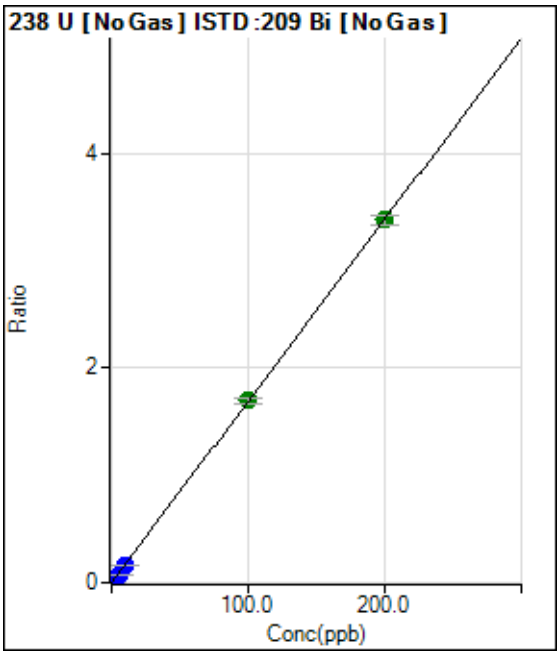
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9728.34	0.0020	P	2.3
2	☐	2.000	1.976	179648.47	0.0363	P	2.2
3	☐	5.000	4.901	427668.79	0.0871	P	2.1
4	☐	10.000	9.953	858372.87	0.1748	P	1.3
5	☐	100.000	103.286	8701375.03	1.7952	A	2.2
6	☐	200.000	198.362	16324404.14	3.4459	A	0.5

y = 0.0174 * x + 0.0020
R = 0.9998
DL = 0.008069
BEC = 0.1169

Weight: <None>
Min Conc: <None>

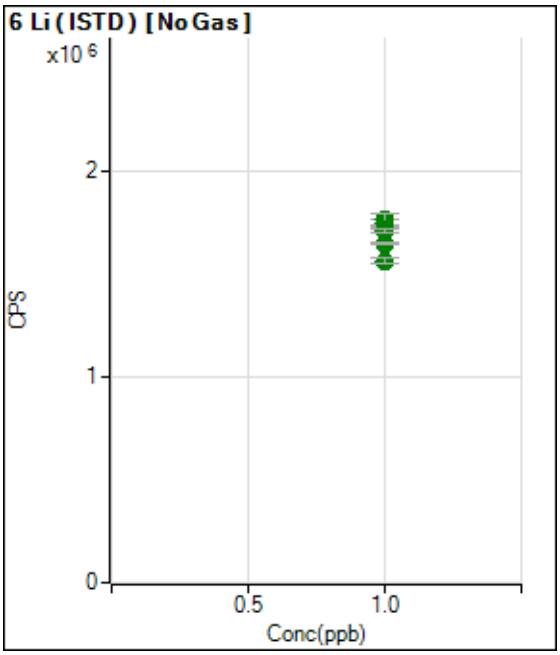


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0000	P	63.2
2	☐	2.000	1.934	161724.47	0.0327	P	1.5
3	☐	5.000	4.717	391551.68	0.0798	P	2.0
4	☐	10.000	9.683	803898.32	0.1637	P	2.4
5	☐	100.000	100.212	8211482.59	1.6943	A	2.3
6	☐	200.000	199.918	16010020.18	3.3799	A	2.3

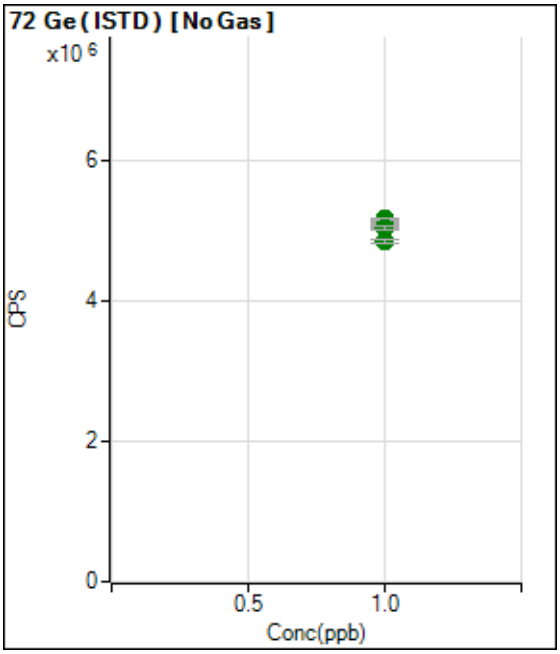
y = 0.0169 * x + 1.2691E-005
R = 1.0000
DL = 0.001424
BEC = 0.0007506

Weight: <None>
Min Conc: <None>

Calibration for 234_ICV.d

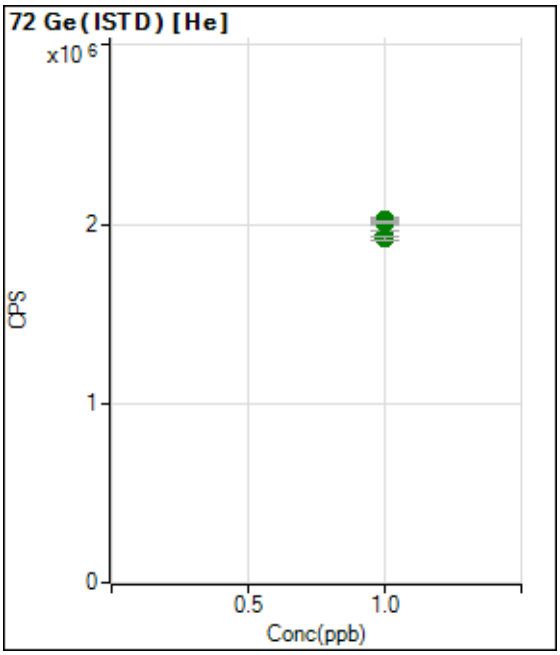


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1751785.11		A	1.4
2	☐	1.000		1763443.15		A	3.9
3	☐	1.000		1724276.41		A	0.7
4	☐	1.000		1710616.68		A	0.7
5	☐	1.000		1648766.21		A	0.4
6	☐	1.000		1565289.50		A	1.5

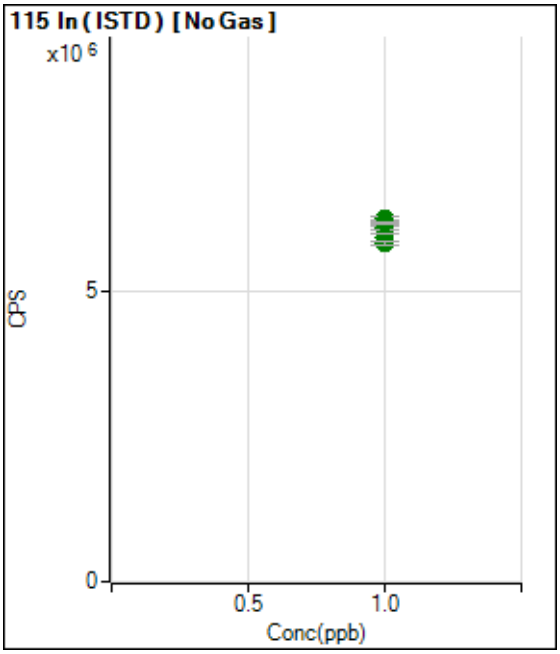


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5085949.51		A	0.6
2	☐	1.000		5113105.55		A	0.5
3	☐	1.000		5175996.59		A	0.7
4	☐	1.000		5044048.88		A	0.7
5	☐	1.000		5044642.22		A	1.3
6	☐	1.000		4852287.53		A	1.4

Calibration for 234_ICV.d

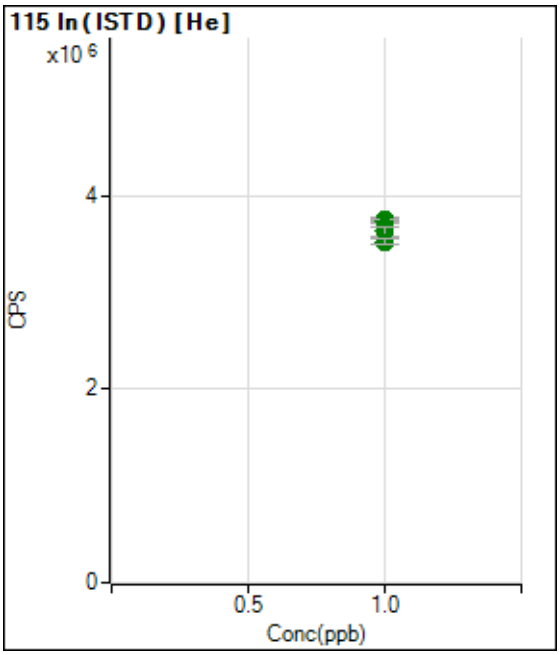


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2020423.62		A	1.8
2	☐	1.000		2002822.57		A	1.2
3	☐	1.000		2024577.47		A	0.3
4	☐	1.000		2012809.92		A	0.6
5	☐	1.000		1945694.50		A	1.7
6	☐	1.000		1921042.89		A	1.1

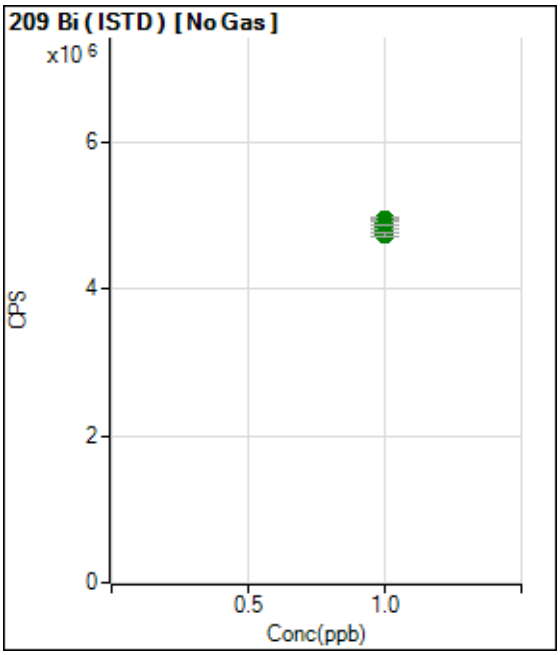


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6109662.55		A	1.2
2	☐	1.000		6208750.01		A	0.8
3	☐	1.000		6257562.34		A	1.1
4	☐	1.000		6188975.82		A	0.8
5	☐	1.000		5935358.75		A	2.2
6	☐	1.000		5832742.02		A	1.4

Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3737026.75		A	1.0
2	☐	1.000		3746750.23		A	1.2
3	☐	1.000		3733425.54		A	0.9
4	☐	1.000		3671029.77		A	0.1
5	☐	1.000		3630004.40		A	2.7
6	☐	1.000		3520313.05		A	1.9



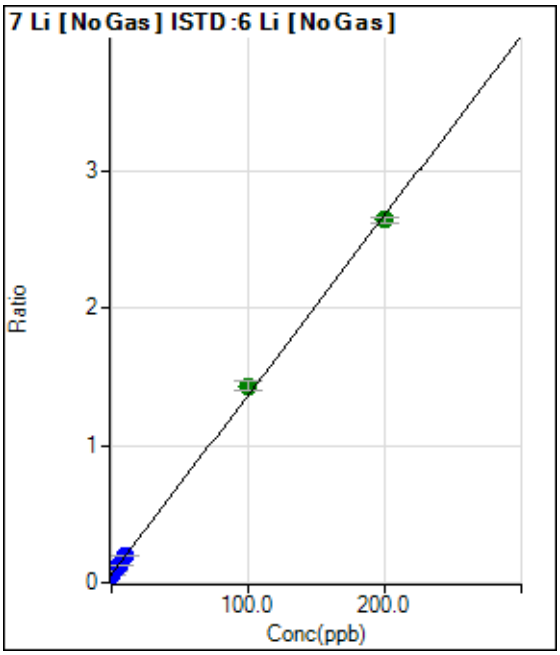
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4792989.20		A	3.2
2	☐	1.000		4944990.55		A	0.9
3	☐	1.000		4909736.18		A	1.6
4	☐	1.000		4910420.45		A	1.2
5	☐	1.000		4847872.43		A	1.6
6	☐	1.000		4737273.16		A	0.9

Calibration for 017_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\102820A.b\
Analysis File: 102820A.batch.bin
DA Date-Time: 10/28/2020 9:48:30 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	010CALB.d	CAL BLK	10/28/2020 10:13:39 AM
2	011CALS.d	2/10/200	10/28/2020 10:15:31 AM
3	012CALS.d	5/25/500	10/28/2020 10:17:22 AM
4	013CALS.d	10/50/100	10/28/2020 10:19:14 AM
5	014CALS.d	100/500/10K	10/28/2020 10:21:05 AM
6	015CALS.d	200/1000/20K	10/28/2020 10:22:48 AM

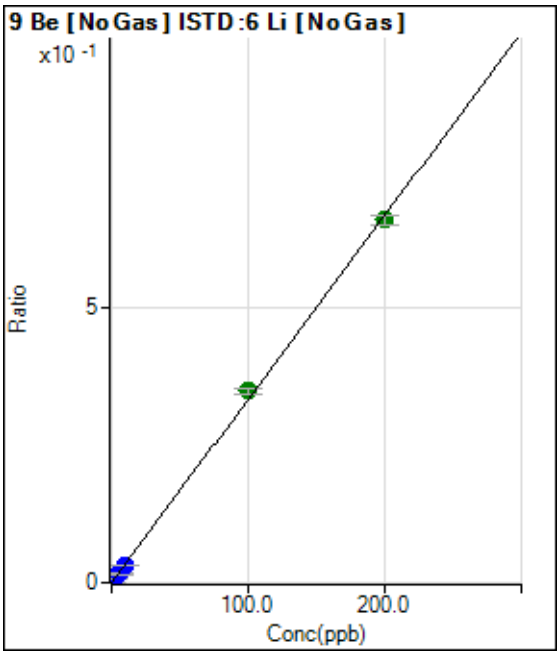
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	138650.82	0.0597	P	2.2
2	☐	2.000	2.069	197700.15	0.0867	P	2.4
3	☐	5.000	4.984	281818.78	0.1248	P	0.7
4	☐	10.000	10.232	431534.32	0.1934	P	2.2
5	☐	100.000	105.060	3048807.14	1.4321	A	4.5
6	☐	200.000	197.458	5549578.46	2.6391	A	1.7

y = 0.0131 * x + 0.0597
R = 0.9995
DL = 0.3042
BEC = 4.571

Weight: <None>
Min Conc: <None>

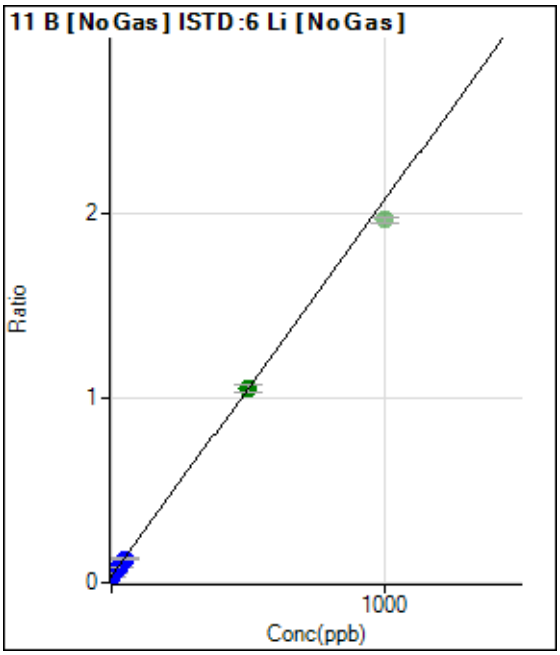


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.00	0.0000	P	34.9
2	☐	2.000	1.948	14807.89	0.0065	P	1.2
3	☐	5.000	4.729	35554.87	0.0157	P	1.4
4	☐	10.000	9.761	72522.40	0.0325	P	2.2
5	☐	100.000	104.429	740235.51	0.3476	A	3.3
6	☐	200.000	197.805	1384208.84	0.6583	A	2.7

y = 0.0033 * x + 1.0770E-005
R = 0.9996
DL = 0.003387
BEC = 0.003236

Weight: <None>
Min Conc: <None>

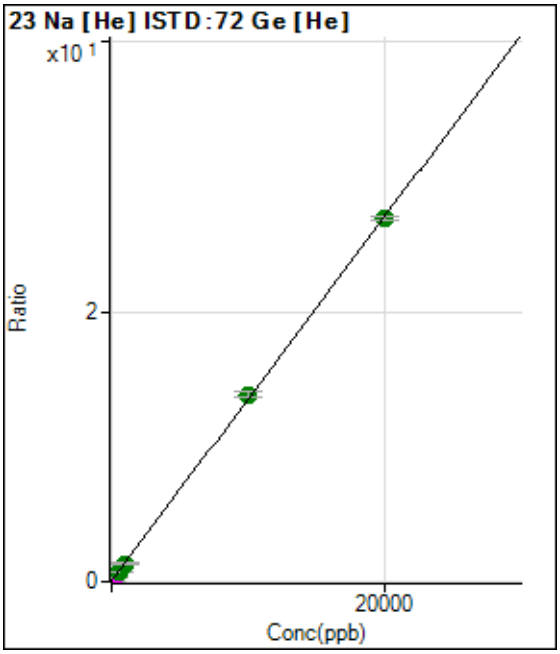
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	81586.89	0.0351	P	1.6
2	☐	10.000	8.722	120646.49	0.0529	P	2.1
3	☐	25.000	22.025	180798.81	0.0801	P	1.7
4	☐	50.000	45.592	285980.74	0.1282	P	3.7
5	☐	500.000	500.615	2250087.99	1.0568	A	4.0
6	☑	1000.000		4143238.90	1.9702	A	1.3

y = 0.0020 * x + 0.0351
R = 1.0000
DL = 0.8187
BEC = 17.21

Weight: <None>
Min Conc: <None>

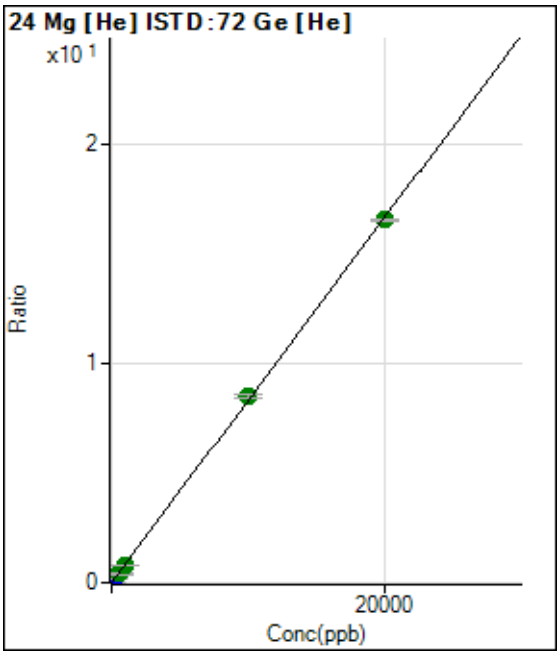


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	131515.05	0.0578	P	2.0
2	☐	200.000	199.612	744566.01	0.3270	M	1.4
3	☐	500.000	470.667	1569159.98	0.6926	A	1.3
4	☐	1000.000	959.388	3006280.16	1.3517	A	1.9
5	☐	10000.00	10232.59	30466712.88	13.8580	A	2.6
6	☐	20000.00	19886.46	56662949.16	26.8778	A	1.2

y = 0.0013 * x + 0.0578
R = 0.9999
DL = 2.623
BEC = 42.85

Weight: <None>
Min Conc: <None>

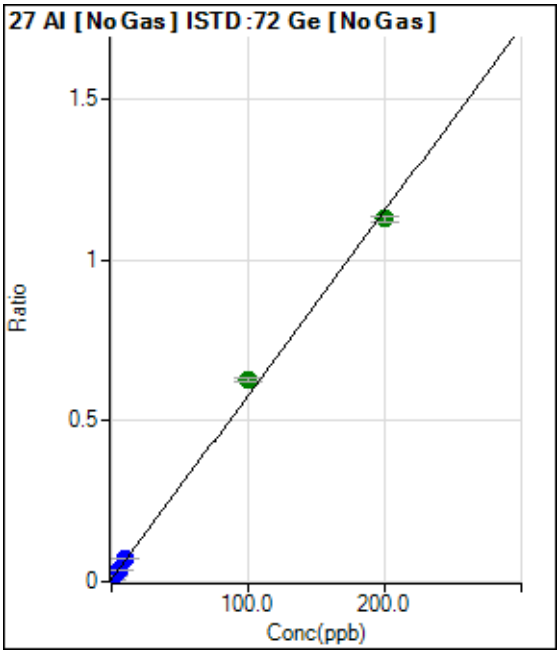
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1563.46	0.0007	P	5.6
2	☐	200.000	205.430	390761.57	0.1716	P	1.1
3	☐	500.000	481.540	909184.13	0.4013	A	4.0
4	☐	1000.000	992.067	1837404.30	0.8261	A	1.2
5	☐	10000.00	10231.83	18719133.05	8.5140	A	2.3
6	☐	20000.00	19884.88	34881459.48	16.5457	A	0.9

y = 8.3204E-004 * x + 6.8734E-004
R = 0.9999
DL = 0.1396
BEC = 0.8261

Weight: <None>
Min Conc: <None>

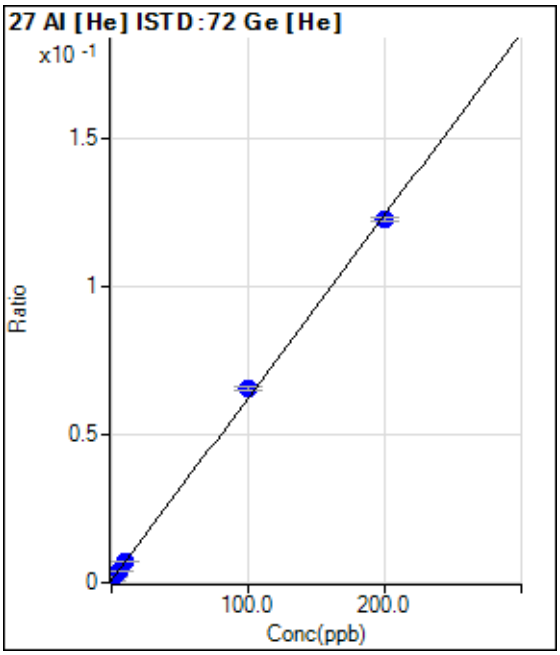


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37815.61	0.0072	P	1.0
2	☐	2.000	2.120	101082.00	0.0193	P	1.0
3	☐	5.000	5.308	195588.27	0.0376	P	0.2
4	☐	10.000	11.004	363113.53	0.0702	P	1.0
5	☐	100.000	108.407	3228002.14	0.6285	A	2.4
6	☐	200.000	195.737	5667919.92	1.1289	A	1.5

y = 0.0057 * x + 0.0072
R = 0.9987
DL = 0.03946
BEC = 1.254

Weight: <None>
Min Conc: <None>

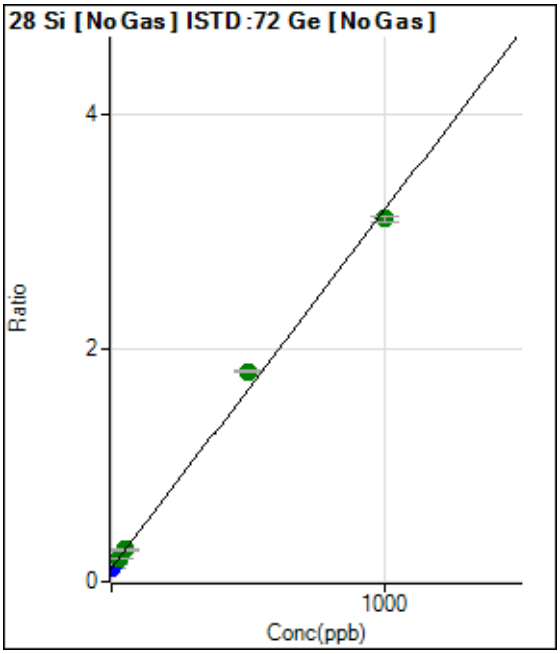
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1783.49	0.0008	P	12.9
2	☐	2.000	1.976	4557.49	0.0020	P	5.6
3	☐	5.000	4.883	8596.11	0.0038	P	2.5
4	☐	10.000	10.038	15505.56	0.0070	P	2.8
5	☐	100.000	104.971	143996.13	0.0655	P	1.9
6	☐	200.000	197.516	258313.39	0.1225	P	1.1

y = 6.1635E-004 * x + 7.8437E-004
R = 0.9996
DL = 0.4938
BEC = 1.273

Weight: <None>
Min Conc: <None>

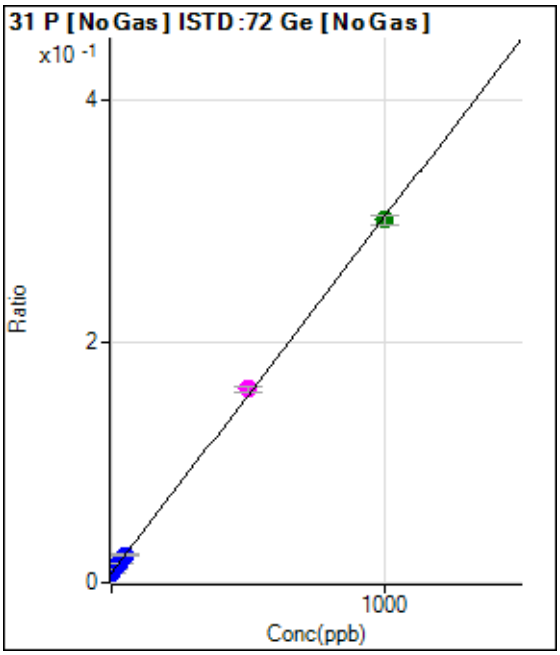


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	607905.09	0.1155	P	0.7
2	☐	10.000	10.798	776953.84	0.1487	P	1.6
3	☐	25.000	25.871	1013612.54	0.1949	A	1.6
4	☐	50.000	51.444	1413034.93	0.2734	A	1.5
5	☐	500.000	548.870	9244016.53	1.7996	A	0.9
6	☐	1000.000	975.463	15605839.77	3.1085	A	1.8

y = 0.0031 * x + 0.1155
R = 0.9983
DL = 0.8265
BEC = 37.65

Weight: <None>
Min Conc: <None>

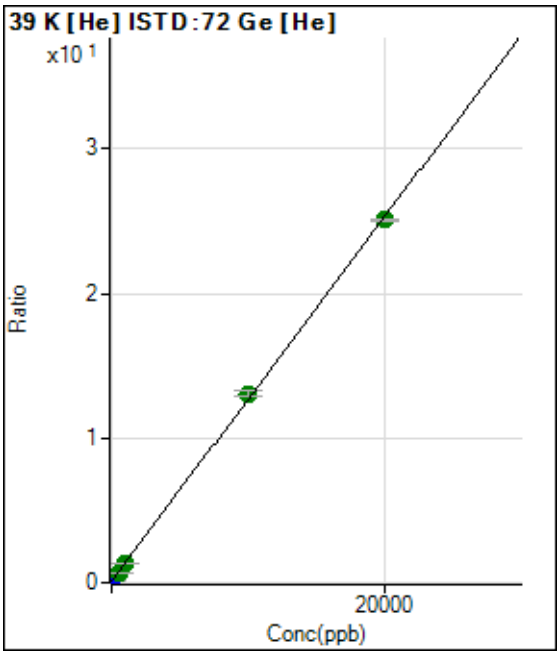
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42334.84	0.0080	P	1.8
2	☐	10.000	10.130	57673.36	0.0110	P	1.5
3	☐	25.000	24.868	79999.93	0.0154	P	0.6
4	☐	50.000	50.834	119108.34	0.0230	P	0.9
5	☐	500.000	515.862	823101.92	0.1602	M	2.7
6	☐	1000.000	992.029	1509614.77	0.3007	A	2.5

y = 2.9502E-004 * x + 0.0080
R = 0.9998
DL = 1.503
BEC = 27.27

Weight: <None>
Min Conc: <None>

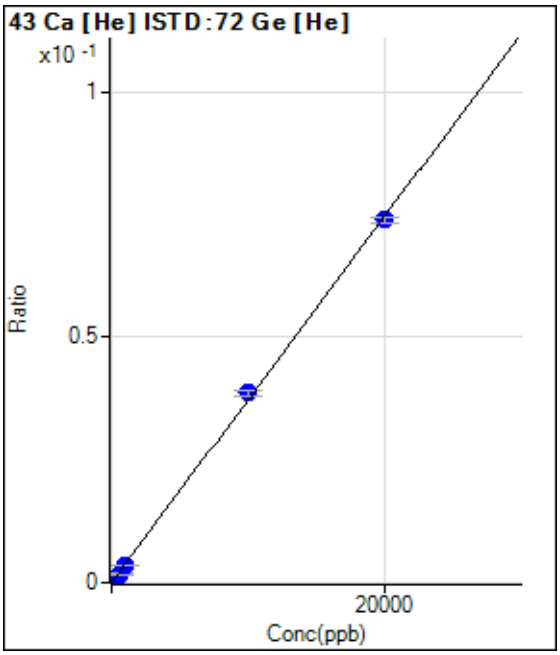


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226943.56	0.0998	P	3.3
2	☐	200.000	198.355	796047.02	0.3496	P	0.4
3	☐	500.000	475.605	1583203.73	0.6988	A	3.3
4	☐	1000.000	978.528	2963182.25	1.3323	A	0.8
5	☐	10000.00	10319.70	28801651.24	13.0983	A	2.3
6	☐	20000.00	19841.84	52900645.88	25.0922	A	0.2

y = 0.0013 * x + 0.0998
R = 0.9998
DL = 7.784
BEC = 79.19

Weight: <None>
Min Conc: <None>

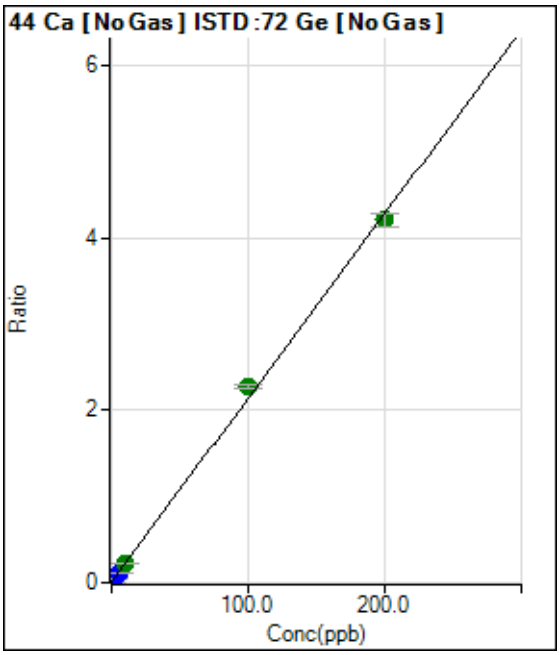
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0000	P	14.8
2	☐	200.000	196.362	1726.81	0.0008	P	3.6
3	☐	500.000	464.119	3980.65	0.0018	P	3.2
4	☐	1000.000	970.928	8109.22	0.0036	P	3.7
5	☐	10000.00	10359.22	84972.11	0.0386	P	2.8
6	☐	20000.00	19822.77	155861.41	0.0739	P	1.4

y = 3.7283E-006 * x + 2.6309E-005
R = 0.9998
DL = 3.129
BEC = 7.056

Weight: <None>
Min Conc: <None>

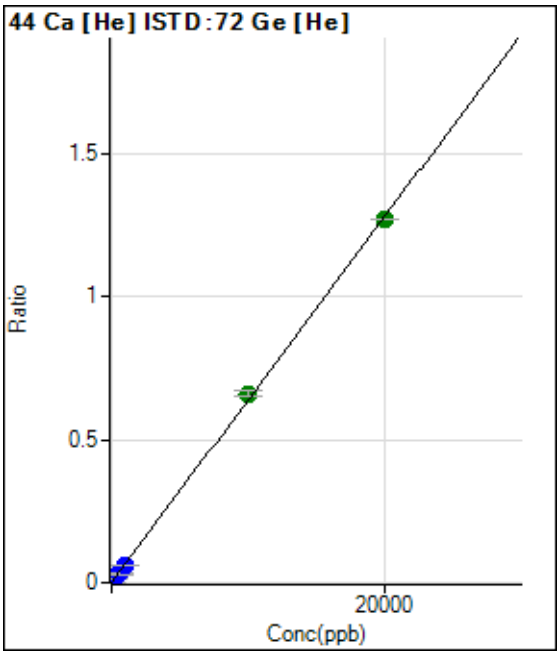


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43389.46	0.0082	P	1.6
2	☐	2.000	2.052	272037.48	0.0520	P	1.3
3	☐	5.000	4.974	595020.11	0.1144	P	0.4
4	☐	10.000	10.157	1163352.01	0.2251	A	0.8
5	☐	100.000	106.300	11699017.33	2.2772	A	1.6
6	☐	200.000	196.842	21130507.60	4.2099	A	4.1

y = 0.0213 * x + 0.0082
R = 0.9993
DL = 0.01877
BEC = 0.3864

Weight: <None>
Min Conc: <None>

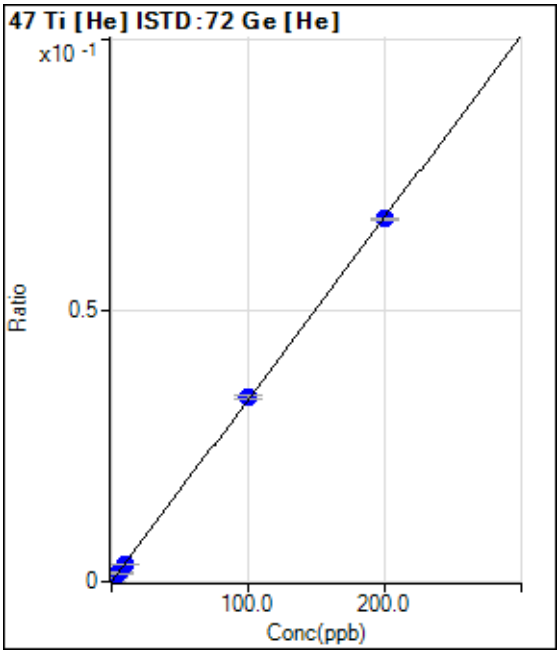
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1576.79	0.0007	P	11.0
2	☐	200.000	189.734	29151.22	0.0128	P	1.3
3	☐	500.000	464.712	68765.37	0.0303	P	1.1
4	☐	1000.000	959.704	137755.56	0.0619	P	0.8
5	☐	10000.00	10326.77	1450291.12	0.6597	A	3.3
6	☐	20000.00	19839.61	2670654.44	1.2668	A	0.1

y = 6.3815E-005 * x + 6.9386E-004
R = 0.9998
DL = 3.584
BEC = 10.87

Weight: <None>
Min Conc: <None>

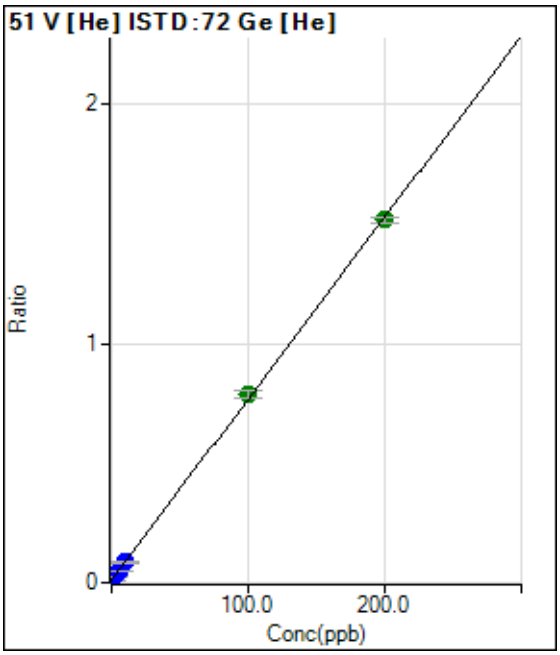


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	64.4
2	☐	2.000	1.748	1360.09	0.0006	P	7.7
3	☐	5.000	4.927	3774.38	0.0017	P	11.1
4	☐	10.000	9.510	7125.31	0.0032	P	0.4
5	☐	100.000	101.552	75004.55	0.0341	P	2.0
6	☐	200.000	199.253	141072.86	0.0669	P	0.4

y = 3.3578E-004 * x + 1.0239E-005
R = 1.0000
DL = 0.05894
BEC = 0.03049

Weight: <None>
Min Conc: <None>

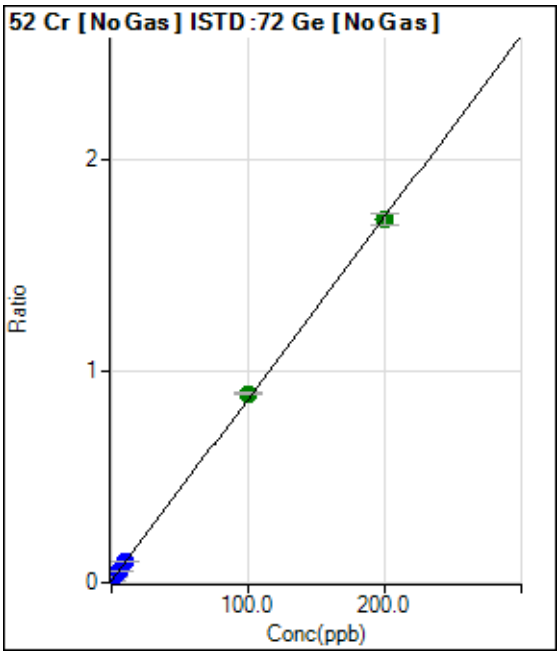
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22242.54	0.0098	P	1.4
2	☐	2.000	1.932	55618.96	0.0244	P	1.1
3	☐	5.000	4.756	103873.53	0.0458	P	1.0
4	☐	10.000	9.856	188014.12	0.0845	P	0.7
5	☐	100.000	102.641	1732747.43	0.7883	A	3.5
6	☐	200.000	198.693	3197877.51	1.5169	A	1.5

y = 0.0076 * x + 0.0098
R = 0.9999
DL = 0.05358
BEC = 1.288

Weight: <None>
Min Conc: <None>

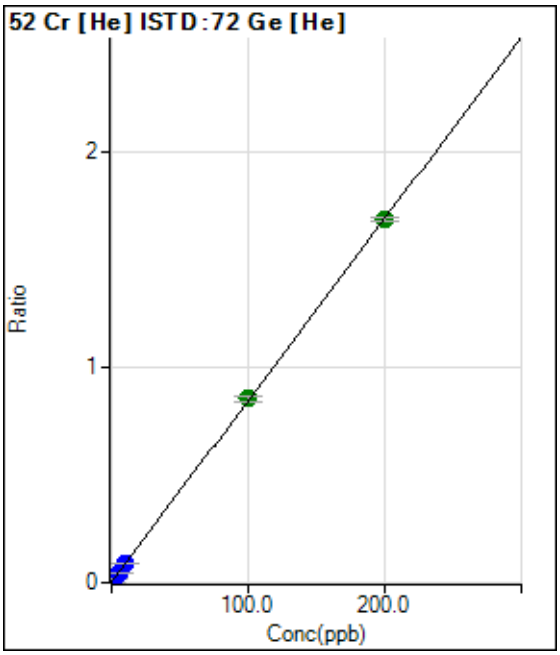


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50326.35	0.0096	P	2.1
2	☐	2.000	2.055	142068.01	0.0272	P	3.7
3	☐	5.000	4.998	272697.02	0.0524	P	0.8
4	☐	10.000	10.208	502051.70	0.0971	P	0.8
5	☐	100.000	102.959	4585852.02	0.8927	A	0.8
6	☐	200.000	198.509	8595394.66	1.7124	A	3.2

y = 0.0086 * x + 0.0096
R = 0.9998
DL = 0.069
BEC = 1.115

Weight: <None>
Min Conc: <None>

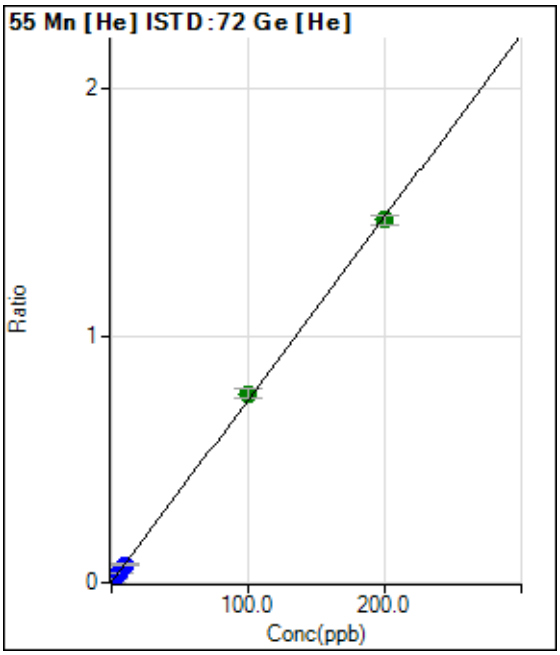
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5487.86	0.0024	P	3.6
2	☐	2.000	1.945	42900.79	0.0188	P	0.7
3	☐	5.000	4.803	97374.99	0.0430	P	1.0
4	☐	10.000	9.901	191354.97	0.0860	P	1.2
5	☐	100.000	100.982	1880188.30	0.8554	A	3.6
6	☐	200.000	199.519	3557833.80	1.6876	A	1.2

y = 0.0084 * x + 0.0024
R = 1.0000
DL = 0.03058
BEC = 0.2853

Weight: <None>
Min Conc: <None>

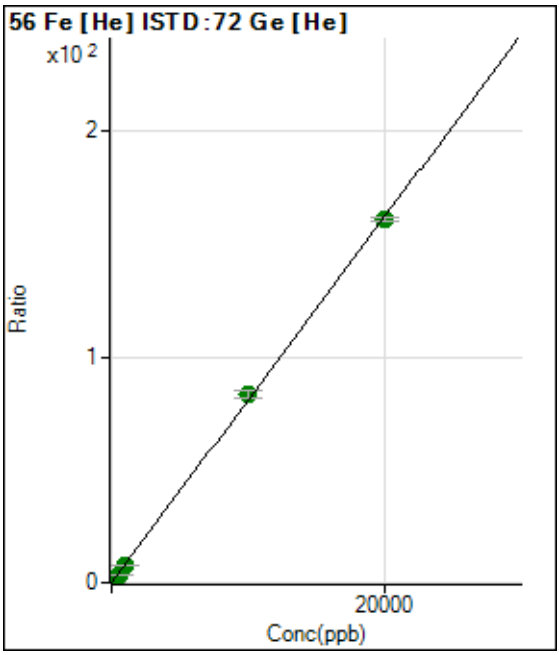


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3017.05	0.0013	P	6.8
2	☐	2.000	1.937	35660.35	0.0157	P	2.1
3	☐	5.000	4.765	82928.07	0.0366	P	1.6
4	☐	10.000	9.804	164327.61	0.0739	P	1.9
5	☐	100.000	103.124	1680004.61	0.7645	A	4.9
6	☐	200.000	198.454	3099239.12	1.4701	A	2.5

y = 0.0074 * x + 0.0013
R = 0.9998
DL = 0.03632
BEC = 0.1793

Weight: <None>
Min Conc: <None>

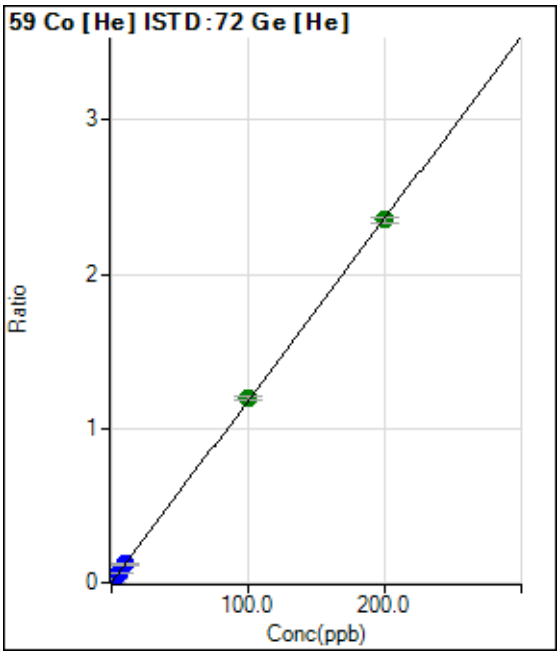
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34236.81	0.0150	P	2.2
2	☐	200.000	193.783	3605188.07	1.5833	A	1.8
3	☐	500.000	462.981	8524385.50	3.7620	A	0.2
4	☐	1000.000	970.630	17504881.82	7.8704	A	0.5
5	☐	10000.00	10321.89	183639537.2	83.5502	A	3.7
6	☐	20000.00	19841.51	338560588.2	160.592	A	1.1

y = 0.0081 * x + 0.0150
R = 0.9998
DL = 0.1212
BEC = 1.859

Weight: <None>
Min Conc: <None>

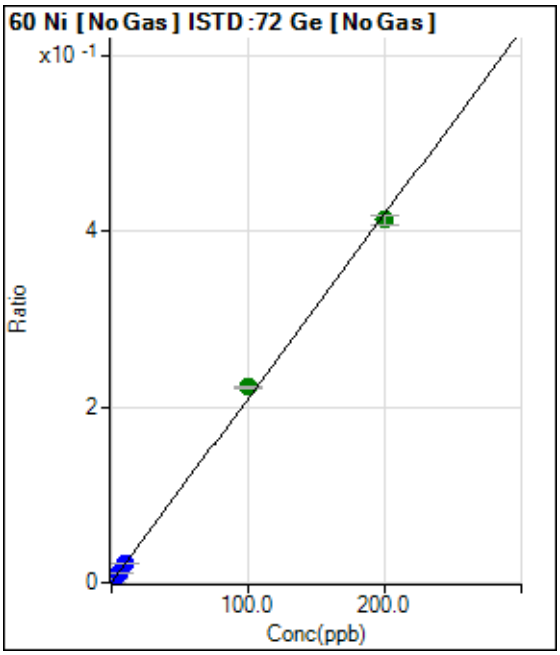


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	730.04	0.0003	P	15.7
2	☐	2.000	1.966	53585.65	0.0235	P	1.1
3	☐	5.000	4.872	131032.61	0.0578	P	1.4
4	☐	10.000	10.038	264242.11	0.1188	P	0.8
5	☐	100.000	101.356	2631616.16	1.1968	A	1.7
6	☐	200.000	199.324	4961165.86	2.3532	A	1.5

y = 0.0118 * x + 3.2098E-004
R = 1.0000
DL = 0.01278
BEC = 0.02719

Weight: <None>
Min Conc: <None>

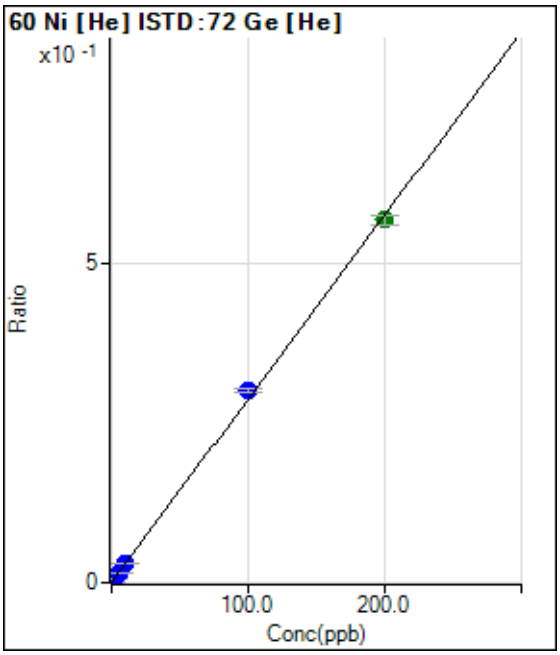
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1156.74	0.0002	P	16.7
2	☐	2.000	2.142	24572.50	0.0047	P	2.8
3	☐	5.000	5.283	58643.39	0.0113	P	1.9
4	☐	10.000	10.666	116522.84	0.0225	P	1.9
5	☐	100.000	106.018	1140856.31	0.2221	A	1.7
6	☐	200.000	196.949	2070170.80	0.4124	A	2.8

y = 0.0021 * x + 2.1999E-004
R = 0.9994
DL = 0.05264
BEC = 0.1051

Weight: <None>
Min Conc: <None>

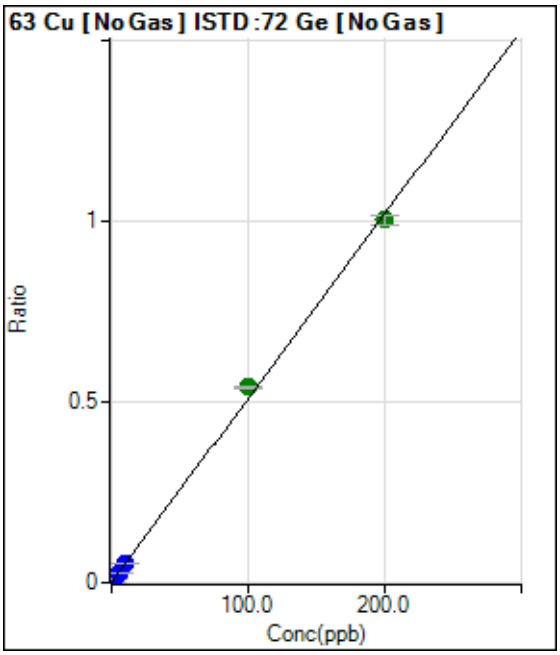


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	590.02	0.0003	P	12.0
2	☐	2.000	1.986	13600.33	0.0060	P	3.8
3	☐	5.000	4.932	32746.50	0.0145	P	1.5
4	☐	10.000	10.216	65969.52	0.0297	P	1.3
5	☐	100.000	104.779	663657.08	0.3018	P	2.1
6	☐	200.000	197.601	1199502.30	0.5690	A	2.8

y = 0.0029 * x + 2.5894E-004
R = 0.9996
DL = 0.03227
BEC = 0.08997

Weight: <None>
Min Conc: <None>

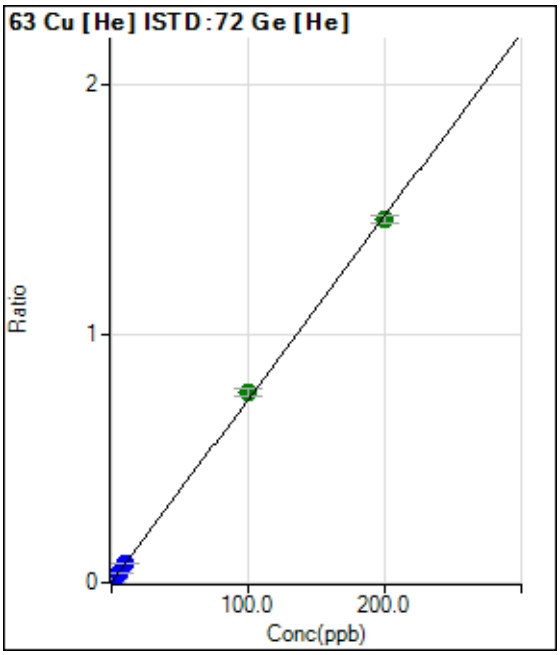
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3397.15	0.0006	P	1.8
2	☐	2.000	2.139	60263.94	0.0115	P	5.5
3	☐	5.000	5.163	140064.71	0.0269	P	1.7
4	☐	10.000	10.539	280724.04	0.0543	P	0.9
5	☐	100.000	106.002	2775676.42	0.5404	A	1.7
6	☐	200.000	196.967	5037572.53	1.0035	A	3.0

y = 0.0051 * x + 6.4557E-004
R = 0.9994
DL = 0.006949
BEC = 0.1268

Weight: <None>
Min Conc: <None>

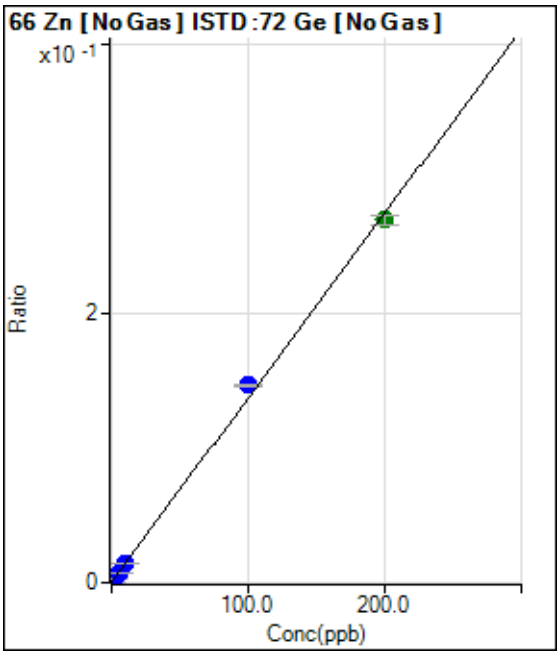


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1910.17	0.0008	P	9.8
2	☐	2.000	2.009	35576.95	0.0156	P	0.8
3	☐	5.000	4.821	82288.79	0.0363	P	2.0
4	☐	10.000	10.225	169251.72	0.0761	P	1.3
5	☐	100.000	103.954	1683425.70	0.7660	A	4.1
6	☐	200.000	198.016	3074301.73	1.4583	A	2.1

y = 0.0074 * x + 8.4016E-004
R = 0.9997
DL = 0.03371
BEC = 0.1141

Weight: <None>
Min Conc: <None>

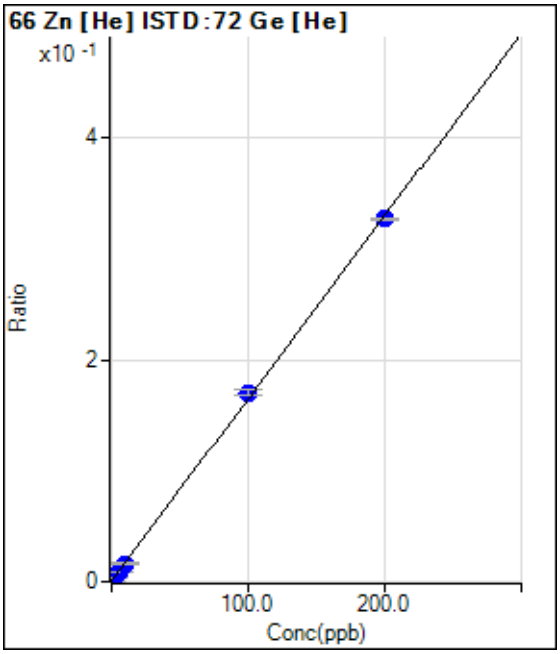
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2200.22	0.0004	P	6.5
2	☐	2.000	2.005	16520.35	0.0032	P	2.5
3	☐	5.000	4.988	37669.28	0.0072	P	2.4
4	☐	10.000	10.167	74065.53	0.0143	P	2.0
5	☐	100.000	106.788	752685.43	0.1465	P	1.0
6	☐	200.000	196.598	1352343.00	0.2694	A	2.9

y = 0.0014 * x + 4.1822E-004
R = 0.9992
DL = 0.05956
BEC = 0.3057

Weight: <None>
Min Conc: <None>

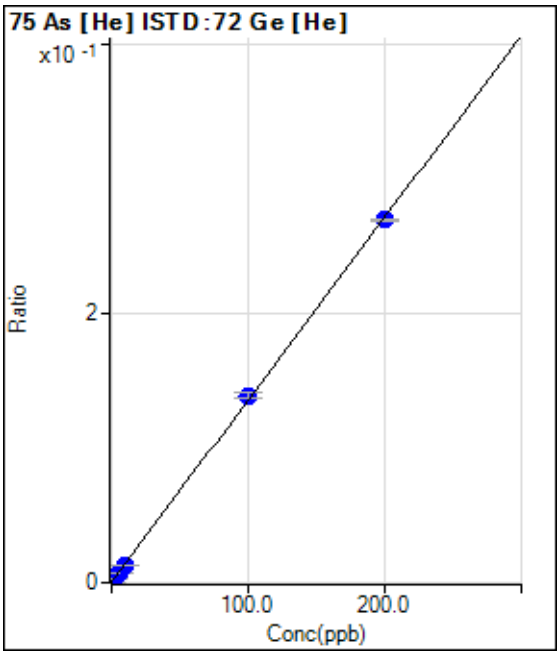


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1243.42	0.0005	P	5.9
2	☐	2.000	1.778	7899.11	0.0035	P	5.4
3	☐	5.000	4.750	18923.46	0.0084	P	3.2
4	☐	10.000	9.561	36165.17	0.0163	P	2.6
5	☐	100.000	103.146	373838.75	0.1701	P	3.2
6	☐	200.000	198.457	688765.25	0.3267	P	0.6

y = 0.0016 * x + 5.4674E-004
R = 0.9998
DL = 0.0584
BEC = 0.3327

Weight: <None>
Min Conc: <None>

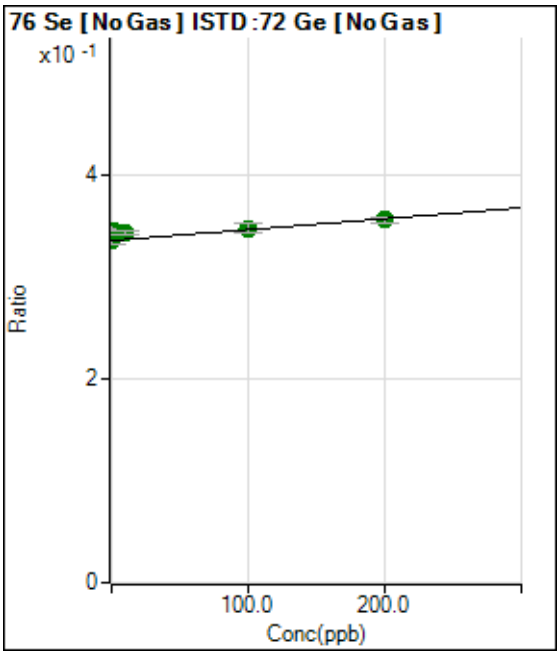
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1060.05	0.0005	P	4.2
2	☐	2.000	1.882	6852.89	0.0030	P	2.4
3	☐	5.000	4.644	15284.22	0.0067	P	0.7
4	☐	10.000	9.524	29673.65	0.0133	P	1.2
5	☐	100.000	102.496	305694.27	0.1390	P	2.4
6	☐	200.000	198.786	567591.37	0.2692	P	0.5

y = 0.0014 * x + 4.6590E-004
R = 0.9999
DL = 0.04371
BEC = 0.3446

Weight: <None>
Min Conc: <None>

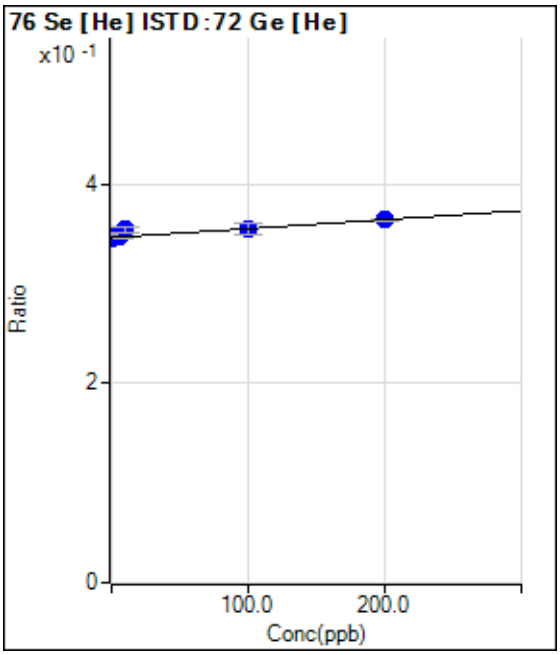


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1770125.18	0.3364	A	2.1
2	☐	2.000	95.583	1811950.50	0.3467	A	2.0
3	☐	5.000	77.884	1793255.13	0.3448	A	1.6
4	☐	10.000	75.502	1781008.88	0.3445	A	1.3
5	☐	100.000	110.732	1789169.77	0.3483	A	2.7
6	☐	200.000	188.601	1790787.37	0.3567	A	1.3

y = 1.0729E-004 * x + 0.3364
R = 0.8486
DL = 200.7
BEC = 3136

Weight: <None>
Min Conc: <None>

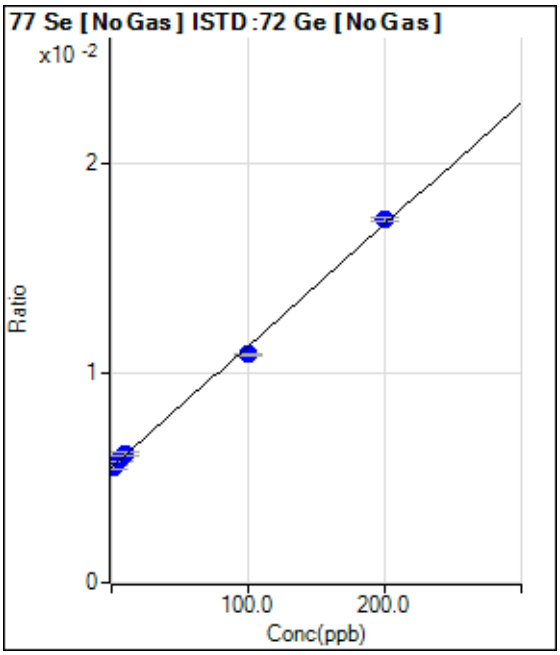
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	787302.91	0.3460	P	1.9
2	☐	2.000	15.447	790951.08	0.3474	P	1.5
3	☐	5.000	11.160	786266.86	0.3470	P	0.9
4	☐	10.000	86.792	786957.85	0.3538	P	1.3
5	☐	100.000	98.519	780148.76	0.3549	P	3.0
6	☐	200.000	196.612	766893.87	0.3638	P	0.4

y = 9.0411E-005 * x + 0.3460
R = 0.9264
DL = 213.6
BEC = 3827

Weight: <None>
Min Conc: <None>

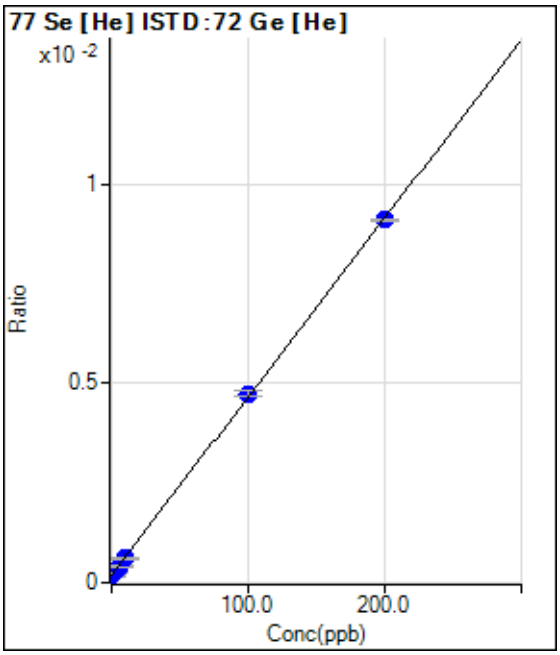


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28994.89	0.0055	P	2.7
2	☐	2.000	0.742	29015.07	0.0056	P	3.3
3	☐	5.000	6.601	30645.35	0.0059	P	4.4
4	☐	10.000	10.599	31664.42	0.0061	P	2.9
5	☐	100.000	92.803	55996.41	0.0109	P	1.0
6	☐	200.000	203.541	87022.99	0.0173	P	1.1

y = 5.8087E-005 * x + 0.0055
R = 0.9990
DL = 7.693
BEC = 94.85

Weight: <None>
Min Conc: <None>

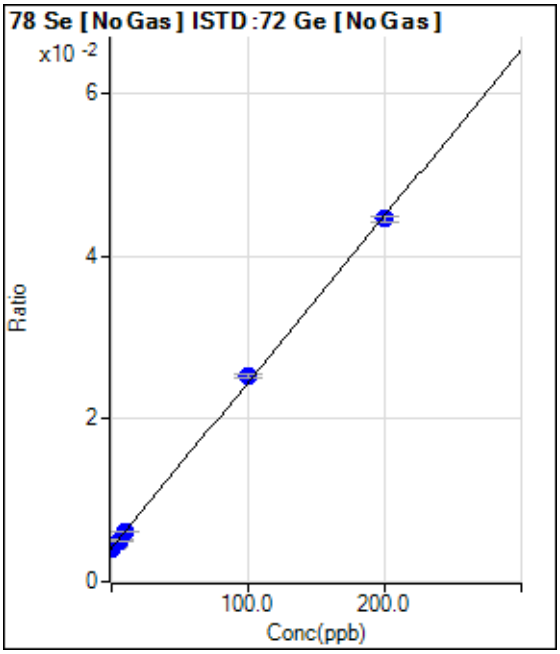
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.68	0.0002	P	23.4
2	☐	2.000	1.488	586.69	0.0003	P	9.1
3	☐	5.000	4.640	903.39	0.0004	P	9.2
4	☐	10.000	9.362	1356.76	0.0006	P	7.0
5	☐	100.000	101.759	10430.94	0.0047	P	2.9
6	☐	200.000	199.166	19190.68	0.0091	P	0.7

y = 4.4743E-005 * x + 1.9117E-004
R = 0.9999
DL = 2.993
BEC = 4.273

Weight: <None>
Min Conc: <None>

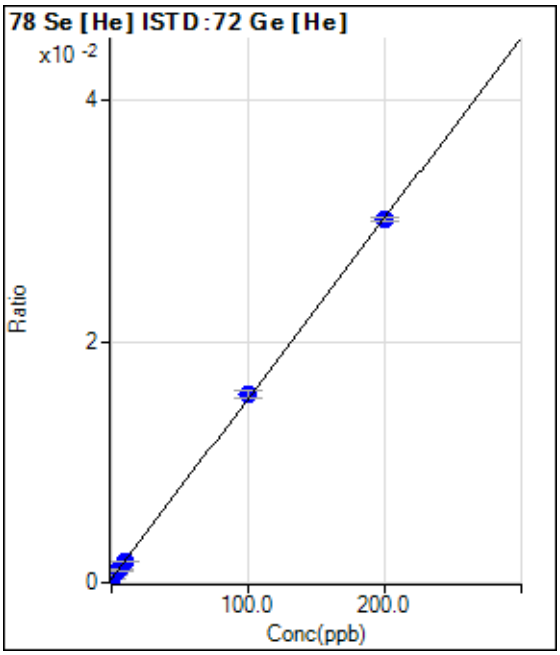


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21641.03	0.0041	P	3.0
2	☐	2.000	1.658	23263.69	0.0045	P	3.5
3	☐	5.000	4.499	26175.86	0.0050	P	2.6
4	☐	10.000	9.818	31637.48	0.0061	P	2.8
5	☐	100.000	103.742	130101.17	0.0253	P	1.2
6	☐	200.000	198.154	224090.91	0.0446	P	1.3

y = 2.0449E-004 * x + 0.0041
R = 0.9997
DL = 1.794
BEC = 20.11

Weight: <None>
Min Conc: <None>

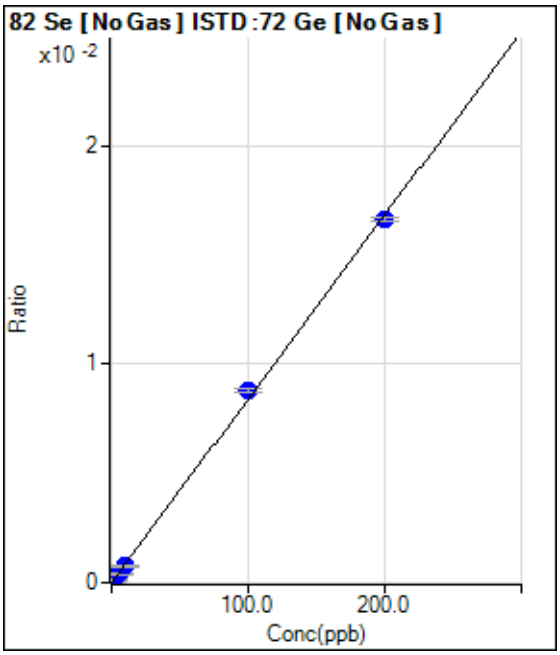
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	785.36	0.0003	P	10.6
2	☐	2.000	2.087	1498.09	0.0007	P	3.8
3	☐	5.000	4.663	2363.55	0.0010	P	3.1
4	☐	10.000	9.716	4000.60	0.0018	P	1.3
5	☐	100.000	102.154	34336.89	0.0156	P	4.4
6	☐	200.000	198.945	63459.09	0.0301	P	1.1

y = 1.4957E-004 * x + 3.4557E-004
R = 0.9999
DL = 0.7335
BEC = 2.31

Weight: <None>
Min Conc: <None>

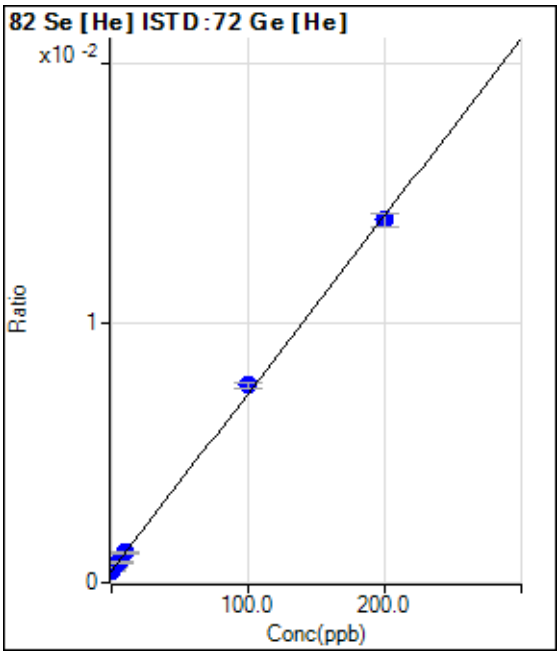


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-24.57	0.0000	P	-697.8
2	☐	2.000	1.531	650.09	0.0001	P	67.9
3	☐	5.000	4.794	2072.76	0.0004	P	3.8
4	☐	10.000	8.969	3875.77	0.0007	P	10.2
5	☐	100.000	105.007	45358.12	0.0088	P	1.9
6	☐	200.000	197.558	83432.08	0.0166	P	1.2

y = 8.4139E-005 * x - 4.7807E-006
R = 0.9995
DL = 1.189
BEC = -0.05682

Weight: <None>
Min Conc: <None>

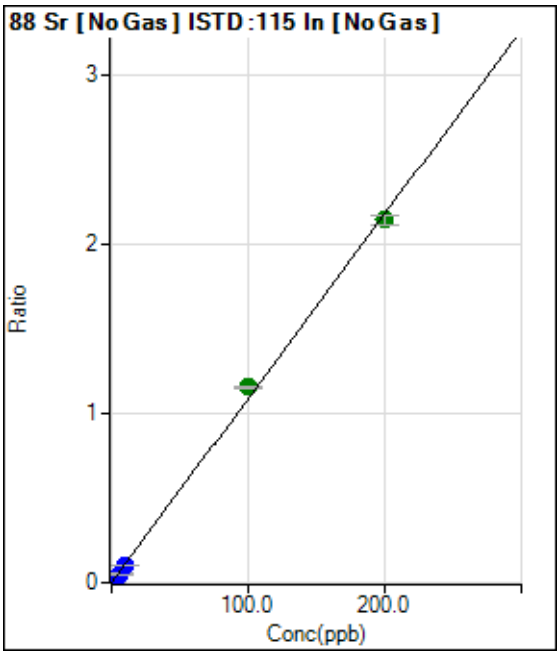
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1033.39	0.0005	P	16.7
2	☐	2.000	1.863	1326.76	0.0006	P	5.8
3	☐	5.000	4.817	1776.81	0.0008	P	9.8
4	☐	10.000	10.415	2596.97	0.0012	P	6.6
5	☐	100.000	104.445	16710.59	0.0076	P	2.9
6	☐	200.000	197.763	29482.79	0.0140	P	3.9

y = 6.8414E-005 * x + 4.5515E-004
R = 0.9996
DL = 3.332
BEC = 6.653

Weight: <None>
Min Conc: <None>

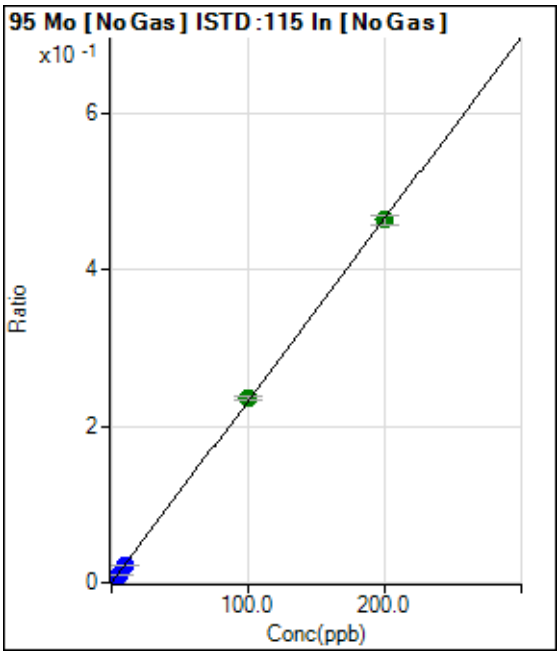


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1416.77	0.0002	P	10.1
2	☐	2.000	1.905	124937.23	0.0210	P	0.9
3	☐	5.000	4.631	299025.63	0.0506	P	2.1
4	☐	10.000	9.622	607323.80	0.1050	P	1.4
5	☐	100.000	106.136	6575219.70	1.1555	A	1.5
6	☐	200.000	196.961	11826581.90	2.1441	A	2.6

y = 0.0109 * x + 2.3950E-004
R = 0.9993
DL = 0.00667
BEC = 0.022

Weight: <None>
Min Conc: <None>

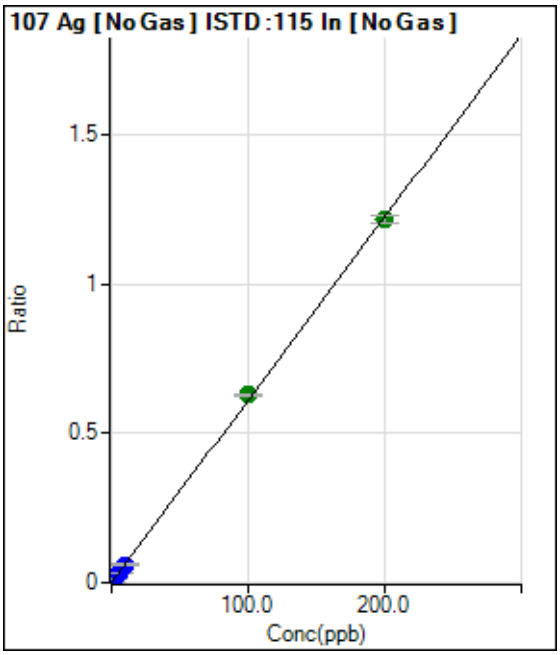
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0000	P	14.8
2	☐	2.000	1.941	27001.21	0.0045	P	2.2
3	☐	5.000	4.687	64403.22	0.0109	P	1.5
4	☐	10.000	9.764	131330.04	0.0227	P	1.5
5	☐	100.000	101.175	1337136.18	0.2350	A	1.7
6	☐	200.000	199.433	2555068.03	0.4632	A	2.6

y = 0.0023 * x + 2.4229E-005
R = 1.0000
DL = 0.004638
BEC = 0.01043

Weight: <None>
Min Conc: <None>

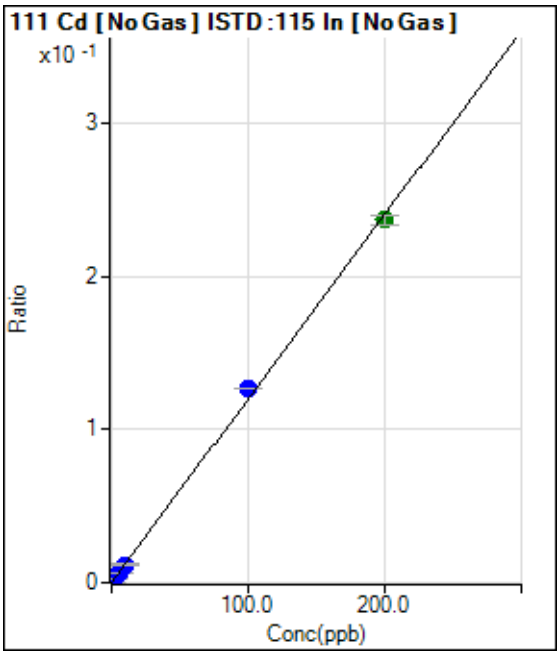


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.01	0.0001	P	11.9
2	☐	2.000	1.989	72860.66	0.0122	P	0.1
3	☐	5.000	4.852	175633.34	0.0298	P	2.5
4	☐	10.000	9.980	353652.78	0.0611	P	0.3
5	☐	100.000	102.668	3574630.88	0.6282	A	1.1
6	☐	200.000	198.671	6704951.98	1.2155	A	2.1

y = 0.0061 * x + 6.7657E-005
R = 0.9999
DL = 0.003942
BEC = 0.01106

Weight: <None>
Min Conc: <None>

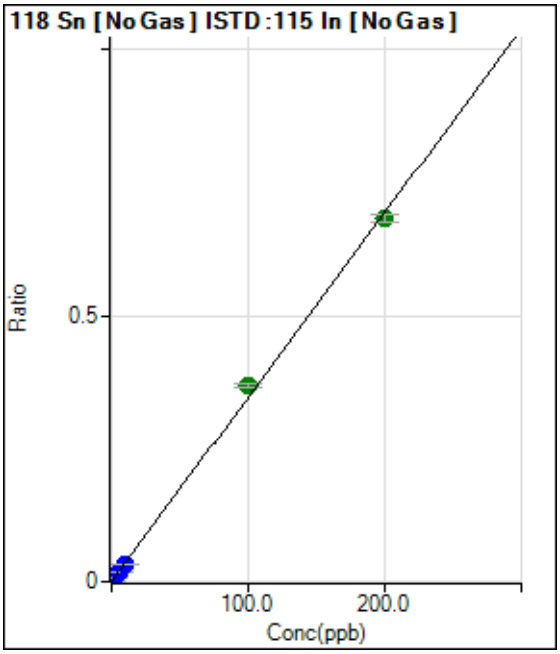
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	57.9
2	☐	2.000	2.014	14428.14	0.0024	P	2.1
3	☐	5.000	4.801	34047.74	0.0058	P	2.9
4	☐	10.000	9.796	68042.21	0.0118	P	2.9
5	☐	100.000	105.503	720480.15	0.1266	P	0.8
6	☐	200.000	197.263	1305740.34	0.2367	A	3.0

y = 0.0012 * x + 6.2238E-006
R = 0.9995
DL = 0.009001
BEC = 0.005187

Weight: <None>
Min Conc: <None>

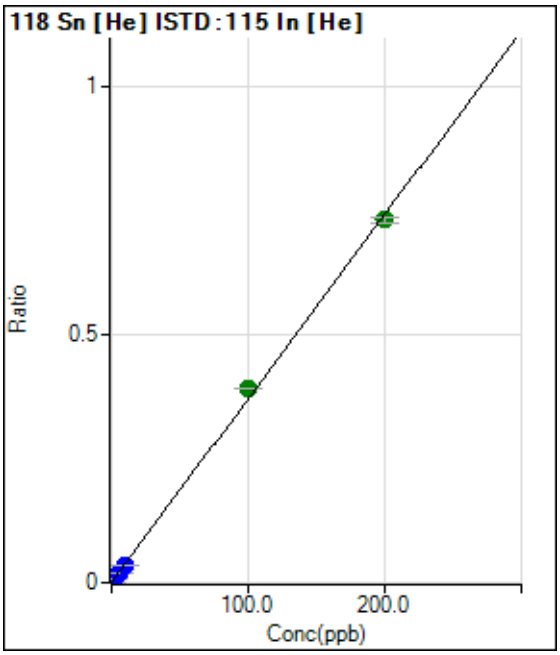


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2760.35	0.0005	P	1.3
2	☐	2.000	1.849	40864.57	0.0069	P	3.7
3	☐	5.000	4.587	96439.67	0.0163	P	0.8
4	☐	10.000	9.594	194690.28	0.0337	P	1.2
5	☐	100.000	106.425	2097683.04	0.3686	A	1.4
6	☐	200.000	196.820	3758148.59	0.6812	A	2.3

y = 0.0035 * x + 4.6652E-004
R = 0.9992
DL = 0.005395
BEC = 0.1349

Weight: <None>
Min Conc: <None>

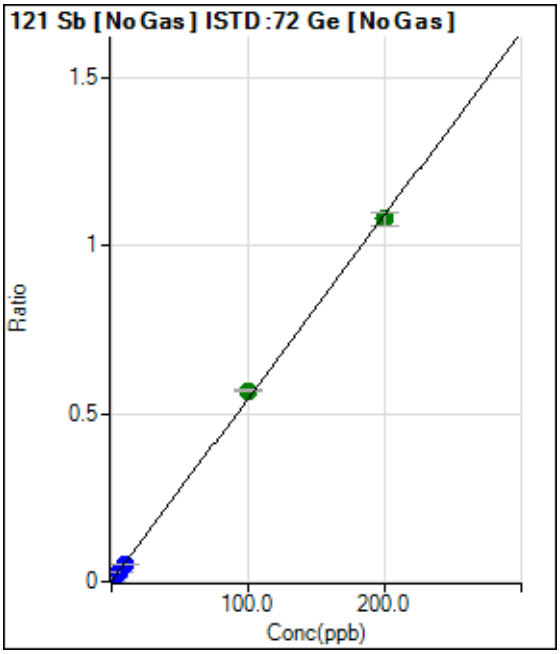
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2040.21	0.0005	P	8.1
2	☐	2.000	1.838	28848.83	0.0073	P	1.9
3	☐	5.000	4.655	68970.85	0.0178	P	2.4
4	☐	10.000	9.470	139540.48	0.0356	P	1.2
5	☐	100.000	105.530	1474248.42	0.3915	A	0.8
6	☐	200.000	197.272	2696574.12	0.7314	A	1.2

y = 0.0037 * x + 5.1823E-004
R = 0.9994
DL = 0.03398
BEC = 0.1399

Weight: <None>
Min Conc: <None>

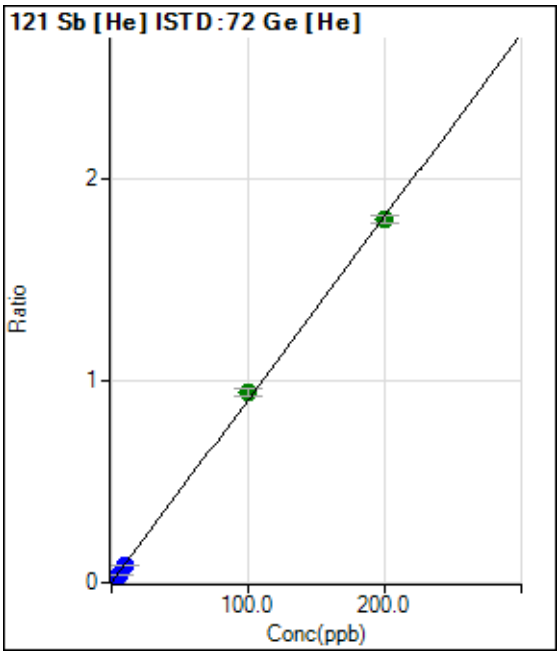


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2857.04	0.0005	P	8.6
2	☐	2.000	1.934	57918.06	0.0111	P	0.9
3	☐	5.000	4.720	136597.78	0.0263	P	1.4
4	☐	10.000	9.686	275654.26	0.0533	P	1.2
5	☐	100.000	104.061	2916104.12	0.5676	A	0.7
6	☐	200.000	197.993	5418768.04	1.0796	A	3.4

y = 0.0054 * x + 5.4291E-004
R = 0.9997
DL = 0.02574
BEC = 0.09962

Weight: <None>
Min Conc: <None>

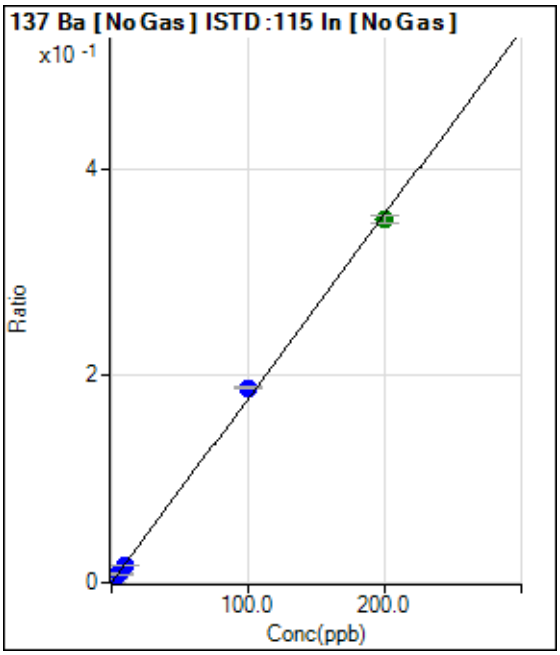
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1953.52	0.0009	P	9.4
2	☐	2.000	1.851	40188.56	0.0176	P	1.1
3	☐	5.000	4.506	94546.48	0.0417	P	1.6
4	☐	10.000	9.429	192113.75	0.0864	P	1.5
5	☐	100.000	103.702	2068800.33	0.9414	A	4.5
6	☐	200.000	198.192	3791168.90	1.7984	A	2.1

y = 0.0091 * x + 8.5945E-004
R = 0.9997
DL = 0.02679
BEC = 0.09476

Weight: <None>
Min Conc: <None>

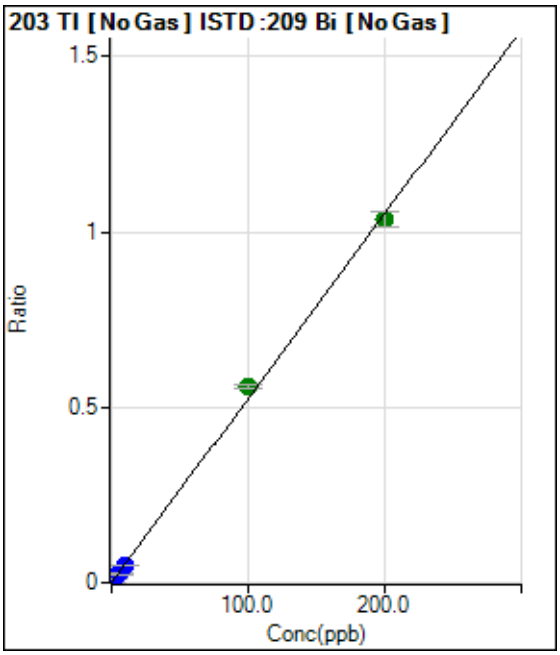


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	483.35	0.0001	P	20.0
2	☐	2.000	1.932	20977.29	0.0035	P	1.0
3	☐	5.000	4.684	49715.79	0.0084	P	2.3
4	☐	10.000	9.746	100871.37	0.0174	P	1.7
5	☐	100.000	105.909	1073440.61	0.1886	P	1.3
6	☐	200.000	197.067	1935938.46	0.3509	A	2.1

y = 0.0018 * x + 8.1788E-005
R = 0.9994
DL = 0.02758
BEC = 0.04594

Weight: <None>
Min Conc: <None>

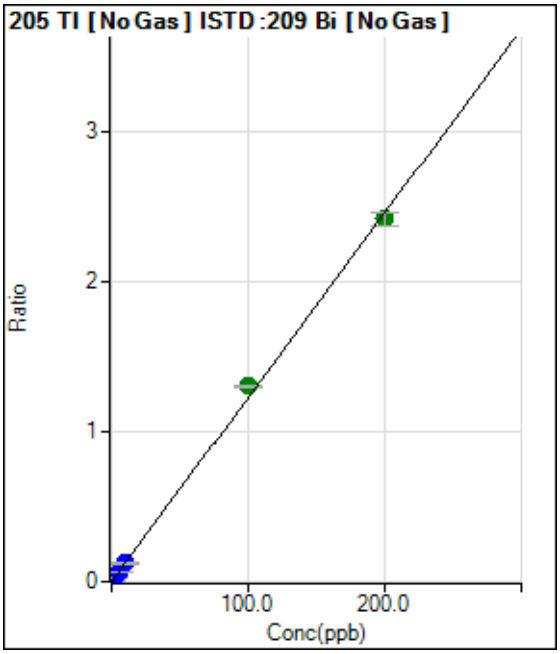
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	600.03	0.0001	P	5.3
2	☐	2.000	1.868	43937.90	0.0100	P	2.3
3	☐	5.000	4.709	108626.94	0.0249	P	2.0
4	☐	10.000	9.749	219480.55	0.0513	P	2.3
5	☐	100.000	106.264	2402184.34	0.5583	A	2.1
6	☐	200.000	196.889	4327497.02	1.0343	A	4.3

y = 0.0053 * x + 1.4142E-004
R = 0.9993
DL = 0.004286
BEC = 0.02692

Weight: <None>
Min Conc: <None>

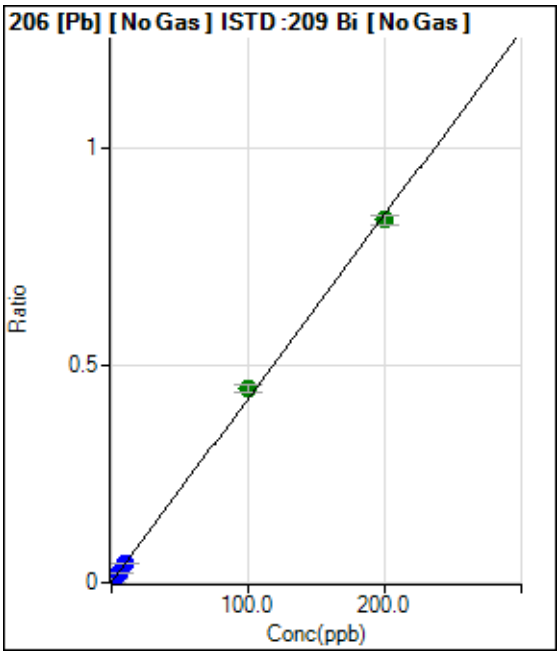


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1303.43	0.0003	P	8.1
2	☐	2.000	1.925	105819.16	0.0240	P	2.2
3	☐	5.000	4.808	259383.53	0.0594	P	1.8
4	☐	10.000	10.014	527400.60	0.1234	P	2.9
5	☐	100.000	106.067	5610584.08	1.3039	A	1.2
6	☐	200.000	196.972	10131424.22	2.4212	A	3.6

y = 0.0123 * x + 3.0650E-004
R = 0.9993
DL = 0.006026
BEC = 0.02494

Weight: <None>
Min Conc: <None>

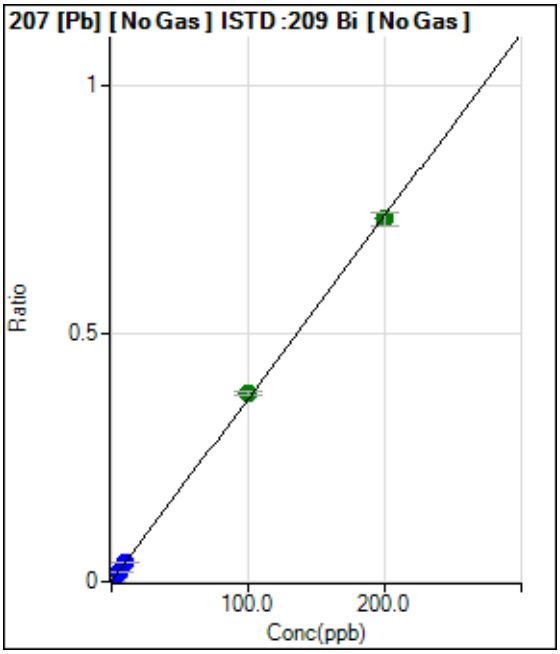
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4557.60	0.0011	P	7.7
2	☐	2.000	1.965	41379.51	0.0094	P	3.0
3	☐	5.000	4.868	94442.53	0.0216	P	2.4
4	☐	10.000	10.118	187232.41	0.0438	P	2.2
5	☐	100.000	105.472	1921340.02	0.4465	A	3.6
6	☐	200.000	197.262	3490609.22	0.8341	A	2.5

y = 0.0042 * x + 0.0011
R = 0.9995
DL = 0.05853
BEC = 0.2545

Weight: <None>
Min Conc: <None>

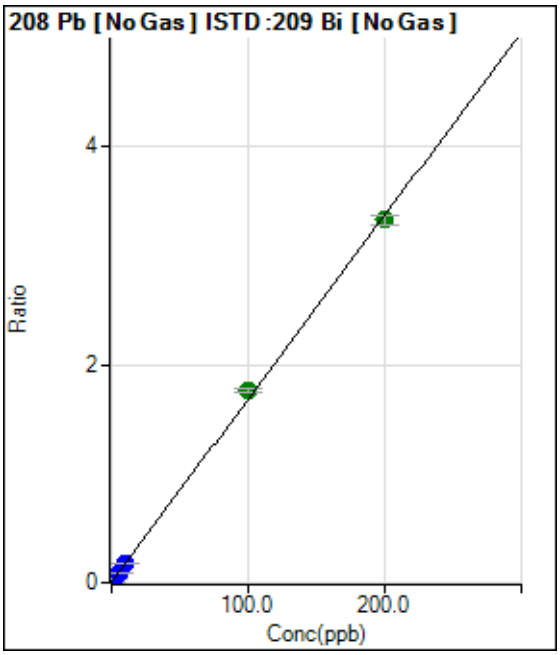


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3347.18	0.0008	P	1.7
2	☐	2.000	2.013	36236.61	0.0082	P	1.8
3	☐	5.000	4.780	80329.91	0.0184	P	1.2
4	☐	10.000	10.104	162475.20	0.0380	P	1.2
5	☐	100.000	103.022	1636216.69	0.3803	A	2.0
6	☐	200.000	198.489	3062974.12	0.7319	A	3.6

y = 0.0037 * x + 7.8819E-004
R = 0.9998
DL = 0.01099
BEC = 0.214

Weight: <None>
Min Conc: <None>

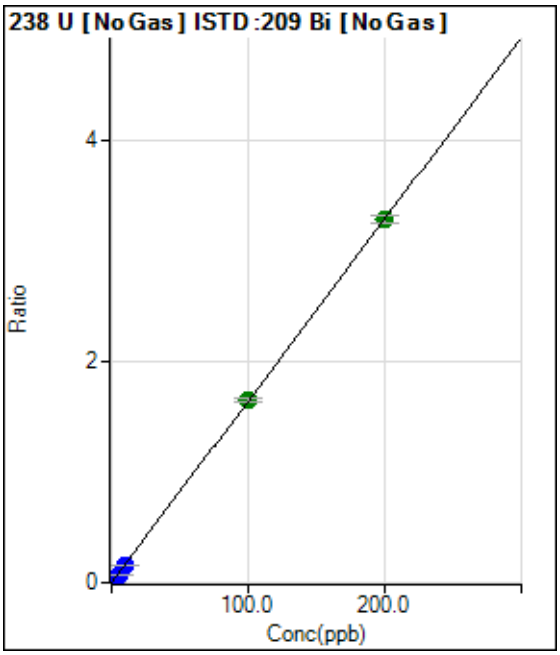
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16494.56	0.0039	P	1.9
2	☐	2.000	2.001	165746.71	0.0375	P	1.0
3	☐	5.000	4.839	372363.76	0.0853	P	0.8
4	☐	10.000	10.021	737044.58	0.1724	P	0.8
5	☐	100.000	104.590	7585713.84	1.7628	A	1.6
6	☐	200.000	197.708	13930658.65	3.3289	A	2.9

y = 0.0168 * x + 0.0039
R = 0.9996
DL = 0.01296
BEC = 0.231

Weight: <None>
Min Conc: <None>

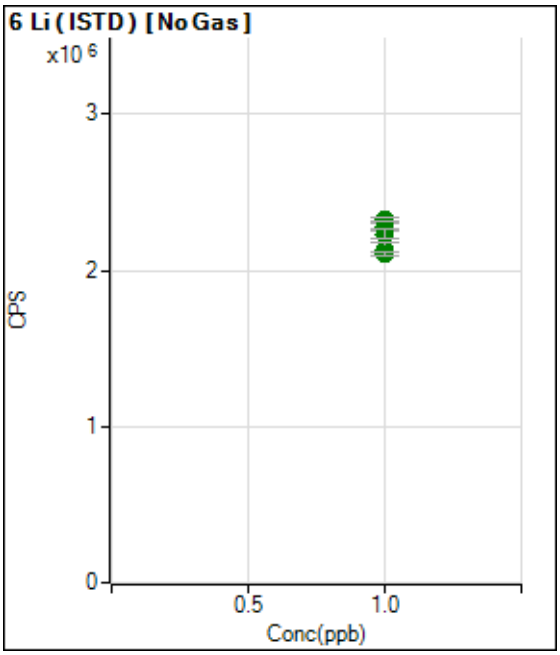


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.00	0.0000	P	31.6
2	☐	2.000	1.848	133810.75	0.0303	P	2.0
3	☐	5.000	4.578	327792.94	0.0751	P	1.7
4	☐	10.000	9.516	666942.10	0.1560	P	0.4
5	☐	100.000	100.584	7094961.56	1.6489	A	1.8
6	☐	200.000	199.744	13703442.30	3.2743	A	2.2

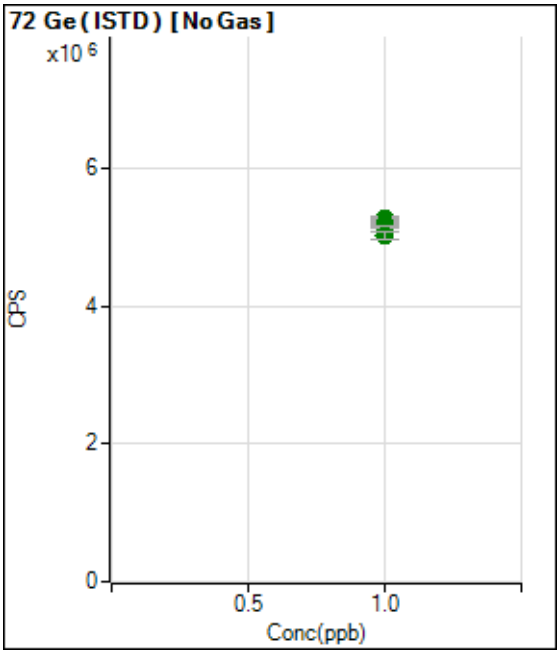
y = 0.0164 * x + 2.1313E-005
R = 1.0000
DL = 0.001231
BEC = 0.0013

Weight: <None>
Min Conc: <None>

Calibration for 017_ICV.d

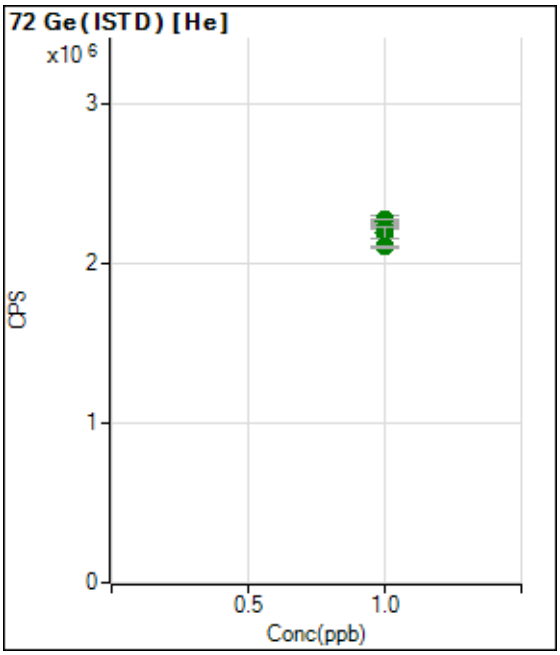


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2322552.60		A	1.3
2	☐	1.000		2280141.89		A	2.5
3	☐	1.000		2257938.62		A	0.7
4	☐	1.000		2232507.32		A	2.4
5	☐	1.000		2131478.51		A	4.0
6	☐	1.000		2103189.02		A	1.4

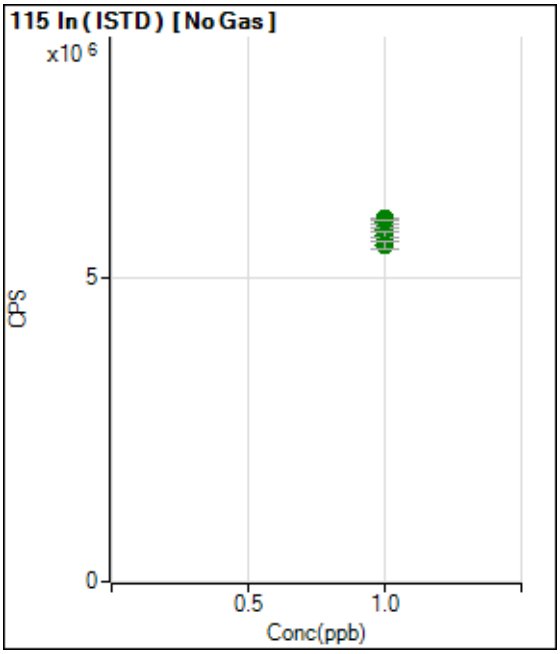


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5261859.72		A	0.9
2	☐	1.000		5227582.84		A	2.0
3	☐	1.000		5200758.88		A	0.4
4	☐	1.000		5169076.90		A	0.4
5	☐	1.000		5136992.63		A	0.7
6	☐	1.000		5021428.99		A	1.8

Calibration for 017_ICV.d

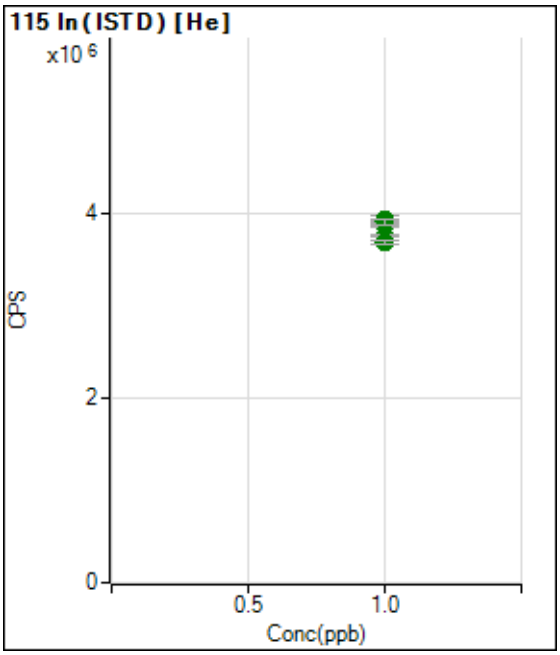


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2276212.67		A	2.3
2	☐	1.000		2277107.78		A	0.8
3	☐	1.000		2265933.61		A	1.1
4	☐	1.000		2224133.56		A	0.3
5	☐	1.000		2199753.56		A	3.3
6	☐	1.000		2108248.04		A	0.4

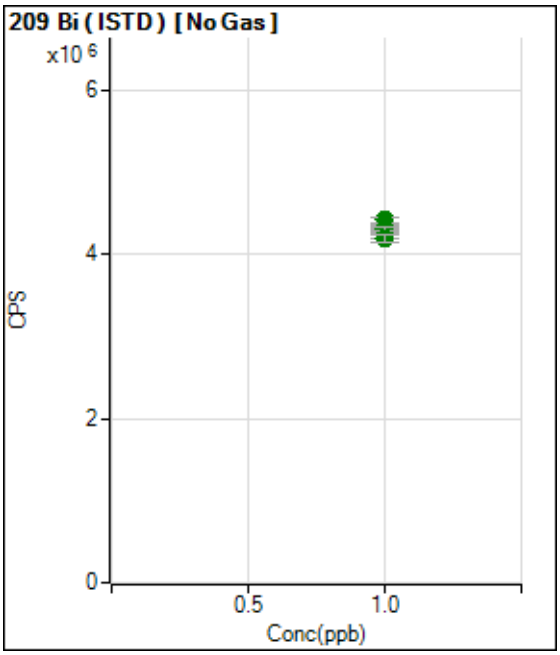


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5917508.77		A	1.2
2	☐	1.000		5956148.02		A	0.8
3	☐	1.000		5904424.75		A	1.0
4	☐	1.000		5786200.70		A	1.2
5	☐	1.000		5691117.14		A	1.6
6	☐	1.000		5518199.79		A	2.4

Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3932094.75		A	2.3
2	☐	1.000		3936145.10		A	0.4
3	☐	1.000		3882334.05		A	1.2
4	☐	1.000		3919461.73		A	1.6
5	☐	1.000		3765650.62		A	0.9
6	☐	1.000		3687172.24		A	1.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4246459.21		A	2.7
2	☐	1.000		4415511.91		A	1.8
3	☐	1.000		4366821.71		A	0.7
4	☐	1.000		4274790.56		A	0.7
5	☐	1.000		4303190.25		A	1.1
6	☐	1.000		4186397.75		A	2.1

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	010CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:13:39-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	No Gas	138651	0.00
Be	9	1	No Gas	25	138.56
V	51	2	He	22243	0.01
Cr	52	2	He	5488	0.10
Fe	56	2	He	34237	0.00
Se	78	2	He	785	1.05
Sn	118	2	He	2040	0.51
As	75	2	He	1060	0.31
Ca	44	2	He	1577	0.55
Na	23	2	He	131515	0.00
Mg	24	2	He	1563	0.26
K	39	2	He	226944	0.00
Mn	55	2	He	3017	0.15
Co	59	2	He	730	2.09
Ni	60	2	He	590	2.28
Cu	63	2	He	1910	0.43
Zn	66	2	He	1243	0.29
Al	27	2	He	1783	0.67
B	11	1	No Gas	81587	0.00
Al	27	1	No Gas	37816	0.00
Si	28	1	No Gas	607905	0.00
P	31	1	No Gas	42335	0.00
Ag	107	1	No Gas	400	2.72
Cd	111	1	No Gas	37	154.83
Sr	88	1	No Gas	1417	0.68
Mo	95	1	No Gas	143	10.13
Sn	118	1	No Gas	2760	0.02
Sb	121	1	No Gas	2857	0.31
Ba	137	1	No Gas	483	3.98
Tl	205	1	No Gas	1303	0.83
Tl	203	1	No Gas	600	0.56
Pb	208	1	No Gas	16495	0.01
U	238	1	No Gas	90	32.66
Ca	43	2	He	60	27.78
Sb	121	2	He	1954	0.36
Ti	47	2	He	23	280.57
Cu	63	1	No Gas	3397	0.07

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	No Gas	2322553	1.28
Ge	72	2	He	2276213	2.29

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	No Gas	5261860	0.93
In	115	1	No Gas	5917509	1.23
Bi	209	1	No Gas	4246459	2.71

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	011CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:15:31-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	14808	0.02
V	51	2	He	55619	0.00
Cr	52	2	He	42901	0.00
Fe	56	2	He	3605188	0.00
Se	78	2	He	1498	0.31
Sn	118	2	He	28849	0.01
As	75	2	He	6853	0.03
Ca	44	2	He	29151	0.01
Na	23	2	He	744566	0.00
Mg	24	2	He	390762	0.00
K	39	2	He	796047	0.00
Mn	55	2	He	35660	0.00
Co	59	2	He	53586	0.00
Ni	60	2	He	13600	0.02
Cu	63	2	He	35577	0.00
Zn	66	2	He	7899	0.07
Al	27	2	He	4557	0.11
B	11	1	No Gas	120646	0.00
Al	27	1	No Gas	101082	0.00
Si	28	1	No Gas	776954	0.00
P	31	1	No Gas	57673	0.00
Ag	107	1	No Gas	72861	0.00
Cd	111	1	No Gas	14428	0.01
Sr	88	1	No Gas	124937	0.00
Mo	95	1	No Gas	27001	0.01
Sn	118	1	No Gas	40865	0.01
Sb	121	1	No Gas	57918	0.00
Ba	137	1	No Gas	20977	0.00
Tl	205	1	No Gas	105819	0.00
Tl	203	1	No Gas	43938	0.00
Pb	208	1	No Gas	165747	0.00
U	238	1	No Gas	133811	0.00
Ca	43	2	He	1727	0.19
Sb	121	2	He	40189	0.00
Cu	63	1	No Gas	60264	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2280142	2.51	2322553	98.17	70	120	

Calibration Standard Report

Ge	72	2	He	2277108	0.81	2276213	100.04	70	120	
Ge	72	1	No Gas	5227583	1.99	5261860	99.35	70	120	
In	115	1	No Gas	5956148	0.82	5917509	100.65	70	120	
Bi	209	1	No Gas	4415512	1.80	4246459	103.98	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	012CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:17:22-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	35555	0.00
V	51	2	He	103874	0.00
Cr	52	2	He	97375	0.00
Fe	56	2	He	8524386	0.00
Se	78	2	He	2364	0.15
Sn	118	2	He	68971	0.00
As	75	2	He	15284	0.01
Ca	44	2	He	68765	0.00
Na	23	2	He	1569160	0.00
Mg	24	2	He	909184	0.00
K	39	2	He	1583204	0.00
Mn	55	2	He	82928	0.00
Co	59	2	He	131033	0.00
Ni	60	2	He	32747	0.00
Cu	63	2	He	82289	0.00
Zn	66	2	He	18923	0.01
Al	27	2	He	8596	0.03
B	11	1	No Gas	180799	0.00
Al	27	1	No Gas	195588	0.00
Si	28	1	No Gas	1013613	0.00
P	31	1	No Gas	80000	0.00
Ag	107	1	No Gas	175633	0.00
Cd	111	1	No Gas	34048	0.01
Sr	88	1	No Gas	299026	0.00
Mo	95	1	No Gas	64403	0.00
Sn	118	1	No Gas	96440	0.00
Sb	121	1	No Gas	136598	0.00
Ba	137	1	No Gas	49716	0.00
Tl	205	1	No Gas	259384	0.00
Tl	203	1	No Gas	108627	0.00
Pb	208	1	No Gas	372364	0.00
U	238	1	No Gas	327793	0.00
Ca	43	2	He	3981	0.09
Sb	121	2	He	94546	0.00
Cu	63	1	No Gas	140065	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2257939	0.69	2322553	97.22	70	120	

Calibration Standard Report

Ge	72	2	He	2265934	1.12	2276213	99.55	70	120	
Ge	72	1	No Gas	5200759	0.39	5261860	98.84	70	120	
In	115	1	No Gas	5904425	0.98	5917509	99.78	70	120	
Bi	209	1	No Gas	4366822	0.72	4246459	102.83	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/100
Data File Name	013CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:19:14-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	72522	0.00
V	51	2	He	188014	0.00
Cr	52	2	He	191355	0.00
Fe	56	2	He	17504882	0.00
Se	78	2	He	4001	0.03
Sn	118	2	He	139540	0.00
As	75	2	He	29674	0.00
Ca	44	2	He	137756	0.00
Na	23	2	He	3006280	0.00
Mg	24	2	He	1837404	0.00
K	39	2	He	2963182	0.00
Mn	55	2	He	164328	0.00
Co	59	2	He	264242	0.00
Ni	60	2	He	65970	0.00
Cu	63	2	He	169252	0.00
Zn	66	2	He	36165	0.01
Al	27	2	He	15506	0.02
B	11	1	No Gas	285981	0.00
Al	27	1	No Gas	363114	0.00
Si	28	1	No Gas	1413035	0.00
P	31	1	No Gas	119108	0.00
Ag	107	1	No Gas	353653	0.00
Cd	111	1	No Gas	68042	0.00
Sr	88	1	No Gas	607324	0.00
Mo	95	1	No Gas	131330	0.00
Sn	118	1	No Gas	194690	0.00
Sb	121	1	No Gas	275654	0.00
Ba	137	1	No Gas	100871	0.00
Tl	205	1	No Gas	527401	0.00
Tl	203	1	No Gas	219481	0.00
Pb	208	1	No Gas	737045	0.00
U	238	1	No Gas	666942	0.00
Ca	43	2	He	8109	0.04
Sb	121	2	He	192114	0.00
Cu	63	1	No Gas	280724	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2232507	2.38	2322553	96.12	70	120	

Calibration Standard Report

Ge	72	2	He	2224134	0.31	2276213	97.71	70	120	
Ge	72	1	No Gas	5169077	0.38	5261860	98.24	70	120	
In	115	1	No Gas	5786201	1.22	5917509	97.78	70	120	
Bi	209	1	No Gas	4274791	0.67	4246459	100.67	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	014CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:21:05-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	740236	0.00
V	51	2	He	1732747	0.00
Cr	52	2	He	1880188	0.00
Fe	56	2	He	183639537	0.00
Se	78	2	He	34337	0.00
Sn	118	2	He	1474248	0.00
As	75	2	He	305694	0.00
Ca	44	2	He	1450291	0.00
Na	23	2	He	30466713	0.00
Mg	24	2	He	18719133	0.00
K	39	2	He	28801651	0.00
Mn	55	2	He	1680005	0.00
Co	59	2	He	2631616	0.00
Ni	60	2	He	663657	0.00
Cu	63	2	He	1683426	0.00
Zn	66	2	He	373839	0.00
Al	27	2	He	143996	0.00
B	11	1	No Gas	2250088	0.00
Al	27	1	No Gas	3228002	0.00
Si	28	1	No Gas	9244017	0.00
P	31	1	No Gas	823102	0.00
Ag	107	1	No Gas	3574631	0.00
Cd	111	1	No Gas	720480	0.00
Sr	88	1	No Gas	6575220	0.00
Mo	95	1	No Gas	1337136	0.00
Sn	118	1	No Gas	2097683	0.00
Sb	121	1	No Gas	2916104	0.00
Ba	137	1	No Gas	1073441	0.00
Tl	205	1	No Gas	5610584	0.00
Tl	203	1	No Gas	2402184	0.00
Pb	208	1	No Gas	7585714	0.00
U	238	1	No Gas	7094962	0.00
Ca	43	2	He	84972	0.00
Sb	121	2	He	2068800	0.00
Cu	63	1	No Gas	2775676	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2131479	4.01	2322553	91.77	70	120	

Calibration Standard Report

Ge	72	2	He	2199754	3.33	2276213	96.64	70	120	
Ge	72	1	No Gas	5136993	0.74	5261860	97.63	70	120	
In	115	1	No Gas	5691117	1.62	5917509	96.17	70	120	
Bi	209	1	No Gas	4303190	1.11	4246459	101.34	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	015CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:22:48-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	1384209	0.00
V	51	2	He	3197878	0.00
Cr	52	2	He	3557834	0.00
Fe	56	2	He	338560588	0.00
Se	78	2	He	63459	0.00
Sn	118	2	He	2696574	0.00
As	75	2	He	567591	0.00
Ca	44	2	He	2670654	0.00
Na	23	2	He	56662949	0.00
Mg	24	2	He	34881459	0.00
K	39	2	He	52900646	0.00
Mn	55	2	He	3099239	0.00
Co	59	2	He	4961166	0.00
Ni	60	2	He	1199502	0.00
Cu	63	2	He	3074302	0.00
Zn	66	2	He	688765	0.00
Al	27	2	He	258313	0.00
B	11	1	No Gas	4143239	0.00
Al	27	1	No Gas	5667920	0.00
Si	28	1	No Gas	15605840	0.00
P	31	1	No Gas	1509615	0.00
Ag	107	1	No Gas	6704952	0.00
Cd	111	1	No Gas	1305740	0.00
Sr	88	1	No Gas	11826582	0.00
Mo	95	1	No Gas	2555068	0.00
Sn	118	1	No Gas	3758149	0.00
Sb	121	1	No Gas	5418768	0.00
Ba	137	1	No Gas	1935938	0.00
Tl	205	1	No Gas	10131424	0.00
Tl	203	1	No Gas	4327497	0.00
Pb	208	1	No Gas	13930659	0.00
U	238	1	No Gas	13703442	0.00
Ca	43	2	He	155861	0.00
Sb	121	2	He	3791169	0.00
Cu	63	1	No Gas	5037573	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2103189	1.41	2322553	90.56	70	120	

Calibration Standard Report

Ge	72	2	He	2108248	0.45	2276213	92.62	70	120	
Ge	72	1	No Gas	5021429	1.84	5261860	95.43	70	120	
In	115	1	No Gas	5518200	2.44	5917509	93.25	70	120	
Bi	209	1	No Gas	4186398	2.08	4246459	98.59	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	017_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:40:31-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	105.950	1.260	3083901	1.55	100	105.9	90	110	
Be	9	1	No Gas	105.641	2.422	750933	1.71	100	105.6	90	110	
V	51	2	He	99.922	3.803	1710365	1.48	100	99.9	90	110	
Cr	52	2	He	98.486	1.516	1859399	1.36	100	98.5	90	110	
Fe	56	2	He	10016.759	2.284	180691931	1.19	10000	100.2	90	110	
Se	78	2	He	101.034	2.060	34447	0.86	100	101.0	90	110	
Sn	118	2	He	105.789	0.770	1497856	0.84	100	105.8	90	110	
As	75	2	He	103.741	1.867	313626	1.23	100	103.7	90	110	
Ca	44	2	He	10109.933	4.056	1438807	1.22	10000	101.1	90	110	
Na	23	2	He	10196.320	2.667	30771865	0.95	10000	102.0	90	110	
Mg	24	2	He	10235.708	1.002	18985636	2.15	10000	102.4	90	110	
K	39	2	He	10263.790	2.987	29028547	0.50	10000	102.6	90	110	
Mn	55	2	He	100.695	2.461	1663655	0.53	100	100.7	90	110	
Co	59	2	He	100.542	3.127	2645703	2.65	100	100.5	90	110	
Ni	60	2	He	102.741	2.128	659570	1.28	100	102.7	90	110	
Cu	63	2	He	103.226	2.640	1694921	0.83	100	103.2	90	110	
Zn	66	2	He	101.467	2.120	372887	2.00	100	101.5	90	110	
Al	27	2	He	100.246	2.867	139424	0.04	100	100.2	90	110	
B	11	1	No Gas	485.194	1.739	2190023	1.63	500	97.0	90	110	
Al	27	1	No Gas	104.308	2.846	3130159	3.19	100	104.3	90	110	
Si	28	1	No Gas	617.348	3.007	10395384	1.28	500	123.5	90	110	ICV Main CR1 Failed
P	31	1	No Gas	506.823	3.103	815053	1.71	500	101.4	90	110	
Ag	107	1	No Gas	104.068	0.484	3621948	1.19	100	104.1	90	110	
Cd	111	1	No Gas	102.833	0.548	701960	0.97	100	102.8	90	110	
Sr	88	1	No Gas	108.994	0.386	6750090	1.30	100	109.0	90	110	
Mo	95	1	No Gas	101.588	1.272	1342148	1.17	100	101.6	90	110	
Sn	118	1	No Gas	106.339	1.334	2094856	1.34	100	106.3	90	110	
Sb	121	1	No Gas	103.485	2.478	2920434	2.06	100	103.5	90	110	
Ba	137	1	No Gas	102.526	1.451	1038785	1.39	100	102.5	90	110	
Tl	205	1	No Gas	105.385	1.582	5497390	1.94	100	105.4	90	110	
Tl	203	1	No Gas	106.866	2.714	2382453	2.99	100	106.9	90	110	
Pb	208	1	No Gas	103.478	2.081	7400687	2.21	100	103.5	90	110	
U	238	1	No Gas	98.039	1.570	6819068	1.35	100	98.0	90	110	
Ca	43	2	He	10073.923	2.380	83758	0.93	10000	100.7	90	110	
Sb	121	2	He	101.911	1.949	2061889	1.62	100	101.9	90	110	
Ti	47	2	He	100.806	3.045	75443	0.70	100	100.8	90	110	
Cu	63	1	No Gas	107.588	1.490	2837334	0.31	100	107.6	90	110	

QC ISTD Table

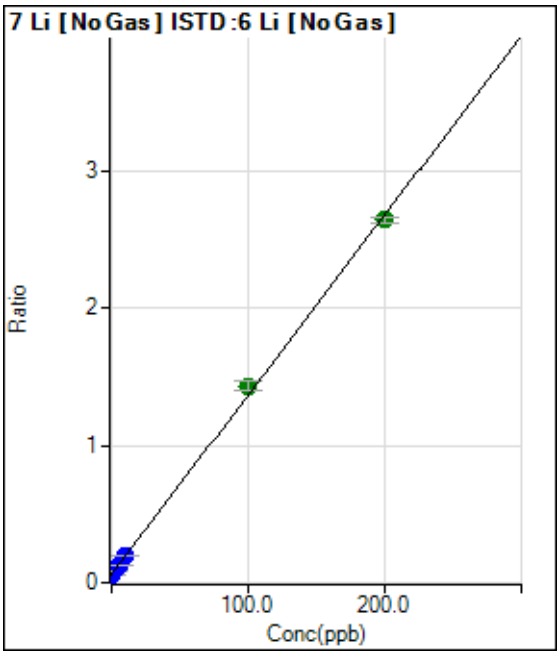
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2136349	2.10	2322553	91.98	70	120	
Ge	72	2	He	2229434	2.85	2276213	97.94	70	120	
Ge	72	1	No Gas	5174156	1.57	5261860	98.33	70	120	
In	115	1	No Gas	5688413	0.91	5917509	96.13	70	120	
Bi	209	1	No Gas	4243117	0.38	4246459	99.92	70	120	

Calibration for 017_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\102820A.b\
Analysis File: 102820A.batch.bin
DA Date-Time: 10/28/2020 9:48:30 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	010CALB.d	CAL BLK	10/28/2020 10:13:39 AM
2	011CALS.d	2/10/200	10/28/2020 10:15:31 AM
3	012CALS.d	5/25/500	10/28/2020 10:17:22 AM
4	013CALS.d	10/50/100	10/28/2020 10:19:14 AM
5	014CALS.d	100/500/10K	10/28/2020 10:21:05 AM
6	015CALS.d	200/1000/20K	10/28/2020 10:22:48 AM

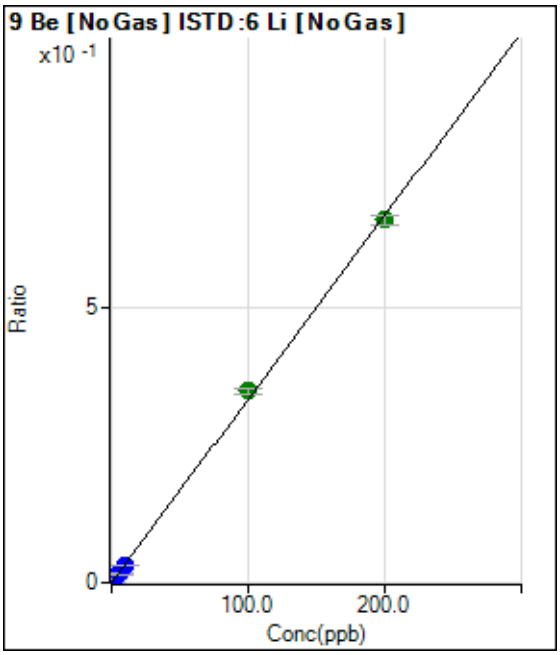
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	138650.82	0.0597	P	2.2
2	☐	2.000	2.069	197700.15	0.0867	P	2.4
3	☐	5.000	4.984	281818.78	0.1248	P	0.7
4	☐	10.000	10.232	431534.32	0.1934	P	2.2
5	☐	100.000	105.060	3048807.14	1.4321	A	4.5
6	☐	200.000	197.458	5549578.46	2.6391	A	1.7

y = 0.0131 * x + 0.0597
R = 0.9995
DL = 0.3042
BEC = 4.571

Weight: <None>
Min Conc: <None>

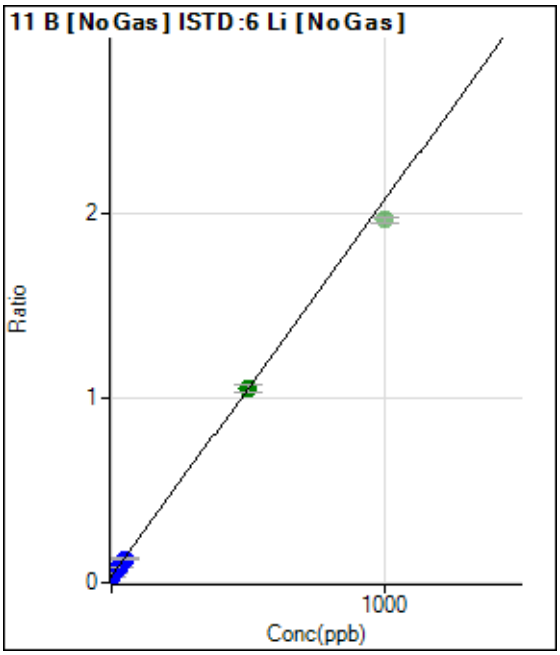


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.00	0.0000	P	34.9
2	☐	2.000	1.948	14807.89	0.0065	P	1.2
3	☐	5.000	4.729	35554.87	0.0157	P	1.4
4	☐	10.000	9.761	72522.40	0.0325	P	2.2
5	☐	100.000	104.429	740235.51	0.3476	A	3.3
6	☐	200.000	197.805	1384208.84	0.6583	A	2.7

y = 0.0033 * x + 1.0770E-005
R = 0.9996
DL = 0.003387
BEC = 0.003236

Weight: <None>
Min Conc: <None>

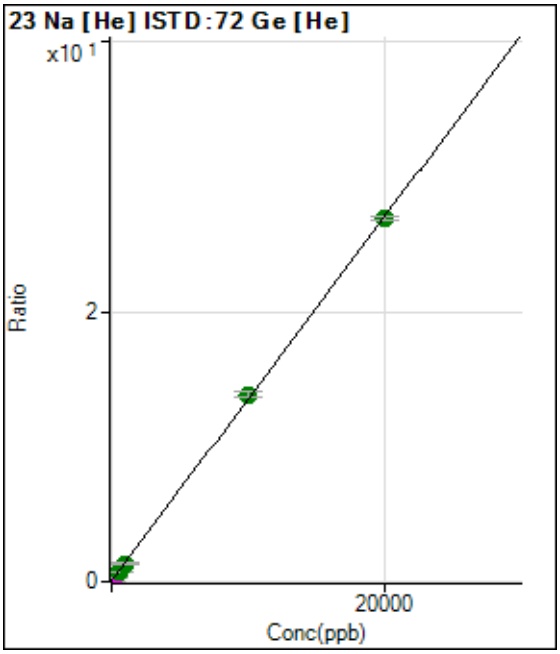
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	81586.89	0.0351	P	1.6
2	☐	10.000	8.722	120646.49	0.0529	P	2.1
3	☐	25.000	22.025	180798.81	0.0801	P	1.7
4	☐	50.000	45.592	285980.74	0.1282	P	3.7
5	☐	500.000	500.615	2250087.99	1.0568	A	4.0
6	☑	1000.000		4143238.90	1.9702	A	1.3

y = 0.0020 * x + 0.0351
R = 1.0000
DL = 0.8187
BEC = 17.21

Weight: <None>
Min Conc: <None>

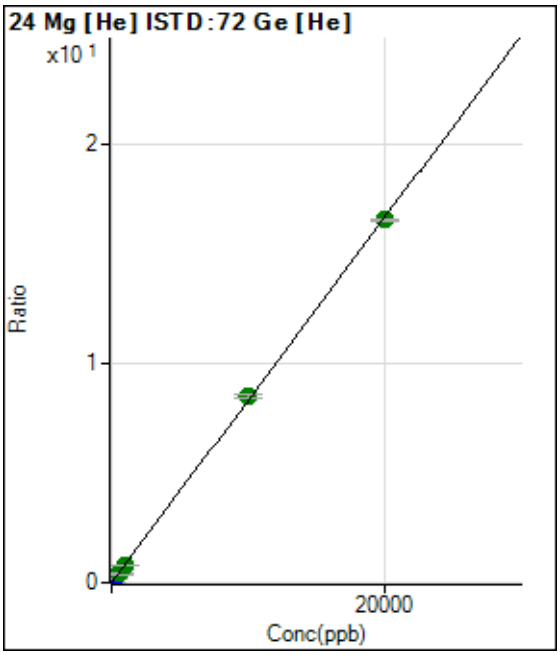


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	131515.05	0.0578	P	2.0
2	☐	200.000	199.612	744566.01	0.3270	M	1.4
3	☐	500.000	470.667	1569159.98	0.6926	A	1.3
4	☐	1000.000	959.388	3006280.16	1.3517	A	1.9
5	☐	10000.00	10232.59	30466712.88	13.8580	A	2.6
6	☐	20000.00	19886.46	56662949.16	26.8778	A	1.2

y = 0.0013 * x + 0.0578
R = 0.9999
DL = 2.623
BEC = 42.85

Weight: <None>
Min Conc: <None>

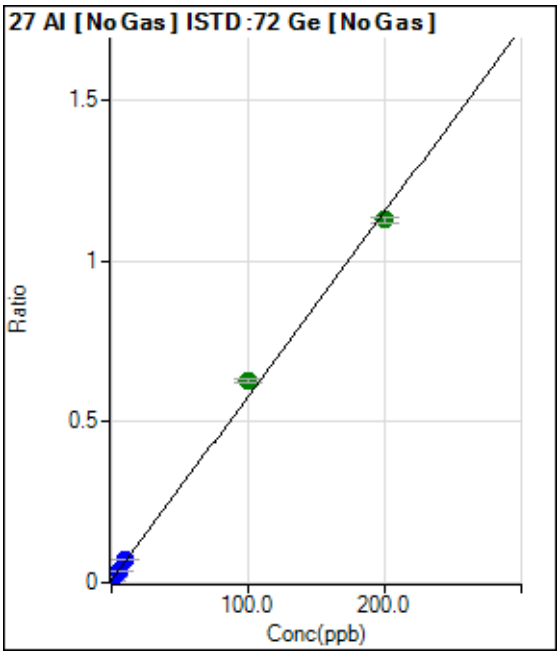
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1563.46	0.0007	P	5.6
2	☐	200.000	205.430	390761.57	0.1716	P	1.1
3	☐	500.000	481.540	909184.13	0.4013	A	4.0
4	☐	1000.000	992.067	1837404.30	0.8261	A	1.2
5	☐	10000.00	10231.83	18719133.05	8.5140	A	2.3
6	☐	20000.00	19884.88	34881459.48	16.5457	A	0.9

y = 8.3204E-004 * x + 6.8734E-004
R = 0.9999
DL = 0.1396
BEC = 0.8261

Weight: <None>
Min Conc: <None>

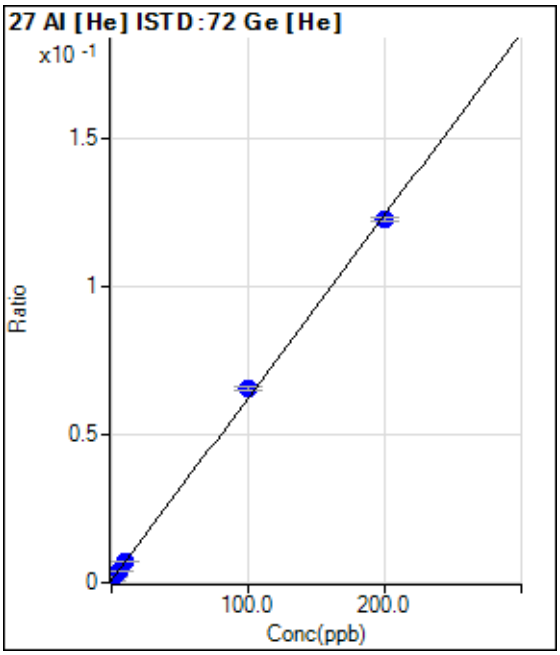


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37815.61	0.0072	P	1.0
2	☐	2.000	2.120	101082.00	0.0193	P	1.0
3	☐	5.000	5.308	195588.27	0.0376	P	0.2
4	☐	10.000	11.004	363113.53	0.0702	P	1.0
5	☐	100.000	108.407	3228002.14	0.6285	A	2.4
6	☐	200.000	195.737	5667919.92	1.1289	A	1.5

y = 0.0057 * x + 0.0072
R = 0.9987
DL = 0.03946
BEC = 1.254

Weight: <None>
Min Conc: <None>

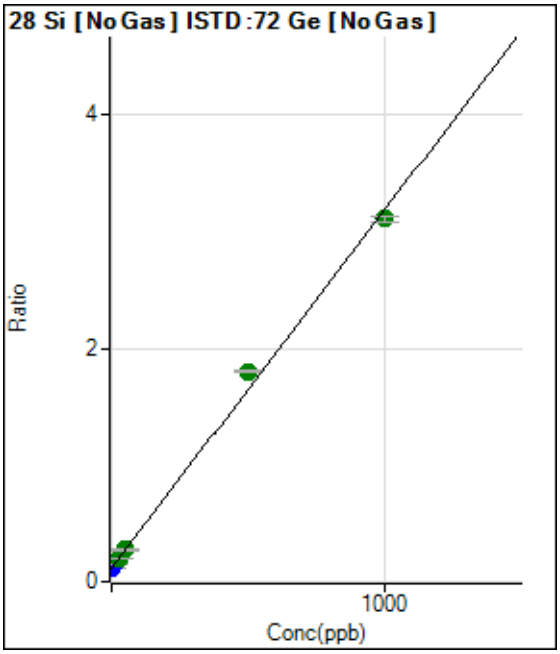
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1783.49	0.0008	P	12.9
2	☐	2.000	1.976	4557.49	0.0020	P	5.6
3	☐	5.000	4.883	8596.11	0.0038	P	2.5
4	☐	10.000	10.038	15505.56	0.0070	P	2.8
5	☐	100.000	104.971	143996.13	0.0655	P	1.9
6	☐	200.000	197.516	258313.39	0.1225	P	1.1

y = 6.1635E-004 * x + 7.8437E-004
R = 0.9996
DL = 0.4938
BEC = 1.273

Weight: <None>
Min Conc: <None>

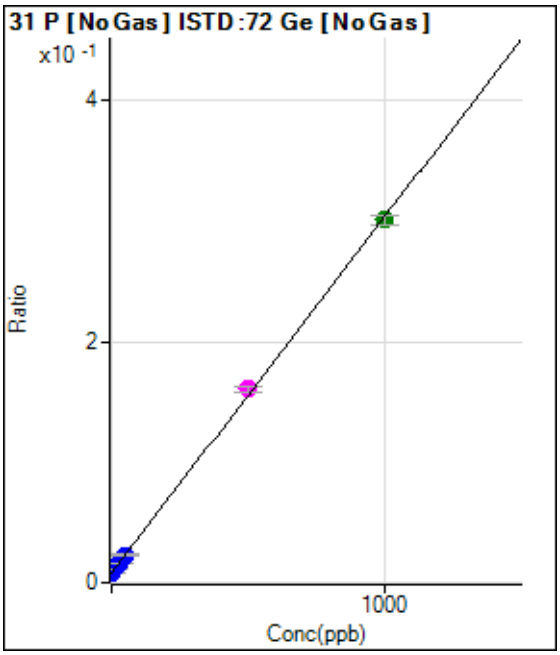


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	607905.09	0.1155	P	0.7
2	☐	10.000	10.798	776953.84	0.1487	P	1.6
3	☐	25.000	25.871	1013612.54	0.1949	A	1.6
4	☐	50.000	51.444	1413034.93	0.2734	A	1.5
5	☐	500.000	548.870	9244016.53	1.7996	A	0.9
6	☐	1000.000	975.463	15605839.77	3.1085	A	1.8

y = 0.0031 * x + 0.1155
R = 0.9983
DL = 0.8265
BEC = 37.65

Weight: <None>
Min Conc: <None>

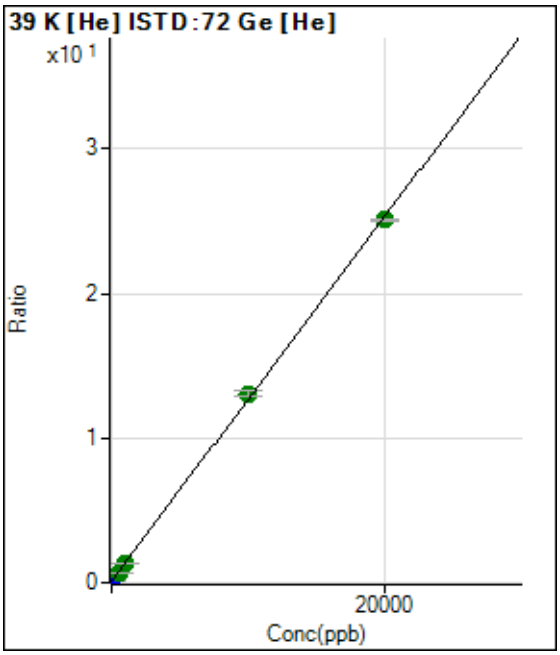
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42334.84	0.0080	P	1.8
2	☐	10.000	10.130	57673.36	0.0110	P	1.5
3	☐	25.000	24.868	79999.93	0.0154	P	0.6
4	☐	50.000	50.834	119108.34	0.0230	P	0.9
5	☐	500.000	515.862	823101.92	0.1602	M	2.7
6	☐	1000.000	992.029	1509614.77	0.3007	A	2.5

y = 2.9502E-004 * x + 0.0080
R = 0.9998
DL = 1.503
BEC = 27.27

Weight: <None>
Min Conc: <None>

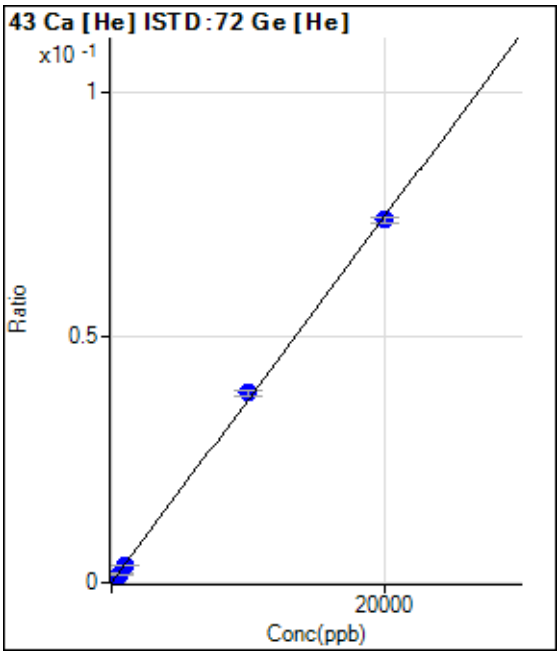


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226943.56	0.0998	P	3.3
2	☐	200.000	198.355	796047.02	0.3496	P	0.4
3	☐	500.000	475.605	1583203.73	0.6988	A	3.3
4	☐	1000.000	978.528	2963182.25	1.3323	A	0.8
5	☐	10000.00	10319.70	28801651.24	13.0983	A	2.3
6	☐	20000.00	19841.84	52900645.88	25.0922	A	0.2

y = 0.0013 * x + 0.0998
R = 0.9998
DL = 7.784
BEC = 79.19

Weight: <None>
Min Conc: <None>

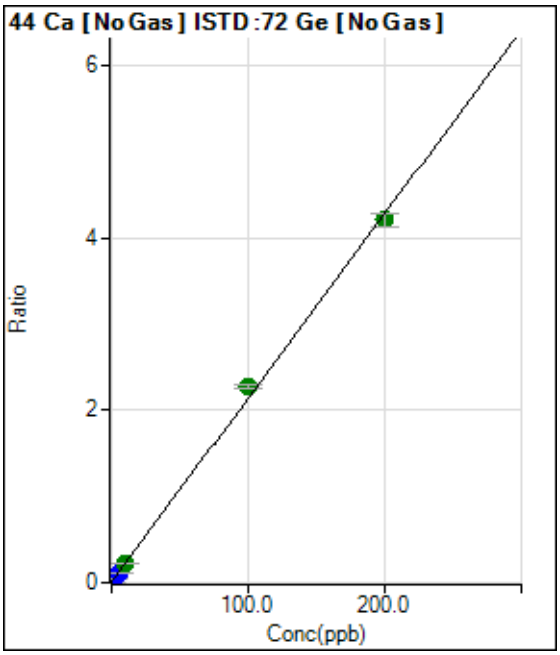
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0000	P	14.8
2	☐	200.000	196.362	1726.81	0.0008	P	3.6
3	☐	500.000	464.119	3980.65	0.0018	P	3.2
4	☐	1000.000	970.928	8109.22	0.0036	P	3.7
5	☐	10000.00	10359.22	84972.11	0.0386	P	2.8
6	☐	20000.00	19822.77	155861.41	0.0739	P	1.4

y = 3.7283E-006 * x + 2.6309E-005
R = 0.9998
DL = 3.129
BEC = 7.056

Weight: <None>
Min Conc: <None>

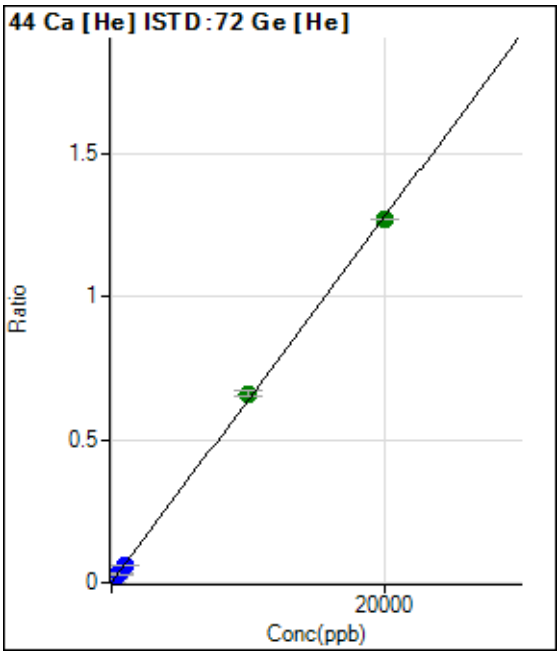


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43389.46	0.0082	P	1.6
2	☐	2.000	2.052	272037.48	0.0520	P	1.3
3	☐	5.000	4.974	595020.11	0.1144	P	0.4
4	☐	10.000	10.157	1163352.01	0.2251	A	0.8
5	☐	100.000	106.300	11699017.33	2.2772	A	1.6
6	☐	200.000	196.842	21130507.60	4.2099	A	4.1

y = 0.0213 * x + 0.0082
R = 0.9993
DL = 0.01877
BEC = 0.3864

Weight: <None>
Min Conc: <None>

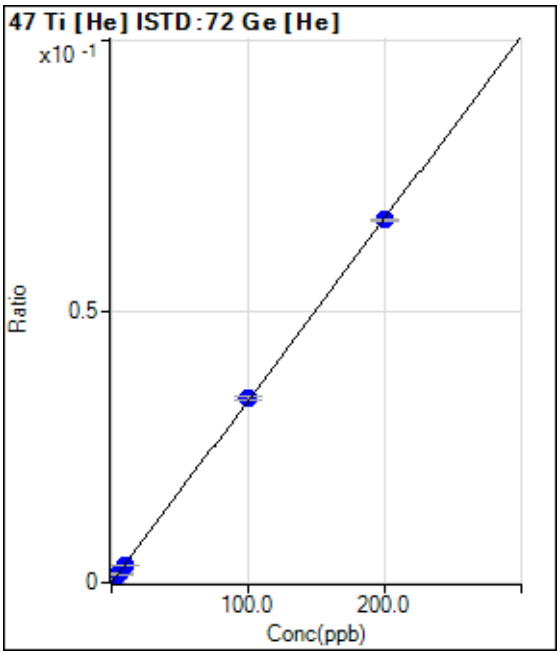
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1576.79	0.0007	P	11.0
2	☐	200.000	189.734	29151.22	0.0128	P	1.3
3	☐	500.000	464.712	68765.37	0.0303	P	1.1
4	☐	1000.000	959.704	137755.56	0.0619	P	0.8
5	☐	10000.00	10326.77	1450291.12	0.6597	A	3.3
6	☐	20000.00	19839.61	2670654.44	1.2668	A	0.1

y = 6.3815E-005 * x + 6.9386E-004
R = 0.9998
DL = 3.584
BEC = 10.87

Weight: <None>
Min Conc: <None>

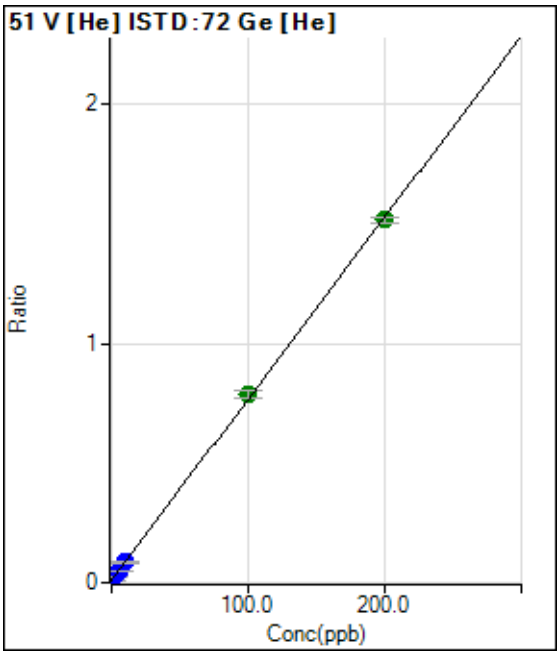


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	64.4
2	☐	2.000	1.748	1360.09	0.0006	P	7.7
3	☐	5.000	4.927	3774.38	0.0017	P	11.1
4	☐	10.000	9.510	7125.31	0.0032	P	0.4
5	☐	100.000	101.552	75004.55	0.0341	P	2.0
6	☐	200.000	199.253	141072.86	0.0669	P	0.4

y = 3.3578E-004 * x + 1.0239E-005
R = 1.0000
DL = 0.05894
BEC = 0.03049

Weight: <None>
Min Conc: <None>

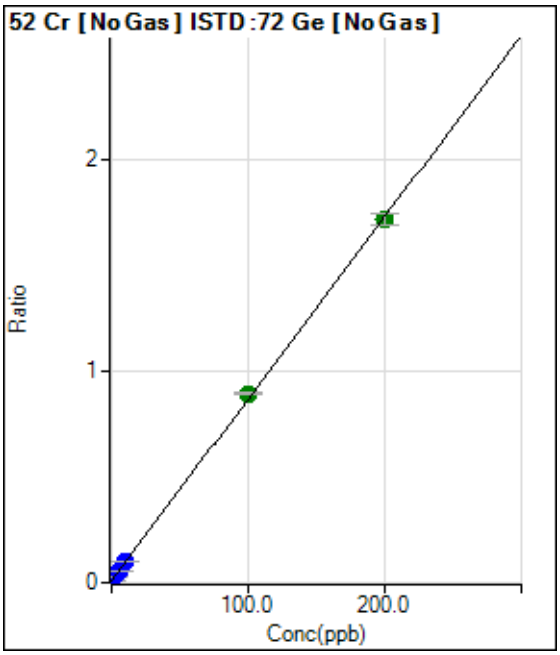
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22242.54	0.0098	P	1.4
2	☐	2.000	1.932	55618.96	0.0244	P	1.1
3	☐	5.000	4.756	103873.53	0.0458	P	1.0
4	☐	10.000	9.856	188014.12	0.0845	P	0.7
5	☐	100.000	102.641	1732747.43	0.7883	A	3.5
6	☐	200.000	198.693	3197877.51	1.5169	A	1.5

y = 0.0076 * x + 0.0098
R = 0.9999
DL = 0.05358
BEC = 1.288

Weight: <None>
Min Conc: <None>

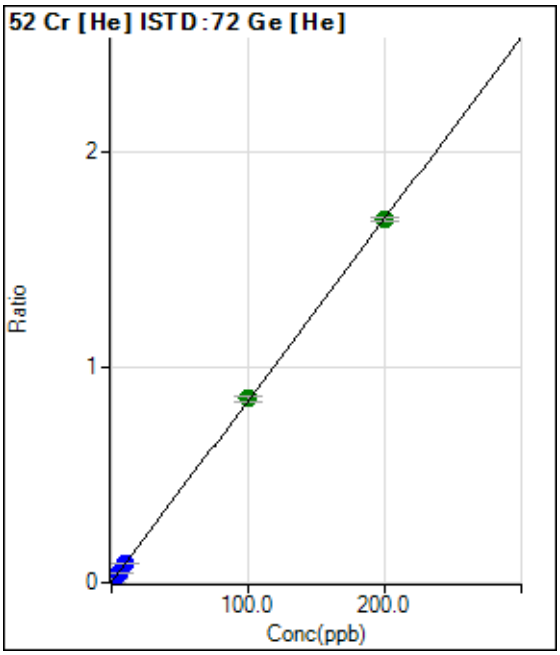


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50326.35	0.0096	P	2.1
2	☐	2.000	2.055	142068.01	0.0272	P	3.7
3	☐	5.000	4.998	272697.02	0.0524	P	0.8
4	☐	10.000	10.208	502051.70	0.0971	P	0.8
5	☐	100.000	102.959	4585852.02	0.8927	A	0.8
6	☐	200.000	198.509	8595394.66	1.7124	A	3.2

y = 0.0086 * x + 0.0096
R = 0.9998
DL = 0.069
BEC = 1.115

Weight: <None>
Min Conc: <None>

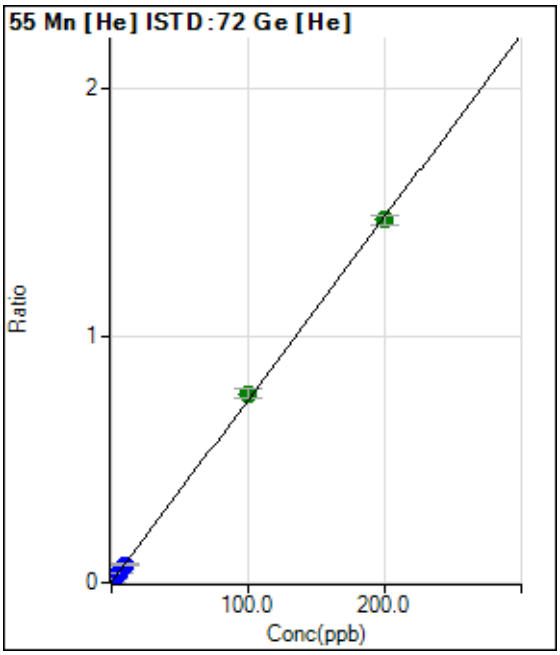
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5487.86	0.0024	P	3.6
2	☐	2.000	1.945	42900.79	0.0188	P	0.7
3	☐	5.000	4.803	97374.99	0.0430	P	1.0
4	☐	10.000	9.901	191354.97	0.0860	P	1.2
5	☐	100.000	100.982	1880188.30	0.8554	A	3.6
6	☐	200.000	199.519	3557833.80	1.6876	A	1.2

y = 0.0084 * x + 0.0024
R = 1.0000
DL = 0.03058
BEC = 0.2853

Weight: <None>
Min Conc: <None>

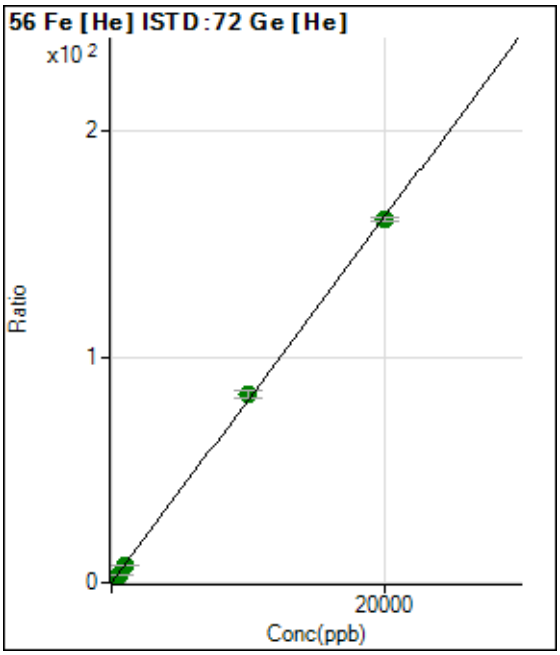


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3017.05	0.0013	P	6.8
2	☐	2.000	1.937	35660.35	0.0157	P	2.1
3	☐	5.000	4.765	82928.07	0.0366	P	1.6
4	☐	10.000	9.804	164327.61	0.0739	P	1.9
5	☐	100.000	103.124	1680004.61	0.7645	A	4.9
6	☐	200.000	198.454	3099239.12	1.4701	A	2.5

y = 0.0074 * x + 0.0013
R = 0.9998
DL = 0.03632
BEC = 0.1793

Weight: <None>
Min Conc: <None>

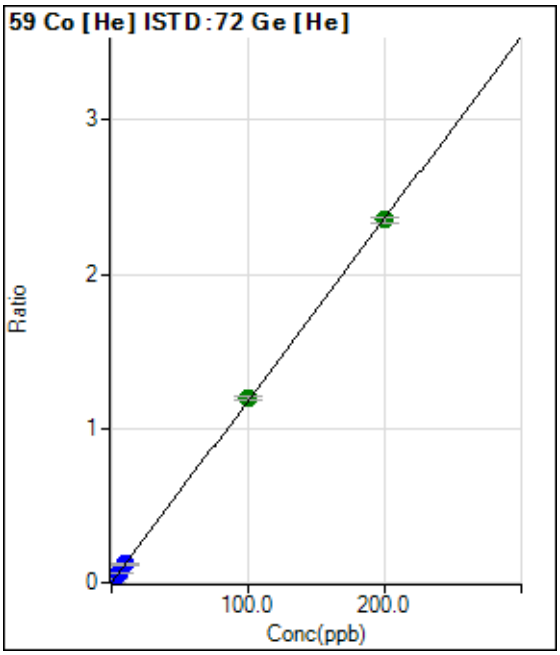
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34236.81	0.0150	P	2.2
2	☐	200.000	193.783	3605188.07	1.5833	A	1.8
3	☐	500.000	462.981	8524385.50	3.7620	A	0.2
4	☐	1000.000	970.630	17504881.82	7.8704	A	0.5
5	☐	10000.00	10321.89	183639537.2	83.5502	A	3.7
6	☐	20000.00	19841.51	338560588.2	160.592	A	1.1

y = 0.0081 * x + 0.0150
R = 0.9998
DL = 0.1212
BEC = 1.859

Weight: <None>
Min Conc: <None>

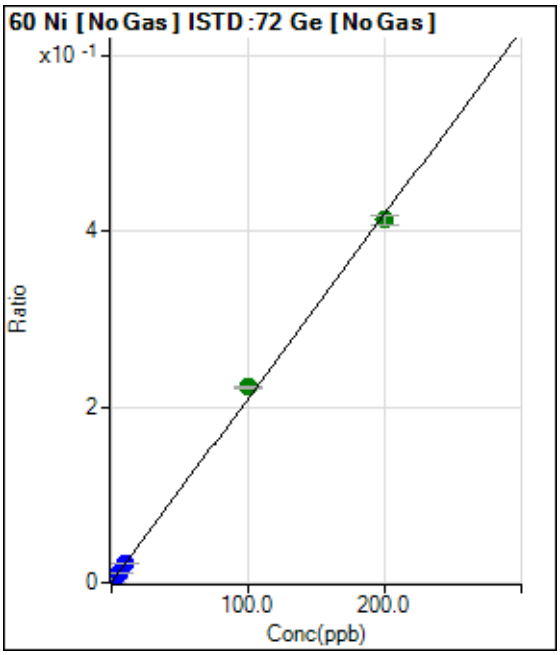


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	730.04	0.0003	P	15.7
2	☐	2.000	1.966	53585.65	0.0235	P	1.1
3	☐	5.000	4.872	131032.61	0.0578	P	1.4
4	☐	10.000	10.038	264242.11	0.1188	P	0.8
5	☐	100.000	101.356	2631616.16	1.1968	A	1.7
6	☐	200.000	199.324	4961165.86	2.3532	A	1.5

y = 0.0118 * x + 3.2098E-004
R = 1.0000
DL = 0.01278
BEC = 0.02719

Weight: <None>
Min Conc: <None>

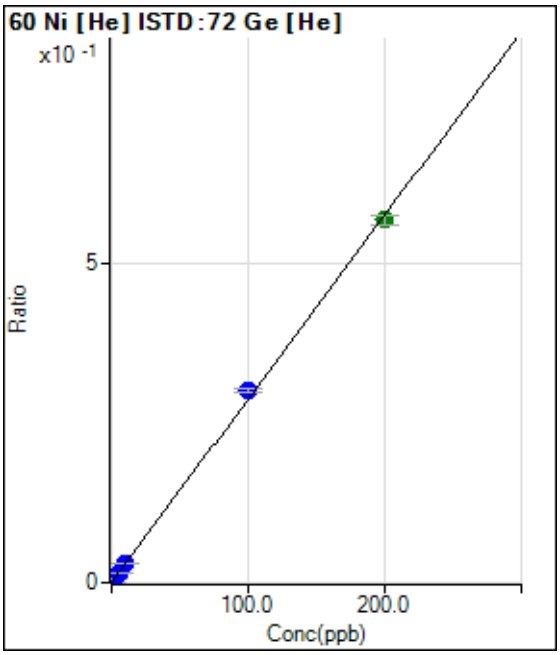
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1156.74	0.0002	P	16.7
2	☐	2.000	2.142	24572.50	0.0047	P	2.8
3	☐	5.000	5.283	58643.39	0.0113	P	1.9
4	☐	10.000	10.666	116522.84	0.0225	P	1.9
5	☐	100.000	106.018	1140856.31	0.2221	A	1.7
6	☐	200.000	196.949	2070170.80	0.4124	A	2.8

y = 0.0021 * x + 2.1999E-004
R = 0.9994
DL = 0.05264
BEC = 0.1051

Weight: <None>
Min Conc: <None>

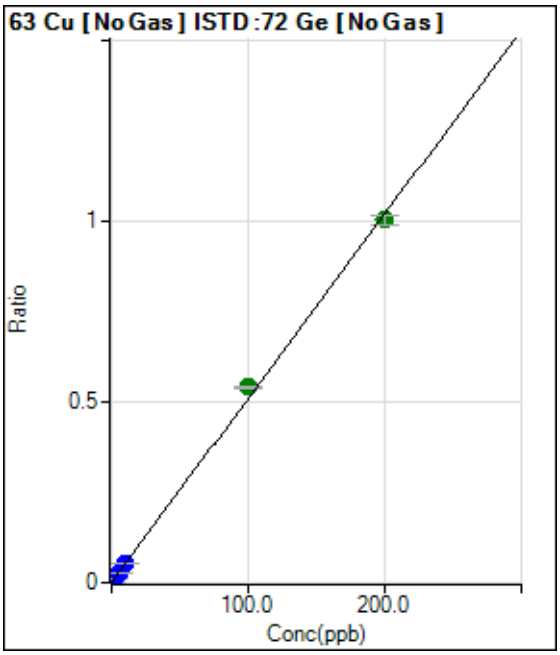


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	590.02	0.0003	P	12.0
2	☐	2.000	1.986	13600.33	0.0060	P	3.8
3	☐	5.000	4.932	32746.50	0.0145	P	1.5
4	☐	10.000	10.216	65969.52	0.0297	P	1.3
5	☐	100.000	104.779	663657.08	0.3018	P	2.1
6	☐	200.000	197.601	1199502.30	0.5690	A	2.8

y = 0.0029 * x + 2.5894E-004
R = 0.9996
DL = 0.03227
BEC = 0.08997

Weight: <None>
Min Conc: <None>

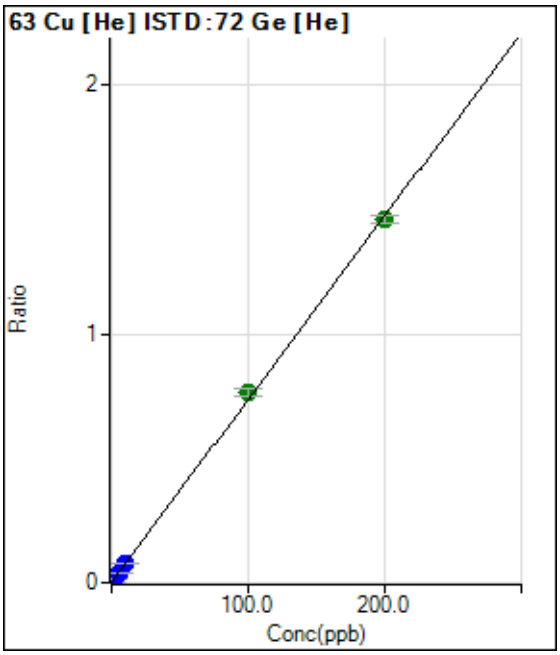
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3397.15	0.0006	P	1.8
2	☐	2.000	2.139	60263.94	0.0115	P	5.5
3	☐	5.000	5.163	140064.71	0.0269	P	1.7
4	☐	10.000	10.539	280724.04	0.0543	P	0.9
5	☐	100.000	106.002	2775676.42	0.5404	A	1.7
6	☐	200.000	196.967	5037572.53	1.0035	A	3.0

y = 0.0051 * x + 6.4557E-004
R = 0.9994
DL = 0.006949
BEC = 0.1268

Weight: <None>
Min Conc: <None>

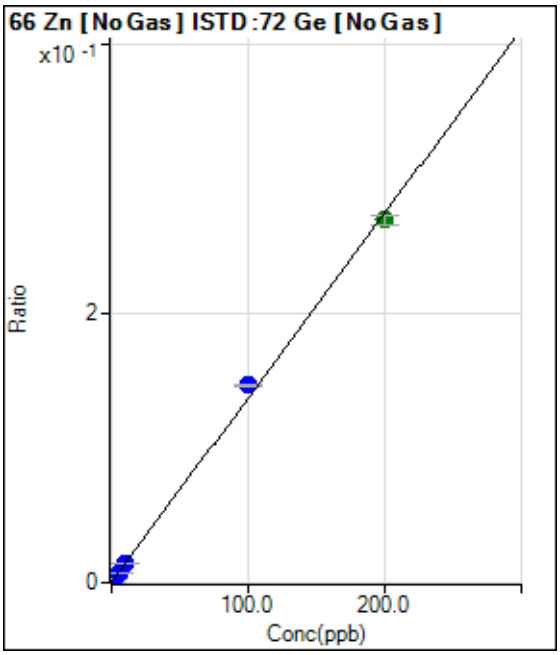


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1910.17	0.0008	P	9.8
2	☐	2.000	2.009	35576.95	0.0156	P	0.8
3	☐	5.000	4.821	82288.79	0.0363	P	2.0
4	☐	10.000	10.225	169251.72	0.0761	P	1.3
5	☐	100.000	103.954	1683425.70	0.7660	A	4.1
6	☐	200.000	198.016	3074301.73	1.4583	A	2.1

y = 0.0074 * x + 8.4016E-004
R = 0.9997
DL = 0.03371
BEC = 0.1141

Weight: <None>
Min Conc: <None>

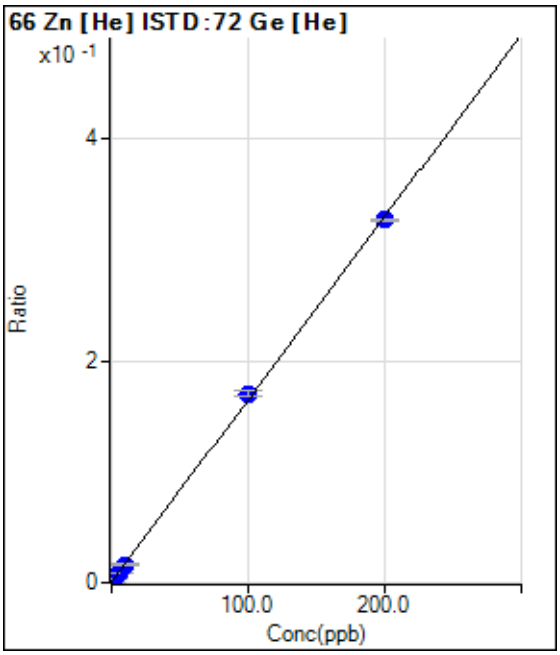
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2200.22	0.0004	P	6.5
2	☐	2.000	2.005	16520.35	0.0032	P	2.5
3	☐	5.000	4.988	37669.28	0.0072	P	2.4
4	☐	10.000	10.167	74065.53	0.0143	P	2.0
5	☐	100.000	106.788	752685.43	0.1465	P	1.0
6	☐	200.000	196.598	1352343.00	0.2694	A	2.9

y = 0.0014 * x + 4.1822E-004
R = 0.9992
DL = 0.05956
BEC = 0.3057

Weight: <None>
Min Conc: <None>

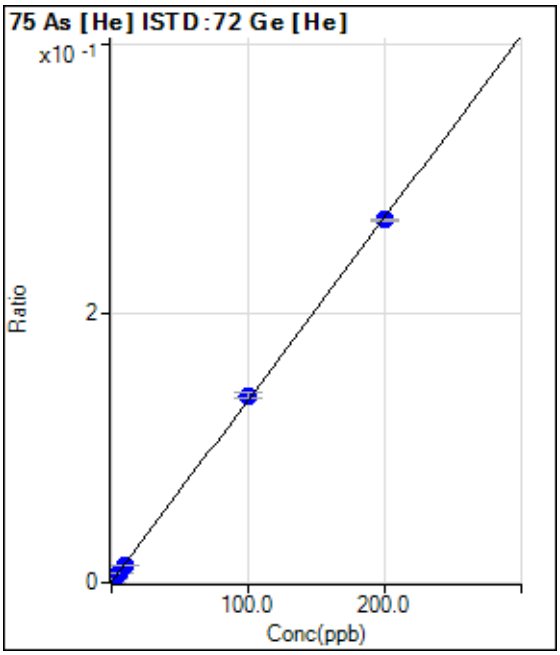


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1243.42	0.0005	P	5.9
2	☐	2.000	1.778	7899.11	0.0035	P	5.4
3	☐	5.000	4.750	18923.46	0.0084	P	3.2
4	☐	10.000	9.561	36165.17	0.0163	P	2.6
5	☐	100.000	103.146	373838.75	0.1701	P	3.2
6	☐	200.000	198.457	688765.25	0.3267	P	0.6

y = 0.0016 * x + 5.4674E-004
R = 0.9998
DL = 0.0584
BEC = 0.3327

Weight: <None>
Min Conc: <None>

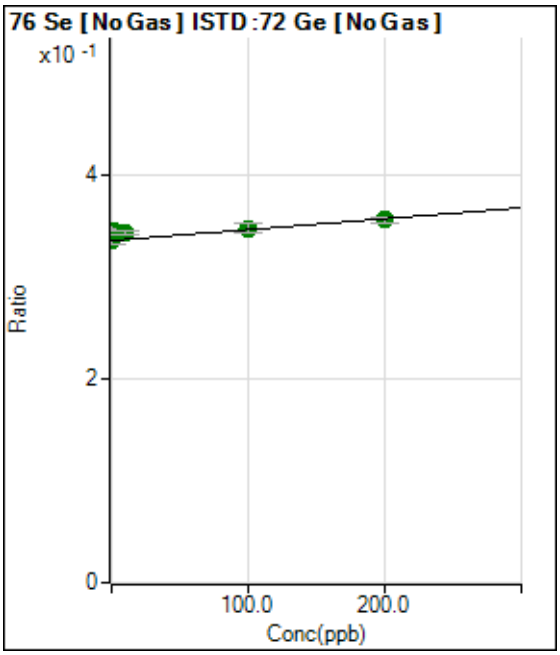
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1060.05	0.0005	P	4.2
2	☐	2.000	1.882	6852.89	0.0030	P	2.4
3	☐	5.000	4.644	15284.22	0.0067	P	0.7
4	☐	10.000	9.524	29673.65	0.0133	P	1.2
5	☐	100.000	102.496	305694.27	0.1390	P	2.4
6	☐	200.000	198.786	567591.37	0.2692	P	0.5

y = 0.0014 * x + 4.6590E-004
R = 0.9999
DL = 0.04371
BEC = 0.3446

Weight: <None>
Min Conc: <None>

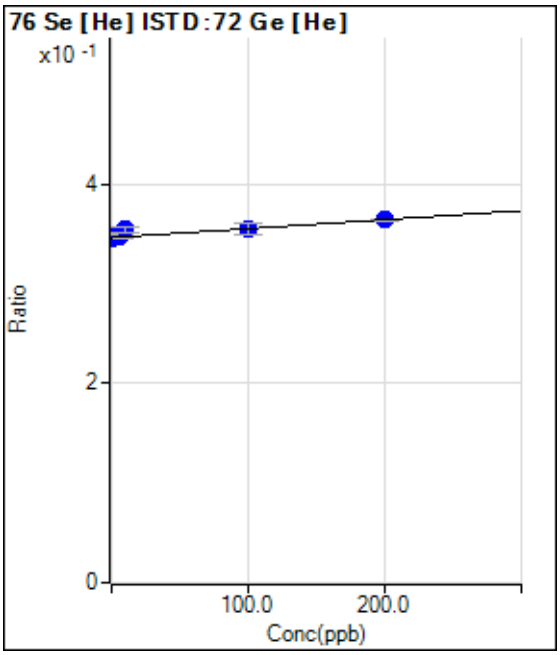


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1770125.18	0.3364	A	2.1
2	☐	2.000	95.583	1811950.50	0.3467	A	2.0
3	☐	5.000	77.884	1793255.13	0.3448	A	1.6
4	☐	10.000	75.502	1781008.88	0.3445	A	1.3
5	☐	100.000	110.732	1789169.77	0.3483	A	2.7
6	☐	200.000	188.601	1790787.37	0.3567	A	1.3

y = 1.0729E-004 * x + 0.3364
R = 0.8486
DL = 200.7
BEC = 3136

Weight: <None>
Min Conc: <None>

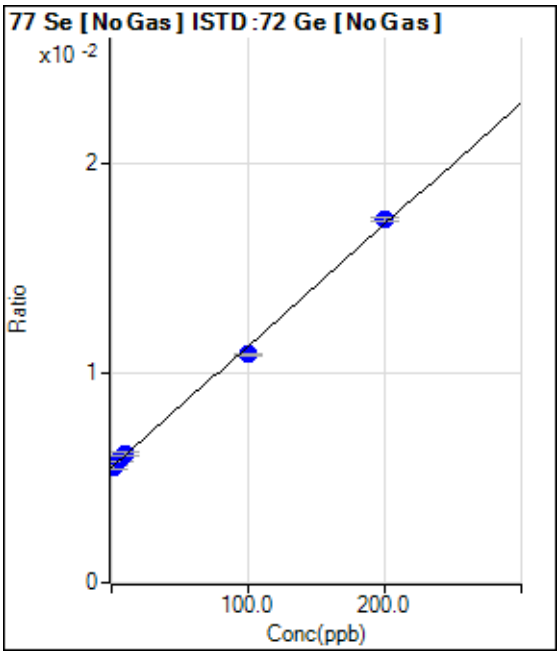
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	787302.91	0.3460	P	1.9
2	☐	2.000	15.447	790951.08	0.3474	P	1.5
3	☐	5.000	11.160	786266.86	0.3470	P	0.9
4	☐	10.000	86.792	786957.85	0.3538	P	1.3
5	☐	100.000	98.519	780148.76	0.3549	P	3.0
6	☐	200.000	196.612	766893.87	0.3638	P	0.4

y = 9.0411E-005 * x + 0.3460
R = 0.9264
DL = 213.6
BEC = 3827

Weight: <None>
Min Conc: <None>

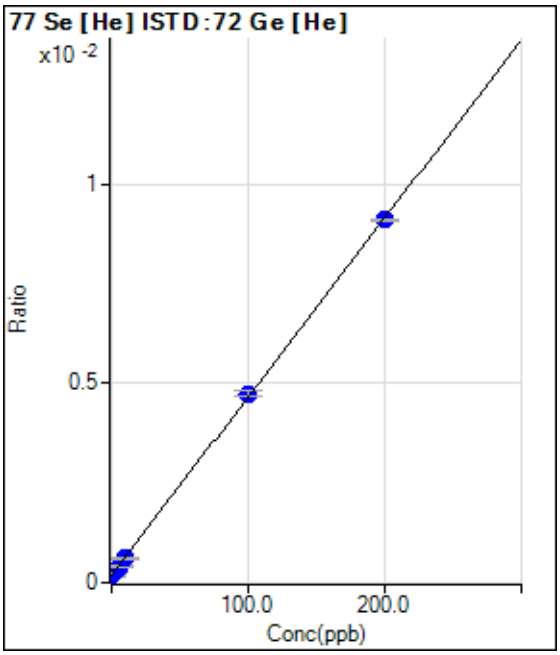


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28994.89	0.0055	P	2.7
2	☐	2.000	0.742	29015.07	0.0056	P	3.3
3	☐	5.000	6.601	30645.35	0.0059	P	4.4
4	☐	10.000	10.599	31664.42	0.0061	P	2.9
5	☐	100.000	92.803	55996.41	0.0109	P	1.0
6	☐	200.000	203.541	87022.99	0.0173	P	1.1

y = 5.8087E-005 * x + 0.0055
R = 0.9990
DL = 7.693
BEC = 94.85

Weight: <None>
Min Conc: <None>

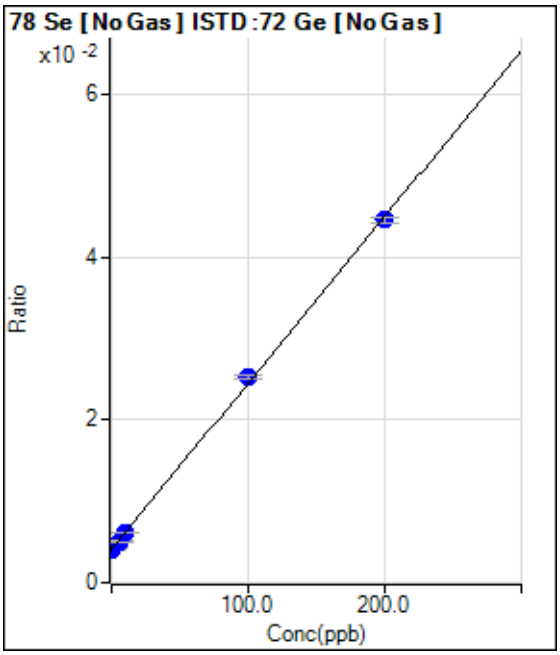
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.68	0.0002	P	23.4
2	☐	2.000	1.488	586.69	0.0003	P	9.1
3	☐	5.000	4.640	903.39	0.0004	P	9.2
4	☐	10.000	9.362	1356.76	0.0006	P	7.0
5	☐	100.000	101.759	10430.94	0.0047	P	2.9
6	☐	200.000	199.166	19190.68	0.0091	P	0.7

y = 4.4743E-005 * x + 1.9117E-004
R = 0.9999
DL = 2.993
BEC = 4.273

Weight: <None>
Min Conc: <None>

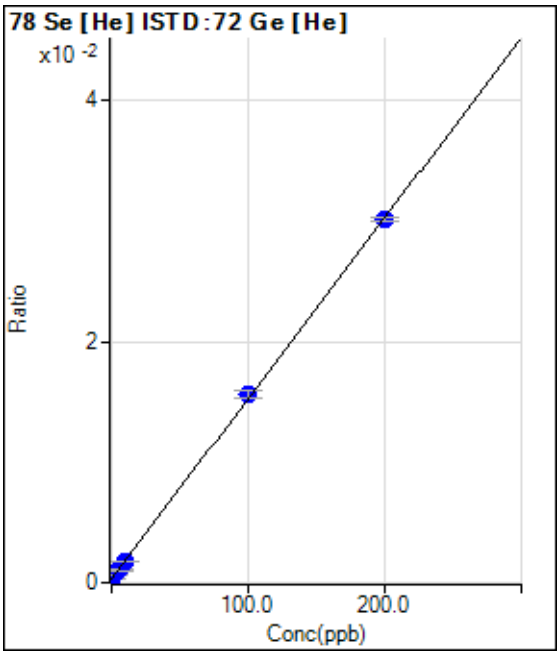


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21641.03	0.0041	P	3.0
2	☐	2.000	1.658	23263.69	0.0045	P	3.5
3	☐	5.000	4.499	26175.86	0.0050	P	2.6
4	☐	10.000	9.818	31637.48	0.0061	P	2.8
5	☐	100.000	103.742	130101.17	0.0253	P	1.2
6	☐	200.000	198.154	224090.91	0.0446	P	1.3

y = 2.0449E-004 * x + 0.0041
R = 0.9997
DL = 1.794
BEC = 20.11

Weight: <None>
Min Conc: <None>

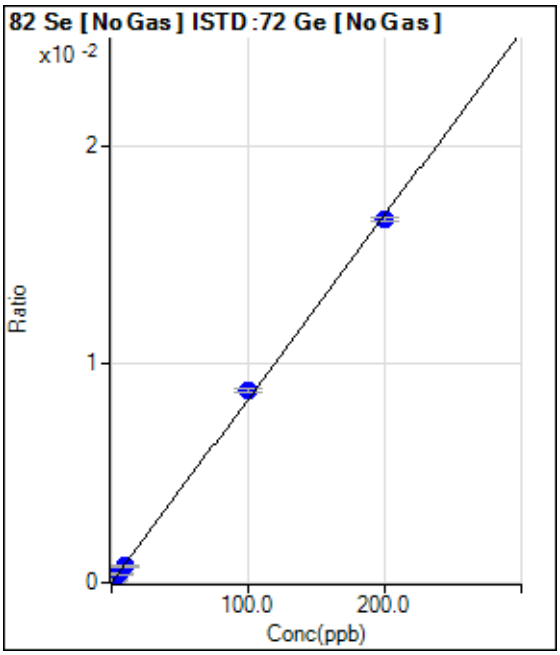
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	785.36	0.0003	P	10.6
2	☐	2.000	2.087	1498.09	0.0007	P	3.8
3	☐	5.000	4.663	2363.55	0.0010	P	3.1
4	☐	10.000	9.716	4000.60	0.0018	P	1.3
5	☐	100.000	102.154	34336.89	0.0156	P	4.4
6	☐	200.000	198.945	63459.09	0.0301	P	1.1

y = 1.4957E-004 * x + 3.4557E-004
R = 0.9999
DL = 0.7335
BEC = 2.31

Weight: <None>
Min Conc: <None>

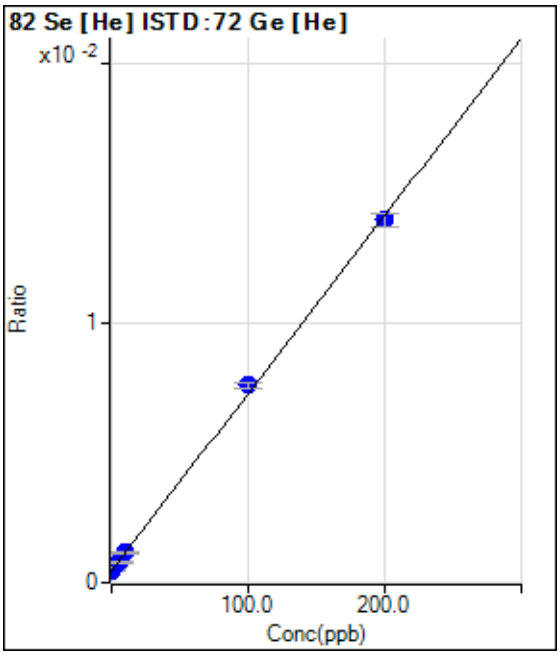


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-24.57	0.0000	P	-697.8
2	☐	2.000	1.531	650.09	0.0001	P	67.9
3	☐	5.000	4.794	2072.76	0.0004	P	3.8
4	☐	10.000	8.969	3875.77	0.0007	P	10.2
5	☐	100.000	105.007	45358.12	0.0088	P	1.9
6	☐	200.000	197.558	83432.08	0.0166	P	1.2

y = 8.4139E-005 * x - 4.7807E-006
R = 0.9995
DL = 1.189
BEC = -0.05682

Weight: <None>
Min Conc: <None>

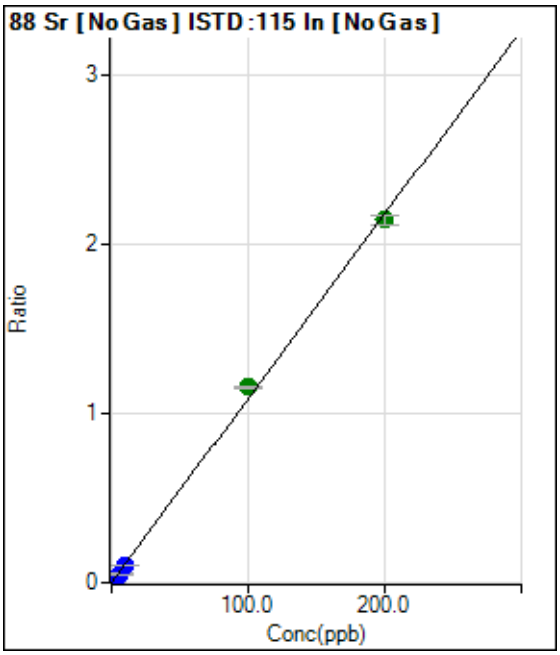
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1033.39	0.0005	P	16.7
2	☐	2.000	1.863	1326.76	0.0006	P	5.8
3	☐	5.000	4.817	1776.81	0.0008	P	9.8
4	☐	10.000	10.415	2596.97	0.0012	P	6.6
5	☐	100.000	104.445	16710.59	0.0076	P	2.9
6	☐	200.000	197.763	29482.79	0.0140	P	3.9

y = 6.8414E-005 * x + 4.5515E-004
R = 0.9996
DL = 3.332
BEC = 6.653

Weight: <None>
Min Conc: <None>

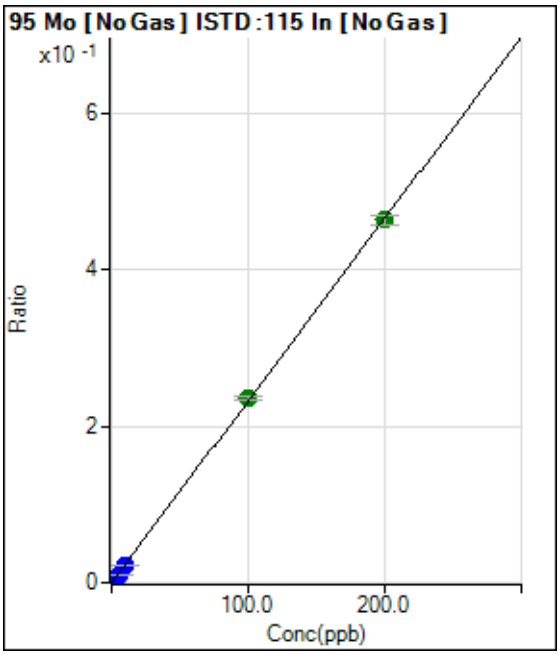


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1416.77	0.0002	P	10.1
2	☐	2.000	1.905	124937.23	0.0210	P	0.9
3	☐	5.000	4.631	299025.63	0.0506	P	2.1
4	☐	10.000	9.622	607323.80	0.1050	P	1.4
5	☐	100.000	106.136	6575219.70	1.1555	A	1.5
6	☐	200.000	196.961	11826581.90	2.1441	A	2.6

y = 0.0109 * x + 2.3950E-004
R = 0.9993
DL = 0.00667
BEC = 0.022

Weight: <None>
Min Conc: <None>

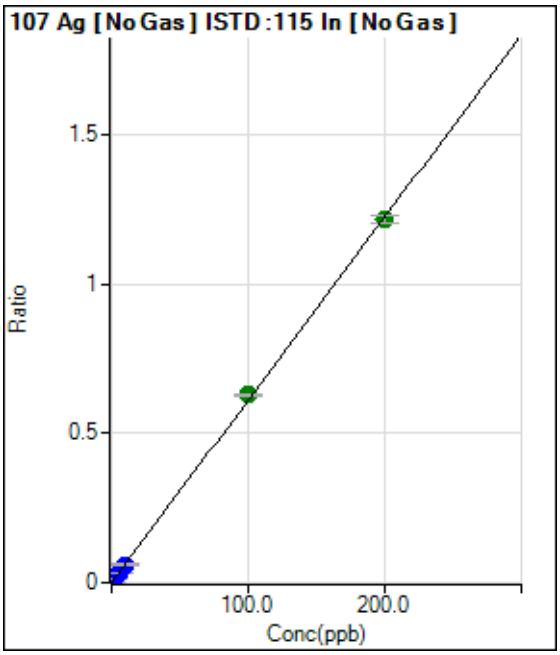
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0000	P	14.8
2	☐	2.000	1.941	27001.21	0.0045	P	2.2
3	☐	5.000	4.687	64403.22	0.0109	P	1.5
4	☐	10.000	9.764	131330.04	0.0227	P	1.5
5	☐	100.000	101.175	1337136.18	0.2350	A	1.7
6	☐	200.000	199.433	2555068.03	0.4632	A	2.6

y = 0.0023 * x + 2.4229E-005
R = 1.0000
DL = 0.004638
BEC = 0.01043

Weight: <None>
Min Conc: <None>

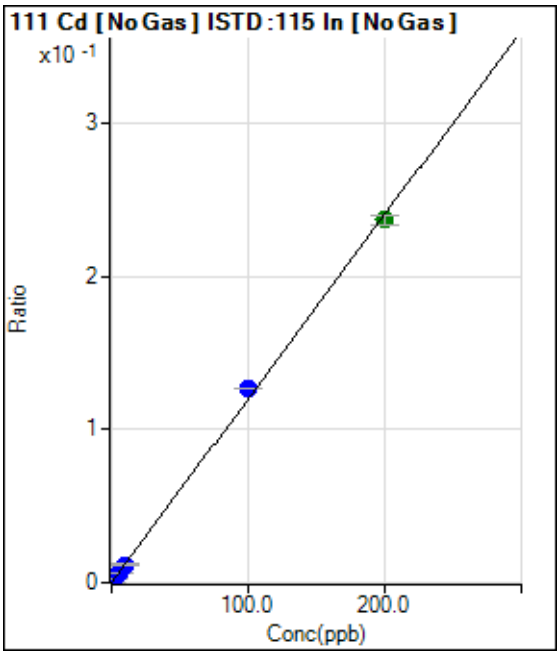


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.01	0.0001	P	11.9
2	☐	2.000	1.989	72860.66	0.0122	P	0.1
3	☐	5.000	4.852	175633.34	0.0298	P	2.5
4	☐	10.000	9.980	353652.78	0.0611	P	0.3
5	☐	100.000	102.668	3574630.88	0.6282	A	1.1
6	☐	200.000	198.671	6704951.98	1.2155	A	2.1

y = 0.0061 * x + 6.7657E-005
R = 0.9999
DL = 0.003942
BEC = 0.01106

Weight: <None>
Min Conc: <None>

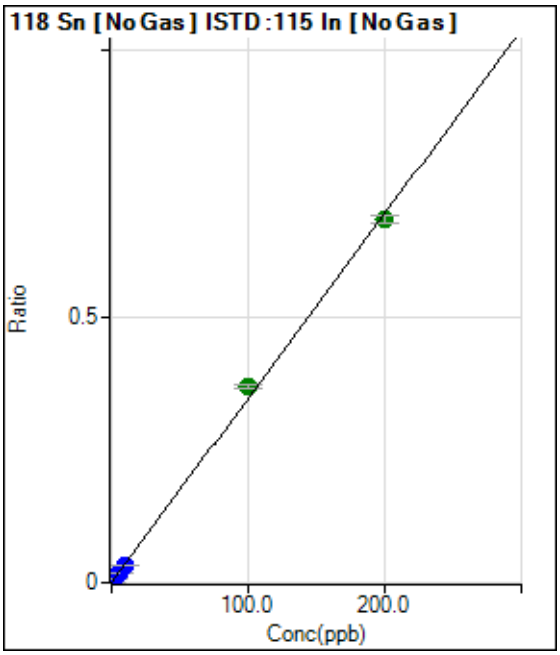
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	57.9
2	☐	2.000	2.014	14428.14	0.0024	P	2.1
3	☐	5.000	4.801	34047.74	0.0058	P	2.9
4	☐	10.000	9.796	68042.21	0.0118	P	2.9
5	☐	100.000	105.503	720480.15	0.1266	P	0.8
6	☐	200.000	197.263	1305740.34	0.2367	A	3.0

y = 0.0012 * x + 6.2238E-006
R = 0.9995
DL = 0.009001
BEC = 0.005187

Weight: <None>
Min Conc: <None>

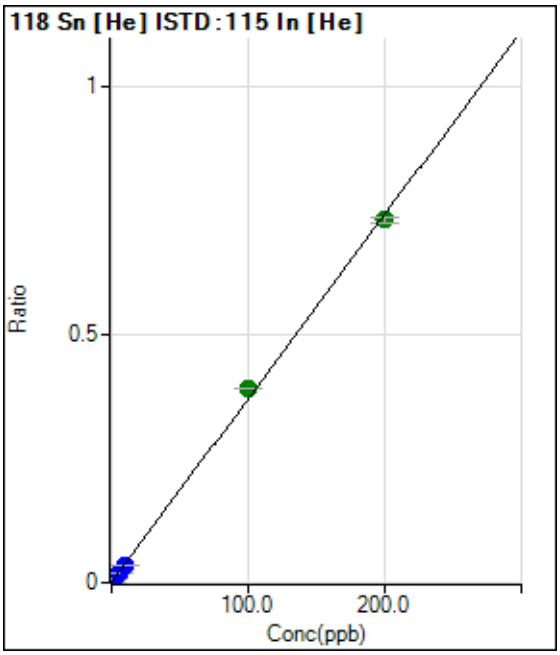


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2760.35	0.0005	P	1.3
2	☐	2.000	1.849	40864.57	0.0069	P	3.7
3	☐	5.000	4.587	96439.67	0.0163	P	0.8
4	☐	10.000	9.594	194690.28	0.0337	P	1.2
5	☐	100.000	106.425	2097683.04	0.3686	A	1.4
6	☐	200.000	196.820	3758148.59	0.6812	A	2.3

y = 0.0035 * x + 4.6652E-004
R = 0.9992
DL = 0.005395
BEC = 0.1349

Weight: <None>
Min Conc: <None>

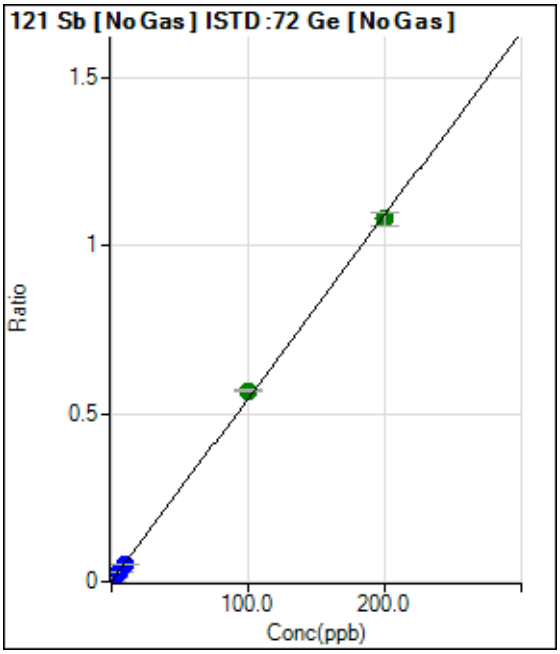
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2040.21	0.0005	P	8.1
2	☐	2.000	1.838	28848.83	0.0073	P	1.9
3	☐	5.000	4.655	68970.85	0.0178	P	2.4
4	☐	10.000	9.470	139540.48	0.0356	P	1.2
5	☐	100.000	105.530	1474248.42	0.3915	A	0.8
6	☐	200.000	197.272	2696574.12	0.7314	A	1.2

y = 0.0037 * x + 5.1823E-004
R = 0.9994
DL = 0.03398
BEC = 0.1399

Weight: <None>
Min Conc: <None>

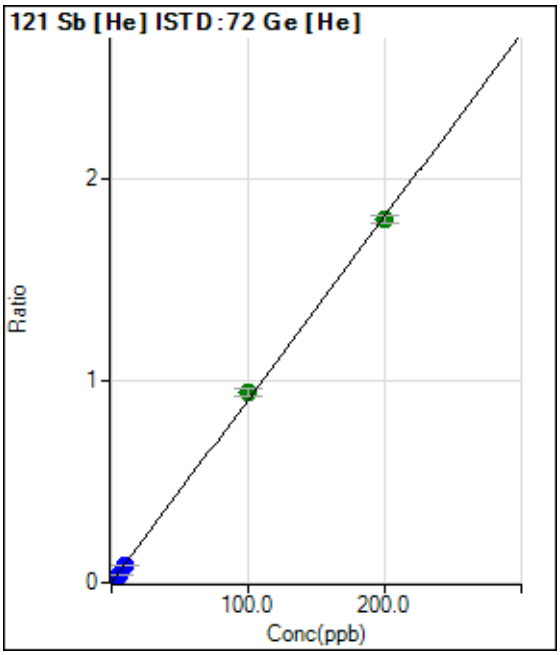


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2857.04	0.0005	P	8.6
2	☐	2.000	1.934	57918.06	0.0111	P	0.9
3	☐	5.000	4.720	136597.78	0.0263	P	1.4
4	☐	10.000	9.686	275654.26	0.0533	P	1.2
5	☐	100.000	104.061	2916104.12	0.5676	A	0.7
6	☐	200.000	197.993	5418768.04	1.0796	A	3.4

y = 0.0054 * x + 5.4291E-004
R = 0.9997
DL = 0.02574
BEC = 0.09962

Weight: <None>
Min Conc: <None>

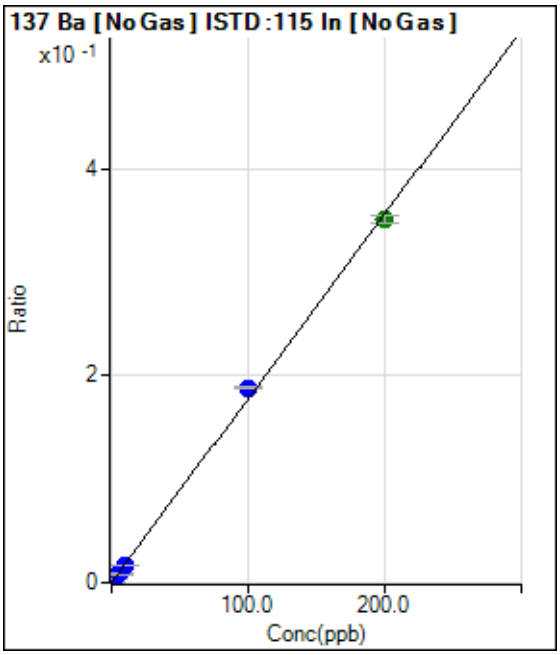
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1953.52	0.0009	P	9.4
2	☐	2.000	1.851	40188.56	0.0176	P	1.1
3	☐	5.000	4.506	94546.48	0.0417	P	1.6
4	☐	10.000	9.429	192113.75	0.0864	P	1.5
5	☐	100.000	103.702	2068800.33	0.9414	A	4.5
6	☐	200.000	198.192	3791168.90	1.7984	A	2.1

y = 0.0091 * x + 8.5945E-004
R = 0.9997
DL = 0.02679
BEC = 0.09476

Weight: <None>
Min Conc: <None>

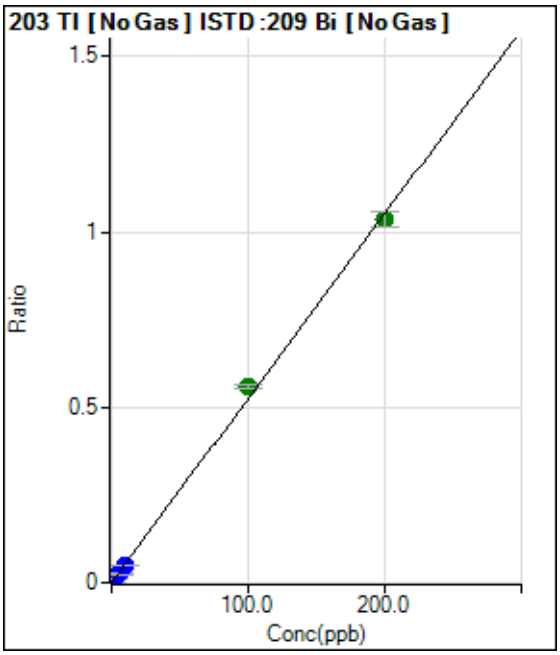


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	483.35	0.0001	P	20.0
2	☐	2.000	1.932	20977.29	0.0035	P	1.0
3	☐	5.000	4.684	49715.79	0.0084	P	2.3
4	☐	10.000	9.746	100871.37	0.0174	P	1.7
5	☐	100.000	105.909	1073440.61	0.1886	P	1.3
6	☐	200.000	197.067	1935938.46	0.3509	A	2.1

y = 0.0018 * x + 8.1788E-005
R = 0.9994
DL = 0.02758
BEC = 0.04594

Weight: <None>
Min Conc: <None>

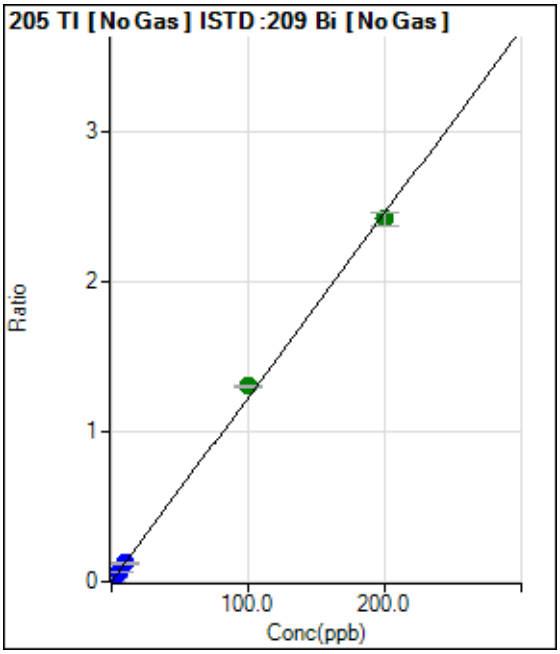
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	600.03	0.0001	P	5.3
2	☐	2.000	1.868	43937.90	0.0100	P	2.3
3	☐	5.000	4.709	108626.94	0.0249	P	2.0
4	☐	10.000	9.749	219480.55	0.0513	P	2.3
5	☐	100.000	106.264	2402184.34	0.5583	A	2.1
6	☐	200.000	196.889	4327497.02	1.0343	A	4.3

y = 0.0053 * x + 1.4142E-004
R = 0.9993
DL = 0.004286
BEC = 0.02692

Weight: <None>
Min Conc: <None>

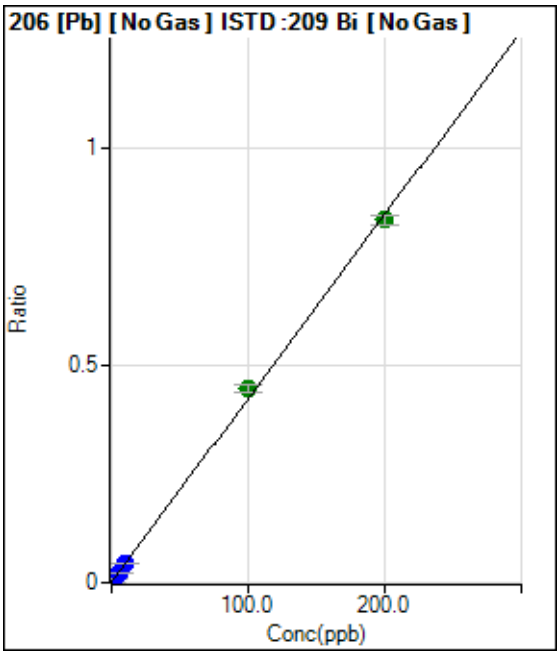


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1303.43	0.0003	P	8.1
2	☐	2.000	1.925	105819.16	0.0240	P	2.2
3	☐	5.000	4.808	259383.53	0.0594	P	1.8
4	☐	10.000	10.014	527400.60	0.1234	P	2.9
5	☐	100.000	106.067	5610584.08	1.3039	A	1.2
6	☐	200.000	196.972	10131424.22	2.4212	A	3.6

y = 0.0123 * x + 3.0650E-004
R = 0.9993
DL = 0.006026
BEC = 0.02494

Weight: <None>
Min Conc: <None>

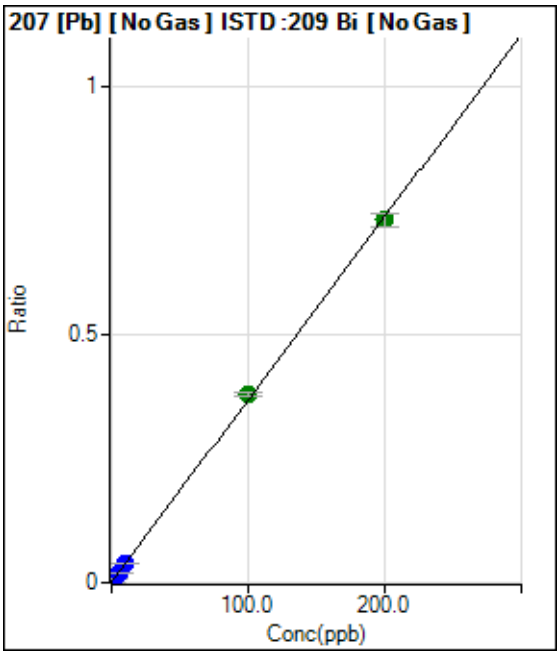
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4557.60	0.0011	P	7.7
2	☐	2.000	1.965	41379.51	0.0094	P	3.0
3	☐	5.000	4.868	94442.53	0.0216	P	2.4
4	☐	10.000	10.118	187232.41	0.0438	P	2.2
5	☐	100.000	105.472	1921340.02	0.4465	A	3.6
6	☐	200.000	197.262	3490609.22	0.8341	A	2.5

y = 0.0042 * x + 0.0011
R = 0.9995
DL = 0.05853
BEC = 0.2545

Weight: <None>
Min Conc: <None>

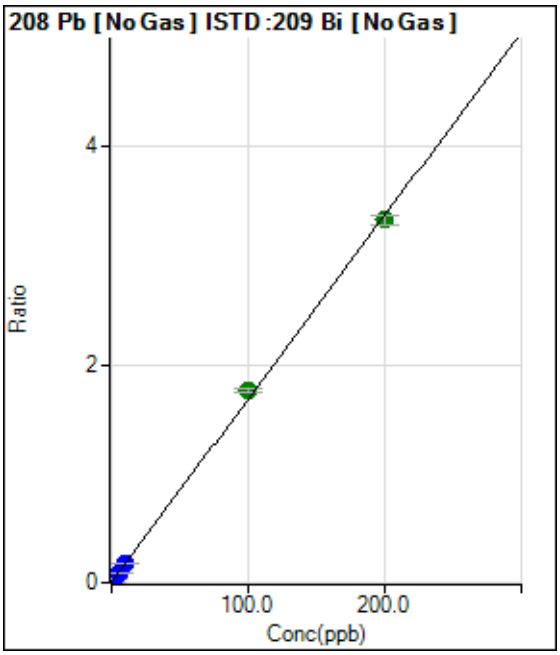


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3347.18	0.0008	P	1.7
2	☐	2.000	2.013	36236.61	0.0082	P	1.8
3	☐	5.000	4.780	80329.91	0.0184	P	1.2
4	☐	10.000	10.104	162475.20	0.0380	P	1.2
5	☐	100.000	103.022	1636216.69	0.3803	A	2.0
6	☐	200.000	198.489	3062974.12	0.7319	A	3.6

y = 0.0037 * x + 7.8819E-004
R = 0.9998
DL = 0.01099
BEC = 0.214

Weight: <None>
Min Conc: <None>

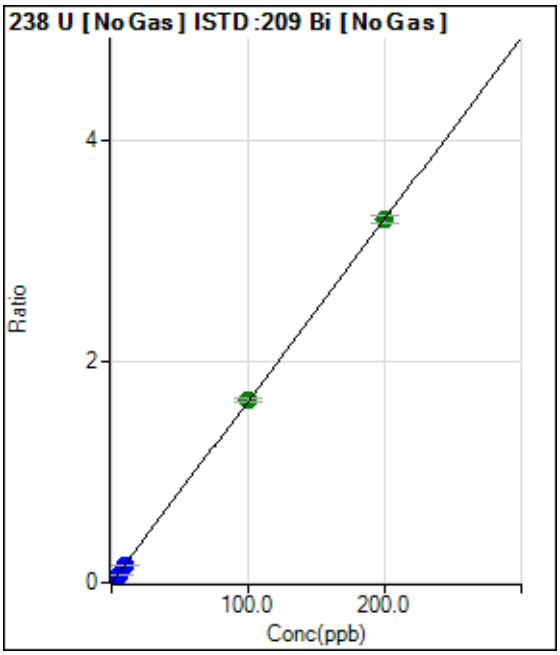
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16494.56	0.0039	P	1.9
2	☐	2.000	2.001	165746.71	0.0375	P	1.0
3	☐	5.000	4.839	372363.76	0.0853	P	0.8
4	☐	10.000	10.021	737044.58	0.1724	P	0.8
5	☐	100.000	104.590	7585713.84	1.7628	A	1.6
6	☐	200.000	197.708	13930658.65	3.3289	A	2.9

y = 0.0168 * x + 0.0039
R = 0.9996
DL = 0.01296
BEC = 0.231

Weight: <None>
Min Conc: <None>

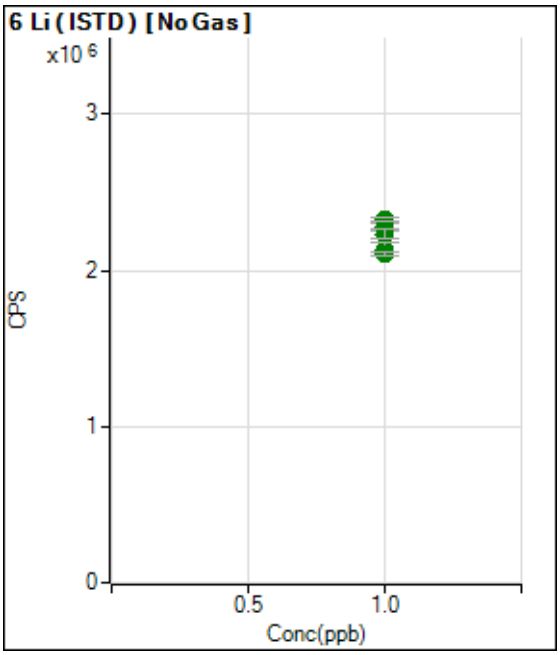


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.00	0.0000	P	31.6
2	☐	2.000	1.848	133810.75	0.0303	P	2.0
3	☐	5.000	4.578	327792.94	0.0751	P	1.7
4	☐	10.000	9.516	666942.10	0.1560	P	0.4
5	☐	100.000	100.584	7094961.56	1.6489	A	1.8
6	☐	200.000	199.744	13703442.30	3.2743	A	2.2

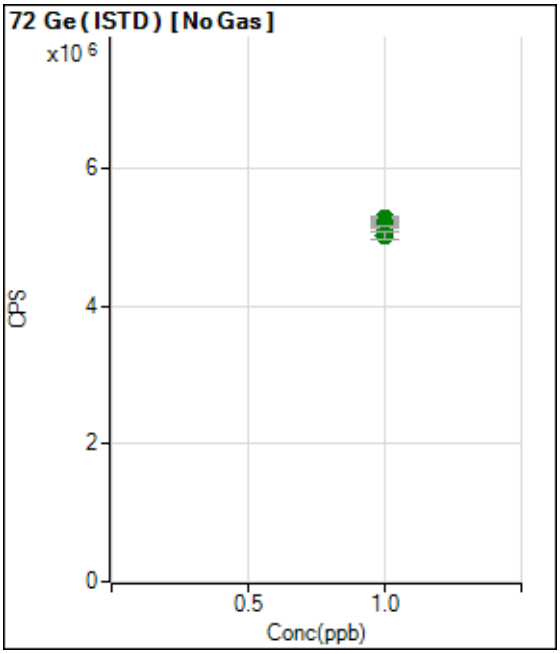
y = 0.0164 * x + 2.1313E-005
R = 1.0000
DL = 0.001231
BEC = 0.0013

Weight: <None>
Min Conc: <None>

Calibration for 017_ICV.d

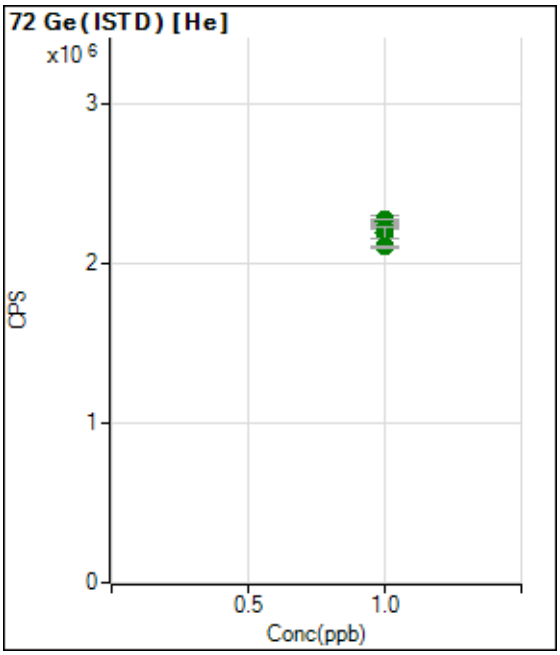


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2322552.60		A	1.3
2	☐	1.000		2280141.89		A	2.5
3	☐	1.000		2257938.62		A	0.7
4	☐	1.000		2232507.32		A	2.4
5	☐	1.000		2131478.51		A	4.0
6	☐	1.000		2103189.02		A	1.4

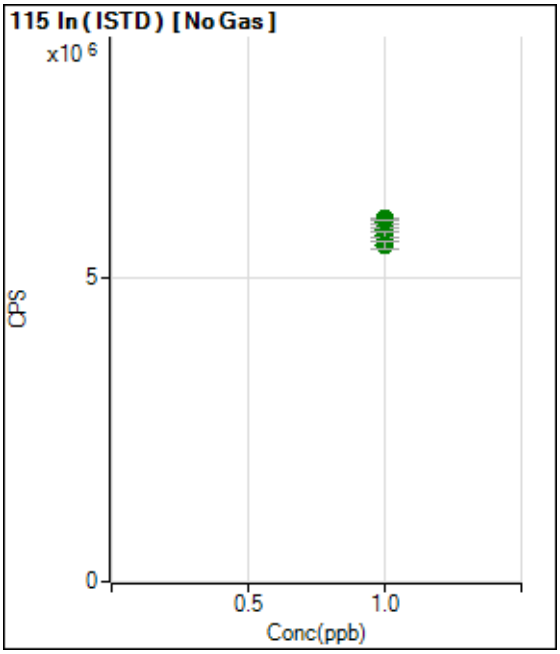


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5261859.72		A	0.9
2	☐	1.000		5227582.84		A	2.0
3	☐	1.000		5200758.88		A	0.4
4	☐	1.000		5169076.90		A	0.4
5	☐	1.000		5136992.63		A	0.7
6	☐	1.000		5021428.99		A	1.8

Calibration for 017_ICV.d

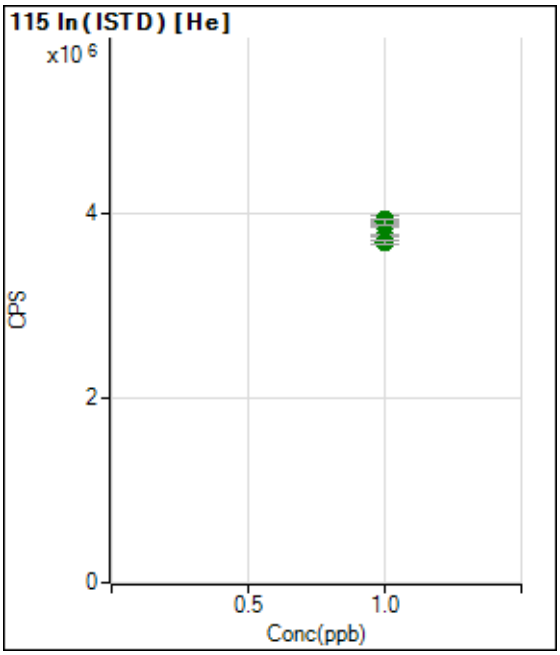


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2276212.67		A	2.3
2	☐	1.000		2277107.78		A	0.8
3	☐	1.000		2265933.61		A	1.1
4	☐	1.000		2224133.56		A	0.3
5	☐	1.000		2199753.56		A	3.3
6	☐	1.000		2108248.04		A	0.4

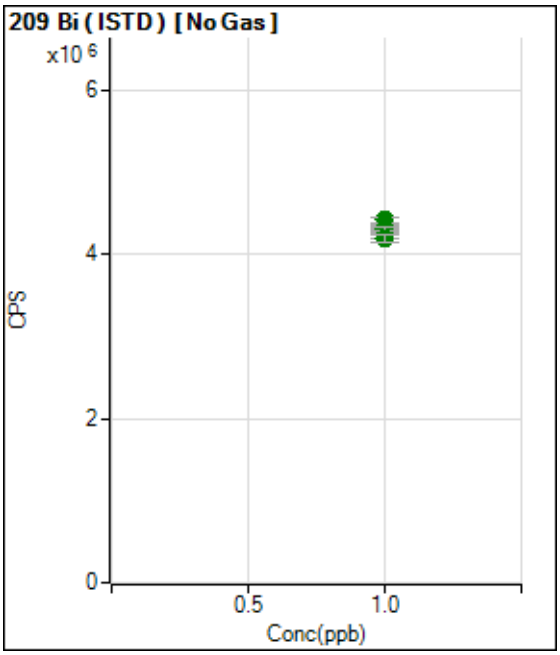


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5917508.77		A	1.2
2	☐	1.000		5956148.02		A	0.8
3	☐	1.000		5904424.75		A	1.0
4	☐	1.000		5786200.70		A	1.2
5	☐	1.000		5691117.14		A	1.6
6	☐	1.000		5518199.79		A	2.4

Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3932094.75		A	2.3
2	☐	1.000		3936145.10		A	0.4
3	☐	1.000		3882334.05		A	1.2
4	☐	1.000		3919461.73		A	1.6
5	☐	1.000		3765650.62		A	0.9
6	☐	1.000		3687172.24		A	1.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4246459.21		A	2.7
2	☐	1.000		4415511.91		A	1.8
3	☐	1.000		4366821.71		A	0.7
4	☐	1.000		4274790.56		A	0.7
5	☐	1.000		4303190.25		A	1.1
6	☐	1.000		4186397.75		A	2.1

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	018LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:42:14-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	2.107	2.107	4.04	198359	0.00	2	
Be	9	1	No Gas	1.939	1.939	5.08	14694	0.01	2	
V	51	2	He	1.489	1.489	4.34	47183	0.00	2	
Cr	52	2	He	2.026	2.026	1.88	43744	0.00	2	
Fe	56	2	He	197.234	197.234	1.66	3609587	0.01	200	
Se	78	2	He	2.114	2.114	8.62	1483	0.14	2	
Sn	118	2	He	2.179	2.179	0.32	33242	0.01	2	
As	75	2	He	1.882	1.882	1.10	6745	0.03	2	
Ca	44	2	He	191.741	191.741	1.71	28968	0.66	200	
Na	23	2	He	200.669	200.669	1.01	735819	0.03	200	
Mg	24	2	He	206.684	206.684	1.20	386787	0.05	200	
K	39	2	He	201.368	201.368	2.31	791636	0.03	200	
Mn	55	2	He	1.945	1.945	3.64	35212	0.01	2	
Co	59	2	He	1.994	1.994	2.76	53448	0.00	2	
Ni	60	2	He	2.054	2.054	3.82	13821	0.01	2	
Cu	63	2	He	2.076	2.076	2.93	36115	0.01	2	
Zn	66	2	He	1.907	1.907	2.82	8246	0.02	2	
Al	27	2	He	2.020	2.020	6.74	4547	0.04	2	
B	11	1	No Gas	14.199	14.199	7.63	145758	0.01	10	NewName Main CR1 Failed
Al	27	1	No Gas	2.100	2.100	4.78	100764	0.00	2	
Si	28	1	No Gas	10.682	10.682	7.94	777508	0.00	10	
P	31	1	No Gas	9.859	9.859	11.55	57429	0.02	10	
Ag	107	1	No Gas	1.963	1.963	4.86	71960	0.00	2	
Cd	111	1	No Gas	1.960	1.960	3.41	14061	0.01	2	
Sr	88	1	No Gas	1.882	1.882	1.27	123555	0.00	2	
Mo	95	1	No Gas	2.008	2.008	2.68	27936	0.01	2	
Sn	118	1	No Gas	2.182	2.182	2.10	47771	0.00	2	
Sb	121	1	No Gas	2.187	2.187	1.13	65346	0.00	2	
Ba	137	1	No Gas	1.829	1.829	2.61	19899	0.01	2	
Tl	205	1	No Gas	2.079	2.079	5.99	112315	0.00	2	
Tl	203	1	No Gas	2.041	2.041	6.12	47170	0.00	2	
Pb	208	1	No Gas	2.078	2.078	3.60	168805	0.00	2	
U	238	1	No Gas	1.885	1.885	0.73	134444	0.00	2	
Ca	43	2	He	196.578	196.578	9.27	1700	11.56	200	
Sb	121	2	He	2.114	2.114	3.97	44874	0.00	2	
Ti	47	2	He	2.022	2.022	7.15	1543	0.13	200	
Cu	63	1	No Gas	2.110	2.110	1.51	59728	0.00	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2274018	0.88	2322553	97.91	70	120	
Ge	72	2	He	2240377	1.06	2276213	98.43	70	120	
Ge	72	1	No Gas	5243253	0.91	5261860	99.65	70	120	
In	115	1	No Gas	5962737	2.33	5917509	100.76	70	120	
Bi	209	1	No Gas	4347991	2.71	4246459	102.39	70	120	

Sample Report

Sample Table

Sample Name	LLICV5
Data File Name	019LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:44:06-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	5.163	5.163	4.44	284824	0.00	5	
Be	9	1	No Gas	4.734	4.734	2.81	35311	0.01	5	
V	51	2	He	4.332	4.332	4.07	96349	0.00	5	
Cr	52	2	He	4.765	4.765	3.25	96415	0.00	5	
Fe	56	2	He	459.801	459.801	1.16	8446902	0.01	500	
Se	78	2	He	4.445	4.445	4.37	2284	0.19	5	
Sn	118	2	He	4.724	4.724	1.74	69783	0.01	5	
As	75	2	He	4.576	4.576	2.24	15038	0.03	5	
Ca	44	2	He	460.369	460.369	2.36	67978	0.68	500	
Na	23	2	He	477.487	477.487	4.81	1585789	0.03	500	
Mg	24	2	He	485.762	485.762	3.38	914982	0.05	500	
K	39	2	He	483.614	483.614	4.24	1602400	0.03	500	
Mn	55	2	He	4.643	4.643	1.78	80685	0.01	5	
Co	59	2	He	4.856	4.856	1.37	130313	0.00	5	
Ni	60	2	He	4.972	4.972	1.51	32933	0.02	5	
Cu	63	2	He	4.930	4.930	3.41	83912	0.01	5	
Zn	66	2	He	4.661	4.661	4.22	18560	0.03	5	
Al	27	2	He	4.842	4.842	8.90	8513	0.06	5	
B	11	1	No Gas	24.249	24.249	4.51	189526	0.01	25	
Al	27	1	No Gas	5.250	5.250	0.54	196174	0.00	5	
Si	28	1	No Gas	24.774	24.774	3.51	1008041	0.00	25	
P	31	1	No Gas	23.536	23.536	5.07	78887	0.03	25	
Ag	107	1	No Gas	4.787	4.787	1.67	173929	0.00	5	
Cd	111	1	No Gas	4.776	4.776	3.23	33994	0.01	5	
Sr	88	1	No Gas	4.646	4.646	0.98	301104	0.00	5	
Mo	95	1	No Gas	4.733	4.733	1.78	65267	0.01	5	
Sn	118	1	No Gas	4.740	4.740	1.36	99902	0.00	5	
Sb	121	1	No Gas	4.812	4.812	1.63	140868	0.00	5	
Ba	137	1	No Gas	4.669	4.669	0.29	49742	0.01	5	
Tl	205	1	No Gas	4.758	4.758	3.54	259576	0.00	5	
Tl	203	1	No Gas	4.694	4.694	3.11	109493	0.00	5	
Pb	208	1	No Gas	4.861	4.861	1.42	378197	0.00	5	
U	238	1	No Gas	4.567	4.567	1.69	330849	0.00	5	
Ca	43	2	He	446.738	446.738	2.36	3827	11.67	500	
Sb	121	2	He	4.634	4.634	2.92	96937	0.00	5	
Ti	47	2	He	4.514	4.514	6.44	3454	0.13	5	
Cu	63	1	No Gas	5.039	5.039	1.92	138413	0.00	5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2240438	1.69	2322553	96.46	70	120	
Ge	72	2	He	2261247	2.52	2276213	99.34	70	120	

Sample Report

Ge	72	1	No Gas	5263037	0.33	5261860	100.02	70	120	
In	115	1	No Gas	5925491	0.92	5917509	100.13	70	120	
Bi	209	1	No Gas	4417280	1.48	4246459	104.02	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	020_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:45:58-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.214	30.0	138797	1.2	0.5	
Be	9	1	No Gas	0.001	89.7	35	28.6	0.5	
V	51	2	He	-0.307	-1.9	16781	1.0	2.5	
Cr	52	2	He	0.058	13.9	6535	3.9	2.5	
Fe	56	2	He	0.370	14.8	40661	2.7	100	
Se	78	2	He	-0.046	-207.1	763	2.7	1	
Sn	118	2	He	0.095	12.9	3340	5.7	2.5	
As	75	2	He	-0.042	-28.5	923	5.4	2.5	
Ca	44	2	He	0.755	98.6	1673	7.5	100	
Na	23	2	He	-0.149	-722.1	129806	1.4	100	
Mg	24	2	He	0.094	147.0	1727	15.4	100	
K	39	2	He	-0.823	-168.6	222545	2.7	100	
Mn	55	2	He	0.097	11.0	4611	4.5	2.5	
Co	59	2	He	0.002	53.3	777	4.5	2.5	
Ni	60	2	He	0.018	71.8	700	10.8	2.5	
Cu	63	2	He	0.016	22.6	2154	4.3	1	
Zn	66	2	He	0.042	62.3	1387	6.0	2.5	
Al	27	2	He	0.216	74.8	2070	12.2	5	
B	11	1	No Gas	0.038	521.7	78181	1.1	0.5	
Al	27	1	No Gas	0.196	10.6	43559	1.2	5	
Si	28	1	No Gas	-0.325	-130.6	600378	0.9	10	
P	31	1	No Gas	-0.302	-137.4	41716	2.4	10	
Ag	107	1	No Gas	0.037	23.3	1723	17.9	2.5	
Cd	111	1	No Gas	0.000	-38163.6	37	68.6	1	
Sr	88	1	No Gas	0.007	37.2	1823	7.9	2.5	
Mo	95	1	No Gas	0.017	7.9	377	6.7	2.5	
Sn	118	1	No Gas	0.101	4.3	4794	2.0	5	
Sb	121	1	No Gas	0.077	9.8	5031	3.5	2.5	
Ba	137	1	No Gas	0.046	10.2	960	6.8	2.5	
Tl	205	1	No Gas	0.014	41.8	2130	17.9	1	
Tl	203	1	No Gas	0.007	114.3	810	27.8	1	
Pb	208	1	No Gas	0.006	18.6	17915	3.1	2.5	
U	238	1	No Gas	0.001	50.4	180	25.5	2.5	
Ca	43	2	He	-0.285	-992.0	57	40.8	100	
Sb	121	2	He	0.077	9.2	3504	5.0	2.5	
Ti	47	2	He	0.009	146.9	30	33.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Initial Calibration Blank (ICB) Report

Li	6	1	No Gas	2220582	0.22	2322553	95.61	70	120	
Ge	72	2	He	2254337	1.59	2276213	99.04	70	120	
Ge	72	1	No Gas	5242328	0.93	5261860	99.63	70	120	
In	115	1	No Gas	5872216	1.77	5917509	99.23	70	120	
Bi	209	1	No Gas	4489671	3.33	4246459	105.73	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	021ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:47:57-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.803	13.2	151404	1.4	0	ICSA Main CR1 Failed
Be	9	1	No Gas	0.002	79.7	40	33.1	0	ICSA Main CR1 Failed
V	51	2	He	-0.389	-7.8	14833	1.9	0	ICSA Main CR1 Failed
Cr	52	2	He	0.895	5.3	21664	1.4	0	ICSA Main CR1 Failed
Fe	56	2	He	96146.807	1.5	1691555601	1.1	0	
Se	78	2	He	0.188	87.6	812	5.6	0	ICSA Main CR1 Failed
Sn	118	2	He	0.085	11.0	3067	2.8	0	ICSA Main CR1 Failed
As	75	2	He	0.124	22.5	1377	4.8	0	ICSA Main CR1 Failed
Ca	44	2	He	94885.124	2.3	13162764	0.4	0	
Na	23	2	He	96981.807	3.6	284355729	1.0	0	
Mg	24	2	He	98513.655	1.2	178207791	2.0	0	
K	39	2	He	97901.822	1.7	268280943	0.9	0	
Mn	55	2	He	0.121	11.6	4821	2.0	0	ICSA Main CR1 Failed
Co	59	2	He	0.200	7.0	5841	5.7	0	ICSA Main CR1 Failed
Ni	60	2	He	0.236	10.6	2040	5.2	0	ICSA Main CR1 Failed
Cu	63	2	He	0.297	1.4	6585	2.8	0	ICSA Main CR1 Failed
Zn	66	2	He	0.409	7.3	2650	4.3	0	ICSA Main CR1 Failed
Al	27	2	He	91074.455	1.2	122036132	1.4	0	
B	11	1	No Gas	-0.113	-313.1	75275	2.1	0	ICSA Main CR1 Failed
Al	27	1	No Gas	97650.495	2.7	2731314413	1.7	0	
Si	28	1	No Gas	24.192	1.2	926293	1.5	0	
P	31	1	No Gas	96157.352	0.8	138511141	0.9	0	
Ag	107	1	No Gas	0.011	2.6	723	2.1	0	ICSA Main CR1 Failed
Cd	111	1	No Gas	1.462	5.9	9504	5.1	0	ICSA Main CR1 Failed
Sr	88	1	No Gas	0.993	0.8	59670	1.9	0	ICSA Main CR1 Failed
Mo	95	1	No Gas	1912.746	1.7	23976950	0.9	0	
Sn	118	1	No Gas	0.102	12.4	4424	6.0	0	ICSA Main CR1 Failed
Sb	121	1	No Gas	0.047	21.8	3897	5.8	0	ICSA Main CR1 Failed
Ba	137	1	No Gas	0.048	3.4	900	2.9	0	ICSA Main CR1 Failed
Tl	205	1	No Gas	0.001	394.5	1220	8.9	0	ICSA Main CR1 Failed
Tl	203	1	No Gas	-0.004	-24.4	470	3.7	0	ICSA Main CR1 Failed
Pb	208	1	No Gas	0.021	24.4	16515	2.3	0	ICSA Main CR1 Failed
U	238	1	No Gas	0.002	30.6	180	16.7	0	ICSA Main CR1 Failed
Ca	43	2	He	95798.801	2.3	776400	0.7	0	
Sb	121	2	He	0.057	17.7	2987	5.1	0	ICSA Main CR1 Failed
Ti	47	2	He	1907.398	3.5	1391927	1.7	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2156842	0.62	2322553	92.87	70	120	
Ge	72	2	He	2174428	2.57	2276213	95.53	70	120	
Ge	72	1	No Gas	4881526	1.25	5261860	92.77	70	120	
In	115	1	No Gas	5398185	1.22	5917509	91.22	70	120	
Bi	209	1	No Gas	3894291	0.51	4246459	91.71	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	022ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:49:59-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	94.494	3.047	2894805	1.48	100	94.5	180	120	ICSB Main CR1 Failed
Be	9	1	No Gas	94.656	1.690	704808	0.64	100	94.7	80	120	
V	51	2	He	97.232	2.290	1655120	1.16	100	97.2	80	120	
Cr	52	2	He	96.800	3.398	1815939	1.77	100	96.8	80	120	
Fe	56	2	He	106405.450	1.510	1907407705	0.28	100	106405.5	80	120	
Se	78	2	He	99.337	2.486	33671	1.04	100	99.3	80	120	
Sn	118	2	He	94.902	0.905	1332831	1.45	100	94.9	80	120	
As	75	2	He	96.559	1.195	290207	1.15	100	96.6	80	120	
Ca	44	2	He	106101.257	1.958	14997843	0.19	100	106101.3	80	120	
Na	23	2	He	109565.438	0.579	327464235	1.46	100	109565.4	80	120	ICSB Main CR1 Failed
Mg	24	2	He	109360.036	2.220	201527810	0.72	100	109360.0	80	120	
K	39	2	He	109529.531	0.981	305817435	0.85	100	109529.5	80	120	
Mn	55	2	He	95.969	3.543	1575754	1.74	100	96.0	80	120	
Co	59	2	He	94.775	2.478	2478793	2.28	100	94.8	80	120	
Ni	60	2	He	95.182	1.223	607367	0.77	100	95.2	80	120	
Cu	63	2	He	95.510	1.092	1558999	0.69	100	95.5	80	120	
Zn	66	2	He	94.774	1.903	346191	0.23	100	94.8	80	120	
Al	27	2	He	92867.441	1.138	126788641	0.64	100	92867.4	80	120	ICSB Main CR1 Failed
B	11	1	No Gas	445.099	1.693	2110810	0.87	100	445.1	80	120	
Al	27	1	No Gas	97125.966	0.482	2800273772	0.83	100	97126.0	80	120	ICSB Main CR1 Failed
Si	28	1	No Gas	496.823	1.341	8249398	0.45	100	496.8	80	120	
P	31	1	No Gas	95884.623	1.741	142333975	0.72	100	95884.6	80	120	ICSB Main CR1 Failed
Ag	107	1	No Gas	93.779	1.836	3071163	1.39	100	93.8	80	120	
Cd	111	1	No Gas	99.176	0.843	637053	0.29	100	99.2	80	120	
Sr	88	1	No Gas	99.582	2.850	5802829	2.32	100	99.6	80	120	
Mo	95	1	No Gas	2068.540	0.863	25714607	0.39	100	2068.5	80	120	ICSB Main CR1 Failed
Sn	118	1	No Gas	96.619	1.339	1791285	0.72	100	96.6	80	120	
Sb	121	1	No Gas	94.887	1.203	2604024	0.10	100	94.9	80	120	
Ba	137	1	No Gas	97.312	1.745	927826	1.52	100	97.3	80	120	
Tl	205	1	No Gas	99.348	0.765	4686727	2.02	100	99.3	80	120	
Tl	203	1	No Gas	99.520	1.356	2006309	1.86	100	99.5	80	120	
Pb	208	1	No Gas	98.894	0.231	6397562	2.55	100	98.9	80	120	
U	238	1	No Gas	99.467	1.685	6255861	1.24	100	99.5	80	120	
Ca	43	2	He	105850.034	3.543	874026	2.30	100	105850.0	80	120	
Sb	121	2	He	95.993	1.677	1930262	1.03	100	96.0	80	120	
Ti	47	2	He	2018.373	1.390	1501276	1.49	100	2018.4	80	120	
Cu	63	1	No Gas	96.537	0.674	2476007	0.51	100	96.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2237839	2.29	2322553	96.35	70	120	
Ge	72	2	He	2215333	1.77	2276213	97.33	70	120	
Ge	72	1	No Gas	5030913	1.14	5261860	95.61	70	120	
In	115	1	No Gas	5352897	0.62	5917509	90.46	70	120	
Bi	209	1	No Gas	3837594	2.41	4246459	90.37	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	040_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:34:48-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.601	1.523	3304097	1.06	100	101.6	90	110	
Be	9	1	No Gas	96.152	0.796	762396	0.70	100	96.2	90	110	
V	51	2	He	100.015	3.338	1834082	1.66	100	100.0	90	110	
Cr	52	2	He	97.943	2.450	1980550	0.98	100	97.9	90	110	
Fe	56	2	He	10120.270	2.053	195557117	0.54	10000	101.2	90	110	
Se	78	2	He	98.395	2.412	35957	1.29	100	98.4	90	110	
Sn	118	2	He	101.544	0.549	1529309	0.56	100	101.5	90	110	
As	75	2	He	97.469	2.028	315693	0.42	100	97.5	90	110	
Ca	44	2	He	10363.771	1.502	1580687	1.48	10000	103.6	90	110	
Na	23	2	He	10238.411	1.074	33105069	1.02	10000	102.4	90	110	
Mg	24	2	He	10323.281	1.928	20507104	1.00	10000	103.2	90	110	
K	39	2	He	10400.749	1.641	31513571	0.32	10000	104.0	90	110	
Mn	55	2	He	98.663	2.306	1746306	1.00	100	98.7	90	110	
Co	59	2	He	96.928	2.053	2732135	0.48	100	96.9	90	110	
Ni	60	2	He	99.579	1.823	684838	1.25	100	99.6	90	110	
Cu	63	2	He	99.284	0.410	1746937	2.04	100	99.3	90	110	
Zn	66	2	He	99.793	2.099	392822	0.46	100	99.8	90	110	
Al	27	2	He	100.456	1.366	149692	0.45	100	100.5	90	110	
B	11	1	No Gas	461.812	0.930	2328947	0.57	500	92.4	90	110	
Al	27	1	No Gas	100.285	1.008	3261644	0.46	100	100.3	90	110	
Si	28	1	No Gas	489.495	2.822	9066287	2.85	5000	9.8	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	495.332	0.770	864252	1.61	500	99.1	90	110	
Ag	107	1	No Gas	96.715	0.707	3687282	0.81	100	96.7	90	110	
Cd	111	1	No Gas	99.406	0.606	743349	1.01	100	99.4	90	110	
Sr	88	1	No Gas	98.300	1.904	6668860	2.00	100	98.3	90	110	
Mo	95	1	No Gas	97.487	0.644	1410994	1.19	100	97.5	90	110	
Sn	118	1	No Gas	100.078	1.294	2159805	0.45	100	100.1	90	110	
Sb	121	1	No Gas	94.241	2.465	2881496	1.62	100	94.2	90	110	
Ba	137	1	No Gas	96.250	1.896	1068278	1.49	100	96.2	90	110	
Tl	205	1	No Gas	99.137	0.738	5640988	1.60	100	99.1	90	110	
Tl	203	1	No Gas	99.166	1.821	2411524	2.39	100	99.2	90	110	
Pb	208	1	No Gas	97.947	0.835	7641488	0.30	100	97.9	90	110	
U	238	1	No Gas	95.153	1.308	7218790	0.82	100	95.2	90	110	
Ca	43	2	He	10196.894	0.753	90839	1.81	10000	102.0	90	110	
Sb	121	2	He	93.865	2.261	2034288	0.94	100	93.9	90	110	
Ti	47	2	He	101.924	2.295	81723	0.71	100	101.9	90	110	
Cu	63	1	No Gas	101.667	0.985	2905181	0.92	100	101.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2382452	0.50	2322553	102.58	70	120	
Ge	72	2	He	2387743	1.64	2276213	104.90	70	120	
Ge	72	1	No Gas	5605453	1.13	5261860	106.53	70	120	
In	115	1	No Gas	6231754	1.51	5917509	105.31	70	120	
Bi	209	1	No Gas	4628305	1.01	4246459	108.99	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	041_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:36:32-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.138	62.0	150231	0.5	0.5	
Be	9	1	No Gas	0.008	16.8	93	13.5	0.5	
V	51	2	He	-0.454	-4.2	15271	1.7	2.5	
Cr	52	2	He	0.113	27.0	8106	7.8	2.5	
Fe	56	2	He	1.772	3.1	70881	0.9	100	
Se	78	2	He	-0.129	-199.1	787	11.3	2	
As	75	2	He	-0.062	-48.4	921	11.0	2.5	
Ca	44	2	He	24.833	9.1	5495	5.7	100	
Na	23	2	He	8.203	8.2	166081	0.7	100	
Mg	24	2	He	0.597	9.2	2857	4.3	100	
K	39	2	He	5.633	23.8	257711	1.4	100	
Mn	55	2	He	1.008	4.2	21190	3.0	2.5	
Co	59	2	He	0.002	168.3	820	8.8	2.5	
Ni	60	2	He	0.302	12.8	2717	9.2	2.5	
Cu	63	2	He	0.096	22.1	3734	9.5	2	
Zn	66	2	He	0.954	3.4	5101	2.6	2.5	
Al	27	2	He	1.387	4.0	3954	2.7	5	
B	11	1	No Gas	4.531	22.0	108353	3.1	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.464	1.6	86726	0.8	5	
Si	28	1	No Gas	1.508	103.0	668813	3.2	10	
P	31	1	No Gas	-0.560	-22.9	43876	1.2	10	
Ag	107	1	No Gas	0.004	32.1	583	6.5	2.5	
Cd	111	1	No Gas	0.005	136.1	73	63.0	1	
Sr	88	1	No Gas	0.042	7.4	4411	3.3	2.5	
Mo	95	1	No Gas	0.072	9.9	1210	6.6	2.5	
Sn	118	1	No Gas	0.509	3.4	14058	3.2	5	
Sb	121	1	No Gas	1.024	19.0	34086	16.9	2.5	
Ba	137	1	No Gas	0.005	169.8	577	16.0	2.5	
Tl	205	1	No Gas	0.030	62.9	3184	33.9	1	
Tl	203	1	No Gas	0.026	76.2	1307	36.9	1	
Pb	208	1	No Gas	-0.060	-5.2	13503	1.4	2.5	
U	238	1	No Gas	0.009	30.4	817	26.2	2.5	
Ca	43	2	He	25.217	31.1	290	23.9	100	
Sb	121	2	He	0.677	1.9	16891	1.3	2.5	
Ti	47	2	He	0.044	49.3	60	28.9	2.5	
Cu	63	1	No Gas	0.097	8.4	6358	4.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2442893	2.17	2322553	105.18	70	120	
Ge	72	2	He	2412073	0.65	2276213	105.97	70	120	
Ge	72	1	No Gas	5567827	1.65	5261860	105.81	70	120	
In	115	1	No Gas	6317967	2.56	5917509	106.77	70	120	
Bi	209	1	No Gas	4705520	0.50	4246459	110.81	70	120	

Sample Report

Sample Table

Sample Name	MBLK-158768
Data File Name	042SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:41:15-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.137	0.137	33.97	153086	0.00	2000	
Be	9	1	No Gas	0.003	0.003	79.73	52	0.01	2000	
V	51	2	He	-0.389	-0.389	-6.66	16493	0.00	2000	
Cr	52	2	He	-0.072	-0.072	-12.89	4344	0.00	2000	
Fe	56	2	He	20.418	20.418	0.46	435684	0.00	200000	
Se	78	2	He	-0.060	-0.060	-181.99	813	-0.01	2000	
Sn	118	2	He	0.081	0.081	3.48	3474	0.00	200	
As	75	2	He	-0.052	-0.052	-23.90	956	-0.01	2000	
Ca	44	2	He	2.205	2.205	16.82	2017	0.11	200000	
Na	23	2	He	9.396	9.396	3.31	170292	0.01	200000	
Mg	24	2	He	17.571	17.571	2.39	36993	0.05	200000	
K	39	2	He	2.418	2.418	45.48	248415	0.00	200000	
Mn	55	2	He	0.668	0.668	6.87	15162	0.00	2000	
Co	59	2	He	-0.002	-0.002	-69.46	710	0.00	2000	
Ni	60	2	He	-0.007	-0.007	-175.33	580	0.00	2000	
Cu	63	2	He	0.149	0.149	8.13	4674	0.00	2000	
Zn	66	2	He	2.962	2.962	3.19	13083	0.02	2000	
Al	27	2	He	9.807	9.807	3.52	16503	0.06	2000	
B	11	1	No Gas	0.511	0.511	32.73	90049	0.00	2000	
Al	27	1	No Gas	10.585	10.585	2.99	375494	0.00	2000	
Si	28	1	No Gas	100.776	100.776	6.73	2349753	0.00	2000	
Ag	107	1	No Gas	0.001	0.001	270.10	453	0.00	2000	
Cd	111	1	No Gas	0.034	0.034	20.96	297	0.01	2000	
Sr	88	1	No Gas	0.018	0.018	13.46	2717	0.00	2000	
Mo	95	1	No Gas	0.017	0.017	19.35	403	0.00	2000	
Sn	118	1	No Gas	0.097	0.097	1.01	5031	0.00	2000	
Sb	121	1	No Gas	0.087	0.087	3.00	5628	0.00	2000	
Ba	137	1	No Gas	0.075	0.075	20.28	1353	0.01	2000	
Tl	205	1	No Gas	-0.007	-0.007	-32.28	1043	0.00	2000	
Tl	203	1	No Gas	-0.009	-0.009	-15.29	447	0.00	2000	
Pb	208	1	No Gas	0.167	0.167	10.06	31546	0.00	2000	
U	238	1	No Gas	0.001	0.001	41.44	177	0.00	2000	
Ca	43	2	He	2.566	2.566	139.44	87	2.96	200000	
Sb	121	2	He	0.103	0.103	3.55	4341	0.00	2000	
Ti	47	2	He	0.093	0.093	13.13	100	0.09	2000	
Cu	63	1	No Gas	0.157	0.157	5.46	8009	0.00	2000	
Zn	66	1	No Gas	3.159	3.159	2.03	26236	0.01	2000	
Se	82	1	No Gas	-0.125	-0.125	-706.95	-91	0.14	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2489534	1.35	2322553	107.19	70	120	
Ge	72	2	He	2416609	0.13	2276213	106.17	70	120	
Ge	72	1	No Gas	5536386	2.23	5261860	105.22	70	120	

Sample Report

In	115	1	No Gas	6282743	1.03	5917509	106.17	70	120	
Bi	209	1	No Gas	4713721	0.62	4246459	111.00	70	120	

Sample Report

Sample Table

Sample Name	LCS-158768
Data File Name	043SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:43:08-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	102.560	102.560	1.44	3234015	0.00	2000	
Be	9	1	No Gas	52.056	52.056	1.36	400382	0.01	2000	
V	51	2	He	48.932	48.932	1.23	910420	0.01	2000	
Cr	52	2	He	47.799	47.799	2.51	970654	0.00	2000	
Fe	56	2	He	4752.680	4752.680	1.08	91965269	0.01	200000	
Se	78	2	He	50.258	50.258	0.29	18793	0.27	2000	
Sn	118	2	He	100.847	100.847	1.76	1532987	0.01	200	
As	75	2	He	48.707	48.707	1.09	158505	0.03	2000	
Ca	44	2	He	5015.903	5015.903	1.44	766688	0.65	200000	
Na	23	2	He	4871.511	4871.511	1.98	15839876	0.03	200000	
Mg	24	2	He	4981.506	4981.506	2.35	9907202	0.05	200000	
K	39	2	He	5009.937	5009.937	1.42	15320296	0.03	200000	
Mn	55	2	He	48.550	48.550	1.84	861924	0.01	2000	
Co	59	2	He	49.170	49.170	0.83	1388074	0.00	2000	
Ni	60	2	He	50.213	50.213	0.95	346028	0.01	2000	
Cu	63	2	He	50.730	50.730	1.51	894384	0.01	2000	
Zn	66	2	He	51.826	51.826	1.19	204879	0.03	2000	
Al	27	2	He	105.696	105.696	2.31	157564	0.07	2000	
B	11	1	No Gas	473.505	473.505	1.48	2314285	0.02	2000	
Al	27	1	No Gas	108.663	108.663	1.95	3470088	0.00	2000	
Si	28	1	No Gas	547.165	547.165	0.68	9884904	0.01	2000	
Ag	107	1	No Gas	50.332	50.332	1.53	1853282	0.00	2000	
Cd	111	1	No Gas	50.910	50.910	1.97	367631	0.01	2000	
Sr	88	1	No Gas	104.391	104.391	0.28	6839702	0.00	2000	
Mo	95	1	No Gas	49.951	49.951	1.62	698210	0.01	2000	
Sn	118	1	No Gas	101.514	101.514	2.08	2115613	0.00	2000	
Sb	121	1	No Gas	48.163	48.163	0.69	1448938	0.00	2000	
Ba	137	1	No Gas	49.052	49.052	1.19	526032	0.01	2000	
Tl	205	1	No Gas	49.432	49.432	2.47	2743802	0.00	2000	
Tl	203	1	No Gas	47.469	47.469	1.66	1126219	0.00	2000	
Pb	208	1	No Gas	49.322	49.322	2.12	3762098	0.00	2000	
U	238	1	No Gas	91.452	91.452	1.78	6767601	0.00	2000	
Ca	43	2	He	5191.756	5191.756	1.46	46325	11.21	200000	
Sb	121	2	He	47.600	47.600	0.90	1033856	0.00	2000	
Ti	47	2	He	144.580	144.580	1.97	116047	0.12	2000	
Cu	63	1	No Gas	52.485	52.485	0.76	1475716	0.00	2000	
Zn	66	1	No Gas	53.121	53.121	0.64	402692	0.01	2000	
Se	82	1	No Gas	51.488	51.488	1.52	23839	0.22	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2311182	1.35	2322553	99.51	70	120	
Ge	72	2	He	2390217	1.03	2276213	105.01	70	120	
Ge	72	1	No Gas	5508848	0.31	5261860	104.69	70	120	

Sample Report

In	115	1	No Gas	6018148	1.16	5917509	101.70	70	120	
Bi	209	1	No Gas	4515230	1.83	4246459	106.33	70	120	

Sample Report

Sample Table

Sample Name	HS20100780-04SD
Data File Name	045SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:46:53-05:00
Sample Type	Sample
Dilution	5
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	5.043	25.214	0.57	289377	0.00	2000	
Be	9	1	No Gas	0.003	0.016	40.97	50	0.01	2000	
V	51	2	He	-0.527	-2.637	-7.21	13152	0.00	2000	
Cr	52	2	He	0.066	0.328	28.66	6752	0.00	2000	
Fe	56	2	He	1118.564	5592.822	0.38	20658121	0.01	200000	
Se	78	2	He	0.106	0.529	94.47	823	0.01	2000	
Sn	118	2	He	0.348	1.739	5.46	7199	0.00	200	
As	75	2	He	0.195	0.975	7.21	1662	0.01	2000	
Ca	44	2	He	24959.453	124797.264	1.72	3630143	0.69	200000	
Na	23	2	He	8268.109	41340.543	0.38	25536738	0.03	200000	
Mg	24	2	He	4289.672	21448.360	0.39	8133034	0.05	200000	
K	39	2	He	739.087	3695.437	1.92	2348159	0.03	200000	
Mn	55	2	He	909.990	4549.948	1.70	15347981	0.01	2000	
Co	59	2	He	0.006	0.030	45.82	893	0.00	2000	
Ni	60	2	He	0.073	0.364	38.96	1067	0.01	2000	
Cu	63	2	He	0.257	1.283	8.26	6215	0.00	2000	
Zn	66	2	He	0.657	3.283	6.96	3704	0.02	2000	
Al	27	2	He	4.721	23.603	2.41	8416	0.06	2000	
B	11	1	No Gas	18.368	91.838	1.54	167322	0.01	2000	
Al	27	1	No Gas	5.253	26.263	2.01	195423	0.00	2000	
Si	28	1	No Gas	3122.604	15613.018	2.02	50813818	0.01	2000	>LDR
Ag	107	1	No Gas	0.000	-0.002	-212.29	383	0.00	2000	
Cd	111	1	No Gas	0.001	0.005	221.72	43	0.00	2000	
Sr	88	1	No Gas	188.813	944.064	0.92	12051309	0.00	2000	
Mo	95	1	No Gas	0.594	2.971	1.75	8233	0.01	2000	
Sn	118	1	No Gas	0.383	1.917	5.13	10511	0.00	2000	
Sb	121	1	No Gas	0.129	0.646	8.82	6532	0.00	2000	
Ba	137	1	No Gas	115.506	577.530	1.68	1206201	0.01	2000	
Tl	205	1	No Gas	-0.006	-0.028	-22.92	1070	0.00	2000	
Tl	203	1	No Gas	-0.007	-0.037	-64.51	460	0.00	2000	
Pb	208	1	No Gas	-0.064	-0.322	-15.93	12583	0.00	2000	
U	238	1	No Gas	0.122	0.608	0.70	9054	0.00	2000	
Ca	43	2	He	25620.503	128102.514	2.09	217661	11.77	200000	
Sb	121	2	He	0.140	0.702	11.42	4861	0.00	2000	
Ti	47	2	He	0.074	0.372	62.32	80	0.09	2000	
Cu	63	1	No Gas	0.322	1.608	3.85	11965	0.00	2000	
Zn	66	1	No Gas	0.749	3.743	6.55	7559	0.01	2000	
Se	82	1	No Gas	0.598	2.990	43.08	238	0.25	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2304253	0.86	2322553	99.21	70	120	
Ge	72	2	He	2278275	0.81	2276213	100.09	70	120	
Ge	72	1	No Gas	5240950	0.64	5261860	99.60	70	120	

Sample Report

In	115	1	No Gas	5863042	0.39	5917509	99.08	70	120	
Bi	209	1	No Gas	4495453	2.63	4246459	105.86	70	120	

Sample Report

Sample Table

Sample Name	HS20100780-04MS
Data File Name	046SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:48:43-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	115.116	115.116	1.95	3495595	0.00	2000	
Be	9	1	No Gas	49.066	49.066	0.29	365148	0.01	2000	
V	51	2	He	47.605	47.605	1.37	838250	0.01	2000	
Cr	52	2	He	46.738	46.738	1.73	897726	0.01	2000	
Fe	56	2	He	9886.914	9886.914	2.13	180884877	0.01	200000	
Se	78	2	He	47.464	47.464	2.83	16826	0.28	2000	
Sn	118	2	He	96.691	96.691	2.88	1390997	0.01	200	
As	75	2	He	48.096	48.096	1.29	148035	0.03	2000	
Ca	44	2	He	127498.893	127498.893	1.59	18391947	0.69	200000	
Na	23	2	He	45126.151	45126.151	1.18	137701938	0.03	200000	
Mg	24	2	He	25545.620	25545.620	1.33	48047776	0.05	200000	
K	39	2	He	8163.764	8163.764	0.80	23468473	0.03	200000	
Mn	55	2	He	4393.561	4393.561	1.18	73500751	0.01	2000	>LDR
Co	59	2	He	45.246	45.246	0.87	1207960	0.00	2000	
Ni	60	2	He	46.131	46.131	1.82	300676	0.02	2000	
Cu	63	2	He	46.396	46.396	1.47	773749	0.01	2000	
Zn	66	2	He	47.719	47.719	0.79	178502	0.03	2000	
Al	27	2	He	101.283	101.283	1.39	142882	0.07	2000	
B	11	1	No Gas	526.873	526.873	1.37	2482835	0.02	2000	
Al	27	1	No Gas	104.845	104.845	4.49	3180832	0.00	2000	
Si	28	1	No Gas	15975.764	15975.764	1.95	257130323	0.01	2000	>LDR
Ag	107	1	No Gas	46.054	46.054	2.59	1620193	0.00	2000	
Cd	111	1	No Gas	47.642	47.642	2.83	328711	0.01	2000	
Sr	88	1	No Gas	1026.048	1026.048	2.32	64213266	0.00	2000	
Mo	95	1	No Gas	51.412	51.412	3.34	686515	0.01	2000	
Sn	118	1	No Gas	97.964	97.964	3.23	1950564	0.01	2000	
Sb	121	1	No Gas	47.293	47.293	0.38	1352065	0.00	2000	
Ba	137	1	No Gas	600.747	600.747	2.31	6149980	0.01	2000	
Tl	205	1	No Gas	47.698	47.698	2.16	2469813	0.00	2000	
Tl	203	1	No Gas	46.954	46.954	1.20	1039074	0.00	2000	
Pb	208	1	No Gas	47.144	47.144	0.07	3354926	0.00	2000	
U	238	1	No Gas	92.075	92.075	2.46	6355933	0.00	2000	
Ca	43	2	He	127930.131	127930.131	1.10	1078155	11.87	200000	
Sb	121	2	He	45.909	45.909	0.33	943105	0.00	2000	
Ti	47	2	He	138.664	138.664	1.79	105262	0.13	2000	
Cu	63	1	No Gas	47.599	47.599	3.17	1271490	0.00	2000	
Zn	66	1	No Gas	49.398	49.398	2.08	355891	0.01	2000	
Se	82	1	No Gas	49.728	49.728	2.71	21870	0.23	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2235986	0.62	2322553	96.27	70	120	
Ge	72	2	He	2260432	0.73	2276213	99.31	70	120	
Ge	72	1	No Gas	5234915	2.40	5261860	99.49	70	120	
In	115	1	No Gas	5751596	2.41	5917509	97.20	70	120	
Bi	209	1	No Gas	4210817	0.39	4246459	99.16	70	120	

Sample Report

Sample Table

Sample Name	HS20100780-04MSD
Data File Name	047SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:50:37-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	121.779	121.779	1.47	3609249	0.00	2000	
Be	9	1	No Gas	51.211	51.211	1.09	372722	0.01	2000	
V	51	2	He	47.615	47.615	1.73	846863	0.01	2000	
Cr	52	2	He	47.092	47.092	1.38	913602	0.01	2000	
Fe	56	2	He	10113.840	10113.840	2.62	186894997	0.01	200000	
Se	78	2	He	47.942	47.942	0.81	17160	0.28	2000	
Sn	118	2	He	100.638	100.638	0.70	1463869	0.01	200	
As	75	2	He	48.612	48.612	0.58	151120	0.03	2000	
Ca	44	2	He	129663.827	129663.827	0.75	18893189	0.69	200000	
Na	23	2	He	45429.084	45429.084	1.15	140011165	0.03	200000	
Mg	24	2	He	25829.162	25829.162	1.55	49066254	0.05	200000	
K	39	2	He	8331.070	8331.070	1.26	24185619	0.03	200000	
Mn	55	2	He	4520.835	4520.835	1.58	76391077	0.01	2000	>LDR
Co	59	2	He	45.274	45.274	0.98	1220883	0.00	2000	
Ni	60	2	He	47.177	47.177	1.21	310590	0.02	2000	
Cu	63	2	He	47.175	47.175	0.59	794655	0.01	2000	
Zn	66	2	He	48.738	48.738	1.01	184119	0.03	2000	
Al	27	2	He	105.030	105.030	1.89	149582	0.07	2000	
B	11	1	No Gas	548.556	548.556	1.88	2524933	0.02	2000	
Al	27	1	No Gas	109.506	109.506	0.56	3323939	0.00	2000	
Si	28	1	No Gas	16261.066	16261.066	0.79	261854843	0.01	2000	>LDR
Ag	107	1	No Gas	47.099	47.099	0.50	1673764	0.00	2000	
Cd	111	1	No Gas	48.414	48.414	0.11	337436	0.01	2000	
Sr	88	1	No Gas	1045.118	1045.118	1.52	66064044	0.00	2000	
Mo	95	1	No Gas	51.400	51.400	0.98	693392	0.01	2000	
Sn	118	1	No Gas	102.131	102.131	2.05	2054104	0.00	2000	
Sb	121	1	No Gas	47.388	47.388	0.73	1355259	0.00	2000	
Ba	137	1	No Gas	606.683	606.683	1.50	6273204	0.01	2000	
Tl	205	1	No Gas	49.136	49.136	2.24	2579691	0.00	2000	
Tl	203	1	No Gas	47.080	47.080	3.51	1056201	0.00	2000	
Pb	208	1	No Gas	48.303	48.303	2.88	3484810	0.00	2000	
U	238	1	No Gas	93.466	93.466	2.42	6541352	0.00	2000	
Ca	43	2	He	132386.401	132386.401	1.25	1126935	11.75	200000	
Sb	121	2	He	47.056	47.056	0.84	976341	0.00	2000	
Ti	47	2	He	140.365	140.365	1.31	107634	0.13	2000	
Cu	63	1	No Gas	48.301	48.301	1.61	1291180	0.00	2000	
Zn	66	1	No Gas	50.804	50.804	1.70	366142	0.01	2000	
Se	82	1	No Gas	51.461	51.461	1.27	22646	0.23	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2186918	0.79	2322553	94.16	70	120	
Ge	72	2	He	2283173	0.62	2276213	100.31	70	120	
Ge	72	1	No Gas	5236514	1.20	5261860	99.52	70	120	
In	115	1	No Gas	5807755	0.84	5917509	98.15	70	120	
Bi	209	1	No Gas	4270901	2.26	4246459	100.58	70	120	

Sample Report

Sample Table

Sample Name	HS20100780-04PDS
Data File Name	048SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:52:31-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	23.001	23.001	1.88	847282	0.00	2000	
Be	9	1	No Gas	134.416	134.416	1.74	1052383	0.01	2000	
V	51	2	He	139.568	139.568	2.14	2463798	0.01	2000	
Cr	52	2	He	134.559	134.559	3.31	2626047	0.01	2000	
Fe	56	2	He	18700.699	18700.699	2.07	349045141	0.01	200000	
Se	78	2	He	139.783	139.783	2.79	49005	0.29	2000	
Sn	118	2	He	0.901	0.901	0.23	15142	0.01	200	
As	75	2	He	140.908	140.908	2.39	440375	0.03	2000	
Ca	44	2	He	134260.167	134260.167	1.12	19762464	0.68	200000	
Na	23	2	He	53366.400	53366.400	2.63	166093344	0.03	200000	
Mg	24	2	He	34312.466	34312.466	3.27	65826731	0.05	200000	
K	39	2	He	17224.460	17224.460	1.99	50261956	0.03	200000	
Mn	55	2	He	4422.660	4422.660	2.36	75481514	0.01	2000	>LDR
Co	59	2	He	132.118	132.118	1.92	3597450	0.00	2000	
Ni	60	2	He	136.337	136.337	2.27	905457	0.02	2000	
Cu	63	2	He	136.012	136.012	1.93	2310554	0.01	2000	
Zn	66	2	He	138.789	138.789	2.01	527266	0.03	2000	
Al	27	2	He	143.618	143.618	2.79	205920	0.07	2000	
B	11	1	No Gas	79.050	79.050	1.39	462160	0.02	2000	
Al	27	1	No Gas	146.056	146.056	2.76	4494579	0.00	2000	
Si	28	1	No Gas	15248.932	15248.932	2.85	249699770	0.01	2000	>LDR
Ag	107	1	No Gas	129.904	129.904	1.48	4706254	0.00	2000	
Cd	111	1	No Gas	137.197	137.197	1.13	974903	0.01	2000	
Sr	88	1	No Gas	912.279	912.279	0.31	58804001	0.00	2000	
Mo	95	1	No Gas	137.940	137.940	0.86	1897176	0.01	2000	
Sn	118	1	No Gas	0.891	0.891	7.35	21024	0.00	2000	
Sb	121	1	No Gas	125.183	125.183	3.00	3635652	0.00	2000	
Ba	137	1	No Gas	663.304	663.304	1.38	6993623	0.01	2000	
Tl	205	1	No Gas	134.377	134.377	1.84	7232697	0.00	2000	
Tl	203	1	No Gas	134.145	134.145	2.61	3085468	0.00	2000	
Pb	208	1	No Gas	134.296	134.296	2.18	9906016	0.00	2000	
U	238	1	No Gas	0.630	0.630	2.20	45275	0.00	2000	
Ca	43	2	He	136102.300	136102.300	1.60	1170666	11.63	200000	
Sb	121	2	He	129.560	129.560	2.23	2711752	0.00	2000	
Ti	47	2	He	138.567	138.567	1.40	107331	0.13	2000	
Cu	63	1	No Gas	133.137	133.137	2.25	3612788	0.00	2000	
Zn	66	1	No Gas	139.352	139.352	2.21	1017408	0.01	2000	
Se	82	1	No Gas	140.806	140.806	3.80	63047	0.22	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2352528	0.35	2322553	101.29	70	120	
Ge	72	2	He	2306788	2.32	2276213	101.34	70	120	
Ge	72	1	No Gas	5326139	2.38	5261860	101.22	70	120	
In	115	1	No Gas	5921746	0.70	5917509	100.07	70	120	
Bi	209	1	No Gas	4378934	1.67	4246459	103.12	70	120	

Sample Report

Sample Table

Sample Name	HS20100694-01
Data File Name	049SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:57:44-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	21.663	21.663	3.45	804838	0.00	2000	
Be	9	1	No Gas	0.016	0.016	23.78	153	0.01	2000	
V	51	2	He	-0.198	-0.198	-45.61	19073	0.00	2000	
Cr	52	2	He	1.277	1.277	1.17	30424	0.00	2000	
Fe	56	2	He	130.367	130.367	1.39	2467120	0.01	200000	
Se	78	2	He	0.089	0.089	179.59	827	0.01	2000	
Sn	118	2	He	0.308	0.308	8.13	6358	0.00	200	
As	75	2	He	0.462	0.462	3.39	2512	0.02	2000	
Ca	44	2	He	9632.119	9632.119	2.01	1418700	0.68	200000	
Na	23	2	He	416202.989	416202.989	0.74	1294297901	0.03	200000	>LDR
Mg	24	2	He	14791.870	14791.870	0.87	28376050	0.05	200000	
K	39	2	He	1744.507	1744.507	0.86	5296030	0.03	200000	
Mn	55	2	He	50.608	50.608	0.49	866654	0.01	2000	
Co	59	2	He	0.496	0.496	3.01	14231	0.00	2000	
Ni	60	2	He	1.283	1.283	3.43	9110	0.01	2000	
Cu	63	2	He	1.187	1.187	1.75	22085	0.01	2000	
Zn	66	2	He	8.041	8.041	0.28	31731	0.03	2000	
Al	27	2	He	12.844	12.844	6.39	20051	0.06	2000	
B	11	1	No Gas	25.820	25.820	3.48	206256	0.01	2000	
Al	27	1	No Gas	13.447	13.447	1.09	440746	0.00	2000	
Si	28	1	No Gas	11727.526	11727.526	1.28	188842237	0.01	2000	>LDR
Ag	107	1	No Gas	0.010	0.010	19.09	737	0.00	2000	
Cd	111	1	No Gas	0.021	0.021	8.87	173	0.01	2000	
Sr	88	1	No Gas	275.130	275.130	2.15	16823014	0.00	2000	
Mo	95	1	No Gas	1.029	1.029	3.50	13564	0.01	2000	
Sn	118	1	No Gas	0.327	0.327	5.41	8987	0.00	2000	
Sb	121	1	No Gas	1.676	1.676	13.94	50599	0.00	2000	
Ba	137	1	No Gas	180.718	180.718	1.73	1807873	0.01	2000	
Tl	205	1	No Gas	0.023	0.023	22.20	2410	0.00	2000	
Tl	203	1	No Gas	0.019	0.019	68.74	977	0.00	2000	
Pb	208	1	No Gas	0.062	0.062	20.42	20073	0.00	2000	
U	238	1	No Gas	0.051	0.051	4.60	3491	0.00	2000	
Ca	43	2	He	9706.903	9706.903	0.84	83499	11.63	200000	
Sb	121	2	He	1.082	1.082	6.91	24587	0.00	2000	
Ti	47	2	He	0.577	0.577	7.48	470	0.12	2000	
Cu	63	1	No Gas	2.917	2.917	0.71	81065	0.00	2000	
Zn	66	1	No Gas	8.224	8.224	1.11	61054	0.01	2000	
Se	82	1	No Gas	1.230	1.230	27.77	517	0.24	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2349286	2.18	2322553	101.15	70	120	
Ge	72	2	He	2305672	1.43	2276213	101.29	70	120	
Ge	72	1	No Gas	5231163	0.44	5261860	99.42	70	120	
In	115	1	No Gas	5618544	1.79	5917509	94.95	70	120	
Bi	209	1	No Gas	4064495	2.97	4246459	95.71	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	052_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T12:03:23-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	104.563	1.772	3318334	0.79	100	104.6	90	110	
Be	9	1	No Gas	94.939	0.293	735612	1.74	100	94.9	90	110	
V	51	2	He	99.658	2.174	1716336	1.41	100	99.7	90	110	
Cr	52	2	He	97.953	2.937	1859865	2.10	100	98.0	90	110	
Fe	56	2	He	10191.566	1.676	184920524	0.80	10000	101.9	90	110	
Se	78	2	He	99.298	1.240	34069	1.30	100	99.3	90	110	
Sn	118	2	He	103.803	1.292	1477447	1.79	100	103.8	90	110	
As	75	2	He	97.909	1.393	297773	0.57	100	97.9	90	110	
Ca	44	2	He	10437.903	0.400	1494791	0.65	10000	104.4	90	110	
Na	23	2	He	10463.454	0.526	31765110	1.09	10000	104.6	90	110	
Mg	24	2	He	10559.611	1.397	19696686	0.84	10000	105.6	90	110	
K	39	2	He	10472.766	1.473	29793452	0.62	10000	104.7	90	110	
Mn	55	2	He	98.219	0.795	1632521	0.48	100	98.2	90	110	
Co	59	2	He	99.493	2.043	2633348	1.41	100	99.5	90	110	
Ni	60	2	He	102.552	1.880	662194	1.19	100	102.6	90	110	
Cu	63	2	He	102.620	0.986	1695043	0.23	100	102.6	90	110	
Zn	66	2	He	100.584	1.259	371783	0.53	100	100.6	90	110	
Al	27	2	He	100.995	2.383	141289	1.52	100	101.0	90	110	
B	11	1	No Gas	456.235	2.551	2248711	0.45	500	91.2	90	110	
Al	27	1	No Gas	104.761	0.964	3184979	0.49	100	104.8	90	110	
Si	28	1	No Gas	627.864	31.206	10735159	31.02	5000	12.6	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	509.614	3.646	830351	3.54	500	101.9	90	110	
Ag	107	1	No Gas	99.122	2.139	3593192	1.99	100	99.1	90	110	
Cd	111	1	No Gas	100.778	1.149	716547	1.08	100	100.8	90	110	
Sr	88	1	No Gas	100.636	0.647	6491579	0.41	100	100.6	90	110	
Mo	95	1	No Gas	98.638	2.380	1357443	2.45	100	98.6	90	110	
Sn	118	1	No Gas	100.892	0.982	2070433	1.09	100	100.9	90	110	
Sb	121	1	No Gas	98.727	1.022	2823436	1.16	100	98.7	90	110	
Ba	137	1	No Gas	99.420	1.387	1049269	1.47	100	99.4	90	110	
Tl	205	1	No Gas	102.640	2.265	5574687	1.37	100	102.6	90	110	
Tl	203	1	No Gas	100.852	3.475	2340861	2.68	100	100.9	90	110	
Pb	208	1	No Gas	99.914	2.461	7440730	1.54	100	99.9	90	110	
U	238	1	No Gas	98.404	0.868	7127928	1.61	100	98.4	90	110	
Ca	43	2	He	10255.201	0.842	85770	0.21	10000	102.6	90	110	
Sb	121	2	He	97.562	1.626	1985400	1.05	100	97.6	90	110	
Ti	47	2	He	102.118	0.395	76891	0.62	100	102.1	90	110	
Cu	63	1	No Gas	104.079	2.791	2781318	2.40	100	104.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2328182	2.03	2322553	100.24	70	120	
Ge	72	2	He	2241805	0.89	2276213	98.49	70	120	
Ge	72	1	No Gas	5242690	1.44	5261860	99.64	70	120	
In	115	1	No Gas	5924991	0.24	5917509	100.13	70	120	
Bi	209	1	No Gas	4418614	0.93	4246459	104.05	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	053_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T12:05:07-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.269	44.6	147418	0.8	0.5	
Be	9	1	No Gas	0.009	33.7	98	25.1	0.5	
V	51	2	He	-0.468	-2.6	13939	1.3	2.5	
Cr	52	2	He	0.101	13.1	7322	4.2	2.5	
Fe	56	2	He	1.872	8.5	67644	3.5	100	
Se	78	2	He	-0.126	-5.6	732	0.9	2	
As	75	2	He	-0.074	-46.4	819	11.9	2.5	
Ca	44	2	He	25.321	9.1	5178	7.3	100	
Na	23	2	He	26.858	5.7	210650	1.2	100	
Mg	24	2	He	0.803	13.3	3037	6.4	100	
K	39	2	He	4.126	31.7	235155	0.8	100	
Mn	55	2	He	1.037	0.8	20168	0.7	2.5	
Co	59	2	He	0.002	211.8	760	10.8	2.5	
Ni	60	2	He	0.308	5.8	2570	5.2	2.5	
Cu	63	2	He	0.083	3.3	3247	2.1	2	
Zn	66	2	He	0.922	9.2	4621	6.0	2.5	
Al	27	2	He	1.436	5.4	3741	2.6	5	
B	11	1	No Gas	4.784	17.7	104685	3.3	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.472	5.1	83735	1.2	5	
Si	28	1	No Gas	2.525	53.8	660623	1.7	10	
P	31	1	No Gas	-2.054	-37.5	39878	2.2	10	
Ag	107	1	No Gas	0.002	48.8	487	7.8	2.5	
Cd	111	1	No Gas	0.004	60.9	63	24.1	1	
Sr	88	1	No Gas	0.046	4.0	4471	2.3	2.5	
Mo	95	1	No Gas	0.065	15.2	1057	13.5	2.5	
Sn	118	1	No Gas	0.558	4.7	14518	3.7	5	
Sb	121	1	No Gas	1.055	15.4	33771	15.8	2.5	
Ba	137	1	No Gas	0.015	22.9	660	6.1	2.5	
Tl	205	1	No Gas	0.032	45.9	3237	27.6	1	
Tl	203	1	No Gas	0.029	49.3	1357	27.3	1	
Pb	208	1	No Gas	-0.057	-9.5	13443	4.9	2.5	
U	238	1	No Gas	0.010	22.5	887	21.5	2.5	
Ca	43	2	He	26.823	20.7	283	17.4	100	
Sb	121	2	He	0.750	2.8	17172	1.7	2.5	
Ti	47	2	He	0.098	67.0	97	51.0	2.5	
Cu	63	1	No Gas	0.099	7.2	6152	2.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2332504	1.87	2322553	100.43	70	120	
Ge	72	2	He	2240890	0.96	2276213	98.45	70	120	
Ge	72	1	No Gas	5361029	1.66	5261860	101.88	70	120	
In	115	1	No Gas	6058904	0.51	5917509	102.39	70	120	
Bi	209	1	No Gas	4591431	1.77	4246459	108.12	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	064_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T12:26:24-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	102.425	1.087	3130366	0.44	100	102.4	90	110	
Be	9	1	No Gas	98.406	2.322	733502	1.86	100	98.4	90	110	
V	51	2	He	100.863	2.742	1662842	2.14	100	100.9	90	110	
Cr	52	2	He	99.781	1.020	1814174	1.75	100	99.8	90	110	
Fe	56	2	He	10379.591	0.802	180323404	0.67	10000	103.8	90	110	
Se	78	2	He	98.404	1.556	32329	0.51	100	98.4	90	110	
Sn	118	2	He	102.967	1.452	1456948	0.32	100	103.0	90	110	
As	75	2	He	99.054	0.706	288429	0.60	100	99.1	90	110	
Ca	44	2	He	10297.386	2.005	1411788	1.47	10000	103.0	90	110	
Na	23	2	He	10519.742	0.963	30573531	0.22	10000	105.2	90	110	
Mg	24	2	He	10558.398	2.416	18853989	1.33	10000	105.6	90	110	
K	39	2	He	10443.516	1.554	28446914	1.41	10000	104.4	90	110	
Mn	55	2	He	101.019	1.172	1607452	0.61	100	101.0	90	110	
Co	59	2	He	99.774	0.756	2528698	1.63	100	99.8	90	110	
Ni	60	2	He	103.713	0.272	641239	1.21	100	103.7	90	110	
Cu	63	2	He	103.568	0.585	1637911	0.83	100	103.6	90	110	
Zn	66	2	He	101.942	0.808	360751	0.30	100	101.9	90	110	
Al	27	2	He	100.688	0.823	134880	0.72	100	100.7	90	110	
B	11	1	No Gas	460.479	2.311	2183485	2.36	500	92.1	90	110	
Al	27	1	No Gas	101.336	0.835	3051174	1.36	100	101.3	90	110	
Si	28	1	No Gas	496.853	0.368	8510548	0.27	5000	9.9	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	505.058	0.940	814963	0.47	500	101.0	90	110	
Ag	107	1	No Gas	100.428	1.274	3549491	1.37	100	100.4	90	110	
Cd	111	1	No Gas	102.094	0.769	707723	0.48	100	102.1	90	110	
Sr	88	1	No Gas	101.556	1.172	6386819	0.79	100	101.6	90	110	
Mo	95	1	No Gas	100.080	1.032	1342882	1.73	100	100.1	90	110	
Sn	118	1	No Gas	101.761	0.687	2036077	1.51	100	101.8	90	110	
Sb	121	1	No Gas	97.822	1.210	2769396	1.50	100	97.8	90	110	
Ba	137	1	No Gas	100.576	0.954	1034855	0.46	100	100.6	90	110	
Tl	205	1	No Gas	103.924	2.336	5669816	1.52	100	103.9	90	110	
Tl	203	1	No Gas	102.347	2.083	2386304	0.81	100	102.3	90	110	
Pb	208	1	No Gas	102.670	1.610	7680324	0.94	100	102.7	90	110	
U	238	1	No Gas	98.605	1.739	7175565	3.00	100	98.6	90	110	
Ca	43	2	He	10569.101	1.109	84629	0.78	10000	105.7	90	110	
Sb	121	2	He	100.807	1.186	1964059	0.62	100	100.8	90	110	
Ti	47	2	He	102.216	1.864	73681	0.92	100	102.2	90	110	
Cu	63	1	No Gas	102.698	1.769	2716871	1.53	100	102.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2239946	1.47	2322553	96.44	70	120	
Ge	72	2	He	2146367	1.09	2276213	94.30	70	120	
Ge	72	1	No Gas	5189484	0.54	5261860	98.62	70	120	
In	115	1	No Gas	5776816	0.90	5917509	97.62	70	120	
Bi	209	1	No Gas	4438882	1.90	4246459	104.53	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	065_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T12:28:09-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.256	23.5	141323	1.6	0.5	
Be	9	1	No Gas	0.010	18.6	97	13.0	0.5	
V	51	2	He	-0.644	-0.9	10854	3.7	2.5	
Cr	52	2	He	0.103	20.3	7279	2.0	2.5	
Fe	56	2	He	2.655	8.3	81040	1.4	100	
Se	78	2	He	0.106	167.0	802	6.9	2	
As	75	2	He	-0.084	-5.7	783	1.7	2.5	
Ca	44	2	He	26.043	5.9	5231	5.5	100	
Na	23	2	He	39.634	8.4	246803	1.1	100	
Mg	24	2	He	1.376	7.6	4067	5.0	100	
K	39	2	He	3.299	96.3	230525	1.0	100	
Mn	55	2	He	1.076	3.8	20609	1.3	2.5	
Co	59	2	He	0.006	36.2	863	9.4	2.5	
Ni	60	2	He	0.313	13.3	2574	10.4	2.5	
Cu	63	2	He	0.093	8.9	3377	2.2	2	
Zn	66	2	He	0.936	15.0	4618	7.5	2.5	
Al	27	2	He	1.202	8.7	3384	1.5	5	
B	11	1	No Gas	6.009	9.1	106262	4.3	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.472	3.6	81723	0.7	5	
Si	28	1	No Gas	3.536	14.8	661245	1.8	10	
P	31	1	No Gas	-1.718	-25.3	39447	1.8	10	
Ag	107	1	No Gas	0.008	5.4	700	2.5	2.5	
Cd	111	1	No Gas	0.005	59.1	77	30.1	1	
Sr	88	1	No Gas	0.072	2.9	6128	2.5	2.5	
Mo	95	1	No Gas	0.072	11.5	1147	9.9	2.5	
Sn	118	1	No Gas	0.522	6.3	13634	5.0	5	
Sb	121	1	No Gas	0.935	22.1	29468	18.8	2.5	
Ba	137	1	No Gas	0.018	10.2	687	3.0	2.5	
Tl	205	1	No Gas	0.039	56.4	3631	36.3	1	
Tl	203	1	No Gas	0.043	44.2	1707	29.6	1	
Pb	208	1	No Gas	-0.079	-4.7	11782	3.7	2.5	
U	238	1	No Gas	0.017	31.2	1357	31.0	2.5	
Ca	43	2	He	25.573	21.5	270	17.0	100	
Sb	121	2	He	0.632	8.4	14622	5.3	2.5	
Ti	47	2	He	0.084	85.9	87	65.6	2.5	
Cu	63	1	No Gas	0.097	15.1	5971	5.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2241548	2.11	2322553	96.51	70	120	
Ge	72	2	He	2220483	3.42	2276213	97.55	70	120	
Ge	72	1	No Gas	5232411	1.29	5261860	99.44	70	120	
In	115	1	No Gas	6003111	0.47	5917509	101.45	70	120	
Bi	209	1	No Gas	4603384	2.12	4246459	108.41	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	076_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T12:48:56-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	104.073	0.226	3011982	0.77	100	104.1	90	110	
Be	9	1	No Gas	100.912	1.289	712760	1.11	100	100.9	90	110	
V	51	2	He	99.034	3.714	1601514	2.56	100	99.0	90	110	
Cr	52	2	He	99.475	2.649	1773500	1.52	100	99.5	90	110	
Fe	56	2	He	10226.291	0.593	174253217	0.89	10000	102.3	90	110	
Se	78	2	He	97.948	2.332	31562	1.05	100	97.9	90	110	
Sn	118	2	He	102.034	1.469	1434143	0.35	100	102.0	90	110	
As	75	2	He	97.898	1.293	279587	0.21	100	97.9	90	110	
Ca	44	2	He	10200.364	4.533	1371519	3.94	10000	102.0	90	110	
Na	23	2	He	10174.073	1.315	29005550	1.11	10000	101.7	90	110	
Mg	24	2	He	10276.584	2.537	17998071	1.33	10000	102.8	90	110	
K	39	2	He	10153.235	1.655	27129141	0.41	10000	101.5	90	110	
Mn	55	2	He	100.689	2.022	1571311	0.81	100	100.7	90	110	
Co	59	2	He	99.621	2.750	2475763	1.69	100	99.6	90	110	
Ni	60	2	He	103.181	1.521	625628	0.37	100	103.2	90	110	
Cu	63	2	He	103.105	3.285	1598934	2.17	100	103.1	90	110	
Zn	66	2	He	100.559	1.562	349028	0.92	100	100.6	90	110	
Al	27	2	He	98.377	2.153	129283	1.61	100	98.4	90	110	
B	11	1	No Gas	470.821	2.994	2113459	2.25	500	94.2	90	110	
Al	27	1	No Gas	101.588	0.396	3022338	0.33	100	101.6	90	110	
Si	28	1	No Gas	507.270	2.251	8574064	2.36	5000	10.1	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	498.270	1.411	795050	1.13	500	99.7	90	110	
Ag	107	1	No Gas	96.666	0.783	3476238	0.53	100	96.7	90	110	
Cd	111	1	No Gas	99.741	0.490	703554	1.34	100	99.7	90	110	
Sr	88	1	No Gas	100.480	1.341	6429739	1.15	100	100.5	90	110	
Mo	95	1	No Gas	96.158	0.740	1312723	0.14	100	96.2	90	110	
Sn	118	1	No Gas	103.043	1.458	2097511	0.69	100	103.0	90	110	
Sb	121	1	No Gas	100.444	1.728	2809742	1.47	100	100.4	90	110	
Ba	137	1	No Gas	99.711	1.492	1043903	1.21	100	99.7	90	110	
Tl	205	1	No Gas	102.577	2.847	5720991	0.52	100	102.6	90	110	
Tl	203	1	No Gas	103.313	4.485	2461695	1.47	100	103.3	90	110	
Pb	208	1	No Gas	101.938	2.326	7795920	0.73	100	101.9	90	110	
U	238	1	No Gas	98.641	2.217	7336680	0.80	100	98.6	90	110	
Ca	43	2	He	10199.784	0.940	80106	0.30	10000	102.0	90	110	
Sb	121	2	He	100.314	2.138	1916760	0.91	100	100.3	90	110	
Ti	47	2	He	100.779	2.316	71248	1.32	100	100.8	90	110	
Cu	63	1	No Gas	102.519	1.175	2680065	0.95	100	102.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2122338	0.89	2322553	91.38	70	120	
Ge	72	2	He	2105180	1.24	2276213	92.49	70	120	
Ge	72	1	No Gas	5128021	0.27	5261860	97.46	70	120	
In	115	1	No Gas	5877846	0.87	5917509	99.33	70	120	
Bi	209	1	No Gas	4539239	2.98	4246459	106.89	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	077_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T12:50:41-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.127	52.5	136893	0.8	0.5	
Be	9	1	No Gas	0.014	31.6	130	25.2	0.5	
V	51	2	He	-0.689	-2.4	9732	2.0	2.5	
Cr	52	2	He	0.104	31.1	7042	7.8	2.5	
Fe	56	2	He	2.938	2.0	83146	2.0	100	
Se	78	2	He	-0.181	-2.4	682	1.3	2	
As	75	2	He	-0.086	-6.6	748	1.6	2.5	
Ca	44	2	He	27.797	11.1	5281	6.6	100	
Na	23	2	He	22.928	3.3	189982	1.0	100	
Mg	24	2	He	1.748	11.3	4588	8.0	100	
K	39	2	He	1.857	108.6	218585	1.1	100	
Mn	55	2	He	1.235	2.3	22412	1.0	2.5	
Co	59	2	He	0.006	55.8	833	8.5	2.5	
Ni	60	2	He	0.306	10.0	2440	6.9	2.5	
Cu	63	2	He	0.086	24.2	3154	9.0	2	
Zn	66	2	He	0.979	7.5	4614	4.2	2.5	
Al	27	2	He	2.266	93.8	4687	61.1	5	
B	11	1	No Gas	7.151	15.5	110898	3.9	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.457	5.5	80550	3.0	5	
Si	28	1	No Gas	4.620	9.0	672455	1.0	10	
P	31	1	No Gas	-1.488	-51.8	39440	3.1	10	
Ag	107	1	No Gas	0.008	27.2	713	12.2	2.5	
Cd	111	1	No Gas	0.010	97.8	110	63.6	1	
Sr	88	1	No Gas	0.080	8.6	6785	7.2	2.5	
Mo	95	1	No Gas	0.070	17.6	1130	14.6	2.5	
Sn	118	1	No Gas	0.657	0.9	16651	2.3	5	
Sb	121	1	No Gas	1.064	16.2	32876	14.9	2.5	
Ba	137	1	No Gas	0.048	26.0	1017	14.0	2.5	
Tl	205	1	No Gas	0.046	46.2	4208	33.9	1	
Tl	203	1	No Gas	0.040	54.6	1693	36.6	1	
Pb	208	1	No Gas	-0.087	-2.9	11546	4.9	2.5	
U	238	1	No Gas	0.016	12.7	1387	14.5	2.5	
Ca	43	2	He	25.105	8.9	257	6.0	100	
Sb	121	2	He	0.756	0.4	16524	1.6	2.5	
Ti	47	2	He	0.071	29.6	73	20.8	2.5	
Cu	63	1	No Gas	0.094	1.4	5831	0.5	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2230672	0.68	2322553	96.04	70	120	
Ge	72	2	He	2141610	1.40	2276213	94.09	70	120	
Ge	72	1	No Gas	5184586	0.08	5261860	98.53	70	120	
In	115	1	No Gas	6082062	1.66	5917509	102.78	70	120	
Bi	209	1	No Gas	4767737	4.31	4246459	112.28	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	088_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T13:18:32-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.262	1.477	3016692	0.28	100	101.3	90	110	
Be	9	1	No Gas	97.326	1.494	706815	0.64	100	97.3	90	110	
V	51	2	He	94.796	1.503	1572921	1.57	100	94.8	90	110	
Cr	52	2	He	95.537	1.304	1746725	1.23	100	95.5	90	110	
Fe	56	2	He	9743.136	0.834	170207231	0.73	10000	97.4	90	110	
Se	78	2	He	92.749	0.435	30685	0.44	100	92.7	90	110	
Sn	118	2	He	100.833	0.761	1434476	0.65	100	100.8	90	110	
As	75	2	He	93.699	0.420	274405	0.47	100	93.7	90	110	
Ca	44	2	He	9712.394	0.912	1339131	0.82	10000	97.1	90	110	
Na	23	2	He	9838.436	0.445	28760996	0.52	10000	98.4	90	110	
Mg	24	2	He	9907.550	1.987	17792508	2.05	10000	99.1	90	110	
K	39	2	He	9626.944	0.418	26385266	0.39	10000	96.3	90	110	
Mn	55	2	He	94.408	1.493	1510823	1.53	100	94.4	90	110	
Co	59	2	He	94.433	1.038	2406449	0.98	100	94.4	90	110	
Ni	60	2	He	98.909	0.651	614922	0.56	100	98.9	90	110	
Cu	63	2	He	97.958	2.451	1557845	2.40	100	98.0	90	110	
Zn	66	2	He	97.834	0.718	348190	0.81	100	97.8	90	110	
Al	27	2	He	94.059	1.448	126812	1.53	100	94.1	90	110	
B	11	1	No Gas	447.118	1.732	2067695	0.81	500	89.4	90	110	CCV Main CR1-2 Failed
Al	27	1	No Gas	99.651	1.362	2981301	1.27	100	99.7	90	110	
Si	28	1	No Gas	472.924	2.204	8075421	0.67	5000	9.5	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	488.195	1.763	783948	0.75	500	97.6	90	110	
Ag	107	1	No Gas	97.047	2.234	3565536	0.35	100	97.0	90	110	
Cd	111	1	No Gas	99.041	2.596	713678	0.72	100	99.0	90	110	
Sr	88	1	No Gas	96.057	3.985	6278723	2.25	100	96.1	90	110	
Mo	95	1	No Gas	95.529	0.456	1332694	1.43	100	95.5	90	110	
Sn	118	1	No Gas	99.287	1.939	2065175	1.03	100	99.3	90	110	
Sb	121	1	No Gas	99.347	1.821	2793787	0.23	100	99.3	90	110	
Ba	137	1	No Gas	96.950	1.438	1037162	1.19	100	96.9	90	110	
Tl	205	1	No Gas	99.147	1.966	5705560	0.82	100	99.1	90	110	
Tl	203	1	No Gas	99.480	2.677	2446523	1.80	100	99.5	90	110	
Pb	208	1	No Gas	98.379	1.763	7763093	0.98	100	98.4	90	110	
U	238	1	No Gas	96.230	2.668	7383678	1.46	100	96.2	90	110	
Ca	43	2	He	9755.847	0.442	78557	0.54	10000	97.6	90	110	
Sb	121	2	He	98.540	0.904	1930646	0.97	100	98.5	90	110	
Ti	47	2	He	95.124	1.122	68956	1.12	100	95.1	90	110	
Cu	63	1	No Gas	97.754	2.228	2568984	0.54	100	97.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2182376	1.39	2322553	93.96	70	120	
Ge	72	2	He	2158185	0.10	2276213	94.81	70	120	
Ge	72	1	No Gas	5156253	2.07	5261860	97.99	70	120	
In	115	1	No Gas	6006661	1.88	5917509	101.51	70	120	
Bi	209	1	No Gas	4681740	1.34	4246459	110.25	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	089_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T13:20:18-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.072	102.0	136937	0.6	0.5	
Be	9	1	No Gas	0.008	21.1	85	15.6	0.5	
V	51	2	He	-0.692	-2.3	9714	1.7	2.5	
Cr	52	2	He	0.103	5.7	7042	2.1	2.5	
Fe	56	2	He	1.690	6.1	61679	1.0	100	
Se	78	2	He	-0.273	-67.2	654	7.4	2	
As	75	2	He	-0.118	-7.7	659	5.4	2.5	
Ca	44	2	He	21.708	7.4	4467	6.1	100	
Na	23	2	He	10.678	6.1	155060	1.0	100	
Mg	24	2	He	0.737	19.5	2797	11.0	100	
K	39	2	He	-2.082	-64.6	208593	0.4	100	
Mn	55	2	He	1.031	3.1	19231	1.0	2.5	
Co	59	2	He	-0.002	-157.4	647	9.4	2.5	
Ni	60	2	He	0.299	4.5	2404	4.6	2.5	
Cu	63	2	He	0.068	7.5	2877	2.5	2	
Zn	66	2	He	0.891	14.4	4324	12.2	2.5	
Al	27	2	He	1.158	5.0	3217	0.5	5	
B	11	1	No Gas	1.754	33.9	87437	4.6	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.613	24.7	87159	16.4	5	
Si	28	1	No Gas	-1.484	-81.3	587103	1.1	10	
P	31	1	No Gas	-1.679	-14.8	39965	2.1	10	
Ag	107	1	No Gas	0.002	66.8	493	11.2	2.5	
Cd	111	1	No Gas	-0.002	-154.5	23	99.0	1	
Sr	88	1	No Gas	0.047	8.6	4624	6.5	2.5	
Mo	95	1	No Gas	0.065	18.3	1077	15.0	2.5	
Sn	118	1	No Gas	0.497	7.7	13434	5.6	5	
Sb	121	1	No Gas	0.845	14.2	27306	15.0	2.5	
Ba	137	1	No Gas	0.016	56.0	673	14.0	2.5	
Tl	205	1	No Gas	0.041	61.4	3997	39.7	1	
Tl	203	1	No Gas	0.033	74.7	1533	42.1	1	
Pb	208	1	No Gas	-0.088	-4.9	11726	4.0	2.5	
U	238	1	No Gas	0.009	27.3	833	25.2	2.5	
Ca	43	2	He	22.165	30.6	233	21.1	100	
Sb	121	2	He	0.597	3.5	13464	1.6	2.5	
Ti	47	2	He	0.067	43.9	70	28.6	2.5	
Cu	63	1	No Gas	0.074	3.9	5398	1.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2258092	1.45	2322553	97.22	70	120	
Ge	72	2	He	2148087	1.91	2276213	94.37	70	120	
Ge	72	1	No Gas	5293300	2.37	5261860	100.60	70	120	
In	115	1	No Gas	6148400	0.94	5917509	103.90	70	120	
Bi	209	1	No Gas	4888624	1.42	4246459	115.12	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	097_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T13:36:40-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.394	1.804	3000545	0.80	100	101.4	90	110	
Be	9	1	No Gas	100.057	2.028	721816	0.24	100	100.1	90	110	
V	51	2	He	94.660	1.336	1585216	1.20	100	94.7	90	110	
Cr	52	2	He	94.389	2.822	1741832	2.95	100	94.4	90	110	
Fe	56	2	He	9674.096	0.803	170568291	0.95	10000	96.7	90	110	
Se	78	2	He	92.714	0.628	30957	0.67	100	92.7	90	110	
Sn	118	2	He	102.643	1.004	1469661	1.79	100	102.6	90	110	
As	75	2	He	94.230	0.945	278506	0.51	100	94.2	90	110	
Ca	44	2	He	9762.121	1.514	1358468	1.66	10000	97.6	90	110	
Na	23	2	He	9806.323	2.467	28928546	1.25	10000	98.1	90	110	
Mg	24	2	He	9823.810	2.264	17803112	1.17	10000	98.2	90	110	
K	39	2	He	9532.207	2.181	26366624	1.10	10000	95.3	90	110	
Mn	55	2	He	95.509	1.937	1542399	0.94	100	95.5	90	110	
Co	59	2	He	95.653	1.671	2460220	2.03	100	95.7	90	110	
Ni	60	2	He	98.855	1.666	620234	0.80	100	98.9	90	110	
Cu	63	2	He	98.030	1.779	1573322	1.04	100	98.0	90	110	
Zn	66	2	He	97.655	1.347	350750	0.42	100	97.7	90	110	
Al	27	2	He	94.219	1.192	128194	0.33	100	94.2	90	110	
B	11	1	No Gas	455.354	3.556	2090016	1.58	500	91.1	90	110	
Al	27	1	No Gas	97.930	2.981	2994257	2.36	100	97.9	90	110	
Si	28	1	No Gas	473.883	1.664	8268029	0.80	5000	9.5	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	484.128	1.587	794780	0.76	500	96.8	90	110	
Ag	107	1	No Gas	97.064	2.468	3548314	2.17	100	97.1	90	110	
Cd	111	1	No Gas	99.382	0.553	712641	1.25	100	99.4	90	110	
Sr	88	1	No Gas	98.219	3.040	6388304	2.01	100	98.2	90	110	
Mo	95	1	No Gas	95.785	3.749	1329526	4.28	100	95.8	90	110	
Sn	118	1	No Gas	99.777	0.923	2064865	0.58	100	99.8	90	110	
Sb	121	1	No Gas	98.884	0.631	2841940	1.02	100	98.9	90	110	
Ba	137	1	No Gas	99.731	2.030	1061345	1.02	100	99.7	90	110	
Tl	205	1	No Gas	100.858	0.801	5859544	1.78	100	100.9	90	110	
Tl	203	1	No Gas	99.247	1.858	2463998	1.79	100	99.2	90	110	
Pb	208	1	No Gas	99.475	1.428	7923539	1.34	100	99.5	90	110	
U	238	1	No Gas	97.635	3.662	7560764	2.16	100	97.6	90	110	
Ca	43	2	He	9671.250	2.923	78584	1.92	10000	96.7	90	110	
Sb	121	2	He	100.900	1.354	1995073	0.94	100	100.9	90	110	
Ti	47	2	He	95.461	1.162	69841	1.13	100	95.5	90	110	
Cu	63	1	No Gas	98.112	1.012	2635199	1.19	100	98.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2168142	1.94	2322553	93.35	70	120	
Ge	72	2	He	2178270	1.21	2276213	95.70	70	120	
Ge	72	1	No Gas	5268337	0.75	5261860	100.12	70	120	
In	115	1	No Gas	5975474	1.21	5917509	100.98	70	120	
Bi	209	1	No Gas	4726369	2.50	4246459	111.30	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	098_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T13:38:46-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.054	240.4	135948	0.7	0.5	
Be	9	1	No Gas	0.007	2.9	80	0.0	0.5	
V	51	2	He	-0.715	-1.8	9563	2.0	2.5	
Cr	52	2	He	0.078	21.4	6752	4.8	2.5	
Fe	56	2	He	1.392	5.3	57846	1.9	100	
Se	78	2	He	-0.154	-106.7	709	7.8	2	
As	75	2	He	-0.120	-15.7	668	8.3	2.5	
Ca	44	2	He	21.677	4.7	4568	3.5	100	
Na	23	2	He	4.400	8.4	140124	1.1	100	
Mg	24	2	He	0.677	15.6	2750	6.7	100	
K	39	2	He	-3.538	-49.4	209525	2.4	100	
Mn	55	2	He	0.991	4.1	19037	3.8	2.5	
Co	59	2	He	0.002	226.6	750	13.5	2.5	
Ni	60	2	He	0.291	1.9	2414	1.0	2.5	
Cu	63	2	He	0.073	6.2	3027	2.0	2	
Zn	66	2	He	1.021	4.0	4891	2.6	2.5	
Al	27	2	He	1.266	11.9	3441	5.9	5	
B	11	1	No Gas	-0.530	-170.4	76611	3.9	0.5	
Al	27	1	No Gas	1.453	2.4	83054	0.4	5	
Si	28	1	No Gas	-2.403	-47.2	578868	2.6	10	
P	31	1	No Gas	-1.756	-25.9	40299	2.1	10	
Ag	107	1	No Gas	0.002	5.3	483	2.4	2.5	
Cd	111	1	No Gas	-0.002	-95.0	23	65.5	1	
Sr	88	1	No Gas	0.048	3.2	4784	1.1	2.5	
Mo	95	1	No Gas	0.051	36.4	893	30.9	2.5	
Sn	118	1	No Gas	0.412	9.3	11832	7.3	5	
Sb	121	1	No Gas	0.694	16.4	23181	15.1	2.5	
Ba	137	1	No Gas	0.043	15.8	993	6.5	2.5	
Tl	205	1	No Gas	0.053	80.8	4648	57.7	1	
Tl	203	1	No Gas	0.050	79.0	1934	53.4	1	
Pb	208	1	No Gas	-0.089	-2.3	11402	3.5	2.5	
U	238	1	No Gas	0.008	37.7	733	35.1	2.5	
Ca	43	2	He	20.191	4.1	223	2.6	100	
Sb	121	2	He	0.510	2.6	12052	1.7	2.5	
Ti	47	2	He	0.015	141.0	33	45.8	2.5	
Cu	63	1	No Gas	0.064	2.2	5191	0.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Continuing Calibration Blank (CCB) Report

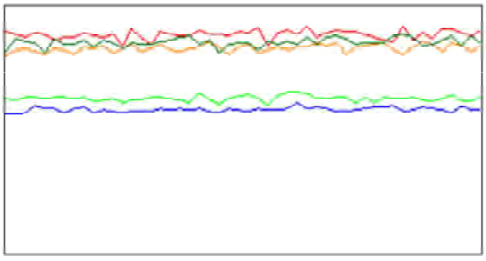
Li	6	1	No Gas	2251360	2.06	2322553	96.93	70	120	
Ge	72	2	He	2198728	0.44	2276213	96.60	70	120	
Ge	72	1	No Gas	5353154	0.84	5261860	101.74	70	120	
In	115	1	No Gas	6257959	1.75	5917509	105.75	70	120	
Bi	209	1	No Gas	4783488	2.75	4246459	112.65	70	120	

Tune Check Report

Operator Name	ALSHS NoUser
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq. Date-Time	10/28/2020 9:01:54 AM
Report Comment	---
Instrument Name	G8421A SG18523544

[No Gas]

Sensitivity



Sampling Period [sec]	0.514
Integration Time [sec]	0.1

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	10000	8867	88670.06		
24	50000	31418	314181.32		
59	100000	58283	582832.48		
115	100000	83221	832205.92		
208	50000	42778	427781.90		

Mass	Resp Ratio	Resp Ratio (Required)	Resp Ratio (Flag)
9		-	
24		-	
59		-	
115		-	
208		-	

Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	2.019	5.000	
24	1.887	5.000	
59	1.617	5.000	
115	1.800	5.000	
208	2.089	5.000	

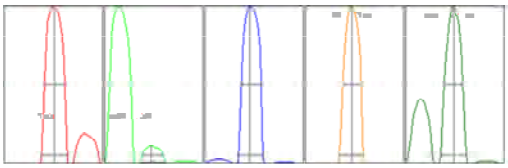
Mass	Background	Background (Required)	Background (Flag)
9	0.200		
24	0.900		
59	0.700		
115	0.400		
208	1.400		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.764 %
Doubly Charged	70 / 140 0.789 %

Tune Check Report

Resolution/Axis



Integration Time [sec]	0.1
Acquisition Time [sec]	37.4
Y Axis	Linear

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	8876.07	9.05	8.90 - 9.10	
24	31633.06	23.95	23.90 - 24.10	
59	59254.31	58.90	58.90 - 59.10	
115	85354.05	114.95	114.90 - 115.10	
208	43558.12	208.00	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.63	0.783		
24	0.64	0.785		
59	0.61	0.739		
115	0.56	0.728		
208	0.58	0.778		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.45 L/min	Dilution Gas	0.55 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.0 V	Deflect	12.6 V
Extract 2	-195.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-90 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	190 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.13		

Hardware Settings

Torch

Torch H	0.6 mm	Torch V	0.1 mm

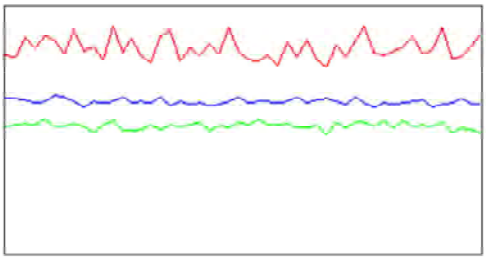
EM

Discriminator	4.3 mV	Analog HV	2485 V	Pulse HV	1250 V

[He]

Tune Check Report

Sensitivity



Sampling Period [sec]	0.306
Integration Time [sec]	0.1

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	500	416	4162.41		
24	5000	2580	25799.48		
59	50000	30731	307307.76		

Mass	Resp Ratio	Resp Ratio (Required)	Resp Ratio (Flag)
9		-	
24		-	
59		-	

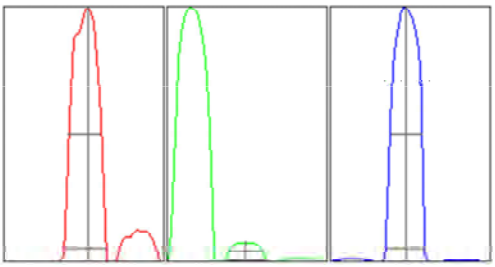
Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	5.391	5.000	Fail
24	2.717	5.000	
59	1.845	5.000	

Mass	Background	Background (Required)	Background (Flag)
9	0.400		
24	0.700		
59	0.100		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.561 %
Doubly Charged	70 / 140 0.767 %

Resolution/Axis



Integration Time [sec]	0.1
Acquisition Time [sec]	22.24
Y Axis	Linear

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	414.33	9.10	8.90 - 9.10	
24	2584.22	24.00	23.90 - 24.10	
59	31523.34	58.95	58.90 - 59.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.62	0.786		
24	0.64	0.785		

Tune Check Report

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
59	0.61	0.739		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.45 L/min	Dilution Gas	0.55 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.0 V	Deflect	0.2 V
Extract 2	-195.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	3.6 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.13		

Hardware Settings

Torch

Torch H	0.6 mm	Torch V	0.1 mm

EM

Discriminator	4.3 mV	Analog HV	2485 V	Pulse HV	1250 V

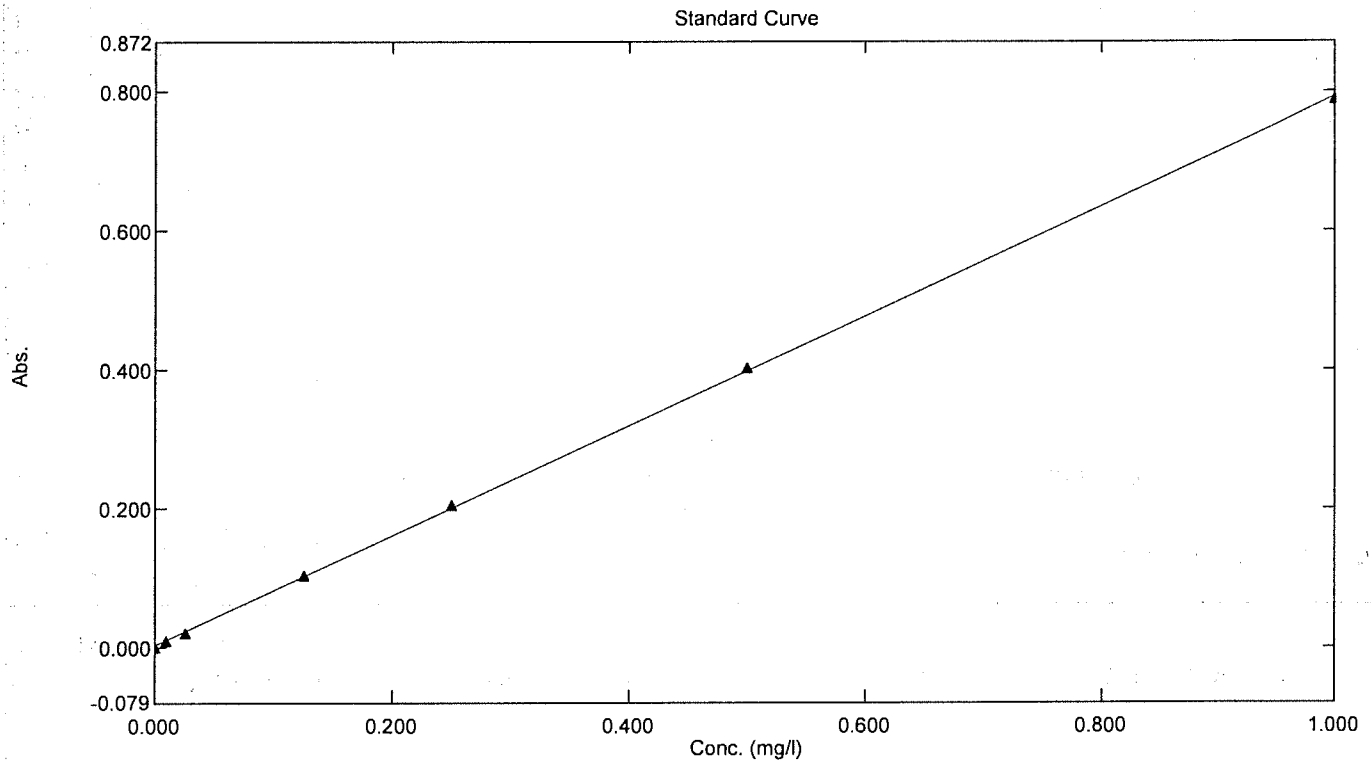
HS20100694 Wet Chem Raw Data (Cr6_W_7196_DOD)

ALS WO# HS20100694

Standard Table Report

11/06/2020 12:11:33 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\10142020-CR6 W_.pho



Correlation Coefficient r2 = 0.99986

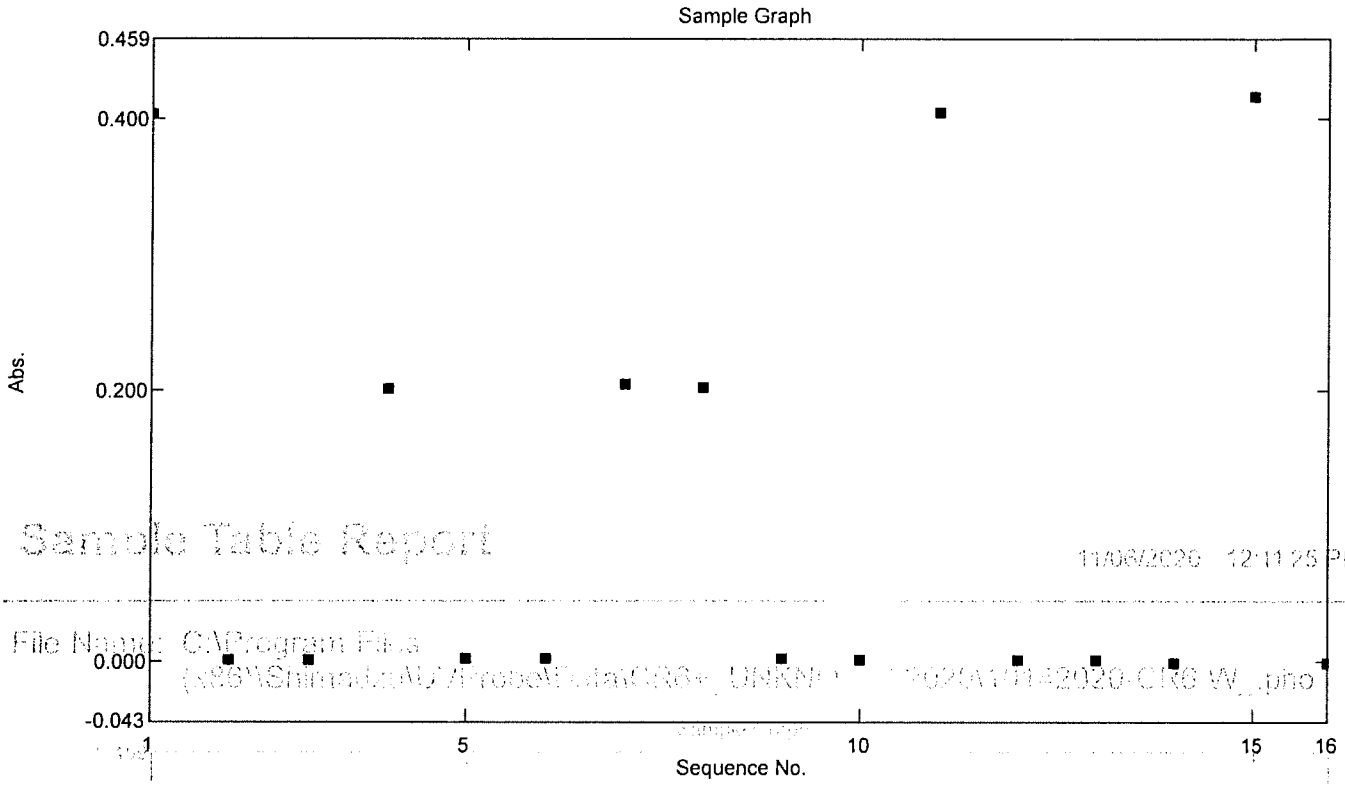
Standard Table

	Sample ID	Type	Ex	Conc	WL540.0	Wgt.Factor	Comments
1	STD1	Standard		0.000	0.000	1.000	
2	STD2	Standard		0.010	0.008	1.000	
3	STD3	Standard		0.025	0.020	1.000	
4	STD4	Standard		0.125	0.104	1.000	
5	STD5	Standard		0.250	0.203	1.000	
6	STD6	Standard		0.500	0.403	1.000	
7	STD7	Standard		1.000	0.790	1.000	
8							

Sample Table Report

11/06/2020 12:11:25 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\10142020-CR6 W_.pho



Sample Table

	Sample ID	Type	Ex	Conc	WL540.0	Comments
1	CCV	Unknown		0.506	0.403	314066803 WC-14
2	CCB	Unknown		-0.002	0.001	314060804 WC-13
3	MBLK	Unknown		-0.002	0.001	314066803 WC-13
4	LCS	Unknown		0.252	0.202	314066802 WC-14
5	HS20100694.01	Unknown		0.000	0.003	1:18PM,SAMP-BKG=TOTAL
6	HS20100694.01BKG	Unknown		-0.001	0.002	1:18PM,0
7	HS20100694.01MS	Unknown		0.255	0.204	1:19PM
8	HS20100694.01MSD	Unknown		0.253	0.203	1:19PM
9	HS20100695.01	Unknown		0.000	0.003	1:20PM,0
10	HS20100695.01BKG	Unknown		-0.001	0.001	1:21PM
11	CCV2	Unknown		0.508	0.404	
12	CCB2	Unknown		-0.002	0.001	
13	HS20100718.01	Unknown		-0.002	0.001	5:50PM
14	HS20100718.01BKG	Unknown		-0.004	-0.001	5:50PM
15	CCV3	Unknown		0.524	0.417	
16	CCB3	Unknown		-0.005	-0.002	
17						

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

WorkOrder: HS20100695

Longhorn GW Treatment Plant Monthly Influent Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

06-Nov-2020

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

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HS20100695 Wet Chem Raw Data (Cr6_W_7196_DOD)

HS20100695 Longhorn GW Treatment Plant Monthly Influent Samples Final

ALS WO# HS20100695

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

October 28, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20100695**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Influent Samples**

Dear Marcia Olive,

ALS Environmental received 1 sample(s) on Oct 14, 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: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20100695

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20100695-01	LH18/24-SP140_101320	Water		13-Oct-2020 14:00	14-Oct-2020 09:15	☐

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20100695

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

Metals by Method SW6020

Batch ID: 158768

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

WetChemistry by Method SW7196

Batch ID: R370512

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

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Influent Samples WorkOrder:HS20100695

Sample ID: LH18/24-SP140_101320 Lab ID:HS20100695-01

Collection Date: 13-Oct-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 22-Oct-2020		Analyst: JHD
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	28-Oct-2020 11:59
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	28-Oct-2020 11:59
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**						Analyst: KVL
Chromium, Hexavalent	0.0100	U	0.00600	0.0100	0.0100	mg/L	1	14-Oct-2020 13:00
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	22-Oct-2020 13:19

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

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20100695

Batch ID: 158768 **Start Date:** 22 Oct 2020 10:00 **End Date:** 22 Oct 2020 14:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20100695-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20100695

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 158768 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20100695-01	LH18/24-SP140_101320	13 Oct 2020 14:00		22 Oct 2020 14:00	28 Oct 2020 11:59	1
Batch ID: R370512 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Water	
HS20100695-01	LH18/24-SP140_101320	13 Oct 2020 14:00			14 Oct 2020 13:00	1
Batch ID: R371062 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20100695-01	LH18/24-SP140_101320	13 Oct 2020 14:00			22 Oct 2020 13:19	1

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20100695

QC BATCH REPORT

Batch ID: 158768 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-158768** Units: **mg/L** Analysis Date: **28-Oct-2020 11:41**
Client ID: Run ID: **ICPMS06_371455** SeqNo: **5804529** PrepDate: **22-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U

LCS Sample ID: **LCS-158768** Units: **mg/L** Analysis Date: **28-Oct-2020 11:43**
Client ID: Run ID: **ICPMS06_371455** SeqNo: **5804530** PrepDate: **22-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05026	0.00500	0.05	0	101	80 - 120				
Silver	0.05033	0.00500	0.05	0	101	85 - 116				

MS Sample ID: **HS20100780-04MS** Units: **mg/L** Analysis Date: **28-Oct-2020 11:48**
Client ID: Run ID: **ICPMS06_371455** SeqNo: **5804533** PrepDate: **22-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04746	0.00500	0.05	-0.000131	95.2	80 - 120				
Silver	0.04605	0.00500	0.05	0	92.1	85 - 116				

MSD Sample ID: **HS20100780-04MSD** Units: **mg/L** Analysis Date: **28-Oct-2020 11:50**
Client ID: Run ID: **ICPMS06_371455** SeqNo: **5804534** PrepDate: **22-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04794	0.00500	0.05	-0.000131	96.1	80 - 120	0.04746	1	20	
Silver	0.0471	0.00500	0.05	0	94.2	85 - 116	0.04605	2.24	20	

SD Sample ID: **HS20100780-04SD** Units: **mg/L** Analysis Date: **28-Oct-2020 11:46**
Client ID: Run ID: **ICPMS06_371455** SeqNo: **5804532** PrepDate: **22-Oct-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Selenium	0.0125	0.0250					-0.000131	0	10	U
Silver	0.00250	0.0250					0	0	10	U

The following samples were analyzed in this batch: HS20100695-01

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20100695

QC BATCH REPORT

Batch ID: R370512 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-R370512** Units: **mg/L** Analysis Date: **14-Oct-2020 13:00**
Client ID: Run ID: **UV-2450_370512** SeqNo: **5782019** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.0100	0.0100								U

LCS Sample ID: **LCS-R370512** Units: **mg/L** Analysis Date: **14-Oct-2020 13:00**
Client ID: Run ID: **UV-2450_370512** SeqNo: **5782018** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.252	0.0100	0.25	0	101	90 - 111				

MS Sample ID: **HS20100694-01MS** Units: **mg/L** Analysis Date: **14-Oct-2020 13:00**
Client ID: Run ID: **UV-2450_370512** SeqNo: **5782021** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.255	0.0100	0.25	0	102	90 - 111				

MSD Sample ID: **HS20100694-01MSD** Units: **mg/L** Analysis Date: **14-Oct-2020 13:00**
Client ID: Run ID: **UV-2450_370512** SeqNo: **5782020** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.253	0.0100	0.25	0	101	90 - 111	0.255	0.787	20	

The following samples were analyzed in this batch: HS20100695-01

ALS Houston, US Date: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: **HS20100695**

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: 28-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20100695

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20100695-01	LH18/24-SP140_101320	Login	10/14/2020 10:45:09 AM	JRM	MET026
HS20100695-01	LH18/24-SP140_101320	Login	10/14/2020 10:45:09 AM	JRM	Sub
HS20100695-01	LH18/24-SP140_101320	Login	10/14/2020 10:45:09 AM	JRM	WET015

ALS Houston, US Date: 28-Oct-20

Sample Receipt Checklist

Work Order ID: HS20100695 **Date/Time Received:** 14-Oct-2020 09:15

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Jared R. Makan	14-Oct-2020 10:46	**Reviewed by:**	/S/ RJ Modashia	14-Oct-2020 14:09
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **ALS Courier**

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

Temperature(s)/Thermometer(s):	1.3°C/1.3°C UC/C	IR31
Cooler(s)/Kit(s):	45942	
Date/Time sample(s) sent to storage:	10/14/2020 10:55	

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:

HS20100695

Bhate Environmental Associates, Inc.

Longhorn GW Treatment Plant Monthly Influent Sam

CHAIN OF CUSTODY

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

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

Project No. NWO1312.0150.0 16.0001

Job:
GROUNDWATER TREATMENT PLANT MONTHLY INFLUENT SAMPLES

Prepared By: Scott Beesinger

P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: SILVER & SELENIUM	HEXAVALENT CHROMIUM	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP140_101320	Water	10/13/20 / 14:00		1	X			HNO3	
LH18/24-SP140_101320	Water	10/13/20 / 14:00		2		X	X	NONE	

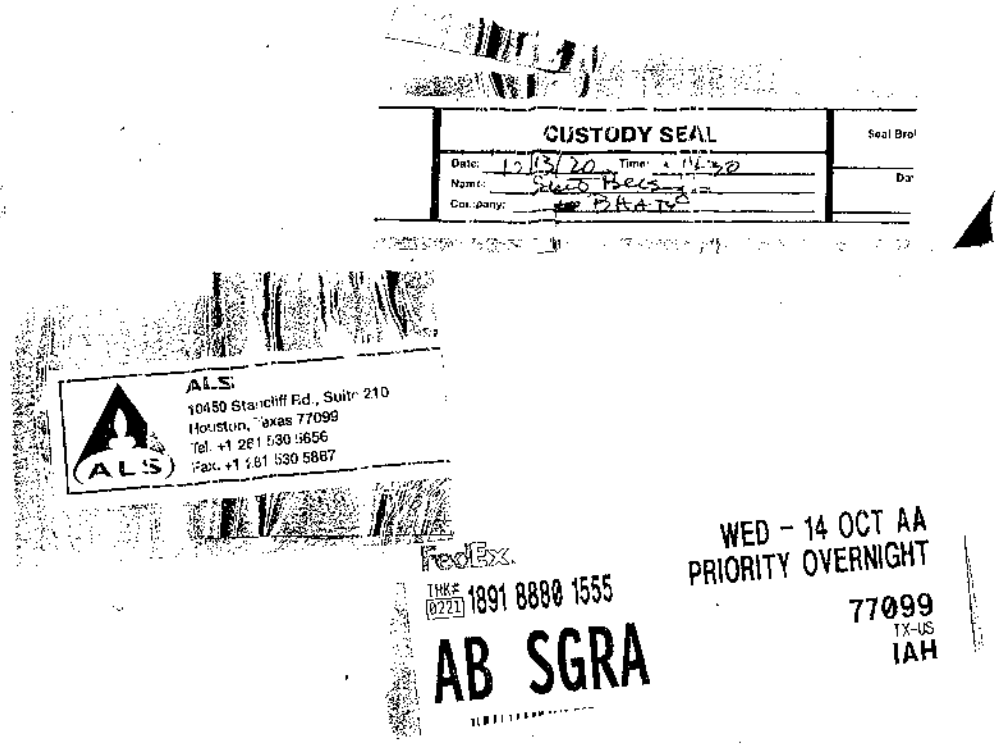
Additional Remarks: **STANDARD TURN AROUND TIME**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	10/13/20	14:30									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Summers	10/14/20	09:15							

Remarks: Cooler 45942 1123
Temp 1.3°C CFO


CUSTODY SEAL
Seal Bro
Date: 10/13/20 Time:
Name:
Company:
ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
FedEx.
THK# 0221 1891 8880 1555
AB SGRA
WED - 14 OCT AA
PRIORITY OVERNIGHT
77099
TX-US
IAH

October 22, 2020 Service Request No:E2000982

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

Laboratory Results for: HS20100695

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 14, 2020
For your reference, these analyses have been assigned our service request number **E2000982.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000982
Project:	HS20100695	**Date Received:**	10/14/20
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 10/14/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000513: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits. The MS/MSD was performed on an unrelated sample.

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

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

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

Client: ALS Environmental - US **Service Request:**E2000982
Project: HS20100695

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000982-001	LH18/24-SP140_101320	10/13/2020	1400

Service Request Summary

Folder #: **E2000982**
Client Name: ALS Environmental - US
Project Name: HS20100695
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/14/20
Internal Due Date: 10/28/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20100695
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 1E
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000982-001	LH18/24-SP140_101320	Water	10/13/20 1400	**IV**

Service Request Summary

Folder #: **E2000982**
Client Name: ALS Environmental - US
Project Name: HS20100695
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/14/20
Internal Due Date: 10/28/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20100695
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 1E
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 10/28,level IV 11/4

Data Qualifiers

Lab Standard

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

Data Qualifiers

Lab Standard

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

ALS Laboratory Group

Acronyms

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

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

ALS

Chain of Custody

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

E2000982 5
ALS Laboratory Group
HS20100695

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: 14926**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100695
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20100695-01**	**LH18/24-SP140_101320**	**Water**	**13 Oct 2020 14:00**
	SUB_Perch-6850			21 Oct 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: J. Macemore Date/Time:

Received By: Date/Time: 10/14/20 1200

Cooler ID(s): Temperature(s):

Cooler Receipt Form

ALS Environmental

Project Chemist CH

Client/Project ALS-H

Thermometer ID IR31

Date/Time Received: 10/14/20 Initials: CH

Date/Time Logged in: 10/14/20 Initials CH

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

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

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

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
-		10/14/20	1200	CH	1.0	☒
						☐
						☐
						☐

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

Notes, Discrepancies, & Resolutions:

Service request Label: E2000982 5
ALS Laboratory Group
HS20100695

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

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 368005 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 10/19/20 09:34

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000981-001	LH18/24-SP650_101320-AIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000982-001	LH18/24-SP140_101320	.01	6850/ClO4 DOD			Water	10mL	
3	E2000984-001	LH18/24-SP650_101320-AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2000985-001	16WW36-201013	.01	6850/ClO4 DOD			Water	10mL	
5	E2000985-002	16WW35-201013	.01	6850/ClO4 DOD			Water	10mL	
6	E2000985-003	16IW09-201013	.01	6850/ClO4 DOD			Water	10mL	
7	E2000985-004	16WW55-201013	.01	6850/ClO4 DOD			Water	10mL	
8	E2000985-005	16IW03-201013	.01	6850/ClO4 DOD			Water	10mL	
9	E2000985-006	16IW10-201013	.01	6850/ClO4 DOD			Water	10mL	
10	E2000996-001	16WW25-201014	.01	6850/ClO4 DOD			Water	10mL	
11	E2000996-002	16WW26-201014	.01	6850/ClO4 DOD			Water	10mL	
12	E2000996-003	16WW30-201014	.01	6850/ClO4 DOD			Water	10mL	
13	E2000996-004	16WW29-201014	.01	6850/ClO4 DOD			Water	10mL	
14	E2000996-005	16WW22-201014	.01	6850/ClO4 DOD			Water	10mL	
15	E2000996-006	16WW41-201014	.01	6850/ClO4 DOD			Water	10mL	
16	E2000996-007	16WW21-201014	.01	6850/ClO4 DOD			Water	10mL	
17	E2000996-008	16WW21-201014-FD	.01	6850/ClO4 DOD			Water	10mL	
18	E2000996-009	16WW39-201014	.01	6850/ClO4 DOD			Water	10mL	
19	EQ2000513-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000513-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000513-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000513-04	16IW03-201013 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2000513-05	16IW03-201013 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000513-02	1.00µL	EQ2000513-03	1.00µL	EQ2000513-04	1.00µL	EQ2000513-05	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2000981-001	100.00µL	E2000982-001	100.00µL	E2000984-001	100.00µL	E2000985-001	100.00µL	E2000985-002	100.00µL	E2000985-003	100.00µL
E2000985-004	100.00µL	E2000985-005	100.00µL	E2000985-006	100.00µL	E2000996-001	100.00µL	E2000996-002	100.00µL	E2000996-003	100.00µL
E2000996-004	100.00µL	E2000996-005	100.00µL	E2000996-006	100.00µL	E2000996-007	100.00µL	E2000996-008	100.00µL	E2000996-009	100.00µL
EQ2000513-01	100.00µL	EQ2000513-02	100.00µL	EQ2000513-03	100.00µL	EQ2000513-04	100.00µL	EQ2000513-05	100.00µL		

Preparation Information Benchsheet

Prep Run#: 368005 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 10/19/20 09:34

Preparation Steps

Step: Preparation
Started: 10/19/20 09:34
Finished: 10/19/20 14:58
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 10/19/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000982
Project:	HS20100695	**Date Collected:**	10/13/20 1400
Sample Matrix:	Water	**Date Received:**	10/14/20
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:44
Sample Name:	LH18/24-SP140_101320	**Units:**	µg/L
Lab Code:	E2000982-001	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_037	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	200

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**6260**		20.0	10.0	5.00	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000982
Project:	HS20100695	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/19/20 20:15
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000513-01	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	700168
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201019\20201019_041	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20100695
Sample Matrix: Water

Service Request: E2000982
Date Analyzed: 10/20/20

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

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 368005

	Lab Control Sample EQ2000513-02			Duplicate Lab Control Sample EQ2000513-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.105	0.100	105	0.108	0.100	108	84 - 119	3	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000982
Project:	HS20100695	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:04
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000513-02	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_032	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.105**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000982
Project:	HS20100695	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:12
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000513-03	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_033	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.108**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000982
Project:	HS20100695	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	10/20/20

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

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2000985-005	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS				Batch QCDMS					
		Matrix Spike				**Duplicate Matrix Spike**					
		EQ2000513-04				EQ2000513-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0876	0.194	0.100	106	0.193	0.100	105	84 - 119	<1	15

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

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000982
Project:	HS20100695	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:20
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000513-04	**Basis:**	NA
Run Type:	Matrix Spike		

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_034	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.194**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000982
Project:	HS20100695	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:28
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000513-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_035	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.193**		0.100	0.0500	0.0250	

HS20100695 - ME - ICP_W_DOD

ALS WO# HS20100695

ALS Houston, US Date: 06-Nov-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20100695
Start Date: 22-Oct-2020 10:00 End Date: 22-Oct-2020 14:00

Batch ID: 158768
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20100695-01	LH18/24-SP140_101320	Water		10	10	1
HS20100780-04MS				10	10	1
HS20100780-04MSD				10	10	1
HS20100780-04PDS				10	10	1
HS20100780-04SD				10	10	1
LCS-158768				10	10	1
MBLK-158768				10	10	1

ALS Houston, US

Date: 06-Nov-20

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20100695
Start Date: 28-Oct-2020 End Date: 28-Oct-2020

Run ID:ICPMS06_371455
Instrument:ICPMS06
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS06_371455_Tune	1	28-Oct-2020 00:00	ICPMS06_371455_Tune_1	
CAL BLK	1	28-Oct-2020 10:13	010CALB.d_5804093	AG SE
2/10/200	1	28-Oct-2020 10:15	011CALS.d_5804094	AG SE
5/25/500	1	28-Oct-2020 10:17	012CALS.d_5804095	AG SE
10/50/100	1	28-Oct-2020 10:19	013CALS.d_5804096	AG SE
100/500/10K	1	28-Oct-2020 10:21	014CALS.d_5804097	AG SE
200/1000/20K	1	28-Oct-2020 10:22	015CALS.d_5804098	AG SE
ICV	1	28-Oct-2020 10:40	017_ICV.d_5804100	AG SE
LLICV2	1	28-Oct-2020 10:42	018LCV2.d_5804101	AG SE
LLICV5	1	28-Oct-2020 10:44	019LCV5.d_5804102	AG SE
ICB	1	28-Oct-2020 10:45	020_ICB.d_5804103	AG SE
ICSA	1	28-Oct-2020 10:47	021ICSA.d_5804104	AG SE
ICSAB	1	28-Oct-2020 10:49	022ICSB.d_5804105	AG SE
CCV 1	1	28-Oct-2020 11:34	040_CCV.d_5804527	AG SE
CCB 1	1	28-Oct-2020 11:36	041_CCB.d_5804528	AG SE
MBLK-158768	1	28-Oct-2020 11:41	042SMPL.d_5804529	AG SE
LCS-158768	1	28-Oct-2020 11:43	043SMPL.d_5804530	AG SE
ZZZZZZSD	5	28-Oct-2020 11:46	045SMPL.d_5804532	AG SE
ZZZZZZMS	1	28-Oct-2020 11:48	046SMPL.d_5804533	AG SE
ZZZZZZMSD	1	28-Oct-2020 11:50	047SMPL.d_5804534	AG SE
ZZZZZZPDS	1	28-Oct-2020 11:52	048SMPL.d_5804535	
LH18/24-SP140_101320	1	28-Oct-2020 11:59	050SMPL.d_5804537	AG SE
CCV 2	1	28-Oct-2020 12:03	052_CCV.d_5804539	AG SE
CCB 2	1	28-Oct-2020 12:05	053_CCB.d_5804540	AG SE
CCV 3	1	28-Oct-2020 12:26	064_CCV.d_5804550	AG SE
CCB 3	1	28-Oct-2020 12:28	065_CCB.d_5804551	AG SE
CCV 4	1	28-Oct-2020 12:48	076_CCV.d_5804562	AG SE
CCB 4	1	28-Oct-2020 12:50	077_CCB.d_5804563	AG SE
CCV 5	1	28-Oct-2020 13:18	088_CCV.d_5804737	AG SE
CCB 5	1	28-Oct-2020 13:20	089_CCB.d_5804738	AG SE
CCV 6	1	28-Oct-2020 13:36	097_CCV.d_5804746	AG SE
CCB 6	1	28-Oct-2020 13:38	098_CCB.d_5804747	AG SE

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20100695

Run ID: ICPMS06_371455
Instrument: ICPMS06
Method: SW6020

ICV	Date: 28-Oct-2020 10:40		Seq: 5804100	ICV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	101.034	101	90-110	
Silver	100	104.068	104	90-110	

CCV1	Date: 28-Oct-2020 11:34		Seq: 5804527	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	98.395	98	90-110	
Silver	100	96.715	97	90-110	

CCV2	Date: 28-Oct-2020 12:03		Seq: 5804539	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	99.298	99	90-110	
Silver	100	99.122	99	90-110	

CCV3	Date: 28-Oct-2020 12:26		Seq: 5804550	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	98.404	98	90-110	
Silver	100	100.428	100	90-110	

CCV4	Date: 28-Oct-2020 12:48		Seq: 5804562	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	97.948	98	90-110	
Silver	100	96.666	97	90-110	

CCV5	Date: 28-Oct-2020 13:18		Seq: 5804737	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	92.749	93	90-110	
Silver	100	97.047	97	90-110	

CCV6	Date: 28-Oct-2020 13:36		Seq: 5804746	CCV	Units: ug/L
Analyte	**True**	**Found**	**%R**	**Control Limits**	**Flag**
Selenium	100	92.714	93	90-110	
Silver	100	97.064	97	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20100695

Run ID: ICPMS06_371455
Instrument: ICPMS06
Method: SW6020

ICB	Date: 28-Oct-2020 10:45		Seq: 5804103	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	

CCB1	Date: 28-Oct-2020 11:36		Seq: 5804528	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

MBLK-158768	Date: 28-Oct-2020 11:41		Seq: 5804529	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	

CCB2	Date: 28-Oct-2020 12:05		Seq: 5804540	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB3	Date: 28-Oct-2020 12:28		Seq: 5804551	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB4	Date: 28-Oct-2020 12:50		Seq: 5804563	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB5	Date: 28-Oct-2020 13:20		Seq: 5804738	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

CCB6	Date: 28-Oct-2020 13:38		Seq: 5804747	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

ALS Houston, US

Date: 06-Nov-20

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20100695

Run ID: ICPMS06_371455
Instrument: ICPMS06
Method: SW6020

ICSA	Date: 28-Oct-2020 10:47	Seq: 5804104	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Selenium		0.188	0	
Silver		0.011	0	

ICSAB	Date: 28-Oct-2020 10:49	Seq: 5804105	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Selenium	100	99.34	99.3	
Silver	100	93.78	93.8	

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20100695

Date Analyzed: 28-Oct-2020 11:50
Date Extracted: 22-Oct-2020 14:00
Units: ug/L

Matrix Spike: HS20100780-04MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Selenium	5.000	47.46	50.00	95.2	47.94	50.00	96.1	80-120	1.00	20
Silver	5.000	46.05	50.00	92.1	47.10	50.00	94.2	85-116	2.24	20

ALS Houston, US

Date: 06-Nov-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20100695

Date Analyzed: 28-Oct-2020 11:43
Date Extracted: 22-Oct-2020 14:00
Units: ug/L

Lab Sample ID: LCS-158768

Analysis Method: SW6020

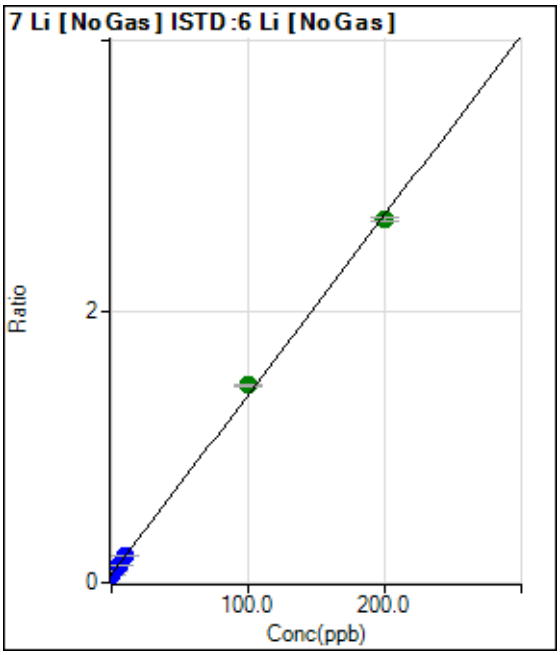
Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Selenium	50	50.26	101	80-120
Silver	50	50.33	101	85-116

Calibration for 234_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\102820A.b\
Analysis File: 102820A.batch.bin
DA Date-Time: 10/28/2020 11:11:21 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	227CALB.d	CAL BLK	10/28/2020 10:57:53 PM
2	228CALS.d	2/10/200	10/28/2020 10:59:47 PM
3	229CALS.d	5/25/500	10/28/2020 11:01:38 PM
4	230CALS.d	10/50/100	10/28/2020 11:03:29 PM
5	231CALS.d	100/500/10K	10/28/2020 11:05:21 PM
6	232CALS.d	200/1000/20K	10/28/2020 11:07:06 PM

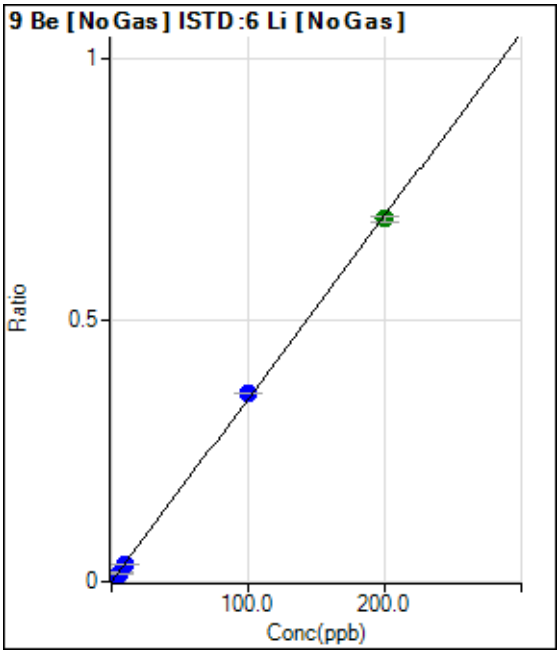
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	105340.47	0.0601	P	0.8
2	☐	2.000	1.945	151317.17	0.0859	P	4.1
3	☐	5.000	5.016	218233.37	0.1266	P	0.6
4	☐	10.000	10.221	334385.37	0.1955	P	0.9
5	☐	100.000	105.344	2399111.53	1.4551	A	1.4
6	☐	200.000	197.317	4183681.19	2.6730	A	1.1

y = 0.0132 * x + 0.0601
R = 0.9995
DL = 0.1031
BEC = 4.541

Weight: <None>
Min Conc: <None>

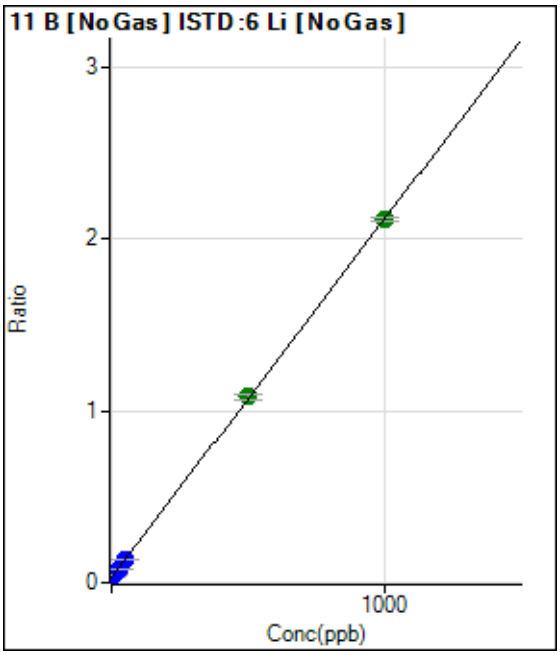


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	65.00	0.0000	P	16.3
2	☐	2.000	1.851	11461.37	0.0065	P	5.3
3	☐	5.000	4.712	28463.80	0.0165	P	0.5
4	☐	10.000	9.569	57274.35	0.0335	P	1.9
5	☐	100.000	103.377	595799.72	0.3614	P	0.1
6	☐	200.000	198.342	1084999.13	0.6933	A	1.7

y = 0.0035 * x + 3.7147E-005
R = 0.9998
DL = 0.005192
BEC = 0.01063

Weight: <None>
Min Conc: <None>

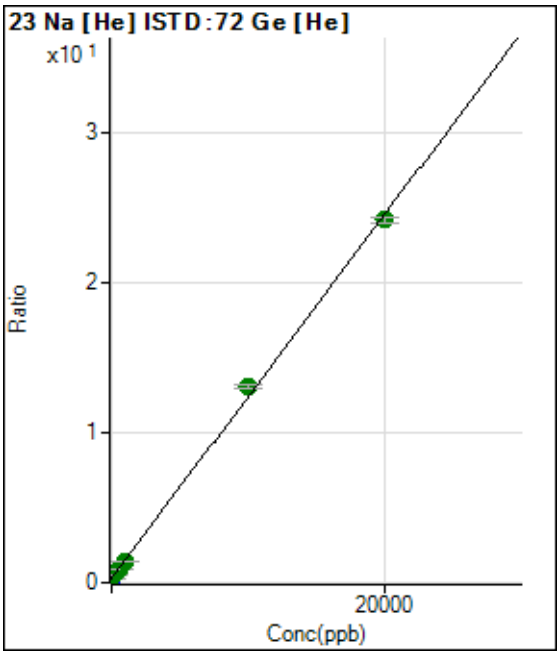
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	51134.30	0.0292	P	2.2
2	☐	10.000	9.087	84830.70	0.0481	P	3.5
3	☐	25.000	23.503	134853.27	0.0782	P	1.8
4	☐	50.000	48.388	222570.78	0.1301	P	1.0
5	☐	500.000	504.298	1782285.49	1.0810	A	2.5
6	☐	1000.000	997.978	3303496.10	2.1107	A	1.0

y = 0.0021 * x + 0.0292
R = 1.0000
DL = 0.9414
BEC = 14

Weight: <None>
Min Conc: <None>

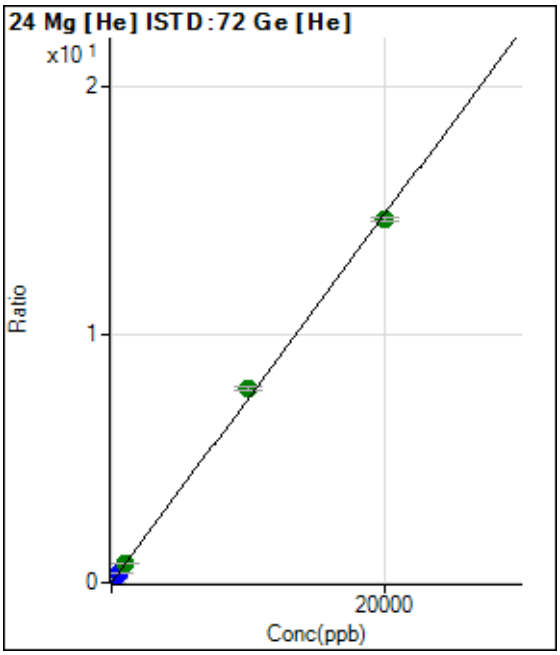


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	578154.51	0.2862	P	1.7
2	☐	200.000	190.100	1035302.43	0.5169	A	2.0
3	☐	500.000	468.586	1730601.22	0.8548	A	0.8
4	☐	1000.000	964.365	2931387.98	1.4564	A	0.6
5	☐	10000.00	10575.10	25517246.29	13.1181	A	2.3
6	☐	20000.00	19715.11	46503057.64	24.2087	A	1.3

y = 0.0012 * x + 0.2862
R = 0.9994
DL = 12.2
BEC = 235.9

Weight: <None>
Min Conc: <None>

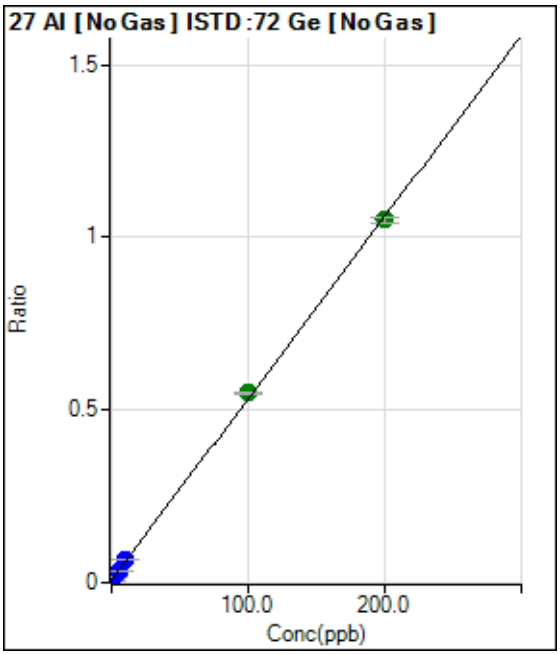
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2443.59	0.0012	P	2.7
2	☐	200.000	213.041	319080.09	0.1593	P	1.1
3	☐	500.000	507.722	765366.81	0.3780	P	0.9
4	☐	1000.000	1018.463	1523973.20	0.7571	A	0.8
5	☐	10000.00	10587.03	15287938.94	7.8589	A	1.8
6	☐	20000.00	19705.23	28096686.25	14.6264	A	1.0

y = 7.4220E-004 * x + 0.0012
R = 0.9994
DL = 0.1321
BEC = 1.63

Weight: <None>
Min Conc: <None>

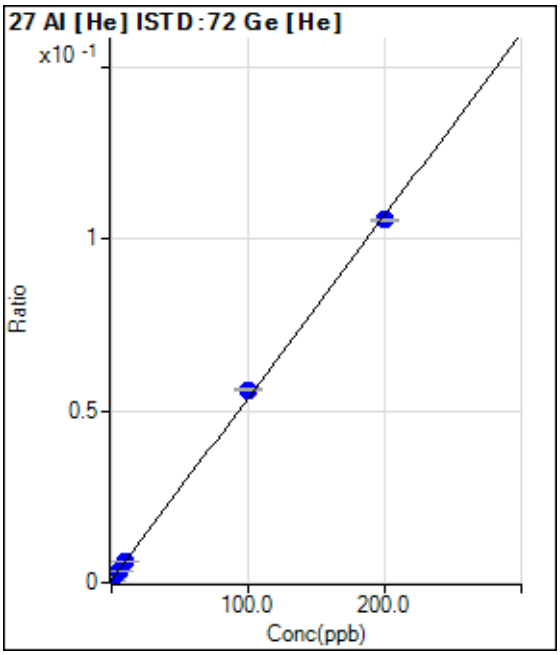


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37320.49	0.0073	P	2.8
2	☐	2.000	2.143	95137.33	0.0186	P	1.1
3	☐	5.000	5.337	183214.18	0.0354	P	1.0
4	☐	10.000	11.293	336495.79	0.0667	P	0.7
5	☐	100.000	103.010	2769027.67	0.5489	A	1.3
6	☐	200.000	198.420	5097772.53	1.0506	A	1.4

y = 0.0053 * x + 0.0073
R = 0.9998
DL = 0.1189
BEC = 1.395

Weight: <None>
Min Conc: <None>

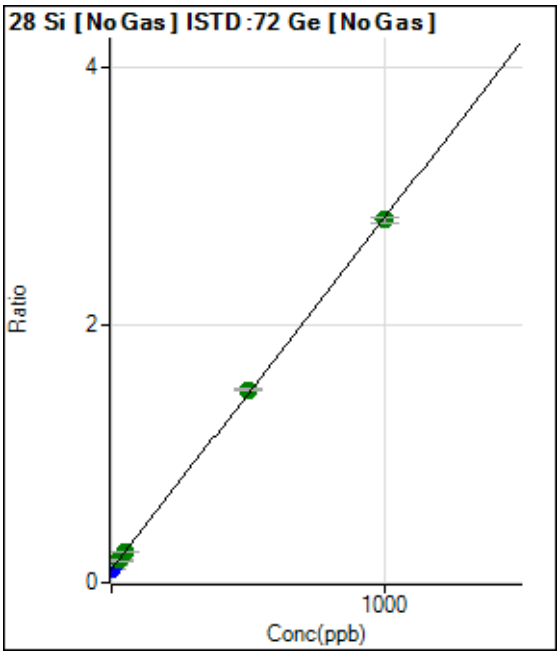
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1463.45	0.0007	P	10.3
2	☐	2.000	2.041	3613.88	0.0018	P	5.6
3	☐	5.000	5.146	6985.25	0.0035	P	4.1
4	☐	10.000	10.220	12355.70	0.0061	P	4.8
5	☐	100.000	104.621	109230.23	0.0561	P	0.7
6	☐	200.000	197.674	202544.31	0.1054	P	0.3

y = 5.2972E-004 * x + 7.2411E-004
R = 0.9996
DL = 0.4222
BEC = 1.367

Weight: <None>
Min Conc: <None>

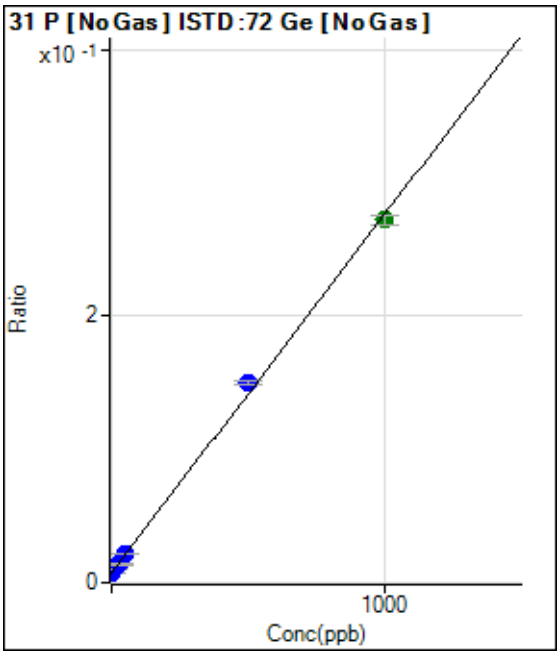


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	527550.30	0.1037	P	2.8
2	☐	10.000	9.748	666132.43	0.1303	P	1.7
3	☐	25.000	24.893	887923.01	0.1715	A	0.6
4	☐	50.000	50.660	1219317.82	0.2417	A	1.4
5	☐	500.000	511.591	7554155.72	1.4976	A	0.7
6	☐	1000.000	994.177	13644896.47	2.8124	A	1.3

y = 0.0027 * x + 0.1037
R = 0.9999
DL = 3.146
BEC = 38.07

Weight: <None>
Min Conc: <None>

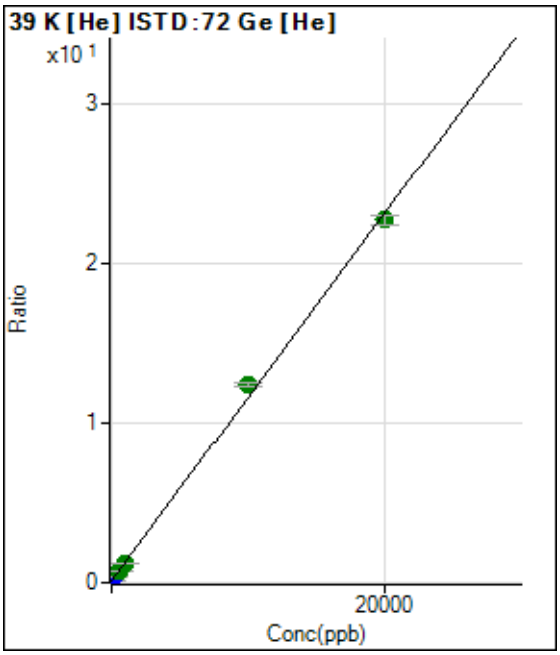
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37247.06	0.0073	P	1.3
2	☐	10.000	9.698	50773.16	0.0099	P	2.1
3	☐	25.000	23.802	71021.59	0.0137	P	1.0
4	☐	50.000	52.087	107555.27	0.0213	P	2.2
5	☐	500.000	529.488	754864.60	0.1497	P	1.6
6	☐	1000.000	985.184	1320337.14	0.2722	A	2.5

y = 2.6881E-004 * x + 0.0073
R = 0.9994
DL = 1.034
BEC = 27.24

Weight: <None>
Min Conc: <None>

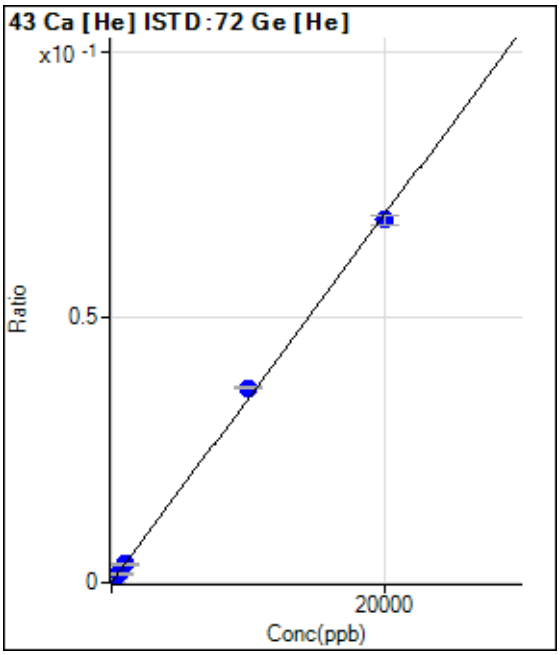


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	241556.14	0.1196	P	1.7
2	☐	200.000	207.504	716893.45	0.3580	P	1.5
3	☐	500.000	484.291	1368568.26	0.6760	A	1.1
4	☐	1000.000	987.883	2525275.85	1.2546	A	0.6
5	☐	10000.00	10686.05	24118492.98	12.3969	A	1.2
6	☐	20000.00	19657.89	43611442.68	22.7048	A	2.4

y = 0.0011 * x + 0.1196
R = 0.9992
DL = 5.295
BEC = 104.1

Weight: <None>
Min Conc: <None>

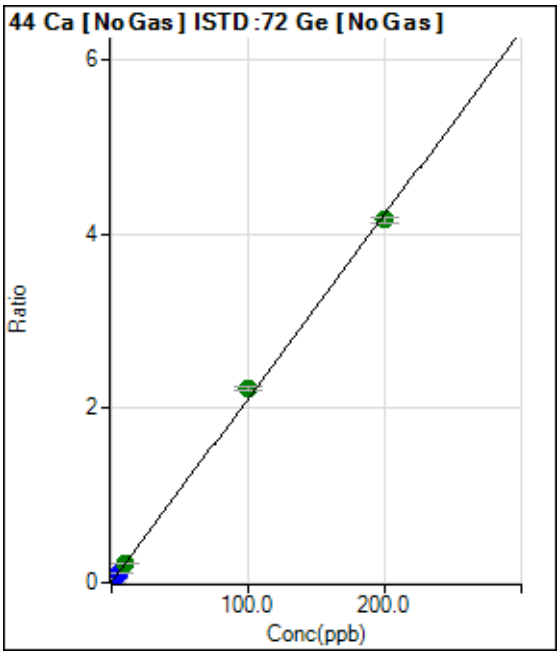
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0000	P	36.4
2	☐	200.000	201.065	1443.44	0.0007	P	14.4
3	☐	500.000	476.690	3393.82	0.0017	P	6.5
4	☐	1000.000	994.448	6985.24	0.0035	P	2.1
5	☐	10000.00	10567.29	71287.83	0.0366	P	0.8
6	☐	20000.00	19717.20	131268.78	0.0683	P	2.7

y = 3.4648E-006 * x + 2.4844E-005
R = 0.9994
DL = 7.836
BEC = 7.17

Weight: <None>
Min Conc: <None>

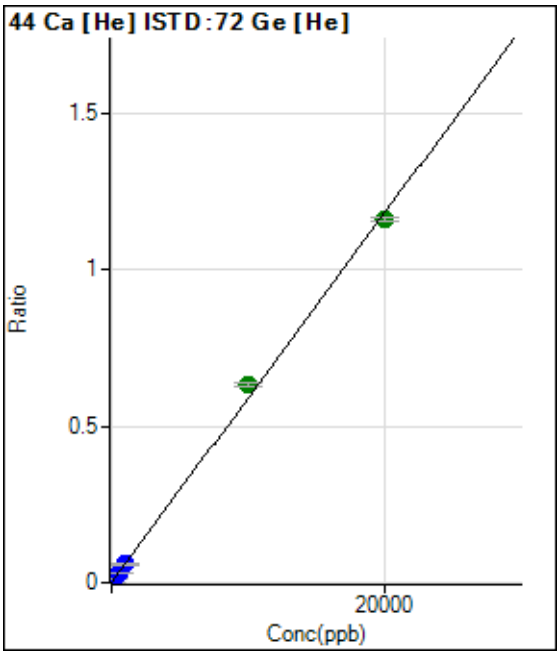


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20852.90	0.0041	P	3.9
2	☐	2.000	2.047	241881.91	0.0473	P	0.9
3	☐	5.000	4.862	552222.15	0.1067	P	0.7
4	☐	10.000	10.210	1107444.88	0.2196	A	1.5
5	☐	100.000	105.663	11268722.75	2.2339	A	2.0
6	☐	200.000	197.161	20205760.53	4.1648	A	1.8

y = 0.0211 * x + 0.0041
R = 0.9994
DL = 0.02255
BEC = 0.1943

Weight: <None>
Min Conc: <None>

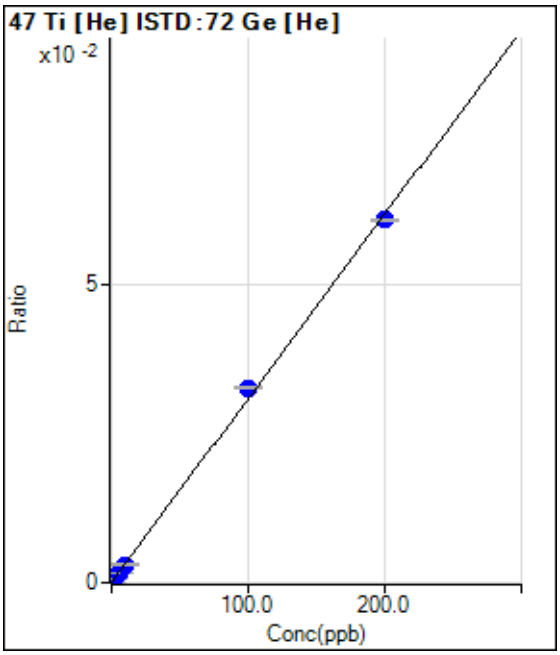
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1086.73	0.0005	P	12.2
2	☐	200.000	198.901	24602.27	0.0123	P	4.4
3	☐	500.000	480.041	58500.86	0.0289	P	1.3
4	☐	1000.000	983.768	118060.69	0.0587	P	1.4
5	☐	10000.00	10734.78	1234584.67	0.6347	A	2.0
6	☐	20000.00	19633.93	2228968.98	1.1604	A	0.9

y = 5.9072E-005 * x + 5.3850E-004
R = 0.9990
DL = 3.346
BEC = 9.116

Weight: <None>
Min Conc: <None>

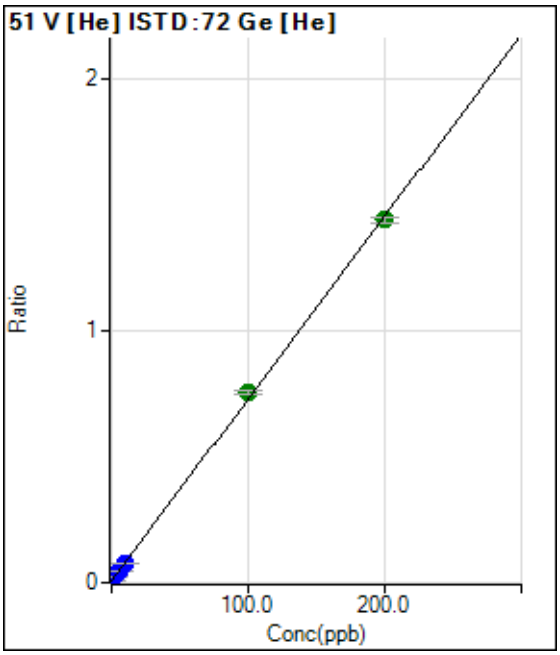


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0000	P	74.0
2	☐	2.000	1.918	1230.08	0.0006	P	16.9
3	☐	5.000	4.907	3117.08	0.0015	P	4.7
4	☐	10.000	9.804	6148.16	0.0031	P	2.3
5	☐	100.000	105.843	63737.93	0.0328	P	1.5
6	☐	200.000	197.091	117166.71	0.0610	P	0.5

y = 3.0935E-004 * x + 2.1466E-005
R = 0.9994
DL = 0.154
BEC = 0.06939

Weight: <None>
Min Conc: <None>

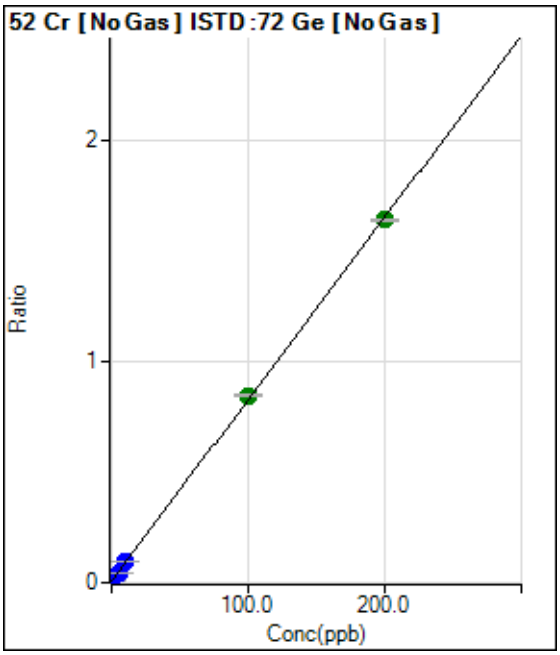
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13828.16	0.0068	P	3.9
2	☐	2.000	2.083	43922.30	0.0219	P	1.6
3	☐	5.000	4.976	86803.90	0.0429	P	0.9
4	☐	10.000	10.093	160866.74	0.0799	P	0.5
5	☐	100.000	103.570	1472145.84	0.7567	A	1.7
6	☐	200.000	198.210	2769979.96	1.4419	A	1.8

y = 0.0072 * x + 0.0068
R = 0.9998
DL = 0.1119
BEC = 0.9457

Weight: <None>
Min Conc: <None>

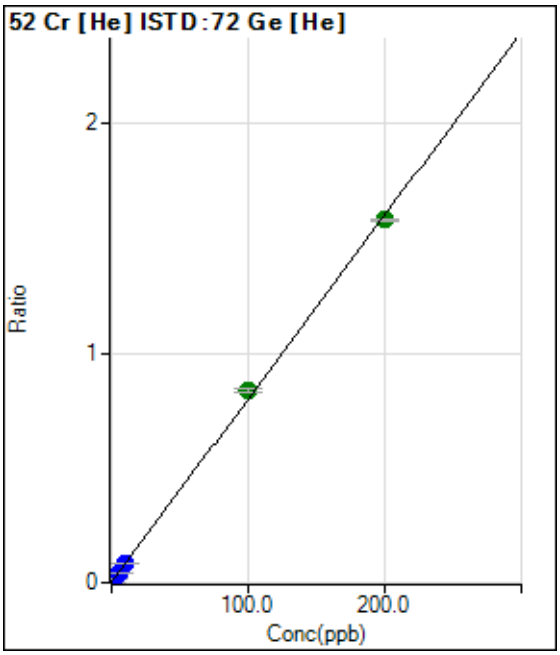


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33701.79	0.0066	P	0.2
2	☐	2.000	2.085	121324.25	0.0237	P	0.7
3	☐	5.000	4.949	244379.44	0.0472	P	1.5
4	☐	10.000	10.448	465677.99	0.0923	P	1.5
5	☐	100.000	102.347	4268081.60	0.8461	A	0.8
6	☐	200.000	198.805	7944190.09	1.6373	A	0.7

y = 0.0082 * x + 0.0066
R = 0.9999
DL = 0.004251
BEC = 0.8079

Weight: <None>
Min Conc: <None>

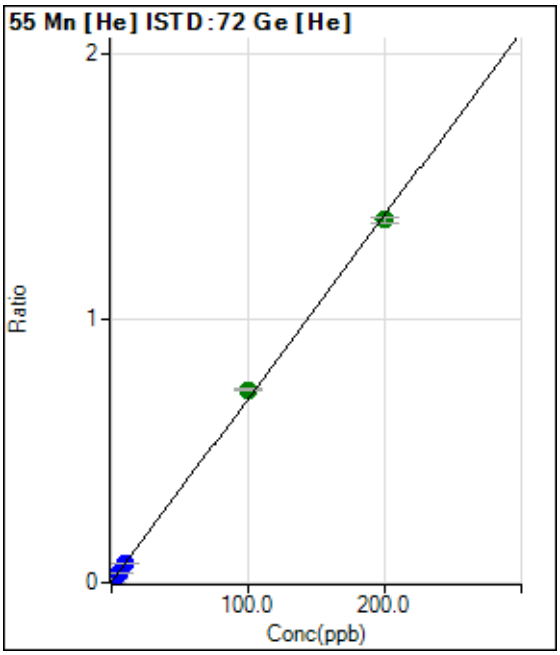
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4167.39	0.0021	P	3.6
2	☐	2.000	2.059	37077.19	0.0185	P	3.0
3	☐	5.000	5.001	85087.10	0.0420	P	2.1
4	☐	10.000	10.161	167616.25	0.0833	P	1.3
5	☐	100.000	104.724	1632124.40	0.8390	A	2.2
6	☐	200.000	197.629	3038067.45	1.5815	A	0.6

y = 0.0080 * x + 0.0021
R = 0.9996
DL = 0.02804
BEC = 0.2581

Weight: <None>
Min Conc: <None>

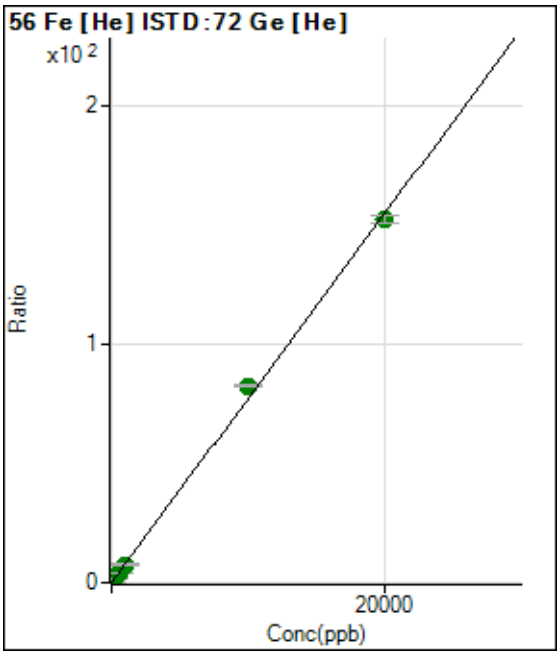


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5004.35	0.0025	P	4.5
2	☐	2.000	2.031	33187.23	0.0166	P	3.0
3	☐	5.000	4.927	74258.19	0.0367	P	0.2
4	☐	10.000	10.079	145812.66	0.0724	P	0.1
5	☐	100.000	104.953	1422404.56	0.7310	A	0.9
6	☐	200.000	197.521	2638668.55	1.3736	A	1.5

y = 0.0069 * x + 0.0025
R = 0.9996
DL = 0.04794
BEC = 0.3569

Weight: <None>
Min Conc: <None>

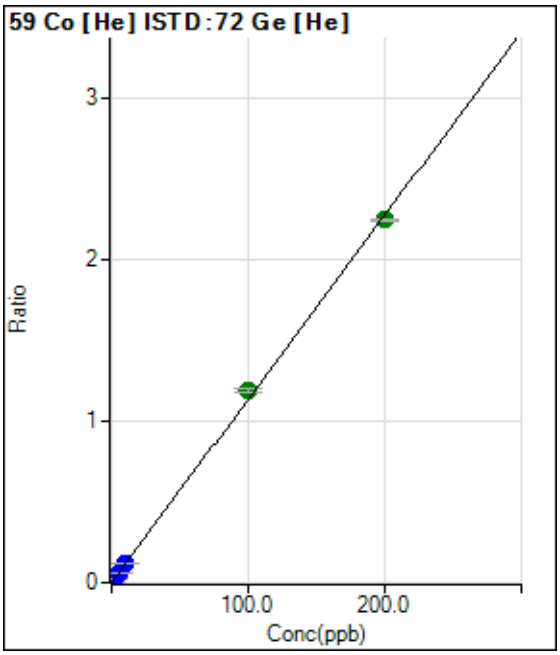
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	35847.80	0.0177	P	9.7
2	☐	200.000	203.552	3193958.81	1.5948	A	1.6
3	☐	500.000	489.303	7711056.55	3.8087	A	0.4
4	☐	1000.000	981.477	15341290.19	7.6220	A	2.0
5	☐	10000.00	10659.99	160705140.9	82.6086	A	1.4
6	☐	20000.00	19671.16	292795535.6	152.424	A	2.2

y = 0.0077 * x + 0.0177
R = 0.9992
DL = 0.6655
BEC = 2.29

Weight: <None>
Min Conc: <None>

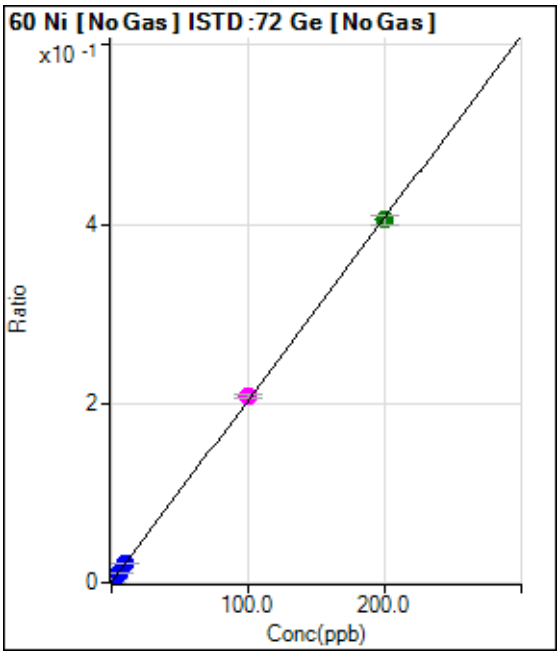


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	450.02	0.0002	P	13.3
2	☐	2.000	2.102	48272.51	0.0241	P	2.4
3	☐	5.000	5.072	117144.21	0.0579	P	0.5
4	☐	10.000	10.317	236401.40	0.1175	P	1.9
5	☐	100.000	104.602	2312531.06	1.1888	A	2.3
6	☐	200.000	197.680	4315420.87	2.2465	A	0.7

y = 0.0114 * x + 2.2306E-004
R = 0.9996
DL = 0.007841
BEC = 0.01963

Weight: <None>
Min Conc: <None>

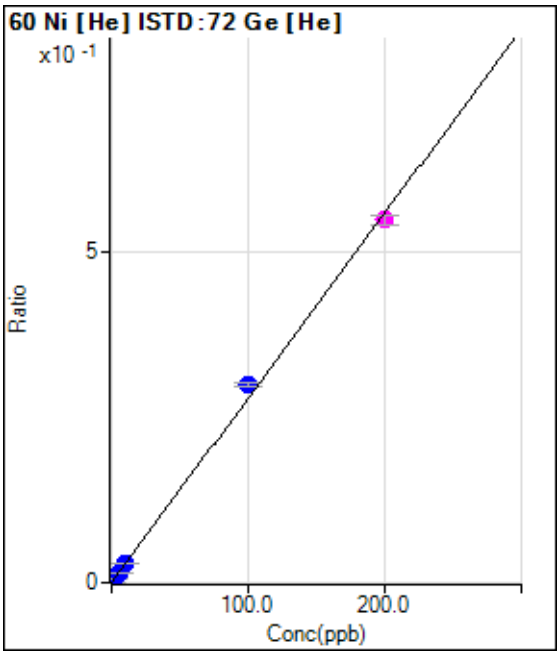
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2376.92	0.0005	P	6.0
2	☐	2.000	2.121	24445.61	0.0048	P	2.7
3	☐	5.000	5.054	55613.73	0.0107	P	1.7
4	☐	10.000	10.419	109225.76	0.0217	P	0.8
5	☐	100.000	102.083	1049551.42	0.2081	M	2.9
6	☐	200.000	198.935	1964848.62	0.4050	A	2.6

y = 0.0020 * x + 4.6724E-004
R = 0.9999
DL = 0.04112
BEC = 0.2298

Weight: <None>
Min Conc: <None>

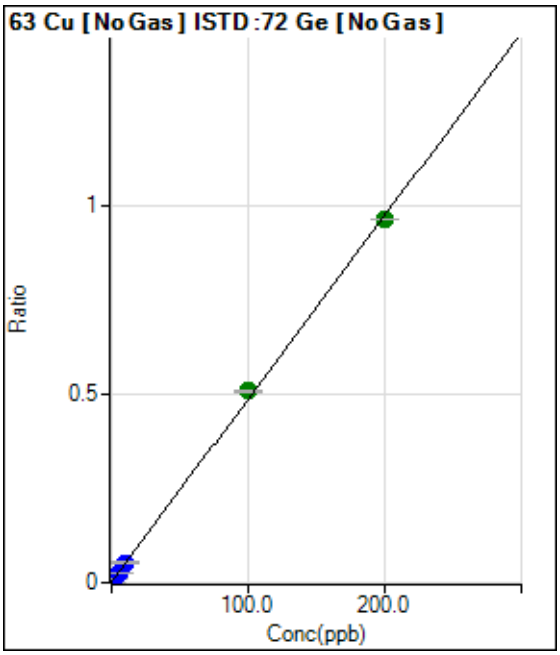


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	473.35	0.0002	P	12.6
2	☐	2.000	2.098	12182.34	0.0061	P	2.6
3	☐	5.000	5.179	29706.12	0.0147	P	2.0
4	☐	10.000	10.433	59014.86	0.0293	P	1.4
5	☐	100.000	106.875	580088.43	0.2982	P	1.9
6	☐	200.000	196.536	1053094.20	0.5482	M	2.4

y = 0.0028 * x + 2.3403E-004
R = 0.9992
DL = 0.03181
BEC = 0.08394

Weight: <None>
Min Conc: <None>

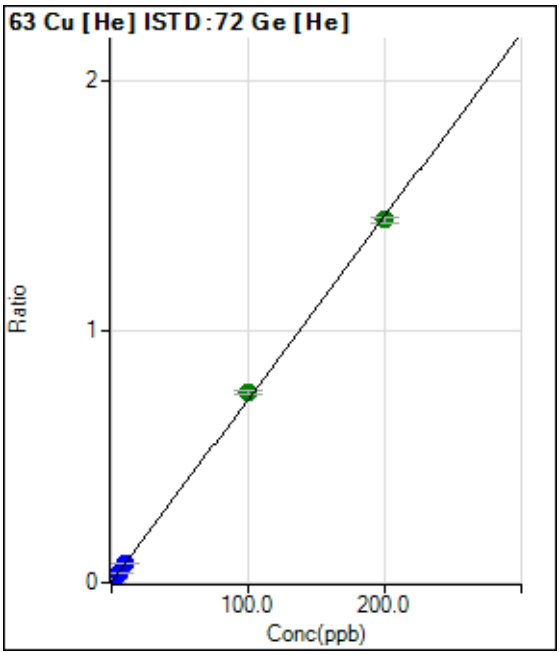
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9623.54	0.0019	P	4.0
2	☐	2.000	2.123	62449.88	0.0122	P	1.3
3	☐	5.000	5.090	137871.17	0.0266	P	2.5
4	☐	10.000	10.623	270029.83	0.0535	P	2.3
5	☐	100.000	104.291	2566969.28	0.5089	A	1.6
6	☐	200.000	197.820	4675770.76	0.9636	A	0.0

y = 0.0049 * x + 0.0019
R = 0.9997
DL = 0.04673
BEC = 0.3893

Weight: <None>
Min Conc: <None>

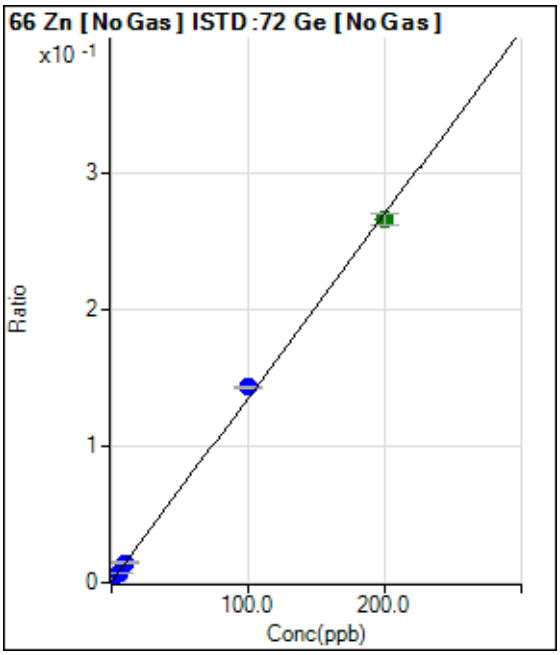


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3677.24	0.0018	P	4.4
2	☐	2.000	2.089	34129.90	0.0170	P	3.5
3	☐	5.000	5.005	77517.06	0.0383	P	2.0
4	☐	10.000	10.239	153837.03	0.0764	P	0.3
5	☐	100.000	103.813	1474940.19	0.7583	A	2.9
6	☐	200.000	198.080	2776100.06	1.4452	A	1.3

y = 0.0073 * x + 0.0018
R = 0.9997
DL = 0.03322
BEC = 0.2497

Weight: <None>
Min Conc: <None>

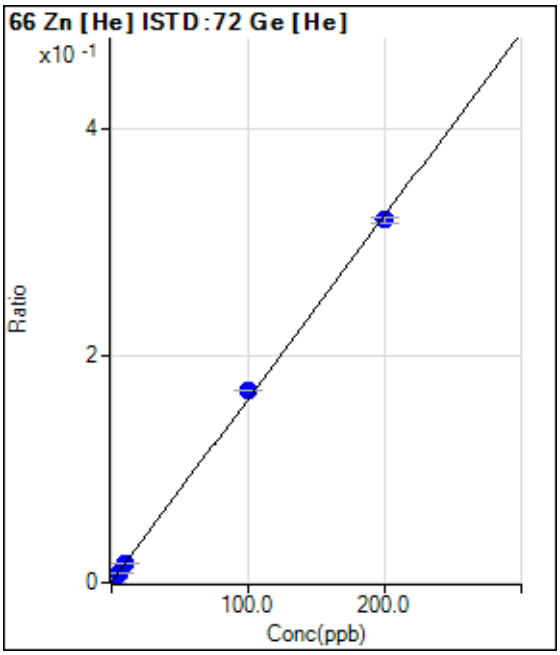
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3813.95	0.0008	P	5.2
2	☐	2.000	2.062	17995.48	0.0035	P	1.7
3	☐	5.000	5.093	39277.05	0.0076	P	2.5
4	☐	10.000	10.385	74118.37	0.0147	P	2.5
5	☐	100.000	106.024	721955.64	0.1431	P	1.0
6	☐	200.000	196.966	1286697.51	0.2652	A	3.1

y = 0.0013 * x + 7.5006E-004
R = 0.9994
DL = 0.0875
BEC = 0.5586

Weight: <None>
Min Conc: <None>

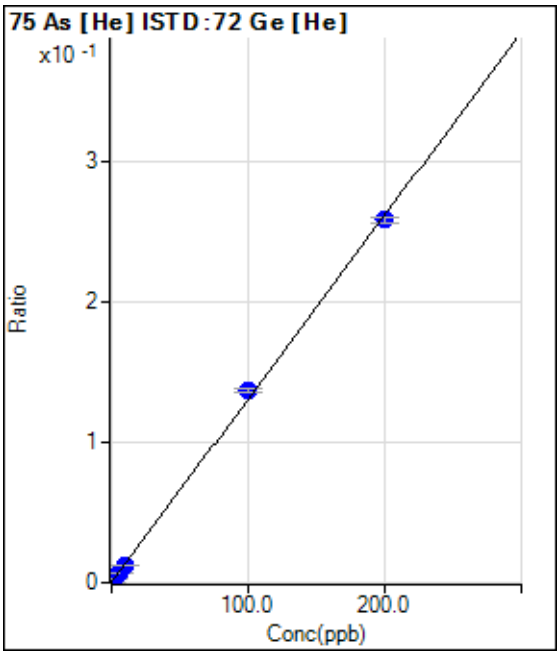


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1376.76	0.0007	P	6.6
2	☐	2.000	1.939	7645.60	0.0038	P	4.5
3	☐	5.000	4.990	17708.51	0.0087	P	0.4
4	☐	10.000	9.802	33264.52	0.0165	P	2.7
5	☐	100.000	104.588	330198.38	0.1697	P	1.0
6	☐	200.000	197.717	615136.21	0.3202	P	1.5

y = 0.0016 * x + 6.8195E-004
R = 0.9996
DL = 0.08363
BEC = 0.4219

Weight: <None>
Min Conc: <None>

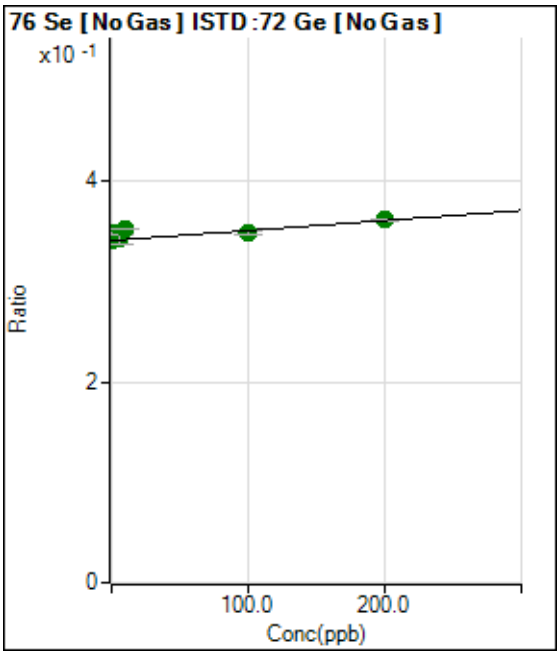
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	474.46	0.0002	P	9.5
2	☐	2.000	1.999	5713.46	0.0029	P	0.7
3	☐	5.000	4.833	13285.46	0.0066	P	0.4
4	☐	10.000	9.734	26126.41	0.0130	P	0.5
5	☐	100.000	104.738	267214.85	0.1374	P	1.7
6	☐	200.000	197.648	497527.25	0.2590	P	1.4

y = 0.0013 * x + 2.3508E-004
R = 0.9996
DL = 0.051
BEC = 0.1796

Weight: <None>
Min Conc: <None>

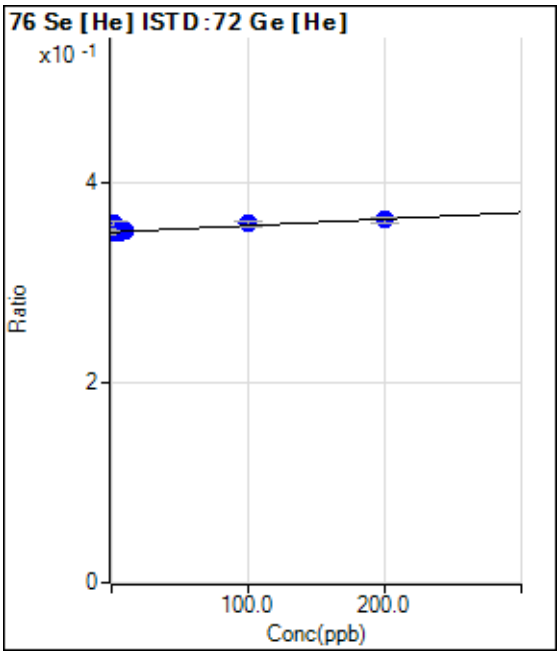


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1734734.45	0.3411	A	1.8
2	☐	2.000	70.274	1780057.37	0.3481	A	0.8
3	☐	5.000	12.656	1771834.61	0.3424	A	2.8
4	☐	10.000	113.599	1777832.06	0.3525	A	0.4
5	☐	100.000	77.230	1759610.24	0.3488	A	0.7
6	☐	200.000	205.331	1754840.18	0.3616	A	0.2

y = 1.0009E-004 * x + 0.3411
R = 0.8136
DL = 181.6
BEC = 3408

Weight: <None>
Min Conc: <None>

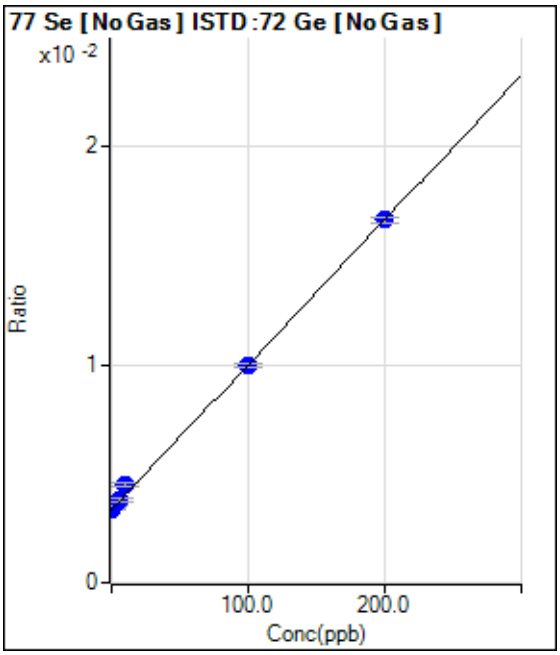
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	708533.66	0.3508	P	2.3
2	☐	2.000	132.130	719911.06	0.3595	P	1.4
3	☐	5.000	1.521	710374.73	0.3509	P	1.6
4	☐	10.000	27.500	709698.66	0.3526	P	0.3
5	☐	100.000	123.823	698261.76	0.3589	P	1.5
6	☐	200.000	185.999	697353.74	0.3630	P	1.6

y = 6.5892E-005 * x + 0.3508
R = 0.7826
DL = 368.3
BEC = 5324

Weight: <None>
Min Conc: <None>

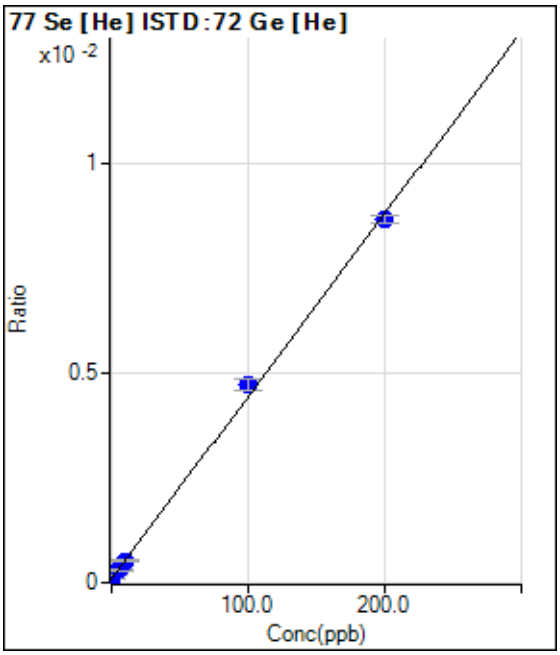


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17064.44	0.0034	P	2.6
2	☐	2.000	2.600	18039.13	0.0035	P	1.2
3	☐	5.000	6.606	19637.96	0.0038	P	3.0
4	☐	10.000	16.690	22522.43	0.0045	P	3.8
5	☐	100.000	99.504	50320.69	0.0100	P	1.1
6	☐	200.000	199.867	80795.18	0.0167	P	1.6

y = 6.6535E-005 * x + 0.0034
R = 0.9995
DL = 3.962
BEC = 50.42

Weight: <None>
Min Conc: <None>

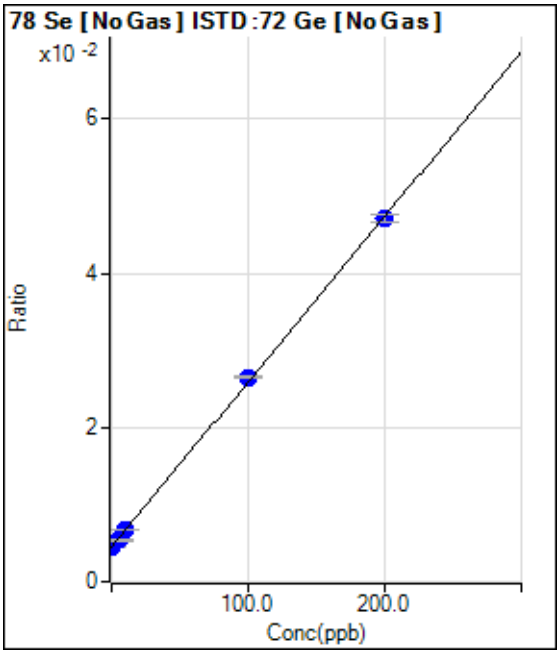
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	183.34	0.0001	P	24.7
2	☐	2.000	2.856	430.02	0.0002	P	13.7
3	☐	5.000	4.965	620.02	0.0003	P	11.9
4	☐	10.000	10.036	1060.07	0.0005	P	5.4
5	☐	100.000	106.465	9173.27	0.0047	P	5.4
6	☐	200.000	196.758	16600.46	0.0086	P	2.1

y = 4.3461E-005 * x + 9.0542E-005
R = 0.9993
DL = 1.545
BEC = 2.083

Weight: <None>
Min Conc: <None>

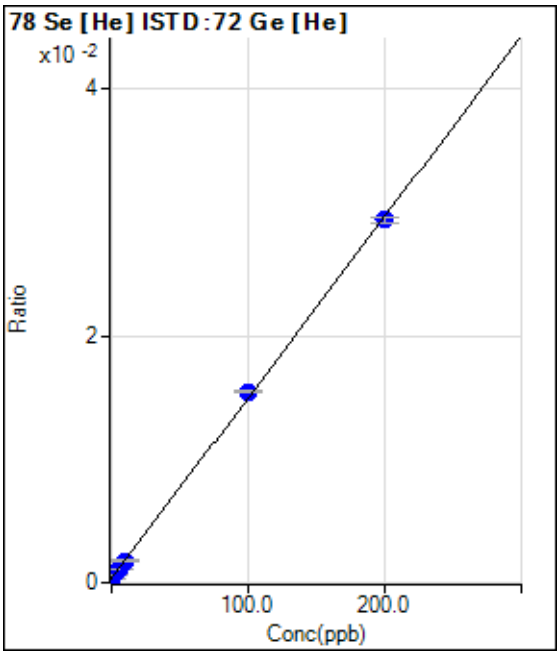


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22916.47	0.0045	P	0.4
2	☐	2.000	2.314	25567.91	0.0050	P	3.2
3	☐	5.000	4.389	28176.43	0.0054	P	4.9
4	☐	10.000	10.299	33842.73	0.0067	P	1.1
5	☐	100.000	102.570	133442.71	0.0265	P	0.8
6	☐	200.000	198.712	228144.41	0.0470	P	2.0

y = 2.1398E-004 * x + 0.0045
R = 0.9999
DL = 0.227
BEC = 21.06

Weight: <None>
Min Conc: <None>

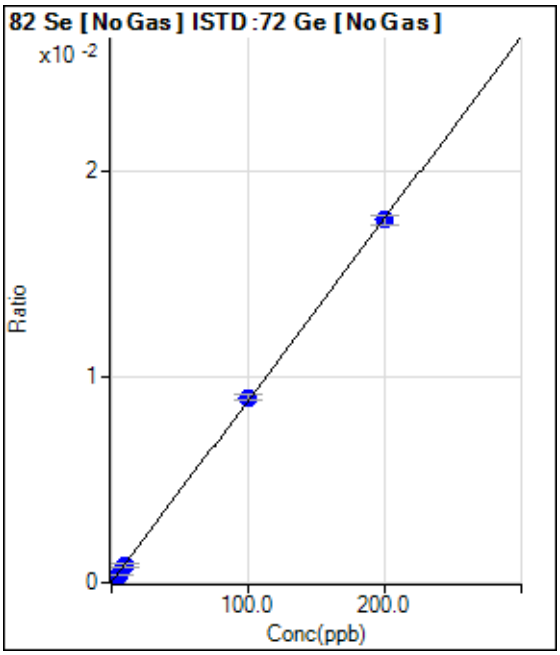
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	682.02	0.0003	P	8.5
2	☐	2.000	2.116	1296.07	0.0006	P	3.8
3	☐	5.000	4.883	2130.84	0.0011	P	2.5
4	☐	10.000	9.871	3588.49	0.0018	P	2.8
5	☐	100.000	103.328	30093.48	0.0155	P	1.5
6	☐	200.000	198.344	56443.47	0.0294	P	1.4

y = 1.4645E-004 * x + 3.3735E-004
R = 0.9998
DL = 0.5873
BEC = 2.304

Weight: <None>
Min Conc: <None>

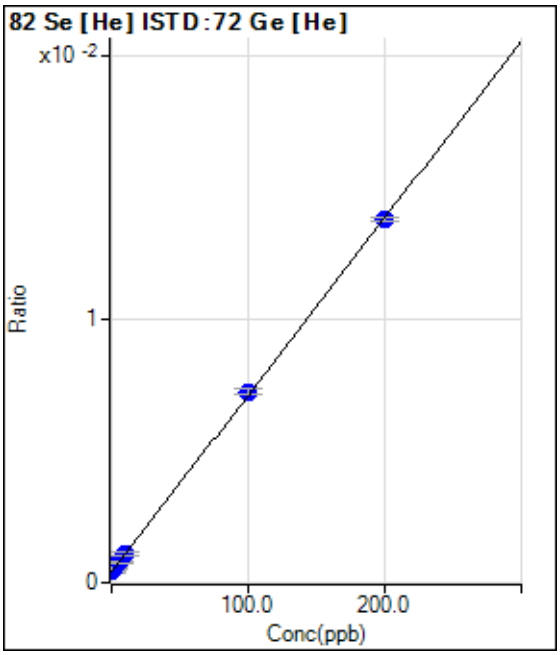


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	98.69	0.0000	P	10.0
2	☐	2.000	1.909	964.16	0.0002	P	11.0
3	☐	5.000	4.119	1989.31	0.0004	P	7.9
4	☐	10.000	9.046	4142.85	0.0008	P	19.6
5	☐	100.000	101.543	45461.04	0.0090	P	2.8
6	☐	200.000	199.299	85733.34	0.0177	P	2.8

y = 8.8578E-005 * x + 1.9409E-005
R = 0.9999
DL = 0.06597
BEC = 0.2191

Weight: <None>
Min Conc: <None>

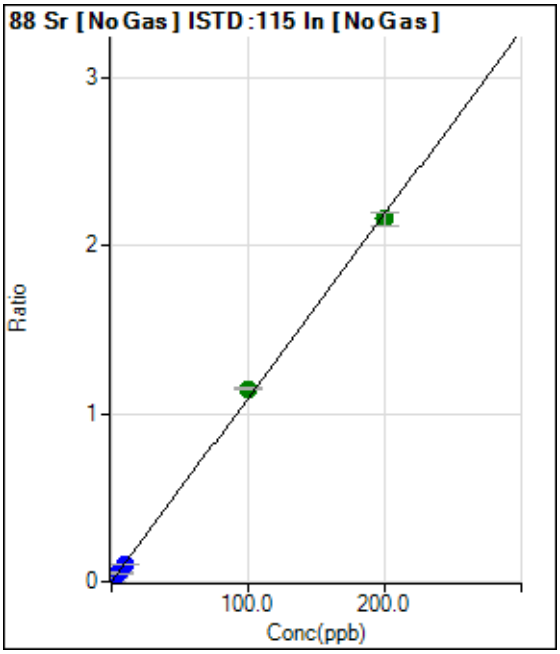
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	813.37	0.0004	P	5.0
2	☐	2.000	2.091	1086.73	0.0005	P	11.5
3	☐	5.000	5.410	1550.11	0.0008	P	2.5
4	☐	10.000	10.202	2186.88	0.0011	P	11.9
5	☐	100.000	101.873	14077.61	0.0072	P	3.5
6	☐	200.000	199.042	26419.67	0.0138	P	1.2

y = 6.7075E-005 * x + 4.0276E-004
R = 0.9999
DL = 0.8941
BEC = 6.005

Weight: <None>
Min Conc: <None>

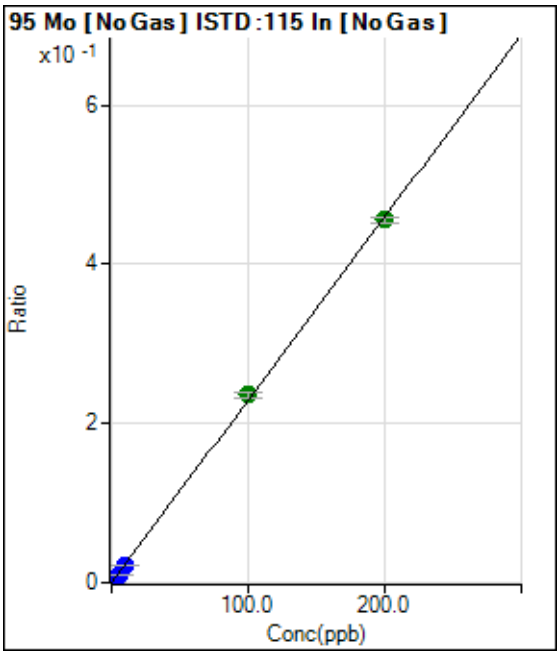


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2066.87	0.0003	P	3.2
2	☐	2.000	1.935	133448.69	0.0215	P	1.8
3	☐	5.000	4.704	323979.46	0.0518	P	1.2
4	☐	10.000	9.609	652425.72	0.1054	P	0.3
5	☐	100.000	105.136	6826925.53	1.1501	A	0.8
6	☐	200.000	197.460	12592817.31	2.1597	A	3.9

y = 0.0109 * x + 3.3836E-004
R = 0.9995
DL = 0.002968
BEC = 0.03094

Weight: <None>
Min Conc: <None>

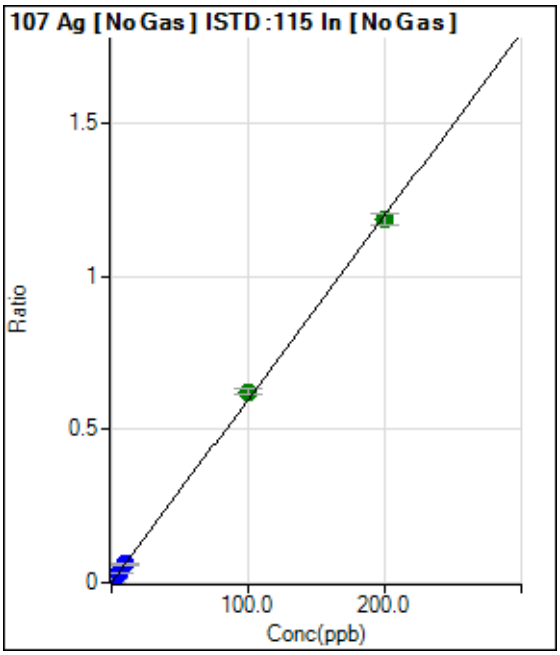
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	240.01	0.0000	P	17.7
2	☐	2.000	1.905	27378.70	0.0044	P	3.3
3	☐	5.000	4.636	66784.27	0.0107	P	3.4
4	☐	10.000	9.635	137048.06	0.0221	P	0.9
5	☐	100.000	102.855	1400358.88	0.2360	A	2.9
6	☐	200.000	198.601	2657691.94	0.4557	A	1.4

y = 0.0023 * x + 3.9327E-005
R = 0.9998
DL = 0.009081
BEC = 0.01714

Weight: <None>
Min Conc: <None>

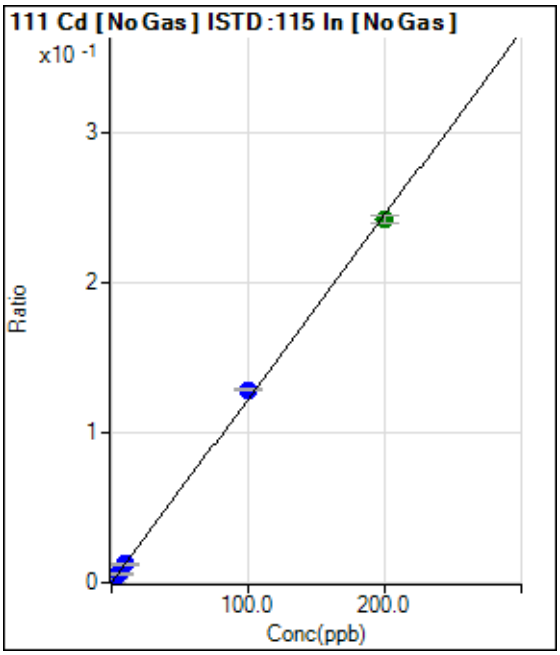


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	426.68	0.0001	P	12.2
2	☐	2.000	2.052	76601.85	0.0123	P	3.1
3	☐	5.000	4.876	182872.21	0.0292	P	1.2
4	☐	10.000	9.988	370002.25	0.0598	P	2.3
5	☐	100.000	104.305	3701998.28	0.6238	A	2.1
6	☐	200.000	197.851	6898677.19	1.1831	A	3.2

y = 0.0060 * x + 6.9803E-005
R = 0.9997
DL = 0.004276
BEC = 0.01167

Weight: <None>
Min Conc: <None>

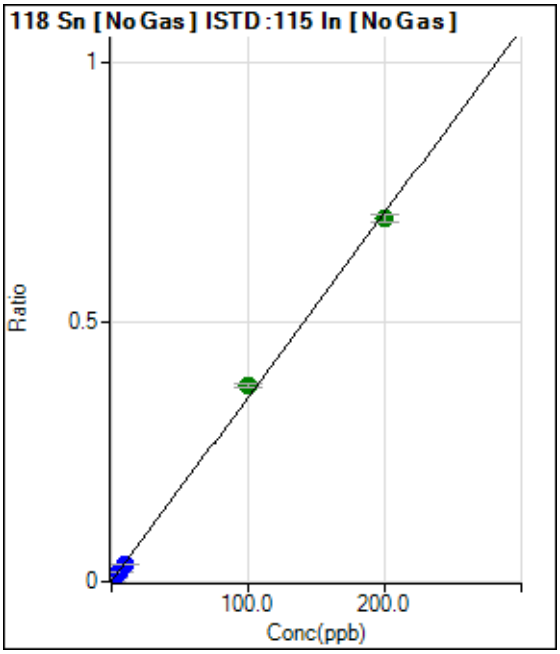
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	115.2
2	☐	2.000	1.982	15072.19	0.0024	P	2.4
3	☐	5.000	4.717	36140.10	0.0058	P	1.3
4	☐	10.000	9.969	75519.39	0.0122	P	1.8
5	☐	100.000	105.122	763591.42	0.1287	P	0.9
6	☐	200.000	197.448	1409401.18	0.2417	A	2.0

y = 0.0012 * x + 2.2021E-006
R = 0.9995
DL = 0.00622
BEC = 0.001799

Weight: <None>
Min Conc: <None>

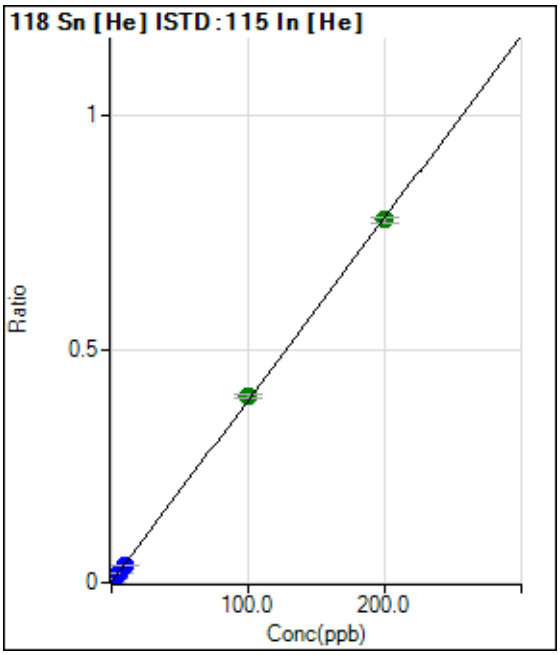


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4677.60	0.0008	P	3.7
2	☐	2.000	1.903	46733.74	0.0075	P	0.3
3	☐	5.000	4.644	108040.41	0.0173	P	2.2
4	☐	10.000	9.588	215604.82	0.0348	P	1.5
5	☐	100.000	106.513	2250187.26	0.3792	A	2.2
6	☐	200.000	196.774	4081829.00	0.7000	A	2.3

y = 0.0036 * x + 7.6568E-004
R = 0.9992
DL = 0.02367
BEC = 0.2155

Weight: <None>
Min Conc: <None>

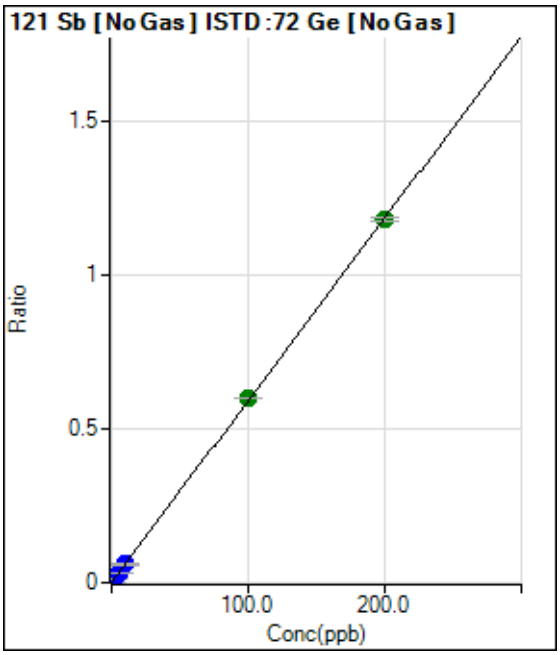
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3003.73	0.0008	P	6.2
2	☐	2.000	1.867	30328.78	0.0081	P	0.2
3	☐	5.000	4.646	70730.75	0.0189	P	1.1
4	☐	10.000	9.492	139021.73	0.0379	P	0.5
5	☐	100.000	102.165	1450665.50	0.3997	A	1.6
6	☐	200.000	198.953	2737508.50	0.7777	A	1.4

y = 0.0039 * x + 8.0410E-004
R = 0.9999
DL = 0.03839
BEC = 0.2059

Weight: <None>
Min Conc: <None>

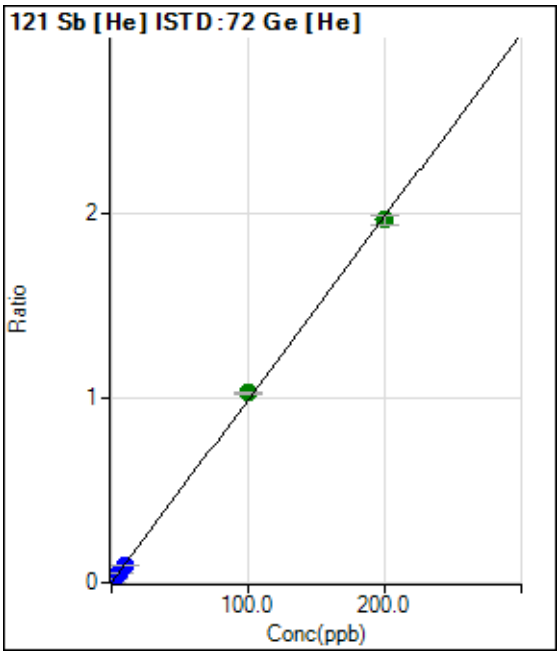


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1693.48	0.0003	P	7.1
2	☐	2.000	1.948	60710.67	0.0119	P	1.7
3	☐	5.000	4.796	148818.16	0.0288	P	2.1
4	☐	10.000	9.985	300120.59	0.0595	P	1.0
5	☐	100.000	101.488	3035424.33	0.6017	A	0.4
6	☐	200.000	199.263	5730698.66	1.1811	A	1.2

y = 0.0059 * x + 3.3290E-004
R = 1.0000
DL = 0.01199
BEC = 0.05618

Weight: <None>
Min Conc: <None>

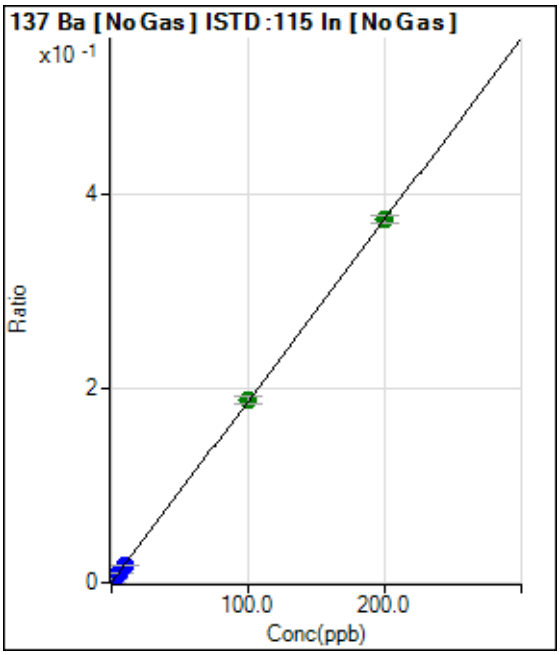
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1396.76	0.0007	P	4.4
2	☐	2.000	1.919	39466.35	0.0197	P	2.2
3	☐	5.000	4.719	96047.79	0.0474	P	1.4
4	☐	10.000	9.500	190839.02	0.0948	P	1.4
5	☐	100.000	103.534	1996982.16	1.0264	A	1.0
6	☐	200.000	198.266	3774382.24	1.9650	A	2.4

y = 0.0099 * x + 6.9132E-004
R = 0.9998
DL = 0.009254
BEC = 0.06978

Weight: <None>
Min Conc: <None>

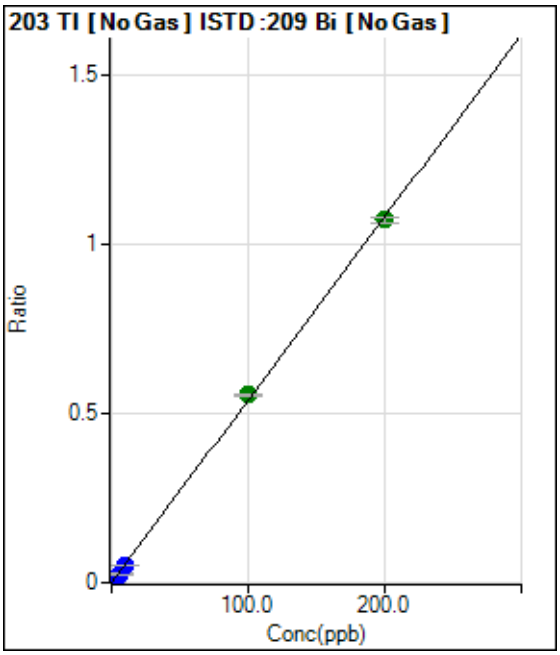


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1640.13	0.0003	P	9.6
2	☐	2.000	1.894	23635.21	0.0038	P	1.9
3	☐	5.000	4.843	58271.48	0.0093	P	3.5
4	☐	10.000	9.811	115086.00	0.0186	P	0.7
5	☐	100.000	100.193	1111845.79	0.1874	A	4.0
6	☐	200.000	199.918	2179443.25	0.3737	A	2.3

y = 0.0019 * x + 2.6827E-004
R = 1.0000
DL = 0.04147
BEC = 0.1436

Weight: <None>
Min Conc: <None>

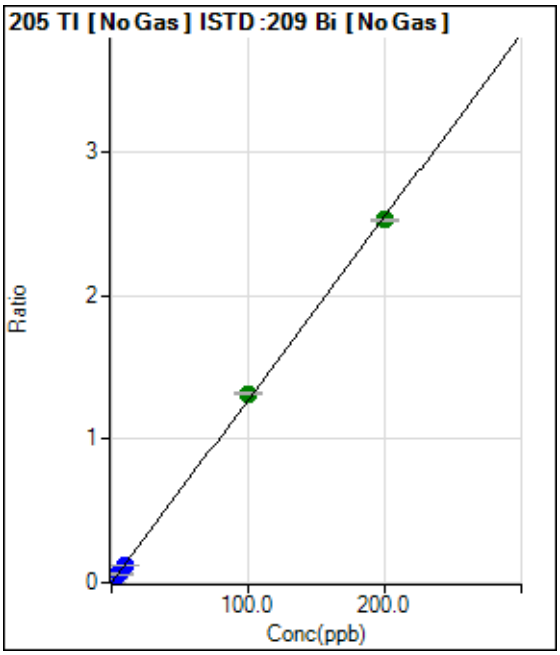
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	290.01	0.0001	P	16.3
2	☐	2.000	1.918	51440.48	0.0104	P	2.9
3	☐	5.000	4.721	125250.22	0.0255	P	3.3
4	☐	10.000	9.738	258108.07	0.0526	P	1.4
5	☐	100.000	102.901	2689955.48	0.5549	A	1.0
6	☐	200.000	198.570	5072174.20	1.0708	A	1.5

y = 0.0054 * x + 6.0607E-005
R = 0.9998
DL = 0.005509
BEC = 0.01124

Weight: <None>
Min Conc: <None>

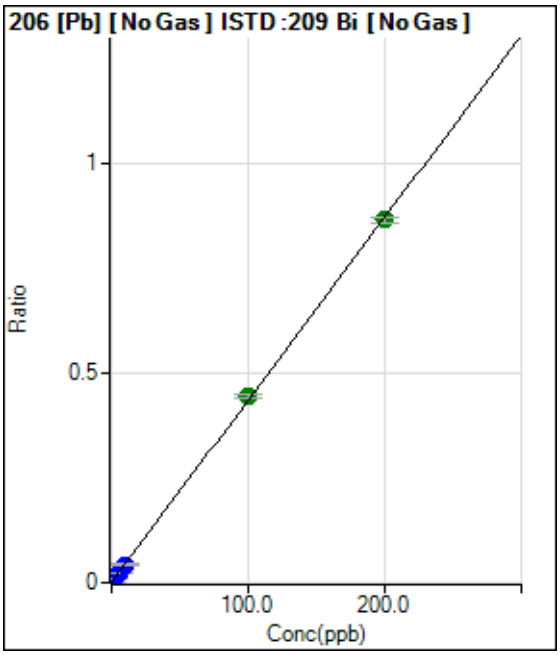


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	740.04	0.0002	P	5.6
2	☐	2.000	1.914	121340.81	0.0245	P	2.5
3	☐	5.000	4.732	296796.45	0.0605	P	1.3
4	☐	10.000	9.649	604419.25	0.1231	P	2.8
5	☐	100.000	103.361	6385103.03	1.3172	A	1.5
6	☐	200.000	198.345	11974139.82	2.5276	A	0.6

y = 0.0127 * x + 1.5425E-004
R = 0.9998
DL = 0.002039
BEC = 0.01211

Weight: <None>
Min Conc: <None>

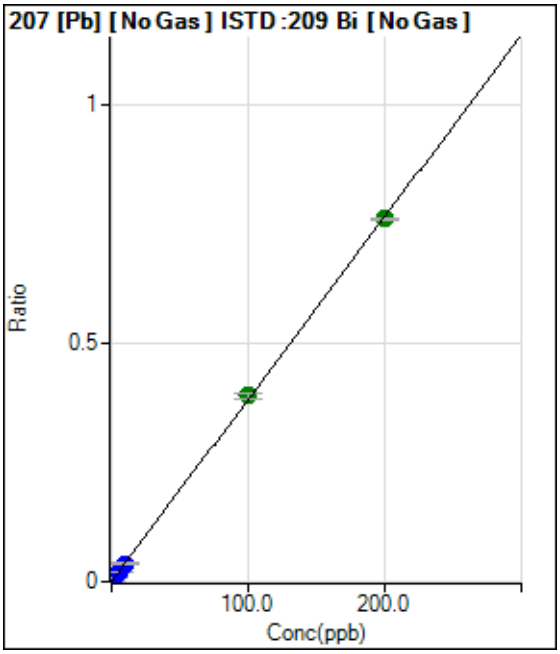
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2520.30	0.0005	P	4.5
2	☐	2.000	1.947	44526.96	0.0090	P	2.0
3	☐	5.000	4.867	106637.80	0.0217	P	1.7
4	☐	10.000	9.825	212667.26	0.0433	P	3.4
5	☐	100.000	102.423	2164537.52	0.4466	A	1.9
6	☐	200.000	198.801	4104198.17	0.8663	A	1.9

y = 0.0044 * x + 5.2626E-004
R = 0.9999
DL = 0.01645
BEC = 0.1208

Weight: <None>
Min Conc: <None>

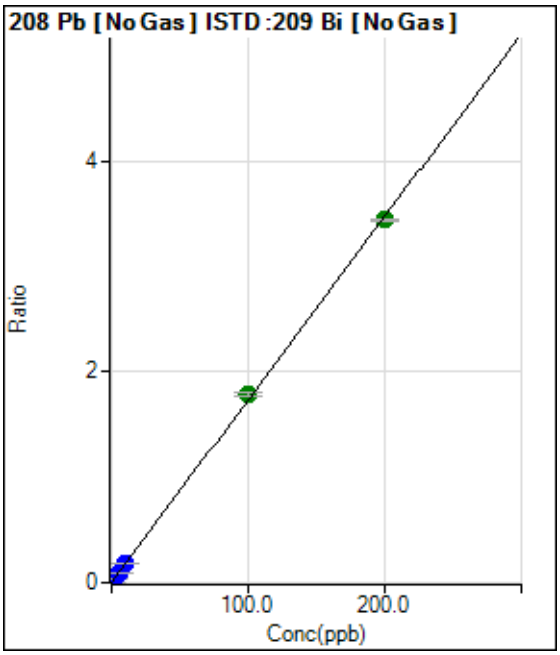


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2070.22	0.0004	P	1.7
2	☐	2.000	1.959	39072.34	0.0079	P	2.3
3	☐	5.000	4.902	93892.11	0.0191	P	2.7
4	☐	10.000	9.864	186820.64	0.0381	P	1.9
5	☐	100.000	101.930	1886278.93	0.3892	A	2.5
6	☐	200.000	199.045	3598491.51	0.7596	A	0.9

y = 0.0038 * x + 4.3178E-004
R = 0.9999
DL = 0.00579
BEC = 0.1132

Weight: <None>
Min Conc: <None>

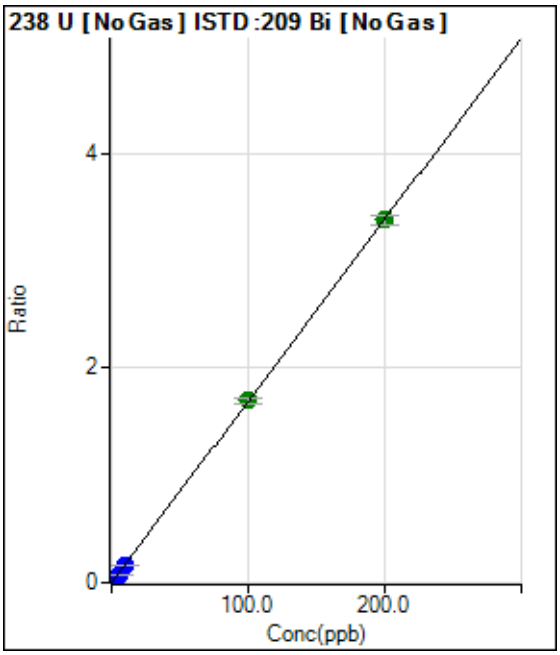
Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9728.34	0.0020	P	2.3
2	☐	2.000	1.976	179648.47	0.0363	P	2.2
3	☐	5.000	4.901	427668.79	0.0871	P	2.1
4	☐	10.000	9.953	858372.87	0.1748	P	1.3
5	☐	100.000	103.286	8701375.03	1.7952	A	2.2
6	☐	200.000	198.362	16324404.14	3.4459	A	0.5

y = 0.0174 * x + 0.0020
R = 0.9998
DL = 0.008069
BEC = 0.1169

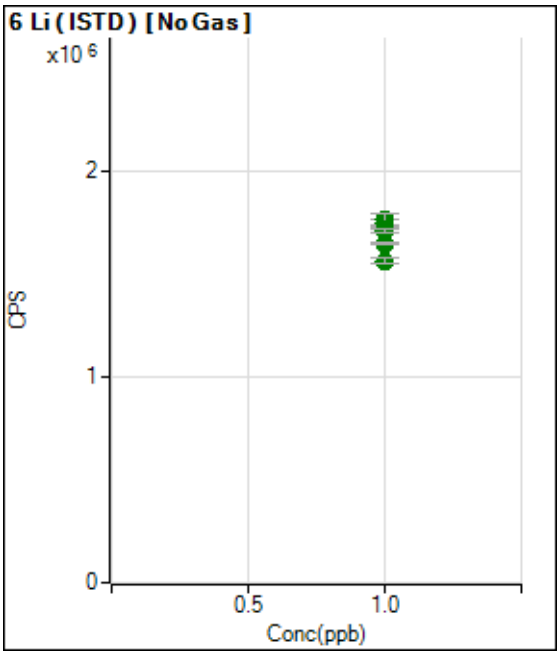
Weight: <None>
Min Conc: <None>



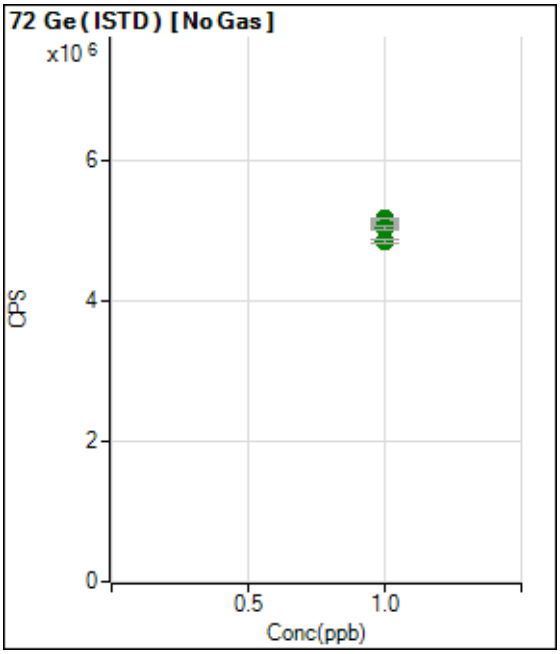
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0000	P	63.2
2	☐	2.000	1.934	161724.47	0.0327	P	1.5
3	☐	5.000	4.717	391551.68	0.0798	P	2.0
4	☐	10.000	9.683	803898.32	0.1637	P	2.4
5	☐	100.000	100.212	8211482.59	1.6943	A	2.3
6	☐	200.000	199.918	16010020.18	3.3799	A	2.3

y = 0.0169 * x + 1.2691E-005
R = 1.0000
DL = 0.001424
BEC = 0.0007506

Weight: <None>
Min Conc: <None>

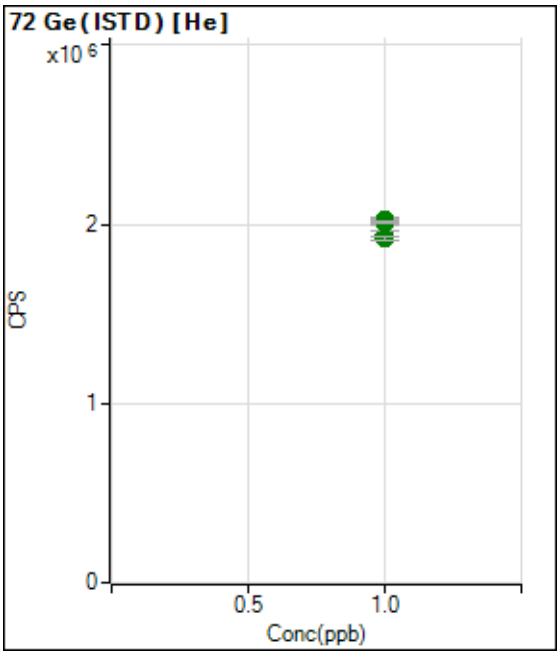


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1751785.11		A	1.4
2	☐	1.000		1763443.15		A	3.9
3	☐	1.000		1724276.41		A	0.7
4	☐	1.000		1710616.68		A	0.7
5	☐	1.000		1648766.21		A	0.4
6	☐	1.000		1565289.50		A	1.5

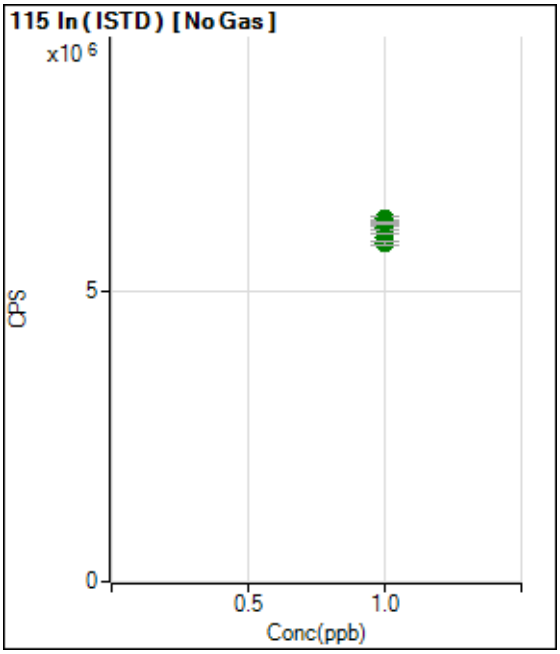


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5085949.51		A	0.6
2	☐	1.000		5113105.55		A	0.5
3	☐	1.000		5175996.59		A	0.7
4	☐	1.000		5044048.88		A	0.7
5	☐	1.000		5044642.22		A	1.3
6	☐	1.000		4852287.53		A	1.4

Calibration for 234_ICV.d

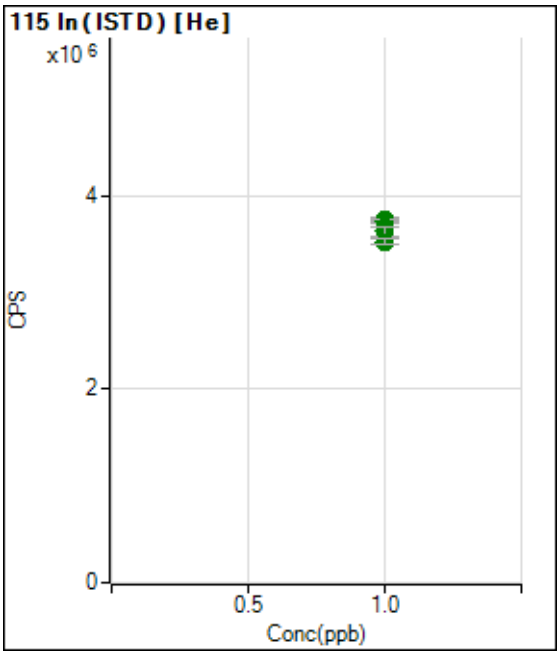


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2020423.62		A	1.8
2	☐	1.000		2002822.57		A	1.2
3	☐	1.000		2024577.47		A	0.3
4	☐	1.000		2012809.92		A	0.6
5	☐	1.000		1945694.50		A	1.7
6	☐	1.000		1921042.89		A	1.1

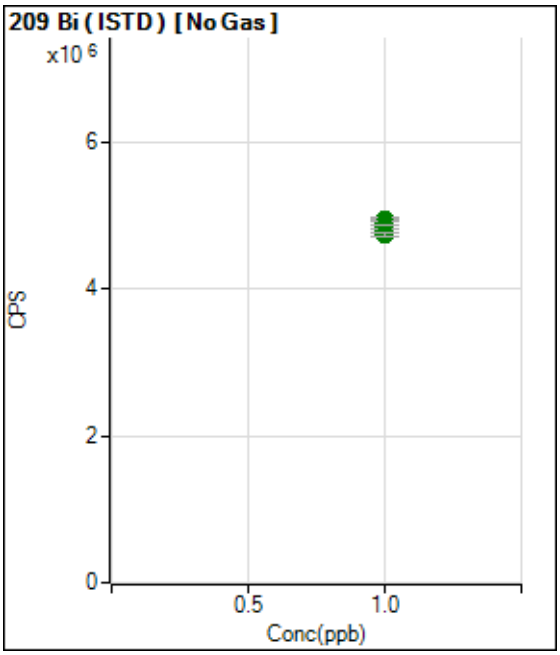


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6109662.55		A	1.2
2	☐	1.000		6208750.01		A	0.8
3	☐	1.000		6257562.34		A	1.1
4	☐	1.000		6188975.82		A	0.8
5	☐	1.000		5935358.75		A	2.2
6	☐	1.000		5832742.02		A	1.4

Calibration for 234_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3737026.75		A	1.0
2	☐	1.000		3746750.23		A	1.2
3	☐	1.000		3733425.54		A	0.9
4	☐	1.000		3671029.77		A	0.1
5	☐	1.000		3630004.40		A	2.7
6	☐	1.000		3520313.05		A	1.9



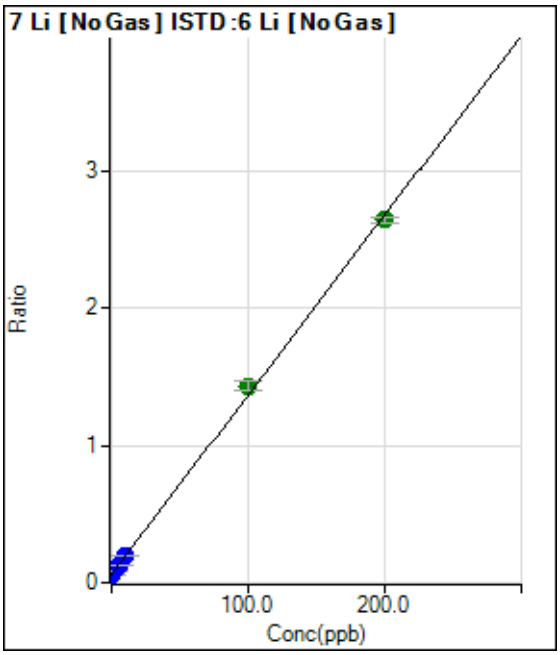
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4792989.20		A	3.2
2	☐	1.000		4944990.55		A	0.9
3	☐	1.000		4909736.18		A	1.6
4	☐	1.000		4910420.45		A	1.2
5	☐	1.000		4847872.43		A	1.6
6	☐	1.000		4737273.16		A	0.9

Calibration for 017_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\102820A.b\
Analysis File: 102820A.batch.bin
DA Date-Time: 10/28/2020 9:48:30 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	010CALB.d	CAL BLK	10/28/2020 10:13:39 AM
2	011CALS.d	2/10/200	10/28/2020 10:15:31 AM
3	012CALS.d	5/25/500	10/28/2020 10:17:22 AM
4	013CALS.d	10/50/100	10/28/2020 10:19:14 AM
5	014CALS.d	100/500/10K	10/28/2020 10:21:05 AM
6	015CALS.d	200/1000/20K	10/28/2020 10:22:48 AM

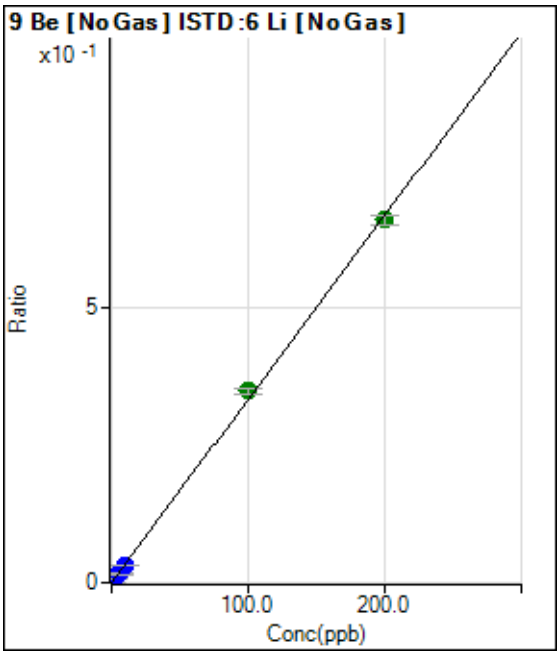
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	138650.82	0.0597	P	2.2
2	☐	2.000	2.069	197700.15	0.0867	P	2.4
3	☐	5.000	4.984	281818.78	0.1248	P	0.7
4	☐	10.000	10.232	431534.32	0.1934	P	2.2
5	☐	100.000	105.060	3048807.14	1.4321	A	4.5
6	☐	200.000	197.458	5549578.46	2.6391	A	1.7

y = 0.0131 * x + 0.0597
R = 0.9995
DL = 0.3042
BEC = 4.571

Weight: <None>
Min Conc: <None>

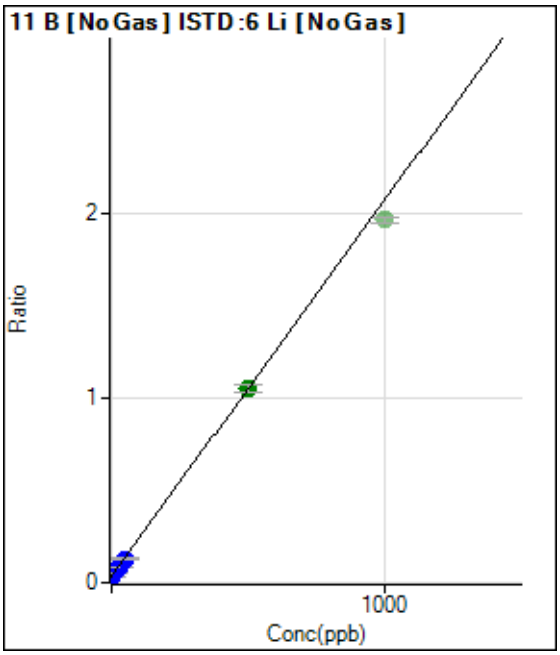


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.00	0.0000	P	34.9
2	☐	2.000	1.948	14807.89	0.0065	P	1.2
3	☐	5.000	4.729	35554.87	0.0157	P	1.4
4	☐	10.000	9.761	72522.40	0.0325	P	2.2
5	☐	100.000	104.429	740235.51	0.3476	A	3.3
6	☐	200.000	197.805	1384208.84	0.6583	A	2.7

y = 0.0033 * x + 1.0770E-005
R = 0.9996
DL = 0.003387
BEC = 0.003236

Weight: <None>
Min Conc: <None>

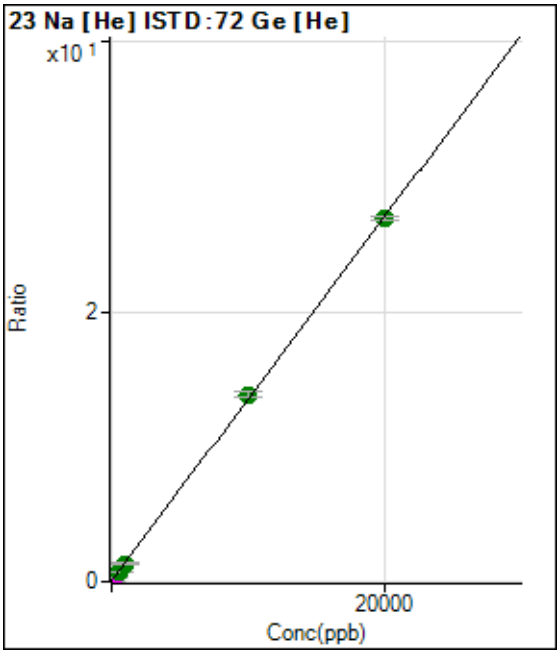
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	81586.89	0.0351	P	1.6
2	☐	10.000	8.722	120646.49	0.0529	P	2.1
3	☐	25.000	22.025	180798.81	0.0801	P	1.7
4	☐	50.000	45.592	285980.74	0.1282	P	3.7
5	☐	500.000	500.615	2250087.99	1.0568	A	4.0
6	☑	1000.000		4143238.90	1.9702	A	1.3

y = 0.0020 * x + 0.0351
R = 1.0000
DL = 0.8187
BEC = 17.21

Weight: <None>
Min Conc: <None>

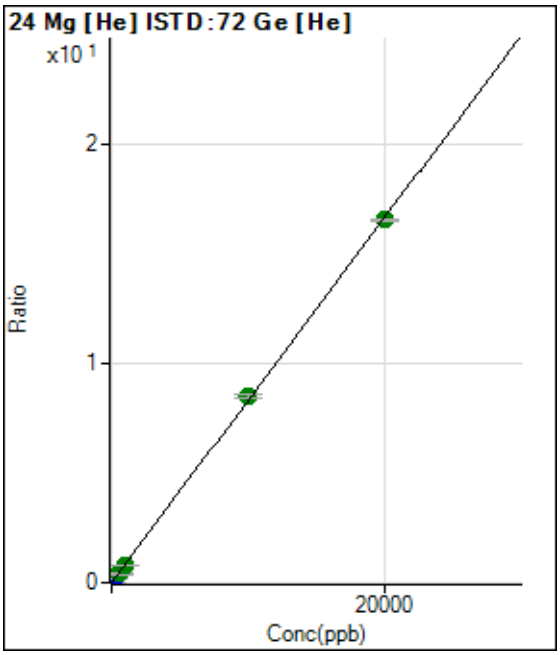


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	131515.05	0.0578	P	2.0
2	☐	200.000	199.612	744566.01	0.3270	M	1.4
3	☐	500.000	470.667	1569159.98	0.6926	A	1.3
4	☐	1000.000	959.388	3006280.16	1.3517	A	1.9
5	☐	10000.00	10232.59	30466712.88	13.8580	A	2.6
6	☐	20000.00	19886.46	56662949.16	26.8778	A	1.2

y = 0.0013 * x + 0.0578
R = 0.9999
DL = 2.623
BEC = 42.85

Weight: <None>
Min Conc: <None>

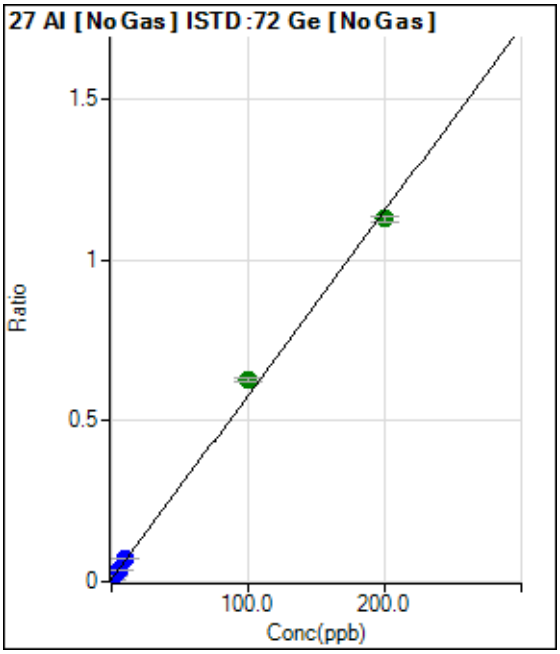
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1563.46	0.0007	P	5.6
2	☐	200.000	205.430	390761.57	0.1716	P	1.1
3	☐	500.000	481.540	909184.13	0.4013	A	4.0
4	☐	1000.000	992.067	1837404.30	0.8261	A	1.2
5	☐	10000.00	10231.83	18719133.05	8.5140	A	2.3
6	☐	20000.00	19884.88	34881459.48	16.5457	A	0.9

y = 8.3204E-004 * x + 6.8734E-004
R = 0.9999
DL = 0.1396
BEC = 0.8261

Weight: <None>
Min Conc: <None>

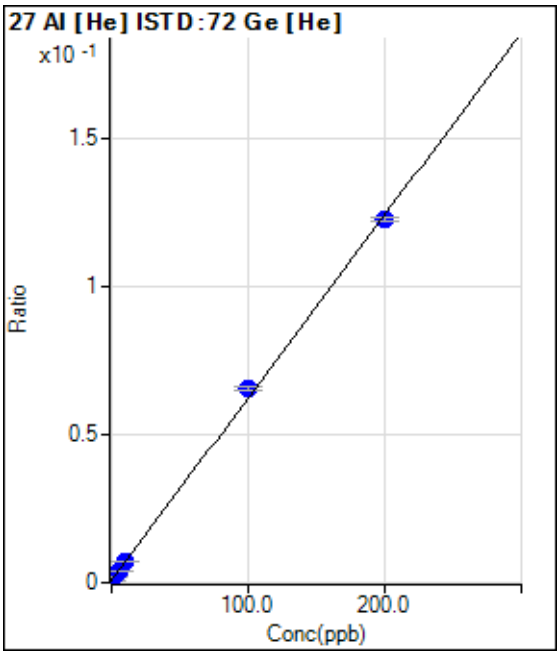


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37815.61	0.0072	P	1.0
2	☐	2.000	2.120	101082.00	0.0193	P	1.0
3	☐	5.000	5.308	195588.27	0.0376	P	0.2
4	☐	10.000	11.004	363113.53	0.0702	P	1.0
5	☐	100.000	108.407	3228002.14	0.6285	A	2.4
6	☐	200.000	195.737	5667919.92	1.1289	A	1.5

y = 0.0057 * x + 0.0072
R = 0.9987
DL = 0.03946
BEC = 1.254

Weight: <None>
Min Conc: <None>

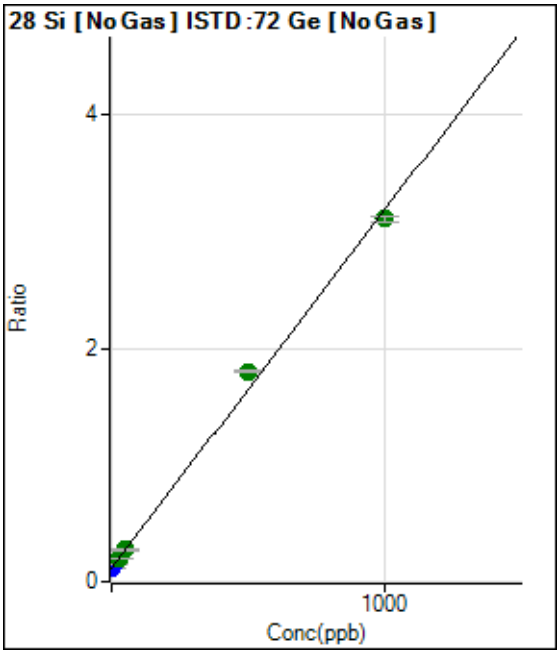
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1783.49	0.0008	P	12.9
2	☐	2.000	1.976	4557.49	0.0020	P	5.6
3	☐	5.000	4.883	8596.11	0.0038	P	2.5
4	☐	10.000	10.038	15505.56	0.0070	P	2.8
5	☐	100.000	104.971	143996.13	0.0655	P	1.9
6	☐	200.000	197.516	258313.39	0.1225	P	1.1

y = 6.1635E-004 * x + 7.8437E-004
R = 0.9996
DL = 0.4938
BEC = 1.273

Weight: <None>
Min Conc: <None>

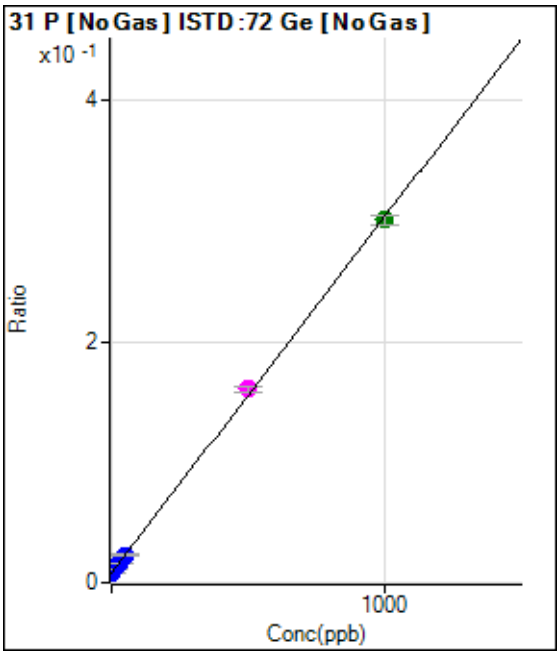


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	607905.09	0.1155	P	0.7
2	☐	10.000	10.798	776953.84	0.1487	P	1.6
3	☐	25.000	25.871	1013612.54	0.1949	A	1.6
4	☐	50.000	51.444	1413034.93	0.2734	A	1.5
5	☐	500.000	548.870	9244016.53	1.7996	A	0.9
6	☐	1000.000	975.463	15605839.77	3.1085	A	1.8

y = 0.0031 * x + 0.1155
R = 0.9983
DL = 0.8265
BEC = 37.65

Weight: <None>
Min Conc: <None>

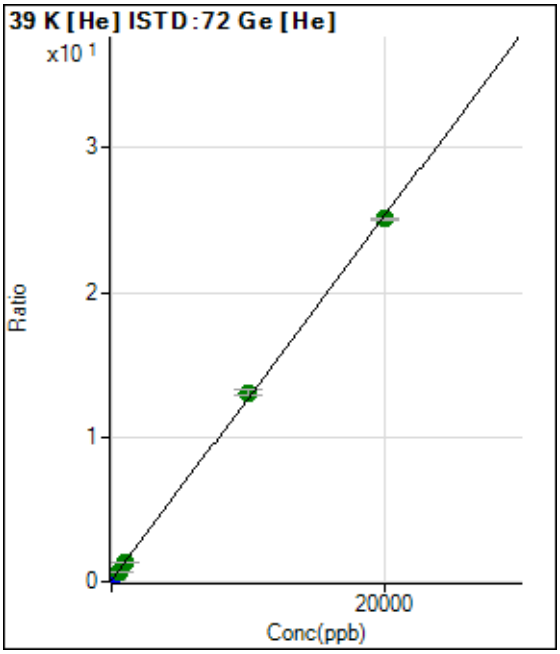
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42334.84	0.0080	P	1.8
2	☐	10.000	10.130	57673.36	0.0110	P	1.5
3	☐	25.000	24.868	79999.93	0.0154	P	0.6
4	☐	50.000	50.834	119108.34	0.0230	P	0.9
5	☐	500.000	515.862	823101.92	0.1602	M	2.7
6	☐	1000.000	992.029	1509614.77	0.3007	A	2.5

y = 2.9502E-004 * x + 0.0080
R = 0.9998
DL = 1.503
BEC = 27.27

Weight: <None>
Min Conc: <None>

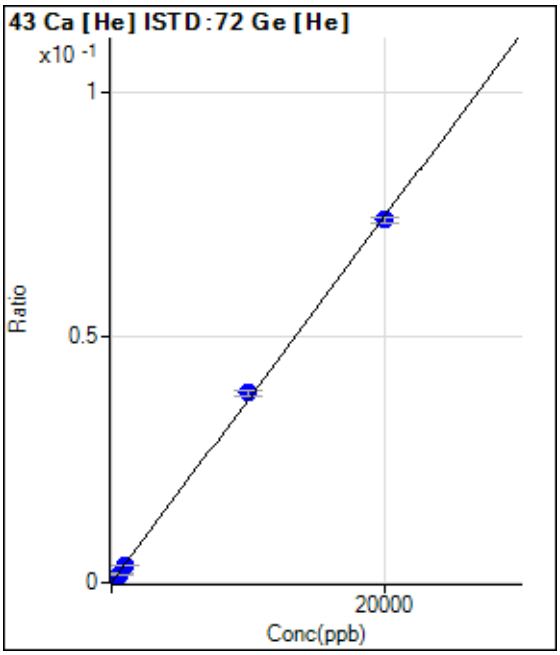


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226943.56	0.0998	P	3.3
2	☐	200.000	198.355	796047.02	0.3496	P	0.4
3	☐	500.000	475.605	1583203.73	0.6988	A	3.3
4	☐	1000.000	978.528	2963182.25	1.3323	A	0.8
5	☐	10000.00	10319.70	28801651.24	13.0983	A	2.3
6	☐	20000.00	19841.84	52900645.88	25.0922	A	0.2

y = 0.0013 * x + 0.0998
R = 0.9998
DL = 7.784
BEC = 79.19

Weight: <None>
Min Conc: <None>

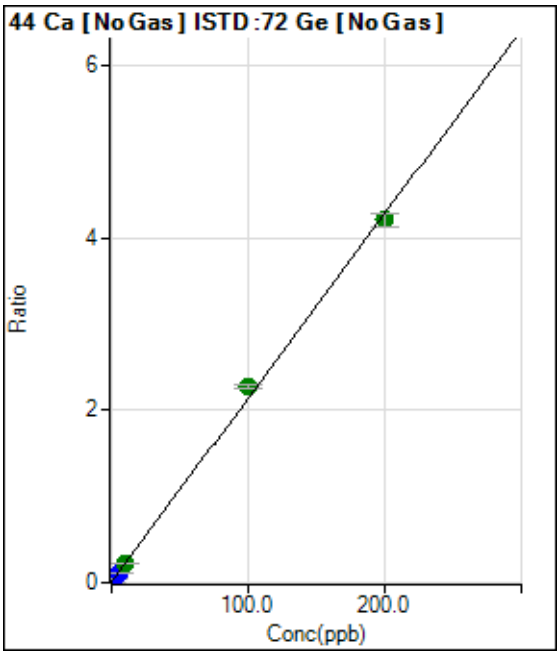
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0000	P	14.8
2	☐	200.000	196.362	1726.81	0.0008	P	3.6
3	☐	500.000	464.119	3980.65	0.0018	P	3.2
4	☐	1000.000	970.928	8109.22	0.0036	P	3.7
5	☐	10000.00	10359.22	84972.11	0.0386	P	2.8
6	☐	20000.00	19822.77	155861.41	0.0739	P	1.4

y = 3.7283E-006 * x + 2.6309E-005
R = 0.9998
DL = 3.129
BEC = 7.056

Weight: <None>
Min Conc: <None>

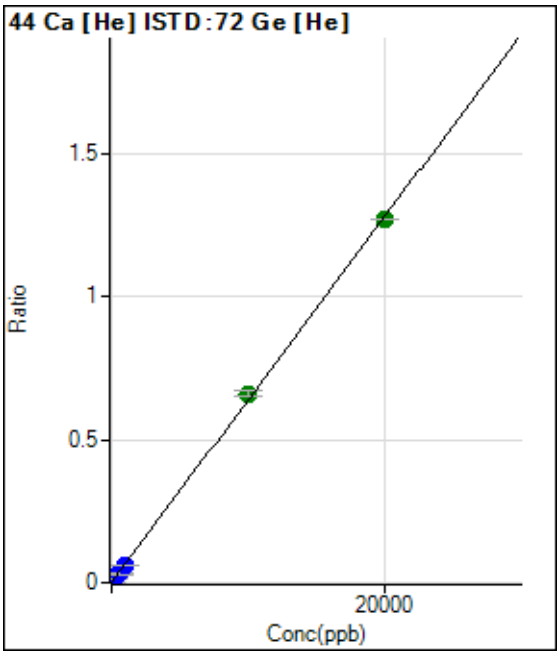


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43389.46	0.0082	P	1.6
2	☐	2.000	2.052	272037.48	0.0520	P	1.3
3	☐	5.000	4.974	595020.11	0.1144	P	0.4
4	☐	10.000	10.157	1163352.01	0.2251	A	0.8
5	☐	100.000	106.300	11699017.33	2.2772	A	1.6
6	☐	200.000	196.842	21130507.60	4.2099	A	4.1

y = 0.0213 * x + 0.0082
R = 0.9993
DL = 0.01877
BEC = 0.3864

Weight: <None>
Min Conc: <None>

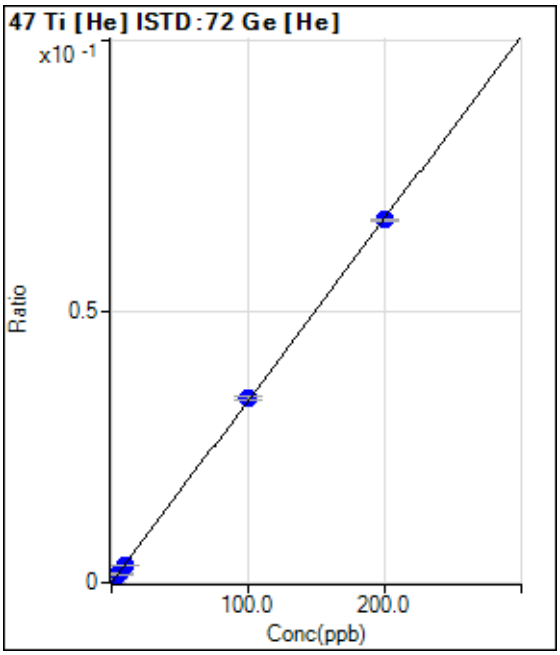
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1576.79	0.0007	P	11.0
2	☐	200.000	189.734	29151.22	0.0128	P	1.3
3	☐	500.000	464.712	68765.37	0.0303	P	1.1
4	☐	1000.000	959.704	137755.56	0.0619	P	0.8
5	☐	10000.00	10326.77	1450291.12	0.6597	A	3.3
6	☐	20000.00	19839.61	2670654.44	1.2668	A	0.1

y = 6.3815E-005 * x + 6.9386E-004
R = 0.9998
DL = 3.584
BEC = 10.87

Weight: <None>
Min Conc: <None>

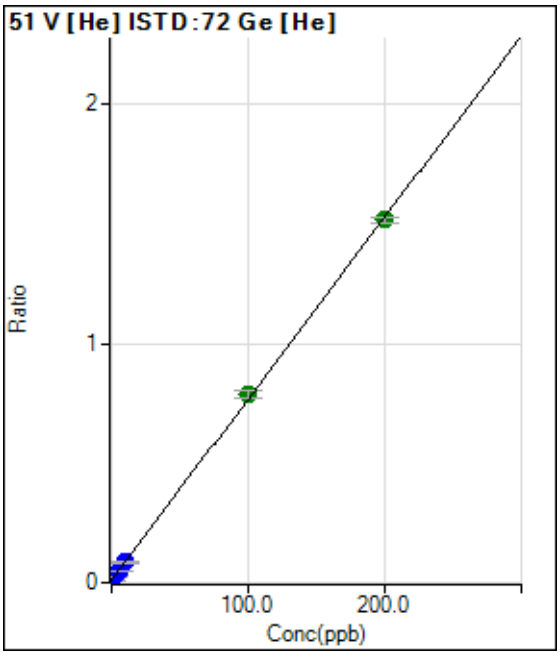


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	64.4
2	☐	2.000	1.748	1360.09	0.0006	P	7.7
3	☐	5.000	4.927	3774.38	0.0017	P	11.1
4	☐	10.000	9.510	7125.31	0.0032	P	0.4
5	☐	100.000	101.552	75004.55	0.0341	P	2.0
6	☐	200.000	199.253	141072.86	0.0669	P	0.4

y = 3.3578E-004 * x + 1.0239E-005
R = 1.0000
DL = 0.05894
BEC = 0.03049

Weight: <None>
Min Conc: <None>

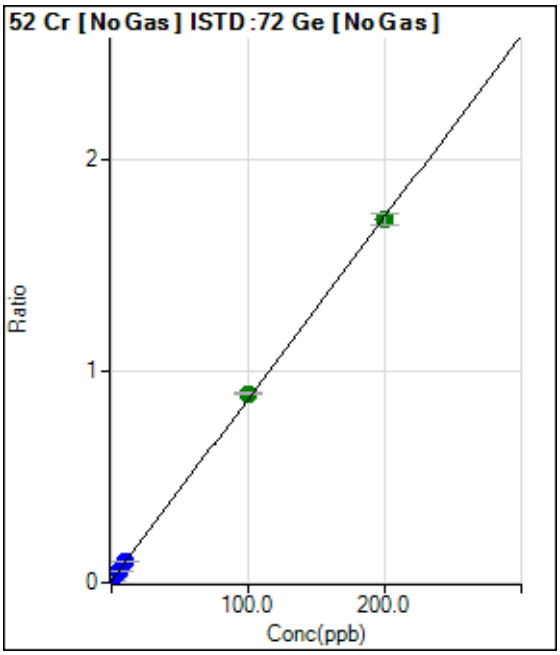
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22242.54	0.0098	P	1.4
2	☐	2.000	1.932	55618.96	0.0244	P	1.1
3	☐	5.000	4.756	103873.53	0.0458	P	1.0
4	☐	10.000	9.856	188014.12	0.0845	P	0.7
5	☐	100.000	102.641	1732747.43	0.7883	A	3.5
6	☐	200.000	198.693	3197877.51	1.5169	A	1.5

y = 0.0076 * x + 0.0098
R = 0.9999
DL = 0.05358
BEC = 1.288

Weight: <None>
Min Conc: <None>

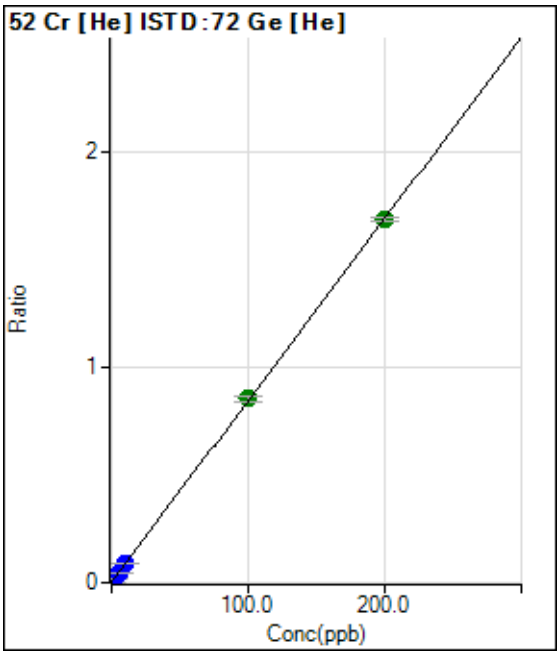


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50326.35	0.0096	P	2.1
2	☐	2.000	2.055	142068.01	0.0272	P	3.7
3	☐	5.000	4.998	272697.02	0.0524	P	0.8
4	☐	10.000	10.208	502051.70	0.0971	P	0.8
5	☐	100.000	102.959	4585852.02	0.8927	A	0.8
6	☐	200.000	198.509	8595394.66	1.7124	A	3.2

y = 0.0086 * x + 0.0096
R = 0.9998
DL = 0.069
BEC = 1.115

Weight: <None>
Min Conc: <None>

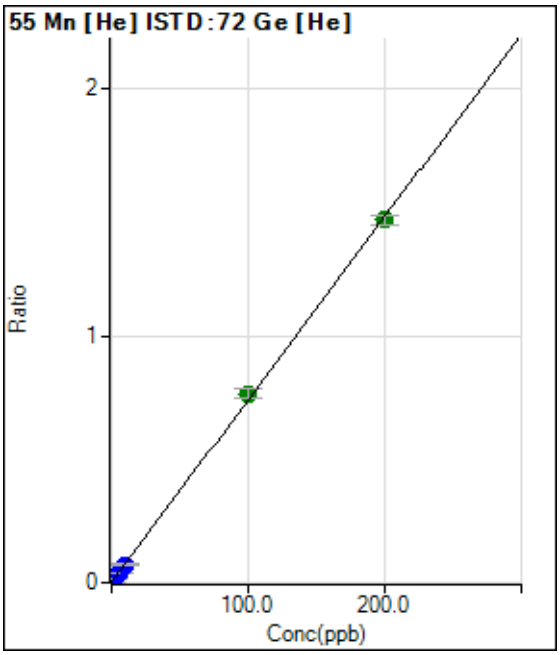
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5487.86	0.0024	P	3.6
2	☐	2.000	1.945	42900.79	0.0188	P	0.7
3	☐	5.000	4.803	97374.99	0.0430	P	1.0
4	☐	10.000	9.901	191354.97	0.0860	P	1.2
5	☐	100.000	100.982	1880188.30	0.8554	A	3.6
6	☐	200.000	199.519	3557833.80	1.6876	A	1.2

y = 0.0084 * x + 0.0024
R = 1.0000
DL = 0.03058
BEC = 0.2853

Weight: <None>
Min Conc: <None>

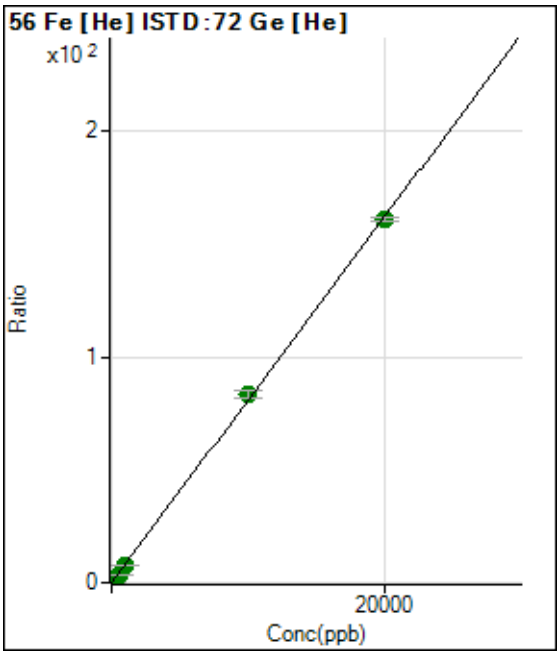


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3017.05	0.0013	P	6.8
2	☐	2.000	1.937	35660.35	0.0157	P	2.1
3	☐	5.000	4.765	82928.07	0.0366	P	1.6
4	☐	10.000	9.804	164327.61	0.0739	P	1.9
5	☐	100.000	103.124	1680004.61	0.7645	A	4.9
6	☐	200.000	198.454	3099239.12	1.4701	A	2.5

y = 0.0074 * x + 0.0013
R = 0.9998
DL = 0.03632
BEC = 0.1793

Weight: <None>
Min Conc: <None>

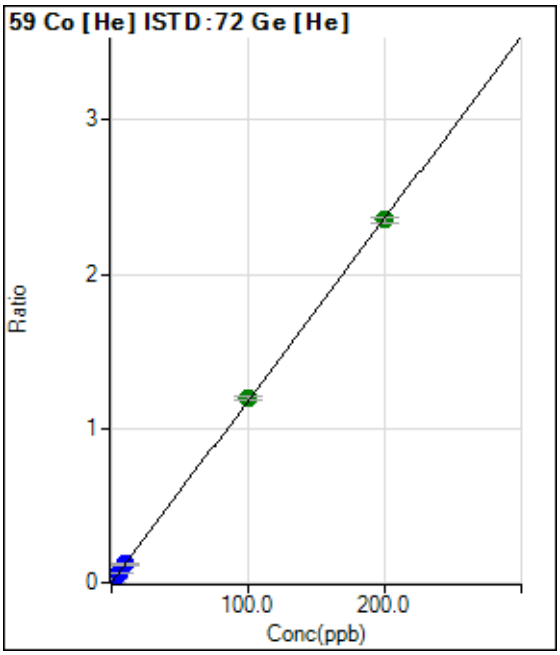
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34236.81	0.0150	P	2.2
2	☐	200.000	193.783	3605188.07	1.5833	A	1.8
3	☐	500.000	462.981	8524385.50	3.7620	A	0.2
4	☐	1000.000	970.630	17504881.82	7.8704	A	0.5
5	☐	10000.00	10321.89	183639537.2	83.5502	A	3.7
6	☐	20000.00	19841.51	338560588.2	160.592	A	1.1

y = 0.0081 * x + 0.0150
R = 0.9998
DL = 0.1212
BEC = 1.859

Weight: <None>
Min Conc: <None>

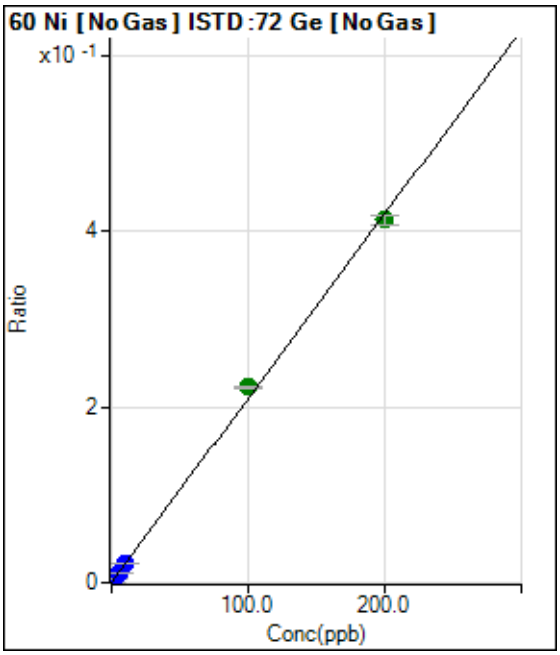


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	730.04	0.0003	P	15.7
2	☐	2.000	1.966	53585.65	0.0235	P	1.1
3	☐	5.000	4.872	131032.61	0.0578	P	1.4
4	☐	10.000	10.038	264242.11	0.1188	P	0.8
5	☐	100.000	101.356	2631616.16	1.1968	A	1.7
6	☐	200.000	199.324	4961165.86	2.3532	A	1.5

y = 0.0118 * x + 3.2098E-004
R = 1.0000
DL = 0.01278
BEC = 0.02719

Weight: <None>
Min Conc: <None>

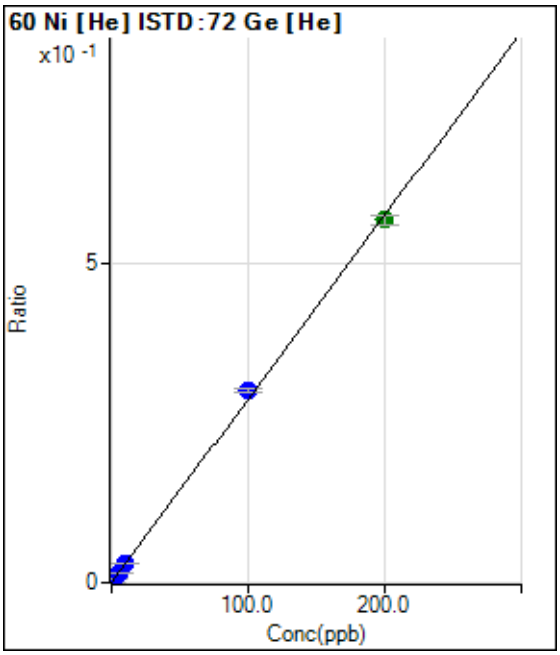
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1156.74	0.0002	P	16.7
2	☐	2.000	2.142	24572.50	0.0047	P	2.8
3	☐	5.000	5.283	58643.39	0.0113	P	1.9
4	☐	10.000	10.666	116522.84	0.0225	P	1.9
5	☐	100.000	106.018	1140856.31	0.2221	A	1.7
6	☐	200.000	196.949	2070170.80	0.4124	A	2.8

y = 0.0021 * x + 2.1999E-004
R = 0.9994
DL = 0.05264
BEC = 0.1051

Weight: <None>
Min Conc: <None>

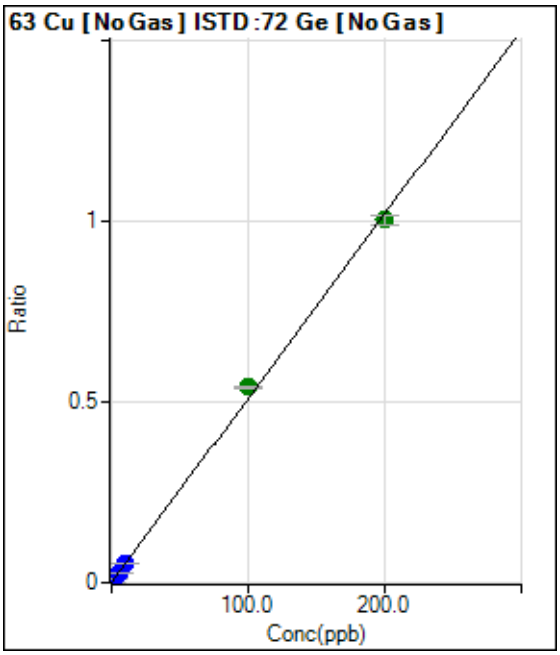


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	590.02	0.0003	P	12.0
2	☐	2.000	1.986	13600.33	0.0060	P	3.8
3	☐	5.000	4.932	32746.50	0.0145	P	1.5
4	☐	10.000	10.216	65969.52	0.0297	P	1.3
5	☐	100.000	104.779	663657.08	0.3018	P	2.1
6	☐	200.000	197.601	1199502.30	0.5690	A	2.8

y = 0.0029 * x + 2.5894E-004
R = 0.9996
DL = 0.03227
BEC = 0.08997

Weight: <None>
Min Conc: <None>

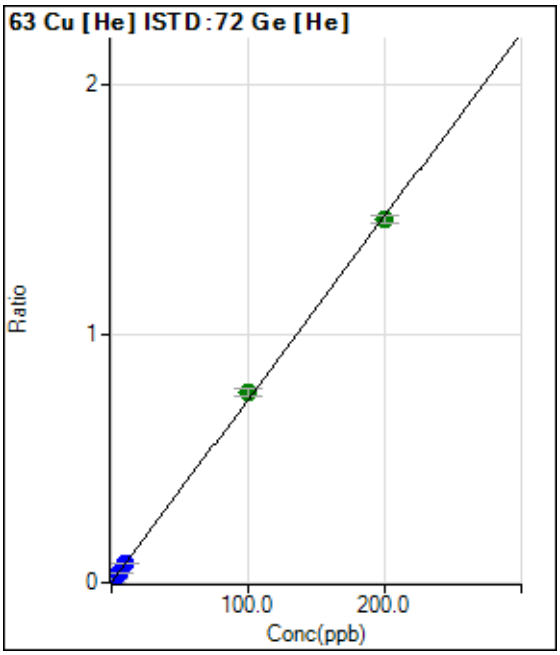
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3397.15	0.0006	P	1.8
2	☐	2.000	2.139	60263.94	0.0115	P	5.5
3	☐	5.000	5.163	140064.71	0.0269	P	1.7
4	☐	10.000	10.539	280724.04	0.0543	P	0.9
5	☐	100.000	106.002	2775676.42	0.5404	A	1.7
6	☐	200.000	196.967	5037572.53	1.0035	A	3.0

y = 0.0051 * x + 6.4557E-004
R = 0.9994
DL = 0.006949
BEC = 0.1268

Weight: <None>
Min Conc: <None>

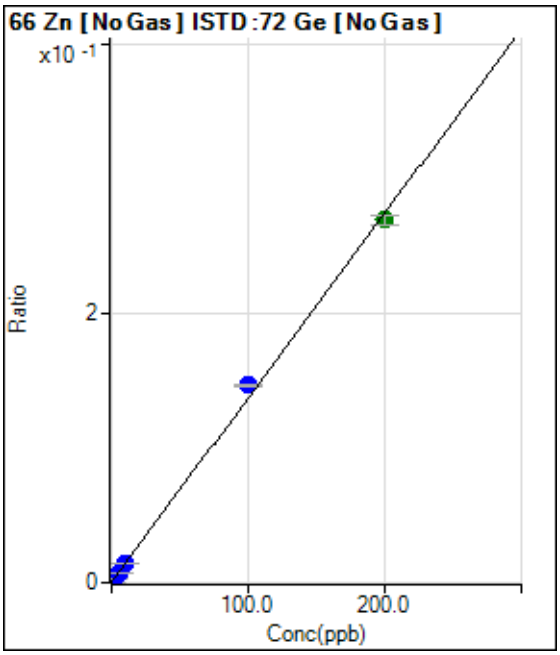


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1910.17	0.0008	P	9.8
2	☐	2.000	2.009	35576.95	0.0156	P	0.8
3	☐	5.000	4.821	82288.79	0.0363	P	2.0
4	☐	10.000	10.225	169251.72	0.0761	P	1.3
5	☐	100.000	103.954	1683425.70	0.7660	A	4.1
6	☐	200.000	198.016	3074301.73	1.4583	A	2.1

y = 0.0074 * x + 8.4016E-004
R = 0.9997
DL = 0.03371
BEC = 0.1141

Weight: <None>
Min Conc: <None>

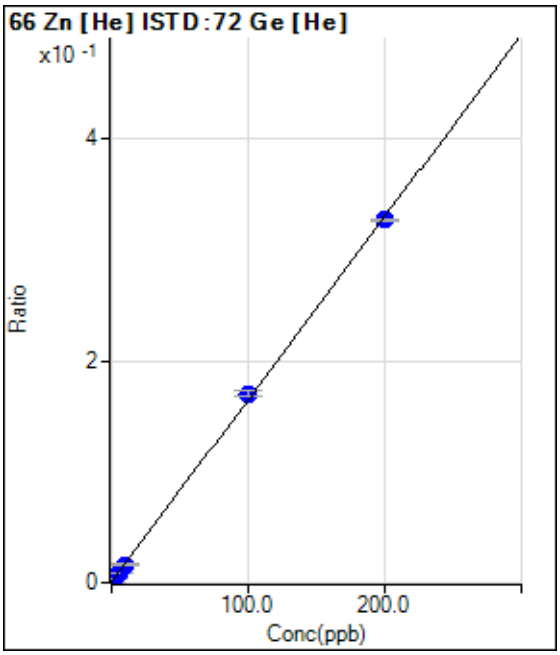
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2200.22	0.0004	P	6.5
2	☐	2.000	2.005	16520.35	0.0032	P	2.5
3	☐	5.000	4.988	37669.28	0.0072	P	2.4
4	☐	10.000	10.167	74065.53	0.0143	P	2.0
5	☐	100.000	106.788	752685.43	0.1465	P	1.0
6	☐	200.000	196.598	1352343.00	0.2694	A	2.9

y = 0.0014 * x + 4.1822E-004
R = 0.9992
DL = 0.05956
BEC = 0.3057

Weight: <None>
Min Conc: <None>

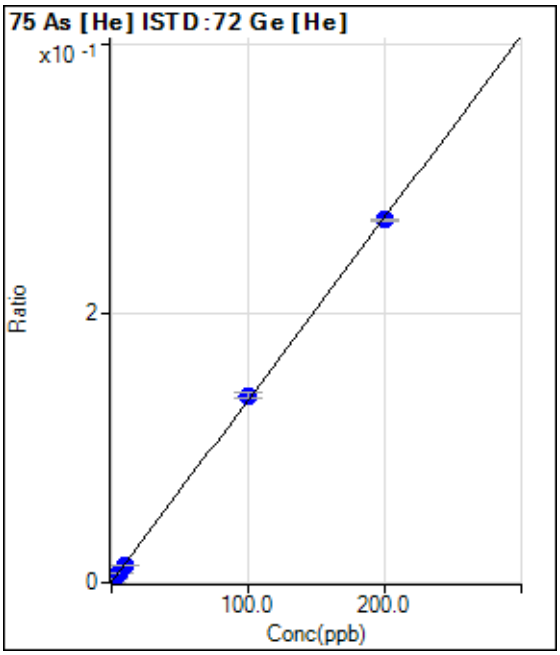


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1243.42	0.0005	P	5.9
2	☐	2.000	1.778	7899.11	0.0035	P	5.4
3	☐	5.000	4.750	18923.46	0.0084	P	3.2
4	☐	10.000	9.561	36165.17	0.0163	P	2.6
5	☐	100.000	103.146	373838.75	0.1701	P	3.2
6	☐	200.000	198.457	688765.25	0.3267	P	0.6

y = 0.0016 * x + 5.4674E-004
R = 0.9998
DL = 0.0584
BEC = 0.3327

Weight: <None>
Min Conc: <None>

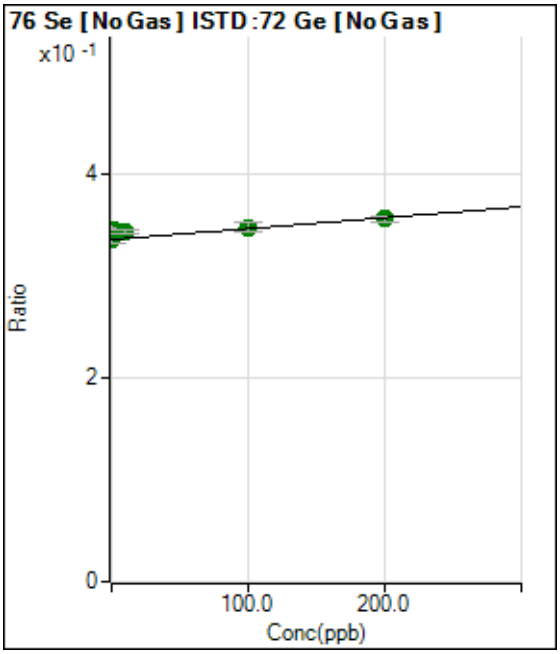
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1060.05	0.0005	P	4.2
2	☐	2.000	1.882	6852.89	0.0030	P	2.4
3	☐	5.000	4.644	15284.22	0.0067	P	0.7
4	☐	10.000	9.524	29673.65	0.0133	P	1.2
5	☐	100.000	102.496	305694.27	0.1390	P	2.4
6	☐	200.000	198.786	567591.37	0.2692	P	0.5

y = 0.0014 * x + 4.6590E-004
R = 0.9999
DL = 0.04371
BEC = 0.3446

Weight: <None>
Min Conc: <None>

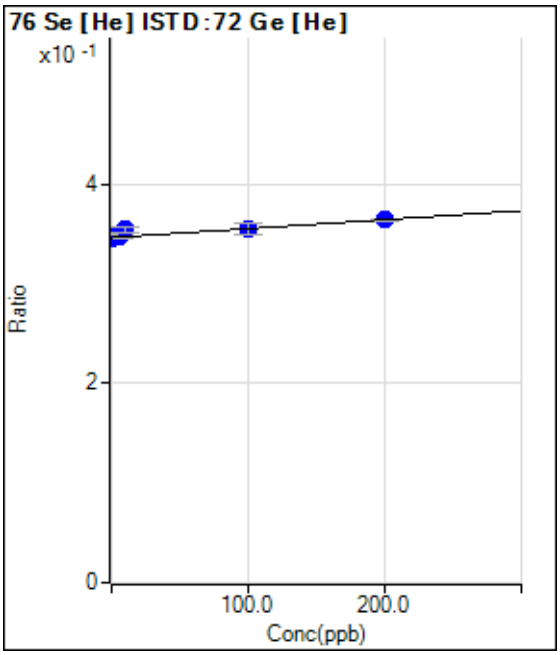


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1770125.18	0.3364	A	2.1
2	☐	2.000	95.583	1811950.50	0.3467	A	2.0
3	☐	5.000	77.884	1793255.13	0.3448	A	1.6
4	☐	10.000	75.502	1781008.88	0.3445	A	1.3
5	☐	100.000	110.732	1789169.77	0.3483	A	2.7
6	☐	200.000	188.601	1790787.37	0.3567	A	1.3

y = 1.0729E-004 * x + 0.3364
R = 0.8486
DL = 200.7
BEC = 3136

Weight: <None>
Min Conc: <None>

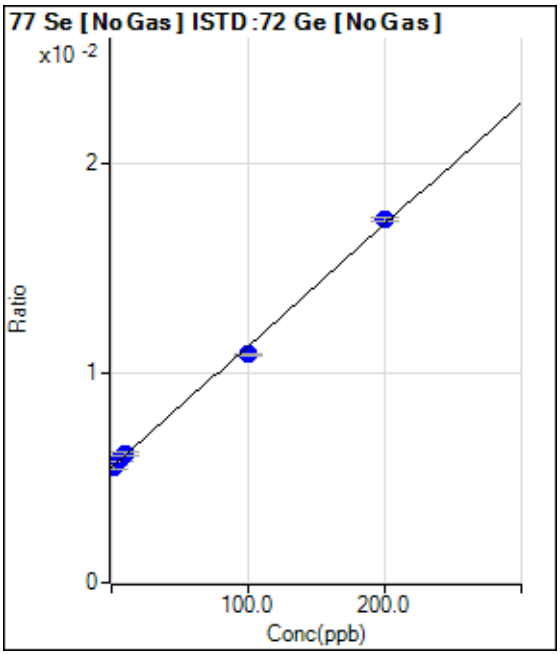
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	787302.91	0.3460	P	1.9
2	☐	2.000	15.447	790951.08	0.3474	P	1.5
3	☐	5.000	11.160	786266.86	0.3470	P	0.9
4	☐	10.000	86.792	786957.85	0.3538	P	1.3
5	☐	100.000	98.519	780148.76	0.3549	P	3.0
6	☐	200.000	196.612	766893.87	0.3638	P	0.4

y = 9.0411E-005 * x + 0.3460
R = 0.9264
DL = 213.6
BEC = 3827

Weight: <None>
Min Conc: <None>

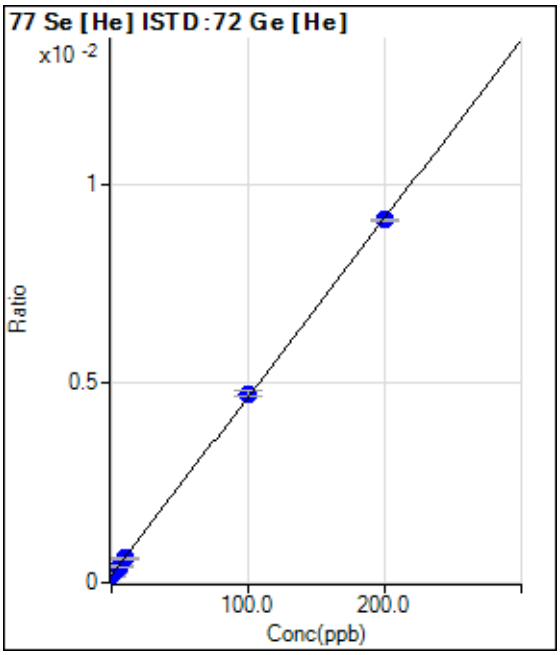


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28994.89	0.0055	P	2.7
2	☐	2.000	0.742	29015.07	0.0056	P	3.3
3	☐	5.000	6.601	30645.35	0.0059	P	4.4
4	☐	10.000	10.599	31664.42	0.0061	P	2.9
5	☐	100.000	92.803	55996.41	0.0109	P	1.0
6	☐	200.000	203.541	87022.99	0.0173	P	1.1

y = 5.8087E-005 * x + 0.0055
R = 0.9990
DL = 7.693
BEC = 94.85

Weight: <None>
Min Conc: <None>

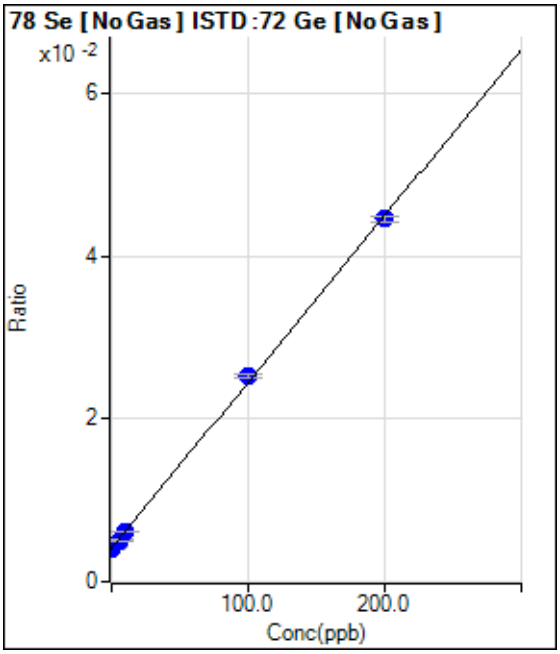
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.68	0.0002	P	23.4
2	☐	2.000	1.488	586.69	0.0003	P	9.1
3	☐	5.000	4.640	903.39	0.0004	P	9.2
4	☐	10.000	9.362	1356.76	0.0006	P	7.0
5	☐	100.000	101.759	10430.94	0.0047	P	2.9
6	☐	200.000	199.166	19190.68	0.0091	P	0.7

y = 4.4743E-005 * x + 1.9117E-004
R = 0.9999
DL = 2.993
BEC = 4.273

Weight: <None>
Min Conc: <None>

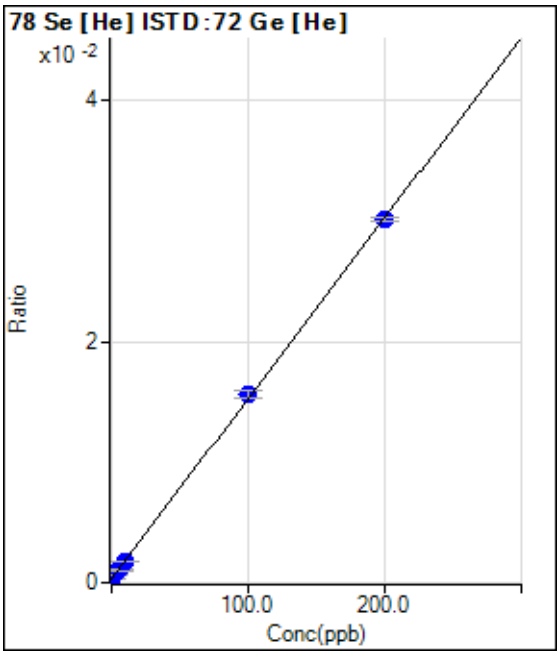


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21641.03	0.0041	P	3.0
2	☐	2.000	1.658	23263.69	0.0045	P	3.5
3	☐	5.000	4.499	26175.86	0.0050	P	2.6
4	☐	10.000	9.818	31637.48	0.0061	P	2.8
5	☐	100.000	103.742	130101.17	0.0253	P	1.2
6	☐	200.000	198.154	224090.91	0.0446	P	1.3

y = 2.0449E-004 * x + 0.0041
R = 0.9997
DL = 1.794
BEC = 20.11

Weight: <None>
Min Conc: <None>

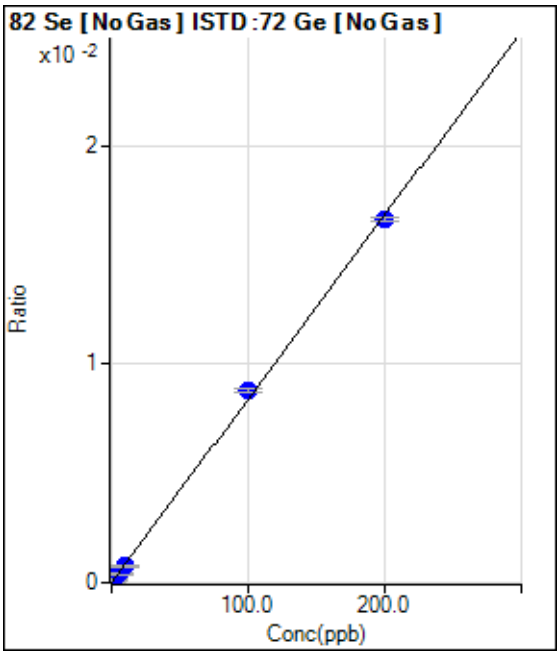
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	785.36	0.0003	P	10.6
2	☐	2.000	2.087	1498.09	0.0007	P	3.8
3	☐	5.000	4.663	2363.55	0.0010	P	3.1
4	☐	10.000	9.716	4000.60	0.0018	P	1.3
5	☐	100.000	102.154	34336.89	0.0156	P	4.4
6	☐	200.000	198.945	63459.09	0.0301	P	1.1

y = 1.4957E-004 * x + 3.4557E-004
R = 0.9999
DL = 0.7335
BEC = 2.31

Weight: <None>
Min Conc: <None>

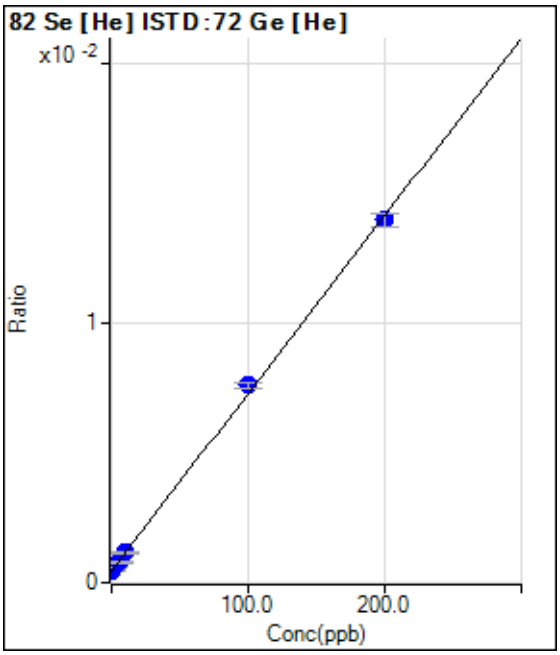


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-24.57	0.0000	P	-697.8
2	☐	2.000	1.531	650.09	0.0001	P	67.9
3	☐	5.000	4.794	2072.76	0.0004	P	3.8
4	☐	10.000	8.969	3875.77	0.0007	P	10.2
5	☐	100.000	105.007	45358.12	0.0088	P	1.9
6	☐	200.000	197.558	83432.08	0.0166	P	1.2

y = 8.4139E-005 * x - 4.7807E-006
R = 0.9995
DL = 1.189
BEC = -0.05682

Weight: <None>
Min Conc: <None>

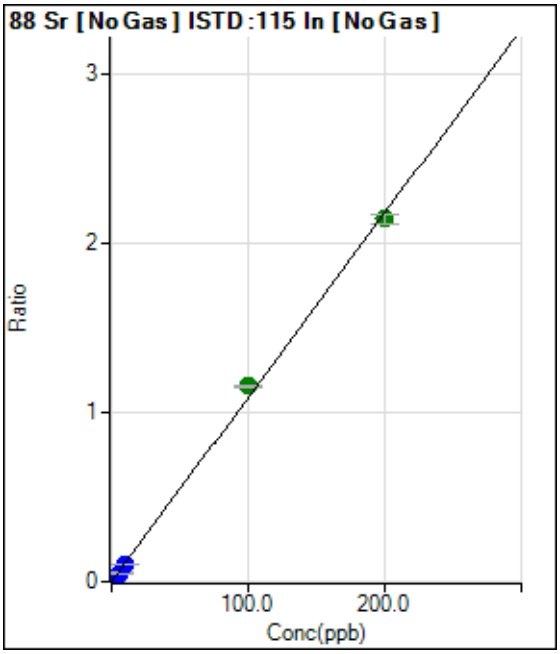
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1033.39	0.0005	P	16.7
2	☐	2.000	1.863	1326.76	0.0006	P	5.8
3	☐	5.000	4.817	1776.81	0.0008	P	9.8
4	☐	10.000	10.415	2596.97	0.0012	P	6.6
5	☐	100.000	104.445	16710.59	0.0076	P	2.9
6	☐	200.000	197.763	29482.79	0.0140	P	3.9

y = 6.8414E-005 * x + 4.5515E-004
R = 0.9996
DL = 3.332
BEC = 6.653

Weight: <None>
Min Conc: <None>

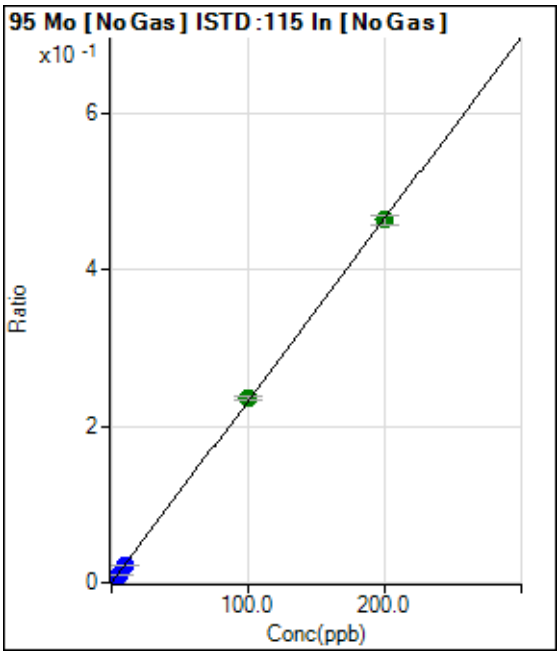


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1416.77	0.0002	P	10.1
2	☐	2.000	1.905	124937.23	0.0210	P	0.9
3	☐	5.000	4.631	299025.63	0.0506	P	2.1
4	☐	10.000	9.622	607323.80	0.1050	P	1.4
5	☐	100.000	106.136	6575219.70	1.1555	A	1.5
6	☐	200.000	196.961	11826581.90	2.1441	A	2.6

y = 0.0109 * x + 2.3950E-004
R = 0.9993
DL = 0.00667
BEC = 0.022

Weight: <None>
Min Conc: <None>

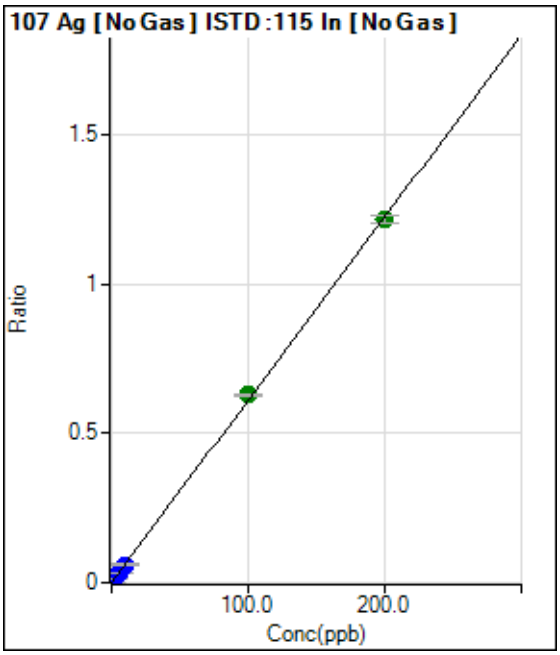
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0000	P	14.8
2	☐	2.000	1.941	27001.21	0.0045	P	2.2
3	☐	5.000	4.687	64403.22	0.0109	P	1.5
4	☐	10.000	9.764	131330.04	0.0227	P	1.5
5	☐	100.000	101.175	1337136.18	0.2350	A	1.7
6	☐	200.000	199.433	2555068.03	0.4632	A	2.6

y = 0.0023 * x + 2.4229E-005
R = 1.0000
DL = 0.004638
BEC = 0.01043

Weight: <None>
Min Conc: <None>

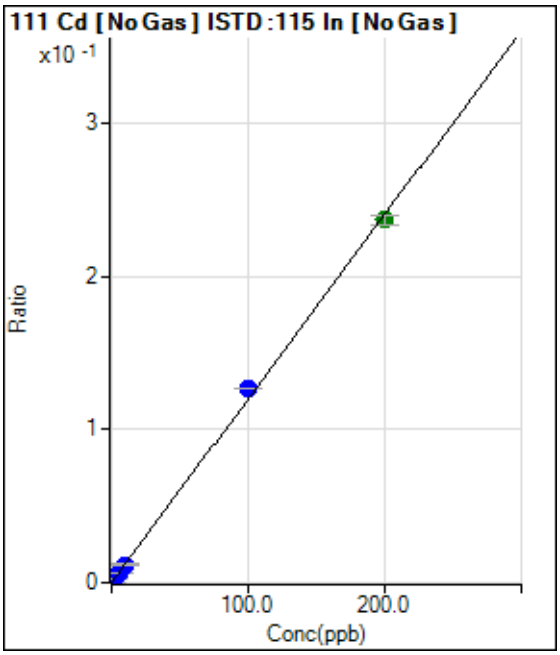


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.01	0.0001	P	11.9
2	☐	2.000	1.989	72860.66	0.0122	P	0.1
3	☐	5.000	4.852	175633.34	0.0298	P	2.5
4	☐	10.000	9.980	353652.78	0.0611	P	0.3
5	☐	100.000	102.668	3574630.88	0.6282	A	1.1
6	☐	200.000	198.671	6704951.98	1.2155	A	2.1

y = 0.0061 * x + 6.7657E-005
R = 0.9999
DL = 0.003942
BEC = 0.01106

Weight: <None>
Min Conc: <None>

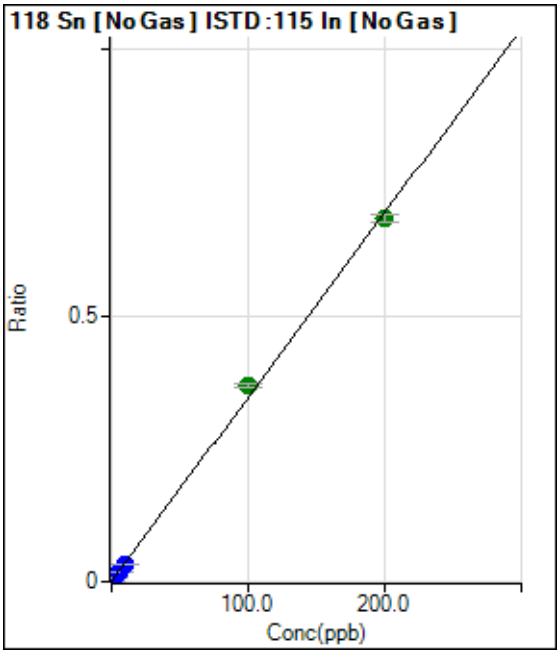
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	57.9
2	☐	2.000	2.014	14428.14	0.0024	P	2.1
3	☐	5.000	4.801	34047.74	0.0058	P	2.9
4	☐	10.000	9.796	68042.21	0.0118	P	2.9
5	☐	100.000	105.503	720480.15	0.1266	P	0.8
6	☐	200.000	197.263	1305740.34	0.2367	A	3.0

y = 0.0012 * x + 6.2238E-006
R = 0.9995
DL = 0.009001
BEC = 0.005187

Weight: <None>
Min Conc: <None>

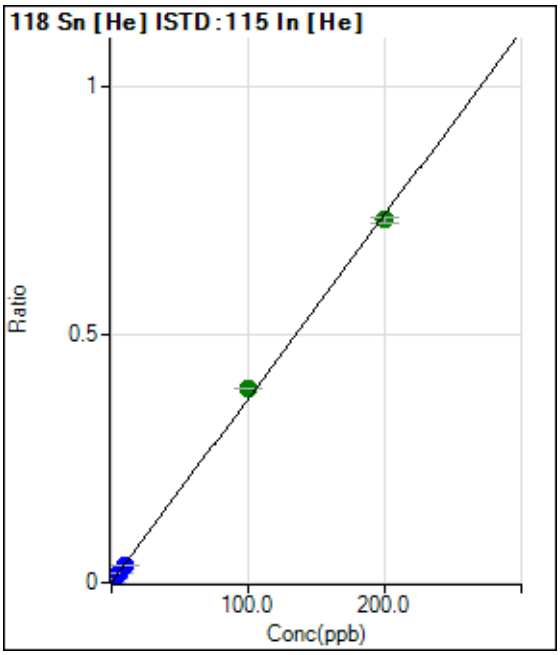


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2760.35	0.0005	P	1.3
2	☐	2.000	1.849	40864.57	0.0069	P	3.7
3	☐	5.000	4.587	96439.67	0.0163	P	0.8
4	☐	10.000	9.594	194690.28	0.0337	P	1.2
5	☐	100.000	106.425	2097683.04	0.3686	A	1.4
6	☐	200.000	196.820	3758148.59	0.6812	A	2.3

y = 0.0035 * x + 4.6652E-004
R = 0.9992
DL = 0.005395
BEC = 0.1349

Weight: <None>
Min Conc: <None>

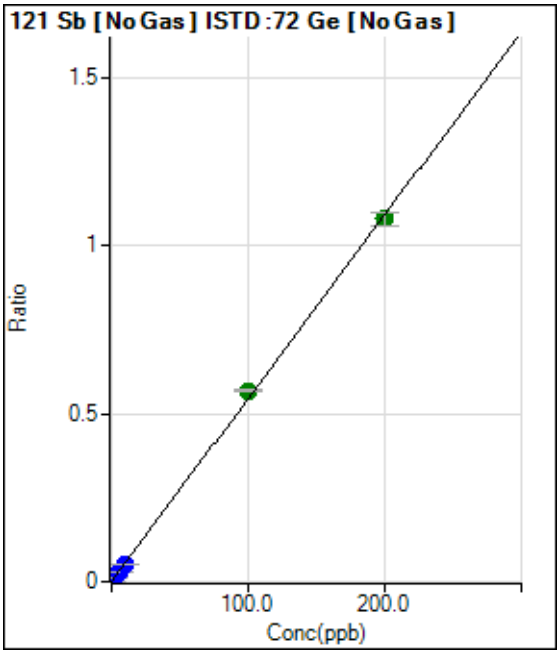
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2040.21	0.0005	P	8.1
2	☐	2.000	1.838	28848.83	0.0073	P	1.9
3	☐	5.000	4.655	68970.85	0.0178	P	2.4
4	☐	10.000	9.470	139540.48	0.0356	P	1.2
5	☐	100.000	105.530	1474248.42	0.3915	A	0.8
6	☐	200.000	197.272	2696574.12	0.7314	A	1.2

y = 0.0037 * x + 5.1823E-004
R = 0.9994
DL = 0.03398
BEC = 0.1399

Weight: <None>
Min Conc: <None>

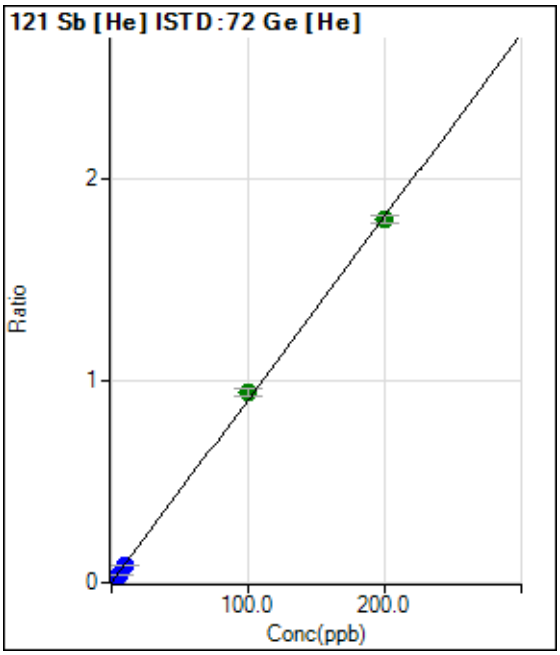


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2857.04	0.0005	P	8.6
2	☐	2.000	1.934	57918.06	0.0111	P	0.9
3	☐	5.000	4.720	136597.78	0.0263	P	1.4
4	☐	10.000	9.686	275654.26	0.0533	P	1.2
5	☐	100.000	104.061	2916104.12	0.5676	A	0.7
6	☐	200.000	197.993	5418768.04	1.0796	A	3.4

y = 0.0054 * x + 5.4291E-004
R = 0.9997
DL = 0.02574
BEC = 0.09962

Weight: <None>
Min Conc: <None>

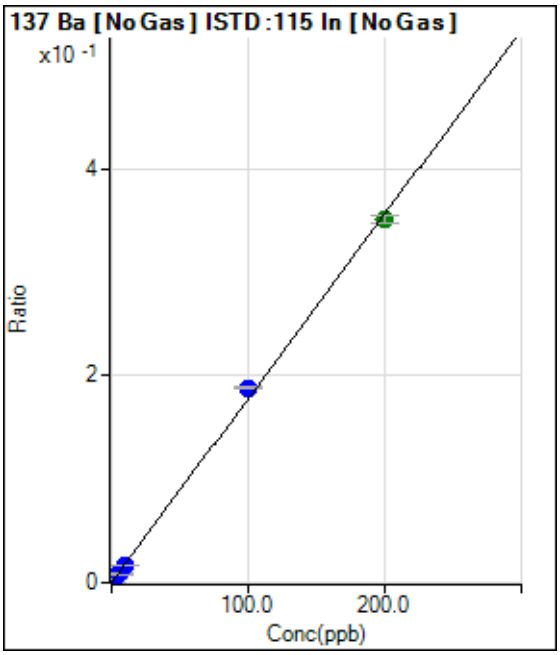
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1953.52	0.0009	P	9.4
2	☐	2.000	1.851	40188.56	0.0176	P	1.1
3	☐	5.000	4.506	94546.48	0.0417	P	1.6
4	☐	10.000	9.429	192113.75	0.0864	P	1.5
5	☐	100.000	103.702	2068800.33	0.9414	A	4.5
6	☐	200.000	198.192	3791168.90	1.7984	A	2.1

y = 0.0091 * x + 8.5945E-004
R = 0.9997
DL = 0.02679
BEC = 0.09476

Weight: <None>
Min Conc: <None>

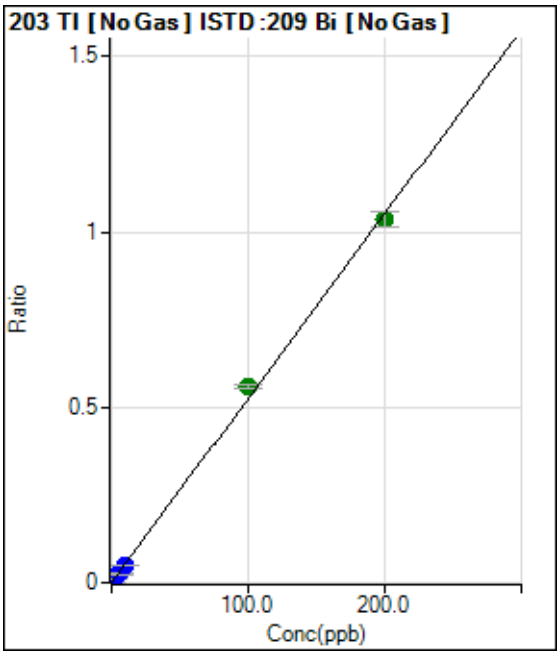


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	483.35	0.0001	P	20.0
2	☐	2.000	1.932	20977.29	0.0035	P	1.0
3	☐	5.000	4.684	49715.79	0.0084	P	2.3
4	☐	10.000	9.746	100871.37	0.0174	P	1.7
5	☐	100.000	105.909	1073440.61	0.1886	P	1.3
6	☐	200.000	197.067	1935938.46	0.3509	A	2.1

y = 0.0018 * x + 8.1788E-005
R = 0.9994
DL = 0.02758
BEC = 0.04594

Weight: <None>
Min Conc: <None>

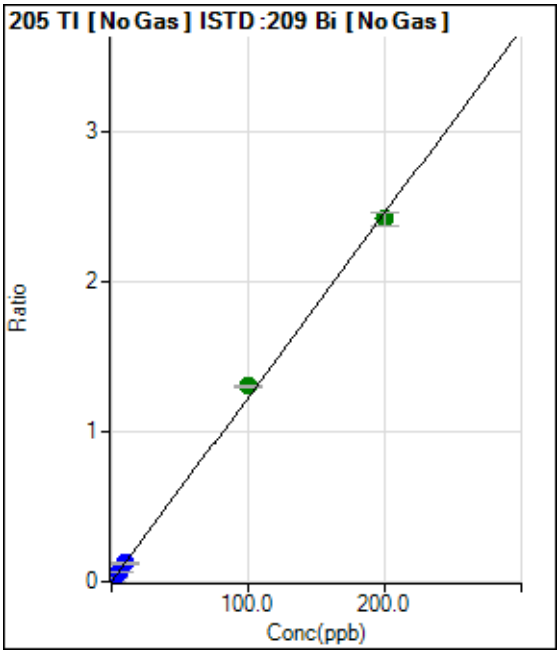
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	600.03	0.0001	P	5.3
2	☐	2.000	1.868	43937.90	0.0100	P	2.3
3	☐	5.000	4.709	108626.94	0.0249	P	2.0
4	☐	10.000	9.749	219480.55	0.0513	P	2.3
5	☐	100.000	106.264	2402184.34	0.5583	A	2.1
6	☐	200.000	196.889	4327497.02	1.0343	A	4.3

y = 0.0053 * x + 1.4142E-004
R = 0.9993
DL = 0.004286
BEC = 0.02692

Weight: <None>
Min Conc: <None>

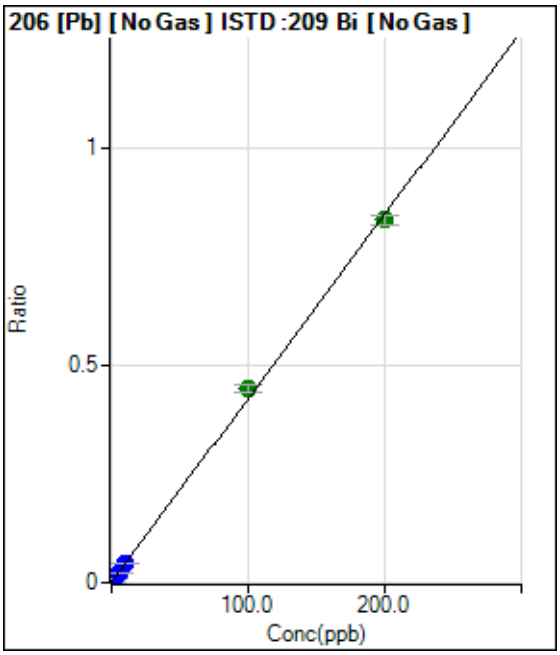


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1303.43	0.0003	P	8.1
2	☐	2.000	1.925	105819.16	0.0240	P	2.2
3	☐	5.000	4.808	259383.53	0.0594	P	1.8
4	☐	10.000	10.014	527400.60	0.1234	P	2.9
5	☐	100.000	106.067	5610584.08	1.3039	A	1.2
6	☐	200.000	196.972	10131424.22	2.4212	A	3.6

y = 0.0123 * x + 3.0650E-004
R = 0.9993
DL = 0.006026
BEC = 0.02494

Weight: <None>
Min Conc: <None>

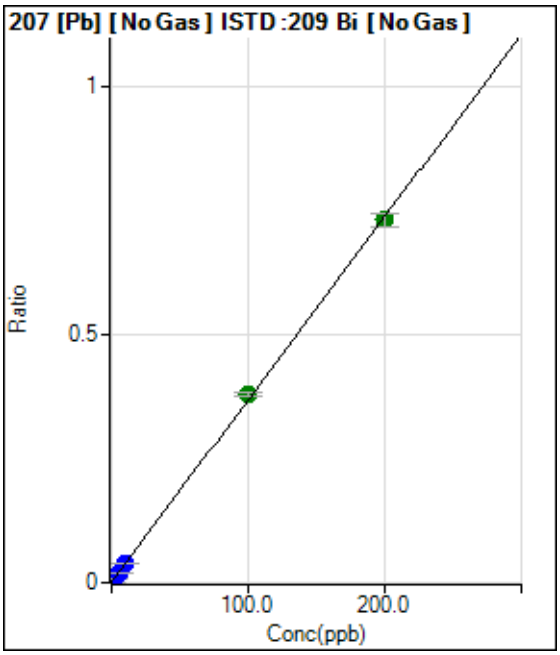
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4557.60	0.0011	P	7.7
2	☐	2.000	1.965	41379.51	0.0094	P	3.0
3	☐	5.000	4.868	94442.53	0.0216	P	2.4
4	☐	10.000	10.118	187232.41	0.0438	P	2.2
5	☐	100.000	105.472	1921340.02	0.4465	A	3.6
6	☐	200.000	197.262	3490609.22	0.8341	A	2.5

y = 0.0042 * x + 0.0011
R = 0.9995
DL = 0.05853
BEC = 0.2545

Weight: <None>
Min Conc: <None>

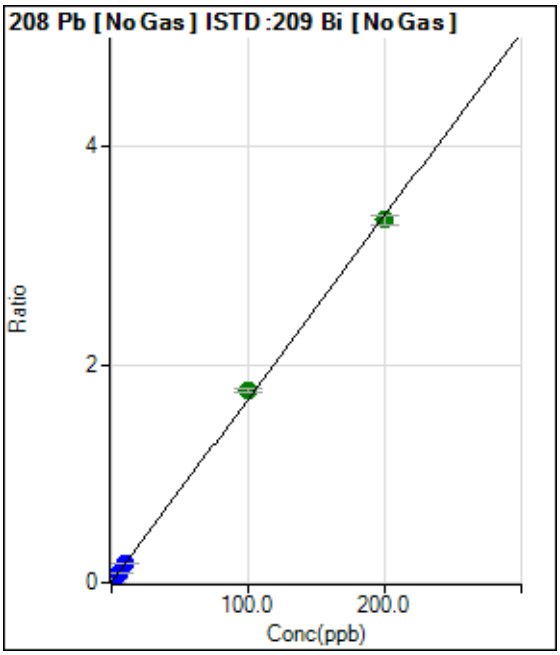


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3347.18	0.0008	P	1.7
2	☐	2.000	2.013	36236.61	0.0082	P	1.8
3	☐	5.000	4.780	80329.91	0.0184	P	1.2
4	☐	10.000	10.104	162475.20	0.0380	P	1.2
5	☐	100.000	103.022	1636216.69	0.3803	A	2.0
6	☐	200.000	198.489	3062974.12	0.7319	A	3.6

y = 0.0037 * x + 7.8819E-004
R = 0.9998
DL = 0.01099
BEC = 0.214

Weight: <None>
Min Conc: <None>

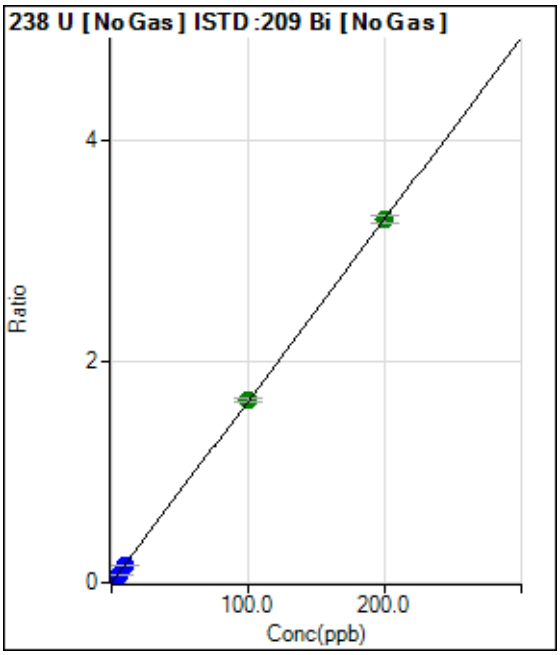
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16494.56	0.0039	P	1.9
2	☐	2.000	2.001	165746.71	0.0375	P	1.0
3	☐	5.000	4.839	372363.76	0.0853	P	0.8
4	☐	10.000	10.021	737044.58	0.1724	P	0.8
5	☐	100.000	104.590	7585713.84	1.7628	A	1.6
6	☐	200.000	197.708	13930658.65	3.3289	A	2.9

y = 0.0168 * x + 0.0039
R = 0.9996
DL = 0.01296
BEC = 0.231

Weight: <None>
Min Conc: <None>

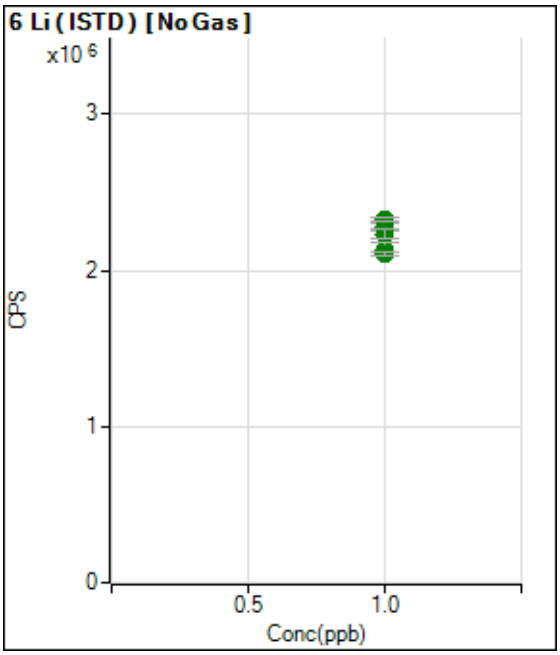


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.00	0.0000	P	31.6
2	☐	2.000	1.848	133810.75	0.0303	P	2.0
3	☐	5.000	4.578	327792.94	0.0751	P	1.7
4	☐	10.000	9.516	666942.10	0.1560	P	0.4
5	☐	100.000	100.584	7094961.56	1.6489	A	1.8
6	☐	200.000	199.744	13703442.30	3.2743	A	2.2

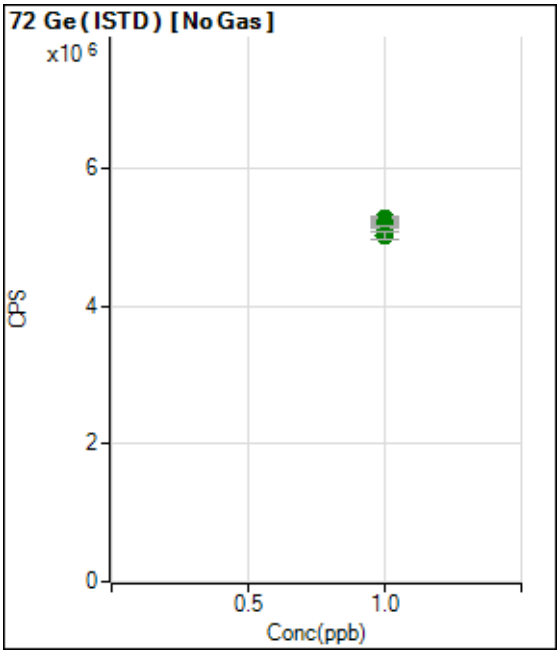
y = 0.0164 * x + 2.1313E-005
R = 1.0000
DL = 0.001231
BEC = 0.0013

Weight: <None>
Min Conc: <None>

Calibration for 017_ICV.d

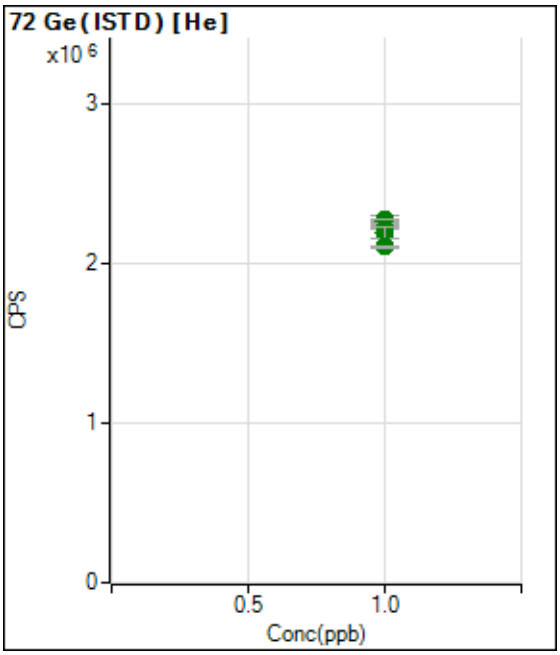


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2322552.60		A	1.3
2	☐	1.000		2280141.89		A	2.5
3	☐	1.000		2257938.62		A	0.7
4	☐	1.000		2232507.32		A	2.4
5	☐	1.000		2131478.51		A	4.0
6	☐	1.000		2103189.02		A	1.4

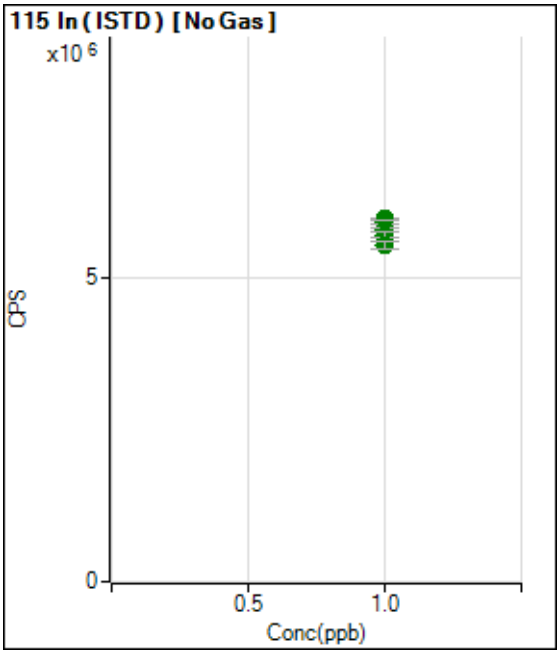


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5261859.72		A	0.9
2	☐	1.000		5227582.84		A	2.0
3	☐	1.000		5200758.88		A	0.4
4	☐	1.000		5169076.90		A	0.4
5	☐	1.000		5136992.63		A	0.7
6	☐	1.000		5021428.99		A	1.8

Calibration for 017_ICV.d

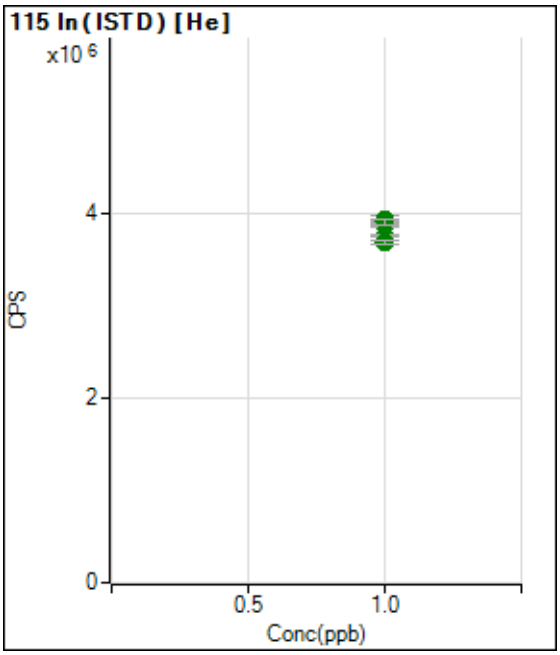


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2276212.67		A	2.3
2	☐	1.000		2277107.78		A	0.8
3	☐	1.000		2265933.61		A	1.1
4	☐	1.000		2224133.56		A	0.3
5	☐	1.000		2199753.56		A	3.3
6	☐	1.000		2108248.04		A	0.4

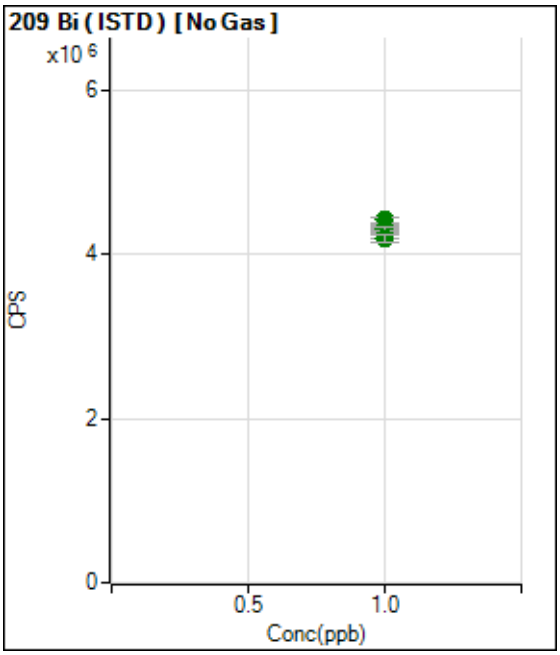


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5917508.77		A	1.2
2	☐	1.000		5956148.02		A	0.8
3	☐	1.000		5904424.75		A	1.0
4	☐	1.000		5786200.70		A	1.2
5	☐	1.000		5691117.14		A	1.6
6	☐	1.000		5518199.79		A	2.4

Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3932094.75		A	2.3
2	☐	1.000		3936145.10		A	0.4
3	☐	1.000		3882334.05		A	1.2
4	☐	1.000		3919461.73		A	1.6
5	☐	1.000		3765650.62		A	0.9
6	☐	1.000		3687172.24		A	1.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4246459.21		A	2.7
2	☐	1.000		4415511.91		A	1.8
3	☐	1.000		4366821.71		A	0.7
4	☐	1.000		4274790.56		A	0.7
5	☐	1.000		4303190.25		A	1.1
6	☐	1.000		4186397.75		A	2.1

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	010CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:13:39-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	No Gas	138651	0.00
Be	9	1	No Gas	25	138.56
V	51	2	He	22243	0.01
Cr	52	2	He	5488	0.10
Fe	56	2	He	34237	0.00
Se	78	2	He	785	1.05
Sn	118	2	He	2040	0.51
As	75	2	He	1060	0.31
Ca	44	2	He	1577	0.55
Na	23	2	He	131515	0.00
Mg	24	2	He	1563	0.26
K	39	2	He	226944	0.00
Mn	55	2	He	3017	0.15
Co	59	2	He	730	2.09
Ni	60	2	He	590	2.28
Cu	63	2	He	1910	0.43
Zn	66	2	He	1243	0.29
Al	27	2	He	1783	0.67
B	11	1	No Gas	81587	0.00
Al	27	1	No Gas	37816	0.00
Si	28	1	No Gas	607905	0.00
P	31	1	No Gas	42335	0.00
Ag	107	1	No Gas	400	2.72
Cd	111	1	No Gas	37	154.83
Sr	88	1	No Gas	1417	0.68
Mo	95	1	No Gas	143	10.13
Sn	118	1	No Gas	2760	0.02
Sb	121	1	No Gas	2857	0.31
Ba	137	1	No Gas	483	3.98
Tl	205	1	No Gas	1303	0.83
Tl	203	1	No Gas	600	0.56
Pb	208	1	No Gas	16495	0.01
U	238	1	No Gas	90	32.66
Ca	43	2	He	60	27.78
Sb	121	2	He	1954	0.36
Ti	47	2	He	23	280.57
Cu	63	1	No Gas	3397	0.07

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	No Gas	2322553	1.28
Ge	72	2	He	2276213	2.29

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	No Gas	5261860	0.93
In	115	1	No Gas	5917509	1.23
Bi	209	1	No Gas	4246459	2.71

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	011CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:15:31-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	14808	0.02
V	51	2	He	55619	0.00
Cr	52	2	He	42901	0.00
Fe	56	2	He	3605188	0.00
Se	78	2	He	1498	0.31
Sn	118	2	He	28849	0.01
As	75	2	He	6853	0.03
Ca	44	2	He	29151	0.01
Na	23	2	He	744566	0.00
Mg	24	2	He	390762	0.00
K	39	2	He	796047	0.00
Mn	55	2	He	35660	0.00
Co	59	2	He	53586	0.00
Ni	60	2	He	13600	0.02
Cu	63	2	He	35577	0.00
Zn	66	2	He	7899	0.07
Al	27	2	He	4557	0.11
B	11	1	No Gas	120646	0.00
Al	27	1	No Gas	101082	0.00
Si	28	1	No Gas	776954	0.00
P	31	1	No Gas	57673	0.00
Ag	107	1	No Gas	72861	0.00
Cd	111	1	No Gas	14428	0.01
Sr	88	1	No Gas	124937	0.00
Mo	95	1	No Gas	27001	0.01
Sn	118	1	No Gas	40865	0.01
Sb	121	1	No Gas	57918	0.00
Ba	137	1	No Gas	20977	0.00
Tl	205	1	No Gas	105819	0.00
Tl	203	1	No Gas	43938	0.00
Pb	208	1	No Gas	165747	0.00
U	238	1	No Gas	133811	0.00
Ca	43	2	He	1727	0.19
Sb	121	2	He	40189	0.00
Cu	63	1	No Gas	60264	0.01

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2280142	2.51	2322553	98.17	70	120	

Calibration Standard Report

Ge	72	2	He	2277108	0.81	2276213	100.04	70	120	
Ge	72	1	No Gas	5227583	1.99	5261860	99.35	70	120	
In	115	1	No Gas	5956148	0.82	5917509	100.65	70	120	
Bi	209	1	No Gas	4415512	1.80	4246459	103.98	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	012CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:17:22-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	35555	0.00
V	51	2	He	103874	0.00
Cr	52	2	He	97375	0.00
Fe	56	2	He	8524386	0.00
Se	78	2	He	2364	0.15
Sn	118	2	He	68971	0.00
As	75	2	He	15284	0.01
Ca	44	2	He	68765	0.00
Na	23	2	He	1569160	0.00
Mg	24	2	He	909184	0.00
K	39	2	He	1583204	0.00
Mn	55	2	He	82928	0.00
Co	59	2	He	131033	0.00
Ni	60	2	He	32747	0.00
Cu	63	2	He	82289	0.00
Zn	66	2	He	18923	0.01
Al	27	2	He	8596	0.03
B	11	1	No Gas	180799	0.00
Al	27	1	No Gas	195588	0.00
Si	28	1	No Gas	1013613	0.00
P	31	1	No Gas	80000	0.00
Ag	107	1	No Gas	175633	0.00
Cd	111	1	No Gas	34048	0.01
Sr	88	1	No Gas	299026	0.00
Mo	95	1	No Gas	64403	0.00
Sn	118	1	No Gas	96440	0.00
Sb	121	1	No Gas	136598	0.00
Ba	137	1	No Gas	49716	0.00
Tl	205	1	No Gas	259384	0.00
Tl	203	1	No Gas	108627	0.00
Pb	208	1	No Gas	372364	0.00
U	238	1	No Gas	327793	0.00
Ca	43	2	He	3981	0.09
Sb	121	2	He	94546	0.00
Cu	63	1	No Gas	140065	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2257939	0.69	2322553	97.22	70	120	

Calibration Standard Report

Ge	72	2	He	2265934	1.12	2276213	99.55	70	120	
Ge	72	1	No Gas	5200759	0.39	5261860	98.84	70	120	
In	115	1	No Gas	5904425	0.98	5917509	99.78	70	120	
Bi	209	1	No Gas	4366822	0.72	4246459	102.83	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/100
Data File Name	013CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:19:14-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	72522	0.00
V	51	2	He	188014	0.00
Cr	52	2	He	191355	0.00
Fe	56	2	He	17504882	0.00
Se	78	2	He	4001	0.03
Sn	118	2	He	139540	0.00
As	75	2	He	29674	0.00
Ca	44	2	He	137756	0.00
Na	23	2	He	3006280	0.00
Mg	24	2	He	1837404	0.00
K	39	2	He	2963182	0.00
Mn	55	2	He	164328	0.00
Co	59	2	He	264242	0.00
Ni	60	2	He	65970	0.00
Cu	63	2	He	169252	0.00
Zn	66	2	He	36165	0.01
Al	27	2	He	15506	0.02
B	11	1	No Gas	285981	0.00
Al	27	1	No Gas	363114	0.00
Si	28	1	No Gas	1413035	0.00
P	31	1	No Gas	119108	0.00
Ag	107	1	No Gas	353653	0.00
Cd	111	1	No Gas	68042	0.00
Sr	88	1	No Gas	607324	0.00
Mo	95	1	No Gas	131330	0.00
Sn	118	1	No Gas	194690	0.00
Sb	121	1	No Gas	275654	0.00
Ba	137	1	No Gas	100871	0.00
Tl	205	1	No Gas	527401	0.00
Tl	203	1	No Gas	219481	0.00
Pb	208	1	No Gas	737045	0.00
U	238	1	No Gas	666942	0.00
Ca	43	2	He	8109	0.04
Sb	121	2	He	192114	0.00
Cu	63	1	No Gas	280724	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2232507	2.38	2322553	96.12	70	120	

Calibration Standard Report

Ge	72	2	He	2224134	0.31	2276213	97.71	70	120	
Ge	72	1	No Gas	5169077	0.38	5261860	98.24	70	120	
In	115	1	No Gas	5786201	1.22	5917509	97.78	70	120	
Bi	209	1	No Gas	4274791	0.67	4246459	100.67	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	014CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:21:05-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	740236	0.00
V	51	2	He	1732747	0.00
Cr	52	2	He	1880188	0.00
Fe	56	2	He	183639537	0.00
Se	78	2	He	34337	0.00
Sn	118	2	He	1474248	0.00
As	75	2	He	305694	0.00
Ca	44	2	He	1450291	0.00
Na	23	2	He	30466713	0.00
Mg	24	2	He	18719133	0.00
K	39	2	He	28801651	0.00
Mn	55	2	He	1680005	0.00
Co	59	2	He	2631616	0.00
Ni	60	2	He	663657	0.00
Cu	63	2	He	1683426	0.00
Zn	66	2	He	373839	0.00
Al	27	2	He	143996	0.00
B	11	1	No Gas	2250088	0.00
Al	27	1	No Gas	3228002	0.00
Si	28	1	No Gas	9244017	0.00
P	31	1	No Gas	823102	0.00
Ag	107	1	No Gas	3574631	0.00
Cd	111	1	No Gas	720480	0.00
Sr	88	1	No Gas	6575220	0.00
Mo	95	1	No Gas	1337136	0.00
Sn	118	1	No Gas	2097683	0.00
Sb	121	1	No Gas	2916104	0.00
Ba	137	1	No Gas	1073441	0.00
Tl	205	1	No Gas	5610584	0.00
Tl	203	1	No Gas	2402184	0.00
Pb	208	1	No Gas	7585714	0.00
U	238	1	No Gas	7094962	0.00
Ca	43	2	He	84972	0.00
Sb	121	2	He	2068800	0.00
Cu	63	1	No Gas	2775676	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2131479	4.01	2322553	91.77	70	120	

Calibration Standard Report

Ge	72	2	He	2199754	3.33	2276213	96.64	70	120	
Ge	72	1	No Gas	5136993	0.74	5261860	97.63	70	120	
In	115	1	No Gas	5691117	1.62	5917509	96.17	70	120	
Bi	209	1	No Gas	4303190	1.11	4246459	101.34	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	015CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:22:48-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	1384209	0.00
V	51	2	He	3197878	0.00
Cr	52	2	He	3557834	0.00
Fe	56	2	He	338560588	0.00
Se	78	2	He	63459	0.00
Sn	118	2	He	2696574	0.00
As	75	2	He	567591	0.00
Ca	44	2	He	2670654	0.00
Na	23	2	He	56662949	0.00
Mg	24	2	He	34881459	0.00
K	39	2	He	52900646	0.00
Mn	55	2	He	3099239	0.00
Co	59	2	He	4961166	0.00
Ni	60	2	He	1199502	0.00
Cu	63	2	He	3074302	0.00
Zn	66	2	He	688765	0.00
Al	27	2	He	258313	0.00
B	11	1	No Gas	4143239	0.00
Al	27	1	No Gas	5667920	0.00
Si	28	1	No Gas	15605840	0.00
P	31	1	No Gas	1509615	0.00
Ag	107	1	No Gas	6704952	0.00
Cd	111	1	No Gas	1305740	0.00
Sr	88	1	No Gas	11826582	0.00
Mo	95	1	No Gas	2555068	0.00
Sn	118	1	No Gas	3758149	0.00
Sb	121	1	No Gas	5418768	0.00
Ba	137	1	No Gas	1935938	0.00
Tl	205	1	No Gas	10131424	0.00
Tl	203	1	No Gas	4327497	0.00
Pb	208	1	No Gas	13930659	0.00
U	238	1	No Gas	13703442	0.00
Ca	43	2	He	155861	0.00
Sb	121	2	He	3791169	0.00
Cu	63	1	No Gas	5037573	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2103189	1.41	2322553	90.56	70	120	

Calibration Standard Report

Ge	72	2	He	2108248	0.45	2276213	92.62	70	120	
Ge	72	1	No Gas	5021429	1.84	5261860	95.43	70	120	
In	115	1	No Gas	5518200	2.44	5917509	93.25	70	120	
Bi	209	1	No Gas	4186398	2.08	4246459	98.59	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	017_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:40:31-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	105.950	1.260	3083901	1.55	100	105.9	90	110	
Be	9	1	No Gas	105.641	2.422	750933	1.71	100	105.6	90	110	
V	51	2	He	99.922	3.803	1710365	1.48	100	99.9	90	110	
Cr	52	2	He	98.486	1.516	1859399	1.36	100	98.5	90	110	
Fe	56	2	He	10016.759	2.284	180691931	1.19	10000	100.2	90	110	
Se	78	2	He	101.034	2.060	34447	0.86	100	101.0	90	110	
Sn	118	2	He	105.789	0.770	1497856	0.84	100	105.8	90	110	
As	75	2	He	103.741	1.867	313626	1.23	100	103.7	90	110	
Ca	44	2	He	10109.933	4.056	1438807	1.22	10000	101.1	90	110	
Na	23	2	He	10196.320	2.667	30771865	0.95	10000	102.0	90	110	
Mg	24	2	He	10235.708	1.002	18985636	2.15	10000	102.4	90	110	
K	39	2	He	10263.790	2.987	29028547	0.50	10000	102.6	90	110	
Mn	55	2	He	100.695	2.461	1663655	0.53	100	100.7	90	110	
Co	59	2	He	100.542	3.127	2645703	2.65	100	100.5	90	110	
Ni	60	2	He	102.741	2.128	659570	1.28	100	102.7	90	110	
Cu	63	2	He	103.226	2.640	1694921	0.83	100	103.2	90	110	
Zn	66	2	He	101.467	2.120	372887	2.00	100	101.5	90	110	
Al	27	2	He	100.246	2.867	139424	0.04	100	100.2	90	110	
B	11	1	No Gas	485.194	1.739	2190023	1.63	500	97.0	90	110	
Al	27	1	No Gas	104.308	2.846	3130159	3.19	100	104.3	90	110	
Si	28	1	No Gas	617.348	3.007	10395384	1.28	500	123.5	90	110	ICV Main CR1 Failed
P	31	1	No Gas	506.823	3.103	815053	1.71	500	101.4	90	110	
Ag	107	1	No Gas	104.068	0.484	3621948	1.19	100	104.1	90	110	
Cd	111	1	No Gas	102.833	0.548	701960	0.97	100	102.8	90	110	
Sr	88	1	No Gas	108.994	0.386	6750090	1.30	100	109.0	90	110	
Mo	95	1	No Gas	101.588	1.272	1342148	1.17	100	101.6	90	110	
Sn	118	1	No Gas	106.339	1.334	2094856	1.34	100	106.3	90	110	
Sb	121	1	No Gas	103.485	2.478	2920434	2.06	100	103.5	90	110	
Ba	137	1	No Gas	102.526	1.451	1038785	1.39	100	102.5	90	110	
Tl	205	1	No Gas	105.385	1.582	5497390	1.94	100	105.4	90	110	
Tl	203	1	No Gas	106.866	2.714	2382453	2.99	100	106.9	90	110	
Pb	208	1	No Gas	103.478	2.081	7400687	2.21	100	103.5	90	110	
U	238	1	No Gas	98.039	1.570	6819068	1.35	100	98.0	90	110	
Ca	43	2	He	10073.923	2.380	83758	0.93	10000	100.7	90	110	
Sb	121	2	He	101.911	1.949	2061889	1.62	100	101.9	90	110	
Ti	47	2	He	100.806	3.045	75443	0.70	100	100.8	90	110	
Cu	63	1	No Gas	107.588	1.490	2837334	0.31	100	107.6	90	110	

QC ISTD Table

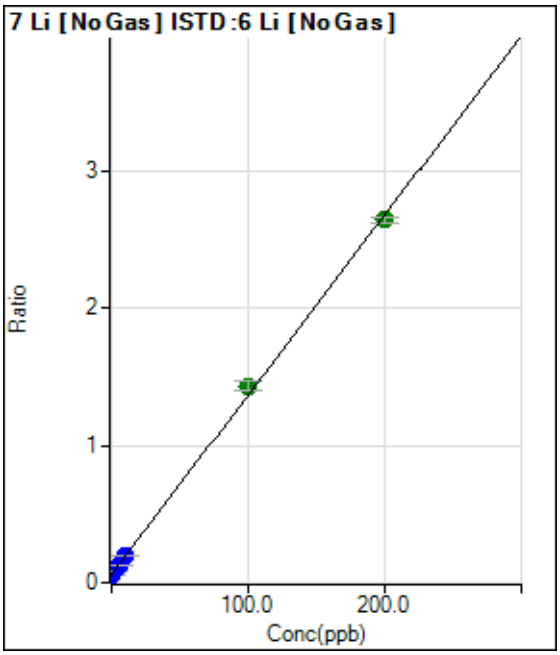
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2136349	2.10	2322553	91.98	70	120	
Ge	72	2	He	2229434	2.85	2276213	97.94	70	120	
Ge	72	1	No Gas	5174156	1.57	5261860	98.33	70	120	
In	115	1	No Gas	5688413	0.91	5917509	96.13	70	120	
Bi	209	1	No Gas	4243117	0.38	4246459	99.92	70	120	

Calibration for 017_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\102820A.b\
Analysis File: 102820A.batch.bin
DA Date-Time: 10/28/2020 9:48:30 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	010CALB.d	CAL BLK	10/28/2020 10:13:39 AM
2	011CALS.d	2/10/200	10/28/2020 10:15:31 AM
3	012CALS.d	5/25/500	10/28/2020 10:17:22 AM
4	013CALS.d	10/50/100	10/28/2020 10:19:14 AM
5	014CALS.d	100/500/10K	10/28/2020 10:21:05 AM
6	015CALS.d	200/1000/20K	10/28/2020 10:22:48 AM

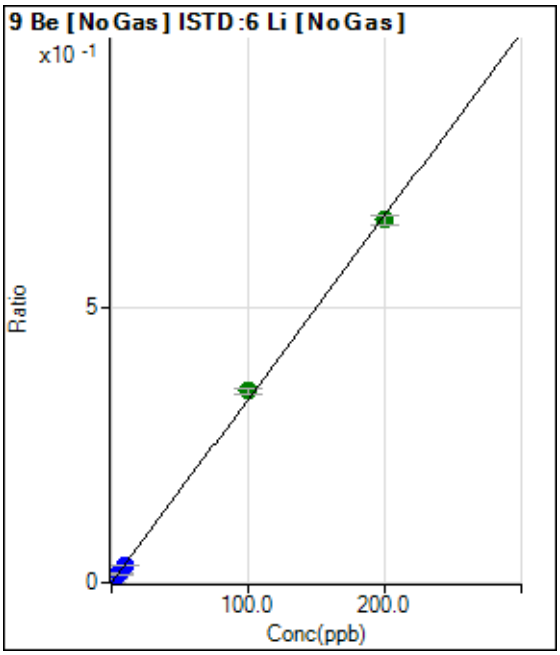
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	138650.82	0.0597	P	2.2
2	☐	2.000	2.069	197700.15	0.0867	P	2.4
3	☐	5.000	4.984	281818.78	0.1248	P	0.7
4	☐	10.000	10.232	431534.32	0.1934	P	2.2
5	☐	100.000	105.060	3048807.14	1.4321	A	4.5
6	☐	200.000	197.458	5549578.46	2.6391	A	1.7

y = 0.0131 * x + 0.0597
R = 0.9995
DL = 0.3042
BEC = 4.571

Weight: <None>
Min Conc: <None>

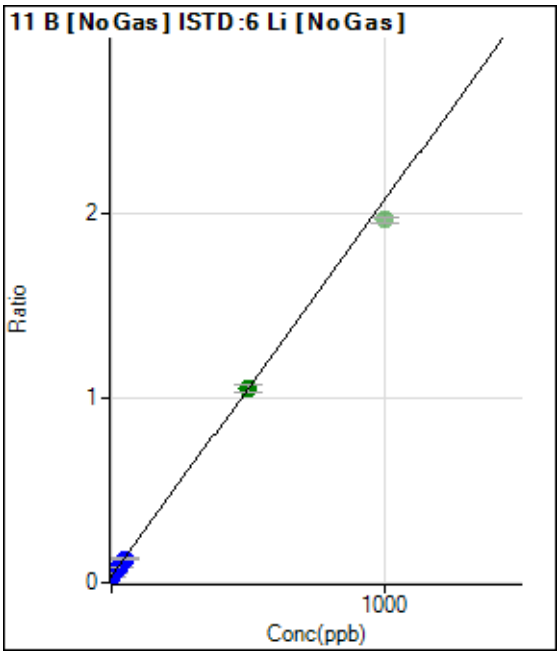


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.00	0.0000	P	34.9
2	☐	2.000	1.948	14807.89	0.0065	P	1.2
3	☐	5.000	4.729	35554.87	0.0157	P	1.4
4	☐	10.000	9.761	72522.40	0.0325	P	2.2
5	☐	100.000	104.429	740235.51	0.3476	A	3.3
6	☐	200.000	197.805	1384208.84	0.6583	A	2.7

y = 0.0033 * x + 1.0770E-005
R = 0.9996
DL = 0.003387
BEC = 0.003236

Weight: <None>
Min Conc: <None>

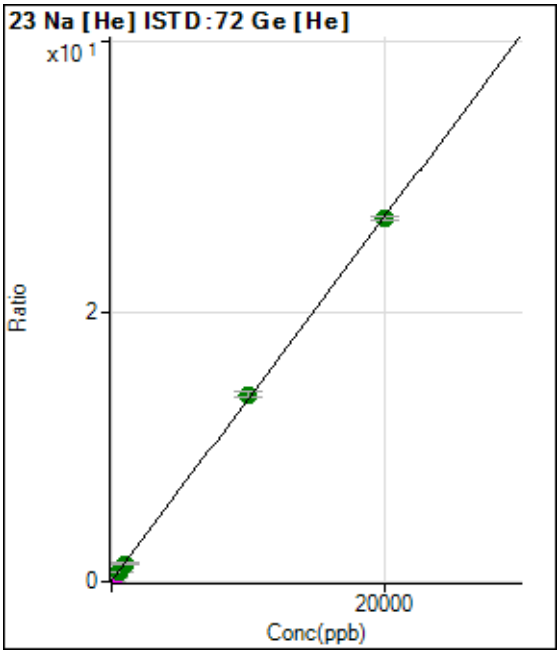
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	81586.89	0.0351	P	1.6
2	☐	10.000	8.722	120646.49	0.0529	P	2.1
3	☐	25.000	22.025	180798.81	0.0801	P	1.7
4	☐	50.000	45.592	285980.74	0.1282	P	3.7
5	☐	500.000	500.615	2250087.99	1.0568	A	4.0
6	☑	1000.000		4143238.90	1.9702	A	1.3

y = 0.0020 * x + 0.0351
R = 1.0000
DL = 0.8187
BEC = 17.21

Weight: <None>
Min Conc: <None>

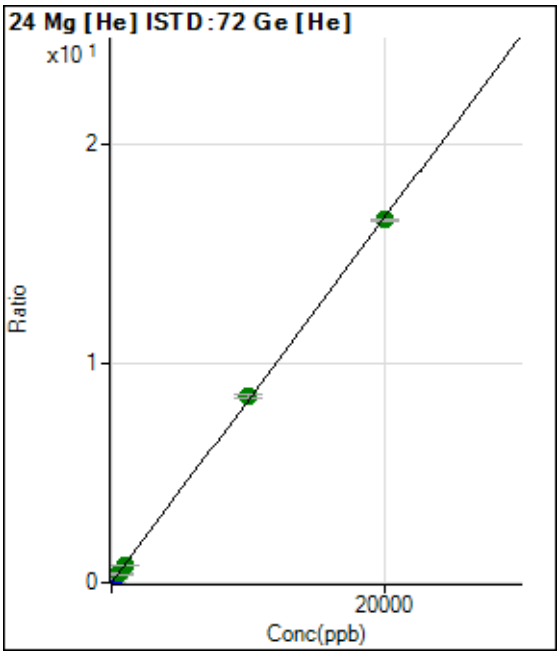


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	131515.05	0.0578	P	2.0
2	☐	200.000	199.612	744566.01	0.3270	M	1.4
3	☐	500.000	470.667	1569159.98	0.6926	A	1.3
4	☐	1000.000	959.388	3006280.16	1.3517	A	1.9
5	☐	10000.00	10232.59	30466712.88	13.8580	A	2.6
6	☐	20000.00	19886.46	56662949.16	26.8778	A	1.2

y = 0.0013 * x + 0.0578
R = 0.9999
DL = 2.623
BEC = 42.85

Weight: <None>
Min Conc: <None>

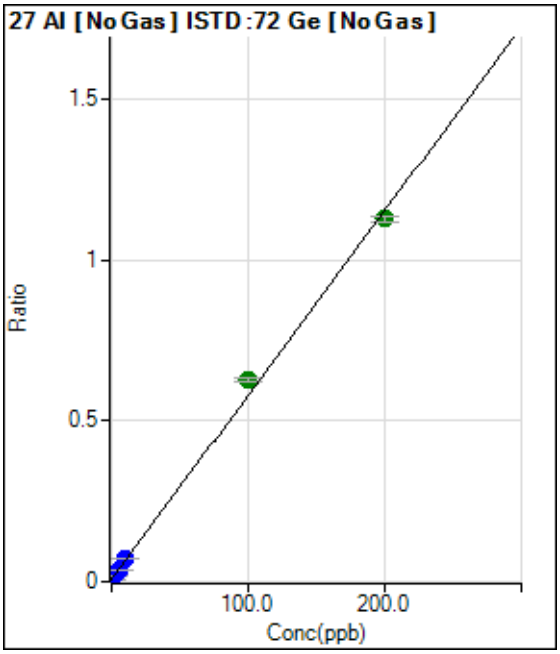
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1563.46	0.0007	P	5.6
2	☐	200.000	205.430	390761.57	0.1716	P	1.1
3	☐	500.000	481.540	909184.13	0.4013	A	4.0
4	☐	1000.000	992.067	1837404.30	0.8261	A	1.2
5	☐	10000.00	10231.83	18719133.05	8.5140	A	2.3
6	☐	20000.00	19884.88	34881459.48	16.5457	A	0.9

y = 8.3204E-004 * x + 6.8734E-004
R = 0.9999
DL = 0.1396
BEC = 0.8261

Weight: <None>
Min Conc: <None>

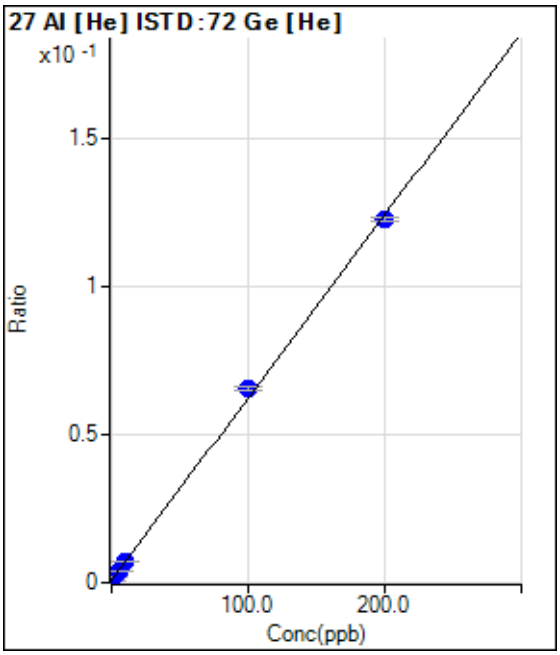


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	37815.61	0.0072	P	1.0
2	☐	2.000	2.120	101082.00	0.0193	P	1.0
3	☐	5.000	5.308	195588.27	0.0376	P	0.2
4	☐	10.000	11.004	363113.53	0.0702	P	1.0
5	☐	100.000	108.407	3228002.14	0.6285	A	2.4
6	☐	200.000	195.737	5667919.92	1.1289	A	1.5

y = 0.0057 * x + 0.0072
R = 0.9987
DL = 0.03946
BEC = 1.254

Weight: <None>
Min Conc: <None>

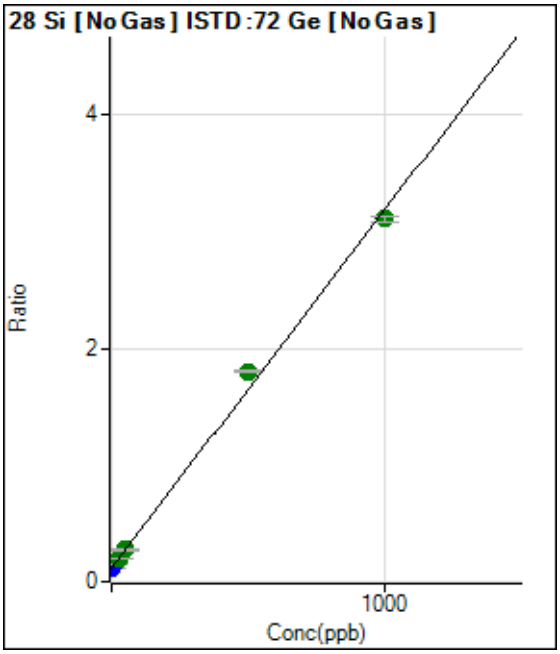
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1783.49	0.0008	P	12.9
2	☐	2.000	1.976	4557.49	0.0020	P	5.6
3	☐	5.000	4.883	8596.11	0.0038	P	2.5
4	☐	10.000	10.038	15505.56	0.0070	P	2.8
5	☐	100.000	104.971	143996.13	0.0655	P	1.9
6	☐	200.000	197.516	258313.39	0.1225	P	1.1

y = 6.1635E-004 * x + 7.8437E-004
R = 0.9996
DL = 0.4938
BEC = 1.273

Weight: <None>
Min Conc: <None>

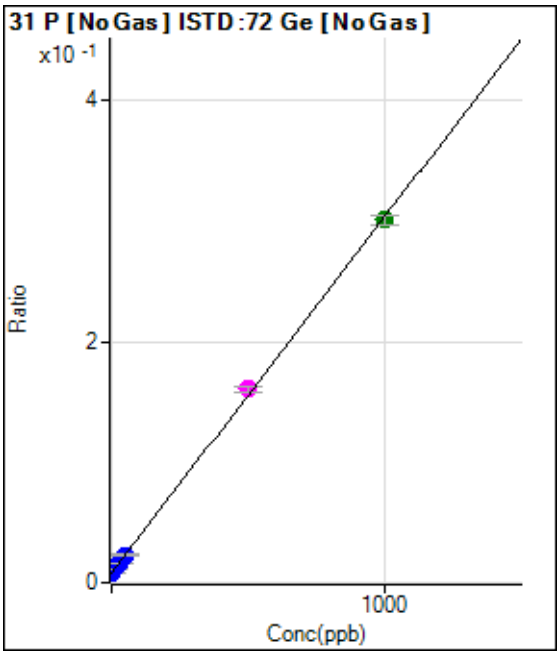


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	607905.09	0.1155	P	0.7
2	☐	10.000	10.798	776953.84	0.1487	P	1.6
3	☐	25.000	25.871	1013612.54	0.1949	A	1.6
4	☐	50.000	51.444	1413034.93	0.2734	A	1.5
5	☐	500.000	548.870	9244016.53	1.7996	A	0.9
6	☐	1000.000	975.463	15605839.77	3.1085	A	1.8

y = 0.0031 * x + 0.1155
R = 0.9983
DL = 0.8265
BEC = 37.65

Weight: <None>
Min Conc: <None>

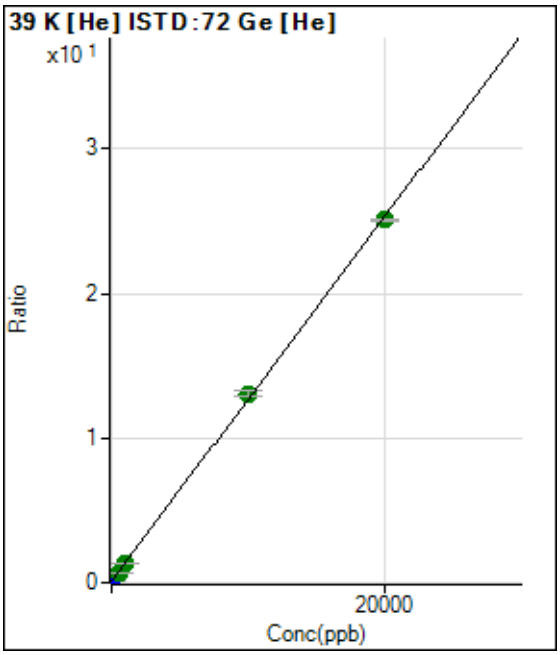
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	42334.84	0.0080	P	1.8
2	☐	10.000	10.130	57673.36	0.0110	P	1.5
3	☐	25.000	24.868	79999.93	0.0154	P	0.6
4	☐	50.000	50.834	119108.34	0.0230	P	0.9
5	☐	500.000	515.862	823101.92	0.1602	M	2.7
6	☐	1000.000	992.029	1509614.77	0.3007	A	2.5

y = 2.9502E-004 * x + 0.0080
R = 0.9998
DL = 1.503
BEC = 27.27

Weight: <None>
Min Conc: <None>

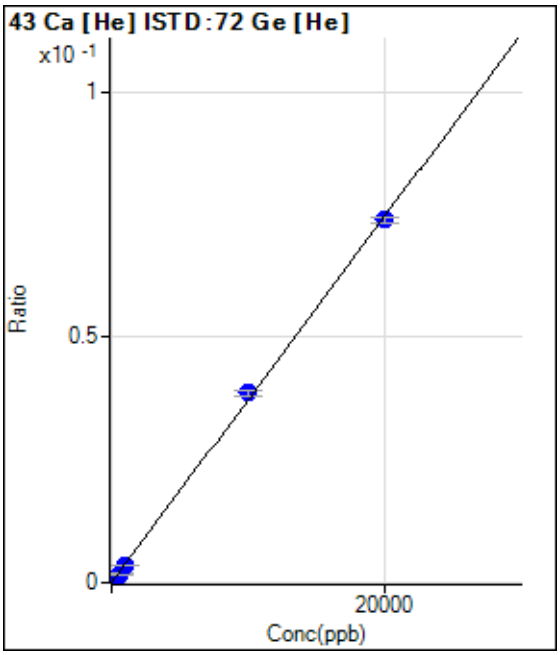


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226943.56	0.0998	P	3.3
2	☐	200.000	198.355	796047.02	0.3496	P	0.4
3	☐	500.000	475.605	1583203.73	0.6988	A	3.3
4	☐	1000.000	978.528	2963182.25	1.3323	A	0.8
5	☐	10000.00	10319.70	28801651.24	13.0983	A	2.3
6	☐	20000.00	19841.84	52900645.88	25.0922	A	0.2

y = 0.0013 * x + 0.0998
R = 0.9998
DL = 7.784
BEC = 79.19

Weight: <None>
Min Conc: <None>

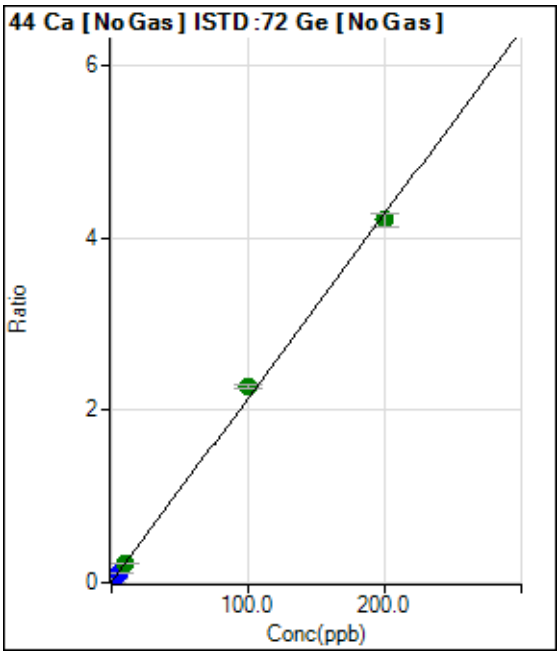
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0000	P	14.8
2	☐	200.000	196.362	1726.81	0.0008	P	3.6
3	☐	500.000	464.119	3980.65	0.0018	P	3.2
4	☐	1000.000	970.928	8109.22	0.0036	P	3.7
5	☐	10000.00	10359.22	84972.11	0.0386	P	2.8
6	☐	20000.00	19822.77	155861.41	0.0739	P	1.4

y = 3.7283E-006 * x + 2.6309E-005
R = 0.9998
DL = 3.129
BEC = 7.056

Weight: <None>
Min Conc: <None>

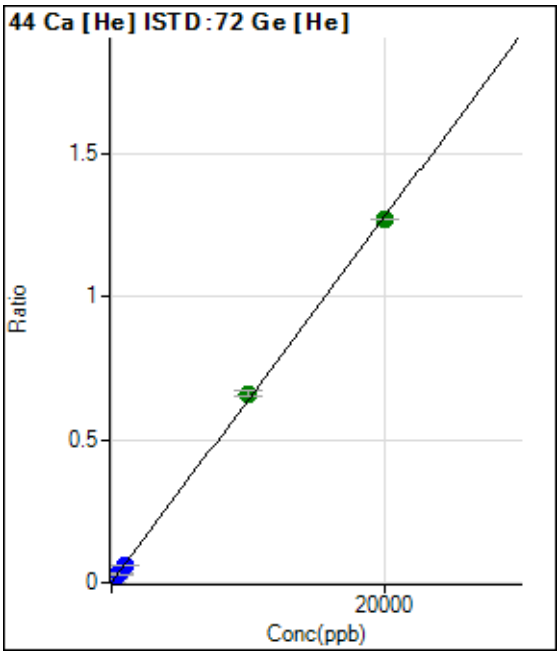


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43389.46	0.0082	P	1.6
2	☐	2.000	2.052	272037.48	0.0520	P	1.3
3	☐	5.000	4.974	595020.11	0.1144	P	0.4
4	☐	10.000	10.157	1163352.01	0.2251	A	0.8
5	☐	100.000	106.300	11699017.33	2.2772	A	1.6
6	☐	200.000	196.842	21130507.60	4.2099	A	4.1

y = 0.0213 * x + 0.0082
R = 0.9993
DL = 0.01877
BEC = 0.3864

Weight: <None>
Min Conc: <None>

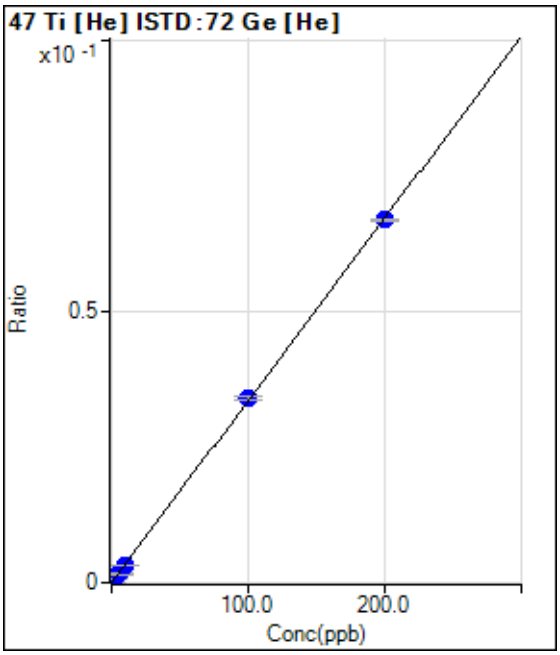
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1576.79	0.0007	P	11.0
2	☐	200.000	189.734	29151.22	0.0128	P	1.3
3	☐	500.000	464.712	68765.37	0.0303	P	1.1
4	☐	1000.000	959.704	137755.56	0.0619	P	0.8
5	☐	10000.00	10326.77	1450291.12	0.6597	A	3.3
6	☐	20000.00	19839.61	2670654.44	1.2668	A	0.1

y = 6.3815E-005 * x + 6.9386E-004
R = 0.9998
DL = 3.584
BEC = 10.87

Weight: <None>
Min Conc: <None>

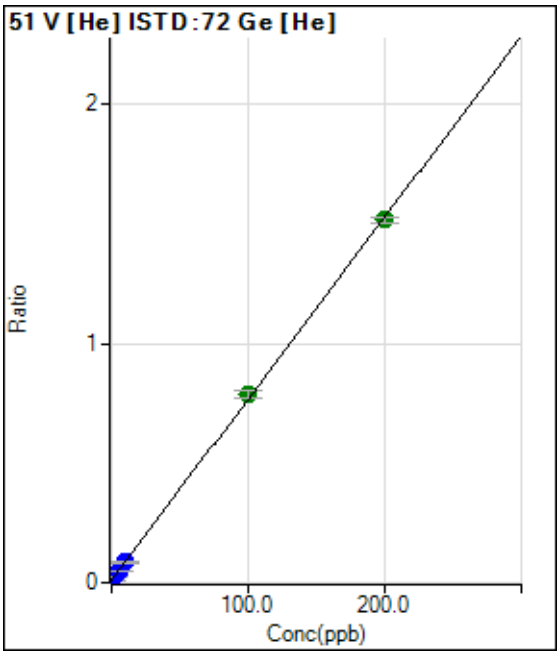


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	64.4
2	☐	2.000	1.748	1360.09	0.0006	P	7.7
3	☐	5.000	4.927	3774.38	0.0017	P	11.1
4	☐	10.000	9.510	7125.31	0.0032	P	0.4
5	☐	100.000	101.552	75004.55	0.0341	P	2.0
6	☐	200.000	199.253	141072.86	0.0669	P	0.4

y = 3.3578E-004 * x + 1.0239E-005
R = 1.0000
DL = 0.05894
BEC = 0.03049

Weight: <None>
Min Conc: <None>

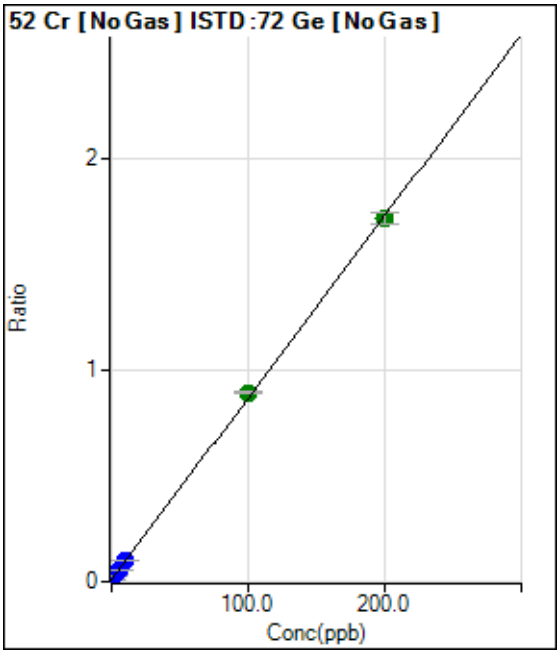
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22242.54	0.0098	P	1.4
2	☐	2.000	1.932	55618.96	0.0244	P	1.1
3	☐	5.000	4.756	103873.53	0.0458	P	1.0
4	☐	10.000	9.856	188014.12	0.0845	P	0.7
5	☐	100.000	102.641	1732747.43	0.7883	A	3.5
6	☐	200.000	198.693	3197877.51	1.5169	A	1.5

y = 0.0076 * x + 0.0098
R = 0.9999
DL = 0.05358
BEC = 1.288

Weight: <None>
Min Conc: <None>

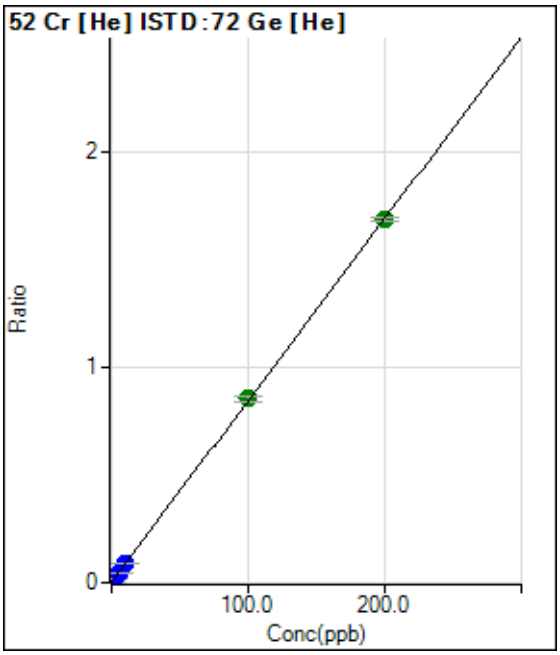


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50326.35	0.0096	P	2.1
2	☐	2.000	2.055	142068.01	0.0272	P	3.7
3	☐	5.000	4.998	272697.02	0.0524	P	0.8
4	☐	10.000	10.208	502051.70	0.0971	P	0.8
5	☐	100.000	102.959	4585852.02	0.8927	A	0.8
6	☐	200.000	198.509	8595394.66	1.7124	A	3.2

y = 0.0086 * x + 0.0096
R = 0.9998
DL = 0.069
BEC = 1.115

Weight: <None>
Min Conc: <None>

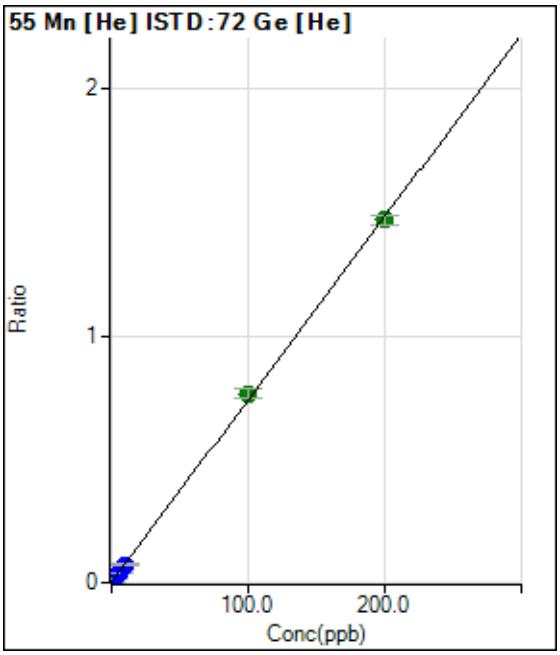
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5487.86	0.0024	P	3.6
2	☐	2.000	1.945	42900.79	0.0188	P	0.7
3	☐	5.000	4.803	97374.99	0.0430	P	1.0
4	☐	10.000	9.901	191354.97	0.0860	P	1.2
5	☐	100.000	100.982	1880188.30	0.8554	A	3.6
6	☐	200.000	199.519	3557833.80	1.6876	A	1.2

y = 0.0084 * x + 0.0024
R = 1.0000
DL = 0.03058
BEC = 0.2853

Weight: <None>
Min Conc: <None>

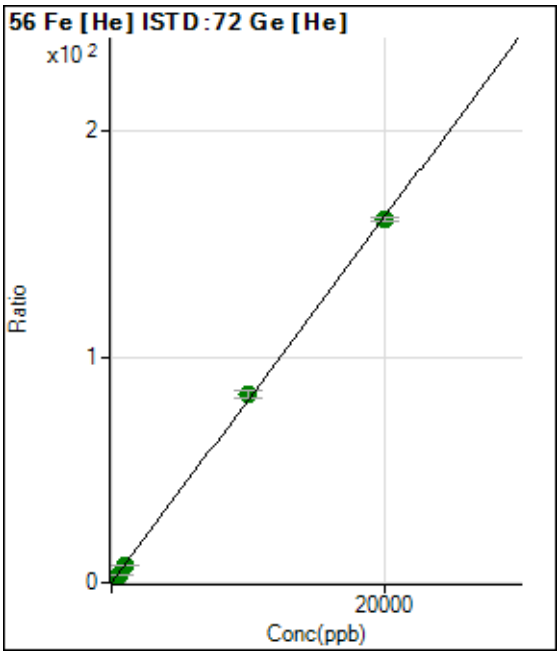


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3017.05	0.0013	P	6.8
2	☐	2.000	1.937	35660.35	0.0157	P	2.1
3	☐	5.000	4.765	82928.07	0.0366	P	1.6
4	☐	10.000	9.804	164327.61	0.0739	P	1.9
5	☐	100.000	103.124	1680004.61	0.7645	A	4.9
6	☐	200.000	198.454	3099239.12	1.4701	A	2.5

y = 0.0074 * x + 0.0013
R = 0.9998
DL = 0.03632
BEC = 0.1793

Weight: <None>
Min Conc: <None>

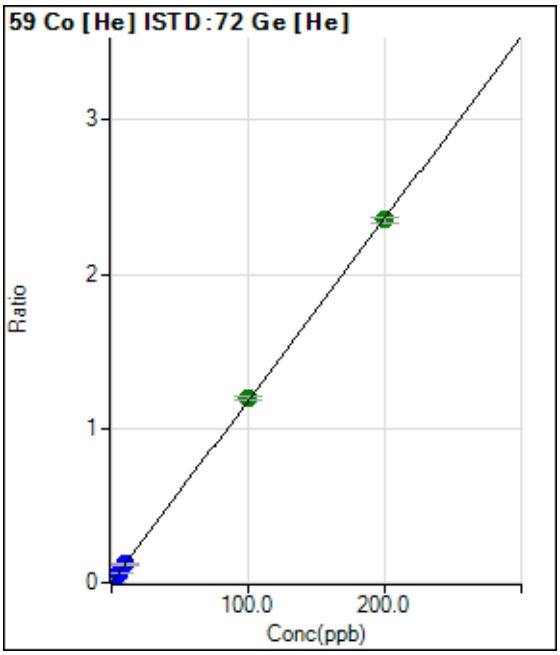
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34236.81	0.0150	P	2.2
2	☐	200.000	193.783	3605188.07	1.5833	A	1.8
3	☐	500.000	462.981	8524385.50	3.7620	A	0.2
4	☐	1000.000	970.630	17504881.82	7.8704	A	0.5
5	☐	10000.00	10321.89	183639537.2	83.5502	A	3.7
6	☐	20000.00	19841.51	338560588.2	160.592	A	1.1

y = 0.0081 * x + 0.0150
R = 0.9998
DL = 0.1212
BEC = 1.859

Weight: <None>
Min Conc: <None>

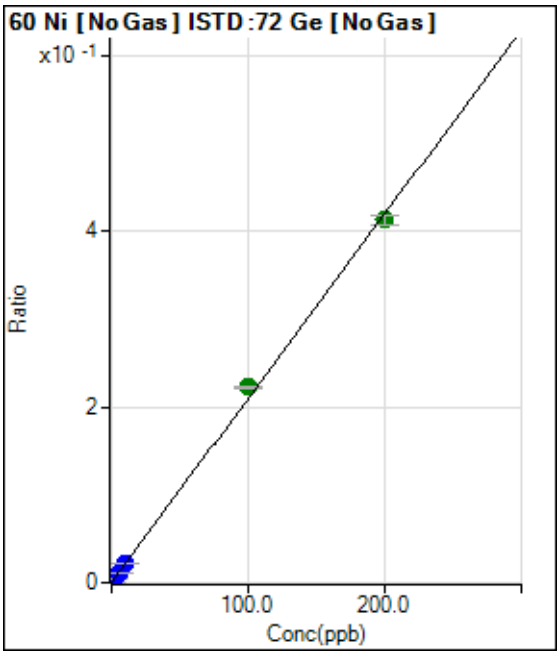


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	730.04	0.0003	P	15.7
2	☐	2.000	1.966	53585.65	0.0235	P	1.1
3	☐	5.000	4.872	131032.61	0.0578	P	1.4
4	☐	10.000	10.038	264242.11	0.1188	P	0.8
5	☐	100.000	101.356	2631616.16	1.1968	A	1.7
6	☐	200.000	199.324	4961165.86	2.3532	A	1.5

y = 0.0118 * x + 3.2098E-004
R = 1.0000
DL = 0.01278
BEC = 0.02719

Weight: <None>
Min Conc: <None>

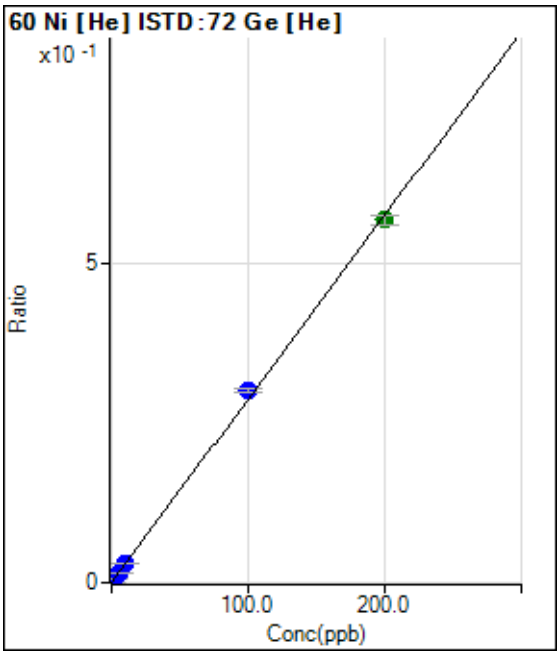
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1156.74	0.0002	P	16.7
2	☐	2.000	2.142	24572.50	0.0047	P	2.8
3	☐	5.000	5.283	58643.39	0.0113	P	1.9
4	☐	10.000	10.666	116522.84	0.0225	P	1.9
5	☐	100.000	106.018	1140856.31	0.2221	A	1.7
6	☐	200.000	196.949	2070170.80	0.4124	A	2.8

y = 0.0021 * x + 2.1999E-004
R = 0.9994
DL = 0.05264
BEC = 0.1051

Weight: <None>
Min Conc: <None>

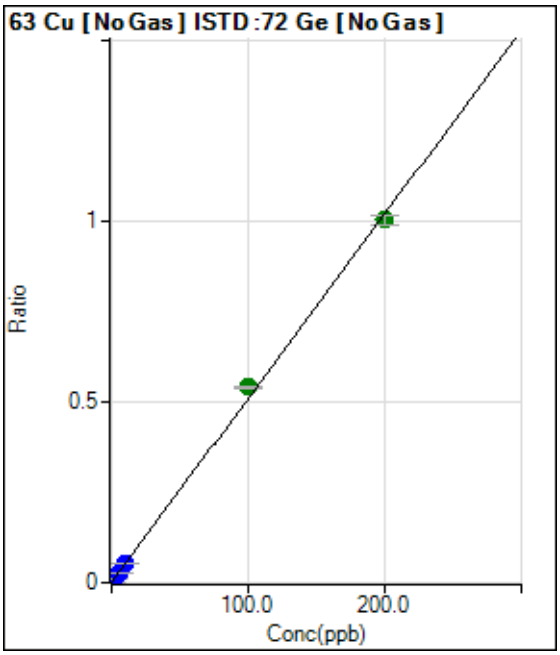


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	590.02	0.0003	P	12.0
2	☐	2.000	1.986	13600.33	0.0060	P	3.8
3	☐	5.000	4.932	32746.50	0.0145	P	1.5
4	☐	10.000	10.216	65969.52	0.0297	P	1.3
5	☐	100.000	104.779	663657.08	0.3018	P	2.1
6	☐	200.000	197.601	1199502.30	0.5690	A	2.8

y = 0.0029 * x + 2.5894E-004
R = 0.9996
DL = 0.03227
BEC = 0.08997

Weight: <None>
Min Conc: <None>

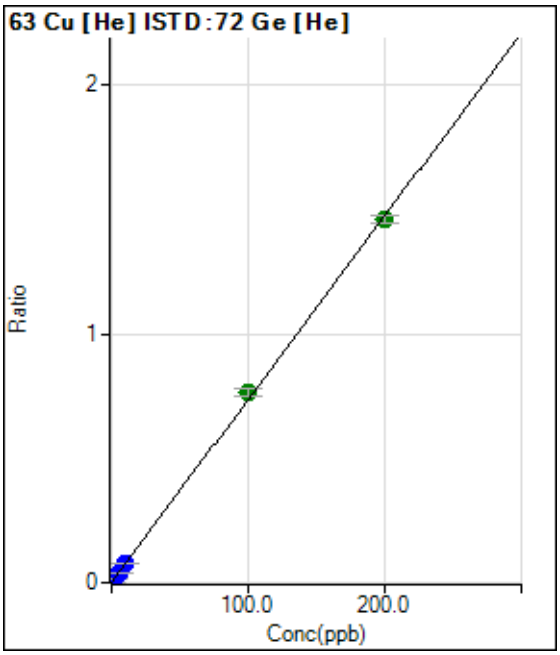
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3397.15	0.0006	P	1.8
2	☐	2.000	2.139	60263.94	0.0115	P	5.5
3	☐	5.000	5.163	140064.71	0.0269	P	1.7
4	☐	10.000	10.539	280724.04	0.0543	P	0.9
5	☐	100.000	106.002	2775676.42	0.5404	A	1.7
6	☐	200.000	196.967	5037572.53	1.0035	A	3.0

y = 0.0051 * x + 6.4557E-004
R = 0.9994
DL = 0.006949
BEC = 0.1268

Weight: <None>
Min Conc: <None>

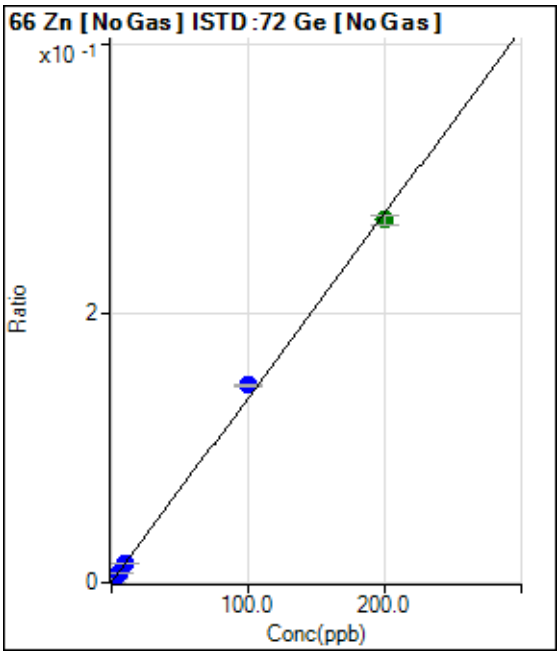


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1910.17	0.0008	P	9.8
2	☐	2.000	2.009	35576.95	0.0156	P	0.8
3	☐	5.000	4.821	82288.79	0.0363	P	2.0
4	☐	10.000	10.225	169251.72	0.0761	P	1.3
5	☐	100.000	103.954	1683425.70	0.7660	A	4.1
6	☐	200.000	198.016	3074301.73	1.4583	A	2.1

y = 0.0074 * x + 8.4016E-004
R = 0.9997
DL = 0.03371
BEC = 0.1141

Weight: <None>
Min Conc: <None>

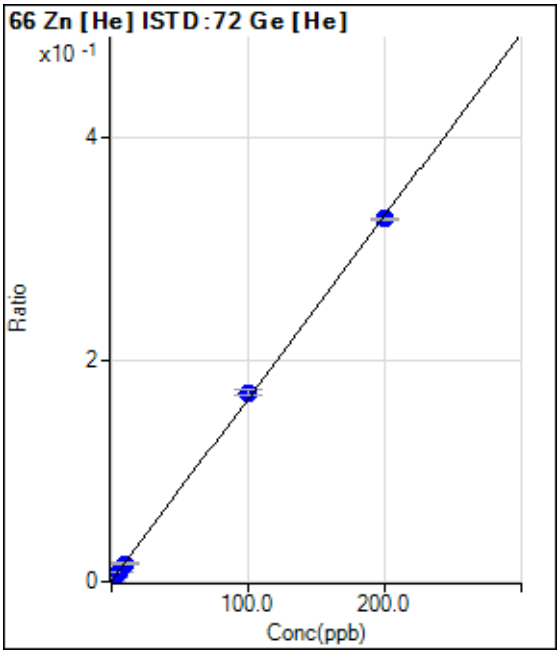
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2200.22	0.0004	P	6.5
2	☐	2.000	2.005	16520.35	0.0032	P	2.5
3	☐	5.000	4.988	37669.28	0.0072	P	2.4
4	☐	10.000	10.167	74065.53	0.0143	P	2.0
5	☐	100.000	106.788	752685.43	0.1465	P	1.0
6	☐	200.000	196.598	1352343.00	0.2694	A	2.9

y = 0.0014 * x + 4.1822E-004
R = 0.9992
DL = 0.05956
BEC = 0.3057

Weight: <None>
Min Conc: <None>

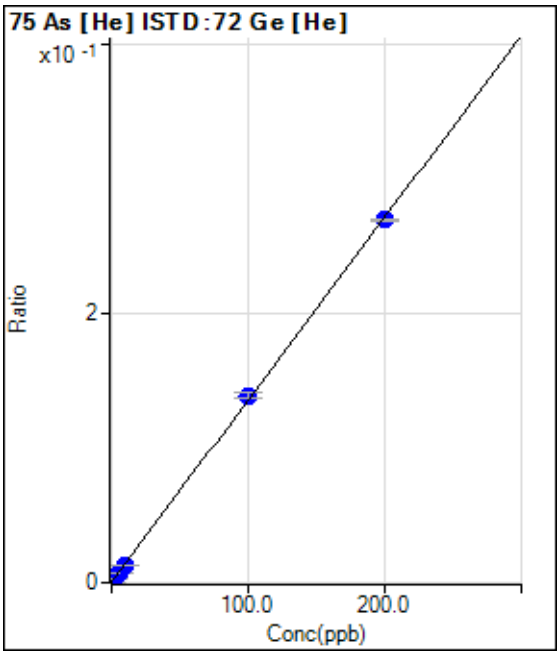


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1243.42	0.0005	P	5.9
2	☐	2.000	1.778	7899.11	0.0035	P	5.4
3	☐	5.000	4.750	18923.46	0.0084	P	3.2
4	☐	10.000	9.561	36165.17	0.0163	P	2.6
5	☐	100.000	103.146	373838.75	0.1701	P	3.2
6	☐	200.000	198.457	688765.25	0.3267	P	0.6

y = 0.0016 * x + 5.4674E-004
R = 0.9998
DL = 0.0584
BEC = 0.3327

Weight: <None>
Min Conc: <None>

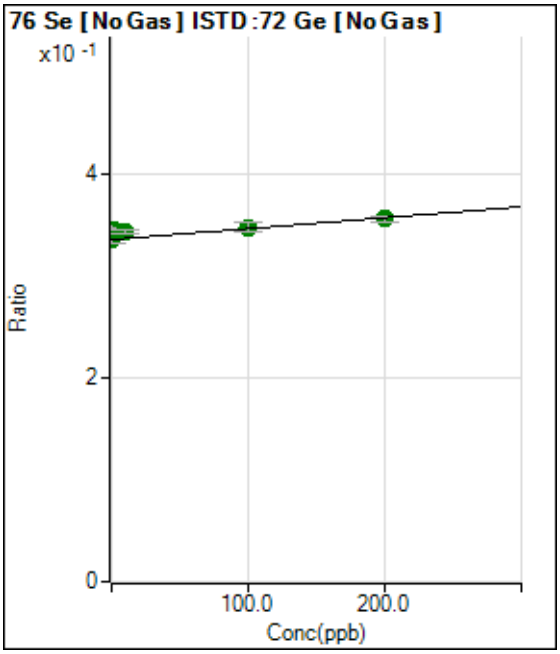
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1060.05	0.0005	P	4.2
2	☐	2.000	1.882	6852.89	0.0030	P	2.4
3	☐	5.000	4.644	15284.22	0.0067	P	0.7
4	☐	10.000	9.524	29673.65	0.0133	P	1.2
5	☐	100.000	102.496	305694.27	0.1390	P	2.4
6	☐	200.000	198.786	567591.37	0.2692	P	0.5

y = 0.0014 * x + 4.6590E-004
R = 0.9999
DL = 0.04371
BEC = 0.3446

Weight: <None>
Min Conc: <None>

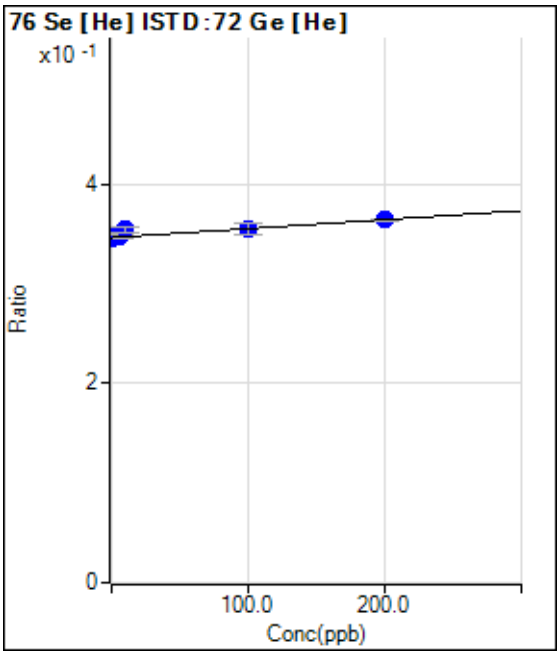


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1770125.18	0.3364	A	2.1
2	☐	2.000	95.583	1811950.50	0.3467	A	2.0
3	☐	5.000	77.884	1793255.13	0.3448	A	1.6
4	☐	10.000	75.502	1781008.88	0.3445	A	1.3
5	☐	100.000	110.732	1789169.77	0.3483	A	2.7
6	☐	200.000	188.601	1790787.37	0.3567	A	1.3

y = 1.0729E-004 * x + 0.3364
R = 0.8486
DL = 200.7
BEC = 3136

Weight: <None>
Min Conc: <None>

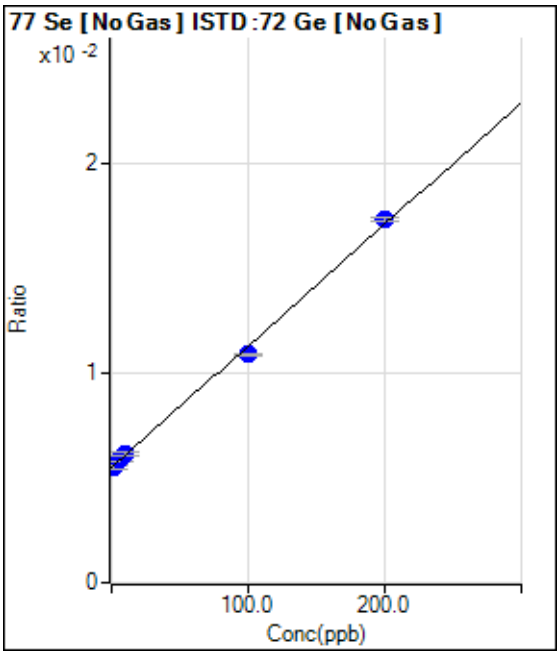
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	787302.91	0.3460	P	1.9
2	☐	2.000	15.447	790951.08	0.3474	P	1.5
3	☐	5.000	11.160	786266.86	0.3470	P	0.9
4	☐	10.000	86.792	786957.85	0.3538	P	1.3
5	☐	100.000	98.519	780148.76	0.3549	P	3.0
6	☐	200.000	196.612	766893.87	0.3638	P	0.4

y = 9.0411E-005 * x + 0.3460
R = 0.9264
DL = 213.6
BEC = 3827

Weight: <None>
Min Conc: <None>

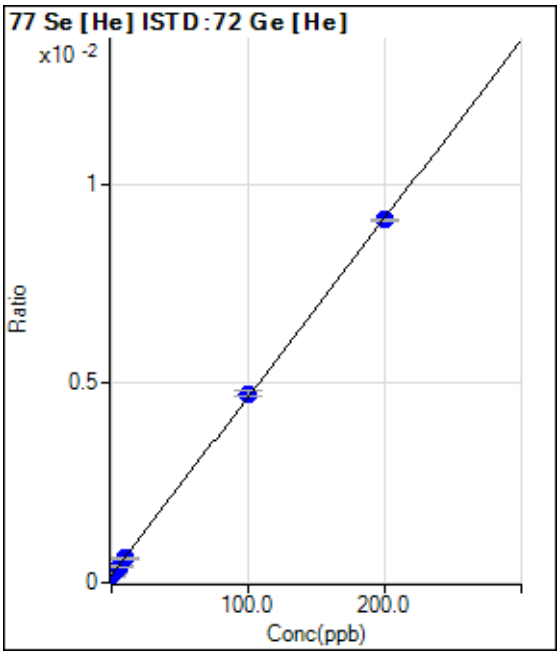


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28994.89	0.0055	P	2.7
2	☐	2.000	0.742	29015.07	0.0056	P	3.3
3	☐	5.000	6.601	30645.35	0.0059	P	4.4
4	☐	10.000	10.599	31664.42	0.0061	P	2.9
5	☐	100.000	92.803	55996.41	0.0109	P	1.0
6	☐	200.000	203.541	87022.99	0.0173	P	1.1

y = 5.8087E-005 * x + 0.0055
R = 0.9990
DL = 7.693
BEC = 94.85

Weight: <None>
Min Conc: <None>

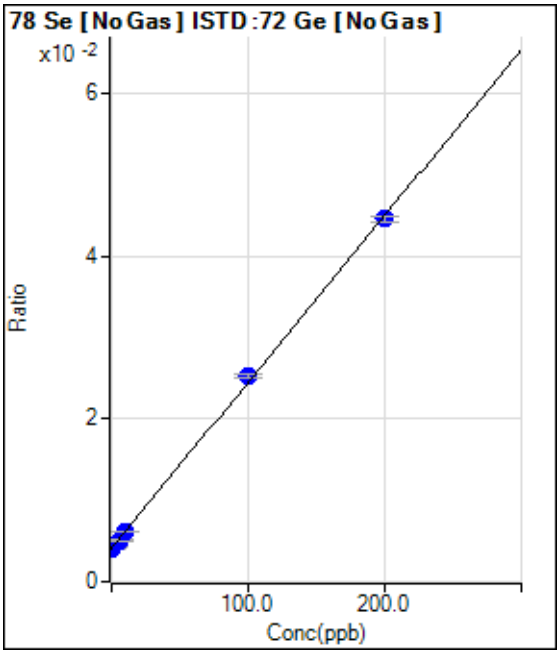
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.68	0.0002	P	23.4
2	☐	2.000	1.488	586.69	0.0003	P	9.1
3	☐	5.000	4.640	903.39	0.0004	P	9.2
4	☐	10.000	9.362	1356.76	0.0006	P	7.0
5	☐	100.000	101.759	10430.94	0.0047	P	2.9
6	☐	200.000	199.166	19190.68	0.0091	P	0.7

y = 4.4743E-005 * x + 1.9117E-004
R = 0.9999
DL = 2.993
BEC = 4.273

Weight: <None>
Min Conc: <None>

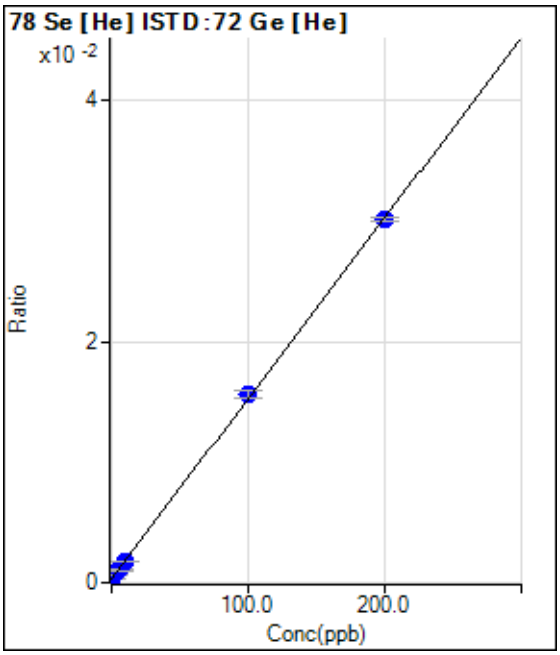


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21641.03	0.0041	P	3.0
2	☐	2.000	1.658	23263.69	0.0045	P	3.5
3	☐	5.000	4.499	26175.86	0.0050	P	2.6
4	☐	10.000	9.818	31637.48	0.0061	P	2.8
5	☐	100.000	103.742	130101.17	0.0253	P	1.2
6	☐	200.000	198.154	224090.91	0.0446	P	1.3

y = 2.0449E-004 * x + 0.0041
R = 0.9997
DL = 1.794
BEC = 20.11

Weight: <None>
Min Conc: <None>

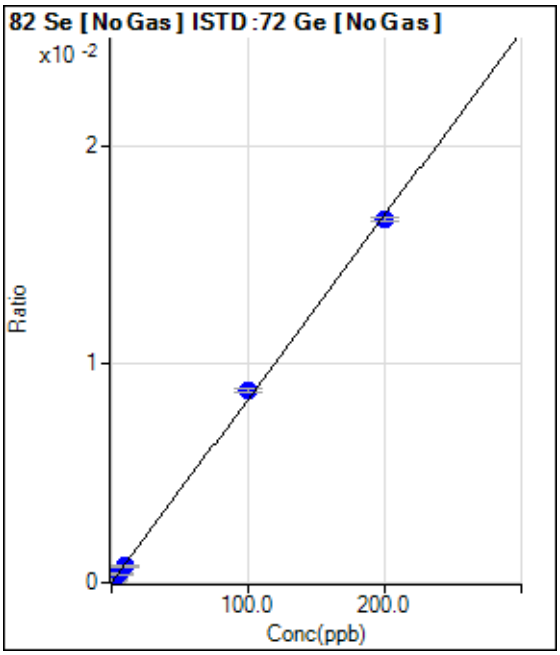
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	785.36	0.0003	P	10.6
2	☐	2.000	2.087	1498.09	0.0007	P	3.8
3	☐	5.000	4.663	2363.55	0.0010	P	3.1
4	☐	10.000	9.716	4000.60	0.0018	P	1.3
5	☐	100.000	102.154	34336.89	0.0156	P	4.4
6	☐	200.000	198.945	63459.09	0.0301	P	1.1

y = 1.4957E-004 * x + 3.4557E-004
R = 0.9999
DL = 0.7335
BEC = 2.31

Weight: <None>
Min Conc: <None>

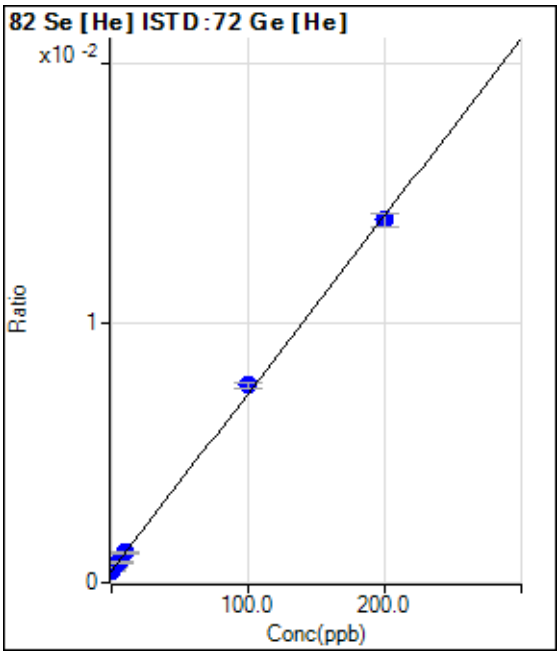


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-24.57	0.0000	P	-697.8
2	☐	2.000	1.531	650.09	0.0001	P	67.9
3	☐	5.000	4.794	2072.76	0.0004	P	3.8
4	☐	10.000	8.969	3875.77	0.0007	P	10.2
5	☐	100.000	105.007	45358.12	0.0088	P	1.9
6	☐	200.000	197.558	83432.08	0.0166	P	1.2

y = 8.4139E-005 * x - 4.7807E-006
R = 0.9995
DL = 1.189
BEC = -0.05682

Weight: <None>
Min Conc: <None>

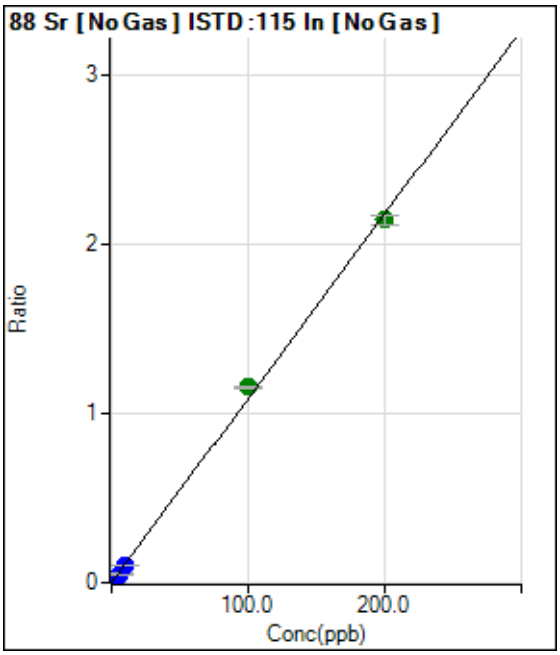
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1033.39	0.0005	P	16.7
2	☐	2.000	1.863	1326.76	0.0006	P	5.8
3	☐	5.000	4.817	1776.81	0.0008	P	9.8
4	☐	10.000	10.415	2596.97	0.0012	P	6.6
5	☐	100.000	104.445	16710.59	0.0076	P	2.9
6	☐	200.000	197.763	29482.79	0.0140	P	3.9

y = 6.8414E-005 * x + 4.5515E-004
R = 0.9996
DL = 3.332
BEC = 6.653

Weight: <None>
Min Conc: <None>

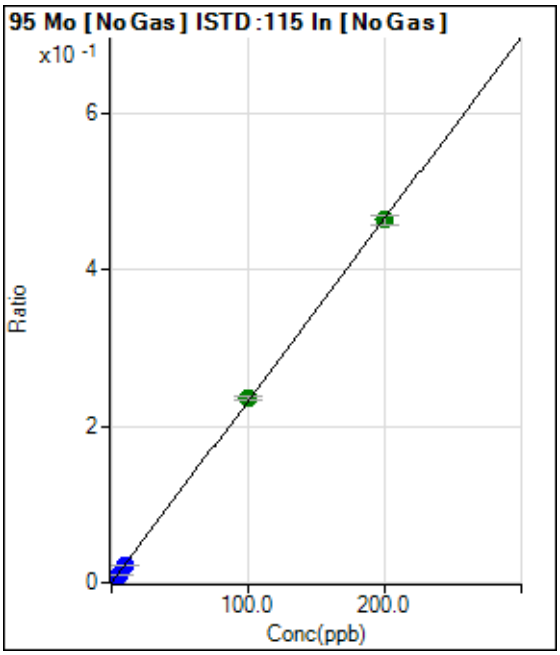


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1416.77	0.0002	P	10.1
2	☐	2.000	1.905	124937.23	0.0210	P	0.9
3	☐	5.000	4.631	299025.63	0.0506	P	2.1
4	☐	10.000	9.622	607323.80	0.1050	P	1.4
5	☐	100.000	106.136	6575219.70	1.1555	A	1.5
6	☐	200.000	196.961	11826581.90	2.1441	A	2.6

y = 0.0109 * x + 2.3950E-004
R = 0.9993
DL = 0.00667
BEC = 0.022

Weight: <None>
Min Conc: <None>

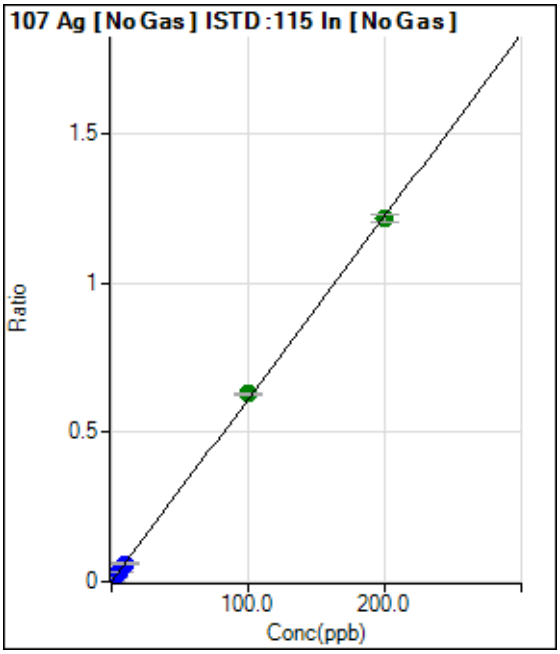
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	143.33	0.0000	P	14.8
2	☐	2.000	1.941	27001.21	0.0045	P	2.2
3	☐	5.000	4.687	64403.22	0.0109	P	1.5
4	☐	10.000	9.764	131330.04	0.0227	P	1.5
5	☐	100.000	101.175	1337136.18	0.2350	A	1.7
6	☐	200.000	199.433	2555068.03	0.4632	A	2.6

y = 0.0023 * x + 2.4229E-005
R = 1.0000
DL = 0.004638
BEC = 0.01043

Weight: <None>
Min Conc: <None>

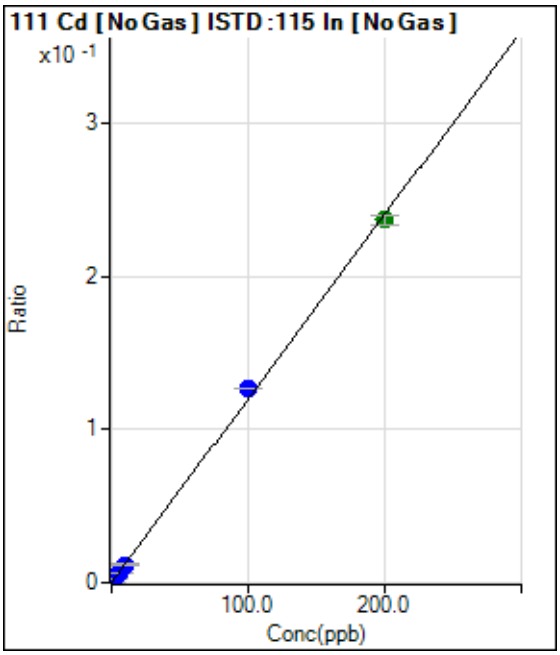


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.01	0.0001	P	11.9
2	☐	2.000	1.989	72860.66	0.0122	P	0.1
3	☐	5.000	4.852	175633.34	0.0298	P	2.5
4	☐	10.000	9.980	353652.78	0.0611	P	0.3
5	☐	100.000	102.668	3574630.88	0.6282	A	1.1
6	☐	200.000	198.671	6704951.98	1.2155	A	2.1

y = 0.0061 * x + 6.7657E-005
R = 0.9999
DL = 0.003942
BEC = 0.01106

Weight: <None>
Min Conc: <None>

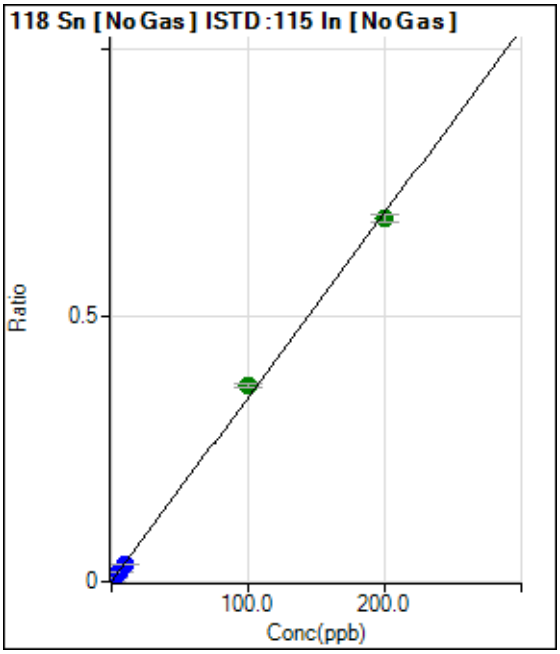
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	57.9
2	☐	2.000	2.014	14428.14	0.0024	P	2.1
3	☐	5.000	4.801	34047.74	0.0058	P	2.9
4	☐	10.000	9.796	68042.21	0.0118	P	2.9
5	☐	100.000	105.503	720480.15	0.1266	P	0.8
6	☐	200.000	197.263	1305740.34	0.2367	A	3.0

y = 0.0012 * x + 6.2238E-006
R = 0.9995
DL = 0.009001
BEC = 0.005187

Weight: <None>
Min Conc: <None>

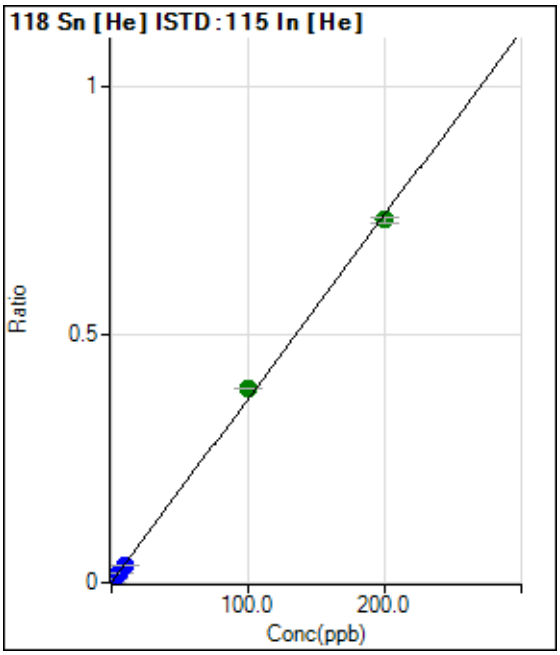


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2760.35	0.0005	P	1.3
2	☐	2.000	1.849	40864.57	0.0069	P	3.7
3	☐	5.000	4.587	96439.67	0.0163	P	0.8
4	☐	10.000	9.594	194690.28	0.0337	P	1.2
5	☐	100.000	106.425	2097683.04	0.3686	A	1.4
6	☐	200.000	196.820	3758148.59	0.6812	A	2.3

y = 0.0035 * x + 4.6652E-004
R = 0.9992
DL = 0.005395
BEC = 0.1349

Weight: <None>
Min Conc: <None>

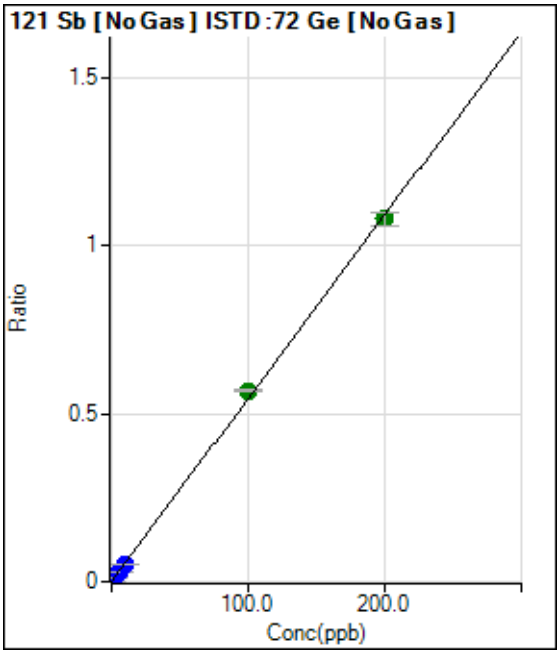
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2040.21	0.0005	P	8.1
2	☐	2.000	1.838	28848.83	0.0073	P	1.9
3	☐	5.000	4.655	68970.85	0.0178	P	2.4
4	☐	10.000	9.470	139540.48	0.0356	P	1.2
5	☐	100.000	105.530	1474248.42	0.3915	A	0.8
6	☐	200.000	197.272	2696574.12	0.7314	A	1.2

y = 0.0037 * x + 5.1823E-004
R = 0.9994
DL = 0.03398
BEC = 0.1399

Weight: <None>
Min Conc: <None>

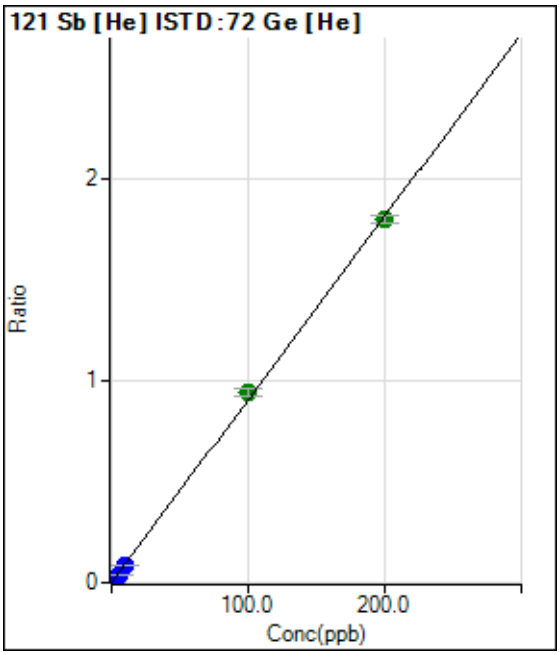


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2857.04	0.0005	P	8.6
2	☐	2.000	1.934	57918.06	0.0111	P	0.9
3	☐	5.000	4.720	136597.78	0.0263	P	1.4
4	☐	10.000	9.686	275654.26	0.0533	P	1.2
5	☐	100.000	104.061	2916104.12	0.5676	A	0.7
6	☐	200.000	197.993	5418768.04	1.0796	A	3.4

y = 0.0054 * x + 5.4291E-004
R = 0.9997
DL = 0.02574
BEC = 0.09962

Weight: <None>
Min Conc: <None>

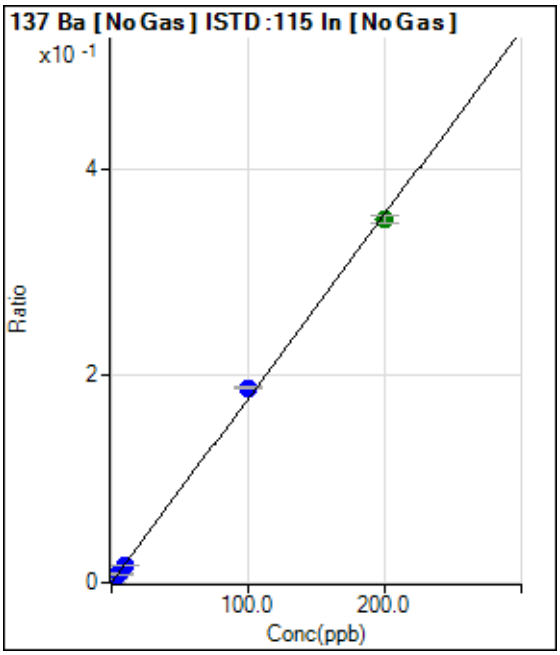
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1953.52	0.0009	P	9.4
2	☐	2.000	1.851	40188.56	0.0176	P	1.1
3	☐	5.000	4.506	94546.48	0.0417	P	1.6
4	☐	10.000	9.429	192113.75	0.0864	P	1.5
5	☐	100.000	103.702	2068800.33	0.9414	A	4.5
6	☐	200.000	198.192	3791168.90	1.7984	A	2.1

y = 0.0091 * x + 8.5945E-004
R = 0.9997
DL = 0.02679
BEC = 0.09476

Weight: <None>
Min Conc: <None>

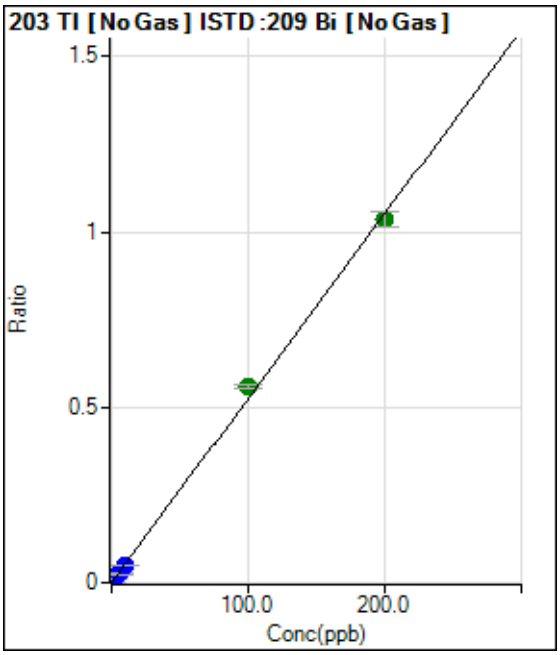


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	483.35	0.0001	P	20.0
2	☐	2.000	1.932	20977.29	0.0035	P	1.0
3	☐	5.000	4.684	49715.79	0.0084	P	2.3
4	☐	10.000	9.746	100871.37	0.0174	P	1.7
5	☐	100.000	105.909	1073440.61	0.1886	P	1.3
6	☐	200.000	197.067	1935938.46	0.3509	A	2.1

y = 0.0018 * x + 8.1788E-005
R = 0.9994
DL = 0.02758
BEC = 0.04594

Weight: <None>
Min Conc: <None>

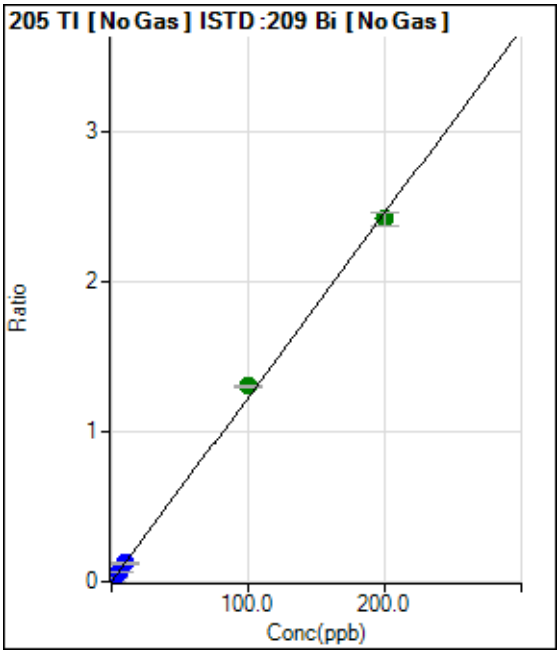
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	600.03	0.0001	P	5.3
2	☐	2.000	1.868	43937.90	0.0100	P	2.3
3	☐	5.000	4.709	108626.94	0.0249	P	2.0
4	☐	10.000	9.749	219480.55	0.0513	P	2.3
5	☐	100.000	106.264	2402184.34	0.5583	A	2.1
6	☐	200.000	196.889	4327497.02	1.0343	A	4.3

y = 0.0053 * x + 1.4142E-004
R = 0.9993
DL = 0.004286
BEC = 0.02692

Weight: <None>
Min Conc: <None>

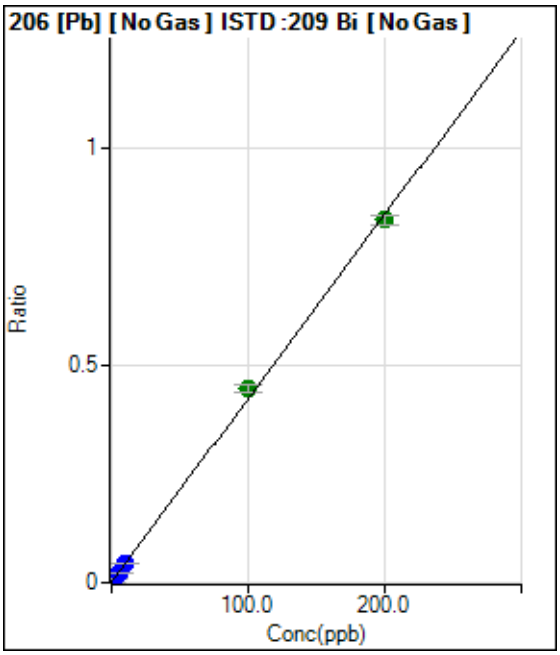


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1303.43	0.0003	P	8.1
2	☐	2.000	1.925	105819.16	0.0240	P	2.2
3	☐	5.000	4.808	259383.53	0.0594	P	1.8
4	☐	10.000	10.014	527400.60	0.1234	P	2.9
5	☐	100.000	106.067	5610584.08	1.3039	A	1.2
6	☐	200.000	196.972	10131424.22	2.4212	A	3.6

y = 0.0123 * x + 3.0650E-004
R = 0.9993
DL = 0.006026
BEC = 0.02494

Weight: <None>
Min Conc: <None>

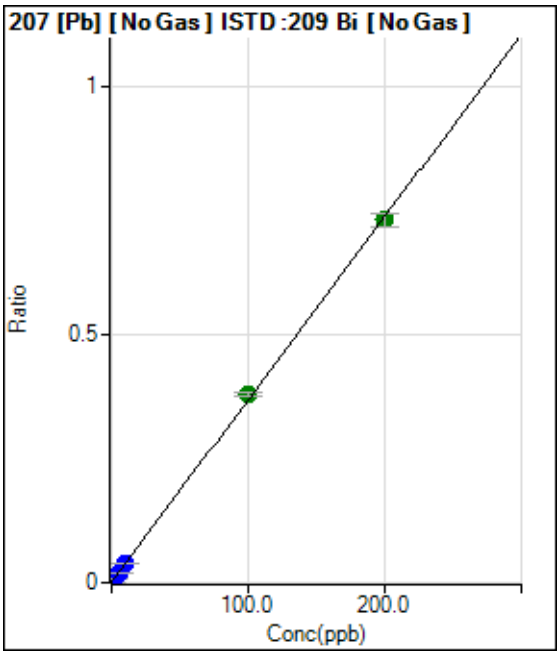
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4557.60	0.0011	P	7.7
2	☐	2.000	1.965	41379.51	0.0094	P	3.0
3	☐	5.000	4.868	94442.53	0.0216	P	2.4
4	☐	10.000	10.118	187232.41	0.0438	P	2.2
5	☐	100.000	105.472	1921340.02	0.4465	A	3.6
6	☐	200.000	197.262	3490609.22	0.8341	A	2.5

y = 0.0042 * x + 0.0011
R = 0.9995
DL = 0.05853
BEC = 0.2545

Weight: <None>
Min Conc: <None>

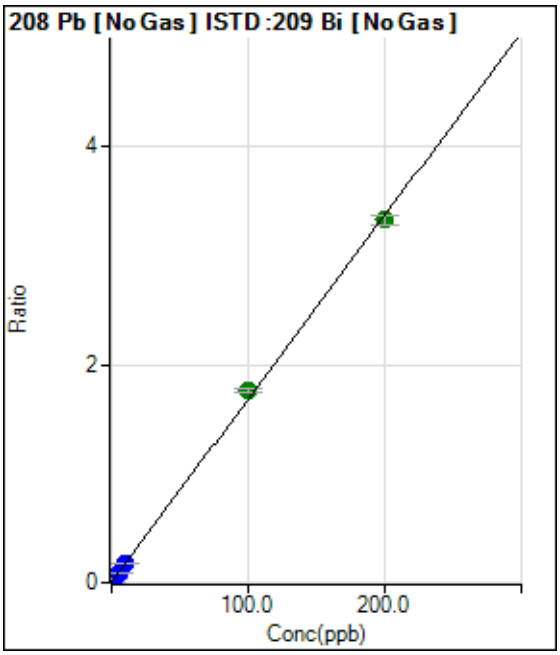


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3347.18	0.0008	P	1.7
2	☐	2.000	2.013	36236.61	0.0082	P	1.8
3	☐	5.000	4.780	80329.91	0.0184	P	1.2
4	☐	10.000	10.104	162475.20	0.0380	P	1.2
5	☐	100.000	103.022	1636216.69	0.3803	A	2.0
6	☐	200.000	198.489	3062974.12	0.7319	A	3.6

y = 0.0037 * x + 7.8819E-004
R = 0.9998
DL = 0.01099
BEC = 0.214

Weight: <None>
Min Conc: <None>

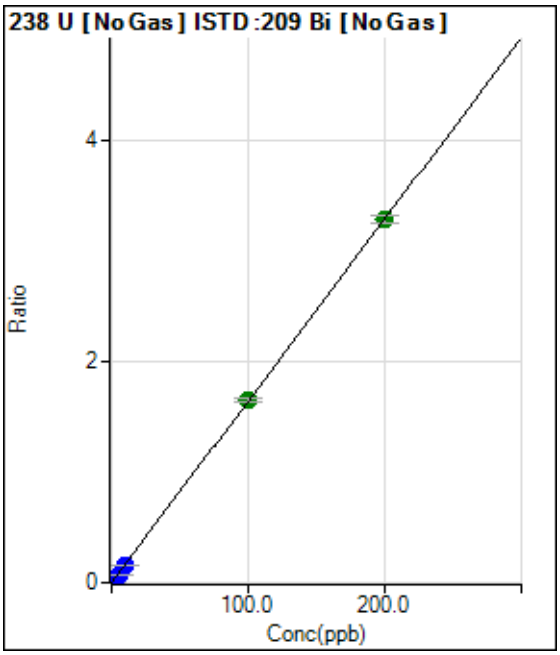
Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16494.56	0.0039	P	1.9
2	☐	2.000	2.001	165746.71	0.0375	P	1.0
3	☐	5.000	4.839	372363.76	0.0853	P	0.8
4	☐	10.000	10.021	737044.58	0.1724	P	0.8
5	☐	100.000	104.590	7585713.84	1.7628	A	1.6
6	☐	200.000	197.708	13930658.65	3.3289	A	2.9

y = 0.0168 * x + 0.0039
R = 0.9996
DL = 0.01296
BEC = 0.231

Weight: <None>
Min Conc: <None>

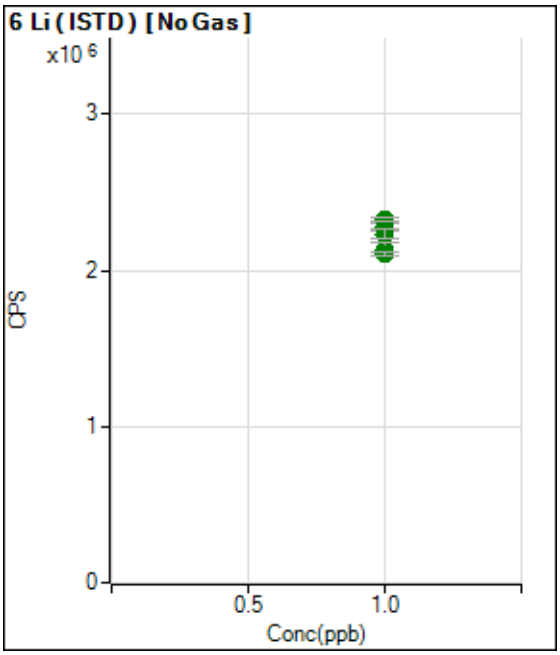


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.00	0.0000	P	31.6
2	☐	2.000	1.848	133810.75	0.0303	P	2.0
3	☐	5.000	4.578	327792.94	0.0751	P	1.7
4	☐	10.000	9.516	666942.10	0.1560	P	0.4
5	☐	100.000	100.584	7094961.56	1.6489	A	1.8
6	☐	200.000	199.744	13703442.30	3.2743	A	2.2

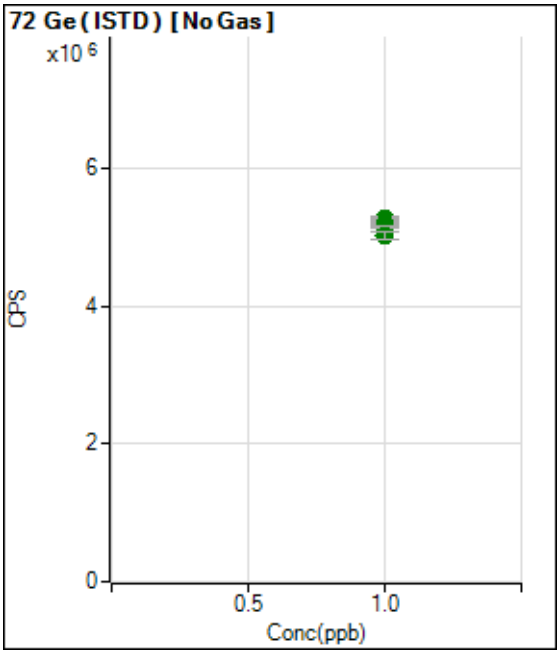
y = 0.0164 * x + 2.1313E-005
R = 1.0000
DL = 0.001231
BEC = 0.0013

Weight: <None>
Min Conc: <None>

Calibration for 017_ICV.d

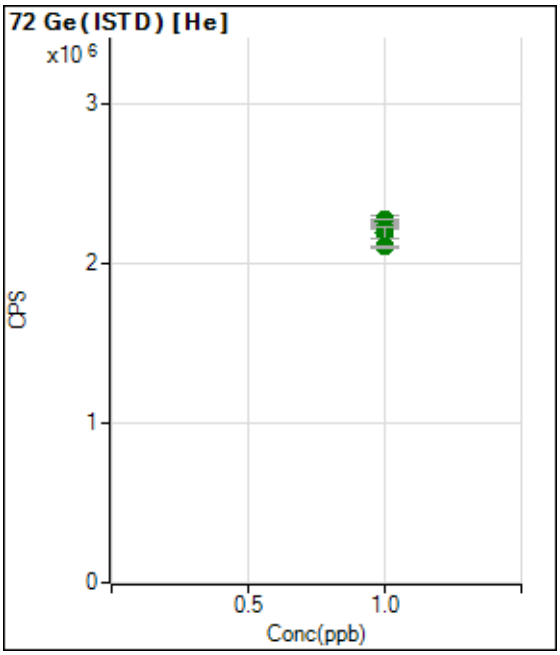


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2322552.60		A	1.3
2	☐	1.000		2280141.89		A	2.5
3	☐	1.000		2257938.62		A	0.7
4	☐	1.000		2232507.32		A	2.4
5	☐	1.000		2131478.51		A	4.0
6	☐	1.000		2103189.02		A	1.4

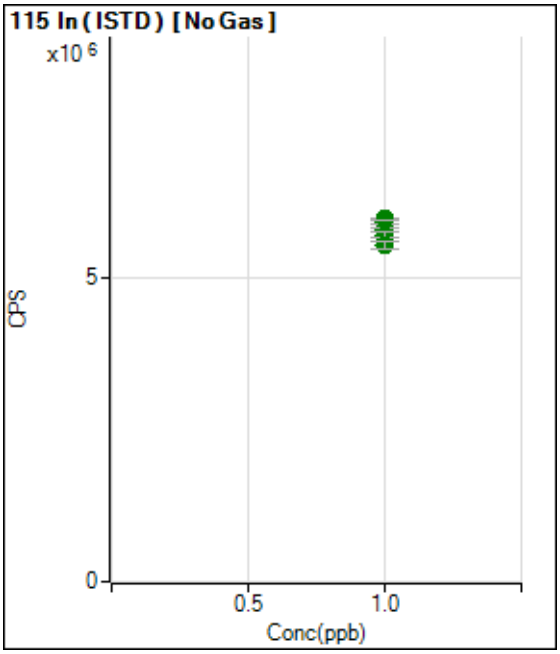


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5261859.72		A	0.9
2	☐	1.000		5227582.84		A	2.0
3	☐	1.000		5200758.88		A	0.4
4	☐	1.000		5169076.90		A	0.4
5	☐	1.000		5136992.63		A	0.7
6	☐	1.000		5021428.99		A	1.8

Calibration for 017_ICV.d

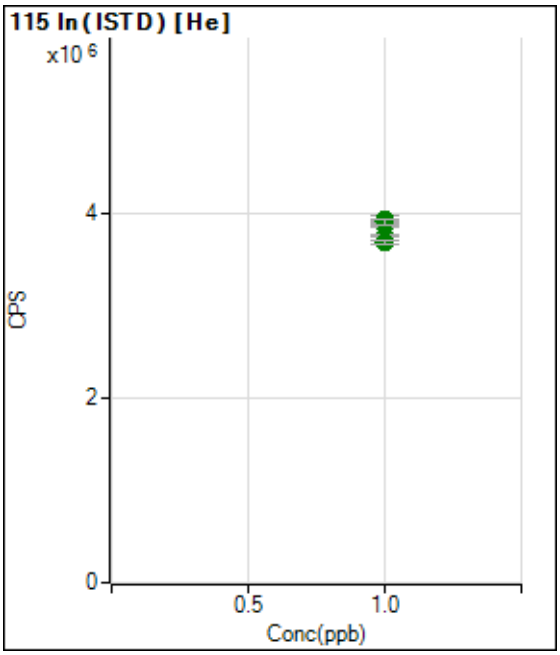


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2276212.67		A	2.3
2	☐	1.000		2277107.78		A	0.8
3	☐	1.000		2265933.61		A	1.1
4	☐	1.000		2224133.56		A	0.3
5	☐	1.000		2199753.56		A	3.3
6	☐	1.000		2108248.04		A	0.4

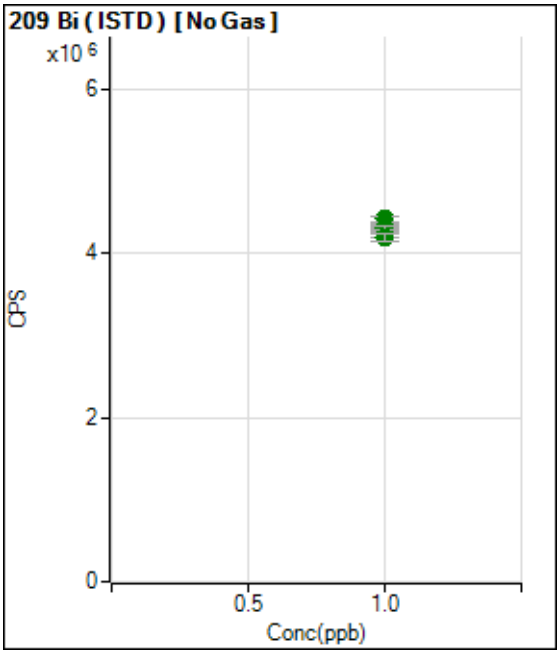


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5917508.77		A	1.2
2	☐	1.000		5956148.02		A	0.8
3	☐	1.000		5904424.75		A	1.0
4	☐	1.000		5786200.70		A	1.2
5	☐	1.000		5691117.14		A	1.6
6	☐	1.000		5518199.79		A	2.4

Calibration for 017_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3932094.75		A	2.3
2	☐	1.000		3936145.10		A	0.4
3	☐	1.000		3882334.05		A	1.2
4	☐	1.000		3919461.73		A	1.6
5	☐	1.000		3765650.62		A	0.9
6	☐	1.000		3687172.24		A	1.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4246459.21		A	2.7
2	☐	1.000		4415511.91		A	1.8
3	☐	1.000		4366821.71		A	0.7
4	☐	1.000		4274790.56		A	0.7
5	☐	1.000		4303190.25		A	1.1
6	☐	1.000		4186397.75		A	2.1

Sample Report

Sample Table

Sample Name	LLICV2
Data File Name	018LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:42:14-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	2.107	2.107	4.04	198359	0.00	2	
Be	9	1	No Gas	1.939	1.939	5.08	14694	0.01	2	
V	51	2	He	1.489	1.489	4.34	47183	0.00	2	
Cr	52	2	He	2.026	2.026	1.88	43744	0.00	2	
Fe	56	2	He	197.234	197.234	1.66	3609587	0.01	200	
Se	78	2	He	2.114	2.114	8.62	1483	0.14	2	
Sn	118	2	He	2.179	2.179	0.32	33242	0.01	2	
As	75	2	He	1.882	1.882	1.10	6745	0.03	2	
Ca	44	2	He	191.741	191.741	1.71	28968	0.66	200	
Na	23	2	He	200.669	200.669	1.01	735819	0.03	200	
Mg	24	2	He	206.684	206.684	1.20	386787	0.05	200	
K	39	2	He	201.368	201.368	2.31	791636	0.03	200	
Mn	55	2	He	1.945	1.945	3.64	35212	0.01	2	
Co	59	2	He	1.994	1.994	2.76	53448	0.00	2	
Ni	60	2	He	2.054	2.054	3.82	13821	0.01	2	
Cu	63	2	He	2.076	2.076	2.93	36115	0.01	2	
Zn	66	2	He	1.907	1.907	2.82	8246	0.02	2	
Al	27	2	He	2.020	2.020	6.74	4547	0.04	2	
B	11	1	No Gas	14.199	14.199	7.63	145758	0.01	10	NewName Main CR1 Failed
Al	27	1	No Gas	2.100	2.100	4.78	100764	0.00	2	
Si	28	1	No Gas	10.682	10.682	7.94	777508	0.00	10	
P	31	1	No Gas	9.859	9.859	11.55	57429	0.02	10	
Ag	107	1	No Gas	1.963	1.963	4.86	71960	0.00	2	
Cd	111	1	No Gas	1.960	1.960	3.41	14061	0.01	2	
Sr	88	1	No Gas	1.882	1.882	1.27	123555	0.00	2	
Mo	95	1	No Gas	2.008	2.008	2.68	27936	0.01	2	
Sn	118	1	No Gas	2.182	2.182	2.10	47771	0.00	2	
Sb	121	1	No Gas	2.187	2.187	1.13	65346	0.00	2	
Ba	137	1	No Gas	1.829	1.829	2.61	19899	0.01	2	
Tl	205	1	No Gas	2.079	2.079	5.99	112315	0.00	2	
Tl	203	1	No Gas	2.041	2.041	6.12	47170	0.00	2	
Pb	208	1	No Gas	2.078	2.078	3.60	168805	0.00	2	
U	238	1	No Gas	1.885	1.885	0.73	134444	0.00	2	
Ca	43	2	He	196.578	196.578	9.27	1700	11.56	200	
Sb	121	2	He	2.114	2.114	3.97	44874	0.00	2	
Ti	47	2	He	2.022	2.022	7.15	1543	0.13	200	
Cu	63	1	No Gas	2.110	2.110	1.51	59728	0.00	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2274018	0.88	2322553	97.91	70	120	
Ge	72	2	He	2240377	1.06	2276213	98.43	70	120	
Ge	72	1	No Gas	5243253	0.91	5261860	99.65	70	120	
In	115	1	No Gas	5962737	2.33	5917509	100.76	70	120	
Bi	209	1	No Gas	4347991	2.71	4246459	102.39	70	120	

Sample Report

Sample Table

Sample Name	LLICV5
Data File Name	019LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:44:06-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	5.163	5.163	4.44	284824	0.00	5	
Be	9	1	No Gas	4.734	4.734	2.81	35311	0.01	5	
V	51	2	He	4.332	4.332	4.07	96349	0.00	5	
Cr	52	2	He	4.765	4.765	3.25	96415	0.00	5	
Fe	56	2	He	459.801	459.801	1.16	8446902	0.01	500	
Se	78	2	He	4.445	4.445	4.37	2284	0.19	5	
Sn	118	2	He	4.724	4.724	1.74	69783	0.01	5	
As	75	2	He	4.576	4.576	2.24	15038	0.03	5	
Ca	44	2	He	460.369	460.369	2.36	67978	0.68	500	
Na	23	2	He	477.487	477.487	4.81	1585789	0.03	500	
Mg	24	2	He	485.762	485.762	3.38	914982	0.05	500	
K	39	2	He	483.614	483.614	4.24	1602400	0.03	500	
Mn	55	2	He	4.643	4.643	1.78	80685	0.01	5	
Co	59	2	He	4.856	4.856	1.37	130313	0.00	5	
Ni	60	2	He	4.972	4.972	1.51	32933	0.02	5	
Cu	63	2	He	4.930	4.930	3.41	83912	0.01	5	
Zn	66	2	He	4.661	4.661	4.22	18560	0.03	5	
Al	27	2	He	4.842	4.842	8.90	8513	0.06	5	
B	11	1	No Gas	24.249	24.249	4.51	189526	0.01	25	
Al	27	1	No Gas	5.250	5.250	0.54	196174	0.00	5	
Si	28	1	No Gas	24.774	24.774	3.51	1008041	0.00	25	
P	31	1	No Gas	23.536	23.536	5.07	78887	0.03	25	
Ag	107	1	No Gas	4.787	4.787	1.67	173929	0.00	5	
Cd	111	1	No Gas	4.776	4.776	3.23	33994	0.01	5	
Sr	88	1	No Gas	4.646	4.646	0.98	301104	0.00	5	
Mo	95	1	No Gas	4.733	4.733	1.78	65267	0.01	5	
Sn	118	1	No Gas	4.740	4.740	1.36	99902	0.00	5	
Sb	121	1	No Gas	4.812	4.812	1.63	140868	0.00	5	
Ba	137	1	No Gas	4.669	4.669	0.29	49742	0.01	5	
Tl	205	1	No Gas	4.758	4.758	3.54	259576	0.00	5	
Tl	203	1	No Gas	4.694	4.694	3.11	109493	0.00	5	
Pb	208	1	No Gas	4.861	4.861	1.42	378197	0.00	5	
U	238	1	No Gas	4.567	4.567	1.69	330849	0.00	5	
Ca	43	2	He	446.738	446.738	2.36	3827	11.67	500	
Sb	121	2	He	4.634	4.634	2.92	96937	0.00	5	
Ti	47	2	He	4.514	4.514	6.44	3454	0.13	5	
Cu	63	1	No Gas	5.039	5.039	1.92	138413	0.00	5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2240438	1.69	2322553	96.46	70	120	
Ge	72	2	He	2261247	2.52	2276213	99.34	70	120	

Sample Report

Ge	72	1	No Gas	5263037	0.33	5261860	100.02	70	120	
In	115	1	No Gas	5925491	0.92	5917509	100.13	70	120	
Bi	209	1	No Gas	4417280	1.48	4246459	104.02	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	020_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:45:58-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.214	30.0	138797	1.2	0.5	
Be	9	1	No Gas	0.001	89.7	35	28.6	0.5	
V	51	2	He	-0.307	-1.9	16781	1.0	2.5	
Cr	52	2	He	0.058	13.9	6535	3.9	2.5	
Fe	56	2	He	0.370	14.8	40661	2.7	100	
Se	78	2	He	-0.046	-207.1	763	2.7	1	
Sn	118	2	He	0.095	12.9	3340	5.7	2.5	
As	75	2	He	-0.042	-28.5	923	5.4	2.5	
Ca	44	2	He	0.755	98.6	1673	7.5	100	
Na	23	2	He	-0.149	-722.1	129806	1.4	100	
Mg	24	2	He	0.094	147.0	1727	15.4	100	
K	39	2	He	-0.823	-168.6	222545	2.7	100	
Mn	55	2	He	0.097	11.0	4611	4.5	2.5	
Co	59	2	He	0.002	53.3	777	4.5	2.5	
Ni	60	2	He	0.018	71.8	700	10.8	2.5	
Cu	63	2	He	0.016	22.6	2154	4.3	1	
Zn	66	2	He	0.042	62.3	1387	6.0	2.5	
Al	27	2	He	0.216	74.8	2070	12.2	5	
B	11	1	No Gas	0.038	521.7	78181	1.1	0.5	
Al	27	1	No Gas	0.196	10.6	43559	1.2	5	
Si	28	1	No Gas	-0.325	-130.6	600378	0.9	10	
P	31	1	No Gas	-0.302	-137.4	41716	2.4	10	
Ag	107	1	No Gas	0.037	23.3	1723	17.9	2.5	
Cd	111	1	No Gas	0.000	-38163.6	37	68.6	1	
Sr	88	1	No Gas	0.007	37.2	1823	7.9	2.5	
Mo	95	1	No Gas	0.017	7.9	377	6.7	2.5	
Sn	118	1	No Gas	0.101	4.3	4794	2.0	5	
Sb	121	1	No Gas	0.077	9.8	5031	3.5	2.5	
Ba	137	1	No Gas	0.046	10.2	960	6.8	2.5	
Tl	205	1	No Gas	0.014	41.8	2130	17.9	1	
Tl	203	1	No Gas	0.007	114.3	810	27.8	1	
Pb	208	1	No Gas	0.006	18.6	17915	3.1	2.5	
U	238	1	No Gas	0.001	50.4	180	25.5	2.5	
Ca	43	2	He	-0.285	-992.0	57	40.8	100	
Sb	121	2	He	0.077	9.2	3504	5.0	2.5	
Ti	47	2	He	0.009	146.9	30	33.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Initial Calibration Blank (ICB) Report

Li	6	1	No Gas	2220582	0.22	2322553	95.61	70	120	
Ge	72	2	He	2254337	1.59	2276213	99.04	70	120	
Ge	72	1	No Gas	5242328	0.93	5261860	99.63	70	120	
In	115	1	No Gas	5872216	1.77	5917509	99.23	70	120	
Bi	209	1	No Gas	4489671	3.33	4246459	105.73	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	021ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:47:57-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.803	13.2	151404	1.4	0	ICSA Main CR1 Failed
Be	9	1	No Gas	0.002	79.7	40	33.1	0	ICSA Main CR1 Failed
V	51	2	He	-0.389	-7.8	14833	1.9	0	ICSA Main CR1 Failed
Cr	52	2	He	0.895	5.3	21664	1.4	0	ICSA Main CR1 Failed
Fe	56	2	He	96146.807	1.5	1691555601	1.1	0	
Se	78	2	He	0.188	87.6	812	5.6	0	ICSA Main CR1 Failed
Sn	118	2	He	0.085	11.0	3067	2.8	0	ICSA Main CR1 Failed
As	75	2	He	0.124	22.5	1377	4.8	0	ICSA Main CR1 Failed
Ca	44	2	He	94885.124	2.3	13162764	0.4	0	
Na	23	2	He	96981.807	3.6	284355729	1.0	0	
Mg	24	2	He	98513.655	1.2	178207791	2.0	0	
K	39	2	He	97901.822	1.7	268280943	0.9	0	
Mn	55	2	He	0.121	11.6	4821	2.0	0	ICSA Main CR1 Failed
Co	59	2	He	0.200	7.0	5841	5.7	0	ICSA Main CR1 Failed
Ni	60	2	He	0.236	10.6	2040	5.2	0	ICSA Main CR1 Failed
Cu	63	2	He	0.297	1.4	6585	2.8	0	ICSA Main CR1 Failed
Zn	66	2	He	0.409	7.3	2650	4.3	0	ICSA Main CR1 Failed
Al	27	2	He	91074.455	1.2	122036132	1.4	0	
B	11	1	No Gas	-0.113	-313.1	75275	2.1	0	ICSA Main CR1 Failed
Al	27	1	No Gas	97650.495	2.7	2731314413	1.7	0	
Si	28	1	No Gas	24.192	1.2	926293	1.5	0	
P	31	1	No Gas	96157.352	0.8	138511141	0.9	0	
Ag	107	1	No Gas	0.011	2.6	723	2.1	0	ICSA Main CR1 Failed
Cd	111	1	No Gas	1.462	5.9	9504	5.1	0	ICSA Main CR1 Failed
Sr	88	1	No Gas	0.993	0.8	59670	1.9	0	ICSA Main CR1 Failed
Mo	95	1	No Gas	1912.746	1.7	23976950	0.9	0	
Sn	118	1	No Gas	0.102	12.4	4424	6.0	0	ICSA Main CR1 Failed
Sb	121	1	No Gas	0.047	21.8	3897	5.8	0	ICSA Main CR1 Failed
Ba	137	1	No Gas	0.048	3.4	900	2.9	0	ICSA Main CR1 Failed
Tl	205	1	No Gas	0.001	394.5	1220	8.9	0	ICSA Main CR1 Failed
Tl	203	1	No Gas	-0.004	-24.4	470	3.7	0	ICSA Main CR1 Failed
Pb	208	1	No Gas	0.021	24.4	16515	2.3	0	ICSA Main CR1 Failed
U	238	1	No Gas	0.002	30.6	180	16.7	0	ICSA Main CR1 Failed
Ca	43	2	He	95798.801	2.3	776400	0.7	0	
Sb	121	2	He	0.057	17.7	2987	5.1	0	ICSA Main CR1 Failed
Ti	47	2	He	1907.398	3.5	1391927	1.7	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2156842	0.62	2322553	92.87	70	120	
Ge	72	2	He	2174428	2.57	2276213	95.53	70	120	
Ge	72	1	No Gas	4881526	1.25	5261860	92.77	70	120	
In	115	1	No Gas	5398185	1.22	5917509	91.22	70	120	
Bi	209	1	No Gas	3894291	0.51	4246459	91.71	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	022ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T10:49:59-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	94.494	3.047	2894805	1.48	100	94.5	180	120	ICSB Main CR1 Failed
Be	9	1	No Gas	94.656	1.690	704808	0.64	100	94.7	80	120	
V	51	2	He	97.232	2.290	1655120	1.16	100	97.2	80	120	
Cr	52	2	He	96.800	3.398	1815939	1.77	100	96.8	80	120	
Fe	56	2	He	106405.450	1.510	1907407705	0.28	100	106405.5	80	120	
Se	78	2	He	99.337	2.486	33671	1.04	100	99.3	80	120	
Sn	118	2	He	94.902	0.905	1332831	1.45	100	94.9	80	120	
As	75	2	He	96.559	1.195	290207	1.15	100	96.6	80	120	
Ca	44	2	He	106101.257	1.958	14997843	0.19	100	106101.3	80	120	
Na	23	2	He	109565.438	0.579	327464235	1.46	100	109565.4	80	120	ICSB Main CR1 Failed
Mg	24	2	He	109360.036	2.220	201527810	0.72	100	109360.0	80	120	
K	39	2	He	109529.531	0.981	305817435	0.85	100	109529.5	80	120	
Mn	55	2	He	95.969	3.543	1575754	1.74	100	96.0	80	120	
Co	59	2	He	94.775	2.478	2478793	2.28	100	94.8	80	120	
Ni	60	2	He	95.182	1.223	607367	0.77	100	95.2	80	120	
Cu	63	2	He	95.510	1.092	1558999	0.69	100	95.5	80	120	
Zn	66	2	He	94.774	1.903	346191	0.23	100	94.8	80	120	
Al	27	2	He	92867.441	1.138	126788641	0.64	100	92867.4	80	120	ICSB Main CR1 Failed
B	11	1	No Gas	445.099	1.693	2110810	0.87	100	445.1	80	120	
Al	27	1	No Gas	97125.966	0.482	2800273772	0.83	100	97126.0	80	120	ICSB Main CR1 Failed
Si	28	1	No Gas	496.823	1.341	8249398	0.45	100	496.8	80	120	
P	31	1	No Gas	95884.623	1.741	142333975	0.72	100	95884.6	80	120	ICSB Main CR1 Failed
Ag	107	1	No Gas	93.779	1.836	3071163	1.39	100	93.8	80	120	
Cd	111	1	No Gas	99.176	0.843	637053	0.29	100	99.2	80	120	
Sr	88	1	No Gas	99.582	2.850	5802829	2.32	100	99.6	80	120	
Mo	95	1	No Gas	2068.540	0.863	25714607	0.39	100	2068.5	80	120	ICSB Main CR1 Failed
Sn	118	1	No Gas	96.619	1.339	1791285	0.72	100	96.6	80	120	
Sb	121	1	No Gas	94.887	1.203	2604024	0.10	100	94.9	80	120	
Ba	137	1	No Gas	97.312	1.745	927826	1.52	100	97.3	80	120	
Tl	205	1	No Gas	99.348	0.765	4686727	2.02	100	99.3	80	120	
Tl	203	1	No Gas	99.520	1.356	2006309	1.86	100	99.5	80	120	
Pb	208	1	No Gas	98.894	0.231	6397562	2.55	100	98.9	80	120	
U	238	1	No Gas	99.467	1.685	6255861	1.24	100	99.5	80	120	
Ca	43	2	He	105850.034	3.543	874026	2.30	100	105850.0	80	120	
Sb	121	2	He	95.993	1.677	1930262	1.03	100	96.0	80	120	
Ti	47	2	He	2018.373	1.390	1501276	1.49	100	2018.4	80	120	
Cu	63	1	No Gas	96.537	0.674	2476007	0.51	100	96.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2237839	2.29	2322553	96.35	70	120	
Ge	72	2	He	2215333	1.77	2276213	97.33	70	120	
Ge	72	1	No Gas	5030913	1.14	5261860	95.61	70	120	
In	115	1	No Gas	5352897	0.62	5917509	90.46	70	120	
Bi	209	1	No Gas	3837594	2.41	4246459	90.37	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	040_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:34:48-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.601	1.523	3304097	1.06	100	101.6	90	110	
Be	9	1	No Gas	96.152	0.796	762396	0.70	100	96.2	90	110	
V	51	2	He	100.015	3.338	1834082	1.66	100	100.0	90	110	
Cr	52	2	He	97.943	2.450	1980550	0.98	100	97.9	90	110	
Fe	56	2	He	10120.270	2.053	195557117	0.54	10000	101.2	90	110	
Se	78	2	He	98.395	2.412	35957	1.29	100	98.4	90	110	
Sn	118	2	He	101.544	0.549	1529309	0.56	100	101.5	90	110	
As	75	2	He	97.469	2.028	315693	0.42	100	97.5	90	110	
Ca	44	2	He	10363.771	1.502	1580687	1.48	10000	103.6	90	110	
Na	23	2	He	10238.411	1.074	33105069	1.02	10000	102.4	90	110	
Mg	24	2	He	10323.281	1.928	20507104	1.00	10000	103.2	90	110	
K	39	2	He	10400.749	1.641	31513571	0.32	10000	104.0	90	110	
Mn	55	2	He	98.663	2.306	1746306	1.00	100	98.7	90	110	
Co	59	2	He	96.928	2.053	2732135	0.48	100	96.9	90	110	
Ni	60	2	He	99.579	1.823	684838	1.25	100	99.6	90	110	
Cu	63	2	He	99.284	0.410	1746937	2.04	100	99.3	90	110	
Zn	66	2	He	99.793	2.099	392822	0.46	100	99.8	90	110	
Al	27	2	He	100.456	1.366	149692	0.45	100	100.5	90	110	
B	11	1	No Gas	461.812	0.930	2328947	0.57	500	92.4	90	110	
Al	27	1	No Gas	100.285	1.008	3261644	0.46	100	100.3	90	110	
Si	28	1	No Gas	489.495	2.822	9066287	2.85	5000	9.8	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	495.332	0.770	864252	1.61	500	99.1	90	110	
Ag	107	1	No Gas	96.715	0.707	3687282	0.81	100	96.7	90	110	
Cd	111	1	No Gas	99.406	0.606	743349	1.01	100	99.4	90	110	
Sr	88	1	No Gas	98.300	1.904	6668860	2.00	100	98.3	90	110	
Mo	95	1	No Gas	97.487	0.644	1410994	1.19	100	97.5	90	110	
Sn	118	1	No Gas	100.078	1.294	2159805	0.45	100	100.1	90	110	
Sb	121	1	No Gas	94.241	2.465	2881496	1.62	100	94.2	90	110	
Ba	137	1	No Gas	96.250	1.896	1068278	1.49	100	96.2	90	110	
Tl	205	1	No Gas	99.137	0.738	5640988	1.60	100	99.1	90	110	
Tl	203	1	No Gas	99.166	1.821	2411524	2.39	100	99.2	90	110	
Pb	208	1	No Gas	97.947	0.835	7641488	0.30	100	97.9	90	110	
U	238	1	No Gas	95.153	1.308	7218790	0.82	100	95.2	90	110	
Ca	43	2	He	10196.894	0.753	90839	1.81	10000	102.0	90	110	
Sb	121	2	He	93.865	2.261	2034288	0.94	100	93.9	90	110	
Ti	47	2	He	101.924	2.295	81723	0.71	100	101.9	90	110	
Cu	63	1	No Gas	101.667	0.985	2905181	0.92	100	101.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2382452	0.50	2322553	102.58	70	120	
Ge	72	2	He	2387743	1.64	2276213	104.90	70	120	
Ge	72	1	No Gas	5605453	1.13	5261860	106.53	70	120	
In	115	1	No Gas	6231754	1.51	5917509	105.31	70	120	
Bi	209	1	No Gas	4628305	1.01	4246459	108.99	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	041_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:36:32-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.138	62.0	150231	0.5	0.5	
Be	9	1	No Gas	0.008	16.8	93	13.5	0.5	
V	51	2	He	-0.454	-4.2	15271	1.7	2.5	
Cr	52	2	He	0.113	27.0	8106	7.8	2.5	
Fe	56	2	He	1.772	3.1	70881	0.9	100	
Se	78	2	He	-0.129	-199.1	787	11.3	2	
As	75	2	He	-0.062	-48.4	921	11.0	2.5	
Ca	44	2	He	24.833	9.1	5495	5.7	100	
Na	23	2	He	8.203	8.2	166081	0.7	100	
Mg	24	2	He	0.597	9.2	2857	4.3	100	
K	39	2	He	5.633	23.8	257711	1.4	100	
Mn	55	2	He	1.008	4.2	21190	3.0	2.5	
Co	59	2	He	0.002	168.3	820	8.8	2.5	
Ni	60	2	He	0.302	12.8	2717	9.2	2.5	
Cu	63	2	He	0.096	22.1	3734	9.5	2	
Zn	66	2	He	0.954	3.4	5101	2.6	2.5	
Al	27	2	He	1.387	4.0	3954	2.7	5	
B	11	1	No Gas	4.531	22.0	108353	3.1	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.464	1.6	86726	0.8	5	
Si	28	1	No Gas	1.508	103.0	668813	3.2	10	
P	31	1	No Gas	-0.560	-22.9	43876	1.2	10	
Ag	107	1	No Gas	0.004	32.1	583	6.5	2.5	
Cd	111	1	No Gas	0.005	136.1	73	63.0	1	
Sr	88	1	No Gas	0.042	7.4	4411	3.3	2.5	
Mo	95	1	No Gas	0.072	9.9	1210	6.6	2.5	
Sn	118	1	No Gas	0.509	3.4	14058	3.2	5	
Sb	121	1	No Gas	1.024	19.0	34086	16.9	2.5	
Ba	137	1	No Gas	0.005	169.8	577	16.0	2.5	
Tl	205	1	No Gas	0.030	62.9	3184	33.9	1	
Tl	203	1	No Gas	0.026	76.2	1307	36.9	1	
Pb	208	1	No Gas	-0.060	-5.2	13503	1.4	2.5	
U	238	1	No Gas	0.009	30.4	817	26.2	2.5	
Ca	43	2	He	25.217	31.1	290	23.9	100	
Sb	121	2	He	0.677	1.9	16891	1.3	2.5	
Ti	47	2	He	0.044	49.3	60	28.9	2.5	
Cu	63	1	No Gas	0.097	8.4	6358	4.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2442893	2.17	2322553	105.18	70	120	
Ge	72	2	He	2412073	0.65	2276213	105.97	70	120	
Ge	72	1	No Gas	5567827	1.65	5261860	105.81	70	120	
In	115	1	No Gas	6317967	2.56	5917509	106.77	70	120	
Bi	209	1	No Gas	4705520	0.50	4246459	110.81	70	120	

Sample Report

Sample Table

Sample Name	MBLK-158768
Data File Name	042SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:41:15-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.137	0.137	33.97	153086	0.00	2000	
Be	9	1	No Gas	0.003	0.003	79.73	52	0.01	2000	
V	51	2	He	-0.389	-0.389	-6.66	16493	0.00	2000	
Cr	52	2	He	-0.072	-0.072	-12.89	4344	0.00	2000	
Fe	56	2	He	20.418	20.418	0.46	435684	0.00	200000	
Se	78	2	He	-0.060	-0.060	-181.99	813	-0.01	2000	
Sn	118	2	He	0.081	0.081	3.48	3474	0.00	200	
As	75	2	He	-0.052	-0.052	-23.90	956	-0.01	2000	
Ca	44	2	He	2.205	2.205	16.82	2017	0.11	200000	
Na	23	2	He	9.396	9.396	3.31	170292	0.01	200000	
Mg	24	2	He	17.571	17.571	2.39	36993	0.05	200000	
K	39	2	He	2.418	2.418	45.48	248415	0.00	200000	
Mn	55	2	He	0.668	0.668	6.87	15162	0.00	2000	
Co	59	2	He	-0.002	-0.002	-69.46	710	0.00	2000	
Ni	60	2	He	-0.007	-0.007	-175.33	580	0.00	2000	
Cu	63	2	He	0.149	0.149	8.13	4674	0.00	2000	
Zn	66	2	He	2.962	2.962	3.19	13083	0.02	2000	
Al	27	2	He	9.807	9.807	3.52	16503	0.06	2000	
B	11	1	No Gas	0.511	0.511	32.73	90049	0.00	2000	
Al	27	1	No Gas	10.585	10.585	2.99	375494	0.00	2000	
Si	28	1	No Gas	100.776	100.776	6.73	2349753	0.00	2000	
Ag	107	1	No Gas	0.001	0.001	270.10	453	0.00	2000	
Cd	111	1	No Gas	0.034	0.034	20.96	297	0.01	2000	
Sr	88	1	No Gas	0.018	0.018	13.46	2717	0.00	2000	
Mo	95	1	No Gas	0.017	0.017	19.35	403	0.00	2000	
Sn	118	1	No Gas	0.097	0.097	1.01	5031	0.00	2000	
Sb	121	1	No Gas	0.087	0.087	3.00	5628	0.00	2000	
Ba	137	1	No Gas	0.075	0.075	20.28	1353	0.01	2000	
Tl	205	1	No Gas	-0.007	-0.007	-32.28	1043	0.00	2000	
Tl	203	1	No Gas	-0.009	-0.009	-15.29	447	0.00	2000	
Pb	208	1	No Gas	0.167	0.167	10.06	31546	0.00	2000	
U	238	1	No Gas	0.001	0.001	41.44	177	0.00	2000	
Ca	43	2	He	2.566	2.566	139.44	87	2.96	200000	
Sb	121	2	He	0.103	0.103	3.55	4341	0.00	2000	
Ti	47	2	He	0.093	0.093	13.13	100	0.09	2000	
Cu	63	1	No Gas	0.157	0.157	5.46	8009	0.00	2000	
Zn	66	1	No Gas	3.159	3.159	2.03	26236	0.01	2000	
Se	82	1	No Gas	-0.125	-0.125	-706.95	-91	0.14	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2489534	1.35	2322553	107.19	70	120	
Ge	72	2	He	2416609	0.13	2276213	106.17	70	120	
Ge	72	1	No Gas	5536386	2.23	5261860	105.22	70	120	

Sample Report

In	115	1	No Gas	6282743	1.03	5917509	106.17	70	120	
Bi	209	1	No Gas	4713721	0.62	4246459	111.00	70	120	

Sample Report

Sample Table

Sample Name	LCS-158768
Data File Name	043SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:43:08-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	102.560	102.560	1.44	3234015	0.00	2000	
Be	9	1	No Gas	52.056	52.056	1.36	400382	0.01	2000	
V	51	2	He	48.932	48.932	1.23	910420	0.01	2000	
Cr	52	2	He	47.799	47.799	2.51	970654	0.00	2000	
Fe	56	2	He	4752.680	4752.680	1.08	91965269	0.01	200000	
Se	78	2	He	50.258	50.258	0.29	18793	0.27	2000	
Sn	118	2	He	100.847	100.847	1.76	1532987	0.01	200	
As	75	2	He	48.707	48.707	1.09	158505	0.03	2000	
Ca	44	2	He	5015.903	5015.903	1.44	766688	0.65	200000	
Na	23	2	He	4871.511	4871.511	1.98	15839876	0.03	200000	
Mg	24	2	He	4981.506	4981.506	2.35	9907202	0.05	200000	
K	39	2	He	5009.937	5009.937	1.42	15320296	0.03	200000	
Mn	55	2	He	48.550	48.550	1.84	861924	0.01	2000	
Co	59	2	He	49.170	49.170	0.83	1388074	0.00	2000	
Ni	60	2	He	50.213	50.213	0.95	346028	0.01	2000	
Cu	63	2	He	50.730	50.730	1.51	894384	0.01	2000	
Zn	66	2	He	51.826	51.826	1.19	204879	0.03	2000	
Al	27	2	He	105.696	105.696	2.31	157564	0.07	2000	
B	11	1	No Gas	473.505	473.505	1.48	2314285	0.02	2000	
Al	27	1	No Gas	108.663	108.663	1.95	3470088	0.00	2000	
Si	28	1	No Gas	547.165	547.165	0.68	9884904	0.01	2000	
Ag	107	1	No Gas	50.332	50.332	1.53	1853282	0.00	2000	
Cd	111	1	No Gas	50.910	50.910	1.97	367631	0.01	2000	
Sr	88	1	No Gas	104.391	104.391	0.28	6839702	0.00	2000	
Mo	95	1	No Gas	49.951	49.951	1.62	698210	0.01	2000	
Sn	118	1	No Gas	101.514	101.514	2.08	2115613	0.00	2000	
Sb	121	1	No Gas	48.163	48.163	0.69	1448938	0.00	2000	
Ba	137	1	No Gas	49.052	49.052	1.19	526032	0.01	2000	
Tl	205	1	No Gas	49.432	49.432	2.47	2743802	0.00	2000	
Tl	203	1	No Gas	47.469	47.469	1.66	1126219	0.00	2000	
Pb	208	1	No Gas	49.322	49.322	2.12	3762098	0.00	2000	
U	238	1	No Gas	91.452	91.452	1.78	6767601	0.00	2000	
Ca	43	2	He	5191.756	5191.756	1.46	46325	11.21	200000	
Sb	121	2	He	47.600	47.600	0.90	1033856	0.00	2000	
Ti	47	2	He	144.580	144.580	1.97	116047	0.12	2000	
Cu	63	1	No Gas	52.485	52.485	0.76	1475716	0.00	2000	
Zn	66	1	No Gas	53.121	53.121	0.64	402692	0.01	2000	
Se	82	1	No Gas	51.488	51.488	1.52	23839	0.22	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2311182	1.35	2322553	99.51	70	120	
Ge	72	2	He	2390217	1.03	2276213	105.01	70	120	
Ge	72	1	No Gas	5508848	0.31	5261860	104.69	70	120	

Sample Report

In	115	1	No Gas	6018148	1.16	5917509	101.70	70	120	
Bi	209	1	No Gas	4515230	1.83	4246459	106.33	70	120	

Sample Report

Sample Table

Sample Name	HS20100780-04SD
Data File Name	045SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:46:53-05:00
Sample Type	Sample
Dilution	5
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	5.043	25.214	0.57	289377	0.00	2000	
Be	9	1	No Gas	0.003	0.016	40.97	50	0.01	2000	
V	51	2	He	-0.527	-2.637	-7.21	13152	0.00	2000	
Cr	52	2	He	0.066	0.328	28.66	6752	0.00	2000	
Fe	56	2	He	1118.564	5592.822	0.38	20658121	0.01	200000	
Se	78	2	He	0.106	0.529	94.47	823	0.01	2000	
Sn	118	2	He	0.348	1.739	5.46	7199	0.00	200	
As	75	2	He	0.195	0.975	7.21	1662	0.01	2000	
Ca	44	2	He	24959.453	124797.264	1.72	3630143	0.69	200000	
Na	23	2	He	8268.109	41340.543	0.38	25536738	0.03	200000	
Mg	24	2	He	4289.672	21448.360	0.39	8133034	0.05	200000	
K	39	2	He	739.087	3695.437	1.92	2348159	0.03	200000	
Mn	55	2	He	909.990	4549.948	1.70	15347981	0.01	2000	
Co	59	2	He	0.006	0.030	45.82	893	0.00	2000	
Ni	60	2	He	0.073	0.364	38.96	1067	0.01	2000	
Cu	63	2	He	0.257	1.283	8.26	6215	0.00	2000	
Zn	66	2	He	0.657	3.283	6.96	3704	0.02	2000	
Al	27	2	He	4.721	23.603	2.41	8416	0.06	2000	
B	11	1	No Gas	18.368	91.838	1.54	167322	0.01	2000	
Al	27	1	No Gas	5.253	26.263	2.01	195423	0.00	2000	
Si	28	1	No Gas	3122.604	15613.018	2.02	50813818	0.01	2000	>LDR
Ag	107	1	No Gas	0.000	-0.002	-212.29	383	0.00	2000	
Cd	111	1	No Gas	0.001	0.005	221.72	43	0.00	2000	
Sr	88	1	No Gas	188.813	944.064	0.92	12051309	0.00	2000	
Mo	95	1	No Gas	0.594	2.971	1.75	8233	0.01	2000	
Sn	118	1	No Gas	0.383	1.917	5.13	10511	0.00	2000	
Sb	121	1	No Gas	0.129	0.646	8.82	6532	0.00	2000	
Ba	137	1	No Gas	115.506	577.530	1.68	1206201	0.01	2000	
Tl	205	1	No Gas	-0.006	-0.028	-22.92	1070	0.00	2000	
Tl	203	1	No Gas	-0.007	-0.037	-64.51	460	0.00	2000	
Pb	208	1	No Gas	-0.064	-0.322	-15.93	12583	0.00	2000	
U	238	1	No Gas	0.122	0.608	0.70	9054	0.00	2000	
Ca	43	2	He	25620.503	128102.514	2.09	217661	11.77	200000	
Sb	121	2	He	0.140	0.702	11.42	4861	0.00	2000	
Ti	47	2	He	0.074	0.372	62.32	80	0.09	2000	
Cu	63	1	No Gas	0.322	1.608	3.85	11965	0.00	2000	
Zn	66	1	No Gas	0.749	3.743	6.55	7559	0.01	2000	
Se	82	1	No Gas	0.598	2.990	43.08	238	0.25	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2304253	0.86	2322553	99.21	70	120	
Ge	72	2	He	2278275	0.81	2276213	100.09	70	120	
Ge	72	1	No Gas	5240950	0.64	5261860	99.60	70	120	

Sample Report

In	115	1	No Gas	5863042	0.39	5917509	99.08	70	120	
Bi	209	1	No Gas	4495453	2.63	4246459	105.86	70	120	

Sample Report

Sample Table

Sample Name	HS20100780-04MS
Data File Name	046SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:48:43-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	115.116	115.116	1.95	3495595	0.00	2000	
Be	9	1	No Gas	49.066	49.066	0.29	365148	0.01	2000	
V	51	2	He	47.605	47.605	1.37	838250	0.01	2000	
Cr	52	2	He	46.738	46.738	1.73	897726	0.01	2000	
Fe	56	2	He	9886.914	9886.914	2.13	180884877	0.01	200000	
Se	78	2	He	47.464	47.464	2.83	16826	0.28	2000	
Sn	118	2	He	96.691	96.691	2.88	1390997	0.01	200	
As	75	2	He	48.096	48.096	1.29	148035	0.03	2000	
Ca	44	2	He	127498.893	127498.893	1.59	18391947	0.69	200000	
Na	23	2	He	45126.151	45126.151	1.18	137701938	0.03	200000	
Mg	24	2	He	25545.620	25545.620	1.33	48047776	0.05	200000	
K	39	2	He	8163.764	8163.764	0.80	23468473	0.03	200000	
Mn	55	2	He	4393.561	4393.561	1.18	73500751	0.01	2000	>LDR
Co	59	2	He	45.246	45.246	0.87	1207960	0.00	2000	
Ni	60	2	He	46.131	46.131	1.82	300676	0.02	2000	
Cu	63	2	He	46.396	46.396	1.47	773749	0.01	2000	
Zn	66	2	He	47.719	47.719	0.79	178502	0.03	2000	
Al	27	2	He	101.283	101.283	1.39	142882	0.07	2000	
B	11	1	No Gas	526.873	526.873	1.37	2482835	0.02	2000	
Al	27	1	No Gas	104.845	104.845	4.49	3180832	0.00	2000	
Si	28	1	No Gas	15975.764	15975.764	1.95	257130323	0.01	2000	>LDR
Ag	107	1	No Gas	46.054	46.054	2.59	1620193	0.00	2000	
Cd	111	1	No Gas	47.642	47.642	2.83	328711	0.01	2000	
Sr	88	1	No Gas	1026.048	1026.048	2.32	64213266	0.00	2000	
Mo	95	1	No Gas	51.412	51.412	3.34	686515	0.01	2000	
Sn	118	1	No Gas	97.964	97.964	3.23	1950564	0.01	2000	
Sb	121	1	No Gas	47.293	47.293	0.38	1352065	0.00	2000	
Ba	137	1	No Gas	600.747	600.747	2.31	6149980	0.01	2000	
Tl	205	1	No Gas	47.698	47.698	2.16	2469813	0.00	2000	
Tl	203	1	No Gas	46.954	46.954	1.20	1039074	0.00	2000	
Pb	208	1	No Gas	47.144	47.144	0.07	3354926	0.00	2000	
U	238	1	No Gas	92.075	92.075	2.46	6355933	0.00	2000	
Ca	43	2	He	127930.131	127930.131	1.10	1078155	11.87	200000	
Sb	121	2	He	45.909	45.909	0.33	943105	0.00	2000	
Ti	47	2	He	138.664	138.664	1.79	105262	0.13	2000	
Cu	63	1	No Gas	47.599	47.599	3.17	1271490	0.00	2000	
Zn	66	1	No Gas	49.398	49.398	2.08	355891	0.01	2000	
Se	82	1	No Gas	49.728	49.728	2.71	21870	0.23	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2235986	0.62	2322553	96.27	70	120	
Ge	72	2	He	2260432	0.73	2276213	99.31	70	120	
Ge	72	1	No Gas	5234915	2.40	5261860	99.49	70	120	
In	115	1	No Gas	5751596	2.41	5917509	97.20	70	120	
Bi	209	1	No Gas	4210817	0.39	4246459	99.16	70	120	

Sample Report

Sample Table

Sample Name	HS20100780-04MSD
Data File Name	047SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:50:37-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	121.779	121.779	1.47	3609249	0.00	2000	
Be	9	1	No Gas	51.211	51.211	1.09	372722	0.01	2000	
V	51	2	He	47.615	47.615	1.73	846863	0.01	2000	
Cr	52	2	He	47.092	47.092	1.38	913602	0.01	2000	
Fe	56	2	He	10113.840	10113.840	2.62	186894997	0.01	200000	
Se	78	2	He	47.942	47.942	0.81	17160	0.28	2000	
Sn	118	2	He	100.638	100.638	0.70	1463869	0.01	200	
As	75	2	He	48.612	48.612	0.58	151120	0.03	2000	
Ca	44	2	He	129663.827	129663.827	0.75	18893189	0.69	200000	
Na	23	2	He	45429.084	45429.084	1.15	140011165	0.03	200000	
Mg	24	2	He	25829.162	25829.162	1.55	49066254	0.05	200000	
K	39	2	He	8331.070	8331.070	1.26	24185619	0.03	200000	
Mn	55	2	He	4520.835	4520.835	1.58	76391077	0.01	2000	>LDR
Co	59	2	He	45.274	45.274	0.98	1220883	0.00	2000	
Ni	60	2	He	47.177	47.177	1.21	310590	0.02	2000	
Cu	63	2	He	47.175	47.175	0.59	794655	0.01	2000	
Zn	66	2	He	48.738	48.738	1.01	184119	0.03	2000	
Al	27	2	He	105.030	105.030	1.89	149582	0.07	2000	
B	11	1	No Gas	548.556	548.556	1.88	2524933	0.02	2000	
Al	27	1	No Gas	109.506	109.506	0.56	3323939	0.00	2000	
Si	28	1	No Gas	16261.066	16261.066	0.79	261854843	0.01	2000	>LDR
Ag	107	1	No Gas	47.099	47.099	0.50	1673764	0.00	2000	
Cd	111	1	No Gas	48.414	48.414	0.11	337436	0.01	2000	
Sr	88	1	No Gas	1045.118	1045.118	1.52	66064044	0.00	2000	
Mo	95	1	No Gas	51.400	51.400	0.98	693392	0.01	2000	
Sn	118	1	No Gas	102.131	102.131	2.05	2054104	0.00	2000	
Sb	121	1	No Gas	47.388	47.388	0.73	1355259	0.00	2000	
Ba	137	1	No Gas	606.683	606.683	1.50	6273204	0.01	2000	
Tl	205	1	No Gas	49.136	49.136	2.24	2579691	0.00	2000	
Tl	203	1	No Gas	47.080	47.080	3.51	1056201	0.00	2000	
Pb	208	1	No Gas	48.303	48.303	2.88	3484810	0.00	2000	
U	238	1	No Gas	93.466	93.466	2.42	6541352	0.00	2000	
Ca	43	2	He	132386.401	132386.401	1.25	1126935	11.75	200000	
Sb	121	2	He	47.056	47.056	0.84	976341	0.00	2000	
Ti	47	2	He	140.365	140.365	1.31	107634	0.13	2000	
Cu	63	1	No Gas	48.301	48.301	1.61	1291180	0.00	2000	
Zn	66	1	No Gas	50.804	50.804	1.70	366142	0.01	2000	
Se	82	1	No Gas	51.461	51.461	1.27	22646	0.23	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2186918	0.79	2322553	94.16	70	120	
Ge	72	2	He	2283173	0.62	2276213	100.31	70	120	
Ge	72	1	No Gas	5236514	1.20	5261860	99.52	70	120	
In	115	1	No Gas	5807755	0.84	5917509	98.15	70	120	
Bi	209	1	No Gas	4270901	2.26	4246459	100.58	70	120	

Sample Report

Sample Table

Sample Name	HS20100780-04PDS
Data File Name	048SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:52:31-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	23.001	23.001	1.88	847282	0.00	2000	
Be	9	1	No Gas	134.416	134.416	1.74	1052383	0.01	2000	
V	51	2	He	139.568	139.568	2.14	2463798	0.01	2000	
Cr	52	2	He	134.559	134.559	3.31	2626047	0.01	2000	
Fe	56	2	He	18700.699	18700.699	2.07	349045141	0.01	200000	
Se	78	2	He	139.783	139.783	2.79	49005	0.29	2000	
Sn	118	2	He	0.901	0.901	0.23	15142	0.01	200	
As	75	2	He	140.908	140.908	2.39	440375	0.03	2000	
Ca	44	2	He	134260.167	134260.167	1.12	19762464	0.68	200000	
Na	23	2	He	53366.400	53366.400	2.63	166093344	0.03	200000	
Mg	24	2	He	34312.466	34312.466	3.27	65826731	0.05	200000	
K	39	2	He	17224.460	17224.460	1.99	50261956	0.03	200000	
Mn	55	2	He	4422.660	4422.660	2.36	75481514	0.01	2000	>LDR
Co	59	2	He	132.118	132.118	1.92	3597450	0.00	2000	
Ni	60	2	He	136.337	136.337	2.27	905457	0.02	2000	
Cu	63	2	He	136.012	136.012	1.93	2310554	0.01	2000	
Zn	66	2	He	138.789	138.789	2.01	527266	0.03	2000	
Al	27	2	He	143.618	143.618	2.79	205920	0.07	2000	
B	11	1	No Gas	79.050	79.050	1.39	462160	0.02	2000	
Al	27	1	No Gas	146.056	146.056	2.76	4494579	0.00	2000	
Si	28	1	No Gas	15248.932	15248.932	2.85	249699770	0.01	2000	>LDR
Ag	107	1	No Gas	129.904	129.904	1.48	4706254	0.00	2000	
Cd	111	1	No Gas	137.197	137.197	1.13	974903	0.01	2000	
Sr	88	1	No Gas	912.279	912.279	0.31	58804001	0.00	2000	
Mo	95	1	No Gas	137.940	137.940	0.86	1897176	0.01	2000	
Sn	118	1	No Gas	0.891	0.891	7.35	21024	0.00	2000	
Sb	121	1	No Gas	125.183	125.183	3.00	3635652	0.00	2000	
Ba	137	1	No Gas	663.304	663.304	1.38	6993623	0.01	2000	
Tl	205	1	No Gas	134.377	134.377	1.84	7232697	0.00	2000	
Tl	203	1	No Gas	134.145	134.145	2.61	3085468	0.00	2000	
Pb	208	1	No Gas	134.296	134.296	2.18	9906016	0.00	2000	
U	238	1	No Gas	0.630	0.630	2.20	45275	0.00	2000	
Ca	43	2	He	136102.300	136102.300	1.60	1170666	11.63	200000	
Sb	121	2	He	129.560	129.560	2.23	2711752	0.00	2000	
Ti	47	2	He	138.567	138.567	1.40	107331	0.13	2000	
Cu	63	1	No Gas	133.137	133.137	2.25	3612788	0.00	2000	
Zn	66	1	No Gas	139.352	139.352	2.21	1017408	0.01	2000	
Se	82	1	No Gas	140.806	140.806	3.80	63047	0.22	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2352528	0.35	2322553	101.29	70	120	
Ge	72	2	He	2306788	2.32	2276213	101.34	70	120	
Ge	72	1	No Gas	5326139	2.38	5261860	101.22	70	120	
In	115	1	No Gas	5921746	0.70	5917509	100.07	70	120	
Bi	209	1	No Gas	4378934	1.67	4246459	103.12	70	120	

Sample Report

Sample Table

Sample Name	HS20100695-01
Data File Name	050SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T11:59:38-05:00
Sample Type	Sample
Dilution	1
Comment	DOD TW 158768
ISTD Ref FileName	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	24.687	24.687	2.42	884542	0.00	2000	
Be	9	1	No Gas	0.137	0.137	10.00	1078	0.01	2000	
V	51	2	He	0.338	0.338	10.38	28299	0.00	2000	
Cr	52	2	He	1.161	1.161	3.37	28019	0.00	2000	
Fe	56	2	He	2114.152	2114.152	1.74	39279558	0.01	200000	
Se	78	2	He	0.491	0.491	20.01	961	0.05	2000	
Sn	118	2	He	0.182	0.182	8.88	4634	0.00	200	
As	75	2	He	1.291	1.291	1.99	5073	0.03	2000	
Ca	44	2	He	38707.896	38707.896	2.91	5666716	0.68	200000	
Na	23	2	He	167288.563	167288.563	1.75	517625526	0.03	200000	
Mg	24	2	He	31050.764	31050.764	1.02	59268014	0.05	200000	
K	39	2	He	1124.320	1124.320	2.54	3476740	0.03	200000	
Mn	55	2	He	634.552	634.552	1.42	10776225	0.01	2000	
Co	59	2	He	9.471	9.471	0.78	257213	0.00	2000	
Ni	60	2	He	15.299	15.299	1.22	101598	0.02	2000	
Cu	63	2	He	17.549	17.549	0.63	298275	0.01	2000	
Zn	66	2	He	25.750	25.750	0.96	98342	0.03	2000	
Al	27	2	He	37.895	37.895	2.69	55389	0.07	2000	
B	11	1	No Gas	34.545	34.545	2.07	244467	0.01	2000	
Al	27	1	No Gas	40.310	40.310	6.32	1234987	0.00	2000	
Si	28	1	No Gas	21769.092	21769.092	0.50	346911208	0.01	2000	>LDR
Ag	107	1	No Gas	0.006	0.006	68.18	570	0.00	2000	
Cd	111	1	No Gas	0.243	0.243	2.06	1657	0.01	2000	
Sr	88	1	No Gas	793.973	793.973	2.21	48055513	0.00	2000	
Mo	95	1	No Gas	0.208	0.208	8.64	2824	0.01	2000	
Sn	118	1	No Gas	0.191	0.191	13.83	6272	0.00	2000	
Sb	121	1	No Gas	0.484	0.484	7.05	16507	0.00	2000	
Ba	137	1	No Gas	804.332	804.332	2.65	7962908	0.01	2000	
Tl	205	1	No Gas	0.003	0.003	78.89	1367	0.00	2000	
Tl	203	1	No Gas	0.002	0.002	207.20	600	0.00	2000	
Pb	208	1	No Gas	0.044	0.044	5.32	18526	0.00	2000	
U	238	1	No Gas	0.119	0.119	2.50	7919	0.00	2000	
Ca	43	2	He	40240.046	40240.046	1.57	344197	11.69	200000	
Sb	121	2	He	0.426	0.426	5.44	10831	0.00	2000	
Ti	47	2	He	0.597	0.597	9.89	483	0.12	2000	
Cu	63	1	No Gas	18.796	18.796	1.82	499482	0.00	2000	
Zn	66	1	No Gas	26.480	26.480	2.89	189973	0.01	2000	
Se	82	1	No Gas	0.792	0.792	44.03	320	0.25	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2314635	1.28	2322553	99.66	70	120	
Ge	72	2	He	2294397	2.59	2276213	100.80	70	120	
Ge	72	1	No Gas	5184968	1.49	5261860	98.54	70	120	
In	115	1	No Gas	5561298	1.15	5917509	93.98	70	120	
Bi	209	1	No Gas	4008506	1.98	4246459	94.40	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	052_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T12:03:23-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	104.563	1.772	3318334	0.79	100	104.6	90	110	
Be	9	1	No Gas	94.939	0.293	735612	1.74	100	94.9	90	110	
V	51	2	He	99.658	2.174	1716336	1.41	100	99.7	90	110	
Cr	52	2	He	97.953	2.937	1859865	2.10	100	98.0	90	110	
Fe	56	2	He	10191.566	1.676	184920524	0.80	10000	101.9	90	110	
Se	78	2	He	99.298	1.240	34069	1.30	100	99.3	90	110	
Sn	118	2	He	103.803	1.292	1477447	1.79	100	103.8	90	110	
As	75	2	He	97.909	1.393	297773	0.57	100	97.9	90	110	
Ca	44	2	He	10437.903	0.400	1494791	0.65	10000	104.4	90	110	
Na	23	2	He	10463.454	0.526	31765110	1.09	10000	104.6	90	110	
Mg	24	2	He	10559.611	1.397	19696686	0.84	10000	105.6	90	110	
K	39	2	He	10472.766	1.473	29793452	0.62	10000	104.7	90	110	
Mn	55	2	He	98.219	0.795	1632521	0.48	100	98.2	90	110	
Co	59	2	He	99.493	2.043	2633348	1.41	100	99.5	90	110	
Ni	60	2	He	102.552	1.880	662194	1.19	100	102.6	90	110	
Cu	63	2	He	102.620	0.986	1695043	0.23	100	102.6	90	110	
Zn	66	2	He	100.584	1.259	371783	0.53	100	100.6	90	110	
Al	27	2	He	100.995	2.383	141289	1.52	100	101.0	90	110	
B	11	1	No Gas	456.235	2.551	2248711	0.45	500	91.2	90	110	
Al	27	1	No Gas	104.761	0.964	3184979	0.49	100	104.8	90	110	
Si	28	1	No Gas	627.864	31.206	10735159	31.02	5000	12.6	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	509.614	3.646	830351	3.54	500	101.9	90	110	
Ag	107	1	No Gas	99.122	2.139	3593192	1.99	100	99.1	90	110	
Cd	111	1	No Gas	100.778	1.149	716547	1.08	100	100.8	90	110	
Sr	88	1	No Gas	100.636	0.647	6491579	0.41	100	100.6	90	110	
Mo	95	1	No Gas	98.638	2.380	1357443	2.45	100	98.6	90	110	
Sn	118	1	No Gas	100.892	0.982	2070433	1.09	100	100.9	90	110	
Sb	121	1	No Gas	98.727	1.022	2823436	1.16	100	98.7	90	110	
Ba	137	1	No Gas	99.420	1.387	1049269	1.47	100	99.4	90	110	
Tl	205	1	No Gas	102.640	2.265	5574687	1.37	100	102.6	90	110	
Tl	203	1	No Gas	100.852	3.475	2340861	2.68	100	100.9	90	110	
Pb	208	1	No Gas	99.914	2.461	7440730	1.54	100	99.9	90	110	
U	238	1	No Gas	98.404	0.868	7127928	1.61	100	98.4	90	110	
Ca	43	2	He	10255.201	0.842	85770	0.21	10000	102.6	90	110	
Sb	121	2	He	97.562	1.626	1985400	1.05	100	97.6	90	110	
Ti	47	2	He	102.118	0.395	76891	0.62	100	102.1	90	110	
Cu	63	1	No Gas	104.079	2.791	2781318	2.40	100	104.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2328182	2.03	2322553	100.24	70	120	
Ge	72	2	He	2241805	0.89	2276213	98.49	70	120	
Ge	72	1	No Gas	5242690	1.44	5261860	99.64	70	120	
In	115	1	No Gas	5924991	0.24	5917509	100.13	70	120	
Bi	209	1	No Gas	4418614	0.93	4246459	104.05	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	053_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T12:05:07-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.269	44.6	147418	0.8	0.5	
Be	9	1	No Gas	0.009	33.7	98	25.1	0.5	
V	51	2	He	-0.468	-2.6	13939	1.3	2.5	
Cr	52	2	He	0.101	13.1	7322	4.2	2.5	
Fe	56	2	He	1.872	8.5	67644	3.5	100	
Se	78	2	He	-0.126	-5.6	732	0.9	2	
As	75	2	He	-0.074	-46.4	819	11.9	2.5	
Ca	44	2	He	25.321	9.1	5178	7.3	100	
Na	23	2	He	26.858	5.7	210650	1.2	100	
Mg	24	2	He	0.803	13.3	3037	6.4	100	
K	39	2	He	4.126	31.7	235155	0.8	100	
Mn	55	2	He	1.037	0.8	20168	0.7	2.5	
Co	59	2	He	0.002	211.8	760	10.8	2.5	
Ni	60	2	He	0.308	5.8	2570	5.2	2.5	
Cu	63	2	He	0.083	3.3	3247	2.1	2	
Zn	66	2	He	0.922	9.2	4621	6.0	2.5	
Al	27	2	He	1.436	5.4	3741	2.6	5	
B	11	1	No Gas	4.784	17.7	104685	3.3	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.472	5.1	83735	1.2	5	
Si	28	1	No Gas	2.525	53.8	660623	1.7	10	
P	31	1	No Gas	-2.054	-37.5	39878	2.2	10	
Ag	107	1	No Gas	0.002	48.8	487	7.8	2.5	
Cd	111	1	No Gas	0.004	60.9	63	24.1	1	
Sr	88	1	No Gas	0.046	4.0	4471	2.3	2.5	
Mo	95	1	No Gas	0.065	15.2	1057	13.5	2.5	
Sn	118	1	No Gas	0.558	4.7	14518	3.7	5	
Sb	121	1	No Gas	1.055	15.4	33771	15.8	2.5	
Ba	137	1	No Gas	0.015	22.9	660	6.1	2.5	
Tl	205	1	No Gas	0.032	45.9	3237	27.6	1	
Tl	203	1	No Gas	0.029	49.3	1357	27.3	1	
Pb	208	1	No Gas	-0.057	-9.5	13443	4.9	2.5	
U	238	1	No Gas	0.010	22.5	887	21.5	2.5	
Ca	43	2	He	26.823	20.7	283	17.4	100	
Sb	121	2	He	0.750	2.8	17172	1.7	2.5	
Ti	47	2	He	0.098	67.0	97	51.0	2.5	
Cu	63	1	No Gas	0.099	7.2	6152	2.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2332504	1.87	2322553	100.43	70	120	
Ge	72	2	He	2240890	0.96	2276213	98.45	70	120	
Ge	72	1	No Gas	5361029	1.66	5261860	101.88	70	120	
In	115	1	No Gas	6058904	0.51	5917509	102.39	70	120	
Bi	209	1	No Gas	4591431	1.77	4246459	108.12	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	064_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T12:26:24-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	102.425	1.087	3130366	0.44	100	102.4	90	110	
Be	9	1	No Gas	98.406	2.322	733502	1.86	100	98.4	90	110	
V	51	2	He	100.863	2.742	1662842	2.14	100	100.9	90	110	
Cr	52	2	He	99.781	1.020	1814174	1.75	100	99.8	90	110	
Fe	56	2	He	10379.591	0.802	180323404	0.67	10000	103.8	90	110	
Se	78	2	He	98.404	1.556	32329	0.51	100	98.4	90	110	
Sn	118	2	He	102.967	1.452	1456948	0.32	100	103.0	90	110	
As	75	2	He	99.054	0.706	288429	0.60	100	99.1	90	110	
Ca	44	2	He	10297.386	2.005	1411788	1.47	10000	103.0	90	110	
Na	23	2	He	10519.742	0.963	30573531	0.22	10000	105.2	90	110	
Mg	24	2	He	10558.398	2.416	18853989	1.33	10000	105.6	90	110	
K	39	2	He	10443.516	1.554	28446914	1.41	10000	104.4	90	110	
Mn	55	2	He	101.019	1.172	1607452	0.61	100	101.0	90	110	
Co	59	2	He	99.774	0.756	2528698	1.63	100	99.8	90	110	
Ni	60	2	He	103.713	0.272	641239	1.21	100	103.7	90	110	
Cu	63	2	He	103.568	0.585	1637911	0.83	100	103.6	90	110	
Zn	66	2	He	101.942	0.808	360751	0.30	100	101.9	90	110	
Al	27	2	He	100.688	0.823	134880	0.72	100	100.7	90	110	
B	11	1	No Gas	460.479	2.311	2183485	2.36	500	92.1	90	110	
Al	27	1	No Gas	101.336	0.835	3051174	1.36	100	101.3	90	110	
Si	28	1	No Gas	496.853	0.368	8510548	0.27	5000	9.9	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	505.058	0.940	814963	0.47	500	101.0	90	110	
Ag	107	1	No Gas	100.428	1.274	3549491	1.37	100	100.4	90	110	
Cd	111	1	No Gas	102.094	0.769	707723	0.48	100	102.1	90	110	
Sr	88	1	No Gas	101.556	1.172	6386819	0.79	100	101.6	90	110	
Mo	95	1	No Gas	100.080	1.032	1342882	1.73	100	100.1	90	110	
Sn	118	1	No Gas	101.761	0.687	2036077	1.51	100	101.8	90	110	
Sb	121	1	No Gas	97.822	1.210	2769396	1.50	100	97.8	90	110	
Ba	137	1	No Gas	100.576	0.954	1034855	0.46	100	100.6	90	110	
Tl	205	1	No Gas	103.924	2.336	5669816	1.52	100	103.9	90	110	
Tl	203	1	No Gas	102.347	2.083	2386304	0.81	100	102.3	90	110	
Pb	208	1	No Gas	102.670	1.610	7680324	0.94	100	102.7	90	110	
U	238	1	No Gas	98.605	1.739	7175565	3.00	100	98.6	90	110	
Ca	43	2	He	10569.101	1.109	84629	0.78	10000	105.7	90	110	
Sb	121	2	He	100.807	1.186	1964059	0.62	100	100.8	90	110	
Ti	47	2	He	102.216	1.864	73681	0.92	100	102.2	90	110	
Cu	63	1	No Gas	102.698	1.769	2716871	1.53	100	102.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2239946	1.47	2322553	96.44	70	120	
Ge	72	2	He	2146367	1.09	2276213	94.30	70	120	
Ge	72	1	No Gas	5189484	0.54	5261860	98.62	70	120	
In	115	1	No Gas	5776816	0.90	5917509	97.62	70	120	
Bi	209	1	No Gas	4438882	1.90	4246459	104.53	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	065_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T12:28:09-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.256	23.5	141323	1.6	0.5	
Be	9	1	No Gas	0.010	18.6	97	13.0	0.5	
V	51	2	He	-0.644	-0.9	10854	3.7	2.5	
Cr	52	2	He	0.103	20.3	7279	2.0	2.5	
Fe	56	2	He	2.655	8.3	81040	1.4	100	
Se	78	2	He	0.106	167.0	802	6.9	2	
As	75	2	He	-0.084	-5.7	783	1.7	2.5	
Ca	44	2	He	26.043	5.9	5231	5.5	100	
Na	23	2	He	39.634	8.4	246803	1.1	100	
Mg	24	2	He	1.376	7.6	4067	5.0	100	
K	39	2	He	3.299	96.3	230525	1.0	100	
Mn	55	2	He	1.076	3.8	20609	1.3	2.5	
Co	59	2	He	0.006	36.2	863	9.4	2.5	
Ni	60	2	He	0.313	13.3	2574	10.4	2.5	
Cu	63	2	He	0.093	8.9	3377	2.2	2	
Zn	66	2	He	0.936	15.0	4618	7.5	2.5	
Al	27	2	He	1.202	8.7	3384	1.5	5	
B	11	1	No Gas	6.009	9.1	106262	4.3	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.472	3.6	81723	0.7	5	
Si	28	1	No Gas	3.536	14.8	661245	1.8	10	
P	31	1	No Gas	-1.718	-25.3	39447	1.8	10	
Ag	107	1	No Gas	0.008	5.4	700	2.5	2.5	
Cd	111	1	No Gas	0.005	59.1	77	30.1	1	
Sr	88	1	No Gas	0.072	2.9	6128	2.5	2.5	
Mo	95	1	No Gas	0.072	11.5	1147	9.9	2.5	
Sn	118	1	No Gas	0.522	6.3	13634	5.0	5	
Sb	121	1	No Gas	0.935	22.1	29468	18.8	2.5	
Ba	137	1	No Gas	0.018	10.2	687	3.0	2.5	
Tl	205	1	No Gas	0.039	56.4	3631	36.3	1	
Tl	203	1	No Gas	0.043	44.2	1707	29.6	1	
Pb	208	1	No Gas	-0.079	-4.7	11782	3.7	2.5	
U	238	1	No Gas	0.017	31.2	1357	31.0	2.5	
Ca	43	2	He	25.573	21.5	270	17.0	100	
Sb	121	2	He	0.632	8.4	14622	5.3	2.5	
Ti	47	2	He	0.084	85.9	87	65.6	2.5	
Cu	63	1	No Gas	0.097	15.1	5971	5.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2241548	2.11	2322553	96.51	70	120	
Ge	72	2	He	2220483	3.42	2276213	97.55	70	120	
Ge	72	1	No Gas	5232411	1.29	5261860	99.44	70	120	
In	115	1	No Gas	6003111	0.47	5917509	101.45	70	120	
Bi	209	1	No Gas	4603384	2.12	4246459	108.41	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	076_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T12:48:56-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	104.073	0.226	3011982	0.77	100	104.1	90	110	
Be	9	1	No Gas	100.912	1.289	712760	1.11	100	100.9	90	110	
V	51	2	He	99.034	3.714	1601514	2.56	100	99.0	90	110	
Cr	52	2	He	99.475	2.649	1773500	1.52	100	99.5	90	110	
Fe	56	2	He	10226.291	0.593	174253217	0.89	10000	102.3	90	110	
Se	78	2	He	97.948	2.332	31562	1.05	100	97.9	90	110	
Sn	118	2	He	102.034	1.469	1434143	0.35	100	102.0	90	110	
As	75	2	He	97.898	1.293	279587	0.21	100	97.9	90	110	
Ca	44	2	He	10200.364	4.533	1371519	3.94	10000	102.0	90	110	
Na	23	2	He	10174.073	1.315	29005550	1.11	10000	101.7	90	110	
Mg	24	2	He	10276.584	2.537	17998071	1.33	10000	102.8	90	110	
K	39	2	He	10153.235	1.655	27129141	0.41	10000	101.5	90	110	
Mn	55	2	He	100.689	2.022	1571311	0.81	100	100.7	90	110	
Co	59	2	He	99.621	2.750	2475763	1.69	100	99.6	90	110	
Ni	60	2	He	103.181	1.521	625628	0.37	100	103.2	90	110	
Cu	63	2	He	103.105	3.285	1598934	2.17	100	103.1	90	110	
Zn	66	2	He	100.559	1.562	349028	0.92	100	100.6	90	110	
Al	27	2	He	98.377	2.153	129283	1.61	100	98.4	90	110	
B	11	1	No Gas	470.821	2.994	2113459	2.25	500	94.2	90	110	
Al	27	1	No Gas	101.588	0.396	3022338	0.33	100	101.6	90	110	
Si	28	1	No Gas	507.270	2.251	8574064	2.36	5000	10.1	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	498.270	1.411	795050	1.13	500	99.7	90	110	
Ag	107	1	No Gas	96.666	0.783	3476238	0.53	100	96.7	90	110	
Cd	111	1	No Gas	99.741	0.490	703554	1.34	100	99.7	90	110	
Sr	88	1	No Gas	100.480	1.341	6429739	1.15	100	100.5	90	110	
Mo	95	1	No Gas	96.158	0.740	1312723	0.14	100	96.2	90	110	
Sn	118	1	No Gas	103.043	1.458	2097511	0.69	100	103.0	90	110	
Sb	121	1	No Gas	100.444	1.728	2809742	1.47	100	100.4	90	110	
Ba	137	1	No Gas	99.711	1.492	1043903	1.21	100	99.7	90	110	
Tl	205	1	No Gas	102.577	2.847	5720991	0.52	100	102.6	90	110	
Tl	203	1	No Gas	103.313	4.485	2461695	1.47	100	103.3	90	110	
Pb	208	1	No Gas	101.938	2.326	7795920	0.73	100	101.9	90	110	
U	238	1	No Gas	98.641	2.217	7336680	0.80	100	98.6	90	110	
Ca	43	2	He	10199.784	0.940	80106	0.30	10000	102.0	90	110	
Sb	121	2	He	100.314	2.138	1916760	0.91	100	100.3	90	110	
Ti	47	2	He	100.779	2.316	71248	1.32	100	100.8	90	110	
Cu	63	1	No Gas	102.519	1.175	2680065	0.95	100	102.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2122338	0.89	2322553	91.38	70	120	
Ge	72	2	He	2105180	1.24	2276213	92.49	70	120	
Ge	72	1	No Gas	5128021	0.27	5261860	97.46	70	120	
In	115	1	No Gas	5877846	0.87	5917509	99.33	70	120	
Bi	209	1	No Gas	4539239	2.98	4246459	106.89	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	077_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T12:50:41-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.127	52.5	136893	0.8	0.5	
Be	9	1	No Gas	0.014	31.6	130	25.2	0.5	
V	51	2	He	-0.689	-2.4	9732	2.0	2.5	
Cr	52	2	He	0.104	31.1	7042	7.8	2.5	
Fe	56	2	He	2.938	2.0	83146	2.0	100	
Se	78	2	He	-0.181	-2.4	682	1.3	2	
As	75	2	He	-0.086	-6.6	748	1.6	2.5	
Ca	44	2	He	27.797	11.1	5281	6.6	100	
Na	23	2	He	22.928	3.3	189982	1.0	100	
Mg	24	2	He	1.748	11.3	4588	8.0	100	
K	39	2	He	1.857	108.6	218585	1.1	100	
Mn	55	2	He	1.235	2.3	22412	1.0	2.5	
Co	59	2	He	0.006	55.8	833	8.5	2.5	
Ni	60	2	He	0.306	10.0	2440	6.9	2.5	
Cu	63	2	He	0.086	24.2	3154	9.0	2	
Zn	66	2	He	0.979	7.5	4614	4.2	2.5	
Al	27	2	He	2.266	93.8	4687	61.1	5	
B	11	1	No Gas	7.151	15.5	110898	3.9	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.457	5.5	80550	3.0	5	
Si	28	1	No Gas	4.620	9.0	672455	1.0	10	
P	31	1	No Gas	-1.488	-51.8	39440	3.1	10	
Ag	107	1	No Gas	0.008	27.2	713	12.2	2.5	
Cd	111	1	No Gas	0.010	97.8	110	63.6	1	
Sr	88	1	No Gas	0.080	8.6	6785	7.2	2.5	
Mo	95	1	No Gas	0.070	17.6	1130	14.6	2.5	
Sn	118	1	No Gas	0.657	0.9	16651	2.3	5	
Sb	121	1	No Gas	1.064	16.2	32876	14.9	2.5	
Ba	137	1	No Gas	0.048	26.0	1017	14.0	2.5	
Tl	205	1	No Gas	0.046	46.2	4208	33.9	1	
Tl	203	1	No Gas	0.040	54.6	1693	36.6	1	
Pb	208	1	No Gas	-0.087	-2.9	11546	4.9	2.5	
U	238	1	No Gas	0.016	12.7	1387	14.5	2.5	
Ca	43	2	He	25.105	8.9	257	6.0	100	
Sb	121	2	He	0.756	0.4	16524	1.6	2.5	
Ti	47	2	He	0.071	29.6	73	20.8	2.5	
Cu	63	1	No Gas	0.094	1.4	5831	0.5	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2230672	0.68	2322553	96.04	70	120	
Ge	72	2	He	2141610	1.40	2276213	94.09	70	120	
Ge	72	1	No Gas	5184586	0.08	5261860	98.53	70	120	
In	115	1	No Gas	6082062	1.66	5917509	102.78	70	120	
Bi	209	1	No Gas	4767737	4.31	4246459	112.28	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	088_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T13:18:32-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.262	1.477	3016692	0.28	100	101.3	90	110	
Be	9	1	No Gas	97.326	1.494	706815	0.64	100	97.3	90	110	
V	51	2	He	94.796	1.503	1572921	1.57	100	94.8	90	110	
Cr	52	2	He	95.537	1.304	1746725	1.23	100	95.5	90	110	
Fe	56	2	He	9743.136	0.834	170207231	0.73	10000	97.4	90	110	
Se	78	2	He	92.749	0.435	30685	0.44	100	92.7	90	110	
Sn	118	2	He	100.833	0.761	1434476	0.65	100	100.8	90	110	
As	75	2	He	93.699	0.420	274405	0.47	100	93.7	90	110	
Ca	44	2	He	9712.394	0.912	1339131	0.82	10000	97.1	90	110	
Na	23	2	He	9838.436	0.445	28760996	0.52	10000	98.4	90	110	
Mg	24	2	He	9907.550	1.987	17792508	2.05	10000	99.1	90	110	
K	39	2	He	9626.944	0.418	26385266	0.39	10000	96.3	90	110	
Mn	55	2	He	94.408	1.493	1510823	1.53	100	94.4	90	110	
Co	59	2	He	94.433	1.038	2406449	0.98	100	94.4	90	110	
Ni	60	2	He	98.909	0.651	614922	0.56	100	98.9	90	110	
Cu	63	2	He	97.958	2.451	1557845	2.40	100	98.0	90	110	
Zn	66	2	He	97.834	0.718	348190	0.81	100	97.8	90	110	
Al	27	2	He	94.059	1.448	126812	1.53	100	94.1	90	110	
B	11	1	No Gas	447.118	1.732	2067695	0.81	500	89.4	90	110	CCV Main CR1-2 Failed
Al	27	1	No Gas	99.651	1.362	2981301	1.27	100	99.7	90	110	
Si	28	1	No Gas	472.924	2.204	8075421	0.67	5000	9.5	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	488.195	1.763	783948	0.75	500	97.6	90	110	
Ag	107	1	No Gas	97.047	2.234	3565536	0.35	100	97.0	90	110	
Cd	111	1	No Gas	99.041	2.596	713678	0.72	100	99.0	90	110	
Sr	88	1	No Gas	96.057	3.985	6278723	2.25	100	96.1	90	110	
Mo	95	1	No Gas	95.529	0.456	1332694	1.43	100	95.5	90	110	
Sn	118	1	No Gas	99.287	1.939	2065175	1.03	100	99.3	90	110	
Sb	121	1	No Gas	99.347	1.821	2793787	0.23	100	99.3	90	110	
Ba	137	1	No Gas	96.950	1.438	1037162	1.19	100	96.9	90	110	
Tl	205	1	No Gas	99.147	1.966	5705560	0.82	100	99.1	90	110	
Tl	203	1	No Gas	99.480	2.677	2446523	1.80	100	99.5	90	110	
Pb	208	1	No Gas	98.379	1.763	7763093	0.98	100	98.4	90	110	
U	238	1	No Gas	96.230	2.668	7383678	1.46	100	96.2	90	110	
Ca	43	2	He	9755.847	0.442	78557	0.54	10000	97.6	90	110	
Sb	121	2	He	98.540	0.904	1930646	0.97	100	98.5	90	110	
Ti	47	2	He	95.124	1.122	68956	1.12	100	95.1	90	110	
Cu	63	1	No Gas	97.754	2.228	2568984	0.54	100	97.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2182376	1.39	2322553	93.96	70	120	
Ge	72	2	He	2158185	0.10	2276213	94.81	70	120	
Ge	72	1	No Gas	5156253	2.07	5261860	97.99	70	120	
In	115	1	No Gas	6006661	1.88	5917509	101.51	70	120	
Bi	209	1	No Gas	4681740	1.34	4246459	110.25	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	089_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T13:20:18-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.072	102.0	136937	0.6	0.5	
Be	9	1	No Gas	0.008	21.1	85	15.6	0.5	
V	51	2	He	-0.692	-2.3	9714	1.7	2.5	
Cr	52	2	He	0.103	5.7	7042	2.1	2.5	
Fe	56	2	He	1.690	6.1	61679	1.0	100	
Se	78	2	He	-0.273	-67.2	654	7.4	2	
As	75	2	He	-0.118	-7.7	659	5.4	2.5	
Ca	44	2	He	21.708	7.4	4467	6.1	100	
Na	23	2	He	10.678	6.1	155060	1.0	100	
Mg	24	2	He	0.737	19.5	2797	11.0	100	
K	39	2	He	-2.082	-64.6	208593	0.4	100	
Mn	55	2	He	1.031	3.1	19231	1.0	2.5	
Co	59	2	He	-0.002	-157.4	647	9.4	2.5	
Ni	60	2	He	0.299	4.5	2404	4.6	2.5	
Cu	63	2	He	0.068	7.5	2877	2.5	2	
Zn	66	2	He	0.891	14.4	4324	12.2	2.5	
Al	27	2	He	1.158	5.0	3217	0.5	5	
B	11	1	No Gas	1.754	33.9	87437	4.6	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	1.613	24.7	87159	16.4	5	
Si	28	1	No Gas	-1.484	-81.3	587103	1.1	10	
P	31	1	No Gas	-1.679	-14.8	39965	2.1	10	
Ag	107	1	No Gas	0.002	66.8	493	11.2	2.5	
Cd	111	1	No Gas	-0.002	-154.5	23	99.0	1	
Sr	88	1	No Gas	0.047	8.6	4624	6.5	2.5	
Mo	95	1	No Gas	0.065	18.3	1077	15.0	2.5	
Sn	118	1	No Gas	0.497	7.7	13434	5.6	5	
Sb	121	1	No Gas	0.845	14.2	27306	15.0	2.5	
Ba	137	1	No Gas	0.016	56.0	673	14.0	2.5	
Tl	205	1	No Gas	0.041	61.4	3997	39.7	1	
Tl	203	1	No Gas	0.033	74.7	1533	42.1	1	
Pb	208	1	No Gas	-0.088	-4.9	11726	4.0	2.5	
U	238	1	No Gas	0.009	27.3	833	25.2	2.5	
Ca	43	2	He	22.165	30.6	233	21.1	100	
Sb	121	2	He	0.597	3.5	13464	1.6	2.5	
Ti	47	2	He	0.067	43.9	70	28.6	2.5	
Cu	63	1	No Gas	0.074	3.9	5398	1.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2258092	1.45	2322553	97.22	70	120	
Ge	72	2	He	2148087	1.91	2276213	94.37	70	120	
Ge	72	1	No Gas	5293300	2.37	5261860	100.60	70	120	
In	115	1	No Gas	6148400	0.94	5917509	103.90	70	120	
Bi	209	1	No Gas	4888624	1.42	4246459	115.12	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	097_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T13:36:40-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.394	1.804	3000545	0.80	100	101.4	90	110	
Be	9	1	No Gas	100.057	2.028	721816	0.24	100	100.1	90	110	
V	51	2	He	94.660	1.336	1585216	1.20	100	94.7	90	110	
Cr	52	2	He	94.389	2.822	1741832	2.95	100	94.4	90	110	
Fe	56	2	He	9674.096	0.803	170568291	0.95	10000	96.7	90	110	
Se	78	2	He	92.714	0.628	30957	0.67	100	92.7	90	110	
Sn	118	2	He	102.643	1.004	1469661	1.79	100	102.6	90	110	
As	75	2	He	94.230	0.945	278506	0.51	100	94.2	90	110	
Ca	44	2	He	9762.121	1.514	1358468	1.66	10000	97.6	90	110	
Na	23	2	He	9806.323	2.467	28928546	1.25	10000	98.1	90	110	
Mg	24	2	He	9823.810	2.264	17803112	1.17	10000	98.2	90	110	
K	39	2	He	9532.207	2.181	26366624	1.10	10000	95.3	90	110	
Mn	55	2	He	95.509	1.937	1542399	0.94	100	95.5	90	110	
Co	59	2	He	95.653	1.671	2460220	2.03	100	95.7	90	110	
Ni	60	2	He	98.855	1.666	620234	0.80	100	98.9	90	110	
Cu	63	2	He	98.030	1.779	1573322	1.04	100	98.0	90	110	
Zn	66	2	He	97.655	1.347	350750	0.42	100	97.7	90	110	
Al	27	2	He	94.219	1.192	128194	0.33	100	94.2	90	110	
B	11	1	No Gas	455.354	3.556	2090016	1.58	500	91.1	90	110	
Al	27	1	No Gas	97.930	2.981	2994257	2.36	100	97.9	90	110	
Si	28	1	No Gas	473.883	1.664	8268029	0.80	5000	9.5	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	484.128	1.587	794780	0.76	500	96.8	90	110	
Ag	107	1	No Gas	97.064	2.468	3548314	2.17	100	97.1	90	110	
Cd	111	1	No Gas	99.382	0.553	712641	1.25	100	99.4	90	110	
Sr	88	1	No Gas	98.219	3.040	6388304	2.01	100	98.2	90	110	
Mo	95	1	No Gas	95.785	3.749	1329526	4.28	100	95.8	90	110	
Sn	118	1	No Gas	99.777	0.923	2064865	0.58	100	99.8	90	110	
Sb	121	1	No Gas	98.884	0.631	2841940	1.02	100	98.9	90	110	
Ba	137	1	No Gas	99.731	2.030	1061345	1.02	100	99.7	90	110	
Tl	205	1	No Gas	100.858	0.801	5859544	1.78	100	100.9	90	110	
Tl	203	1	No Gas	99.247	1.858	2463998	1.79	100	99.2	90	110	
Pb	208	1	No Gas	99.475	1.428	7923539	1.34	100	99.5	90	110	
U	238	1	No Gas	97.635	3.662	7560764	2.16	100	97.6	90	110	
Ca	43	2	He	9671.250	2.923	78584	1.92	10000	96.7	90	110	
Sb	121	2	He	100.900	1.354	1995073	0.94	100	100.9	90	110	
Ti	47	2	He	95.461	1.162	69841	1.13	100	95.5	90	110	
Cu	63	1	No Gas	98.112	1.012	2635199	1.19	100	98.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2168142	1.94	2322553	93.35	70	120	
Ge	72	2	He	2178270	1.21	2276213	95.70	70	120	
Ge	72	1	No Gas	5268337	0.75	5261860	100.12	70	120	
In	115	1	No Gas	5975474	1.21	5917509	100.98	70	120	
Bi	209	1	No Gas	4726369	2.50	4246459	111.30	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	098_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq Date Time	2020-10-28T13:38:46-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.054	240.4	135948	0.7	0.5	
Be	9	1	No Gas	0.007	2.9	80	0.0	0.5	
V	51	2	He	-0.715	-1.8	9563	2.0	2.5	
Cr	52	2	He	0.078	21.4	6752	4.8	2.5	
Fe	56	2	He	1.392	5.3	57846	1.9	100	
Se	78	2	He	-0.154	-106.7	709	7.8	2	
As	75	2	He	-0.120	-15.7	668	8.3	2.5	
Ca	44	2	He	21.677	4.7	4568	3.5	100	
Na	23	2	He	4.400	8.4	140124	1.1	100	
Mg	24	2	He	0.677	15.6	2750	6.7	100	
K	39	2	He	-3.538	-49.4	209525	2.4	100	
Mn	55	2	He	0.991	4.1	19037	3.8	2.5	
Co	59	2	He	0.002	226.6	750	13.5	2.5	
Ni	60	2	He	0.291	1.9	2414	1.0	2.5	
Cu	63	2	He	0.073	6.2	3027	2.0	2	
Zn	66	2	He	1.021	4.0	4891	2.6	2.5	
Al	27	2	He	1.266	11.9	3441	5.9	5	
B	11	1	No Gas	-0.530	-170.4	76611	3.9	0.5	
Al	27	1	No Gas	1.453	2.4	83054	0.4	5	
Si	28	1	No Gas	-2.403	-47.2	578868	2.6	10	
P	31	1	No Gas	-1.756	-25.9	40299	2.1	10	
Ag	107	1	No Gas	0.002	5.3	483	2.4	2.5	
Cd	111	1	No Gas	-0.002	-95.0	23	65.5	1	
Sr	88	1	No Gas	0.048	3.2	4784	1.1	2.5	
Mo	95	1	No Gas	0.051	36.4	893	30.9	2.5	
Sn	118	1	No Gas	0.412	9.3	11832	7.3	5	
Sb	121	1	No Gas	0.694	16.4	23181	15.1	2.5	
Ba	137	1	No Gas	0.043	15.8	993	6.5	2.5	
Tl	205	1	No Gas	0.053	80.8	4648	57.7	1	
Tl	203	1	No Gas	0.050	79.0	1934	53.4	1	
Pb	208	1	No Gas	-0.089	-2.3	11402	3.5	2.5	
U	238	1	No Gas	0.008	37.7	733	35.1	2.5	
Ca	43	2	He	20.191	4.1	223	2.6	100	
Sb	121	2	He	0.510	2.6	12052	1.7	2.5	
Ti	47	2	He	0.015	141.0	33	45.8	2.5	
Cu	63	1	No Gas	0.064	2.2	5191	0.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag

Continuing Calibration Blank (CCB) Report

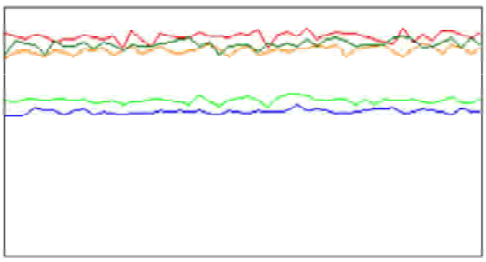
Li	6	1	No Gas	2251360	2.06	2322553	96.93	70	120	
Ge	72	2	He	2198728	0.44	2276213	96.60	70	120	
Ge	72	1	No Gas	5353154	0.84	5261860	101.74	70	120	
In	115	1	No Gas	6257959	1.75	5917509	105.75	70	120	
Bi	209	1	No Gas	4783488	2.75	4246459	112.65	70	120	

Tune Check Report

Operator Name	ALSHS NoUser
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\102820A.b
Acq. Date-Time	10/28/2020 9:01:54 AM
Report Comment	---
Instrument Name	G8421A SG18523544

[No Gas]

Sensitivity



Sampling Period [sec]	0.514
Integration Time [sec]	0.1

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	10000	8867	88670.06		
24	50000	31418	314181.32		
59	100000	58283	582832.48		
115	100000	83221	832205.92		
208	50000	42778	427781.90		

Mass	Resp Ratio	Resp Ratio (Required)	Resp Ratio (Flag)
9		-	
24		-	
59		-	
115		-	
208		-	

Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	2.019	5.000	
24	1.887	5.000	
59	1.617	5.000	
115	1.800	5.000	
208	2.089	5.000	

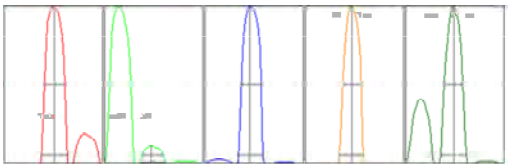
Mass	Background	Background (Required)	Background (Flag)
9	0.200		
24	0.900		
59	0.700		
115	0.400		
208	1.400		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.764 %
Doubly Charged	70 / 140 0.789 %

Tune Check Report

Resolution/Axis



Integration Time [sec]	0.1
Acquisition Time [sec]	37.4
Y Axis	Linear

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	8876.07	9.05	8.90 - 9.10	
24	31633.06	23.95	23.90 - 24.10	
59	59254.31	58.90	58.90 - 59.10	
115	85354.05	114.95	114.90 - 115.10	
208	43558.12	208.00	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.63	0.783		
24	0.64	0.785		
59	0.61	0.739		
115	0.56	0.728		
208	0.58	0.778		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.45 L/min	Dilution Gas	0.55 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.0 V	Deflect	12.6 V
Extract 2	-195.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-90 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	190 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.13		

Hardware Settings

Torch

Torch H	0.6 mm	Torch V	0.1 mm

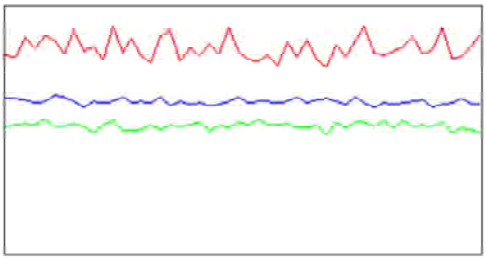
EM

Discriminator	4.3 mV	Analog HV	2485 V	Pulse HV	1250 V

[He]

Tune Check Report

Sensitivity



Sampling Period [sec]	0.306
Integration Time [sec]	0.1

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	500	416	4162.41		
24	5000	2580	25799.48		
59	50000	30731	307307.76		

Mass	Resp Ratio	Resp Ratio (Required)	Resp Ratio (Flag)
9		-	
24		-	
59		-	

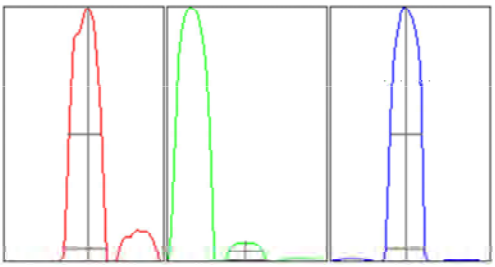
Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	5.391	5.000	Fail
24	2.717	5.000	
59	1.845	5.000	

Mass	Background	Background (Required)	Background (Flag)
9	0.400		
24	0.700		
59	0.100		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.561 %
Doubly Charged	70 / 140 0.767 %

Resolution/Axis



Integration Time [sec]	0.1
Acquisition Time [sec]	22.24
Y Axis	Linear

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	414.33	9.10	8.90 - 9.10	
24	2584.22	24.00	23.90 - 24.10	
59	31523.34	58.95	58.90 - 59.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.62	0.786		
24	0.64	0.785		

Tune Check Report

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
59	0.61	0.739		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.45 L/min	Dilution Gas	0.55 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.0 V	Deflect	0.2 V
Extract 2	-195.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	3.6 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.13		

Hardware Settings

Torch

Torch H	0.6 mm	Torch V	0.1 mm

EM

Discriminator	4.3 mV	Analog HV	2485 V	Pulse HV	1250 V

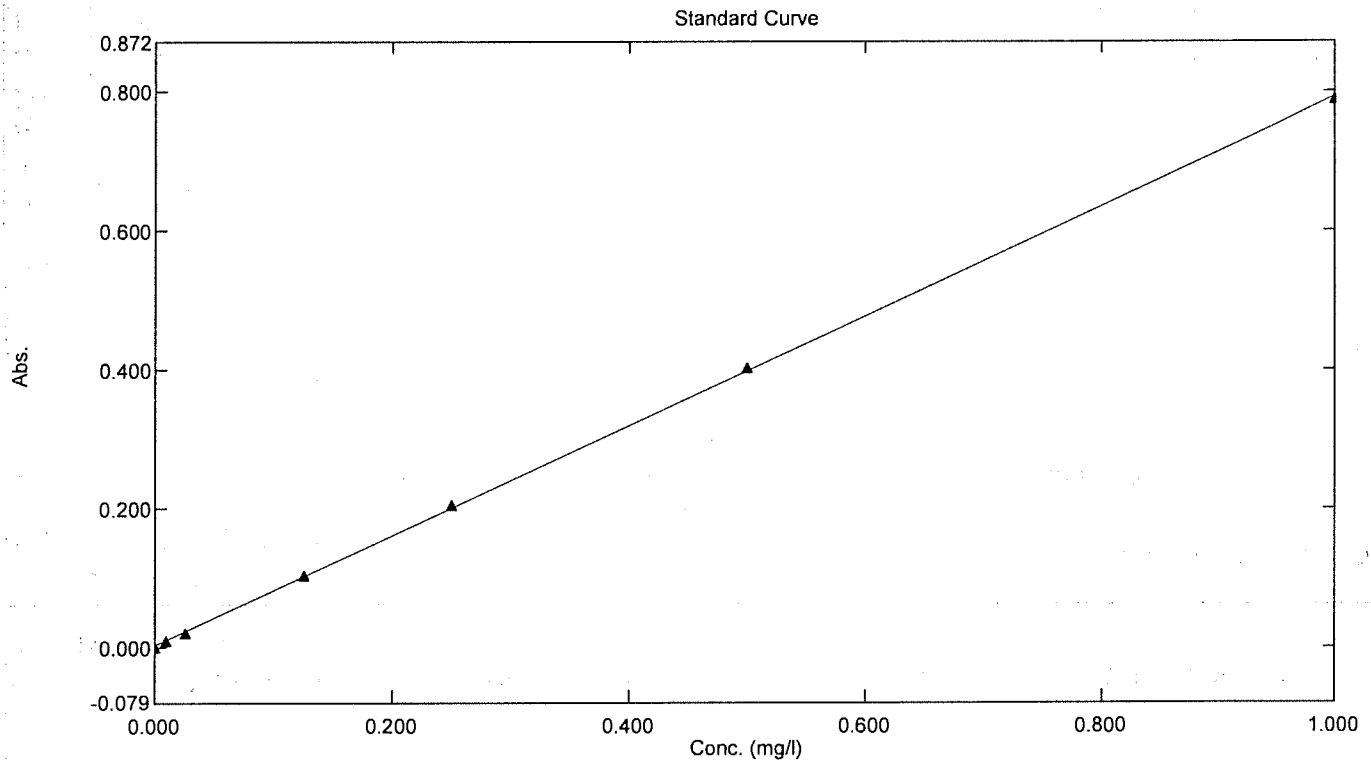
HS20100695 Wet Chem Raw Data (Cr6_W_7196_DOD)

ALS WO# HS20100695

Standard Table Report

11/06/2020 12:11:33 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\10142020-CR6 W_.pho



Correlation Coefficient r2 = 0.99986

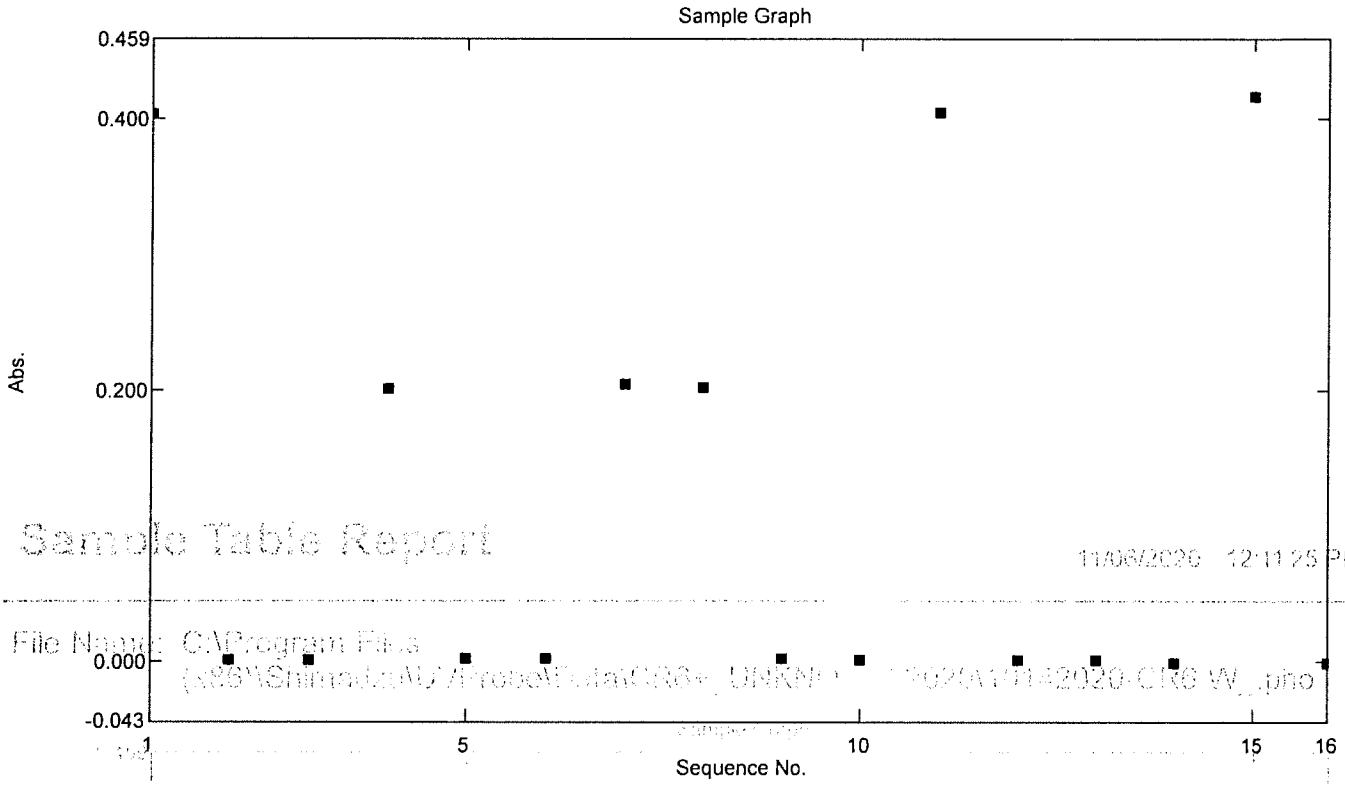
Standard Table

	Sample ID	Type	Ex	Conc	WL540.0	Wgt.Factor	Comments
1	STD1	Standard		0.000	0.000	1.000	
2	STD2	Standard		0.010	0.008	1.000	
3	STD3	Standard		0.025	0.020	1.000	
4	STD4	Standard		0.125	0.104	1.000	
5	STD5	Standard		0.250	0.203	1.000	
6	STD6	Standard		0.500	0.403	1.000	
7	STD7	Standard		1.000	0.790	1.000	
8							

Sample Table Report

11/06/2020 12:11:25 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\10142020-CR6 W_.pho



Sample Table

	Sample ID	Type	Ex	Conc	WL540.0	Comments
1	CCV	Unknown		0.506	0.403	314066803 WC-14
2	CCB	Unknown		-0.002	0.001	314060804 WC-13
3	MBLK	Unknown		-0.002	0.001	314066803 WC-13
4	LCS	Unknown		0.252	0.202	314066802 WC-14
5	HS20100694.01	Unknown		0.000	0.003	1:18PM,SAMP-BKG=TOTAL
6	HS20100694.01BKG	Unknown		-0.001	0.002	1:18PM,0
7	HS20100694.01MS	Unknown		0.255	0.204	1:19PM
8	HS20100694.01MSD	Unknown		0.253	0.203	1:19PM
9	HS20100695.01	Unknown		0.000	0.003	1:20PM,0
10	HS20100695.01BKG	Unknown		-0.001	0.001	1:21PM
11	CCV2	Unknown		0.508	0.404	
12	CCB2	Unknown		-0.002	0.001	
13	HS20100718.01	Unknown		-0.002	0.001	5:50PM
14	HS20100718.01BKG	Unknown		-0.004	-0.001	5:50PM
15	CCV3	Unknown		0.524	0.417	
16	CCB3	Unknown		-0.005	-0.002	
17						

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

WorkOrder: HS20100717

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

23-Oct-2020

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

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- HS20100717 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)
- HS20100717 Wet Chem Raw Data (P-ORTHO)

HS20100717 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20100717

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

October 22, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20100717**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Oct 14, 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: RJ.MODASHIA
RJ Modashia
Project Manager

ALS Houston, US Date: 22-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20100717

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20100717-01	LH18/24-SP650_101320	Water		13-Oct-2020 14:00	14-Oct-2020 09:15	☐
HS20100717-02	LH18/24-SP650_101320-AIX	Water		13-Oct-2020 14:00	14-Oct-2020 09:15	☐

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 22-Oct-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20100717

Work Order Comments

• The analysis for Perchlorate was subcontracted to ALS Salt Lake City, UT. Final report attached.

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached

The analysis for TOC was subcontracted to ALS Kelso, WA. Final report attached.

WetChemistry by Method E350.3

Batch ID: R370855

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

WetChemistry by Method E365.3

Batch ID: R370510

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

ALS Houston, US Date: 22-Oct-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Weekly Samples WorkOrder:HS20100717
Sample ID: LH18/24-SP650_101320 Lab ID:HS20100717-01
Collection Date: 13-Oct-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: MZD
Nitrogen, Ammonia (As N)	**16**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	20-Oct-2020 10:15
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**3.03**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	14-Oct-2020 08:30
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	22-Oct-2020 09:31

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

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ALS Houston, US Date: 22-Oct-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Weekly Samples WorkOrder:HS20100717
Sample ID: LH18/24-SP650_101320-AIX Lab ID:HS20100717-02
Collection Date: 13-Oct-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	22-Oct-2020 13:19

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

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ALS Houston, US Date: 22-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20100717

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R370510 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20100717-01	LH18/24-SP650_101320	13 Oct 2020 14:00			14 Oct 2020 08:30	10
Batch ID: R370855 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20100717-01	LH18/24-SP650_101320	13 Oct 2020 14:00			20 Oct 2020 10:15	1
Batch ID: R371020 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20100717-01	LH18/24-SP650_101320	13 Oct 2020 14:00			22 Oct 2020 09:31	1
Batch ID: R371062 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20100717-02	LH18/24-SP650_101320-AIX	13 Oct 2020 14:00			22 Oct 2020 13:19	1

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ALS Houston, US Date: 22-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20100717

QC BATCH REPORT

Batch ID: R370510 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-R370510** Units: **mg/L** Analysis Date: **14-Oct-2020 08:30**
Client ID: Run ID: **UV-2450_370510** SeqNo: **5782000** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-R370510** Units: **mg/L** Analysis Date: **14-Oct-2020 08:30**
Client ID: Run ID: **UV-2450_370510** SeqNo: **5781999** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.216	0.0250	0.25	0	86.4	85 - 115				

MS Sample ID: **HS20100657-04MS** Units: **mg/L** Analysis Date: **14-Oct-2020 08:30**
Client ID: Run ID: **UV-2450_370510** SeqNo: **5782002** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.286	0.0250	0.25	0	114	80 - 120				

MSD Sample ID: **HS20100657-04MSD** Units: **mg/L** Analysis Date: **14-Oct-2020 08:30**
Client ID: Run ID: **UV-2450_370510** SeqNo: **5782001** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.272	0.0250	0.25	0	109	80 - 120	0.286	5.02	20	

The following samples were analyzed in this batch: HS20100717-01

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ALS Houston, US Date: 22-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20100717

QC BATCH REPORT

Batch ID: R370855 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-370855** Units: **mg/L** Analysis Date: **20-Oct-2020 10:15**
Client ID: Run ID: **WetChem_HS_370855** SeqNo: **5790159** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-370855** Units: **mg/L** Analysis Date: **20-Oct-2020 10:15**
Client ID: Run ID: **WetChem_HS_370855** SeqNo: **5790160** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.26	0.20	10	0	113	80 - 120				

MS Sample ID: **HS20100863-06MS** Units: **mg/L** Analysis Date: **20-Oct-2020 10:15**
Client ID: Run ID: **WetChem_HS_370855** SeqNo: **5790162** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.1	0.20	10	0.299	108	80 - 120				

MSD Sample ID: **HS20100863-06MSD** Units: **mg/L** Analysis Date: **20-Oct-2020 10:15**
Client ID: Run ID: **WetChem_HS_370855** SeqNo: **5790163** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.09	0.20	10	0.299	108	80 - 120	11.1	0.0631	20	

The following samples were analyzed in this batch: HS20100717-01

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ALS Houston, US Date: 22-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20100717**

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

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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

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ALS Houston, US Date: 22-Oct-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20100717

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20100717-01	LH18/24-SP650_101320	Login	10/14/2020 2:53:18 PM	JRM	WET214
HS20100717-01	LH18/24-SP650_101320	Login	10/14/2020 2:53:18 PM	JRM	WET214
HS20100717-01	LH18/24-SP650_101320	Login	10/14/2020 2:53:18 PM	JRM	Sub
HS20100717-02	LH18/24-SP650_101320-AIX	Login	10/14/2020 2:53:18 PM	JRM	Sub

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ALS Houston, US Date: 22-Oct-20

Sample Receipt Checklist

Work Order ID: HS20100717 **Date/Time Received:** 14-Oct-2020 09:15

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Jared R. Makan	14-Oct-2020 14:56	**Reviewed by:**	/S/ RJ Modashia	14-Oct-2020 16:59
	eSignature	Date/Time		eSignature	Date/Time

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

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

Temperature(s)/Thermometer(s):	1.3°C/1.3°C UC/C	IR31
Cooler(s)/Kit(s):	45942	
Date/Time sample(s) sent to storage:	10/14/2020 14:57	

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:

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01021262

HS20100717

Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

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: BHATE LONGHORN ARMY AMMN. PLANT (LHAAP) GROUNDWATER TREATMENT PLANT (GWTP) KARNACK, TEXAS	Project No. NWO1312.0150.0 16.0001
Job: **GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES**	
Prepared By: Scott Beesinger	P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE							Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_101320	Water	10/13/20 / 14:00		3	X	X									H2SO4	
LH18/24-SP650_101320	Water	10/13/20 / 14:00		1			X								NONE	
LH18/24–SP650_101320_AIX	Water	10/13/20 / 14:00		1				X							NONE	

Additional Remarks: **Standard TAT on all parameters**

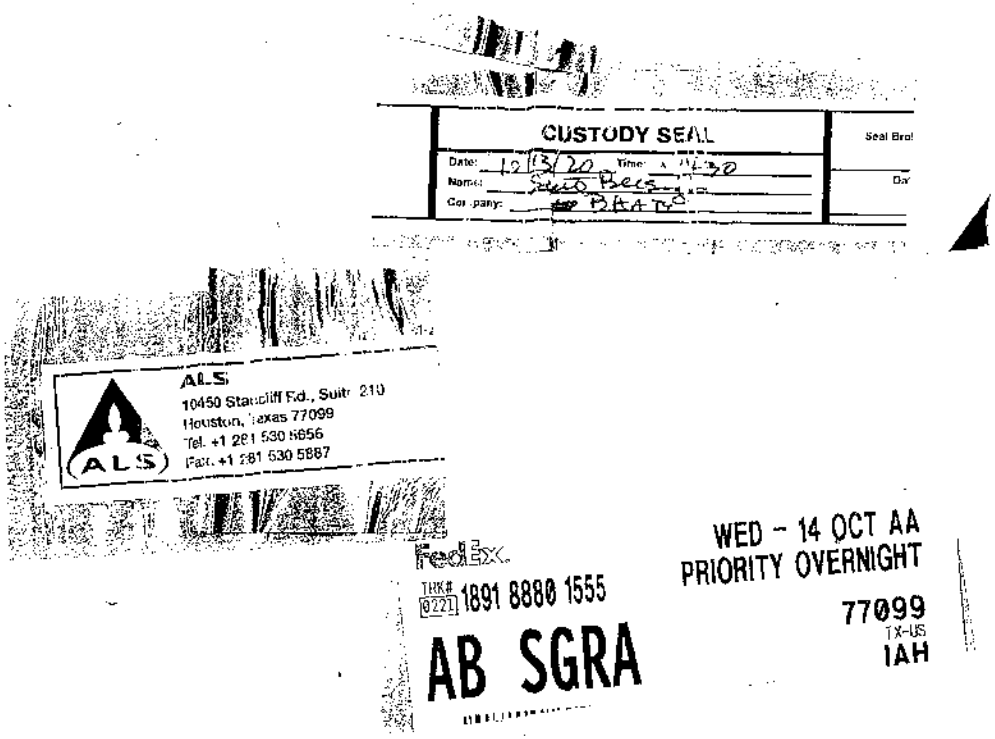
Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
	10/13/20	14:30									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Mercer	10/14/20	09:15							

Remarks:
Cooler 45942 IR31
Temp 1.3°C CF0

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CUSTODY SEAL

Seal Bro

Date: 12/13/20 Time: 1430

Name: Seth Beck

Company: ALS

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

FedEx.

TRK# 0221 1891 8880 1555

AB SGRA

WED - 14 OCT AA
PRIORITY OVERNIGHT

77099
TX-US
IAH

RIGHT SOLUTIONS | RIGHT PARTNER

October 22, 2020 Service Request No:E2000984

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

Laboratory Results for: HS20100717

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 14, 2020
For your reference, these analyses have been assigned our service request number **E2000984.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000984
Project:	HS20100717	**Date Received:**	10/14/20
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 10/14/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000513: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits. The MS/MSD was performed on an unrelated sample.

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

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

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: ALS Environmental - US **Service Request:**E2000984
Project: HS20100717

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000984-001	LH18/24-SP650_101320-AIX	10/13/2020	1400

RIGHT SOLUTIONS | RIGHT PARTNER

Service Request Summary

Folder #: **E2000984**
Client Name: ALS Environmental - US
Project Name: HS20100717
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/14/20
Internal Due Date: 10/28/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20100717
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 10E
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000984-001	LH18/24-SP650_101320-AIX	Water	10/13/20 1400	**IV**

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Service Request Summary

Folder #: **E2000984**
Client Name: ALS Environmental - US
Project Name: HS20100717
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/14/20
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EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 10E
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 10/28,level IV 11/4

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Data Qualifiers

Lab Standard

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

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Data Qualifiers

Lab Standard

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

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Acronyms

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

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

Chain of Custody

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

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

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14935**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100717
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20100717-02**	**LH18/24-SP650_101220-AIX**	**Water**	**13 Oct 2020 14:00**
	SUB_Perch-6850			21 Oct 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: J. Mwecinski Date/Time:

Received By: Date/Time: 10/14/20 1400

Cooler ID(s): Temperature(s):

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ALS Environmental

Cooler Receipt Form

Project Chemist CG

Client/Project ALS-H

Thermometer ID IR31

Date/Time Received: 10/14/20

Initials:

Date/Time Logged in: 10/14/20

Initials CG

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

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

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

If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

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

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
-		10/14/20	1400	CG	3.3	X
						☐
						☐
						☐

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

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

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

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

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

Notes, Discrepancies, & Resolutions:

Service request Label:

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

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

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Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 368005 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 10/19/20 09:34

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000981-001	LH18/24-SP650_101320-AIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000982-001	LH18/24-SP140_101320	.01	6850/ClO4 DOD			Water	10mL	
3	E2000984-001	LH18/24-SP650_101320-AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2000985-001	16WW36-201013	.01	6850/ClO4 DOD			Water	10mL	
5	E2000985-002	16WW35-201013	.01	6850/ClO4 DOD			Water	10mL	
6	E2000985-003	16IW09-201013	.01	6850/ClO4 DOD			Water	10mL	
7	E2000985-004	16WW55-201013	.01	6850/ClO4 DOD			Water	10mL	
8	E2000985-005	16IW03-201013	.01	6850/ClO4 DOD			Water	10mL	
9	E2000985-006	16IW10-201013	.01	6850/ClO4 DOD			Water	10mL	
10	E2000996-001	16WW25-201014	.01	6850/ClO4 DOD			Water	10mL	
11	E2000996-002	16WW26-201014	.01	6850/ClO4 DOD			Water	10mL	
12	E2000996-003	16WW30-201014	.01	6850/ClO4 DOD			Water	10mL	
13	E2000996-004	16WW29-201014	.01	6850/ClO4 DOD			Water	10mL	
14	E2000996-005	16WW22-201014	.01	6850/ClO4 DOD			Water	10mL	
15	E2000996-006	16WW41-201014	.01	6850/ClO4 DOD			Water	10mL	
16	E2000996-007	16WW21-201014	.01	6850/ClO4 DOD			Water	10mL	
17	E2000996-008	16WW21-201014-FD	.01	6850/ClO4 DOD			Water	10mL	
18	E2000996-009	16WW39-201014	.01	6850/ClO4 DOD			Water	10mL	
19	EQ2000513-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000513-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000513-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000513-04	16IW03-201013 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2000513-05	16IW03-201013 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000513-02	1.00µL	EQ2000513-03	1.00µL	EQ2000513-04	1.00µL	EQ2000513-05	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2000981-001	100.00µL	E2000982-001	100.00µL	E2000984-001	100.00µL	E2000985-001	100.00µL	E2000985-002	100.00µL	E2000985-003	100.00µL
E2000985-004	100.00µL	E2000985-005	100.00µL	E2000985-006	100.00µL	E2000996-001	100.00µL	E2000996-002	100.00µL	E2000996-003	100.00µL
E2000996-004	100.00µL	E2000996-005	100.00µL	E2000996-006	100.00µL	E2000996-007	100.00µL	E2000996-008	100.00µL	E2000996-009	100.00µL
EQ2000513-01	100.00µL	EQ2000513-02	100.00µL	EQ2000513-03	100.00µL	EQ2000513-04	100.00µL	EQ2000513-05	100.00µL		

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Preparation Information Benchsheet

Prep Run#: 368005 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 10/19/20 09:34

Preparation Steps

Step: Preparation
Started: 10/19/20 09:34
Finished: 10/19/20 14:58
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 10/19/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000984
Project:	HS20100717	**Date Collected:**	10/13/20 1400
Sample Matrix:	Water	**Date Received:**	10/14/20
		Date Extracted:	10/19/20
		Date Analyzed:	10/21/20 11:19
Sample Name:	LH18/24-SP650_101320-AIX	**Units:**	µg/L
Lab Code:	E2000984-001	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	700177
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201021\20201021_014	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.964**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000984
Project:	HS20100717	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/19/20 20:15
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000513-01	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	700168
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201019\20201019_041	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

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Accuracy & Precision

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000984
Project:	HS20100717	**Date Analyzed:**	10/20/20
Sample Matrix:	Water		

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

Analytical Method:	6850	**Units:**	µg/L
Prep Method:	Method	**Basis:**	NA
		Extraction Lot:	368005

	Lab Control Sample EQ2000513-02			Duplicate Lab Control Sample EQ2000513-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.105	0.100	105	0.108	0.100	108	84 - 119	3	15

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

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

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000984
Project:	HS20100717	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:04
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000513-02	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_032	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.105**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000984
Project:	HS20100717	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:12
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000513-03	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_033	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.108**		0.100	0.0500	0.0250	

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000984
Project:	HS20100717	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	10/20/20

Matrix Spike Summary

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

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2000985-005	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS				Batch QCDMS					
		Matrix Spike				**Duplicate Matrix Spike**					
		EQ2000513-04				EQ2000513-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.0876	0.194	0.100	106	0.193	0.100	105	84 - 119	<1	15

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

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000984
Project:	HS20100717	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:20
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000513-04	**Basis:**	NA
Run Type:	Matrix Spike		

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_034	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.194**		0.100	0.0500	0.0250	

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000984
Project:	HS20100717	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/19/20
		Date Analyzed:	10/20/20 20:28
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000513-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

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

Analytical Method:	6850	**Analysis Lot:**	700170
Prep Method:	Method	**Extraction Lot:**	368005
Data File Name:	I:\LCMS01\DATA\20201020\20201020_035	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.193**		0.100	0.0500	0.0250	

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ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

October 21, 2020

Analytical Report for Service Request No: K2009335

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

RE: HS20100717

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 15, 2020
For your reference, these analyses have been assigned our service request number **K2009335.**

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

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ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
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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.

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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.

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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

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1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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Client: ALS Environmental - US
Project: HS20100717
Sample Matrix: Water

Service Request: K2009335
Date Received: 10/15/2020

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:

One water sample was received for analysis at ALS Environmental on 10/15/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was 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 10/21/2020

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

K2009335

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:** **14934**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100717
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20100717-01**	**LH18/24-SP650_101320**	**Water**	**13 Oct 2020 14:00**
	TOC Analysis for DOD Level IV			21 Oct 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: S. Nuccio Date/Time: 10/14/20 18:00

Received By: Date/Time: 10/15/20 1000

Cooler ID(s): Temperature(s):

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01021300

PM Kelly

Cooler Receipt and Preservation Form

Client AIS-Houston Service Request K20 09335

Received: 10/15/20 Opened: 10/15/20 By: BR Unloaded: 10/15/20 By: BR

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 2 front
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
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
1.4	—	1001		—	—	189188815529	

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

RUSH

Notes, Discrepancies, Resolutions:

General Chemistry

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1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2009335
Project:	HS20100717	**Date Collected:**	10/13/20
Sample Matrix:	Water	**Date Received:**	10/15/20
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
LH18/24-SP650_101320	K2009335-001	**1.58**	0.50	0.20	0.07	1	10/19/20 11:49	
Method Blank	K2009335-MB	ND U	0.50	0.20	0.07	1	10/19/20 11:49	

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ALS Group USA, Corp.
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QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2009335
Project	HS20100717	**Date Collected:**	10/13/20
Sample Matrix:	Water	**Date Received:**	10/15/20
		Date Analyzed:	10/19/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	LH18/24-SP650_101320	**Units:**	mg/L
Lab Code:	K2009335-001	**Basis:**	NA

Analyte Name	Analysis Method	LOQ	LOD	MDL	Sample Result	Duplicate Sample K2009335-001DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic	SM 5310 C	0.50	0.20	0.07	1.58	1.67	1.63	6	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.

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QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2009335
Project:	HS20100717	**Date Collected:**	10/13/20
Sample Matrix:	Water	**Date Received:**	10/15/20
		Date Analyzed:	10/19/20
		Date Extracted:	NA

Matrix Spike Summary
Carbon, Total Organic

Sample Name:	LH18/24-SP650_101320	**Units:**	mg/L
Lab Code:	K2009335-001	**Basis:**	NA
Analysis Method:	SM 5310 C		
Prep Method:	None		

Matrix Spike
K2009335-001MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic	1.58	26.5	25.0	100	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.

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QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2009335
Project:	HS20100717	**Date Analyzed:**	10/19/20
Sample Matrix:	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:	700002

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2009335-LCS	23.9	25.0	95	83-117

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QA/QC Report

Client: ALS Environmental - US **Service Request:** K2009335
Project: HS20100717

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	700002	KQ2016021-12	10/19/20 11:49	25.0	25.4	102	90-110
CCV2	700002	KQ2016021-13	10/19/20 11:49	25.0	25.0	100	90-110
CCV3	700002	KQ2016021-14	10/19/20 11:49	25.0	24.7	99	90-110
CCV4	700002	KQ2016021-15	10/19/20 11:49	25.0	24.7	99	90-110
CCV5	700002	KQ2016021-16	10/19/20 11:49	25.0	25.1	100	90-110

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QA/QC Report

Client: ALS Environmental - US **Service Request:**K2009335
Project: HS20100717

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	700002	KQ2016021-07	10/19/20 11:49	0.50	0.20	0.07	ND	U
CCB2	700002	KQ2016021-08	10/19/20 11:49	0.50	0.20	0.07	ND	U
CCB3	700002	KQ2016021-09	10/19/20 11:49	0.50	0.20	0.07	ND	U
CCB4	700002	KQ2016021-10	10/19/20 11:49	0.50	0.20	0.07	ND	U
CCB5	700002	KQ2016021-11	10/19/20 11:49	0.50	0.20	0.07	ND	U

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Raw Data

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1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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General Chemistry

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1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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Work Request # 9335 9260 9424

Tier: IV II IV

Date Analyzed: 10/19/20

Analyst: MK

Run # 189997/700002

Analysis: DOC, TDC

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:

9424-1MS failed low 82%
9260-1MS failed low 64%
9424-8 high RPD <5 times MRL

Final Approved by: [signature] Date: 10/21/20

DOREPORT

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 700002 **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?
K2009335-001	Carbon, Total Organic	N/A		Water	1.58 mg/L	10 mL	1.58 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009424-001	Carbon, Total Organic	N/A		Ground Water	27.69 mg/L	10 mL	27.7 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009424-002	Carbon, Total Organic	N/A		Ground Water	2.11 mg/L	10 mL	2.11 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009424-003	Carbon, Total Organic	N/A		Ground Water	2.13 mg/L	10 mL	2.13 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009424-004	Carbon, Total Organic	N/A		Ground Water	11.19 mg/L	10 mL	11.2 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009424-005	Carbon, Total Organic	N/A		Ground Water	0.81 mg/L	10 mL	0.81 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009424-006	Carbon, Total Organic	N/A		Ground Water	40.75 mg/L	10 mL	40.8 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009424-007	Carbon, Total Organic	N/A		Ground Water	0.58 mg/L	10 mL	0.58 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009424-008	Carbon, Total Organic	N/A		Ground Water	0.12 mg/L	10 mL	0.12 mg/L J	1	0.07	0.50			10/19/20 11:49:00	N
K2009424-009	Carbon, Total Organic	N/A		Ground Water	2.31 mg/L	10 mL	2.31 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016021-01	Carbon, Total Organic	DUP	K2009424-001	Ground Water	27.07 mg/L	10 mL	27.1 mg/L	1	0.07	0.50		2	10/19/20 11:49:00	N
KQ2016021-02	Carbon, Total Organic	MS	K2009424-001	Ground Water	48.10 mg/L	10 mL	48.1 mg/L	1	0.07	0.50	82*		10/19/20 11:49:00	N
KQ2016021-03	Carbon, Total Organic	DUP	K2009335-001	Water	1.67 mg/L	10 mL	1.67 mg/L	1	0.07	0.50		6	10/19/20 11:49:00	N
KQ2016021-04	Carbon, Total Organic	MS	K2009335-001	Water	26.53 mg/L	10 mL	26.5 mg/L	1	0.07	0.50	100		10/19/20 11:49:00	N
KQ2016021-05	Carbon, Total Organic	LCS		Ground Water	23.86 mg/L	10 mL	23.9 mg/L	1	0.07	0.50	95		10/19/20 11:49:00	N
KQ2016021-06	Carbon, Total Organic	MB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016021-07	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016021-08	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016021-09	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016021-10	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016021-11	Carbon, Total Organic	CCB		Ground Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016021-12	Carbon, Total Organic	CCV		Ground Water	25.38 mg/L	10 mL	25.4 mg/L	1					10/19/20 11:49:00	N
KQ2016021-13	Carbon, Total Organic	CCV		Ground Water	24.96 mg/L	10 mL	25.0 mg/L	1					10/19/20 11:49:00	N
KQ2016021-14	Carbon, Total Organic	CCV		Ground Water	24.67 mg/L	10 mL	24.7 mg/L	1					10/19/20 11:49:00	N

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

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Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 700002 **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?
KQ2016021-15	Carbon, Total Organic	CCV		Ground Water	24.66 mg/L	10 mL	24.7 mg/L	1					10/19/20 11:49:00	N
KQ2016021-16	Carbon, Total Organic	CCV		Ground Water	25.11 mg/L	10 mL	25.1 mg/L	1					10/19/20 11:49:00	N

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

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Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 699997 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?
K2009260-001	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	5.09 mg/L	10 mL	5.09 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009260-002	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	4.67 mg/L	10 mL	4.67 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009260-003	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	2.00 mg/L	10 mL	2.00 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009260-004	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	3.37 mg/L	10 mL	3.37 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009260-005	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	3.11 mg/L	10 mL	3.11 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009260-006	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	4.33 mg/L	10 mL	4.33 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009260-007	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	4.73 mg/L	10 mL	4.73 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009260-008	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	4.41 mg/L	10 mL	4.41 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009260-009	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	3.80 mg/L	10 mL	3.80 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009260-010	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	2.91 mg/L	10 mL	2.91 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009260-011	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	3.61 mg/L	10 mL	3.61 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
K2009260-012	Carbon, Dissolved Organic (DOC)	N/A		Surface Water	4.46 mg/L	10 mL	4.46 mg/L	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016018-01	Carbon, Dissolved Organic (DOC)	DUP	K2009260-001	Surface Water	5.08 mg/L	10 mL	5.08 mg/L	1	0.07	0.50		<1	10/19/20 11:49:00	N
KQ2016018-02	Carbon, Dissolved Organic (DOC)	MS	K2009260-001	Surface Water	21.17 mg/L	10 mL	21.2 mg/L	1	0.07	0.50	64*		10/19/20 11:49:00	N
KQ2016018-04	Carbon, Dissolved Organic (DOC)	MB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016018-05	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016018-06	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016018-07	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016018-08	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016018-09	Carbon, Dissolved Organic (DOC)	CCB		Surface Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			10/19/20 11:49:00	N
KQ2016018-10	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	25.38 mg/L	10 mL	25.4 mg/L	1					10/19/20 11:49:00	N
KQ2016018-11	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	24.96 mg/L	10 mL	25.0 mg/L	1					10/19/20 11:49:00	N
KQ2016018-12	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	24.67 mg/L	10 mL	24.7 mg/L	1					10/19/20 11:49:00	N

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

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Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MKANALY **Analysis Lot:** 699997 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?
KQ2016018-13	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	24.66 mg/L	10 mL	24.7 mg/L	1					10/19/20 11:49:00	N
KQ2016018-14	Carbon, Dissolved Organic (DOC)	CCV		Surface Water	25.11 mg/L	10 mL	25.1 mg/L	1					10/19/20 11:49:00	N
KQ2016018-15	Carbon, Dissolved Organic (DOC)	LCS		Surface Water	24.30 mg/L	10 mL	24.3 mg/L	1	0.07	0.50	97		10/19/20 11:49:00	N
KQ2016018-16	Carbon, Dissolved Organic (DOC)	DLCS		Surface Water	24.32 mg/L	10 mL	24.3 mg/L	1	0.07	0.50	97	<1	10/19/20 11:49:00	N

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

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Schedule: 101920

Version: 8
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/10/19 19:37 - Monday

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 (1)	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
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	k2009260-001*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2009260-002*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2009260-003*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2009260-004*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2009260-005*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2009260-006*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2009260-007*	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 (2)	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
10	Sample	K2009260-008*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2008260-009*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2008260-010*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2009260-011*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2009260-012*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2009424-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2009424-001D	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2009424-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2009424-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2009424-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B (3)	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	K2009424-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2009424-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2009424-006	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2009424-007	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2009424-008	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2009424-009	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2009335-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2009335-001D	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D (4)	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
29	Sample	K2009335-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	K2009260-001D*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
31	Sample	K2008260-001MS*	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D (5)	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

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Fusion Report - 101920
Monday, October 19, 2020 11:27 AM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/10/20 07:48 - Tuesday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	101920	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) Fusion1 (Fusion1) (v3) Fusion1 (Fusion1) (v4) Fusion1 (Fusion1) (v6) Fusion1 (Fusion1) (v7) Fusion1 (Fusion1) (v8)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/10/19 11:27

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	13.15	27.90	14.75	49.63	05:29
2	TC Clean	11.33	24.73	13.40	49.99	04:06
3	TC Clean	1.64	14.97	13.33	50.01	03:55
4	TC Clean	1.06	14.25	13.19	49.99	03:53

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/10/19 11:49

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.06	13.09	13.03	49.67	05:18
2	TC Clean	4.77	17.73	12.96	49.78	07:18

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3	TC Clean	1.18	14.28	13.10	49.78	07:02
4	TC Clean	0.73	13.69	12.96	49.79	07:01

Sample Type: Clean From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/10/19 12:21

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.37	12.52	12.89	49.65	05:24
2	TC Clean	4.51	17.35	12.84	49.83	07:18
3	TC Clean	0.92	13.85	12.93	50.00	07:01
4	TC Clean	0.87	13.66	12.79	50.01	04:05

Sample Type: Blank (Creating v1463) From Schedule Version 3

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/10/19 12:50

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.25	12.42	12.67	49.55	05:24
2	TC Clean	4.32	17.10	12.78	49.98	04:09
3	TC Clean	0.89	13.85	12.96	49.94	03:51
4	TC Clean	0.83	13.89	13.06	49.95	03:58
5	Reagent Blank	4.91	17.82	12.92	49.97	05:09
6	Acid Blank	-0.17	12.78	12.95	49.63	05:30

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.1362 ppm	0.0000 ppm	0.0000%	2020/10/19 13:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1362	1.3616	10.18	23.03	12.84	50.04	10:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 3

	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)	25.3825 ppm (PASS)	0.0000 ppm	0%	2020/10/19 13:38

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.3825	253.8252	187.95	200.78	12.84	50.03	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 3

	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%	2020/10/19 13:53

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.99	20.84	12.85	50.10	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/10/19 14:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.61	20.58	12.97	50.25	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 3

	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)	24.2975 ppm (PASS)	0.0000 ppm	0%	2020/10/19 14:23

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Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.2975	242.9753	180.33	193.23	12.90	50.09	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: Check Standard --> LCS From Schedule Version 3

	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)	24.3208 ppm (PASS)	0.0000 ppm	0%	2020/10/19 14:38

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.3208	243.2076	180.50	193.55	13.05	50.08	10:28

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 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	2	TOC	ICS	0.0000 ppm	0.0000 ppm	0.0000%	2020/10/19 14:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.99	21.84	12.85	50.22	10:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	3	TOC	k2009260-001*	5.0887 ppm	0.0060 ppm	0.1200%	2020/10/19 15:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.0929	50.9295	44.96	57.93	12.97	50.12	10:28
2	TOC	5.0844	50.8440	44.90	57.86	12.96	50.12	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	4	TOC	K2009260-002*	4.6656 ppm	0.1027 ppm	2.2000%	2020/10/19 15:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.7383	47.3827	42.47	55.35	12.89	50.16	10:28
2	TOC	4.5930	45.9301	41.45	54.41	12.96	50.10	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	K2009260-003*	1.9960 ppm	0.0283 ppm	1.4200%	2020/10/19 16:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.9760	19.7598	23.09	35.93	12.83	50.23	10:28
2	TOC	2.0160	20.1604	23.37	36.26	12.89	50.25	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	6	TOC	K2009260-004*	3.3727 ppm	0.0231 ppm	0.6800%	2020/10/19 16:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.3890	33.8899	33.00	45.76	12.76	50.16	10:27
2	TOC	3.3563	33.5634	32.77	45.74	12.96	50.09	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	7	TOC	K2009260-005*	3.1128 ppm	0.0064 ppm	0.2000%	2020/10/19 16:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.1173	31.1728	31.10	43.97	12.88	50.18	10:29
2	TOC	3.1083	31.0830	31.03	44.11	13.07	50.09	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample

From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	8	TOC	K2009260-006*	4.3323 ppm	0.0638 ppm	1.4700%	2020/10/19 17:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.3775	43.7746	39.94	52.77	12.84	50.04	10:26

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2	TOC	4.2872	42.8723	39.30	52.34	13.03	49.99	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2009260-007*	4.7306 ppm	0.0661 ppm	1.4000%	2020/10/19 17:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.7773	47.7733	42.74	55.63	12.89	49.99	10:26
2	TOC	4.6838	46.8382	42.09	55.05	12.96	49.99	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 4

	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)	24.9557 ppm (PASS)	0.0000 ppm	0%	2020/10/19 18:25

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.9557	249.5571	184.95	197.91	12.96	50.03	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 4

	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%	2020/10/19 18:39

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.58	20.48	12.90	50.04	10:31

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 6

		Analysis			Std. Dev.		

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	Pos	Type	Sample ID	Result (ppmC)	(ppmC)	RSD	Start Time
◈	10	TOC	K2009260-008*	4.4077 ppm	0.0444 ppm	1.0100%	2020/10/19 18:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.4390	44.3905	40.37	53.27	12.90	50.07	10:31
2	TOC	4.3763	43.7632	39.93	52.89	12.96	50.09	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 7

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	11	TOC	K2008260-009*	3.7982 ppm	0.0465 ppm	1.2200%	2020/10/19 19:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.8311	38.3105	36.10	48.89	12.79	50.10	10:26
2	TOC	3.7653	37.6533	35.64	48.40	12.76	50.12	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	12	TOC	K2008260-010*	2.9085 ppm	0.0146 ppm	0.5000%	2020/10/19 19:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.9188	29.1884	29.70	42.70	13.00	50.13	10:27
2	TOC	2.8982	28.9817	29.56	42.59	13.03	50.14	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	13	TOC	K2009260-011*	3.6111 ppm	0.0738 ppm	2.0400%	2020/10/19 20:18

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.6633	36.6326	34.93	47.78	12.85	50.15	10:30
2	TOC	3.5589	35.5891	34.20	47.21	13.01	50.17	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

		Analysis			Std. Dev.		

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	Pos	Type	Sample ID	Result (ppmC)	(ppmC)	RSD	Start Time
◆	14	TOC	K2009260-012*	4.4577 ppm	0.0023 ppm	0.0500%	2020/10/19 20:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.4593	44.5929	40.51	53.48	12.97	50.18	10:26
2	TOC	4.4560	44.5601	40.49	53.33	12.85	50.19	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2009424-001	27.6946 ppm	0.7200 ppm	2.6000%	2020/10/19 21:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	28.2037	282.0371	207.07	220.04	12.97	50.19	10:29
2	TOC	27.1854	271.8544	199.93	212.92	12.99	50.19	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2009424-001D	27.0703 ppm	0.1302 ppm	0.4800%	2020/10/19 21:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.1623	271.6235	199.77	212.68	12.92	50.23	10:27
2	TOC	26.9782	269.7817	198.48	211.52	13.04	50.25	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K2009424-001MS	48.1047 ppm	1.0725 ppm	2.2300%	2020/10/19 22:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	47.3463	473.4631	341.36	354.40	13.04	50.25	10:27
2	TOC	48.8631	488.6310	352.00	365.21	13.21	50.28	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2009424-002	2.1066 ppm	0.1317 ppm	6.2500%	2020/10/19 22:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1998	21.9979	24.66	37.86	13.20	50.29	10:29
2	TOC	2.0135	20.1347	23.35	36.61	13.26	50.29	10:26

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	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	19	TOC	K2009424-003	2.1277 ppm	0.0130 ppm	0.6100%	2020/10/19 23:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1369	21.3692	24.22	37.07	12.85	50.31	10:26
2	TOC	2.1185	21.1853	24.09	37.24	13.14	50.34	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 8

	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)	24.6726 ppm (PASS)	0.0000 ppm	0%	2020/10/19 23:35

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.6726	246.7259	182.97	196.04	13.07	50.35	10:29

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 8

	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%	2020/10/19 23:49

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.95	20.08	13.13	50.36	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/10/20 00:04

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Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.83	20.01	13.18	50.39	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 8

	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)	23.8552 ppm (PASS)	0.0000 ppm	0%	2020/10/20 00:19

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.8552	238.5518	177.23	190.50	13.27	50.39	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2009424-004	11.1870 ppm	0.1228 ppm	1.1000%	2020/10/20 00:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	11.2739	112.7386	88.31	101.33	13.02	50.39	10:28
2	TOC	11.1002	111.0022	87.10	100.31	13.21	50.40	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2009424-005	0.8132 ppm	0.0843 ppm	10.3600%	2020/10/20 01:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8727	8.7274	15.35	28.40	13.05	50.42	10:27
2	TOC	0.7536	7.5357	14.52	27.73	13.22	50.46	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2009424-006	40.7504 ppm	0.1190 ppm	0.2900%	2020/10/20 01:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	40.8345	408.3453	295.68	308.82	13.14	50.46	10:32
2	TOC	40.6662	406.6617	294.50	307.90	13.41	50.49	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	K2009424-007	0.5779 ppm	0.1934 ppm	33.4700%	2020/10/20 01:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7147	7.1465	14.24	27.62	13.37	50.51	10:25
2	TOC	0.4411	4.4109	12.32	25.61	13.28	50.51	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2009424-008	0.1228 ppm	0.0482 ppm	39.2500%	2020/10/20 02:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1568	1.5683	10.33	23.49	13.16	50.53	10:26
2	TOC	0.0887	0.8869	9.85	23.12	13.27	50.55	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2009424-009	2.3141 ppm	0.1282 ppm	5.5400%	2020/10/20 02:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.4048	24.0479	26.10	39.35	13.25	50.56	10:26
2	TOC	2.2235	22.2346	24.83	38.14	13.32	50.58	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K2009335-001	1.5783 ppm	0.0771 ppm	4.8900%	2020/10/20 03:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6328	16.3285	20.68	34.01	13.33	50.57	10:28
2	TOC	1.5238	15.2379	19.92	33.40	13.48	50.60	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC)	CAS_salt_010711	CAS_salt_010711

(v1463) (v4) (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K2009335-001D	1.6720 ppm	0.0360 ppm	2.1500%	2020/10/20 03:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6974	16.9743	21.14	34.61	13.48	50.61	10:27
2	TOC	1.6465	16.4653	20.78	34.36	13.58	50.62	10:25

Dilution: 1:10

Blank Contribution: (TC) 9.2298 (IC) (v1463)

Method: CAS_salt_010711 (v4)

Calibration: CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm — From Schedule Version 8

	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)	24.6571 ppm (PASS)	0.0000 ppm	0%	2020/10/20 04:18

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.6571	246.5705	182.86	196.09	13.24	50.63	10:29

Completion State: Success - Criteria met.

Success Action: Do Nothing

Method: CAS_salt_010711 (v4)

Calibration: CAS_salt_010711 (v38)

STD Conc - Pos B: 50 ppmC

Sample Type: Check Standard --> CCB — From Schedule Version 8

	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%	2020/10/20 04:32

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.13	20.40	13.27	50.62	10:30

Completion State: Success - Criteria met.

Success Action: Do Nothing

Method: CAS_salt_010711 (v4)

Calibration: CAS_salt_010711 (v38)

STD Conc - Pos D: 0 ppmC

Sample Type: Sample — From Schedule Version 8

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2009335-001MS	26.5295 ppm	0.2163 ppm	0.8200%	2020/10/20 04:47

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Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	26.6825	266.8251	196.40	209.72	13.32	50.66	10:31
2	TOC	26.3766	263.7658	194.26	207.63	13.37	50.64	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	30	TOC	K2009260-001D*	5.0783 ppm	0.0567 ppm	1.1200%	2020/10/20 05:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.1183	51.1832	45.13	58.54	13.40	50.64	10:25
2	TOC	5.0382	50.3821	44.57	57.77	13.20	50.65	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	31	TOC	K2008260-001MS*	21.1678 ppm	0.3229 ppm	1.5300%	2020/10/20 05:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	20.9395	209.3953	156.12	169.54	13.42	50.67	10:31
2	TOC	21.3961	213.9613	159.32	172.71	13.39	50.66	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2298 (IC) (v1463)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 8

	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)	25.1060 ppm (PASS)	0.0000 ppm	0%	2020/10/20 06:11

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.1060	251.0596	186.01	199.28	13.27	50.68	10:29

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 8

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time

RIGHT SOLUTIONS | RIGHT PARTNER

◉	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/10/20 06:26

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.77	21.18	13.41	50.67	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1462	1.7147	-0.0390	0.0000	0.0000	0.0000	2020/10/16 09:58	Fusion1 (Fusion1)
v1463	1.6350	-0.1710	0.0000	0.0000	0.0000	2020/10/19 13:24	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	2020/10/20 06:41

ALS Environmental

StarLIMS Run: 699997/700002

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-40-C 50 ppm LCS: 19-GEN-8-41-k 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-35-J

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 19-GEN-8-15-B 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-49-F

21 % H3PO4: 19-GEN-08-49-E

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: MC	Date Analyzed: 10-19-20
Reviewed By: JC	Date Reviewed: 10/21/20

HS20100717 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)

ALS WO# HS20100717

NIT-AMN_W-ISE

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31220**

Ion Selective Electrode Logbook

Analyst: MD	Date: 10/20/20 10:15 AM
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F	

Probe Calibration Date: 10/20/2020		Cal Std ID: 3140673(02-07)	Probe ID: X01-11806
Std Level		mV	Conc., mg/L:
STD 1 (mg/L):	0.2	128.7	0.197
STD 2 (mg/L):	1	92.3	1.001
STD 3 (mg/L):	5	51.7	5.001
LSC / MS Spike ID:	3100602320		
ICV Cal STD ID:	3140673(02)		
DPD Reagent ID:	3100602819		

Sodium Thiosulfate ID:

Std Level	mV	Conc., mg/L:
STD 4 (mg/L): 10	34.2	9.996
STD 5 (mg/L): 20	-6.8	20.000

ICAL Date & Slope: 99.4% / -58.6mV

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/-)	Comments
ICV		50ml	50ml		10.135			
CCB					0.002			
MBLK					0.002			
LCS					11.256			
HS2010468-01					63.265		+ve	Rechecked
641-01					0.238		+ve	
631-01					26.787		+ve	
717-01					15.911		+ve	
887-01		5ml	50ml	10X	6.009		+ve	
863-06		5ml			0.299		+ve	
863-06MS					11.098			
863-06MSD					11.091			
CCV					10.841			
CCB					0.003			
HS2010264-46					0.210			
264-45					0.109			
CCV					10.827			
CCB					0.004			

Batch ID: 370852/370855 | Reported By: MD | Reviewed By: YP

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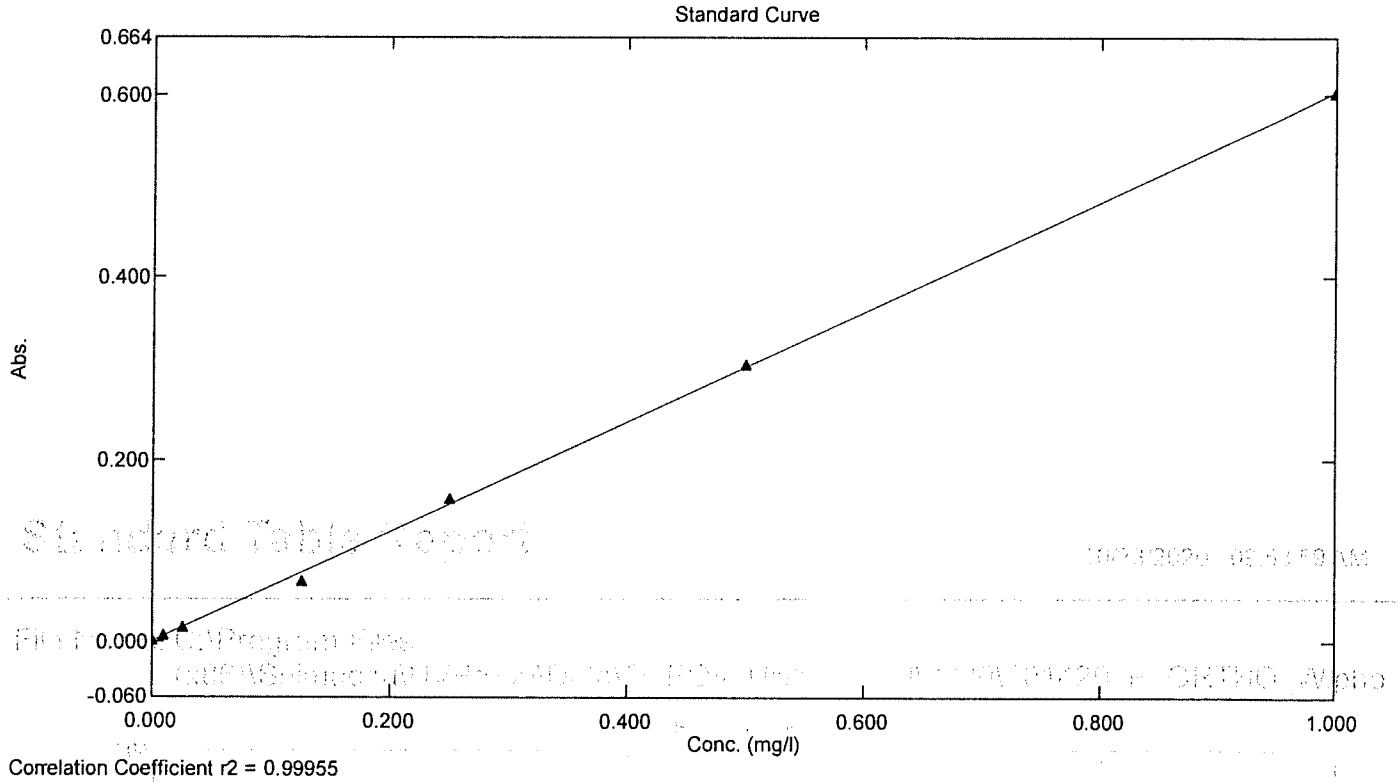
HS20100717 Wet Chem Raw Data (P-ORTHO)

ALS WO# HS20100717

Standard Table Report

10/23/2020 09:53:59 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\101420_P_ORTHO_W.pho



Correlation Coefficient r2 = 0.99955

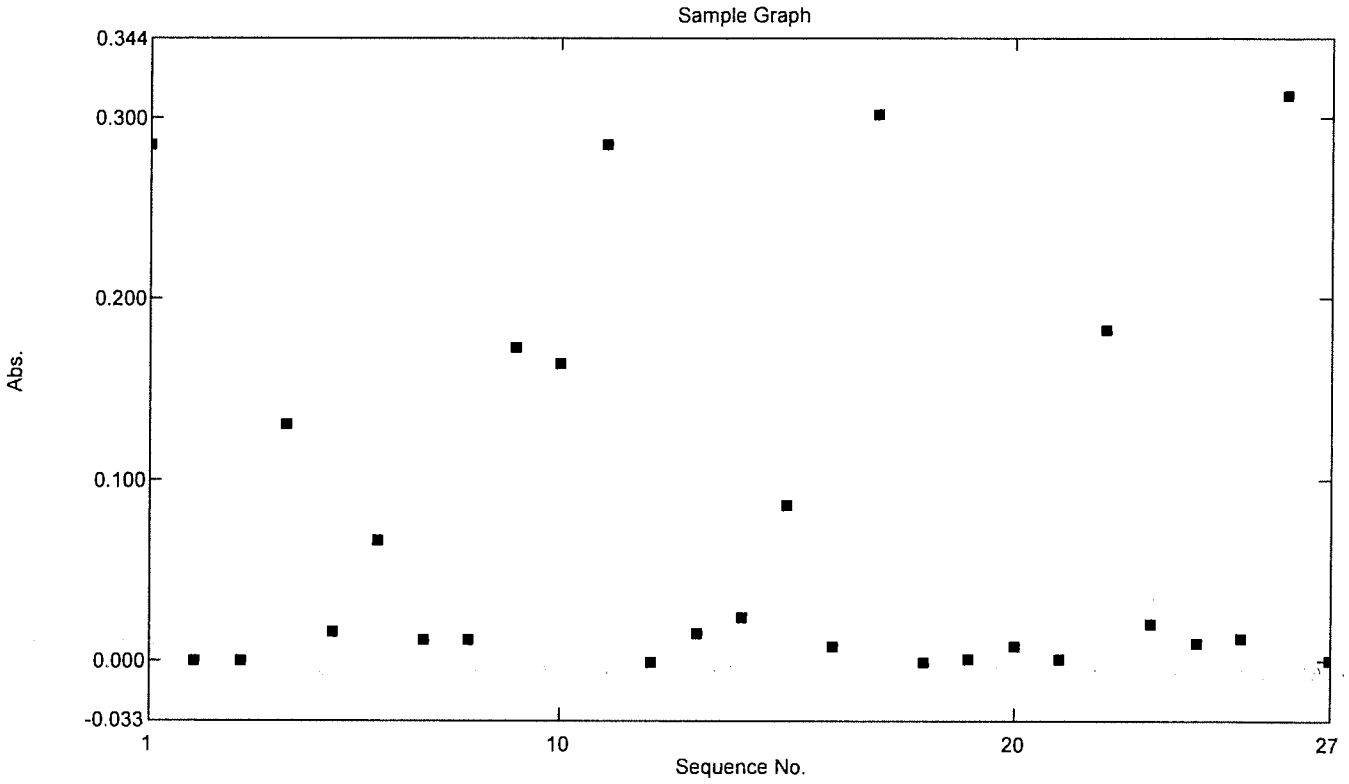
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	0.002	1.000	
2	STD2	Standard		0.010	0.007	1.000	
3	STD3	Standard		0.025	0.015	1.000	
4	STD4	Standard		0.125	0.066	1.000	
5	STD5	Standard		0.250	0.157	1.000	
6	STD6	Standard		0.500	0.305	1.000	
7	STD7	Standard		1.000	0.602	1.000	
8							

Sample Table Report

10/23/2020 09:50:48 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\101420_P_ORTHO_W.ph



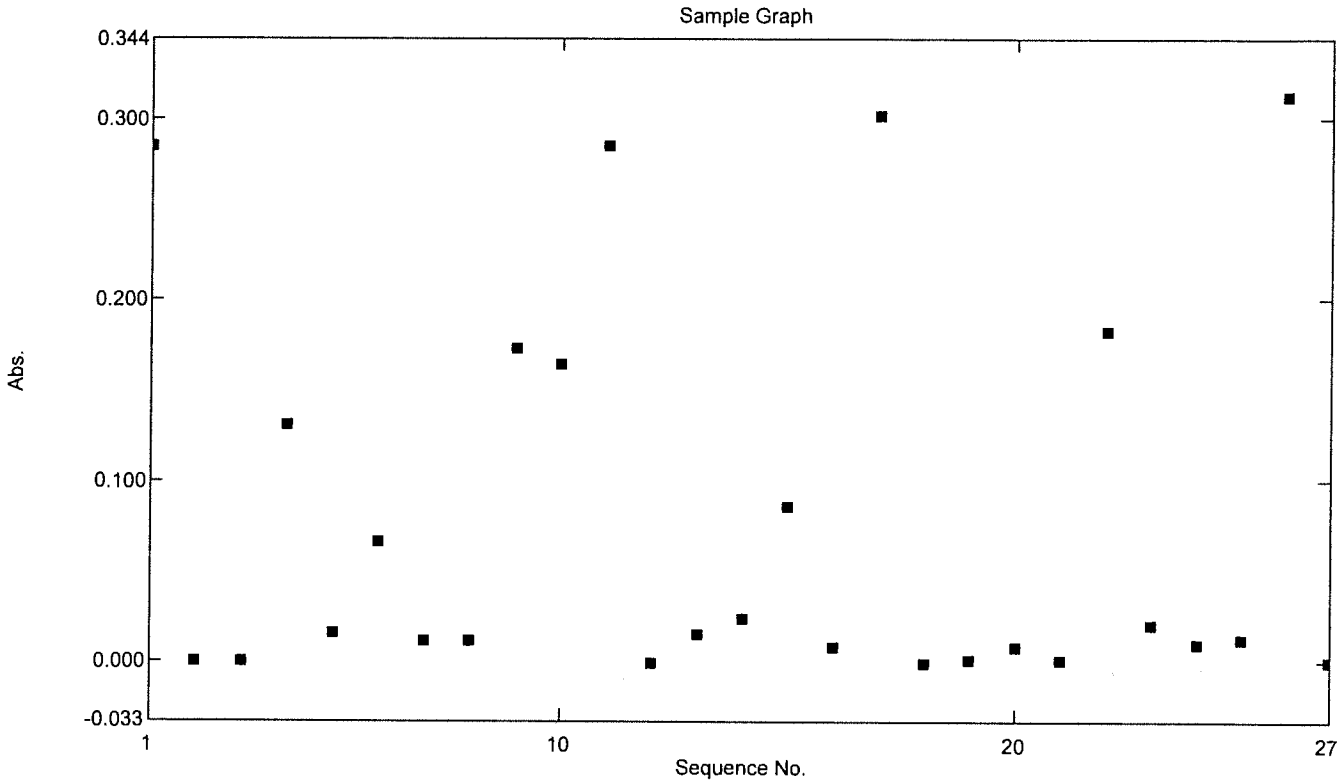
Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.471	0.285	314065605 WC-14
2	CCB	Unknown		0.000	0.000	
3	MBLK	Unknown		-0.001	-0.001	
4	LCS	Unknown		0.216	0.131	314065604 WC-14
5	HS20100657.01	Unknown		0.026	0.016	08:40AM
6	HS20100657.02	Unknown		0.109	0.066	08:40AM
7	HS20100657.03	Unknown		0.019	0.011	08:40AM
8	HS20100657.04	Unknown		0.018	0.011	08:41AM
9	HS20100657.04MS	Unknown		0.286	0.173	08:41AM
10	HS20100657.04MS	Unknown		0.272	0.164	08:42AM
11	CCV2	Unknown		0.473	0.286	
12	CCB2	Unknown		-0.001	-0.001	C-314066902 UV-11
13	HS20100696.02	Unknown		0.025	0.015	11:49AM
14	HS20100696.04	Unknown		0.039	0.023	11:49AM
15	HS20100696.03	Unknown		0.141	0.085	11:50AM
16	HS20100696.05	Unknown		0.012	0.007	11:50AM
17	CCV3	Unknown		0.500	0.302	
18	CCB3	Unknown		-0.002	-0.001	
19	HS20100714.01	Unknown		0.001	0.000	05:13PM

Sample Table Report

10/23/2020 09:50:48 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\101420_P_ORTHO_W.ph



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
20	HS20100714.02	Unknown		0.012	0.008	05:13PM
21	HS20100714.03	Unknown		0.001	0.000	05:14PM
22	HS20100717.01	Unknown		0.303	0.183	PF:10X,05:14PM
23	HS20100723.01	Unknown		0.034	0.020	05:15PM,OUT OF
24	HS20100723.02	Unknown		0.016	0.009	05:15PM.OUT OF
25	HS20100723.03	Unknown		0.020	0.012	05:16PM,OUT OF
26	CCV4	Unknown		0.518	0.313	
27	CCB4	Unknown		-0.000	-0.000	
28						

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

WorkOrder: HS20101139

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

13-Nov-2020

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

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HS20101139 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20101139

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

November 09, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20101139**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Oct 22, 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: 09-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20101139

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20101139-01	LH18/24-SP650_102120	Water		21-Oct-2020 14:00	22-Oct-2020 09:10	☐
HS20101139-02	LH18/24-SP650_102120-AIX	Water		21-Oct-2020 14:00	22-Oct-2020 09:10	☐

ALS Houston, US Date: 09-Nov-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20101139

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached

The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached

WetChemistry by Method E350.3

Batch ID: R371449

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

WetChemistry by Method E365.3

Batch ID: R371210

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

ALS Houston, US Date: 09-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20101139
Sample ID: LH18/24-SP650_102120
Lab ID:HS20101139-01
Collection Date: 21-Oct-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: YP
Nitrogen, Ammonia (As N)	**7.8**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	27-Oct-2020 10:00
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.11**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	23-Oct-2020 11:40
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	09-Nov-2020 09:42

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

ALS Houston, US Date: 09-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20101139
Sample ID: LH18/24-SP650_102120-AIX
Lab ID:HS20101139-02
Collection Date: 21-Oct-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	27-Oct-2020 14:22

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

ALS Houston, US Date: 09-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20101139

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R371210 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20101139-01	LH18/24-SP650_102120	21 Oct 2020 14:00			23 Oct 2020 11:40	10
Batch ID: R371410 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20101139-02	LH18/24-SP650_102120-AIX	21 Oct 2020 14:00			27 Oct 2020 14:22	1
Batch ID: R371449 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20101139-01	LH18/24-SP650_102120	21 Oct 2020 14:00			27 Oct 2020 10:00	1
Batch ID: R372182 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20101139-01	LH18/24-SP650_102120	21 Oct 2020 14:00			09 Nov 2020 09:42	1

ALS Houston, US Date: 09-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20101139

QC BATCH REPORT

Batch ID: R371210 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-371210** Units: **mg/L** Analysis Date: **23-Oct-2020 11:40**
Client ID: Run ID: **UV-2450_371210** SeqNo: **5797769** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-371210** Units: **mg/L** Analysis Date: **23-Oct-2020 11:40**
Client ID: Run ID: **UV-2450_371210** SeqNo: **5797770** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.242	0.0250	0.25	0	96.8	85 - 115				

MS Sample ID: **HS20101201-02MS** Units: **mg/L** Analysis Date: **23-Oct-2020 11:40**
Client ID: Run ID: **UV-2450_371210** SeqNo: **5797772** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.25	0.0250	0.25	0.015	94.0	80 - 120				

MSD Sample ID: **HS20101201-02MSD** Units: **mg/L** Analysis Date: **23-Oct-2020 11:40**
Client ID: Run ID: **UV-2450_371210** SeqNo: **5797773** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.279	0.0250	0.25	0.015	106	80 - 120	0.25	11	20	

The following samples were analyzed in this batch: HS20101139-01

ALS Houston, US Date: 09-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20101139

QC BATCH REPORT

Batch ID: R371449 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-R371449** Units: **mg/L** Analysis Date: **27-Oct-2020 10:00**
Client ID: Run ID: **WetChem_HS_371449** SeqNo: **5803999** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-R371449** Units: **mg/L** Analysis Date: **27-Oct-2020 10:00**
Client ID: Run ID: **WetChem_HS_371449** SeqNo: **5803998** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.55	0.20	10	0	106	80 - 120				

MS Sample ID: **HS20101139-01MS** Units: **mg/L** Analysis Date: **27-Oct-2020 10:00**
Client ID: **LH18/24-SP650_102120** Run ID: **WetChem_HS_371449** SeqNo: **5803995** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	17.9	0.20	10	7.79	101	80 - 120				

MSD Sample ID: **HS20101139-01MSD** Units: **mg/L** Analysis Date: **27-Oct-2020 10:00**
Client ID: **LH18/24-SP650_102120** Run ID: **WetChem_HS_371449** SeqNo: **5803994** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	17.69	0.20	10	7.79	99.0	80 - 120	17.9	1.18	20	

The following samples were analyzed in this batch: HS20101139-01

ALS Houston, US Date: 09-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20101139**

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: 09-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20101139

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20101139-01	LH18/24-SP650_102120	Login	10/22/2020 2:35:58 PM	PMG	WET137
HS20101139-01	LH18/24-SP650_102120	Login	10/22/2020 2:35:58 PM	PMG	WET137
HS20101139-01	LH18/24-SP650_102120	Login	10/22/2020 2:35:58 PM	PMG	Sub
HS20101139-02	LH18/24-SP650_102120-AIX	Login	10/22/2020 2:35:58 PM	PMG	Sub

ALS Houston, US Date: 09-Nov-20

Sample Receipt Checklist

Work Order ID: HS20101139 **Date/Time Received:** 22-Oct-2020 09:10

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Paresh M. Giga	22-Oct-2020 14:38	**Reviewed by:**	/S/ RJ Modashia	22-Oct-2020 20:18
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **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 ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	1.7C U/C	IR31
Cooler(s)/Kit(s):	43886	
Date/Time sample(s) sent to storage:	10/22/2020 14:45	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

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

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

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20101139
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_102120	Water	10/21/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_102120	Water	10/21/20 / 14:00		1			X		NONE	
LH18/24–SP650_102120_AIX	Water	10/21/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	10/21/20	14:30									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Maxwell	10/22/20	09:10							

Remarks: Cooler 43886 1431
Temp 1.7°C CFO

(Word) S:\U-ees\Forms\Chain of Custody - BiWeekly

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

43886

CUSTODY SEAL

Date: 10/24/20 Time: 1430
Name: Scott Beesinger
Company: Dittate

Seal Broken By:
Date: 10/25/20

43886

Must Deliver Next Business Day
Time and Tempature Sensitive!

43886

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
SHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 08SEP20
ACTWGT: 1.00 LB MAN
CAD: 3001130/CAFE3211
DIMS: 19x16x13 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: ADDITIONAL BOTTLES - BO 73689 - RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8880 1566

THU - 22 OCT 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

November 06, 2020 **Analytical Report for Service Request No:** K2009637

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

RE: ALS Houston DOD TOC

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 23, 2020
For your reference, these analyses have been assigned our service request number **K2009637.**

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
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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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: ALS Houston DOD TOC
Sample Matrix: Ground Water

Service Request: K2009641
Date Received: 10/23/2020

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:

Seven ground water samples were received for analysis at ALS Environmental on 10/23/2020. 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 11/06/2020

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

K20096374

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:** **14999**

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:	HS20101139
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20101139-01**	**LH18/24-SP650_102120**	**Water**	**21 Oct 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			05 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: 10/22/2020 1800

Received By: _____ Date/Time: 10/23/20 0945

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

PM KL

Cooler Receipt and Preservation Form

Client ALS - Houston Service Request K20 091037

Received: 10/23/20 Opened: 10/23/20 By: BR Unloaded: 10/23/20 By: BR

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 2 front
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
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
MH	3.4	IR02				891888189107	

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:**	K2009637
Project:	ALS Houston DOD TOC	**Date Collected:**	10/21/20
Sample Matrix:	Water	**Date Received:**	10/23/20
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
LH18/24-SP650_102120	K2009637-001	**0.93**	0.50	0.20	0.07	1	11/04/20 18:42	
Method Blank	K2009637-MB	ND U	0.50	0.20	0.07	1	11/04/20 18:42	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2009637
Project:	ALS Houston DOD TOC	**Date Analyzed:**	11/04/20
Sample Matrix:	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:	702236

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2009637-LCS	23.6	25.0	95	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2009637
Project: ALS Houston DOD TOC

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	702236	KQ2017334-05	11/04/20 18:42	25.0	26.2	105	90-110
CCV2	702236	KQ2017334-06	11/04/20 18:42	25.0	26.4	106	90-110
CCV3	702236	KQ2017334-07	11/04/20 18:42	25.0	26.5	106	90-110
CCV4	702236	KQ2017334-08	11/04/20 18:42	25.0	25.6	103	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2009637
Project: ALS Houston DOD TOC

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	702236	KQ2017334-09	11/04/20 18:42	0.50	0.20	0.07	ND	U
CCB2	702236	KQ2017334-10	11/04/20 18:42	0.50	0.20	0.07	ND	U
CCB3	702236	KQ2017334-11	11/04/20 18:42	0.50	0.20	0.07	ND	U
CCB4	702236	KQ2017334-12	11/04/20 18:42	0.50	0.20	0.07	ND	U

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 ( ) K2009265, 9328, 9464, 9637, 9472

Tier: II II IV IV II

Date Analyzed: 11/4/20

Analyst: MAS Run # 702236, 702238

Analysis: SM 5310C/TOC T

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:

- Run 702236 MS had a low recovery due to the matrix of the sample.
- K2009464-007 was ran at a 100x and had to be centrifuged due to suspended solids in sample.

Final Approved by: _____ Date: 11/5/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MSPECHT **Analysis Lot:** 702236 **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
K2009265-001	Carbon, Total Organic	N/A		Water	3.75 mg/L	10 mL	3.75 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	II
K2009265-003	Carbon, Total Organic	N/A		Water	2.90 mg/L	10 mL	2.90 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	II
K2009328-012	Carbon, Total Organic	N/A		Water	13.30 mg/L	10 mL	13.3 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	II
K2009464-001	Carbon, Total Organic	N/A		Water	21.74 mg/L	10 mL	21.7 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-002	Carbon, Total Organic	N/A		Water	22.12 mg/L	10 mL	22.1 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-003	Carbon, Total Organic	N/A		Water	21.26 mg/L	10 mL	21.3 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-004	Carbon, Total Organic	N/A		Water	21.38 mg/L	10 mL	21.4 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-005	Carbon, Total Organic	N/A		Water	0.03 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-006	Carbon, Total Organic	N/A		Water	0.96 mg/L	10 mL	4.8 mg/L	5	0.4	2.5			11/4/20 18:42:00	N	IV
K2009464-007	Carbon, Total Organic	N/A		Water	2.17 mg/L	10 mL	217 mg/L	100	7	50			11/4/20 18:42:00	N	IV
K2009464-008	Carbon, Total Organic	N/A		Water	2.86 mg/L	10 mL	86 mg/L	30	3	15			11/4/20 18:42:00	N	IV
K2009464-009	Carbon, Total Organic	N/A		Water	21.63 mg/L	10 mL	21.6 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-010	Carbon, Total Organic	N/A		Water	22.18 mg/L	10 mL	22.2 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-012	Carbon, Total Organic	N/A		Water	18.00 mg/L	10 mL	18.0 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-013	Carbon, Total Organic	N/A		Water	5.95 mg/L	10 mL	59.5 mg/L	10	0.7	5.0			11/4/20 18:42:00	N	IV
K2009464-014	Carbon, Total Organic	N/A		Water	20.55 mg/L	10 mL	20.6 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-015	Carbon, Total Organic	N/A		Water	20.13 mg/L	10 mL	20.1 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-016	Carbon, Total Organic	N/A		Water	22.14 mg/L	10 mL	22.1 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009637-001	Carbon, Total Organic	N/A		Water	0.93 mg/L	10 mL	0.93 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
KQ2017334-01	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/4/20 18:42:00	N	II
KQ2017334-02	Carbon, Total Organic	LCS		Water	23.64 mg/L	10 mL	23.6 mg/L	1	0.07	0.50	95		11/4/20 18:42:00	N	II
KQ2017334-03	Carbon, Total Organic	MS	K2009464-005	Water	8.15 mg/L	10 mL	8.15 mg/L	1	0.07	0.50	33*		11/4/20 18:42:00	N	IV
KQ2017334-04	Carbon, Total Organic	DUP	K2009464-005	Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50		NC	11/4/20 18:42:00	N	IV
KQ2017334-05	Carbon, Total Organic	CCV		Water	26.20 mg/L	10 mL	26.2 mg/L	1					11/4/20 18:42:00	N	IV
KQ2017334-06	Carbon, Total Organic	CCV		Water	26.41 mg/L	10 mL	26.4 mg/L	1					11/4/20 18:42:00	N	IV
KQ2017334-07	Carbon, Total Organic	CCV		Water	26.51 mg/L	10 mL	26.5 mg/L	1					11/4/20 18:42:00	N	IV
KQ2017334-08	Carbon, Total Organic	CCV		Water	25.63 mg/L	10 mL	25.6 mg/L	1					11/4/20 18:42:00	N	IV
KQ2017334-09	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/4/20 18:42:00	N	IV
KQ2017334-10	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/4/20 18:42:00	N	IV
KQ2017334-11	Carbon, Total Organic	CCB		Water	0.04 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/4/20 18:42:00	N	IV
KQ2017334-12	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/4/20 18:42:00	N	IV

# 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:** 702238 **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
K2009464-017	Carbon, Total Organic	N/A		Water	22.07 mg/L	10 mL	22.1 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-018	Carbon, Total Organic	N/A		Water	0.04 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-019	Carbon, Total Organic	N/A		Water	0.31 mg/L	10 mL	0.31 mg/L J	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-020	Carbon, Total Organic	N/A		Water	0.30 mg/L	10 mL	0.30 mg/L J	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-021	Carbon, Total Organic	N/A		Water	22.70 mg/L	10 mL	22.7 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-023	Carbon, Total Organic	N/A		Water	0.38 mg/L	10 mL	0.38 mg/L J	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-024	Carbon, Total Organic	N/A		Water	0.09 mg/L	10 mL	0.09 mg/L J	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009464-025	Carbon, Total Organic	N/A		Water	0.08 mg/L	10 mL	0.08 mg/L J	1	0.07	0.50			11/4/20 18:42:00	N	IV
K2009472-001	Carbon, Total Organic	N/A		Ground Water	2.06 mg/L	10 mL	2.06 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	II
K2009472-002	Carbon, Total Organic	N/A		Ground Water	11.17 mg/L	10 mL	11.2 mg/L	1	0.07	0.50			11/4/20 18:42:00	N	II
KQ2017453-01	Carbon, Total Organic	CCV		Water	26.41 mg/L	10 mL	26.4 mg/L	1					11/4/20 18:42:00	N	IV
KQ2017453-02	Carbon, Total Organic	CCV		Water	26.20 mg/L	10 mL	26.2 mg/L	1					11/4/20 18:42:00	N	IV
KQ2017453-03	Carbon, Total Organic	CCV		Water	25.70 mg/L	10 mL	25.7 mg/L	1					11/4/20 18:42:00	N	IV
KQ2017453-04	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/4/20 18:42:00	N	IV
KQ2017453-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/4/20 18:42:00	N	IV
KQ2017453-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/4/20 18:42:00	N	IV
KQ2017453-07	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/4/20 18:42:00	N	IV
KQ2017453-08	Carbon, Total Organic	LCS		Water	23.54 mg/L	10 mL	23.5 mg/L	1	0.07	0.50	94		11/4/20 18:42:00	N	IV
KQ2017453-09	Carbon, Total Organic	MS	K2009472-002	Ground Water	38.51 mg/L	10 mL	38.5 mg/L	1	0.07	0.50	109		11/4/20 18:42:00	N	II
KQ2017453-10	Carbon, Total Organic	DUP	K2009472-002	Ground Water	11.20 mg/L	10 mL	11.2 mg/L	1	0.07	0.50		<1	11/4/20 18:42:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Schedule: 11042020B

Version: 2
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/11/05 15:46 - 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	bottle prep check	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	k2009328-012	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	k2009637-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	k2009265-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	k2009265-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	k2009464-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	k2009464-002	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	k2009464-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	k2009464-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	k2009464-005	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	k2009464-005dup	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	k2009464-005ms	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	k2009464-006 5x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	k2009464-007 500x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	k2009464-008 30x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	k2009464-009	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	k2009464-010	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	k2009464-012	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	k2009464-013 10x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	k2009464-014	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	k2009464-015	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	k2009464-016	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	k2009464-017	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	k2009464-018	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	k2009464-019	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
29	Sample	k2009464-020	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	k2009464-021	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
31	Sample	k2009464-022	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
32	Sample	k2009464-023	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
33	Sample	k2009464-024	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
34	Sample	k2009464-025	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
35	Sample	k2009472-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
36	Sample	k2009472-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
37	Sample	k2009472-002dup	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
38	Sample	k2009472-002ms	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
39	Sample	K2009464-7 100X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready

Schedule: 11042020B

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	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

Fusion Report - 11042020B
Wednesday, November 04, 2020 06:42 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/11/05 17:10 - Thursday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	11042020B	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) Fusion1 (Fusion1) (v2)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/11/04 18:42

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	12.80	27.25	14.45	49.39	05:22
2	TC Clean	7.12	20.27	13.15	50.16	04:02
3	TC Clean	1.64	14.64	13.00	50.09	03:50
4	TC Clean	1.04	14.04	13.00	50.20	03:49

Sample Type: Clean — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/11/04 19:04

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.20	12.80	13.01	49.44	05:10
2	TC Clean	4.96	17.87	12.91	50.04	04:03
3	TC Clean	1.07	14.20	13.13	50.12	03:58
4	TC Clean	0.61	13.72	13.11	50.12	03:56

Sample Type: Clean From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/11/04 19:26

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.25	12.59	12.84	49.43	05:22
2	TC Clean	4.32	17.12	12.81	50.07	04:04
3	TC Clean	1.04	13.98	12.95	50.06	03:49
4	TC Clean	0.70	13.68	12.97	50.16	03:56

Sample Type: Blank (Creating v1472) From Schedule Version 1

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/11/04 19:48

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.24	12.62	12.86	49.51	05:22
2	TC Clean	4.25	17.22	12.97	50.11	04:07
3	TC Clean	1.26	14.17	12.92	50.09	03:50
4	TC Clean	0.95	13.92	12.97	50.08	03:48
5	Reagent Blank	6.50	19.35	12.85	49.93	05:05
6	Acid Blank	-0.03	12.96	12.99	49.58	05:27

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.1514 ppm	0.0000 ppm	0.0000%	2020/11/04 20:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1514	1.5142	10.40	23.27	12.87	50.22	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	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)	25.6311 ppm (PASS)	0.0000 ppm	0%	2020/11/04 20:36

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.6311	256.3113	189.69	202.42	12.73	50.29	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%	2020/11/04 20:51

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.87	20.73	12.87	50.22	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 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%	2020/11/04 21:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.62	20.28	12.66	50.15	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	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)	23.6403 ppm (PASS)	0.0000 ppm	0%	2020/11/04 21:20

Pos	Base Analysis	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time

	Type									
C	TOC	25.0 ppm	1	23.6403	236.4035	175.72	188.45	12.73	50.37	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
◆	2	TOC	ICS	0.0606 ppm	0.0000 ppm	0.0000%	2020/11/04 21:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0606	0.6061	9.76	22.59	12.83	50.26	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	bottle prep check	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/04 21:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.20	20.03	12.83	50.20	10:30
2	TOC	0.0000	0.0000	7.22	20.02	12.80	50.16	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	k2009328-012	13.3015 ppm	0.0148 ppm	0.1100%	2020/11/04 22:17

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	13.3120	133.1197	102.72	115.67	12.95	50.25	10:27
2	TOC	13.2910	132.9101	102.57	115.43	12.86	50.24	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	5	TOC	k2009637-001	0.9290 ppm	0.0309 ppm	3.3300%	2020/11/04 22:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9509	9.5086	16.01	28.72	12.71	50.19	10:28
2	TOC	0.9071	9.0710	15.70	28.53	12.83	50.17	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC)	CAS_salt_010711	CAS_salt_010711

(v1472) (v4) (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	6	TOC	k2009265-001	3.7529 ppm	0.0008 ppm	0.0200%	2020/11/04 23:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.7535	37.5350	35.67	48.44	12.78	50.09	10:26
2	TOC	3.7524	37.5236	35.66	48.56	12.90	50.22	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	7	TOC	k2009265-003	2.9040 ppm	0.0081 ppm	0.2800%	2020/11/04 23:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.9097	29.0972	29.75	42.59	12.84	50.24	10:30
2	TOC	2.8983	28.9831	29.67	42.53	12.86	50.19	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	8	TOC	k2009464-001	21.7445 ppm	0.5236 ppm	2.4100%	2020/11/05 00:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	21.3743	213.7432	159.27	172.16	12.89	50.17	10:28
2	TOC	22.1148	221.1475	164.47	177.48	13.01	50.21	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	9	TOC	k2009464-002	22.1155 ppm	0.1405 ppm	0.6400%	2020/11/05 00:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	22.2148	222.1483	165.17	177.91	12.74	50.15	10:27
2	TOC	22.0161	220.1610	163.77	176.75	12.98	50.17	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	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)	26.5104 ppm (PASS)	0.0000 ppm	0%	2020/11/05 01:06

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.5104	265.1041	195.86	208.66	12.80	50.13	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)	0.0362 ppm (PASS)	0.0000 ppm	0%	2020/11/05 01:20

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0362	0.3620	10.15	22.90	12.75	50.17	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	k2009464-003	21.2576 ppm	0.0985 ppm	0.4600%	2020/11/05 01:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	21.1880	211.8800	157.97	170.66	12.70	50.18	10:29
2	TOC	21.3273	213.2728	158.94	171.94	13.00	50.18	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	k2009464-004	21.3845 ppm	0.0531 ppm	0.2500%	2020/11/05 02:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	21.3470	213.4695	159.08	171.97	12.89	50.22	10:28
2	TOC	21.4221	214.2208	159.61	172.39	12.78	50.20	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	k2009464-005	0.0277 ppm	0.0391 ppm	141.4200%	2020/11/05 02:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0553	0.5533	9.72	22.37	12.64	50.23	10:27
2	TOC	0.0000	0.0000	9.22	21.94	12.72	50.21	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	k2009464-005dup	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/05 02:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.16	21.22	13.06	50.21	10:28
2	TOC	0.0000	0.0000	7.86	20.74	12.88	50.18	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	k2009464-005ms	8.1451 ppm	0.2446 ppm	3.0000%	2020/11/05 03:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.3181	83.1812	67.69	80.53	12.84	50.18	10:28
2	TOC	7.9721	79.7214	65.26	77.96	12.70	50.18	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	k2009464-006 5x	0.9580 ppm	0.1210 ppm	12.6300%	2020/11/05 03:55

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0435	10.4353	16.66	29.58	12.92	50.21	10:30
2	TOC	0.8725	8.7246	15.46	28.53	13.08	50.20	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	k2009464-007 500x	0.4215 ppm	0.0114 ppm	2.7000%	2020/11/05 04:23

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4134	4.1343	12.24	25.18	12.95	50.21	10:30

2	TOC	0.4295	4.2954	12.35	25.33	12.99	50.24	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	k2009464-008 30x	2.8565 ppm	0.0759 ppm	2.6600%	2020/11/05 04:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.8028	28.0280	29.00	41.81	12.82	50.19	10:27
2	TOC	2.9101	29.1014	29.75	42.61	12.86	50.21	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	k2009464-009	21.6285 ppm	0.0728 ppm	0.3400%	2020/11/05 05:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	21.6800	216.7996	161.42	174.33	12.91	50.21	10:24
2	TOC	21.5770	215.7703	160.70	173.61	12.91	50.25	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	k2009464-010	22.1763 ppm	0.0093 ppm	0.0400%	2020/11/05 05:47

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	22.1698	221.6978	164.85	177.69	12.84	50.25	10:29
2	TOC	22.1829	221.8289	164.94	177.92	12.98	50.25	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	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)	26.4083 ppm (PASS)	0.0000 ppm	0%	2020/11/05 06:15

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.4083	264.0834	195.14	207.97	12.83	50.24	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%	2020/11/05 06:30

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.45	22.29	12.85	50.22	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 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%	2020/11/05 06:45

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.86	21.70	12.84	50.28	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	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)	23.5428 ppm (PASS)	0.0000 ppm	0%	2020/11/05 07:00

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.5428	235.4284	175.04	187.97	12.93	50.28	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	21	TOC	k2009464-012	17.9990 ppm	0.7135 ppm	3.9600%	2020/11/05 07:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	17.4945	174.9454	132.06	144.86	12.80	50.27	10:26
2	TOC	18.5035	185.0354	139.14	152.05	12.91	50.28	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	22	TOC	k2009464-013 10x	5.9533 ppm	0.3025 ppm	5.0800%	2020/11/05 07:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	6.1672	61.6724	52.60	65.74	13.14	50.26	10:31
2	TOC	5.7394	57.3944	49.60	62.67	13.07	50.23	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	23	TOC	k2009464-014	20.5525 ppm	0.4945 ppm	2.4100%	2020/11/05 08:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	20.2028	202.0280	151.06	164.02	12.96	50.24	10:27
2	TOC	20.9022	209.0218	155.96	169.02	13.06	50.24	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	24	TOC	k2009464-015	20.1349 ppm	0.2905 ppm	1.4400%	2020/11/05 08:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	20.3404	203.4037	152.02	164.84	12.82	50.22	10:27
2	TOC	19.9295	199.2952	149.14	162.21	13.07	50.19	10:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	25	TOC	k2009464-016	22.1393 ppm	1.0424 ppm	4.7100%	2020/11/05 09:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	22.8764	228.7642	169.81	182.87	13.06	50.17	10:29

2	TOC	21.4023	214.0226	159.47	172.25	12.78	50.18	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	k2009464-017	22.0654 ppm	0.1562 ppm	0.7100%	2020/11/05 09:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	22.1759	221.7591	164.90	177.77	12.87	50.22	10:28
2	TOC	21.9549	219.5495	163.35	176.25	12.90	50.17	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	k2009464-018	0.0391 ppm	0.0470 ppm	120.1900%	2020/11/05 10:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0723	0.7230	9.84	22.53	12.69	50.18	10:28
2	TOC	0.0059	0.0587	9.38	22.25	12.88	50.18	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	k2009464-019	0.3056 ppm	0.0396 ppm	12.9600%	2020/11/05 10:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2776	2.7758	11.28	24.17	12.88	50.23	10:28
2	TOC	0.3336	3.3360	11.68	24.43	12.76	50.24	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	k2009464-020	0.3028 ppm	0.0171 ppm	5.6600%	2020/11/05 10:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3149	3.1493	11.55	24.35	12.80	50.16	10:28
2	TOC	0.2907	2.9069	11.38	24.14	12.76	50.11	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

◆	30	TOC	k2009464-021	22.7012 ppm	0.1392 ppm	0.6100%	2020/11/05 11:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	22.7996	227.9959	169.27	182.07	12.80	50.11	10:26
2	TOC	22.6027	226.0272	167.89	180.80	12.91	50.10	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	31	TOC	k2009464-022	23.0707 ppm	0.2972 ppm	1.2900%	2020/11/05 11:55

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	23.2809	232.8085	172.65	185.54	12.89	50.04	10:28
2	TOC	22.8606	228.6060	169.70	182.51	12.82	50.26	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	32	TOC	k2009464-023	0.3842 ppm	0.0500 ppm	13.0100%	2020/11/05 12:23

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4196	4.1956	12.28	25.08	12.80	50.18	10:29
2	TOC	0.3489	3.4885	11.78	24.57	12.78	50.18	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	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)	26.1981 ppm (PASS)	0.0000 ppm	0%	2020/11/05 12:51

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.1981	261.9807	193.67	206.35	12.68	50.12	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

			Concentration			Min / Max				

	Pos	BAT	(ppm)	Dil	Sample ID	(% 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%	2020/11/05 13:06

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.20	20.79	12.60	50.12	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	33	TOC	k2009464-024	0.0914 ppm	0.0536 ppm	58.6700%	2020/11/05 13:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1293	1.2932	10.24	23.18	12.93	50.34	10:28
2	TOC	0.0535	0.5348	9.71	22.61	12.90	50.36	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	34	TOC	k2009464-025	0.0828 ppm	0.0410 ppm	49.5600%	2020/11/05 13:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.1118	1.1178	10.12	22.98	12.86	50.24	10:27
2	TOC	0.0538	0.5376	9.71	22.68	12.97	50.18	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	35	TOC	k2009472-001	2.0639 ppm	0.0213 ppm	1.0300%	2020/11/05 14:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.0789	20.7890	23.92	36.74	12.82	50.15	10:31
2	TOC	2.0488	20.4882	23.71	36.37	12.66	50.12	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	36	TOC	k2009472-002	11.1714 ppm	0.2629 ppm	2.3500%	2020/11/05 14:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	10.9855	109.8547	86.40	99.19	12.80	50.24	10:28
2	TOC	11.3573	113.5725	89.00	101.66	12.66	50.20	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	37	TOC	k2009472-002dup	11.2032 ppm	0.0471 ppm	0.4200%	2020/11/05 15:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	11.2365	112.3651	88.16	100.86	12.70	50.14	10:29
2	TOC	11.1699	111.6993	87.69	100.57	12.88	50.12	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	38	TOC	k2009472-002ms	38.5097 ppm	0.3477 ppm	0.9000%	2020/11/05 15:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	38.7555	387.5551	281.20	294.00	12.80	50.17	10:28
2	TOC	38.2638	382.6383	277.75	290.77	13.02	50.23	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	39	TOC	K2009464-7 100X	2.1670 ppm	0.0192 ppm	0.8800%	2020/11/05 16:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1805	21.8055	24.63	37.47	12.84	50.20	10:29
2	TOC	2.1535	21.5346	24.44	37.12	12.68	50.27	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.3358 (IC) (v1472)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	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)	25.7007 ppm	0.0000 ppm	0%	2020/11/05 16:37

						(PASS)				

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.7007	257.0070	190.18	203.07	12.89	50.23	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 2

	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%	2020/11/05 16:51

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.18	21.05	12.87	50.19	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1471	4.5417	0.7860	0.0000	0.0000	0.0000	2020/11/03 13:23	Fusion1 (Fusion1)
v1472	2.1650	-0.0330	0.0000	0.0000	0.0000	2020/11/04 20:21	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	2020/11/05 17:07

ALS Environmental

StarLIMS Run: 702236,702238

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 19-GEN-8-55J 50 ppm LCS: 19-GEN-8-41K 25.0 ppm

ICAL Date: 6/16/2020

ICAL ID: 19-GEN-8-22-G

ICS ID: 19-GEN-8-35-K

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-08-55K

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: 11/4/2020
Reviewed By:	Date Reviewed: 11/5/20

October 26, 2020 Service Request No:E2001016

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

Laboratory Results for: HS20101139

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 22, 2020
For your reference, these analyses have been assigned our service request number **E2001016.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001016
Project:	HS20101139	**Date Received:**	10/22/20
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 10/22/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000533: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS/DLCS recoveries pass. MS/MSD was performed on an unrelated sample.

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

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

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

Client: ALS Environmental - US **Service Request:**E2001016
Project: HS20101139

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001016-001	LH18/24-SP650_102120-AIX	10/21/2020	1400

Service Request Summary

Folder #: **E2001016**
Client Name: ALS Environmental - US
Project Name: HS20101139
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/22/20
Internal Due Date: 11/5/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20101139
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 10B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001016-001	LH18/24-SP650_102120-AIX	Ground Water	10/21/20 1400	**IV**

Service Request Summary

Folder #: **E2001016**
Client Name: ALS Environmental - US
Project Name: HS20101139
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/22/20
Internal Due Date: 11/5/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20101139
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 10B
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	Level II due 11/5,level IV 11/12

Data Qualifiers

Lab Standard

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

Data Qualifiers

Lab Standard

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

ALS Laboratory Group

Acronyms

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

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

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

ALS

Chain of Custody

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

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

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **14998**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20101139
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20101139-02**	**LH18/24-SP650_102120-AIX**	**Water**	**21 Oct 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			05 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: _____

Received By: _____ Date/Time: 10/22/20 1645

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

RIGHTS | RIGHTS RESERVED

Cooler Receipt Form

ALS Environmental

Project Chemist: CH

Client/Project: ALS-H

Thermometer ID: IR24

Date/Time Received: 10/22/20 Initials: CH

Date/Time Logged in: 10/22/20 Initials: CH

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

2. Samples received in: ◉ Cooler ○ Box ○ Envelope ○ Other _____

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

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
—		10/22/20	1645	CH	3.3	☒
						☐
						☐
						☐

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

Notes, Discrepancies, & Resolutions:

Service request Label:

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Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
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SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 368381 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 10/23/20 14:19

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001014-001	16WW44-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
2	E2001014-002	16WW37-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2001014-003	16WW38-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2001014-004	16WW14-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2001014-005	16WW34-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001014-006	16WW34-201019-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001014-007	16WW33-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001014-008	16WW32-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001014-009	16WW31-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001014-010	16WW46-201019	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2001015-001	16EW01-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001015-002	16WW49-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001015-003	16WW48-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001015-004	16WW51-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001015-005	16EW08-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001015-006	16EW04-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2001015-007	16RW01-201020	.01	6850/ClO4 DOD			Ground Water	10mL	
18	E2001016-001	LH18/24-SP650_102120-AIX	.01	6850/ClO4 DOD			Ground Water	10mL	
19	EQ2000533-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000533-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000533-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000533-04	16WW48-201020 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2000533-05	16WW48-201020 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000533-02	1.00µL	EQ2000533-03	1.00µL	EQ2000533-04	1.00µL	EQ2000533-05	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2001014-001	100.00µL	E2001014-002	100.00µL	E2001014-003	100.00µL	E2001014-004	100.00µL	E2001014-005	100.00µL	E2001014-006	100.00µL
E2001014-007	100.00µL	E2001014-008	100.00µL	E2001014-009	100.00µL	E2001014-010	100.00µL	E2001015-001	100.00µL	E2001015-002	100.00µL
E2001015-003	100.00µL	E2001015-004	100.00µL	E2001015-005	100.00µL	E2001015-006	100.00µL	E2001015-007	100.00µL	E2001016-001	100.00µL
EQ2000533-01	100.00µL	EQ2000533-02	100.00µL	EQ2000533-03	100.00µL	EQ2000533-04	100.00µL	EQ2000533-05	100.00µL		

Preparation Information Benchsheet

Prep Run#: 368381 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 10/23/20 14:19

Preparation Steps

Step: Preparation
Started: 10/23/20 14:19
Finished: 10/23/20 15:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 10/26/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	10/21/20 1400
Sample Matrix:	Ground Water	**Date Received:**	10/22/20
Sample Name:	LH18/24-SP650_102120-AIX	**Units:**	µg/L
Lab Code:	E2001016-001	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	10/23/20	10/23/20 22:07	368381	700781	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000533-01	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	10/23/20	10/26/20 11:06	368381	700826	

Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20101139
Sample Matrix: Ground Water

Service Request: E2001016
Date Analyzed: 10/26/20

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

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 368381

	Lab Control Sample EQ2000533-02			Duplicate Lab Control Sample EQ2000533-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.106	0.100	106	0.110	0.100	110	84 - 119	4	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000533-02	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.106**		0.100	0.0500	0.0250	1	10/23/20	10/26/20 11:13	368381	700826	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000533-03	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.110**		0.100	0.0500	0.0250	1	10/23/20	10/26/20 11:21	368381	700826	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
		Date Analyzed:	10/26/20

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

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2001015-003	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS Matrix Spike EQ2000533-04				Batch QCDMS Duplicate Matrix Spike EQ2000533-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	167	167	0.100	151	#	167	0.100	249	#	84 - 119	<1	15

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

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000533-04	**Basis:**	NA
Run Type:	Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**167**		1.00	0.500	0.250	10	10/23/20	10/26/20 12:16	368381	700826	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001016
Project:	HS20101139	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000533-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**167**		1.00	0.500	0.250	10	10/23/20	10/26/20 12:24	368381	700826	

HS20101139 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)

ALS WO# HS20101139

NH3_AMM_W-ISE/350.3

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook 3122(

Ion Selective Electrode Logbook

Analyst: YP					Date: 10/27/20 9:30 AM			
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F								
Probe Calibration Date: 10/27/20		Cal Std ID:			Probe ID: X01-11806			
Std Level		mV	Conc., mg/L:		Sodium Thiosulfate ID:			
STD 1 (mg/L):	0.2	132	0.200		Std Level	mV	Conc., mg/L:	
STD 2 (mg/L):	1	92.7	0.999		STD 4 (mg/L): 10	34.0	10.00	
STD 3 (mg/L):	5	52.1	5.002		STD 5 (mg/L): 50	-6.7	49.958	
LSC / MS Spike ID: 3100602320					ICAL Date & Slope:			
ICV Cal STD ID:					98.8 / -58.3 mV			
DPD Reagent ID: 3100602879								

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/–)	Comments
ICV		50ml	50 ml		10.259			
CCB					0.007			
MBLK					0.009			
LCS					10.550			
HS20101007-01					0.170		-ve	
1018-01					12.242		-ve	
1216-01					18.953		-ve	
1139-01					7.790		-ve	
1139-01 MS					17.902			
1139-01MSD					17.692			
1200-01					0.045		-ve	
1200-02					0.029		-ve	
CCV					9.900			
CCB					0.006			
HS20101200-03					0.030		-ve	
-04		5ml	50ml	10x	18.245		-ve	
-05		50ml			0.020		-ve	
CCV					10.162			
CCB					0.007			

Batch ID: 371427 / 371449	Reported By YP	Reviewed By: MD

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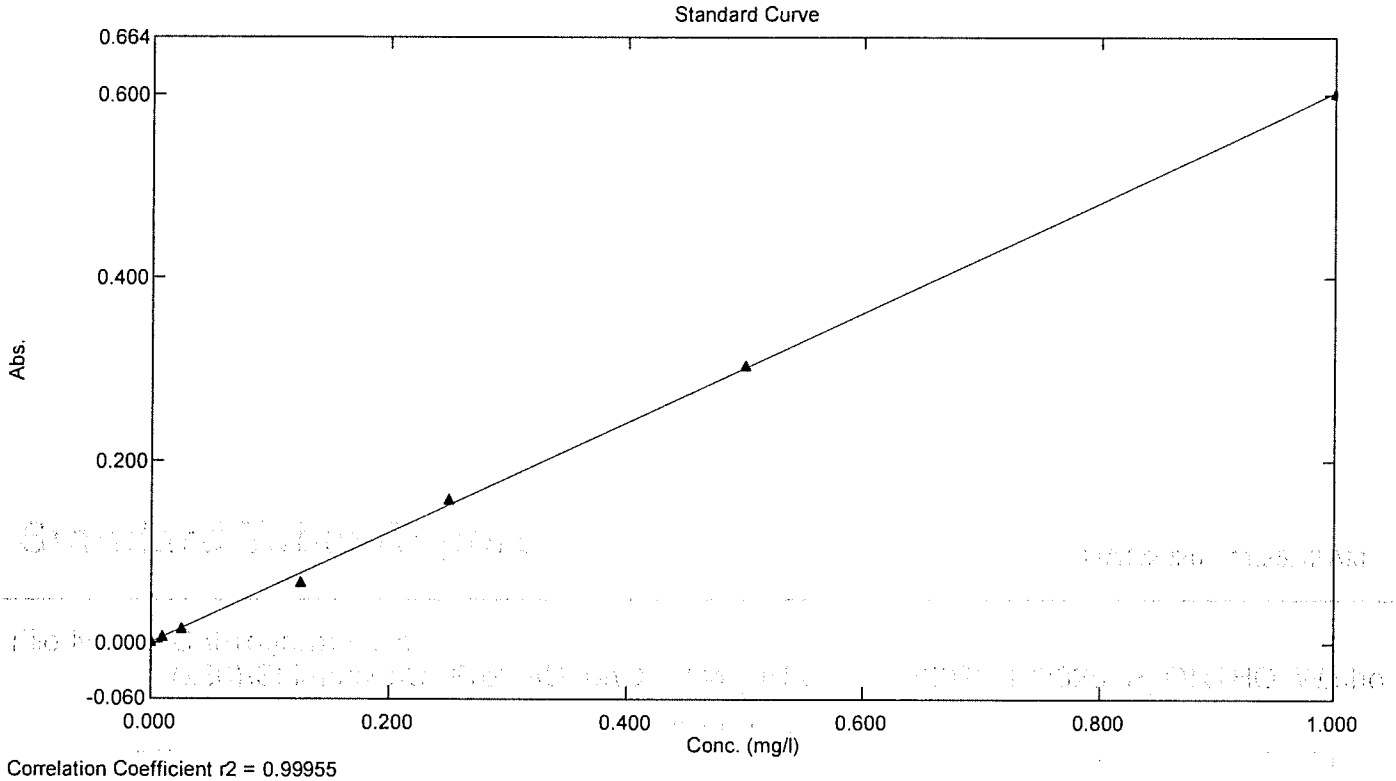
HS20101139 Wet Chem Raw Data (P-ORTHO)

ALS WO# HS20101139

Standard Table Report

11/13/2020 11:25:42 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\102320_P_ORTHO_W.pho



Correlation Coefficient r2 = 0.99955

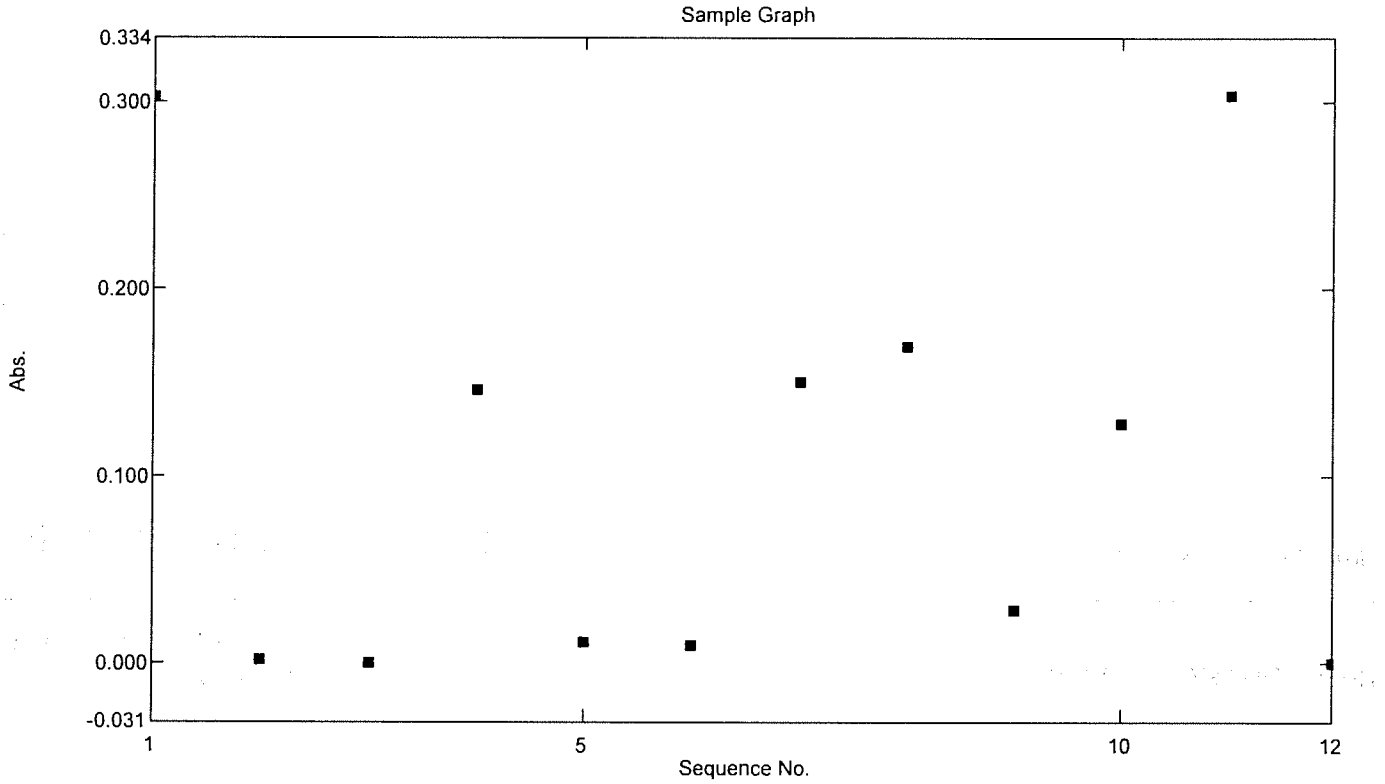
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	0.002	1.000	
2	STD2	Standard		0.010	0.007	1.000	
3	STD3	Standard		0.025	0.015	1.000	
4	STD4	Standard		0.125	0.066	1.000	
5	STD5	Standard		0.250	0.157	1.000	
6	STD6	Standard		0.500	0.305	1.000	
7	STD7	Standard		1.000	0.602	1.000	
8							

Sample Table Report

11/13/2020 11:25:51 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\102320_P_ORTHO_W.ph



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.501	0.302	314067502 WC-14
2	CCB	Unknown		0.002	0.001	
3	MBLK	Unknown		-0.001	-0.001	
4	LCS	Unknown		0.242	0.146	314067501 WC-14
5	HS20101201.01	Unknown		0.018	0.011	11:39AM,OUT OF
6	HS20101201.02	Unknown		0.015	0.009	11:40AM
7	HS20101201.02MS	Unknown		0.250	0.151	11:40AM
8	HS20101201.02MS	Unknown		0.279	0.169	11:41AM
9	HS20101201.03	Unknown		0.046	0.028	11:42AM,OUT OF
10	HS20101139.01	Unknown		0.211	0.128	11:43AM,PF:10X
11	CCV2	Unknown		0.503	0.304	
12	CCB2	Unknown		0.001	0.000	314067504 UV-11
13						

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

WorkOrder: HS20101149

Longhorn GW Treatment Plant Bi Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

07-Nov-2020

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

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  - Trip Blank
  - Dates Report
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  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
  - COC
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- HS20101149 Wet Chem Raw Data (9056_anions_W)

HS20101149 Longhorn GW Treatment Plant Bi Weekly Samples Final

ALS WO# HS20101149

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

November 04, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20101149**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Oct 22, 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: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20101149

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20101149-01	LH18/24-SP650_102120	Water		21-Oct-2020 14:00	22-Oct-2020 09:10	☐
HS20101149-02	Trip Blank	Water		21-Oct-2020 00:00	22-Oct-2020 09:10	☐

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20101149

GCMS Volatiles by Method SW8260

Batch ID: R371935

Sample ID: VLCSW-201103

- 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene and Naphthalene exceeded QC limits for LCS. Samples are ND for these compounds.

Sample ID: HS20101123-01MS

- MS and MSD are for an unrelated sample

WetChemistry by Method SW9056

Batch ID: R371570

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

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Sample ID: LH18/24-SP650_102120
Collection Date: 21-Oct-2020 14:00

ANALYTICAL REPORT
WorkOrder:HS20101149
Lab ID:HS20101149-01
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	03-Nov-2020 19:00
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	03-Nov-2020 19:00
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	03-Nov-2020 19:00
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	03-Nov-2020 19:00
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	03-Nov-2020 19:00
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	03-Nov-2020 19:00
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00

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

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20101149
Sample ID: LH18/24-SP650_102120 Lab ID:HS20101149-01
Collection Date: 21-Oct-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
cis-1,2-Dichloroethene	**13**		**0.20**	**0.50**	**1.0**	**UG/L**	1	03-Nov-2020 19:00
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	03-Nov-2020 19:00
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	03-Nov-2020 19:00
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 19:00
n-Propylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
o-Xylene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Trichloroethene	**2.2**		**0.20**	**0.50**	**1.0**	**UG/L**	1	03-Nov-2020 19:00
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 19:00
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 19:00
Surr: 1,2-Dichloroethane-d4	*87.2*			**0**	*81-118*	*%REC*	*1*	*03-Nov-2020 19:00*
Surr: 4-Bromofluorobenzene	*91.2*			**0**	*85-114*	*%REC*	*1*	*03-Nov-2020 19:00*
Surr: Dibromofluoromethane	*85.8*			**0**	*80-119*	*%REC*	*1*	*03-Nov-2020 19:00*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*03-Nov-2020 19:00*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**561**		**4.00**	**10.0**	**10.0**	**mg/L**	20	29-Oct-2020 08:09
Sulfate	**32.2**		**0.200**	**0.500**	**0.500**	**mg/L**	1	29-Oct-2020 09:03

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

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Sample ID: Trip Blank
Collection Date: 21-Oct-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20101149
Lab ID:HS20101149-02
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	03-Nov-2020 18:39
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	03-Nov-2020 18:39
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	03-Nov-2020 18:39
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	03-Nov-2020 18:39
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	03-Nov-2020 18:39
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	03-Nov-2020 18:39
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39

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

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20101149
Sample ID: Trip Blank Lab ID:HS20101149-02
Collection Date: 21-Oct-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 18:39
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	03-Nov-2020 18:39
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	03-Nov-2020 18:39
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	03-Nov-2020 18:39
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	03-Nov-2020 18:39
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	03-Nov-2020 18:39
Surr: 1,2-Dichloroethane-d4	*85.1*			**0**	*81-118*	*%REC*	*1*	*03-Nov-2020 18:39*
Surr: 4-Bromofluorobenzene	*92.7*			**0**	*85-114*	*%REC*	*1*	*03-Nov-2020 18:39*
Surr: Dibromofluoromethane	*84.7*			**0**	*80-119*	*%REC*	*1*	*03-Nov-2020 18:39*
Surr: Toluene-d8	*99.0*			**0**	*89-112*	*%REC*	*1*	*03-Nov-2020 18:39*

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

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R371570 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20101149-01	LH18/24-SP650_102120	21 Oct 2020 14:00			29 Oct 2020 09:03	1
HS20101149-01	LH18/24-SP650_102120	21 Oct 2020 14:00			29 Oct 2020 08:09	20
Batch ID: R371935 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20101149-01	LH18/24-SP650_102120	21 Oct 2020 14:00			03 Nov 2020 19:00	1
HS20101149-02	Trip Blank	21 Oct 2020 00:00			03 Nov 2020 18:39	1

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201103** Units: **UG/L** Analysis Date: **03-Nov-2020 18:18**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815257** 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-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
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201103** Units: **UG/L** Analysis Date: **03-Nov-2020 18:18**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815257** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
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	*43.1*	*1.0*	*50*	*0*	*86.2*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*45.11*	*1.0*	*50*	*0*	*90.2*	*85 - 114*				
Surr: Dibromofluoromethane	*41.82*	*1.0*	*50*	*0*	*83.6*	*80 - 119*				
Surr: Toluene-d8	*50.18*	*1.0*	*50*	*0*	*100*	*89 - 112*				

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201103** Units: **UG/L** Analysis Date: **03-Nov-2020 17:15**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815256** 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	18.38	1.0	20	0	91.9	78 - 124				
1,1,1-Trichloroethane	18.61	1.0	20	0	93.0	74 - 131				
1,1,2,2-Tetrachloroethane	20.9	1.0	20	0	105	71 - 121				
1,1,2-Trichloroethane	19.19	1.0	20	0	96.0	80 - 119				
1,1-Dichloroethane	17.82	1.0	20	0	89.1	77 - 125				
1,1-Dichloroethene	19.03	1.0	20	0	95.2	71 - 131				
1,1-Dichloropropene	19.59	1.0	20	0	97.9	78 - 125				
1,2,3-Trichlorobenzene	28.1	1.0	20	0	140	69 - 129				S
1,2,3-Trichloropropane	20.62	1.0	20	0	103	73 - 122				
1,2,4-Trichlorobenzene	26.13	1.0	20	0	131	69 - 130				S
1,2,4-Trimethylbenzene	20.64	1.0	20	0	103	76 - 124				
1,2-Dibromo-3-chloropropane	21.21	1.0	20	0	106	62 - 128				
1,2-Dibromoethane	18.84	1.0	20	0	94.2	77 - 121				
1,2-Dichlorobenzene	19.66	1.0	20	0	98.3	80 - 119				
1,2-Dichloroethane	19.48	1.0	20	0	97.4	73 - 128				
1,2-Dichloropropane	18.45	1.0	20	0	92.2	78 - 122				
1,3,5-Trimethylbenzene	19.52	1.0	20	0	97.6	75 - 124				
1,3-Dichlorobenzene	19.85	1.0	20	0	99.2	80 - 119				
1,3-Dichloropropane	19.32	1.0	20	0	96.6	80 - 119				
1,4-Dichlorobenzene	19.71	1.0	20	0	98.5	79 - 118				
2,2-Dichloropropane	18.55	1.0	20	0	92.8	60 - 139				
2-Butanone	37.33	2.0	40	0	93.3	56 - 143				
2-Chlorotoluene	19.9	1.0	20	0	99.5	79 - 122				
2-Hexanone	39.09	2.0	40	0	97.7	57 - 139				
4-Chlorotoluene	18.8	1.0	20	0	94.0	78 - 122				
4-Isopropyltoluene	20.46	1.0	20	0	102	77 - 127				
4-Methyl-2-pentanone	38.31	2.0	40	0	95.8	67 - 130				
Acetone	46.14	2.0	40	0	115	39 - 160				
Benzene	18.89	1.0	20	0	94.5	79 - 120				
Bromobenzene	19.83	1.0	20	0	99.1	80 - 120				
Bromochloromethane	19.34	1.0	20	0	96.7	78 - 123				
Bromodichloromethane	19.03	1.0	20	0	95.1	79 - 125				
Bromoform	19.02	1.0	20	0	95.1	66 - 130				
Bromomethane	19.16	1.0	20	0	95.8	53 - 141				

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201103** Units: **UG/L** Analysis Date: **03-Nov-2020 17:15**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815256** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.87	2.0	40	0	94.7	64 - 133				
Carbon tetrachloride	18.8	1.0	20	0	94.0	72 - 136				
Chlorobenzene	18.1	1.0	20	0	90.5	82 - 118				
Chloroethane	16.37	1.0	20	0	81.8	60 - 138				
Chloroform	18.31	1.0	20	0	91.5	79 - 124				
Chloromethane	19.66	1.0	20	0	98.3	50 - 139				
cis-1,2-Dichloroethene	17.85	1.0	20	0	89.3	78 - 123				
cis-1,3-Dichloropropene	19.63	1.0	20	0	98.1	75 - 124				
Dibromochloromethane	20.06	1.0	20	0	100	74 - 126				
Dibromomethane	19.38	1.0	20	0	96.9	79 - 123				
Dichlorodifluoromethane	19.09	1.0	20	0	95.4	32 - 152				
Ethylbenzene	18.9	1.0	20	0	94.5	79 - 121				
Hexachlorobutadiene	23.47	1.0	20	0	117	66 - 134				
Isopropylbenzene	19.75	1.0	20	0	98.8	72 - 131				
m,p-Xylene	37.82	2.0	40	0	94.6	80 - 121				
Methylene chloride	17.33	2.0	20	0	86.6	74 - 124				
Naphthalene	26.72	1.0	20	0	134	61 - 128				S
n-Butylbenzene	20.8	1.0	20	0	104	75 - 128				
n-Propylbenzene	21.05	1.0	20	0	105	76 - 126				
o-Xylene	18.24	1.0	20	0	91.2	78 - 122				
sec-Butylbenzene	20.87	1.0	20	0	104	77 - 126				
Styrene	19.28	1.0	20	0	96.4	78 - 123				
tert-Butylbenzene	21.08	1.0	20	0	105	78 - 124				
Tetrachloroethene	18.79	1.0	20	0	94.0	74 - 129				
Toluene	18.18	1.0	20	0	90.9	80 - 121				
trans-1,2-Dichloroethene	18.4	1.0	20	0	92.0	75 - 124				
trans-1,3-Dichloropropene	20.98	1.0	20	0	105	73 - 127				
Trichloroethene	19.91	1.0	20	0	99.6	79 - 123				
Trichlorofluoromethane	18.33	1.0	20	0	91.6	65 - 141				
Vinyl chloride	19.48	1.0	20	0	97.4	58 - 137				
Surr: 1,2-Dichloroethane-d4	*50.1*	*1.0*	*50*	*0*	*100*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.89*	*1.0*	*50*	*0*	*99.8*	*85 - 114*				
Surr: Dibromofluoromethane	*47.06*	*1.0*	*50*	*0*	*94.1*	*80 - 119*				
Surr: Toluene-d8	*47.74*	*1.0*	*50*	*0*	*95.5*	*89 - 112*				

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20101123-01MS** Units: **UG/L** Analysis Date: **03-Nov-2020 20:04**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815262** 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	23.2	1.0	20	0	116	78 - 124				
1,1,1-Trichloroethane	23.48	1.0	20	0	117	74 - 131				
1,1,2,2-Tetrachloroethane	25.98	1.0	20	0	130	71 - 121				S
1,1,2-Trichloroethane	25.37	1.0	20	0	127	80 - 119				S
1,1-Dichloroethane	20.54	1.0	20	0	103	77 - 125				
1,1-Dichloroethene	24.98	1.0	20	1.516	117	71 - 131				
1,1-Dichloropropene	25	1.0	20	0	125	78 - 125				S
1,2,3-Trichlorobenzene	21.88	1.0	20	0	109	69 - 129				
1,2,3-Trichloropropane	25.23	1.0	20	0	126	73 - 122				S
1,2,4-Trichlorobenzene	24.56	1.0	20	0	123	69 - 130				
1,2,4-Trimethylbenzene	26.89	1.0	20	0	134	76 - 124				S
1,2-Dibromo-3-chloropropane	21.24	1.0	20	0	106	62 - 128				
1,2-Dibromoethane	23.19	1.0	20	0	116	77 - 121				
1,2-Dichlorobenzene	23.79	1.0	20	0	119	80 - 119				
1,2-Dichloroethane	24.02	1.0	20	0.663	117	73 - 128				
1,2-Dichloropropane	23.71	1.0	20	0	119	78 - 122				
1,3,5-Trimethylbenzene	25.73	1.0	20	0	129	75 - 124				S
1,3-Dichlorobenzene	24.69	1.0	20	0	123	80 - 119				S
1,3-Dichloropropane	23.46	1.0	20	0	117	80 - 119				
1,4-Dichlorobenzene	24.03	1.0	20	0	120	79 - 118				S
2,2-Dichloropropane	22.82	1.0	20	0	114	60 - 139				
2-Butanone	34.05	2.0	40	0	85.1	56 - 143				
2-Chlorotoluene	26.28	1.0	20	0	131	79 - 122				S
2-Hexanone	44.99	2.0	40	0	112	57 - 139				
4-Chlorotoluene	24.34	1.0	20	0	122	78 - 122				
4-Isopropyltoluene	27.72	1.0	20	0	139	77 - 127				S
4-Methyl-2-pentanone	45.81	2.0	40	0	115	67 - 130				
Acetone	34.43	2.0	40	0	86.1	39 - 160				
Benzene	23.21	1.0	20	0	116	79 - 120				
Bromobenzene	25.09	1.0	20	0	125	80 - 120				S
Bromochloromethane	20.48	1.0	20	0	102	78 - 123				
Bromodichloromethane	23.31	1.0	20	0	117	79 - 125				
Bromoform	21.49	1.0	20	0	107	66 - 130				
Bromomethane	20.6	1.0	20	0	103	53 - 141				

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20101123-01MS** Units: **UG/L** Analysis Date: **03-Nov-2020 20:04**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815262** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	43.68	2.0	40	0	109	64 - 133				
Carbon tetrachloride	25.28	1.0	20	0	126	72 - 136				
Chlorobenzene	22.32	1.0	20	0	112	82 - 118				
Chloroethane	21.17	1.0	20	0	106	60 - 138				
Chloroform	20.88	1.0	20	0	104	79 - 124				
Chloromethane	23.89	1.0	20	0	119	50 - 139				
cis-1,2-Dichloroethene	71.36	1.0	20	19.57	259	78 - 123				S
cis-1,3-Dichloropropene	23.93	1.0	20	0	120	75 - 124				
Dibromochloromethane	23.56	1.0	20	0	118	74 - 126				
Dibromomethane	23.79	1.0	20	0	119	79 - 123				
Dichlorodifluoromethane	24.98	1.0	20	0	125	32 - 152				
Ethylbenzene	24.14	1.0	20	0	121	79 - 121				
Hexachlorobutadiene	26.54	1.0	20	0	133	66 - 134				
Isopropylbenzene	25.24	1.0	20	0	126	72 - 131				
m,p-Xylene	47.98	2.0	40	0	120	80 - 121				
Methylene chloride	20.14	2.0	20	0	101	74 - 124				
Naphthalene	20.69	1.0	20	0	103	61 - 128				
n-Butylbenzene	25.85	1.0	20	0	129	75 - 128				S
n-Propylbenzene	28.42	1.0	20	0	142	76 - 126				S
o-Xylene	23.59	1.0	20	0	118	78 - 122				
sec-Butylbenzene	27.37	1.0	20	0	137	77 - 126				S
Styrene	23.08	1.0	20	0	115	78 - 123				
tert-Butylbenzene	27.94	1.0	20	0	140	78 - 124				S
Tetrachloroethene	26.43	1.0	20	0	132	74 - 129				S
Toluene	22.2	1.0	20	0	111	80 - 121				
trans-1,2-Dichloroethene	22.22	1.0	20	0	111	75 - 124				
trans-1,3-Dichloropropene	24.22	1.0	20	0	121	73 - 127				
Trichloroethene	405	1.0	20	216.9	940	79 - 123				SEO
Trichlorofluoromethane	21.82	1.0	20	0	109	65 - 141				
Vinyl chloride	29.58	1.0	20	2.82	134	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.67*	*1.0*	*50*	*0*	*91.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.28*	*1.0*	*50*	*0*	*94.6*	*85 - 114*				
Surr: Dibromofluoromethane	*44.14*	*1.0*	*50*	*0*	*88.3*	*80 - 119*				
Surr: Toluene-d8	*50.31*	*1.0*	*50*	*0*	*101*	*89 - 112*				

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20101123-01MSD** Units: **UG/L** Analysis Date: **03-Nov-2020 20:25**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815263** 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	23.13	1.0	20	0	116	78 - 124	23.2	0.319	20	
1,1,1-Trichloroethane	23.25	1.0	20	0	116	74 - 131	23.48	1	20	
1,1,2,2-Tetrachloroethane	28.09	1.0	20	0	140	71 - 121	25.98	7.81	20	S
1,1,2-Trichloroethane	23.7	1.0	20	0	118	80 - 119	25.37	6.84	20	
1,1-Dichloroethane	21.29	1.0	20	0	106	77 - 125	20.54	3.56	20	
1,1-Dichloroethene	23.91	1.0	20	1.516	112	71 - 131	24.98	4.4	20	
1,1-Dichloropropene	24.37	1.0	20	0	122	78 - 125	25	2.56	20	
1,2,3-Trichlorobenzene	22.98	1.0	20	0	115	69 - 129	21.88	4.91	20	
1,2,3-Trichloropropane	26.88	1.0	20	0	134	73 - 122	25.23	6.33	20	S
1,2,4-Trichlorobenzene	23.64	1.0	20	0	118	69 - 130	24.56	3.79	20	
1,2,4-Trimethylbenzene	26.66	1.0	20	0	133	76 - 124	26.89	0.85	20	S
1,2-Dibromo-3-chloropropane	24.5	1.0	20	0	122	62 - 128	21.24	14.2	20	
1,2-Dibromoethane	23.91	1.0	20	0	120	77 - 121	23.19	3.03	20	
1,2-Dichlorobenzene	24.47	1.0	20	0	122	80 - 119	23.79	2.81	20	S
1,2-Dichloroethane	24.09	1.0	20	0.663	117	73 - 128	24.02	0.278	20	
1,2-Dichloropropane	22.73	1.0	20	0	114	78 - 122	23.71	4.21	20	
1,3,5-Trimethylbenzene	25.99	1.0	20	0	130	75 - 124	25.73	0.986	20	S
1,3-Dichlorobenzene	25.97	1.0	20	0	130	80 - 119	24.69	5.04	20	S
1,3-Dichloropropane	23.91	1.0	20	0	120	80 - 119	23.46	1.92	20	S
1,4-Dichlorobenzene	25.47	1.0	20	0	127	79 - 118	24.03	5.8	20	S
2,2-Dichloropropane	21.69	1.0	20	0	108	60 - 139	22.82	5.08	20	
2-Butanone	35.38	2.0	40	0	88.5	56 - 143	34.05	3.83	20	
2-Chlorotoluene	26.03	1.0	20	0	130	79 - 122	26.28	0.95	20	S
2-Hexanone	43.4	2.0	40	0	109	57 - 139	44.99	3.6	20	
4-Chlorotoluene	24.57	1.0	20	0	123	78 - 122	24.34	0.969	20	S
4-Isopropyltoluene	27.1	1.0	20	0	136	77 - 127	27.72	2.27	20	S
4-Methyl-2-pentanone	43.75	2.0	40	0	109	67 - 130	45.81	4.61	20	
Acetone	37.54	2.0	40	0	93.8	39 - 160	34.43	8.63	20	
Benzene	23.58	1.0	20	0	118	79 - 120	23.21	1.56	20	
Bromobenzene	25.66	1.0	20	0	128	80 - 120	25.09	2.27	20	S
Bromochloromethane	21.7	1.0	20	0	109	78 - 123	20.48	5.8	20	
Bromodichloromethane	23.27	1.0	20	0	116	79 - 125	23.31	0.187	20	
Bromoform	21.9	1.0	20	0	109	66 - 130	21.49	1.89	20	
Bromomethane	21.17	1.0	20	0	106	53 - 141	20.6	2.7	20	

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371935 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20101123-01MSD** Units: **UG/L** Analysis Date: **03-Nov-2020 20:25**
Client ID: Run ID: **VOA6_371935** SeqNo: **5815263** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	44.02	2.0	40	0	110	64 - 133	43.68	0.776	20	
Carbon tetrachloride	24.23	1.0	20	0	121	72 - 136	25.28	4.23	20	
Chlorobenzene	22.17	1.0	20	0	111	82 - 118	22.32	0.662	20	
Chloroethane	20.84	1.0	20	0	104	60 - 138	21.17	1.57	20	
Chloroform	21.45	1.0	20	0	107	79 - 124	20.88	2.66	20	
Chloromethane	23.72	1.0	20	0	119	50 - 139	23.89	0.727	20	
cis-1,2-Dichloroethene	72.84	1.0	20	19.57	266	78 - 123	71.36	2.06	20	S
cis-1,3-Dichloropropene	23.48	1.0	20	0	117	75 - 124	23.93	1.91	20	
Dibromochloromethane	24.12	1.0	20	0	121	74 - 126	23.56	2.36	20	
Dibromomethane	23.96	1.0	20	0	120	79 - 123	23.79	0.732	20	
Dichlorodifluoromethane	23.7	1.0	20	0	118	32 - 152	24.98	5.27	20	
Ethylbenzene	23.77	1.0	20	0	119	79 - 121	24.14	1.54	20	
Hexachlorobutadiene	28.43	1.0	20	0	142	66 - 134	26.54	6.88	20	S
Isopropylbenzene	24.54	1.0	20	0	123	72 - 131	25.24	2.85	20	
m,p-Xylene	48.87	2.0	40	0	122	80 - 121	47.98	1.84	20	S
Methylene chloride	20.25	2.0	20	0	101	74 - 124	20.14	0.534	20	
Naphthalene	24.29	1.0	20	0	121	61 - 128	20.69	16	20	
n-Butylbenzene	25.95	1.0	20	0	130	75 - 128	25.85	0.381	20	S
n-Propylbenzene	29.07	1.0	20	0	145	76 - 126	28.42	2.26	20	S
o-Xylene	23.63	1.0	20	0	118	78 - 122	23.59	0.17	20	
sec-Butylbenzene	27.64	1.0	20	0	138	77 - 126	27.37	1.01	20	S
Styrene	23.74	1.0	20	0	119	78 - 123	23.08	2.79	20	
tert-Butylbenzene	27.97	1.0	20	0	140	78 - 124	27.94	0.0976	20	S
Tetrachloroethene	25.05	1.0	20	0	125	74 - 129	26.43	5.35	20	
Toluene	21.61	1.0	20	0	108	80 - 121	22.2	2.72	20	
trans-1,2-Dichloroethene	22.01	1.0	20	0	110	75 - 124	22.22	0.958	20	
trans-1,3-Dichloropropene	24.14	1.0	20	0	121	73 - 127	24.22	0.324	20	
Trichloroethene	383.9	1.0	20	216.9	835	79 - 123	405	5.36	20	SEO
Trichlorofluoromethane	22.41	1.0	20	0	112	65 - 141	21.82	2.69	20	
Vinyl chloride	29.23	1.0	20	2.82	132	58 - 137	29.58	1.19	20	
Surr: 1,2-Dichloroethane-d4	*45.21*	*1.0*	*50*	*0*	*90.4*	*81 - 118*	*45.67*	*1.01*	*20*	
Surr: 4-Bromofluorobenzene	*47.96*	*1.0*	*50*	*0*	*95.9*	*85 - 114*	*47.28*	*1.43*	*20*	
Surr: Dibromofluoromethane	*45.21*	*1.0*	*50*	*0*	*90.4*	*80 - 119*	*44.14*	*2.39*	*20*	
Surr: Toluene-d8	*49.84*	*1.0*	*50*	*0*	*99.7*	*89 - 112*	*50.31*	*0.939*	*20*	

ALS Houston, US Date: 04-Nov-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20101149

QC BATCH REPORT

Batch ID:	**R371935 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20101149-01 HS20101149-02

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20101149

QC BATCH REPORT

Batch ID: R371570 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

MBLK Sample ID: **MBLK-102820** Units: **mg/L** Analysis Date: **28-Oct-2020 11:27**
Client ID: Run ID: **ICS-Integrion_371570** SeqNo: **5806771** 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
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS-102820** Units: **mg/L** Analysis Date: **28-Oct-2020 11:45**
Client ID: Run ID: **ICS-Integrion_371570** SeqNo: **5806772** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.4	0.500	20	0	97.0	80 - 120				
Sulfate	18.62	0.500	20	0	93.1	80 - 120				

MS Sample ID: **HS20100780-04MS** Units: **mg/L** Analysis Date: **29-Oct-2020 07:15**
Client ID: Run ID: **ICS-Integrion_371570** SeqNo: **5806778** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	247.9	5.00	100	153.2	94.8	80 - 120				
Sulfate	104.2	5.00	100	18.29	85.9	80 - 120				

MSD Sample ID: **HS20100780-04MSD** Units: **mg/L** Analysis Date: **29-Oct-2020 07:33**
Client ID: Run ID: **ICS-Integrion_371570** SeqNo: **5806779** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	246.3	5.00	100	153.2	93.1	80 - 120	247.9	0.66	20	
Sulfate	104.6	5.00	100	18.29	86.3	80 - 120	104.2	0.407	20	

The following samples were analyzed in this batch: HS20101149-01

ALS Houston, US Date: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20101149**

QUALIFIERS, ACRONYMS, UNITS

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

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

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
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: 04-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20101149

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20101149-01	LH18/24-SP650_102120	Login	10/22/2020 3:25:33 PM	PMG	Disposed
HS20101149-01	LH18/24-SP650_102120	Login	10/22/2020 3:25:33 PM	PMG	VOA081
HS20101149-02	Trip Blank	Login	10/22/2020 3:25:33 PM	PMG	VOA081

ALS Houston, US Date: 04-Nov-20

Sample Receipt Checklist

Work Order ID: HS20101149 **Date/Time Received:** 22-Oct-2020 09:10

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Paresh M. Giga	22-Oct-2020 15:27	**Reviewed by:**	/S/ RJ Modashia	22-Oct-2020 20:27
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **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 ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	1.7C U/C	IR31
Cooler(s)/Kit(s):	43886	
Date/Time sample(s) sent to storage:	10/22/2020 15:35	

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 ATTN: R.J. Modashia

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

Project No. NWO1312.0150.0 16.0001

Job:
GROUNDWATER TREATMENT PLANT BI-WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O Number

HS20101149
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant B. Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC	Analyses: CHLORIDE, SULFATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_102120	Water	10/21/20 / 14:00		3	3		HCL	
LH18/24-SP650_102120	Water	10/21/20 / 14:00		1		1	NONE	
Trip Blank	Water	10/21/20		2	2		HCL	

Additional Remarks: Standard TAT on other parameters

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	10/21/20	14:30									

9For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. McCleary	10/22/20	09:10							

Remarks
Cooler 43286 1231
Temp 1.7°C CFO

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

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

43886

CUSTODY SEAL

Date: 10/21/20 Time: 1430
Name: Scott Beesinger
Company: Dittay

Seal Broken By:
Date: 10/22/20

43886

Must Deliver Next Business Day
Time and Tempature Sensitive!

43886

ORIGIN ID:SGRA (303) 597 2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 09SEP20
ACTWGT: 1.00 LB MAN
CAD: 3001307CAFF3211
DIMS: 19x18x13 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: ADDITIONAL BOTTLES - BO 73689 - RJ

RMA:

FedEx Express

FedEx
TRK# 0221 1891 8880 1566

THU - 22 OCT 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

#375872 10/21 S6BJ8/A27E/8766

HS20101149 8260_W_DOD Raw Data

ALS WO# HS20101149

MSVOA06 -Logbook

Batch: 42316 **Analyst:** Devak Giga

Date: 11-03-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	11-03-2020 11:40 am	1.00	0.00 mL	0.00 mL	X110301.D	Liquid	Y	NA
2	VSTD000.25	ICAL1	11-03-2020 12:01 pm	1.00	5.00 mL	0.00 mL	X110302.D	Liquid	Y	NA
3	VSTD000.5	ICAL2	11-03-2020 12:43 pm	1.00	5.00 mL	0.00 mL	X110303.D	Liquid	Y	NA
4	VSTD001	ICAL3	11-03-2020 01:04 pm	1.00	5.00 mL	0.00 mL	X110304.D	Liquid	Y	NA
5	VSTD002	ICAL4	11-03-2020 01:24 pm	1.00	5.00 mL	0.00 mL	X110305.D	Liquid	Y	NA
6	VSTD005	ICAL5	11-03-2020 01:45 pm	1.00	5.00 mL	0.00 mL	X110306.D	Liquid	Y	NA
7	VSTD020	ICAL6	11-03-2020 02:06 pm	1.00	5.00 mL	0.00 mL	X110307.D	Liquid	Y	NA
8	VSTD050	ICAL7	11-03-2020 02:27 pm	1.00	5.00 mL	0.00 mL	X110308.D	Liquid	Y	NA
9	VSTD100	ICAL8	11-03-2020 02:48 pm	1.00	5.00 mL	0.00 mL	X110309.D	Liquid	Y	NA
10	VSTD150	ICAL9	11-03-2020 03:09 pm	1.00	5.00 mL	0.00 mL	X110310.D	Liquid	Y	NA
11	VSTD200	ICAL	11-03-2020 03:30 pm	1.00	5.00 mL	0.00 mL	X110311.D	Liquid	Y	NA
12	BLANK	SAMP	11-03-2020 03:51 pm	1.00	5.00 mL	0.00 mL	X110312.D	Liquid	Y	NA
13	BLANK	SAMP	11-03-2020 04:12 pm	1.00	5.00 mL	0.00 mL	X110313.D	Liquid	Y	NA
14	ICV	ICV	11-03-2020 04:33 pm	1.00	5.00 mL	0.00 mL	X110314.D	Liquid	Y	NA
15	BLANK	SAMP	11-03-2020 04:54 pm	1.00	5.00 mL	0.00 mL	X110315.D	Liquid	Y	NA
16	VLCSW-201103	LCS	11-03-2020 05:15 pm	1.00	5.00 mL	0.00 mL	X110316.D	Liquid	Y	NA
17	BLK	SAMP	11-03-2020 05:36 pm	1.00	5.00 mL	0.00 mL	X110317.D	Liquid	Y	NA
18	BLK	SAMP	11-03-2020 05:57 pm	1.00	5.00 mL	0.00 mL	X110318.D	Liquid	Y	NA
19	VBLKW-201103	MBLK	11-03-2020 06:18 pm	1.00	5.00 mL	0.00 mL	X110319.D	Liquid	Y	NA
20	HS20101149-02	SAMP	11-03-2020 06:39 pm	1.00	5.00 mL	0.00 mL	X110320.D	Liquid	Y	NA
21	HS20101149-01	SAMP	11-03-2020 07:00 pm	1.00	5.00 mL	0.00 mL	X110321.D	Liquid	Y	NA
22	HS20101123-12	SAMP	11-03-2020 07:21 pm	1.00	5.00 mL	0.00 mL	X110322.D	Liquid	Y	NA
23	HS20101123-01	SAMP	11-03-2020 07:42 pm	1.00	5.00 mL	0.00 mL	X110323.D	Liquid	Y	NA
24	HS20101123-01MS	MS	11-03-2020 08:04 pm	1.00	5.00 mL	0.00 mL	X110324.D	Liquid	Y	NA
25	HS20101123-01MSD	MSD	11-03-2020 08:25 pm	1.00	5.00 mL	0.00 mL	X110325.D	Liquid	Y	NA
26	HS20101123-01	SAMP	11-03-2020 08:46 pm	5.00	5.00 mL	0.00 mL	X110326.D	Liquid	Y	NA
27	HS20101123-02	SAMP	11-03-2020 09:07 pm	1.00	5.00 mL	0.00 mL	X110327.D	Liquid	Y	NA
28	HS20101123-03	SAMP	11-03-2020 09:28 pm	1.00	5.00 mL	0.00 mL	X110328.D	Liquid	Y	NA
29	HS20101123-04	SAMP	11-03-2020 09:49 pm	1.00	5.00 mL	0.00 mL	X110329.D	Liquid	Y	NA
30	CCV-END	CCV	11-03-2020 10:10 pm	1.00	5.00 mL	0.00 mL	X110330.D	Liquid	Y	NA
31	BFB	TUNE	11-03-2020 10:31 pm	1.00	0.00 mL	0.00 mL	Y110301a.D	Liquid	Y	NA
32	BFB	TUNE	11-03-2020 10:52 pm	1.00	0.00 mL	0.00 mL	Y110302.D	Liquid	Y	NA
33	CCV	CCV	11-03-2020 11:13 pm	1.00	5.00 mL	0.00 mL	Y110303.D	Liquid	Y	NA
34	BLANK	SAMP	11-03-2020 11:34 pm	1.00	5.00 mL	0.00 mL	Y110304.D	Liquid	Y	NA
35	VLCSW-201103	LCS	11-03-2020 11:55 pm	1.00	5.00 mL	0.00 mL	Y110305.D	Liquid	Y	NA
36	BLK	SAMP	11-04-2020 12:16 am	1.00	5.00 mL	0.00 mL	Y110306.D	Liquid	Y	NA
37	VBLKW-201103	MBLK	11-04-2020 12:37 am	1.00	5.00 mL	0.00 mL	Y110307.D	Liquid	Y	NA
38	HS20101240-10	SAMP	11-04-2020 12:58 am	1.00	5.00 mL	0.00 mL	Y110308.D	Liquid	Y	NA
39	HS20101123-10	SAMP	11-04-2020 01:19 am	500.0(	5.00 mL	0.00 mL	Y110309.D	Liquid	Y	NA
40	HS20101123-11	SAMP	11-04-2020 01:40 am	500.0(	5.00 mL	0.00 mL	Y110310.D	Liquid	Y	NA
41	HS20101240-09	SAMP	11-04-2020 02:01 am	500.0(	5.00 mL	0.00 mL	Y110311.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS20101123-05	SAMP	11-04-2020 02:22 am	5.00	5.00 mL	0.00 mL	Y110312.D	Liquid	Y	NA
43	HS20101123-05	SAMP	11-04-2020 02:43 am	25.00	5.00 mL	0.00 mL	Y110313.D	Liquid	Y	NA
44	HS20101123-05MS	MS	11-04-2020 03:04 am	25.00	5.00 mL	0.00 mL	Y110314.D	Liquid	Y	NA
45	HS20101123-05MSD	MSD	11-04-2020 03:25 am	25.00	5.00 mL	0.00 mL	Y110315.D	Liquid	Y	NA
46	BLK	SAMP	11-04-2020 03:46 am	1.00	5.00 mL	0.00 mL	Y110316.D	Liquid	Y	NA
47	HS20101240-01	SAMP	11-04-2020 04:07 am	1.00	5.00 mL	0.00 mL	Y110317.D	Liquid	Y	NA
48	HS20101240-02	SAMP	11-04-2020 04:29 am	1.00	5.00 mL	0.00 mL	Y110318.D	Liquid	Y	NA
49	HS20101240-03	SAMP	11-04-2020 04:50 am	1.00	5.00 mL	0.00 mL	Y110319.D	Liquid	Y	NA
50	HS20101240-06	SAMP	11-04-2020 05:11 am	1.00	5.00 mL	0.00 mL	Y110320.D	Liquid	Y	NA
51	HS20101240-04	SAMP	11-04-2020 05:32 am	1.00	5.00 mL	0.00 mL	Y110321.D	Liquid	Y	NA
52	HS20101240-04	SAMP	11-04-2020 05:53 am	10.00	5.00 mL	0.00 mL	Y110322.D	Liquid	Y	NA
53	HS20101123-06	SAMP	11-04-2020 06:14 am	5.00	5.00 mL	0.00 mL	Y110323.D	Liquid	Y	NA
54	HS20101123-06	SAMP	11-04-2020 06:35 am	25.00	5.00 mL	0.00 mL	Y110324.D	Liquid	Y	NA
55	HS20101123-07	SAMP	11-04-2020 06:56 am	5.00	5.00 mL	0.00 mL	Y110325.D	Liquid	Y	NA
56	HS20101123-07	SAMP	11-04-2020 07:17 am	50.00	5.00 mL	0.00 mL	Y110326.D	Liquid	Y	NA
57	HS20101123-08	SAMP	11-04-2020 07:38 am	5.00	5.00 mL	0.00 mL	Y110327.D	Liquid	Y	NA
58	HS20101123-08	SAMP	11-04-2020 07:59 am	50.00	5.00 mL	0.00 mL	Y110328.D	Liquid	Y	NA
59	HS20101123-09	SAMP	11-04-2020 08:20 am	50.00	5.00 mL	0.00 mL	Y110329.D	Liquid	Y	NA
60	HS20101123-09	SAMP	11-04-2020 08:41 am	500.0(	5.00 mL	0.00 mL	Y110330.D	Liquid	Y	NA
61	CCV-END	CCV	11-04-2020 09:02 am	1.00	5.00 mL	0.00 mL	Y110331.D	Liquid	Y	NA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20101149

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-201103	100	94	95	100	0
02	VBLKW-201103	86	84	100	90	0
03	HS20101149-02	85	85	99	93	0
04	HS20101149-01	87	86	104	91	0
05	HS20101123-01	91	88	101	94	0
06	HS20101123-01	90	90	100	96	0
07						
08						
09						
10						
11						
12						
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17						
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20						
21						
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23						
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25						
26						
27						
28						

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

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20101149

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	50.39	101	80-120
trans-1,3-Dichloroprope	50.00	51.77	104	80-120
1,3-Dichlorobenzene	50.00	47.54	95	80-120
2,2-Dichloropropane	50.00	48.07	96	80-120
1,1-Dichloropropene	50.00	47.56	95	80-120
Dibromomethane	50.00	49.77	100	80-120
1,2-Dibromoethane	50.00	47.81	96	80-120
trans-1,2-Dichloroethen	50.00	45.78	92	80-120
1,1,1,2-Tetrachloroetha	50.00	47.00	94	80-120
1,1,1-Trichloroethane	50.00	47.63	95	80-120
1,1,2,2-Tetrachloroetha	50.00	48.95	98	80-120
1,1,2-Trichloroethane	50.00	47.47	95	80-120
1,1-Dichloroethane	50.00	47.54	95	80-120
1,1-Dichloroethene	50.00	47.17	94	80-120
Trichloroethene	50.00	49.82	100	80-120
1,2,3-Trichlorobenzene	50.00	59.72	119	80-120
Trichlorofluoromethane	50.00	46.74	93	80-120
1,2,4-Trichlorobenzene	50.00	55.59	111	80-120
1,2,4-Trimethylbenzene	50.00	49.35	99	80-120
Tetrachloroethene	50.00	45.62	91	80-120
1,2-Dichlorobenzene	50.00	48.17	96	80-120
1,2-Dichloroethane	50.00	48.80	98	80-120
1,2-Dichloropropane	50.00	45.70	91	80-120
1,3,5-Trimethylbenzene	50.00	47.59	95	80-120
1,3-Dichloropropane	50.00	46.05	92	80-120
1,4-Dichlorobenzene	50.00	48.35	97	80-120
Toluene	50.00	42.99	86	80-120
2-Butanone	100.00	106.06	106	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.: HS20101149

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	46.44	93	80-120
2-Hexanone	100.00	89.67	90	80-120
4-Chlorotoluene	50.00	46.72	93	80-120
tert-Butylbenzene	50.00	46.17	92	80-120
4-Methyl-2-Pentanone	100.00	93.77	94	80-120
Acetone	100.00	119.63	120	80-120
Benzene	50.00	46.99	94	80-120
Bromobenzene	50.00	45.21	90	80-120
Bromochloromethane	50.00	48.42	97	80-120
Bromodichloromethane	50.00	49.94	100	80-120
Bromoform	50.00	43.20	86	80-120
Bromomethane	50.00	46.78	94	80-120
Carbon Disulfide	100.00	92.20	92	80-120
Carbon Tetrachloride	50.00	49.72	99	80-120
Chlorobenzene	50.00	46.28	92	80-120
Chloroethane	50.00	44.95	90	80-120
Chloroform	50.00	46.96	94	80-120
Chloromethane	50.00	50.02	100	80-120
cis-1,2-Dichloroethene	50.00	47.87	96	80-120
Dibromochloromethane	50.00	50.15	100	80-120
Dichlorodifluoromethane	50.00	52.73	105	80-120
Ethylbenzene	50.00	47.80	96	80-120
Hexachlorobutadiene	50.00	52.32	105	80-120
Isopropylbenzene	50.00	44.31	89	80-120
m,p-Xylenes	100.00	102.37	102	80-120
Methylene Chloride	50.00	45.39	91	80-120
n-Butylbenzene	50.00	44.86	90	80-120
n-Propylbenzene	50.00	48.09	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: Case No.: SAS No.: SDG No.: HS20101149

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	59.94	120	80-120
o-Xylene	50.00	49.24	98	80-120
sec-Butylbenzene	50.00	45.15	90	80-120
Styrene	50.00	51.43	103	80-120
Vinyl Chloride	50.00	49.52	99	80-120
1,2,3-Trichloropropane	50.00	49.07	98	80-120
p-Isopropyltoluene	50.00	49.28	98	80-120
1,2-Dibromo-3-Chloropro	50.00	55.06	110	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-201103

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20101149

Lab File ID: X110319 Lab Sample ID: VBLKW-201103

Date Analyzed: 11/03/20 Time Analyzed: 1818

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-201103	VLCSW-201103	X110316	1715
02	HS20101149-0	HS20101149-02	X110320	1839
03	HS20101149-0	HS20101149-01	X110321	1900
04	HS20101123-0	HS20101123-01M	X110324	2004
05	HS20101123-0	HS20101123-01M	X110325	2025
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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.: HS20101149

Lab File ID: X110301 BFB Injection Date: 11/03/20

Instrument ID: VOA6 BFB Injection Time: 1140

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	26.5
75	30.0 - 60.0% of mass 95	57.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	1.3 (1.6)1
174	Greater than 50.0% of mass 95	82.0
175	5.0 - 9.0% of mass 174	6.5 (7.9)1
176	95.0 - 101.0% of mass 174	78.9 (96.3)1
177	5.0 - 9.0% of mass 176	4.5 (5.7)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X110302	11/03/20	1201
02	VSTD000.5	VSTD000.5	X110303	11/03/20	1243
03	VSTD001	VSTD001	X110304	11/03/20	1304
04	VSTD002	VSTD002	X110305	11/03/20	1324
05	VSTD005	VSTD005	X110306	11/03/20	1345
06	VSTD020	VSTD020	X110307	11/03/20	1406
07	VSTD050	VSTD050	X110308	11/03/20	1427
08	VSTD100	VSTD100	X110309	11/03/20	1448
09	VSTD150	VSTD150	X110310	11/03/20	1509
10	VSTD200	VSTD200	X110311	11/03/20	1530
11	ICV	ICV	X110314	11/03/20	1633
12	VLCSW-201103	VLCSW-201103	X110316	11/03/20	1715
13	VBLKW-201103	VBLKW-201103	X110319	11/03/20	1818
14	HS20101149-0	HS20101149-02	X110320	11/03/20	1839
15	HS20101149-0	HS20101149-01	X110321	11/03/20	1900
16	HS20101123-0	HS20101123-01M	X110324	11/03/20	2004
17	HS20101123-0	HS20101123-01M	X110325	11/03/20	2025
18	CCV-END	CCV-END	X110330	11/03/20	2210
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20101149

Instrument ID: VOA6 Calibration Date(s): 11/03/20 11/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1201 1530

LAB FILE ID: RF0.25: X110302 RF0.5: X110303 RF1: X110304
RF2: X110305 RF5: X110306 RF20: X110307

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.555	0.555	0.606	0.565	0.521
trans-1,3-Dichloropropene		0.505	0.434	0.446	0.482	0.473
1,3-Dichlorobenzene		1.878	1.622	1.375	1.316	1.309
2,2-Dichloropropane		1.236	1.097	1.053	1.008	0.841
1,1-Dichloropropene		0.587	0.468	0.530	0.456	0.381
Dibromomethane		0.234	0.228	0.300	0.292	0.238
1,2-Dibromoethane		0.442	0.390	0.310	0.345	0.367
trans-1,2-Dichloroethene		0.674	0.606	0.639	0.562	0.511
1,1,1,2-Tetrachloroethane		0.414	0.388	0.299	0.336	0.313
1,1,1-Trichloroethane		1.186	0.964	1.031	0.989	0.887
1,1,2,2-Tetrachloroethane		1417	1837	3824	10630	40864
1,1,2-Trichloroethane		0.396	0.324	0.281	0.290	0.275
1,1-Dichloroethane		1.450	1.221	1.098	1.248	1.028
1,1-Dichloroethene		1.141	1.038	0.937	0.959	0.839
Trichloroethene		0.415	0.317	0.377	0.319	0.290
1,2,3-Trichlorobenzene		370	511	1012	2533	8500
Trichlorofluoromethane		2.234	2.132	1.965	1.836	1.654
1,2,4-Trichlorobenzene		448	1196	2022	4083	15476
1,2,4-Trimethylbenzene		3.271	2.645	2.483	2.450	2.480
Tetrachloroethene		0.332	0.300	0.240	0.252	0.216
1,2-Dichlorobenzene		1.564	1.358	1.354	1.301	1.238
1,2-Dichloroethane		0.666	0.598	0.531	0.549	0.490
1,2-Dichloropropane		0.479	0.383	0.377	0.386	0.345
1,3,5-Trimethylbenzene		3.313	2.742	2.746	2.266	2.382
1,3-Dichloropropane		0.732	0.640	0.594	0.599	0.567
1,4-Dichlorobenzene		1.675	1.640	1.634	1.468	1.405
Toluene		2.297	2.090	1.978	1.740	1.477
2-Butanone		0.238	0.229	0.230	0.240	0.216
2-Chlorotoluene		2.999	2.505	2.360	2.254	2.060
2-Hexanone		2217	2282	5963	14581	61091
4-Chlorotoluene		3.757	2.811	2.726	2.631	2.548
tert-Butylbenzene		3197	4630	9232	20057	78132
4-Methyl-2-Pentanone		0.475	0.328	0.348	0.392	0.351
Acetone		3564	3869	6814	13265	43227
Benzene		1.791	1.521	1.407	1.367	1.215
Bromobenzene		1.068	1.030	0.876	0.824	0.811
Bromochloromethane		0.265	0.362	0.357	0.384	0.301
Bromodichloromethane		0.652	0.496	0.559	0.510	0.445
Bromoform		543	772	1884	4618	20267
Bromomethane		1.097	0.978	0.937	0.915	0.774
Carbon Disulfide		1.826	1.783	1.822	1.734	1.526
Carbon Tetrachloride		0.490	0.504	0.471	0.433	0.364
Chlorobenzene		1.191	1.217	1.010	0.969	0.944
Chloroethane		0.849	0.977	0.931	0.814	0.655

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010114

Instrument ID: VOA6 Calibration Date(s): 11/03/20 11/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1201 1530

LAB FILE ID: RF0.25: X110302 RF0.5: X110303 RF1: X110304
RF2: X110305 RF5: X110306 RF20: X110307

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		1.342	1.228	1.457	1.300	1.142
Chloromethane		1628	2614	4801	11006	37225
cis-1,2-Dichloroethene		0.899	0.654	0.758	0.744	0.638
Dibromochloromethane		0.386	0.338	0.326	0.345	0.355
Dichlorodifluoromethane		0.665	0.653	0.627	0.665	0.544
Ethylbenzene		0.625	0.598	0.534	0.447	0.438
Hexachlorobutadiene		348	486	1206	2539	8666
Isopropylbenzene		4684	7329	13777	31967	125533
m,p-Xylenes		0.720	0.603	0.543	0.580	0.570
Methylene Chloride		0.727	0.763	0.707	0.716	0.592
n-Butylbenzene		3247	5444	11381	22870	94869
n-Propylbenzene		5.006	3.812	3.874	3.443	3.384
Naphthalene		632	1364	2622	6669	22879
o-Xylene		0.665	0.587	0.608	0.567	0.556
sec-Butylbenzene		4540	7265	13806	29458	115155
Styrene		1.143	0.959	0.938	0.941	1.024
Vinyl Chloride		1.215	1.206	1.116	1.106	0.992
1,2,3-Trichloropropane		0.780	0.800	0.658	0.685	0.707
p-Isopropyltoluene		2.596	2.546	2.722	2.339	2.228
1,2-Dibromo-3-Chloropropane			69	195	741	2714
1,2-Dichloroethane-d4		1490	2593	5018	11874	44472
Dibromofluoromethane		0.661	0.697	0.668	0.638	0.615
Toluene-d8		1.597	1.287	1.252	1.177	1.190
4-Bromofluorobenzene		1396	2114	4690	11013	41523

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010114

Instrument ID: VOA6 Calibration Date(s): 11/03/20 11/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1201 1530

LAB FILE ID: RF50: X110308 RF100: X110309 RF150: X110310
RF200: X110311

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.559	0.550	0.562	0.547
trans-1,3-Dichloropropene	0.510	0.539	0.509	0.531
1,3-Dichlorobenzene	1.333	1.419	1.439	1.497
2,2-Dichloropropane	0.928	0.994	1.087	1.066
1,1-Dichloropropene	0.441	0.449	0.451	0.434
Dibromomethane	0.250	0.242	0.245	0.245
1,2-Dibromoethane	0.360	0.378	0.381	0.401
trans-1,2-Dichloroethene	0.575	0.639	0.689	0.711
1,1,1,2-Tetrachloroethane	0.342	0.375	0.356	0.386
1,1,1-Trichloroethane	0.985	1.065	1.151	1.136
1,1,2,2-Tetrachloroethane	107818	223385	340740	491582
1,1,2-Trichloroethane	0.299	0.302	0.295	0.314
1,1-Dichloroethane	1.069	1.180	1.236	1.287
1,1-Dichloroethene	0.852	0.872	0.924	0.927
Trichloroethene	0.323	0.318	0.319	0.320
1,2,3-Trichlorobenzene	26867	54420	92101	134528
Trichlorofluoromethane	1.659	1.757	1.849	1.872
1,2,4-Trichlorobenzene	49484	104687	173285	250652
1,2,4-Trimethylbenzene	2.663	2.992	3.048	3.141
Tetrachloroethene	0.263	0.285	0.286	0.302
1,2-Dichlorobenzene	1.297	1.352	1.436	1.521
1,2-Dichloroethane	0.532	0.495	0.501	0.490
1,2-Dichloropropane	0.345	0.340	0.334	0.340
1,3,5-Trimethylbenzene	2.738	2.968	3.207	3.313
1,3-Dichloropropane	0.601	0.596	0.581	0.603
1,4-Dichlorobenzene	1.418	1.495	1.475	1.523
Toluene	1.546	1.672	1.784	1.884
2-Butanone	0.216	0.246	0.227	0.249
2-Chlorotoluene	2.067	2.232	2.292	2.364
2-Hexanone	169392	370165	562101	809663
4-Chlorotoluene	2.749	2.982	3.181	3.309
tert-Butylbenzene	255346	626984	1005736	1422110
4-Methyl-2-Pentanone	0.368	0.378	0.378	0.400
Acetone	87016	169628	230937	315772
Benzene	1.316	1.344	1.308	1.299
Bromobenzene	0.802	0.817	0.840	0.849
Bromochloromethane	0.333	0.348	0.373	0.376
Bromodichloromethane	0.500	0.474	0.496	0.491
Bromoform	56683	133700	217258	300900
Bromomethane	0.777	0.905	1.059	
Carbon Disulfide	1.622	1.688	1.865	1.910
Carbon Tetrachloride	0.428	0.445	0.446	0.447
Chlorobenzene	0.965	1.046	1.091	1.184
Chloroethane	0.657	0.685	0.744	0.778

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010114

Instrument ID: VOA6 Calibration Date(s): 11/03/20 11/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1201 1530

LAB FILE ID: RF50: X110308 RF100: X110309 RF150: X110310
RF200: X110311

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	1.201	1.246	1.298	1.301
Chloromethane	97255	217141	339041	432608
cis-1,2-Dichloroethene	0.689	0.703	0.758	0.755
Dibromochloromethane	0.378	0.391	0.399	0.408
Dichlorodifluoromethane	0.570	0.691	0.710	0.701
Ethylbenzene	0.504	0.553	0.581	0.599
Hexachlorobutadiene	31815	74152	115884	168470
Isopropylbenzene	378050	912871	1491458	
m,p-Xylenes	0.650	0.735	0.793	
Methylene Chloride	0.616	0.656	0.697	0.705
n-Butylbenzene	336254	808796	1360339	1951034
n-Propylbenzene	3.710	4.066	4.227	4.304
Naphthalene	71142	144587	248976	363990
o-Xylene	0.623	0.684	0.744	0.789
sec-Butylbenzene	381699	940164	1526507	2142350
Styrene	1.084	1.243	1.347	
Vinyl Chloride	1.014	1.087	1.098	1.108
1,2,3-Trichloropropane	0.697	0.692	0.632	0.666
p-Isopropyltoluene	2.770	2.964	3.023	3.116
1,2-Dibromo-3-Chloropropane	7134	14813	23770	32792
1,2-Dichloroethane-d4	128500	253050	404360	
Dibromofluoromethane	0.667	0.679	0.735	0.700
Toluene-d8	1.283	1.388	1.411	1.435
4-Bromofluorobenzene	114211	252308	414999	565367

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010114

Instrument ID: VOA6 Calibration Date(s): 11/03/20 11/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1201 1530

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.55780943		3.955	15.000
trans-1,3-Dichloropropene	AVRG		0.49211543		7.391	15.000
1,3-Dichlorobenzene	AVRG		1.46537724		12.558	15.000
2,2-Dichloropropane	AVRG		1.03457358		10.794	15.000
1,1-Dichloropropene	AVRG		0.46627025		12.750	15.000
Dibromomethane	AVRG		0.25275475		10.153	15.000
1,2-Dibromoethane	AVRG		0.37495263		9.802	15.000
trans-1,2-Dichloroethene	AVRG		0.62293308		10.488	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.35670595		10.518	15.000
1,1,1-Trichloroethane	AVRG		1.04399886		9.473	15.000
1,1,2,2-Tetrachloroethane	LINR	-1.18e-002	1.22607927		0.9988660	0.9900000
1,1,2-Trichloroethane	AVRG		0.30839143		11.677	15.000
1,1-Dichloroethane	AVRG		1.20185017		10.670	15.000
1,1-Dichloroethene	AVRG		0.94335689		10.151	15.000
Trichloroethene	AVRG		0.33320083		11.461	15.000
1,2,3-Trichlorobenzene	LINR	3.538e-002	4.50090118		0.9962012	0.9900000
Trichlorofluoromethane	AVRG		1.88440525		10.508	15.000
1,2,4-Trichlorobenzene	LINR	3.525e-002	2.40273119		0.9974951	0.9900000
1,2,4-Trimethylbenzene	AVRG		2.79709892		11.338	15.000
Tetrachloroethene	AVRG		0.27525384		12.943	15.000
1,2-Dichlorobenzene	AVRG		1.37998821		7.772	15.000
1,2-Dichloroethane	AVRG		0.53912868		10.962	15.000
1,2-Dichloropropane	AVRG		0.37001393		12.328	15.000
1,3,5-Trimethylbenzene	AVRG		2.85281152		13.381	15.000
1,3-Dichloropropane	AVRG		0.61260091		7.998	15.000
1,4-Dichlorobenzene	AVRG		1.52588695		6.557	15.000
Toluene	AVRG		1.82980395		14.346	15.000
2-Butanone	AVRG		0.23243307		5.170	15.000
2-Chlorotoluene	AVRG		2.34840479		12.008	15.000
2-Hexanone	LINR	7.417e-002	2.84952067		0.9976837	0.9900000
4-Chlorotoluene	AVRG		2.96611559		13.086	15.000
tert-Butylbenzene	LINR	4.988e-002	0.41728152		0.9983081	0.9900000
4-Methyl-2-Pentanone	AVRG		0.37984642		11.098	15.000
Acetone	LINR	-0.1746572	3.95328097		0.9984390	0.9900000
Benzene	AVRG		1.39659388		12.173	15.000
Bromobenzene	AVRG		0.87979464		11.244	15.000
Bromochloromethane	AVRG		0.34435784		11.365	15.000
Bromodichloromethane	AVRG		0.51371499		11.709	15.000
Bromoform	LINR	6.227e-002	3.78260975		0.9973049	0.9900000
Bromomethane	AVRG		0.93048543		12.546	15.000
Carbon Disulfide	AVRG		1.75295469		7.027	15.000
Carbon Tetrachloride	AVRG		0.44767391		9.012	15.000
Chlorobenzene	AVRG		1.06851845		9.991	15.000
Chloroethane	AVRG		0.78782987		14.767	15.000

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010114

Instrument ID: VOA6 Calibration Date(s): 11/03/20 11/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1201 1530

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		1.27939613		7.057	15.000
Chloromethane	LINR	1.757e-002	1.38746336		0.9973772	0.9900000
cis-1,2-Dichloroethene	AVRG		0.73325309		10.535	15.000
Dibromochloromethane	AVRG		0.36952464		7.956	15.000
Dichlorodifluoromethane	AVRG		0.64746942		8.872	15.000
Ethylbenzene	AVRG		0.54207886		12.387	15.000
Hexachlorobutadiene	LINR	4.656e-002	3.55079816		0.9979368	0.9900000
Isopropylbenzene	LINR	5.23e-002	0.57225016		0.9958485	0.9900000
m,p-Xylenes	AVRG		0.64929693		13.963	15.000
Methylene Chloride	AVRG		0.68649235		8.025	15.000
n-Butylbenzene	LINR	7.209e-002	0.30552156		0.9964224	0.9900000
n-Propylbenzene	AVRG		3.98059418		12.499	15.000
Naphthalene	LINR	4.279e-002	1.66365308		0.9954951	0.9900000
o-Xylene	AVRG		0.64704750		12.405	15.000
sec-Butylbenzene	LINR	5.28e-002	0.27632223		0.9981941	0.9900000
Styrene	AVRG		1.08499974		13.894	15.000
Vinyl Chloride	AVRG		1.10477653		6.709	15.000
1,2,3-Trichloropropane	AVRG		0.70208557		7.819	15.000
p-Isopropyltoluene	AVRG		2.70057524		11.256	15.000
1,2-Dibromo-3-Chloropropane	LINR	-6.79e-003	18.1373969		0.9996332	0.9900000
1,2-Dichloroethane-d4	2ORDR	-9.78e-003	1.33740959	-8.05e-002	0.9996886	0.9900000
Dibromofluoromethane	AVRG		0.67335658		5.250	15.000
Toluene-d8	AVRG		1.33549893		10.085	15.000
4-Bromofluorobenzene	2ORDR	6.046e-003	2.31167671	-0.1639271	0.9997602	0.9900000

FORM VI VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20101149

Instrument ID: VOA6 Calibration Date: 11/03/20 Time: 2210

Lab File ID: X110330 Init. Calib. Date(s): 11/03/20 11/03/20

Init. Calib. Times: 1201 1530

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	0.5580000	0.5345275	0.5345275	0.2	4.21	50.00	AVRG
trans-1,3-Dichloropropene	0.4920000	0.4946062	0.4946062	0.1	-0.53	50.00	AVRG
1,3-Dichlorobenzene	1.4650000	1.1775207	1.1775207	0.6	19.62	50.00	AVRG
2,2-Dichloropropane	1.0340000	0.9075748	0.9075748	0.1	12.23	50.00	AVRG
1,1-Dichloropropene	0.4660000	0.4054936	0.4054936	0.1	12.98	50.00	AVRG
Dibromomethane	0.2530000	0.2425093	0.2425093	0.1	4.15	50.00	AVRG
1,2-Dibromoethane	0.3750000	0.3507336	0.3507336	0.1	6.47	50.00	AVRG
trans-1,2-Dichloroethene	0.6230000	0.5519994	0.5519994	0.1	11.40	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3560000	0.3213368	0.3213368	0.1	9.74	50.00	AVRG
1,1,1-Trichloroethane	1.0440000	0.9391749	0.9391749	0.1	10.04	50.00	AVRG
1,1,2,2-Tetrachloroethane	47.254411	50.000000	0.7804255	0.3	5.49	50.00	LINR
1,1,2-Trichloroethane	0.3080000	0.2915996	0.2915996	0.1	5.32	50.00	AVRG
1,1-Dichloroethane	1.2020000	1.0566511	1.0566511	0.2	12.09	50.00	AVRG
1,1-Dichloroethene	0.9430000	0.8305441	0.8305441	0.1	11.92	50.00	AVRG
Trichloroethene	0.3330000	0.3076790	0.3076790	0.2	7.60	50.00	AVRG
1,2,3-Trichlorobenzene	41.219267	50.000000	0.1752993	0.01	17.56	50.00	LINR
Trichlorofluoromethane	1.8840000	1.5713846	1.5713846	0.1	16.59	50.00	AVRG
1,2,4-Trichlorobenzene	40.518399	50.000000	0.3226004	0.1	18.96	50.00	LINR
1,2,4-Trimethylbenzene	2.7970000	2.3182868	2.3182868	0.1	17.12	50.00	AVRG
Tetrachloroethene	0.2750000	0.2345046	0.2345046	0.2	14.72	50.00	AVRG
1,2-Dichlorobenzene	1.3800000	1.1731263	1.1731263	0.4	14.99	50.00	AVRG
1,2-Dichloroethane	0.5390000	0.5086120	0.5086120	0.1	5.64	50.00	AVRG
1,2-Dichloropropane	0.3700000	0.3387324	0.3387324	0.1	8.45	50.00	AVRG
1,3,5-Trimethylbenzene	2.8530000	2.3233679	2.3233679	0.1	18.56	50.00	AVRG
1,3-Dichloropropane	0.6120000	0.5776743	0.5776743	0.1	5.61	50.00	AVRG
1,4-Dichlorobenzene	1.5260000	1.2262791	1.2262791	0.4	19.64	50.00	AVRG
Toluene	1.8300000	1.4722398	1.4722398	0.4	19.55	50.00	AVRG
2-Butanone	0.2320000	0.2046478	0.2046478	0.1	11.79	50.00	AVRG
2-Chlorotoluene	2.3480000	1.8609545	1.8609545	0.1	20.74	50.00	AVRG
2-Hexanone	93.467985	100.00000	0.3149994	0.1	6.53	50.00	LINR
4-Chlorotoluene	2.9660000	2.4611532	2.4611532	0.1	17.02	50.00	AVRG
tert-Butylbenzene	37.139883	50.000000	1.6605490	0.1	25.72	50.00	LINR
4-Methyl-2-Pentanone	0.3800000	0.3593557	0.3593557	0.1	5.43	50.00	AVRG
Acetone	87.427400	100.00000	0.2432417	0.1	12.57	50.00	LINR
Benzene	1.3960000	1.2619600	1.2619600	0.5	9.60	50.00	AVRG
Bromobenzene	0.8800000	0.7523951	0.7523951	0.1	14.50	50.00	AVRG
Bromochloromethane	0.3440000	0.3251662	0.3251662	0.1	5.47	50.00	AVRG
Bromodichloromethane	0.5140000	0.4863877	0.4863877	0.2	5.37	50.00	AVRG
Bromoform	42.558853	50.000000	0.2085629	0.1	14.88	50.00	LINR
Bromomethane	0.9300000	0.6086243	0.6086243	0.1	34.56	50.00	AVRG
Carbon Disulfide	1.7530000	1.5286461	1.5286461	0.1	12.80	50.00	AVRG
Carbon Tetrachloride	0.4480000	0.3954683	0.3954683	0.1	11.72	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2010114

Instrument ID: VOA6 Calibration Date: 11/03/20 Time: 2210

Lab File ID: X110330 Init. Calib. Date(s): 11/03/20 11/03/20

Init. Calib. Times: 1201 1530

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	1.0680000	0.9020831	0.9020831	0.5	15.54	50.00	AVRG
Chloroethane	0.7880000	0.8789255	0.8789255	0.1	-11.54	50.00	AVRG
Chloroform	1.2790000	1.1499136	1.1499136	0.2	10.09	50.00	AVRG
Chloromethane	38.964931	50.000000	0.5490095	0.1	22.07	50.00	LINR
cis-1,2-Dichloroethene	0.7330000	0.6653996	0.6653996	0.1	9.22	50.00	AVRG
Dibromochloromethane	0.3700000	0.3669447	0.3669447	0.1	0.82	50.00	AVRG
Dichlorodifluoromethane	0.6470000	0.5611326	0.5611326	0.1	13.27	50.00	AVRG
Ethylbenzene	0.5420000	0.4525002	0.4525002	0.1	16.51	50.00	AVRG
Hexachlorobutadiene	35.359625	50.000000	0.1860510	0.1	29.28	50.00	LINR
Isopropylbenzene	37.801493	50.000000	1.2297535	0.1	24.40	50.00	LINR
m,p-Xylenes	0.6490000	0.5940982	0.5940982	0.1	8.46	50.00	AVRG
Methylene Chloride	0.6860000	0.5913849	0.5913849	0.1	13.79	50.00	AVRG
n-Butylbenzene	35.933851	50.000000	2.1163546	0.5	28.13	50.00	LINR
n-Propylbenzene	3.9810000	3.1568089	3.1568089	0.1	20.70	50.00	AVRG
Naphthalene	40.172641	50.000000	0.4572273	0.2	19.65	50.00	LINR
o-Xylene	0.6470000	0.5725672	0.5725672	0.3	11.50	50.00	AVRG
sec-Butylbenzene	36.156650	50.000000	2.4259092	0.1	27.69	50.00	LINR
Styrene	1.0850000	1.0394755	1.0394755	0.3	4.20	50.00	AVRG
Vinyl Chloride	1.1050000	0.9760285	0.9760285	0.1	11.67	50.00	AVRG
1,2,3-Trichloropropane	0.7020000	0.6702263	0.6702263	0.1	4.53	50.00	AVRG
p-Isopropyltoluene	2.7000000	2.2172722	2.2172722	0.1	17.88	50.00	AVRG
1,2-Dibromo-3-Chloropropane	40.662203	50.000000	4.52e-002	0.05	18.68	50.00	LINR
1,2-Dichloroethane-d4	53.192414	50.000000	0.8458272	0.1	-6.38	50.00	2RDR
Dibromofluoromethane	0.6730000	0.6564234	0.6564234	0.1	2.46	50.00	AVRG
Toluene-d8	1.3360000	1.2961457	1.2961457	0.1	2.98	50.00	AVRG
4-Bromofluorobenzene	48.886845	50.000000	0.4336774	0.1	2.23	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.: HS20101149

Lab File ID (Standard): X110308 Date Analyzed: 11/03/20

Instrument ID: VOA6 Time Analyzed: 1427

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

		IS1(CBZ) AREA #	IS1(CBZ) RT #	IS2(DFB) AREA #	IS2(DFB) RT #	IS3(DCB) AREA #	IS3(DCB) RT #
	12 HOUR STD	263420	7.67	292364	4.97	124995	9.66
	UPPER LIMIT	526840	8.17	584728	5.47	249990	10.16
	LOWER LIMIT	131710	7.17	146182	4.47	62498	9.16
	CLIENT SAMPLE NO.						
01	VLCSW-201103	260133	7.67	286594	4.97	116761	9.66
02	VBLKW-201103	217885	7.67	242423	4.97	86038	9.67
03	HS20101149-02	218629	7.67	243669	4.97	88503	9.67
04	HS20101149-01	212467	7.67	237295	4.97	83572	9.67
05	HS20101123-01	223589	7.67	246577	4.97	94097	9.66
06	HS20101123-01	217279	7.67	245407	4.97	90157	9.67
07							
08							
09							
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11							
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16							
17							
18							
19							
20							

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

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

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

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20101149

Lab File ID (Standard): X110308 Date Analyzed: 11/03/20

Instrument ID: VOA6 Time Analyzed: 1427

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

	CLIENT SAMPLE NO.	IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	155760	4.18				
	UPPER LIMIT	311520	4.68				
	LOWER LIMIT	77880	3.68				
01	VLCSW-201103	157990	4.18				
02	VBLKW-201103	141172	4.19				
03	HS20101149-02	139580	4.18				
04	HS20101149-01	137314	4.19				
05	HS20101123-01	142531	4.19				
06	HS20101123-01	136956	4.19				
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Pentafluorobenzene

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

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

FORM VIII VOA

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110301.D

Date : 03-NOV-2020 11:40

Client ID: BFB

Instrument: voa6.i

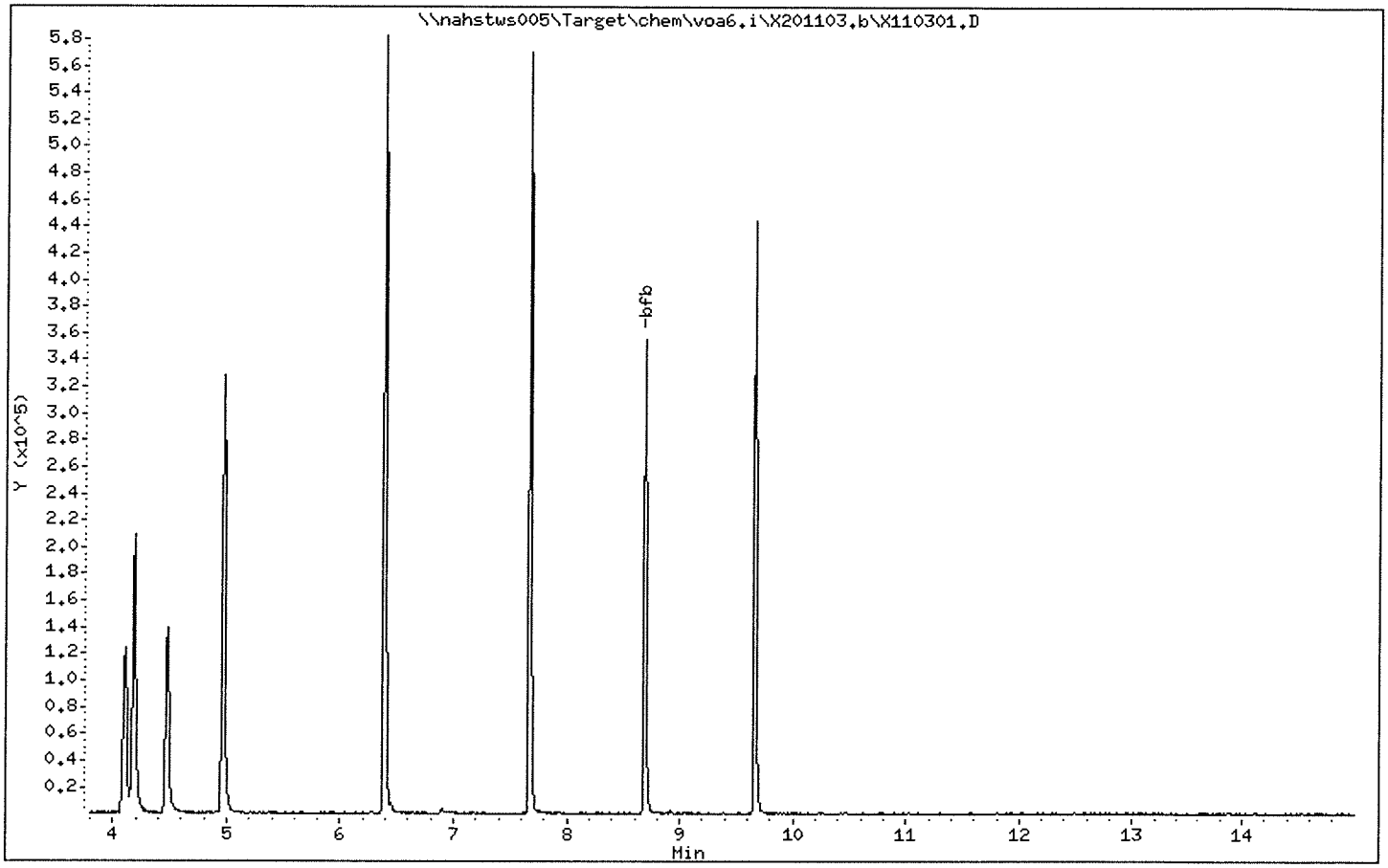
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110301.D

Date : 03-NOV-2020 11:40

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

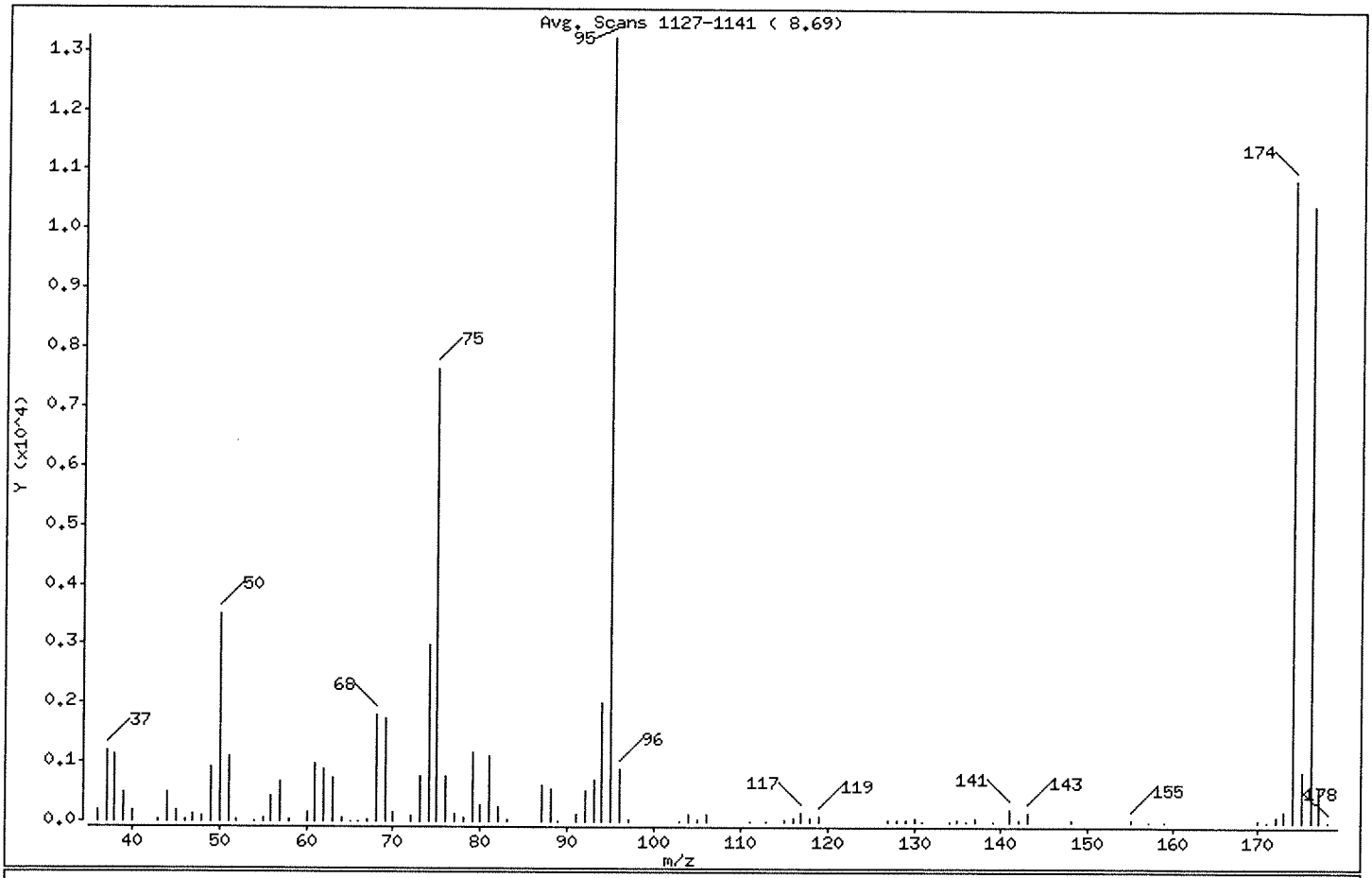
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	26.52
75	30.00 - 60.00% of mass 95	57.75
96	5.00 - 9.00% of mass 95	6.71
173	Less than 2.00% of mass 174	1.32 (1.61)
174	Greater than 50.00% of mass 95	81.97
175	5.00 - 9.00% of mass 174	6.45 (7.87)
176	95.00 - 101.00% of mass 174	78.92 (96.28)
177	5.00 - 9.00% of mass 176	4.53 (5.75)

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110301.D

Date : 03-NOV-2020 11:40

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X110301.D
Spectrum: Avg. Scans 1127-1141 (8.69)
Location of Maximum: 95.00
Number of points: 90

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	185	63.00	745	91.00	120	134.00	4
37.00	1197	64.00	71	92.00	528	135.00	31
38.00	1127	65.00	14	93.00	713	136.00	5
39.00	487	66.00	6	94.00	2013	137.00	53
40.00	173	67.00	42	95.00	13233	139.00	4
43.00	32	68.00	1785	96.00	888	141.00	210
44.00	480	69.00	1734	97.00	28	142.00	28
45.00	181	70.00	151	103.00	9	143.00	160
46.00	40	72.00	93	104.00	117	148.00	27
47.00	125	73.00	763	105.00	30	155.00	41
48.00	105	74.00	2992	106.00	114	157.00	15
49.00	906	75.00	7642	111.00	4	159.00	6
50.00	3510	76.00	747	113.00	10	170.00	36
51.00	1099	77.00	116	115.00	20	171.00	15
52.00	44	78.00	67	116.00	55	172.00	79
54.00	8	79.00	1145	117.00	138	173.00	175
55.00	76	80.00	279	118.00	52	174.00	10847
56.00	436	81.00	1110	119.00	100	175.00	854
57.00	659	82.00	238	127.00	17	176.00	10443
58.00	31	83.00	26	128.00	37	177.00	600
60.00	166	87.00	603	129.00	38	178.00	14
61.00	965	88.00	560	130.00	60		
62.00	880	89.00	6	131.00	3		

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110302.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 03-NOV-2020 12:01
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:10 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:27 Cal File: X110308.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	149848	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	278125	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	261293	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	109498	50.0000	
$ 30 Dibromofluoromethane	113	4.110	4.110	(0.981)	841	0.25000	0.41(aM)
$ 35 1,2-Dichloroethane-d4	65	4.497	4.497	(1.074)	928	0.25000	(Ta)
$ 48 Toluene-d8	98	6.403	6.403	(0.835)	2652	0.25000	0.37(Ta)
$ 69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	1826	0.25000	1.10(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	519	0.25000	0.27(aM)
31 1,1,1-Trichloroethane	97	4.103	4.103	(0.979)	622	0.25000	0.19(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	547	0.25000	(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	405	0.25000	0.25(aM)
22 1,1-Dichloroethane	63	2.943	2.943	(0.703)	1138	0.25000	0.31(aM)
11 1,1-Dichloroethene	96	1.911	1.911	(0.456)	1028	0.25000	0.36(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	938	0.25000	0.36(a)
93 1,2,3-Trichlorobenzene	180	11.753	11.753	(1.216)	95	0.25000	1.96(aM)
71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	435	0.25000	0.28(aM)
90 1,2,4-Trichlorobenzene	180	11.359	11.359	(1.176)	228	0.25000	2.01(aM)
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	1643	0.25000	0.26(a)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	370	0.25000	0.18(aM)
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	699	0.25000	0.23(a)
33 1,2-Dichloroethane	62	4.576	4.576	(0.921)	567	0.25000	0.18(aM)

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110302.D Page 2
Report Date: 07-Nov-2020 12:10

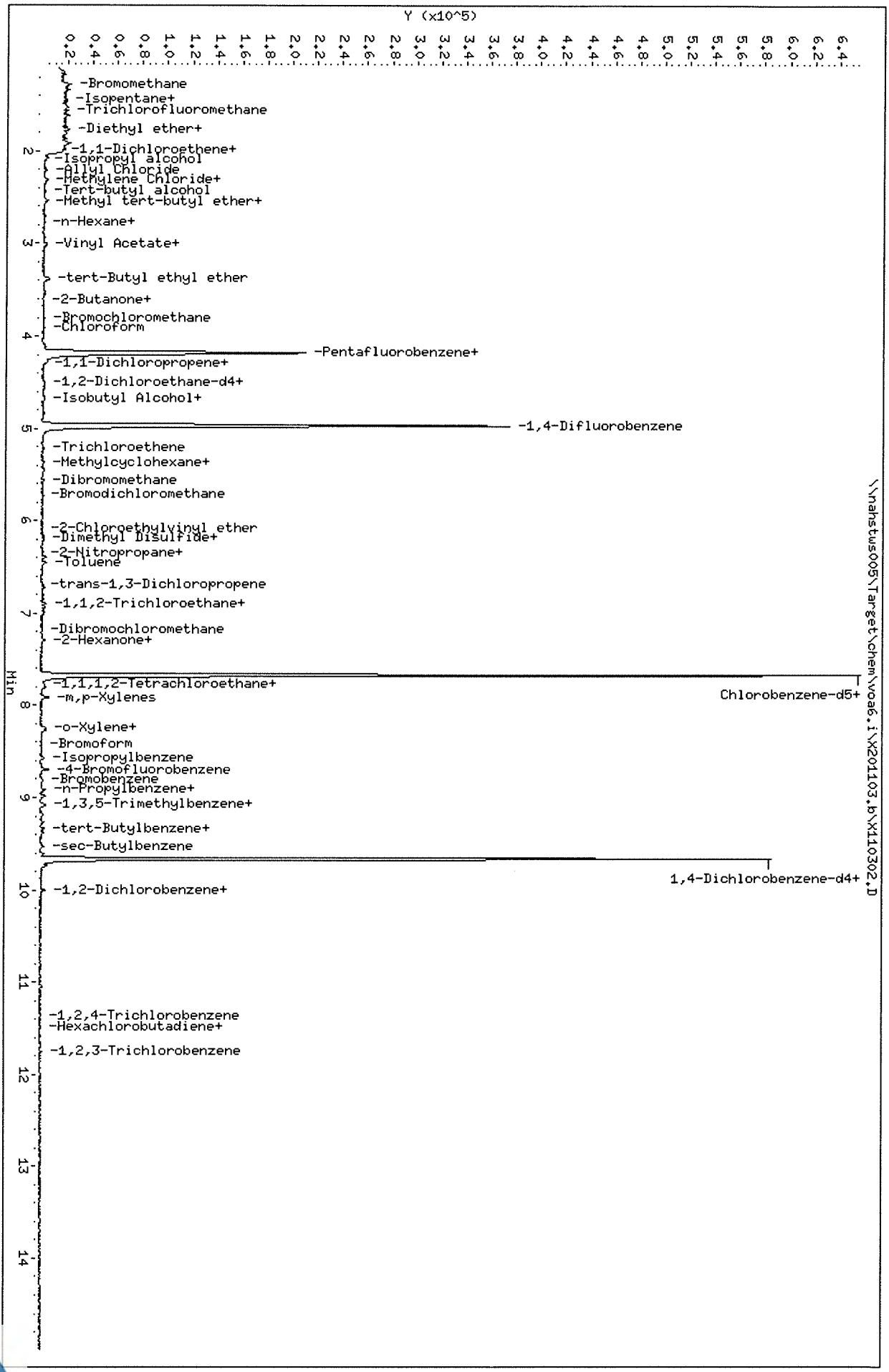
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	623	0.25000	0.30 (aM)
75 1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	1416	0.25000	0.22 (a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	752	0.25000	0.23 (aM)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	957	0.25000	0.29 (aM)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	882	0.25000	0.26 (a)
26 2,2-Dichloropropane	77	3.523	3.523	(0.841)	869	0.25000	0.28 (aM)
24 2-Butanone	43	3.616	3.616	(0.863)	323	0.50000	0.46 (aM)
76 2-Chlorotoluene	91	8.981	8.981	(0.930)	1752	0.25000	0.34 (a)
52 2-Hexanone	43	7.234	7.234	(0.943)	495	0.50000	3.97 (TaM)
77 4-Chlorotoluene	91	9.082	9.082	(0.940)	1793	0.25000	0.27 (a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	1464	0.25000	0.24 (aM)
45 4-Methyl-2-Pentanone	43	6.345	6.345	(0.827)	1232	0.50000	0.62 (aM)
10 Acetone	43	1.983	1.983	(0.473)	3056	0.50000	(aM)
37 Benzene	78	4.519	4.519	(0.909)	2148	0.25000	0.27 (a)
74 Bromobenzene	156	8.824	8.824	(0.913)	587	0.25000	0.30 (aM)
29 Bromochloromethane	128	3.810	3.810	(0.909)	172	0.25000	0.16 (aM)
39 Bromodichloromethane	83	5.722	5.722	(1.151)	789	0.25000	0.27 (aM)
66 Bromoform	173	8.415	8.415	(1.097)	175	0.25000	3.23 (aM)
6 Bromomethane	94	1.338	1.338	(0.320)	1031	0.25000	0.36 (aM)
19 Carbon Disulfide	76	2.069	2.069	(0.494)	3196	0.50000	0.60 (aM)
34 Carbon Tetrachloride	117	4.261	4.261	(0.857)	613	0.25000	0.24 (aM)
59 Chlorobenzene	112	7.699	7.699	(1.004)	1728	0.25000	0.30 (a)
7 Chloroethane	64	1.403	1.403	(0.335)	749	0.25000	0.31 (aMH)
28 Chloroform	83	3.917	3.917	(0.935)	1211	0.25000	0.31 (a)
3 Chloromethane	50	1.073	1.073	(0.256)	777	0.25000	1.23 (aM)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.841)	519	0.25000	0.23 (aM)
46 cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	1015	0.25000	0.32 (aM)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	431	0.25000	0.22 (aM)
44 Dibromomethane	93	5.572	5.572	(1.121)	413	0.25000	0.29 (aM)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	457	0.25000	0.23 (aM)
61 Ethylbenzene	106	7.807	7.807	(1.018)	557	0.25000	0.19 (aM)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	52	0.25000	2.41 (aM)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	1922	0.25000	2.82 (aM)
62 m,p-Xylenes	106	7.914	7.914	(1.032)	2023	0.50000	0.59 (a)
17 Methylene Chloride	84	2.313	2.313	(0.552)	711	0.25000	0.34 (aM)
87 n-Butylbenzene	91	9.998	9.998	(1.035)	1325	0.25000	3.78 (aM)
73 n-Propylbenzene	91	8.917	8.917	(0.923)	2084	0.25000	0.23 (a)
92 Naphthalene	128	11.574	11.574	(1.198)	138	0.25000	2.24 (aM)
63 o-Xylene	106	8.251	8.251	(1.076)	936	0.25000	0.27 (a)
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	1554	0.25000	2.83 (aM)
64 Styrene	104	8.272	8.272	(1.078)	1368	0.25000	0.24 (aM)
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	1532	0.25000	2.78 (Ta)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	461	0.25000	0.32 (aM)
50 Toluene	91	6.460	6.460	(0.842)	1816	0.25000	0.18 (aM)
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.603)	541	0.25000	0.28 (aM)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	622	0.25000	0.22 (aM)
38 Trichloroethene	130	5.214	5.214	(1.049)	548	0.25000	0.29 (aM)
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	1444	0.25000	0.25 (a)
5 Vinyl Chloride	62	1.145	1.145	(0.273)	1079	0.25000	0.32 (aMH)

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\X201103.b\X110302.D
Date : 03-NOV-2020 12:01
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;
Purge Volume: 5.0
Column phase: DB624

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

\\nahstws005\Target\chem\voa6.i\X201103.b\X110302.D

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110303.D Page 1
Report Date: 07-Nov-2020 12:10

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110303.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 03-NOV-2020 12:43
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:10 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 12:01 Cal File: X110302.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	148094	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	267010	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	253498	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	108599	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	979	0.50000	0.49(a)
$	35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.072)	1490	0.50000	0.18(Ta)
$	48 Toluene-d8	98	6.388	6.388	(0.833)	4048	0.50000	0.59(Ta)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	1396	0.50000	0.93(aM)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1050	0.50000	0.58(aM)
	31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	1757	0.50000	0.56(aM)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1417	0.50000	0.21(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1003	0.50000	0.64(aM)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	2147	0.50000	0.60(aM)
	11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	1690	0.50000	0.60(aM)
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	1568	0.50000	0.62(aM)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	370	0.50000	2.53(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	847	0.50000	0.55(aMH)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	448	0.50000	2.25(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	3552	0.50000	0.58(aM)
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	1121	0.50000	0.58(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	1698	0.50000	0.56(aM)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	1777	0.50000	0.61(aM)

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110303.D Page 2
Report Date: 07-Nov-2020 12:10

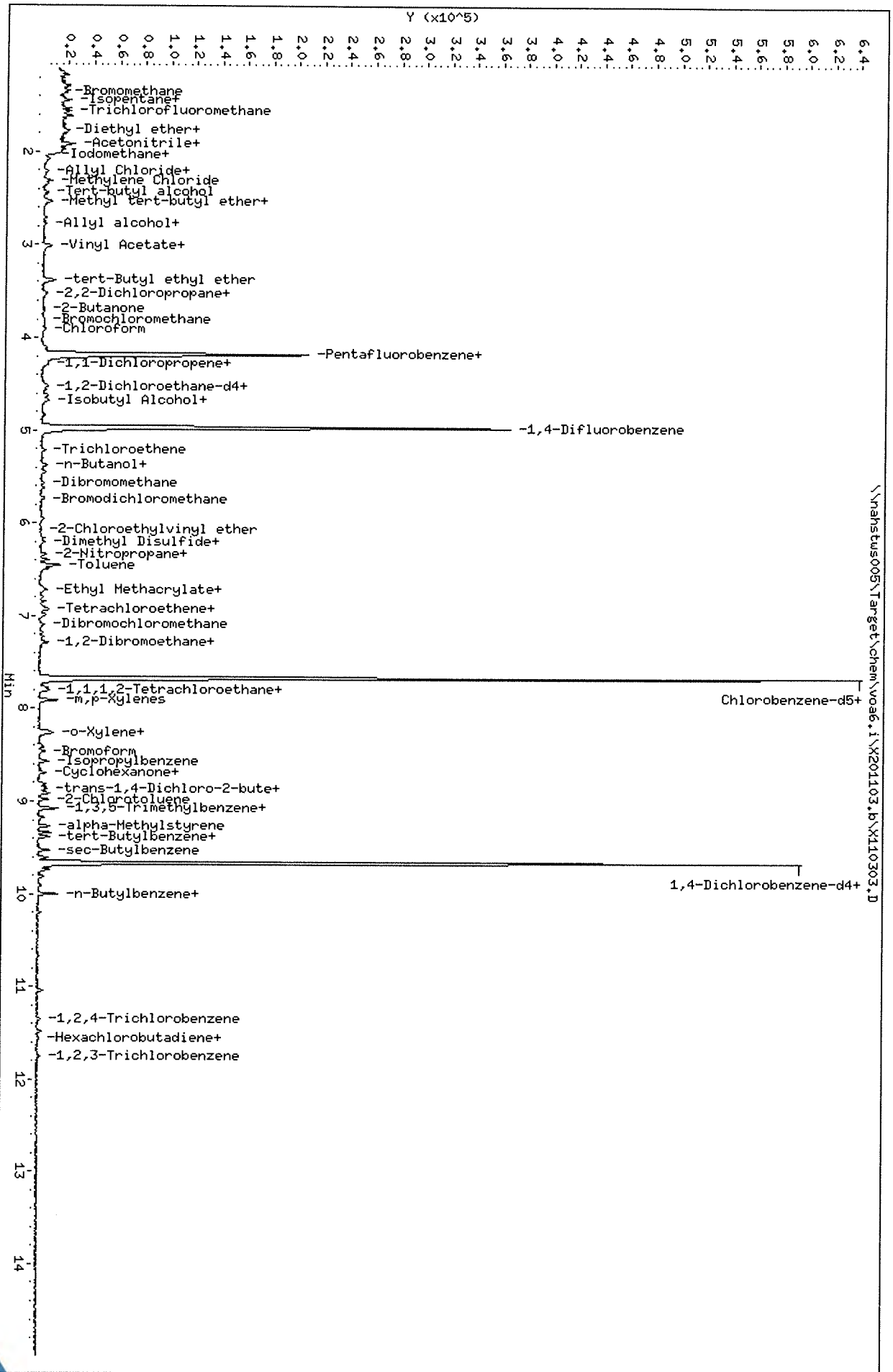
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	1279	0.50000	0.64 (aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	3598	0.50000	0.58 (a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	2039	0.50000	0.64 (aM)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	1856	0.50000	0.59 (aM)
84	1,4-Dichlorobenzene	146	9.691	9.691	(1.003)	1819	0.50000	0.54 (aM)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	1831	0.50000	0.59 (aM)
24	2-Butanone	43	3.609	3.609	(0.862)	704	1.00000	1.02 (aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.930)	3257	0.50000	0.63 (aM)
52	2-Hexanone	43	7.219	7.219	(0.941)	2217	1.00000	4.95 (aM)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	4080	0.50000	0.63 (aM)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2819	0.50000	0.48 (aM)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	2407	1.00000	1.24 (aM)
10	Acetone	43	1.983	1.983	(0.473)	3564	1.00000	(aM)
37	Benzene	78	4.519	4.519	(0.909)	4782	0.50000	0.64 (aM)
74	Bromobenzene	156	8.810	8.810	(0.912)	1160	0.50000	0.60 (aM)
29	Bromochloromethane	128	3.810	3.810	(0.909)	392	0.50000	0.38 (aM)
39	Bromodichloromethane	83	5.744	5.744	(1.156)	1742	0.50000	0.63 (aM)
66	Bromoform	173	8.416	8.416	(1.097)	543	0.50000	3.51 (aM)
6	Bromomethane	94	1.346	1.346	(0.321)	1625	0.50000	0.58 (aM)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	5407	1.00000	1.04 (a)
34	Carbon Tetrachloride	117	4.283	4.283	(0.862)	1308	0.50000	0.54 (aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	3020	0.50000	0.55 (a)
7	Chloroethane	64	1.403	1.403	(0.335)	1257	0.50000	0.53 (aM)
28	Chloroform	83	3.917	3.917	(0.935)	1987	0.50000	0.52 (a)
3	Chloromethane	50	1.081	1.081	(0.258)	1628	0.50000	1.64 (aM)
27	cis-1,2-Dichloroethene	96	3.523	3.523	(0.841)	1332	0.50000	0.61 (aM)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1481	0.50000	0.49 (aM)
55	Dibromochloromethane	129	7.184	7.184	(0.937)	978	0.50000	0.52 (a)
44	Dibromomethane	93	5.572	5.572	(1.121)	625	0.50000	0.46 (aM)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	985	0.50000	0.51 (aM)
61	Ethylbenzene	106	7.814	7.814	(1.019)	1584	0.50000	0.57 (aH)
91	Hexachlorobutadiene	225	11.474	11.474	(1.188)	348	0.50000	2.89 (aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	4684	0.50000	3.14 (a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	3648	1.00000	1.10 (a)
17	Methylene Chloride	84	2.306	2.306	(0.550)	1077	0.50000	0.52 (aM)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	3247	0.50000	4.06 (a)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	5436	0.50000	0.62 (a)
92	Naphthalene	128	11.553	11.553	(1.196)	632	0.50000	2.62 (aM)
63	o-Xylene	106	8.244	8.244	(1.075)	1686	0.50000	0.51 (a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	4540	0.50000	3.21 (aM)
64	Styrene	104	8.265	8.265	(1.078)	2898	0.50000	0.52 (aM)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	3197	0.50000	3.10 (aM)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	841	0.50000	0.60 (a)
50	Toluene	91	6.453	6.453	(0.841)	5824	0.50000	0.62 (aM)
20	trans-1,2-Dichloroethene	96	2.549	2.549	(0.609)	998	0.50000	0.54 (aM)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	1348	0.50000	0.51 (aM)
38	Trichloroethene	130	5.207	5.207	(1.048)	1109	0.50000	0.62 (aM)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	3308	0.50000	0.59 (a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	1800	0.50000	0.55 (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.

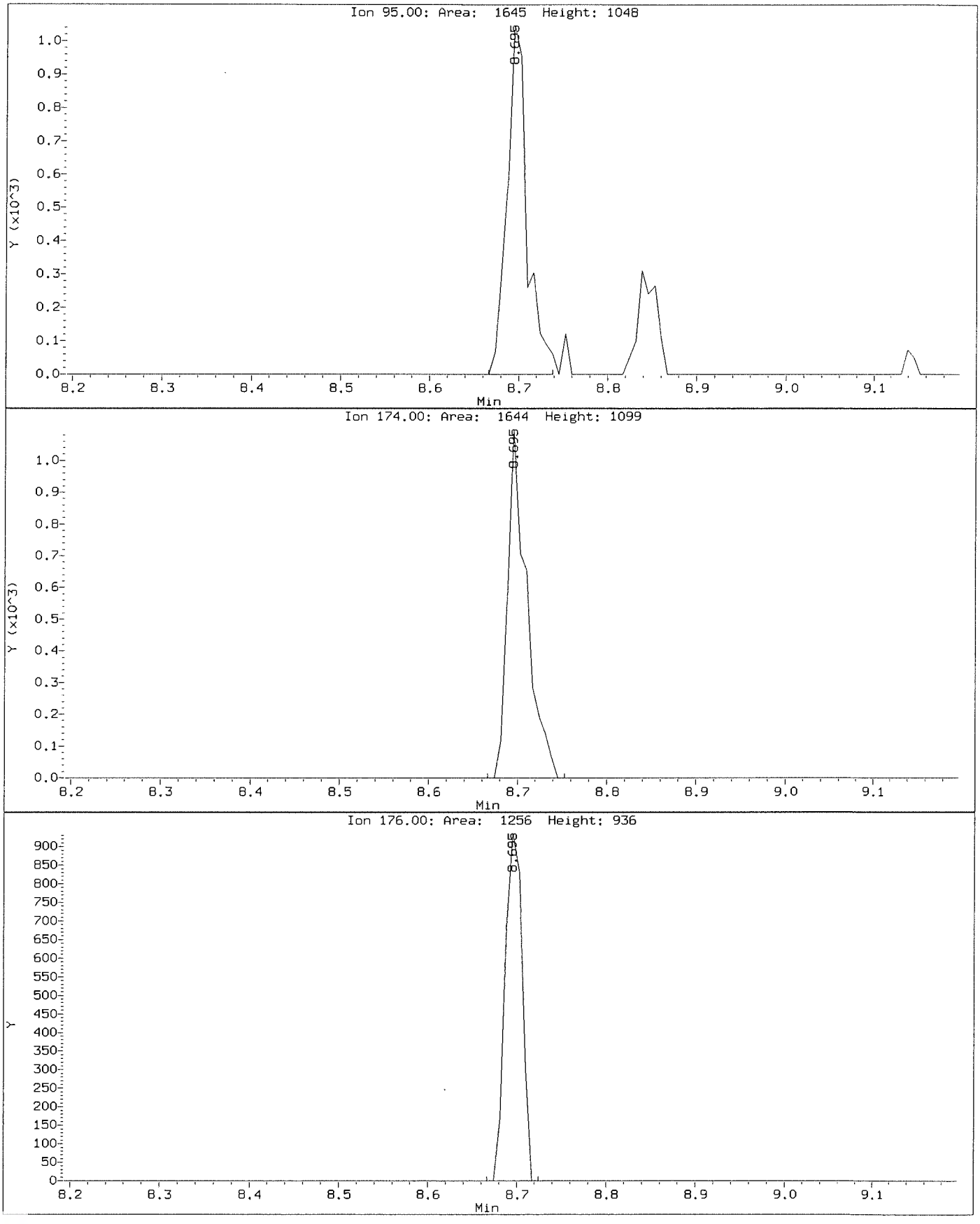


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Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

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

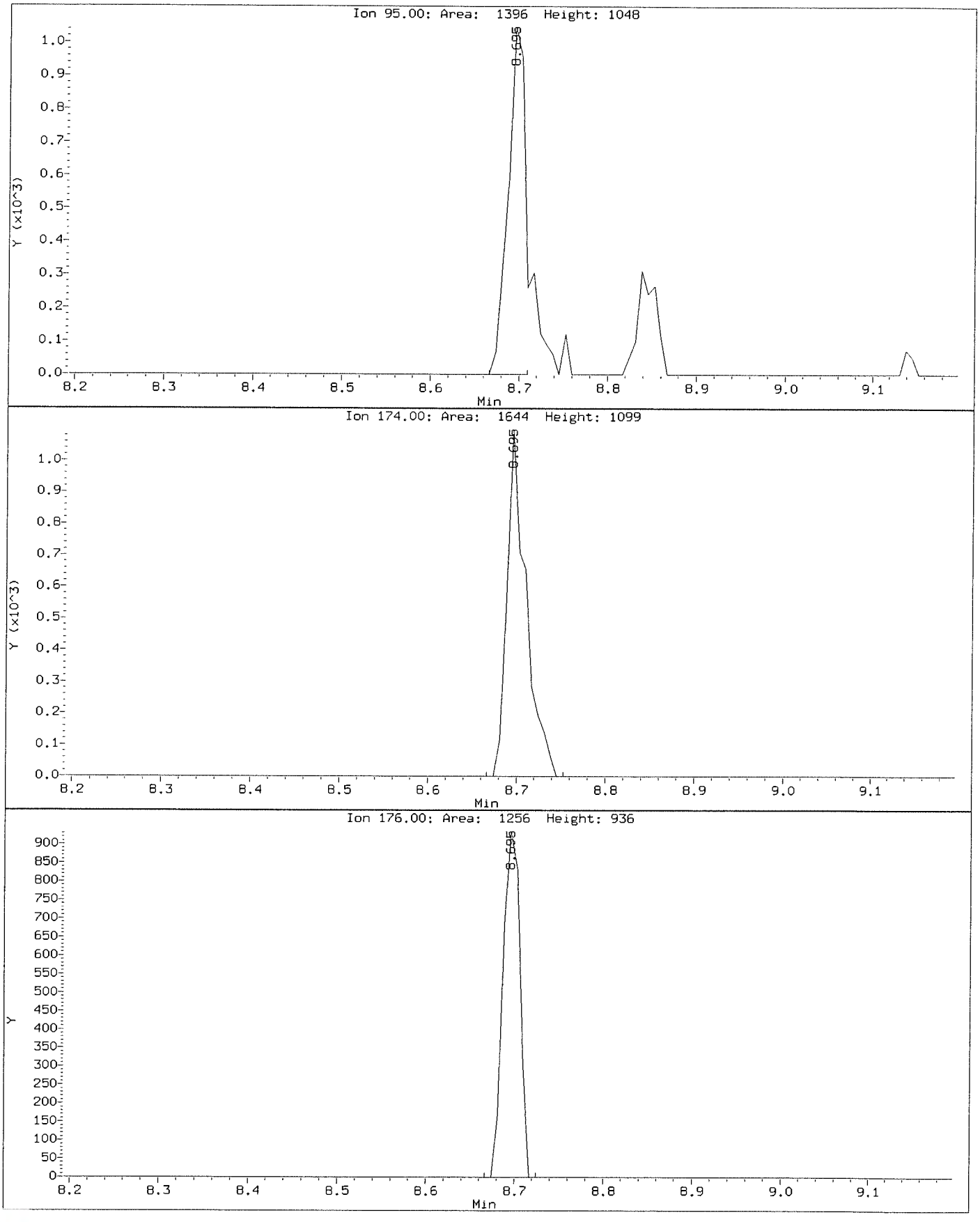
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



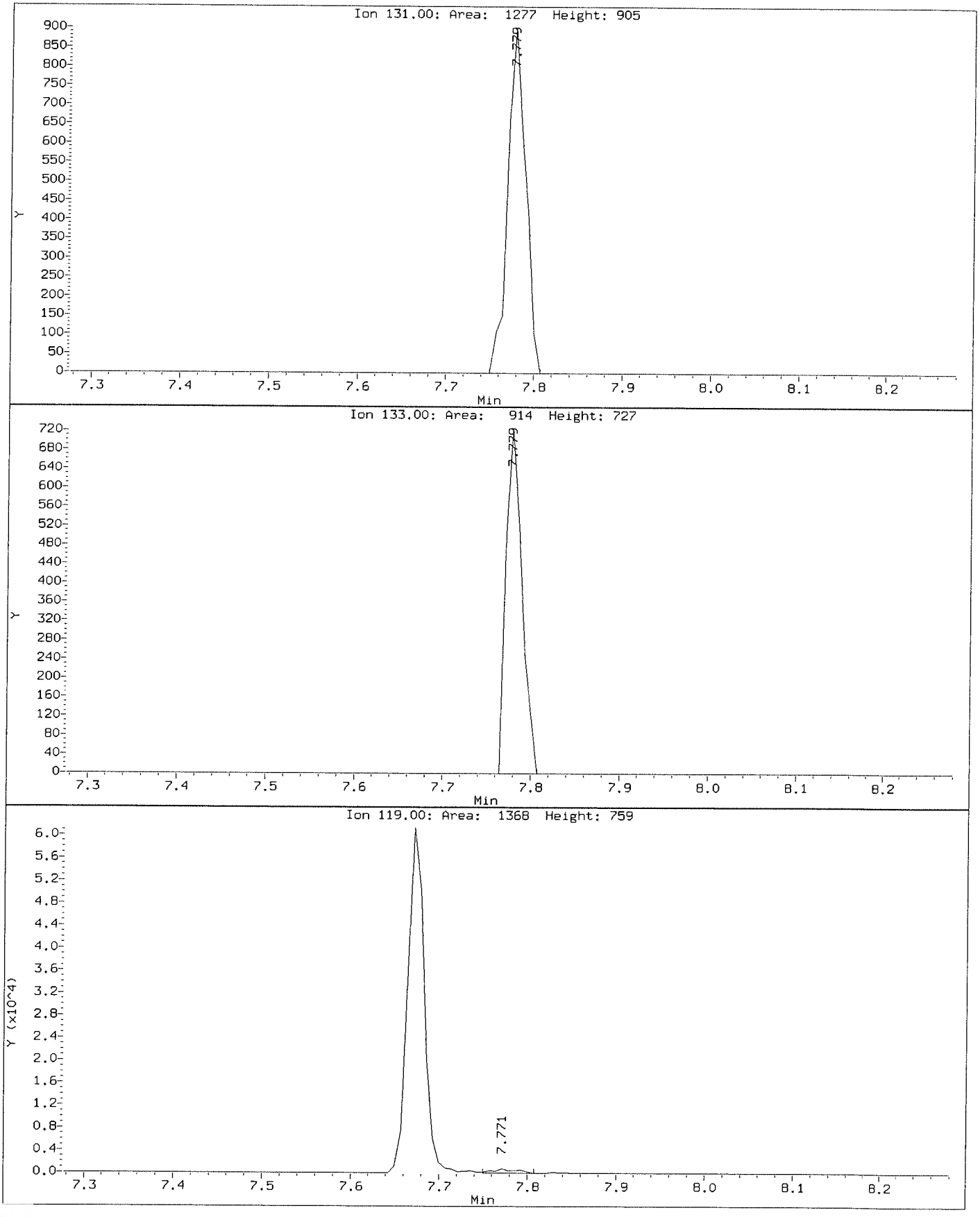
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Instrument: voa6.i
Client Sample ID: VSTD000.5

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



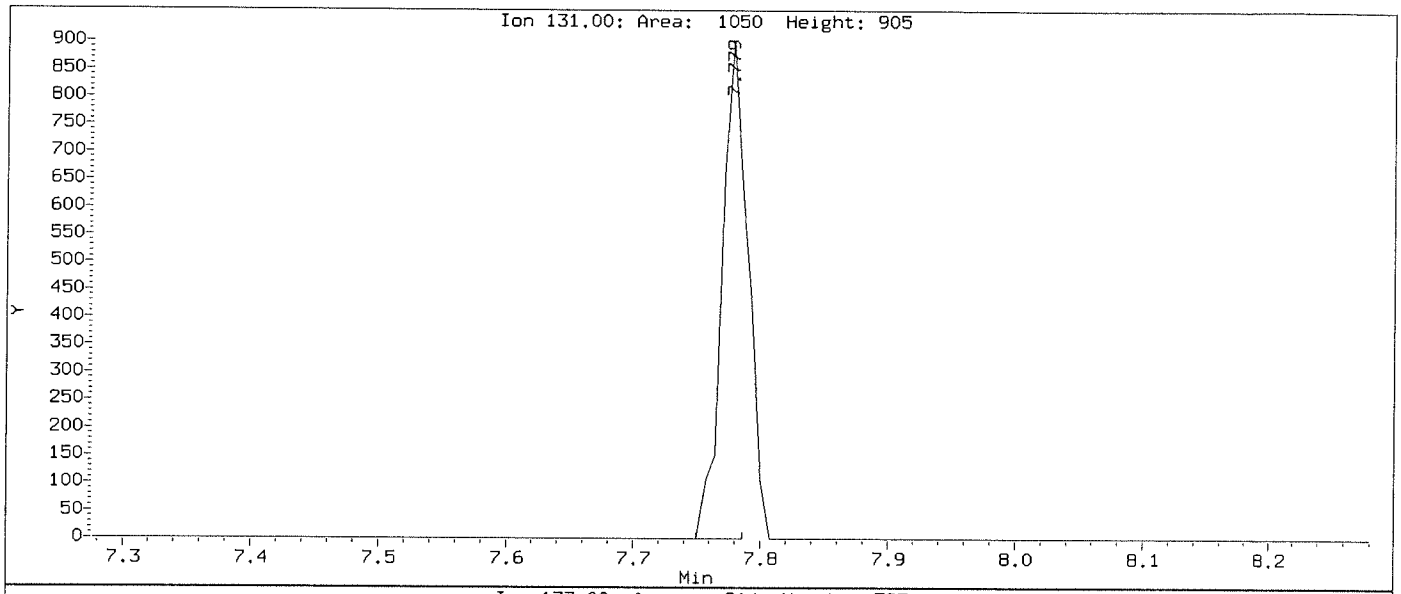
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Instrument: voa6.i
Client Sample ID: VSTD000.5

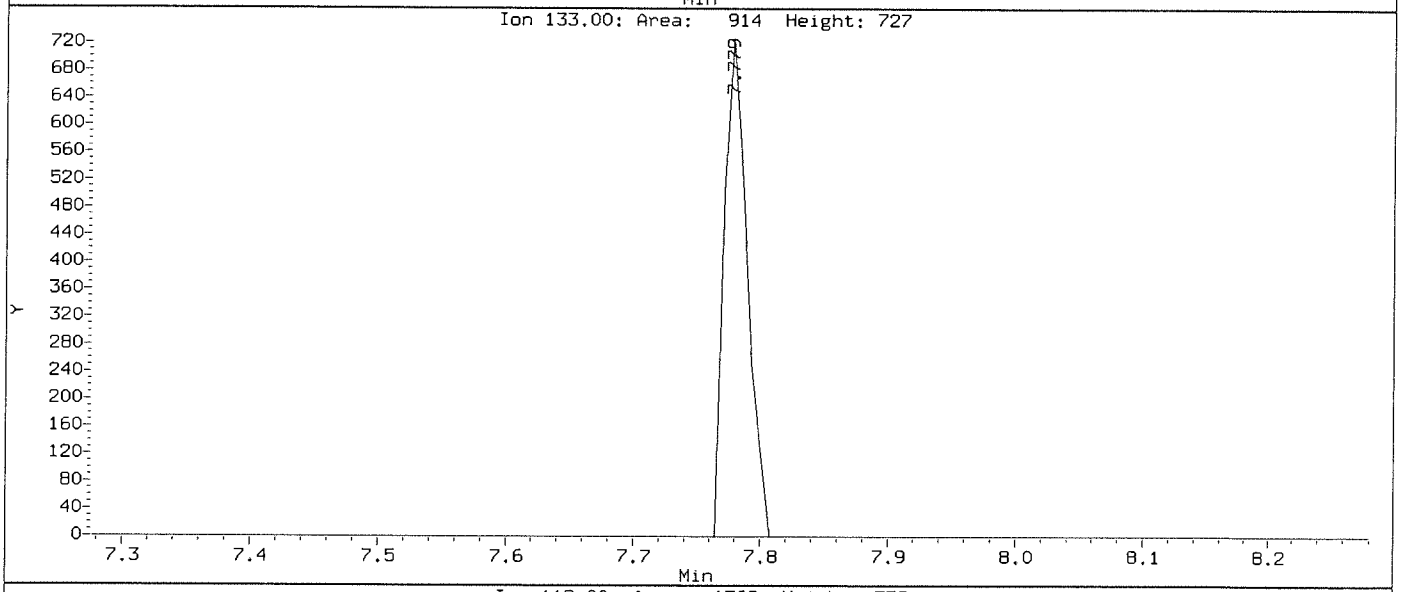
Compound: 1,1,1,2-Tetrachloroethane
CAS Number: 630-20-6

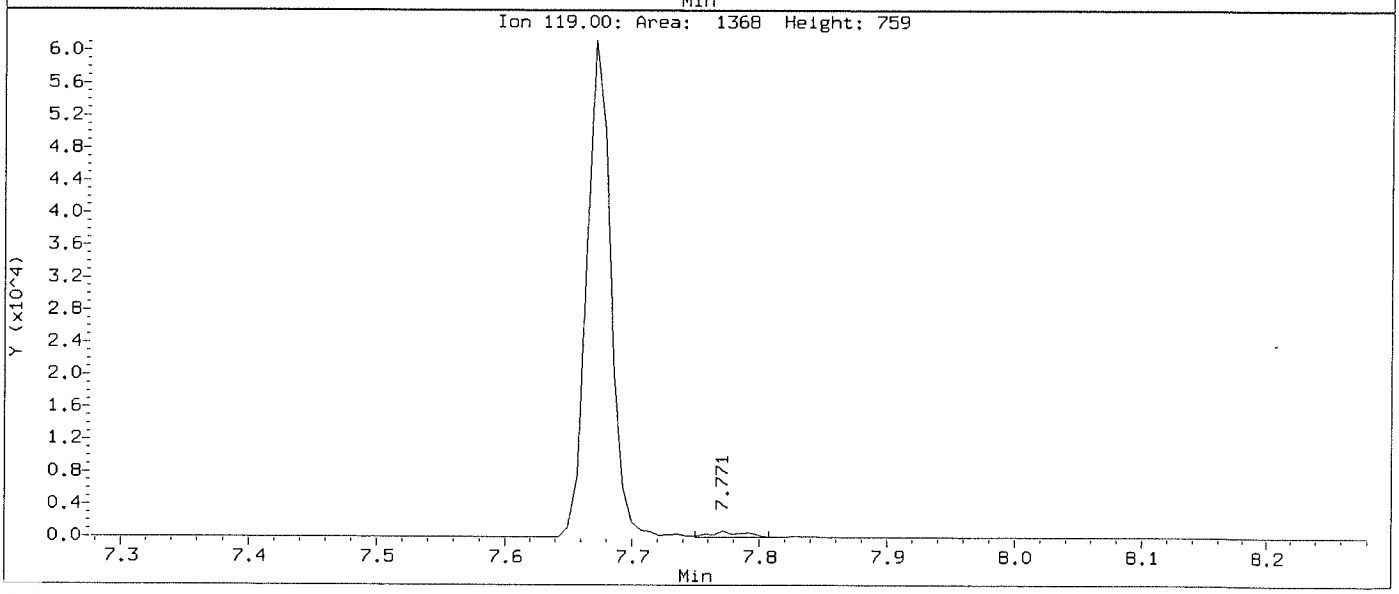


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,1,2-Tetrachloroethane
CAS Number: 630-20-6

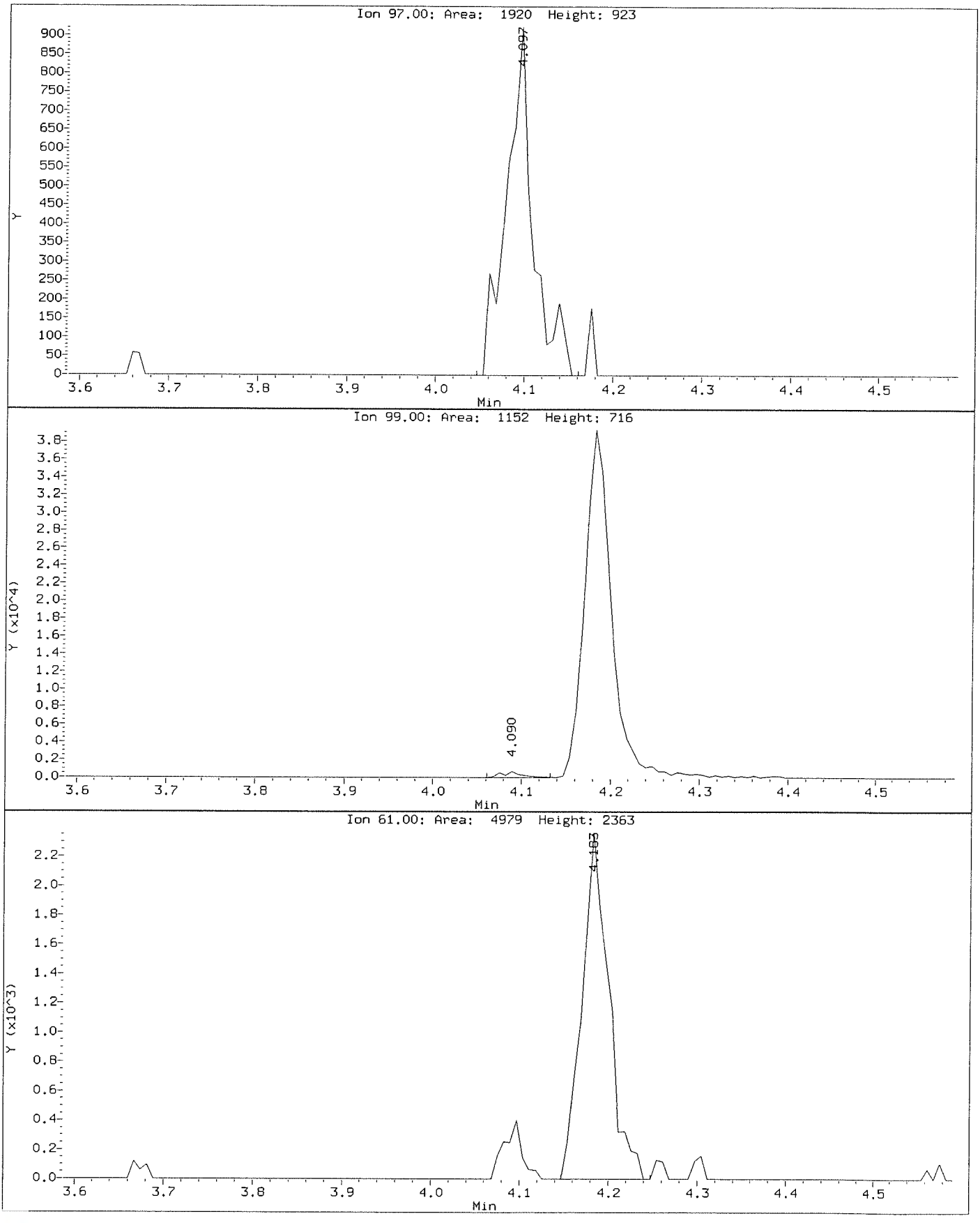






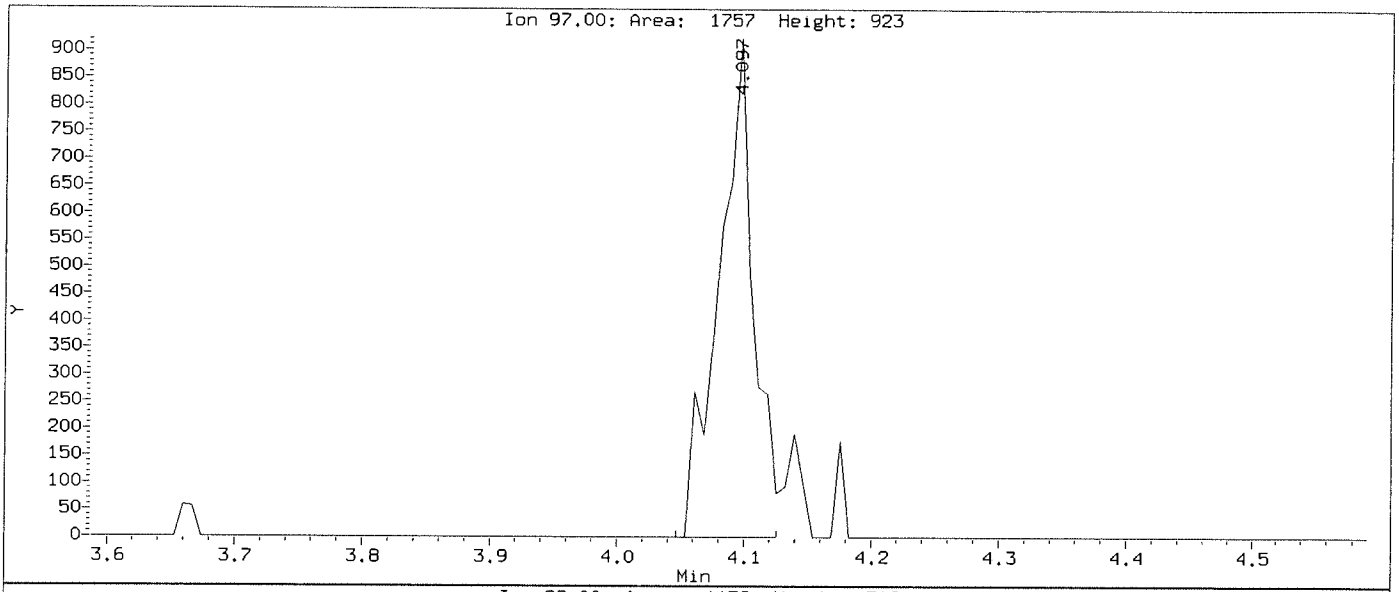
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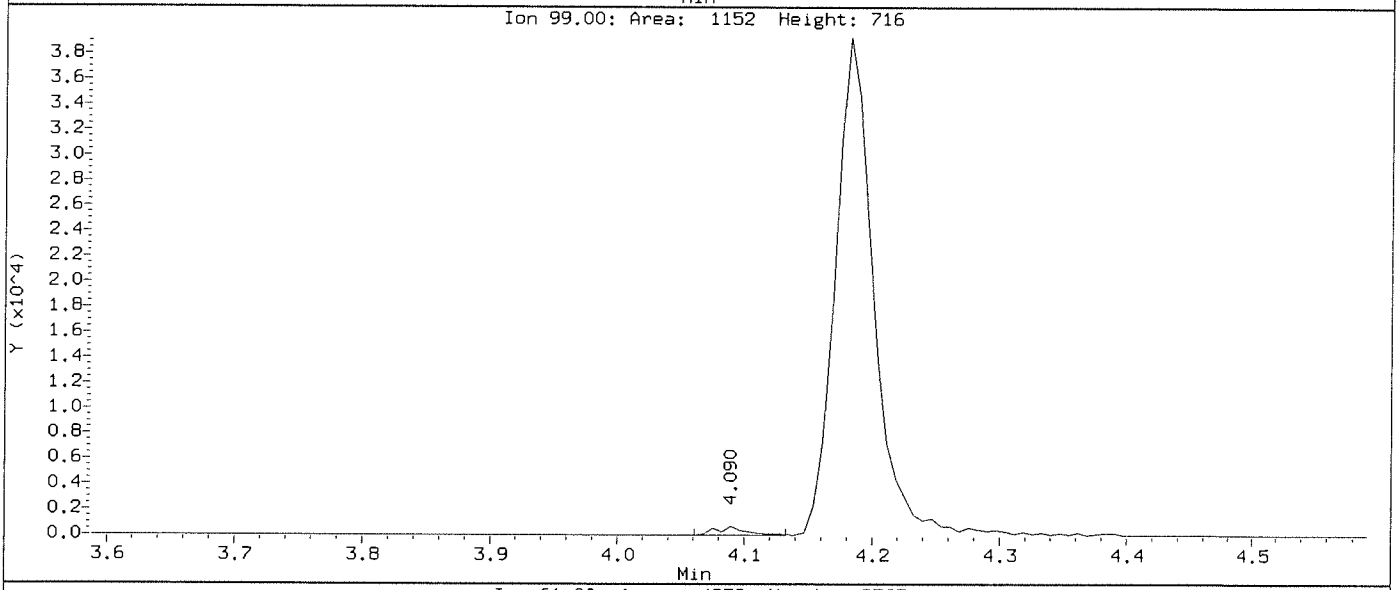
Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6

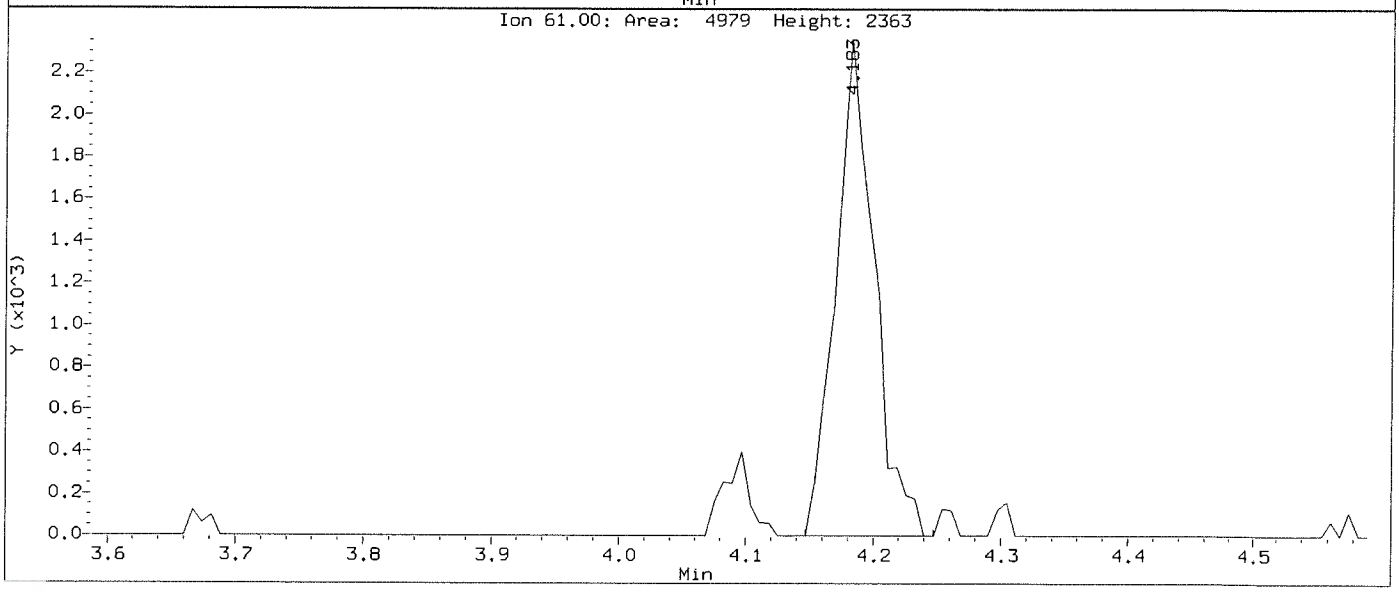


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6

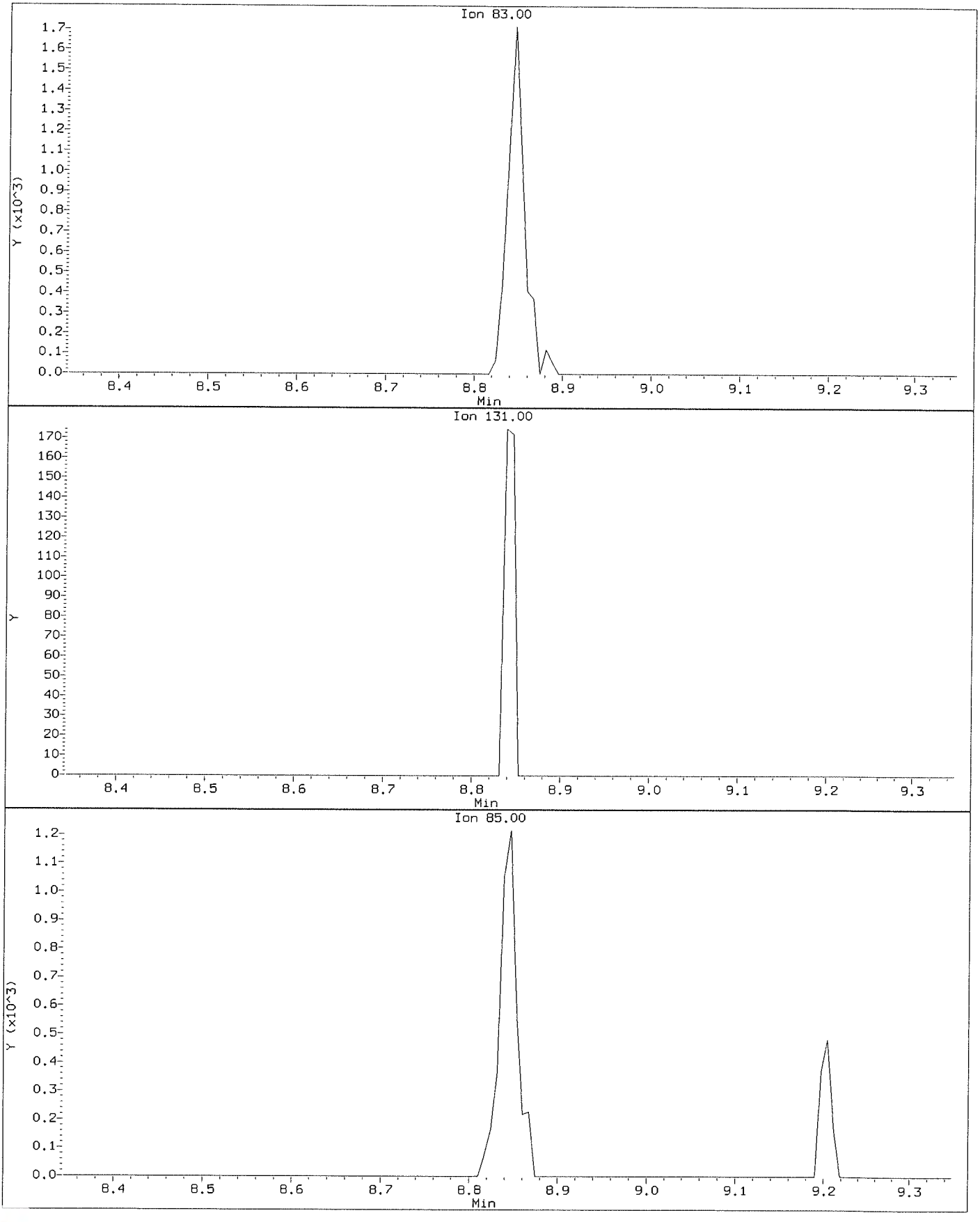






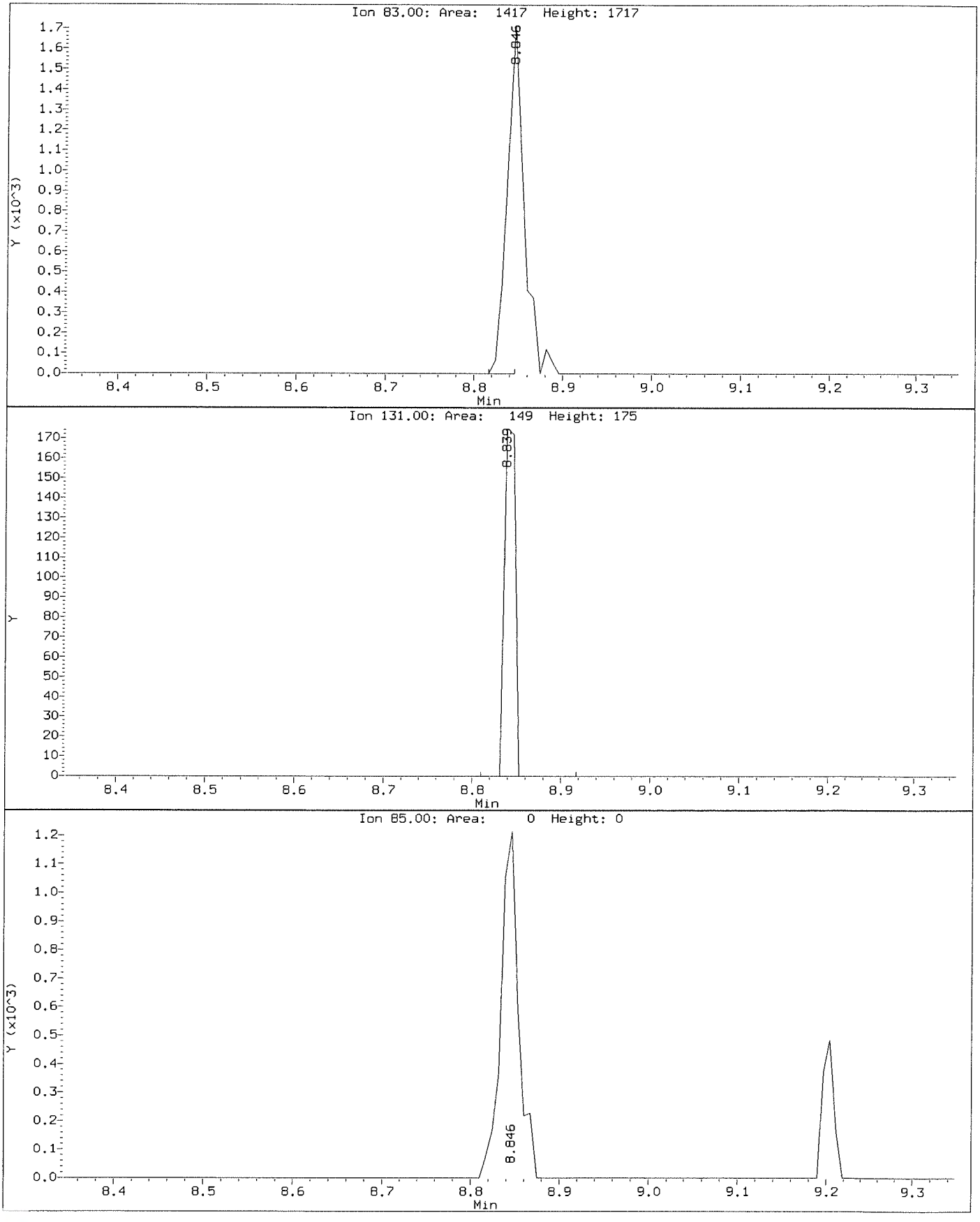
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



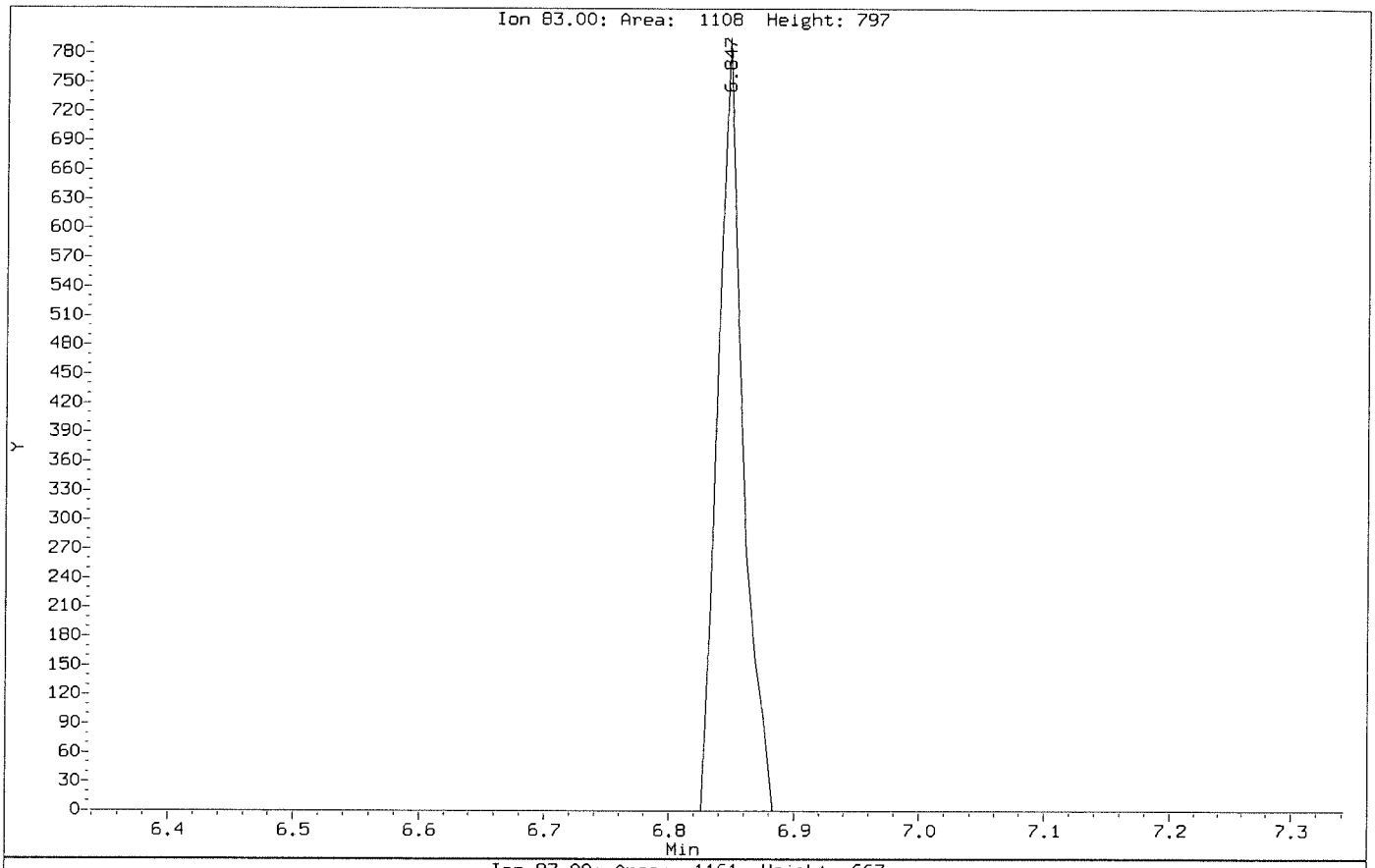
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

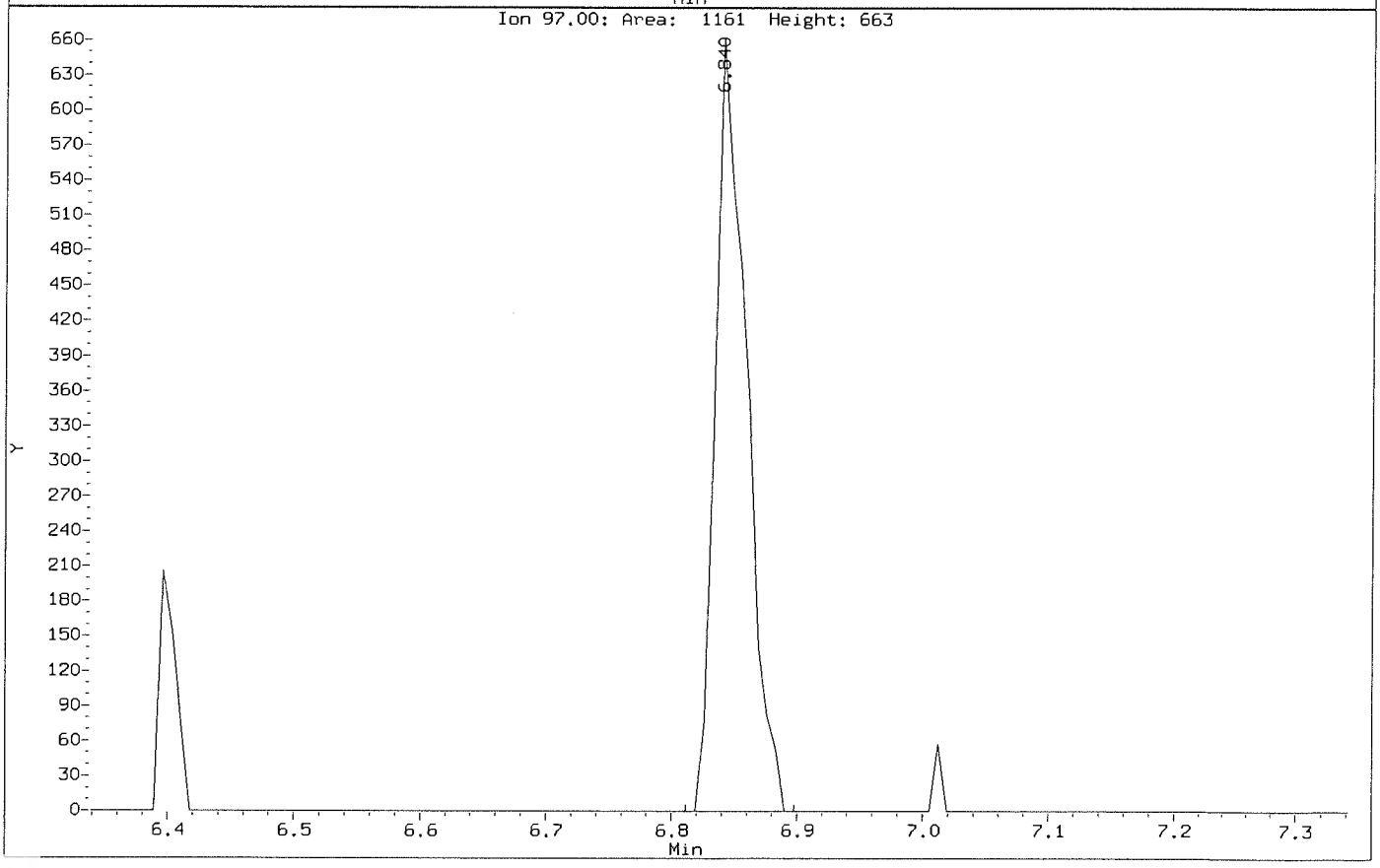
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110303.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

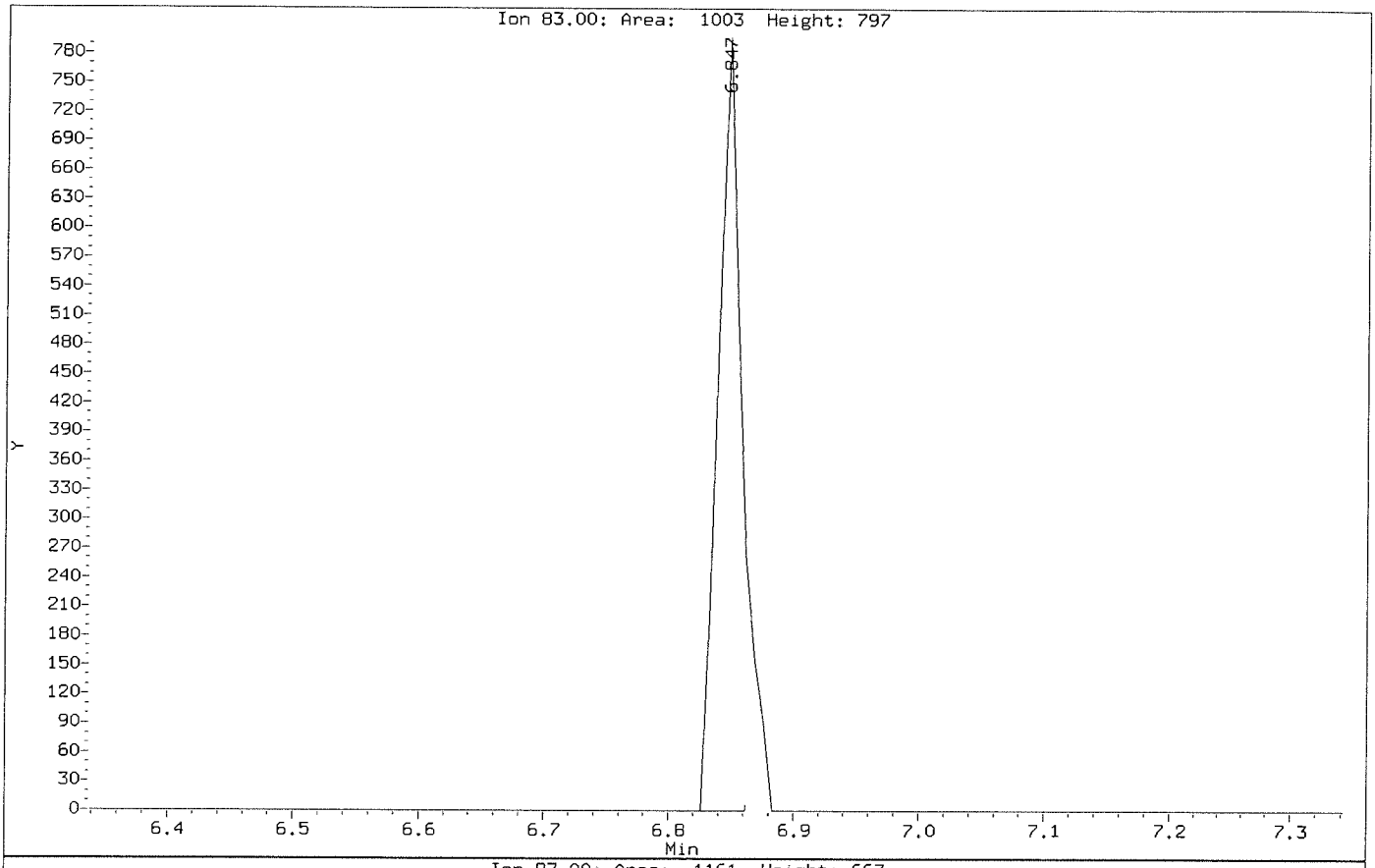
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5

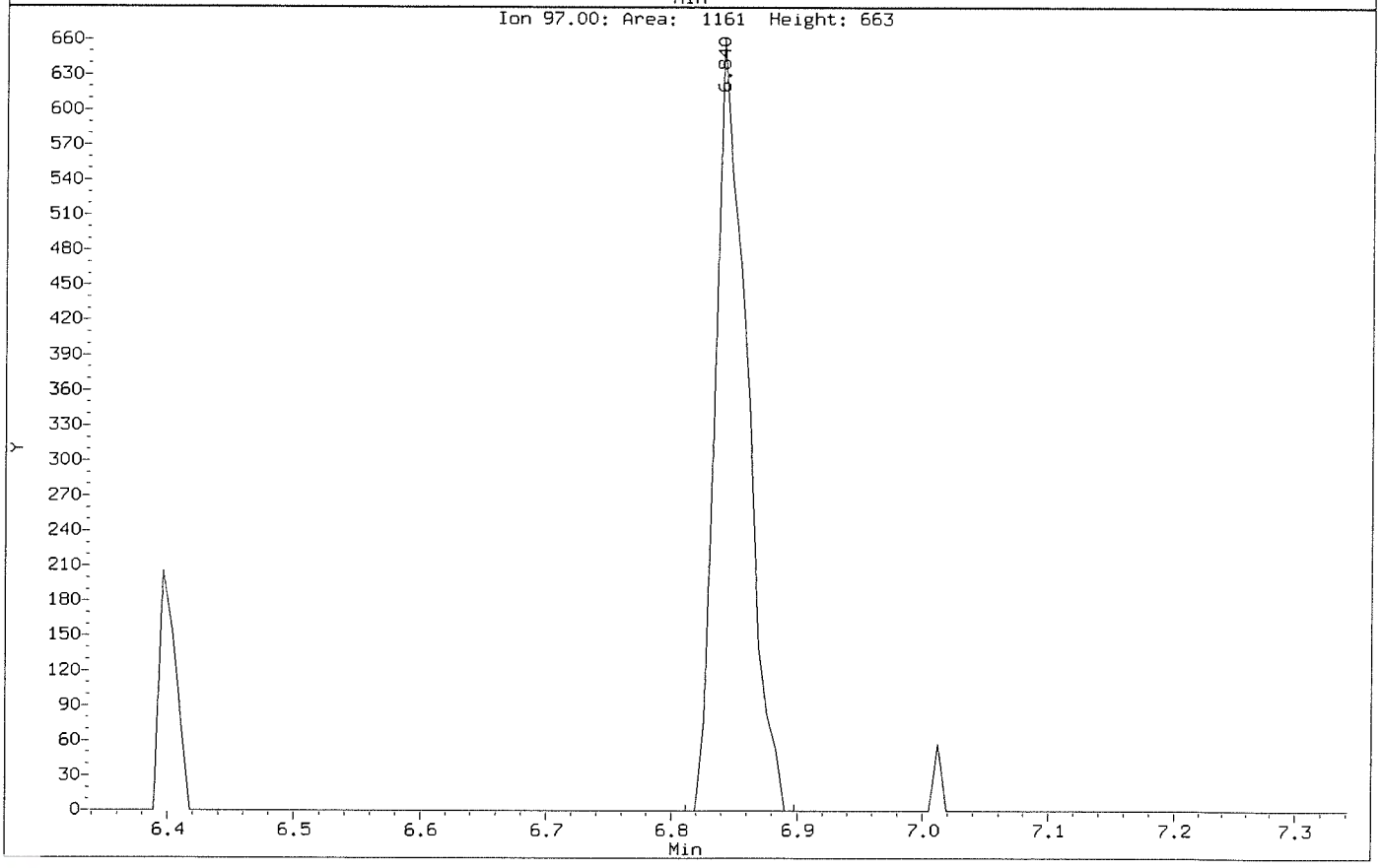




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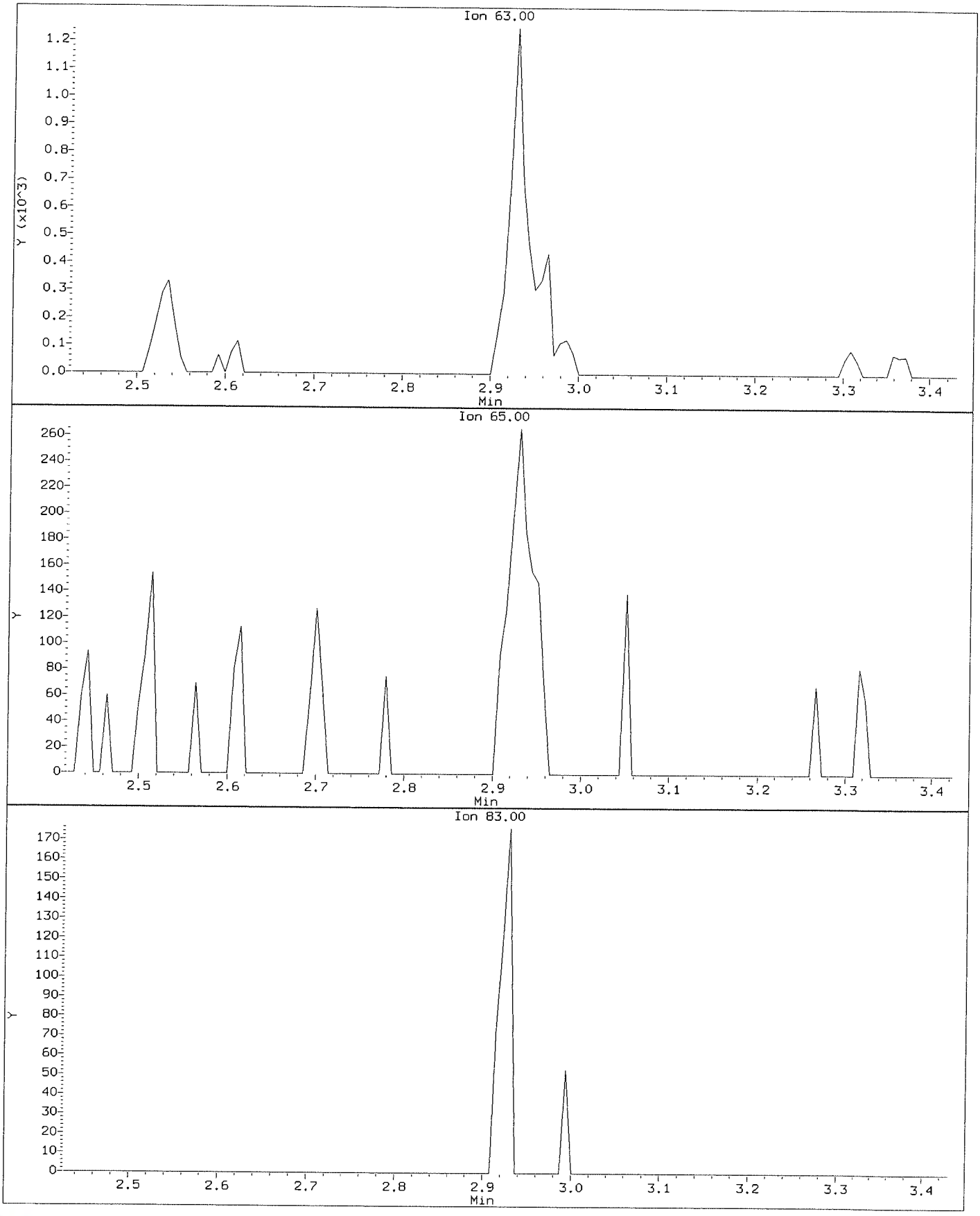
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5





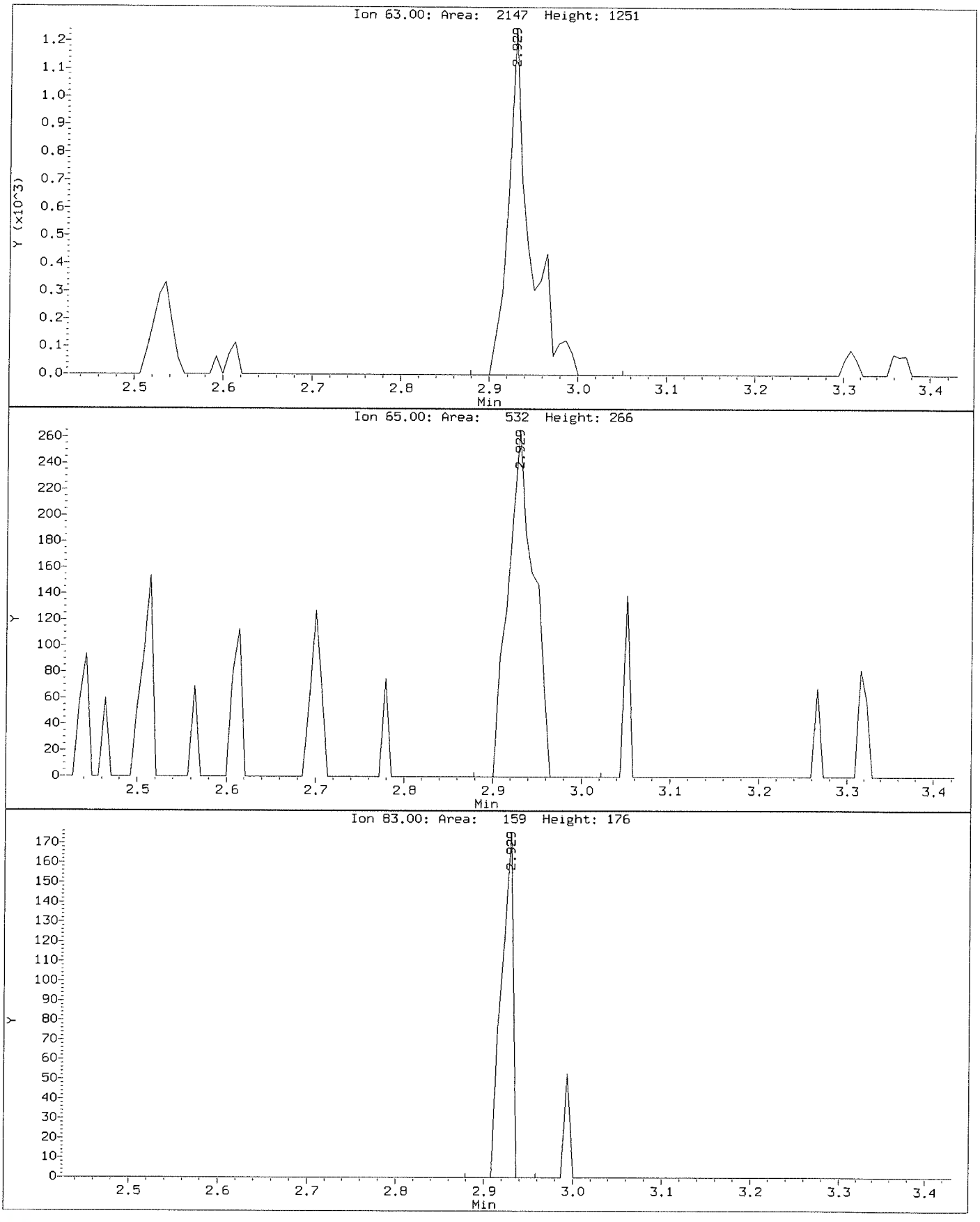
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethane
CAS Number: 75-34-3



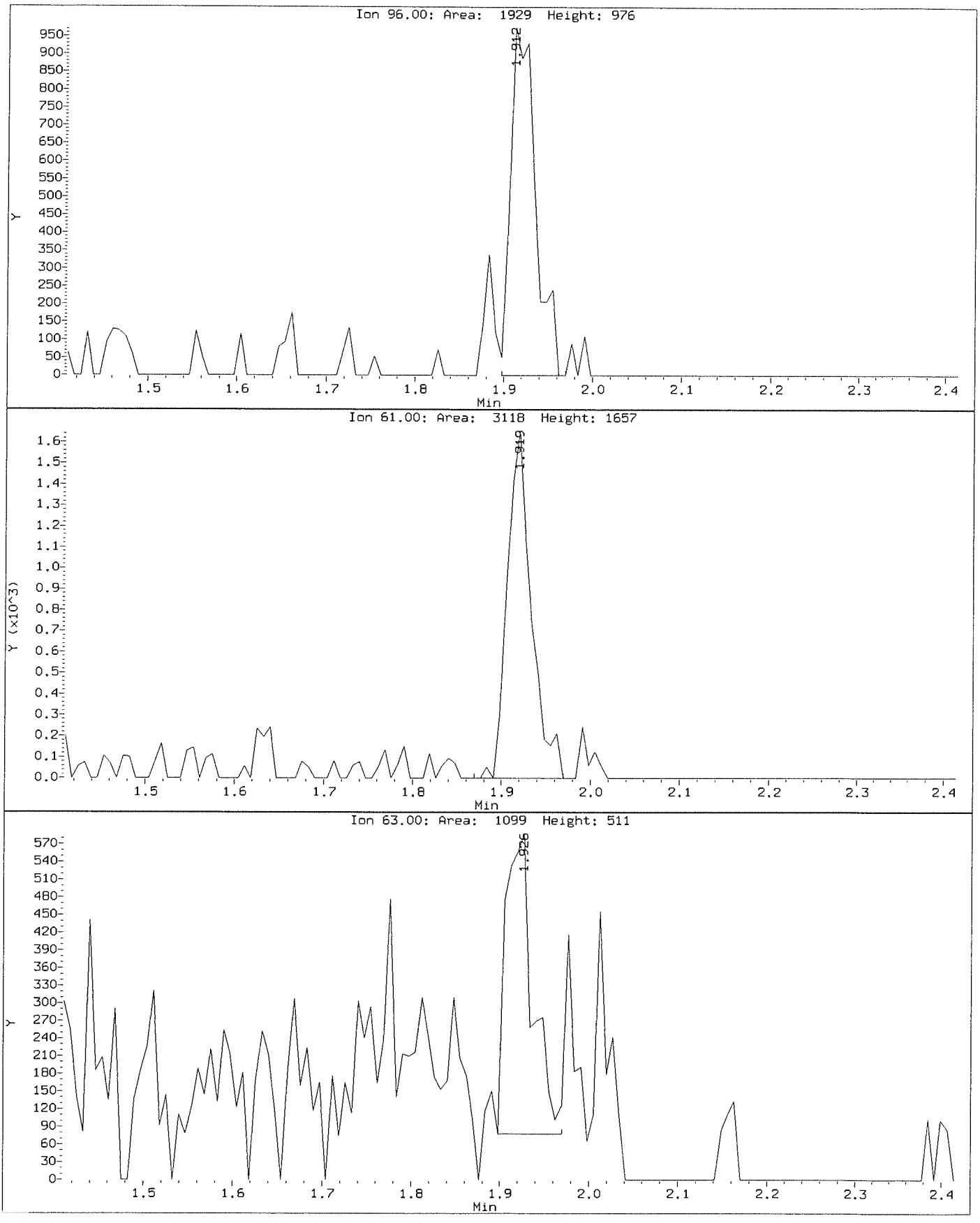
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethane
CAS Number: 75-34-3



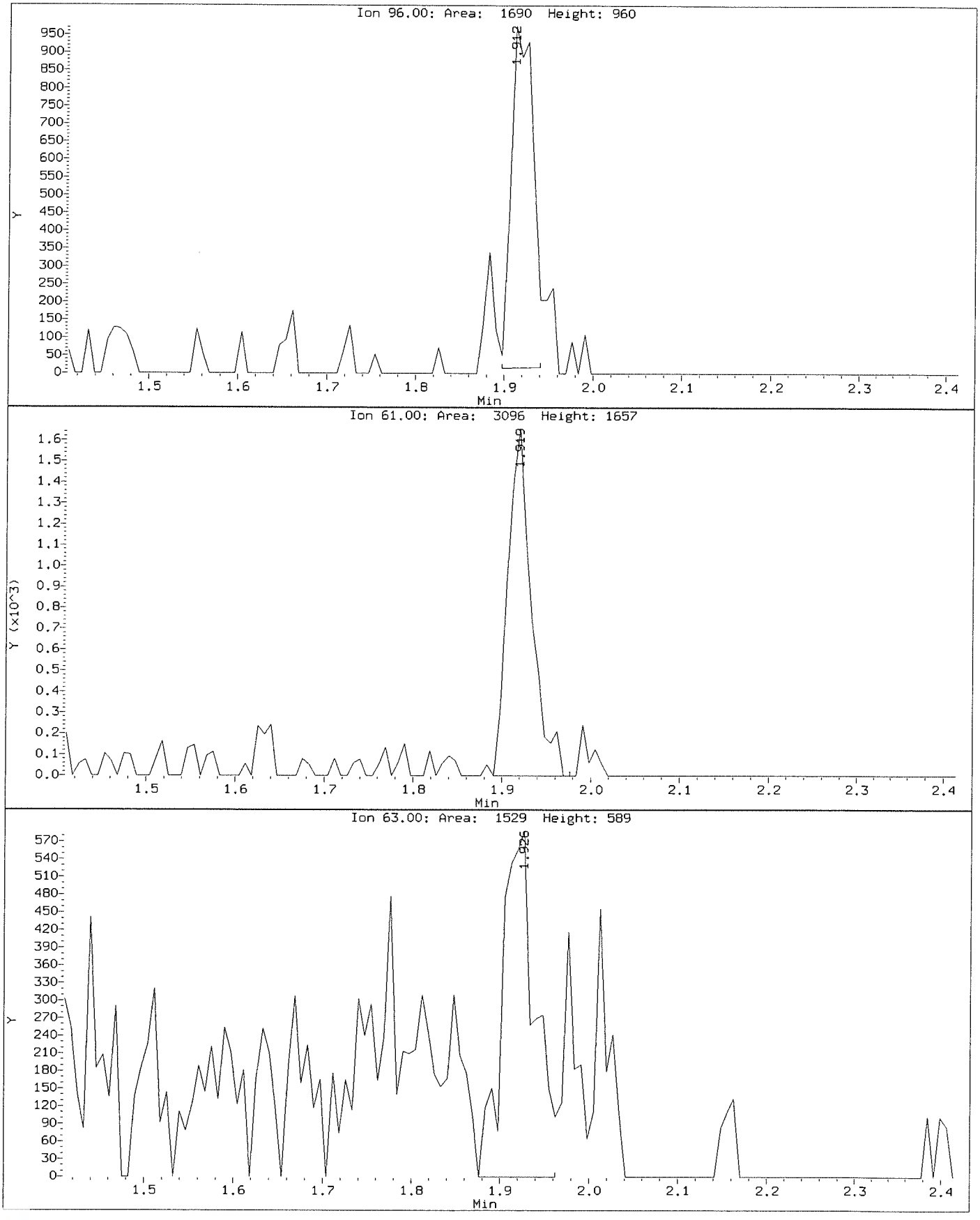
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



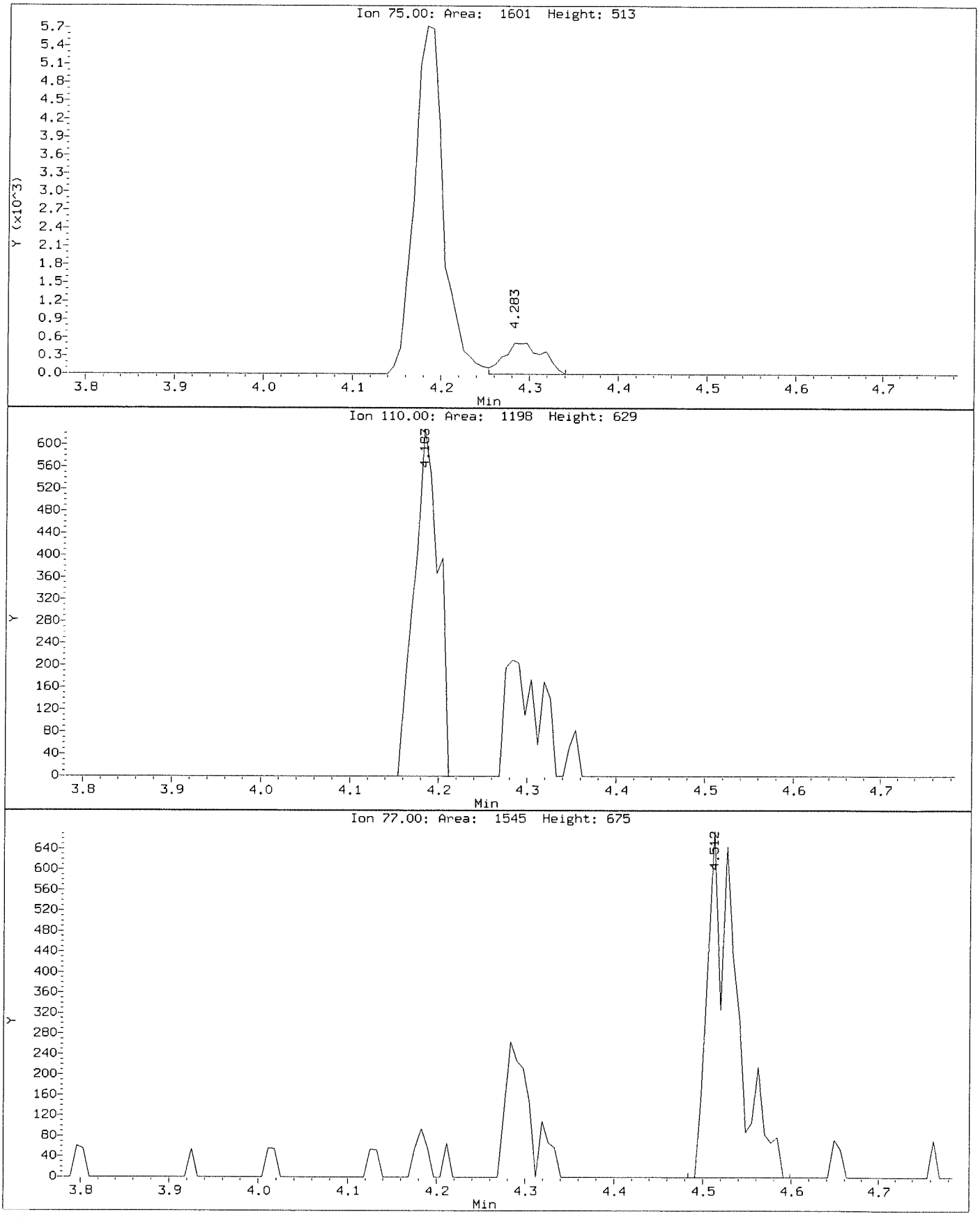
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Instrument: voa6.i
Client Sample ID: VSTD000.5

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



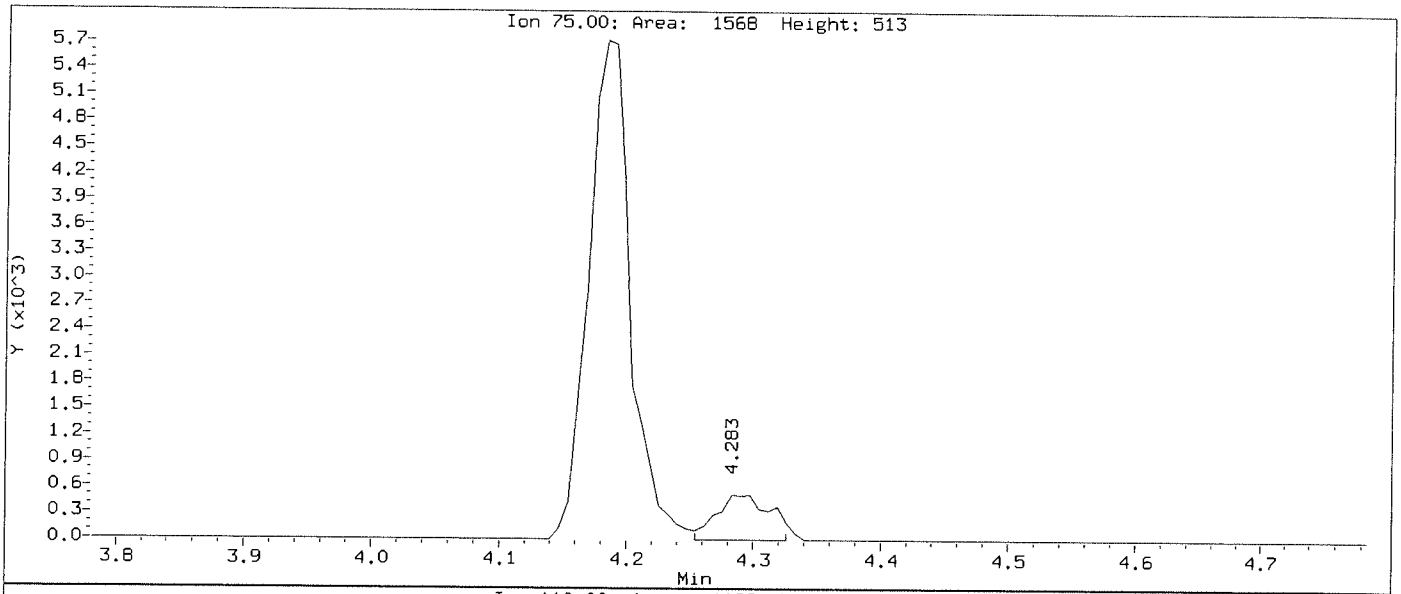
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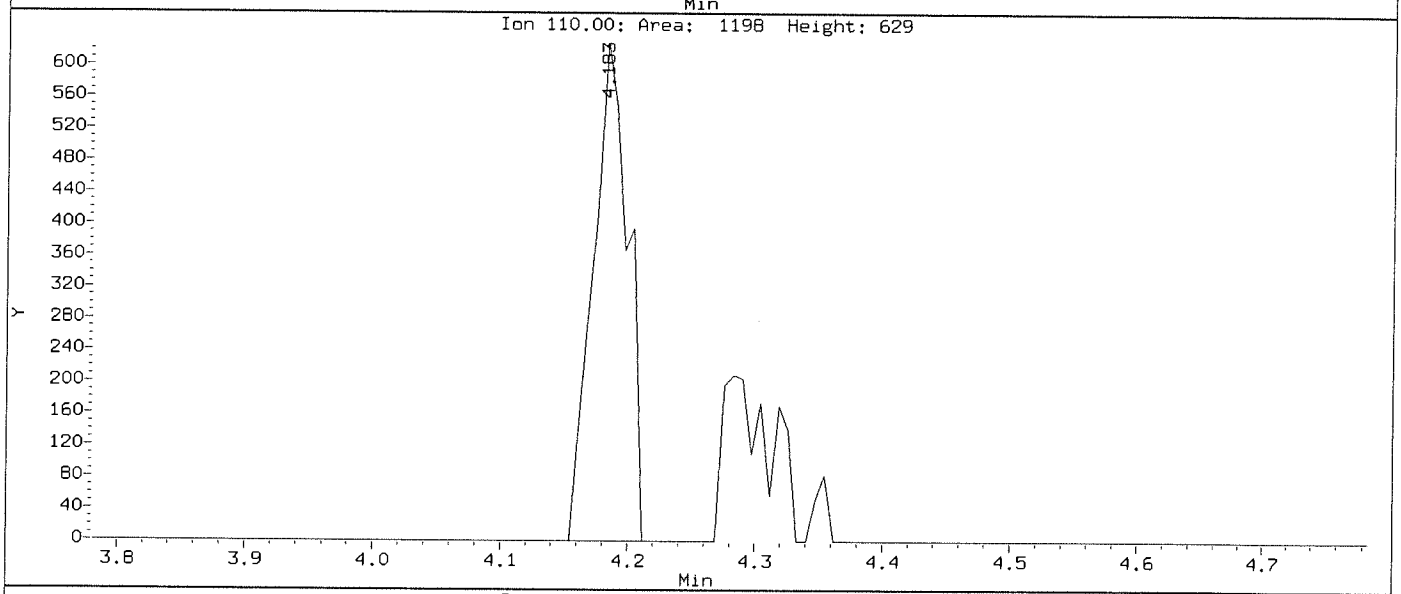
Compound: 1,1-Dichloropropene
CAS Number: 563-58-6

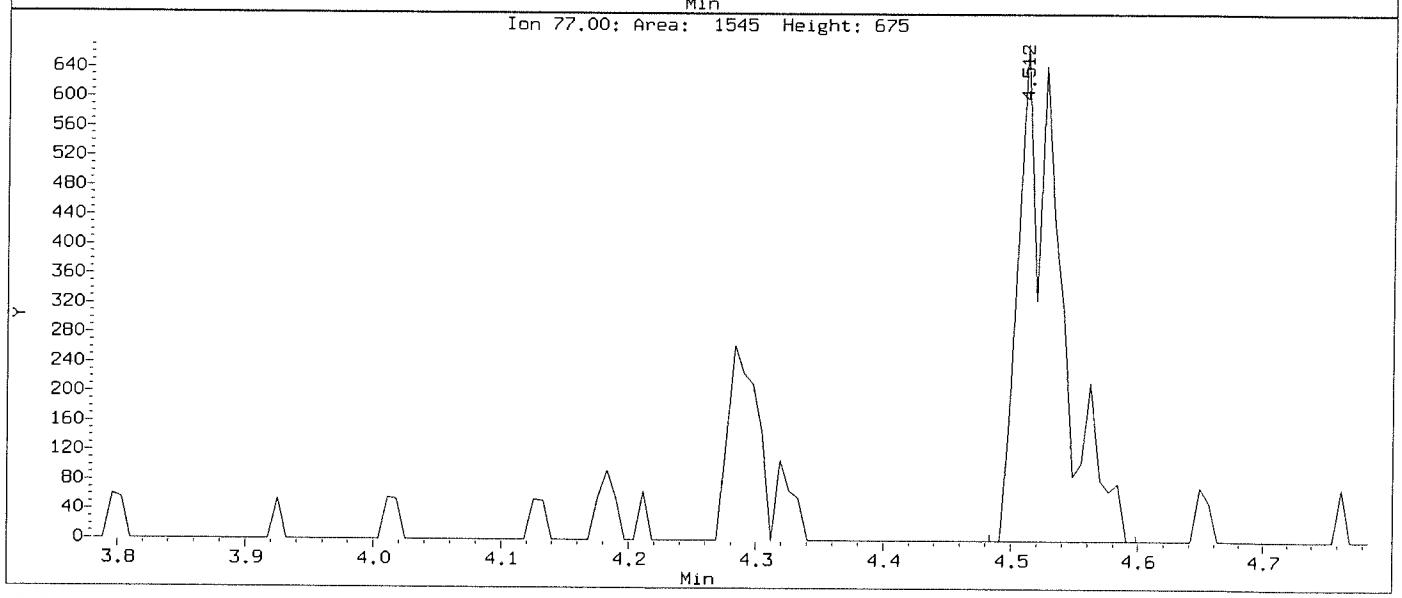


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6

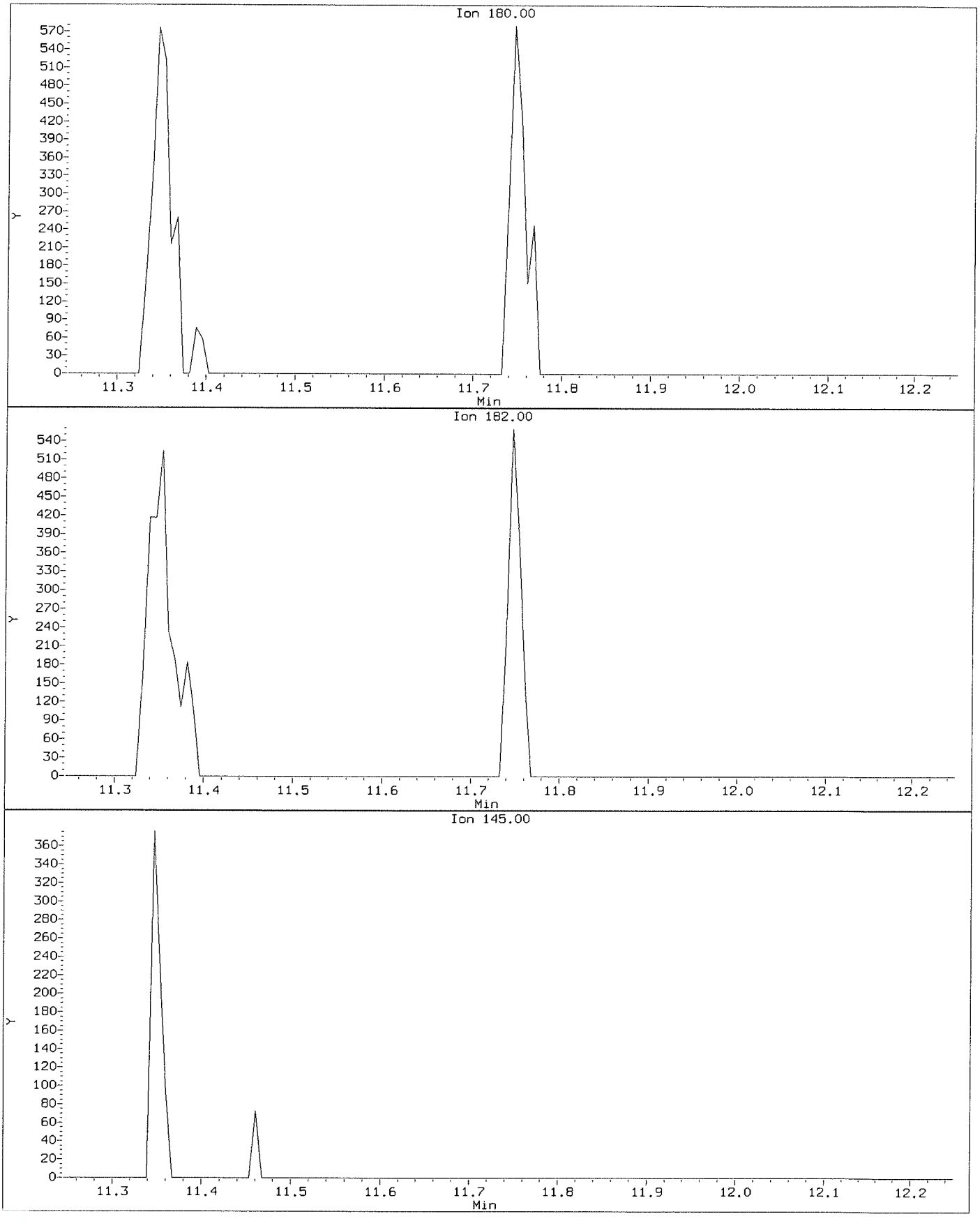






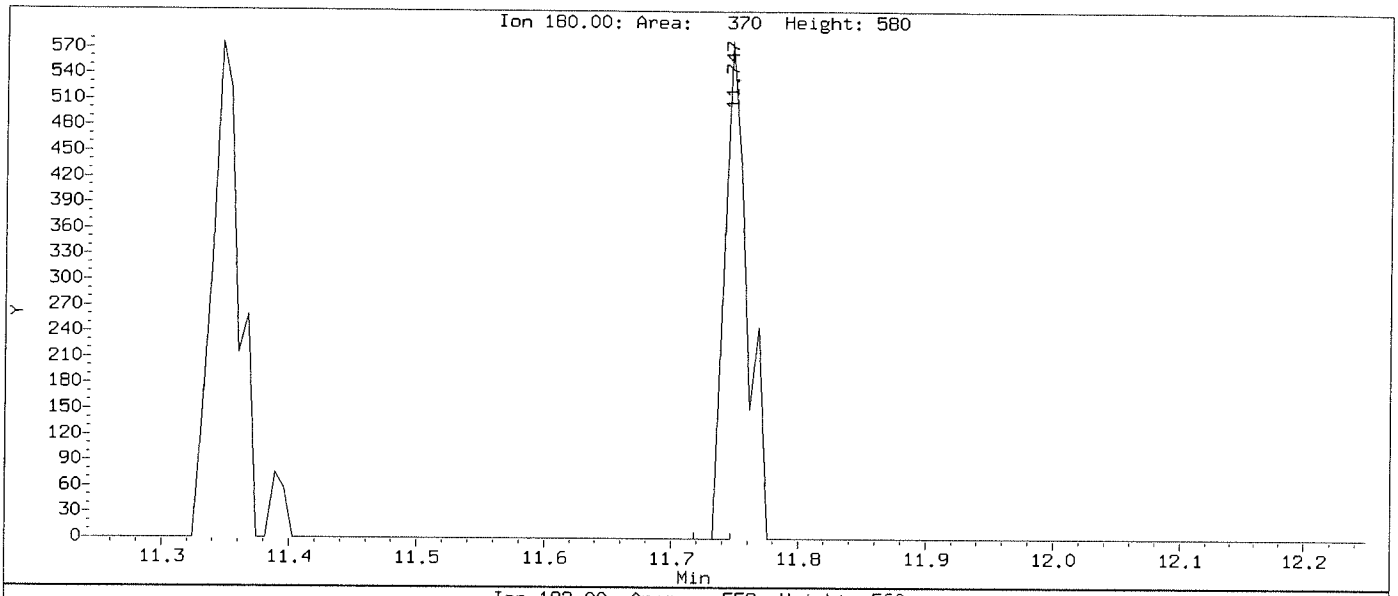
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Client Sample ID: VSTD000.5

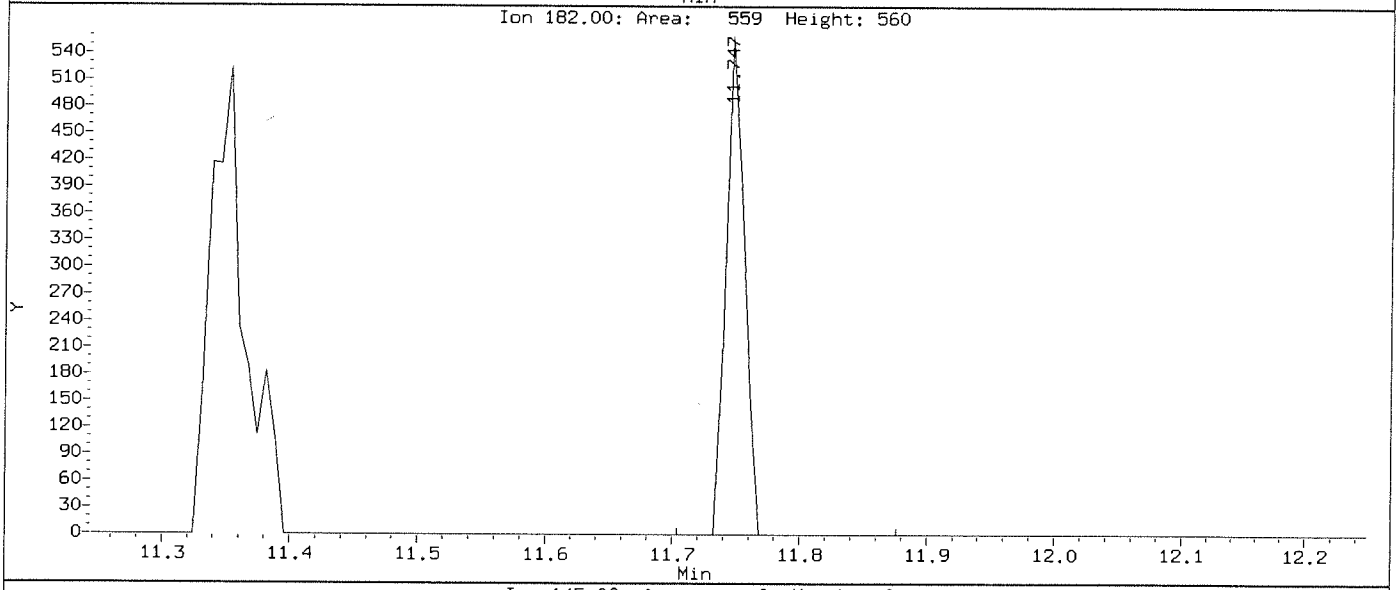
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

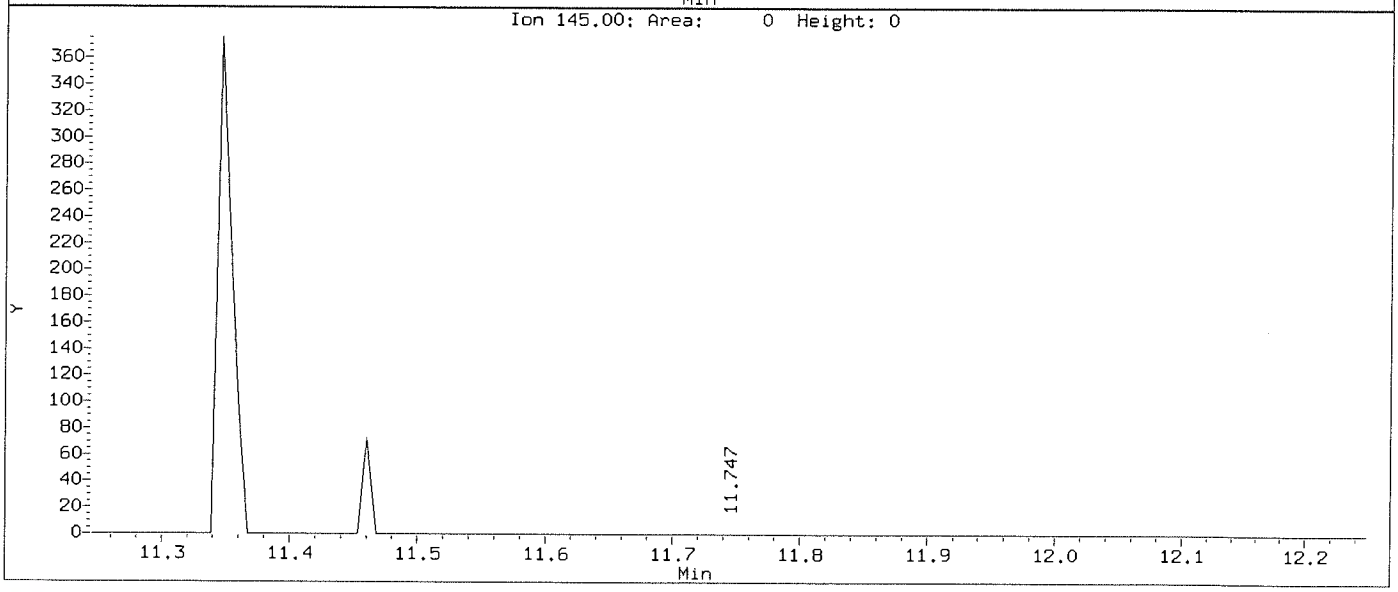


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

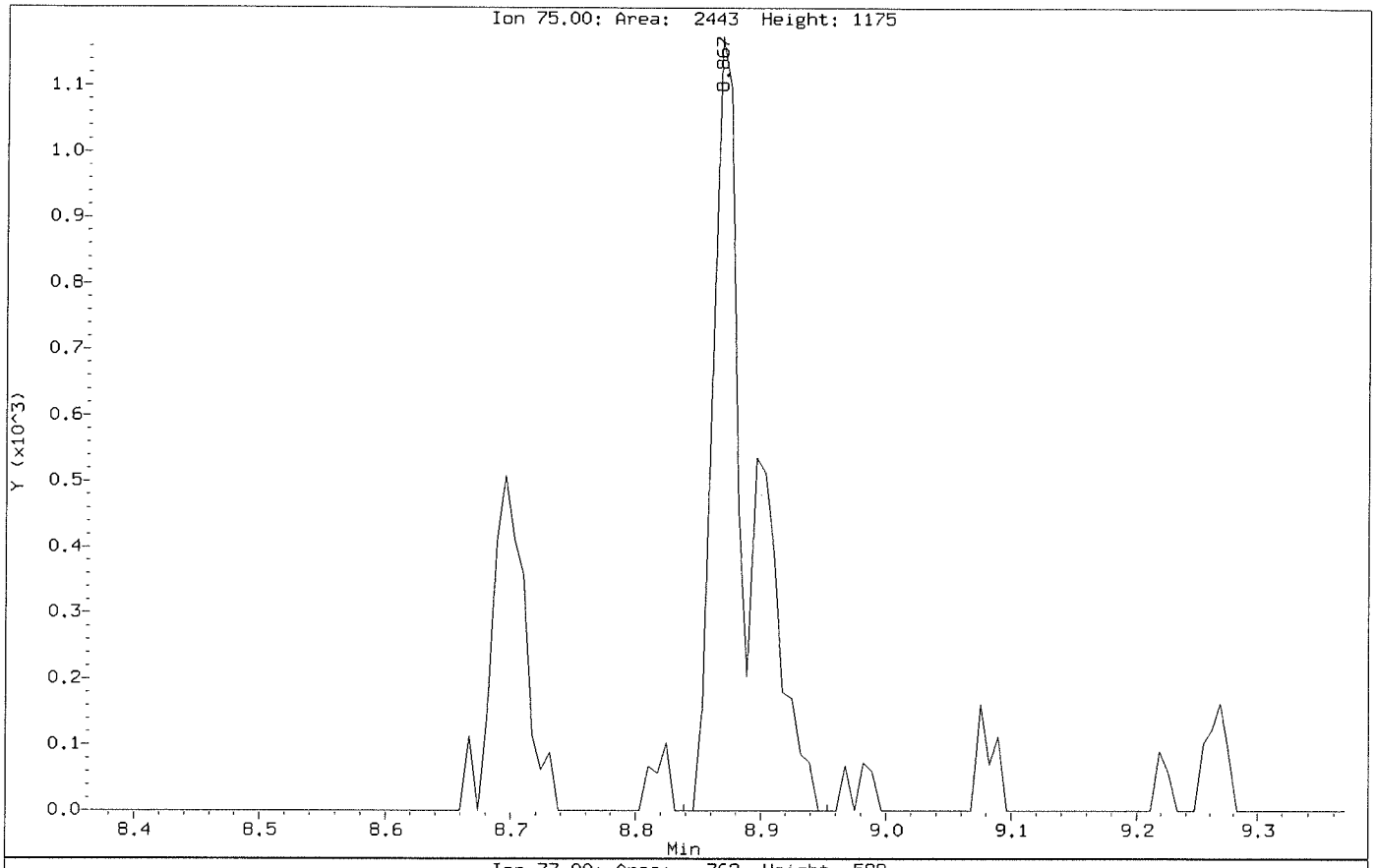


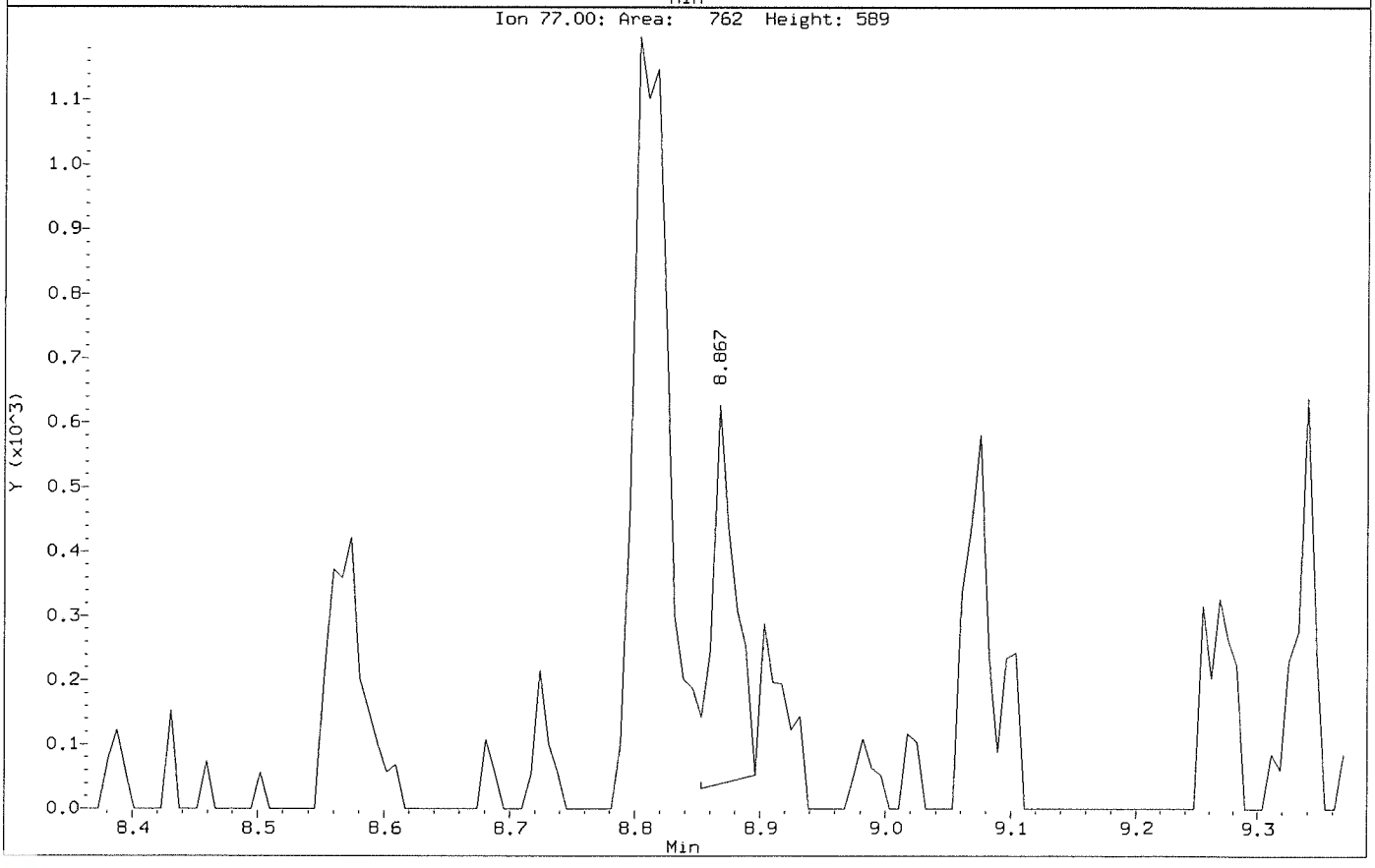




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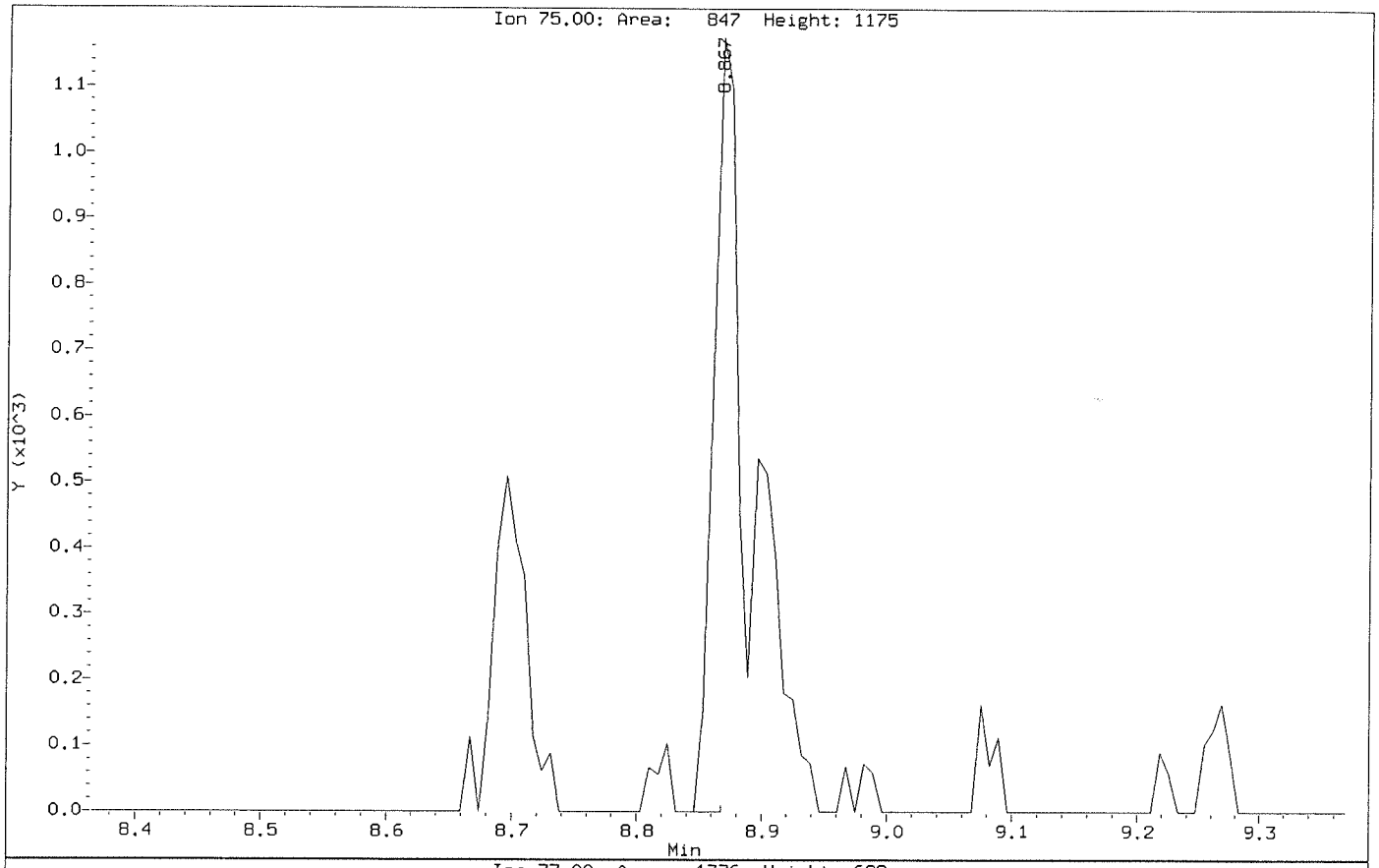
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

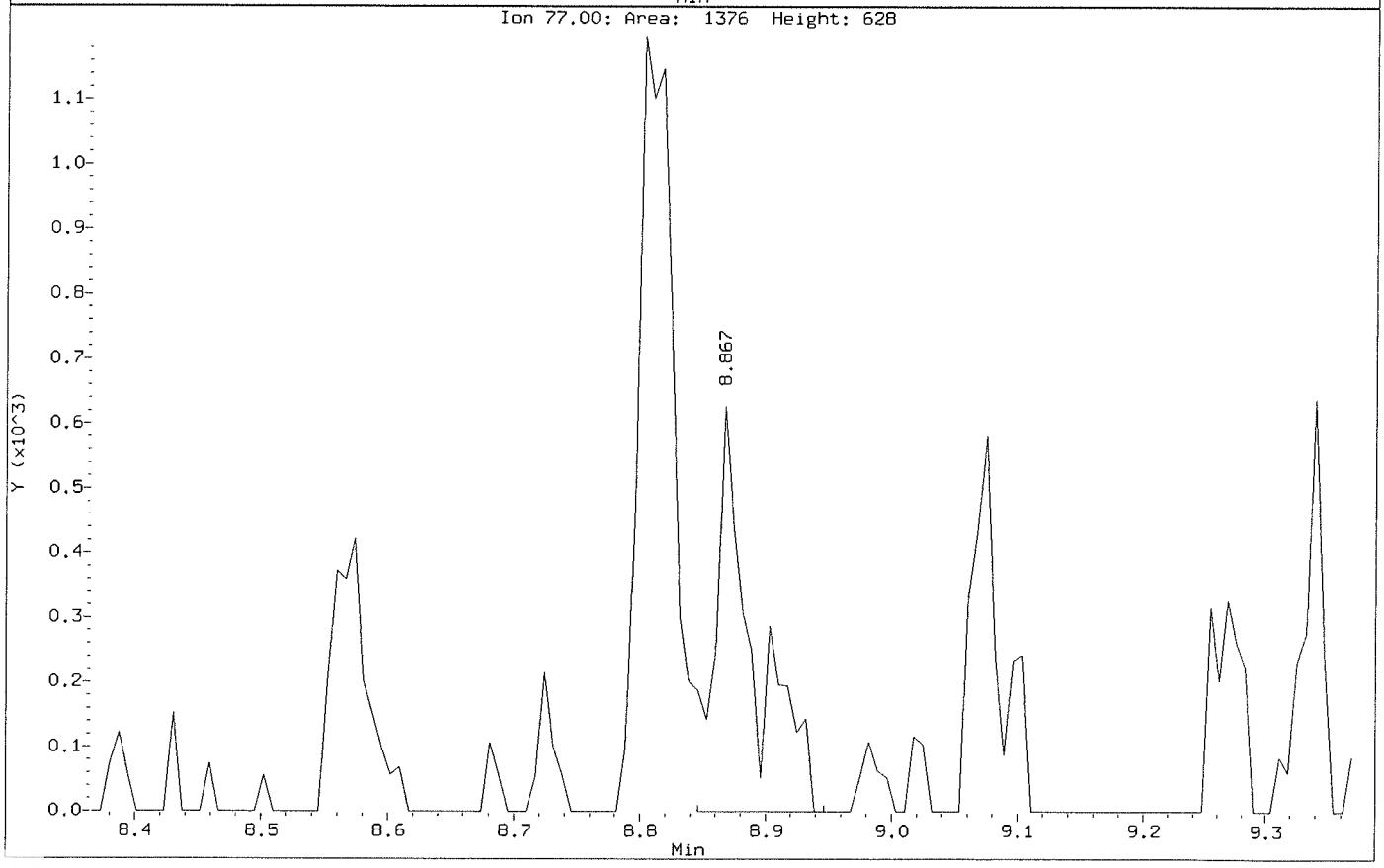




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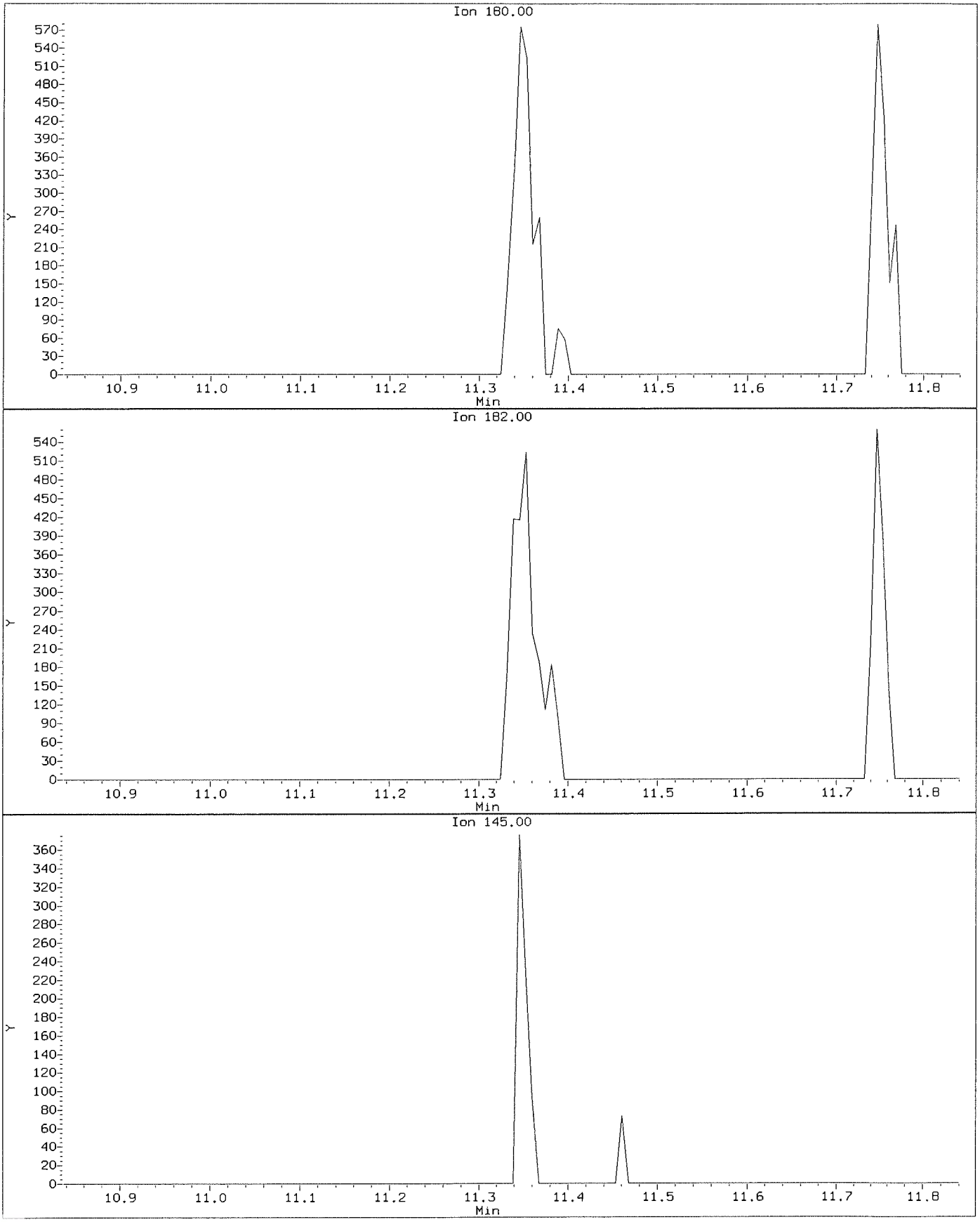
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





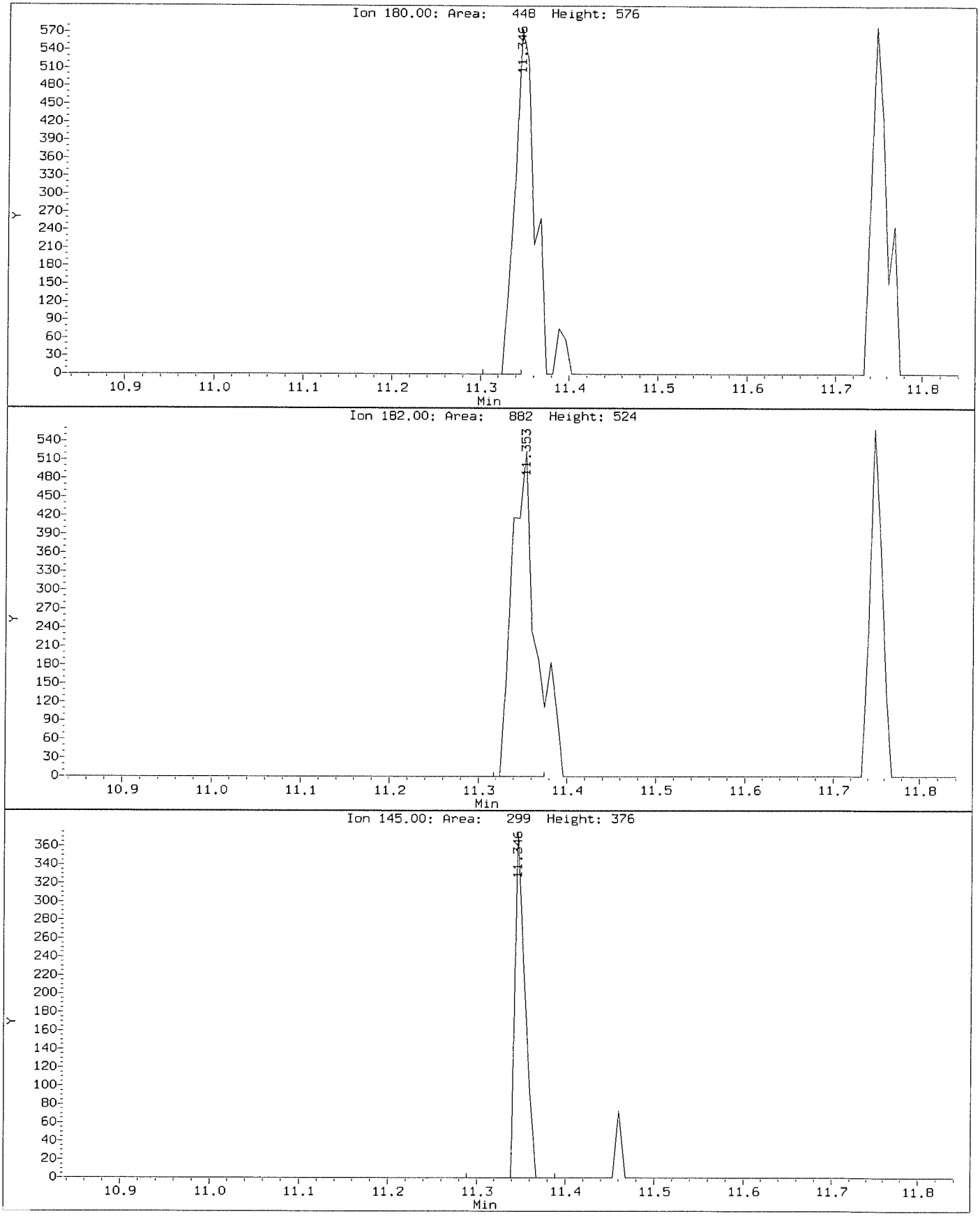
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



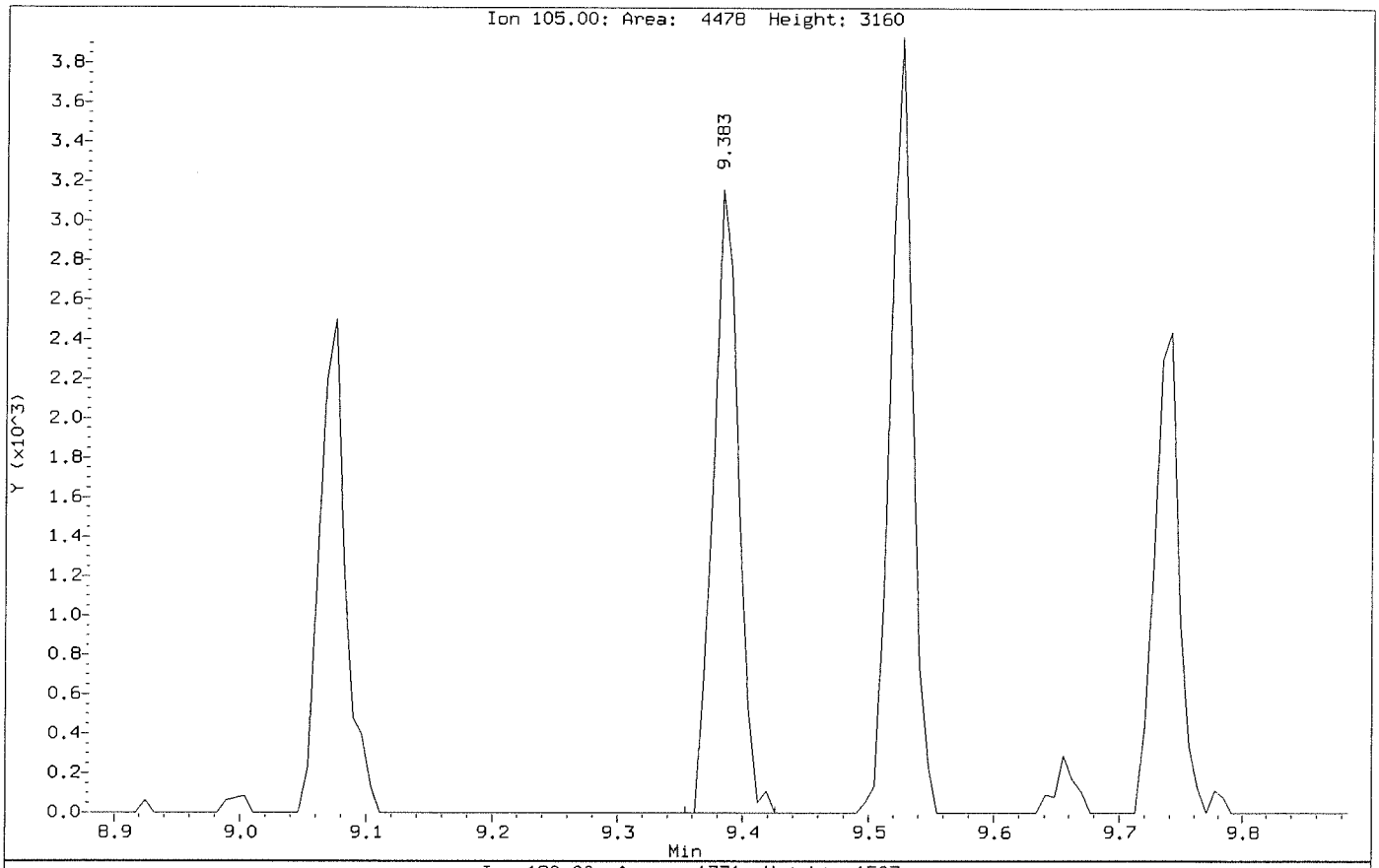
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Instrument: voa6.i
Client Sample ID: VSTD000.5

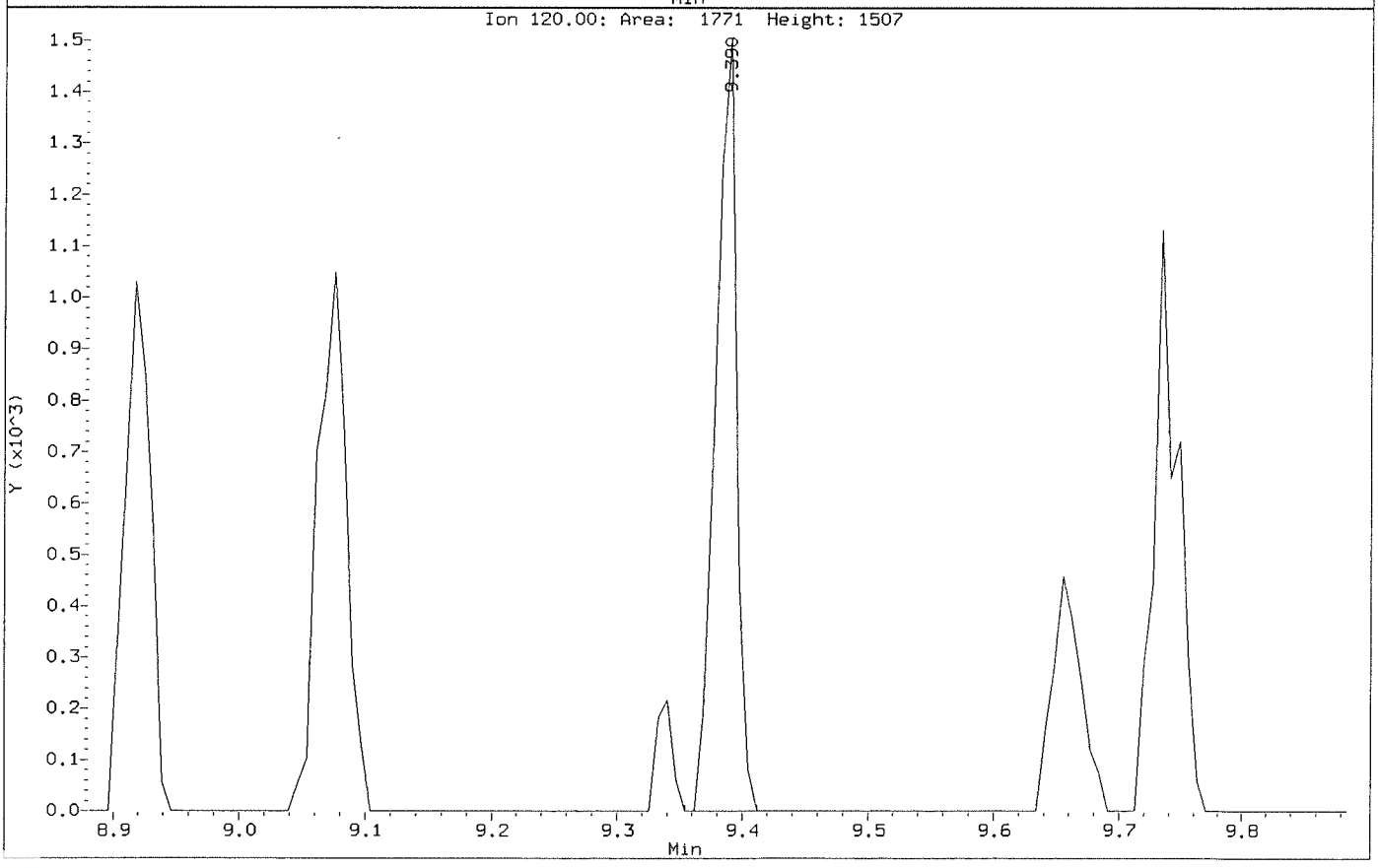
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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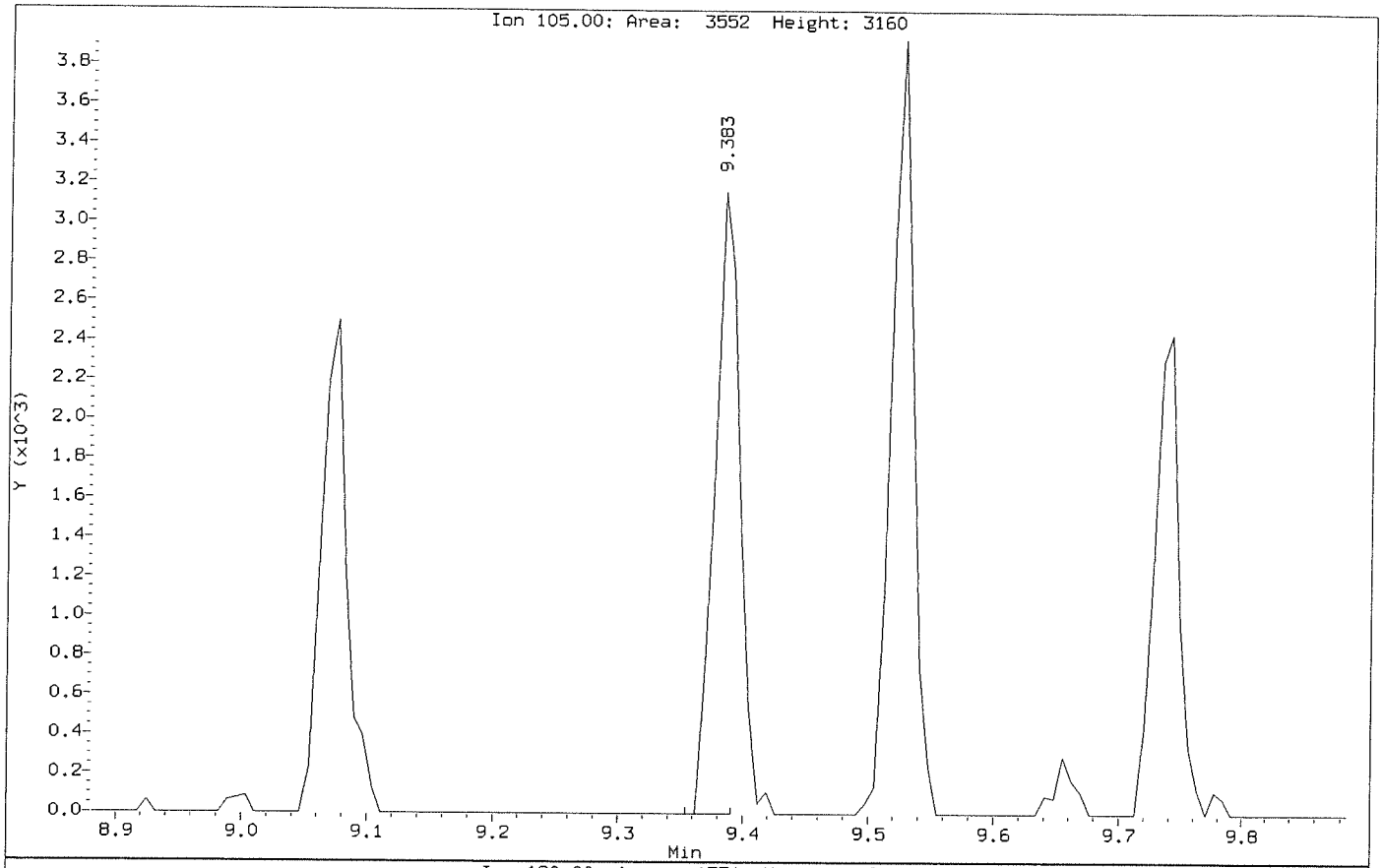
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6

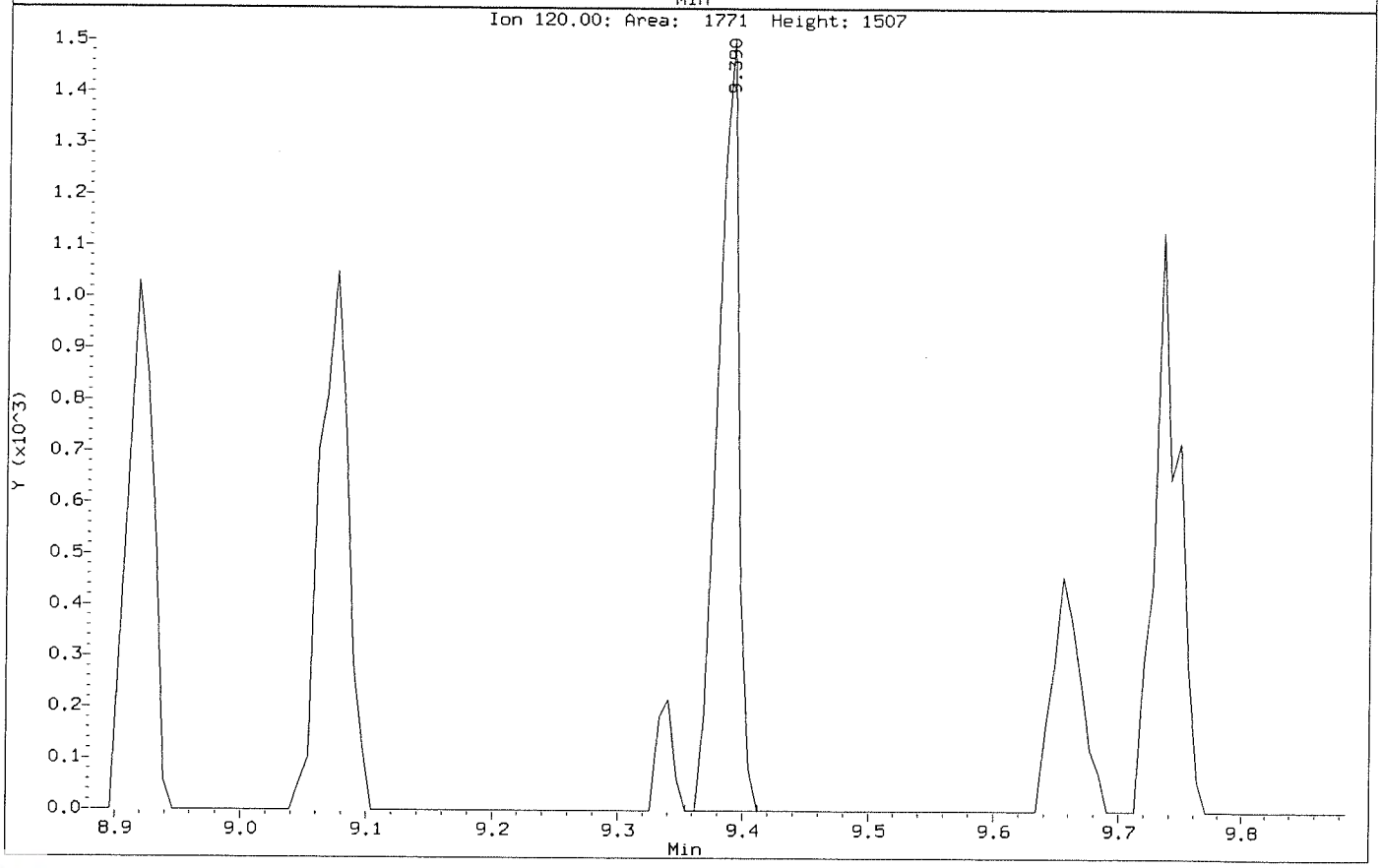




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Instrument: voa6.i
Client Sample ID: VSTD000.5

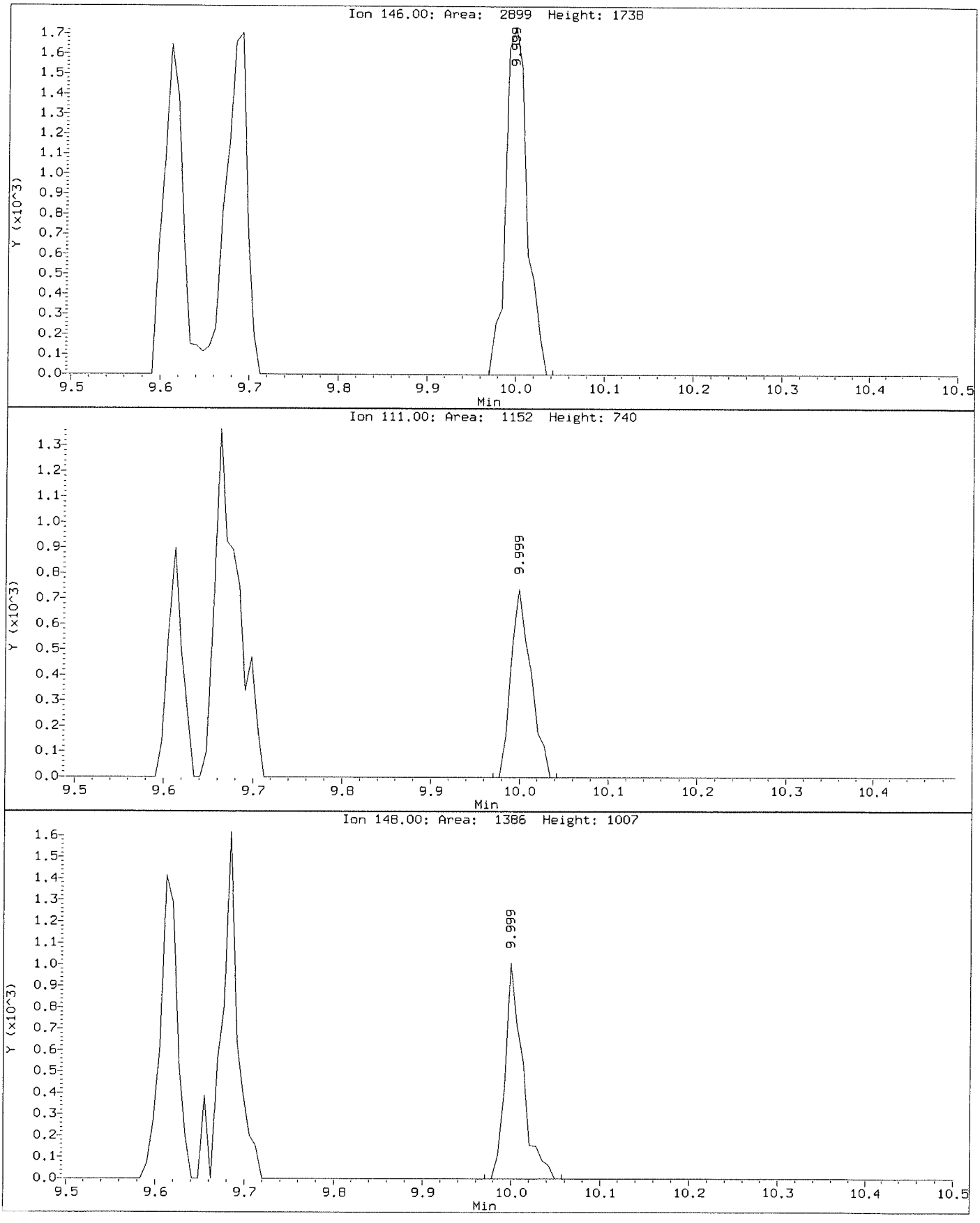
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6





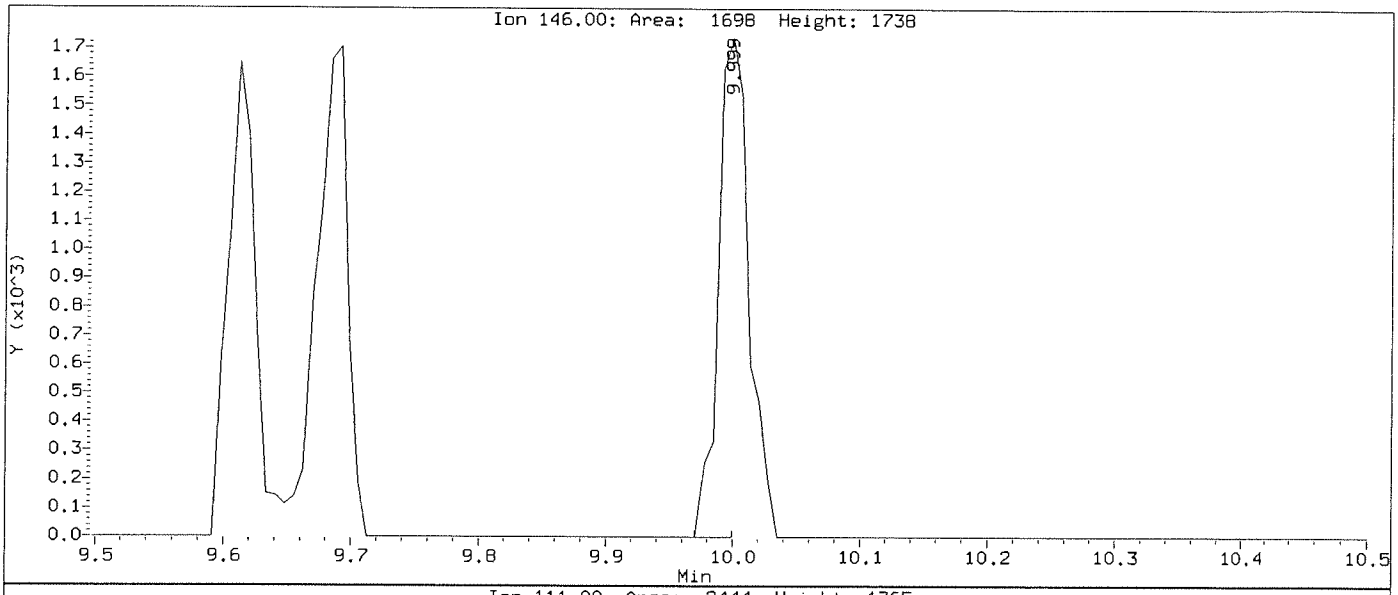
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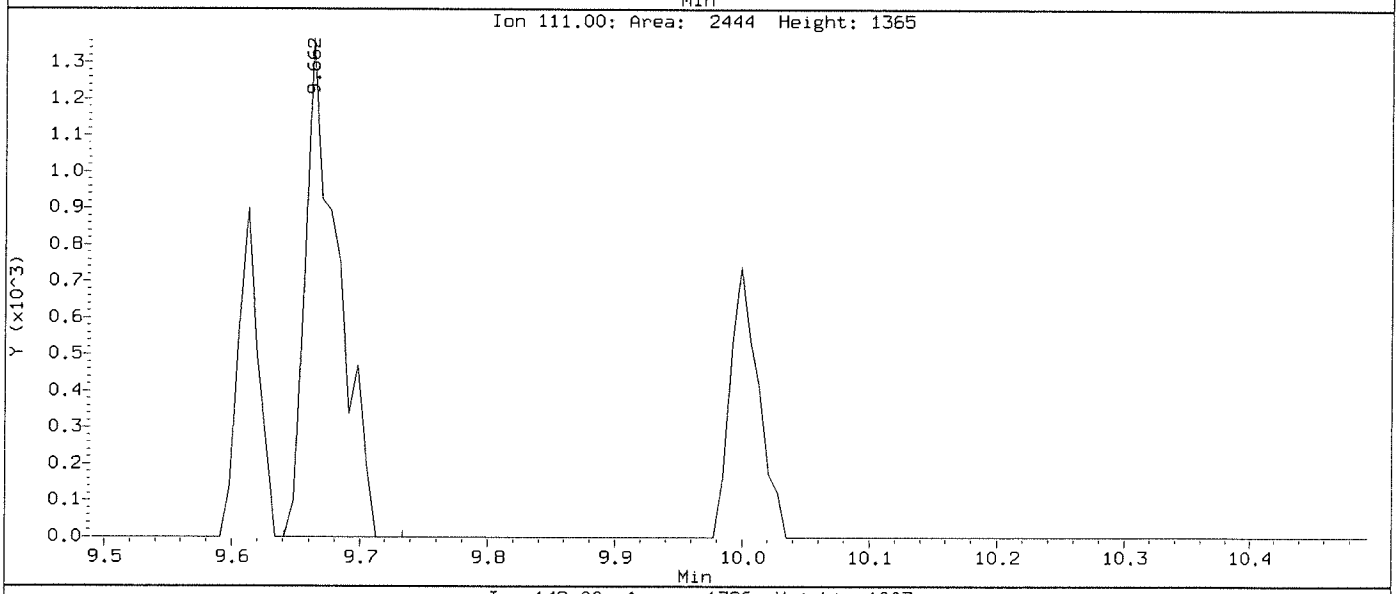
Compound: 1,2-Dichlorobenzene
CAS Number: 95-50-1

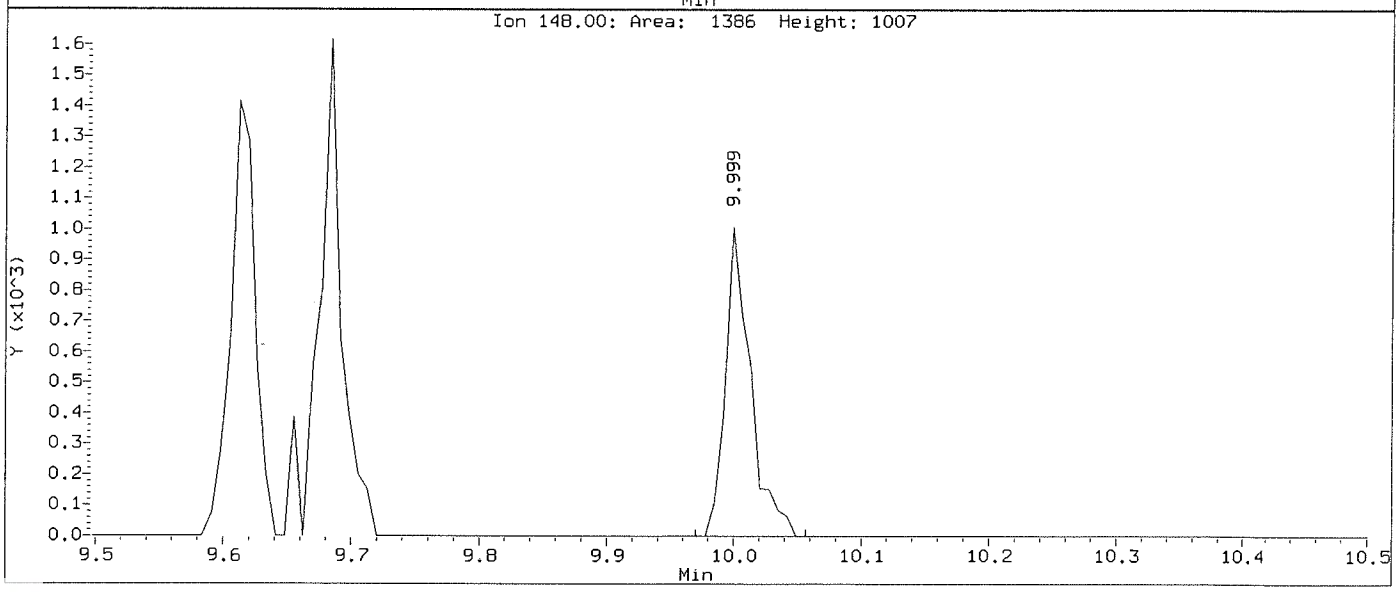


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Injection Date: 03-NOV-2020 12:43
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Client Sample ID: VSTD000.5

Compound: 1,2-Dichlorobenzene
CAS Number: 95-50-1

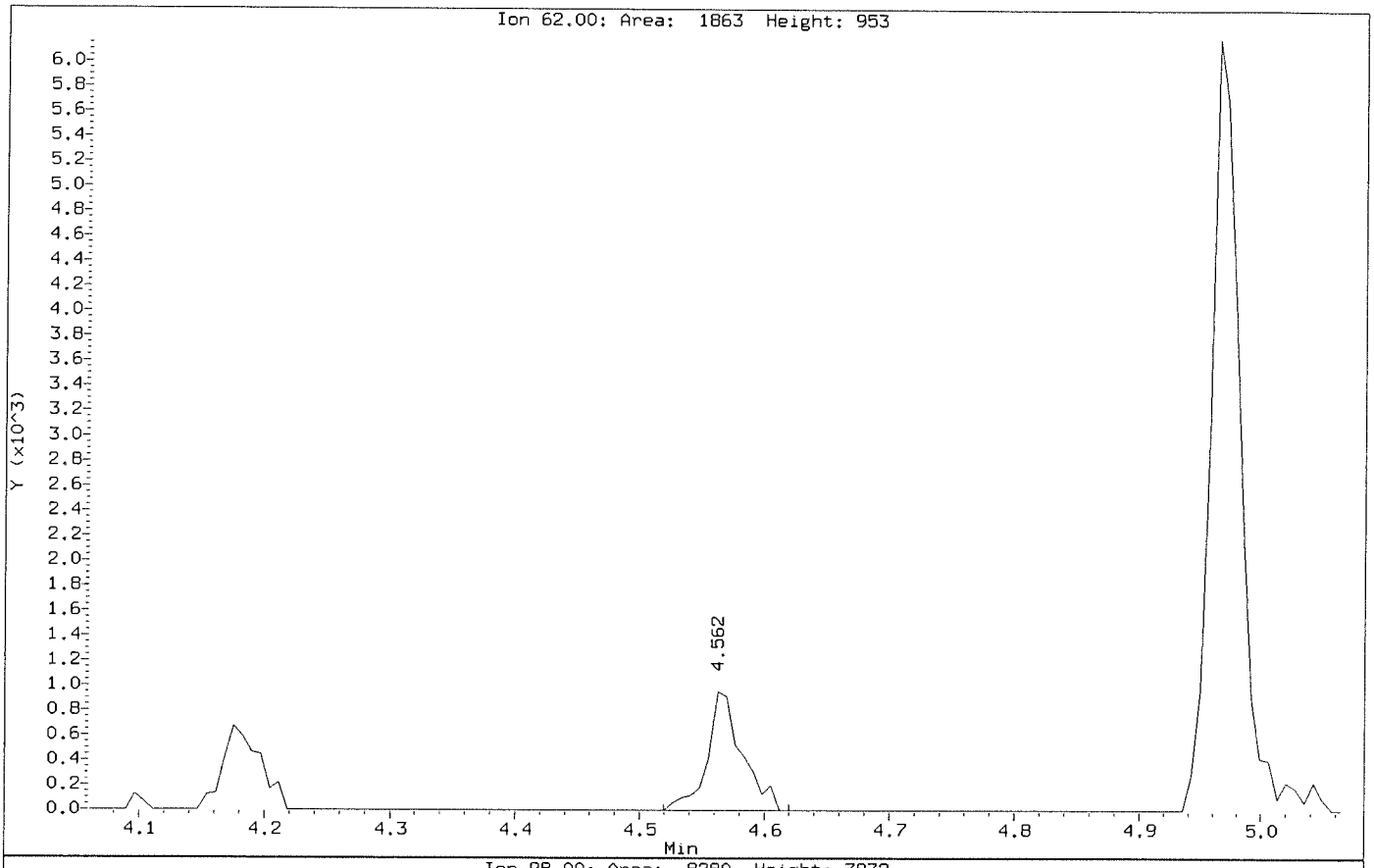


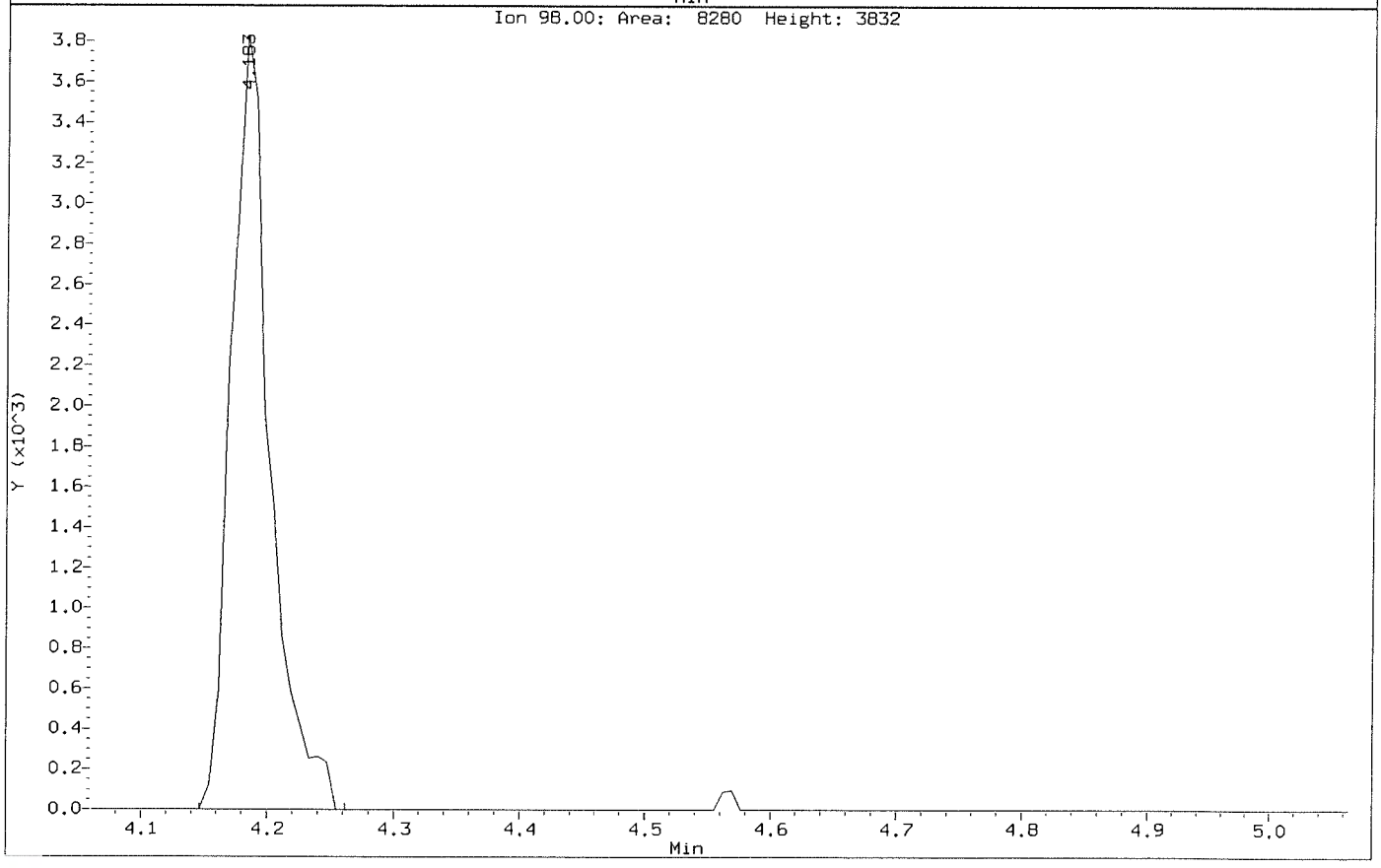




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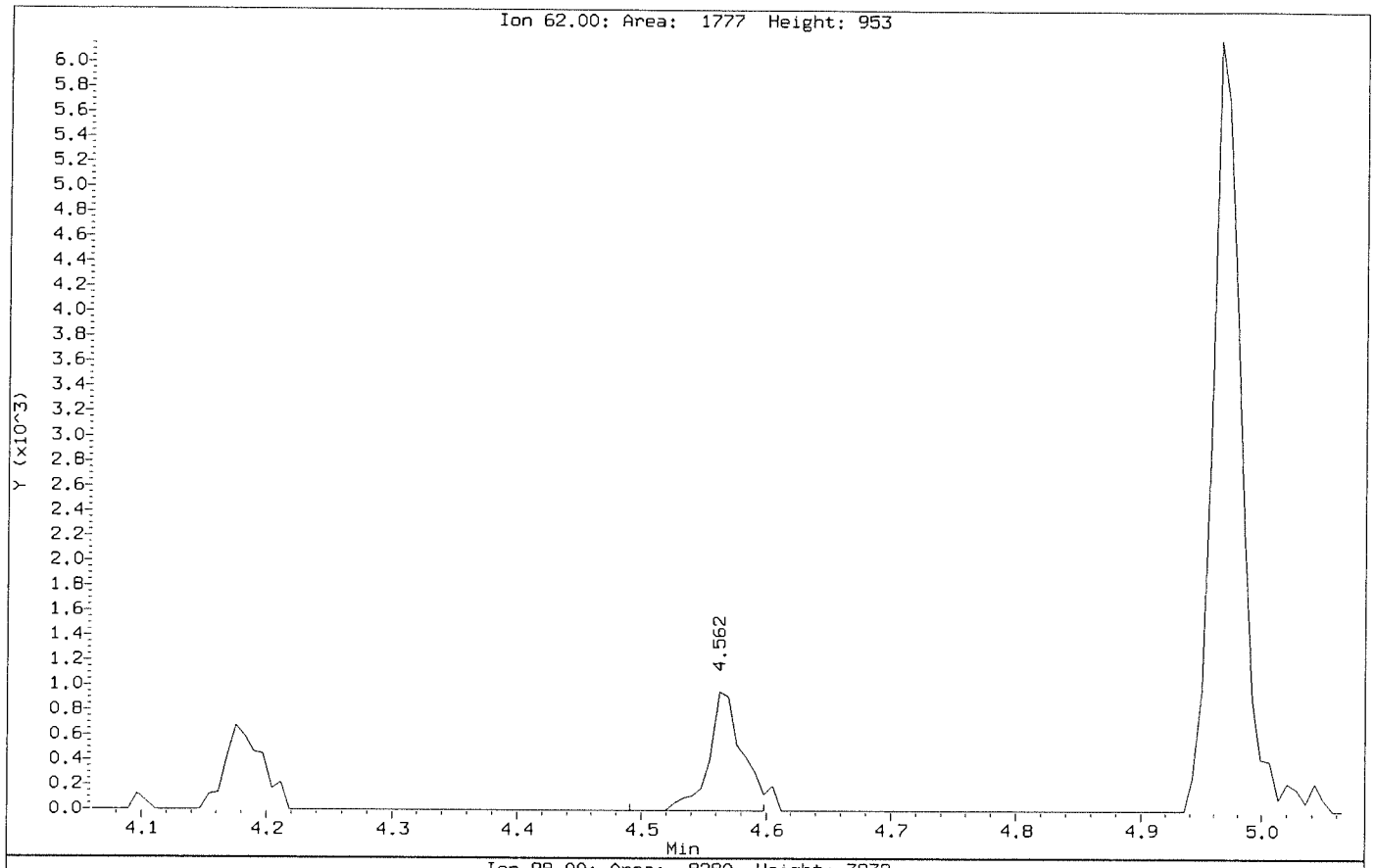
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

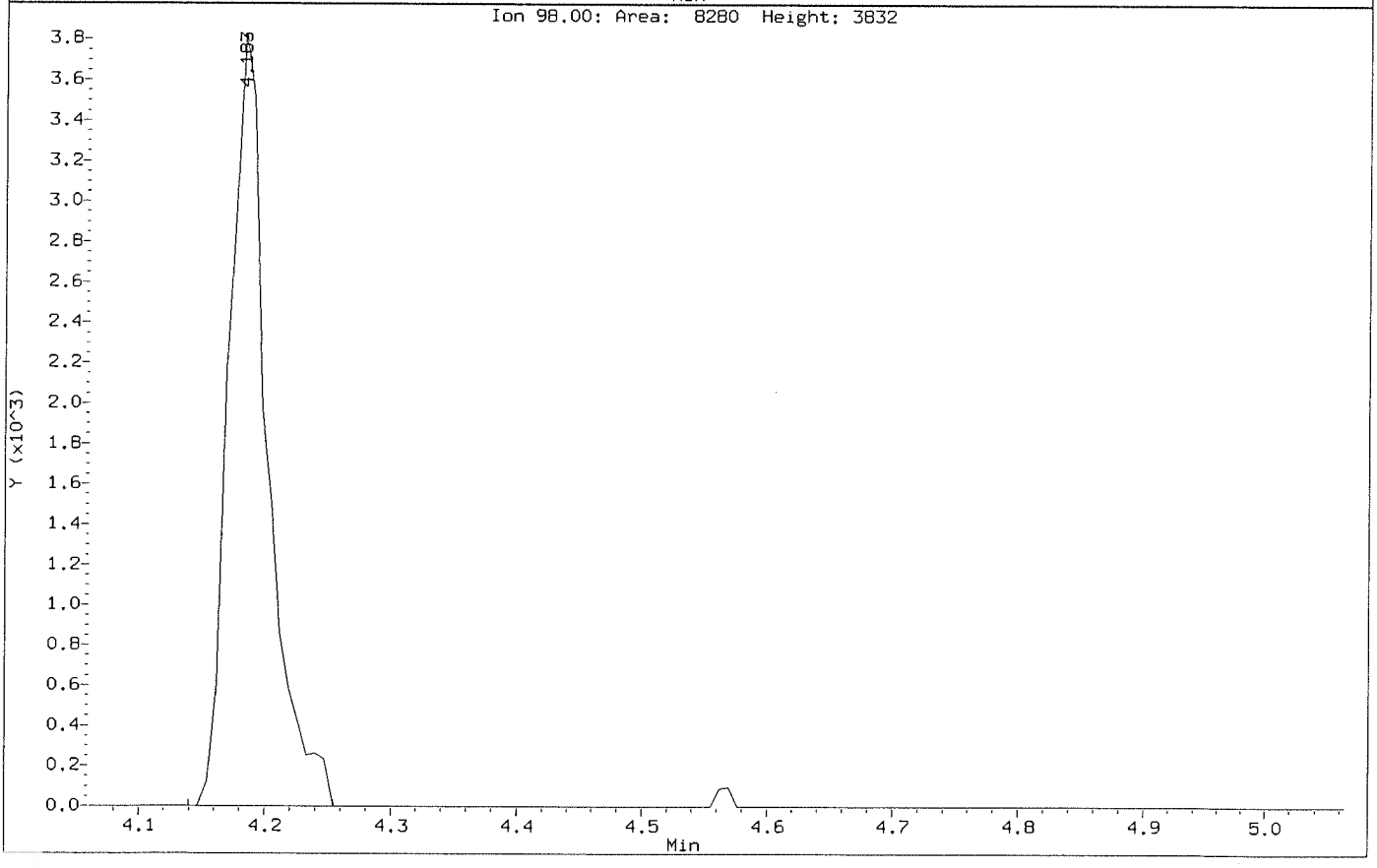




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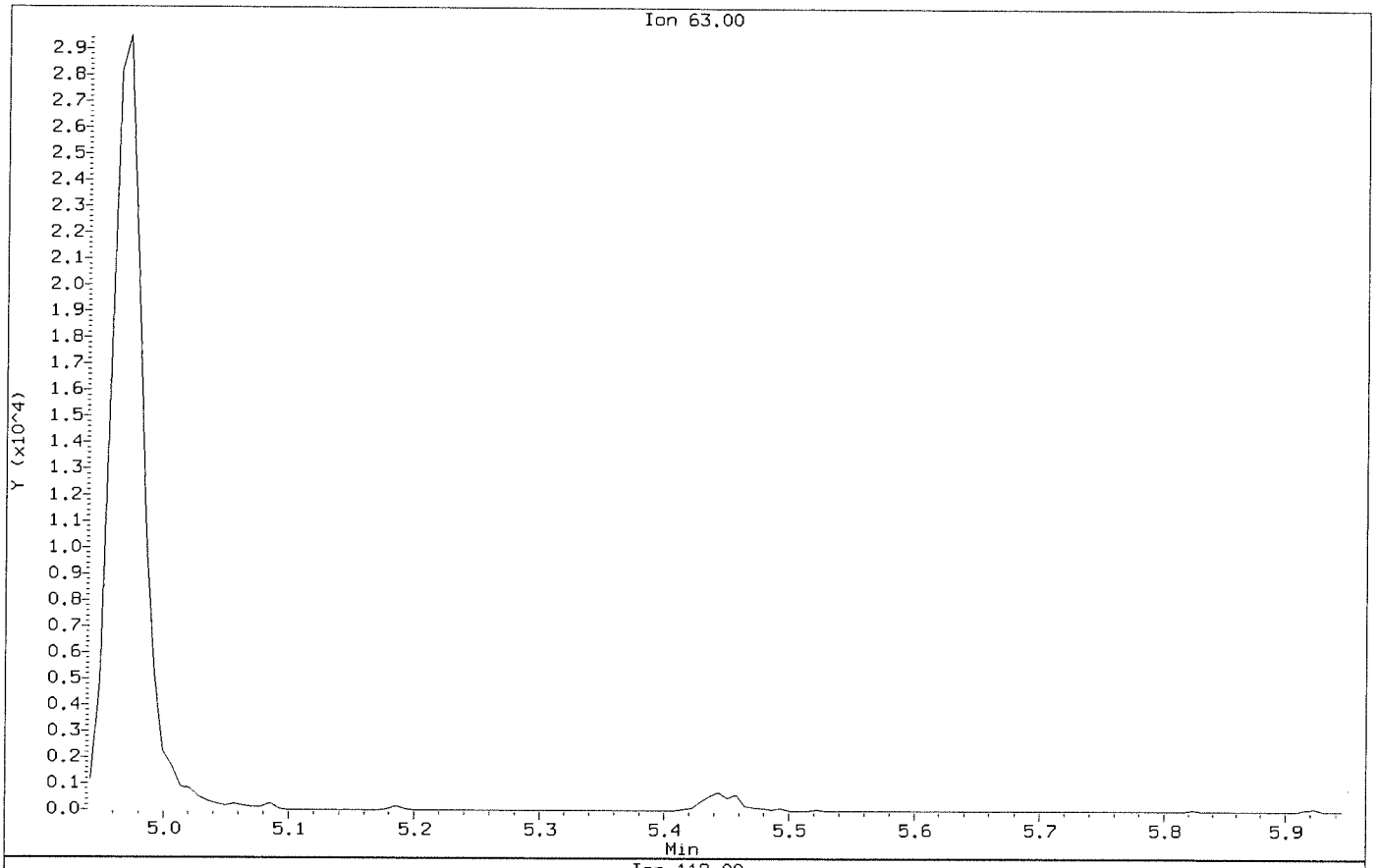
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

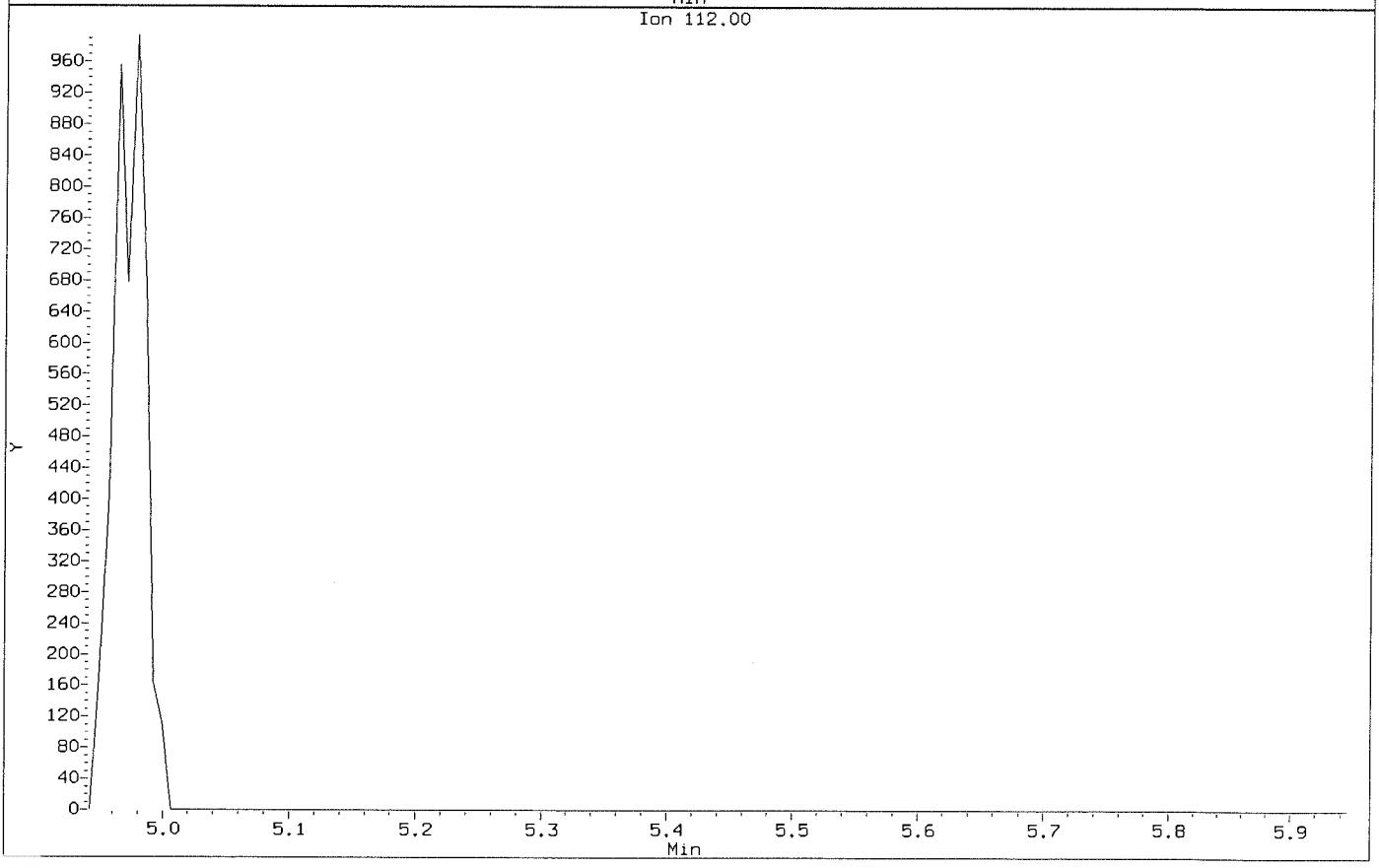




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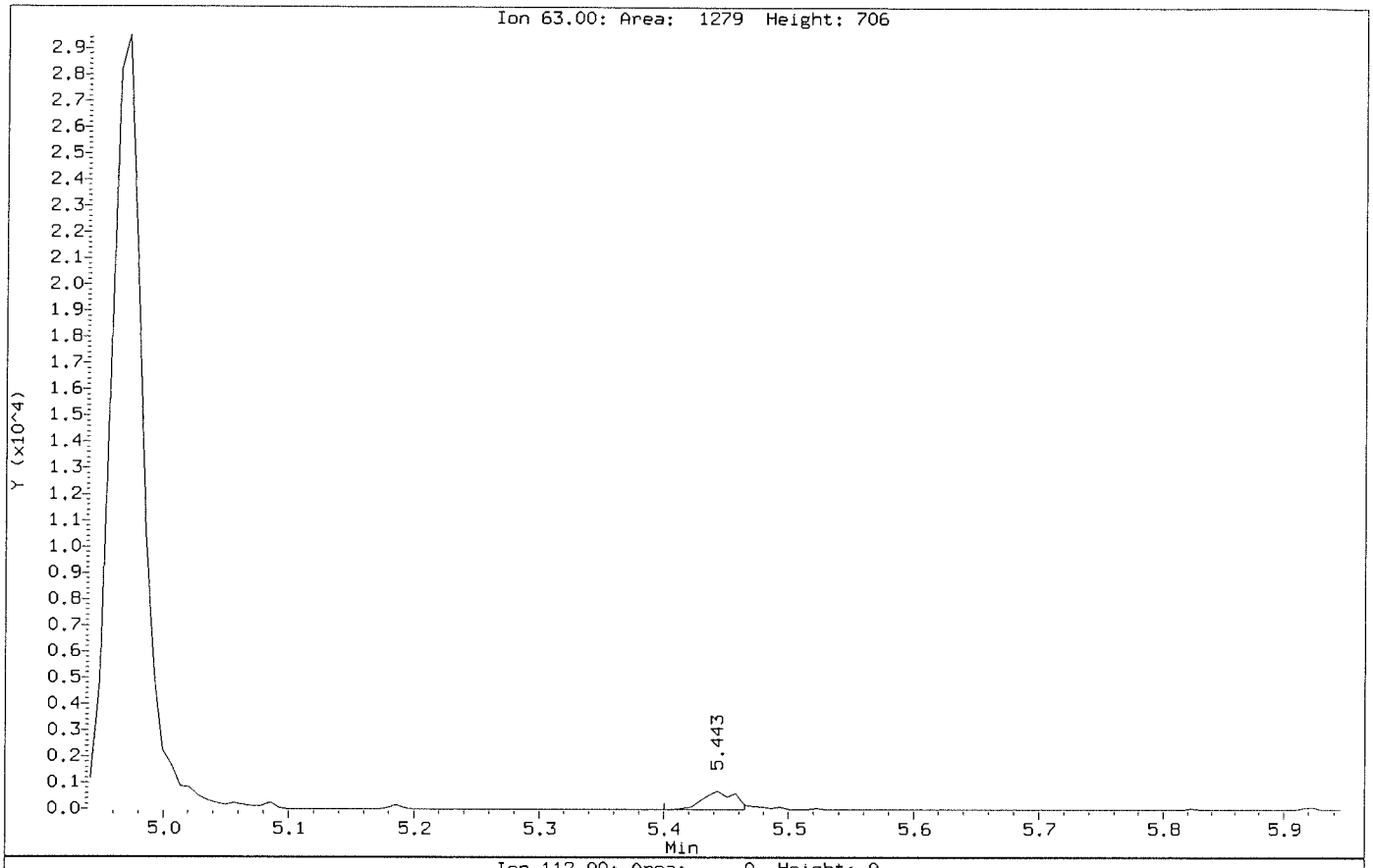
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

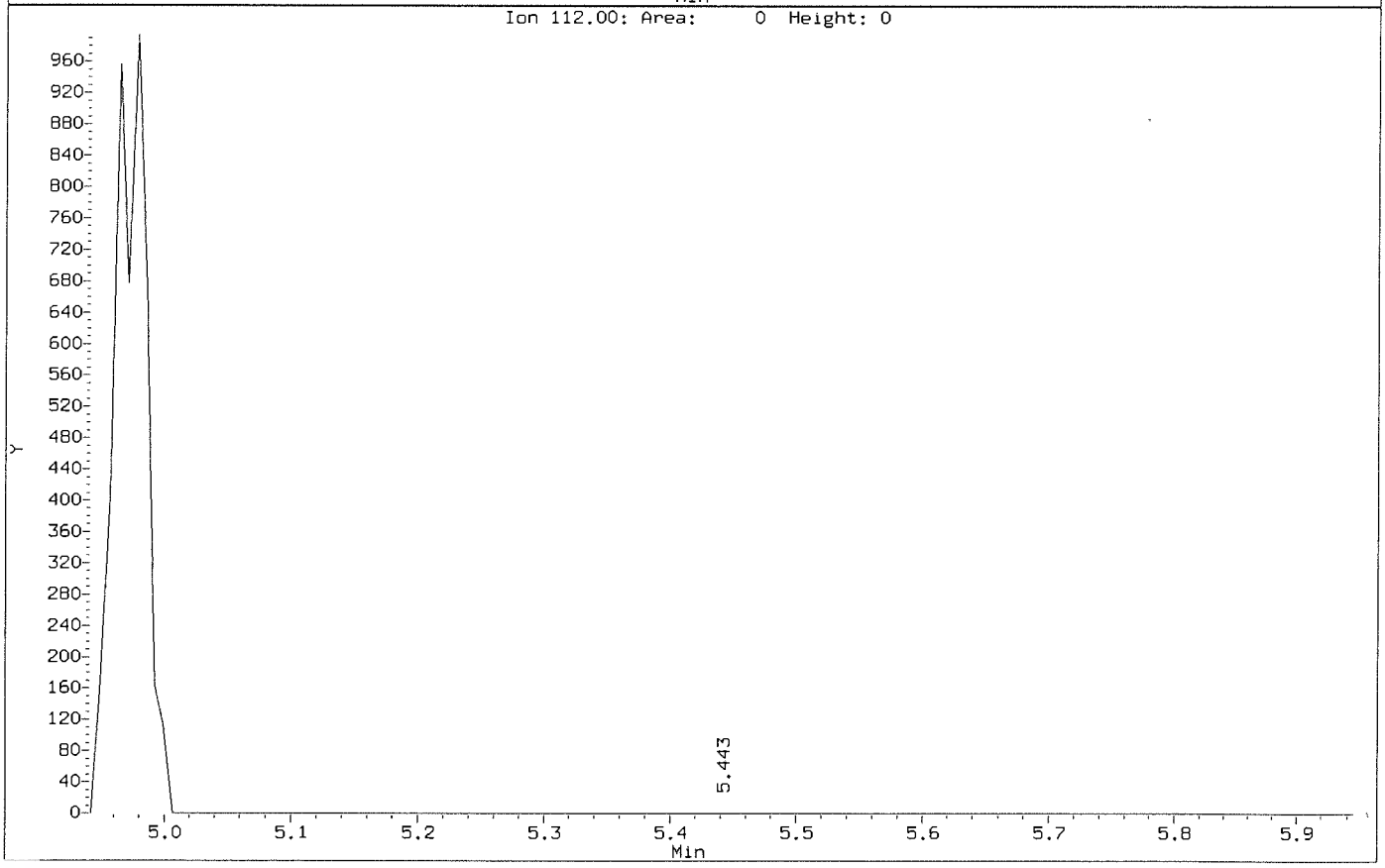




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Instrument: voa6.i
Client Sample ID: VSTD000.5

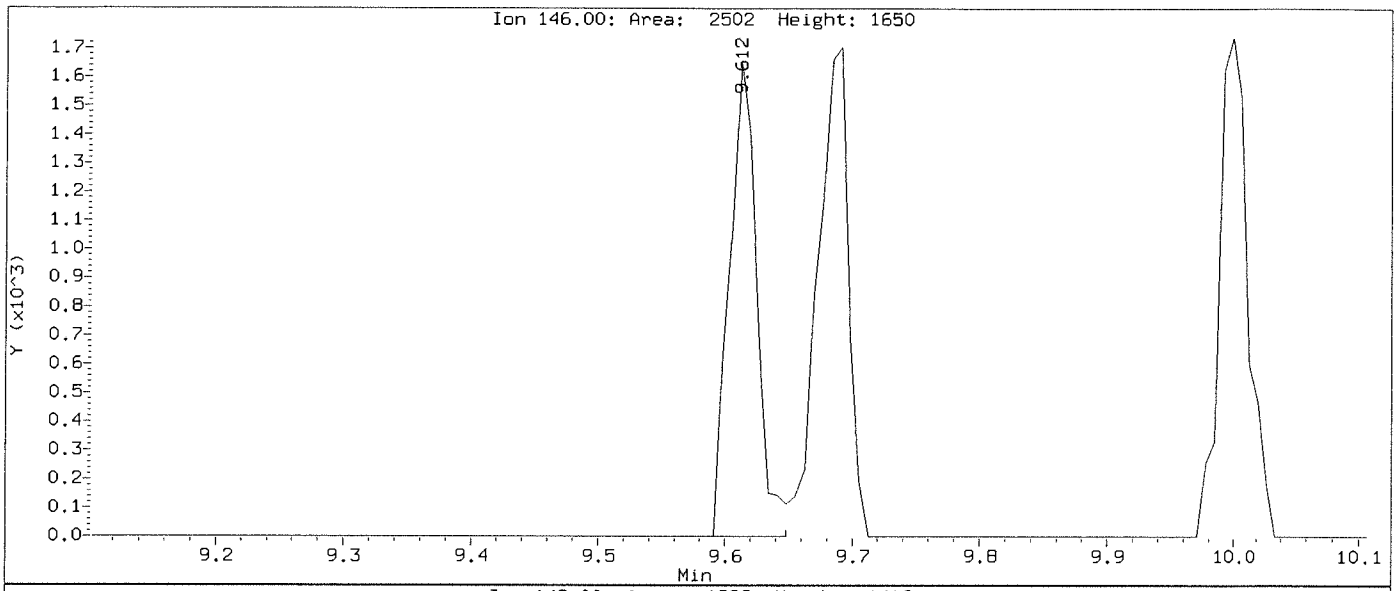
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

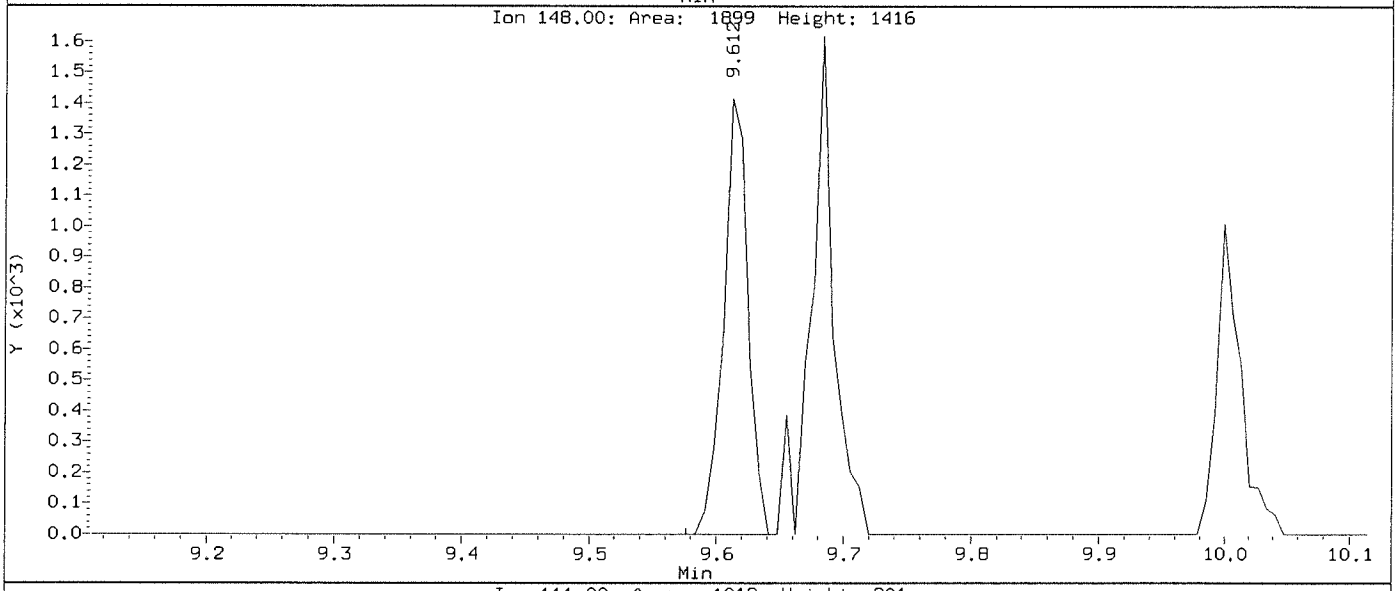


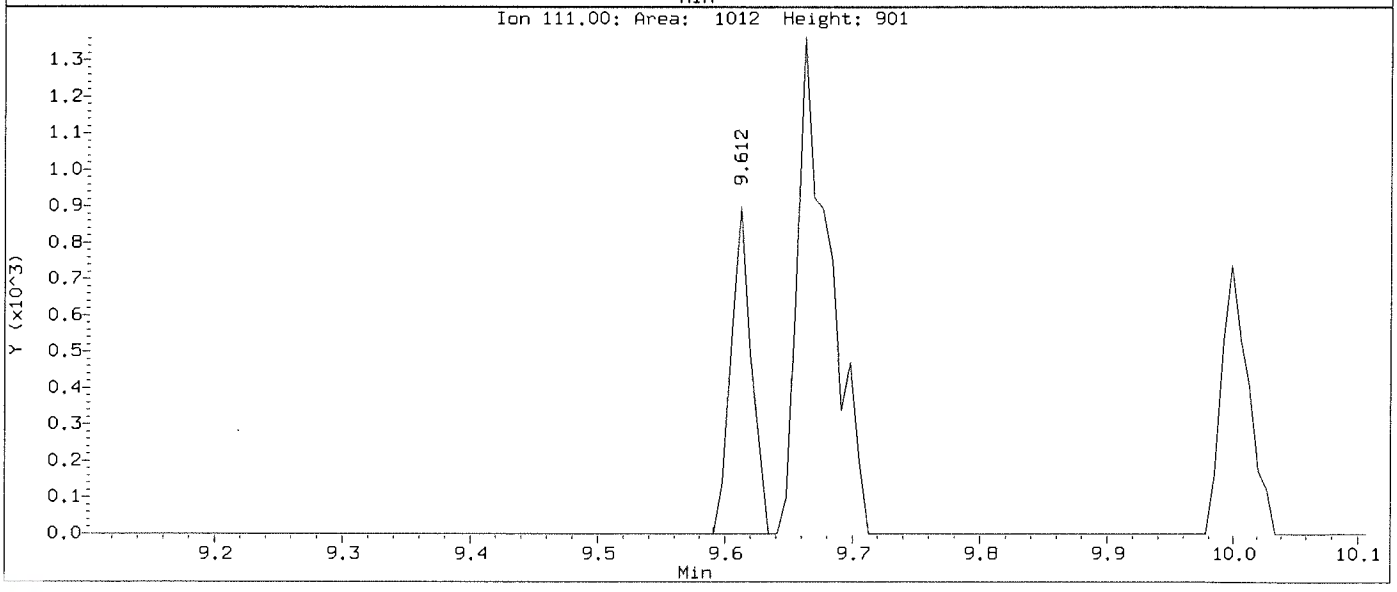


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1

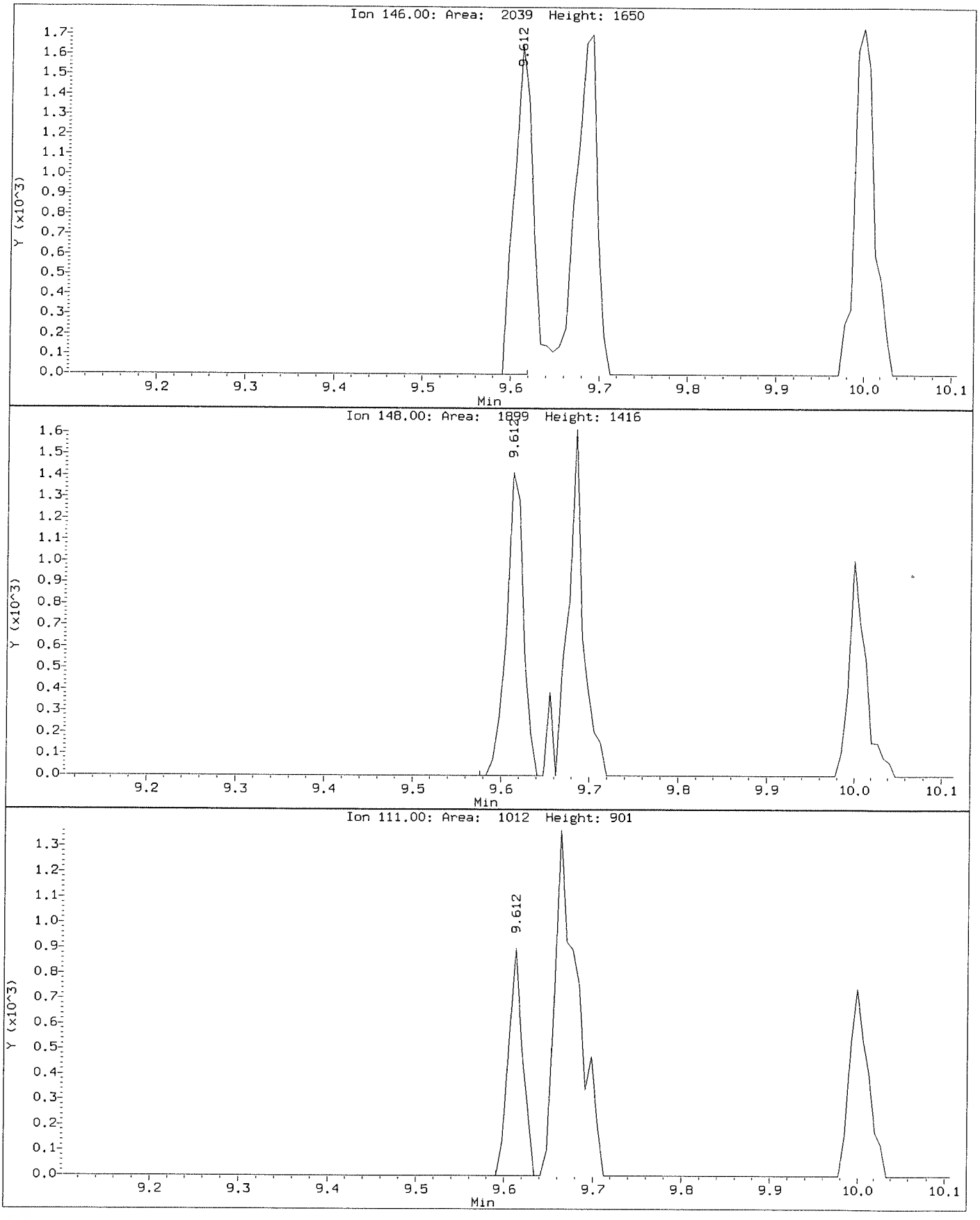






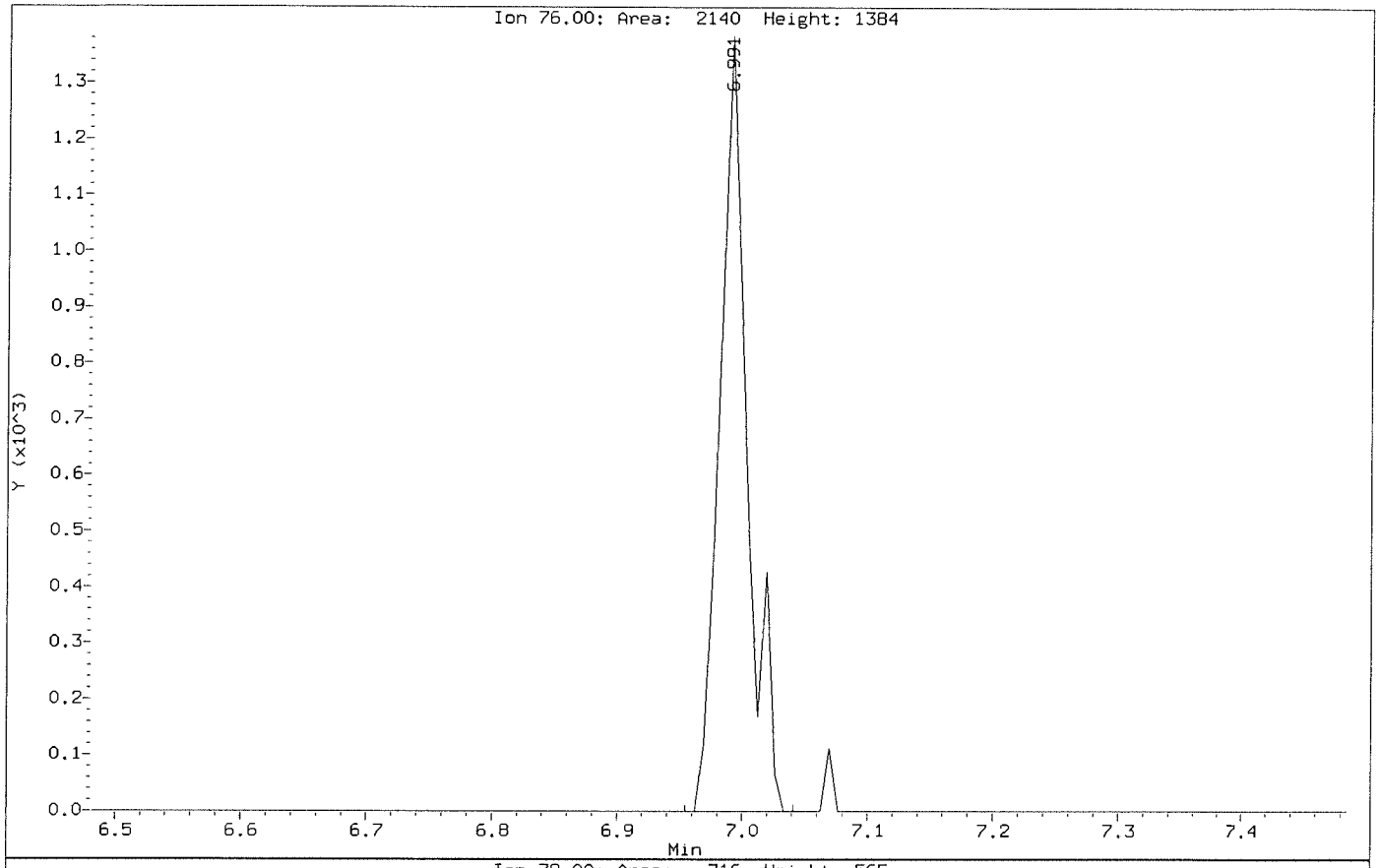
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Instrument: voa6.i
Client Sample ID: VSTD000.5

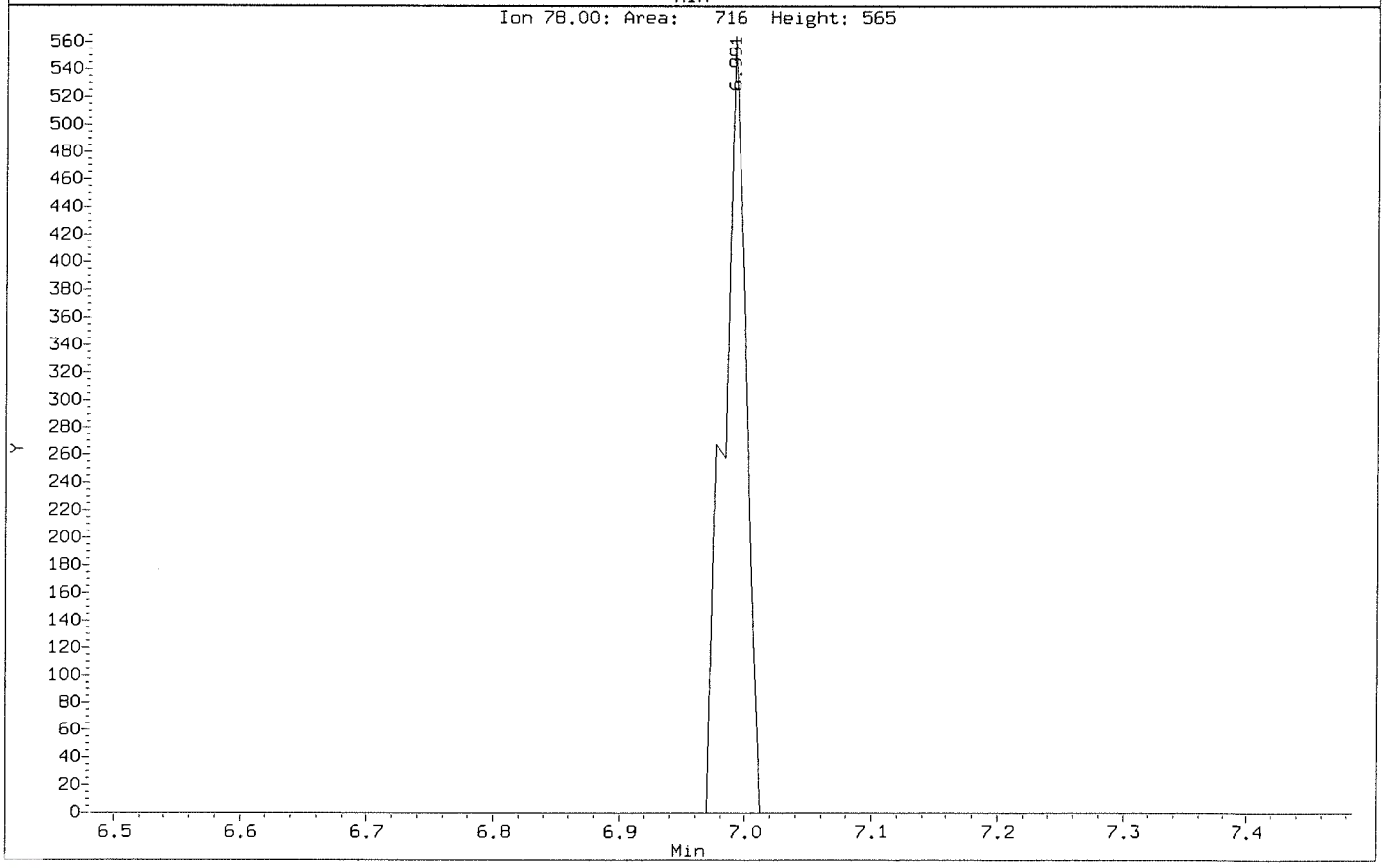
Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1



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Instrument: voa6.i
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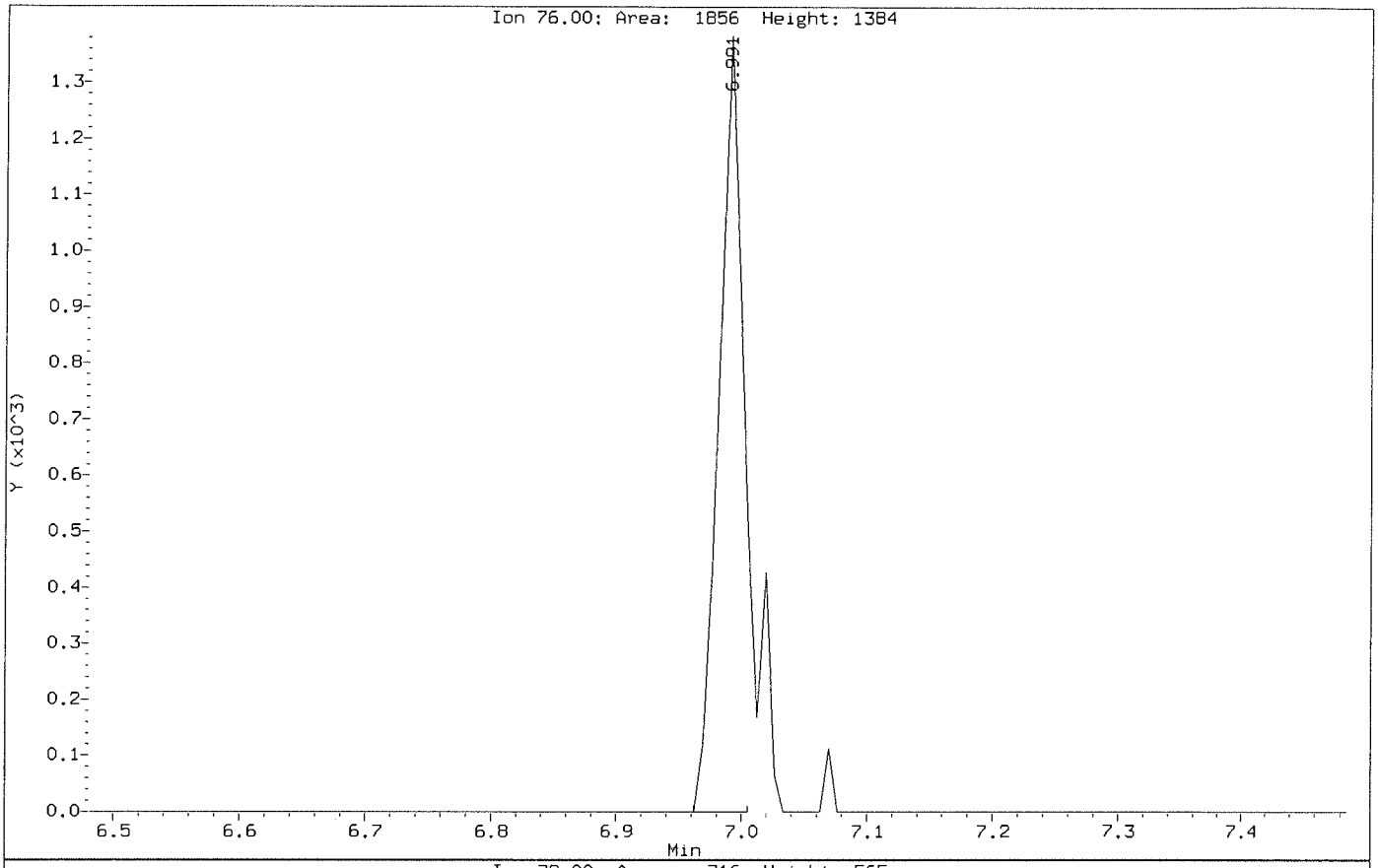
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

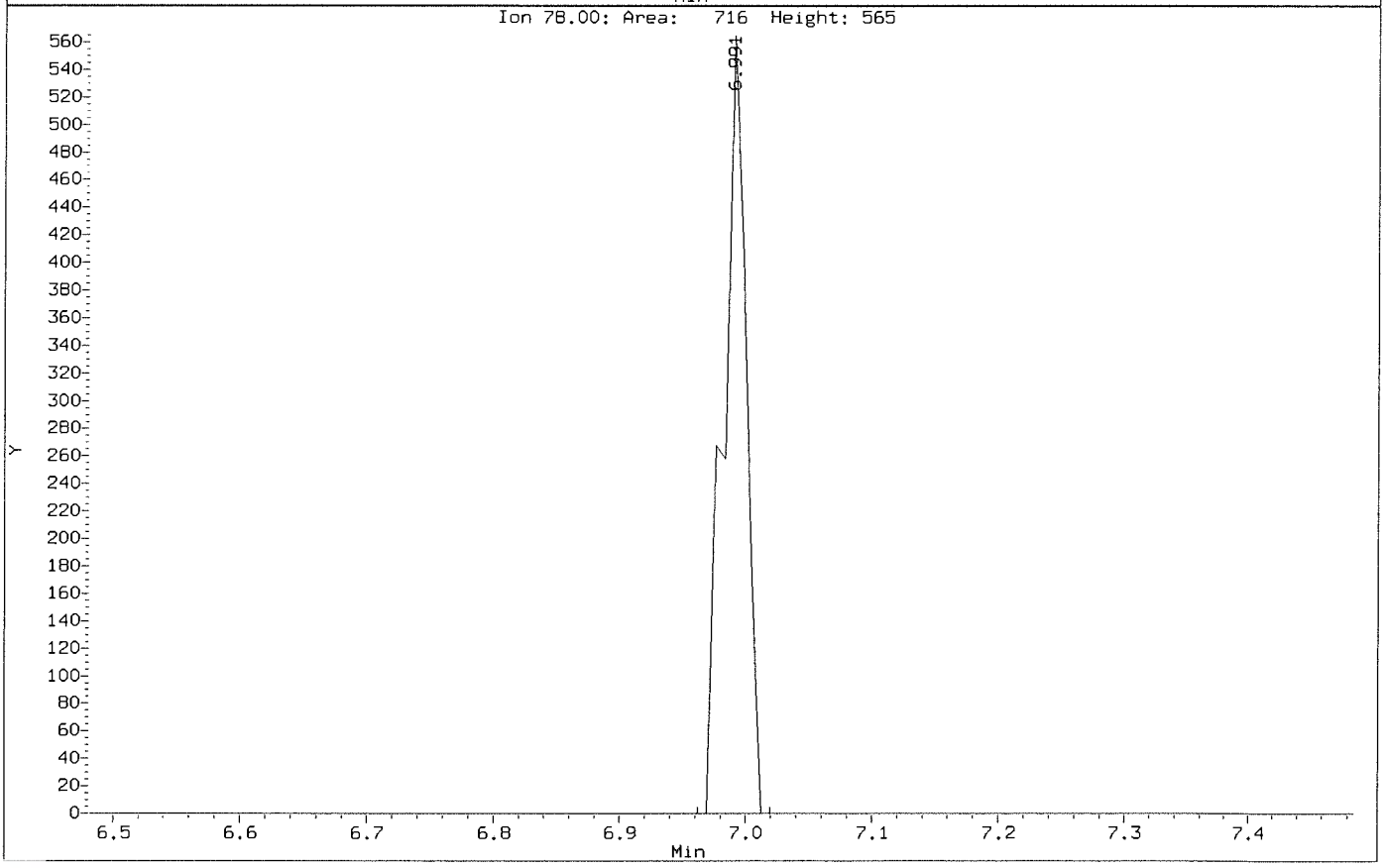




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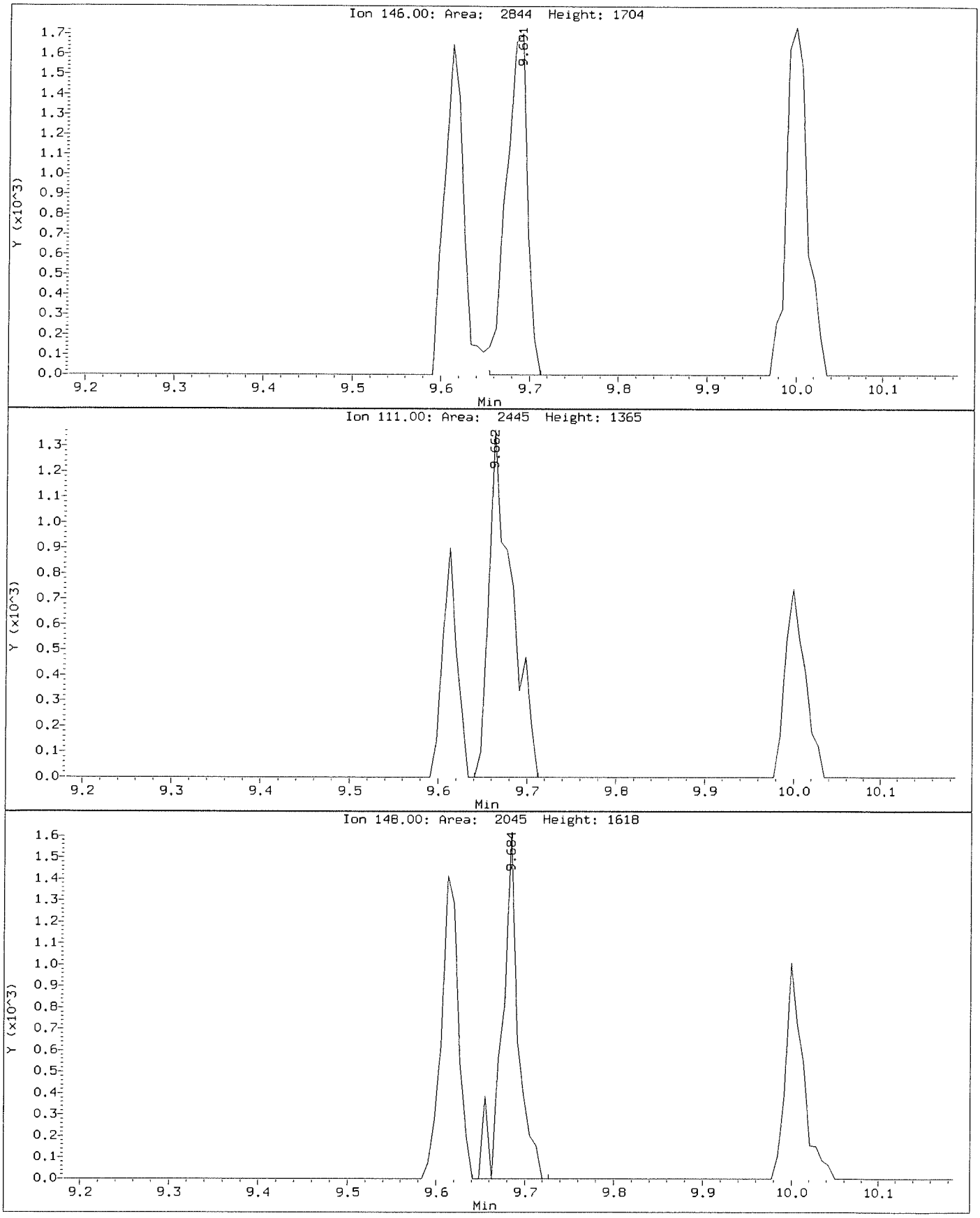
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9





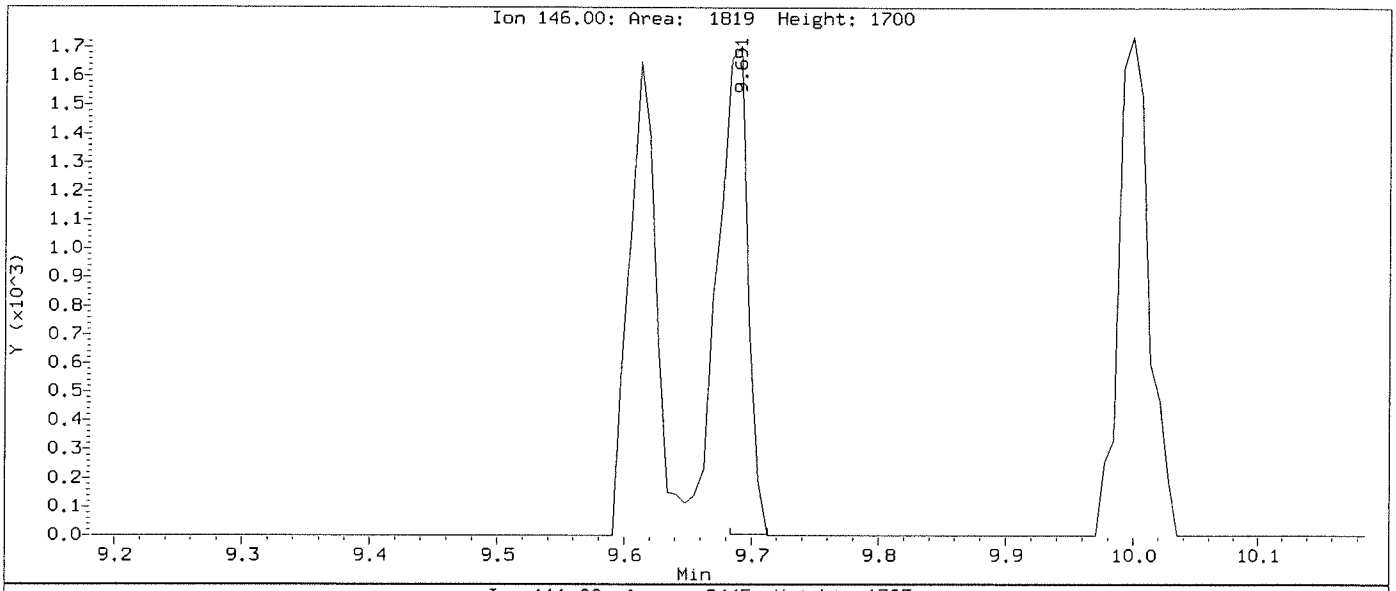
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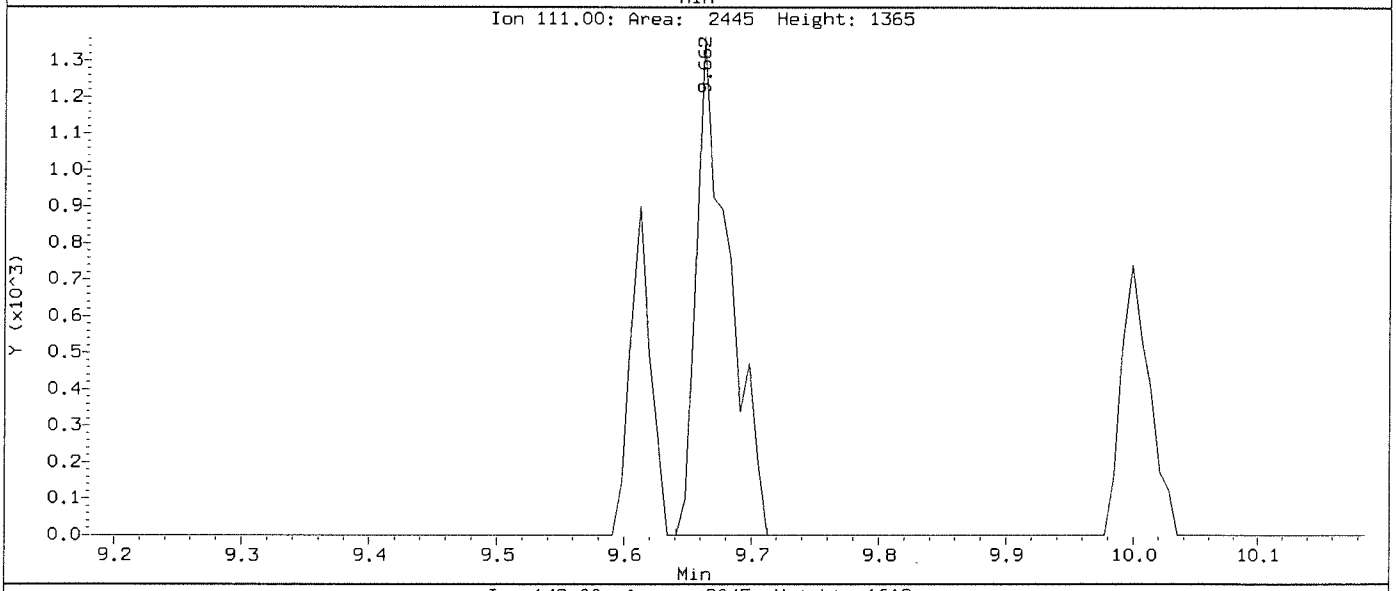
Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

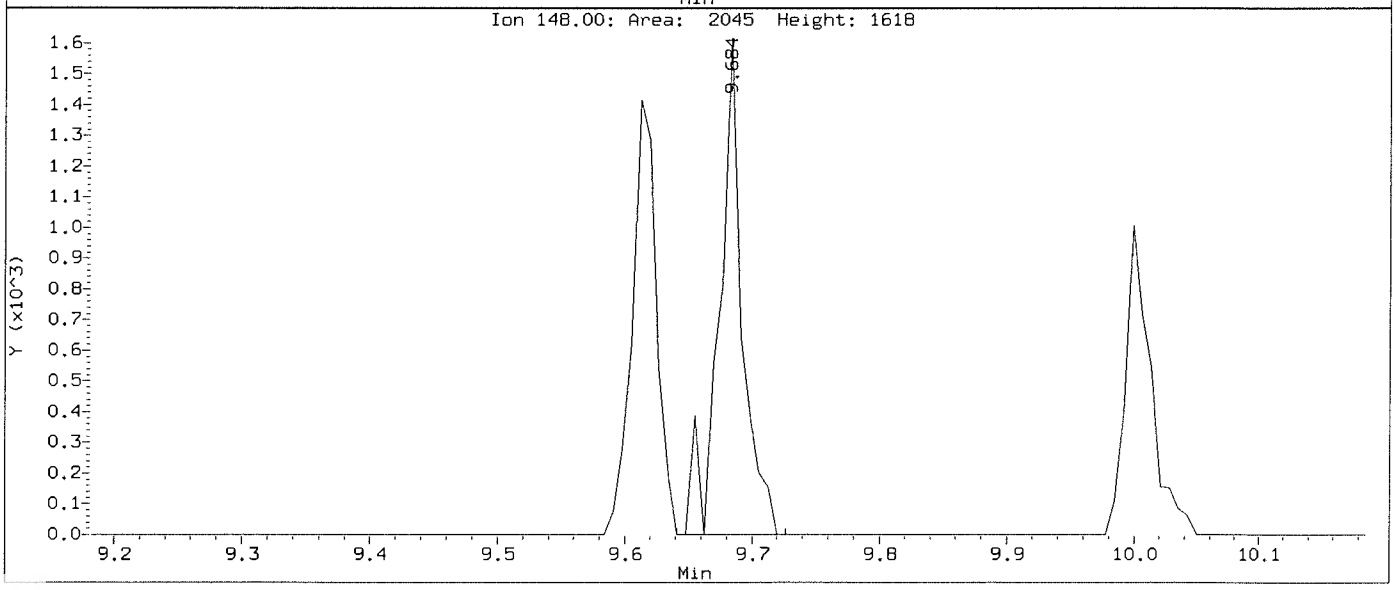


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Injection Date: 03-NOV-2020 12:43
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Client Sample ID: VSTD000.5

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

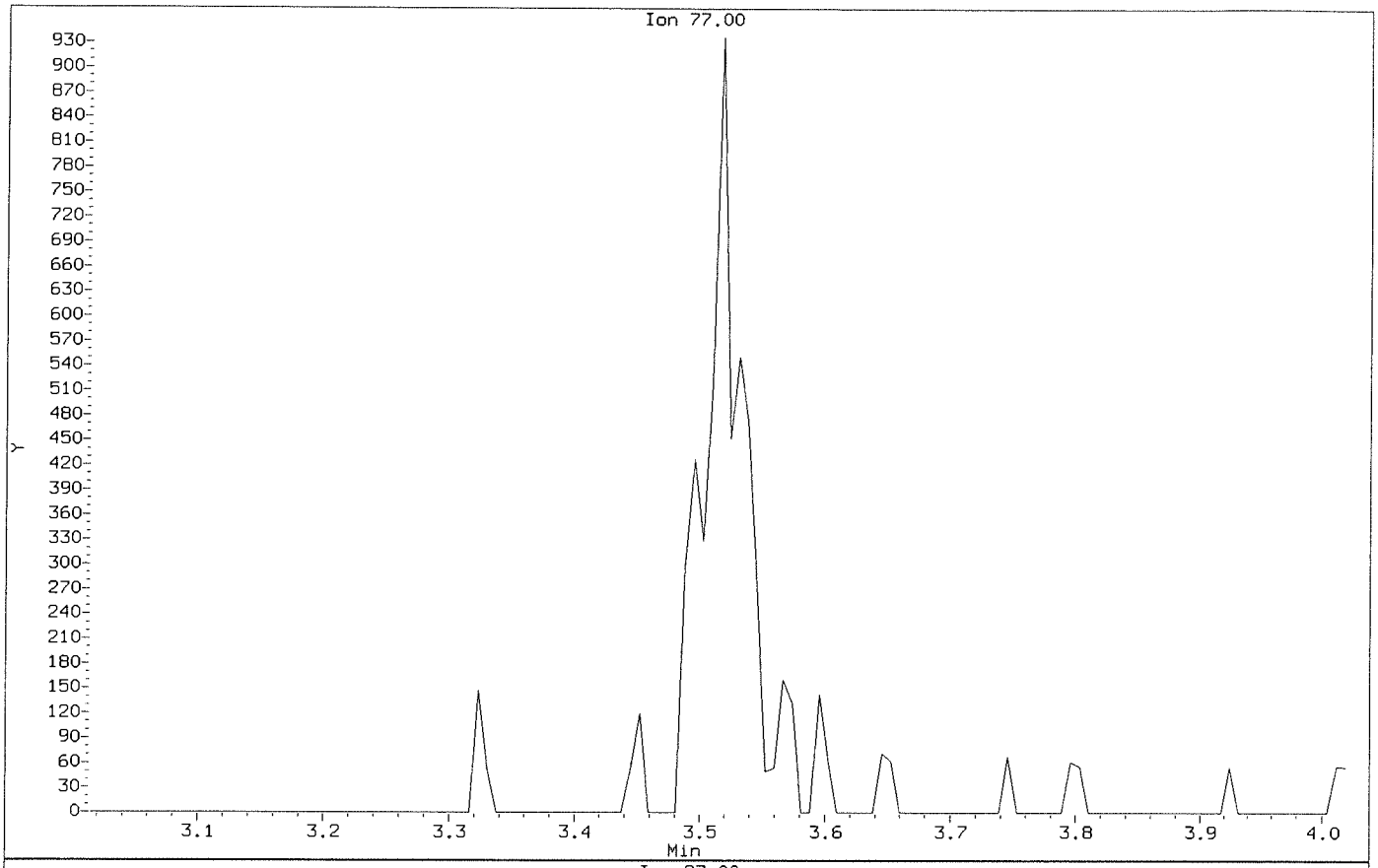


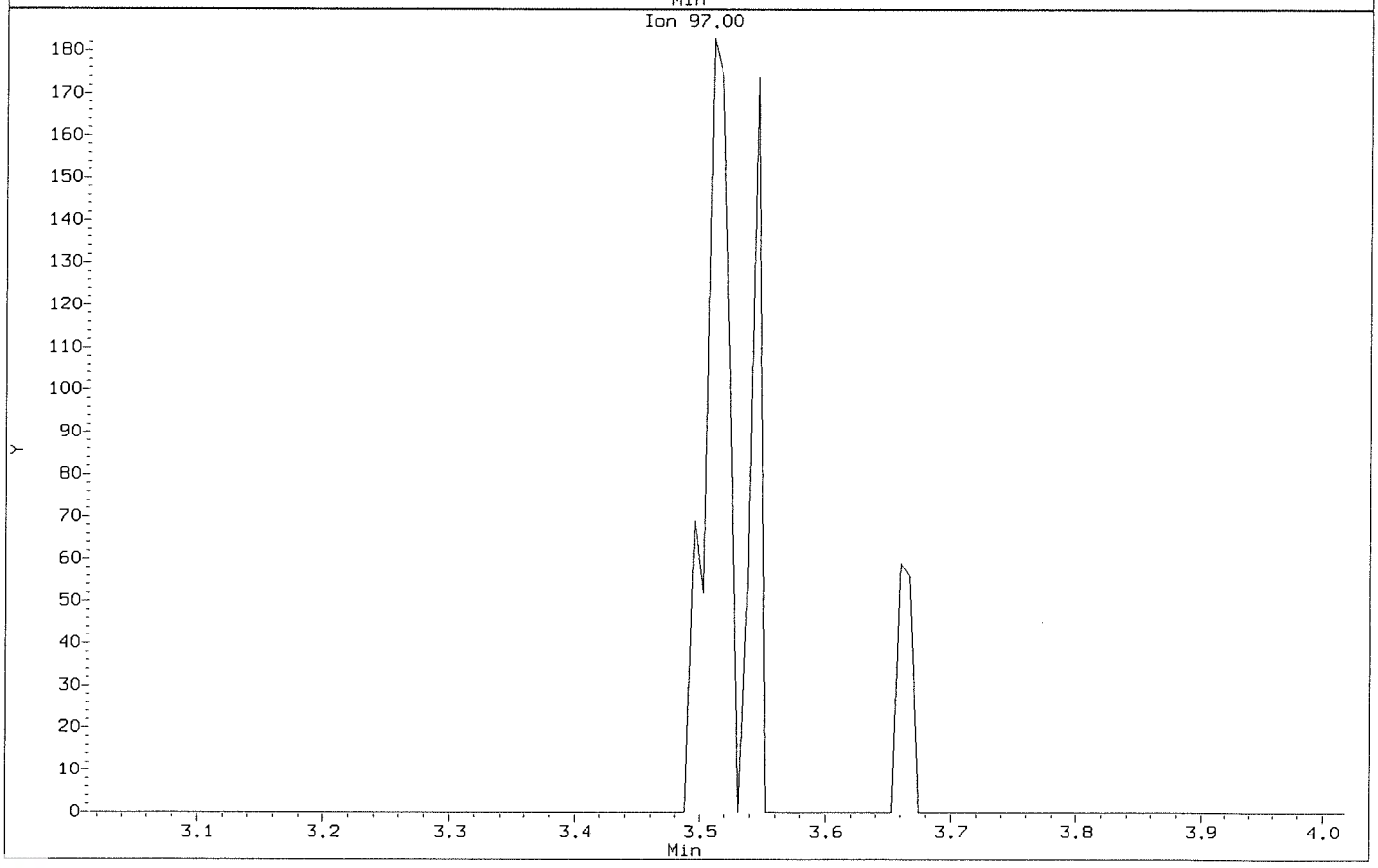




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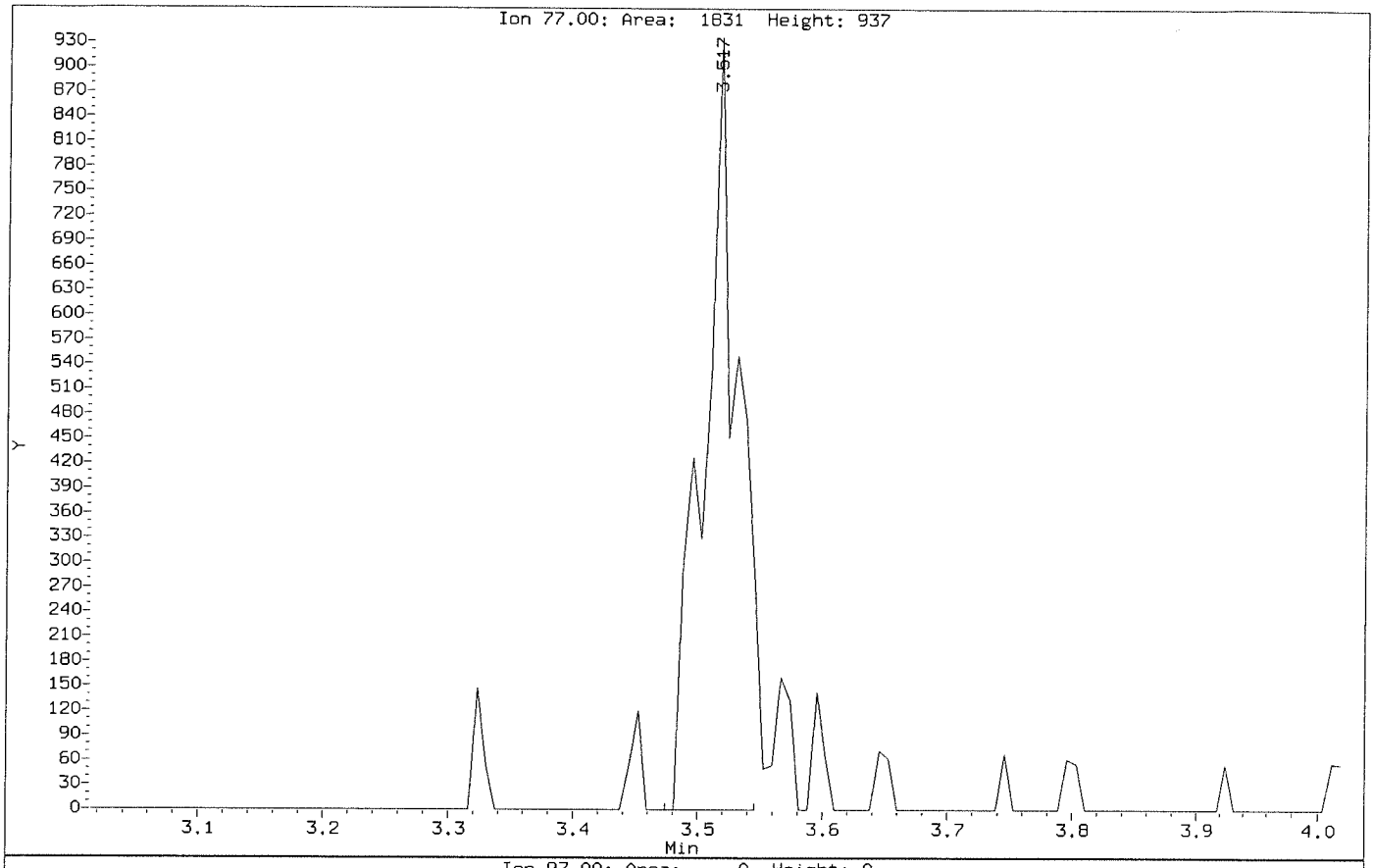
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

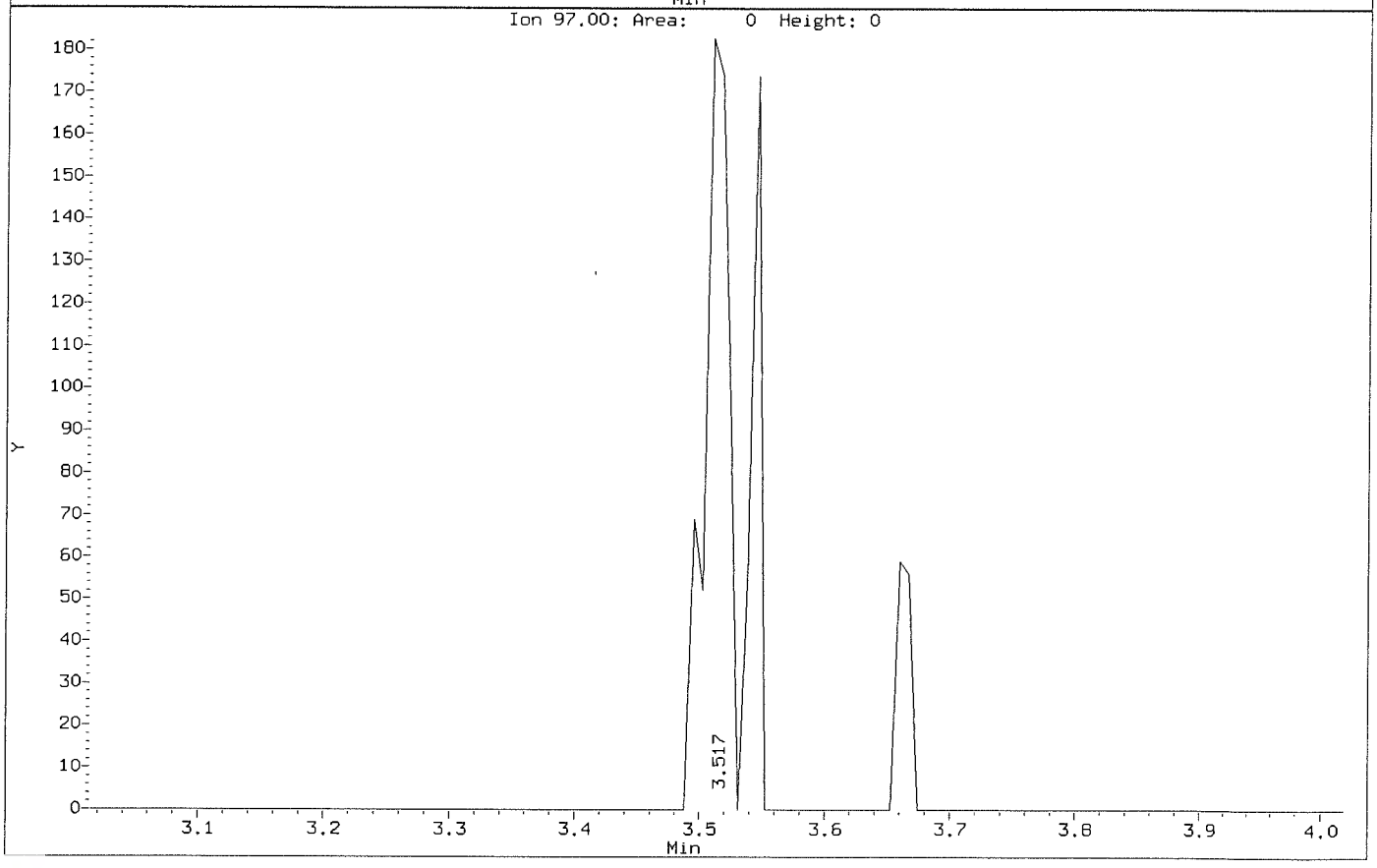




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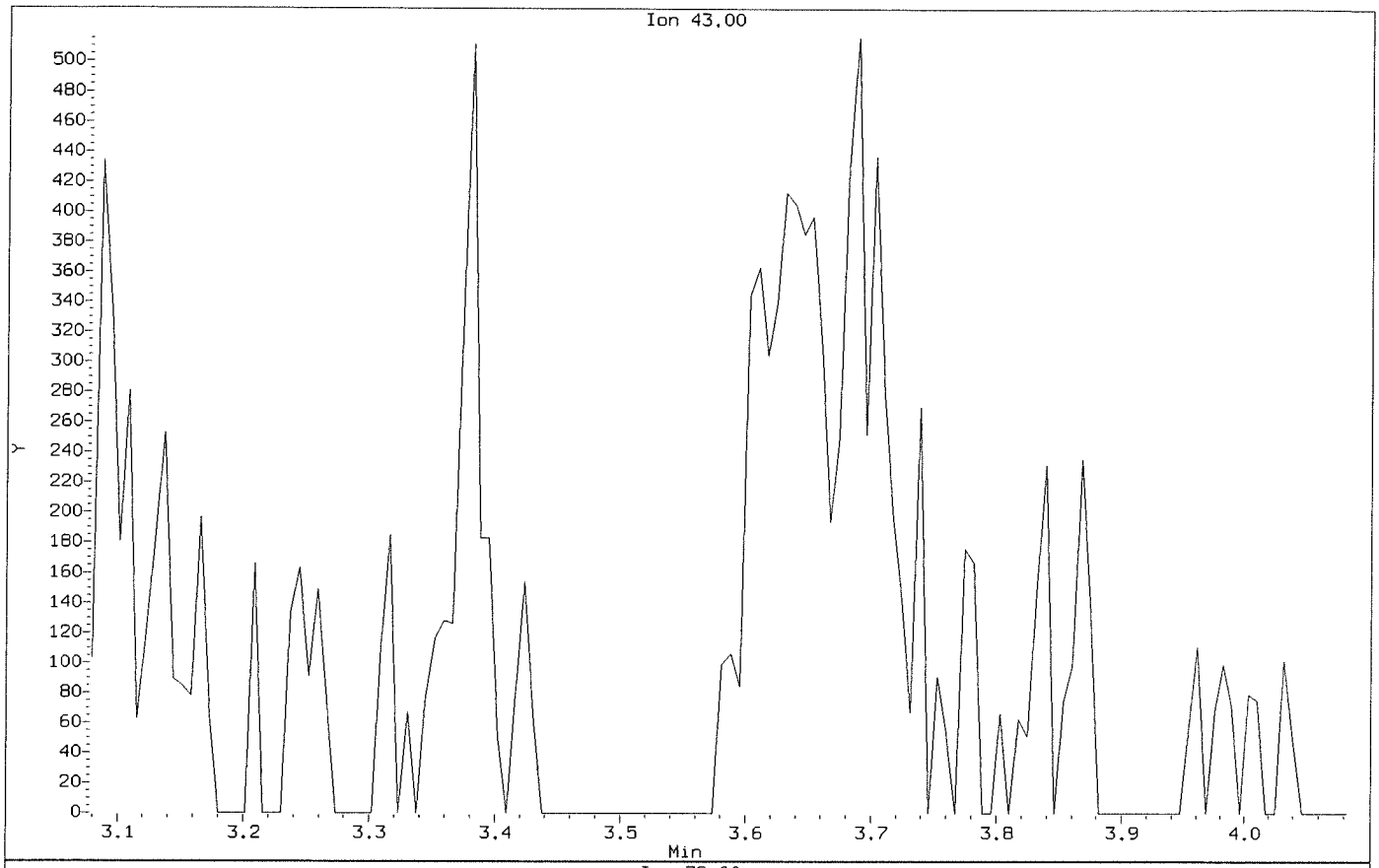
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

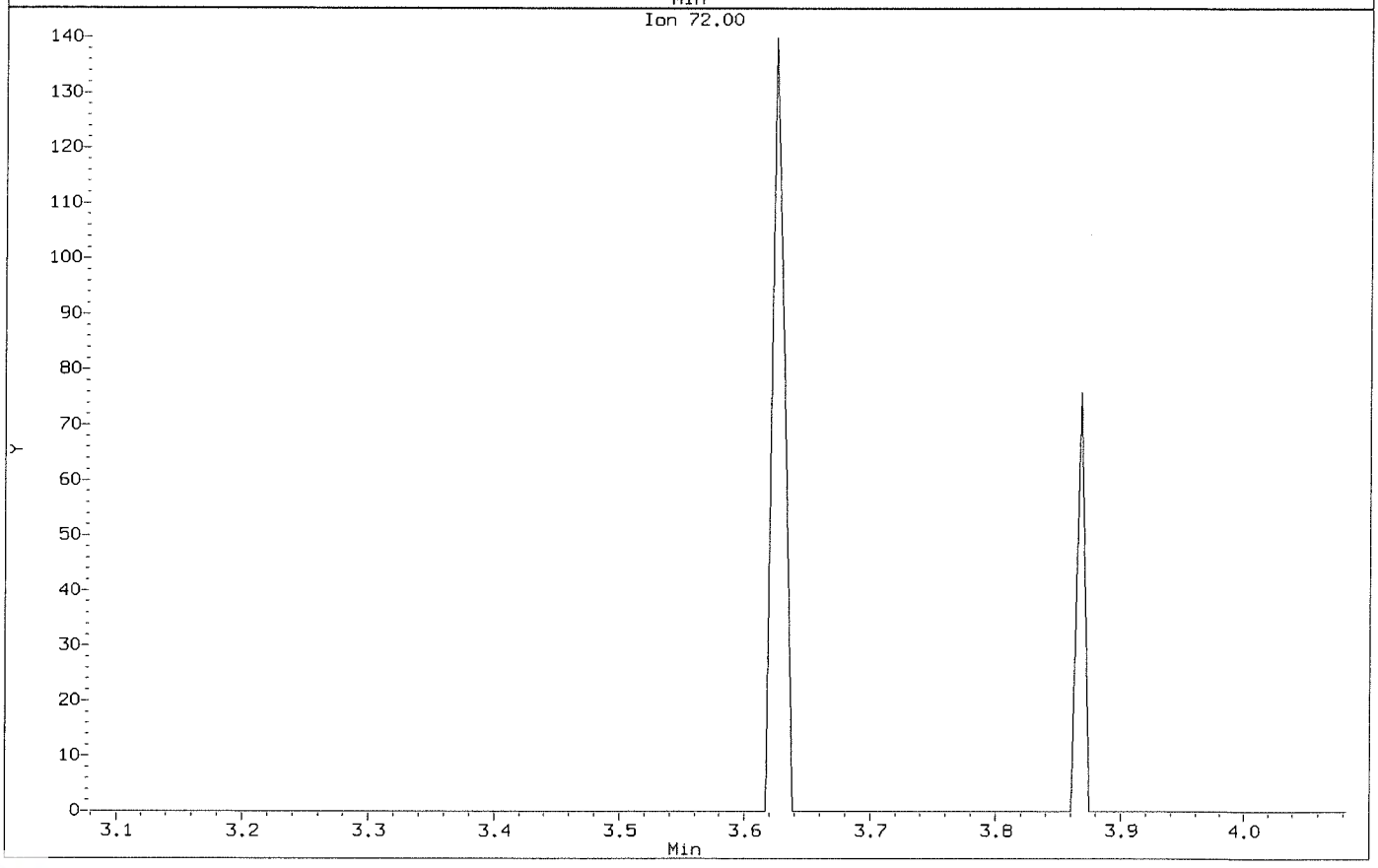




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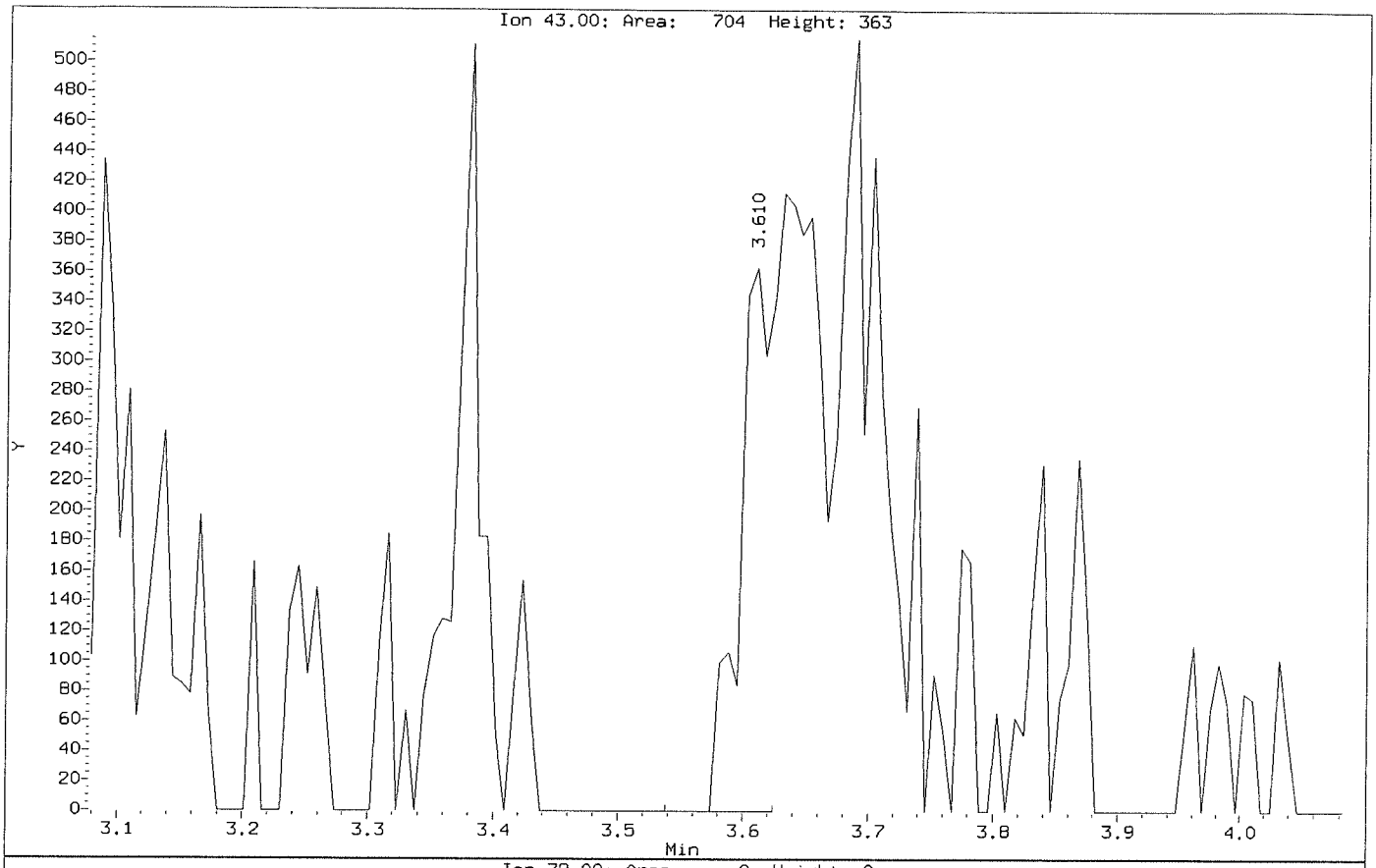
Compound: 2-Butanone
CAS Number: 78-93-3

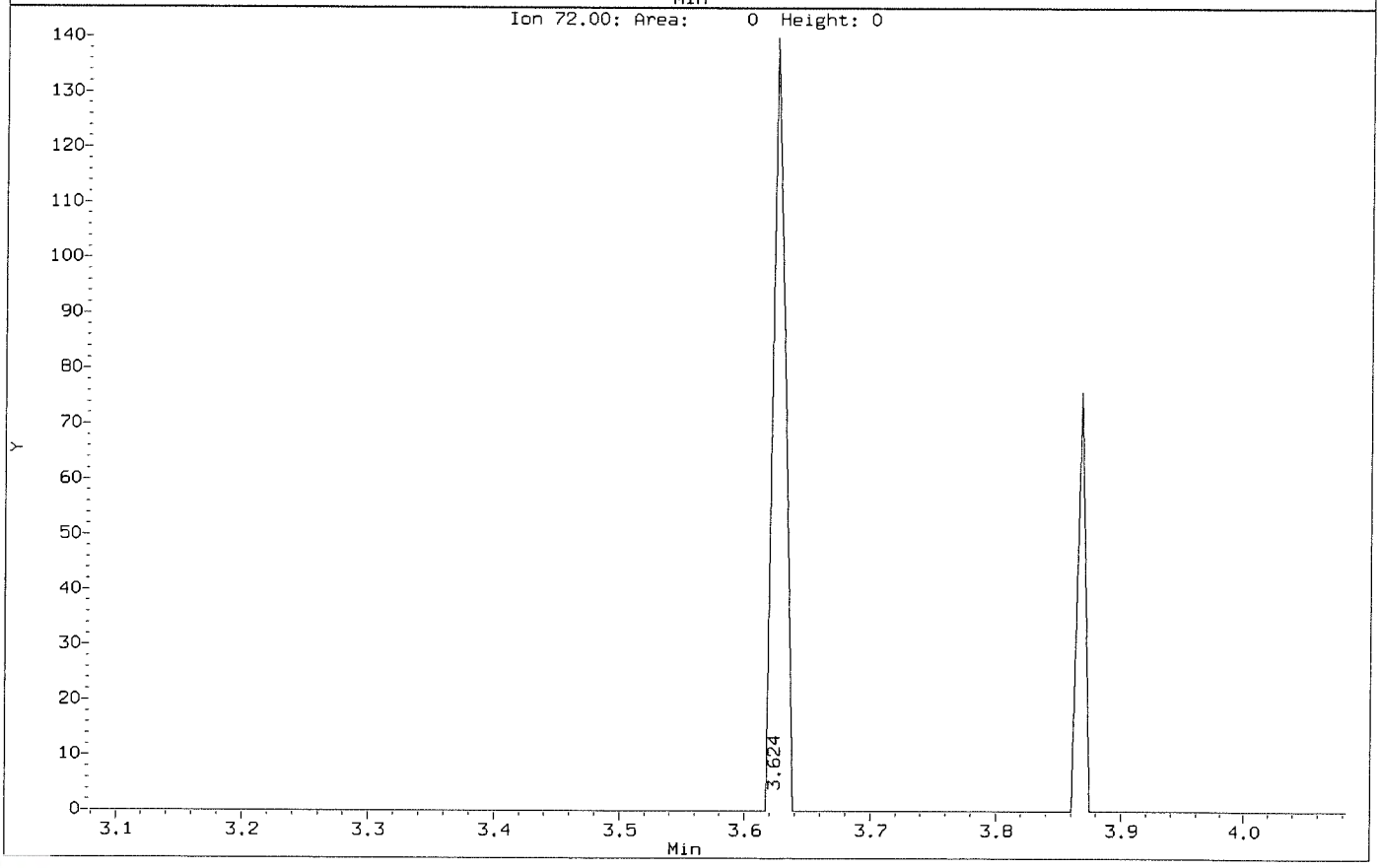




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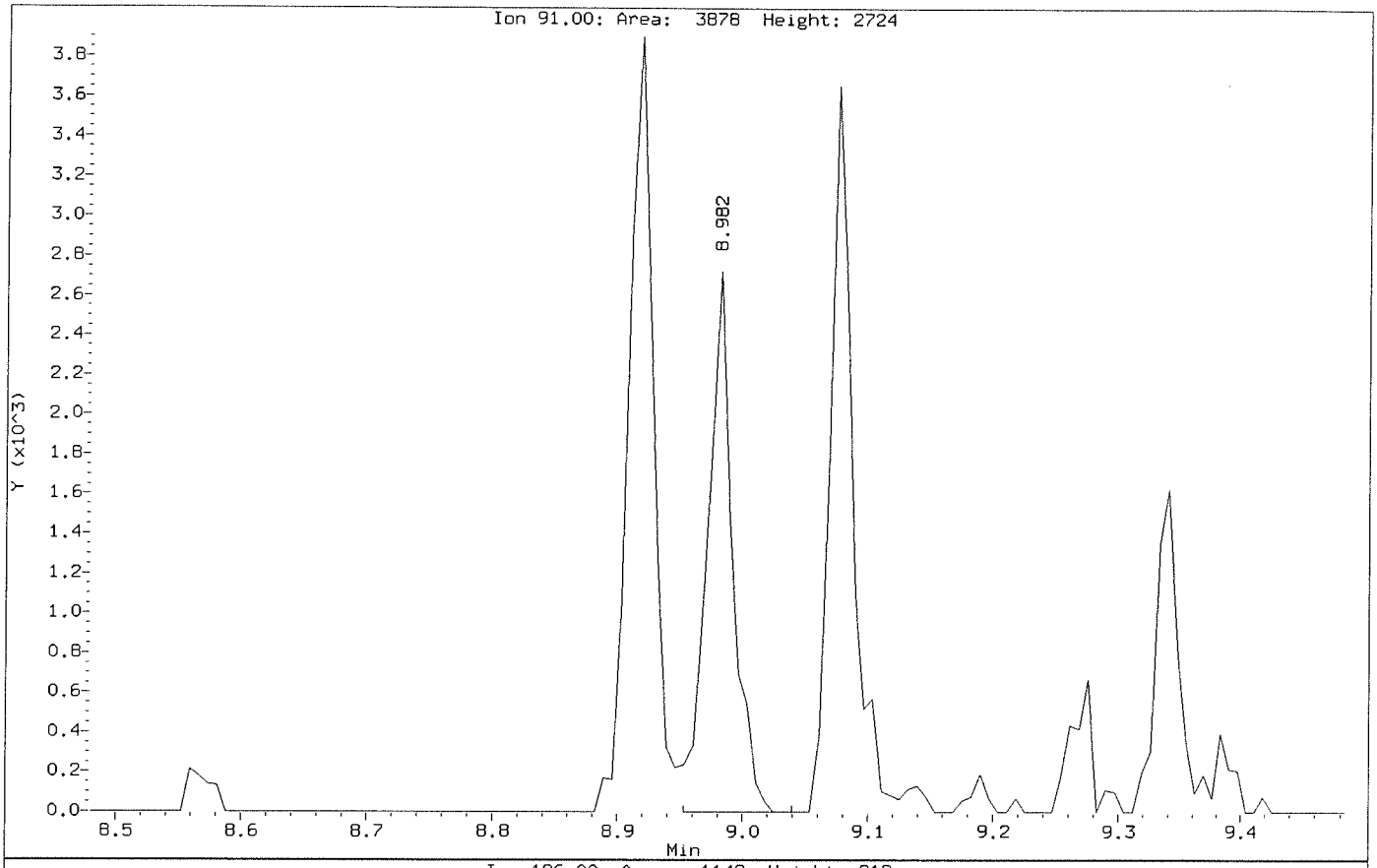
Compound: 2-Butanone
CAS Number: 78-93-3

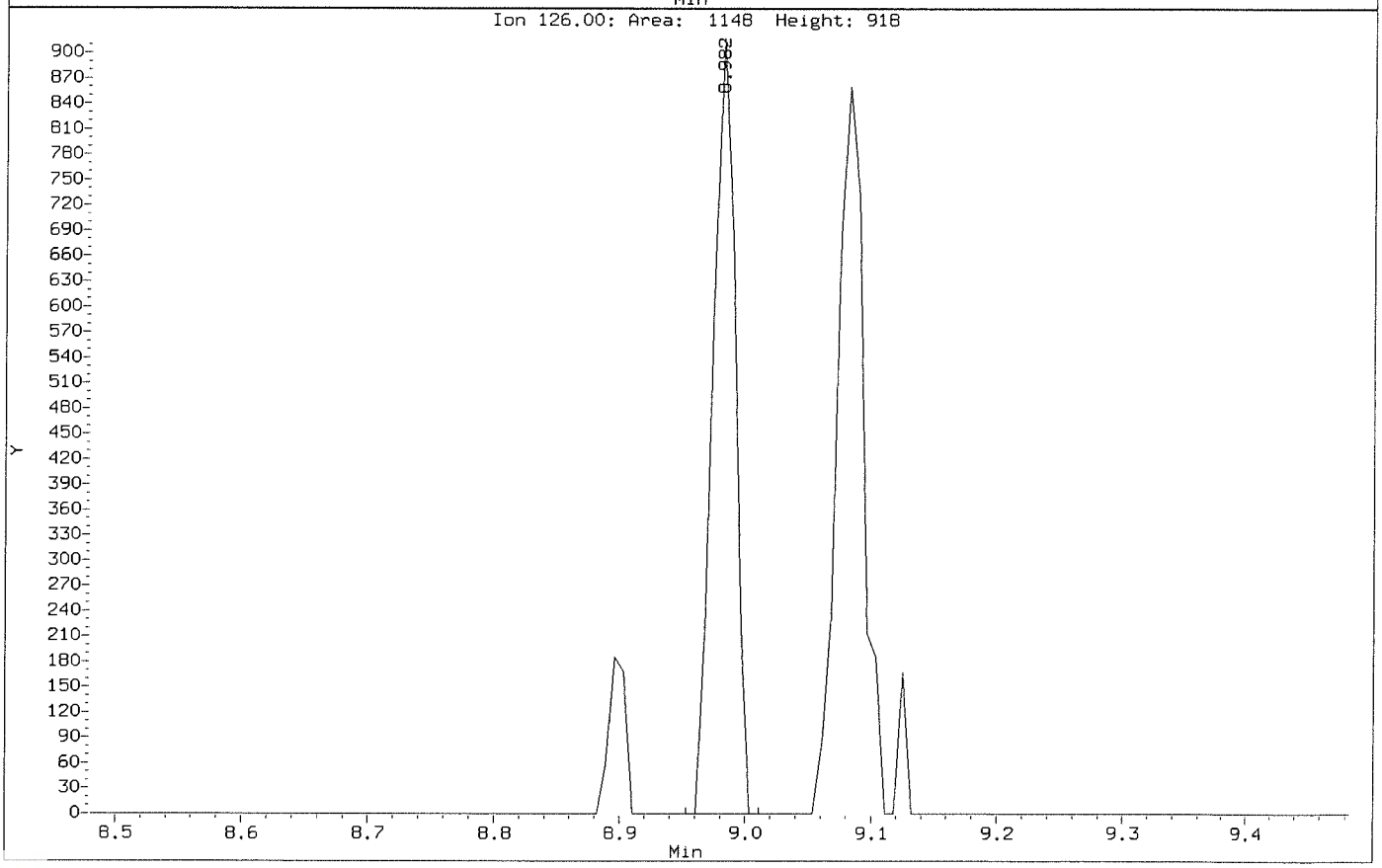




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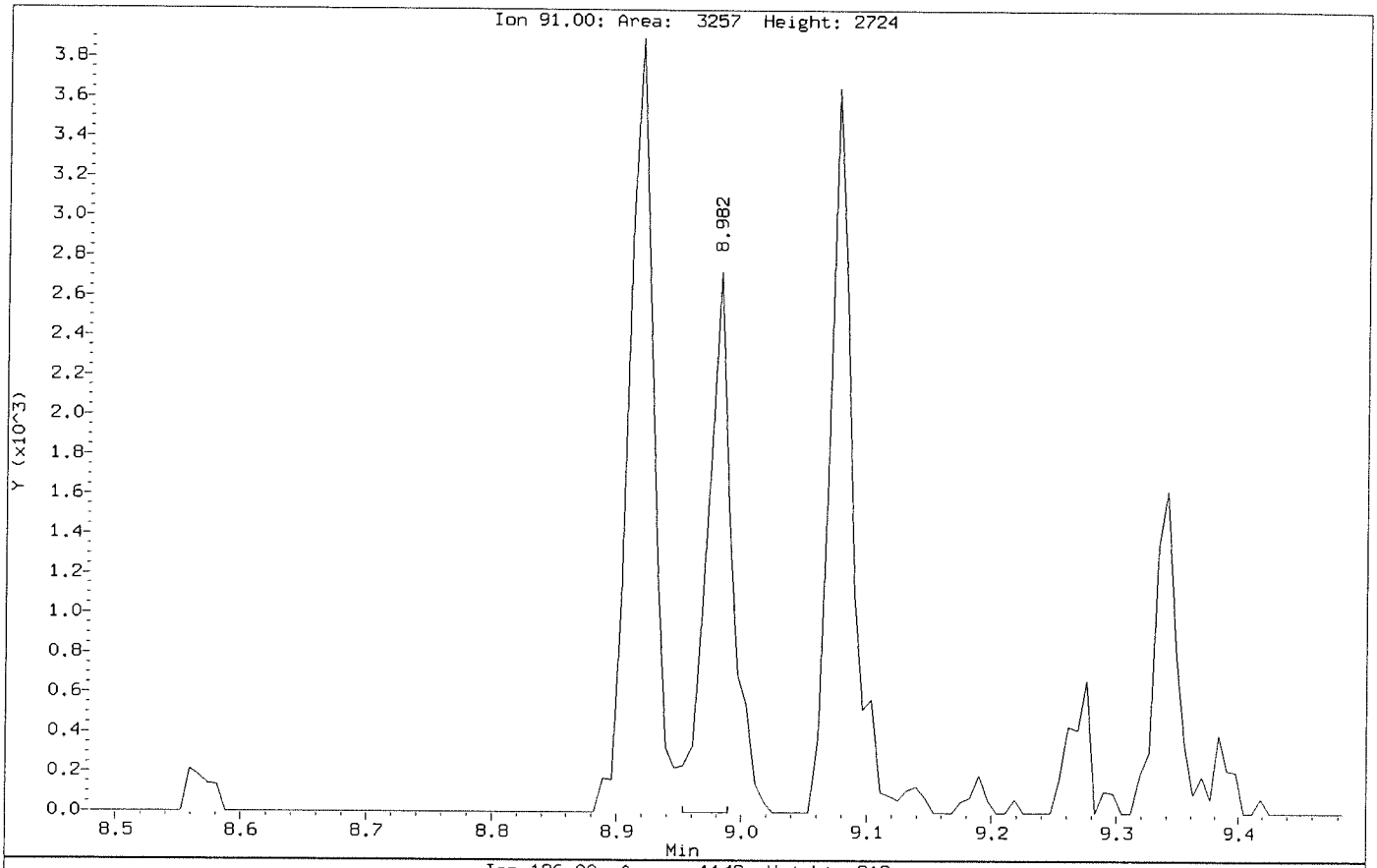
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

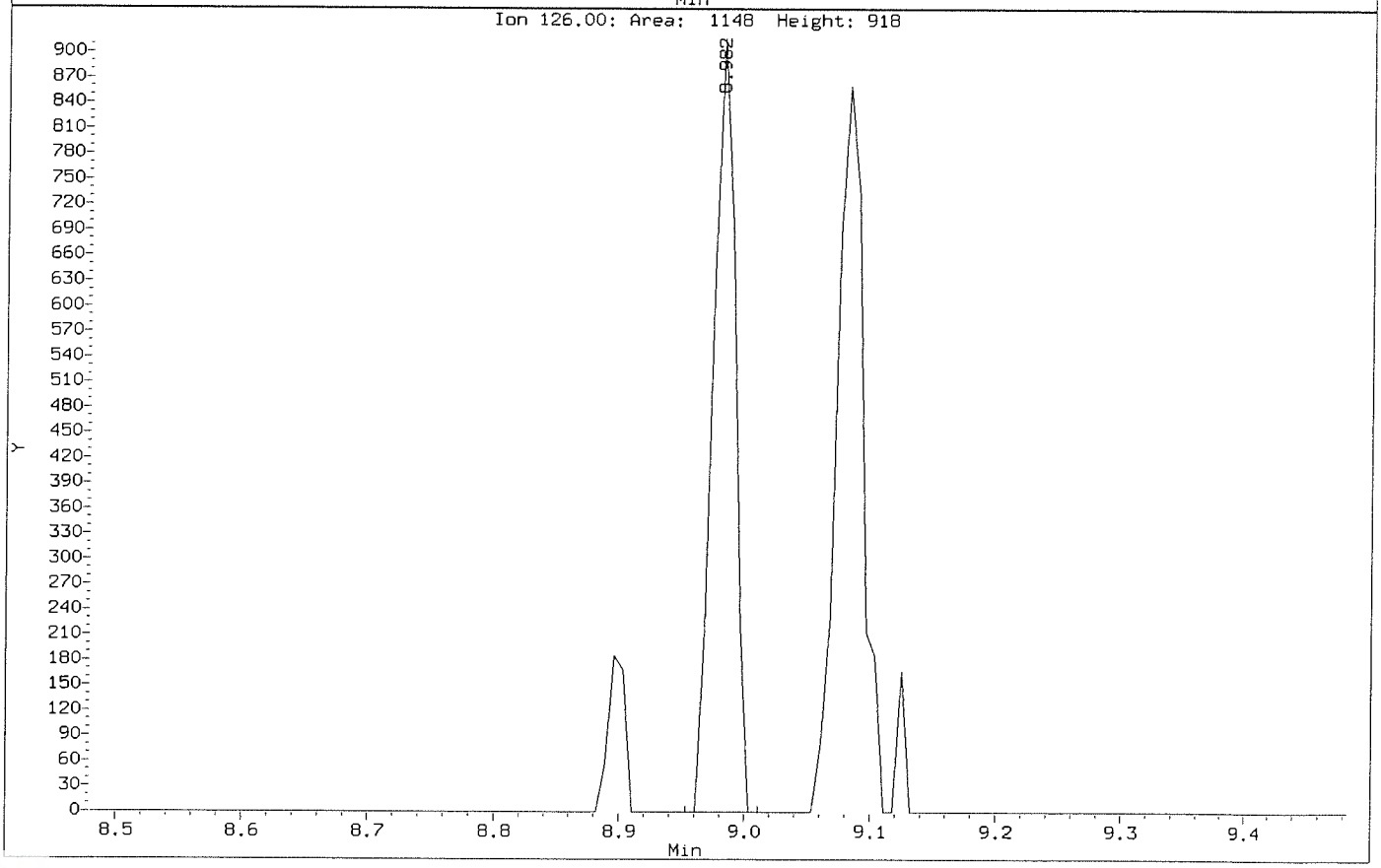




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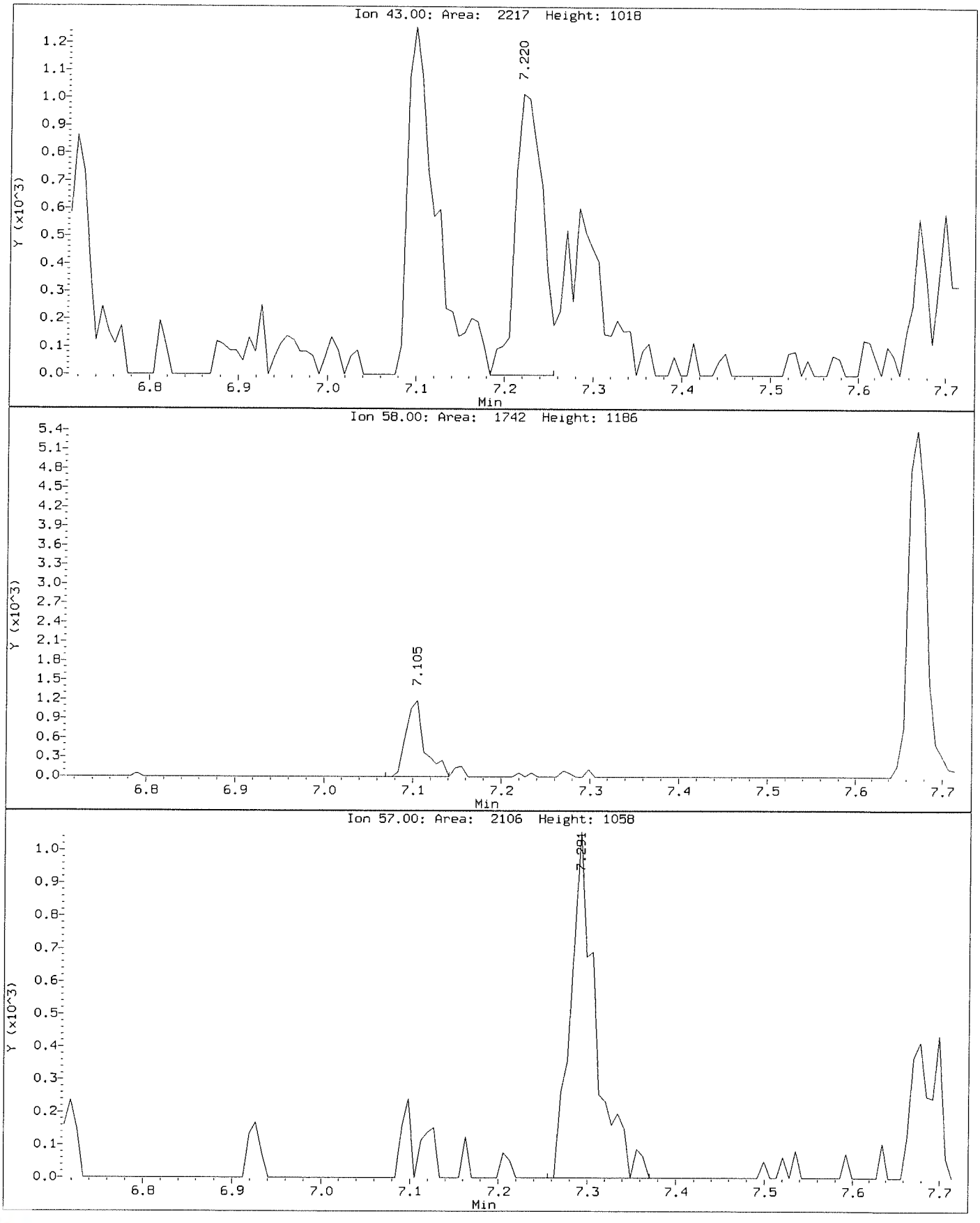
Compound: 2-Chlorotoluene
CAS Number: 95-49-8





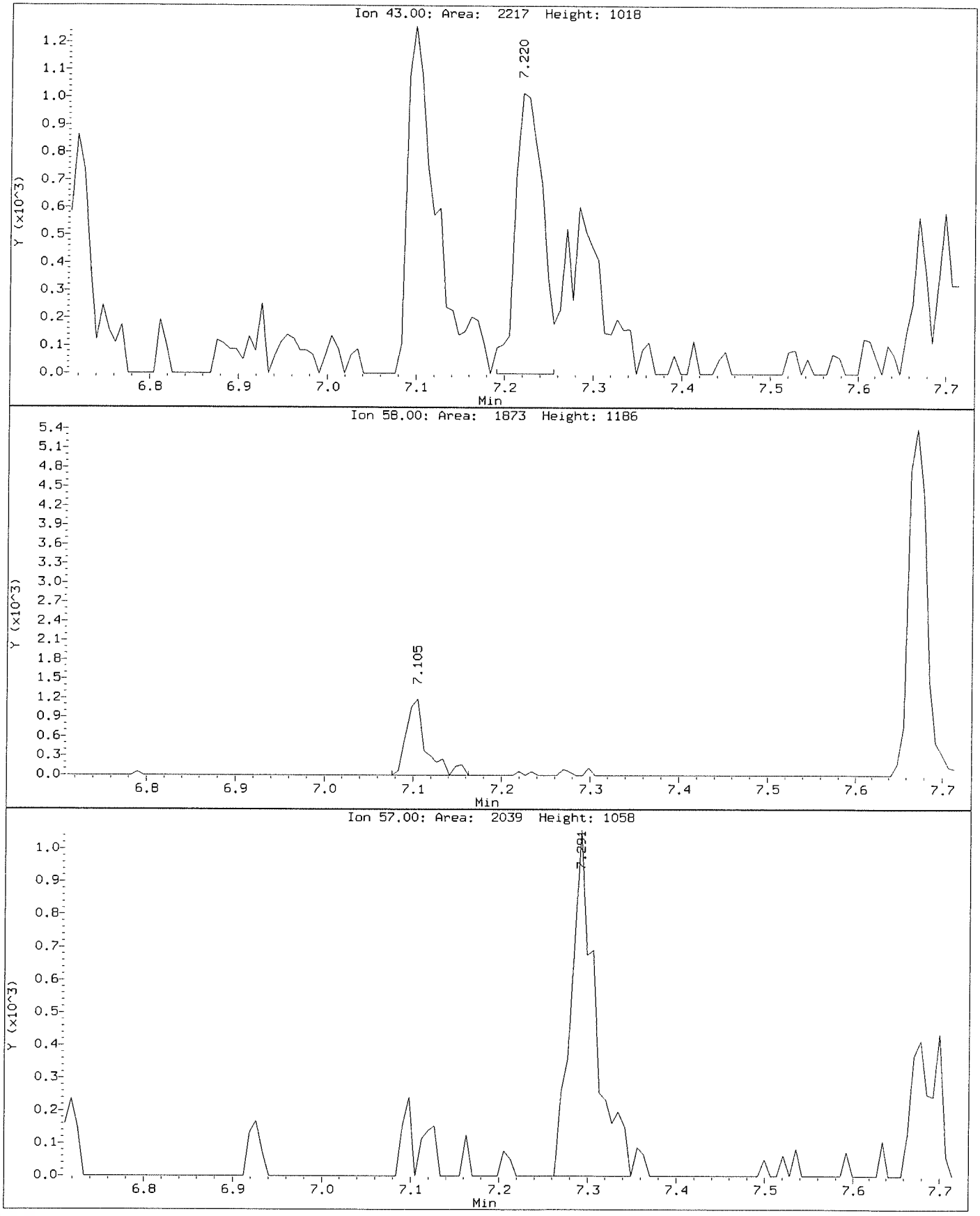
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6



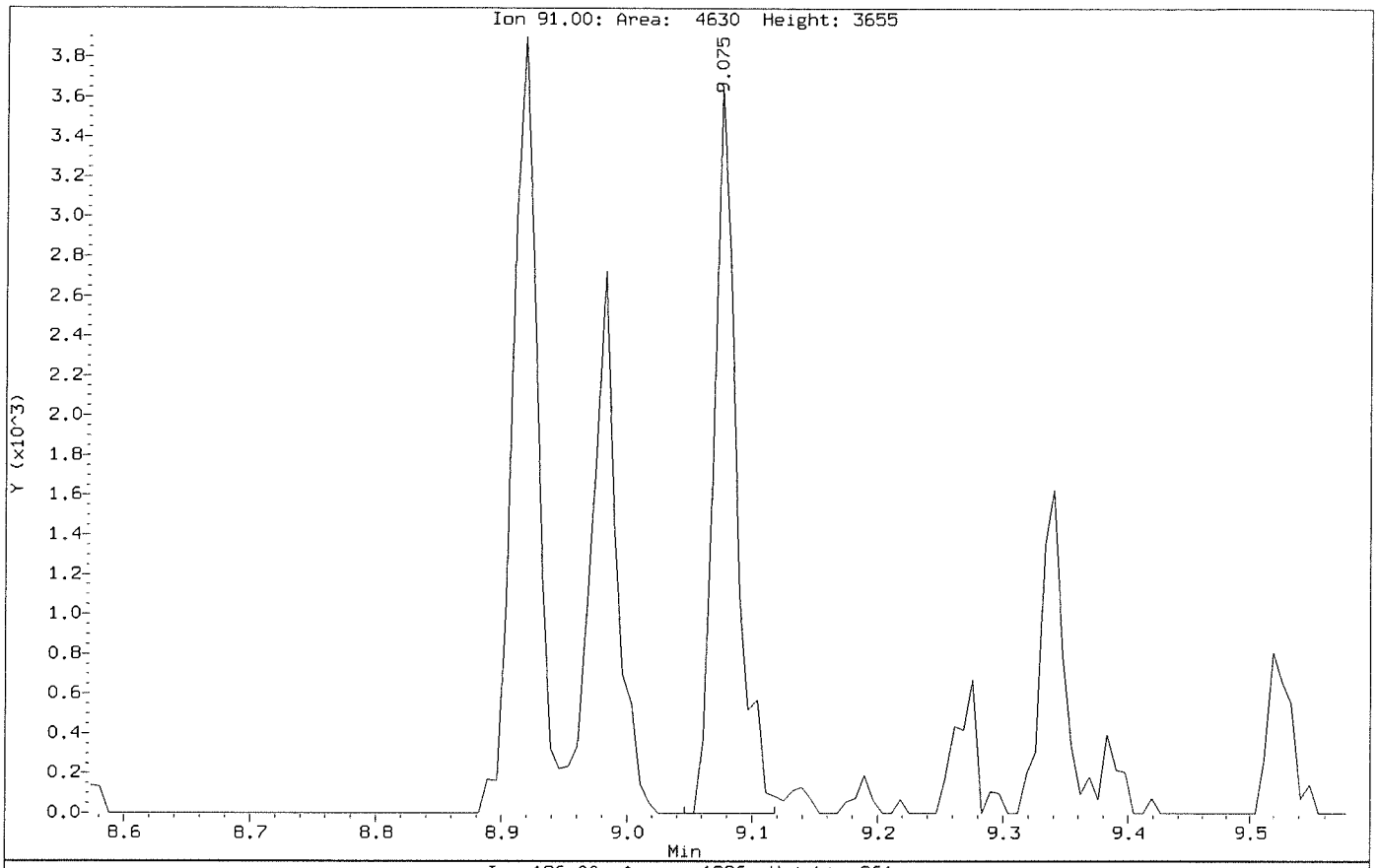
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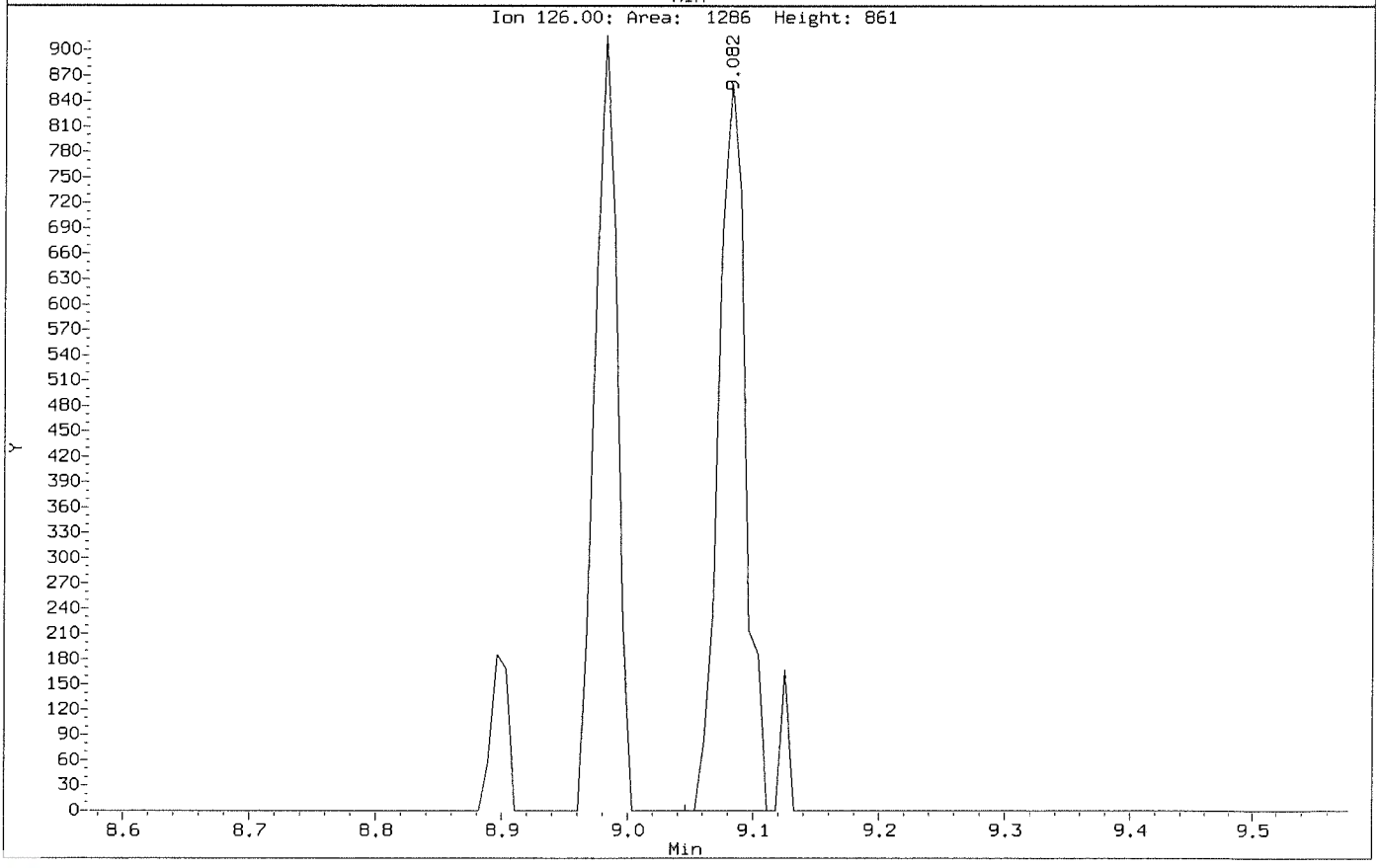
Compound: 2-Hexanone
CAS Number: 591-78-6



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Client Sample ID: VSTD000.5

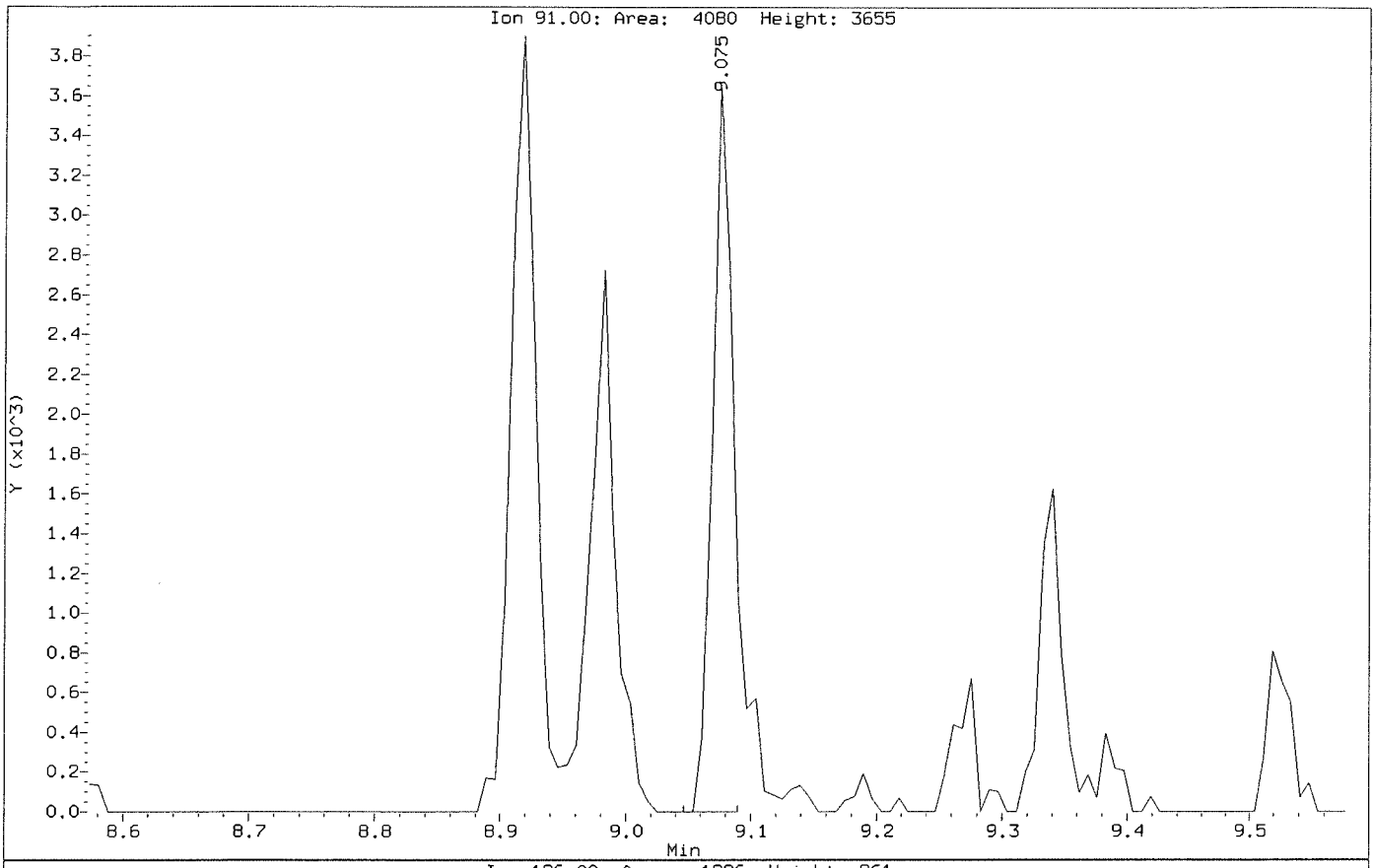
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

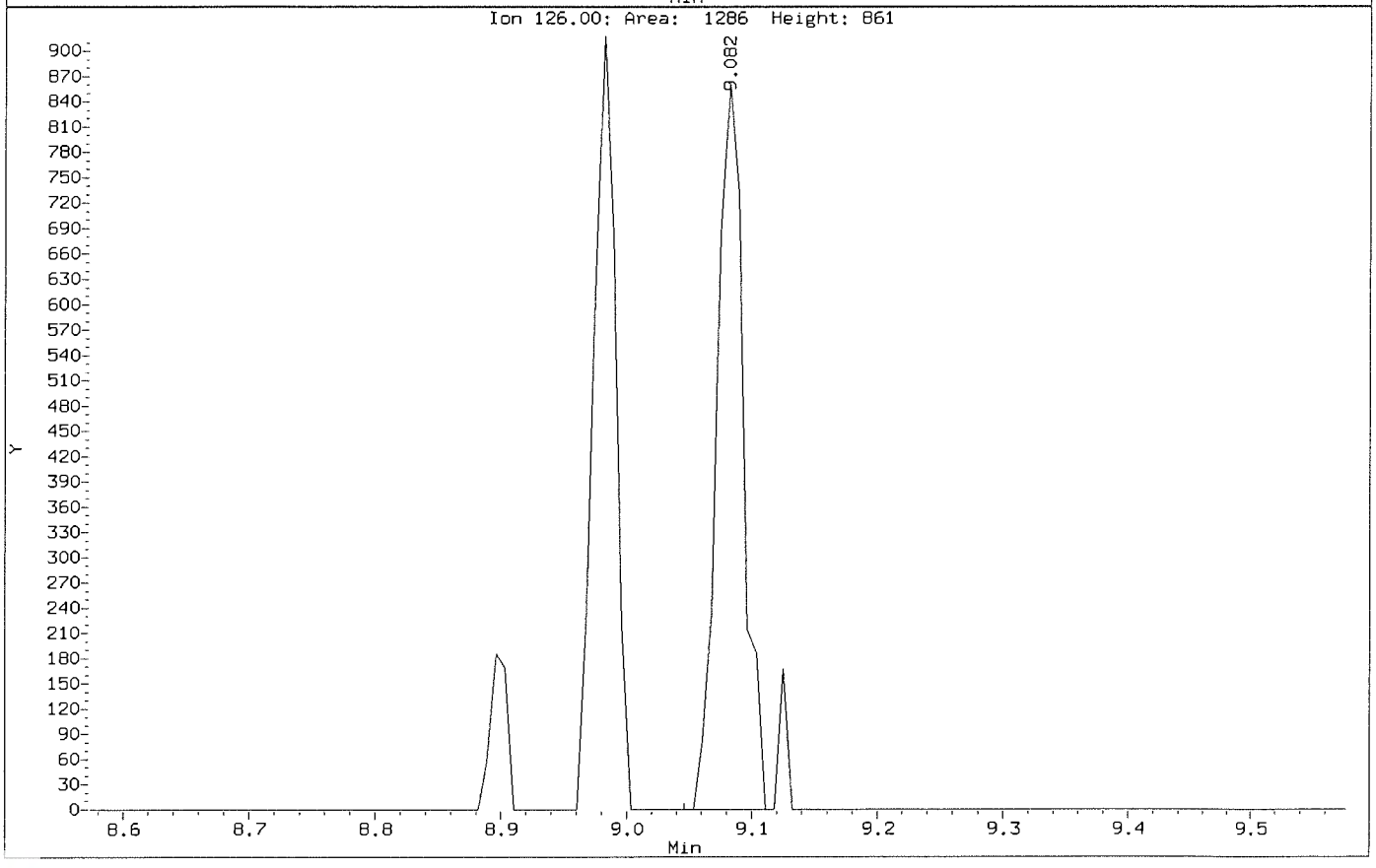




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Client Sample ID: VSTD000.5

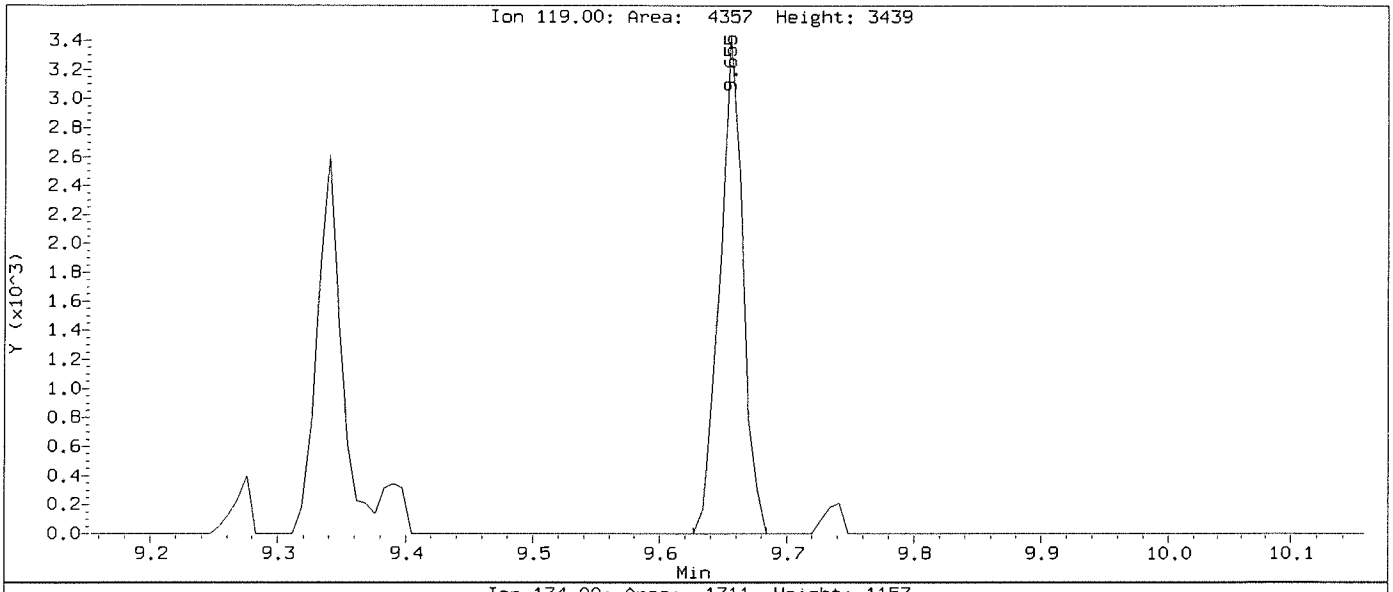
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

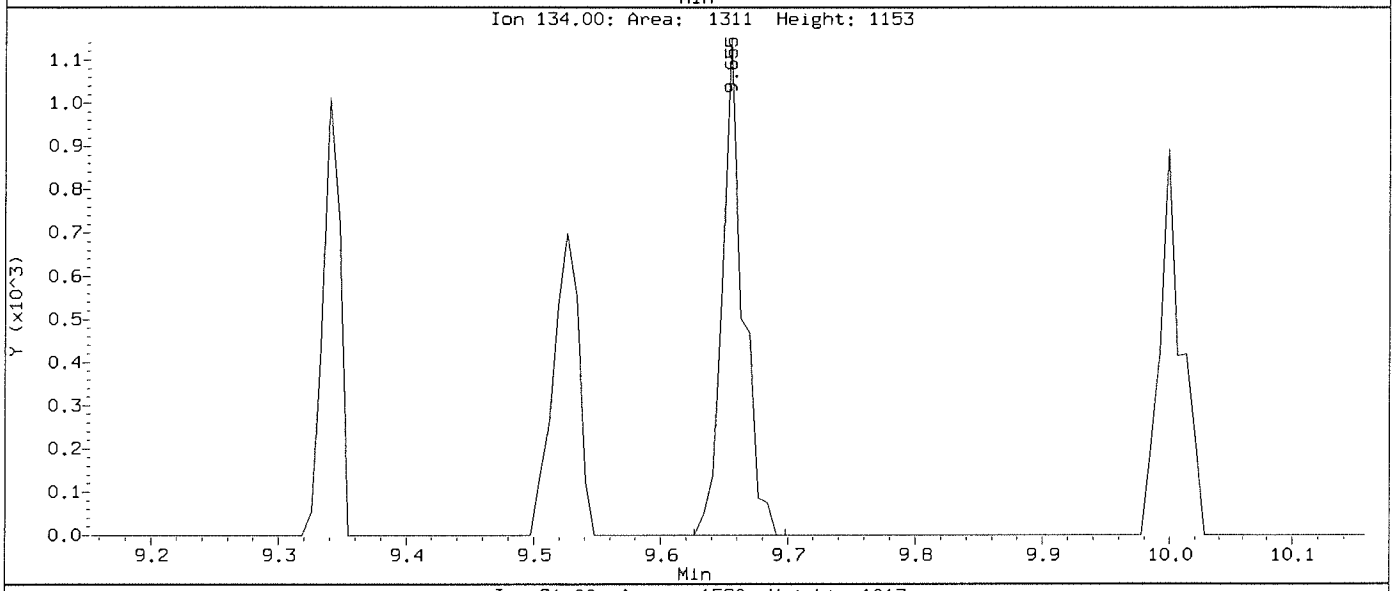


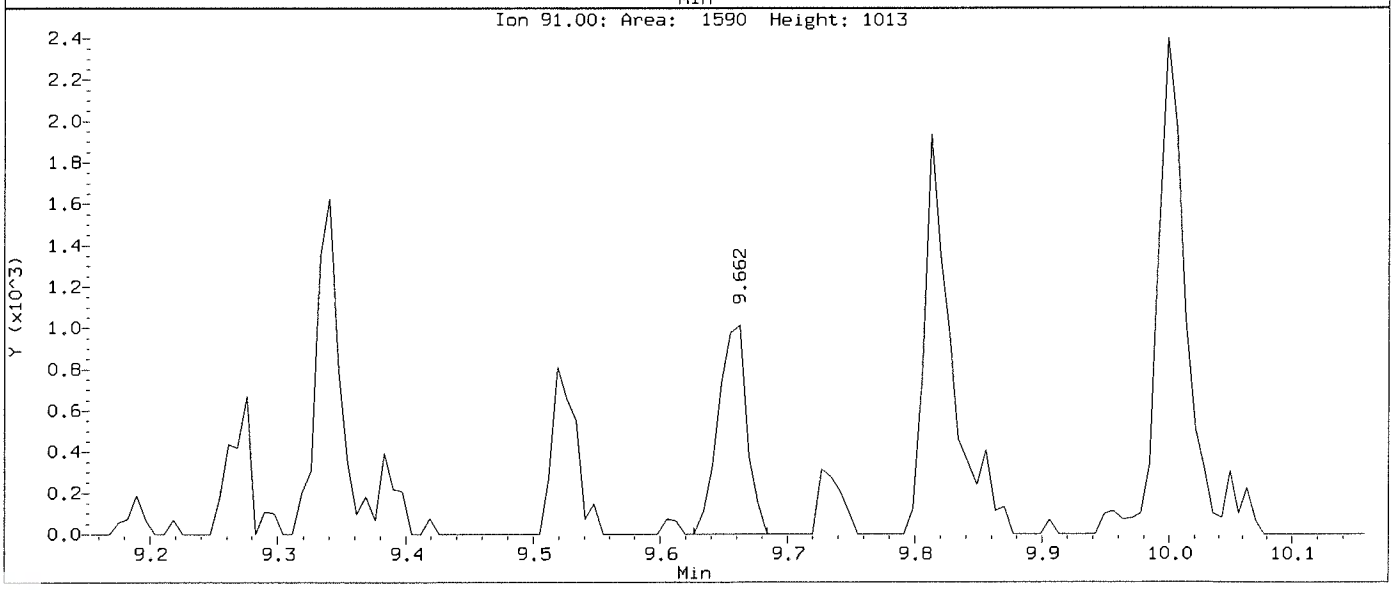


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6

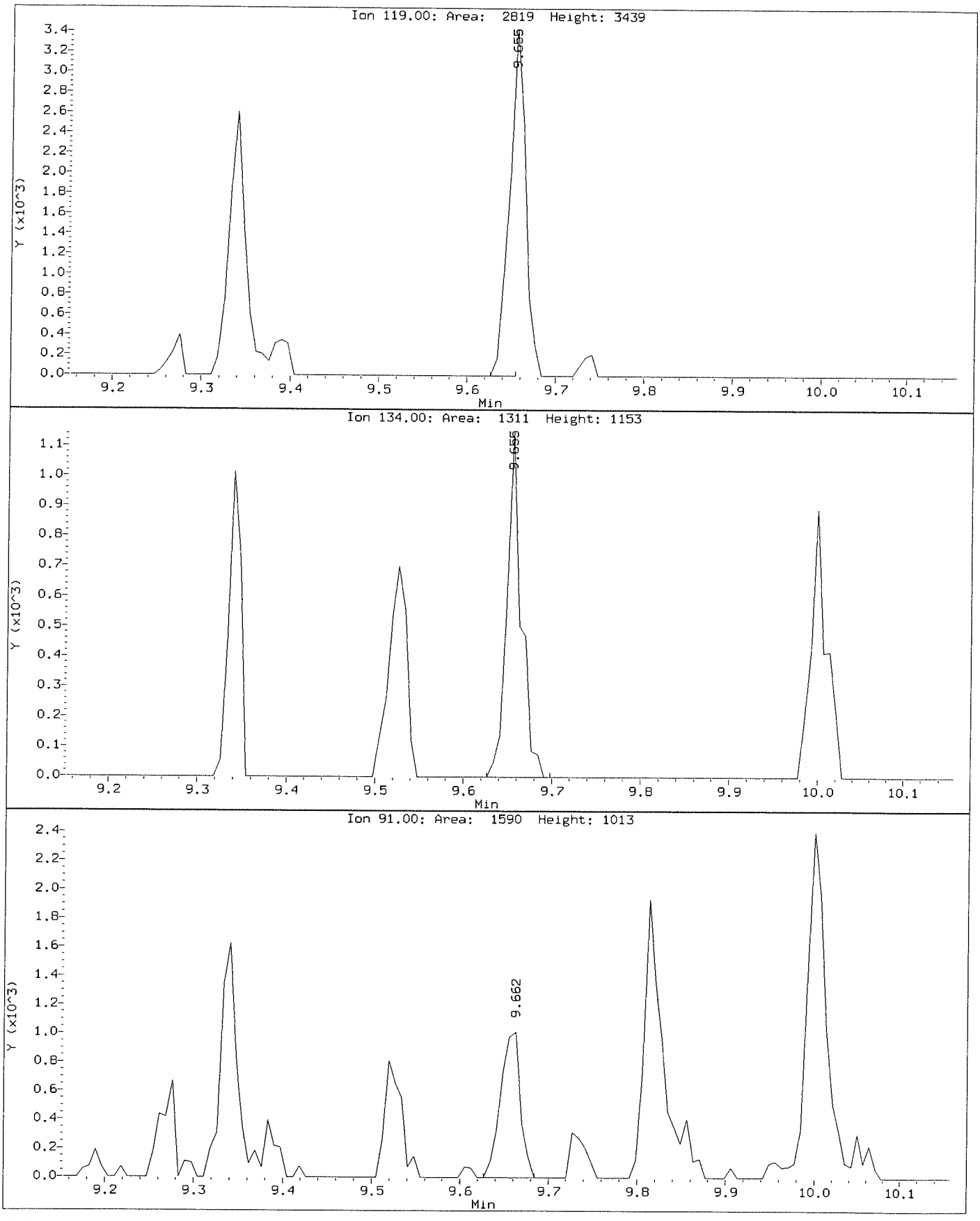






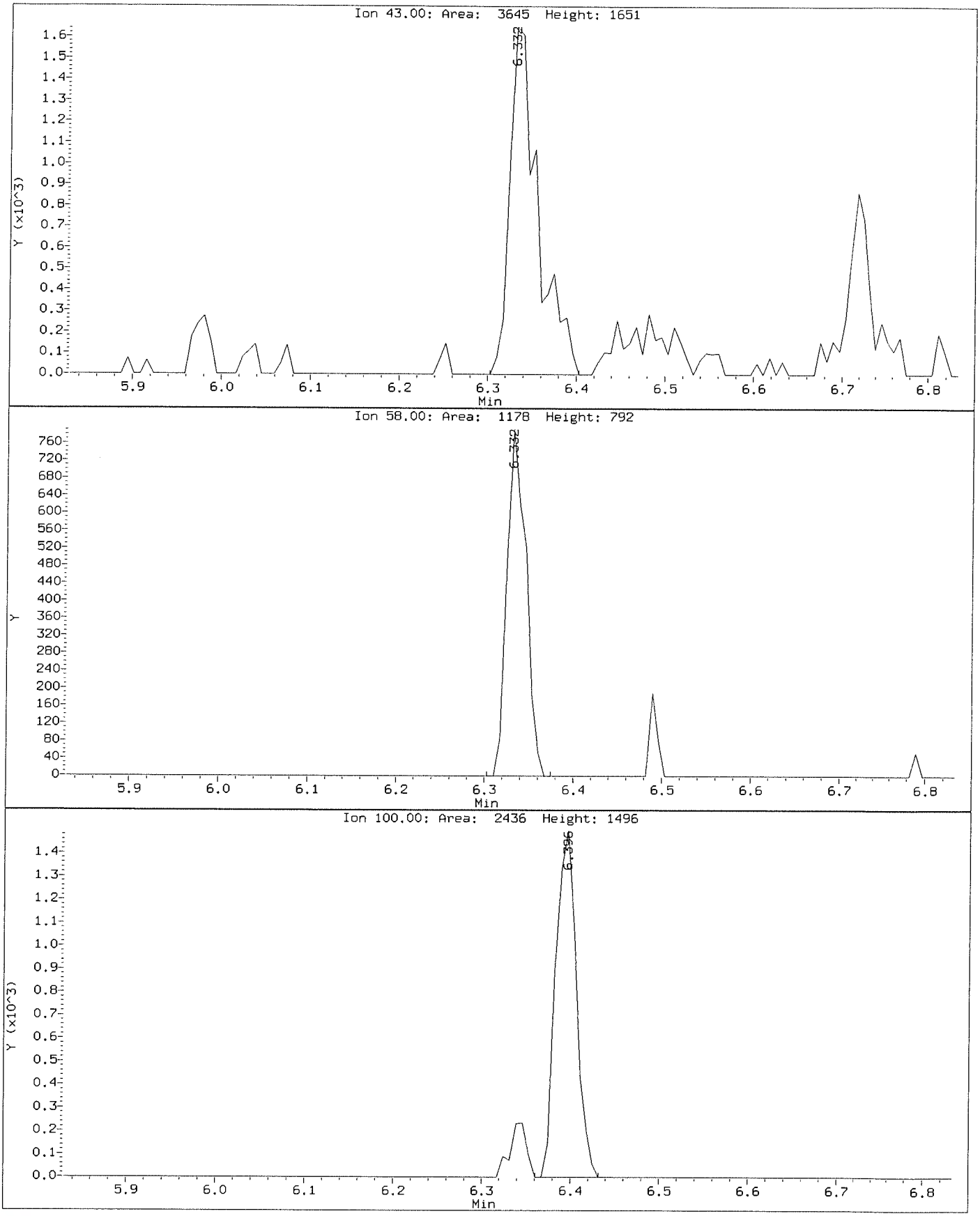
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



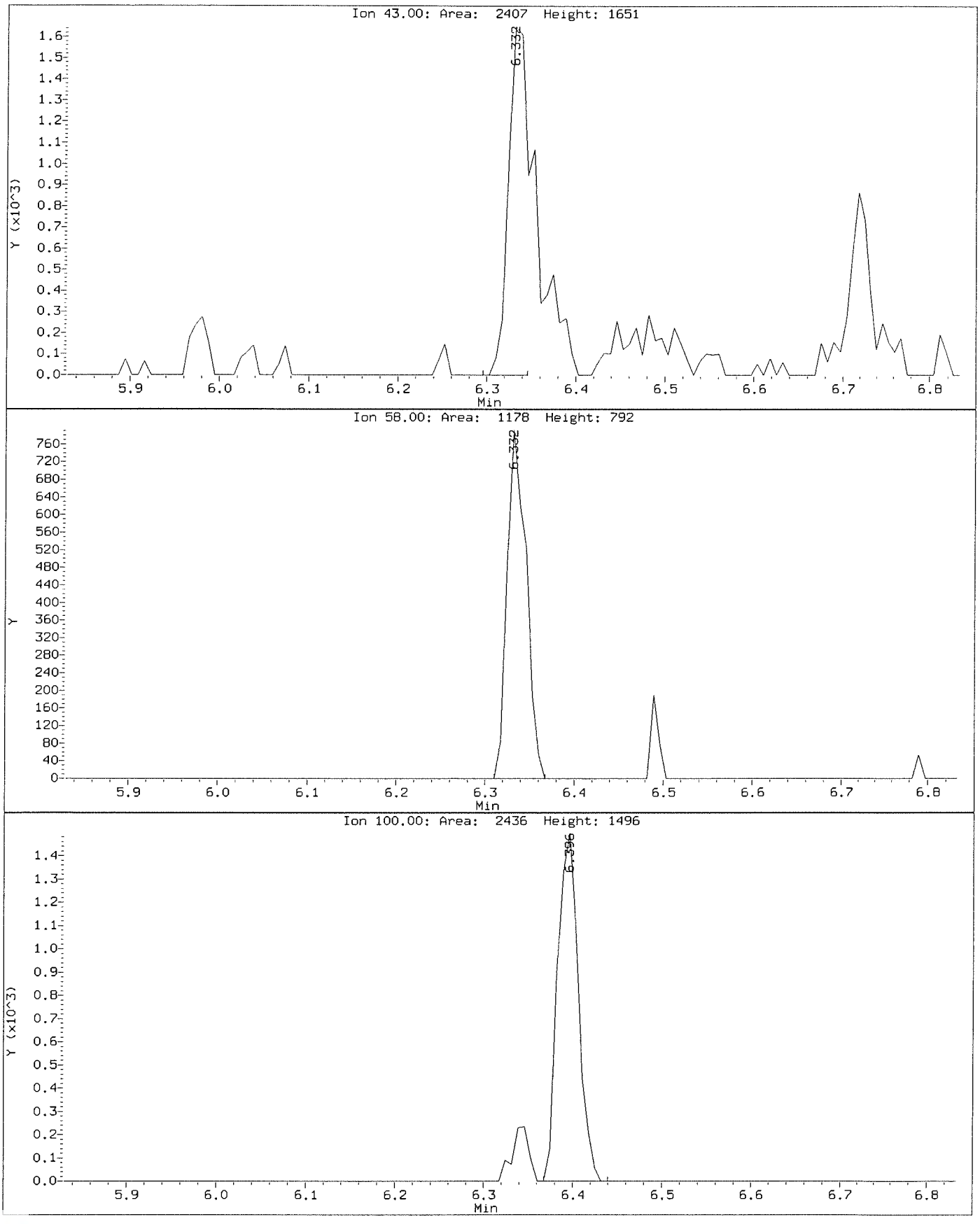
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Methyl-2-Pentanone
CAS Number: 108-10-1



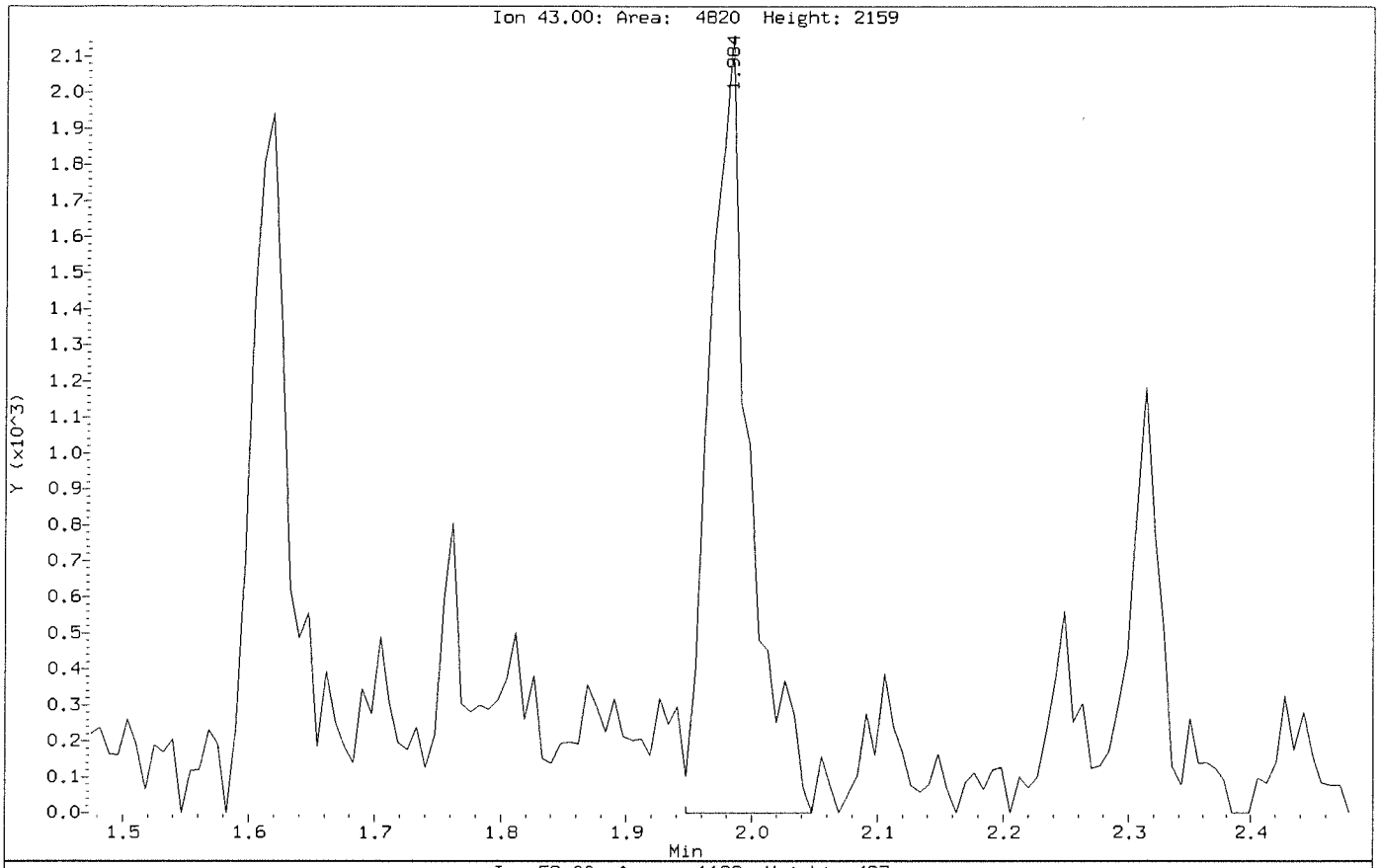
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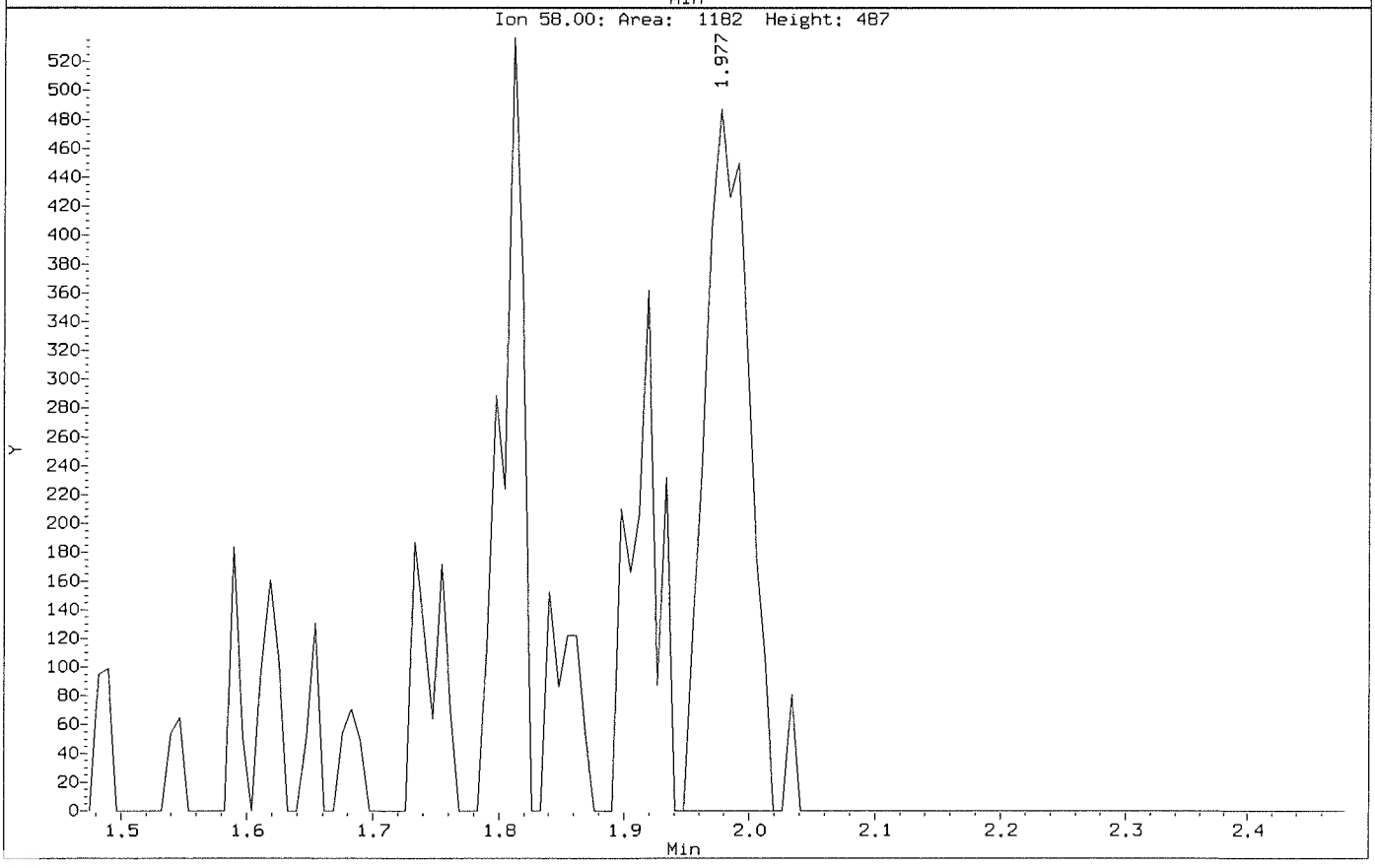
Compound: 4-Methyl-2-Pentanone
CAS Number: 108-10-1



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110303.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

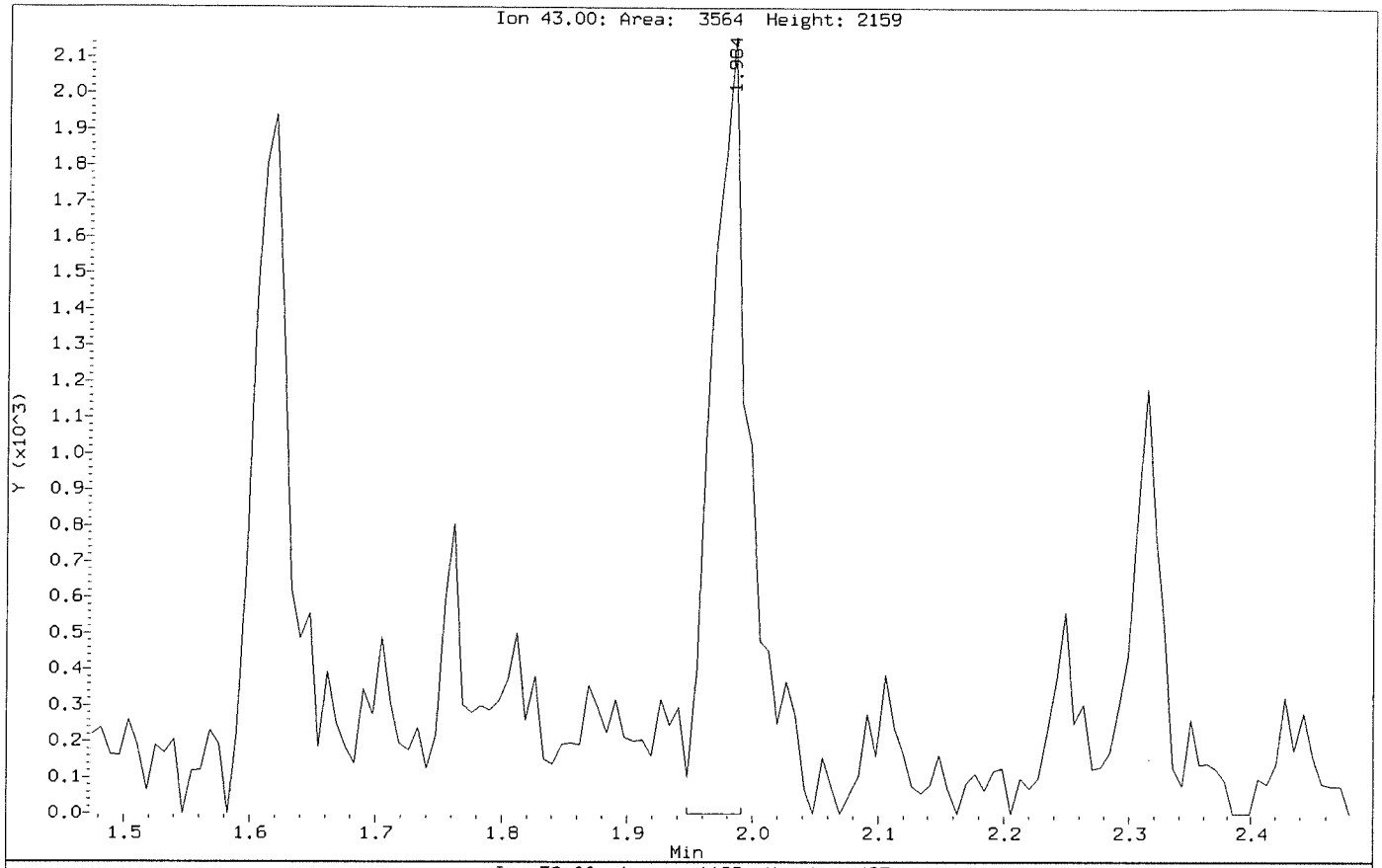
Compound: Acetone
CAS Number: 67-64-1

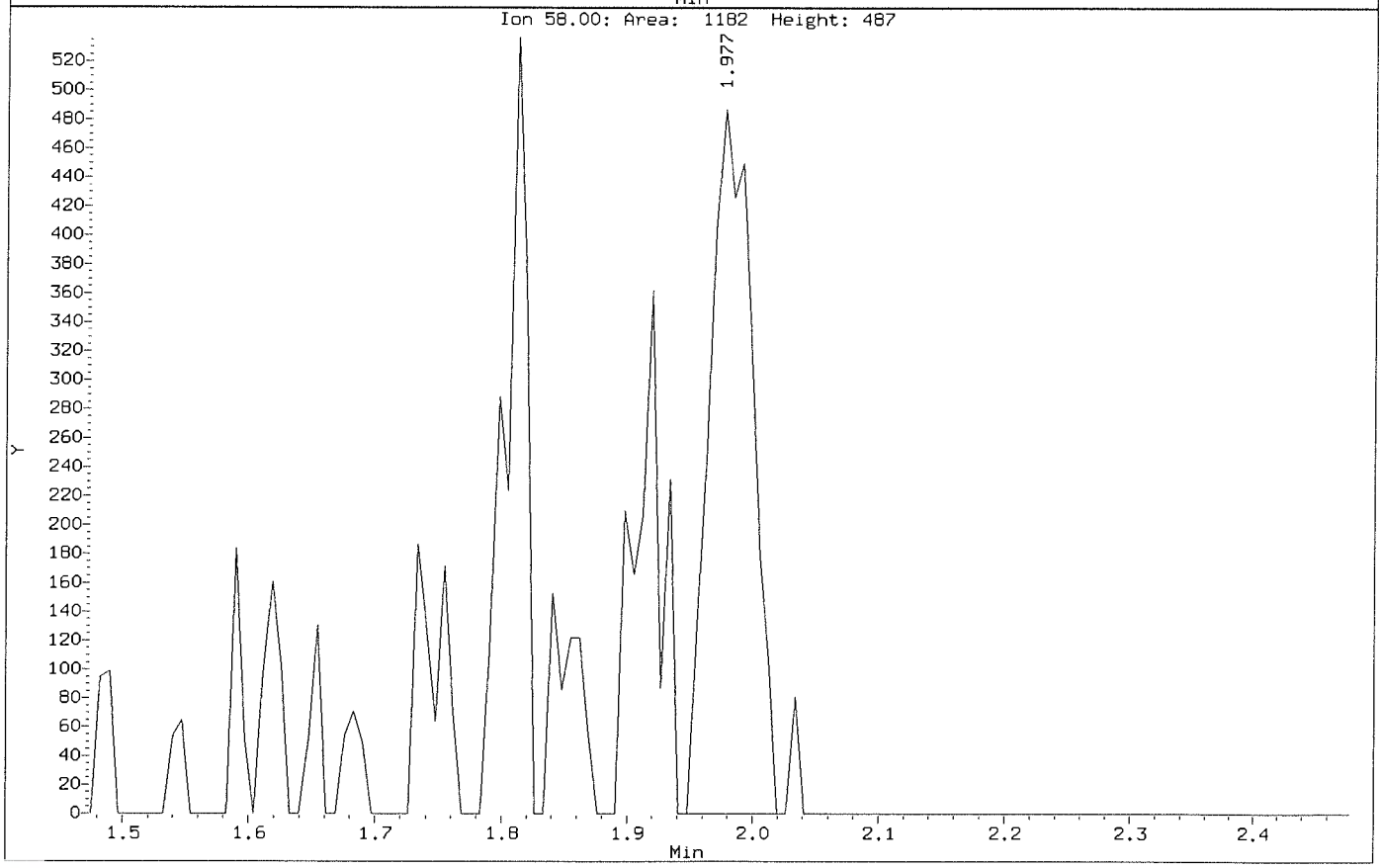




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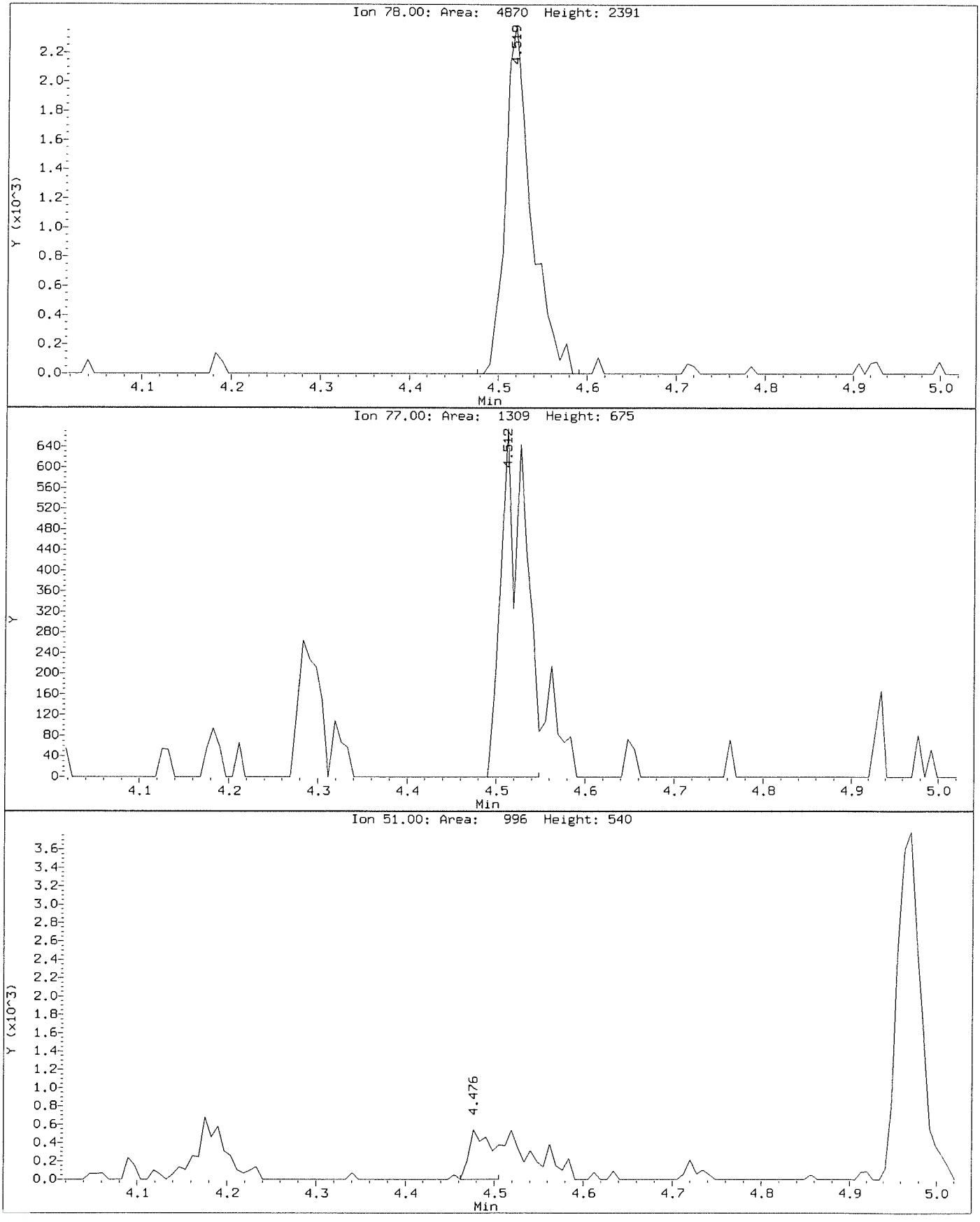
Compound: Acetone
CAS Number: 67-64-1





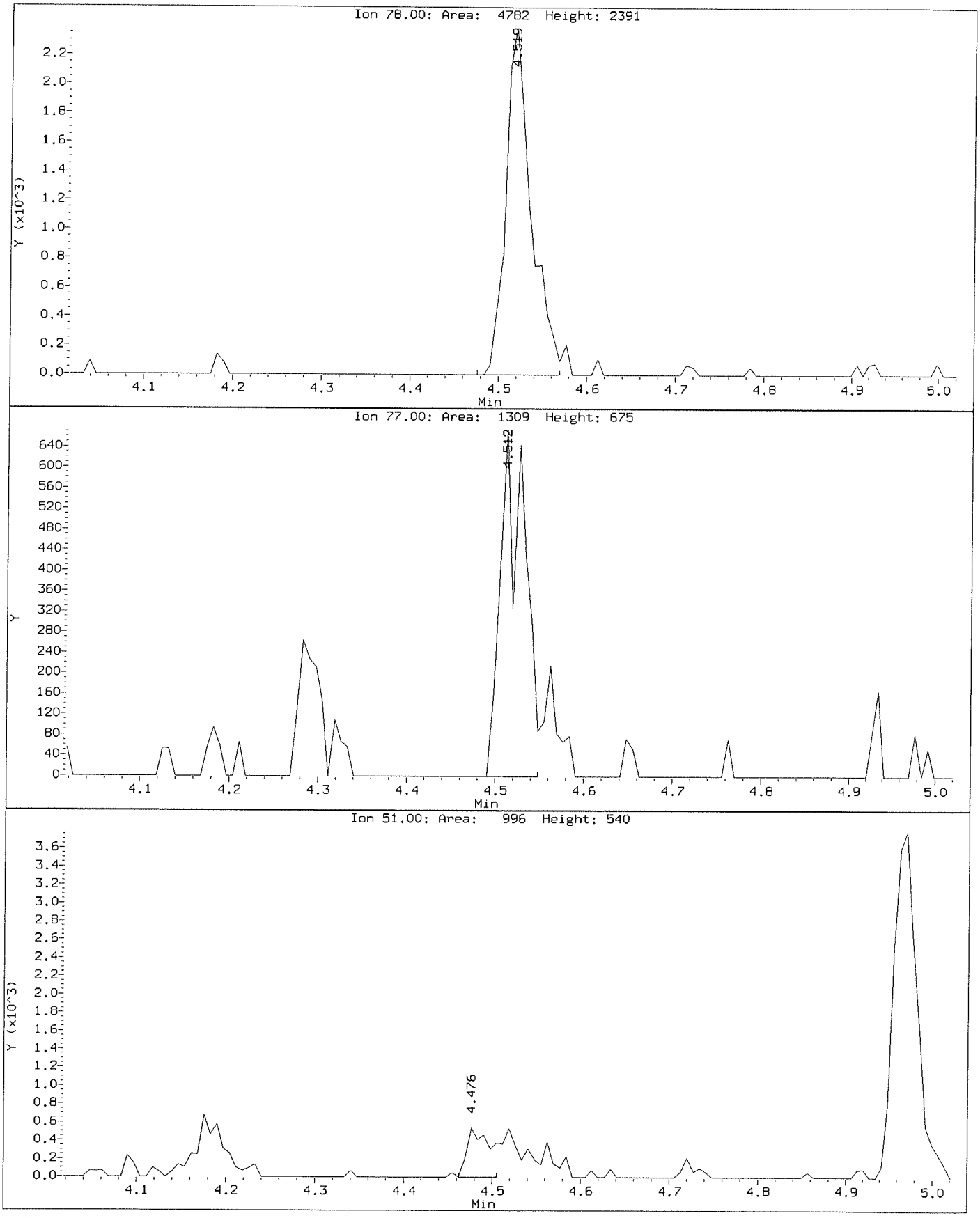
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Benzene
CAS Number: 71-43-2



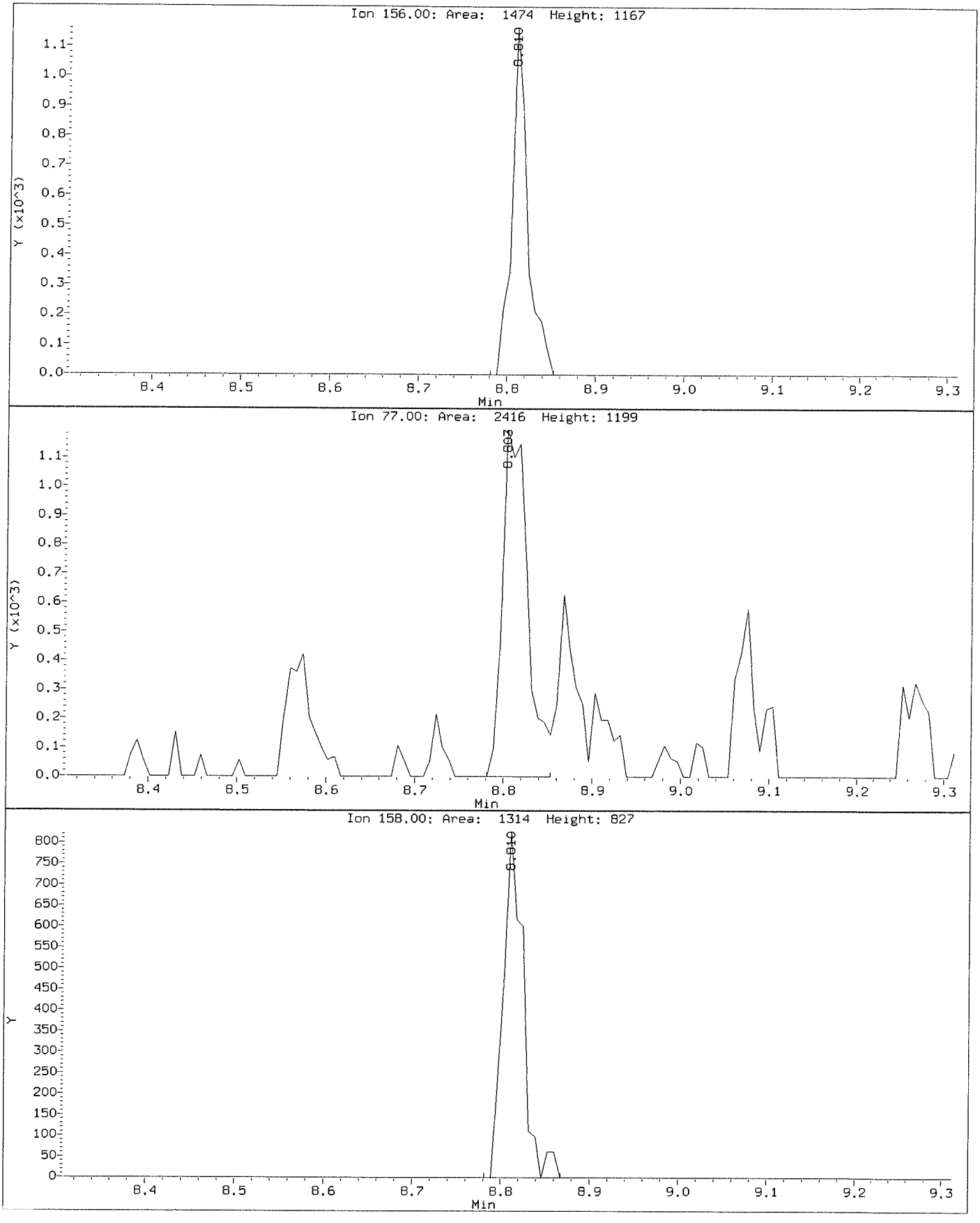
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Benzene
CAS Number: 71-43-2



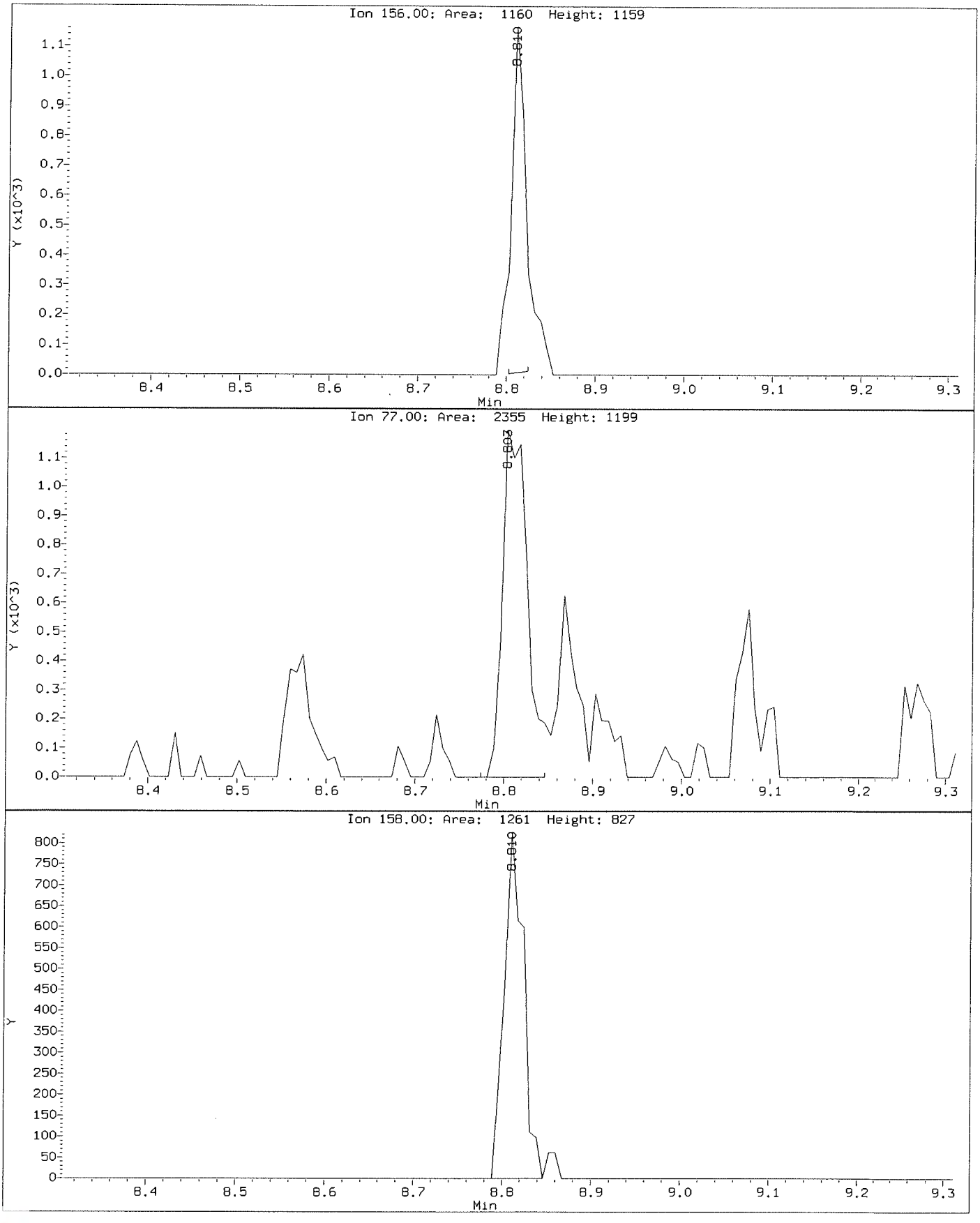
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromobenzene
CAS Number: 108-86-1



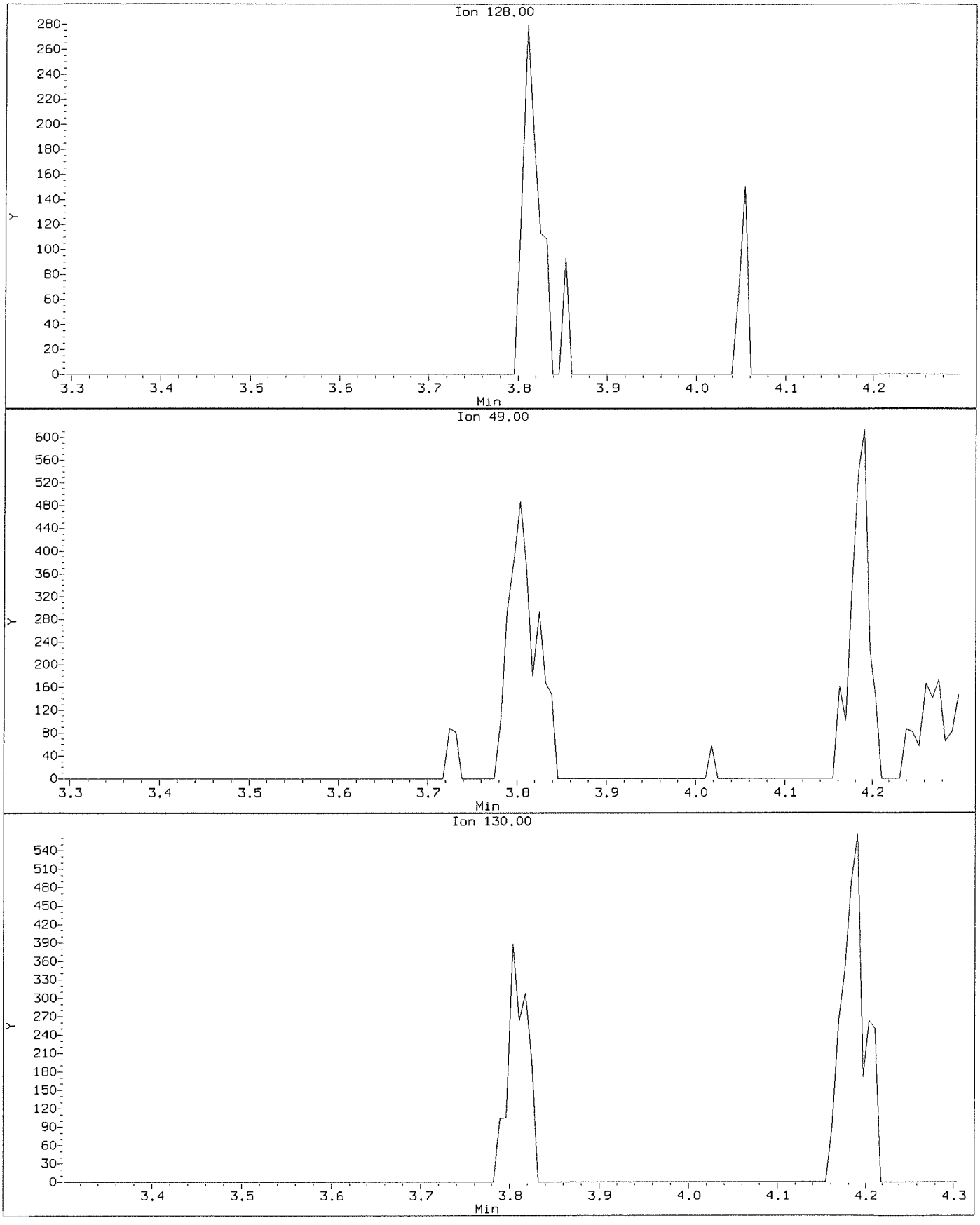
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromobenzene
CAS Number: 108-86-1



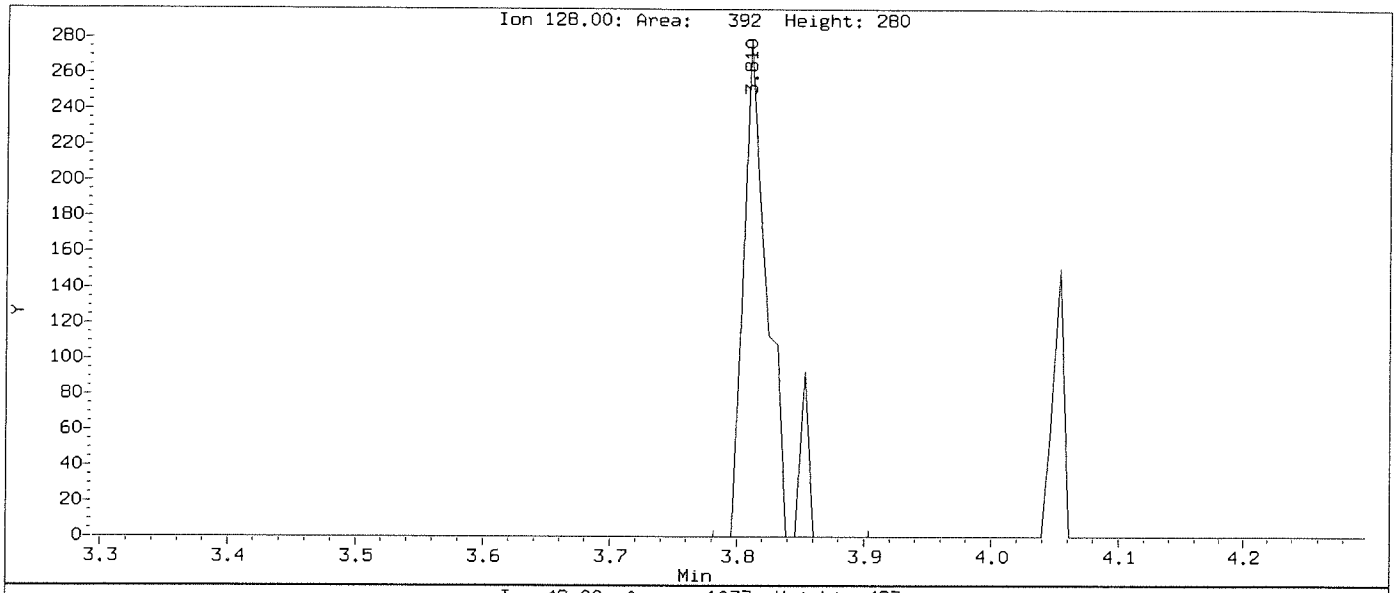
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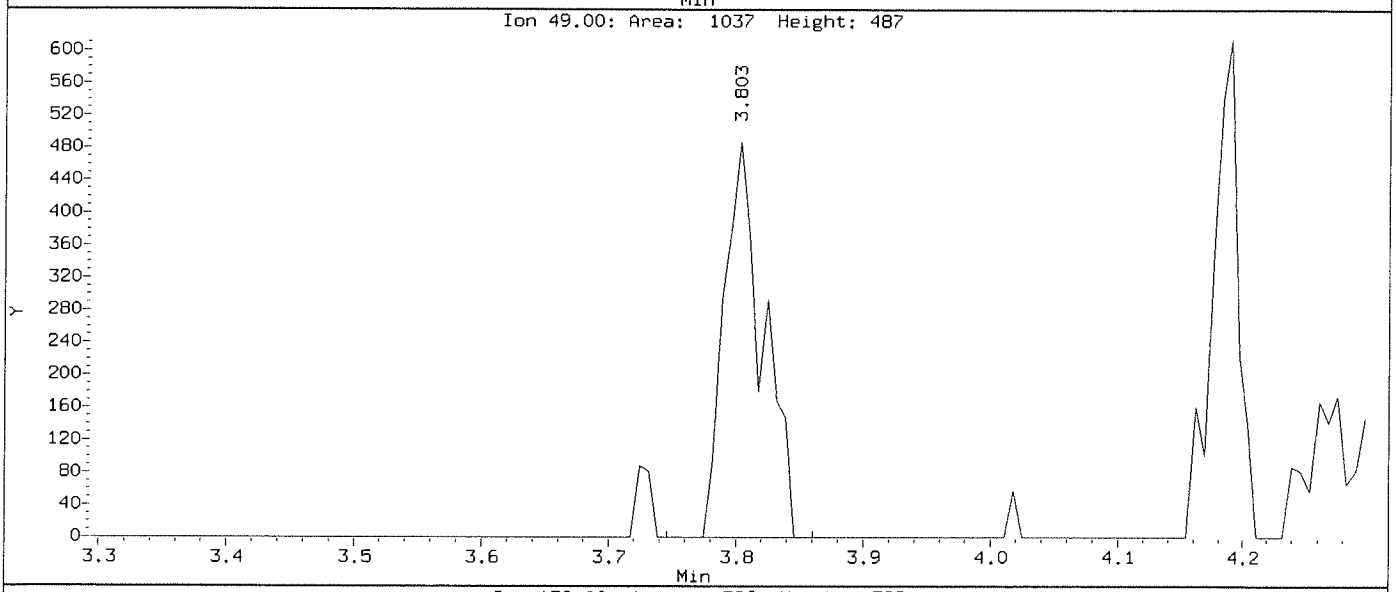
Compound: Bromochloromethane
CAS Number: 74-97-5

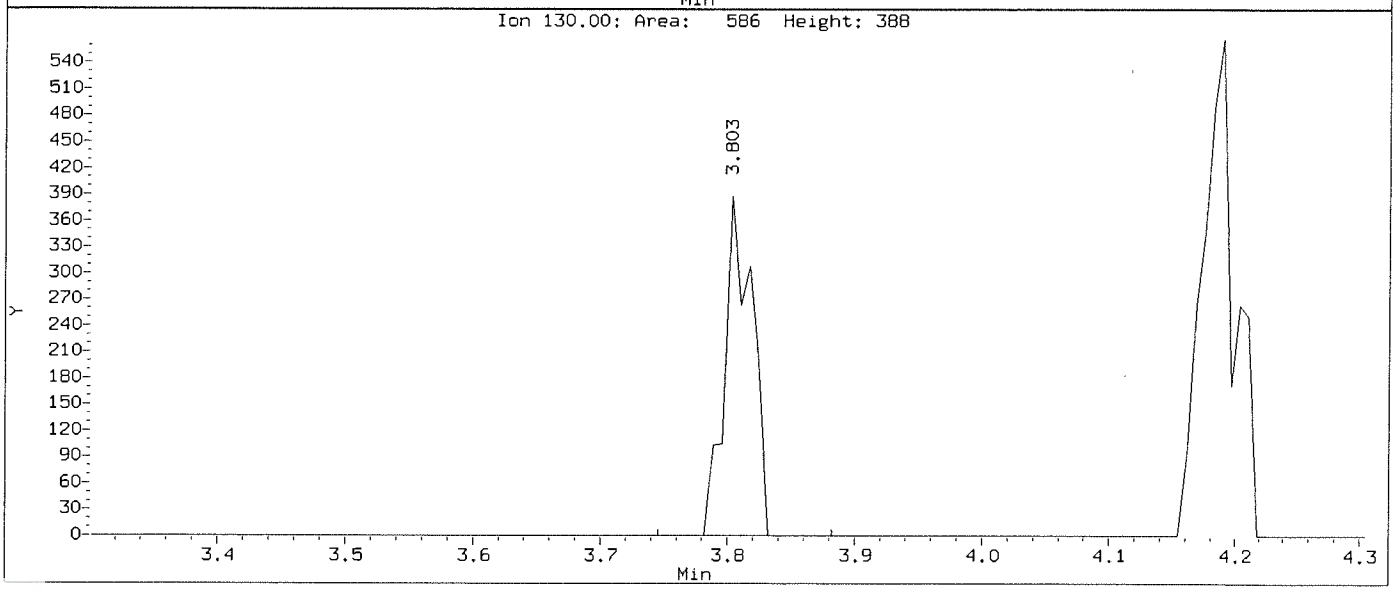


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

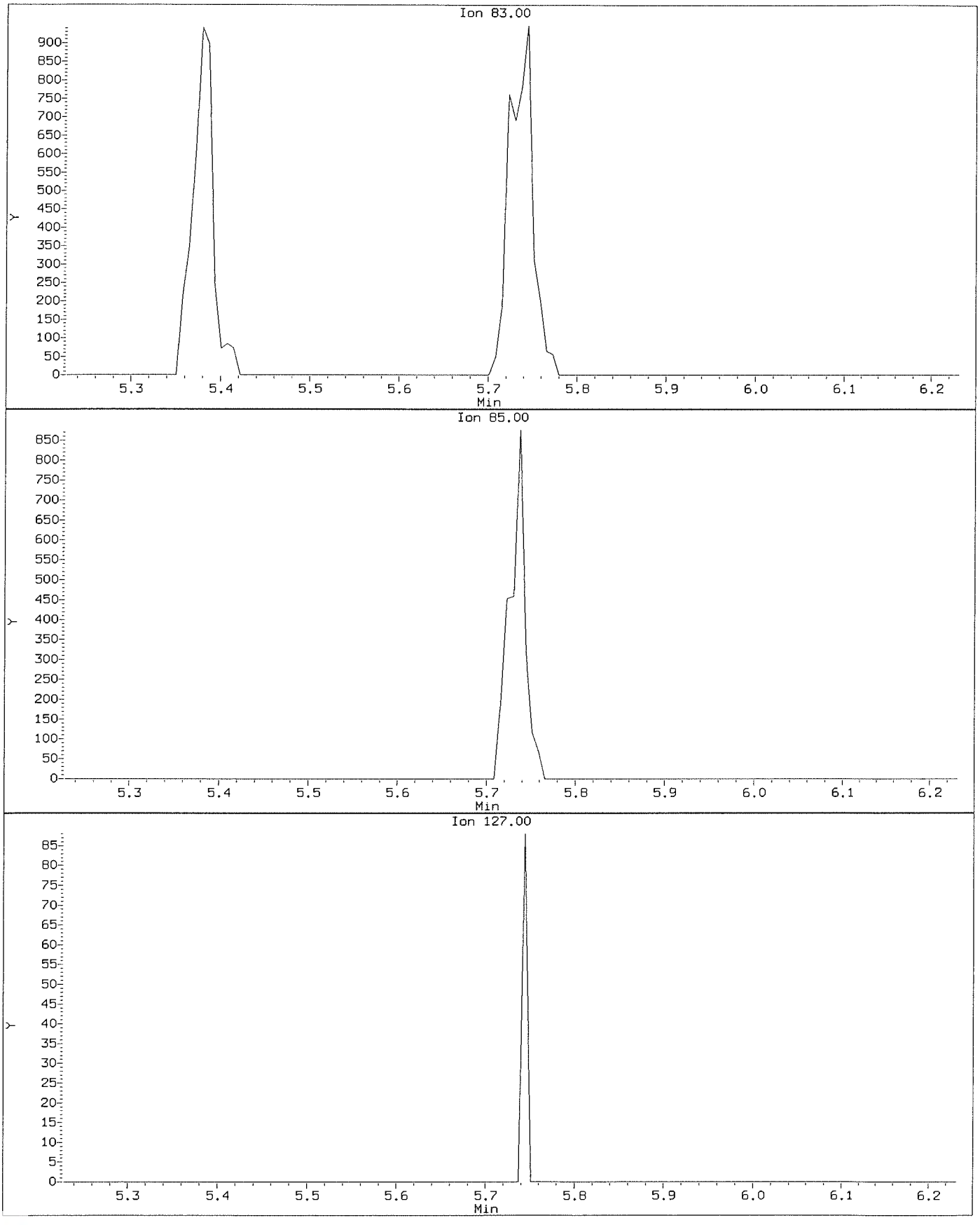






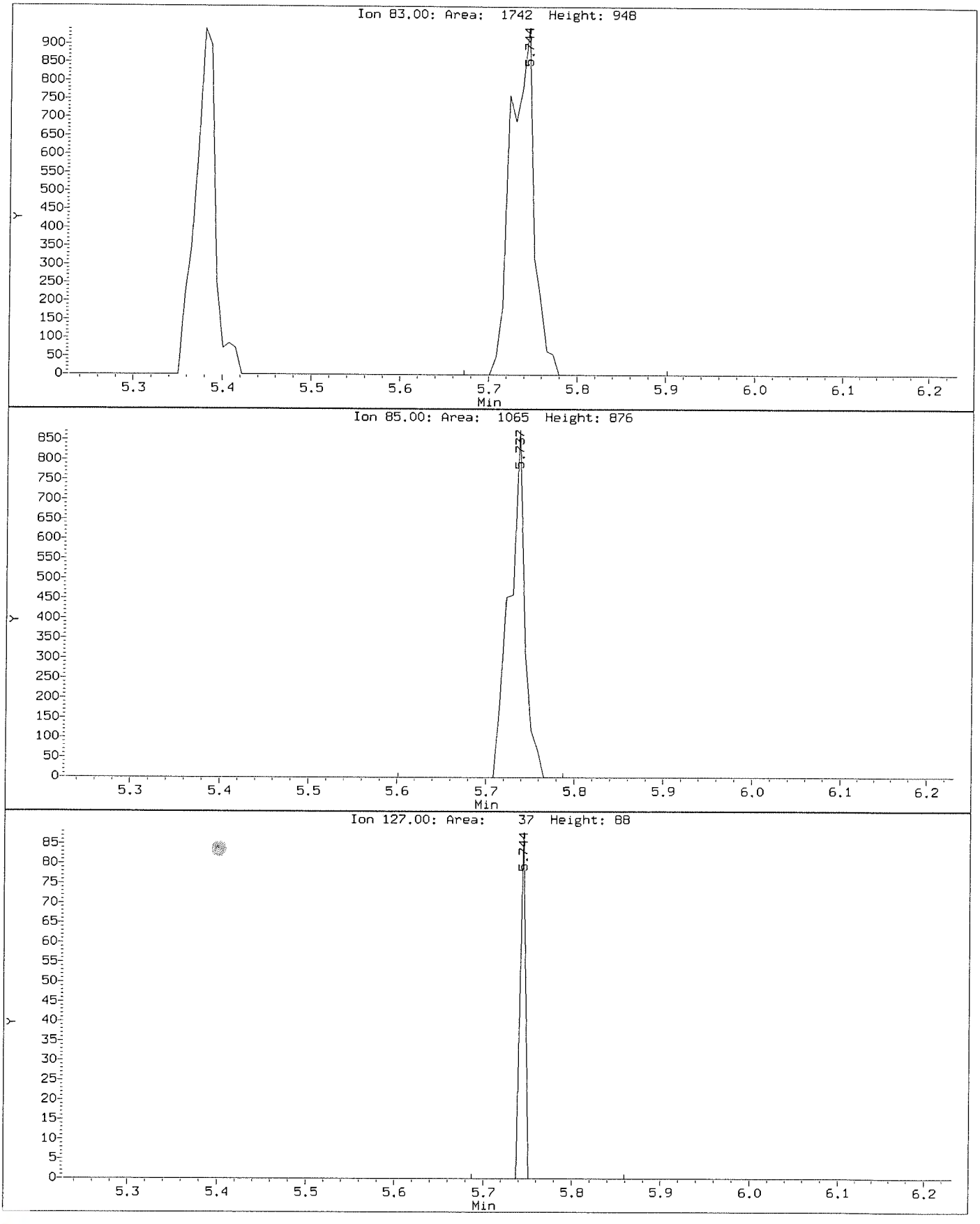
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



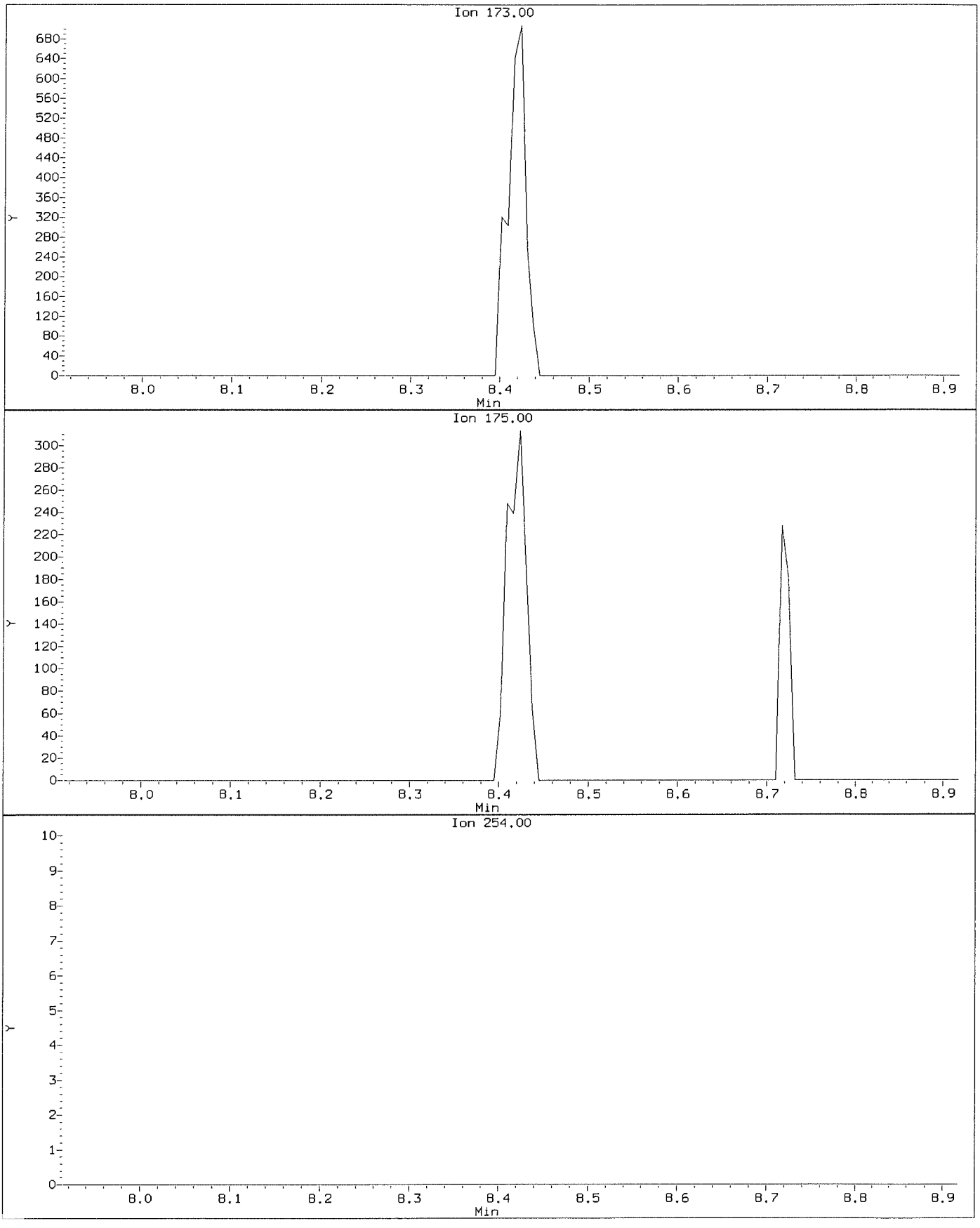
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



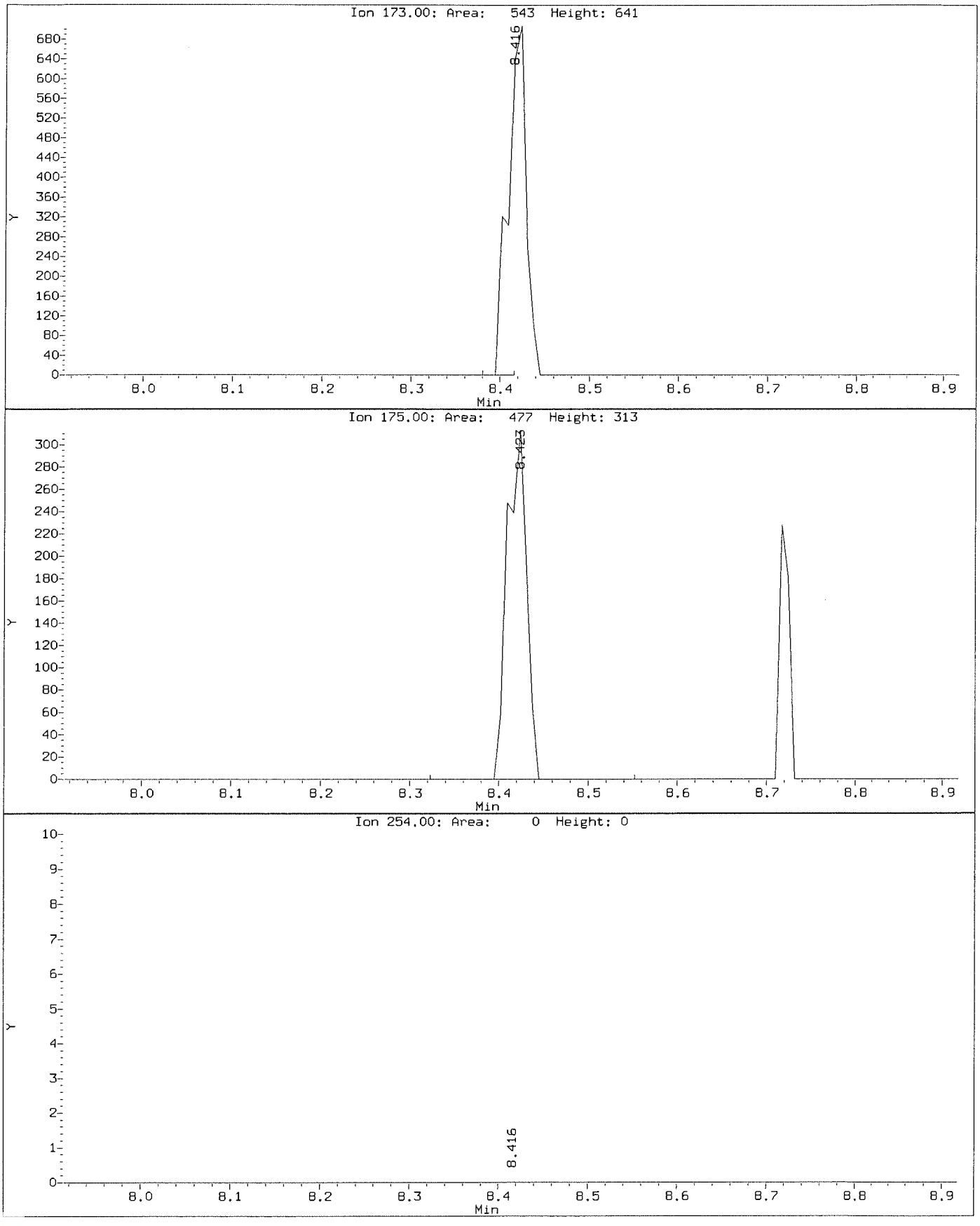
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



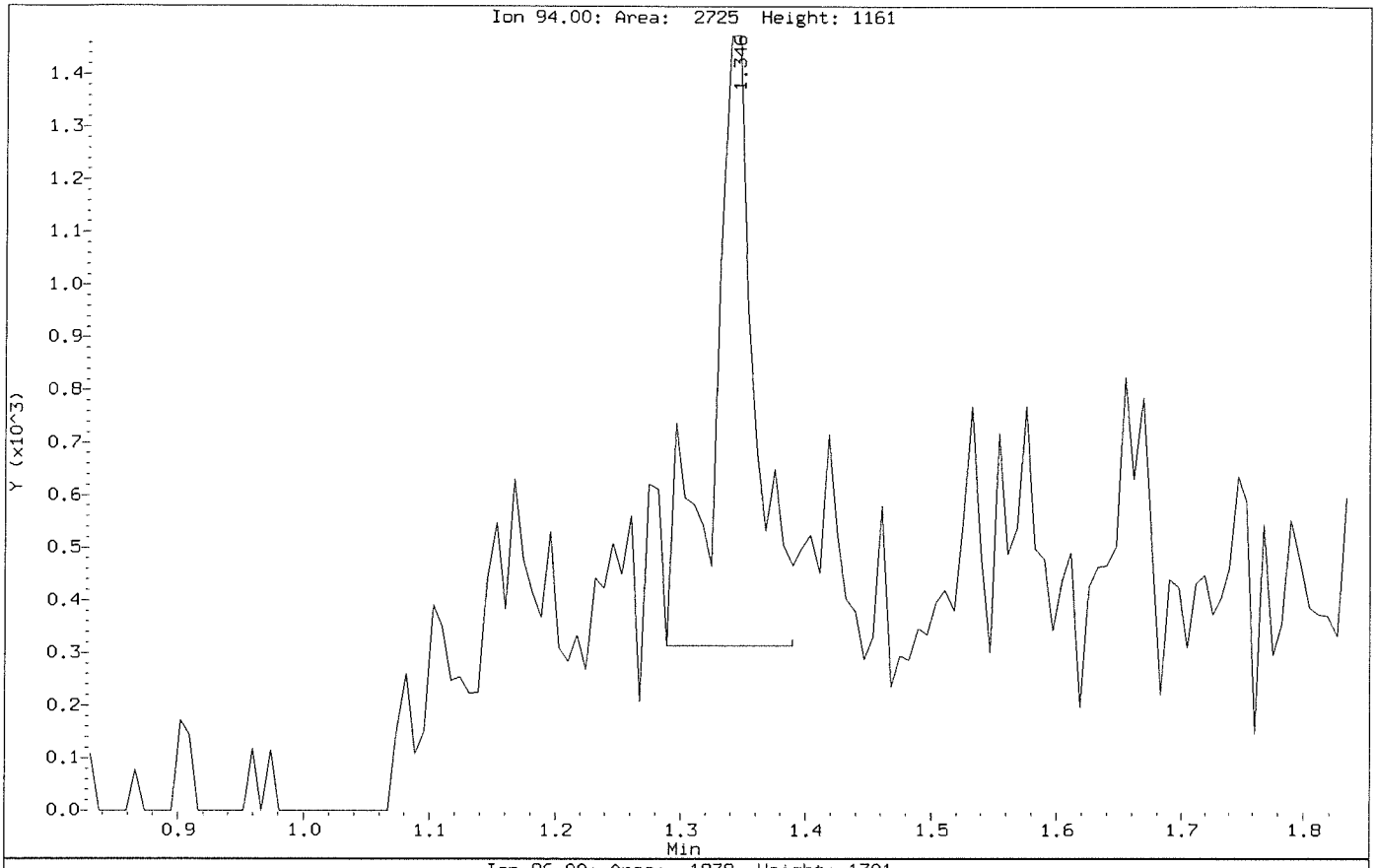
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Client Sample ID: VSTD000.5

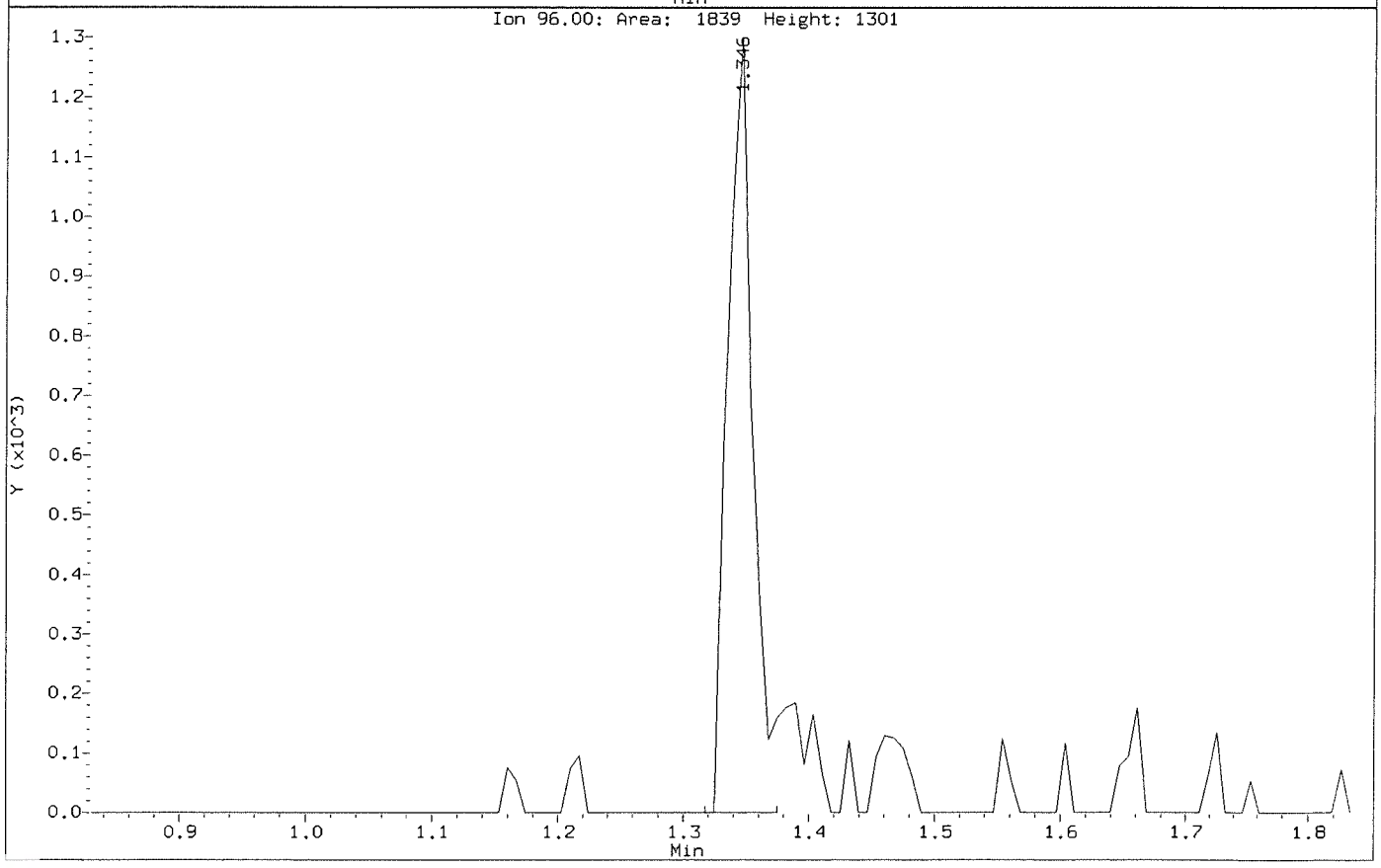
Compound: Bromoform
CAS Number: 75-25-2



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

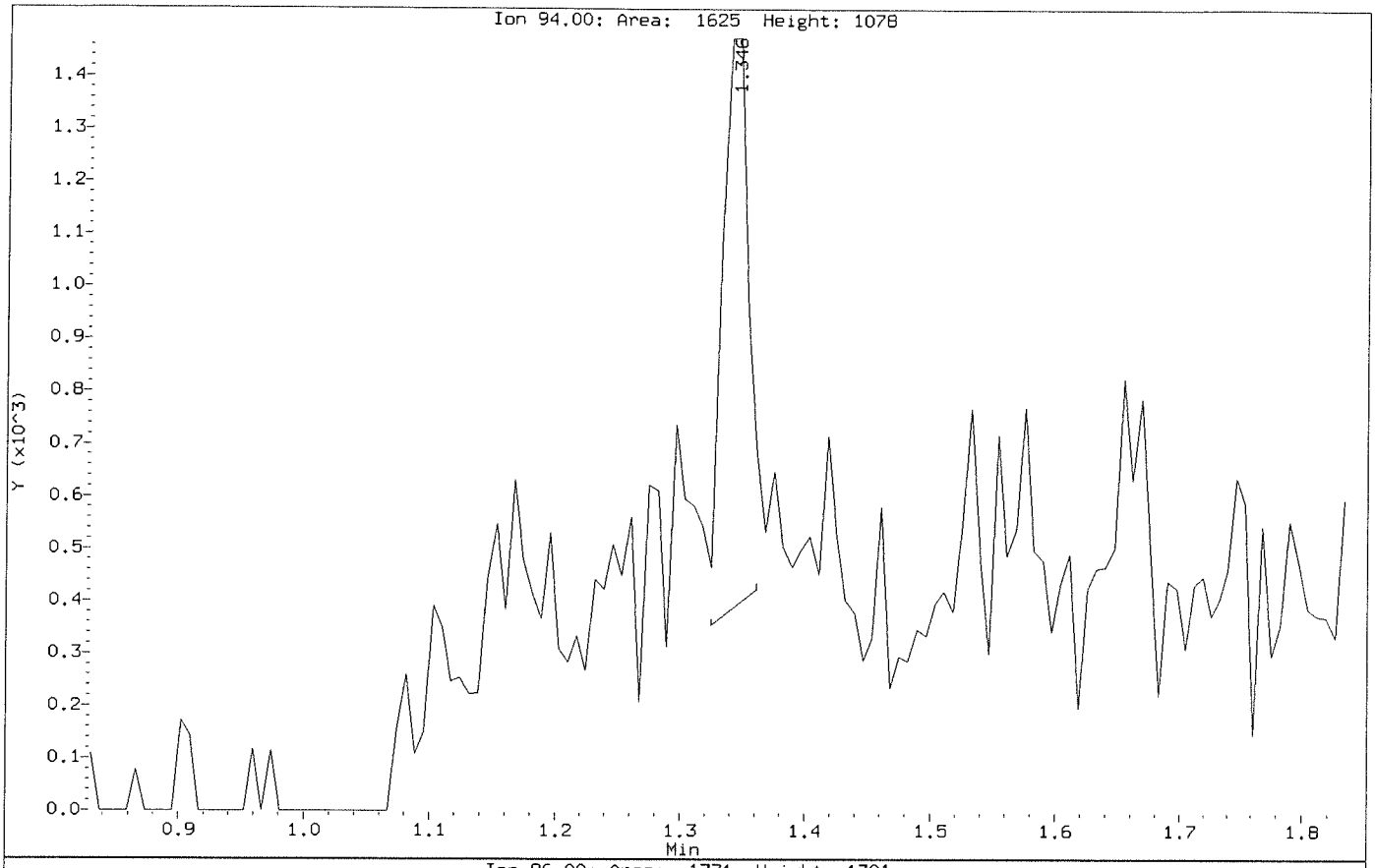
Compound: Bromomethane
CAS Number: 74-83-9

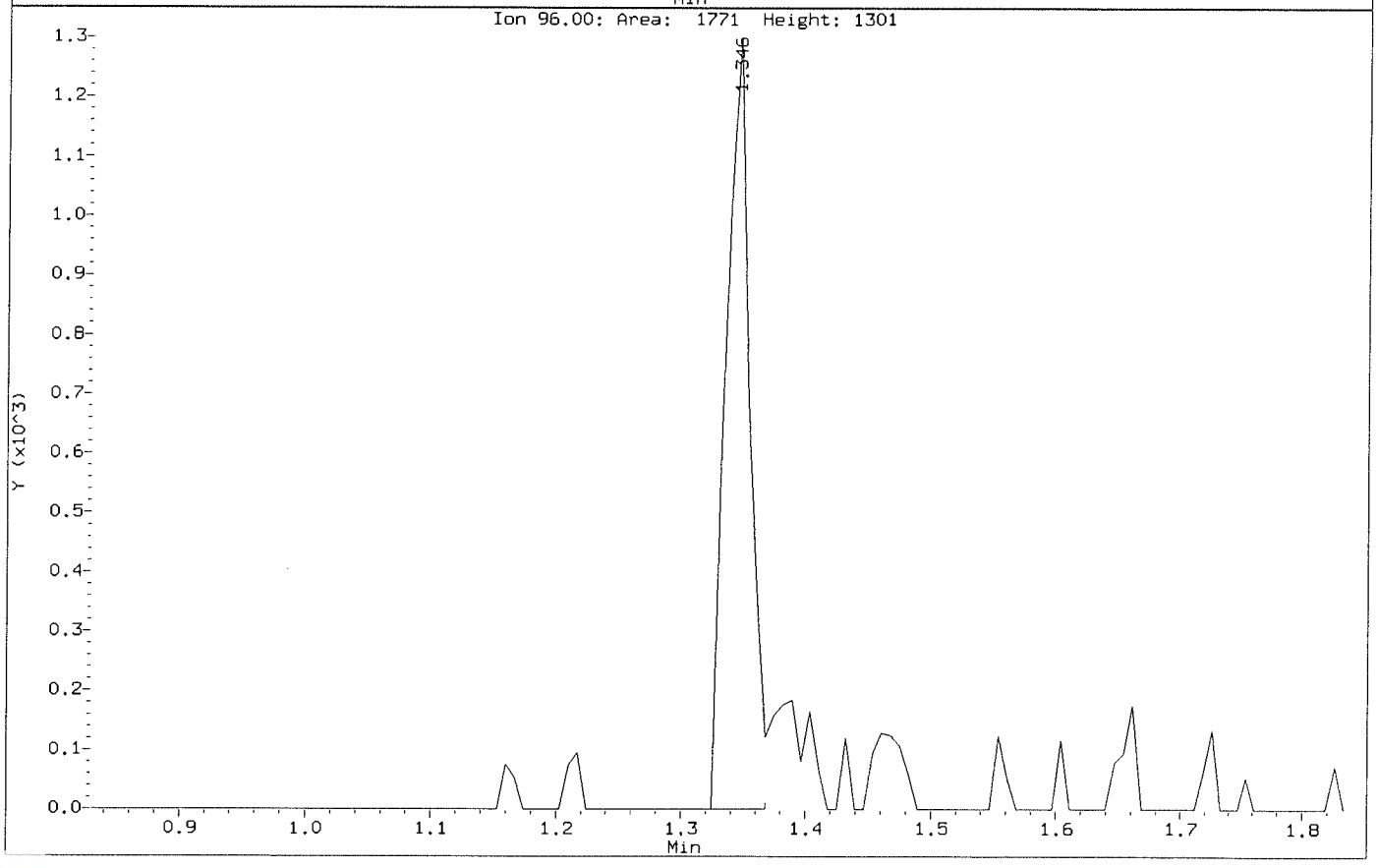




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Client Sample ID: VSTD000.5

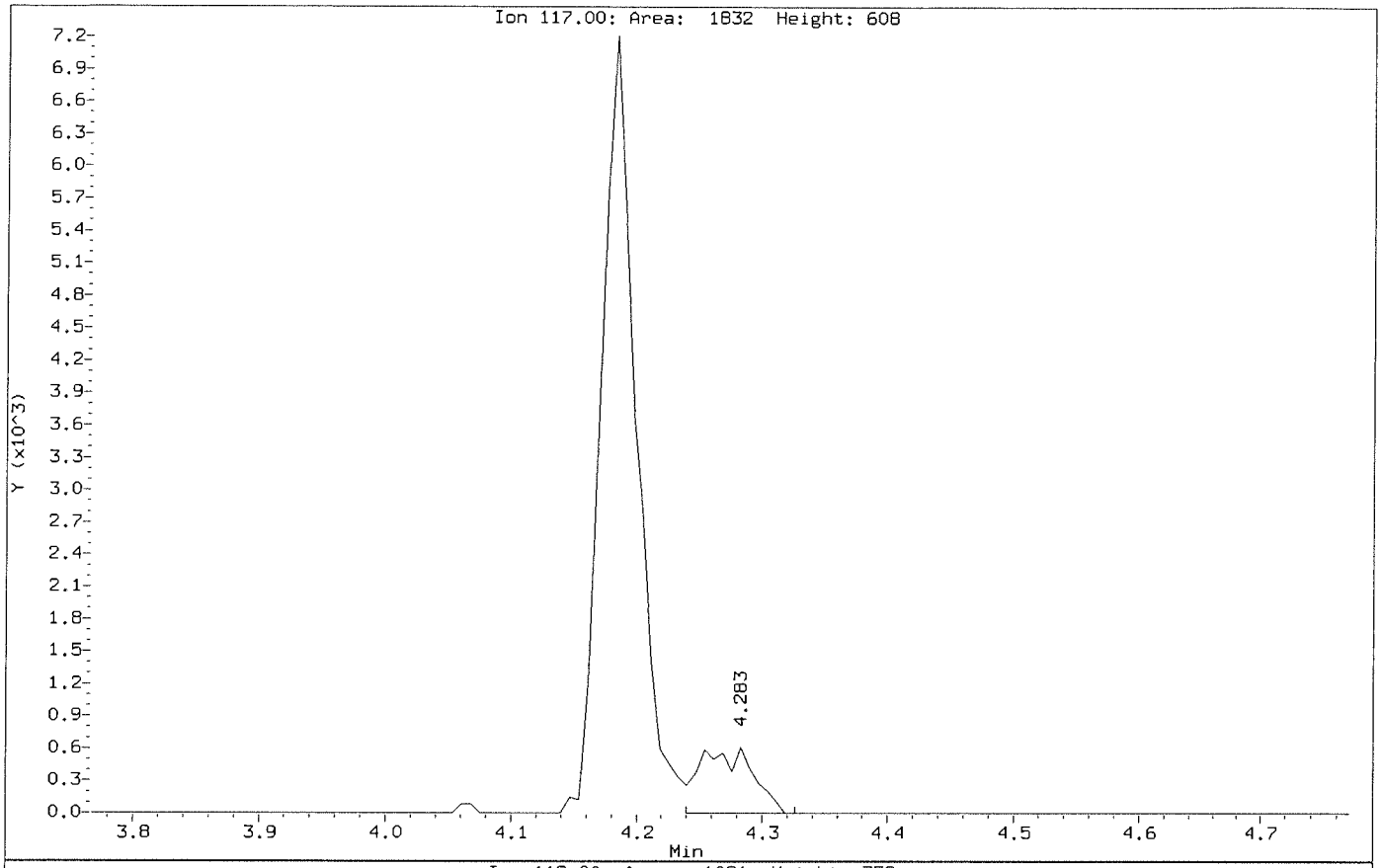
Compound: Bromomethane
CAS Number: 74-83-9

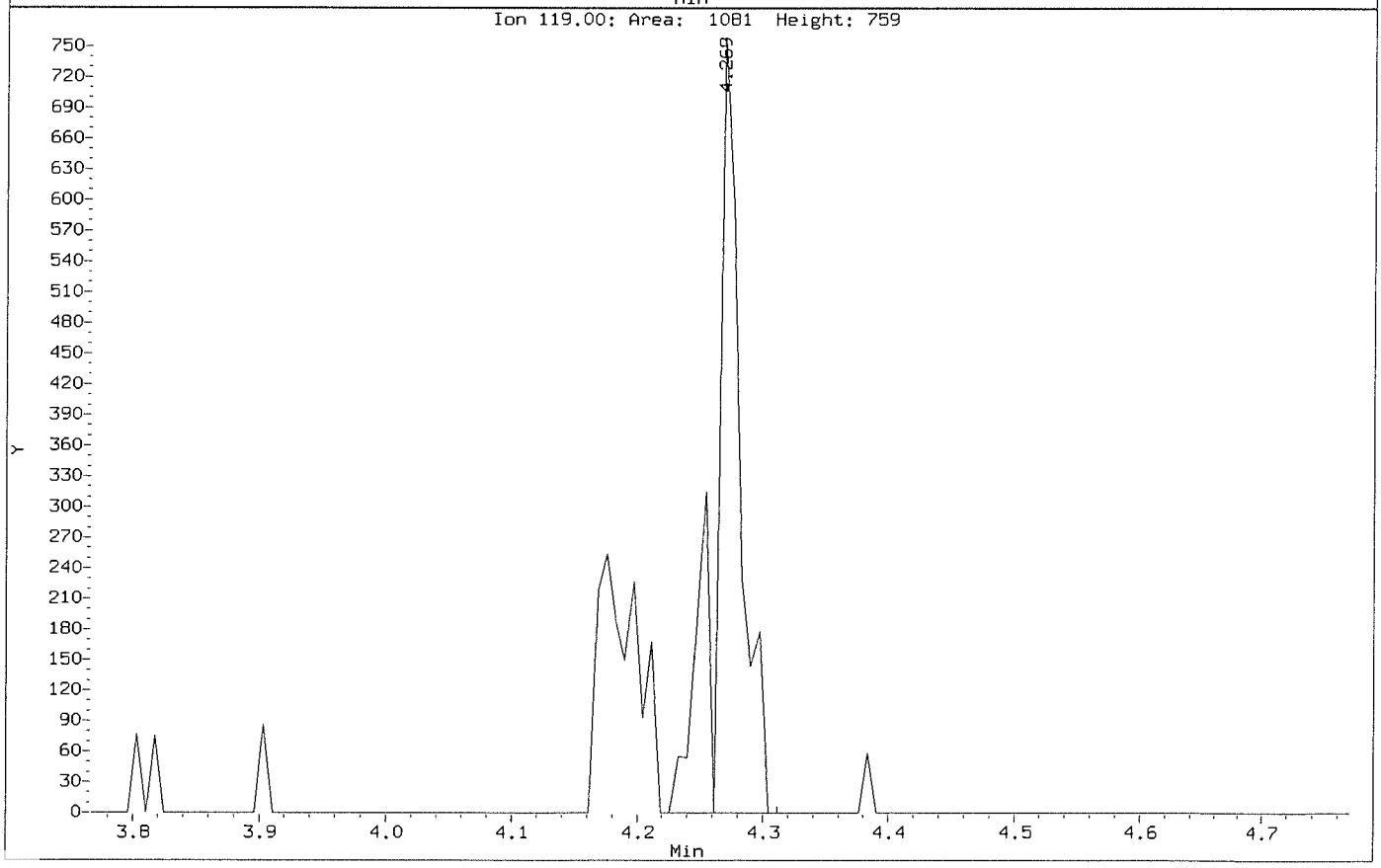




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Instrument: voa6.i
Client Sample ID: VSTD000.5

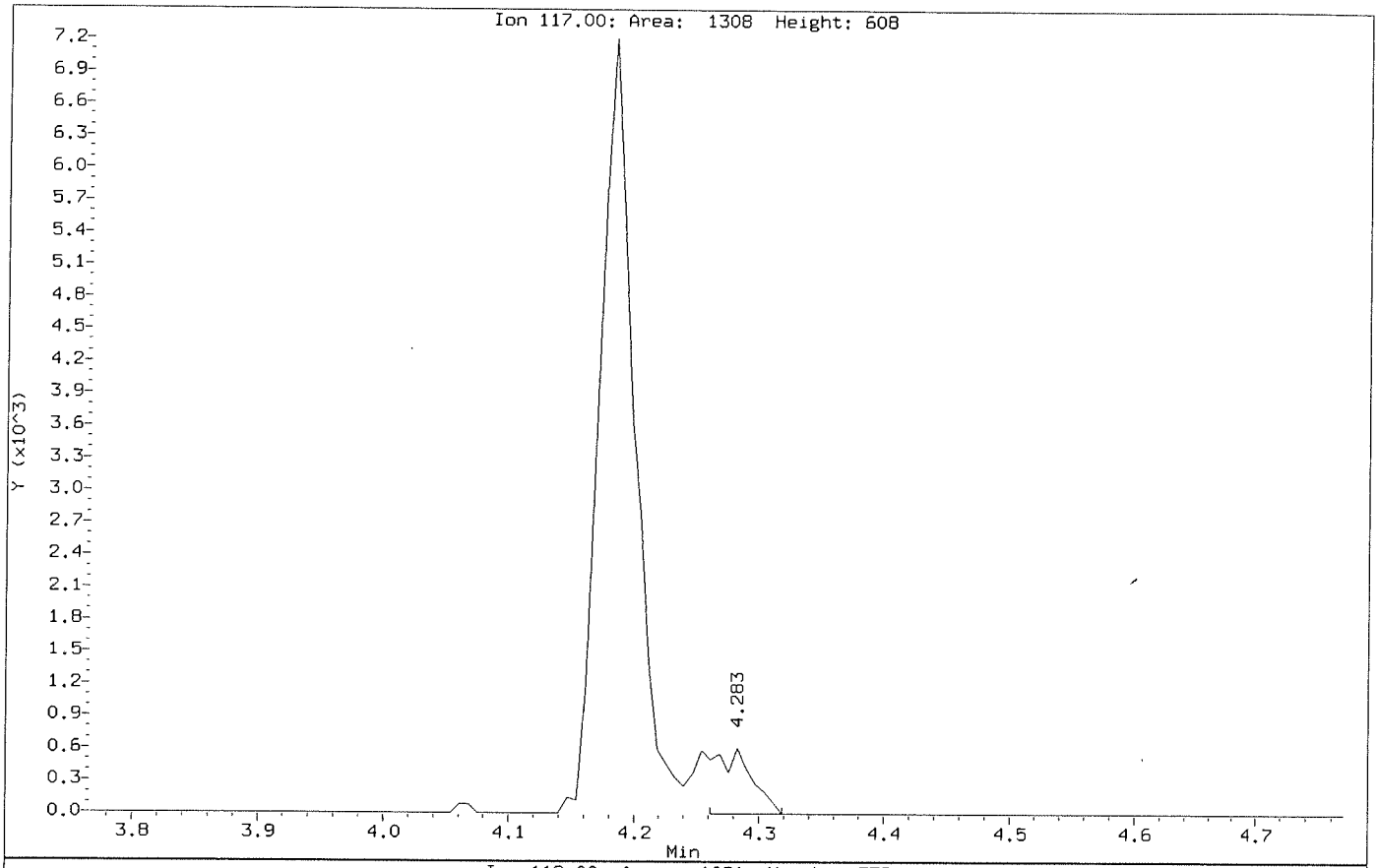
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

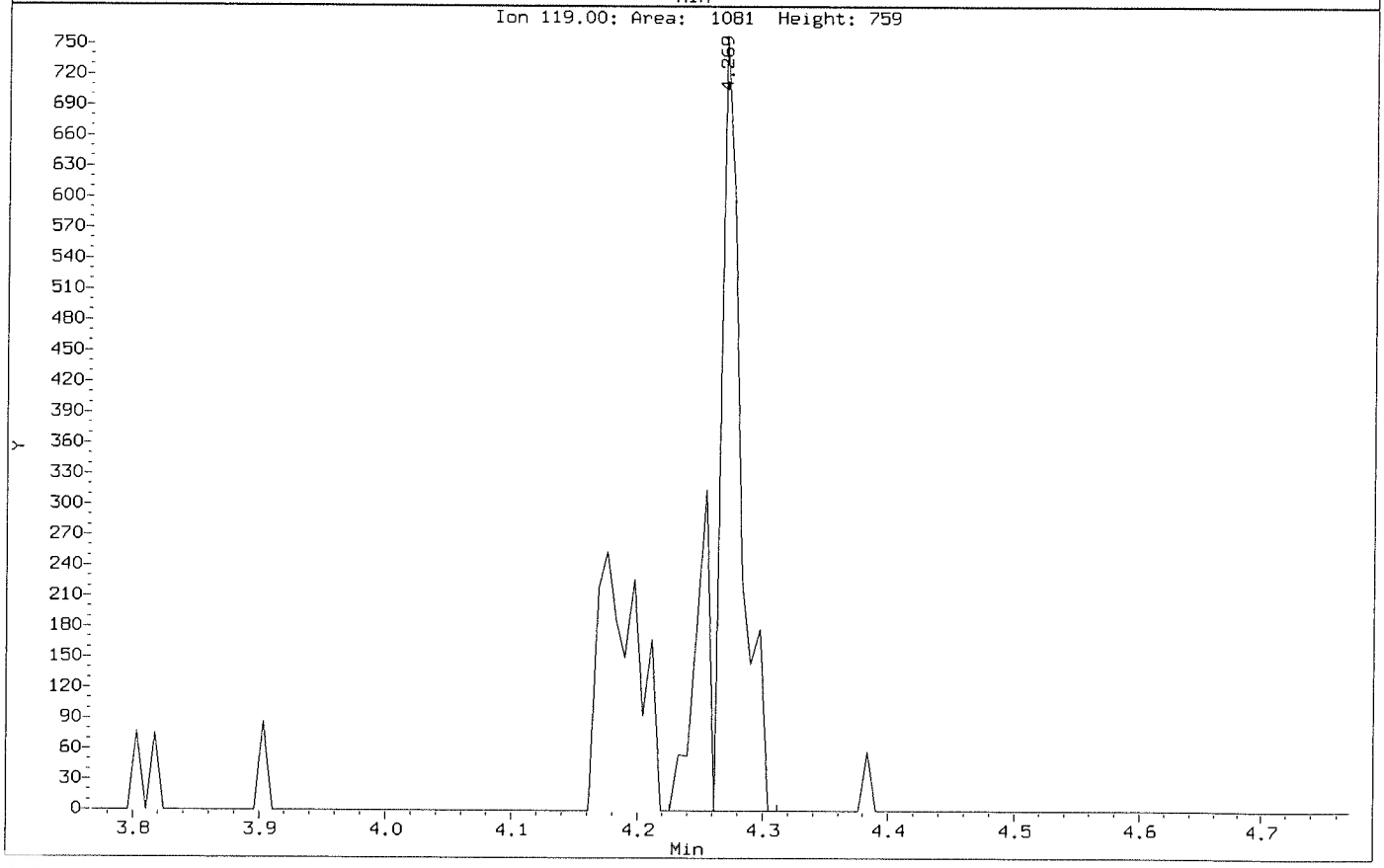




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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

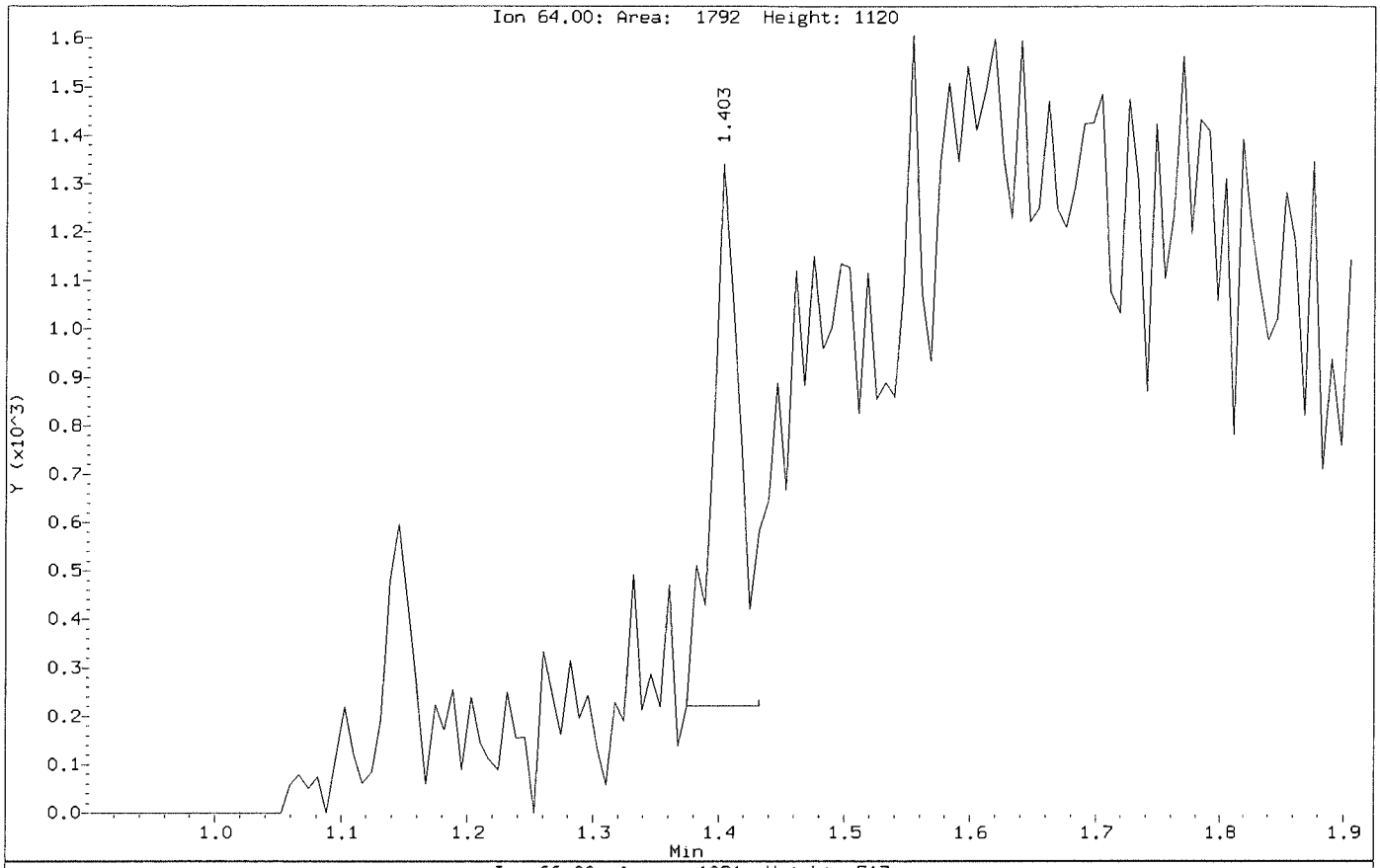
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

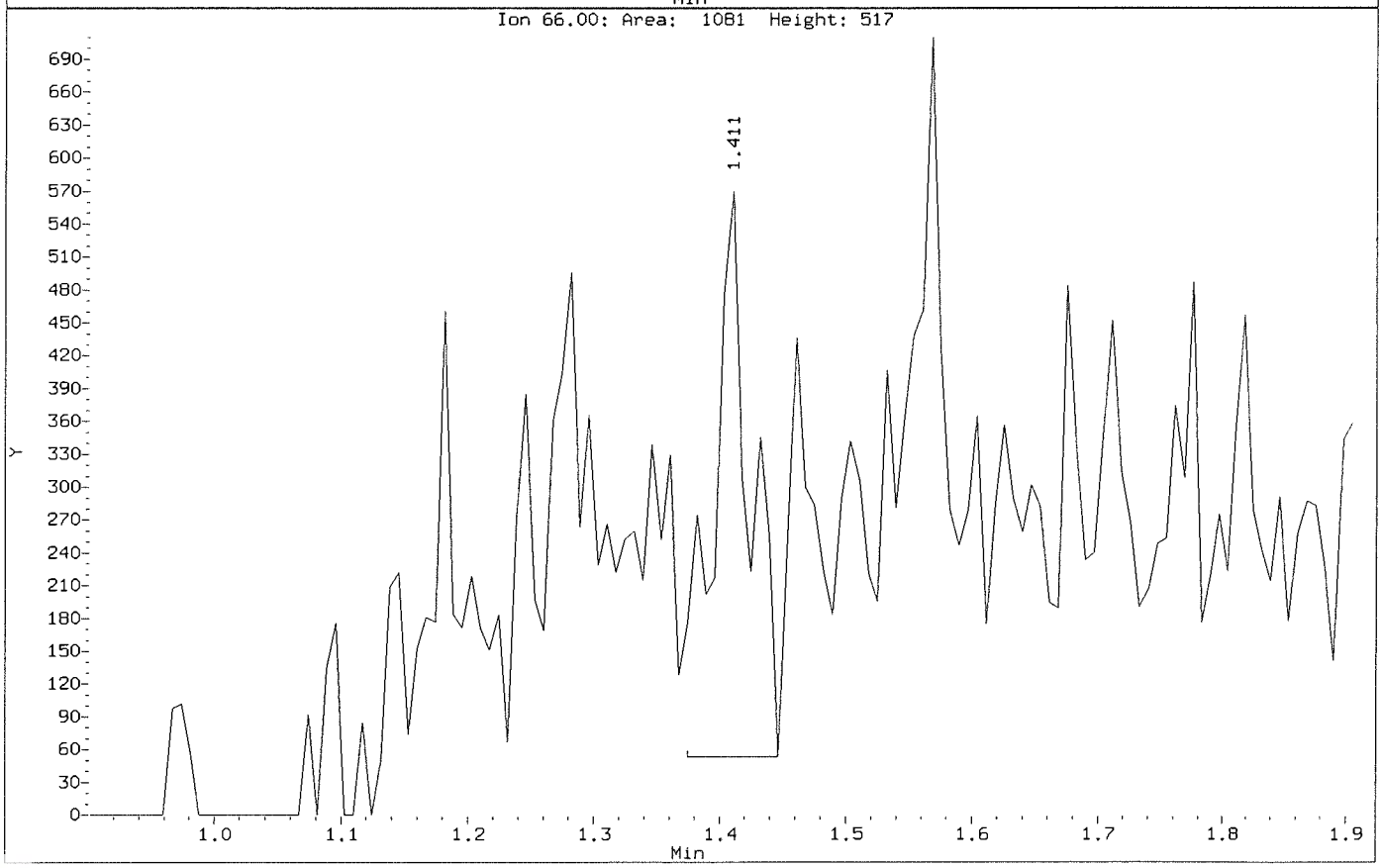




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Instrument: voa6.i
Client Sample ID: VSTD000.5

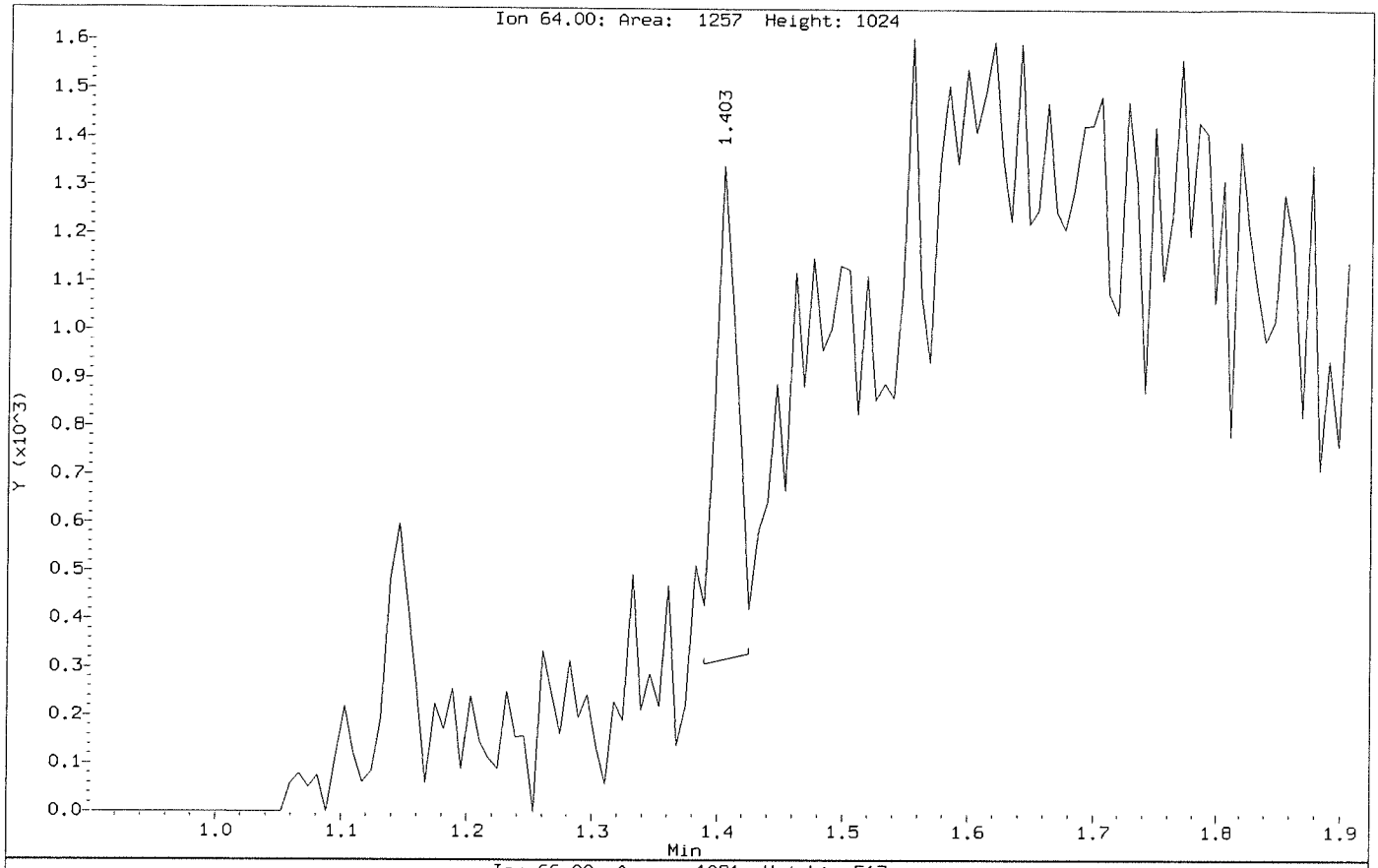
Compound: Chloroethane
CAS Number: 75-00-3

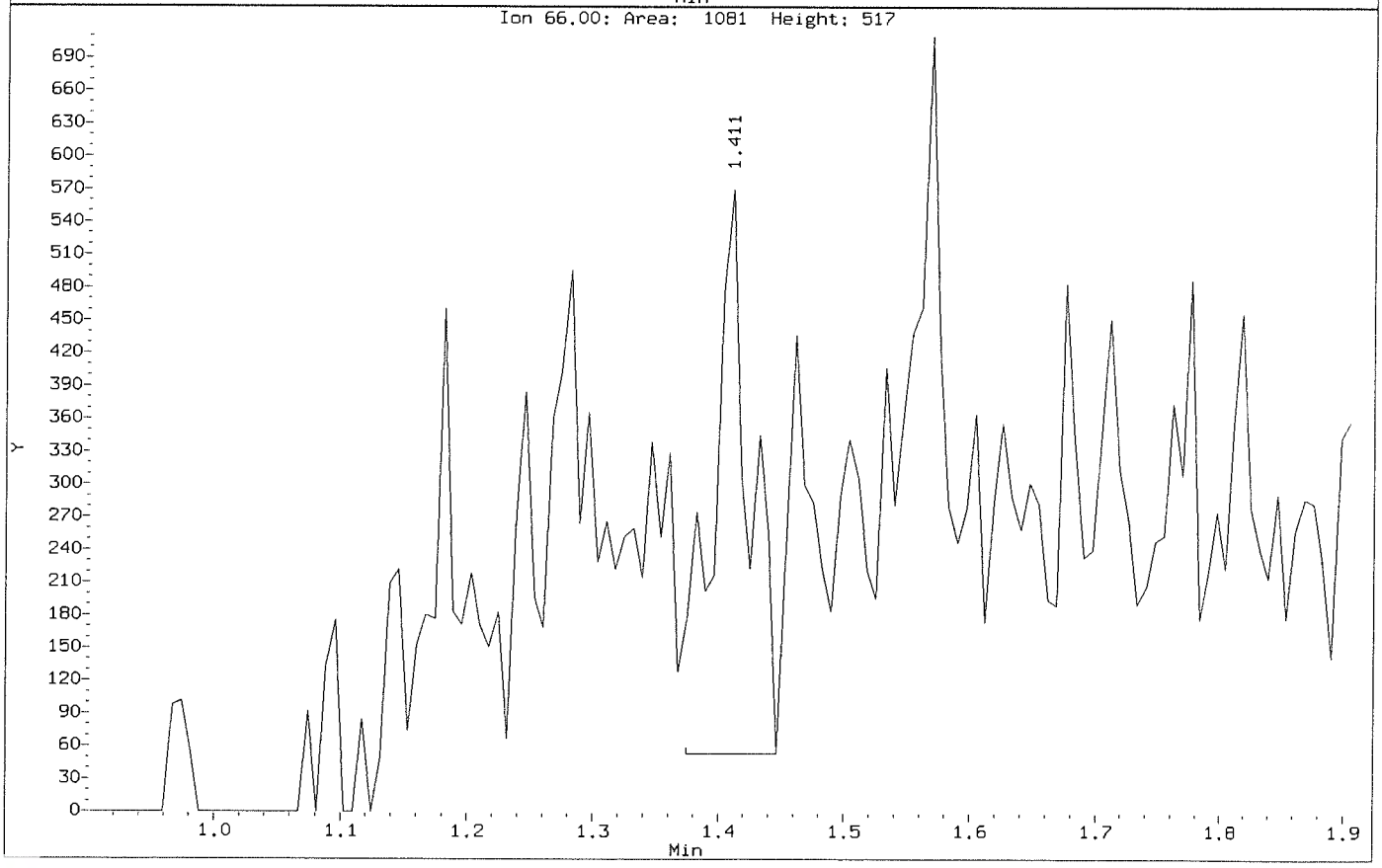




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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

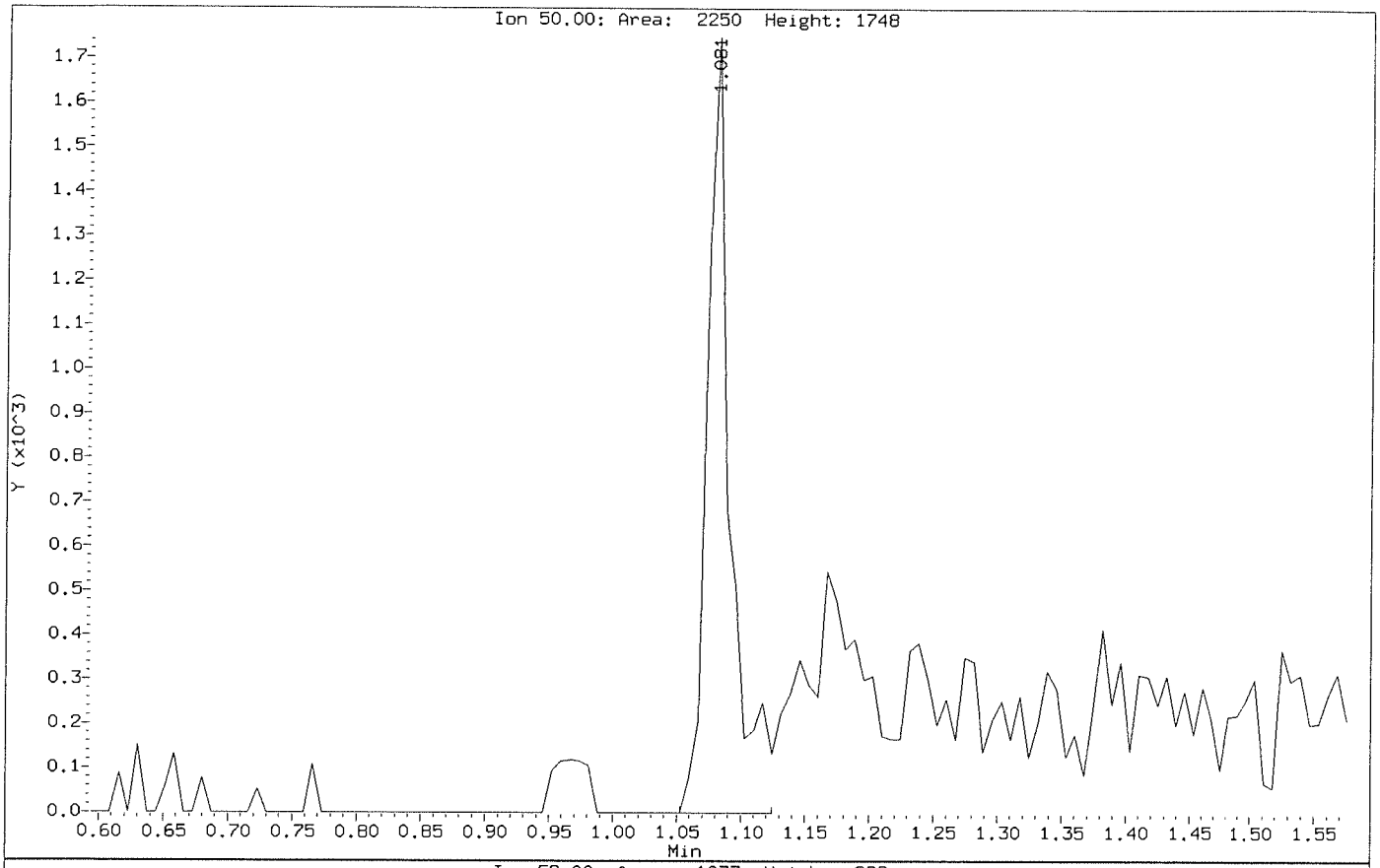
Compound: Chloroethane
CAS Number: 75-00-3

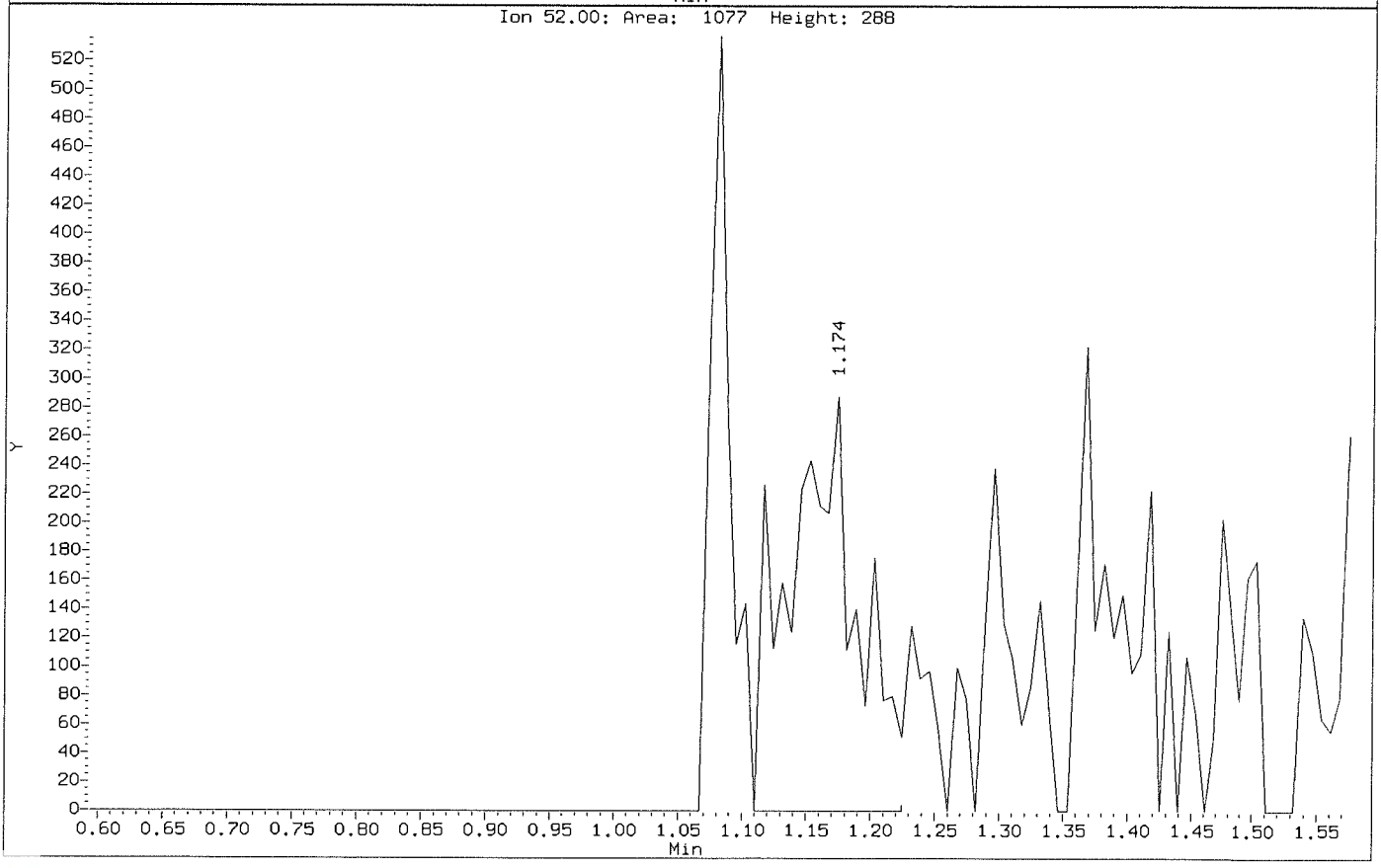




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Instrument: voa6.i
Client Sample ID: VSTD000.5

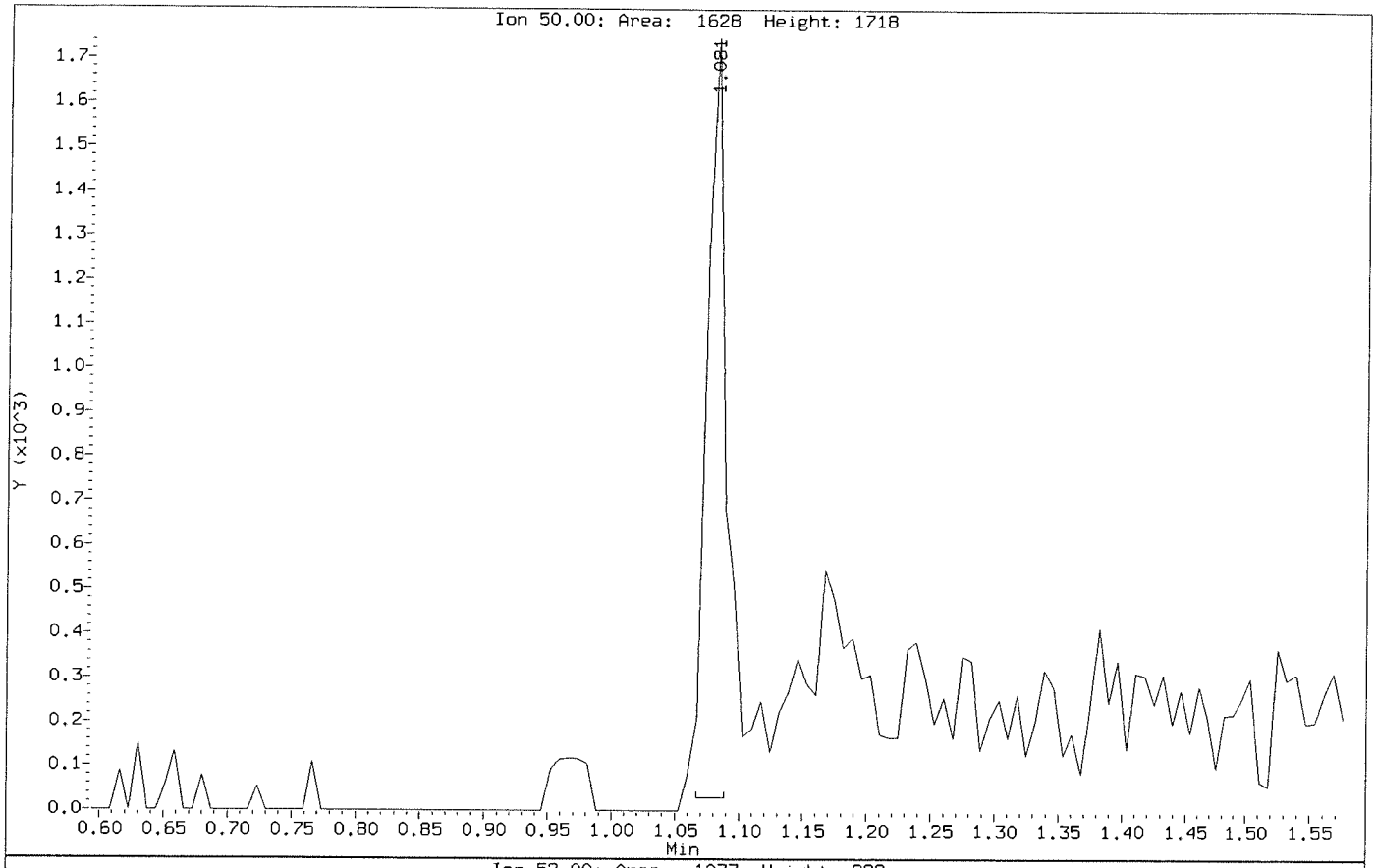
Compound: Chloromethane
CAS Number: 74-87-3

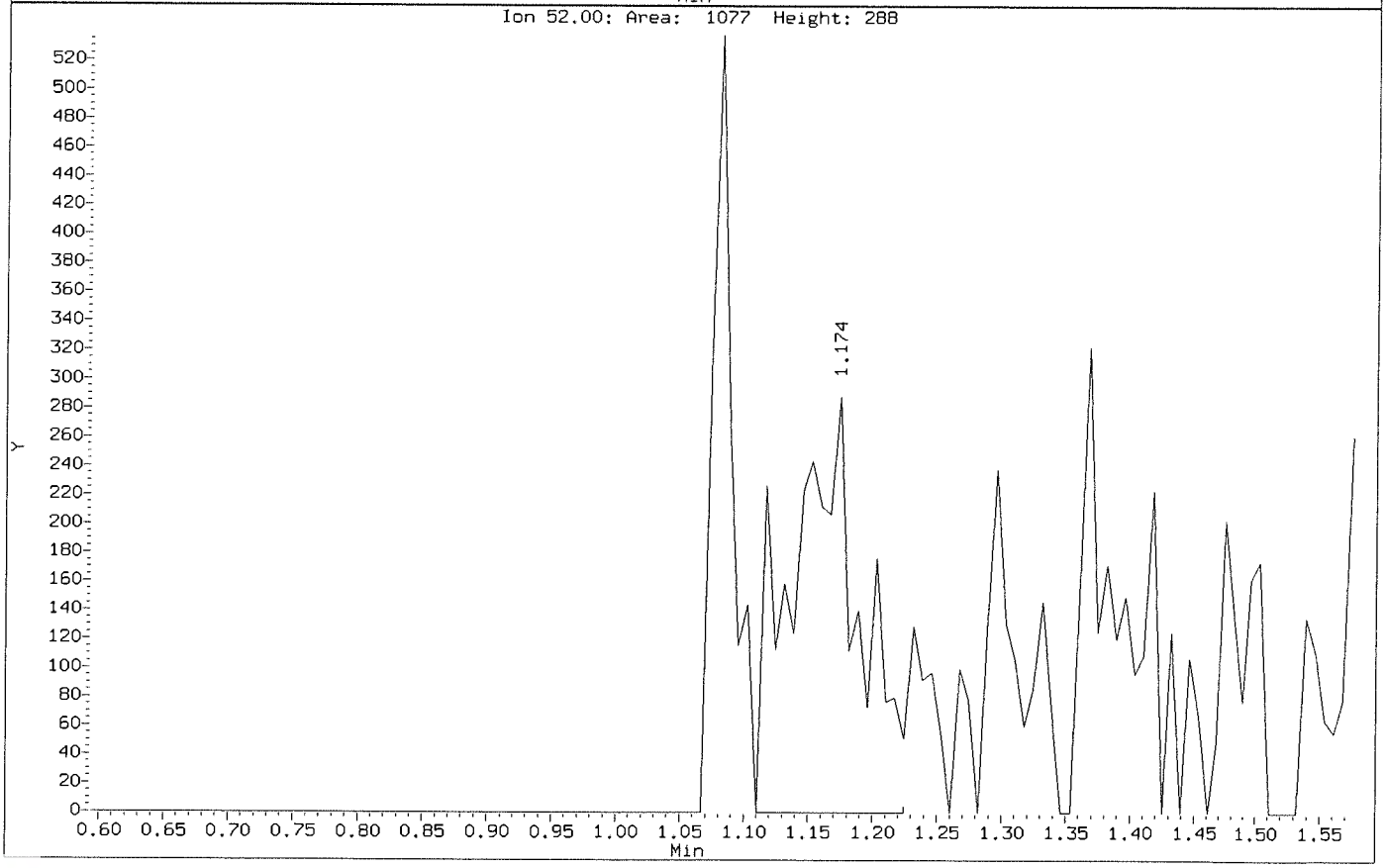




Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110303.D
Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

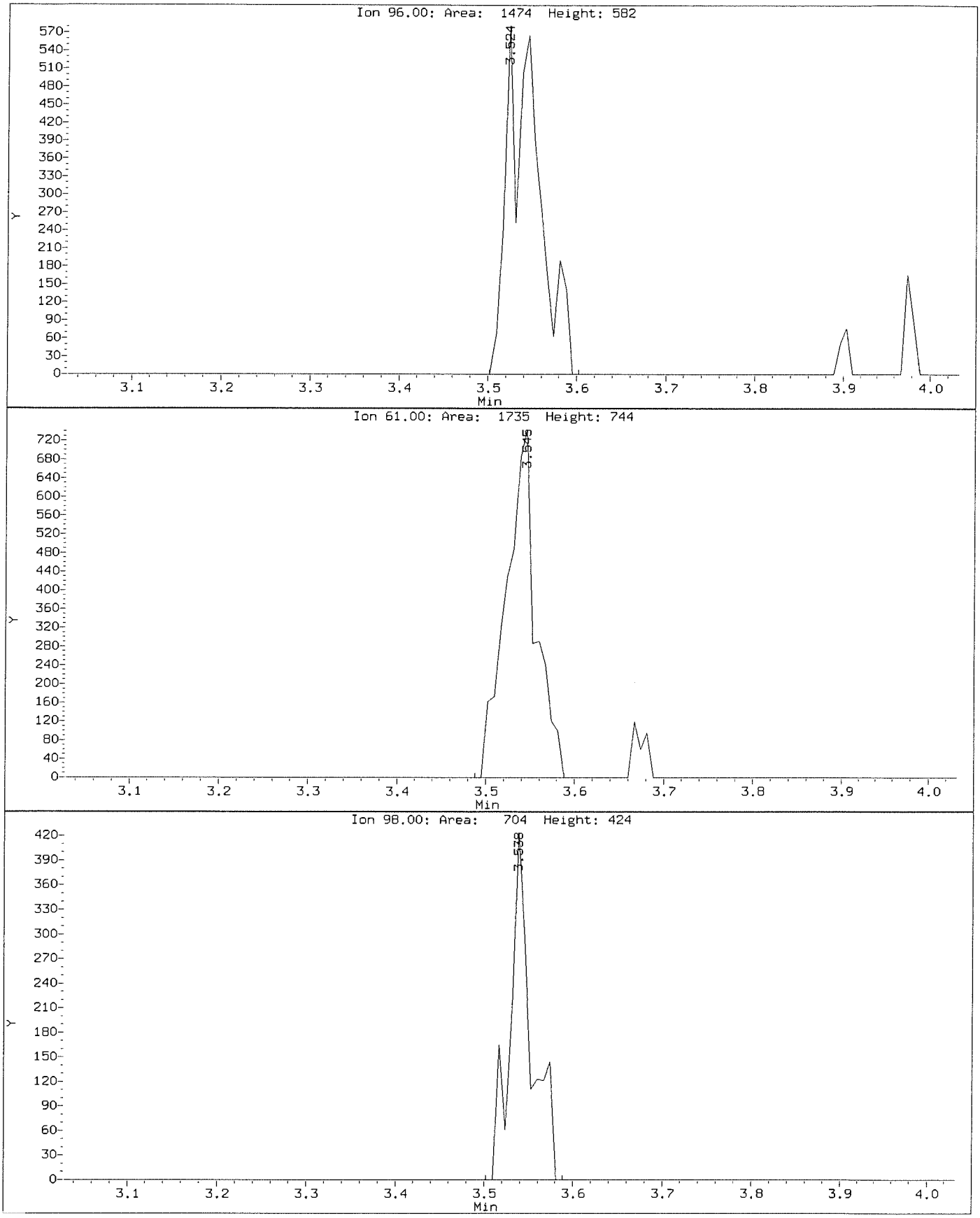
Compound: Chloromethane
CAS Number: 74-87-3





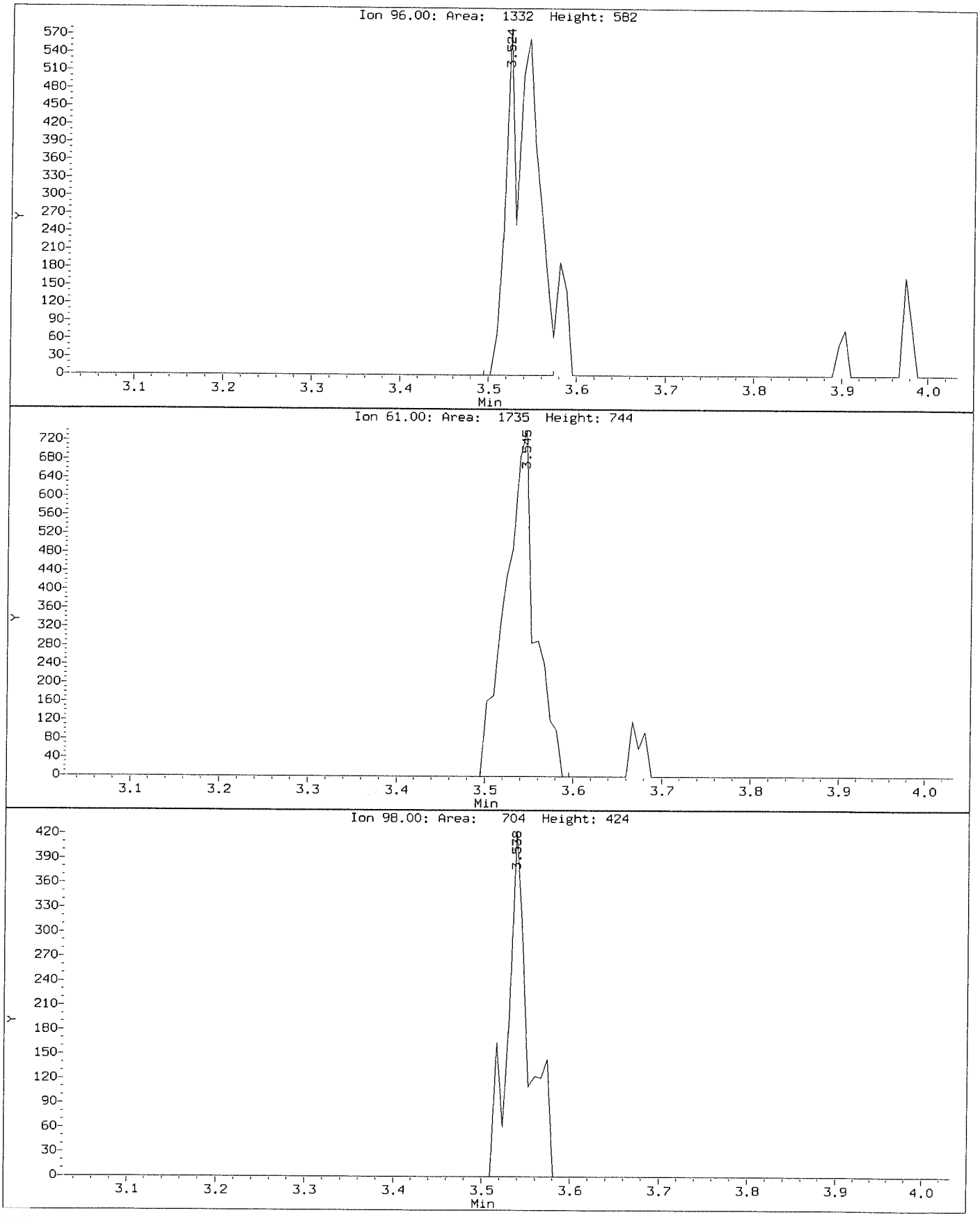
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



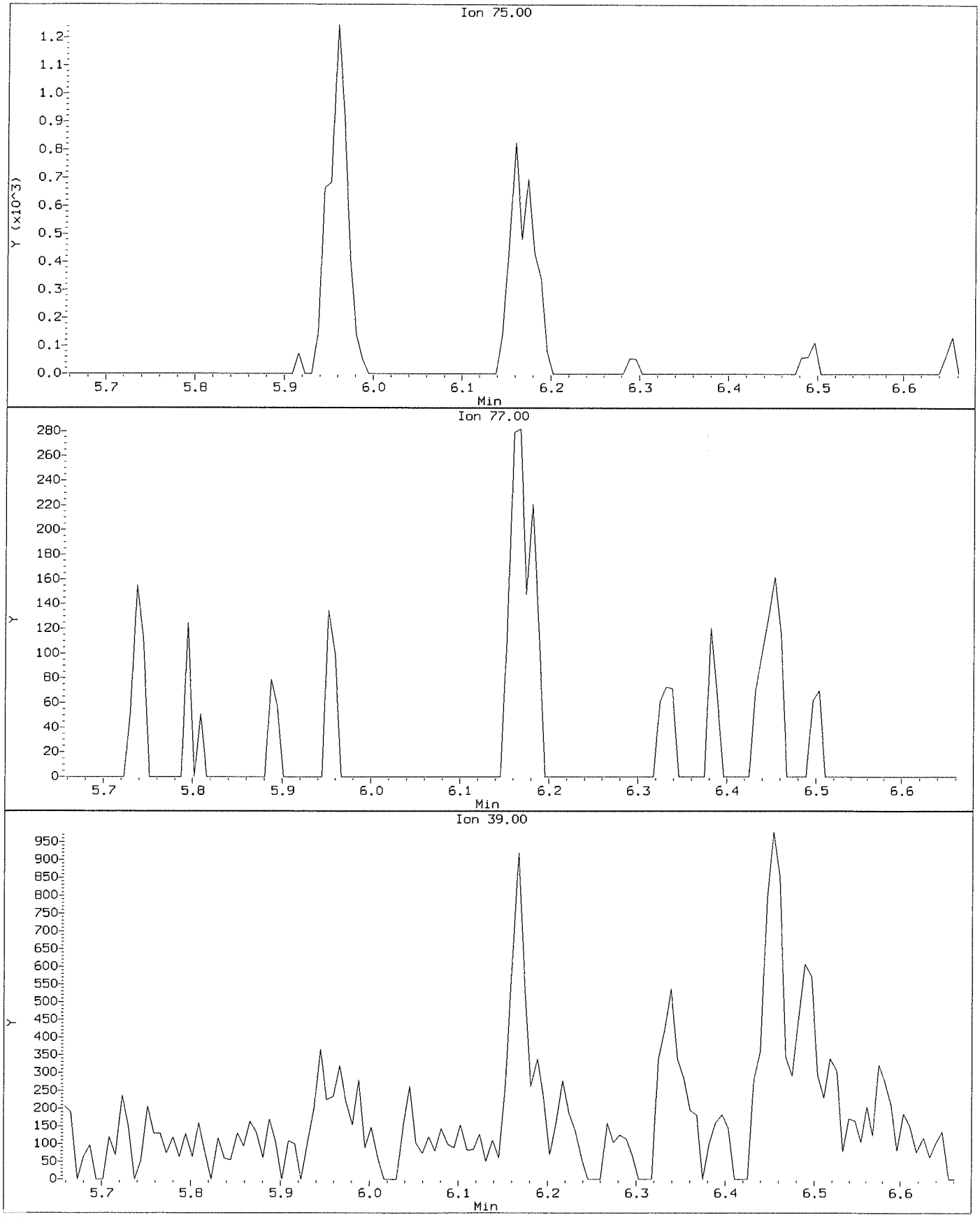
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



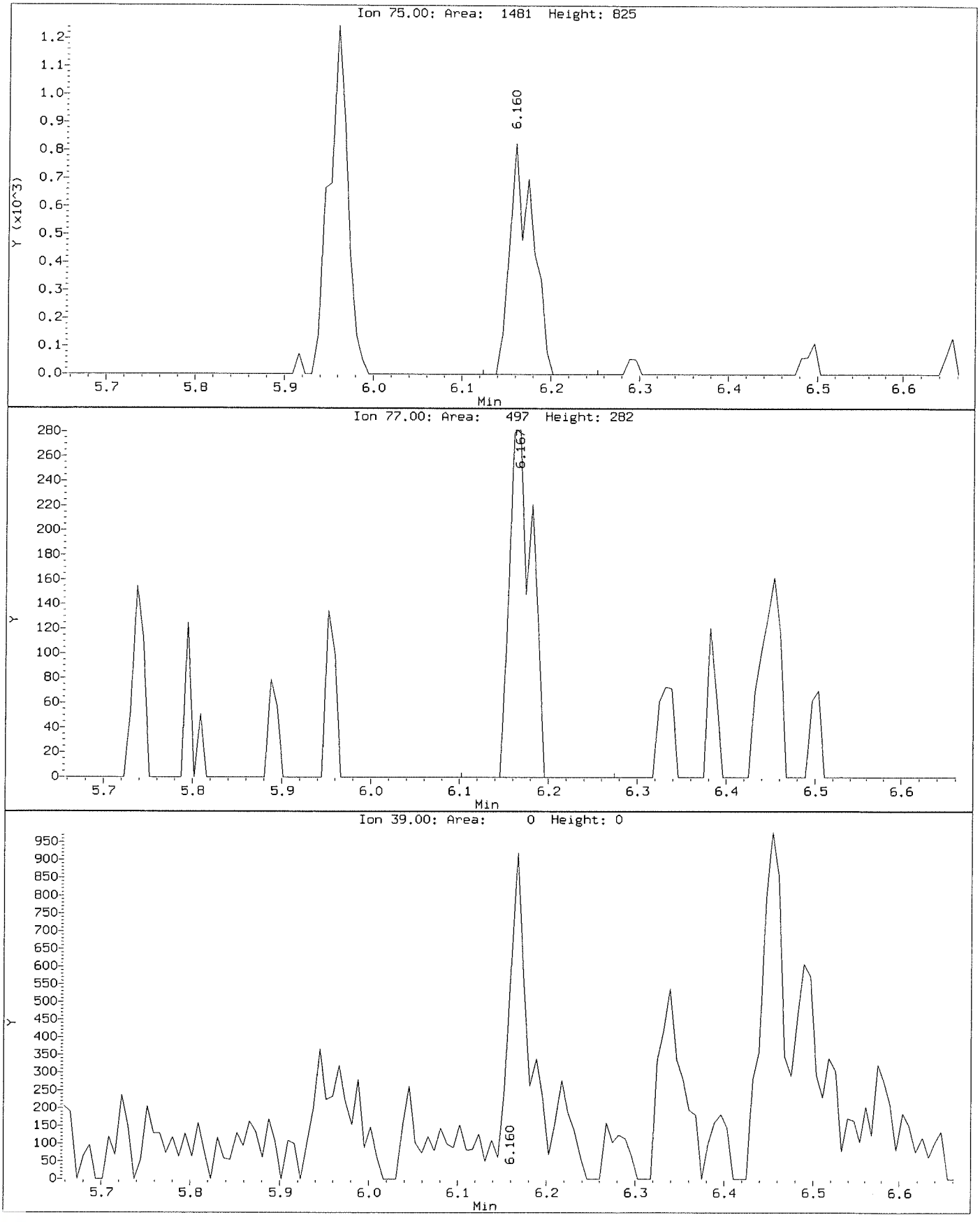
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,3-Dichloropropene
CAS Number: 10061-01-5



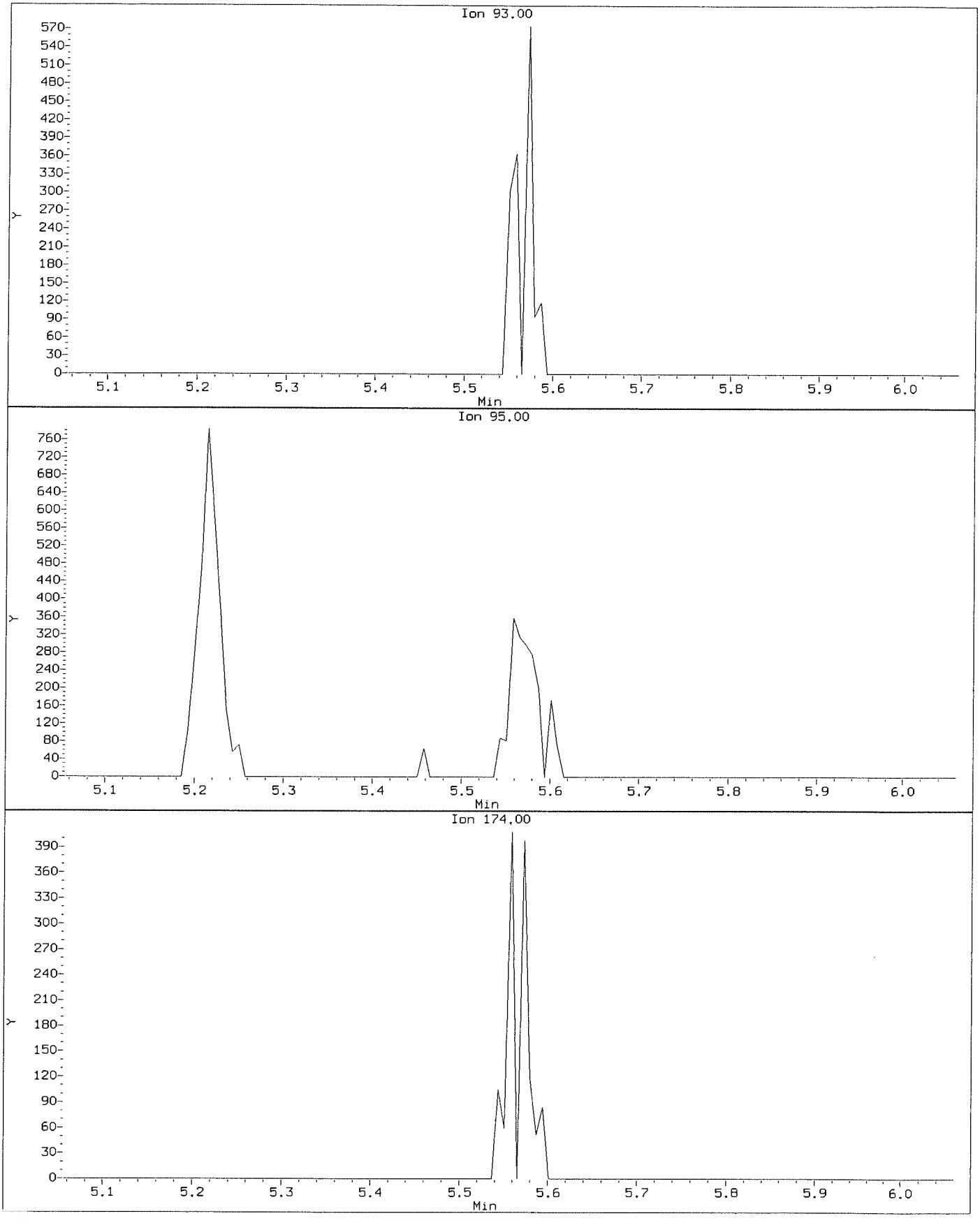
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,3-Dichloropropene
CAS Number: 10061-01-5



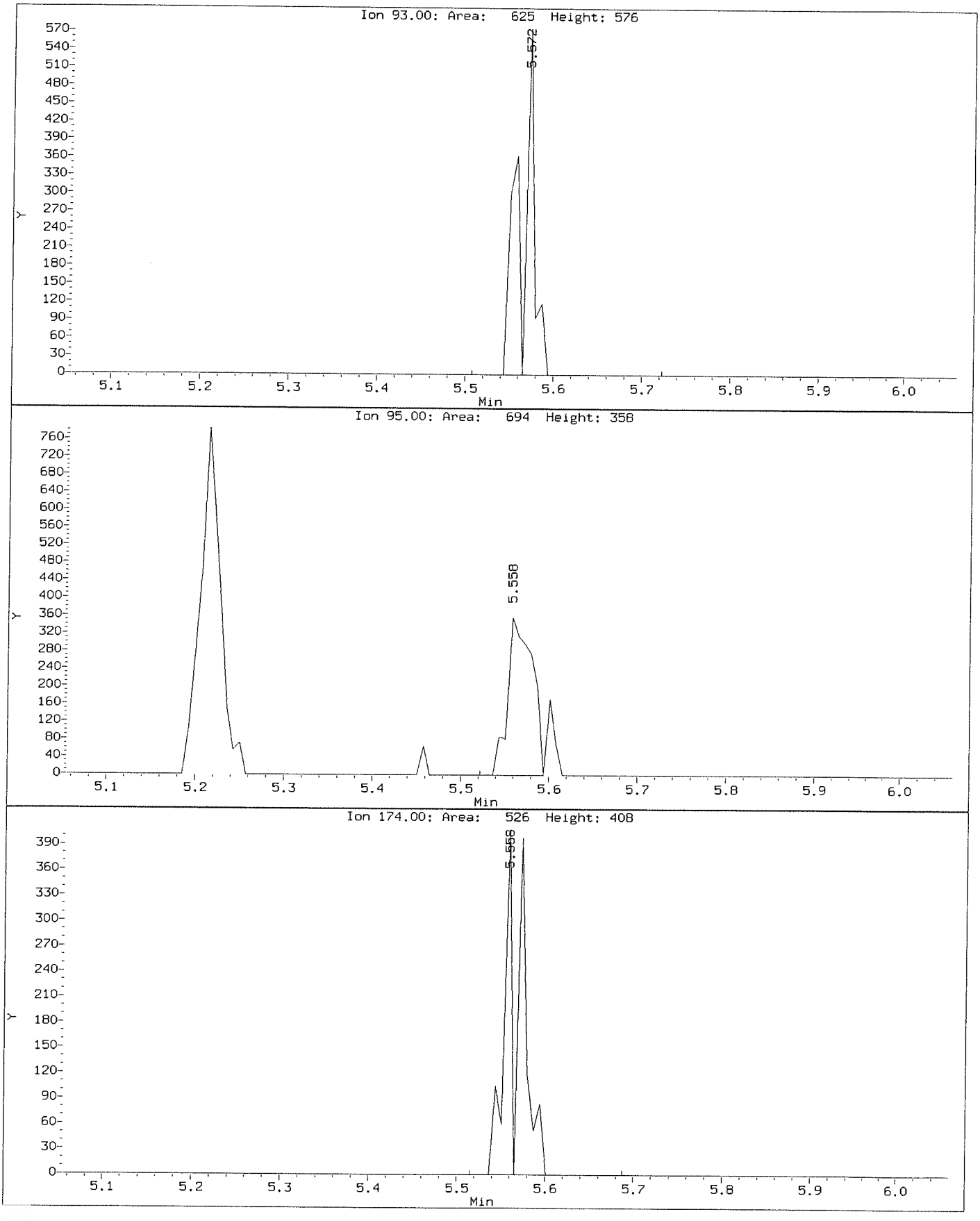
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Dibromomethane
CAS Number: 74-95-3



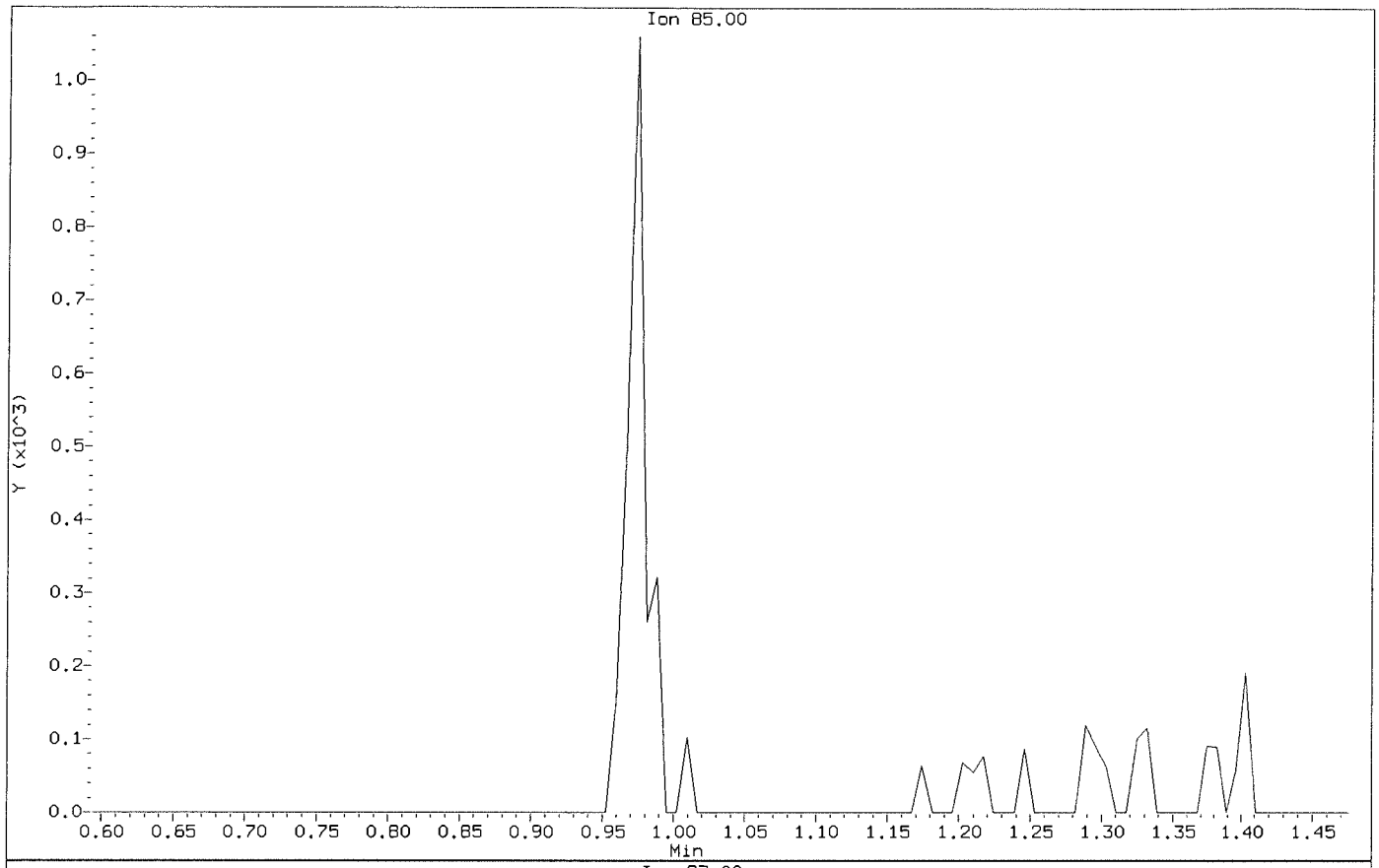
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

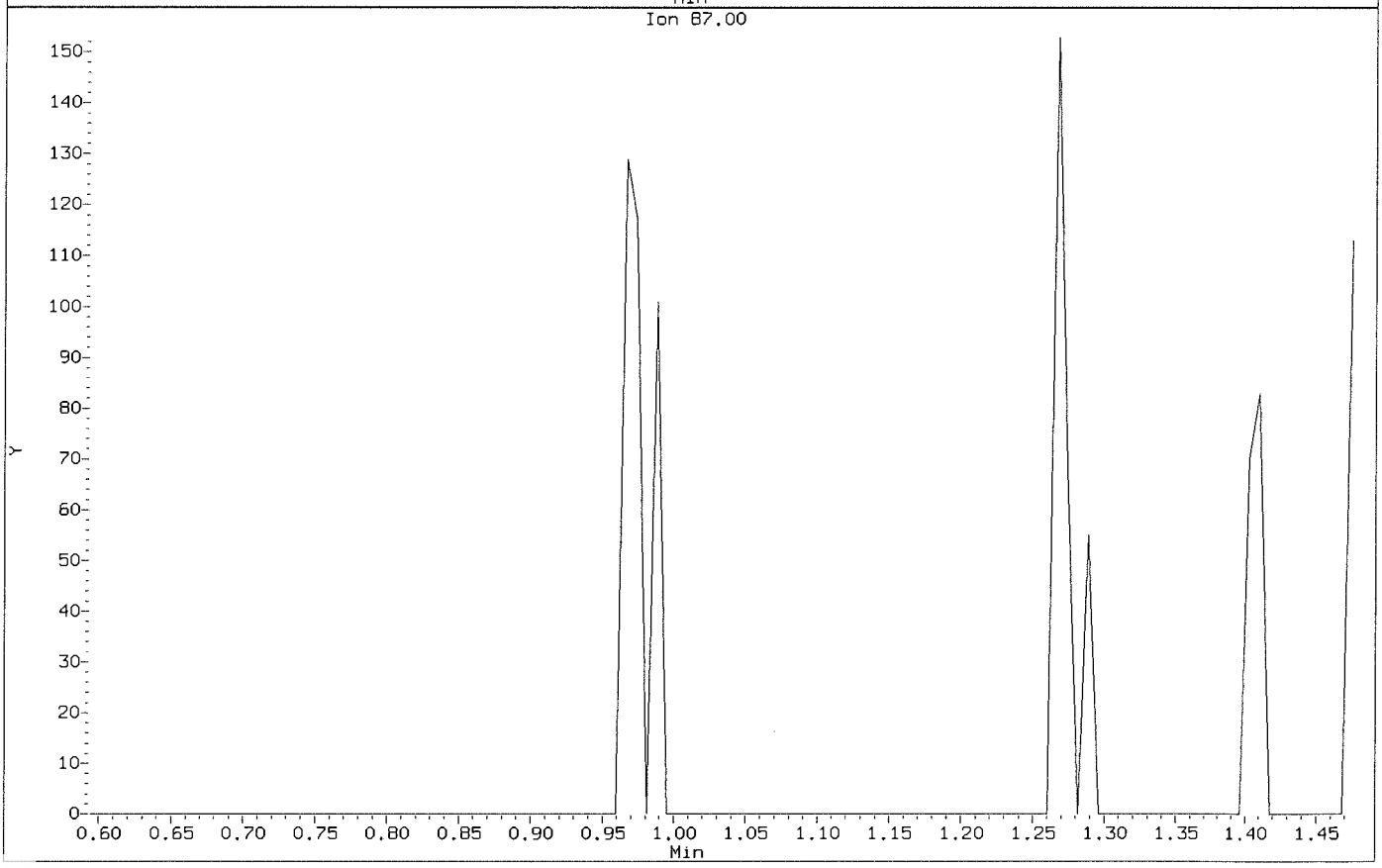
Compound: Dibromomethane
CAS Number: 74-95-3



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

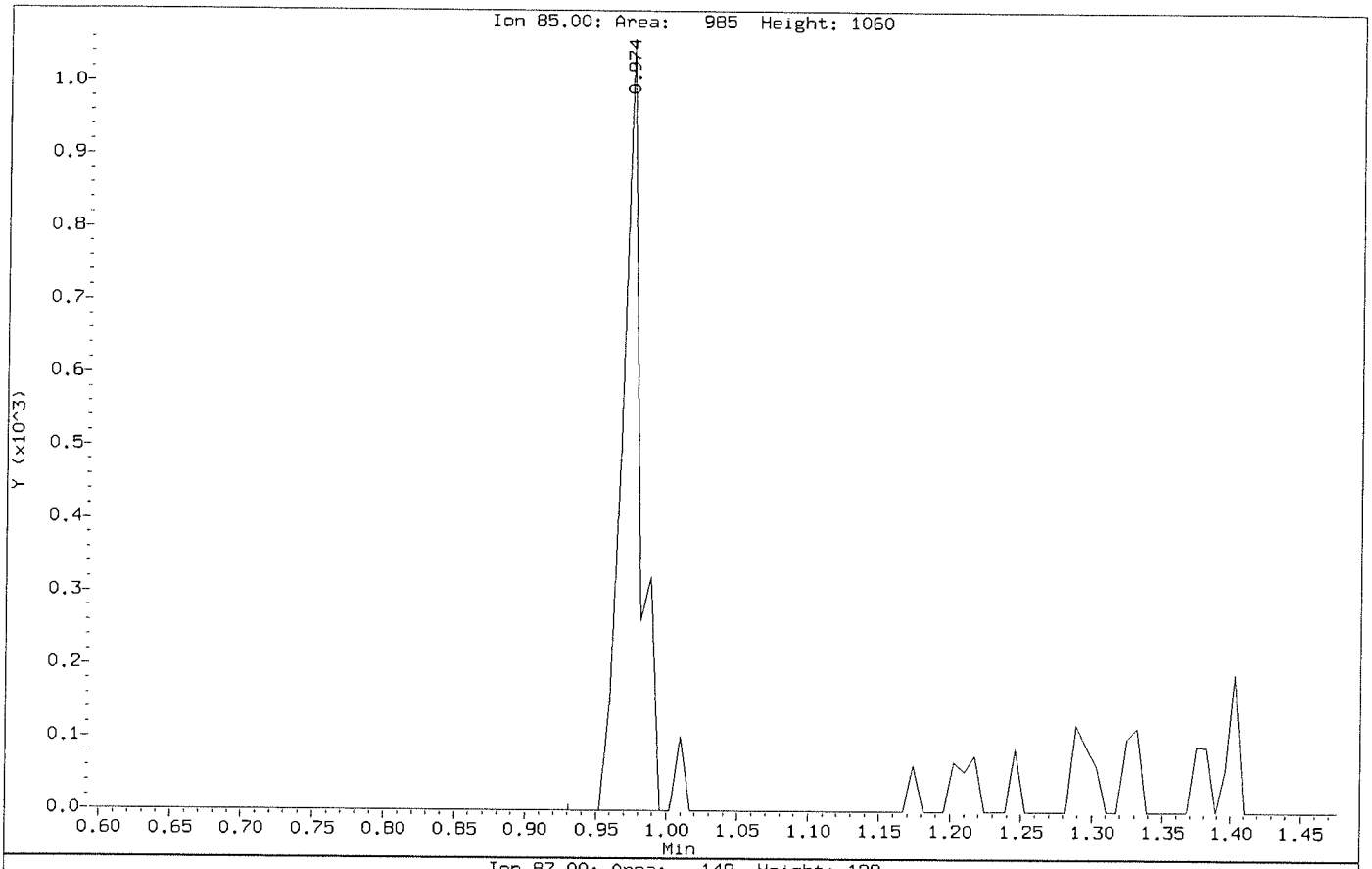
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8

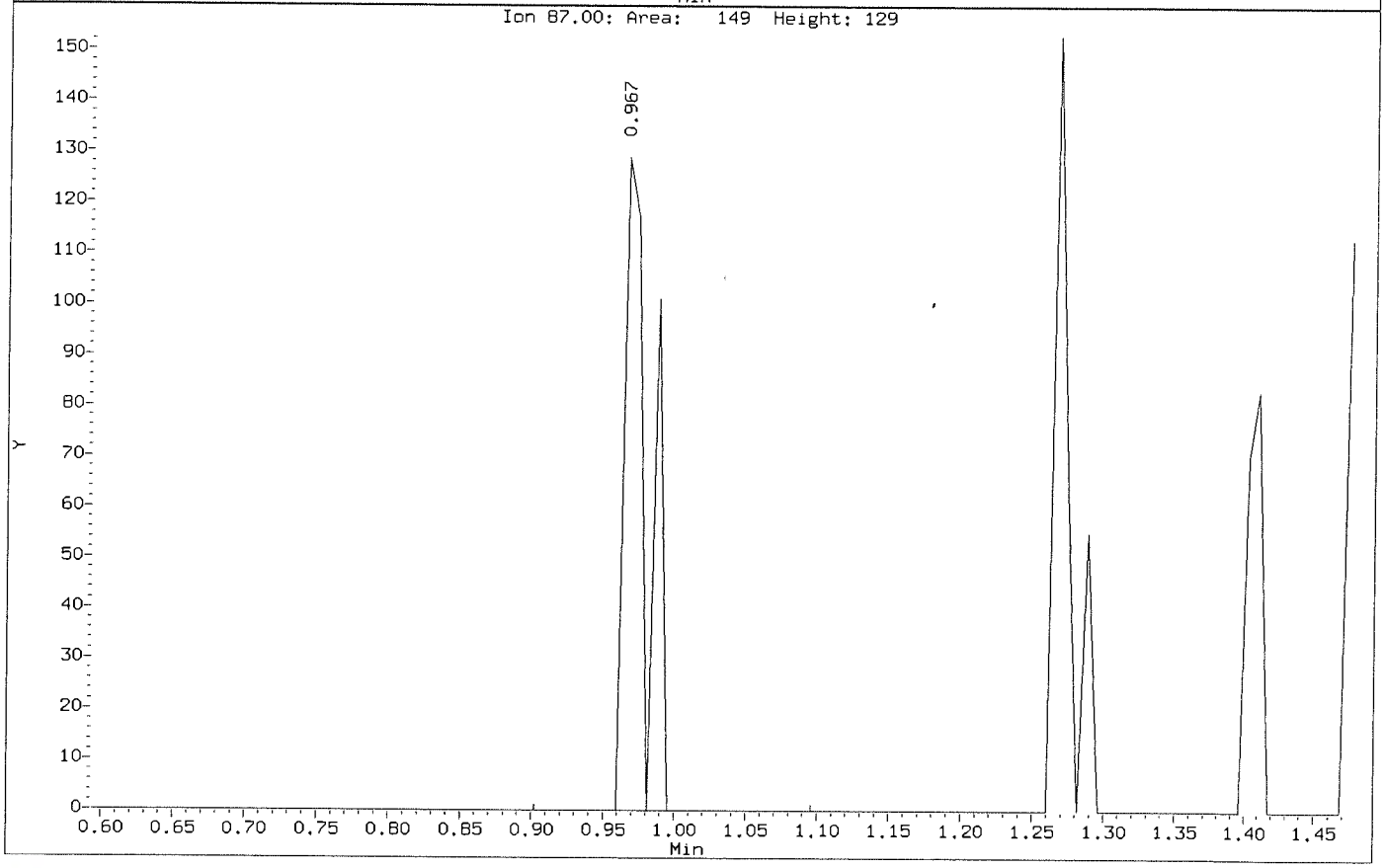




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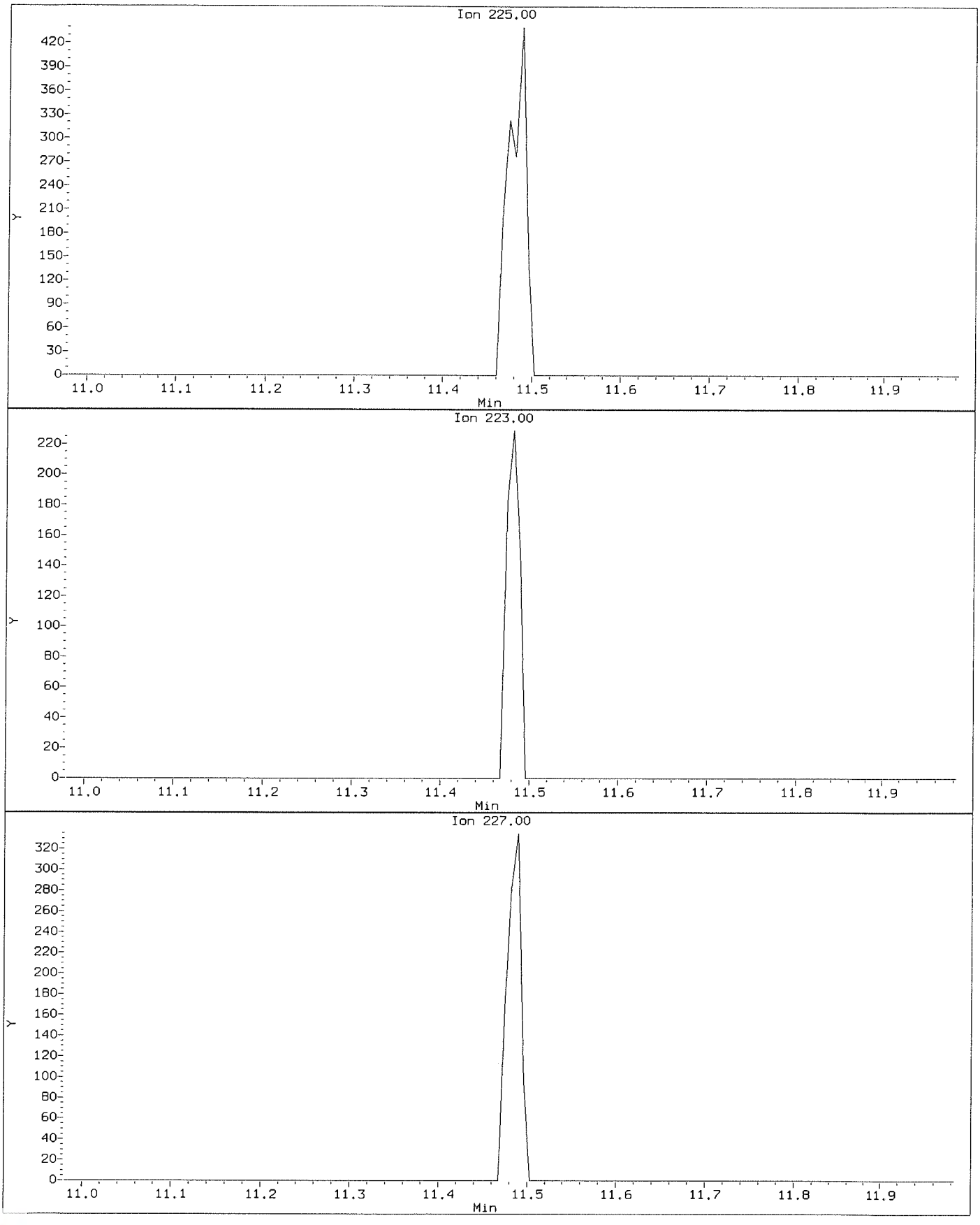
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8





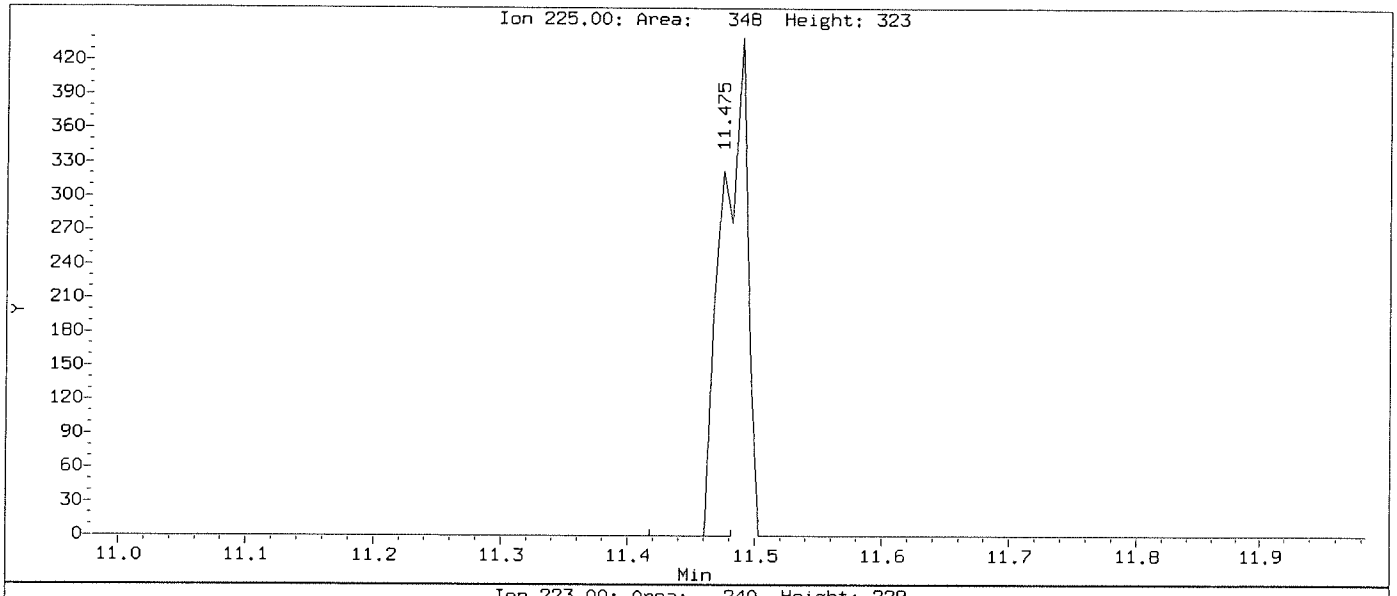
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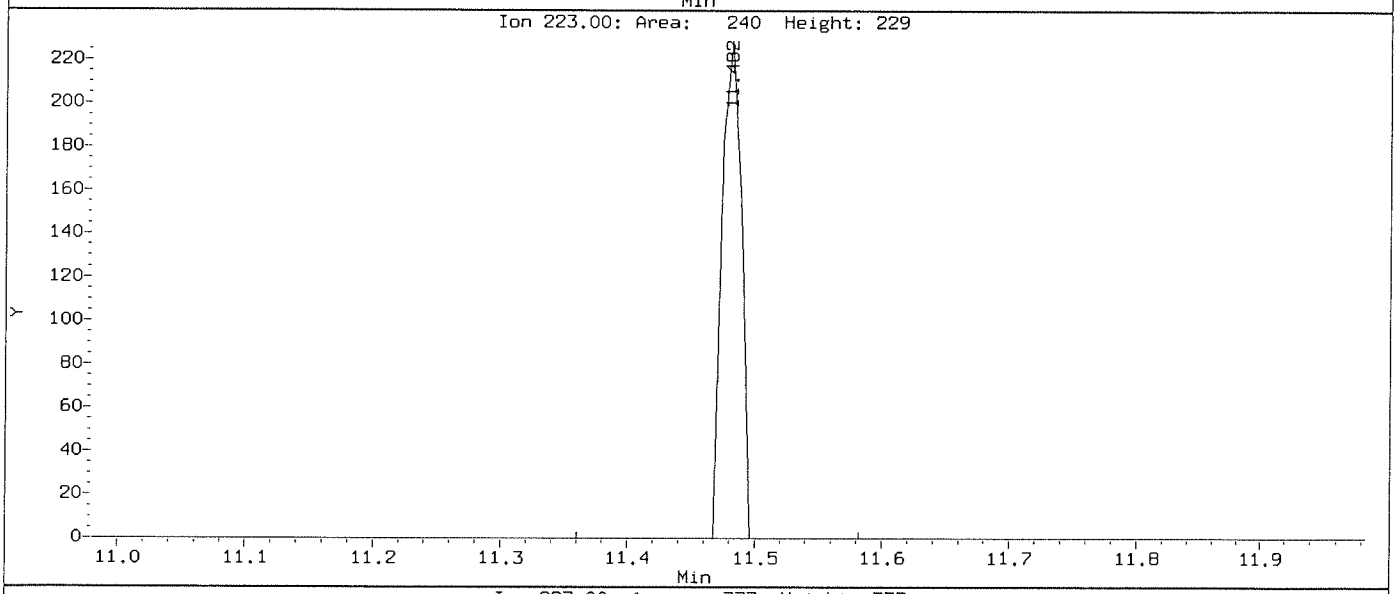
Compound: Hexachlorobutadiene
CAS Number: 87-68-3

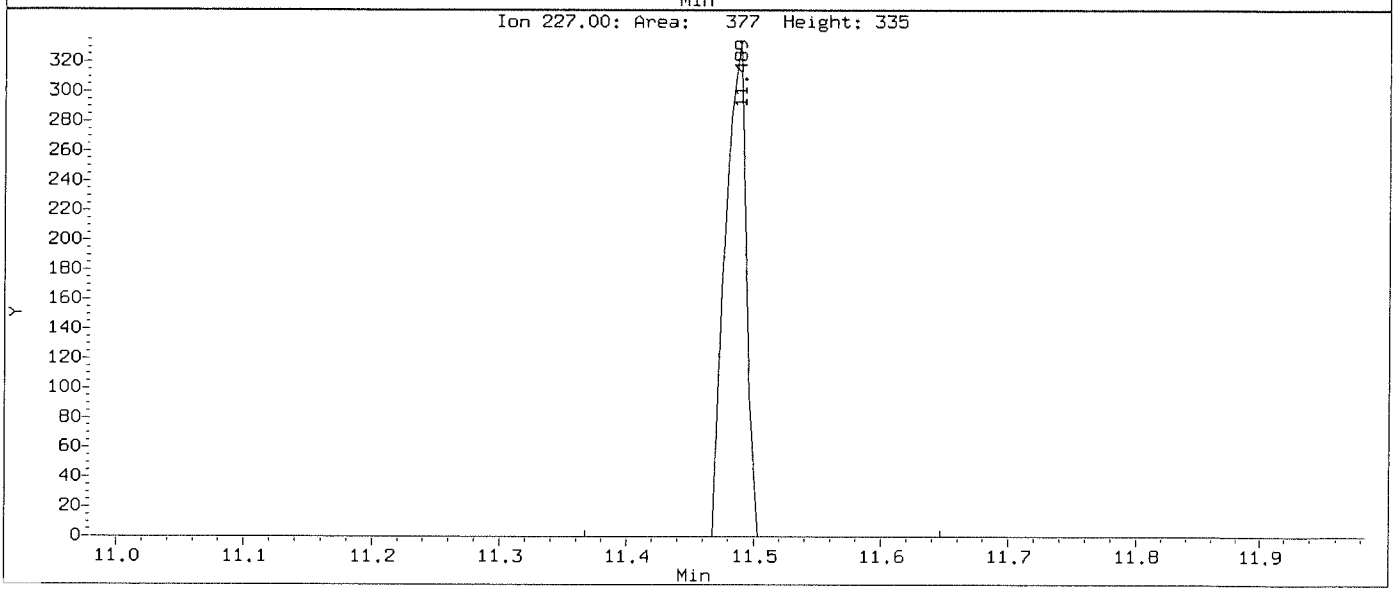


Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110303.D
Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

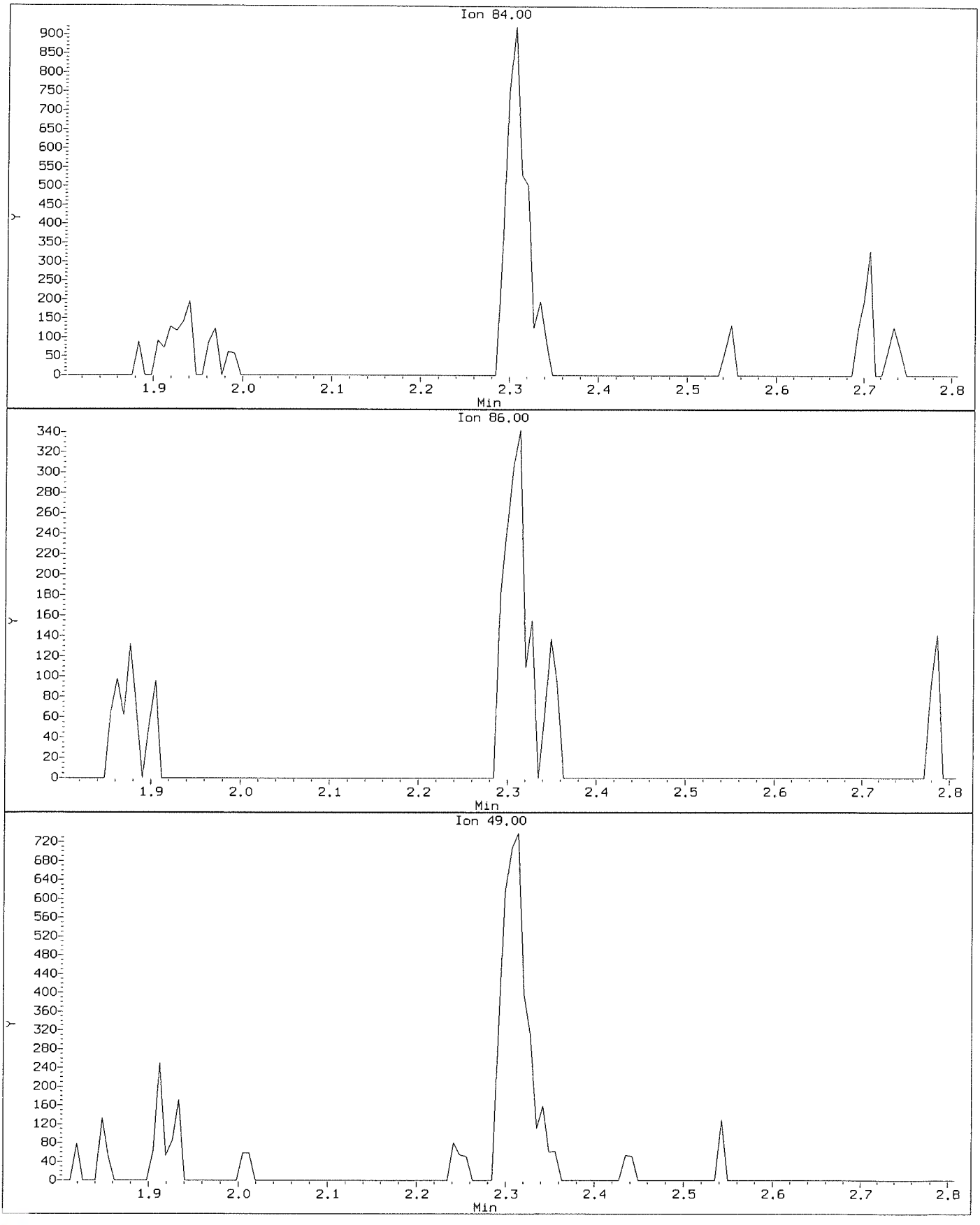






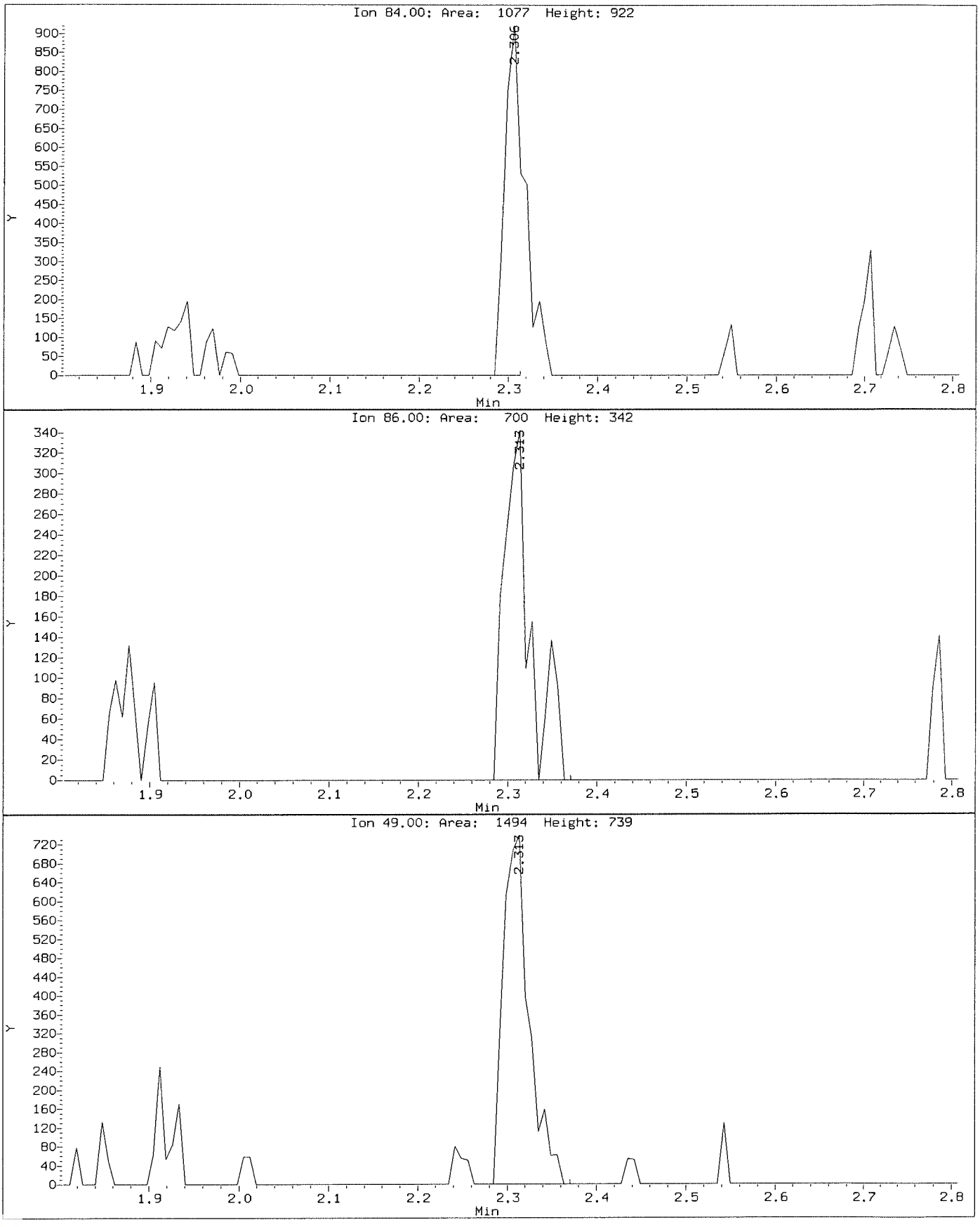
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



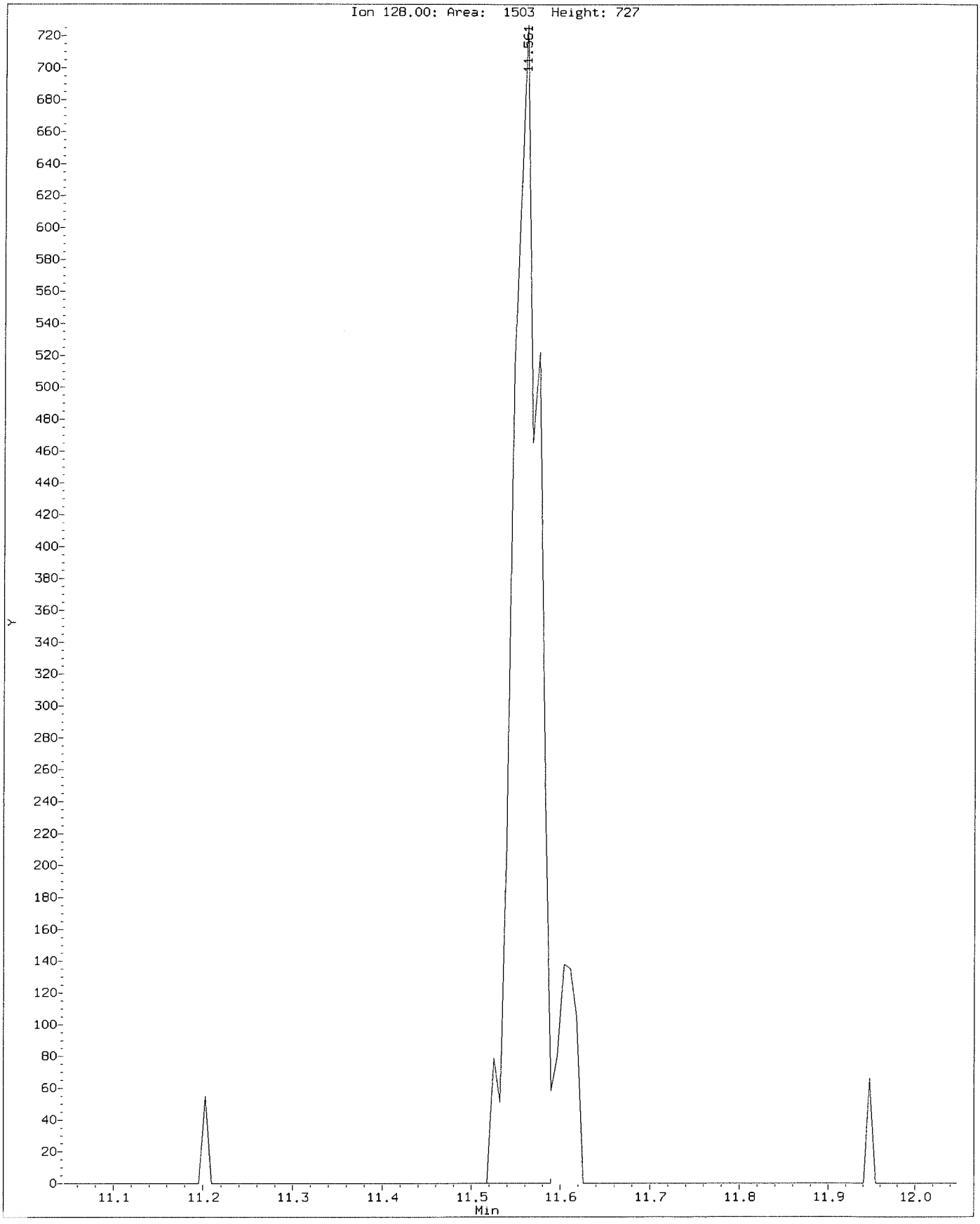
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



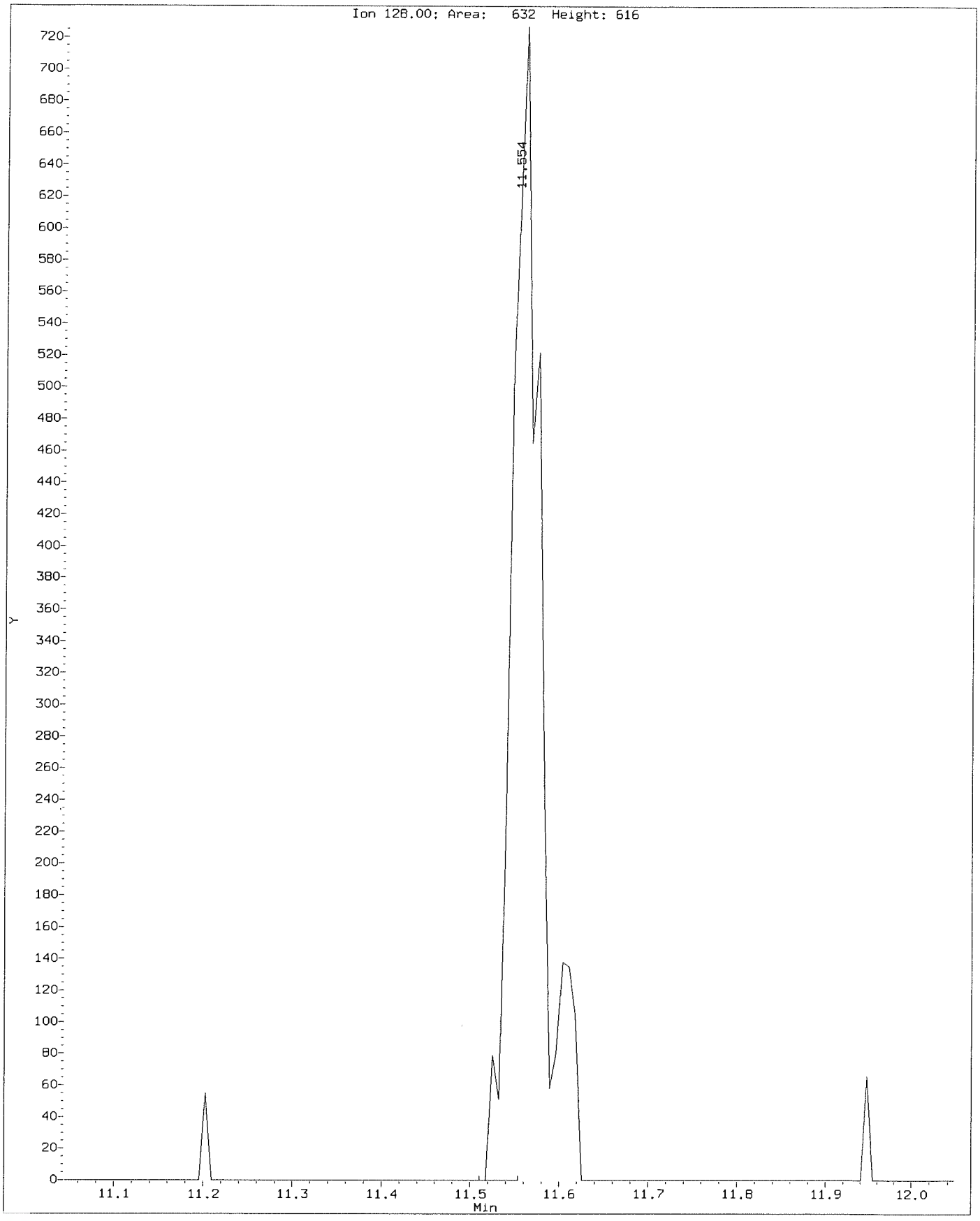
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



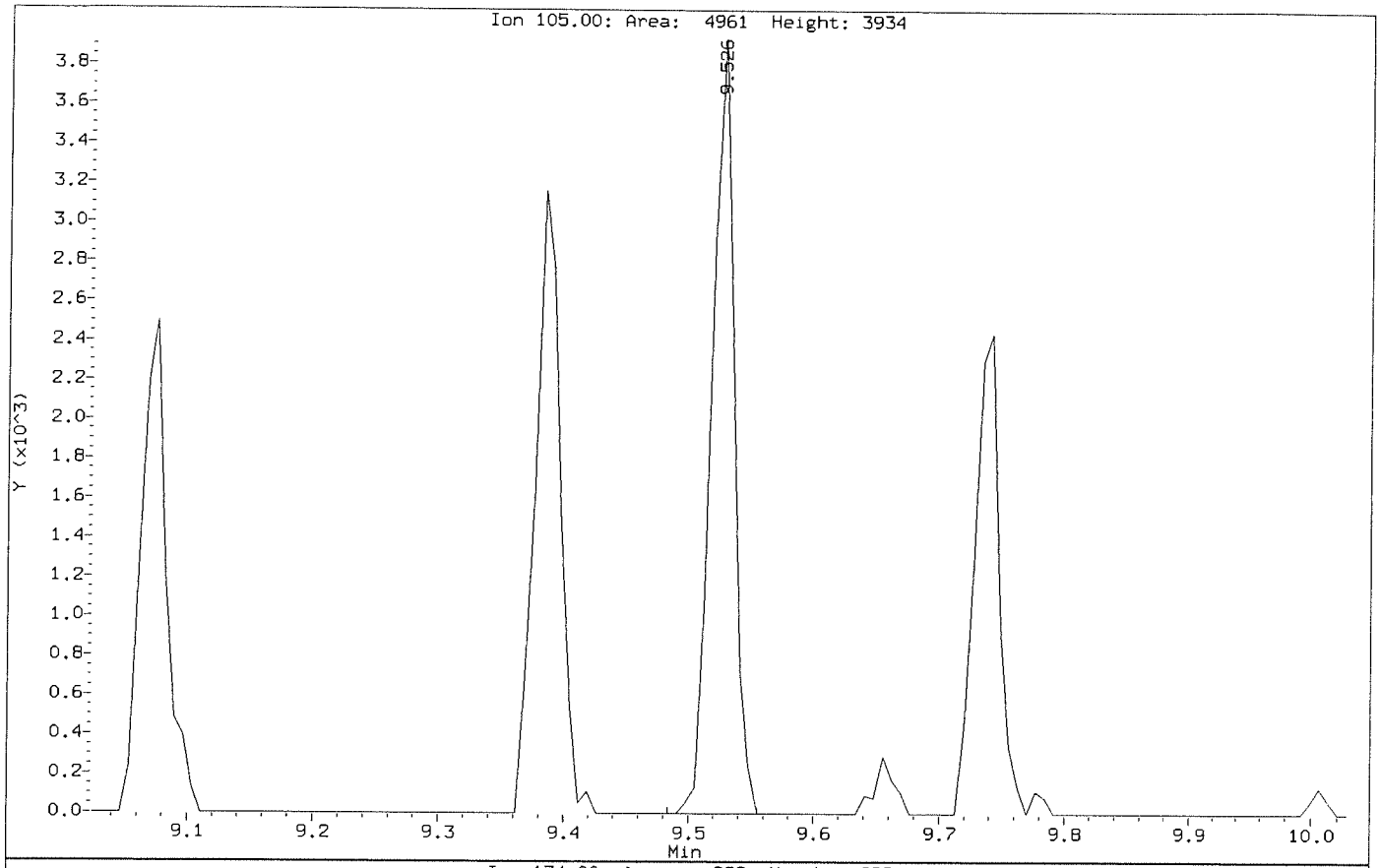
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

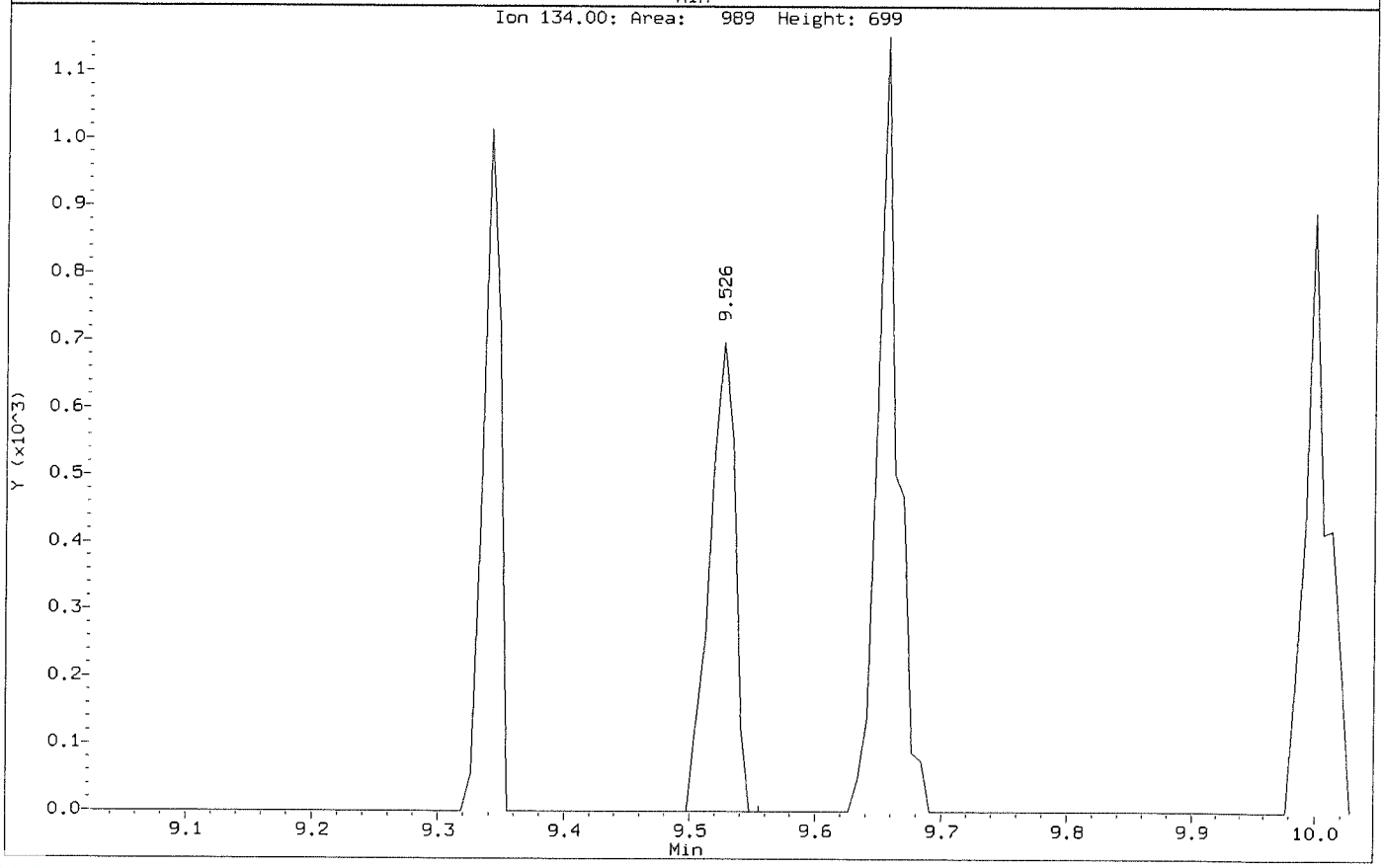
Compound: Naphthalene
CAS Number: 91-20-3



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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

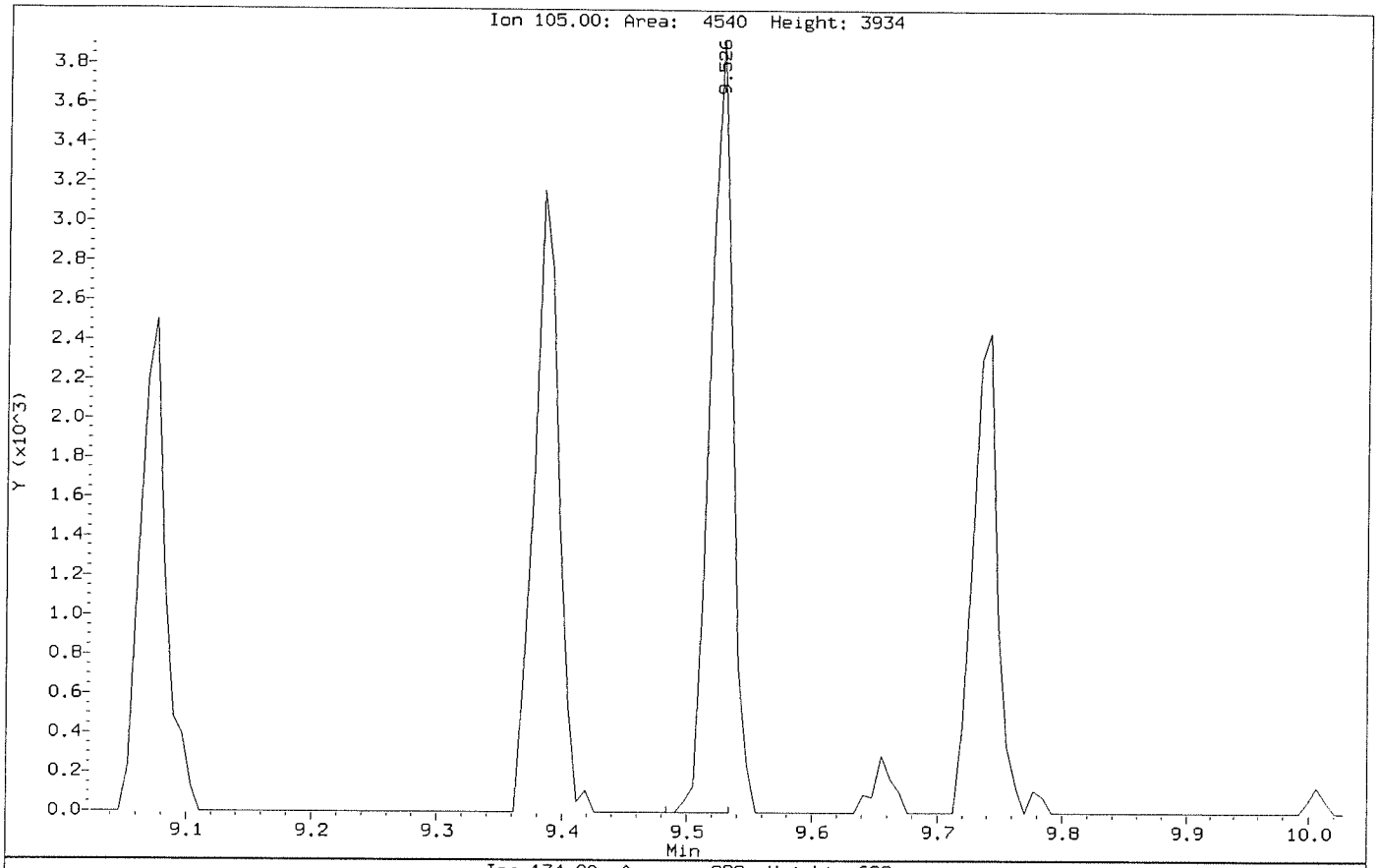
Compound: sec-Butylbenzene
CAS Number: 135-98-8

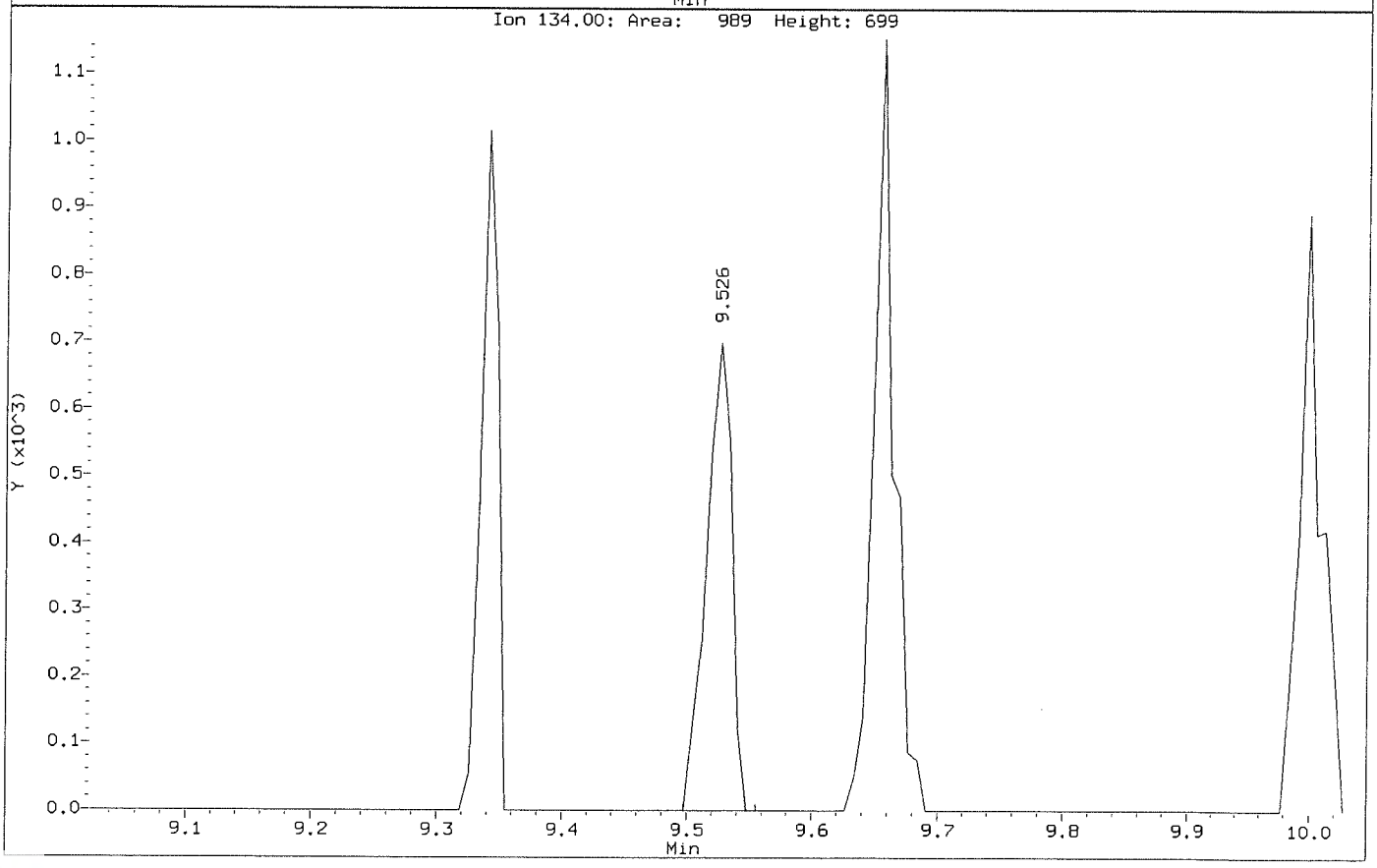




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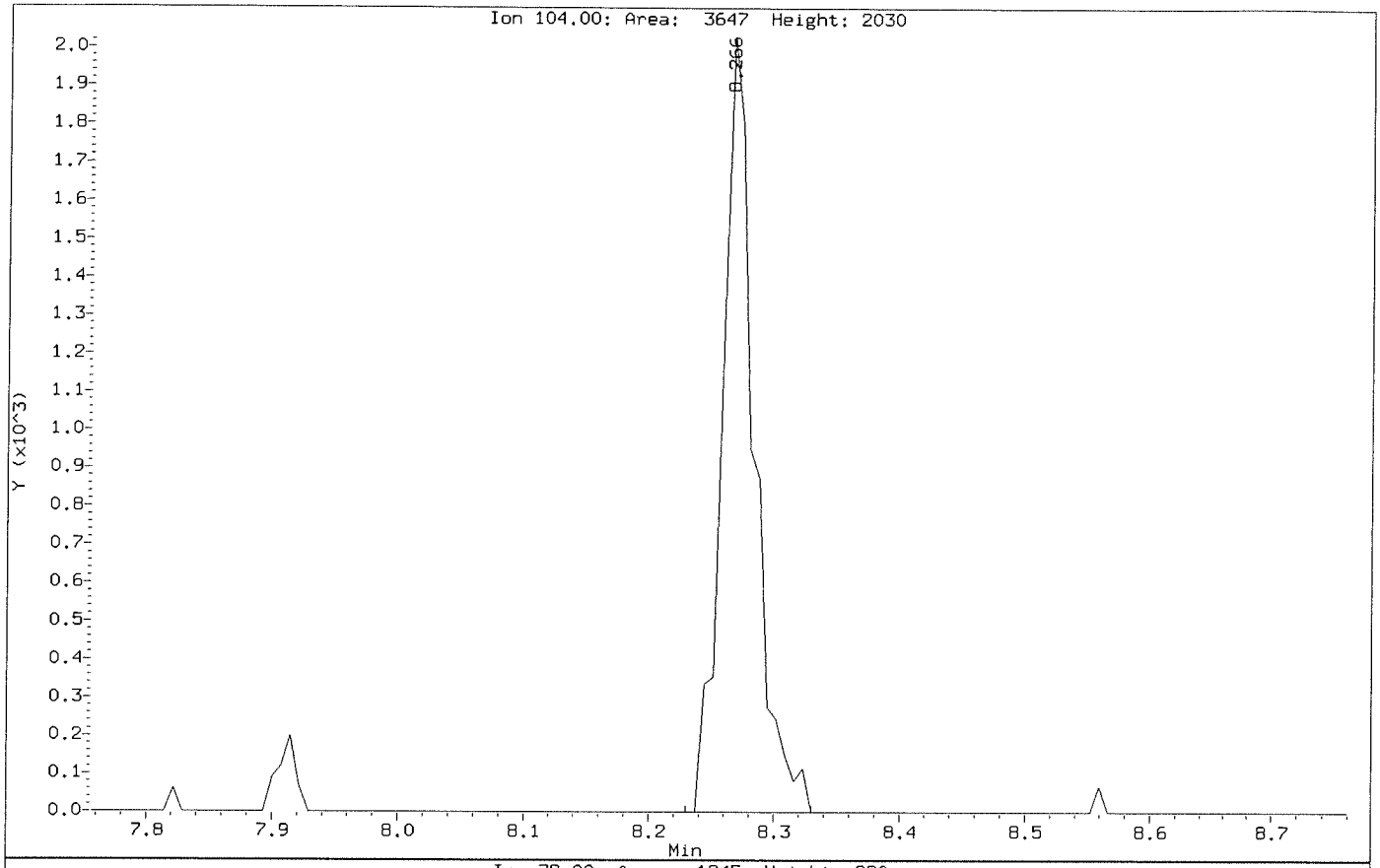
Compound: sec-Butylbenzene
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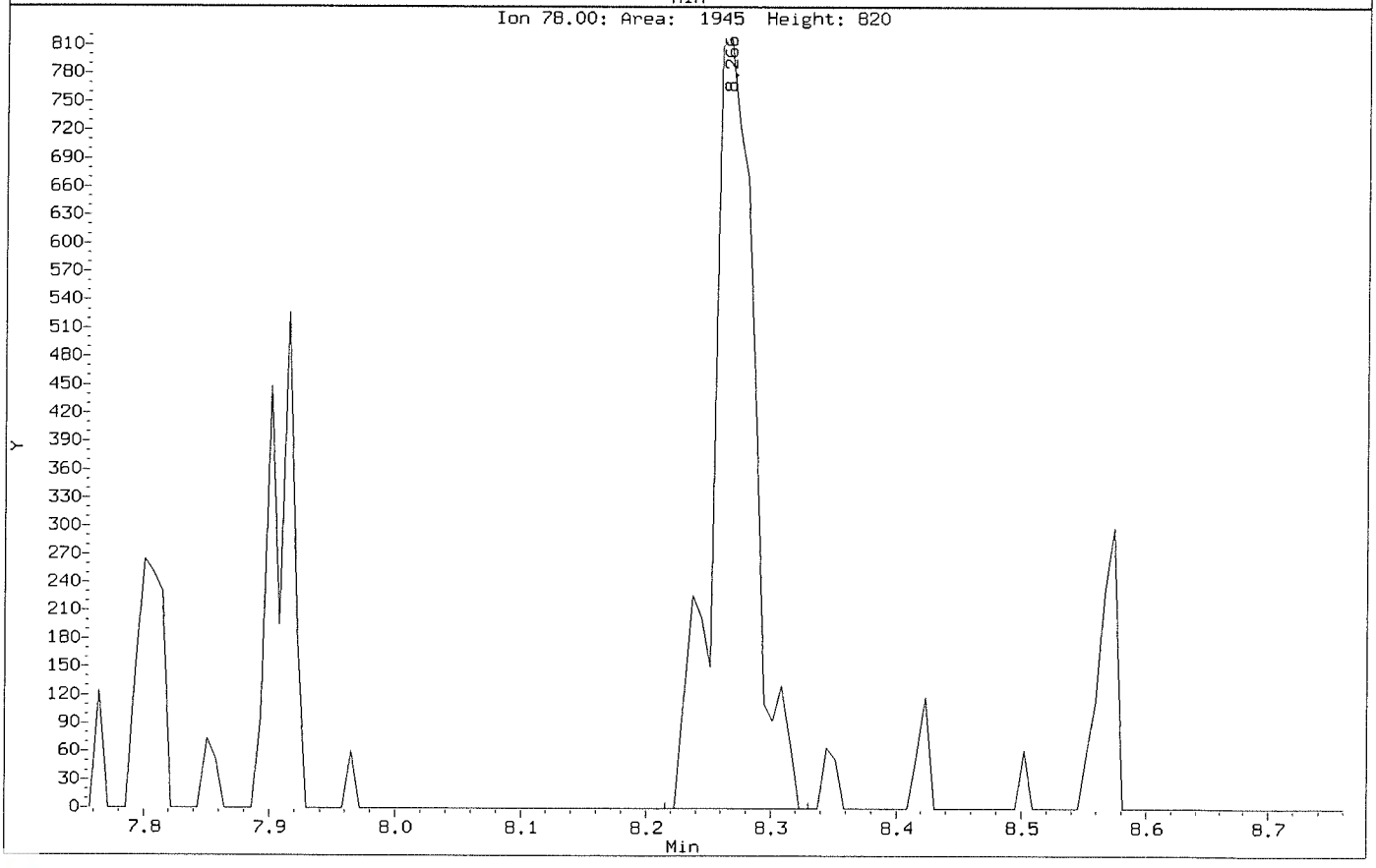




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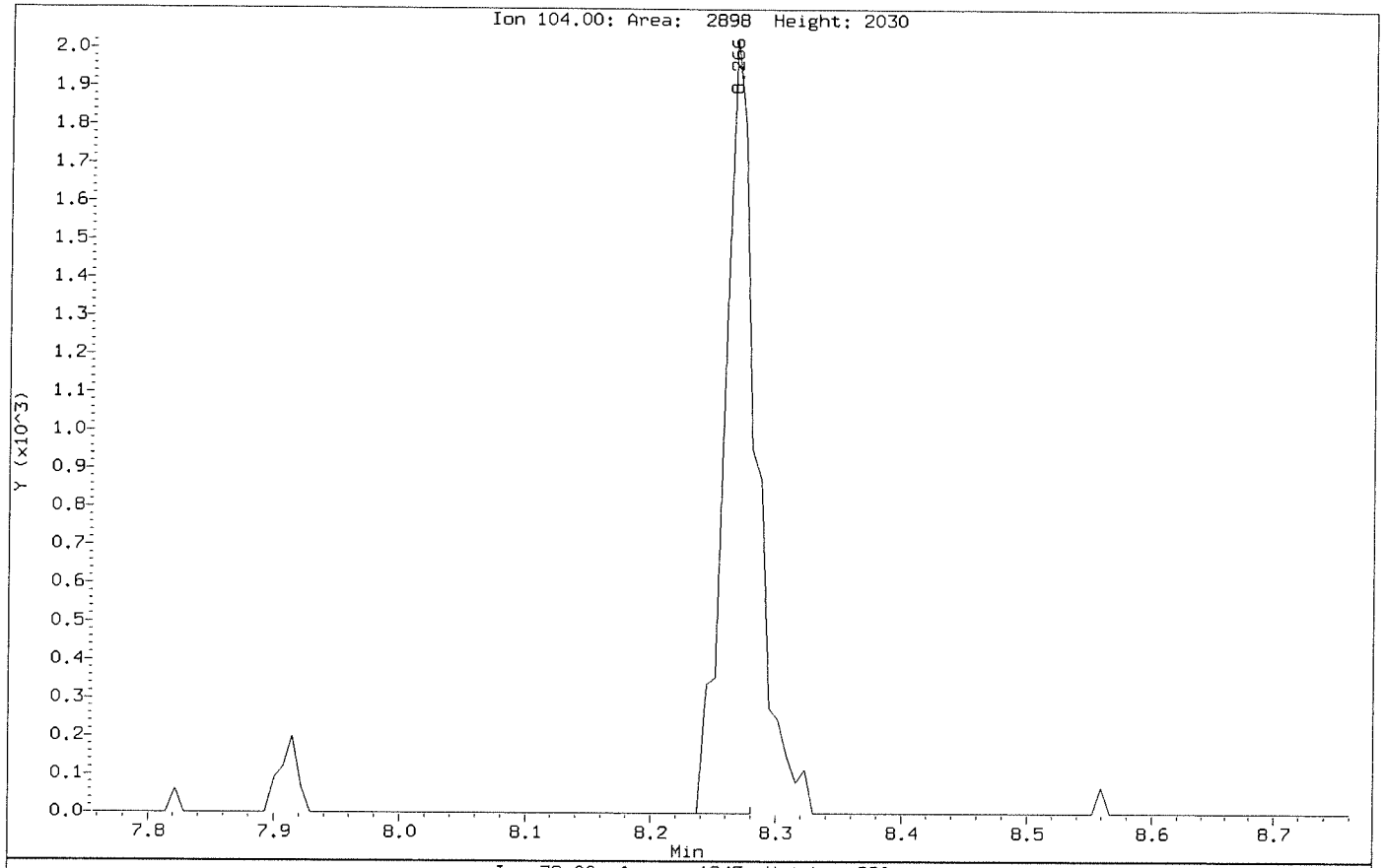
Compound: Styrene
CAS Number: 100-42-5

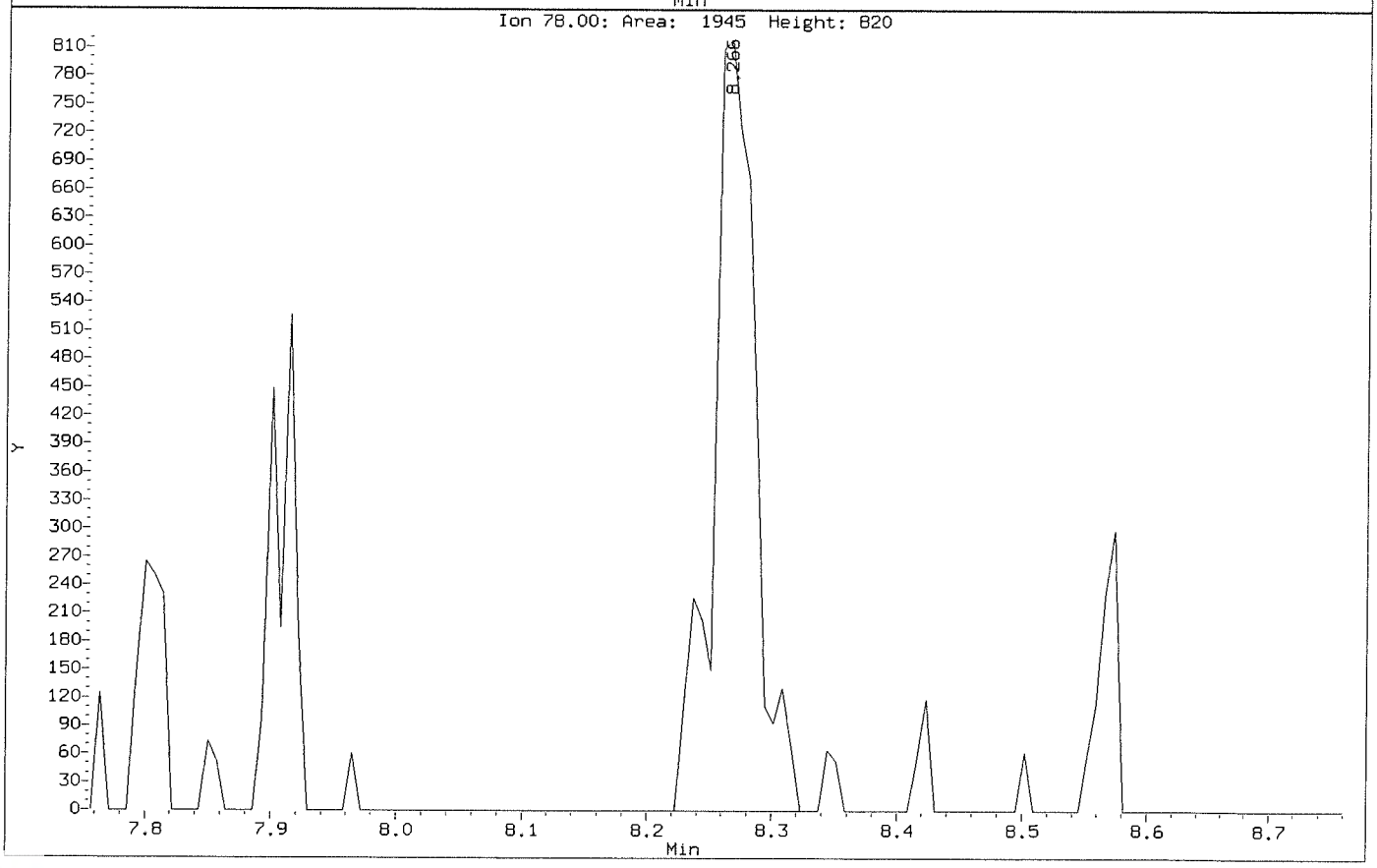




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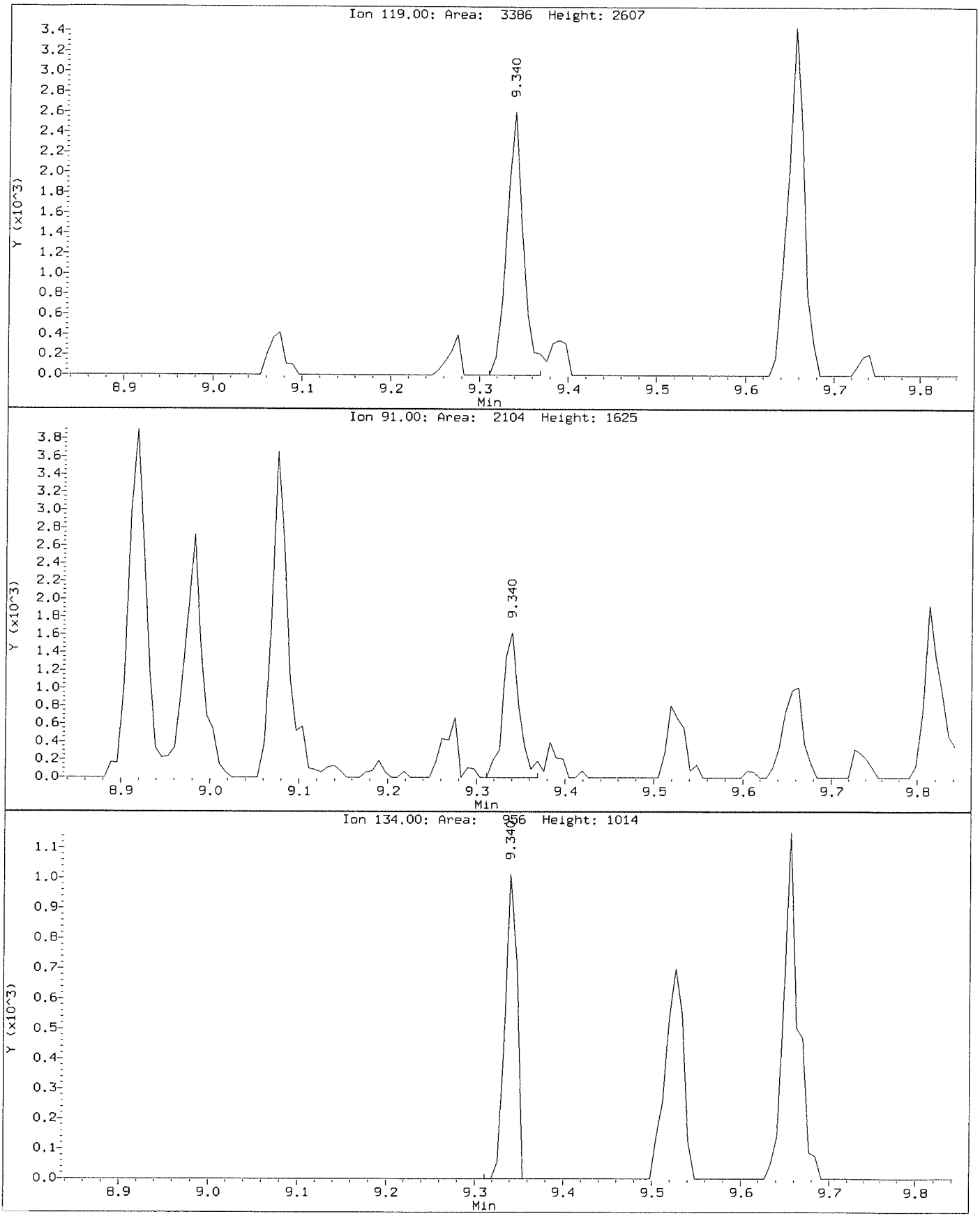
Compound: Styrene
CAS Number: 100-42-5





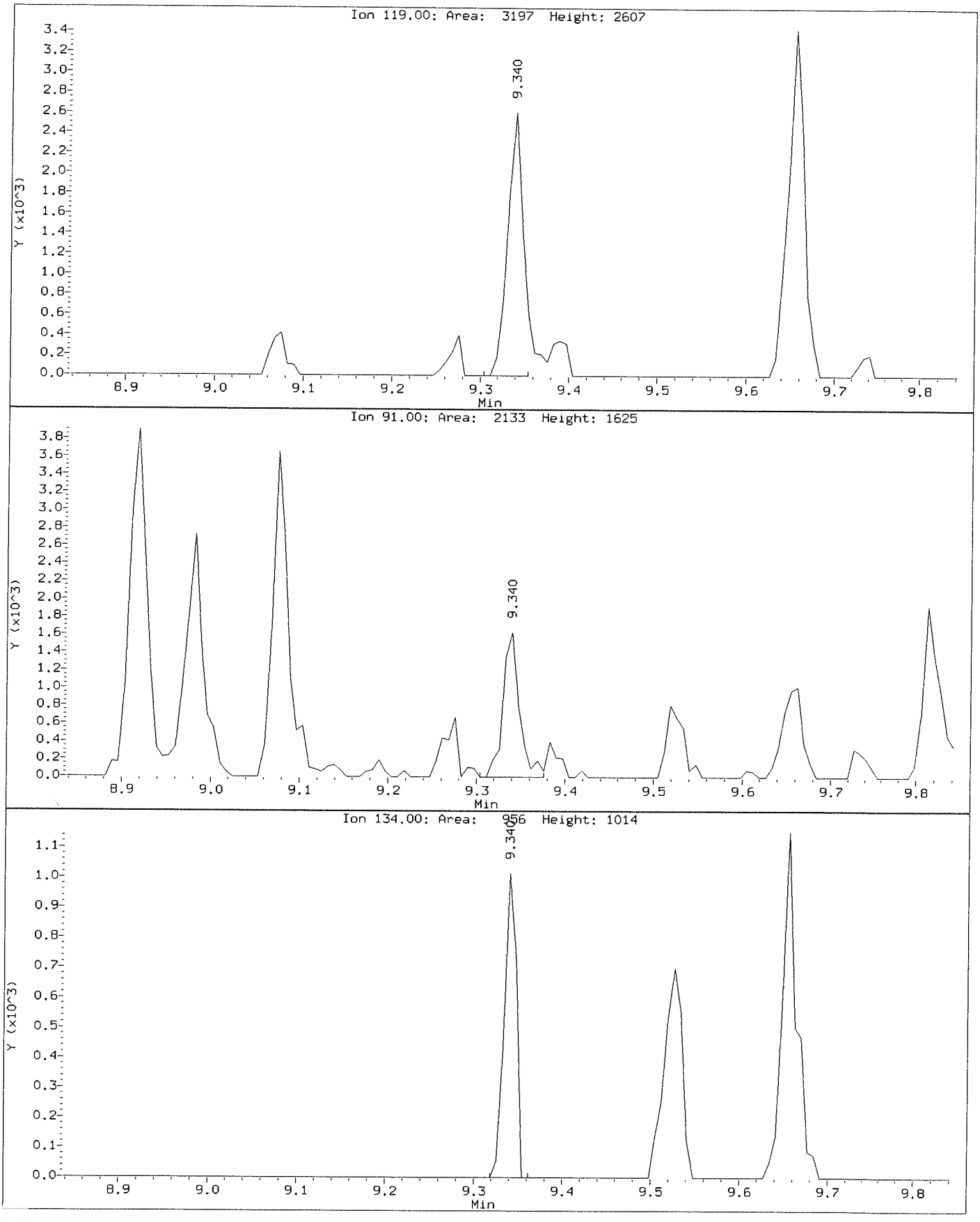
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Client Sample ID: VSTD000.5

Compound: tert-Butylbenzene
CAS Number: 98-06-6



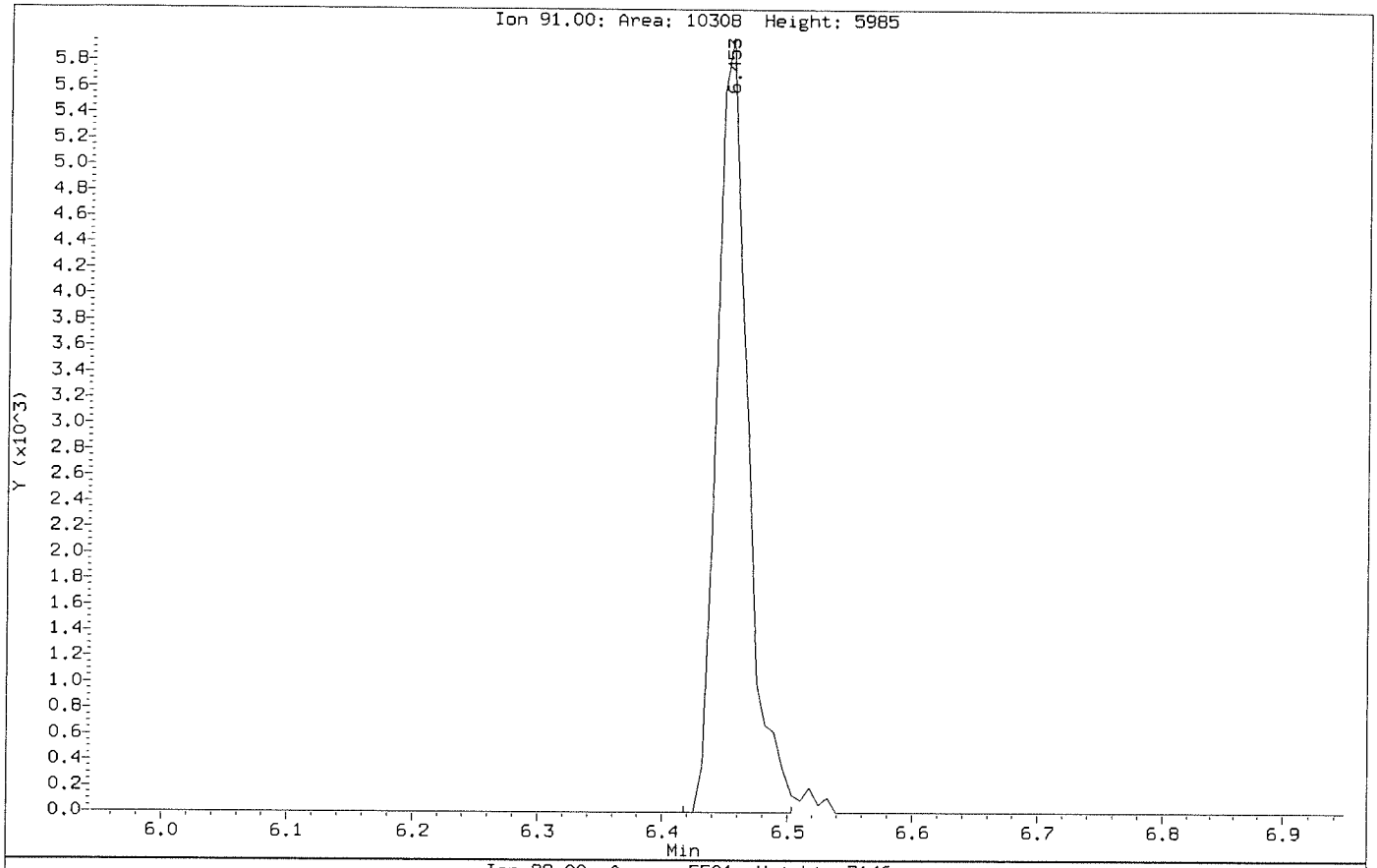
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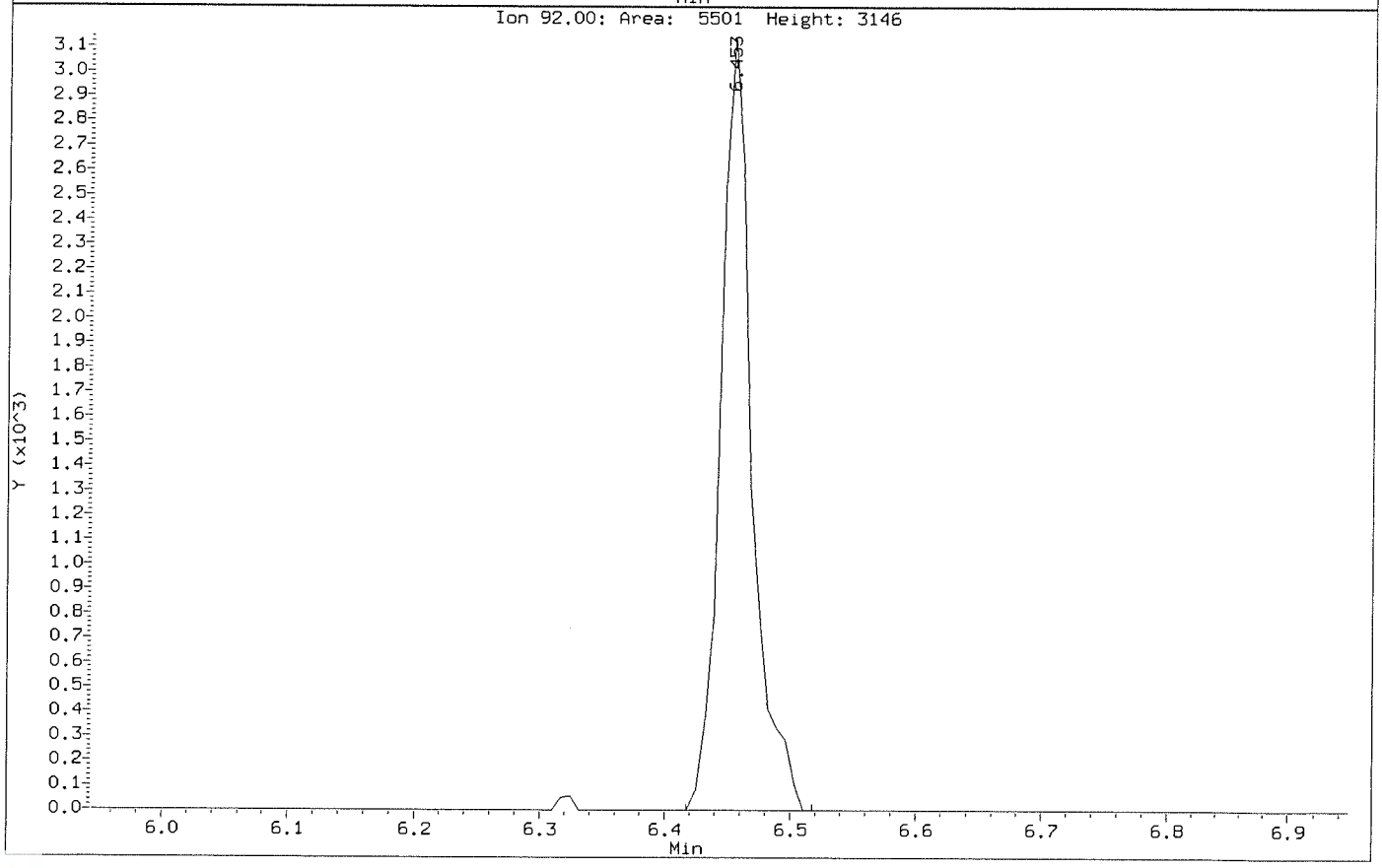
Compound: tert-Butylbenzene
CAS Number: 98-06-6



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Client Sample ID: VSTD000.5

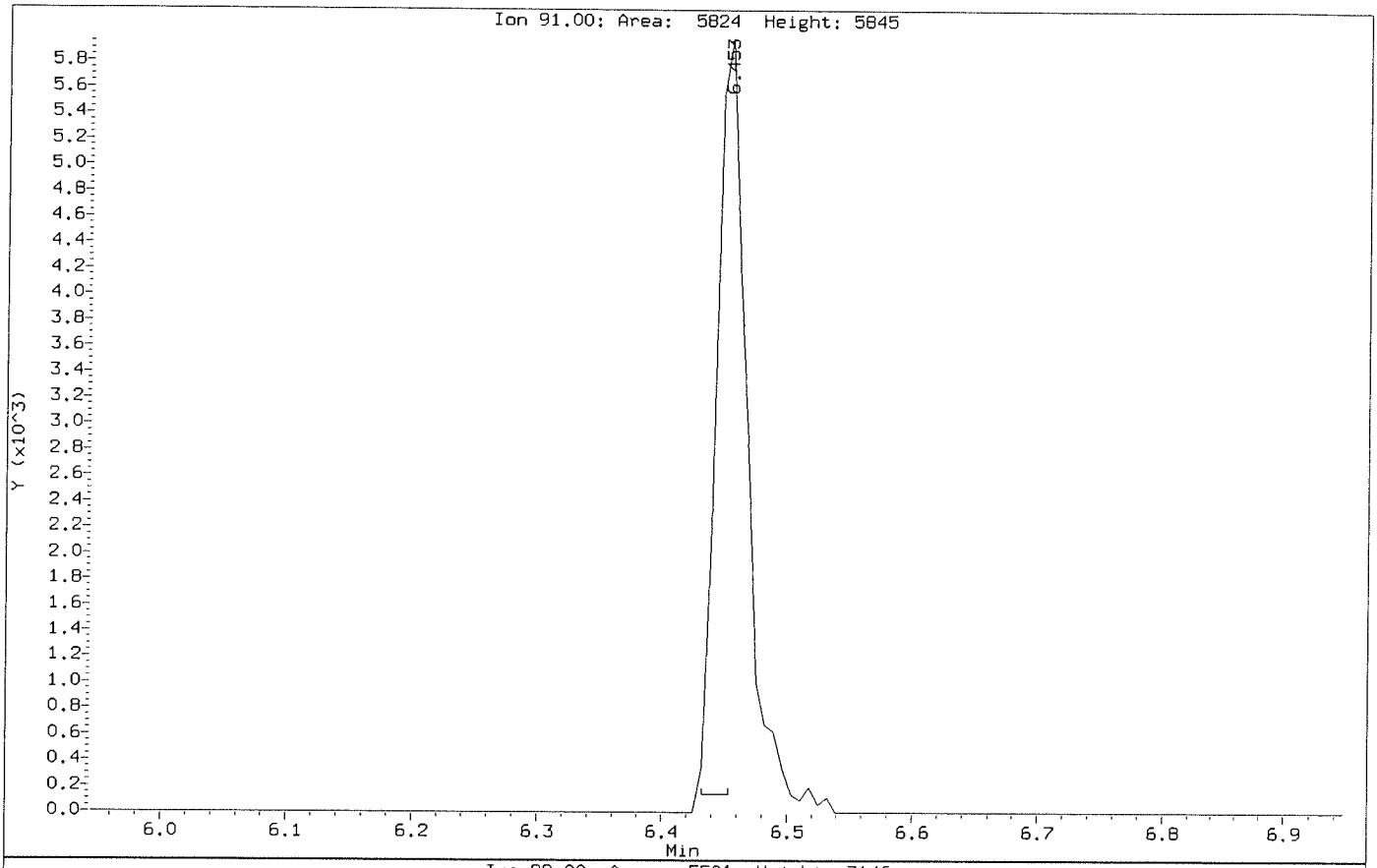
Compound: Toluene
CAS Number: 108-88-3

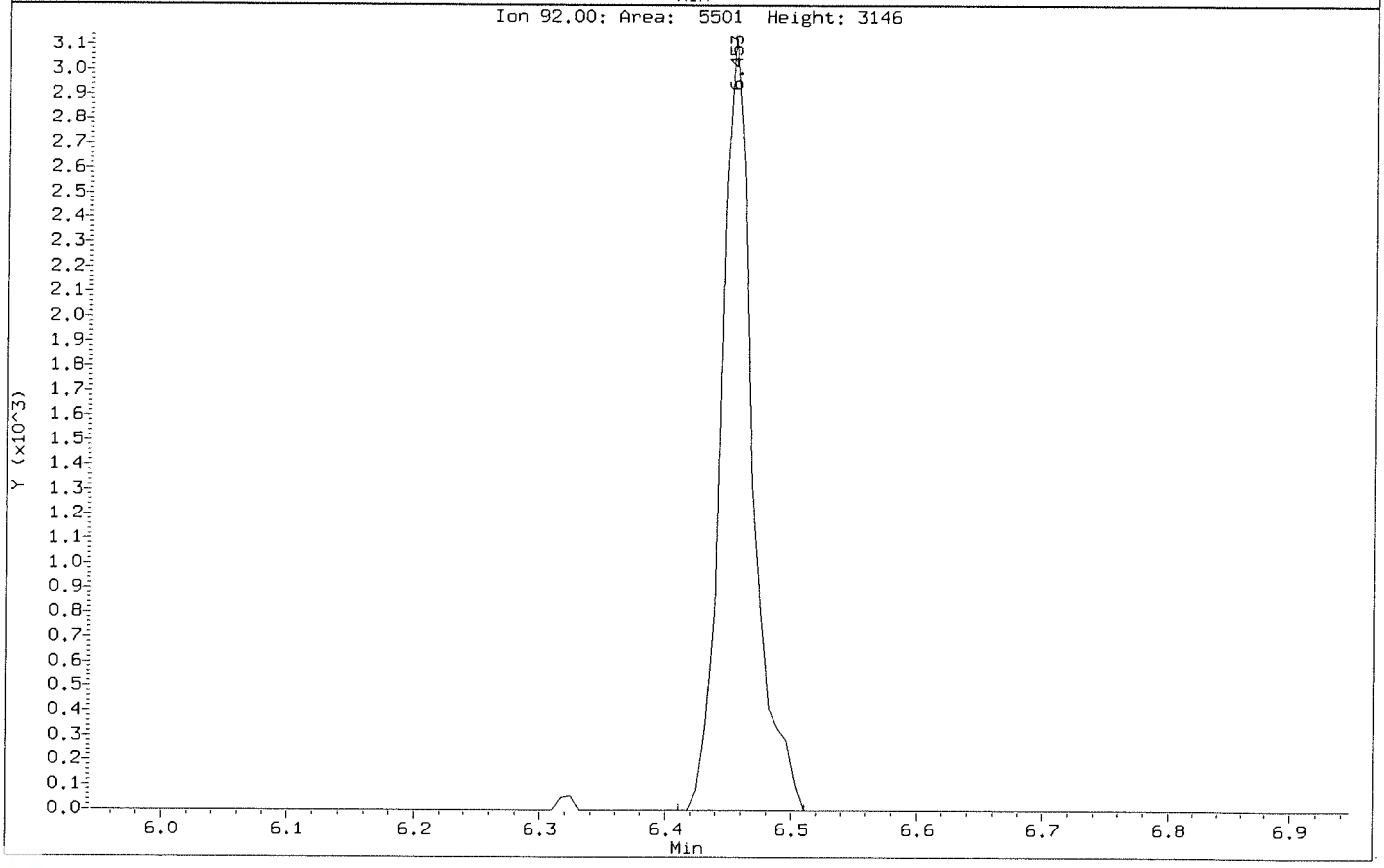




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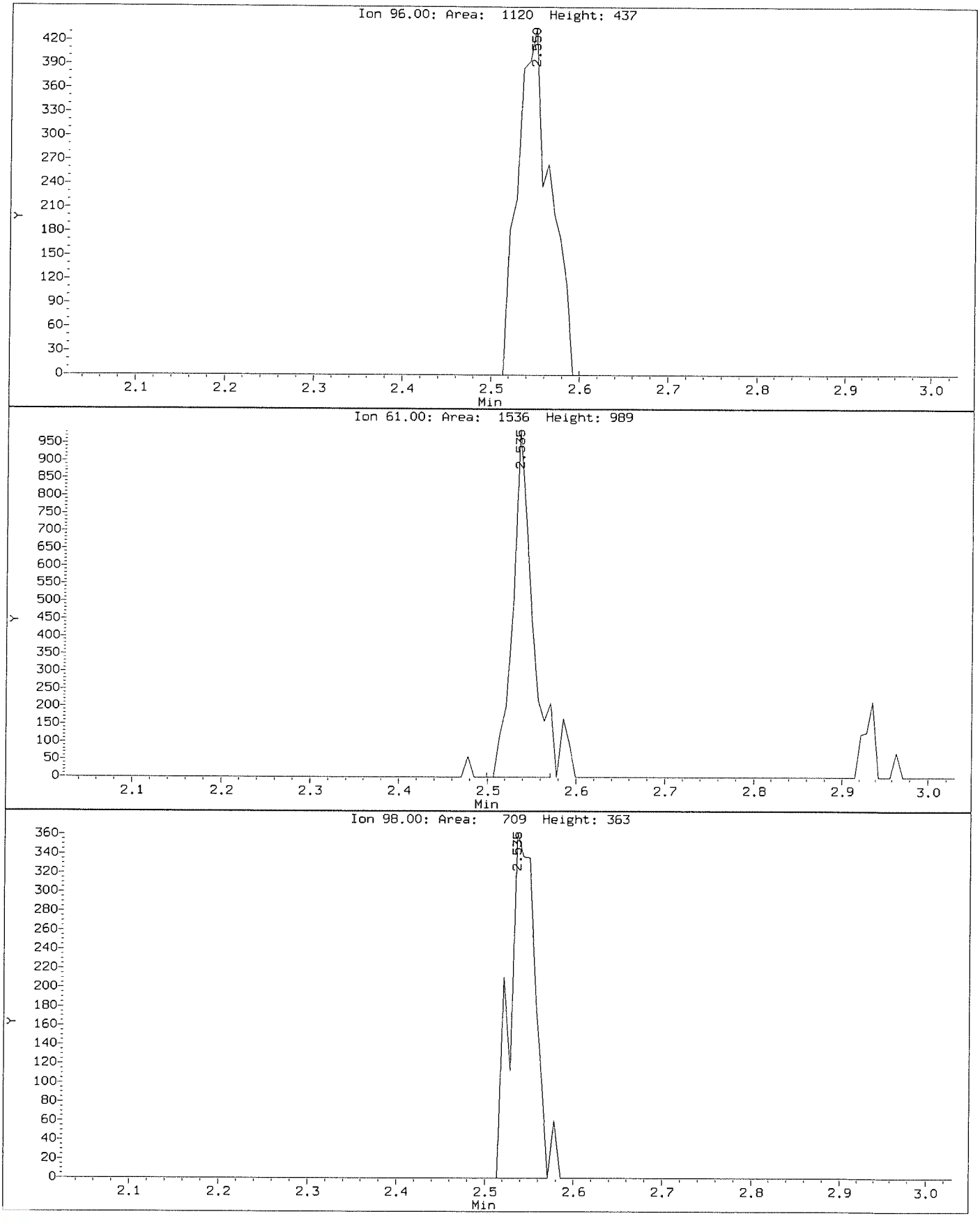
Compound: Toluene
CAS Number: 108-88-3





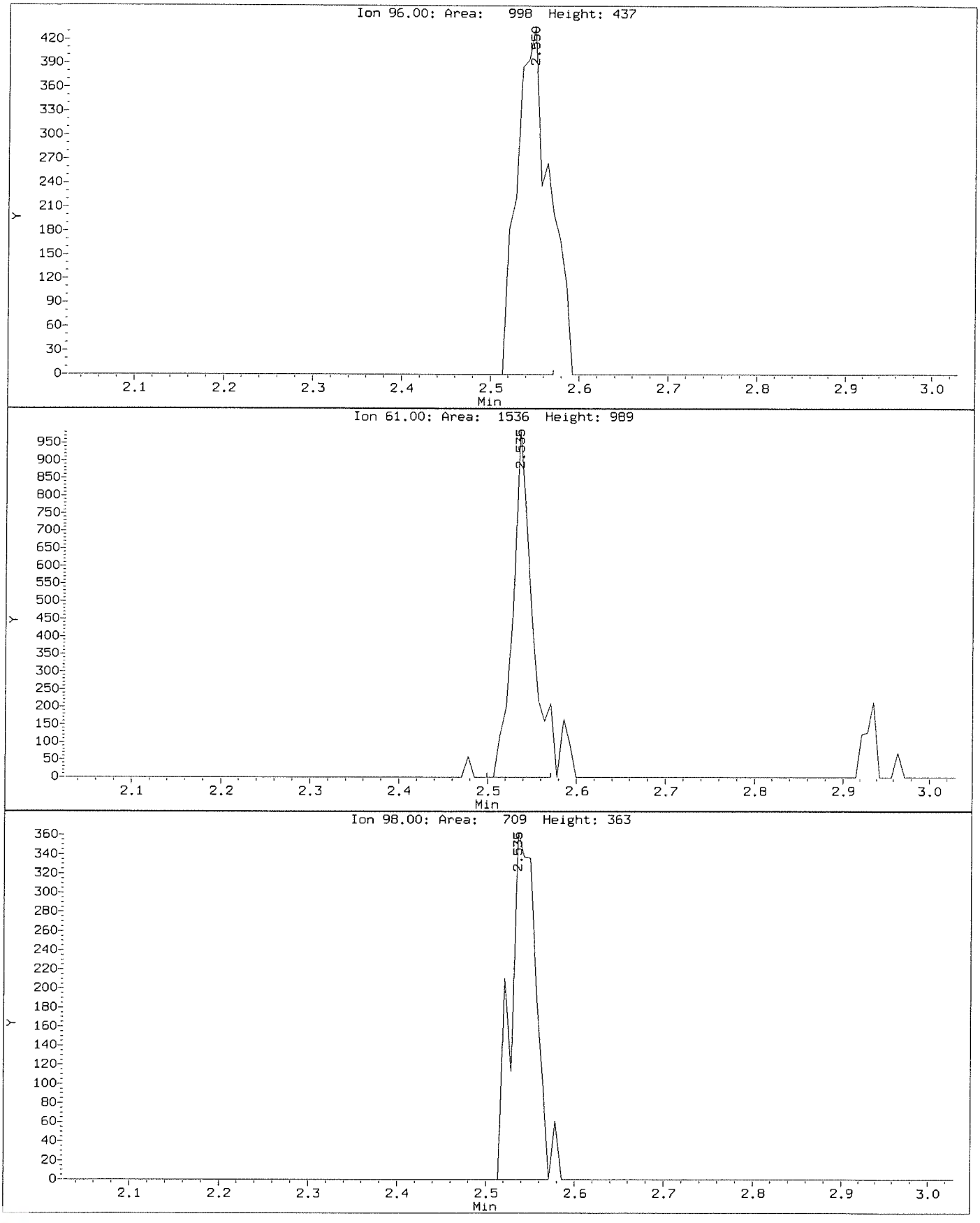
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5



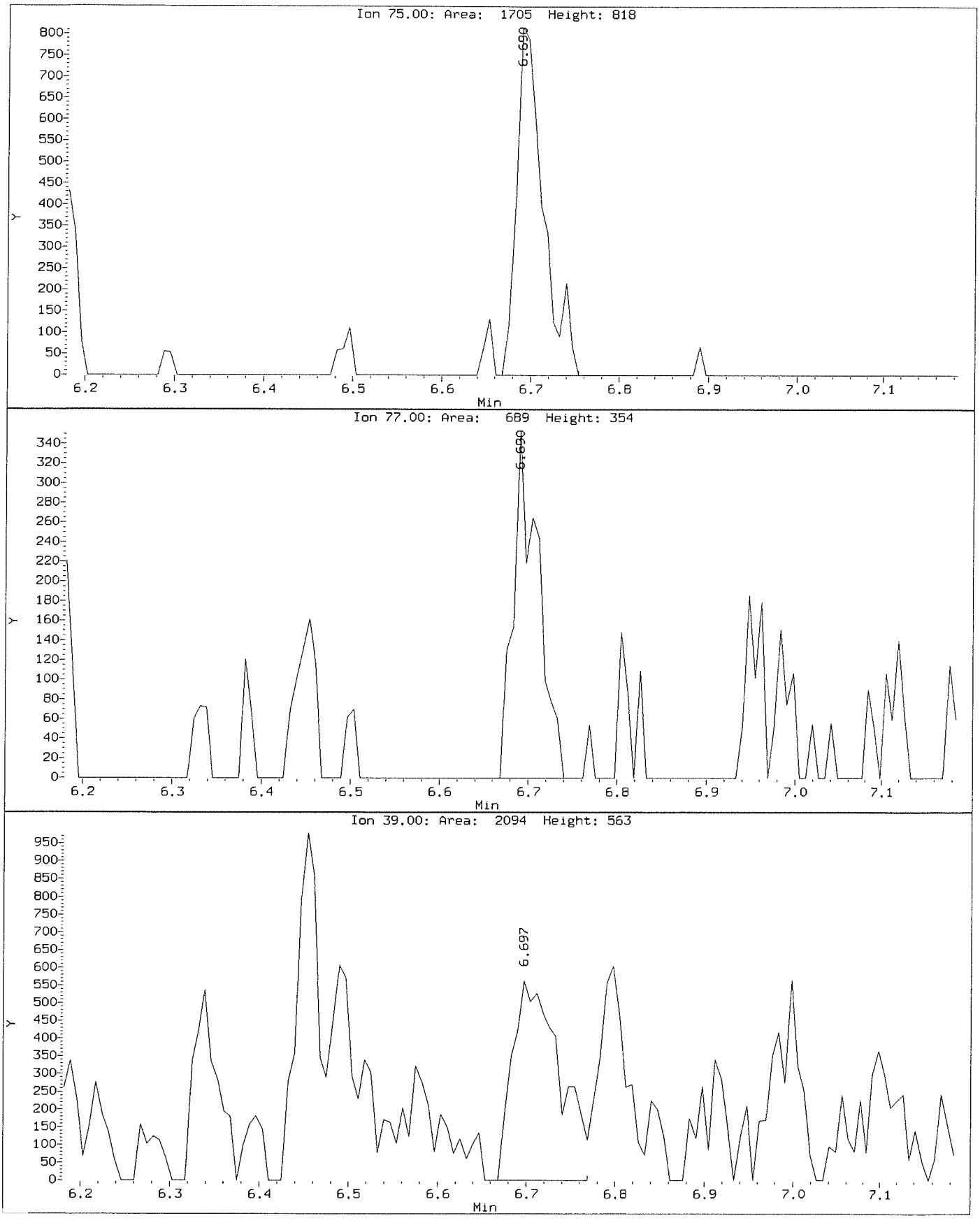
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5



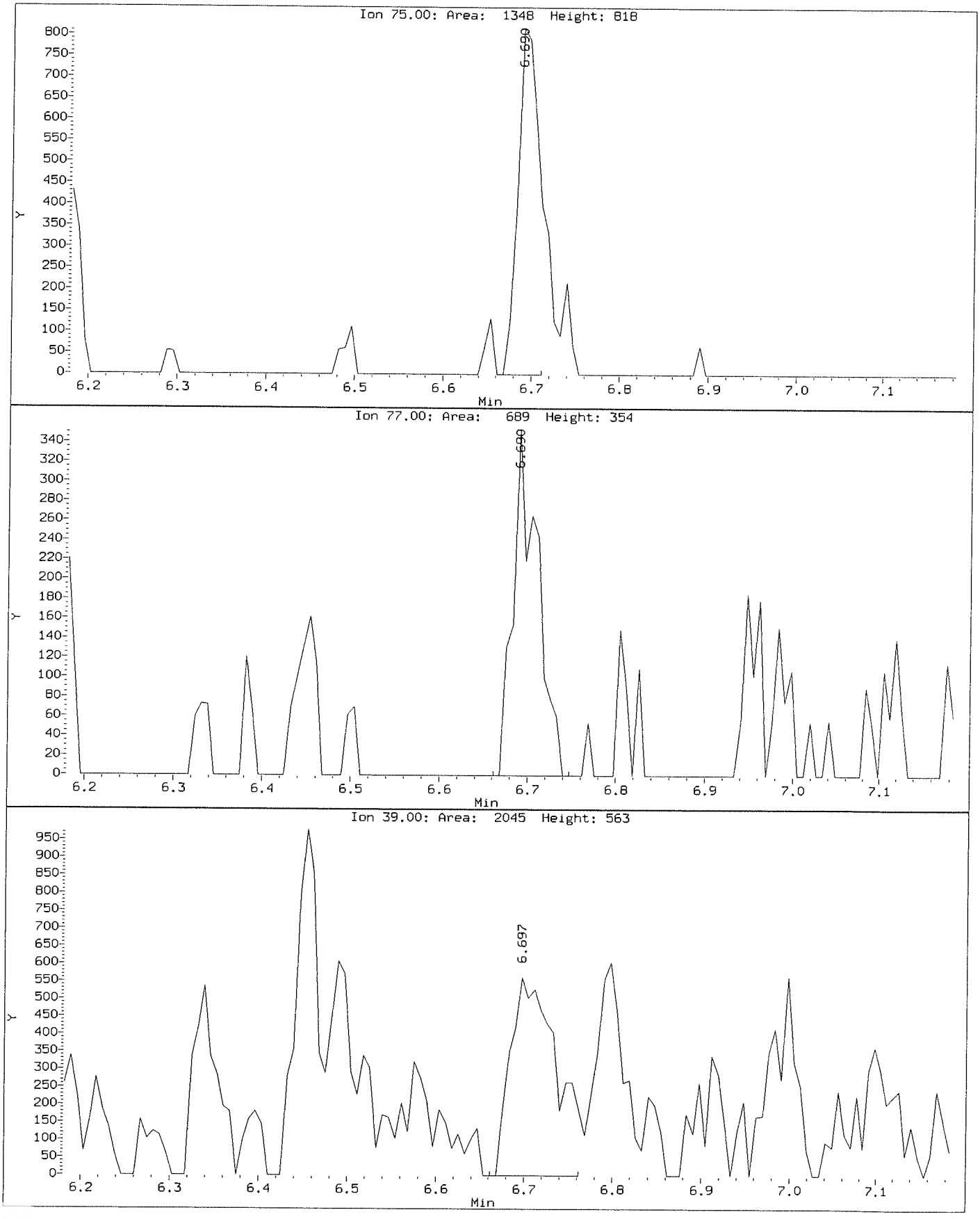
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,3-Dichloropropene
CAS Number: 10061-02-6



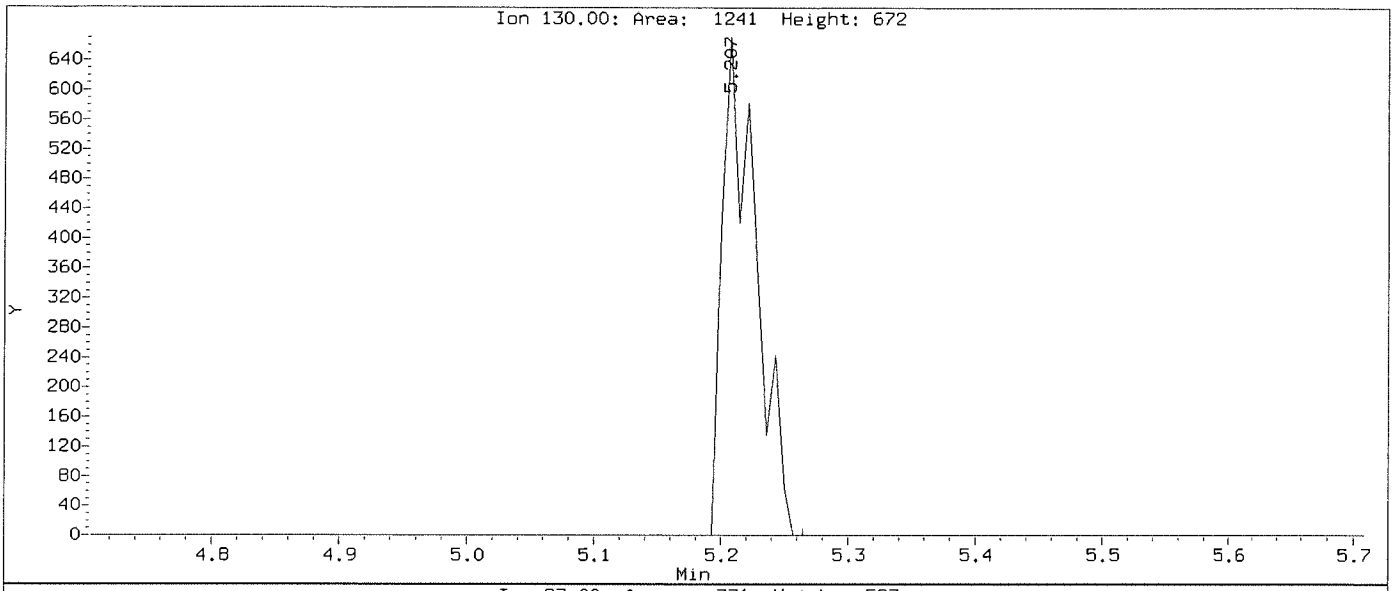
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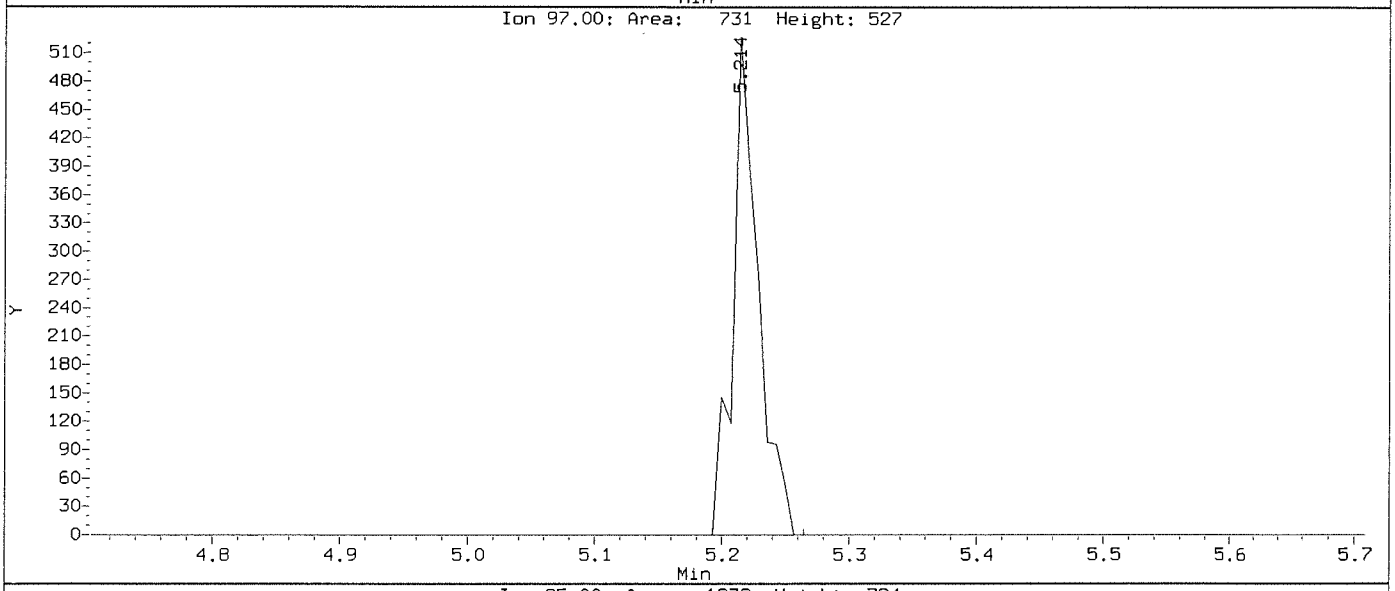
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CAS Number: 10061-02-6

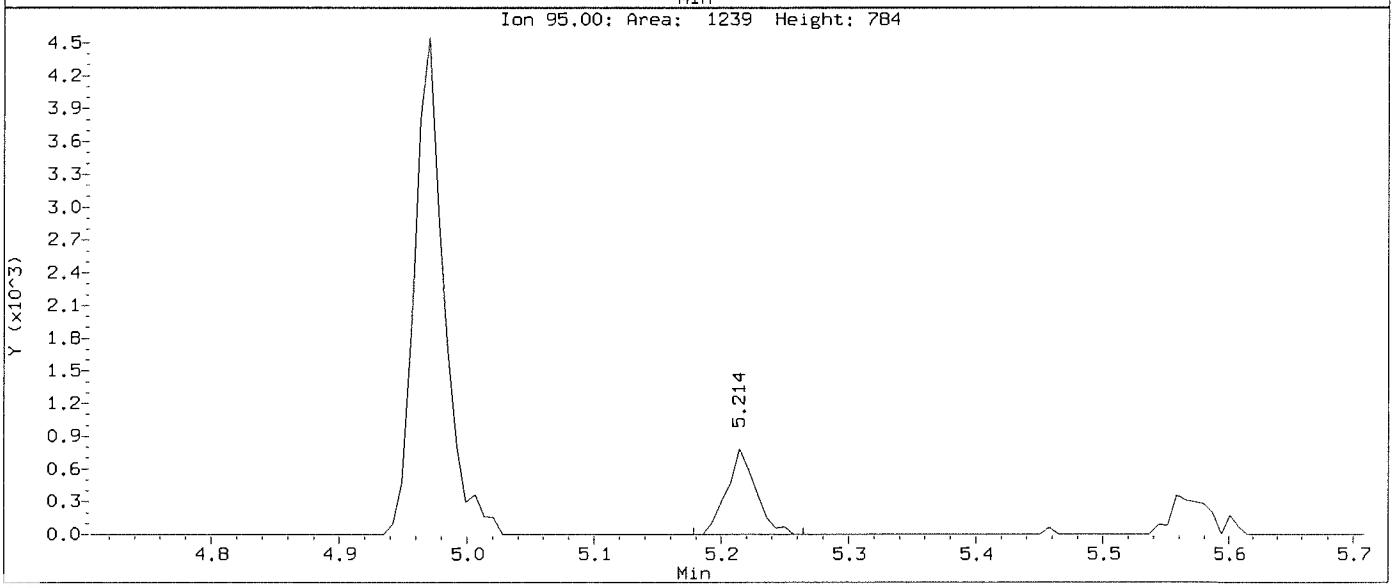


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Trichloroethene
CAS Number: 79-01-6

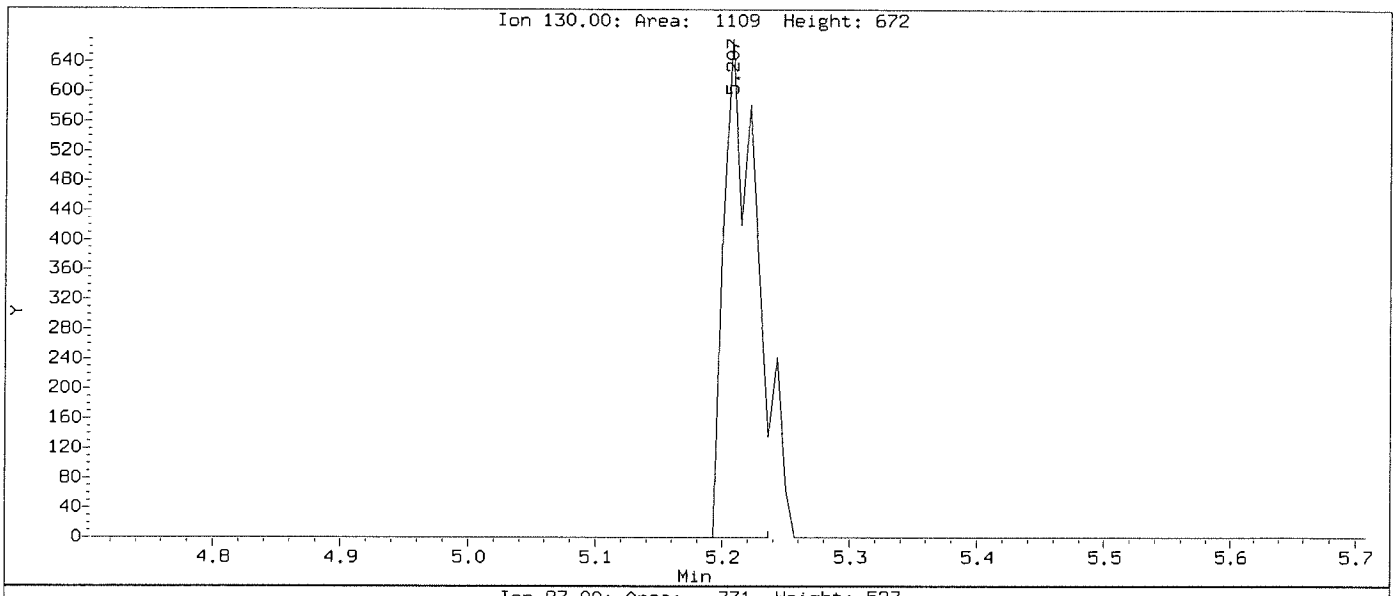


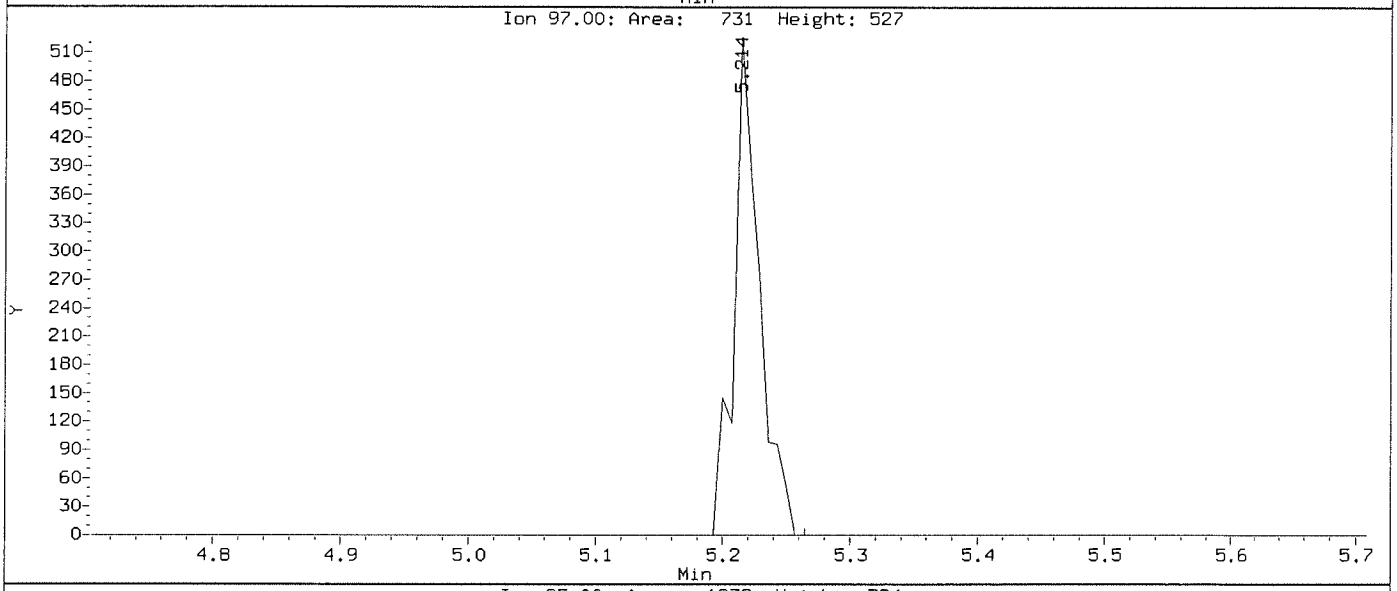


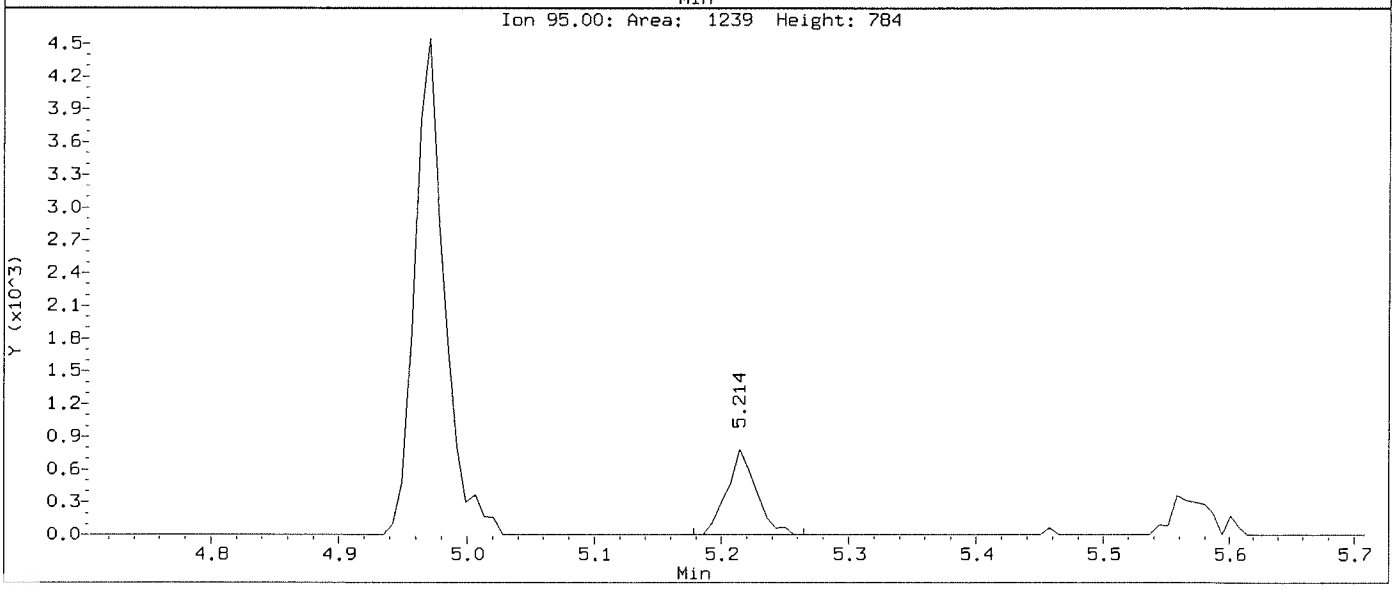


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Trichloroethene
CAS Number: 79-01-6

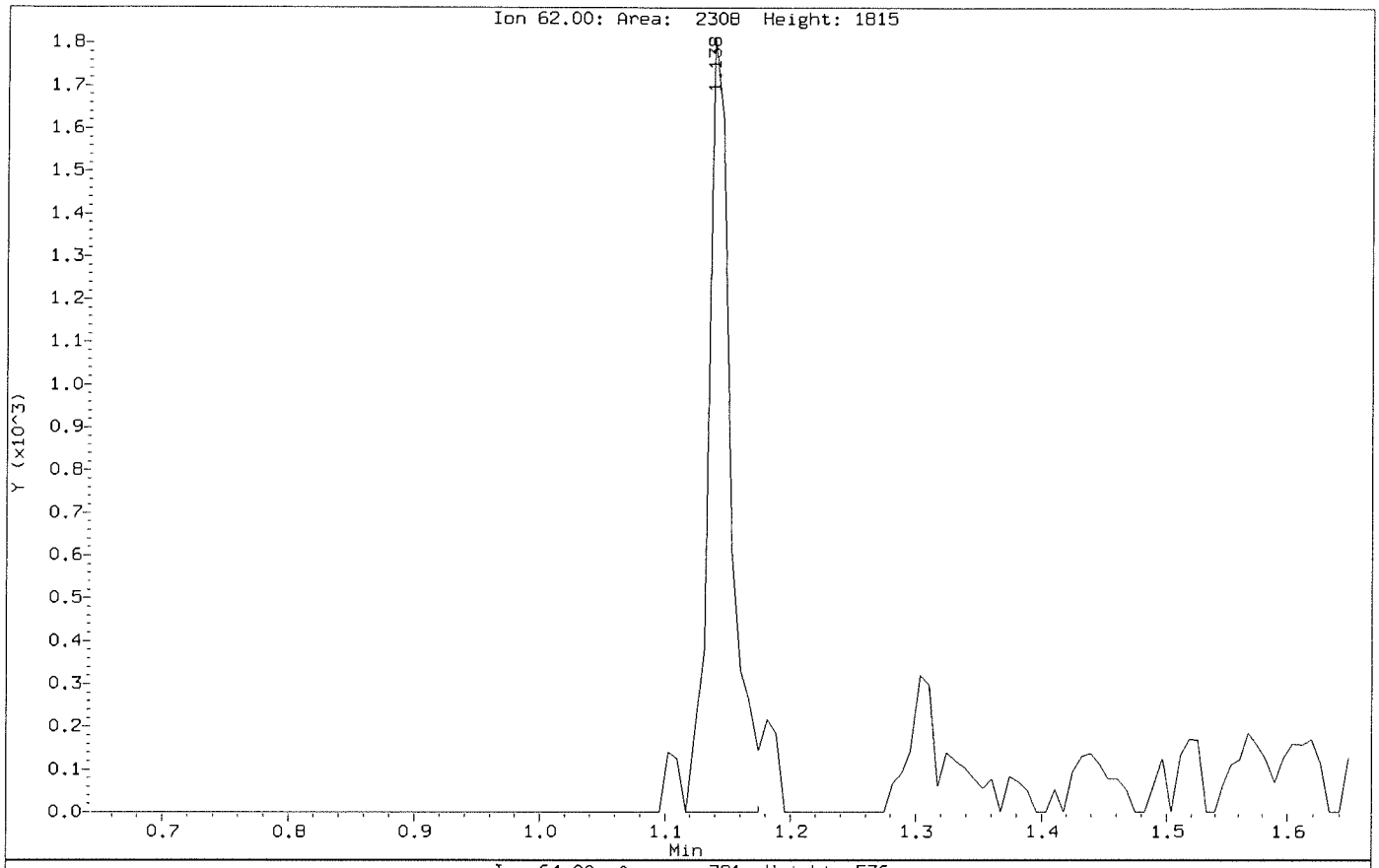


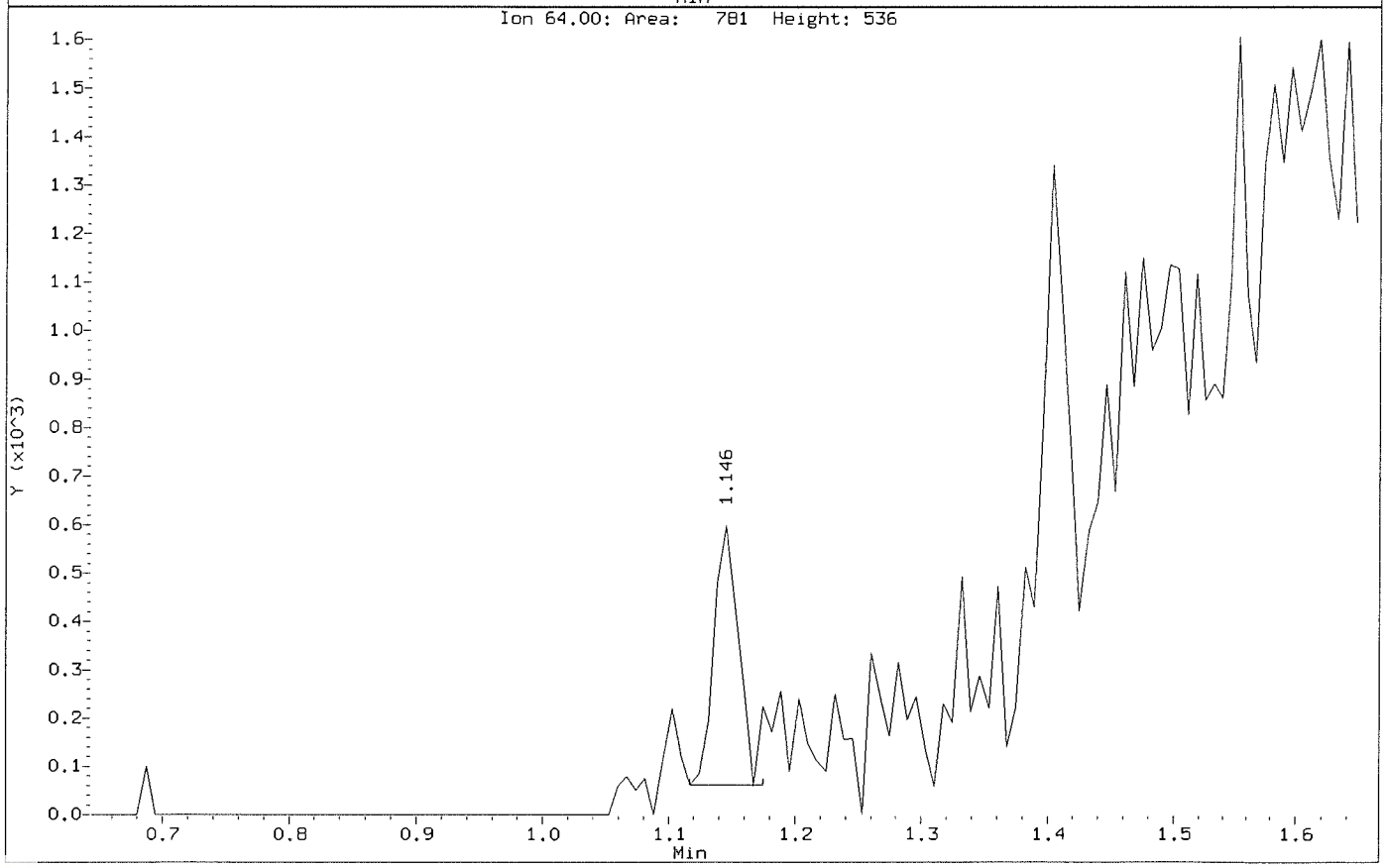




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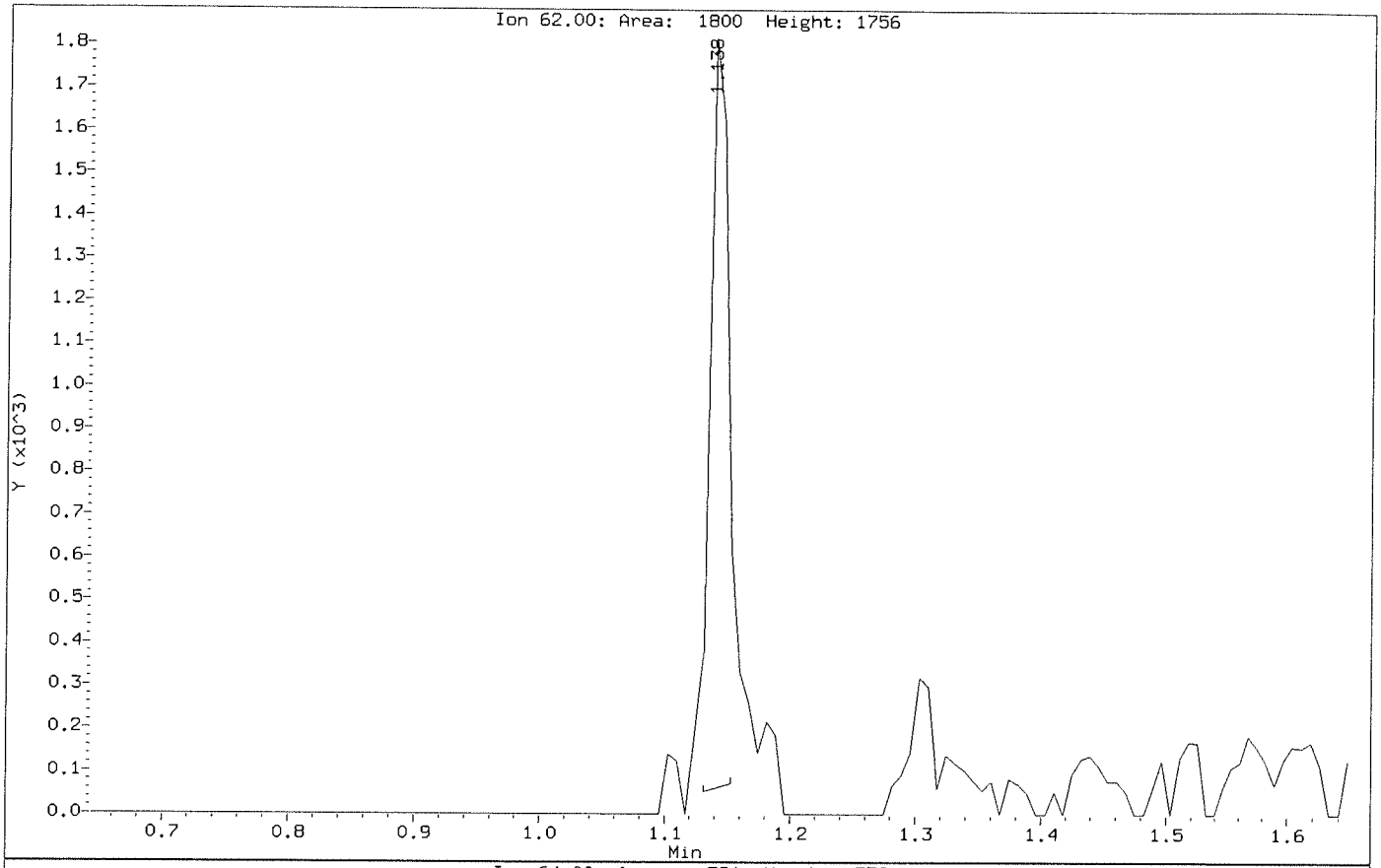
Compound: Vinyl Chloride
CAS Number: 75-01-4

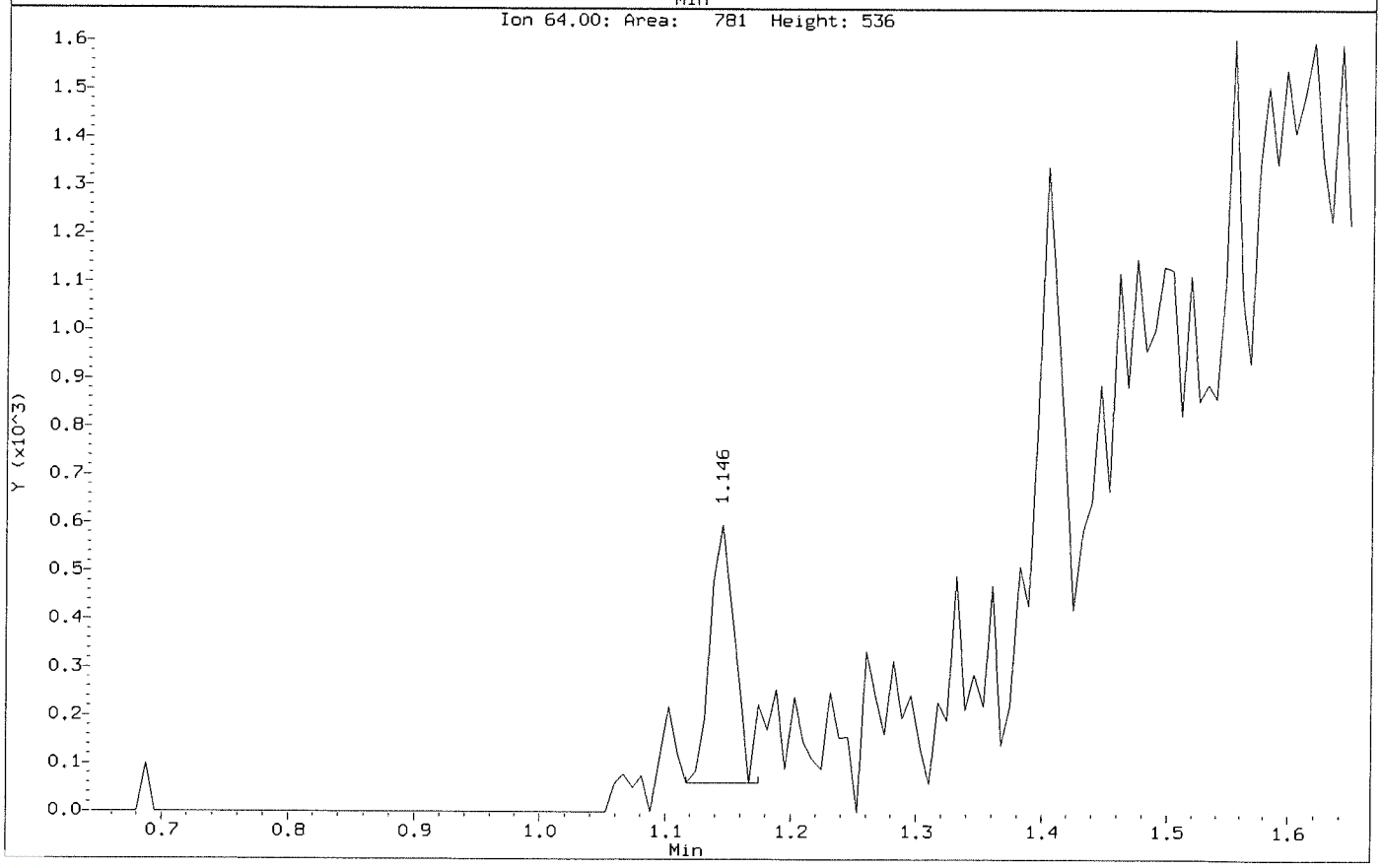




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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110304.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 03-NOV-2020 13:04
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:10 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 12:43 Cal File: X110303.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

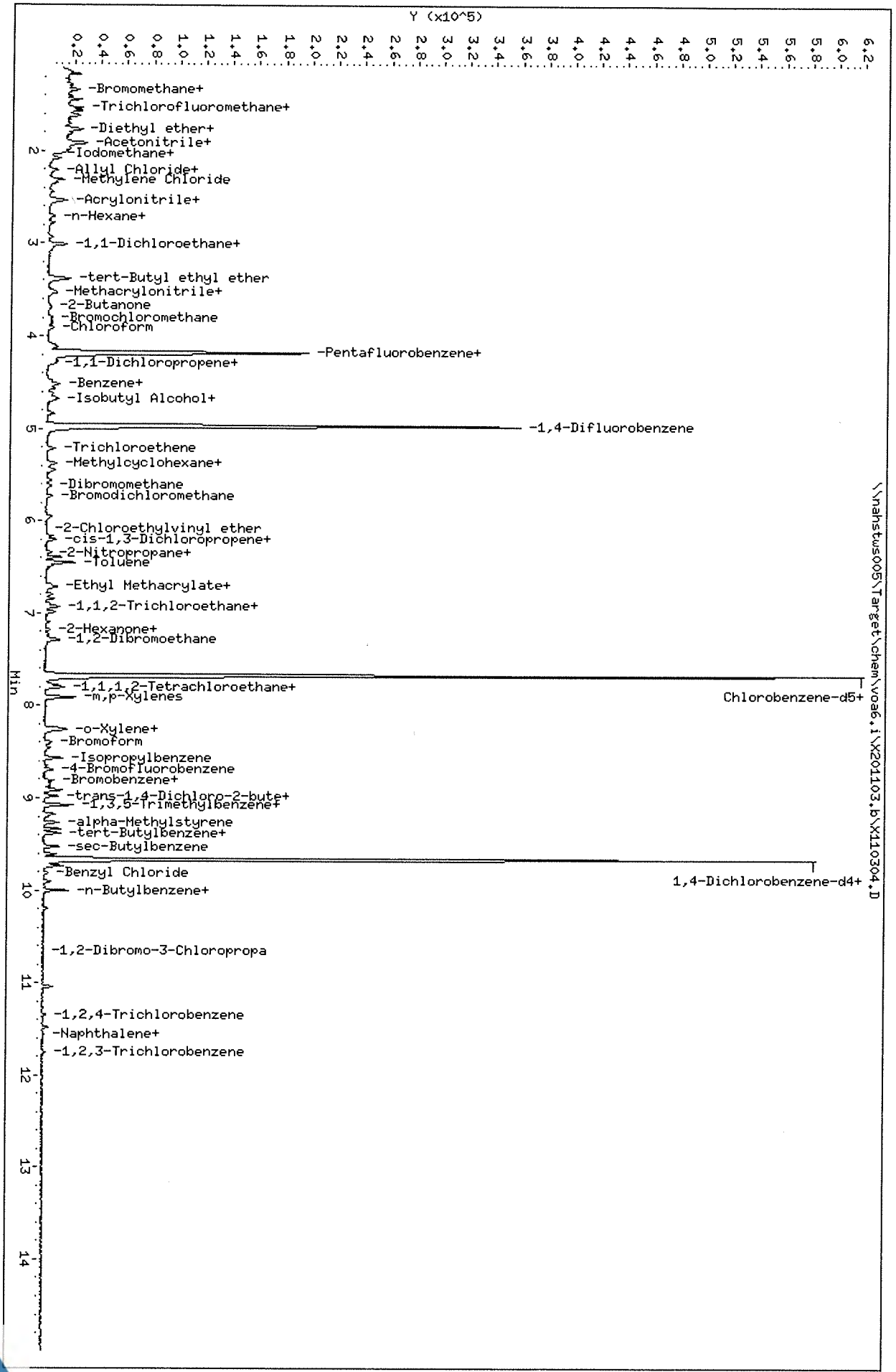
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	140540	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	259506	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	246266	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	105397	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	1960	1.00000	1.03(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	2593	1.00000	0.74(TaM)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	6340	1.00000	0.96(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	2114	1.00000	1.29(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1911	1.00000	1.08(a)
31 1,1,1-Trichloroethane	97	4.096	4.096	(0.979)	2711	1.00000	0.92(a)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	1837	1.00000	0.47(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1596	1.00000	1.05(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	3433	1.00000	1.01(Ta)
11 1,1-Dichloroethene	96	1.926	1.926	(0.461)	2918	1.00000	1.10(aM)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	2429	1.00000	1.00(a)
93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	511	1.00000	2.86(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	1686	1.00000	1.13(aMH)
90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.175)	1196	1.00000	3.12(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	5576	1.00000	0.94(a)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	69	1.00000	0.25(aM)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	1923	1.00000	1.04(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	2862	1.00000	0.98(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	3106	1.00000	1.11(aM)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	1987	1.00000	1.03(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	5780	1.00000	0.96(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	3420	1.00000	1.10(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	3155	1.00000	1.04(a)
84	1,4-Dichlorobenzene	146	9.691	9.691	(1.003)	3457	1.00000	1.07(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	3084	1.00000	1.06(a)
24	2-Butanone	43	3.631	3.631	(0.868)	1288	2.00000	1.97(aM)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	5281	1.00000	1.06(a)
52	2-Hexanone	43	7.226	7.226	(0.942)	2282	2.00000	5.02
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	5926	1.00000	0.94(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	5368	1.00000	0.94(a)
45	4-Methyl-2-Pentanone	43	6.345	6.345	(0.827)	3233	2.00000	1.72(a)
10	Acetone	43	1.969	1.969	(0.471)	3869	2.00000	(aM)
37	Benzene	78	4.519	4.519	(0.909)	7894	1.00000	1.08(a)
74	Bromobenzene	156	8.809	8.809	(0.912)	2171	1.00000	1.17(a)
29	Bromochloromethane	128	3.803	3.803	(0.909)	1019	1.00000	1.05(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	2575	1.00000	0.96(aM)
66	Bromoform	173	8.423	8.423	(1.098)	772	1.00000	3.70(aM)
6	Bromomethane	94	1.338	1.338	(0.320)	2749	1.00000	1.05(aM)
19	Carbon Disulfide	76	2.076	2.076	(0.497)	10025	2.00000	2.03(a)
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	2614	1.00000	1.12(aM)
59	Chlorobenzene	112	7.692	7.692	(1.003)	5993	1.00000	1.13(a)
7	Chloroethane	64	1.403	1.403	(0.336)	2747	1.00000	1.24(aM)
28	Chloroform	83	3.917	3.917	(0.937)	3452	1.00000	0.95(a)
3	Chloromethane	50	1.081	1.081	(0.258)	2614	1.00000	2.16(aM)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	1838	1.00000	0.89(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	2882	1.00000	0.99(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	1663	1.00000	0.91(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	1182	1.00000	0.90(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	1836	1.00000	1.00(a)
61	Ethylbenzene	106	7.800	7.800	(1.017)	2944	1.00000	1.10(aH)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	486	1.00000	3.14(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	7329	1.00000	3.46(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	5943	2.00000	1.85(a)
17	Methylene Chloride	84	2.305	2.305	(0.551)	2145	1.00000	1.11(a)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	5444	1.00000	4.39(a)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	8035	1.00000	0.95(a)
92	Naphthalene	128	11.560	11.560	(1.196)	1364	1.00000	3.21(a)
63	o-Xylene	106	8.244	8.244	(1.075)	2891	1.00000	0.90(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	7265	1.00000	3.59(a)
64	Styrene	104	8.265	8.265	(1.078)	4725	1.00000	0.88(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	4630	1.00000	3.41(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	1480	1.00000	1.09(a)
50	Toluene	91	6.453	6.453	(0.841)	10292	1.00000	1.14(aM)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	1705	1.00000	0.97(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	2250	1.00000	0.88(a)
38	Trichloroethene	130	5.206	5.206	(1.048)	1646	1.00000	0.95(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	5994	1.00000	1.13(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	3389	1.00000	1.09(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.

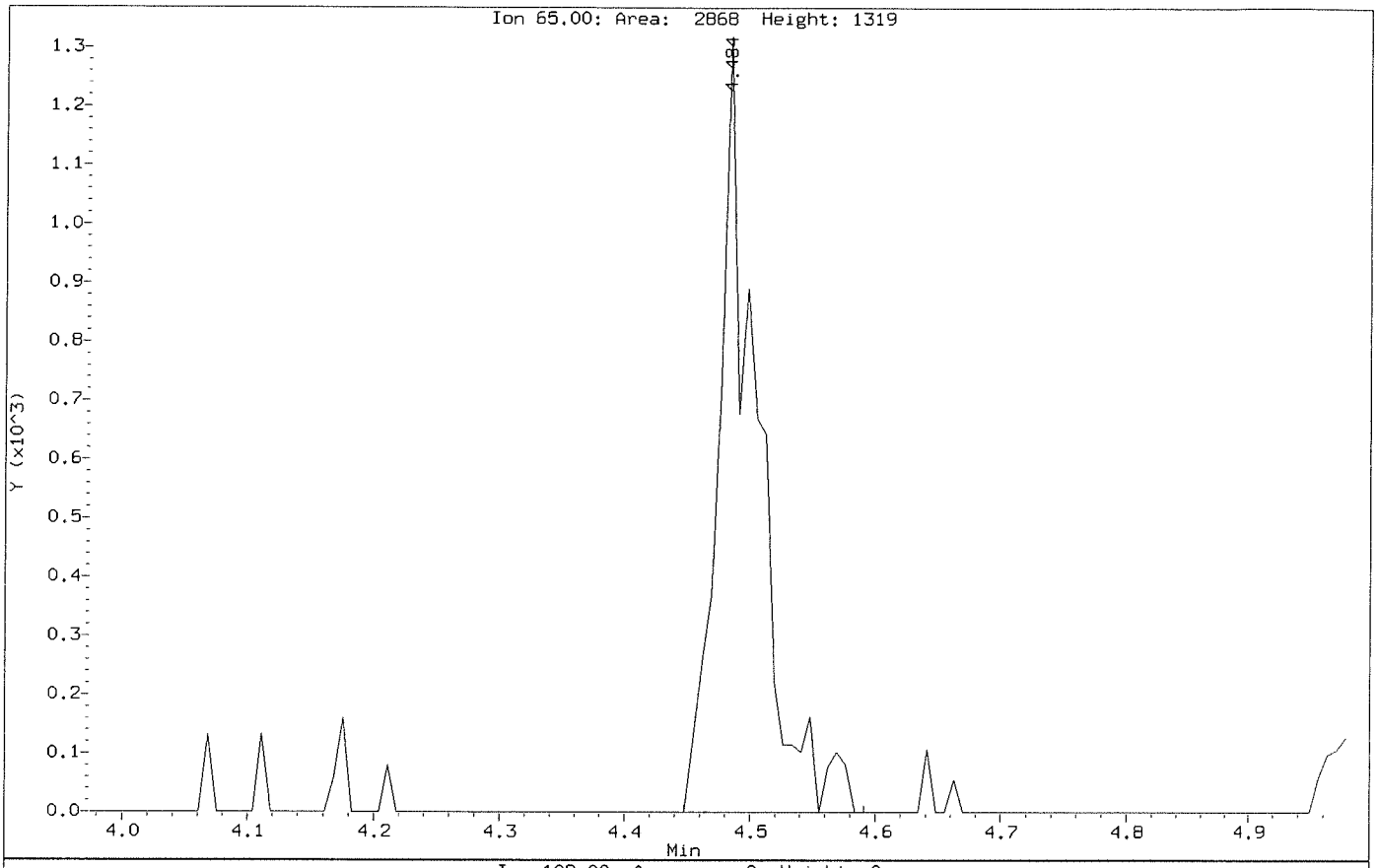


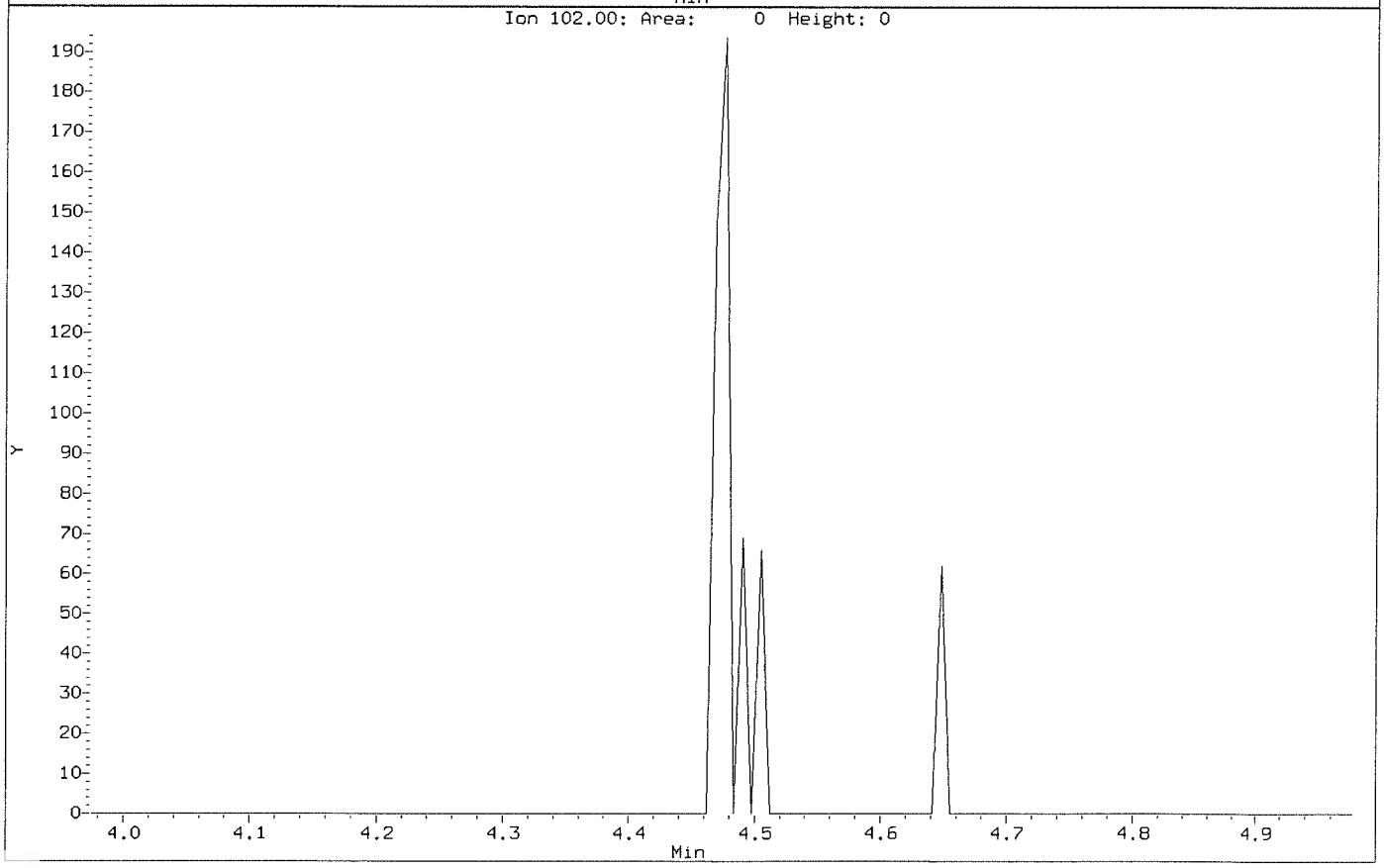
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Date : 03-NOV-2020 13:04
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110304.D
Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

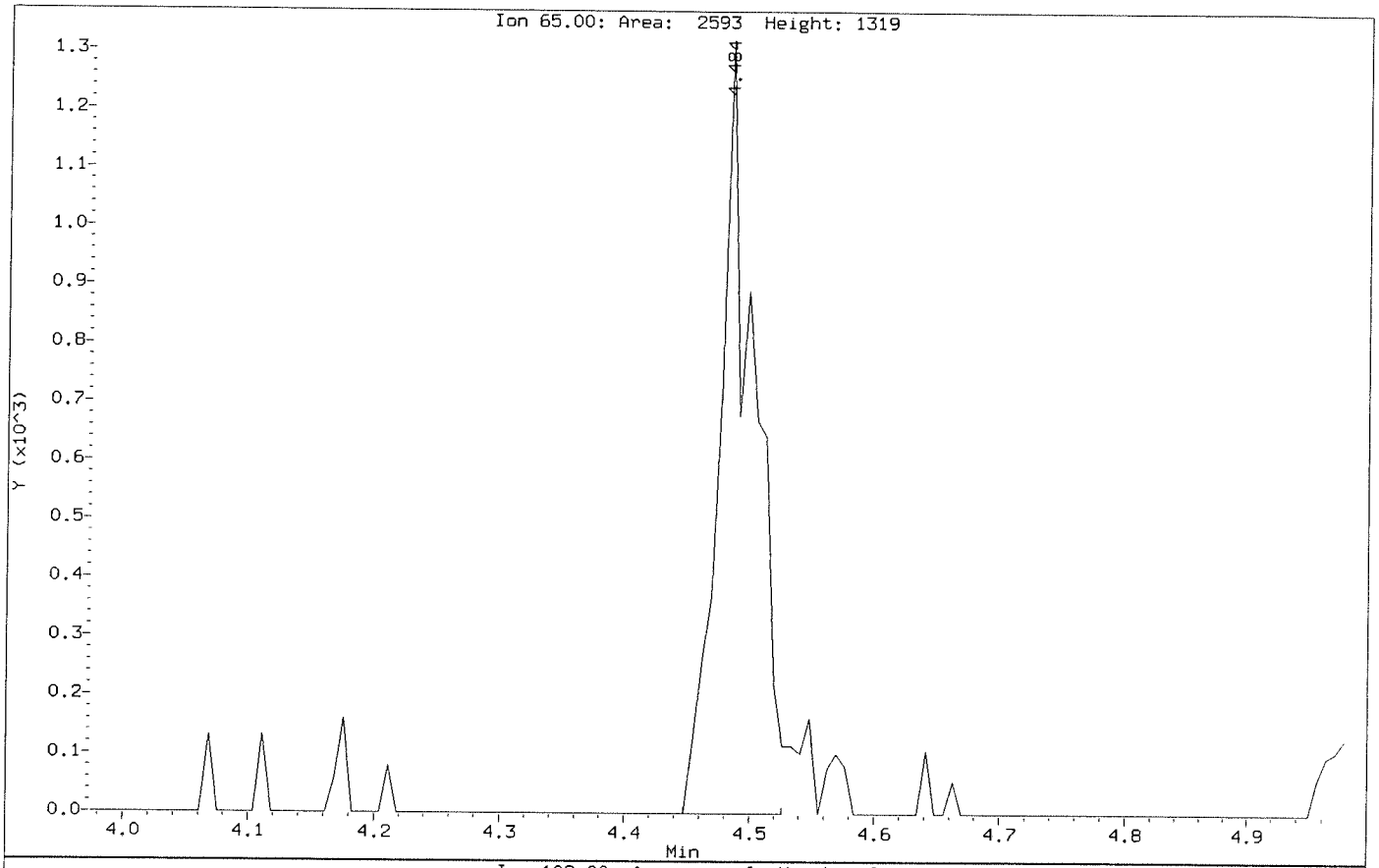
Compound: 1,2-Dichloroethane-d4
CAS Number: 17060-07-0

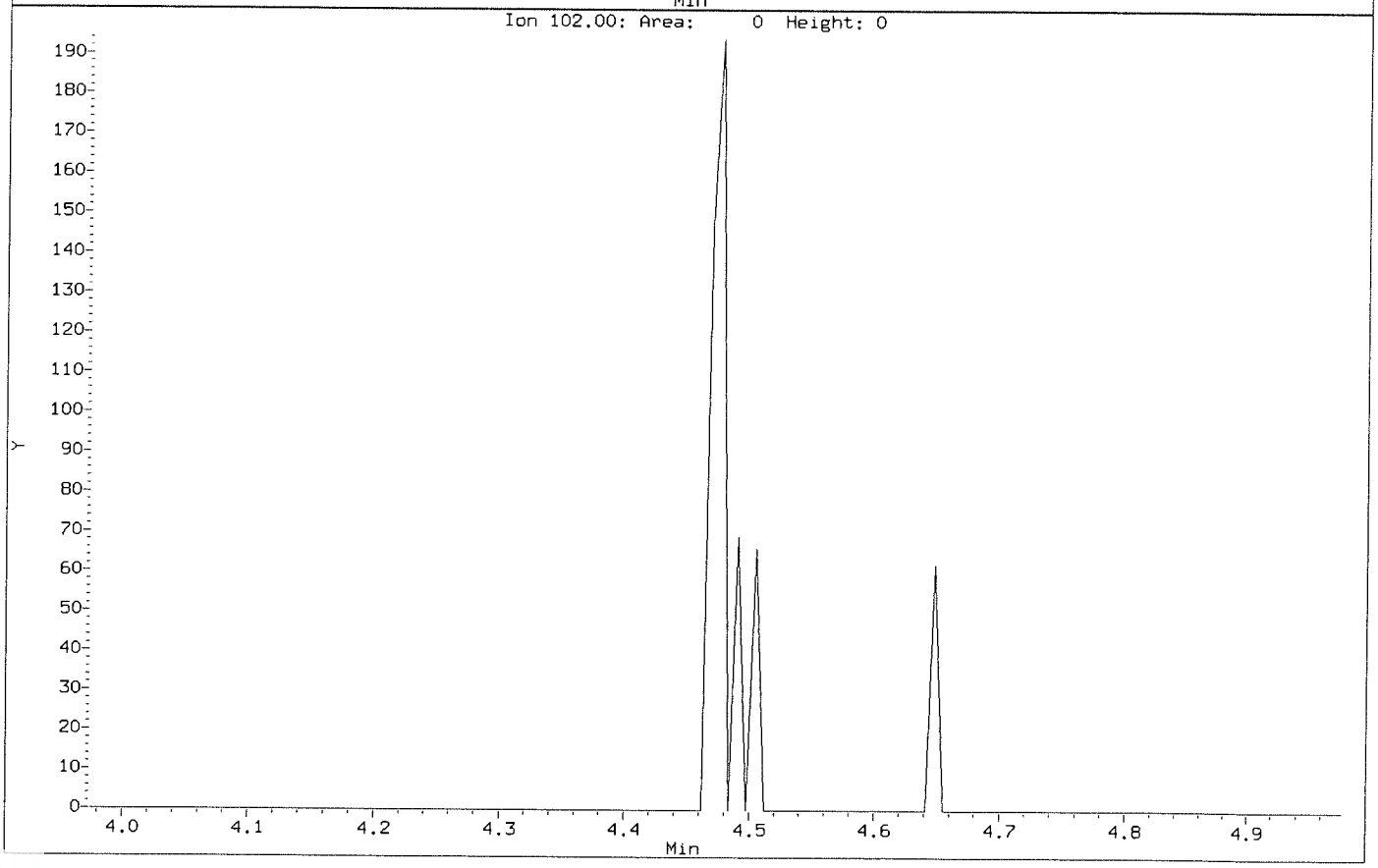




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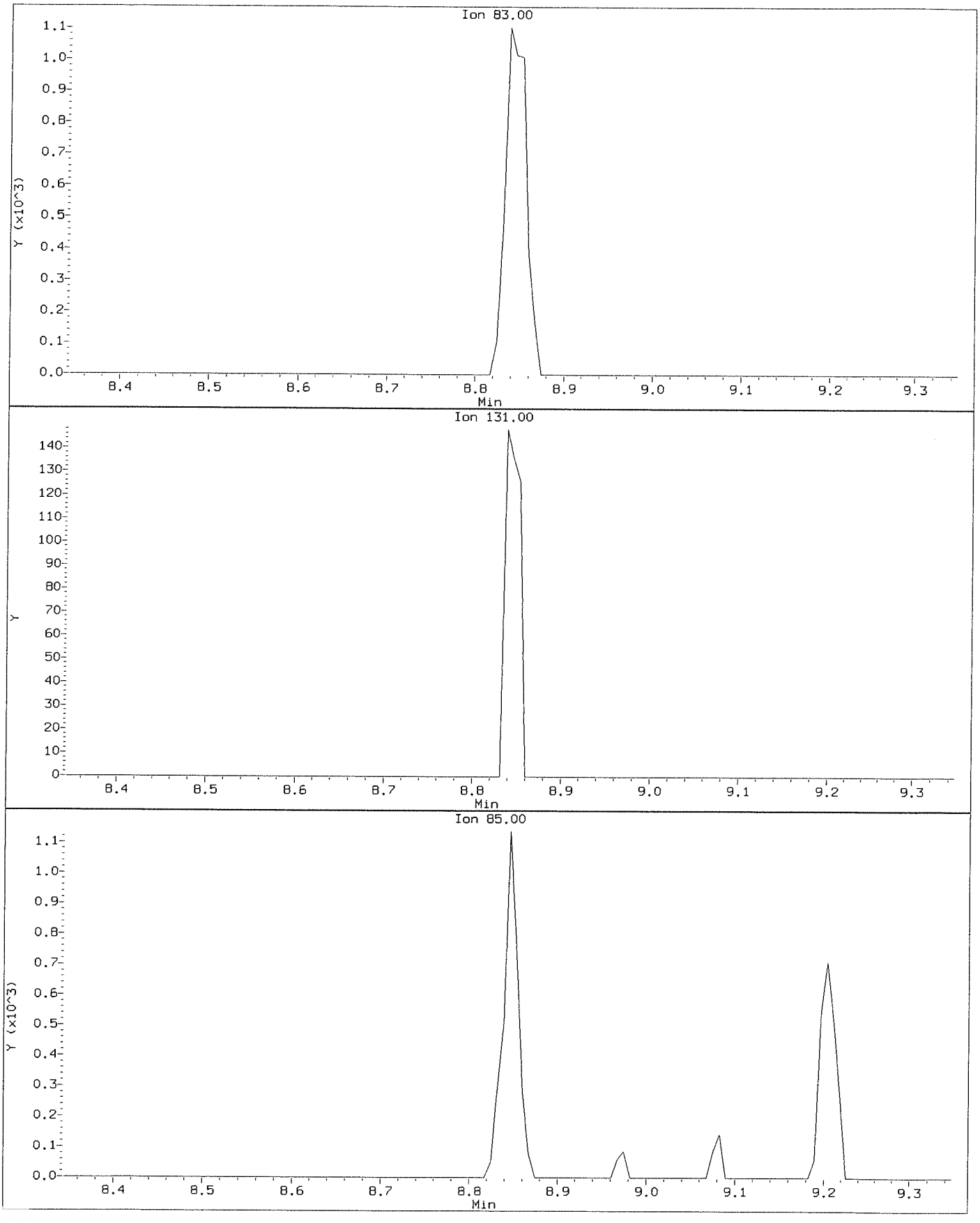
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CAS Number: 17060-07-0





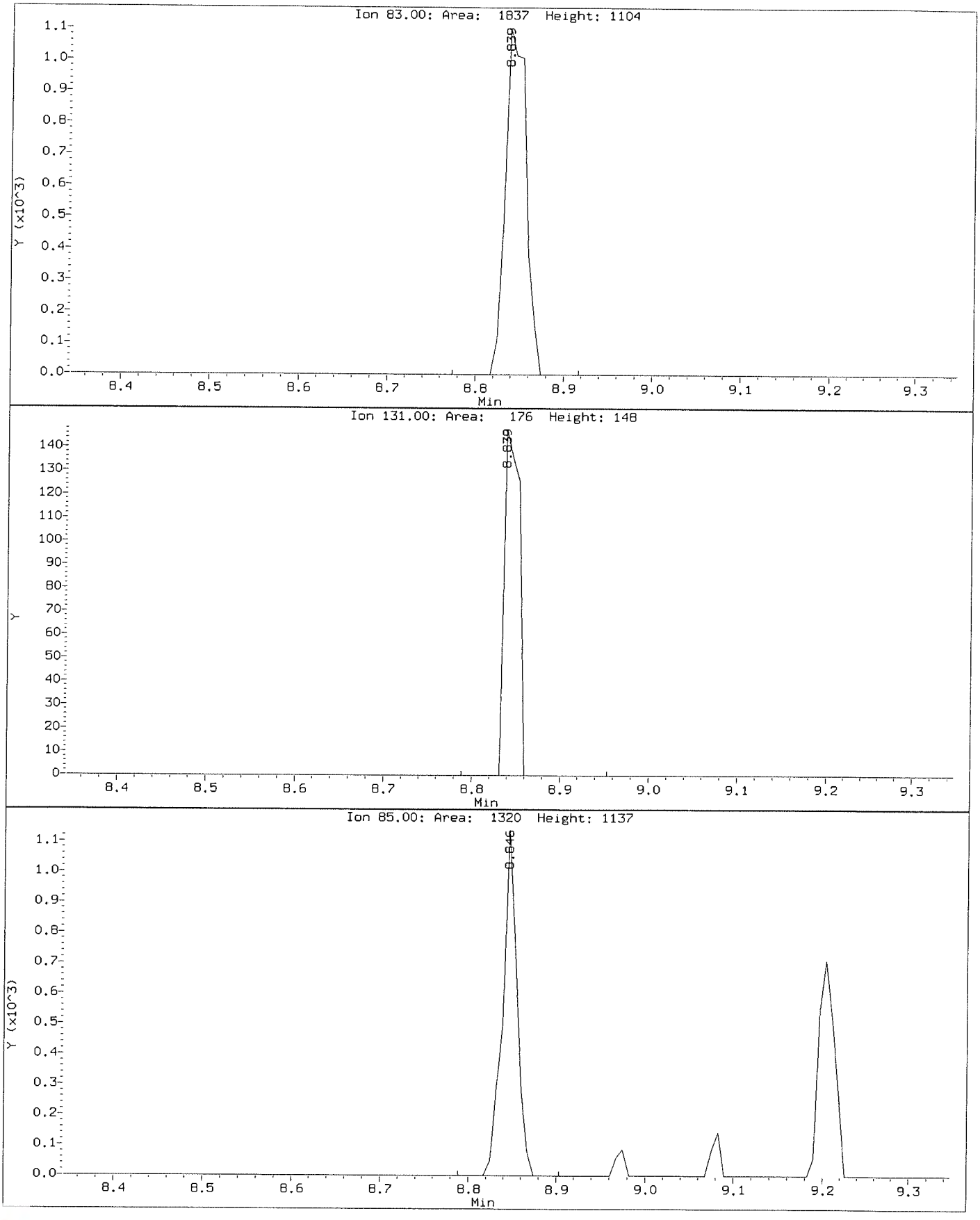
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Instrument: voa6.i
Client Sample ID: VSTD001

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



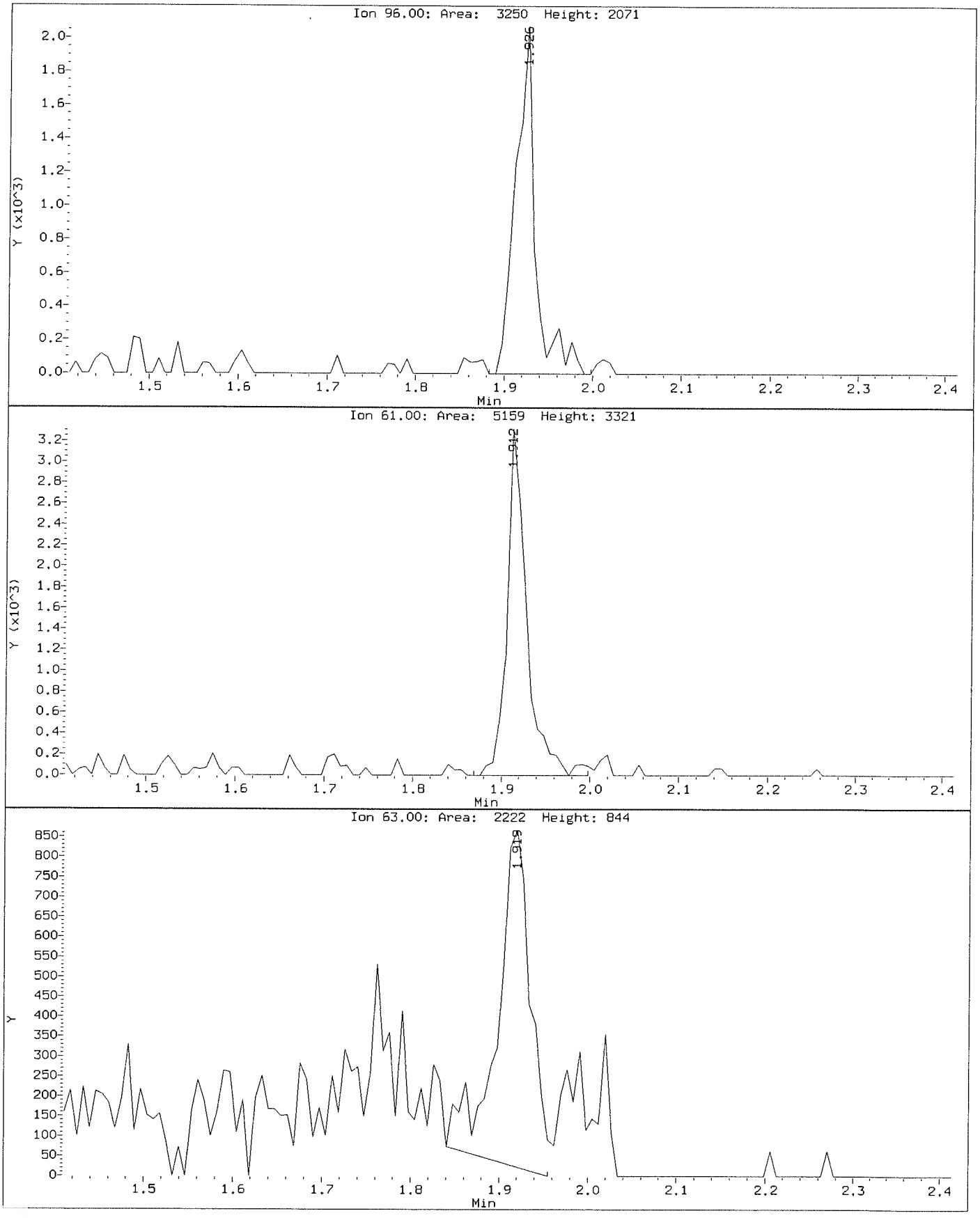
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Client Sample ID: VSTD001

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



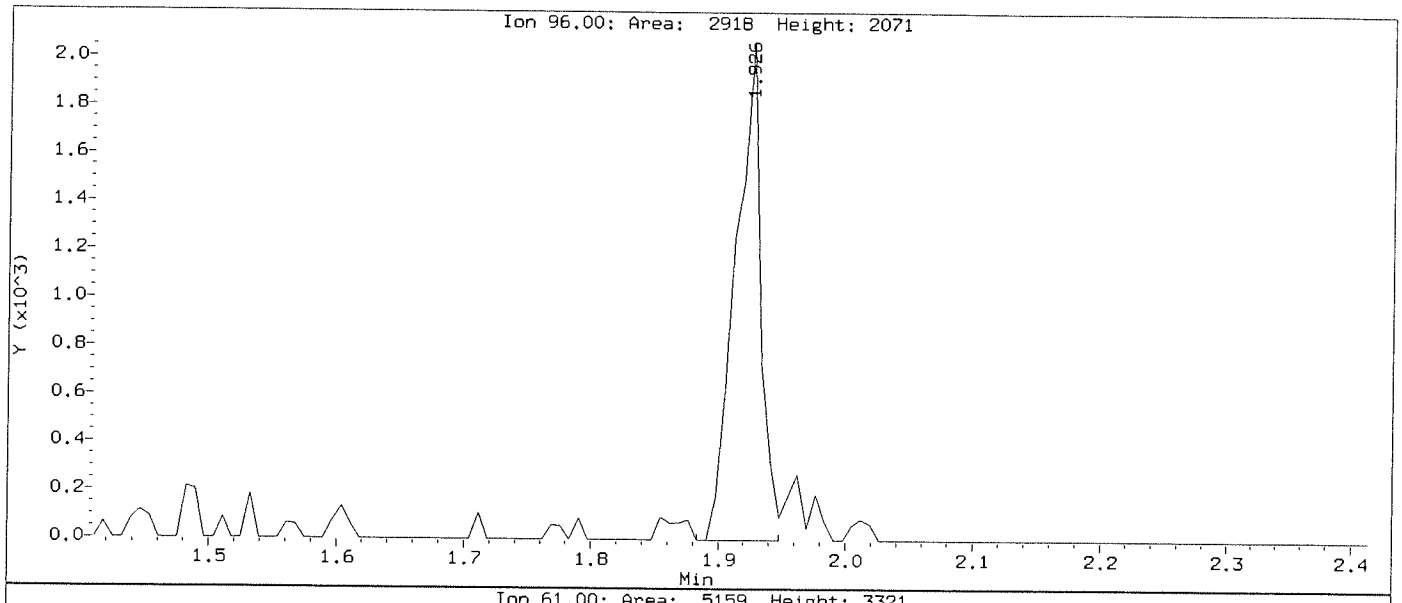
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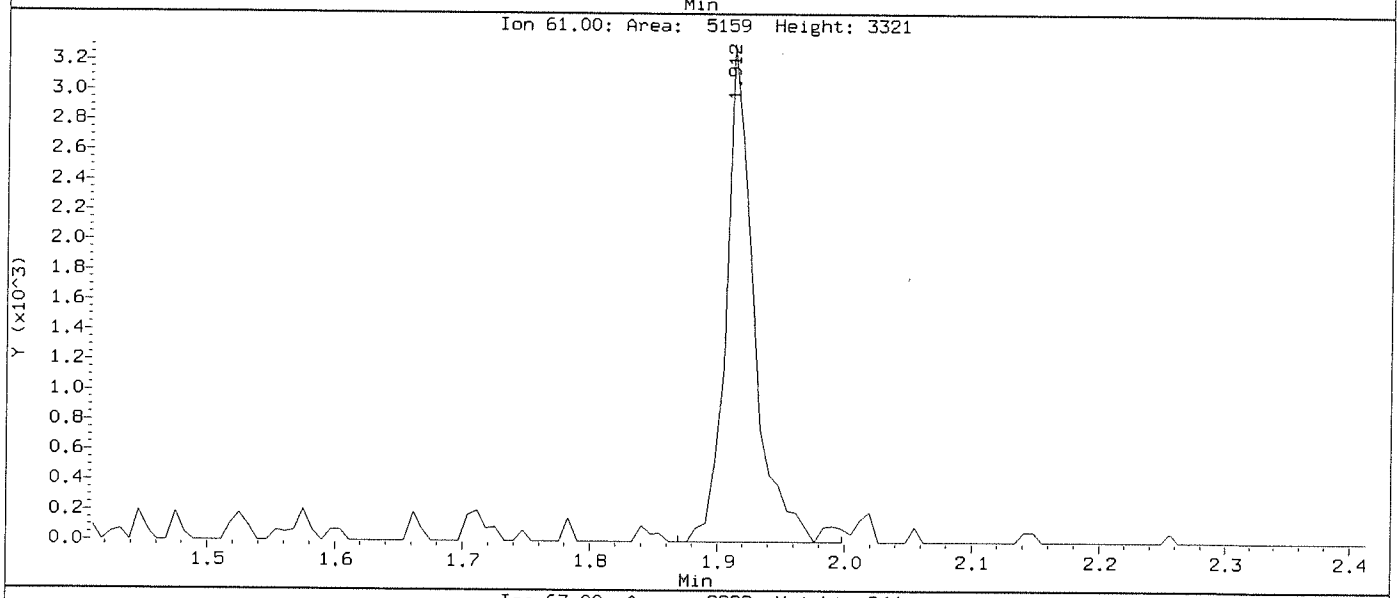
Compound: 1,1-Dichloroethene
CAS Number: 75-35-4

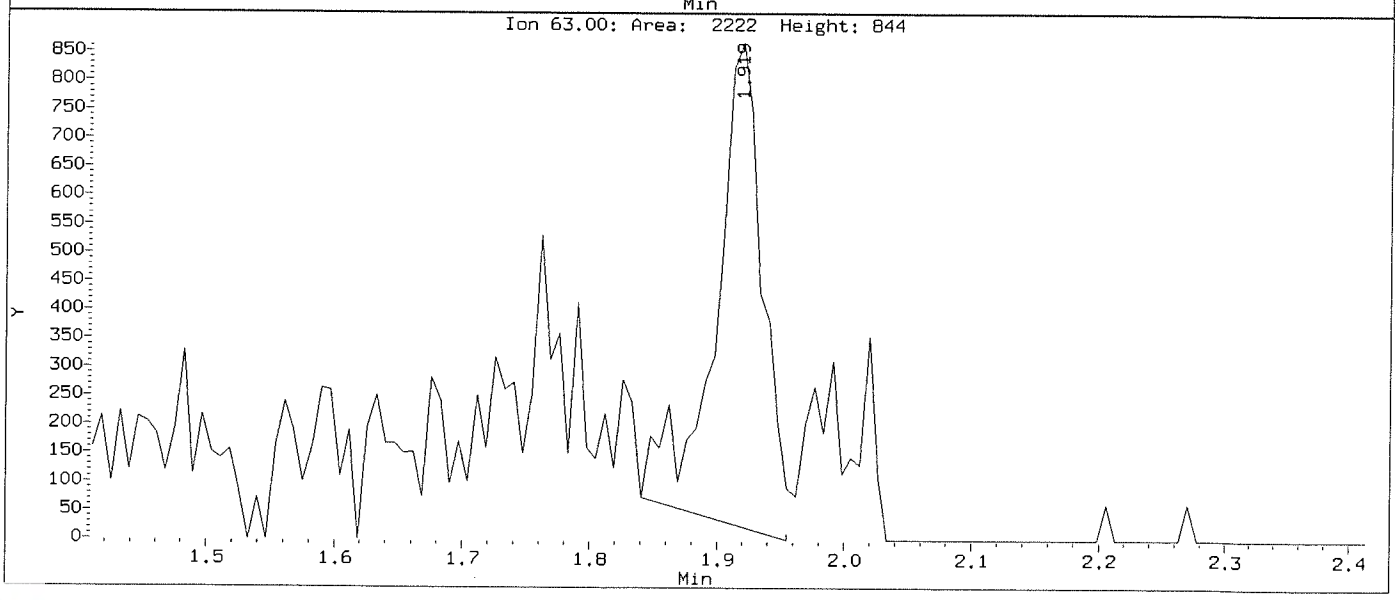


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Compound: 1,1-Dichloroethene
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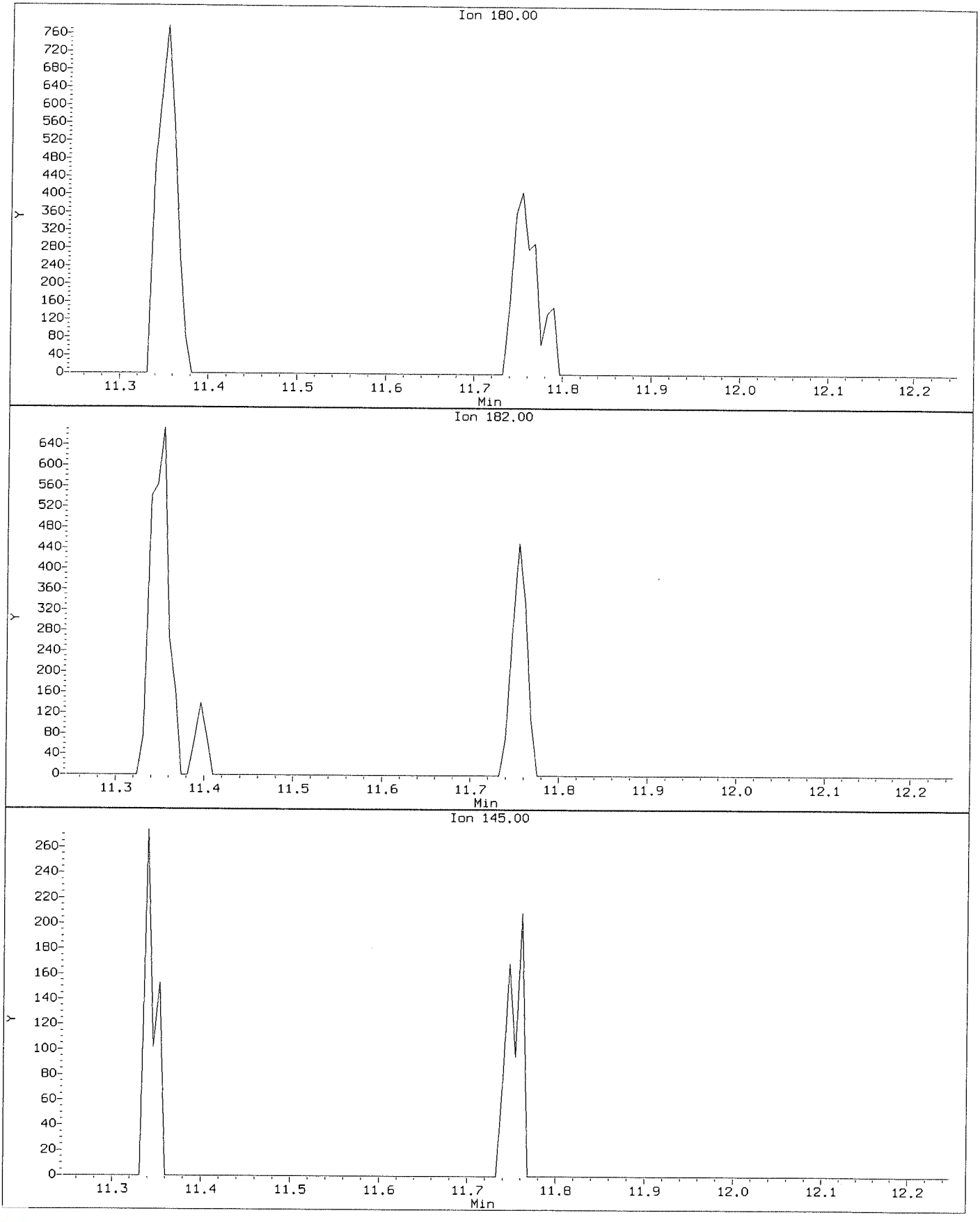






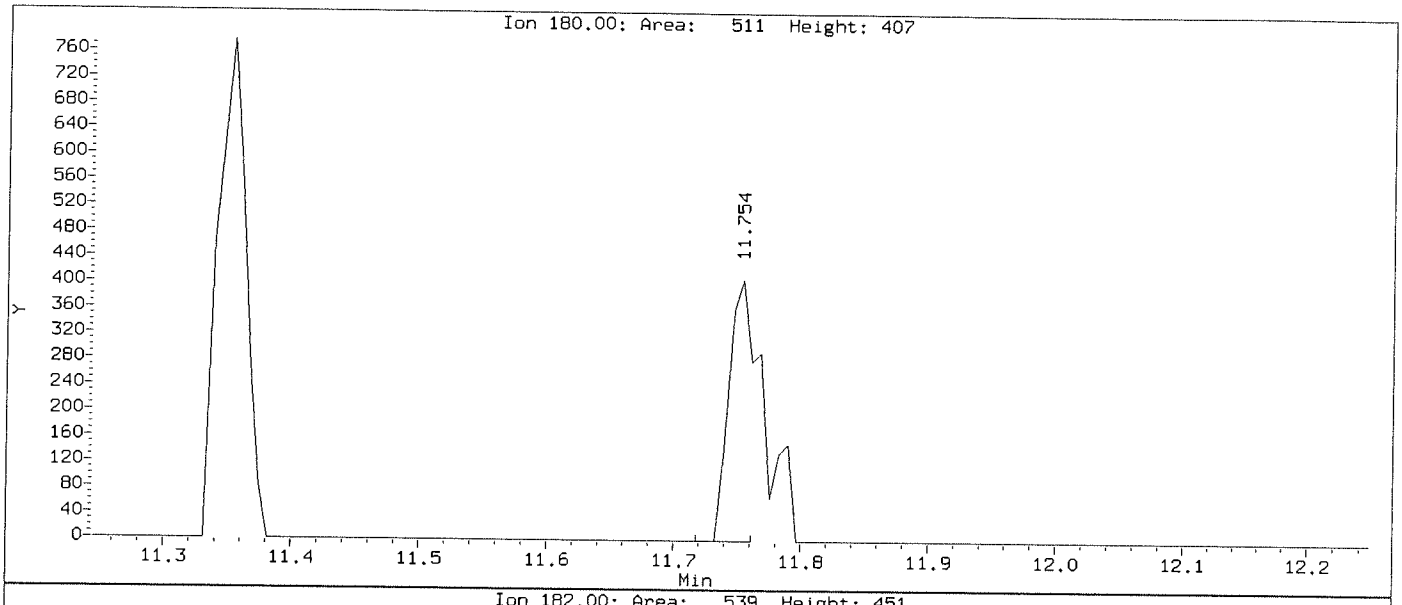
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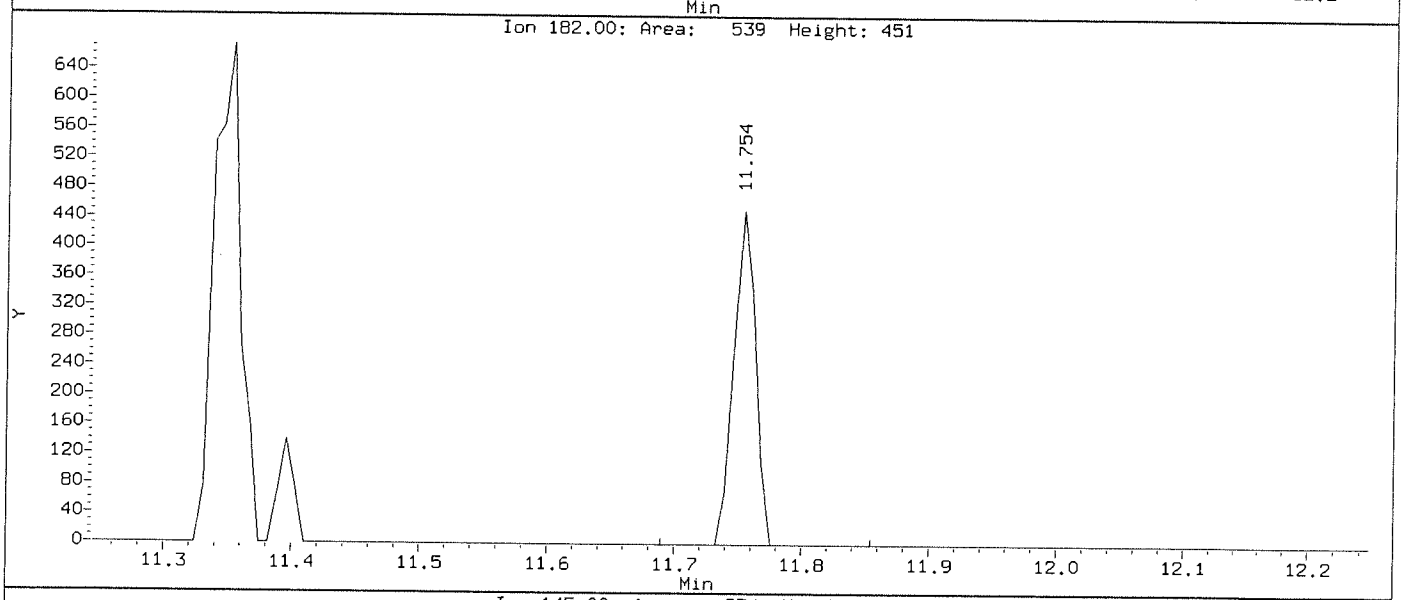
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

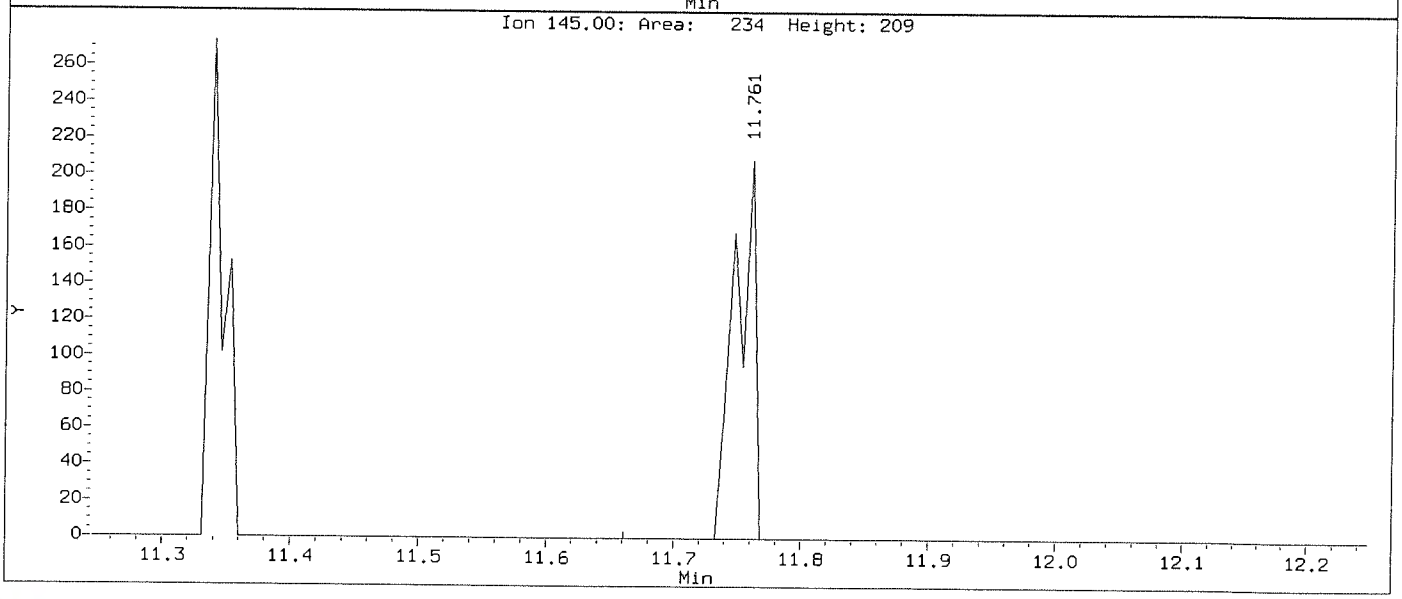


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Client Sample ID: VSTD001

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

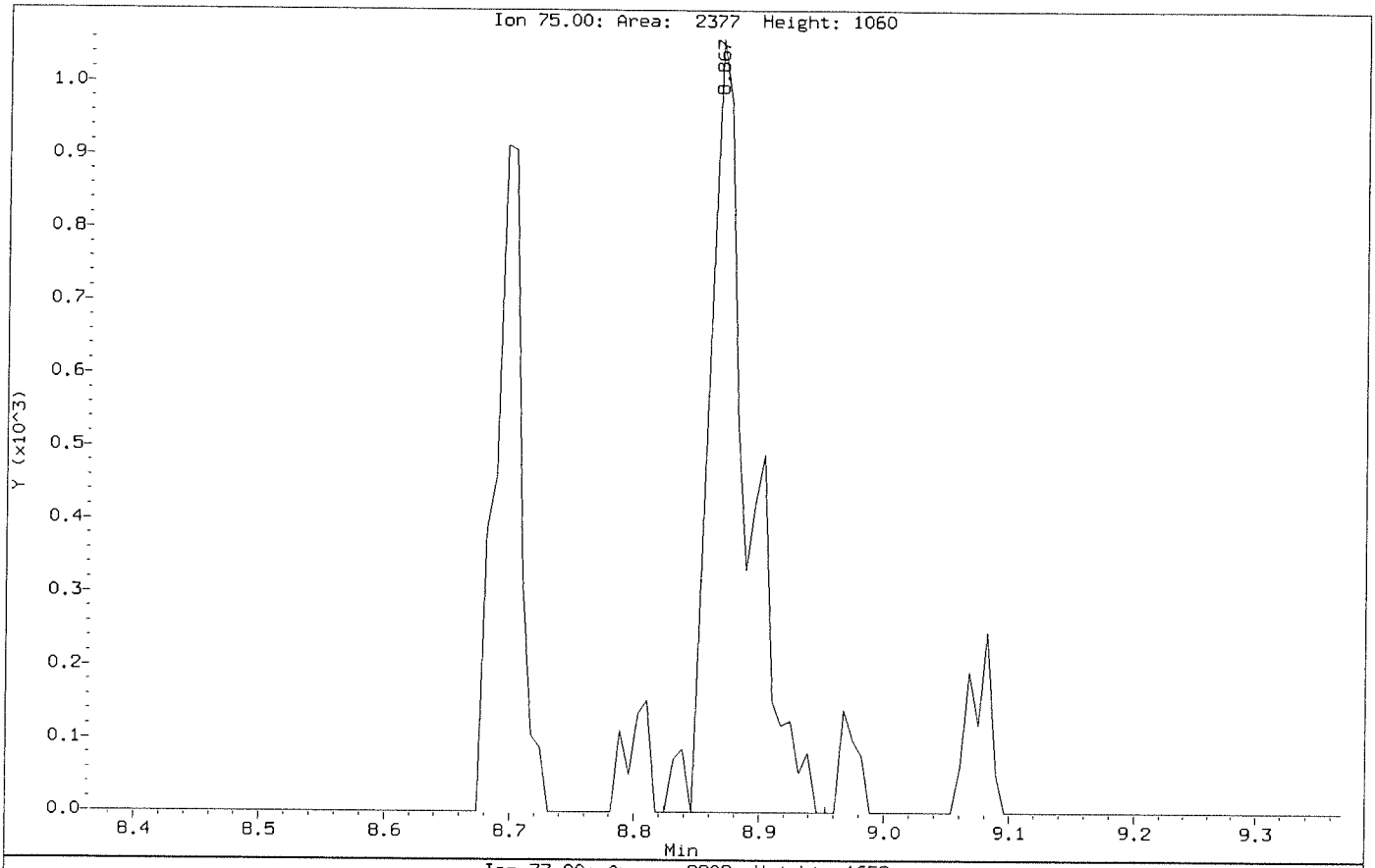


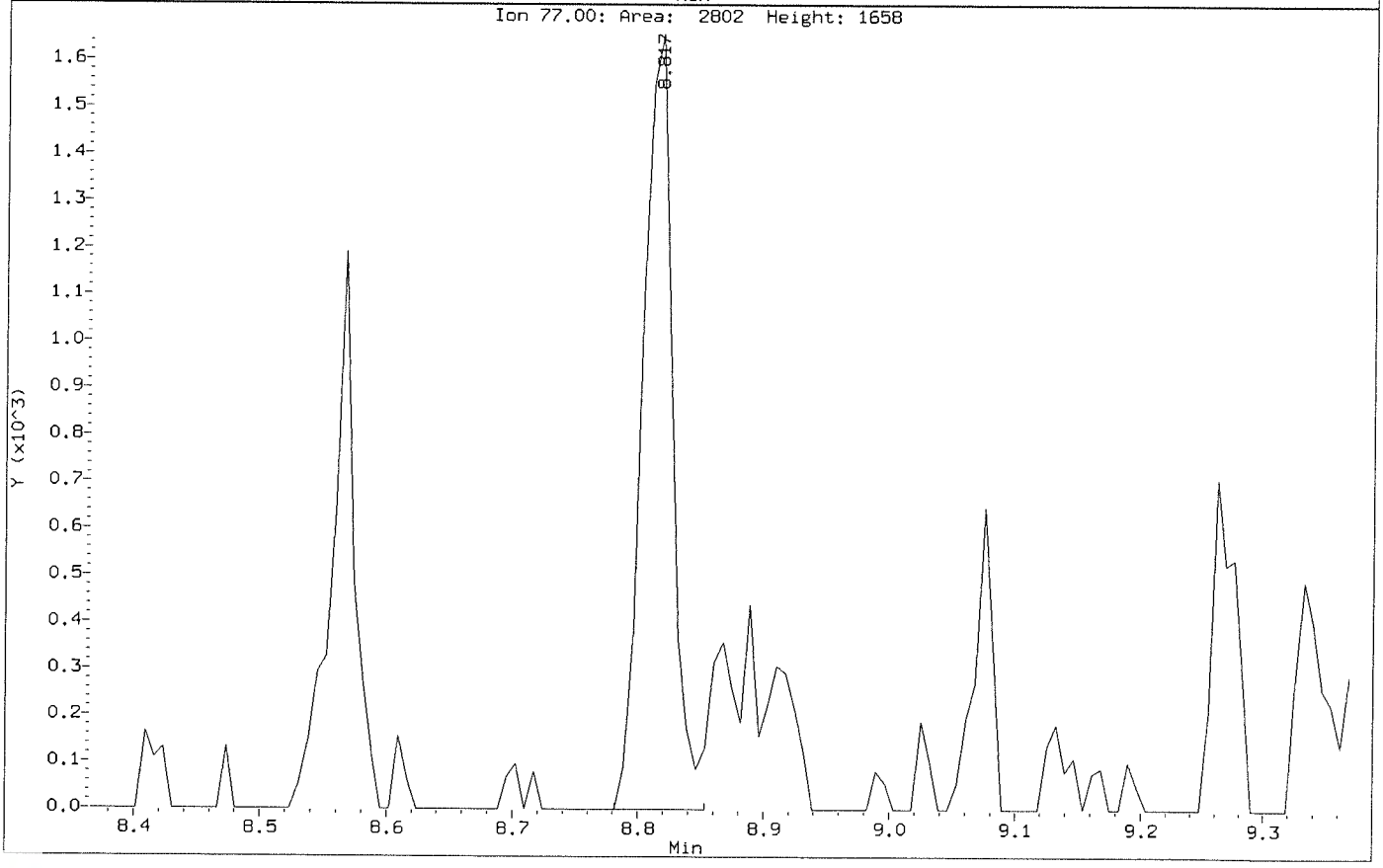




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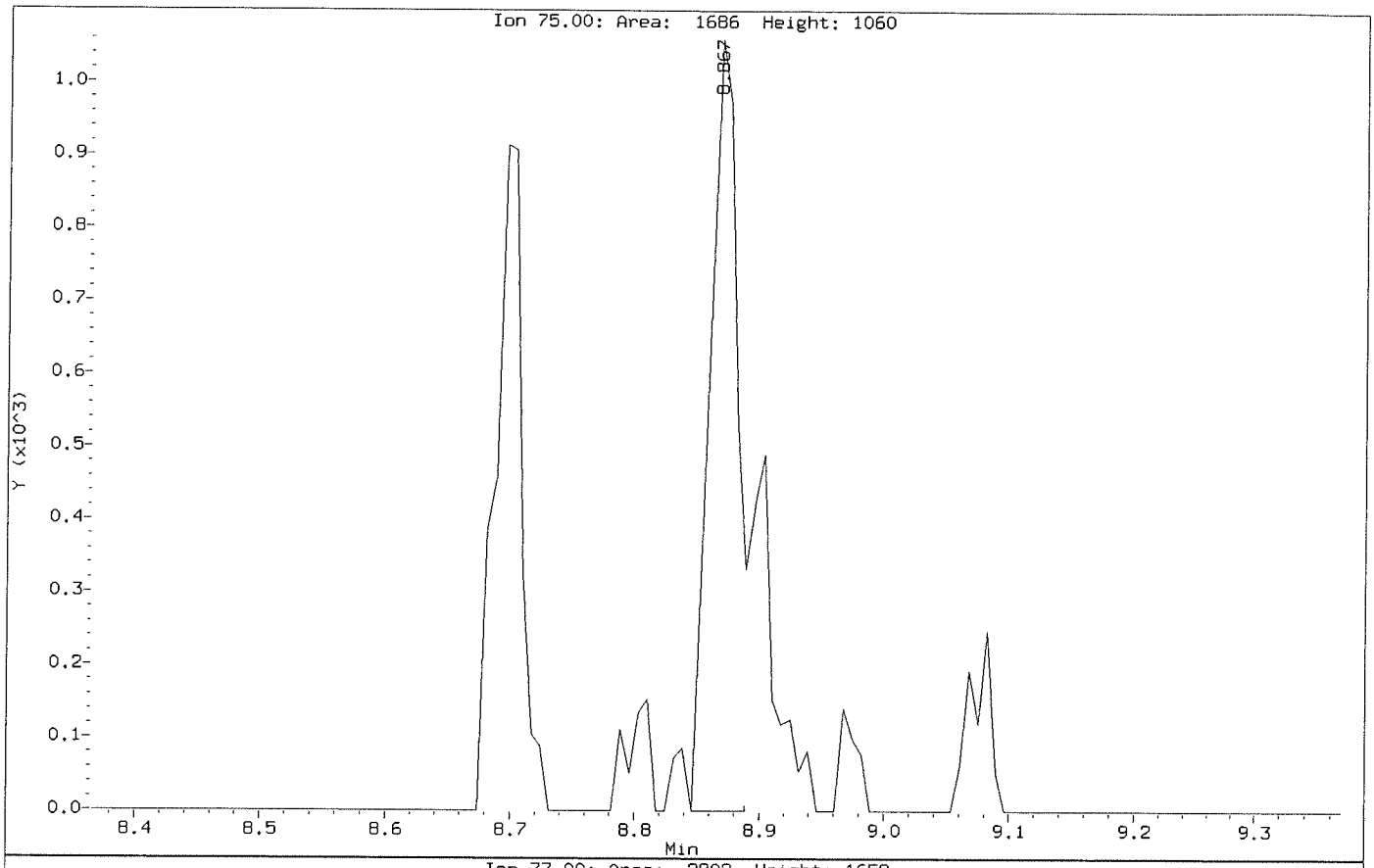
Compound: 1,2,3-Trichloropropane
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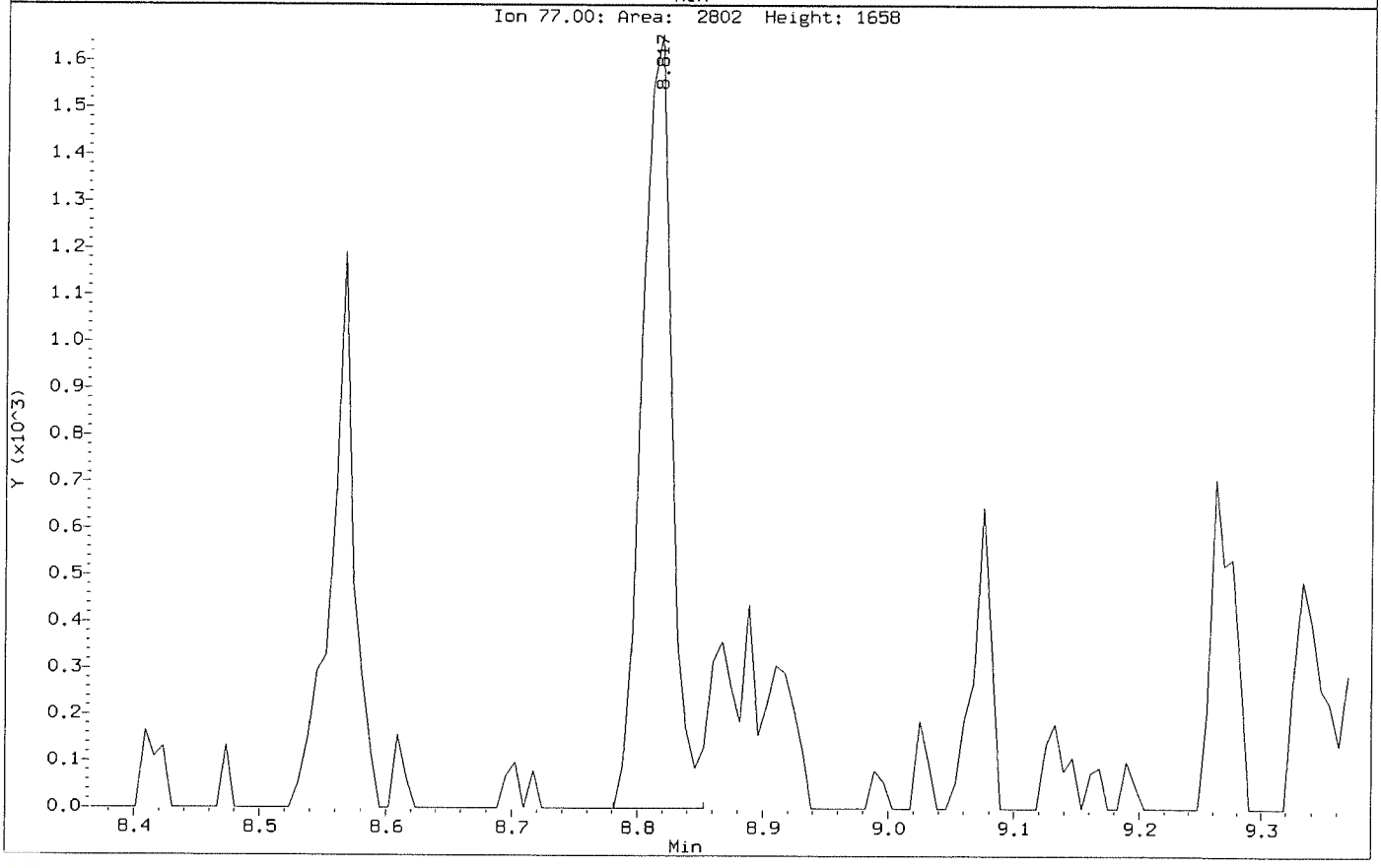




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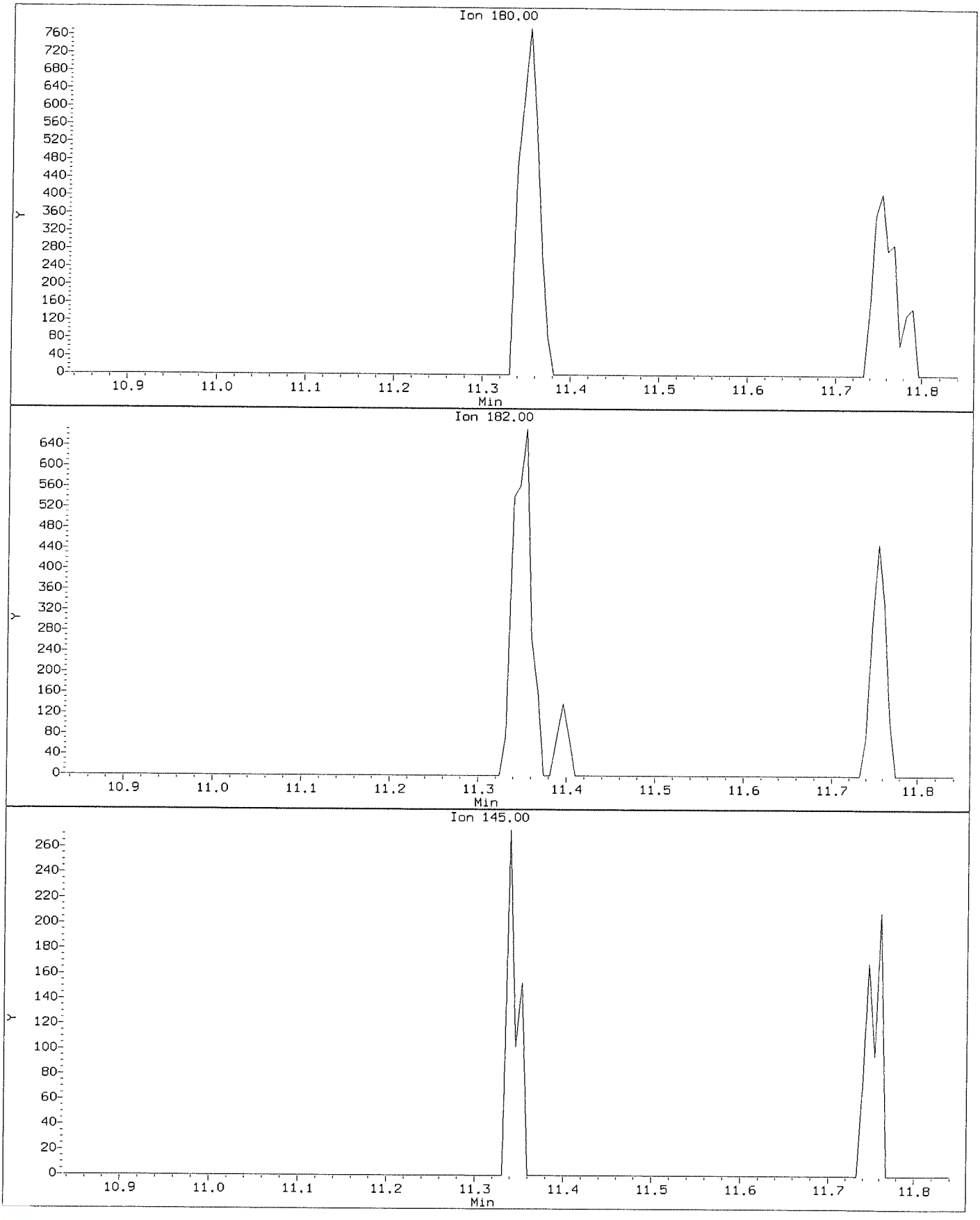
Compound: 1,2,3-Trichloropropane
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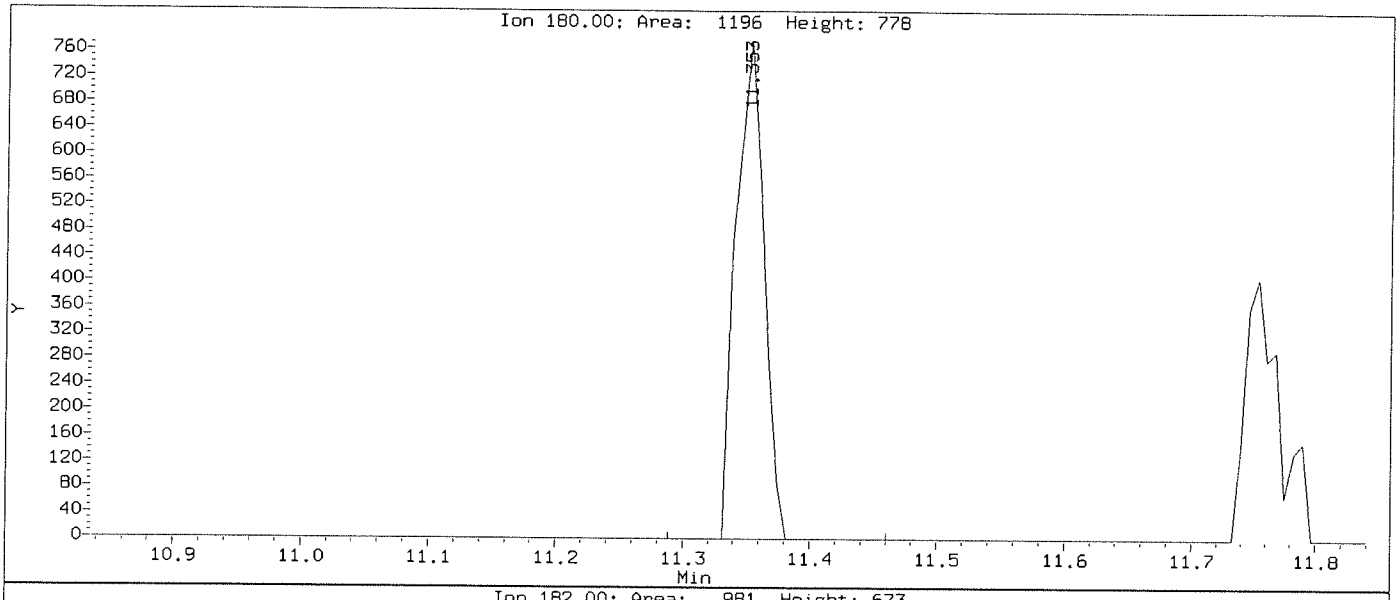
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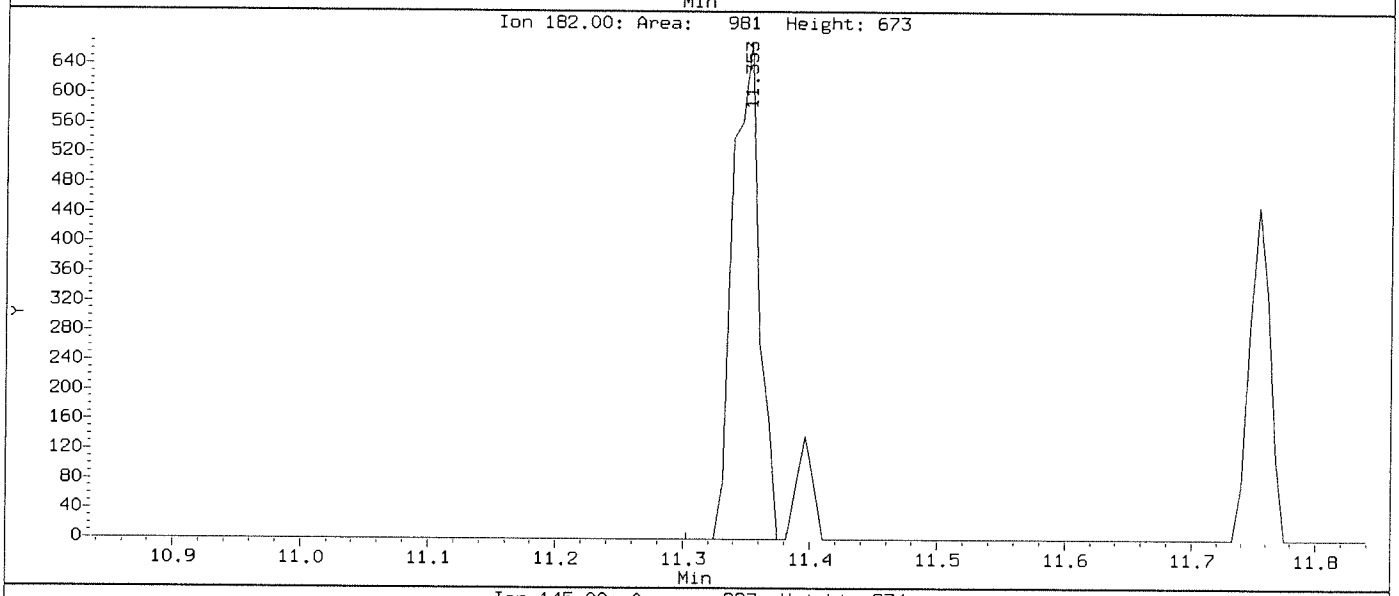
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1

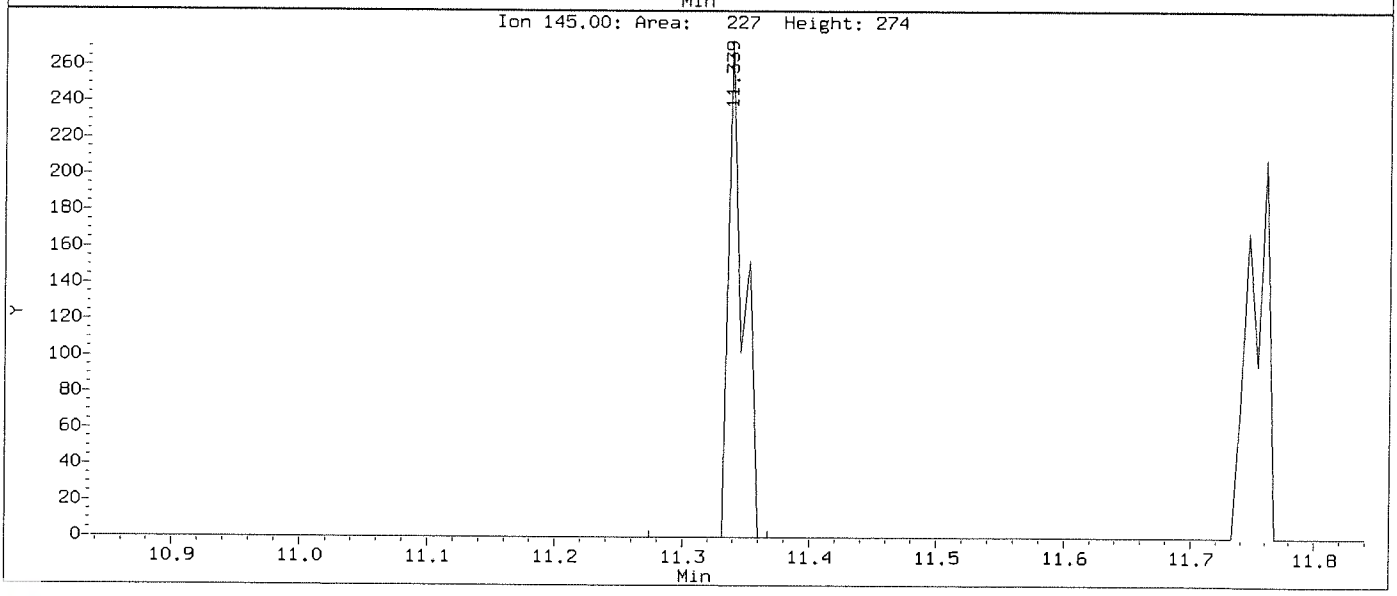


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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

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

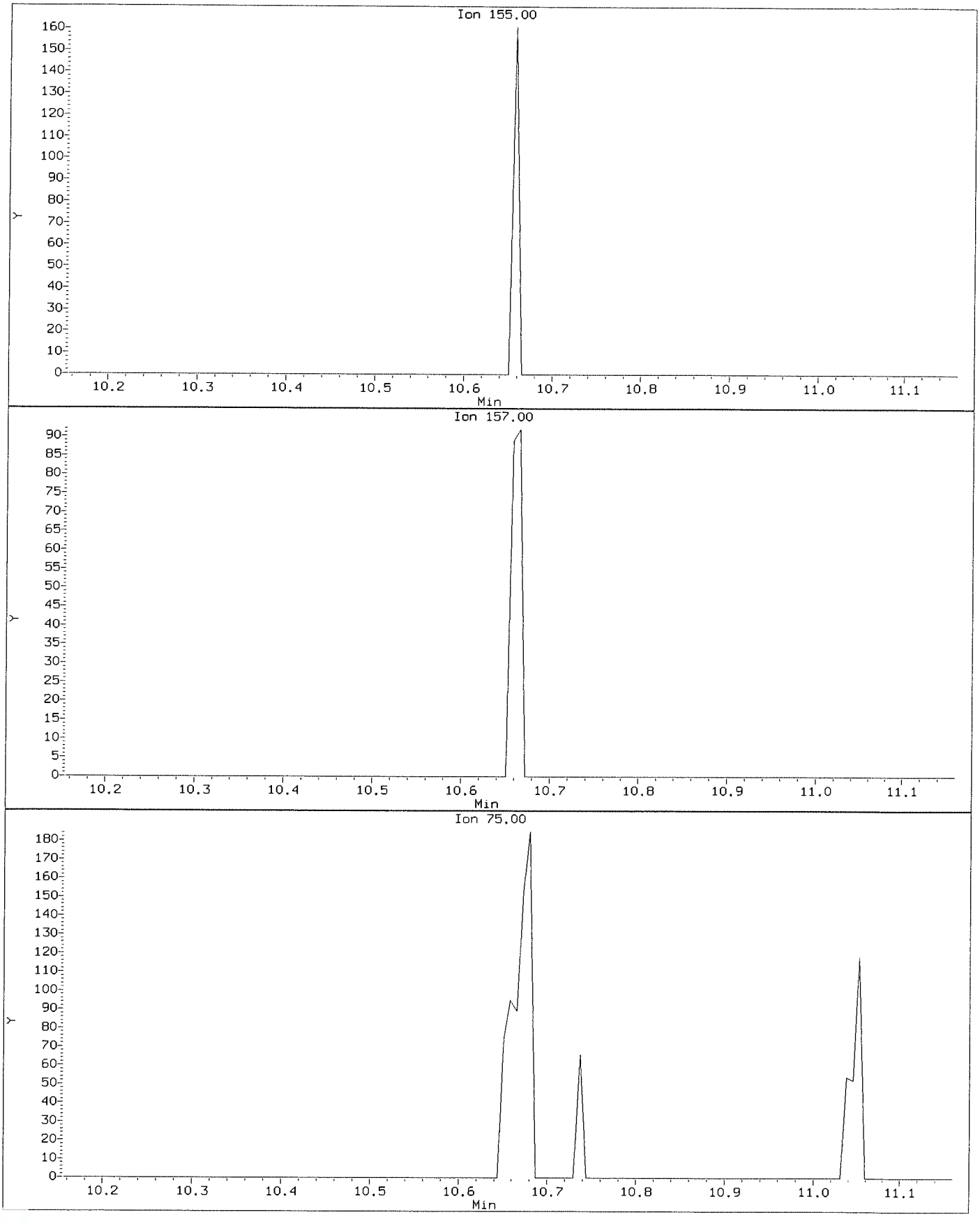






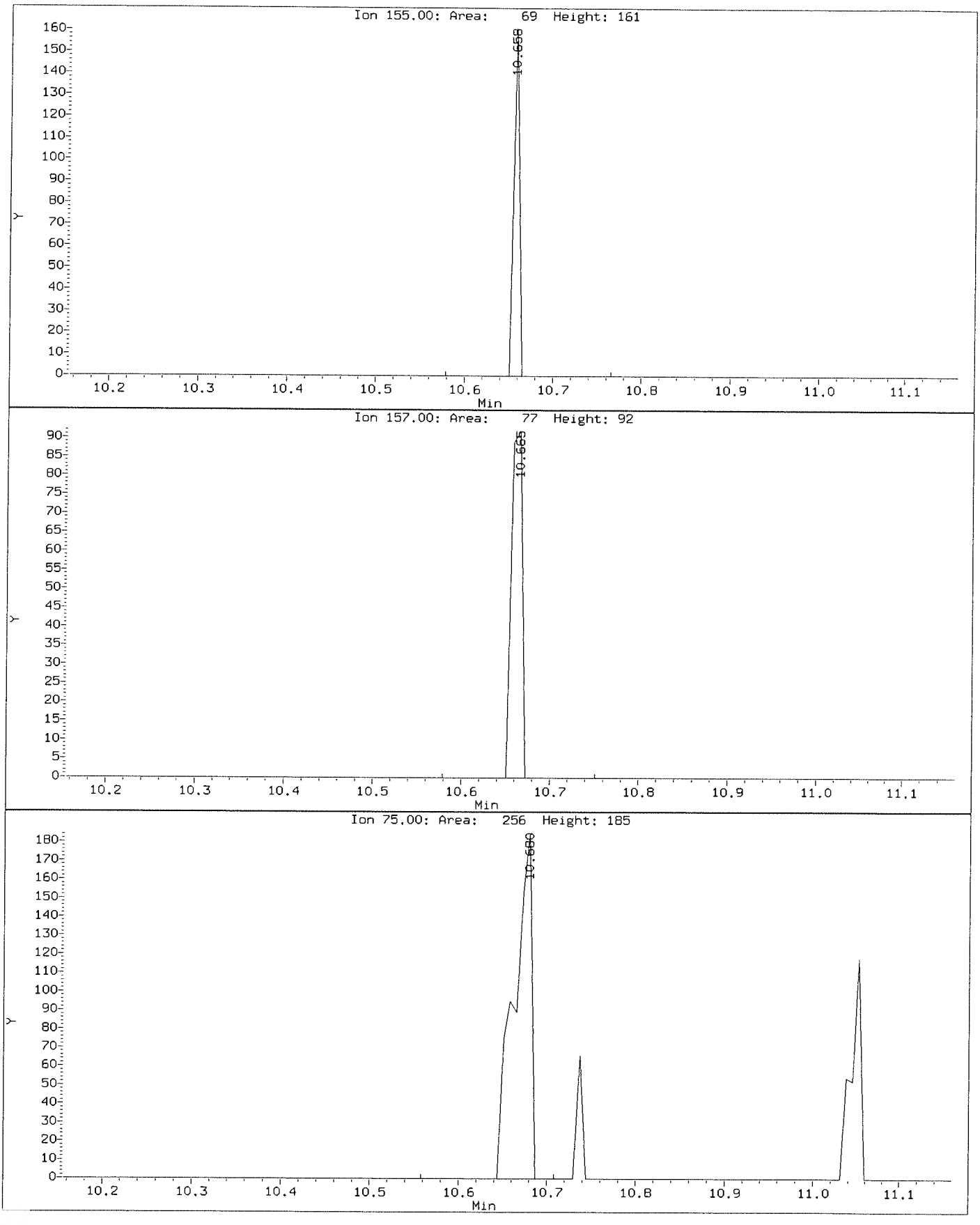
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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

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



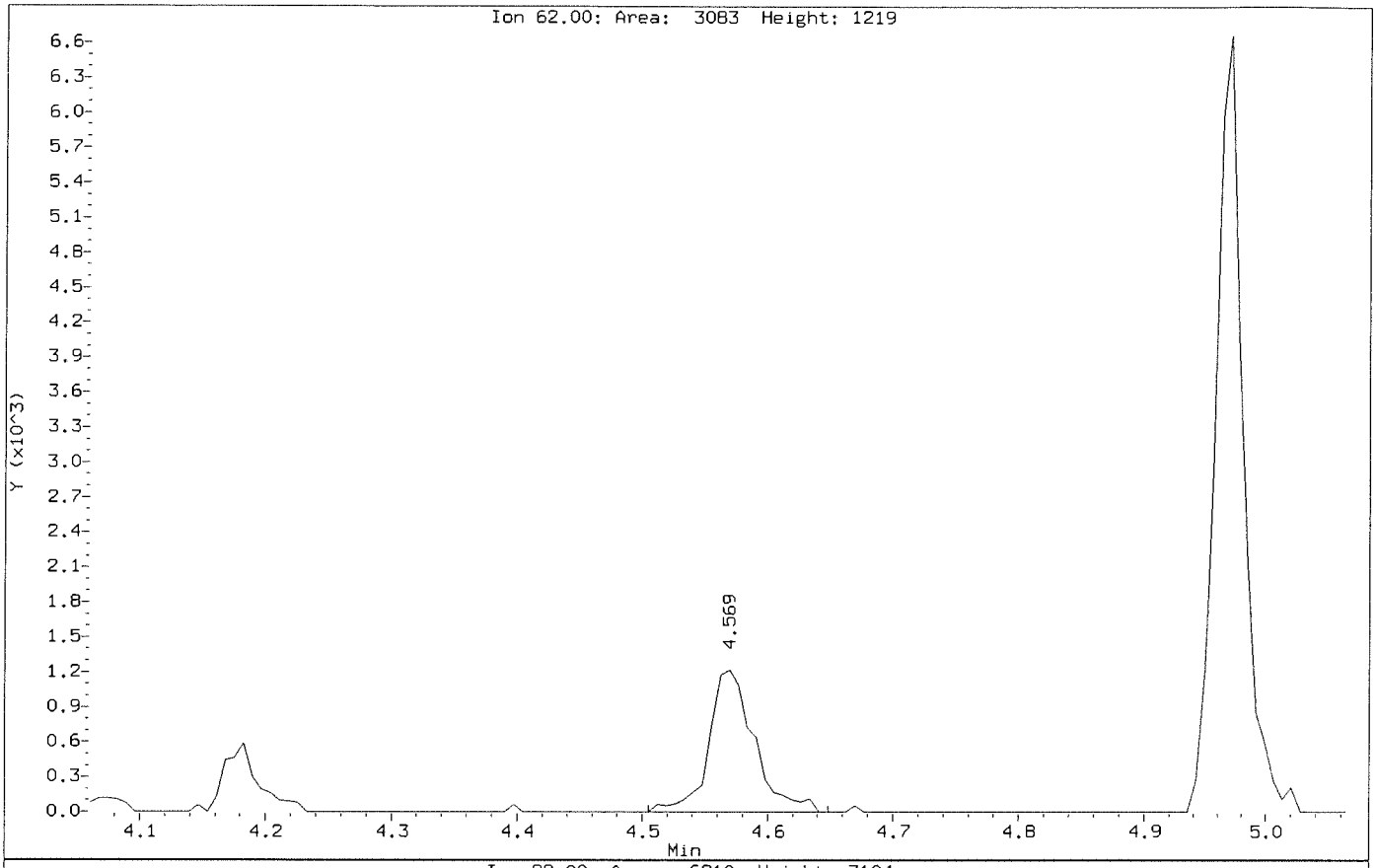
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Client Sample ID: VSTD001

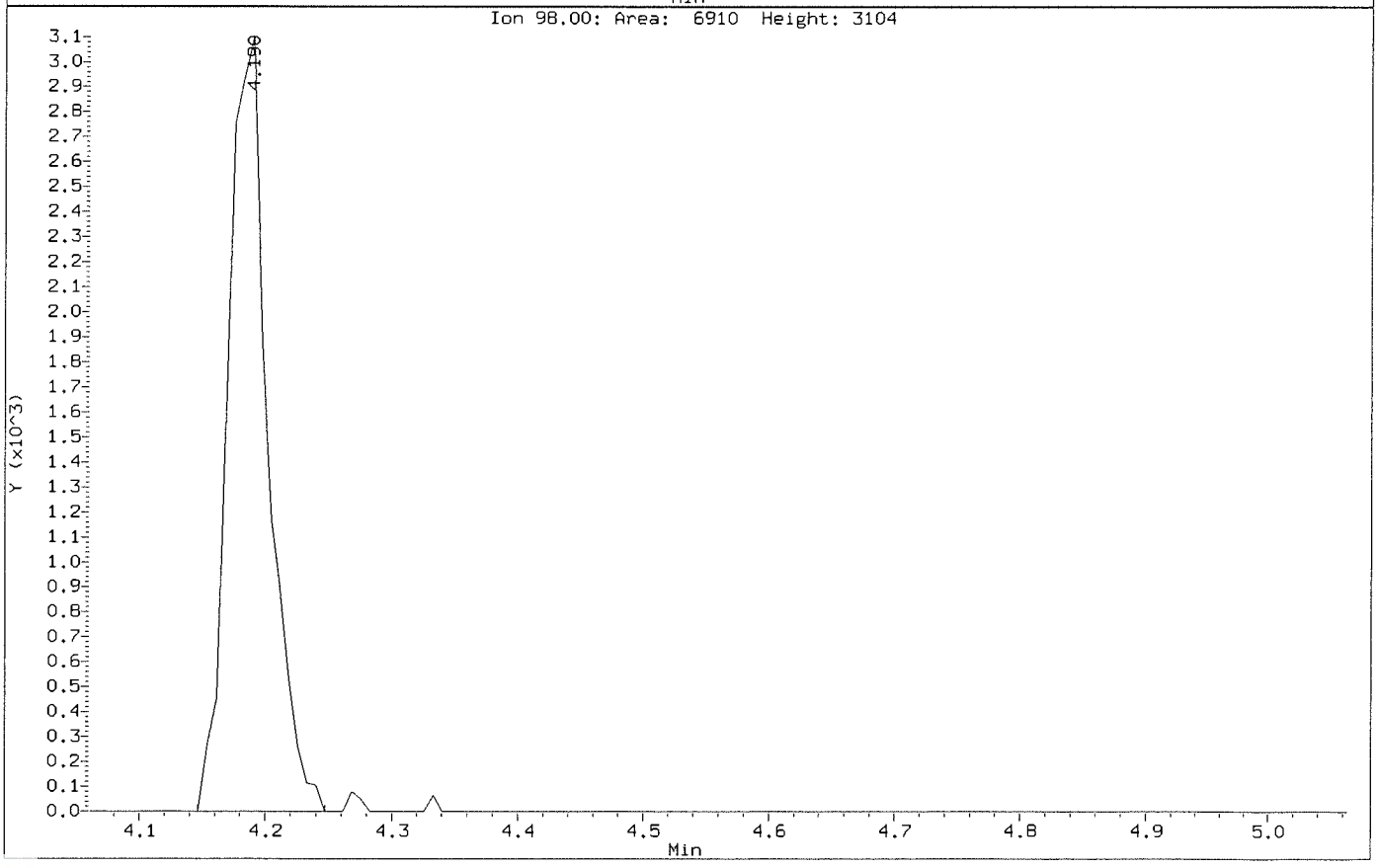
Compound: 1,2-Dibromo-3-Chloropropane
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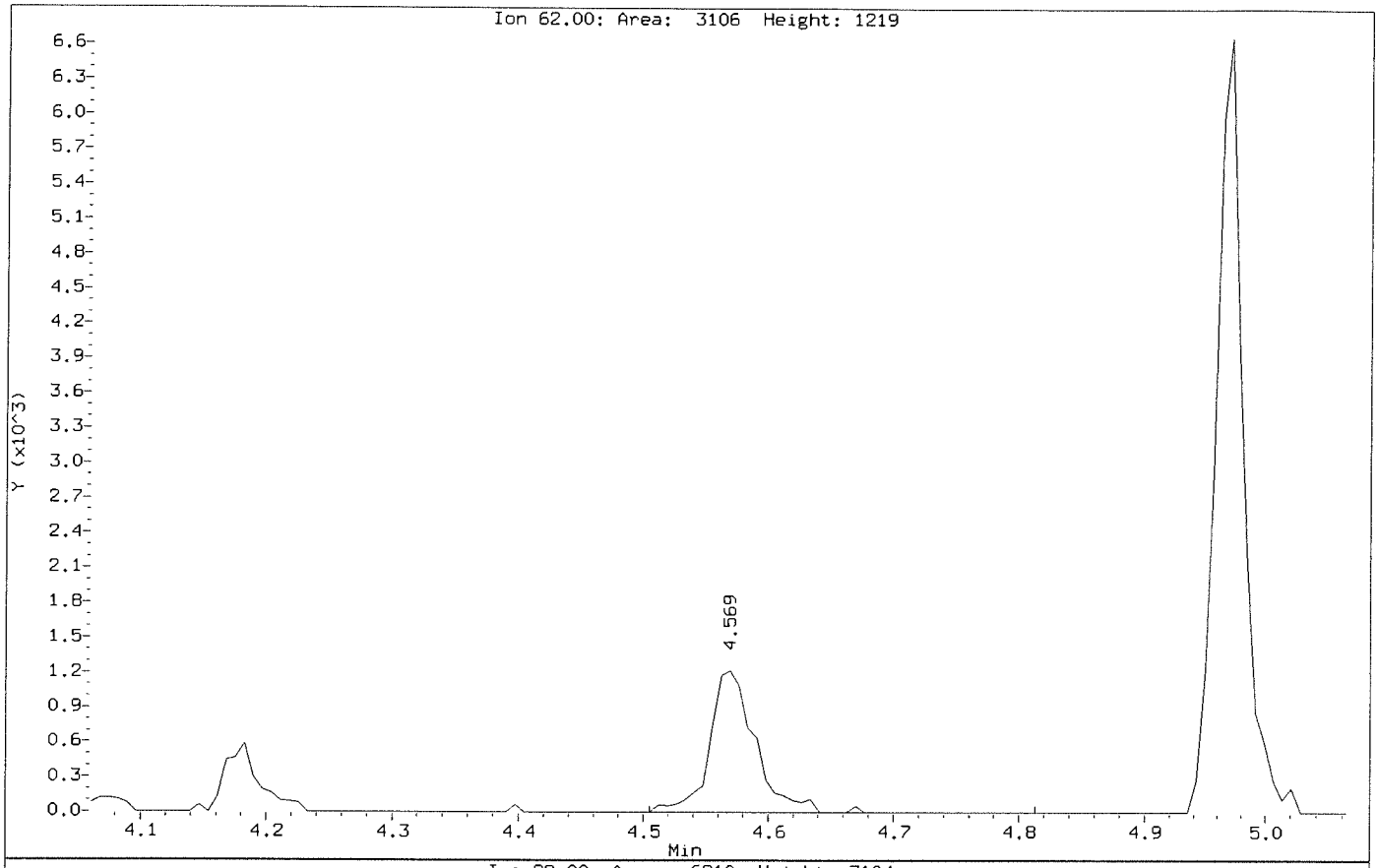
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

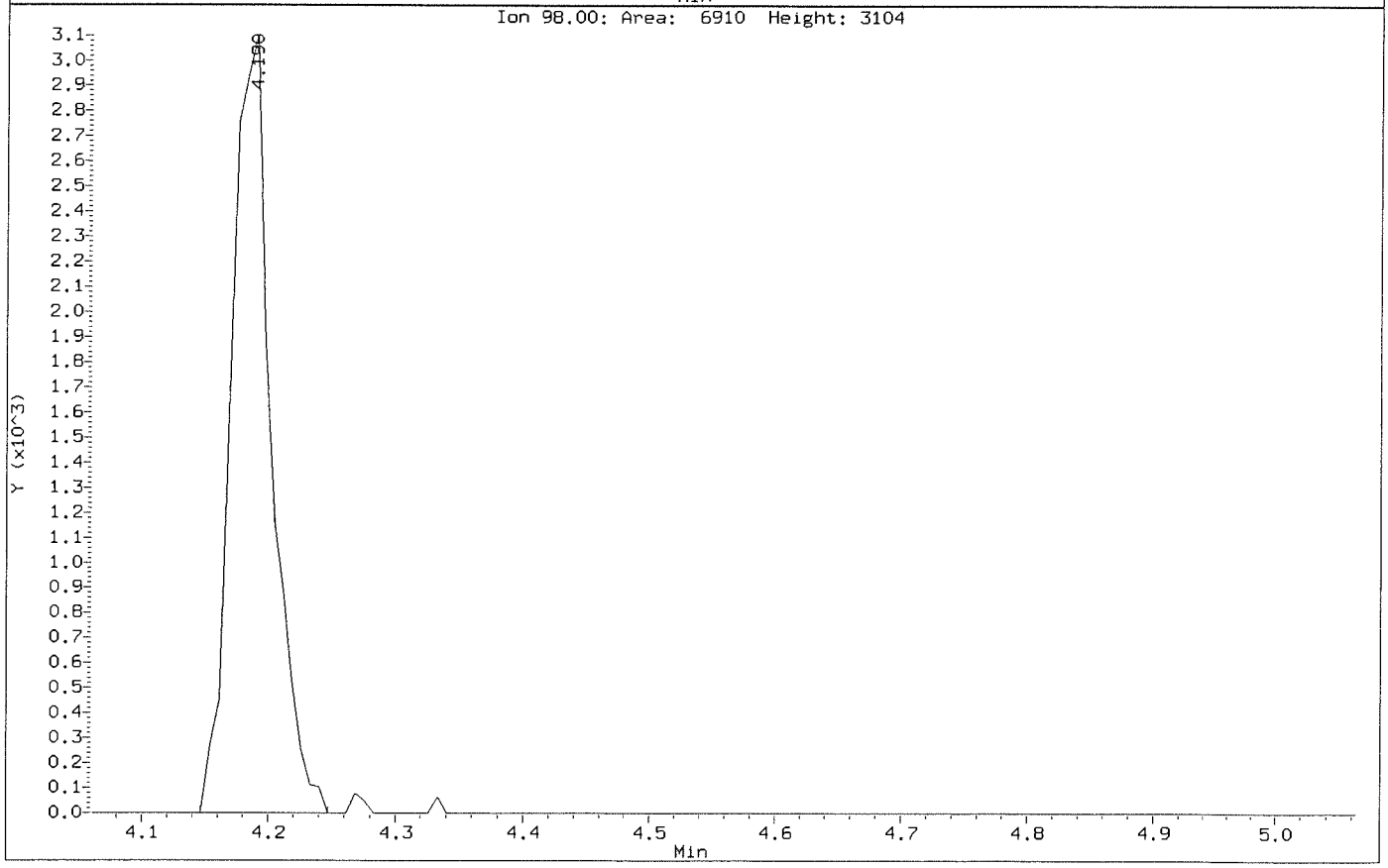




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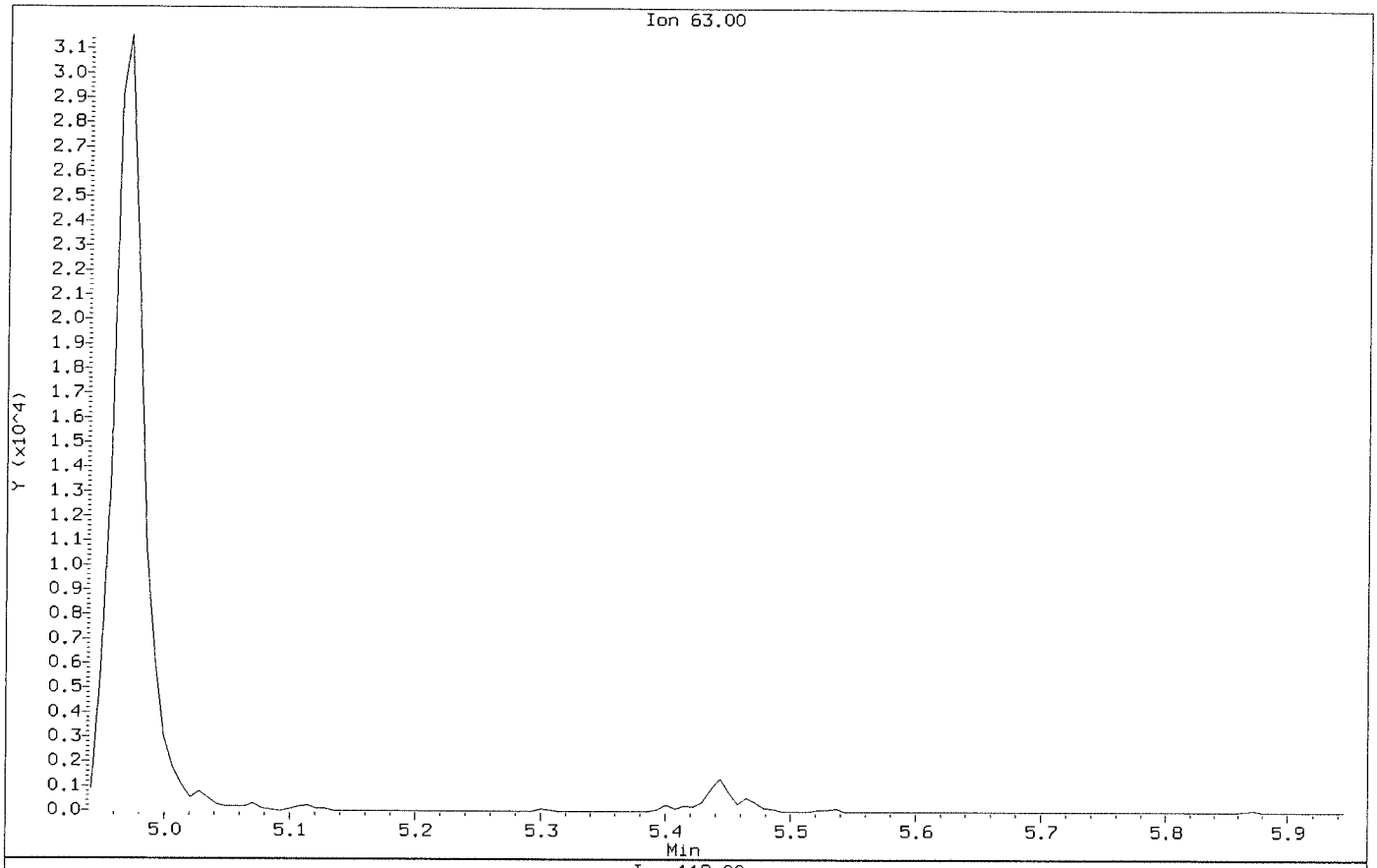
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CAS Number: 107-06-2

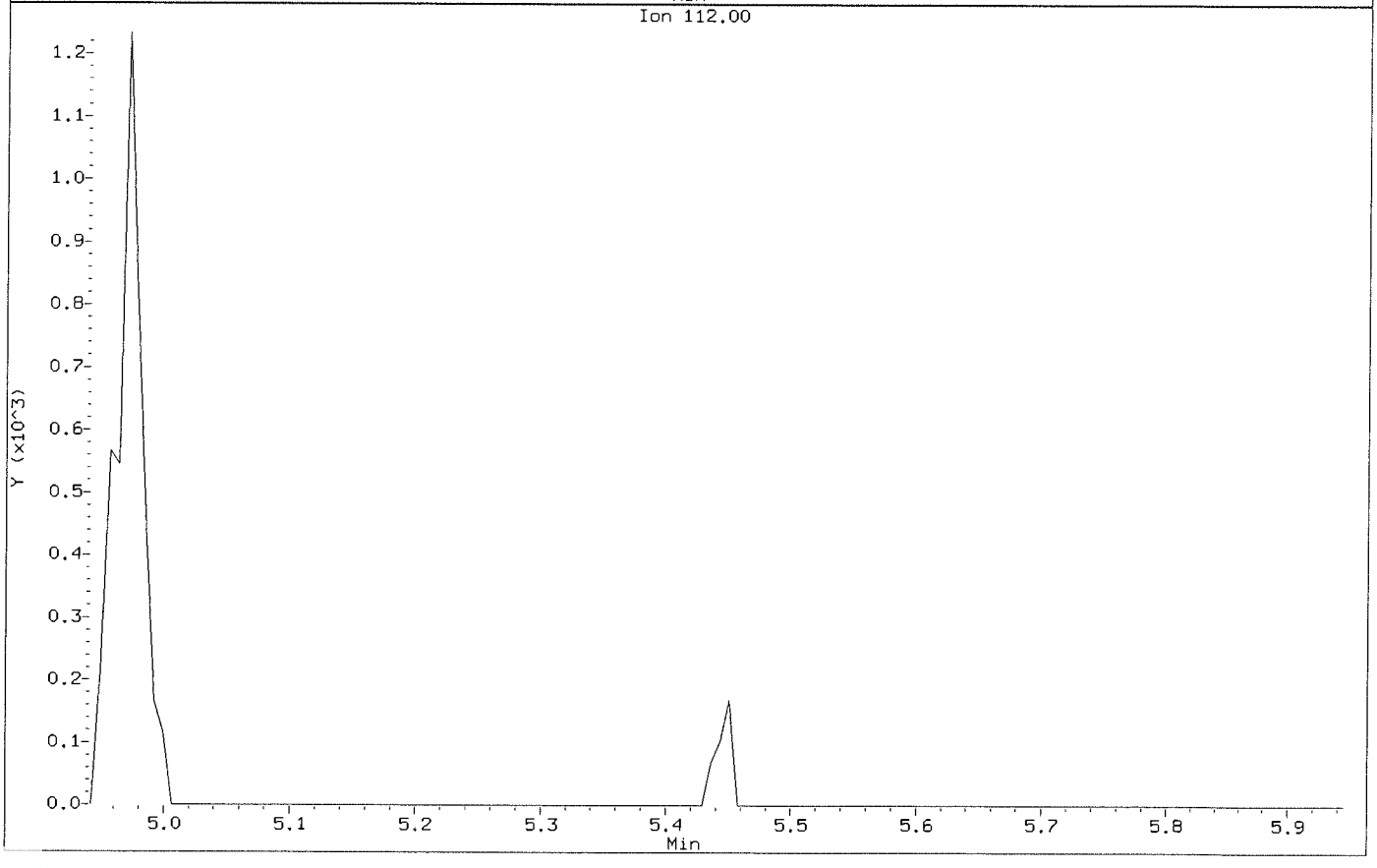




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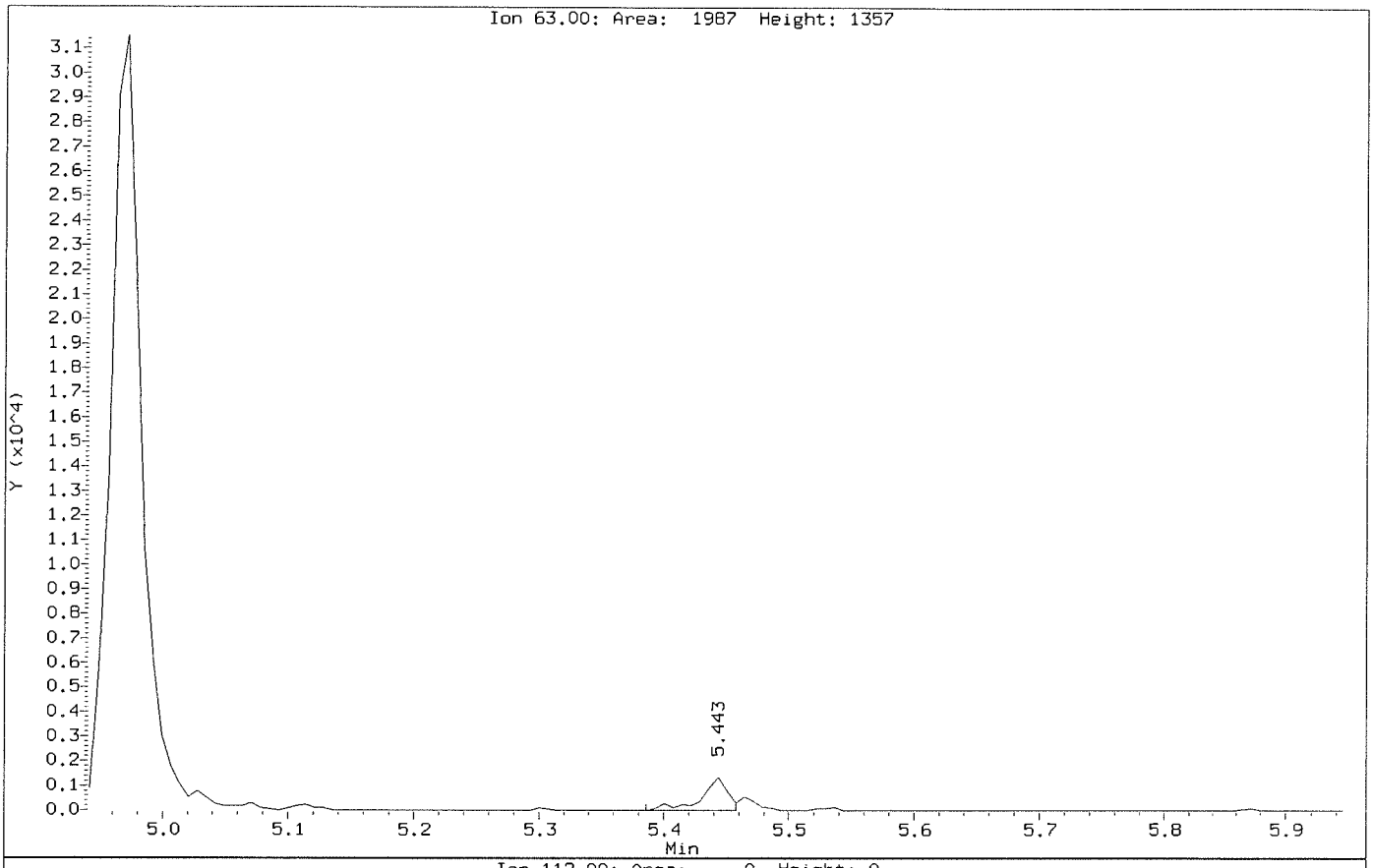
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CAS Number: 78-87-5

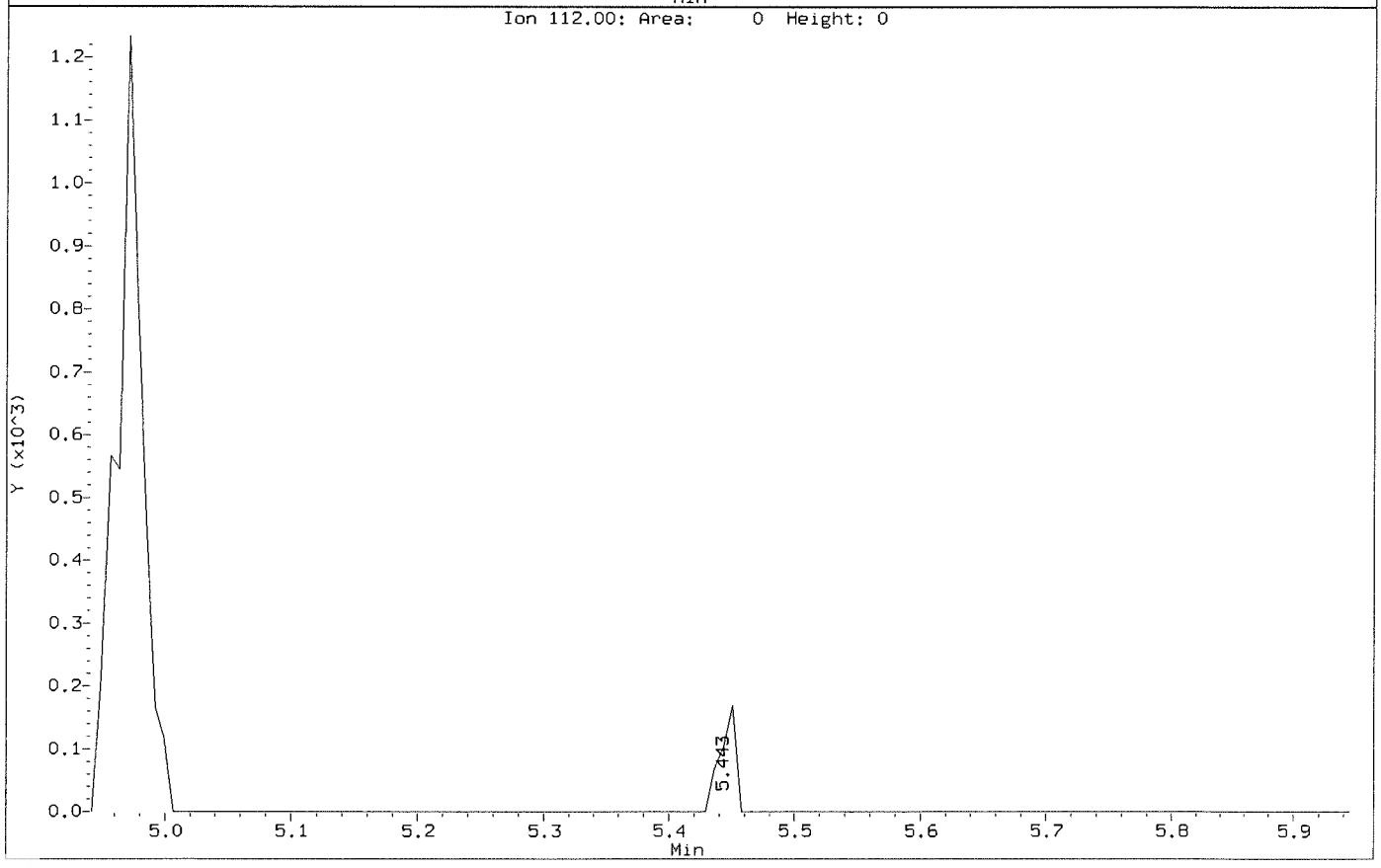




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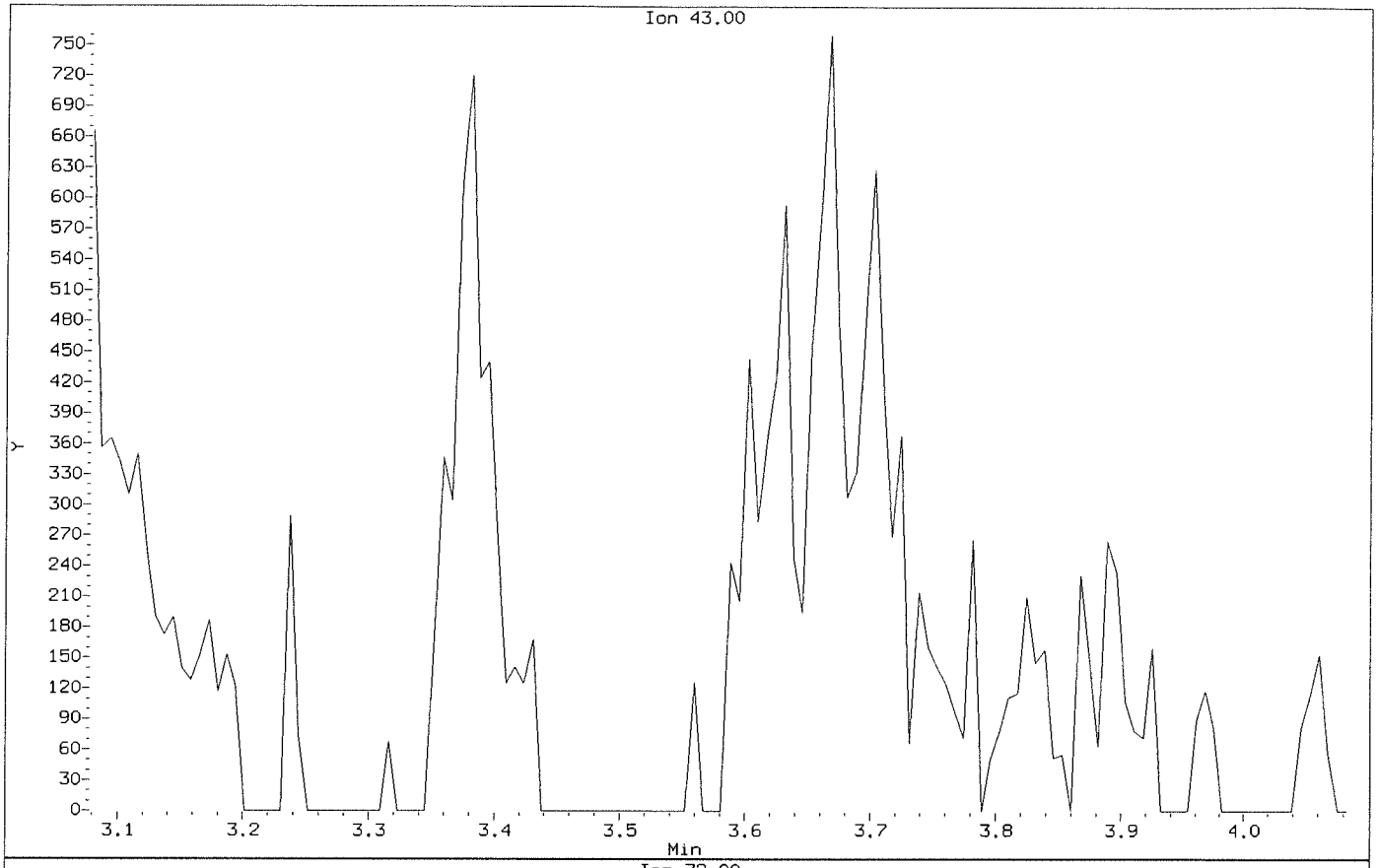
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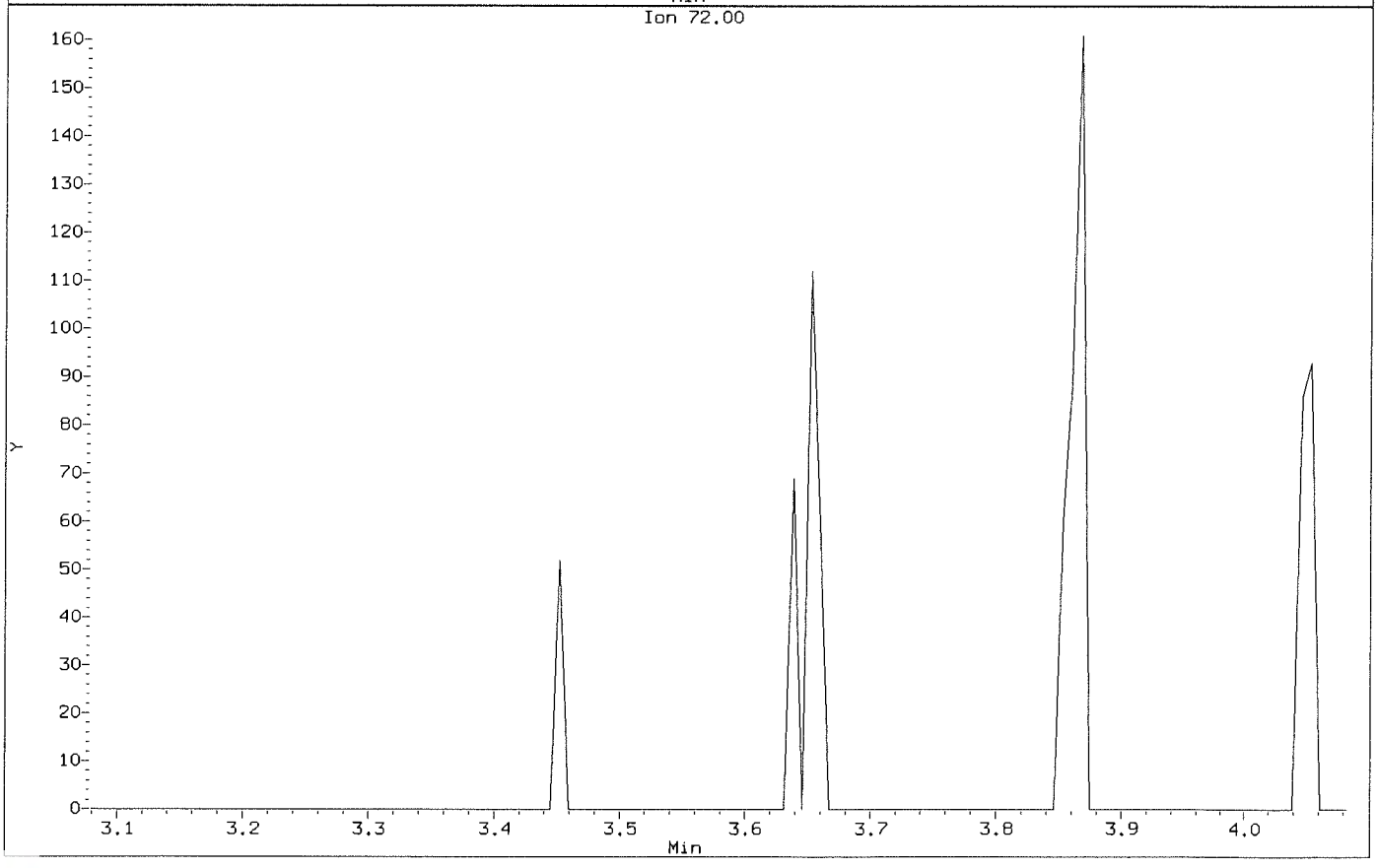




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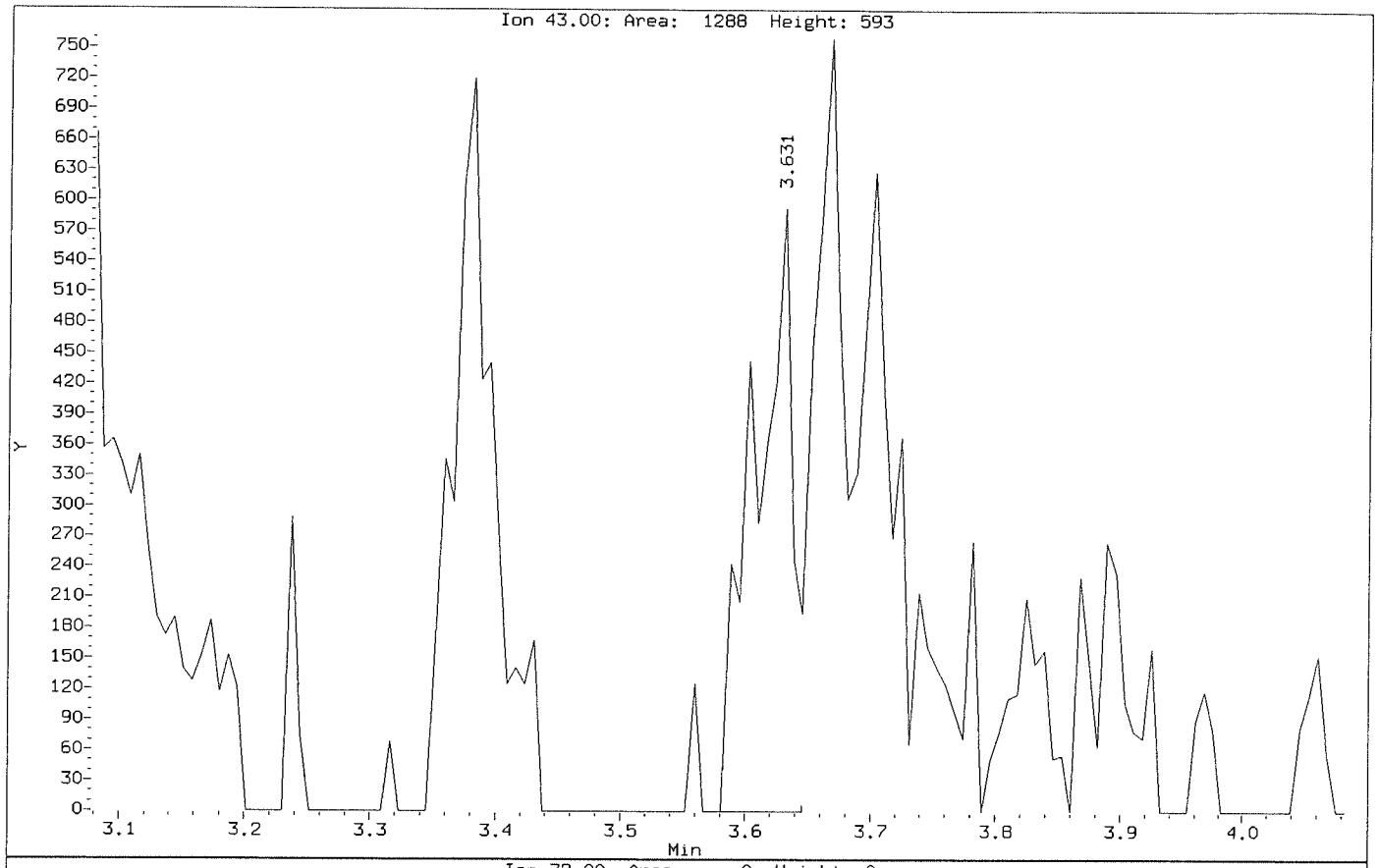
Compound: 2-Butanone
CAS Number: 78-93-3

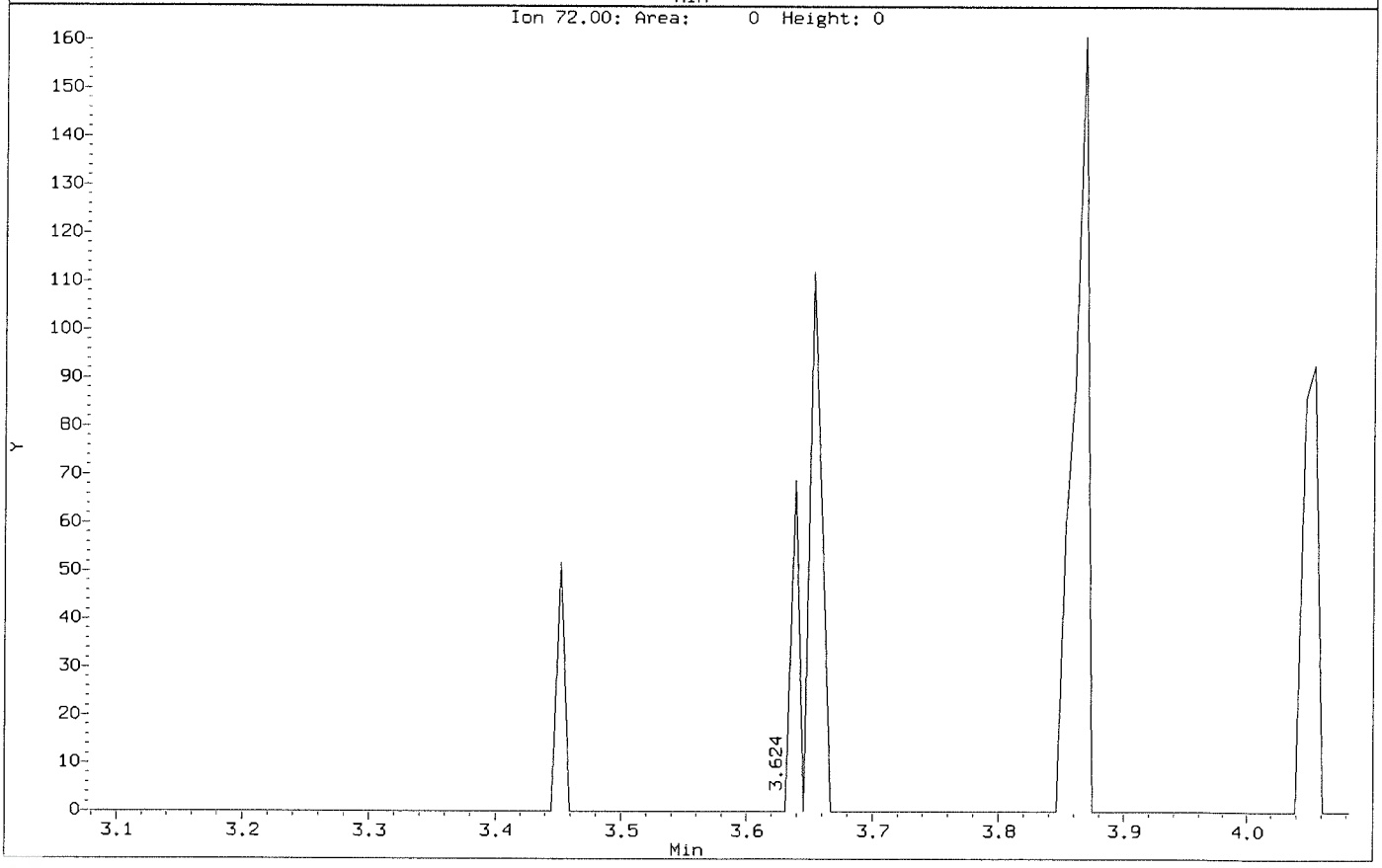




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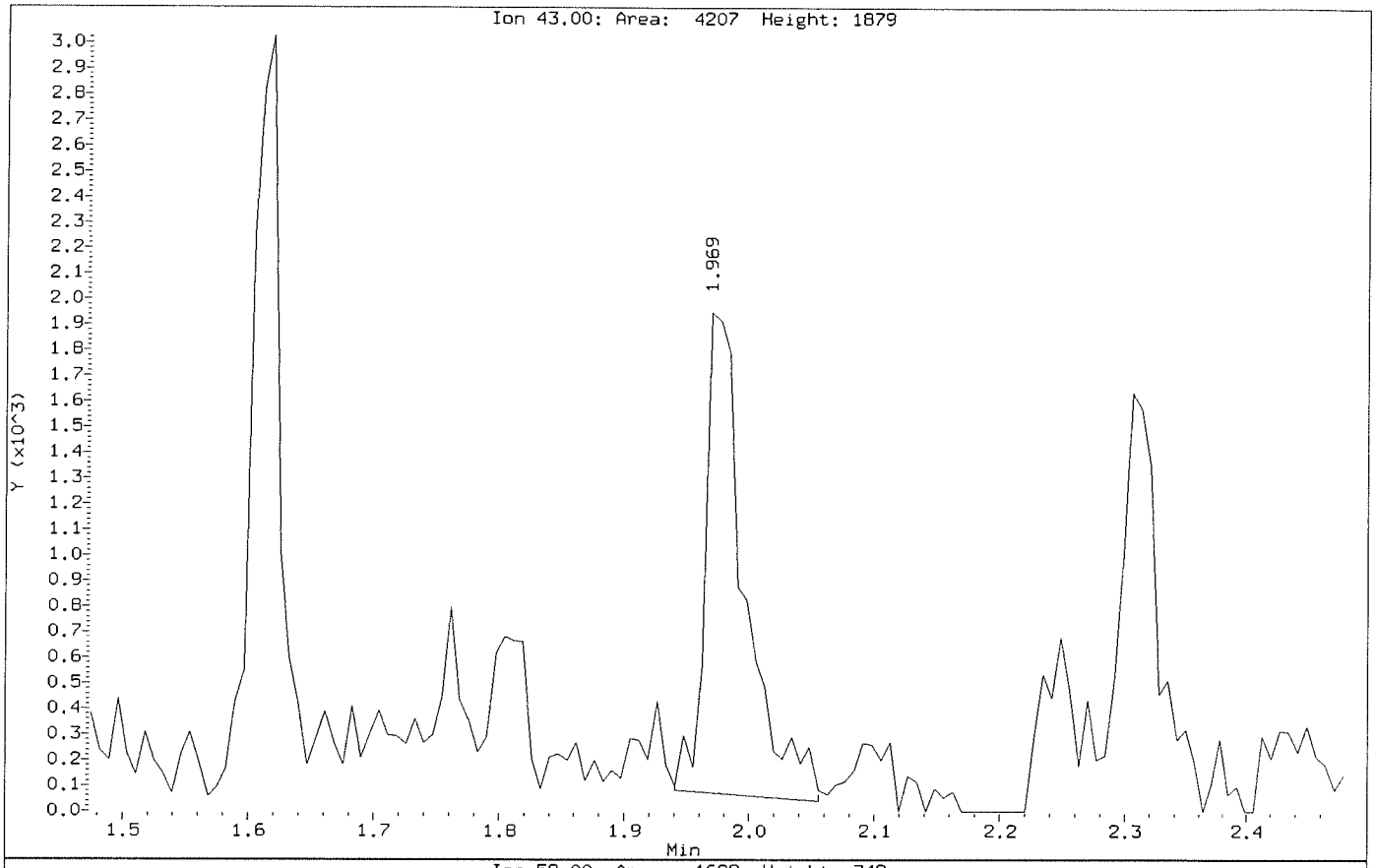
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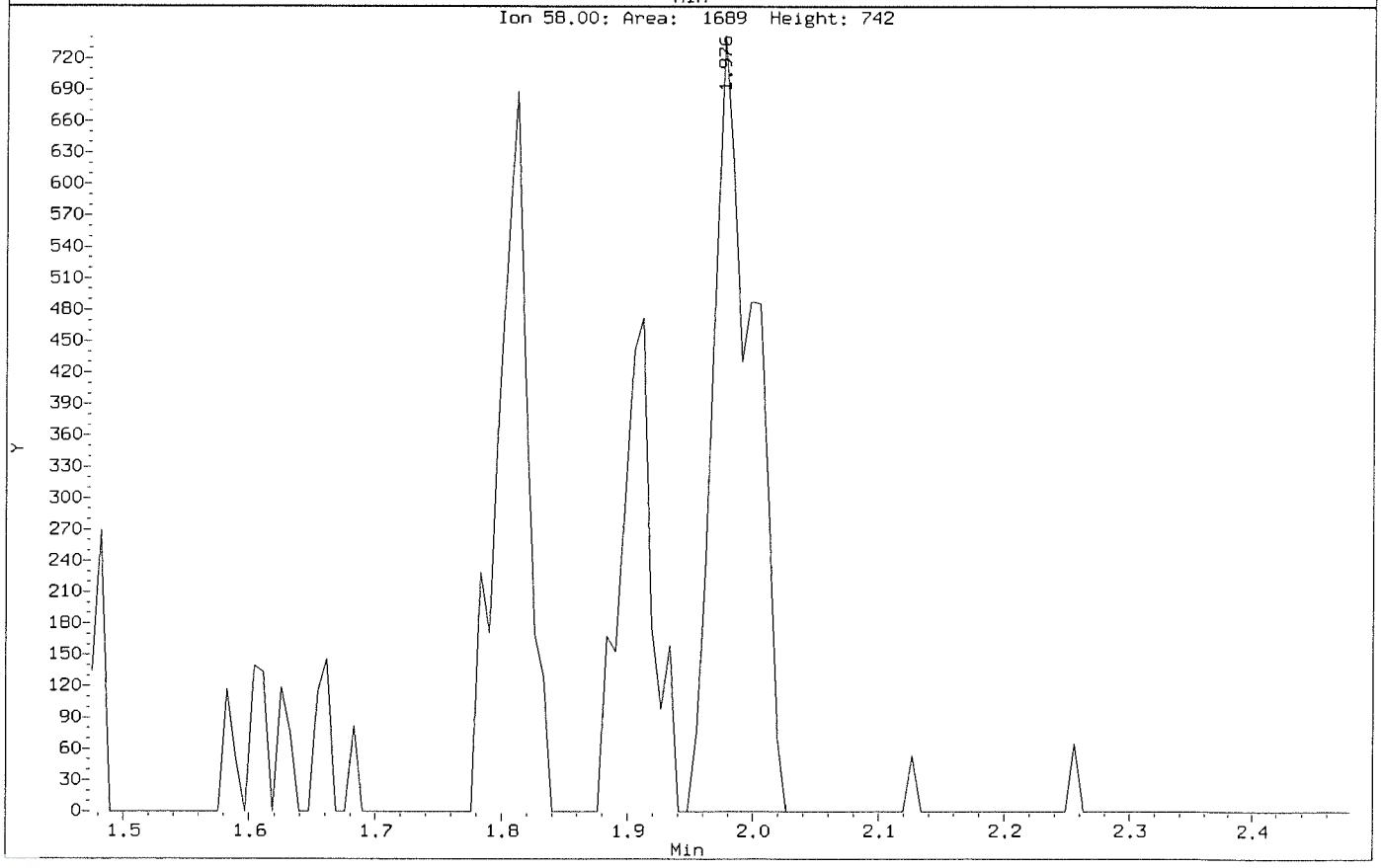




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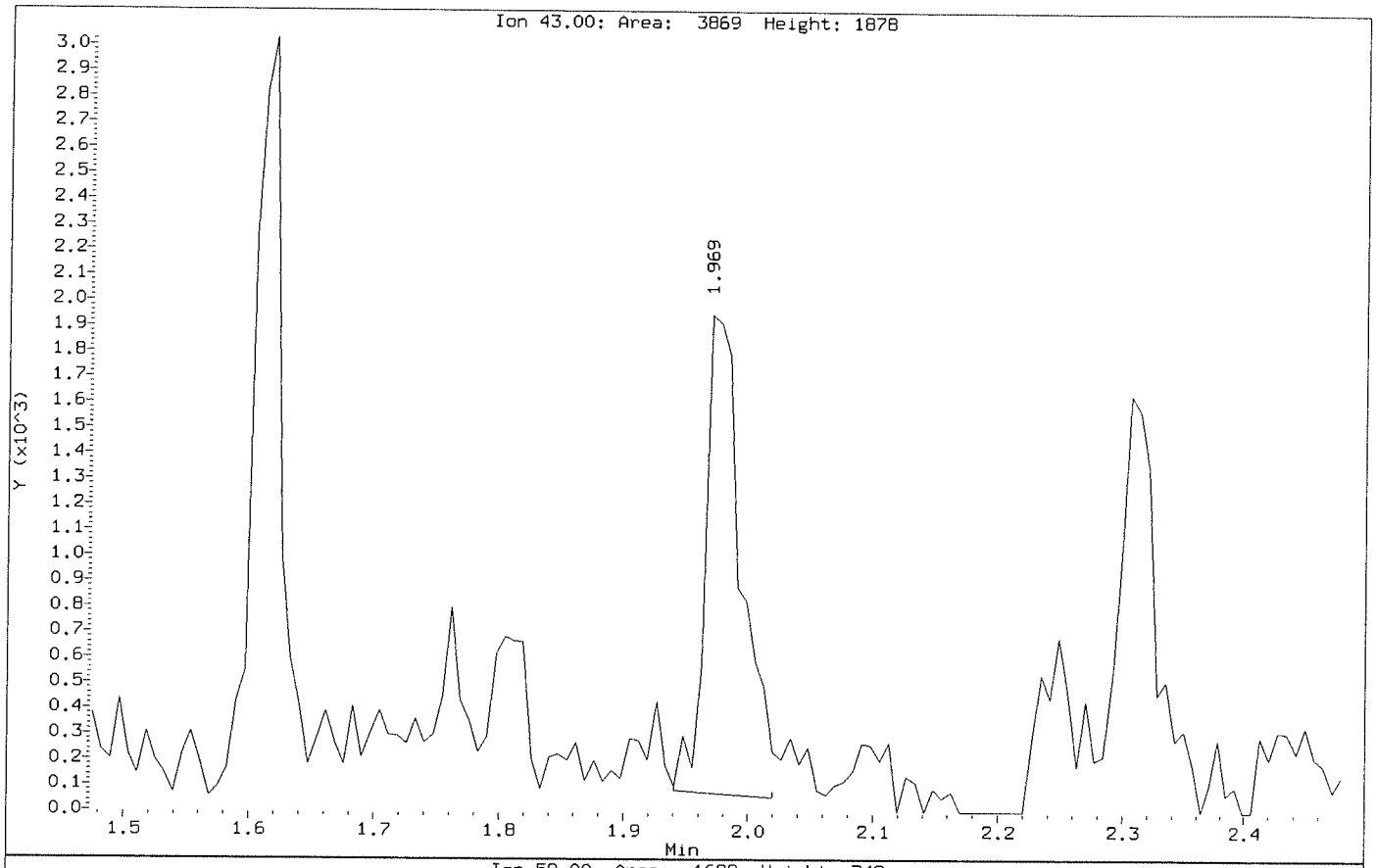
Compound: Acetone
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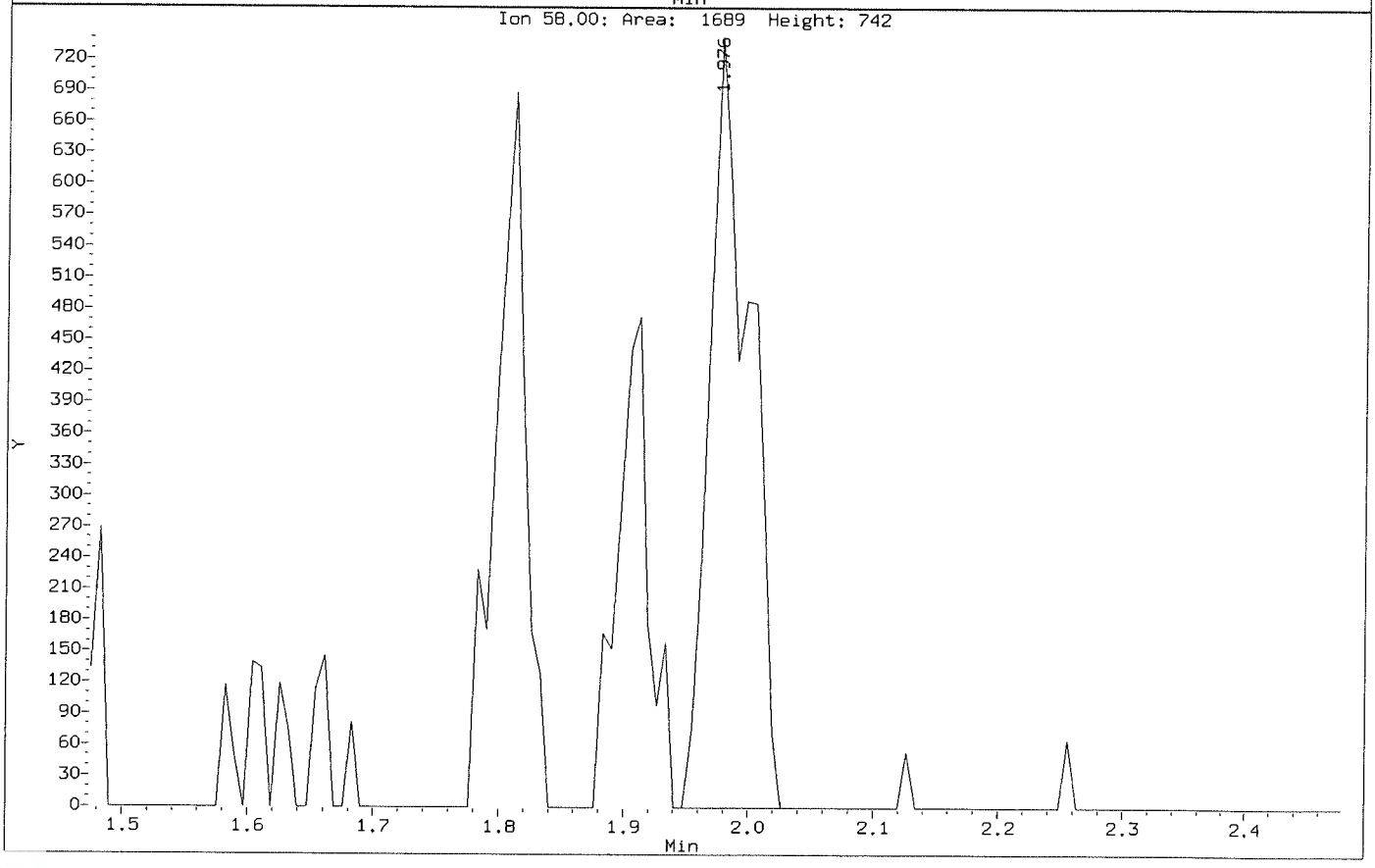




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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

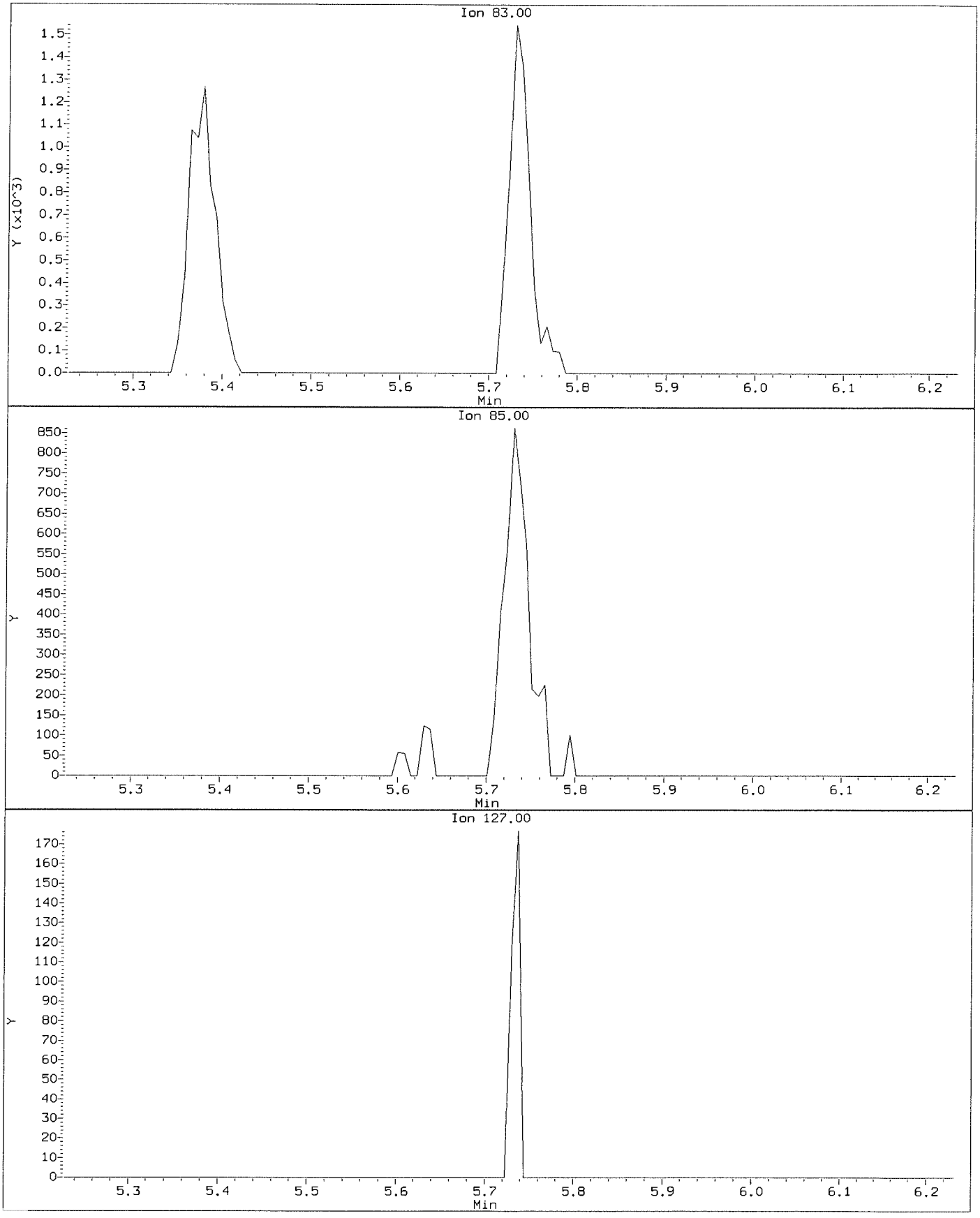
Compound: Acetone
CAS Number: 67-64-1





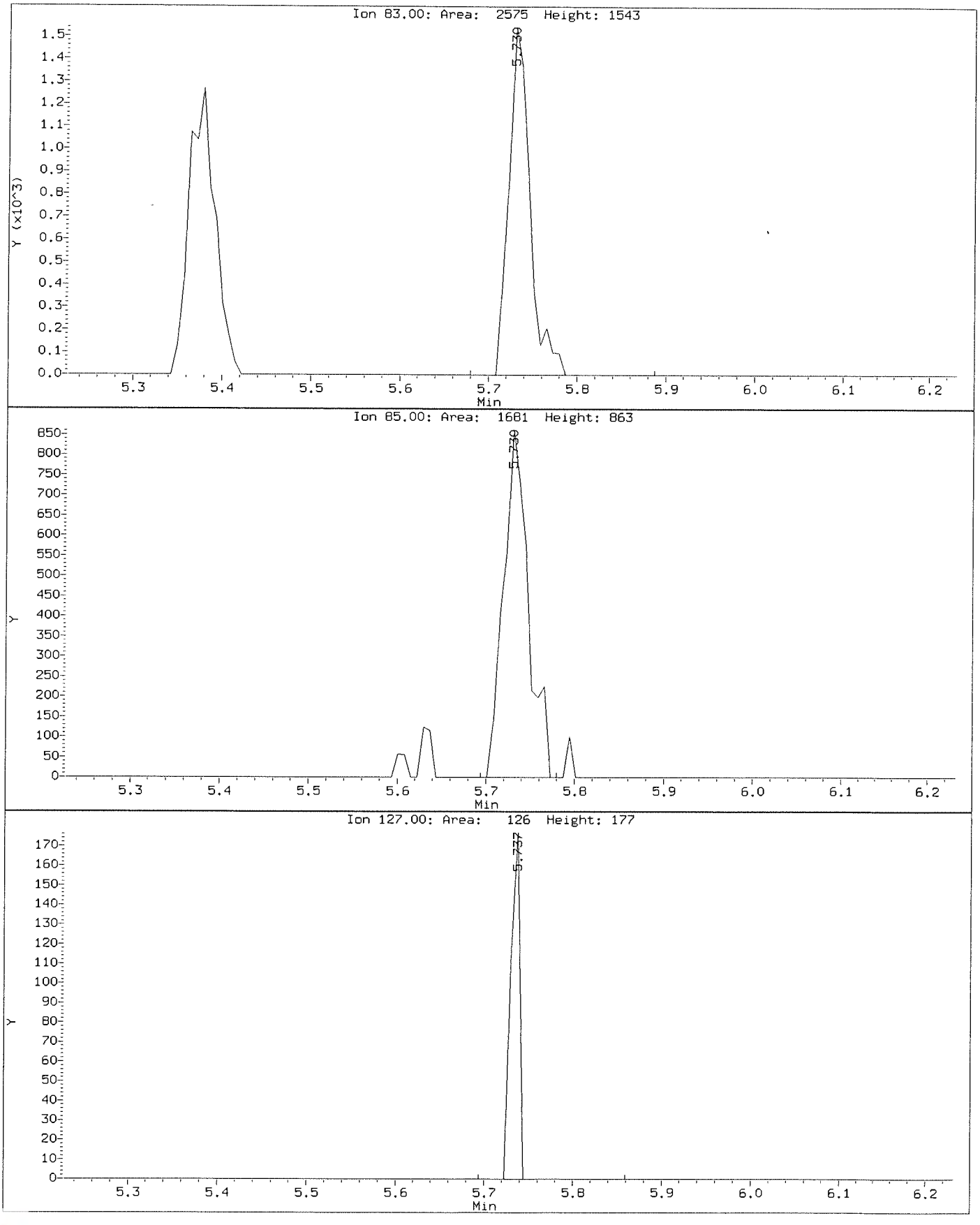
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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



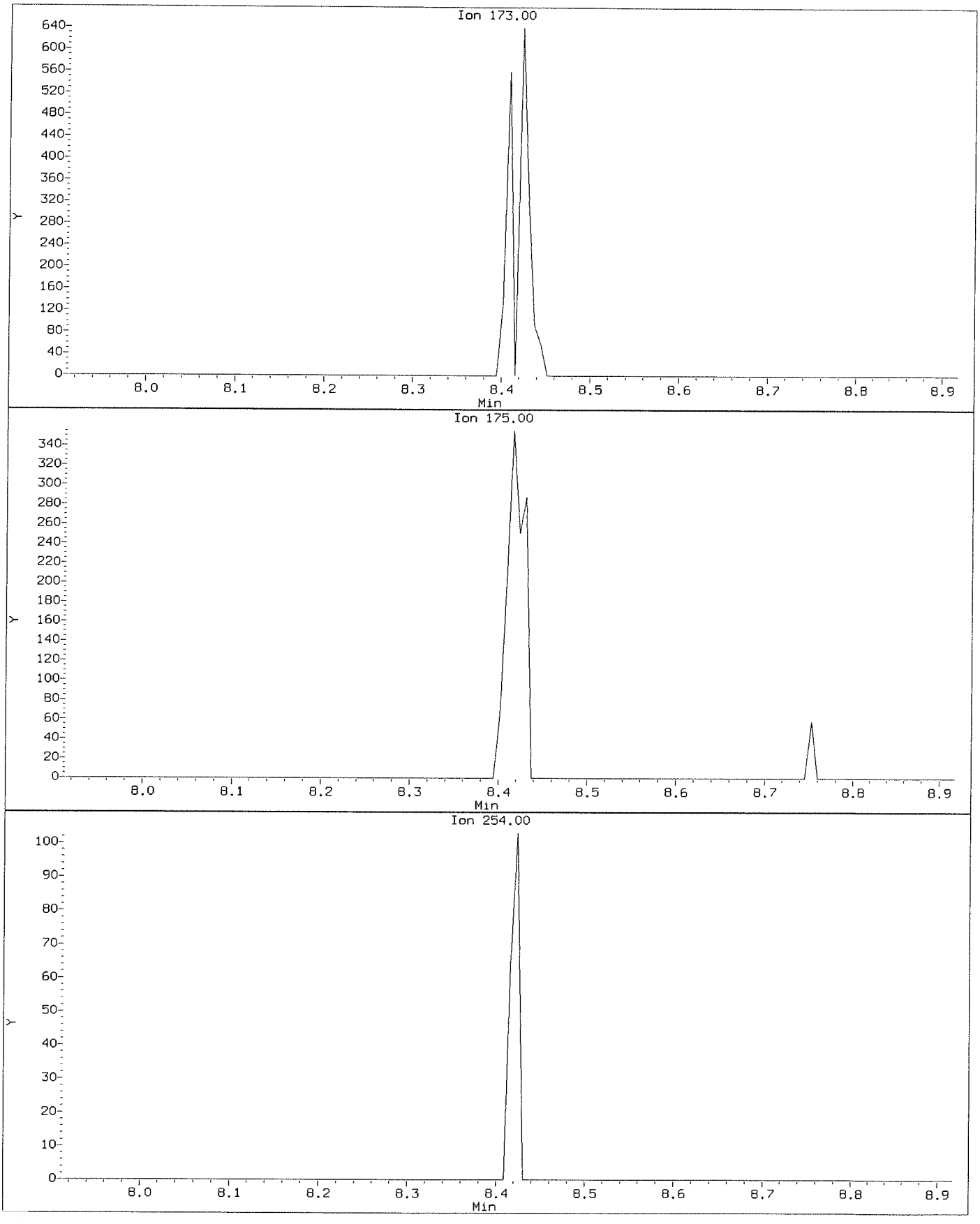
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



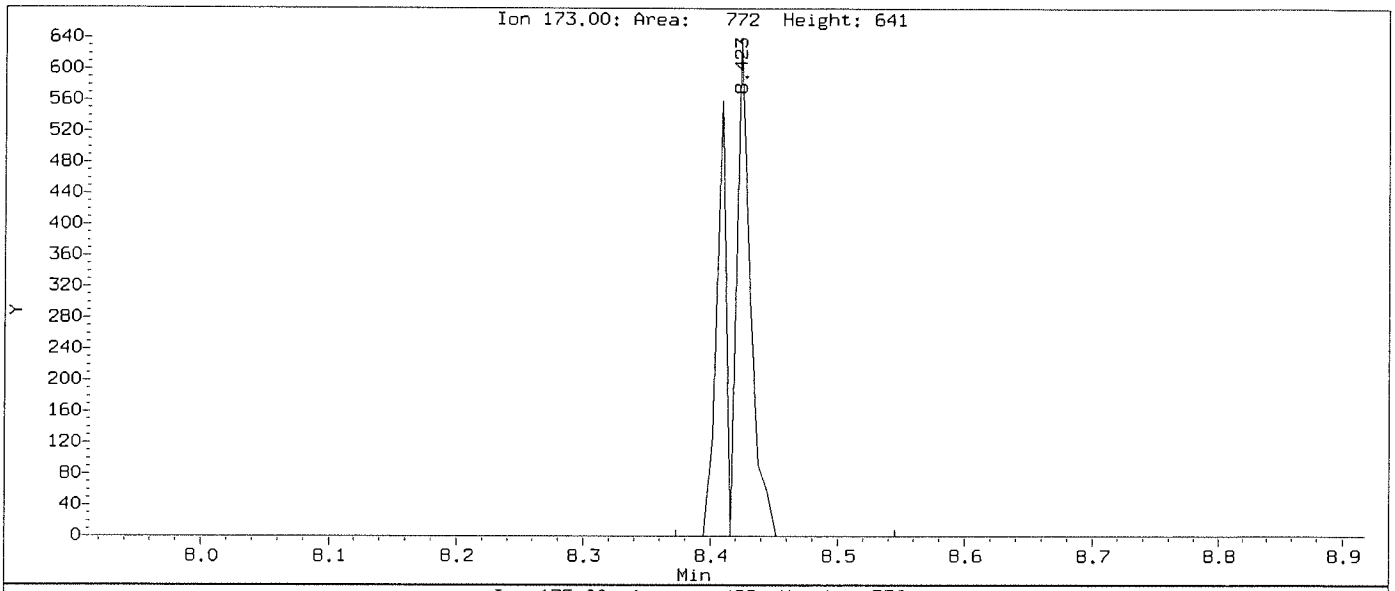
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Instrument: voa6.i
Client Sample ID: VSTD001

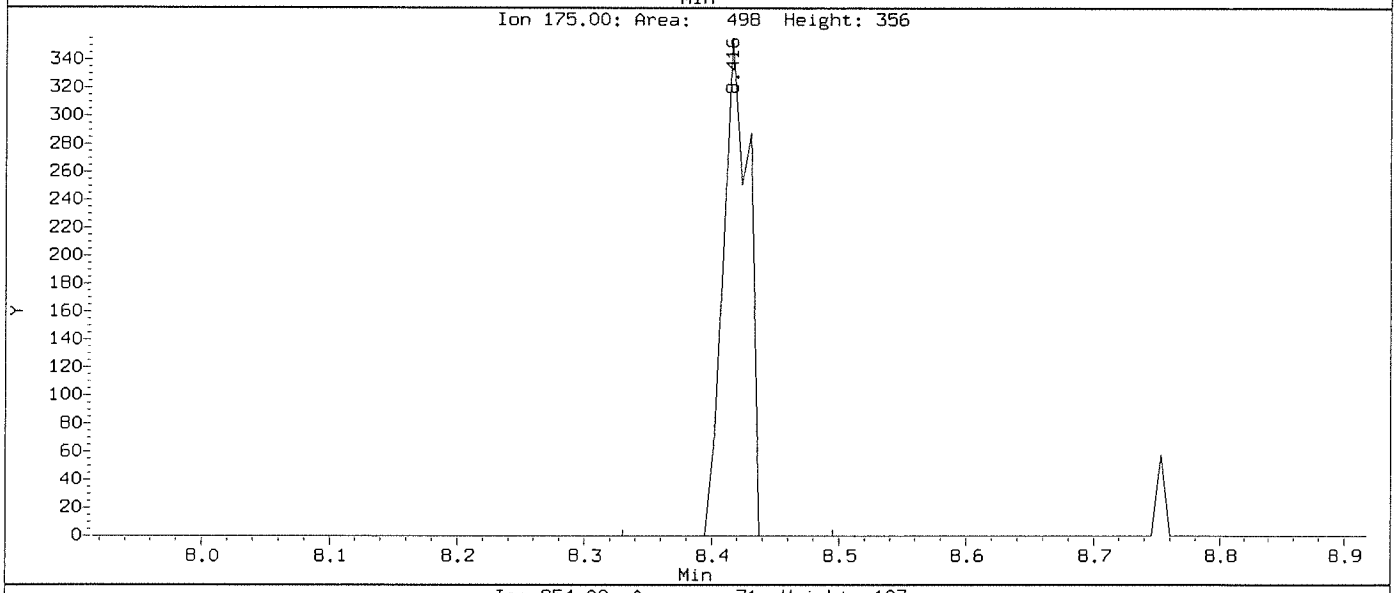
Compound: Bromoform
CAS Number: 75-25-2

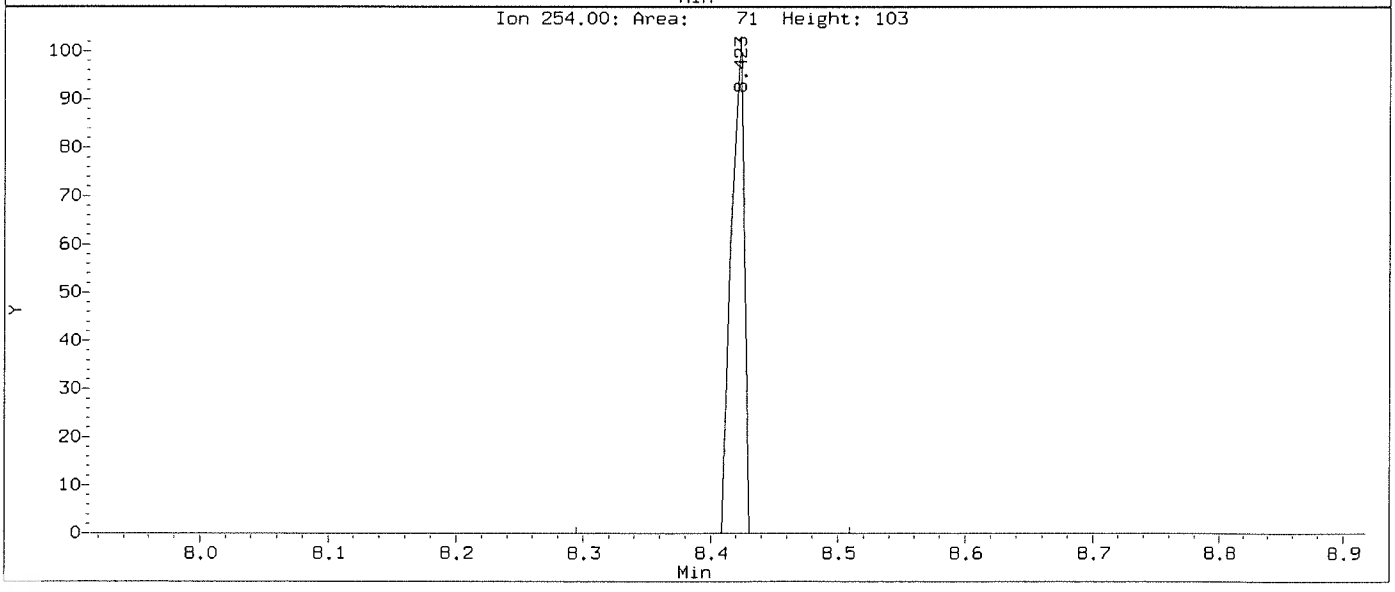


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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromoform
CAS Number: 75-25-2

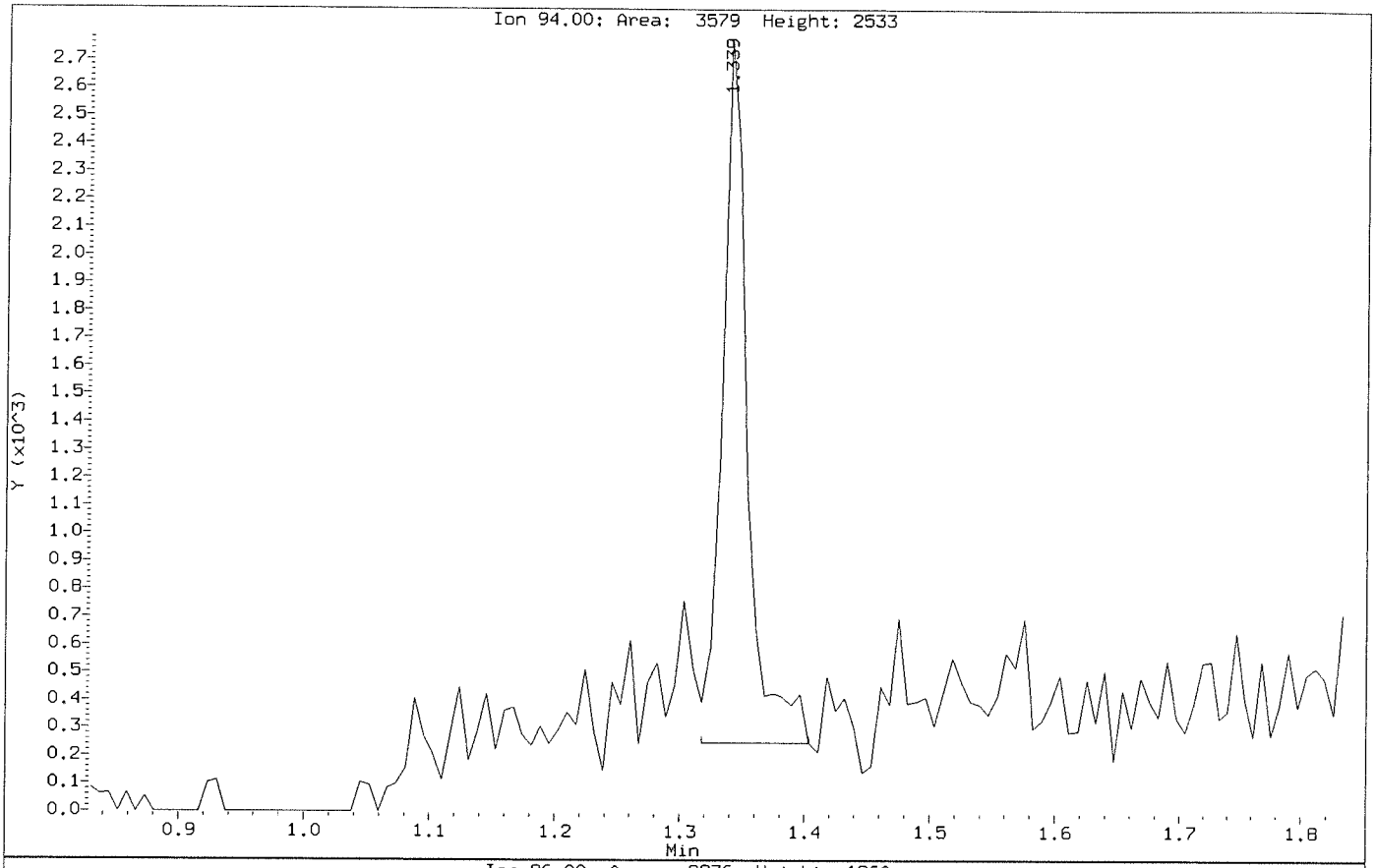


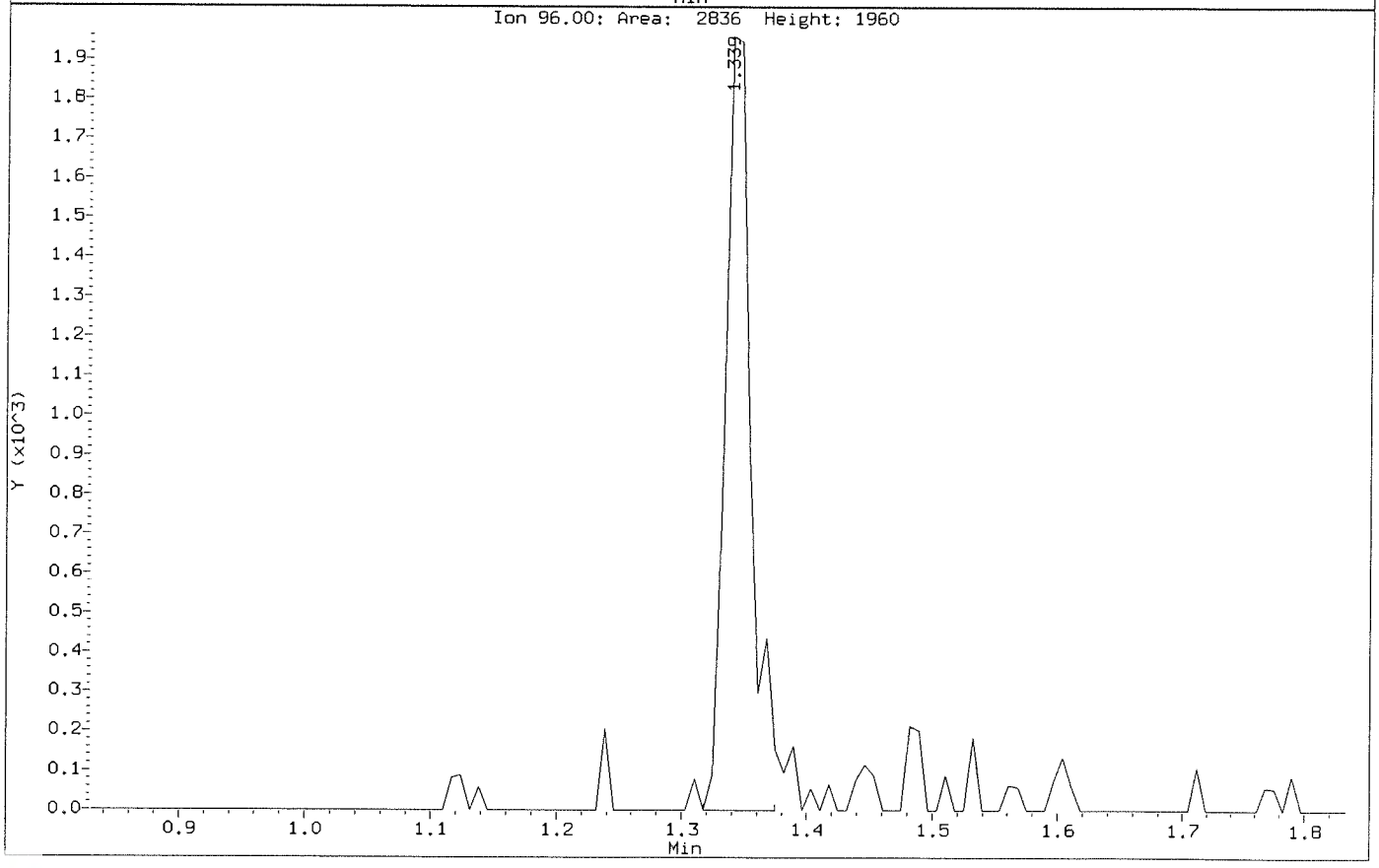




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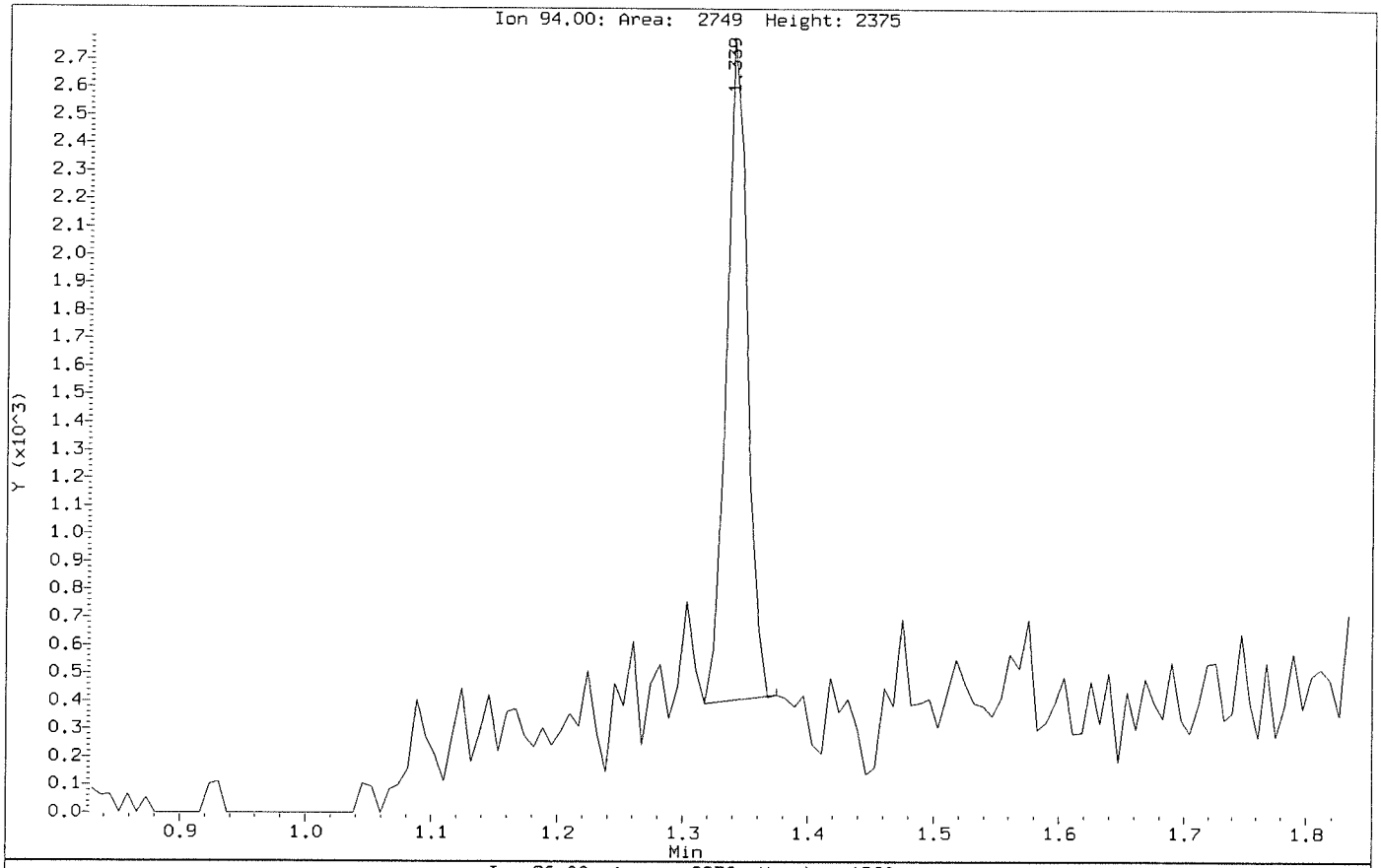
Compound: Bromomethane
CAS Number: 74-83-9

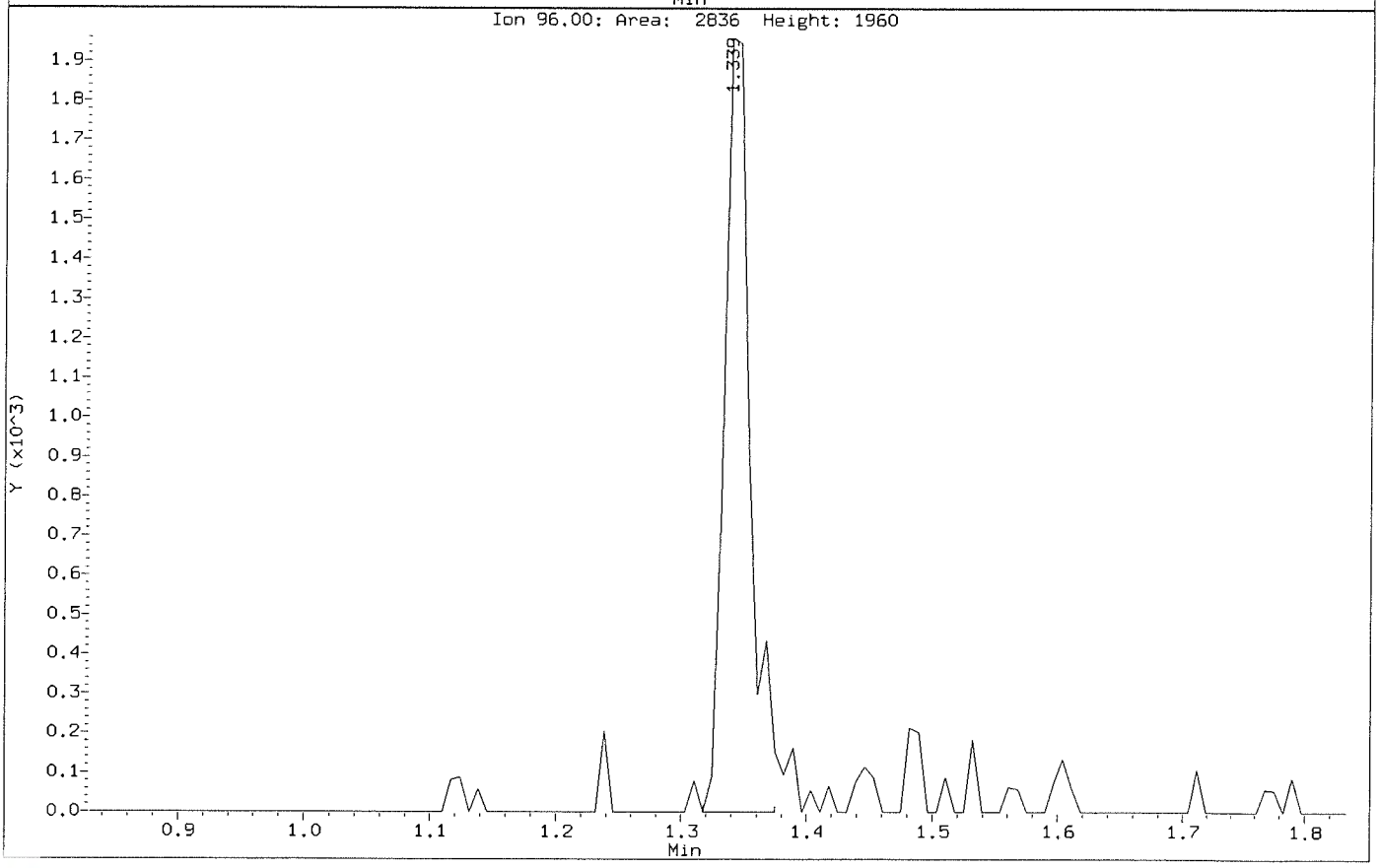




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Instrument: voa6.i
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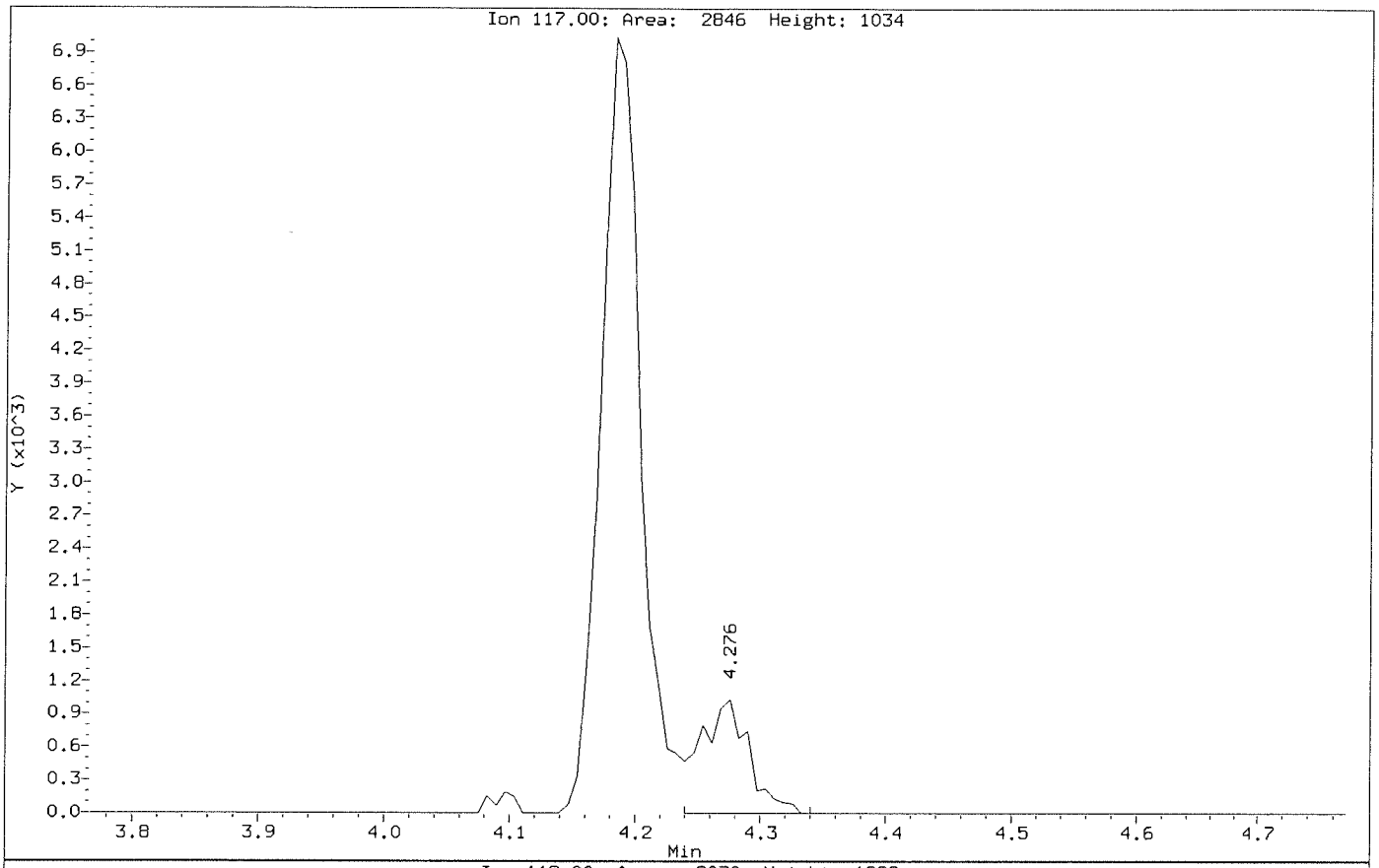
Compound: Bromomethane
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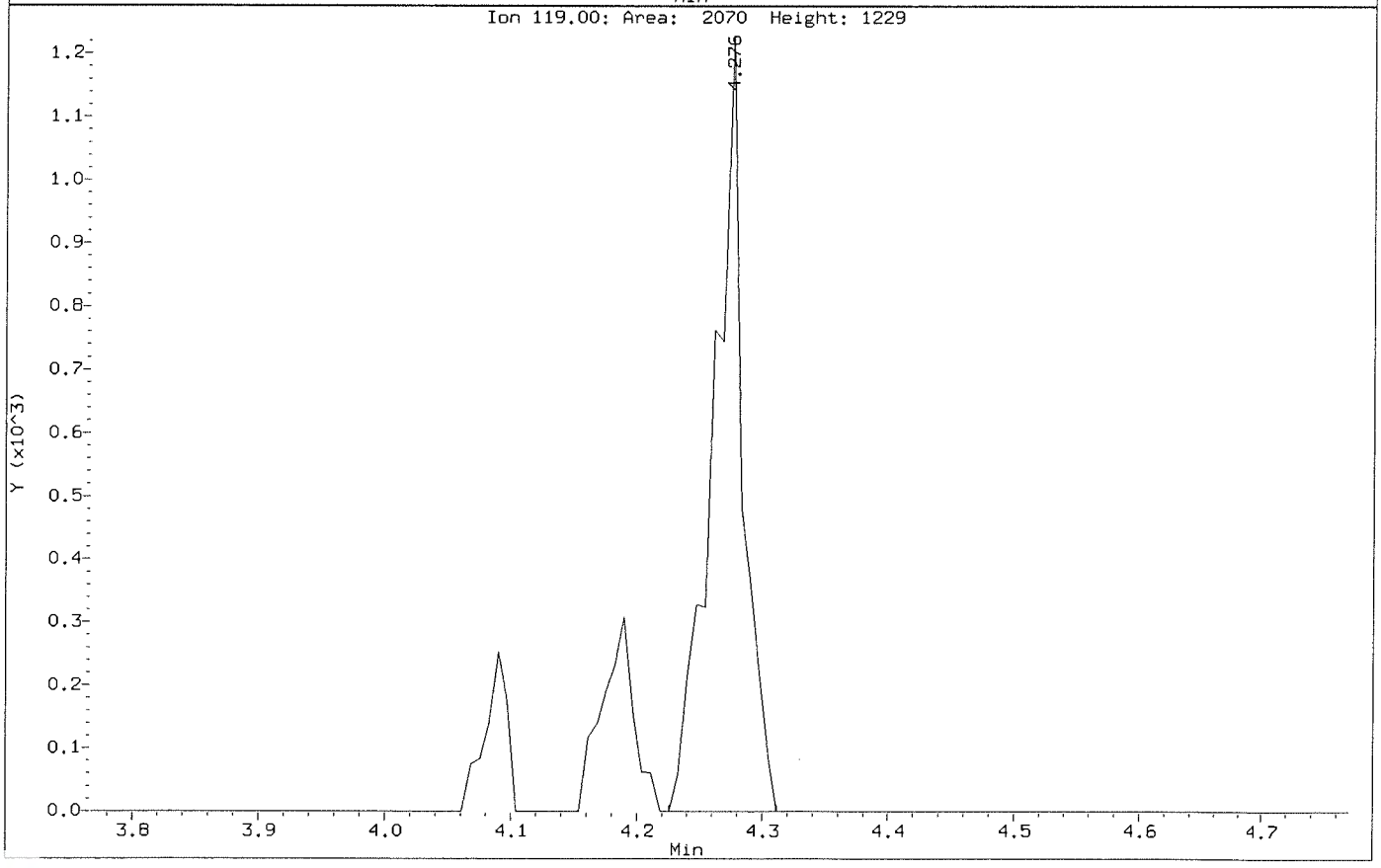




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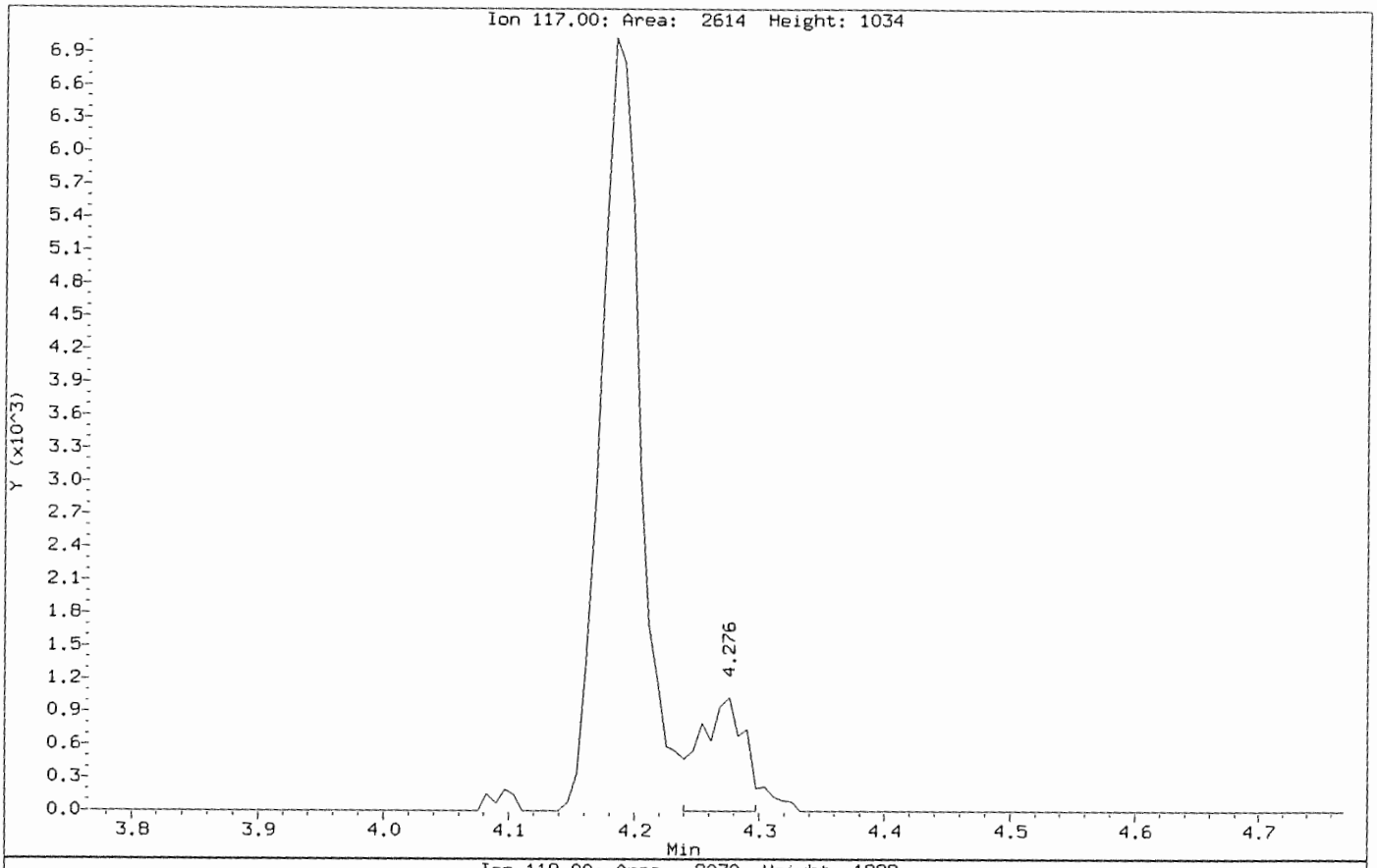
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

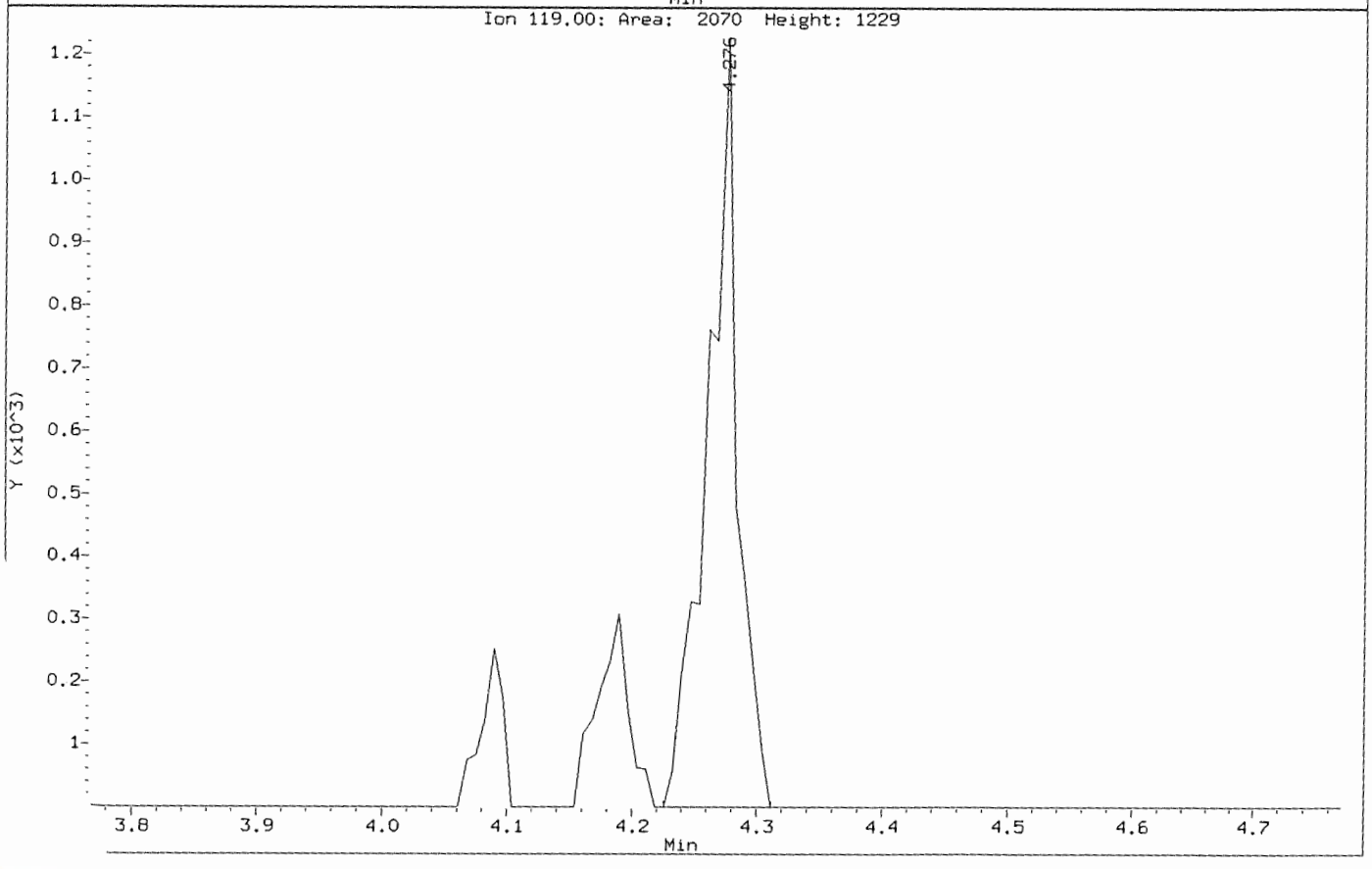




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Instrument: voa6.i
Client Sample ID: VSTD001

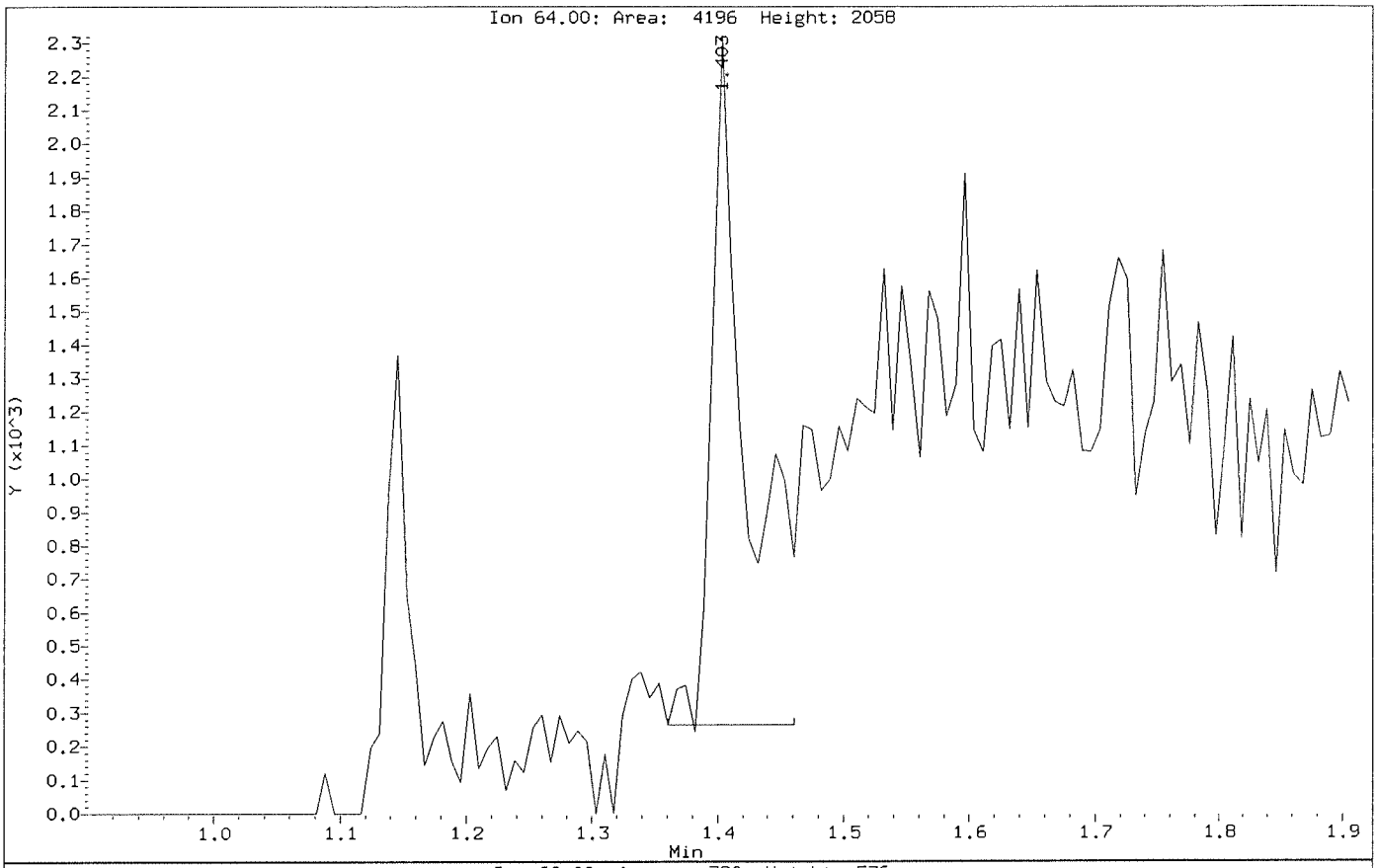
Compound: Carbon Tetrachloride
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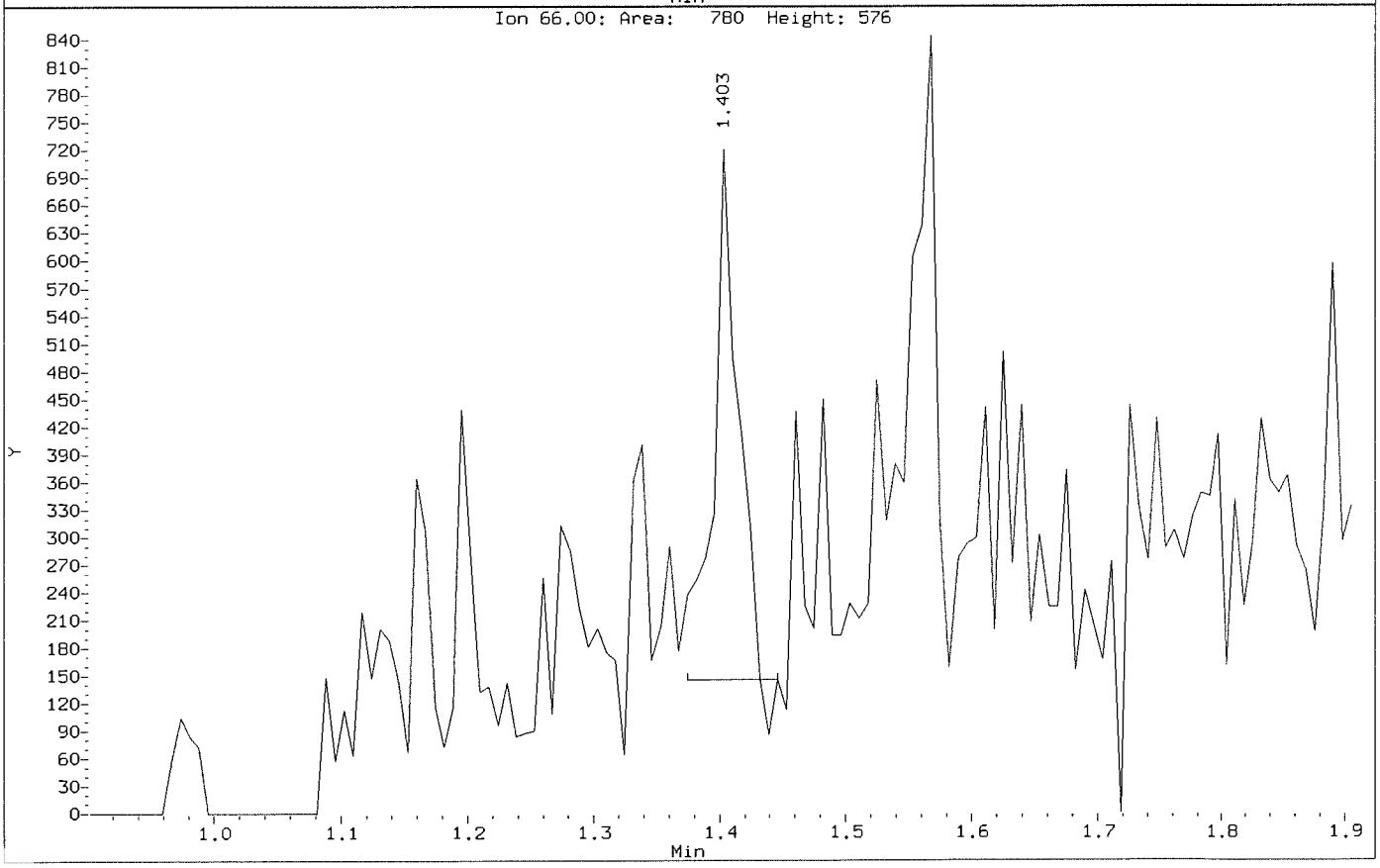




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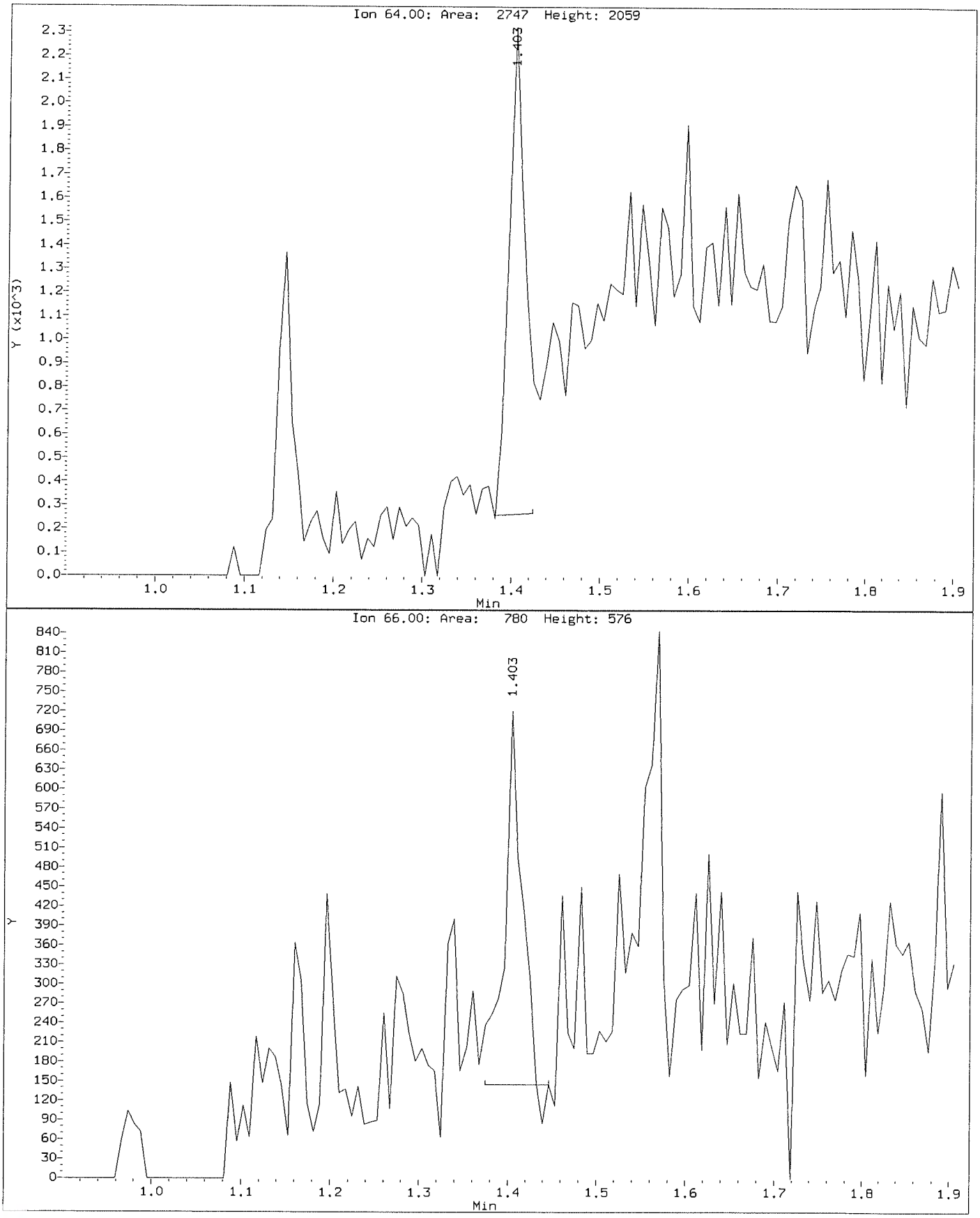
Compound: Chloroethane
CAS Number: 75-00-3





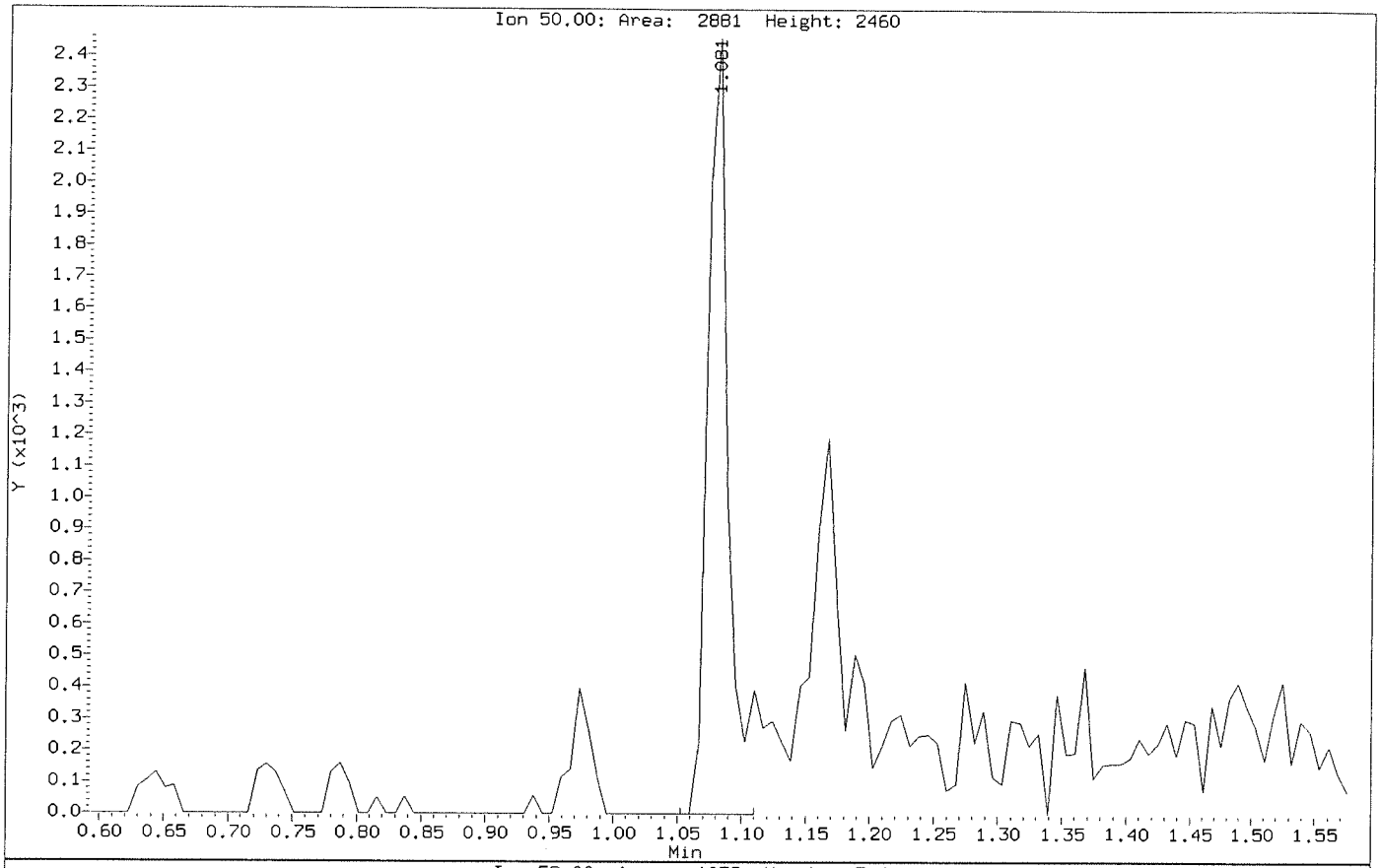
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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

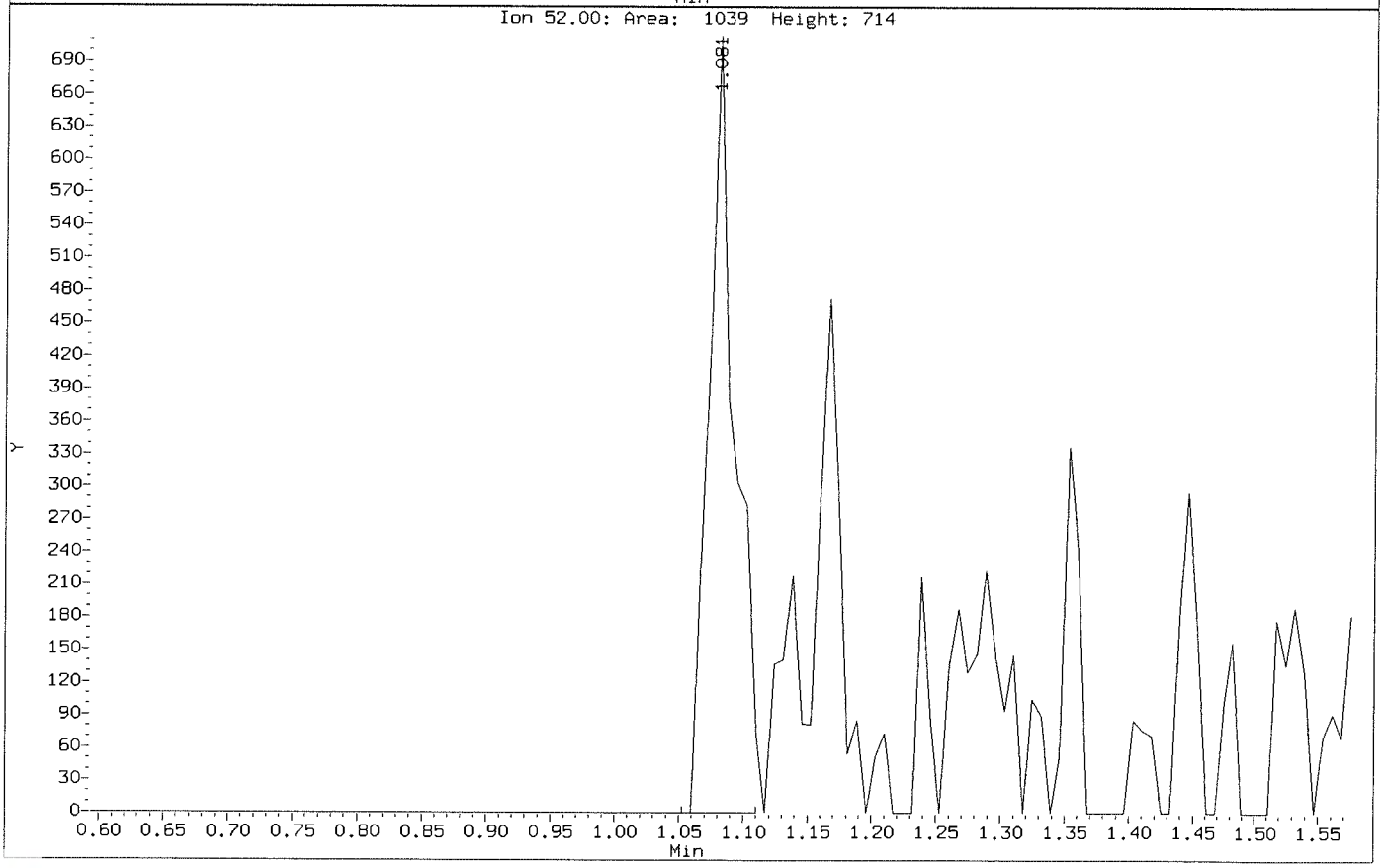
Compound: Chloroethane
CAS Number: 75-00-3



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110304.D
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Client Sample ID: VSTD001

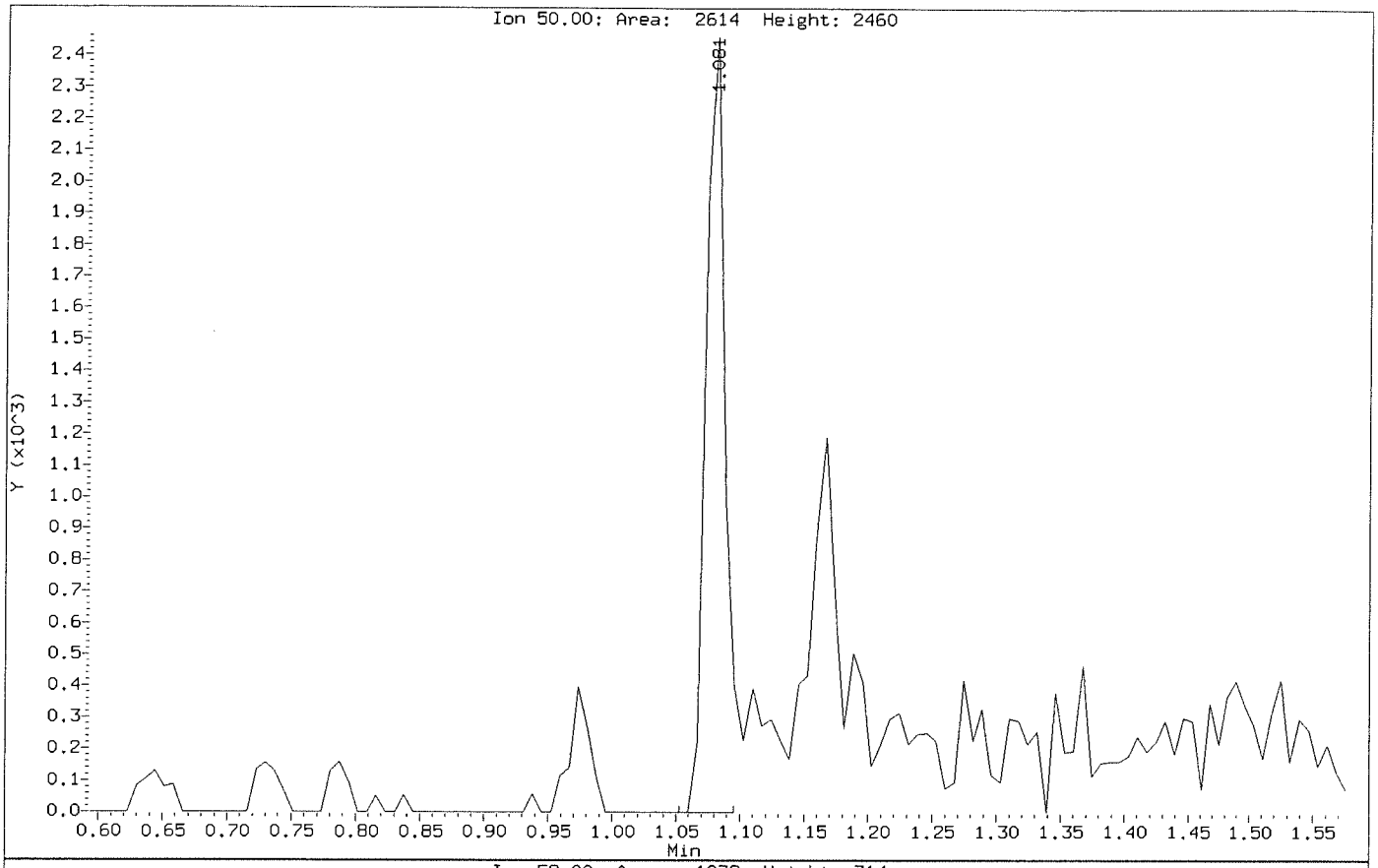
Compound: Chloromethane
CAS Number: 74-87-3

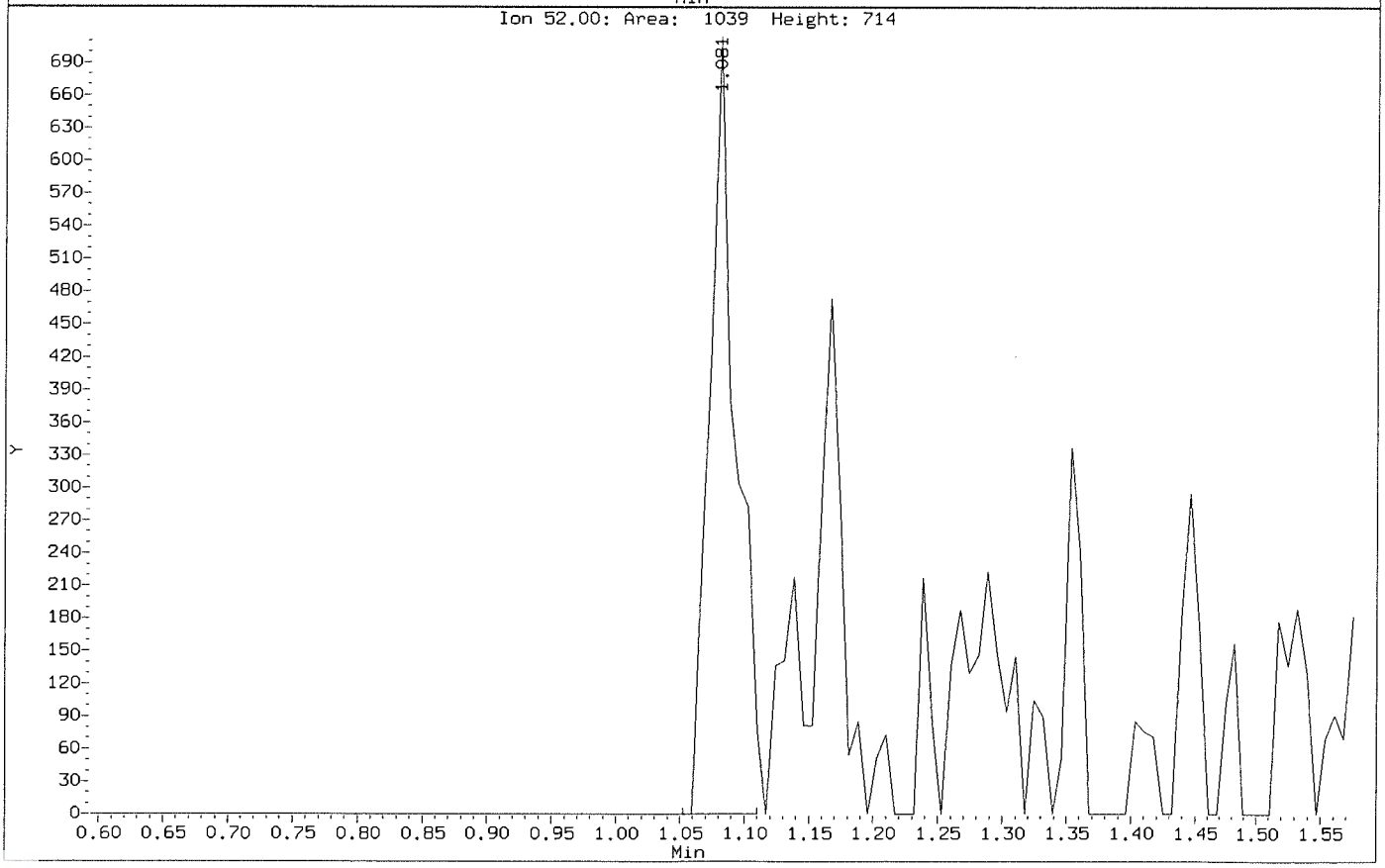




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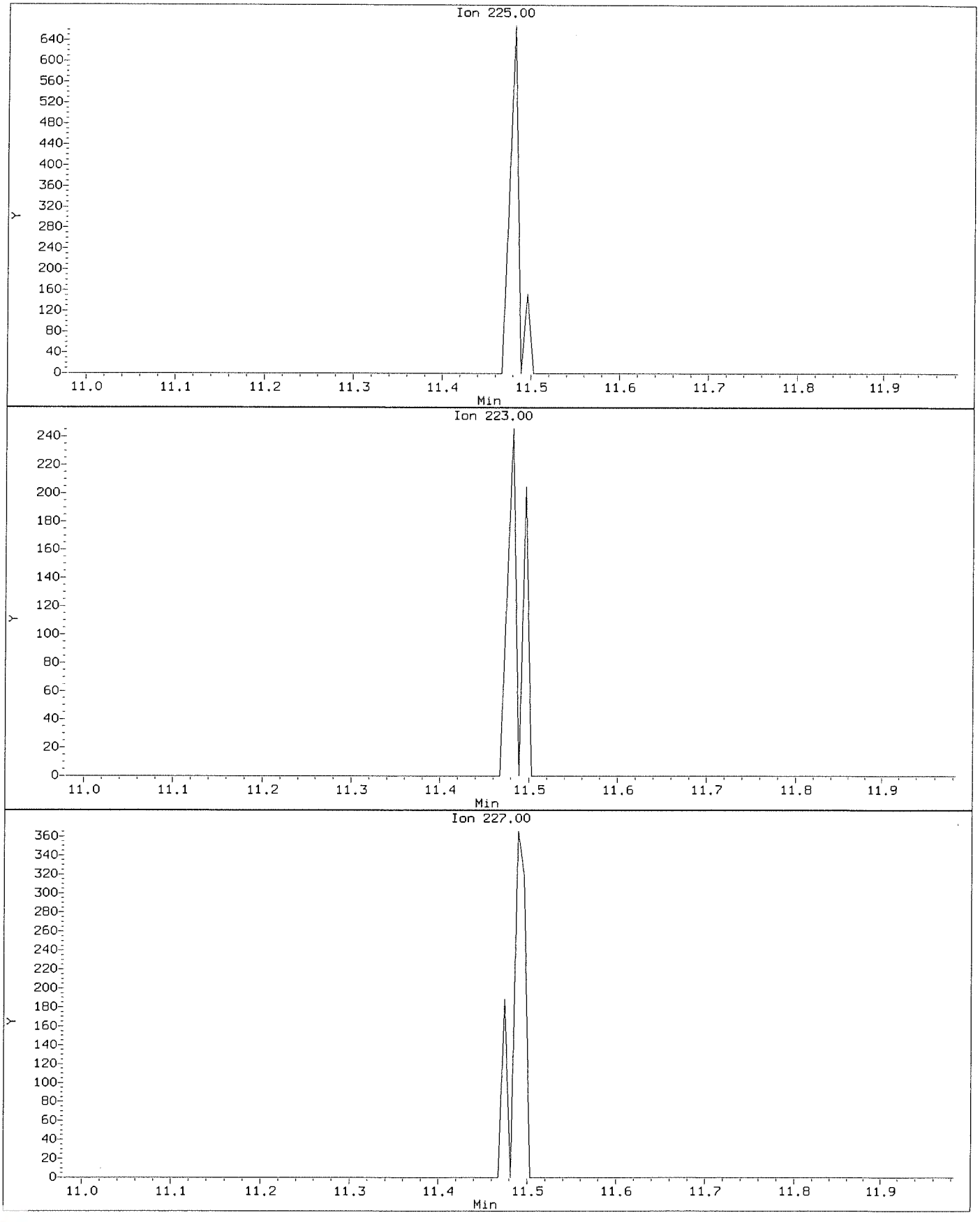
Compound: Chloromethane
CAS Number: 74-87-3





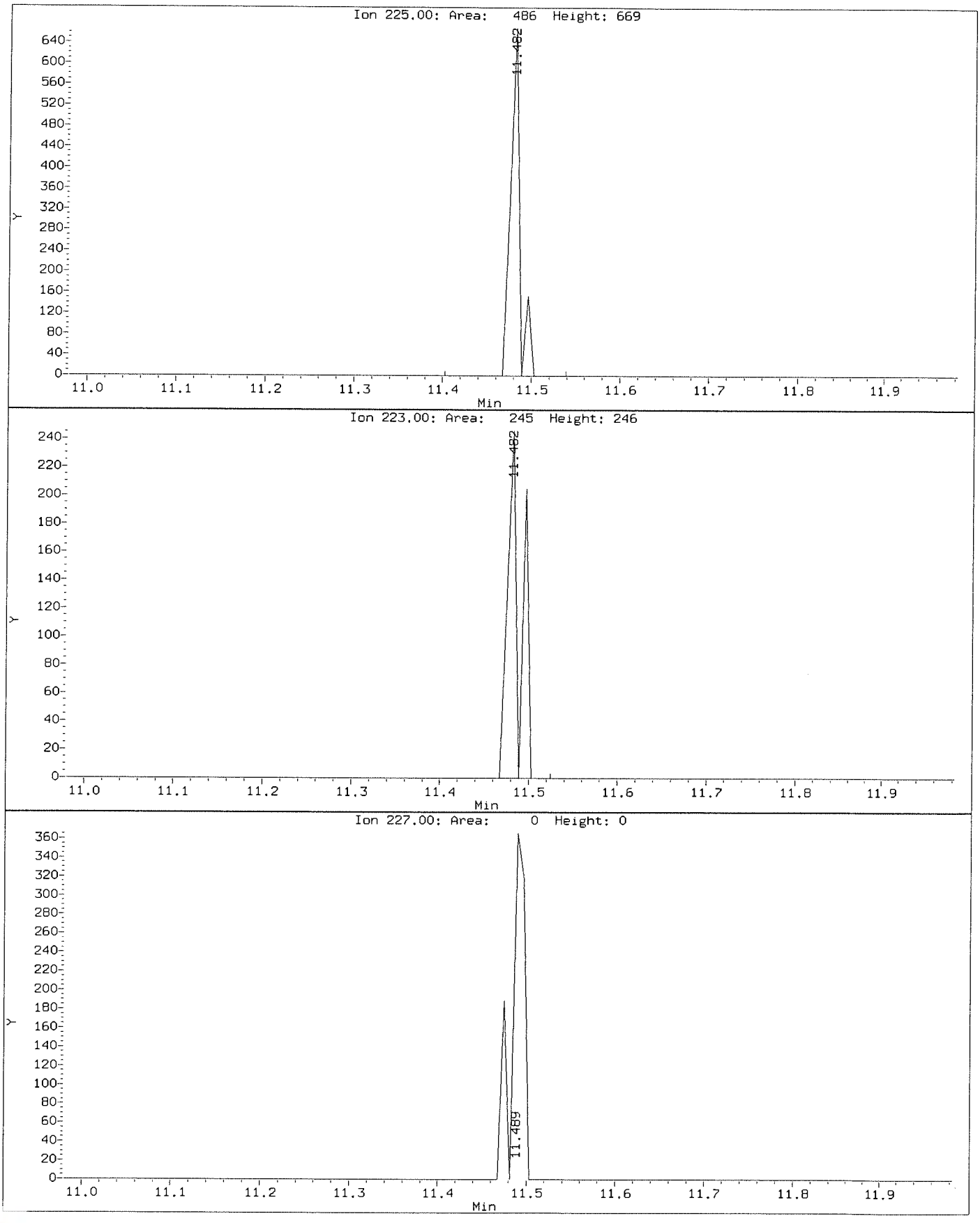
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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



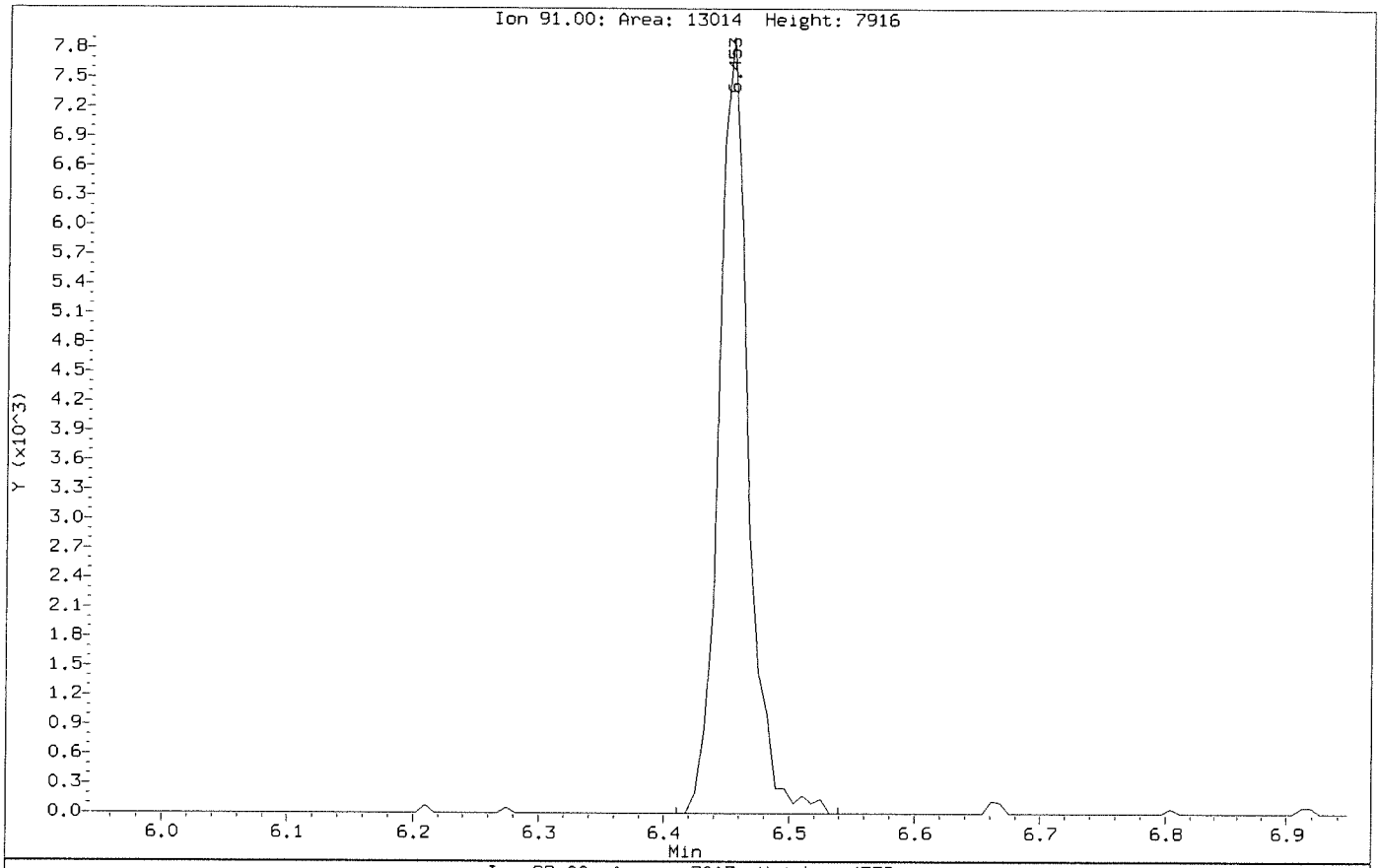
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Client Sample ID: VSTD001

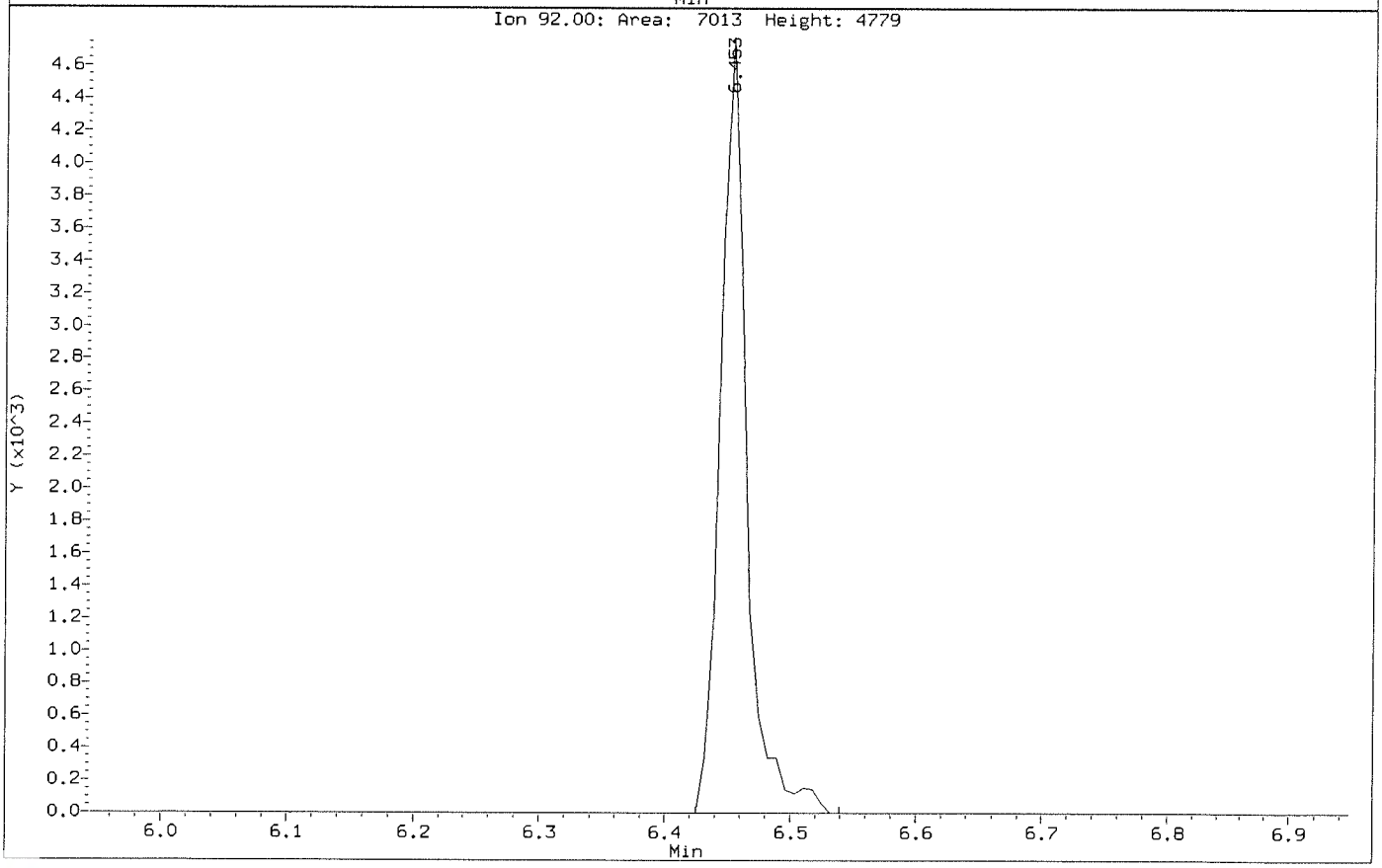
Compound: Hexachlorobutadiene
CAS Number: 87-68-3



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Instrument: voa6.i
Client Sample ID: VSTD001

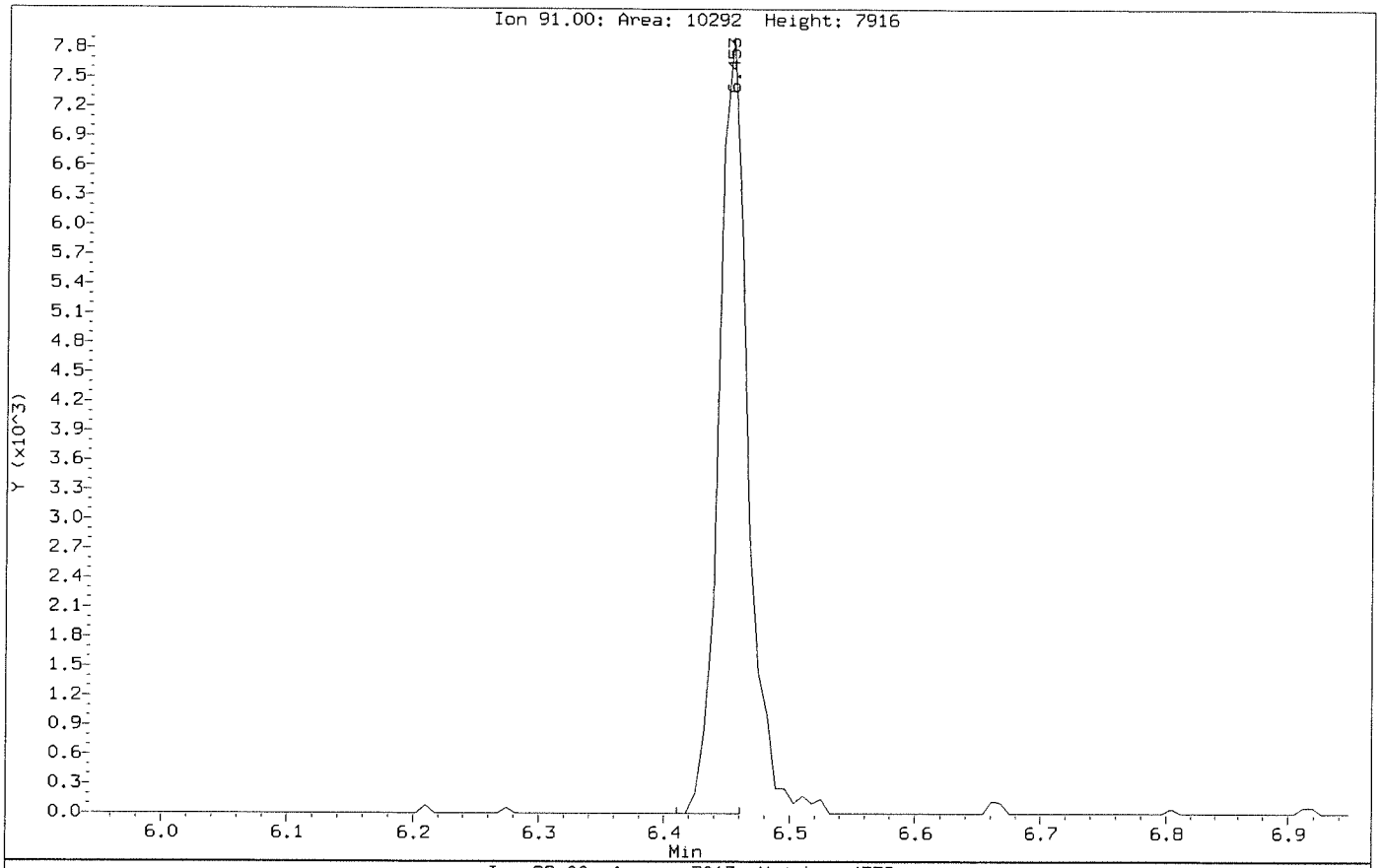
Compound: Toluene
CAS Number: 108-88-3

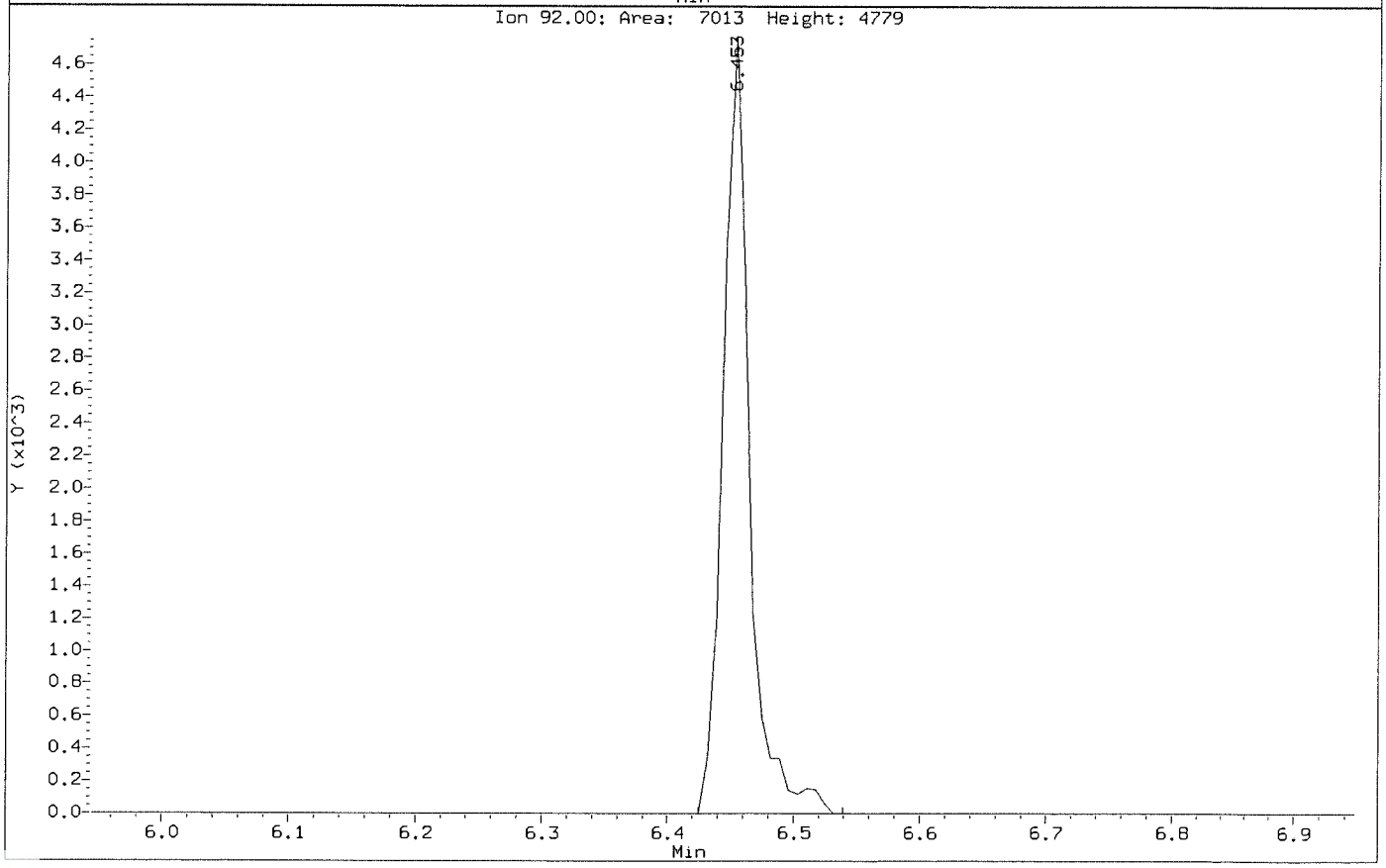




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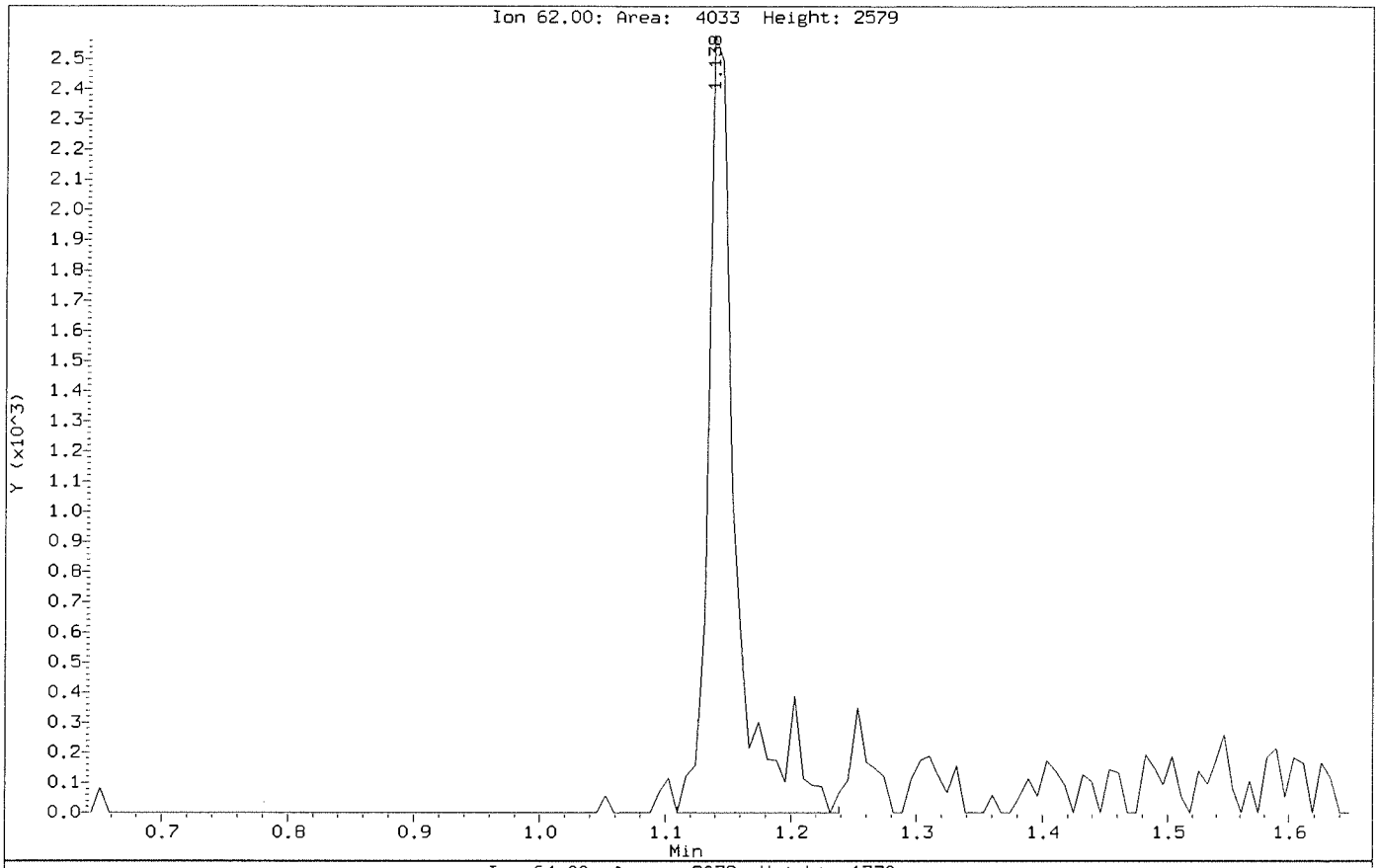
Compound: Toluene
CAS Number: 108-88-3

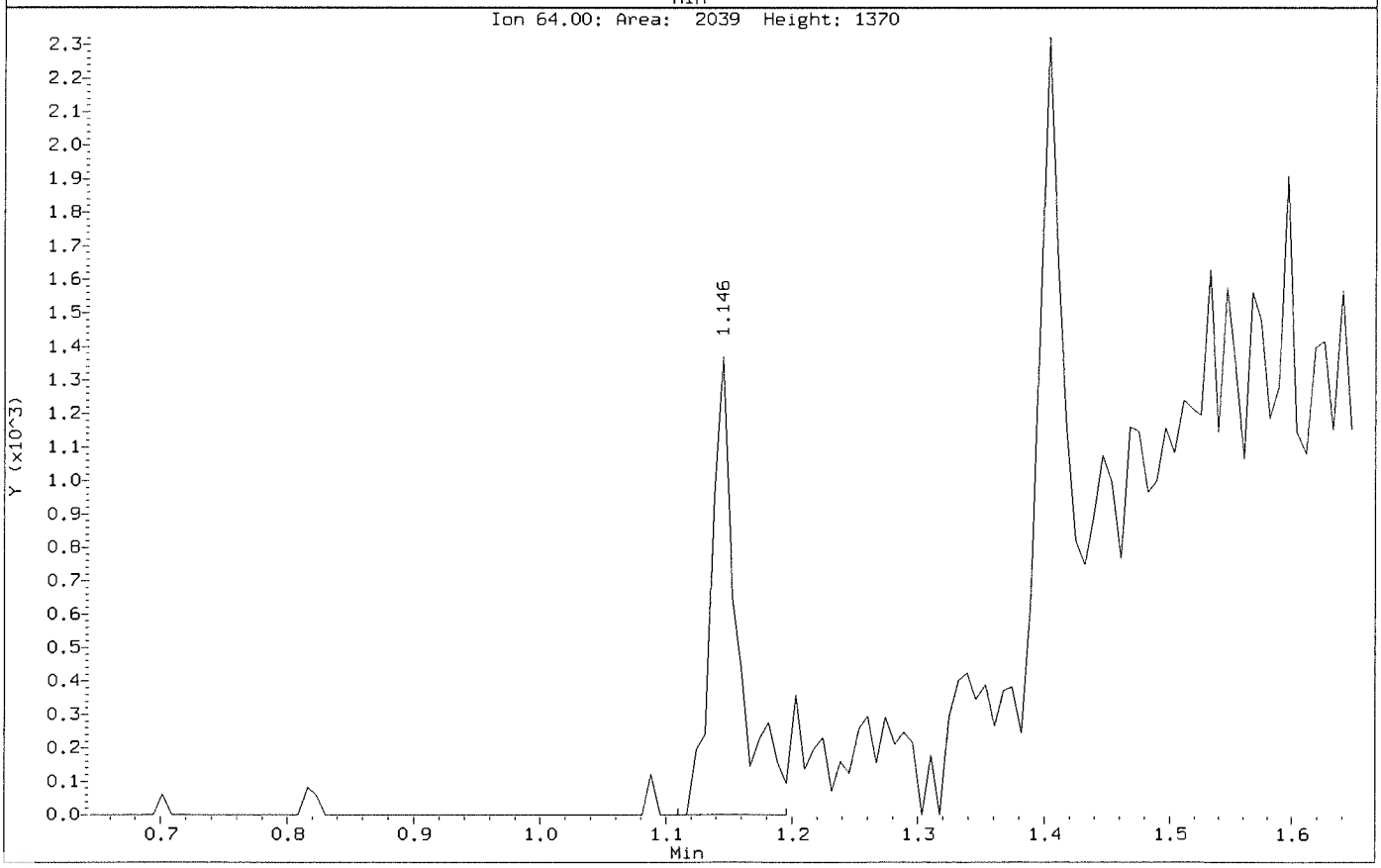




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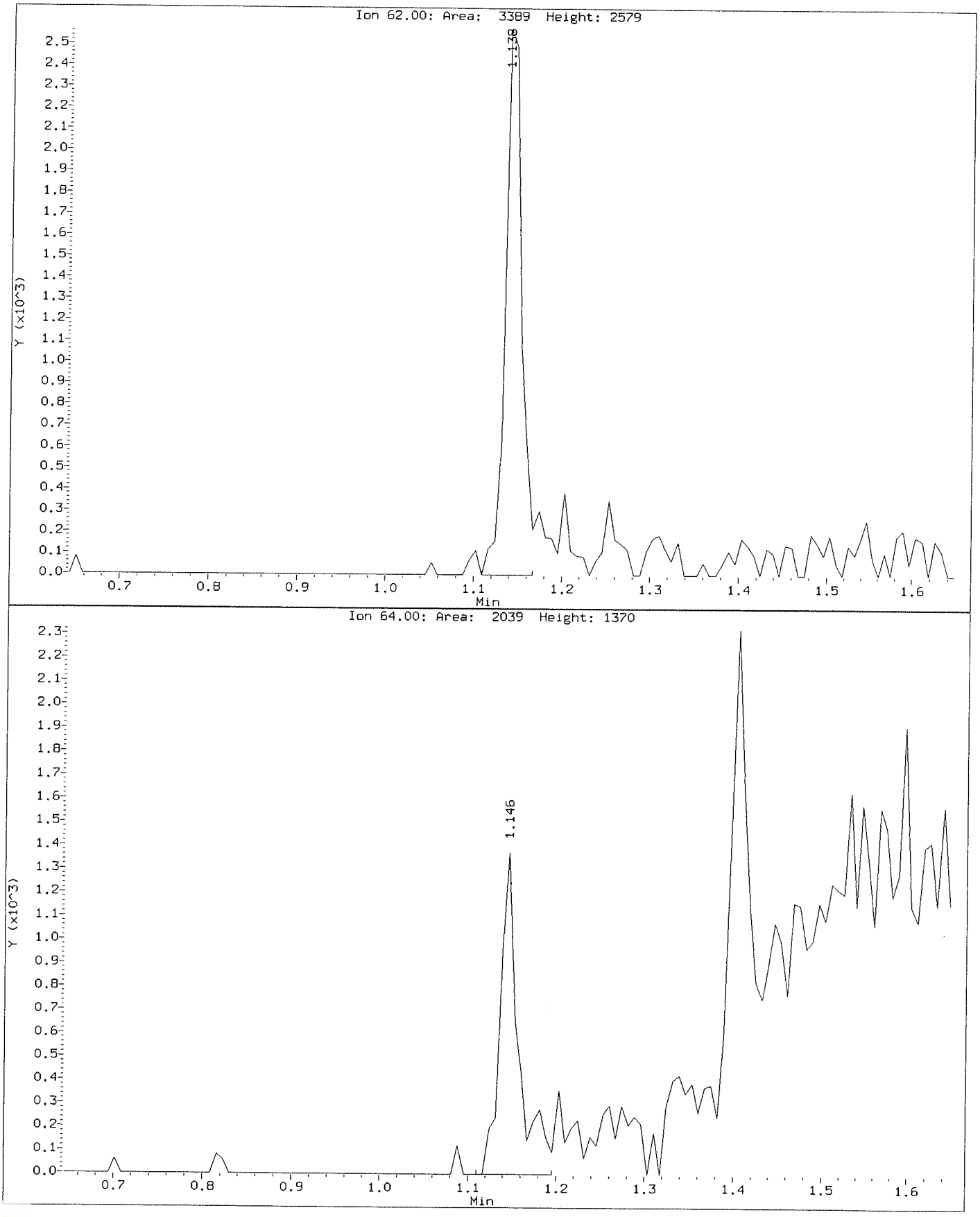
Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110304.D
Injection Date: 03-NOV-2020 13:04
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\X201103.b\X110305.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 03-NOV-2020 13:24
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:10 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 13:04 Cal File: X110304.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

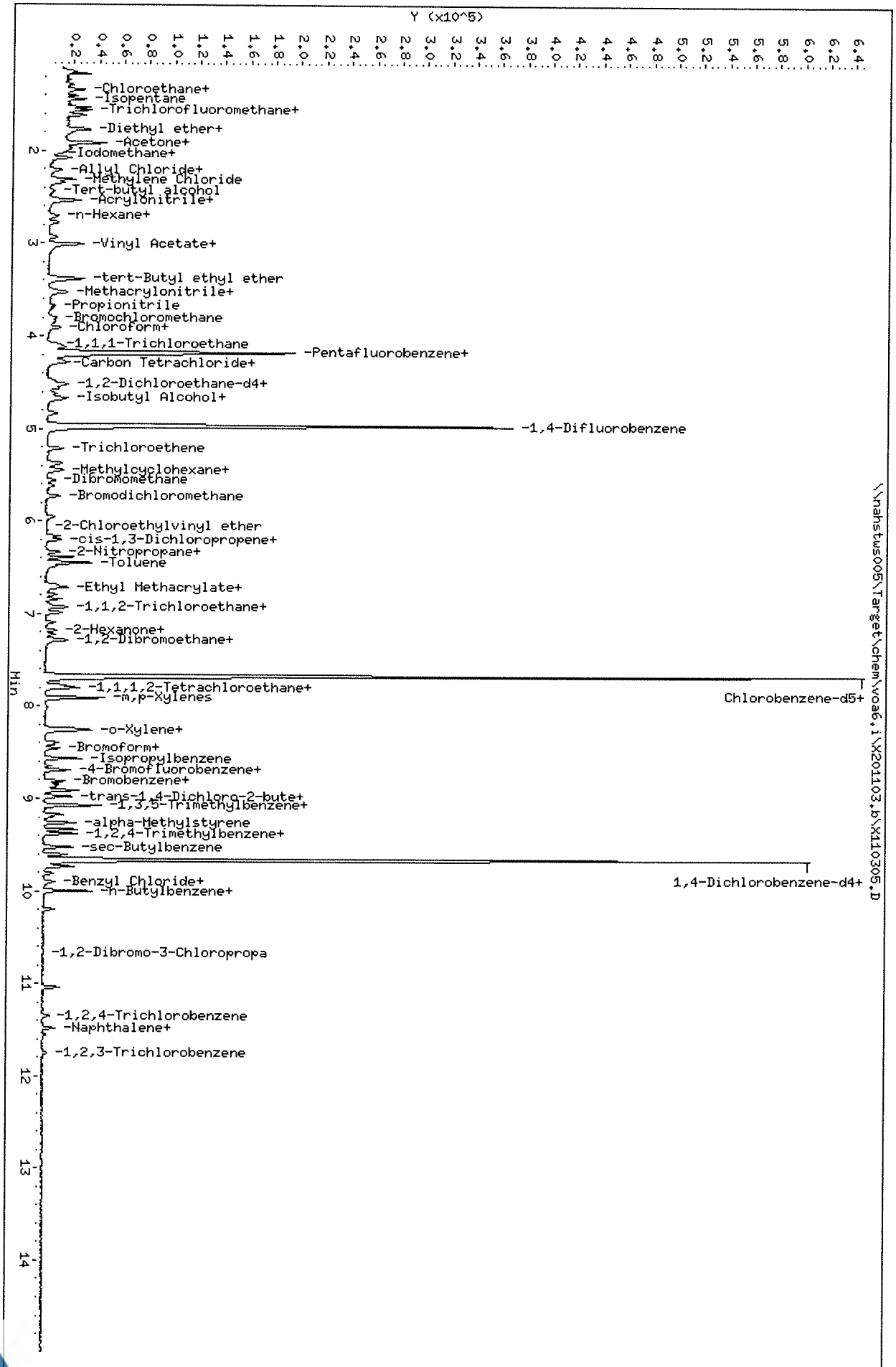
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	138290	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	259024	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	248739	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	106098	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	3693	2.00000	1.98(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	5018	2.00000	1.93(a)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	12459	2.00000	1.87(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	4690	2.00000	2.47(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	2979	2.00000	1.67(a)
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	5702	2.00000	1.97(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	3824	2.00000	1.62(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2796	2.00000	1.82(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	6075	2.00000	1.82(a)
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	5185	2.00000	1.98(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	5488	2.00000	2.27(aM)
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	1012	2.00000	3.91(aM)
71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	2793	2.00000	1.87(aMH)
90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.175)	2022	2.00000	4.05(aM)
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	10539	2.00000	1.77(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	195	2.00000	1.32(aM)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	3087	2.00000	1.65(a)
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	5745	2.00000	1.96(a)

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110305.D Page 2
Report Date: 07-Nov-2020 12:10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	5501	2.00000	1.96(aM)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	3903	2.00000	2.03(aM)
75 1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	11653	2.00000	1.92(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	5834	2.00000	1.87(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	5906	2.00000	1.93(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	6935	2.00000	2.14(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	5827	2.00000	2.03(a)
24 2-Butanone	43	3.588	3.588	(0.858)	2551	4.00000	3.96(aM)
76 2-Chlorotoluene	91	8.981	8.981	(0.930)	10018	2.00000	2.01(a)
52 2-Hexanone	43	7.219	7.219	(0.941)	5963	4.00000	7.12
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	11569	2.00000	1.83(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	11552	2.00000	2.01(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	6934	4.00000	3.66(a)
10 Acetone	43	1.983	1.983	(0.474)	6814	4.00000	1.00(a)
37 Benzene	78	4.519	4.519	(0.909)	14575	2.00000	2.01(a)
74 Bromobenzene	156	8.809	8.809	(0.912)	3717	2.00000	1.99(a)
29 Bromochloromethane	128	3.810	3.810	(0.911)	1977	2.00000	2.07(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	5791	2.00000	2.17(aM)
66 Bromoform	173	8.423	8.423	(1.098)	1884	2.00000	4.54(Ta)
6 Bromomethane	94	1.338	1.338	(0.320)	5183	2.00000	2.01(aM)
19 Carbon Disulfide	76	2.076	2.076	(0.497)	20159	4.00000	4.15(a)
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	4884	2.00000	2.10(a)
59 Chlorobenzene	112	7.699	7.699	(1.004)	10046	2.00000	1.88(a)
7 Chloroethane	64	1.403	1.403	(0.336)	5151	2.00000	2.36(a)
28 Chloroform	83	3.910	3.910	(0.935)	8058	2.00000	2.27(a)
3 Chloromethane	50	1.073	1.073	(0.257)	4801	2.00000	3.28(aM)
27 cis-1,2-Dichloroethene	96	3.537	3.537	(0.846)	4196	2.00000	2.06(a)
46 cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	6278	2.00000	2.17(a)
55 Dibromochloromethane	129	7.176	7.176	(0.936)	3239	2.00000	1.76(a)
44 Dibromomethane	93	5.557	5.557	(1.118)	3114	2.00000	2.37(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	3469	2.00000	1.93(a)
61 Ethylbenzene	106	7.799	7.799	(1.017)	5316	2.00000	1.97(aH)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	1206	2.00000	4.34(aM)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	13777	2.00000	4.19(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	10809	4.00000	3.34(aM)
17 Methylene Chloride	84	2.305	2.305	(0.551)	3913	2.00000	2.06(a)
87 n-Butylbenzene	91	9.998	9.998	(1.035)	11381	2.00000	5.24
73 n-Propylbenzene	91	8.917	8.917	(0.923)	16441	2.00000	1.94(a)
92 Naphthalene	128	11.553	11.553	(1.196)	2622	2.00000	4.19(a)
63 o-Xylene	106	8.244	8.244	(1.075)	6045	2.00000	1.87(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	13806	2.00000	4.43(a)
64 Styrene	104	8.265	8.265	(1.078)	9334	2.00000	1.72(a)
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	9232	2.00000	4.30(aM)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	2392	2.00000	1.74(a)
50 Toluene	91	6.453	6.453	(0.841)	19681	2.00000	2.16(aM)
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	3535	2.00000	2.05(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	4619	2.00000	1.81(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	3905	2.00000	2.26(aM)
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	10872	2.00000	2.08(a)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	6176	2.00000	2.02(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.

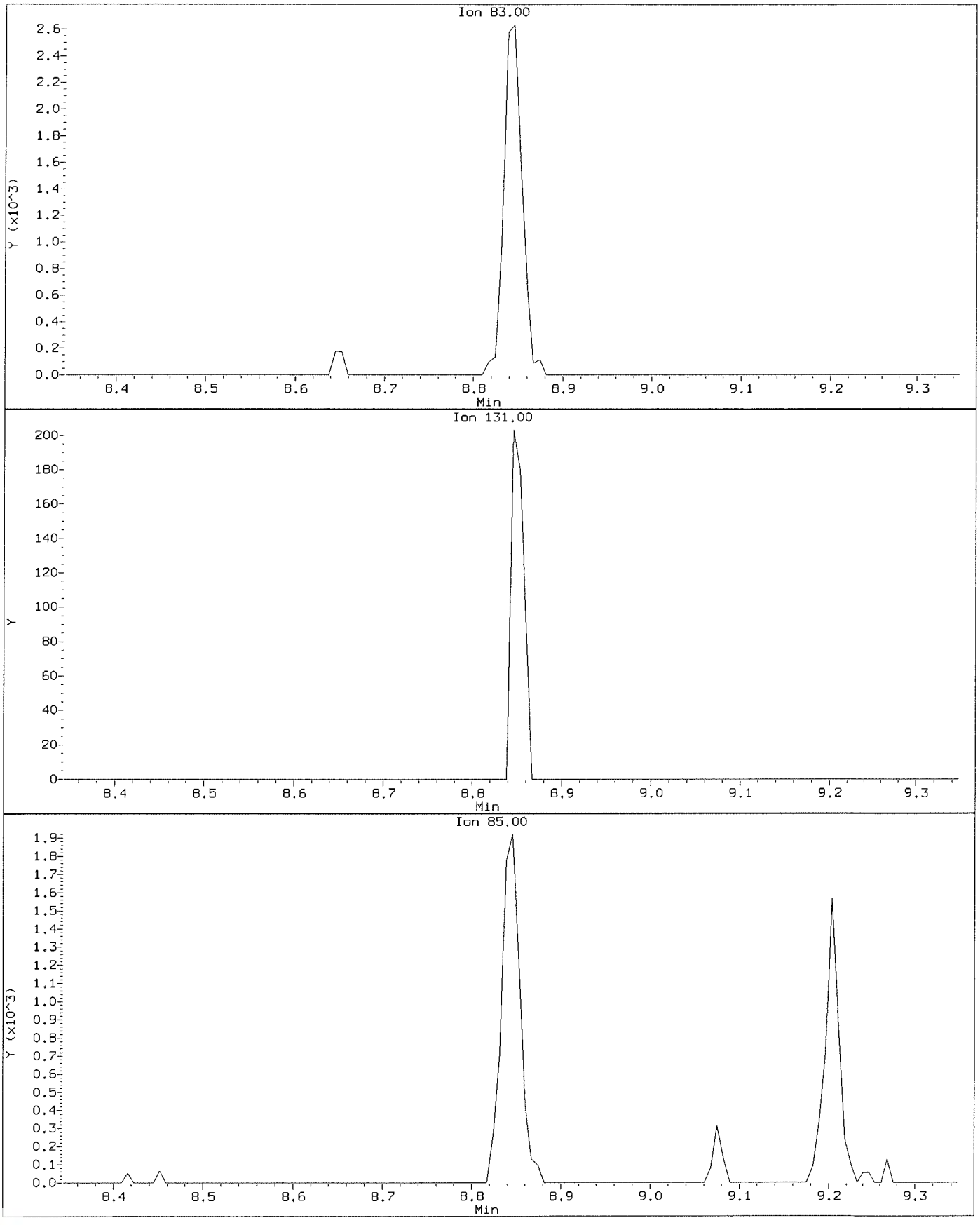


Data File: \\nahstws005\Target\chem\voa6,i\X201103,b\X110305,D
Date : 03-NOV-2020 13:24
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

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

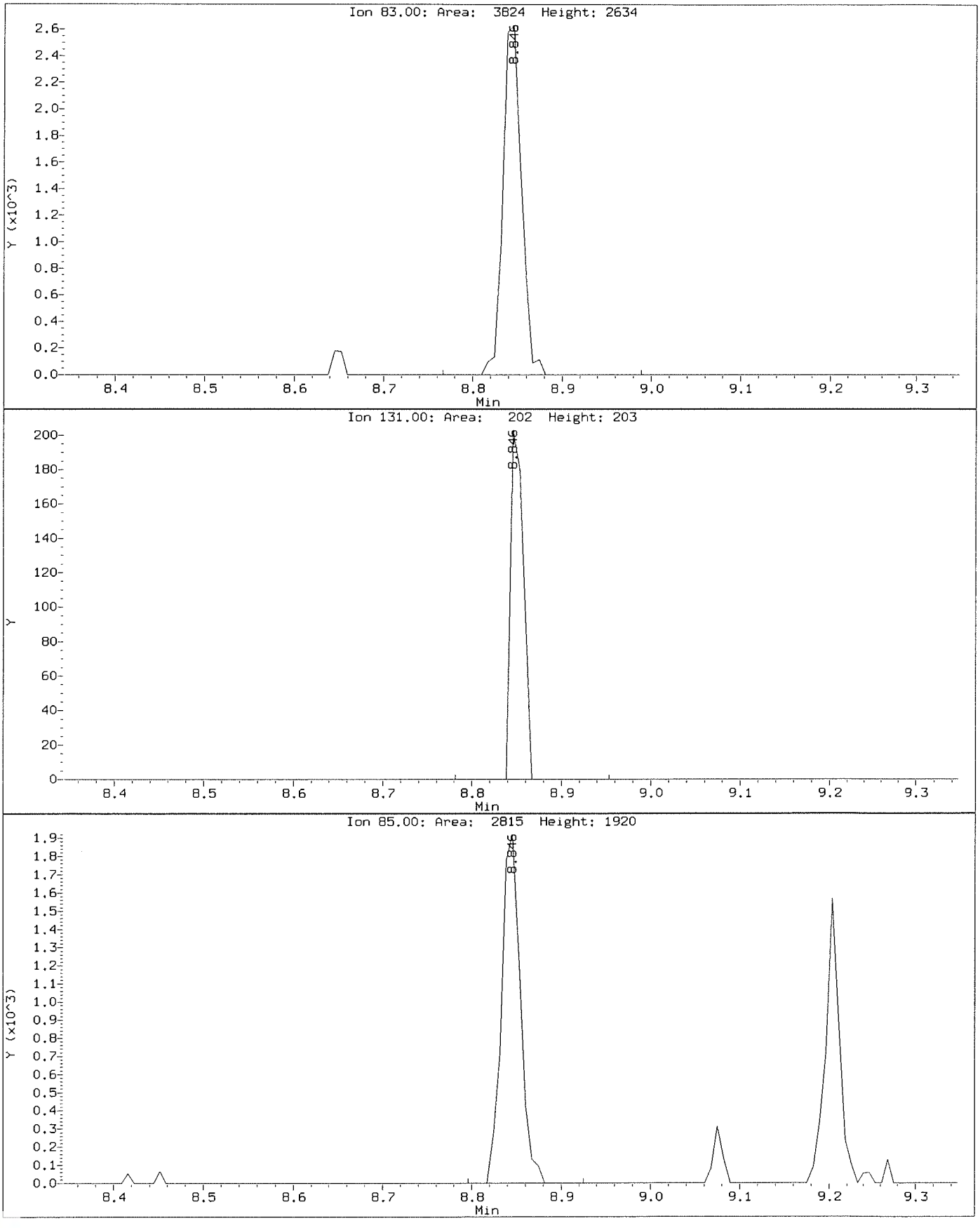
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Injection Date: 03-NOV-2020 13:24
Instrument: voa6.i
Client Sample ID: VSTD002

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



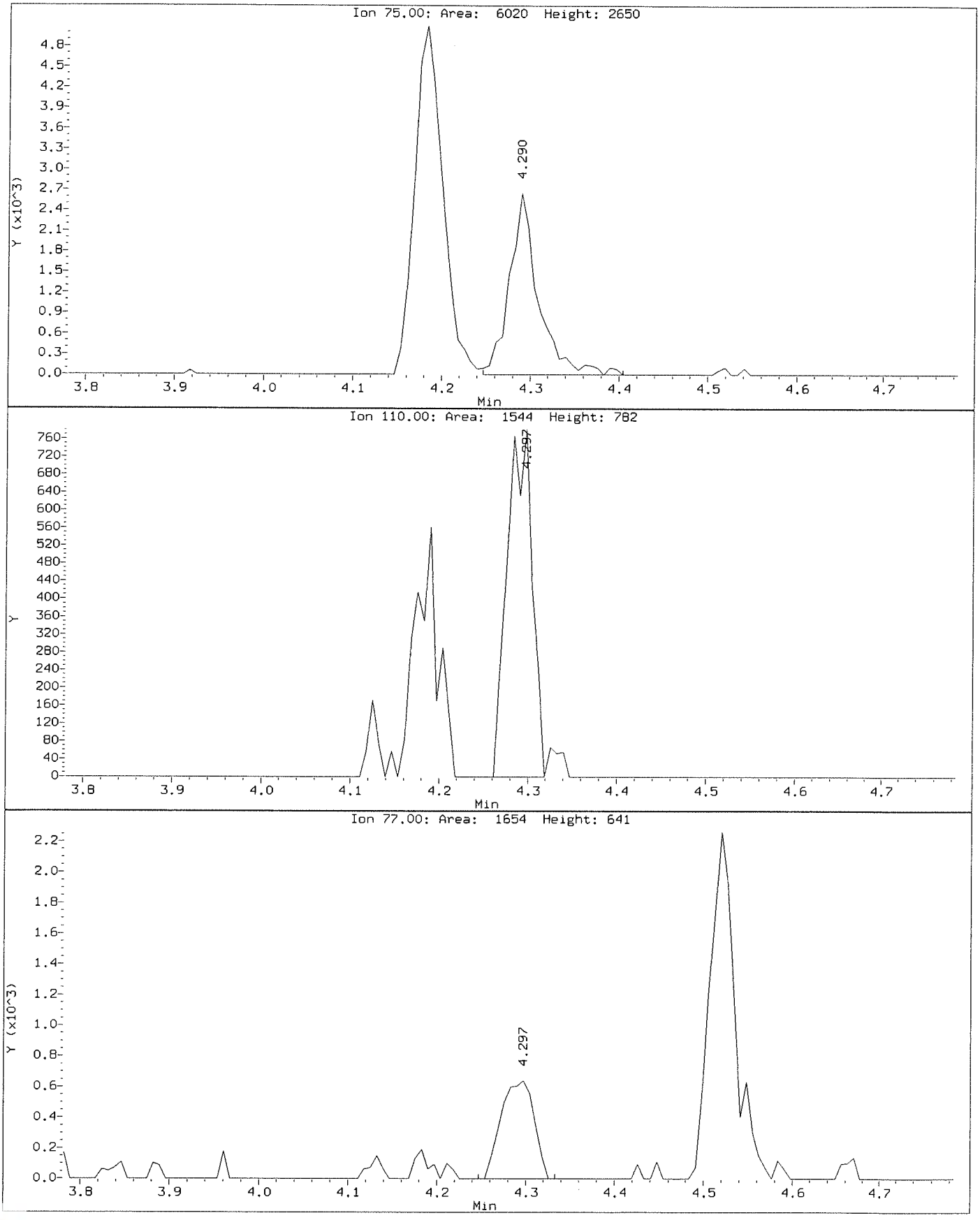
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Instrument: voa6.i
Client Sample ID: VSTD002

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



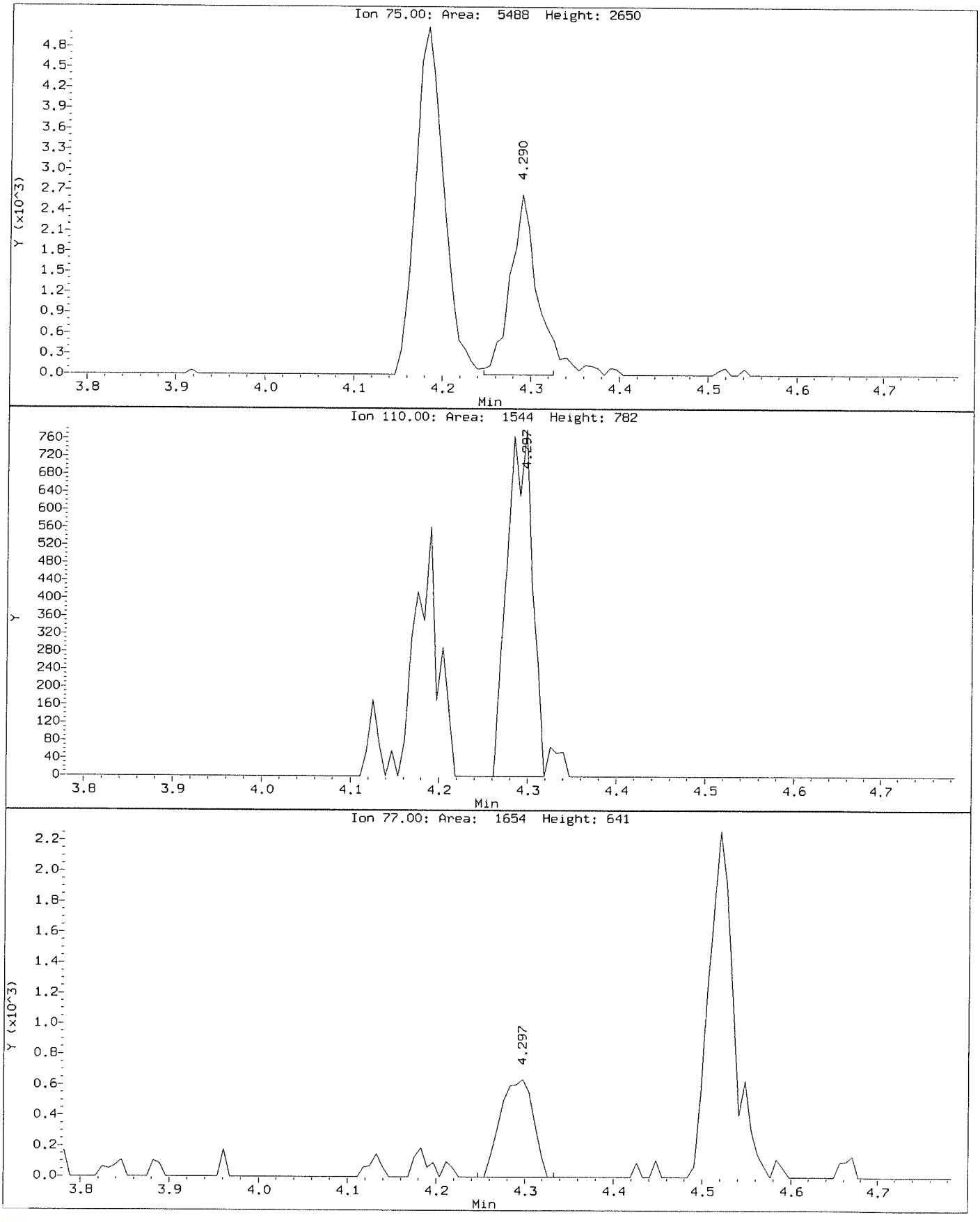
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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



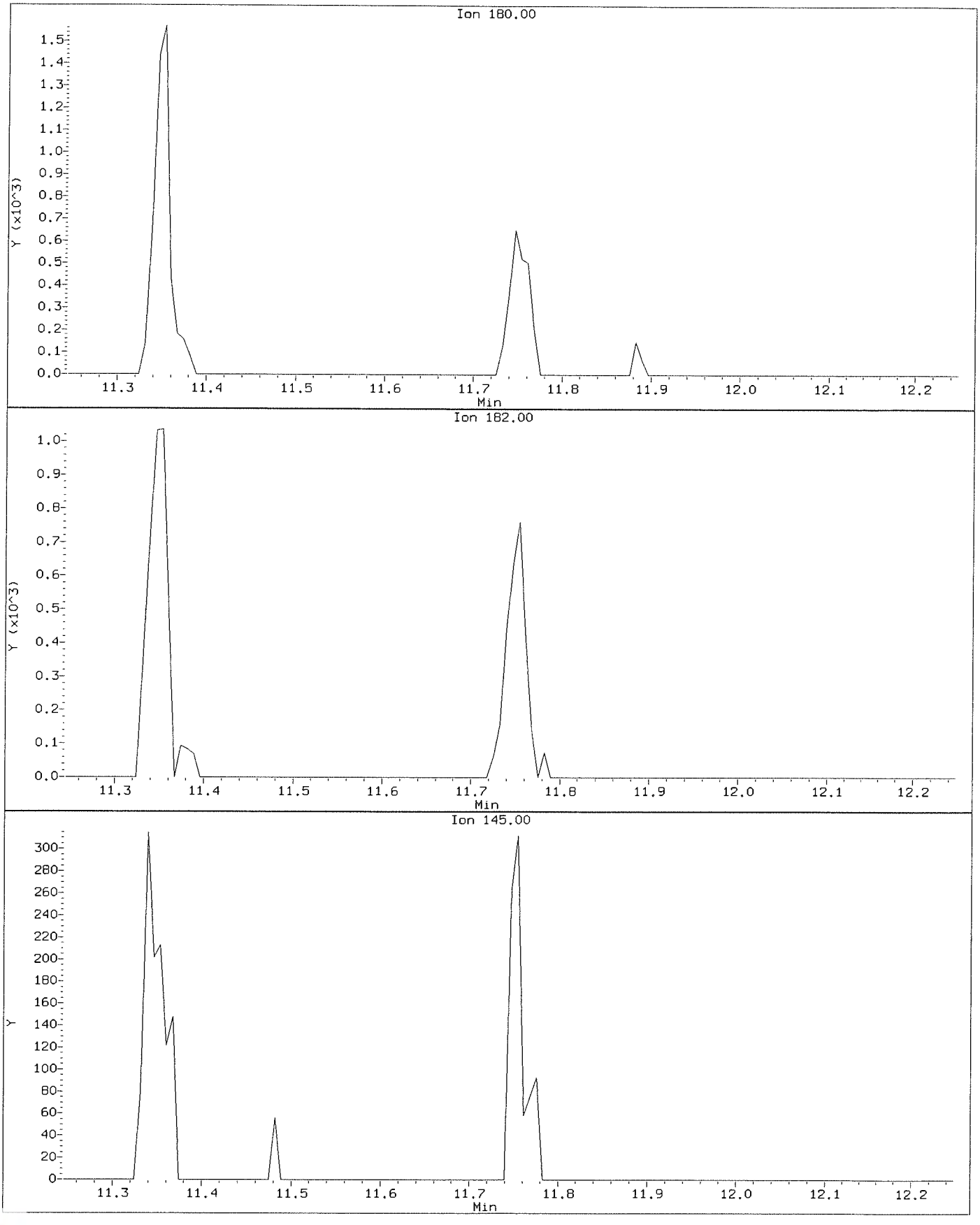
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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



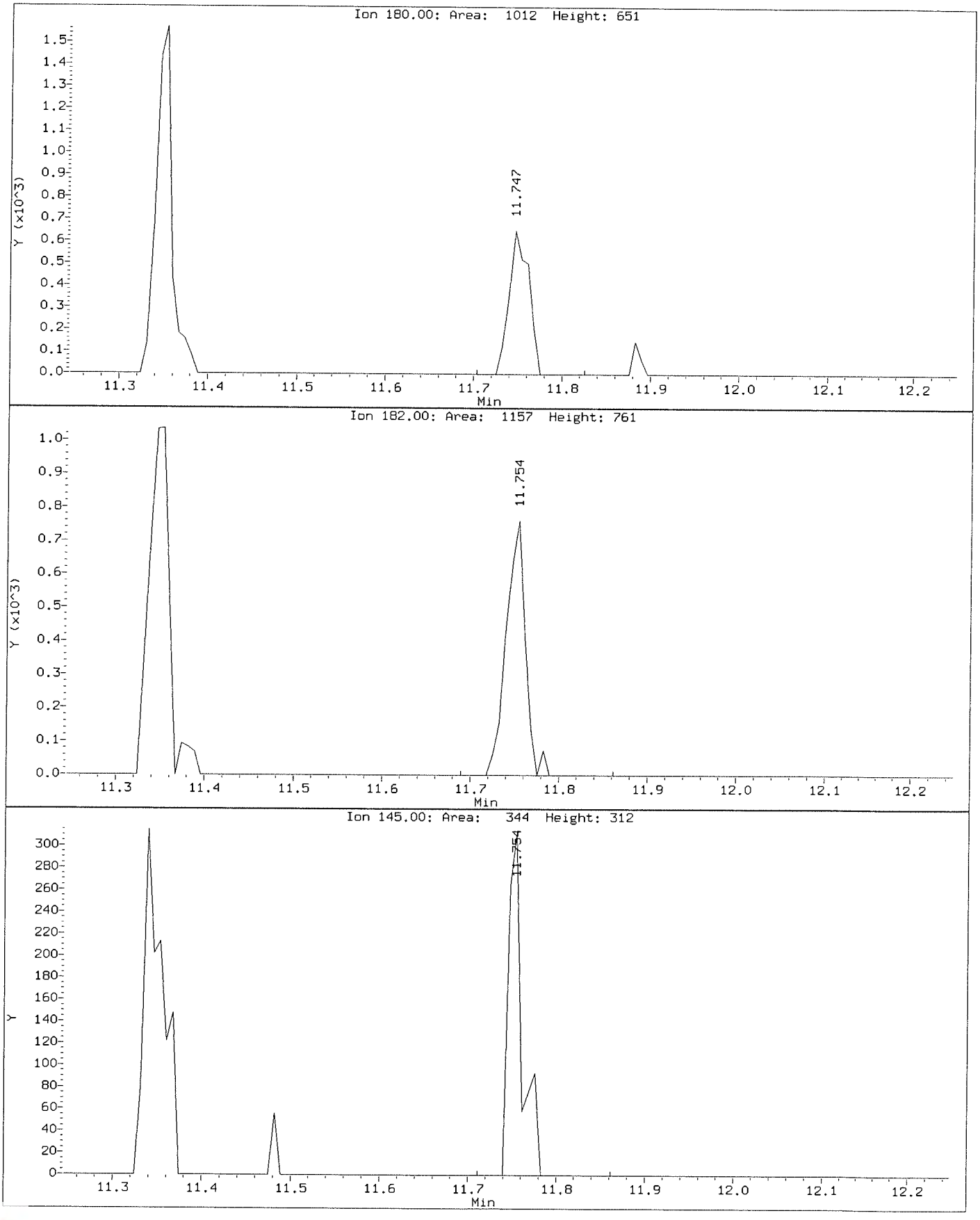
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Instrument: voa6.i
Client Sample ID: VSTD002

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



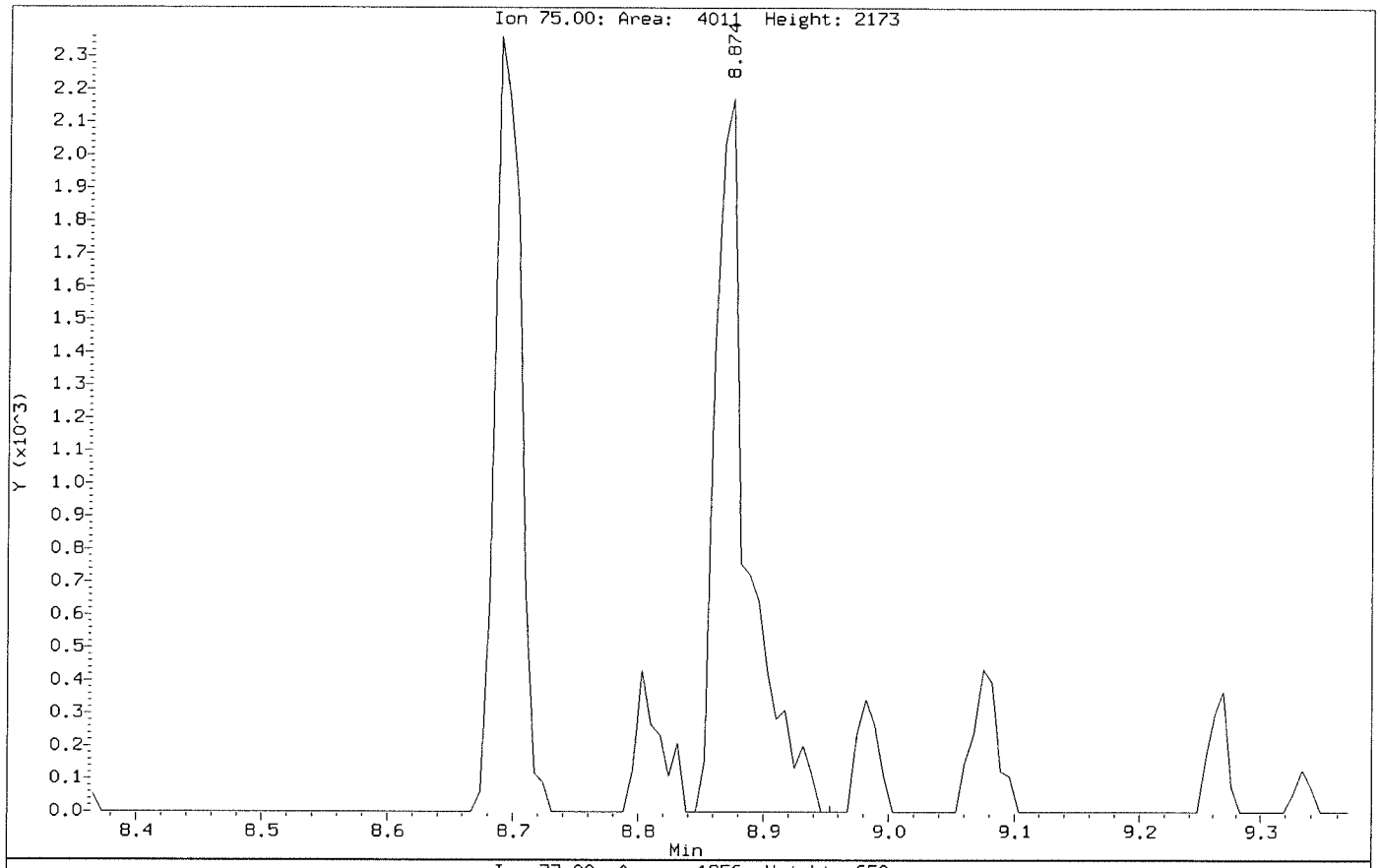
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Client Sample ID: VSTD002

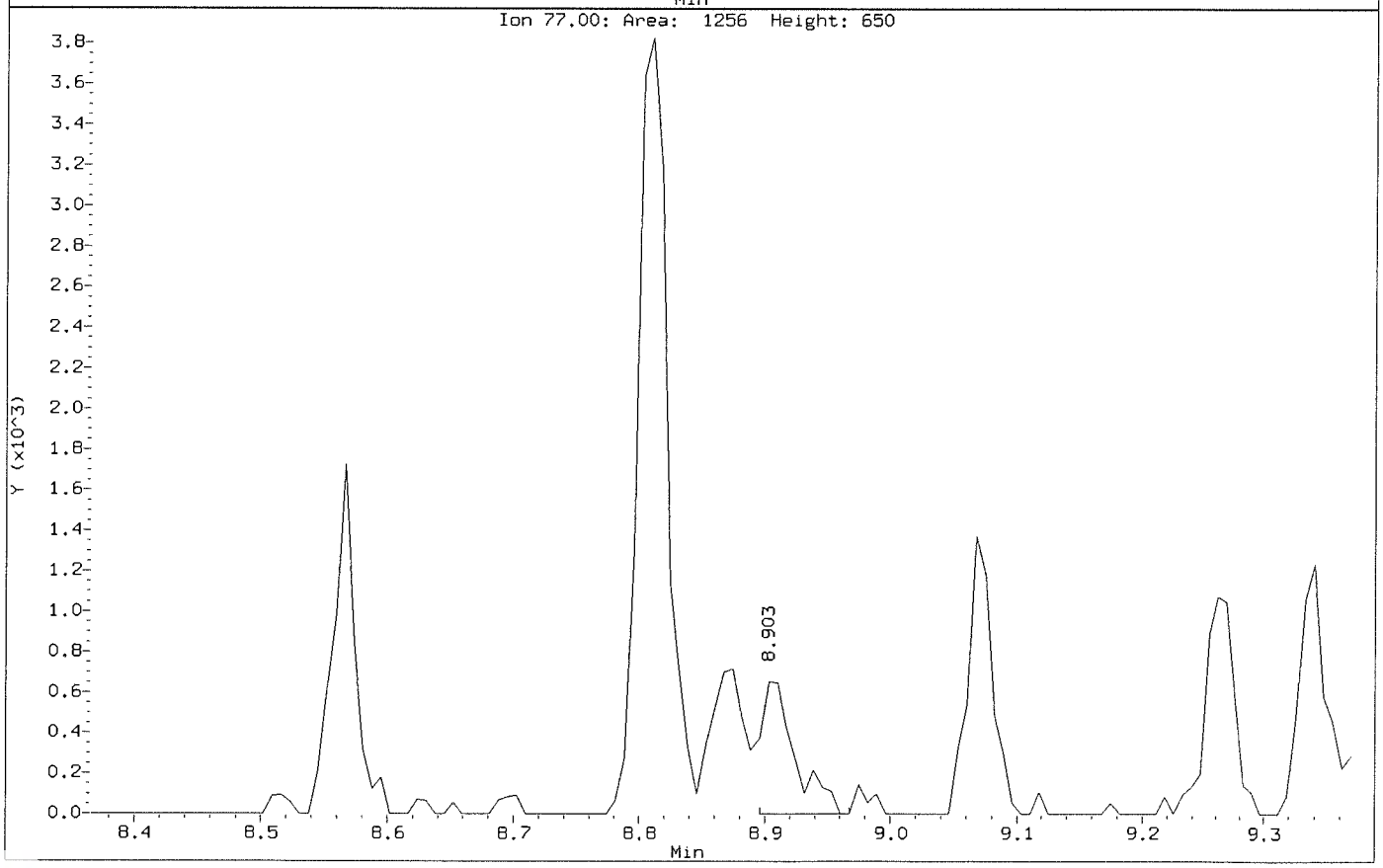
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



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Instrument: voa6.i
Client Sample ID: VSTD002

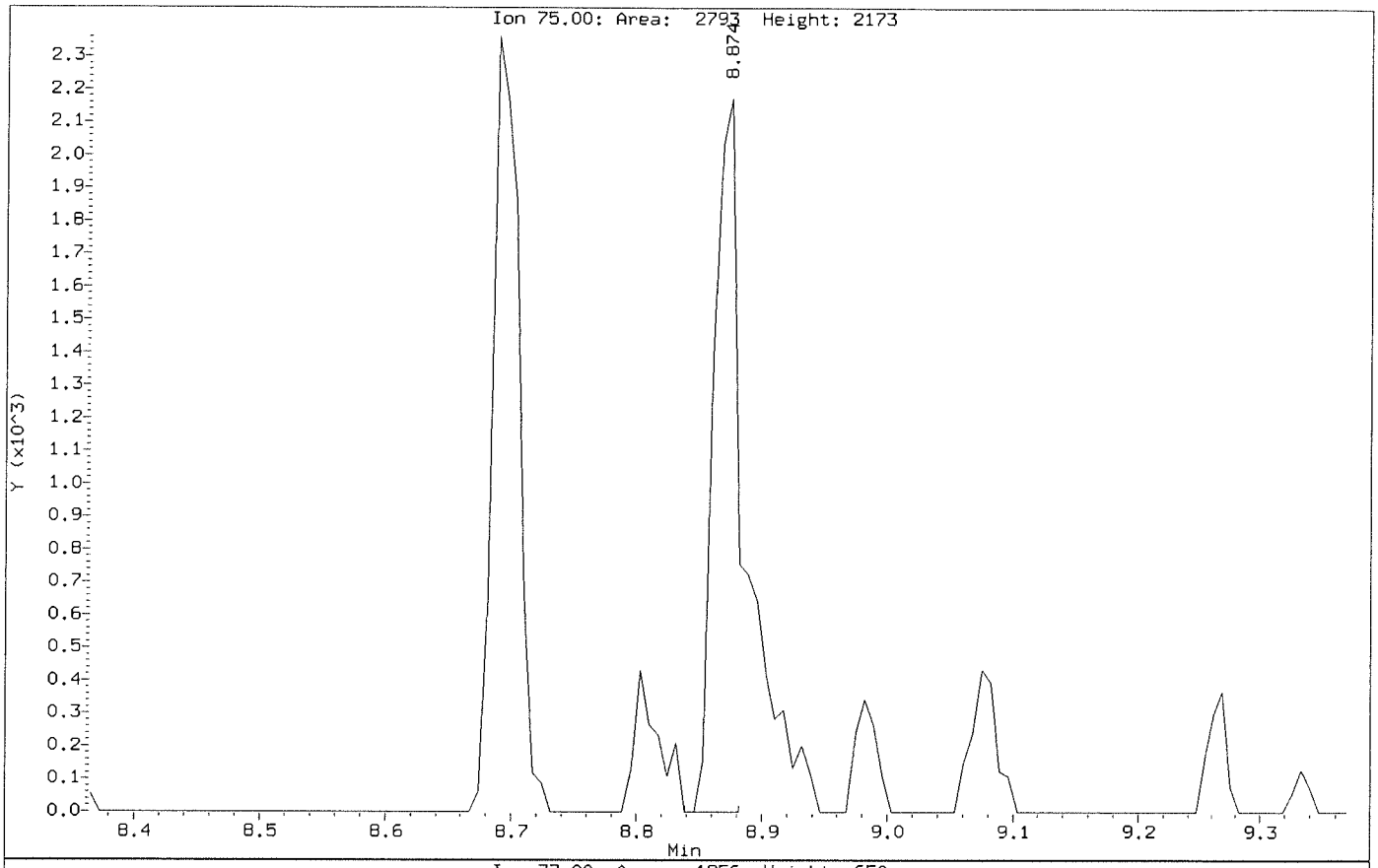
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

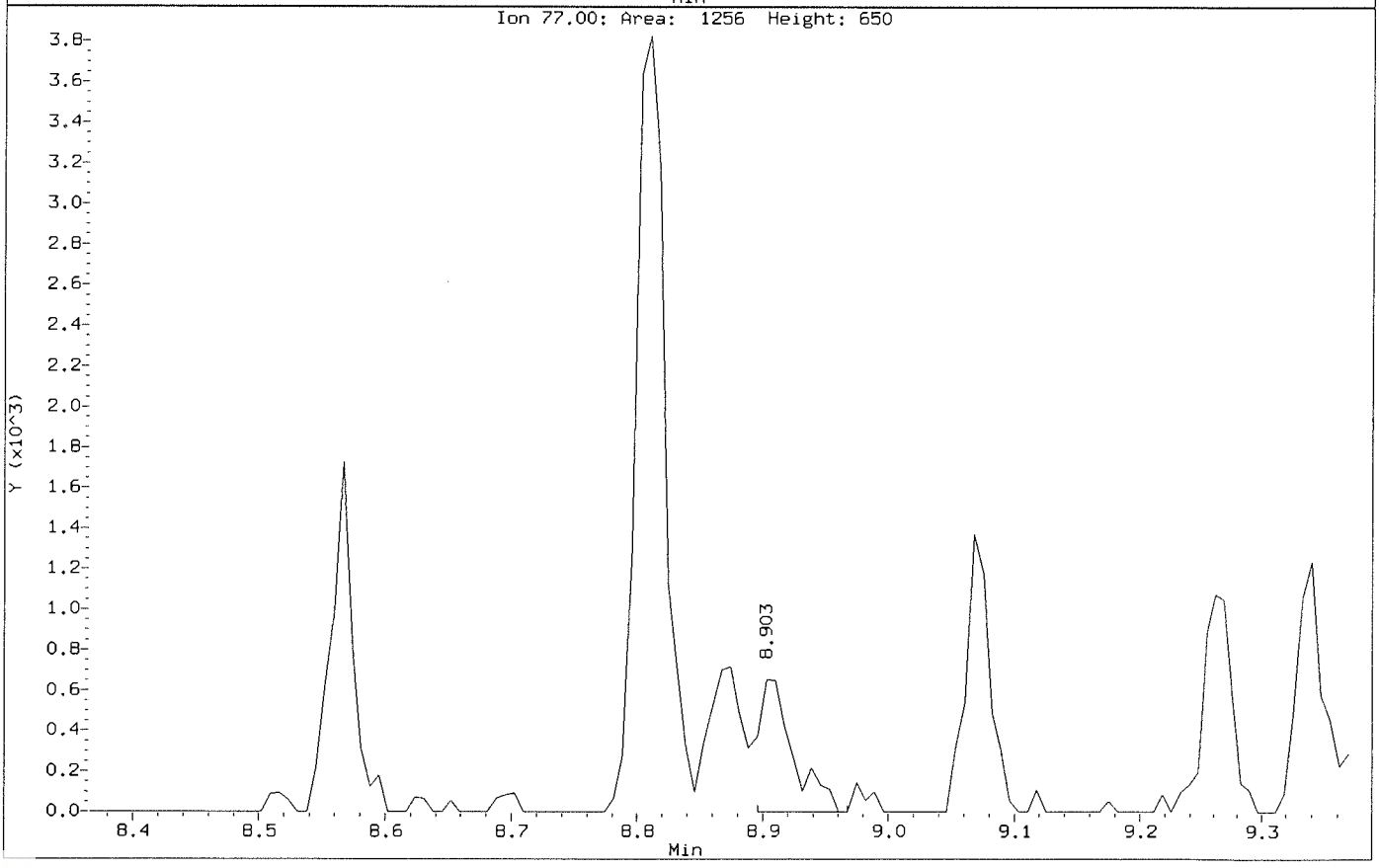




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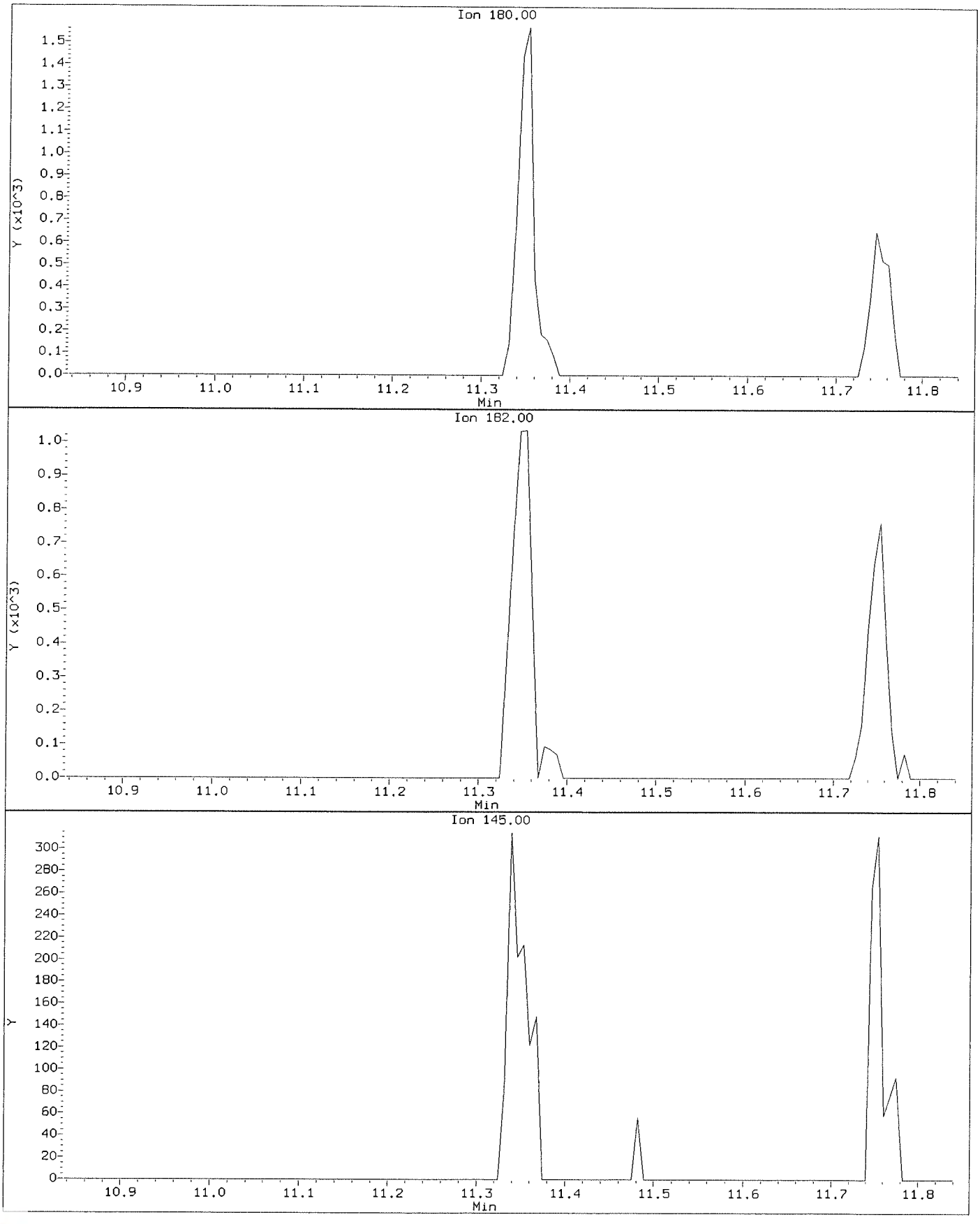
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





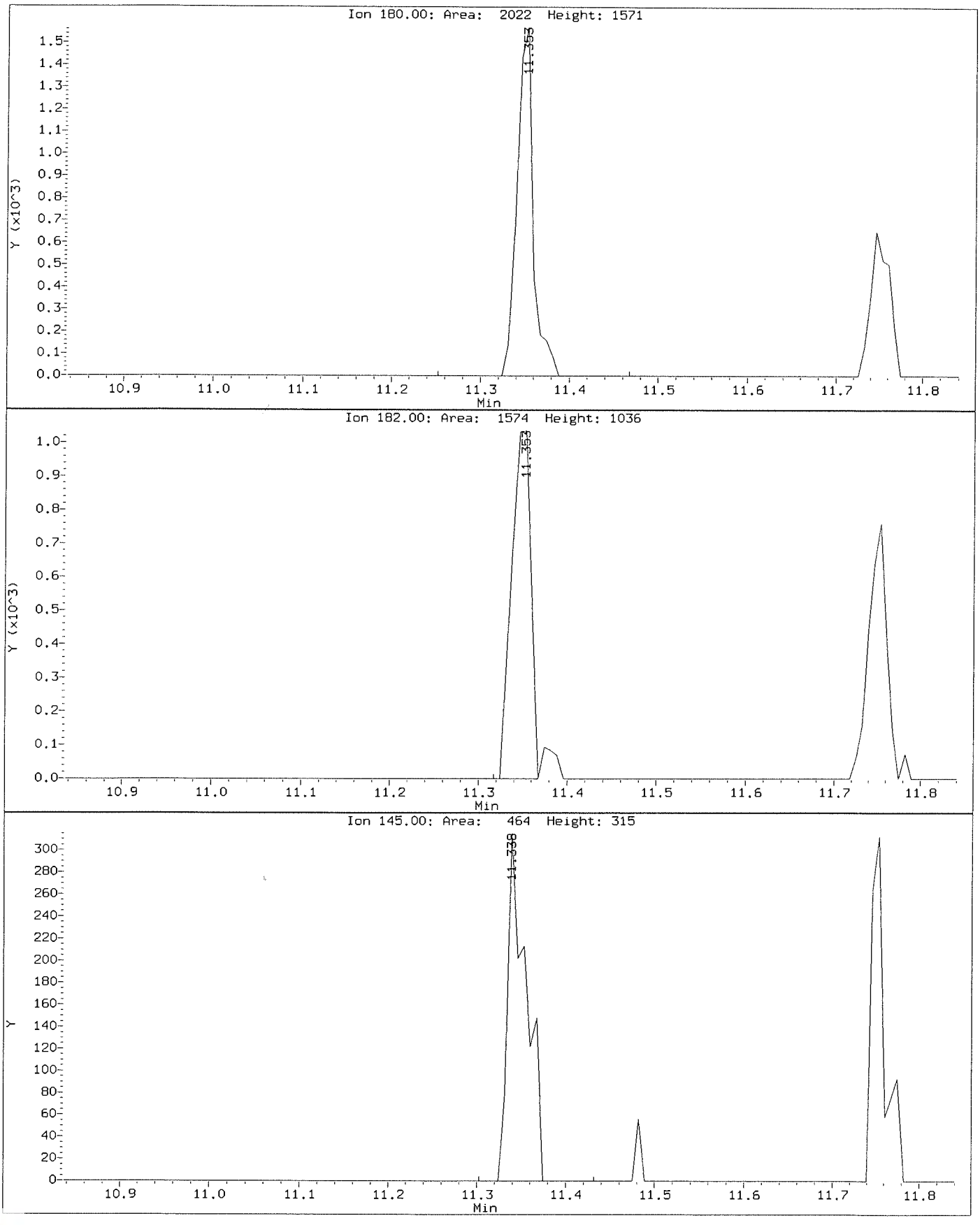
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Instrument: voa6.i
Client Sample ID: VSTD002

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



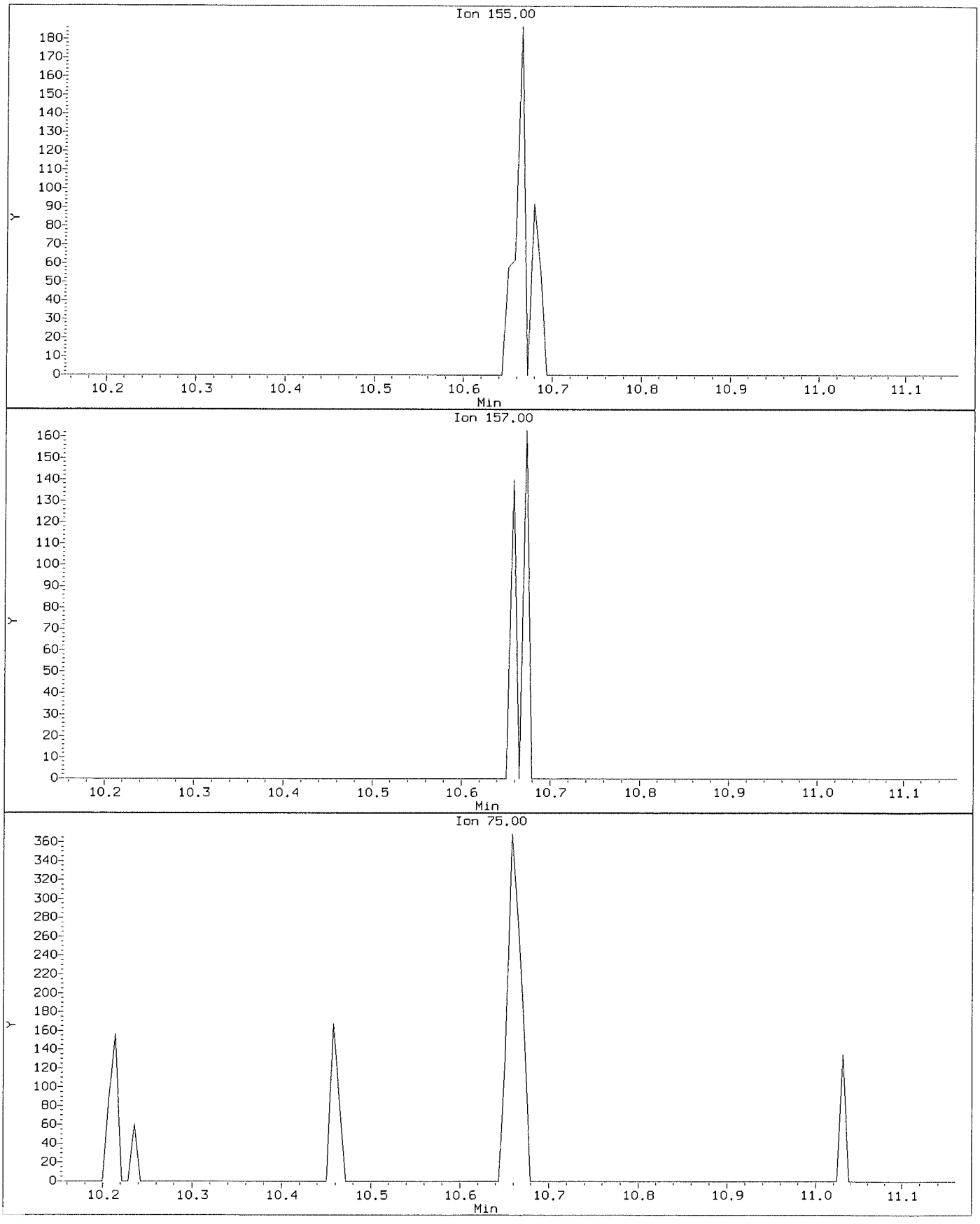
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Instrument: voa6.i
Client Sample ID: VSTD002

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



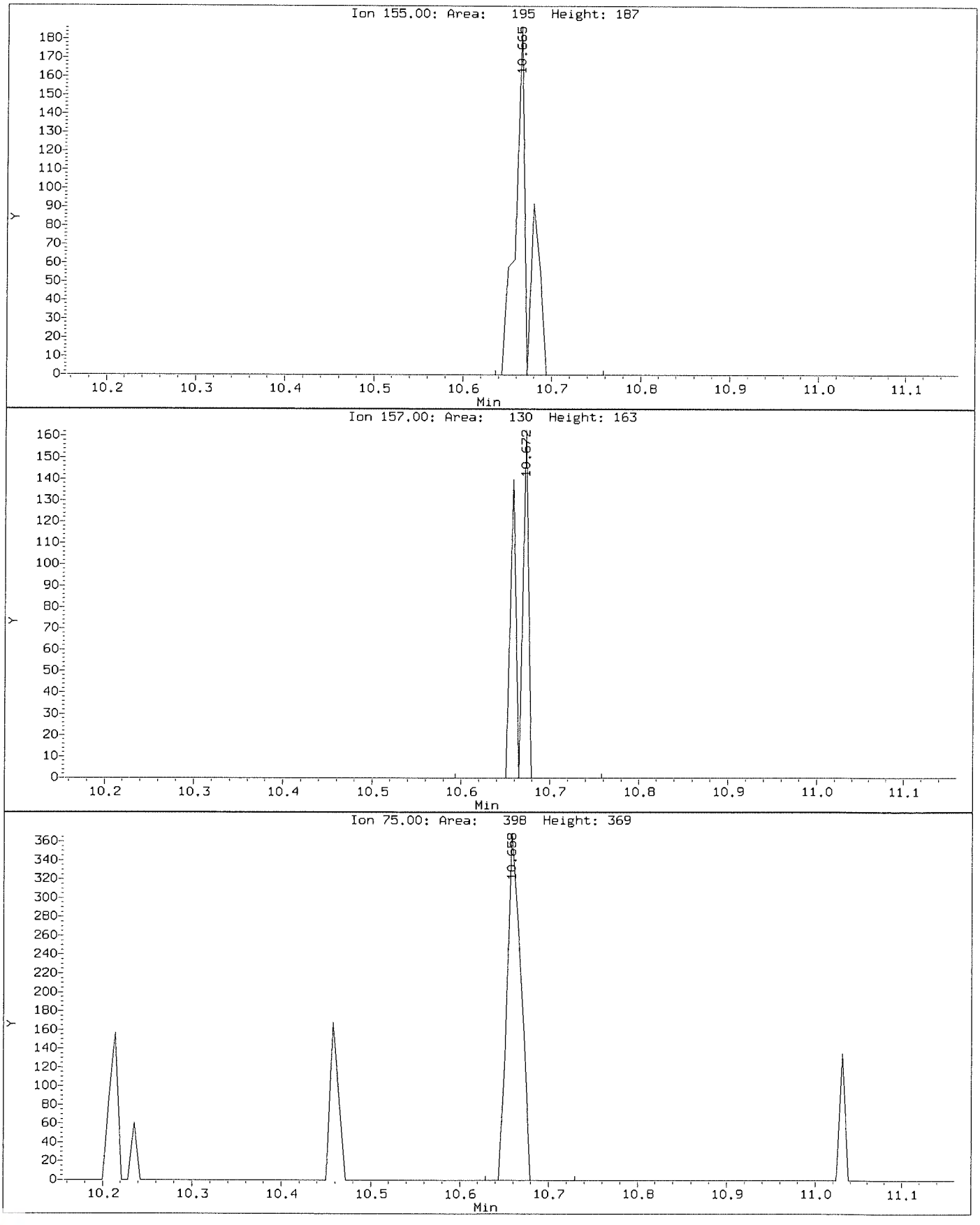
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Injection Date: 03-NOV-2020 13:24
Instrument: voa6.i
Client Sample ID: VSTD002

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



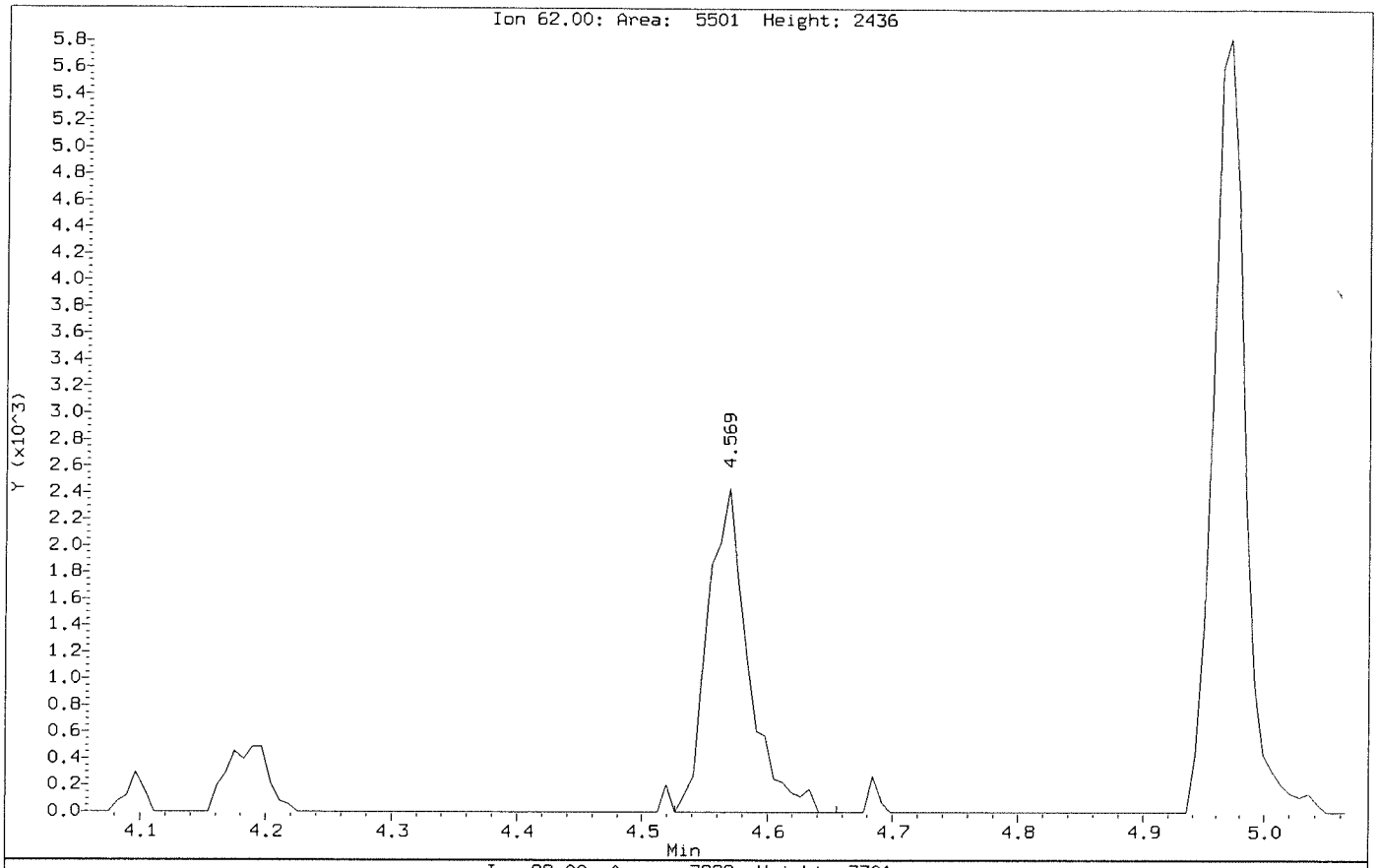
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Client Sample ID: VSTD002

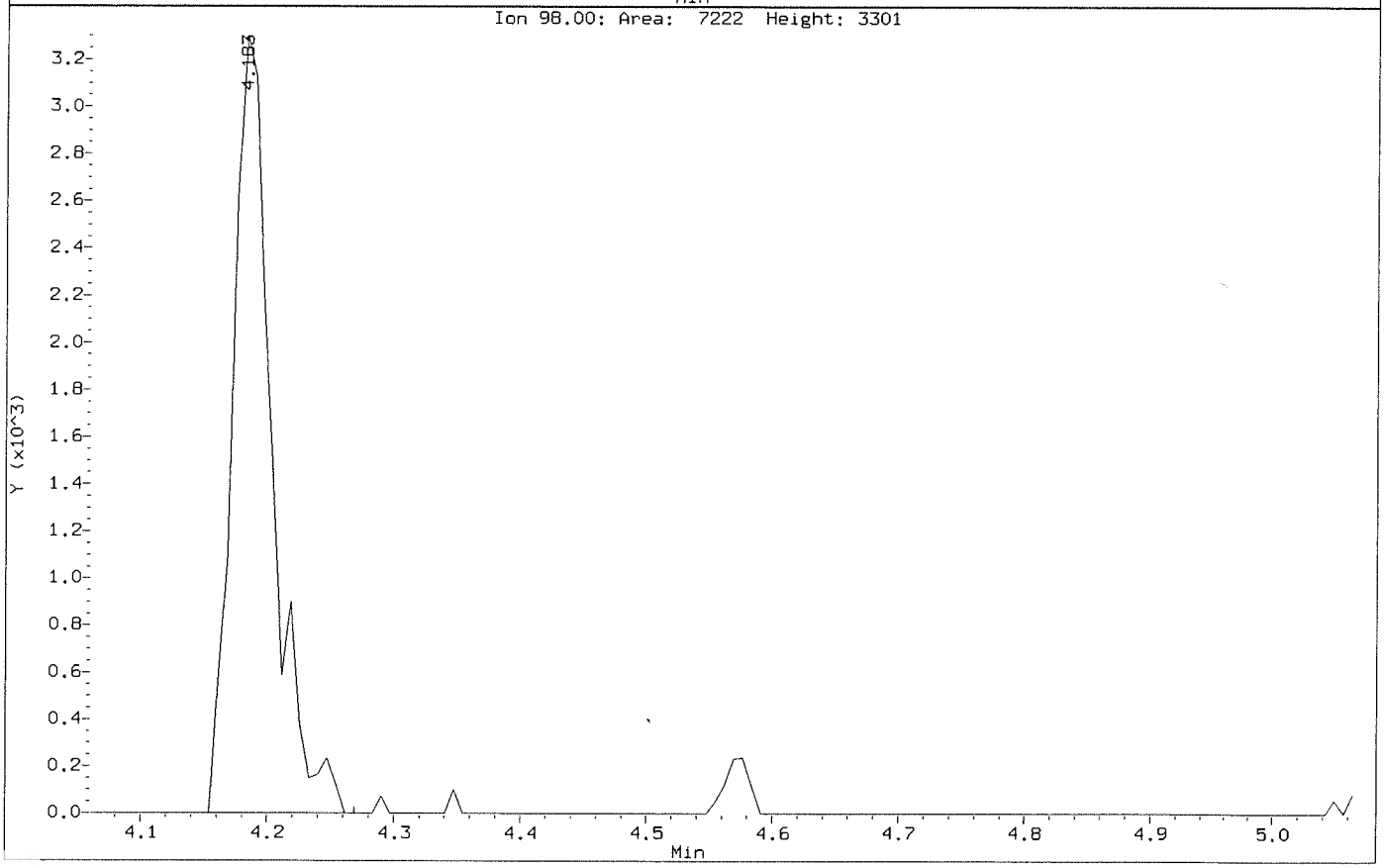
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110305.D
Injection Date: 03-NOV-2020 13:24
Instrument: voa6.i
Client Sample ID: VSTD002

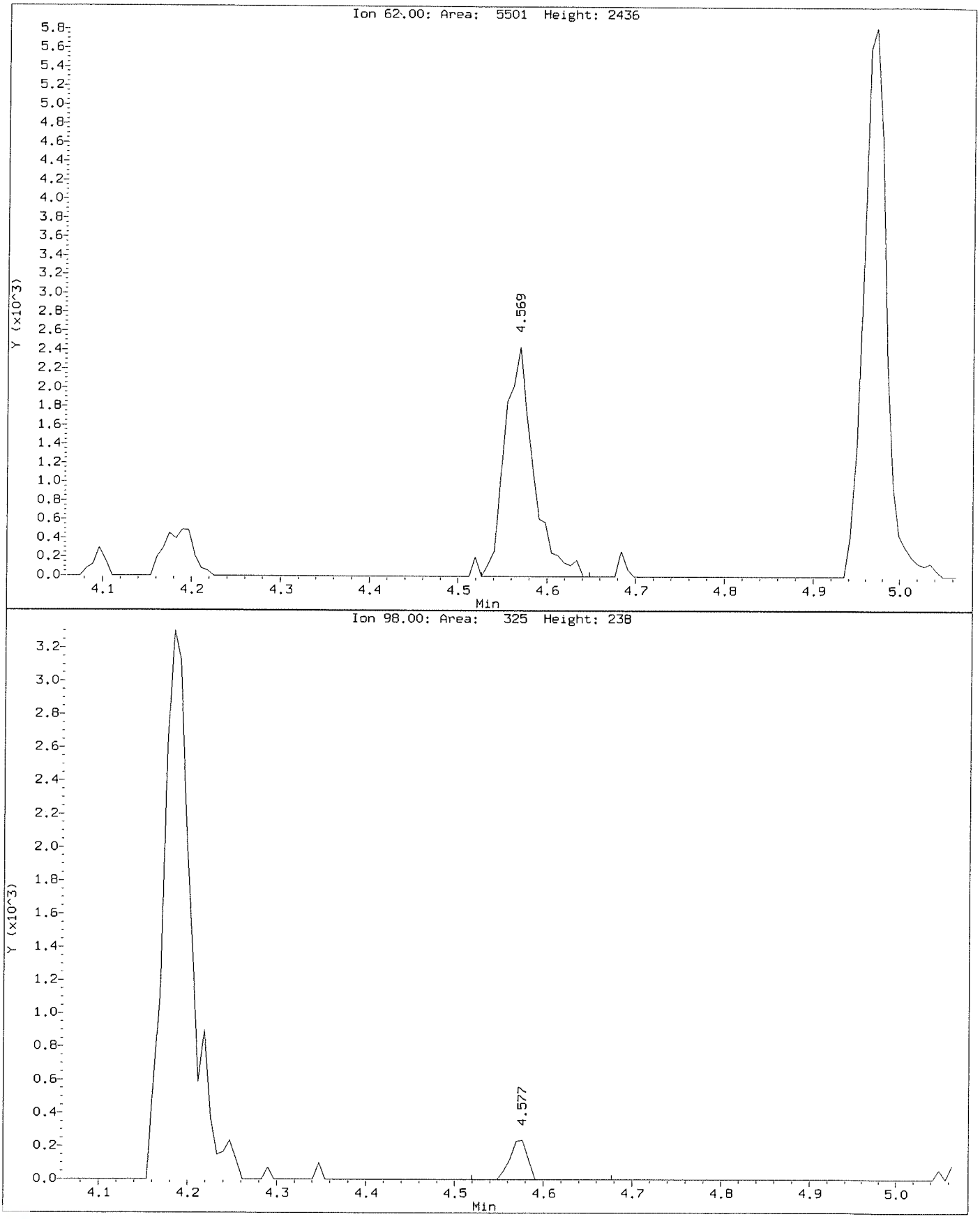
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2





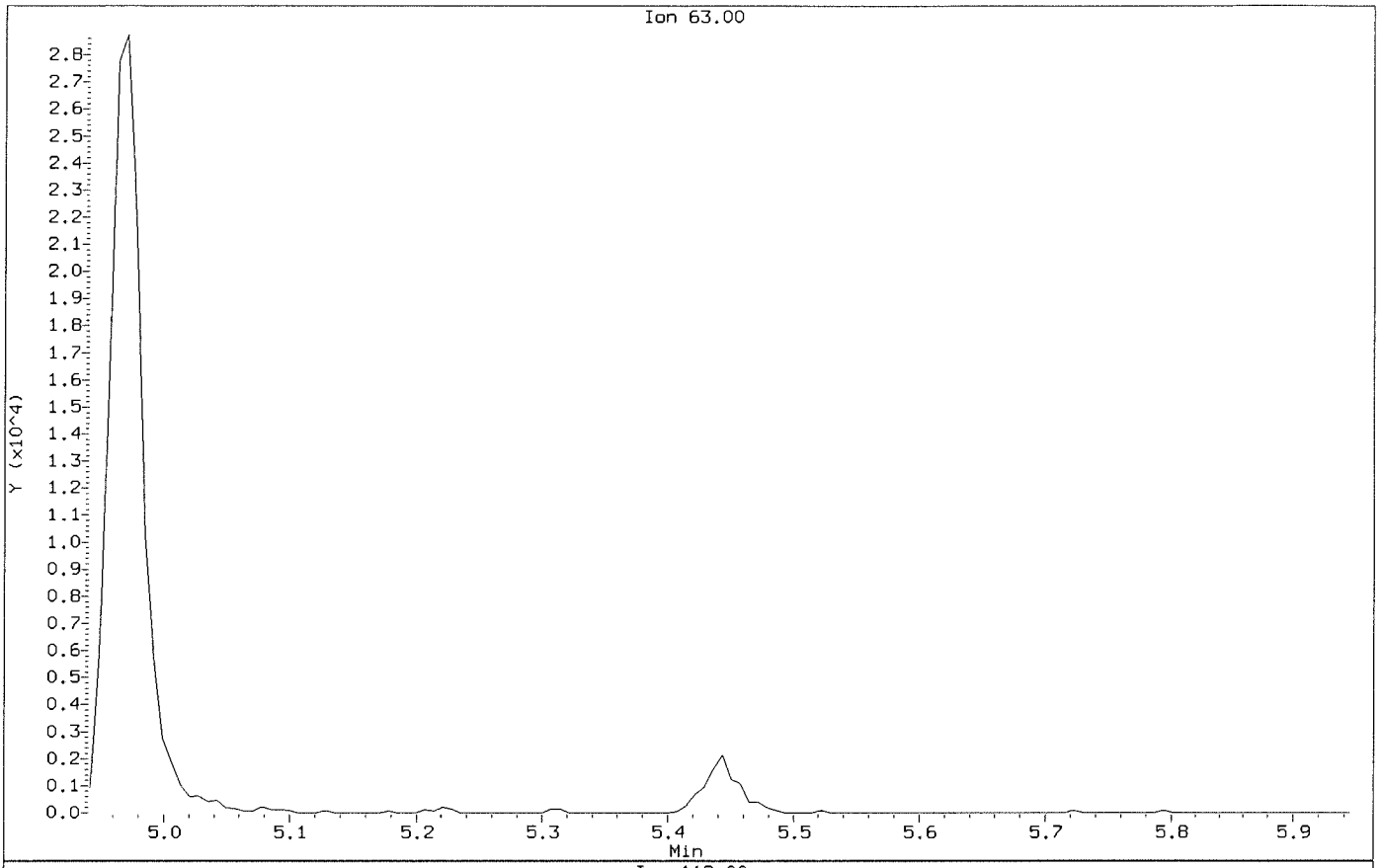
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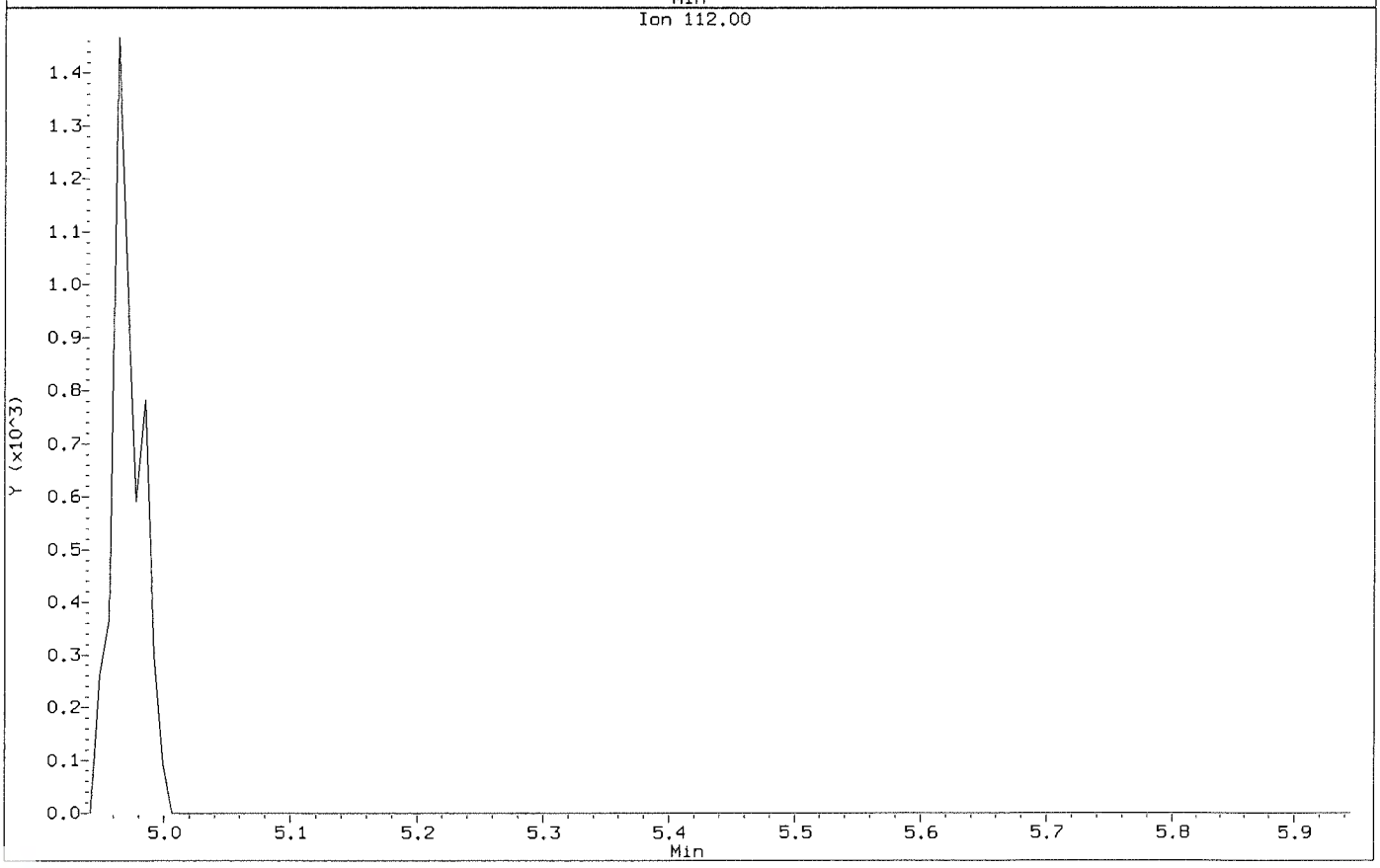
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2



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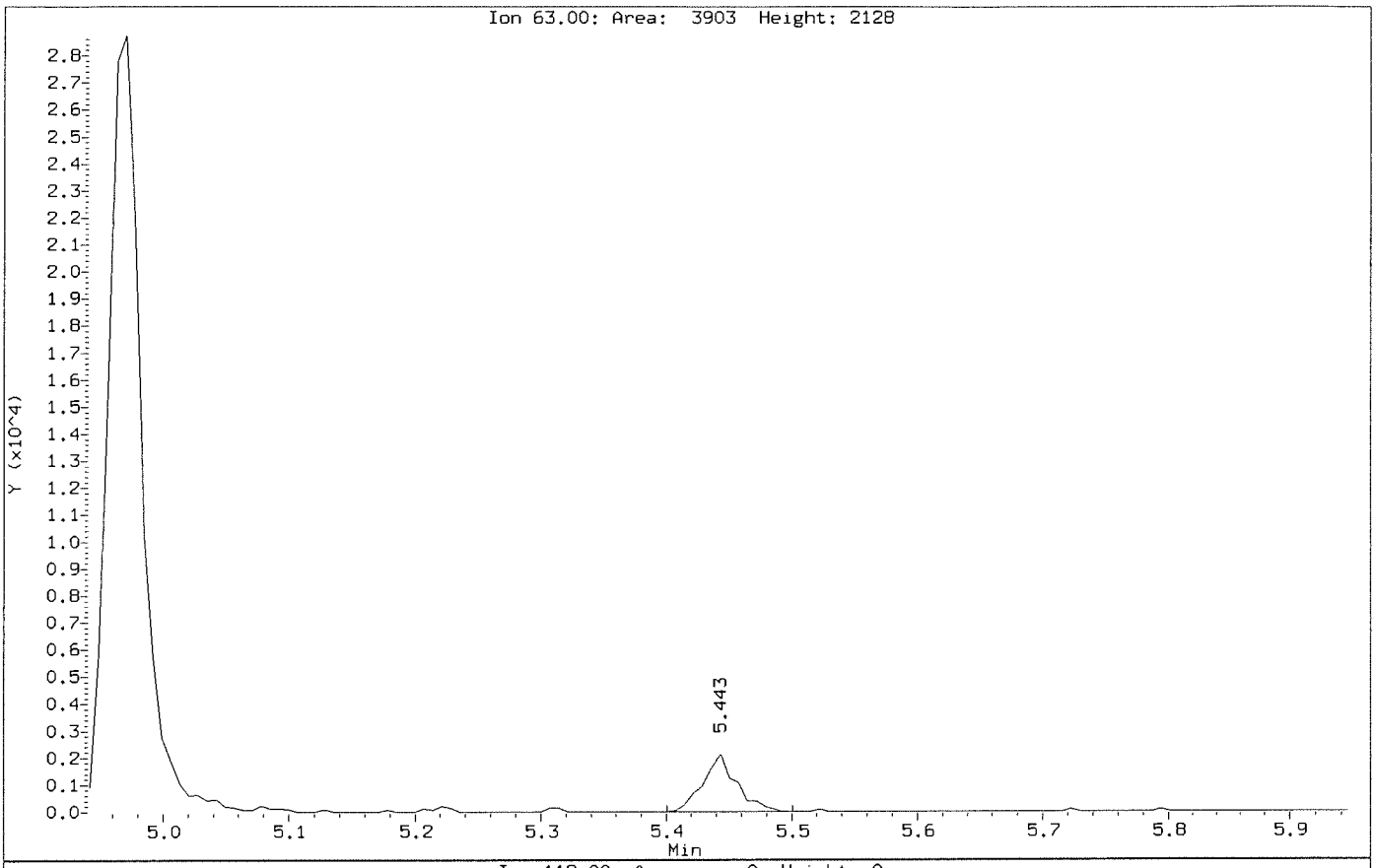
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

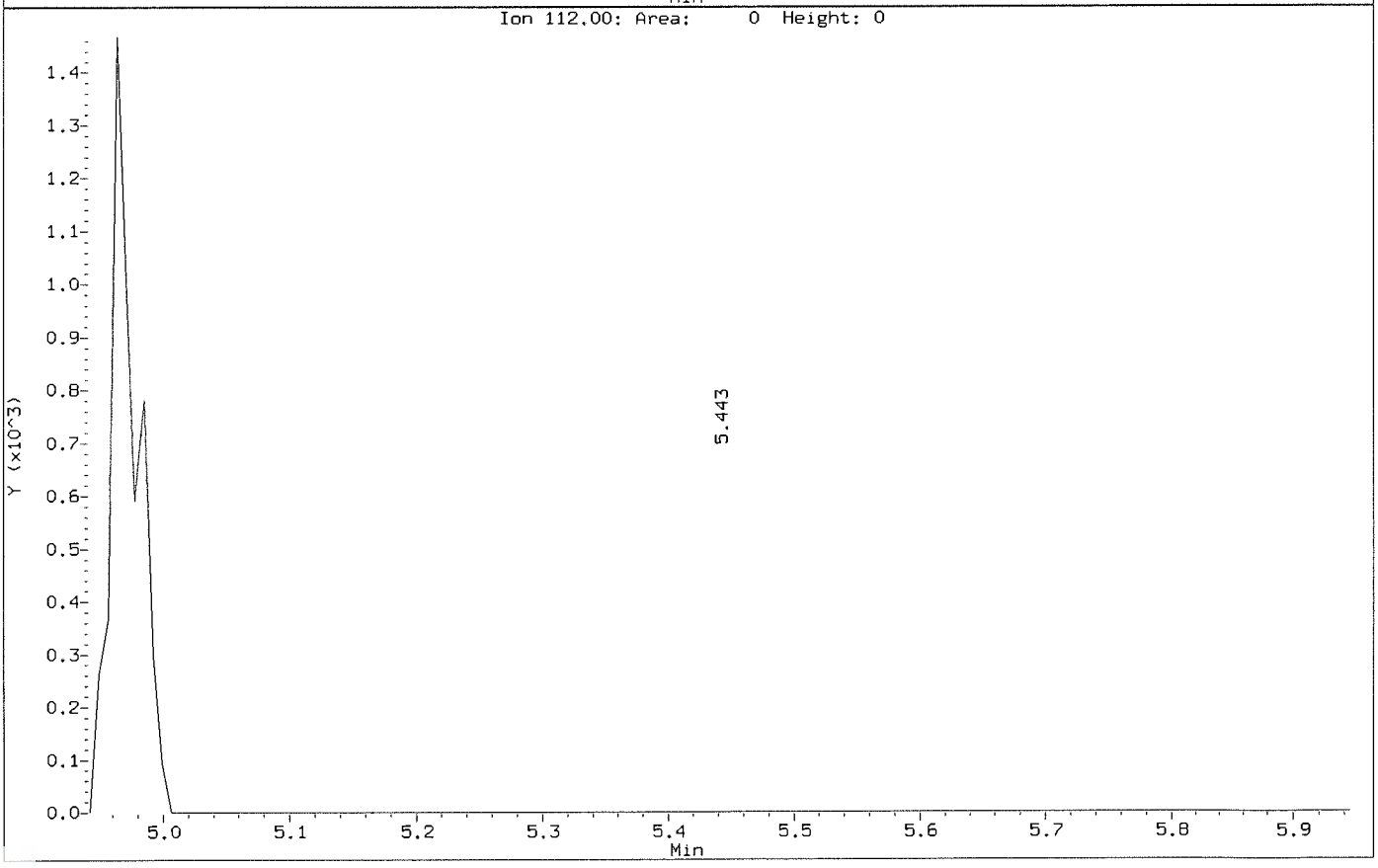




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Instrument: voa6.i
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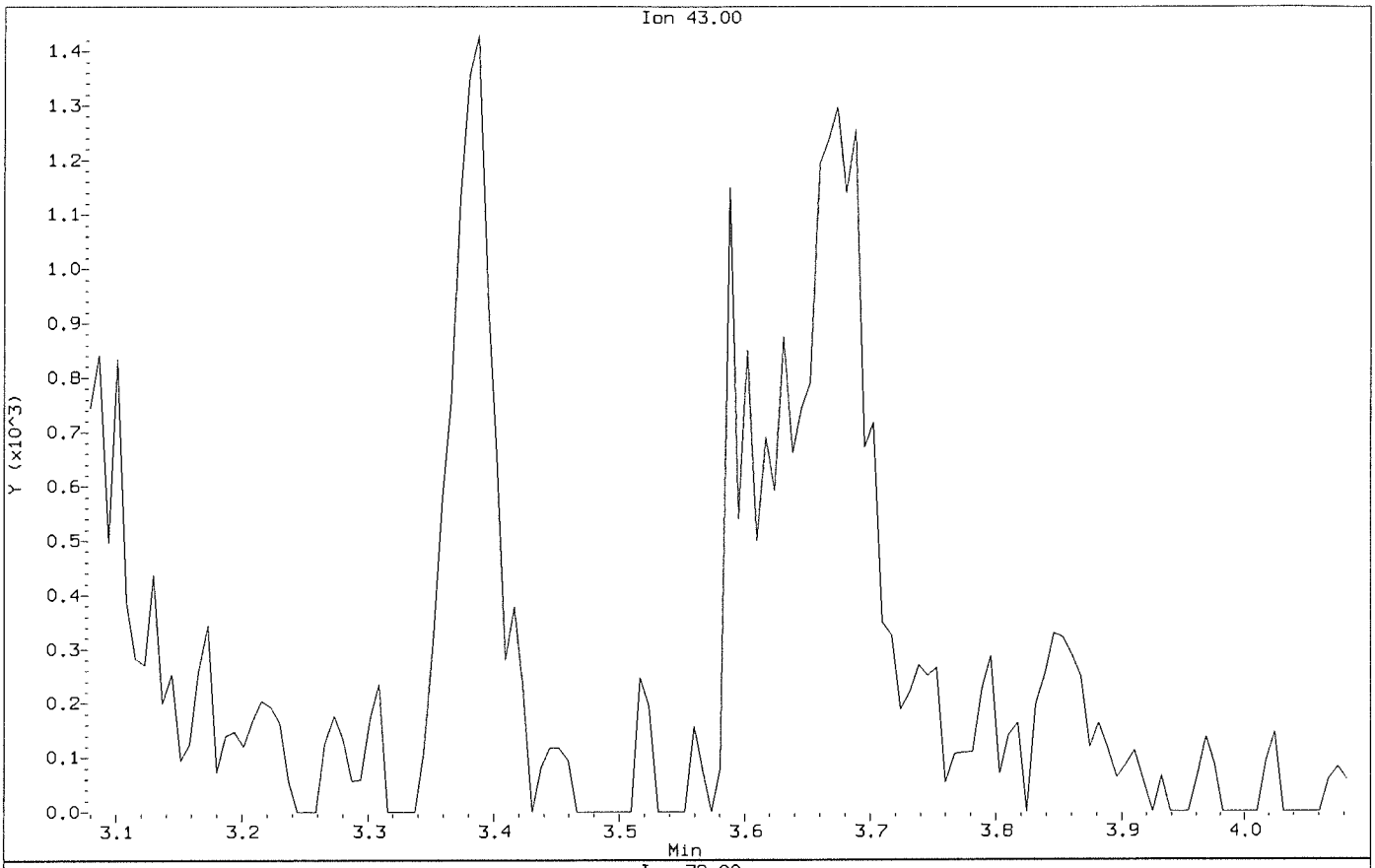
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

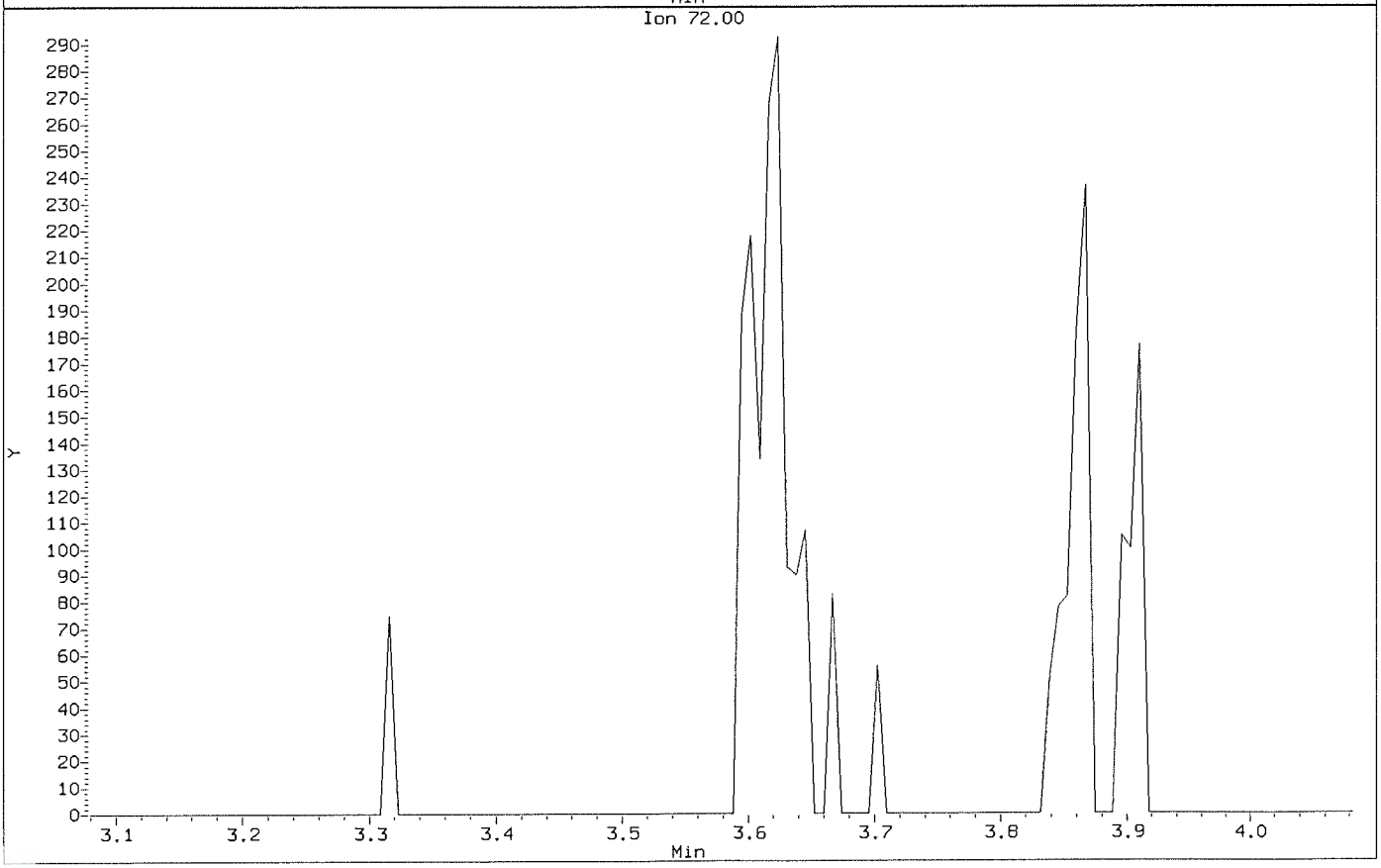




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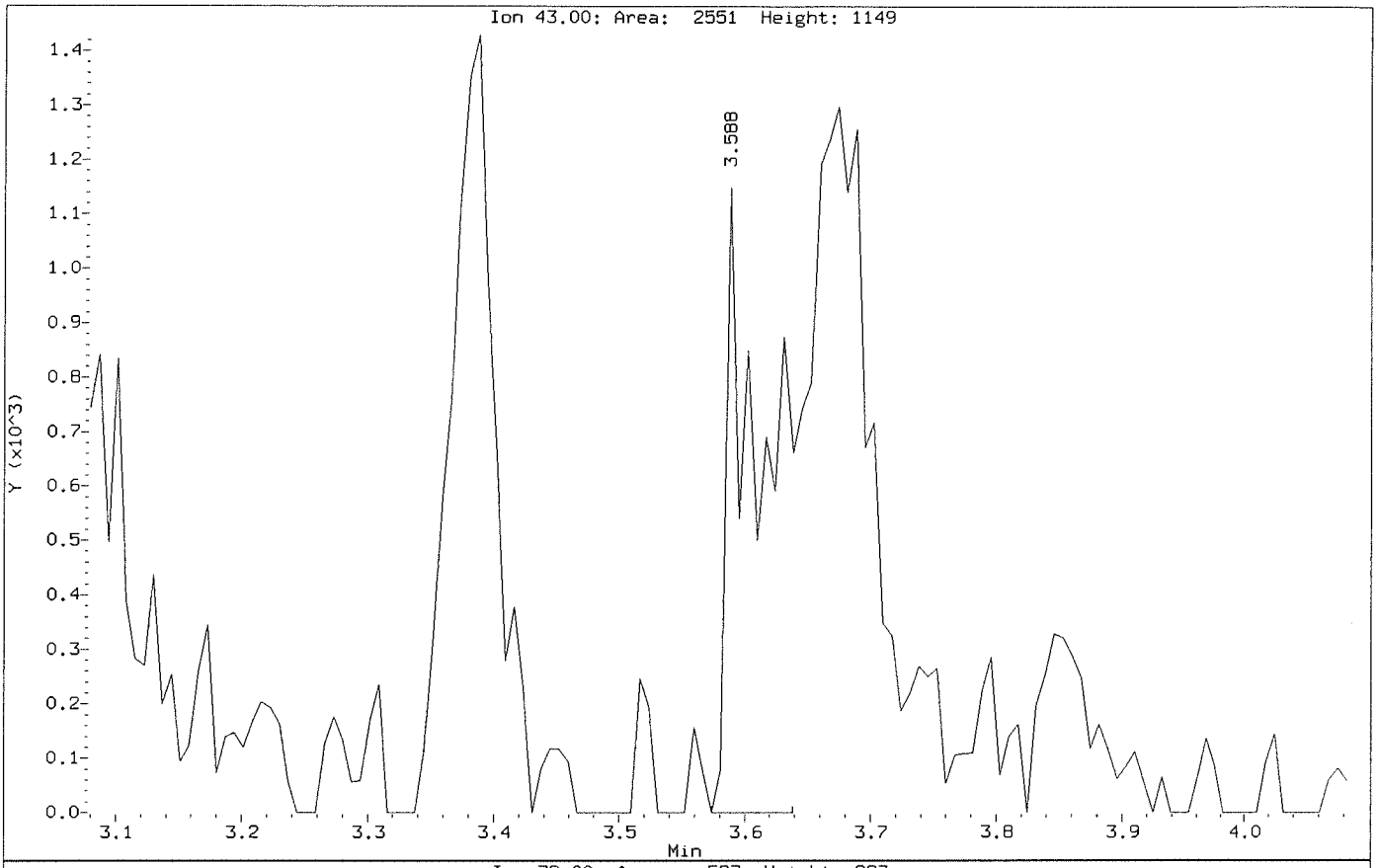
Compound: 2-Butanone
CAS Number: 78-93-3

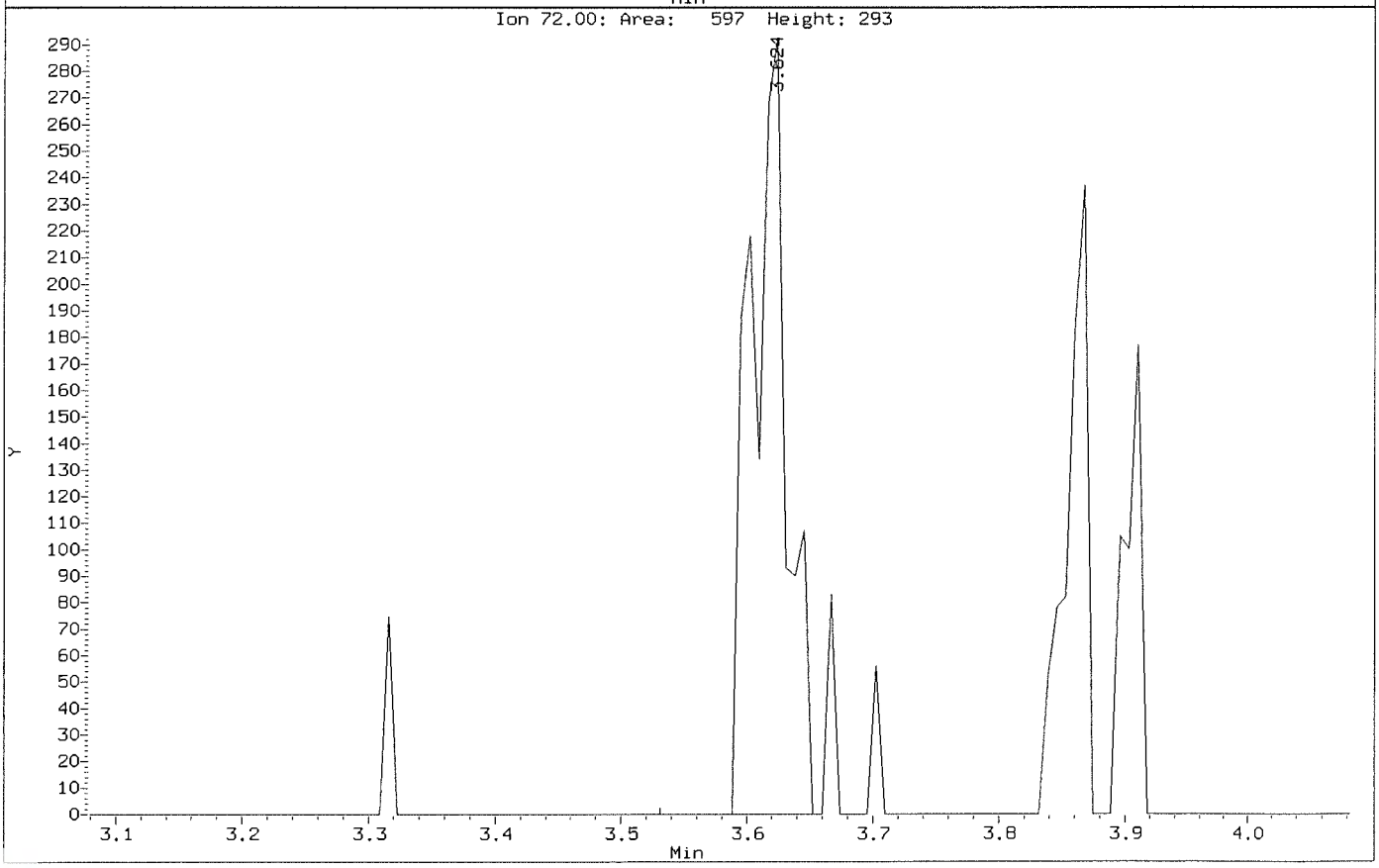




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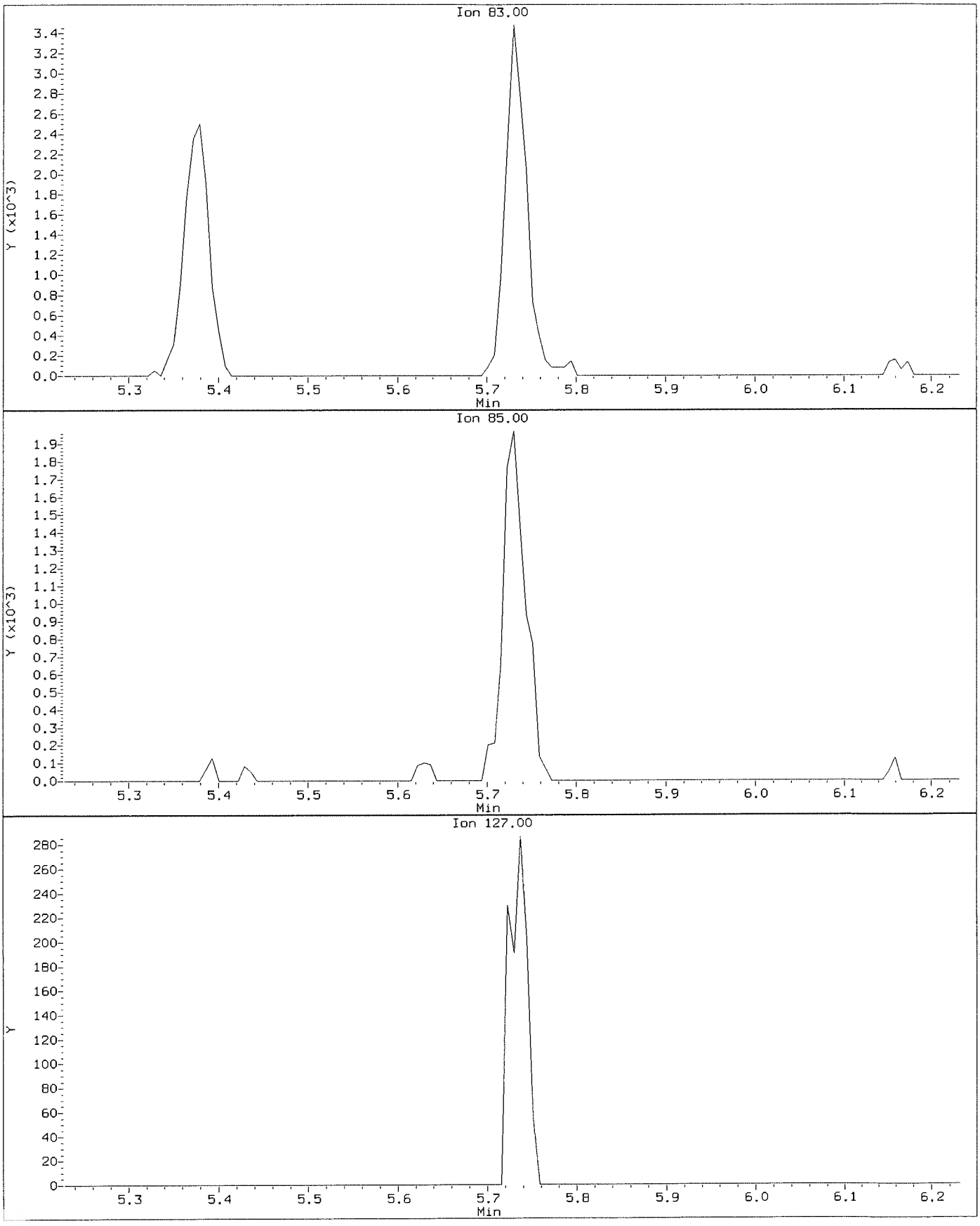
Compound: 2-Butanone
CAS Number: 78-93-3





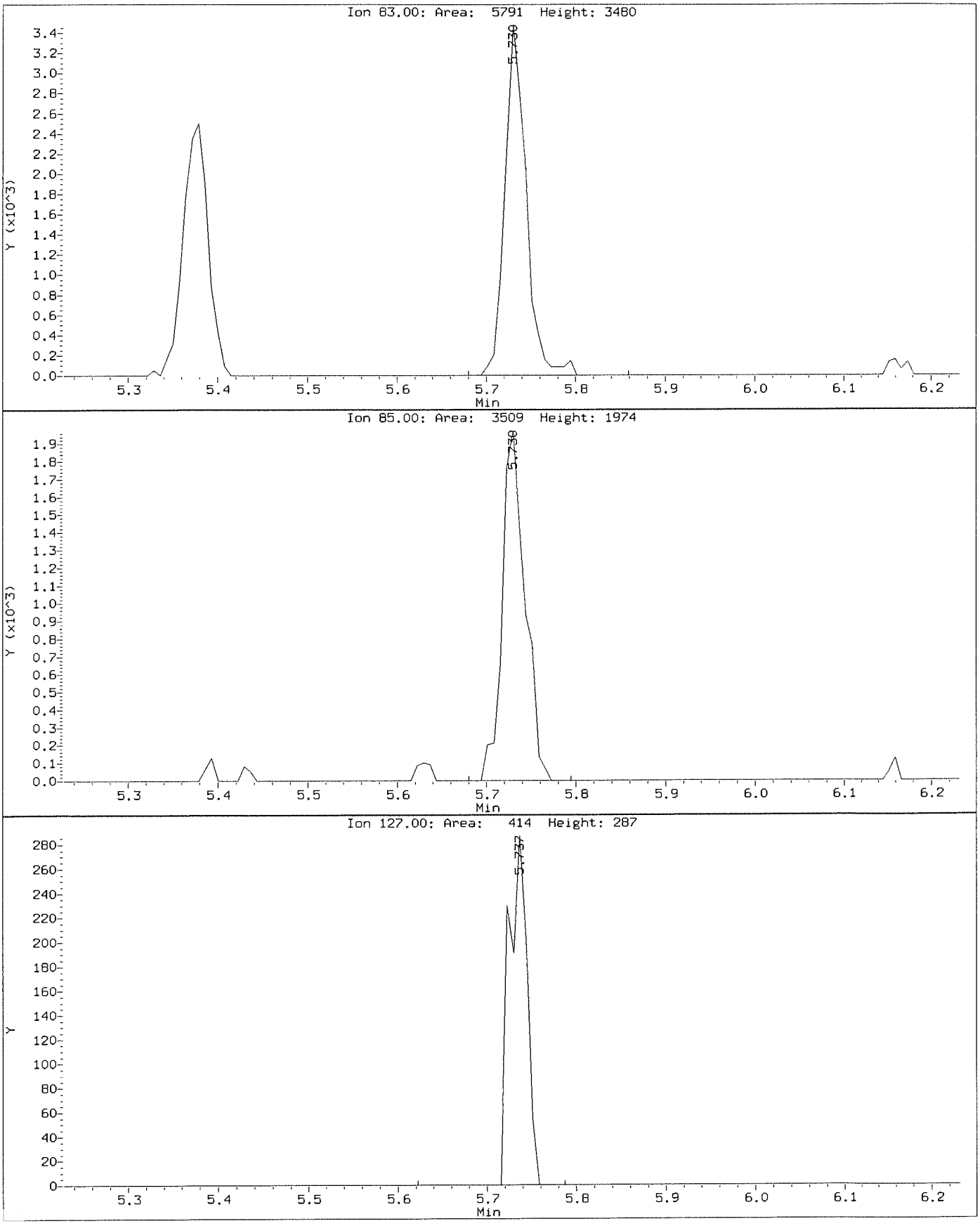
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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Bromodichloromethane
CAS Number: 75-27-4



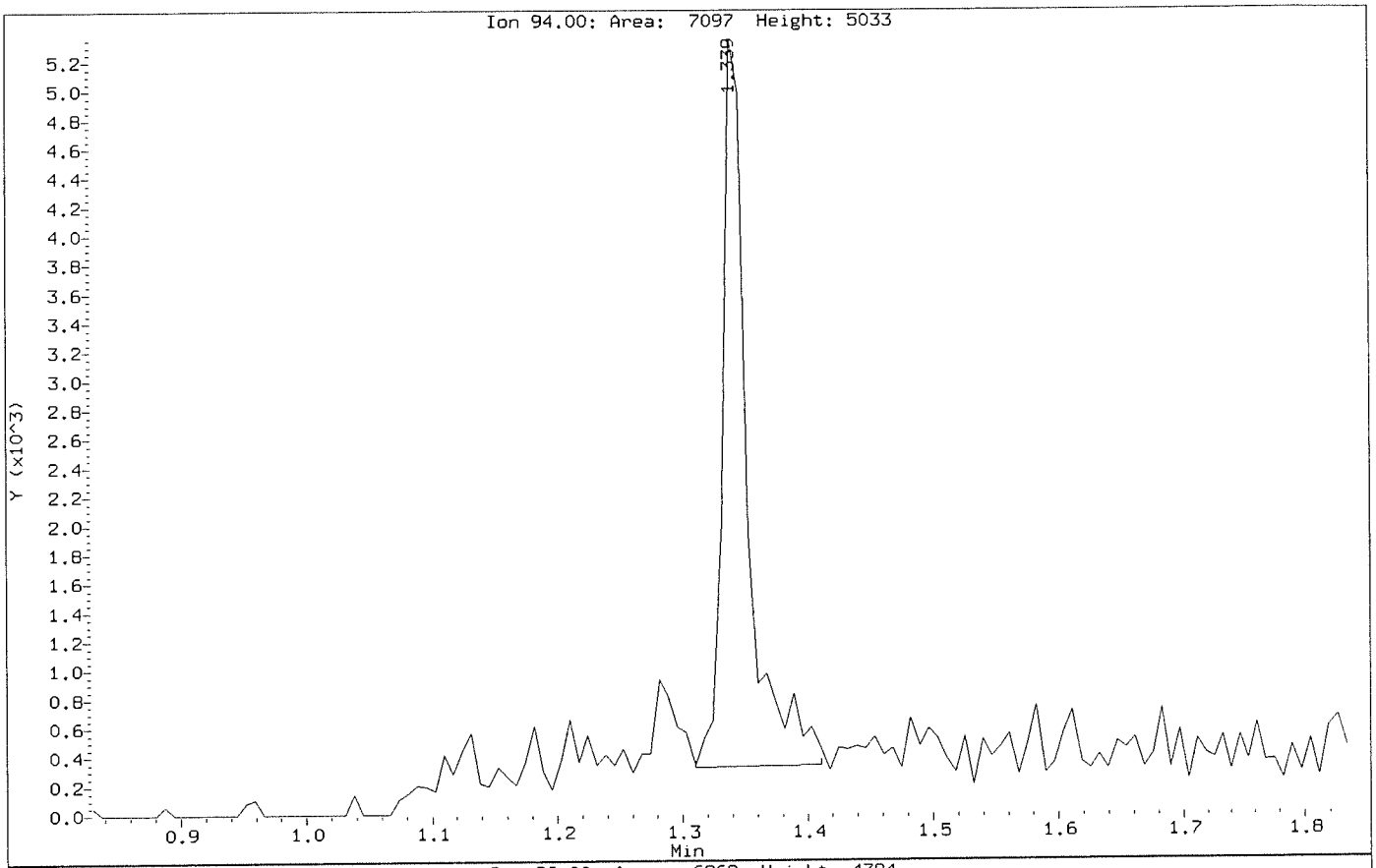
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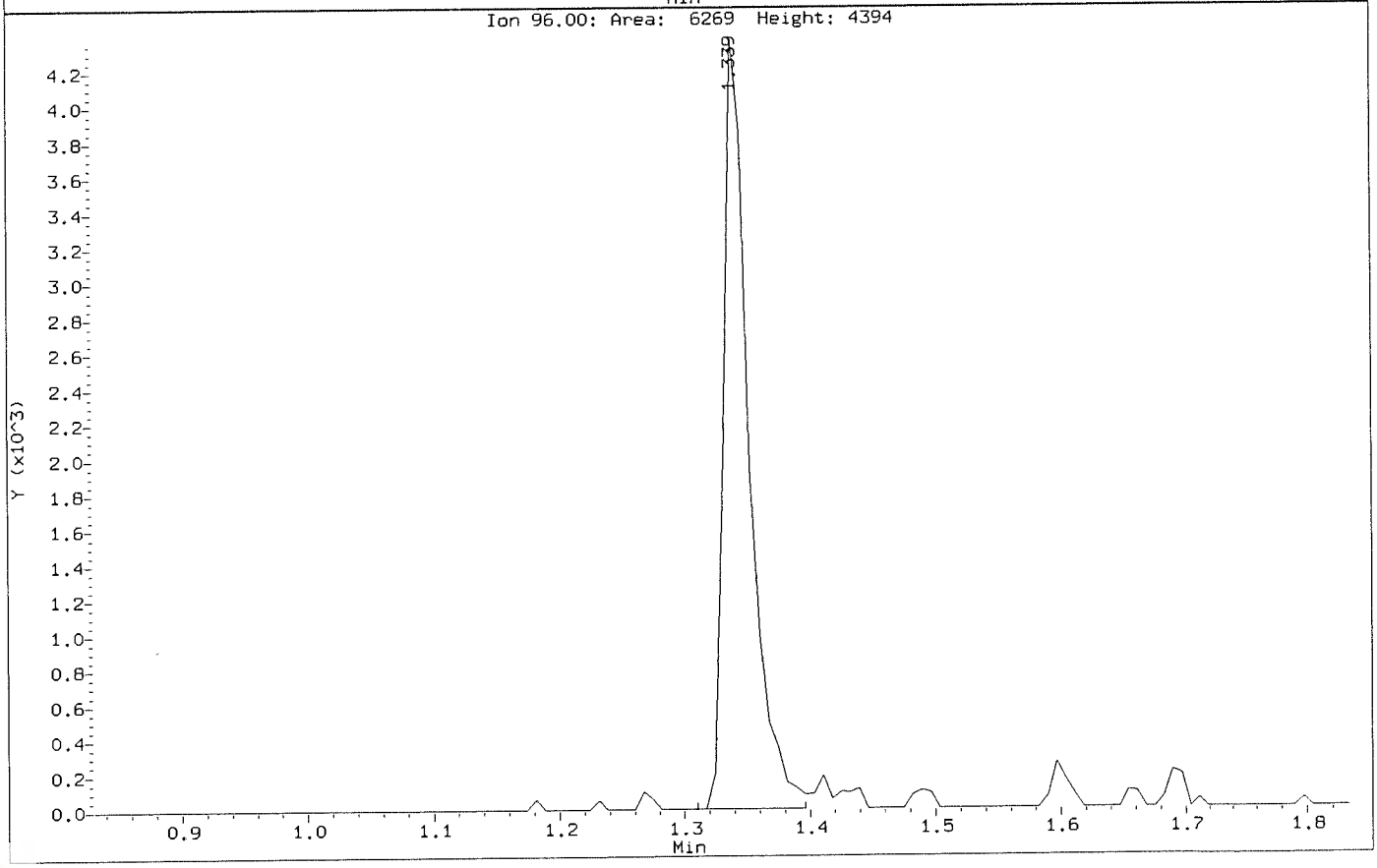
Compound: Bromodichloromethane
CAS Number: 75-27-4



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Instrument: voa6.i
Client Sample ID: VSTD002

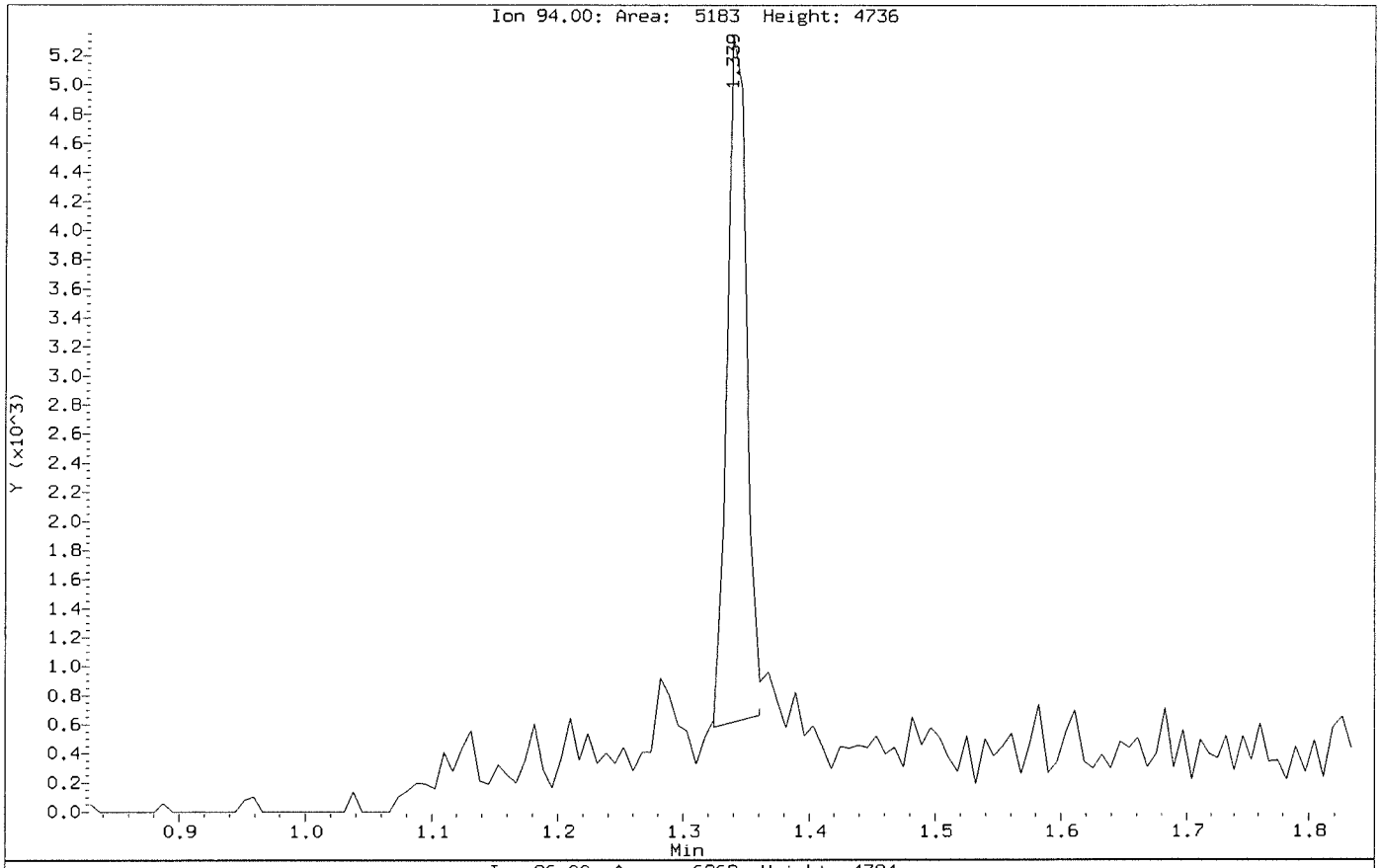
Compound: Bromomethane
CAS Number: 74-83-9

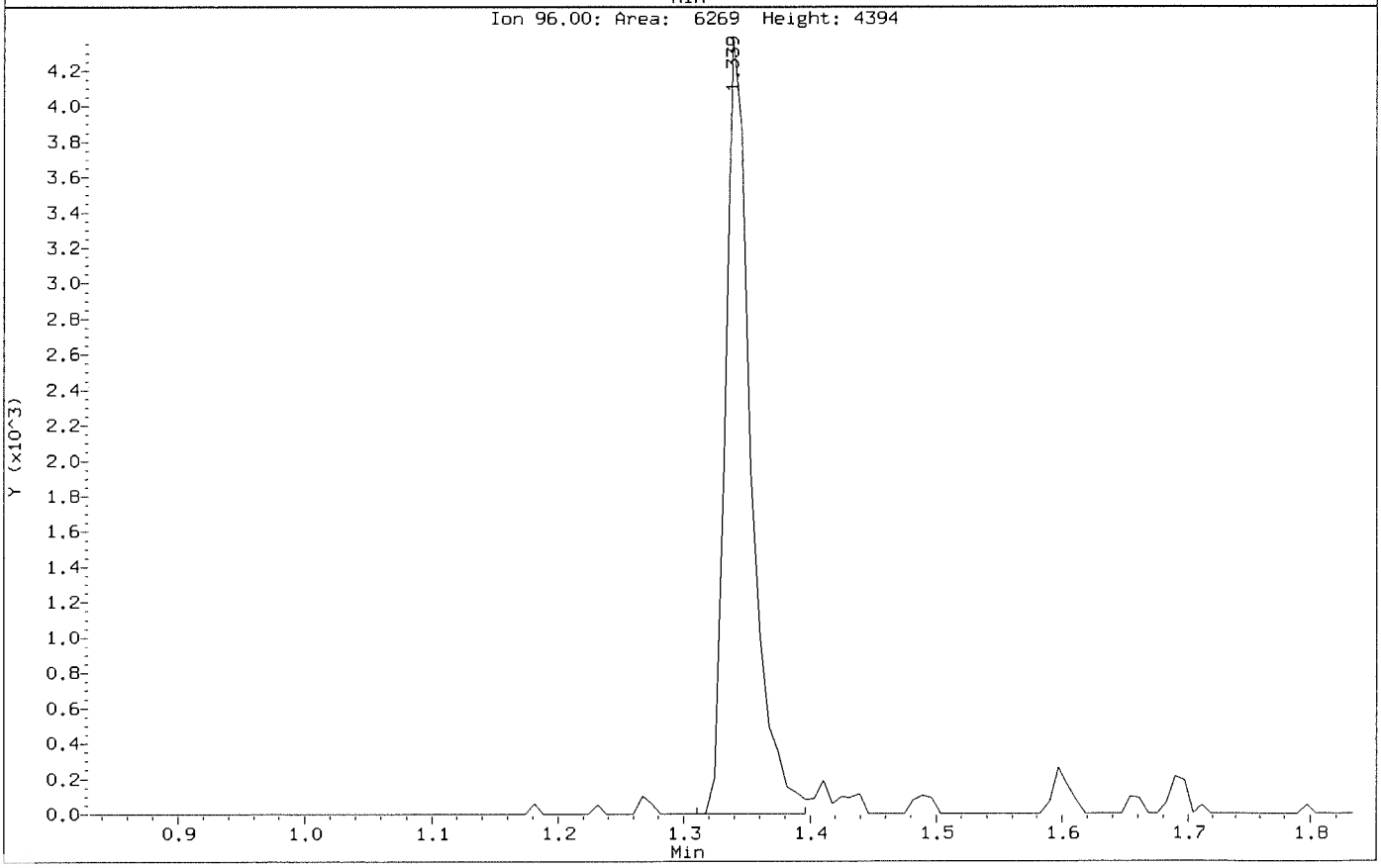




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Client Sample ID: VSTD002

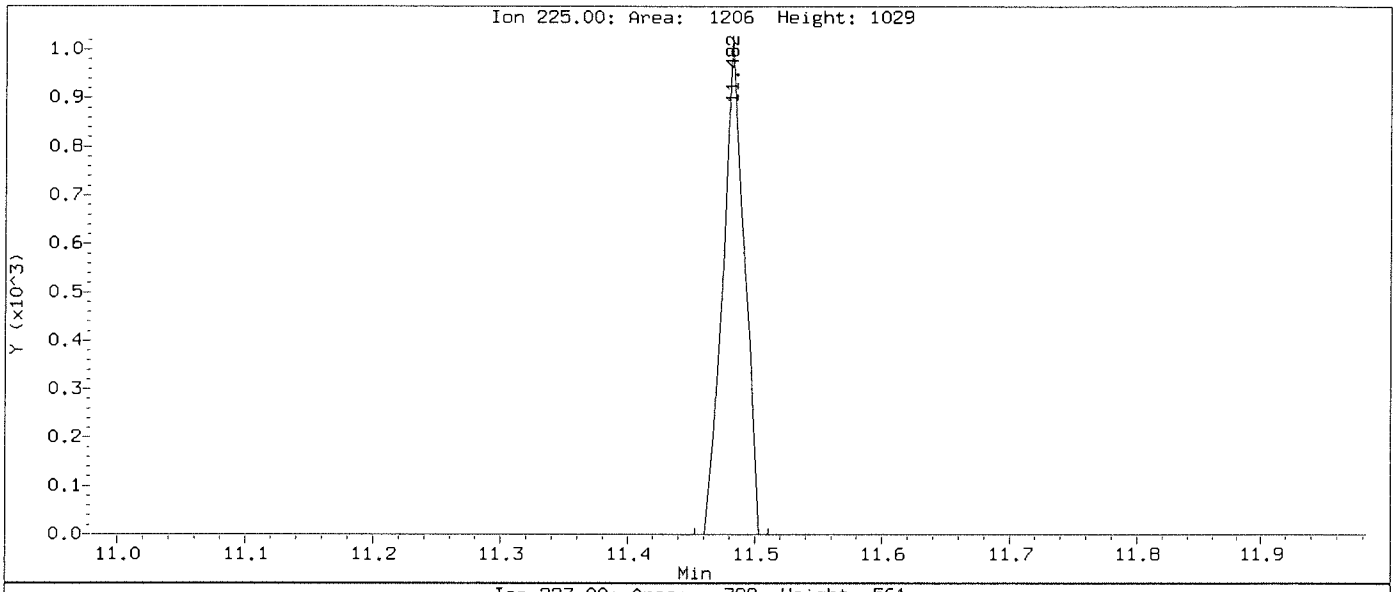
Compound: Bromomethane
CAS Number: 74-83-9

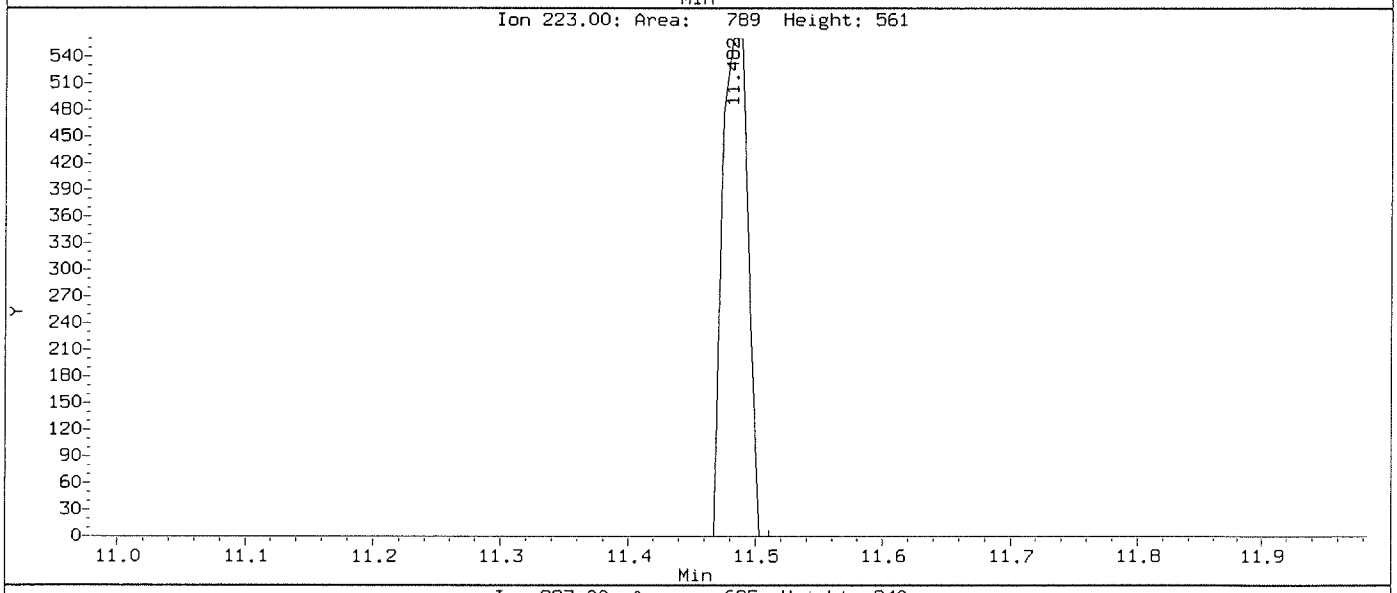


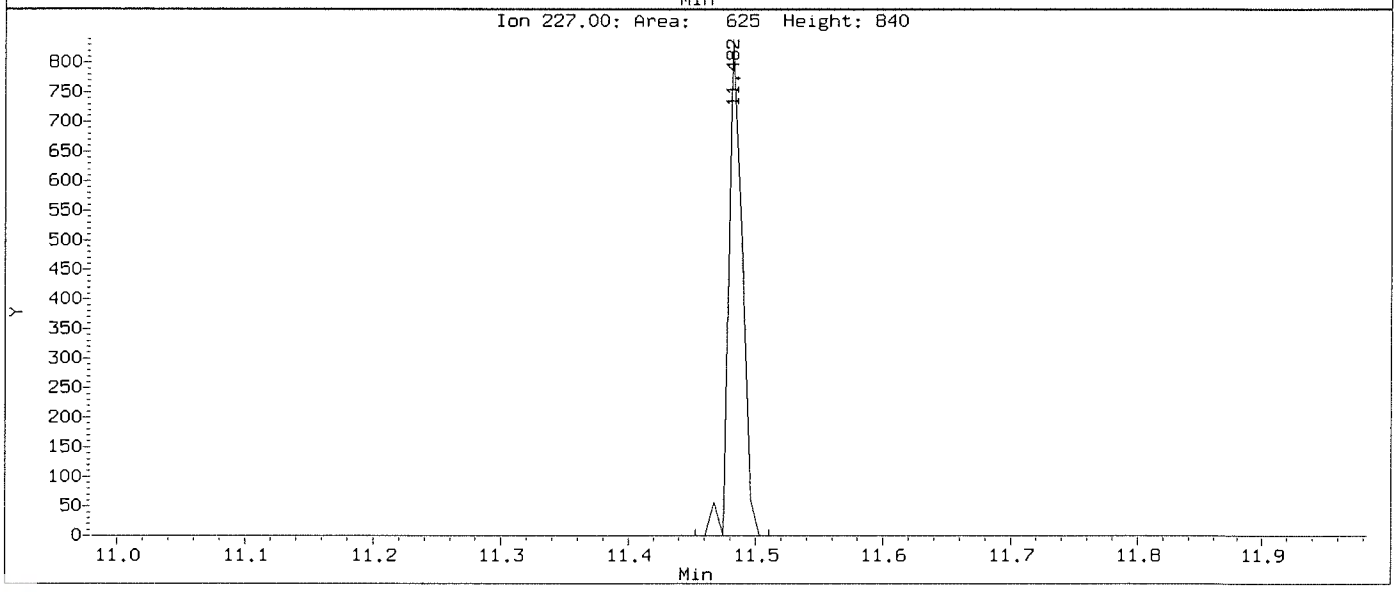


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Injection Date: 03-NOV-2020 13:24
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

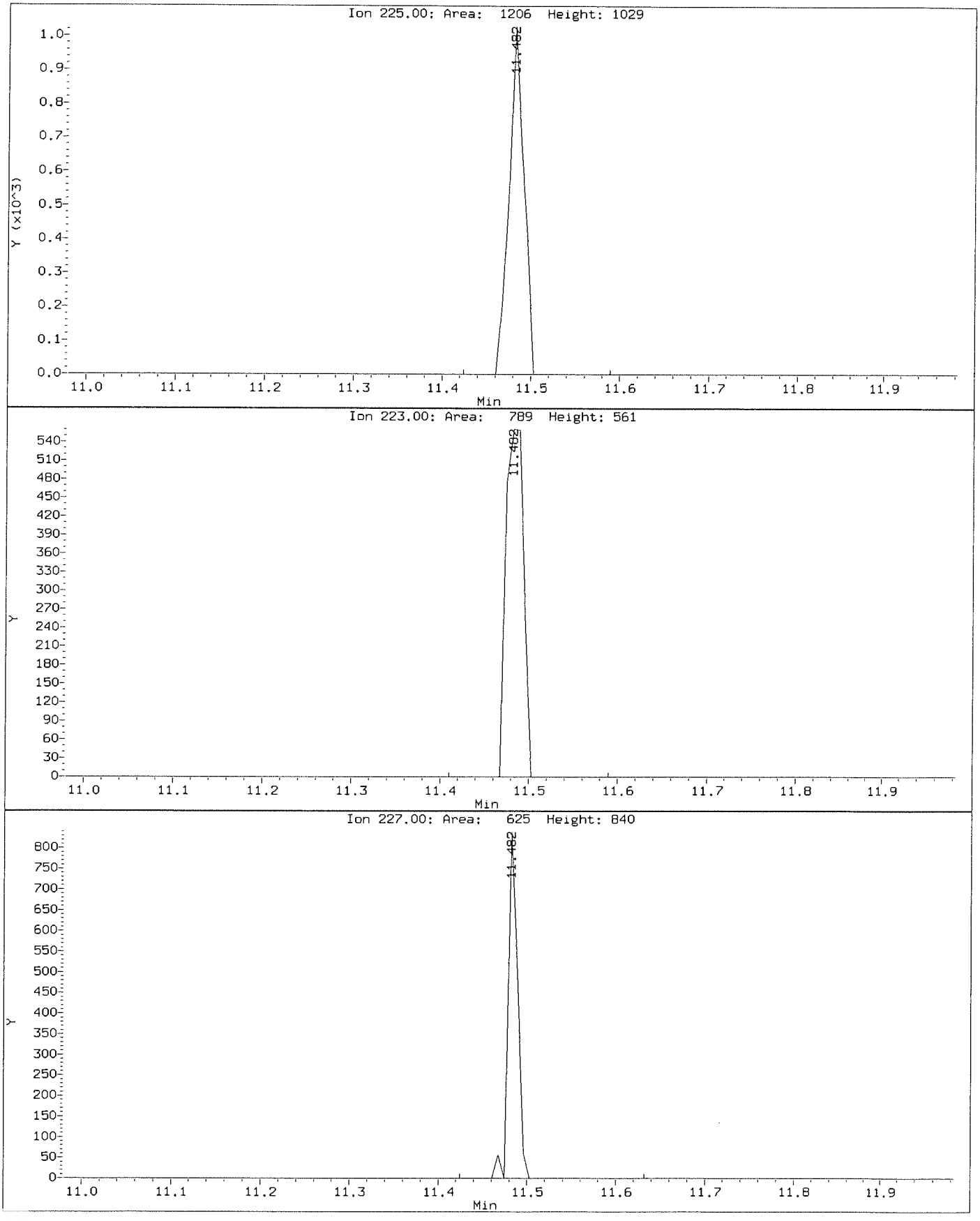






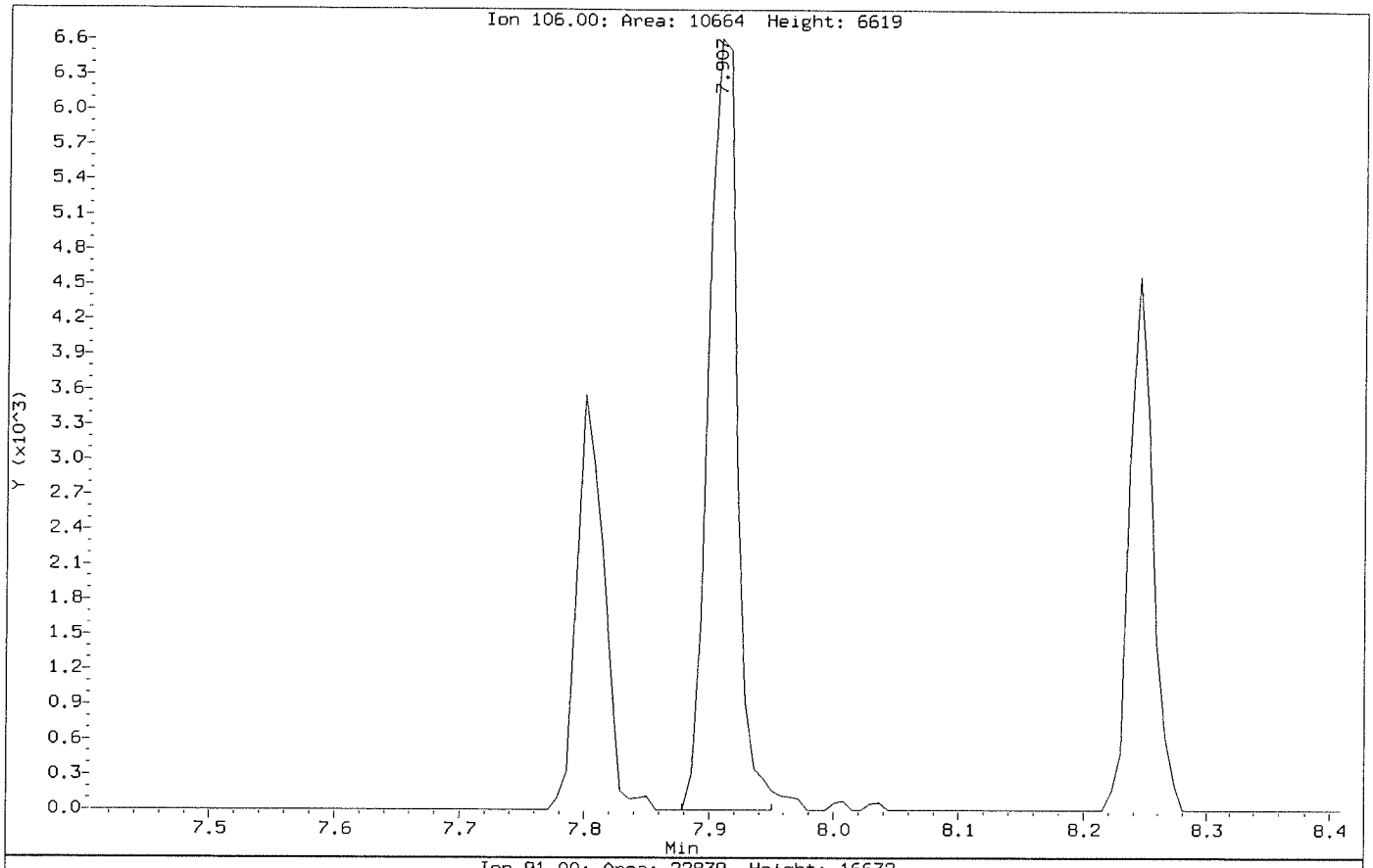
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Instrument: voa6.i
Client Sample ID: VSTD002

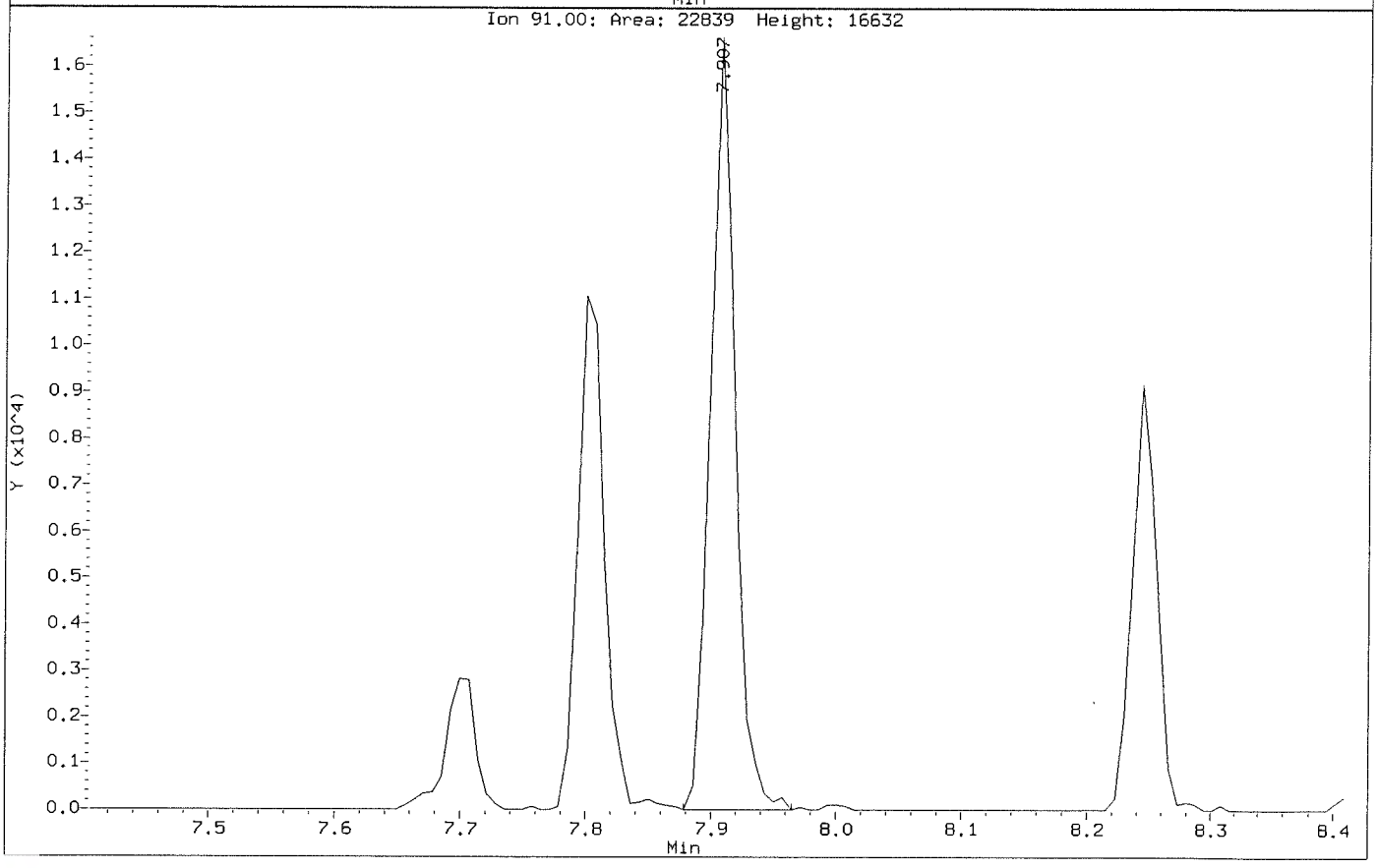
Compound: Hexachlorobutadiene
CAS Number: 87-68-3



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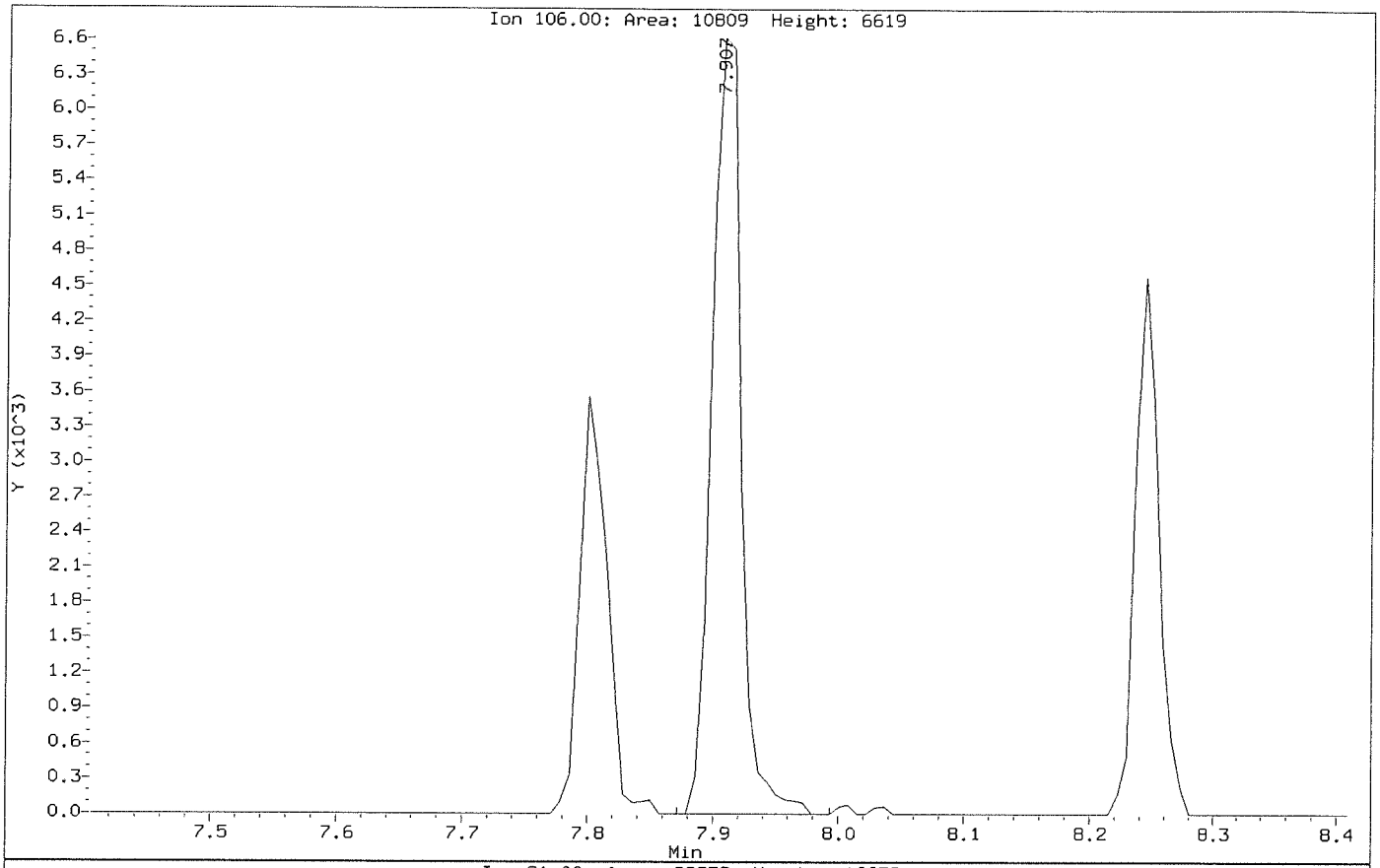
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CAS Number:

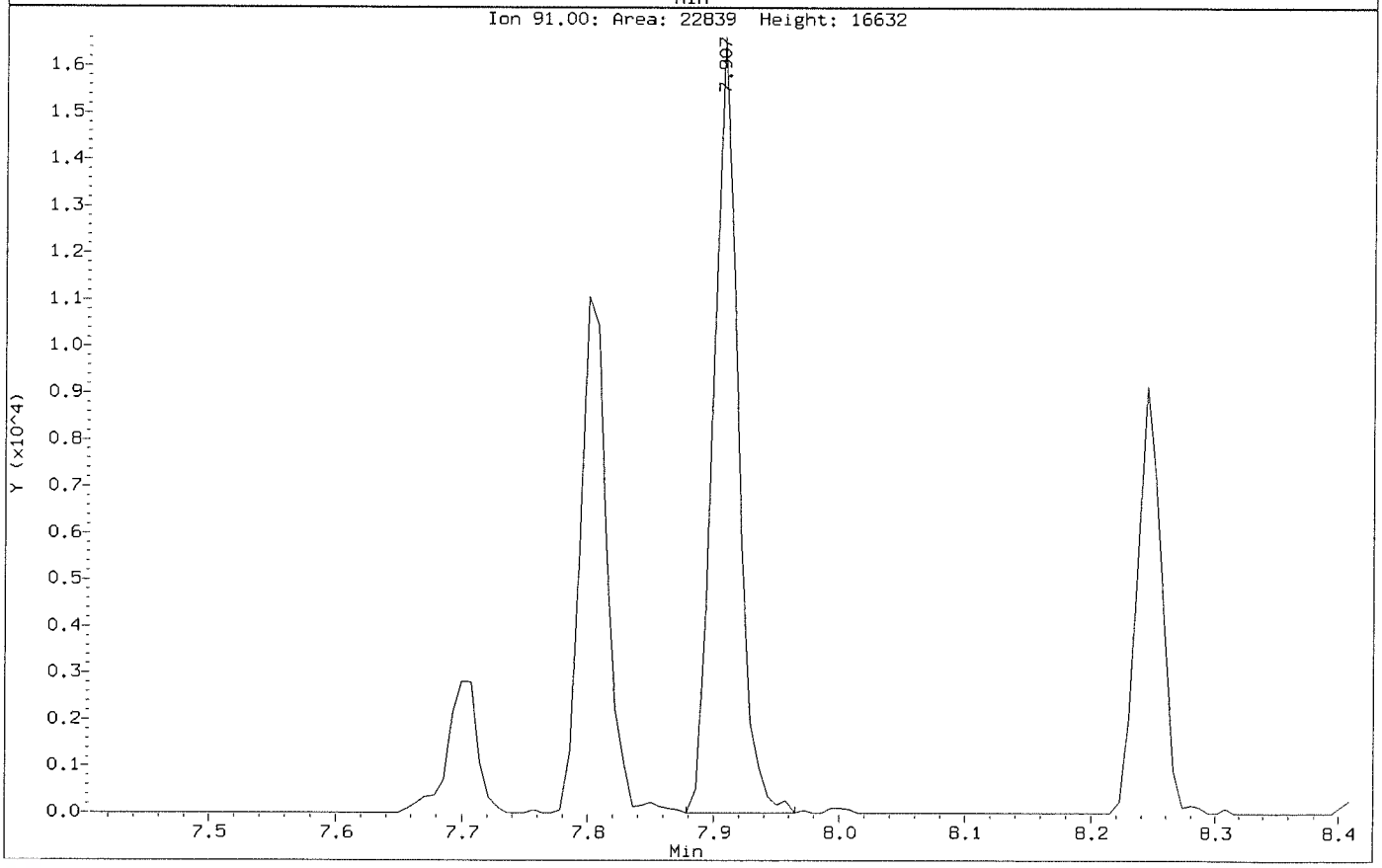




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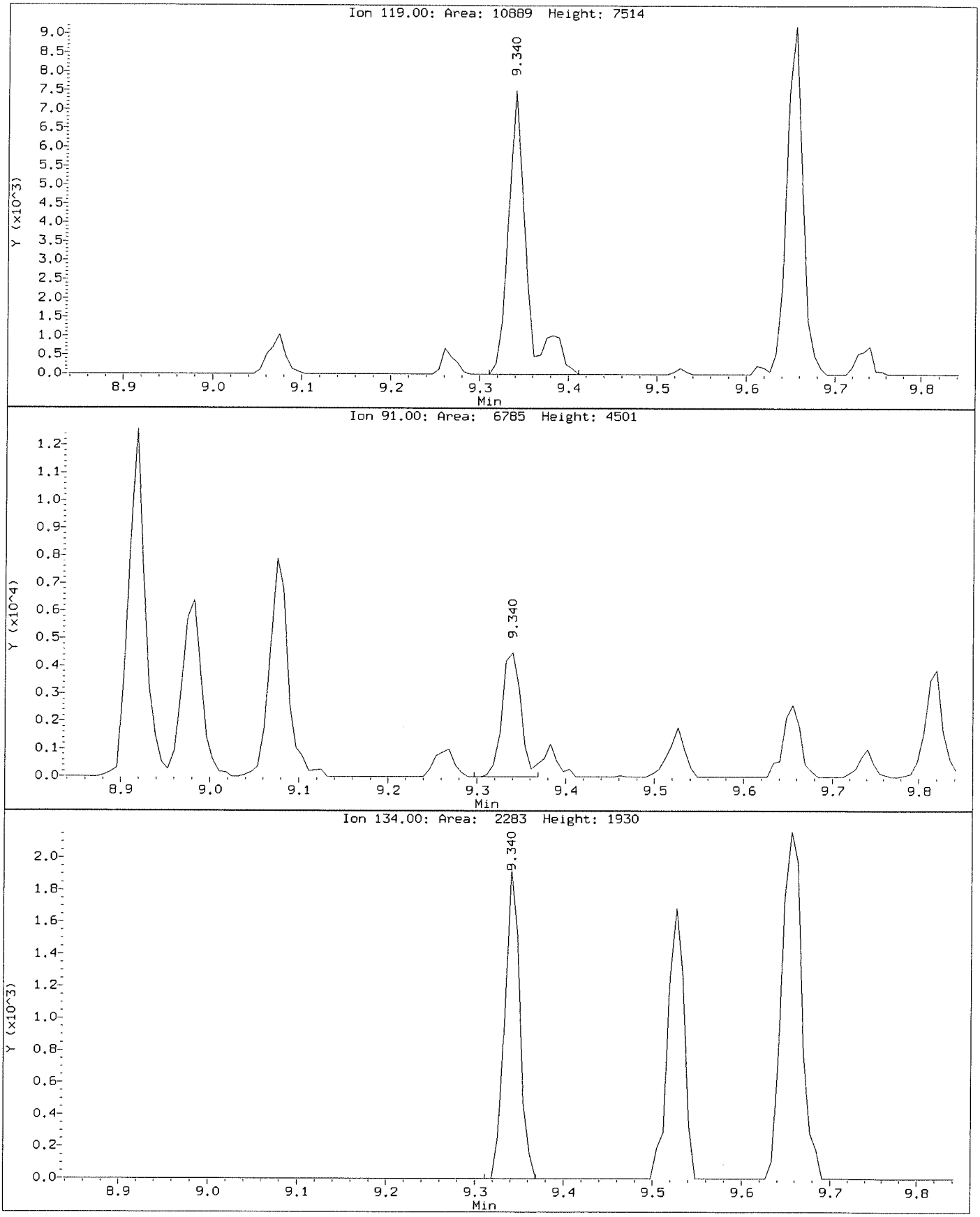
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CAS Number:





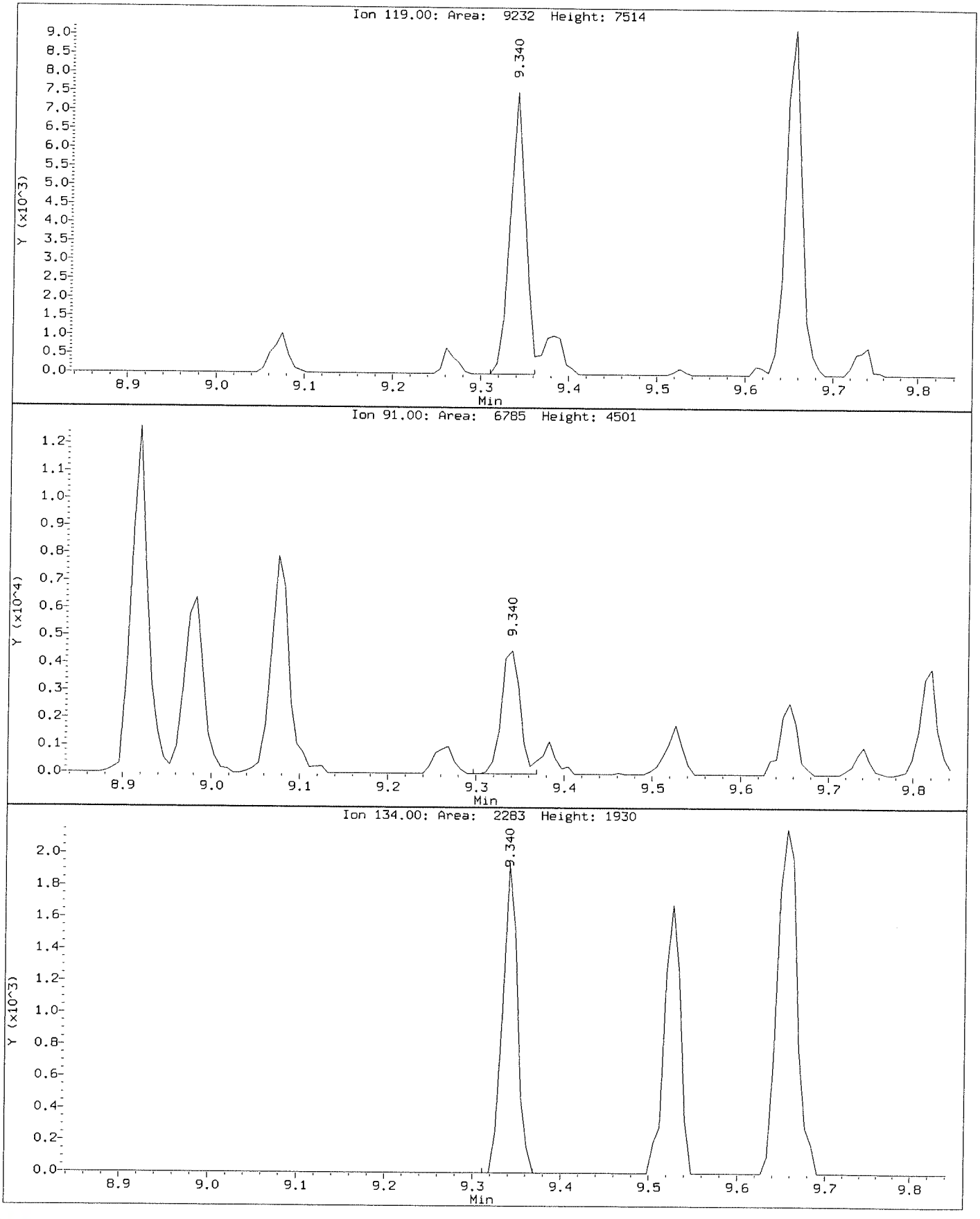
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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: tert-Butylbenzene
CAS Number: 98-06-6



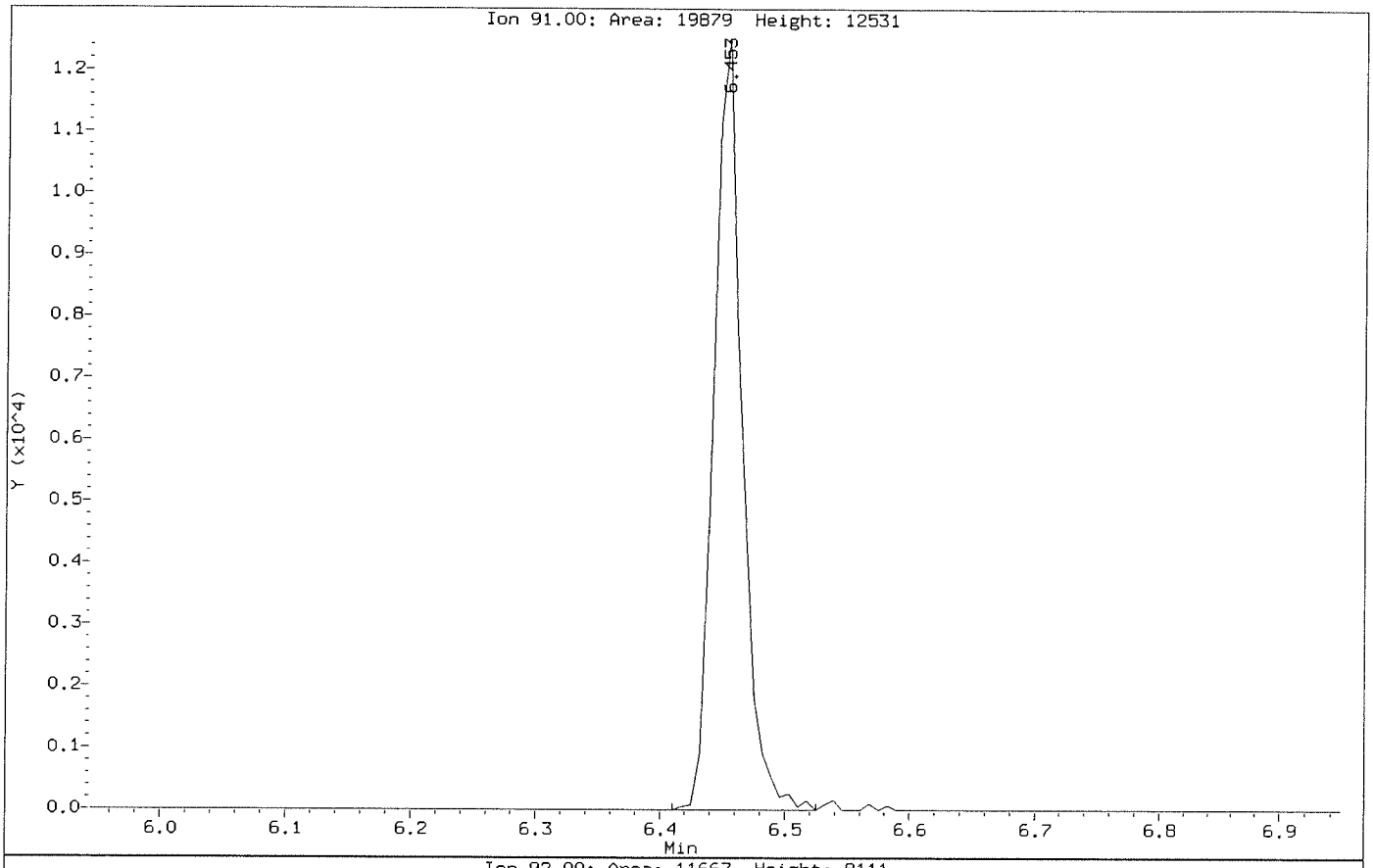
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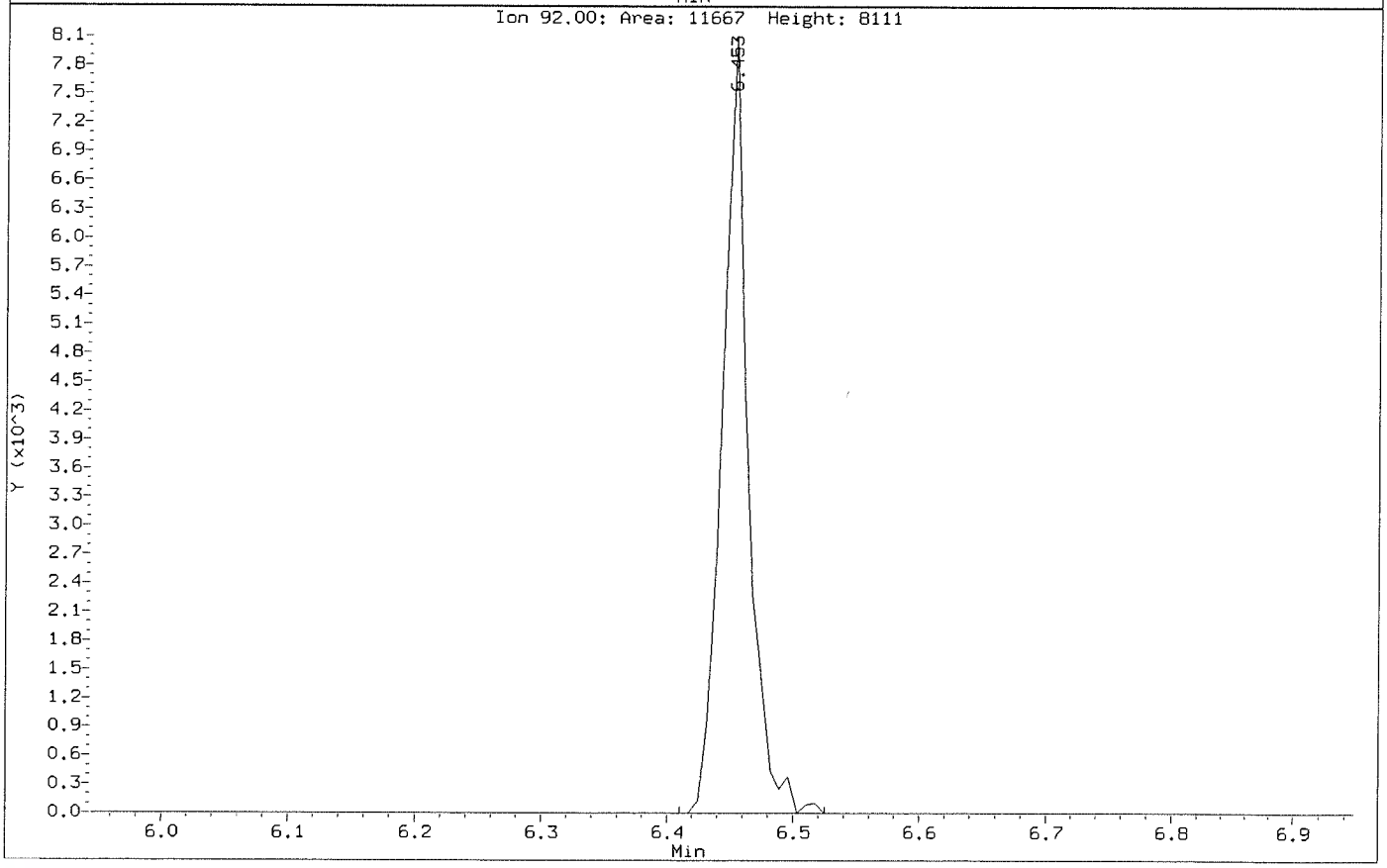
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CAS Number: 98-06-6



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Instrument: voa6.i
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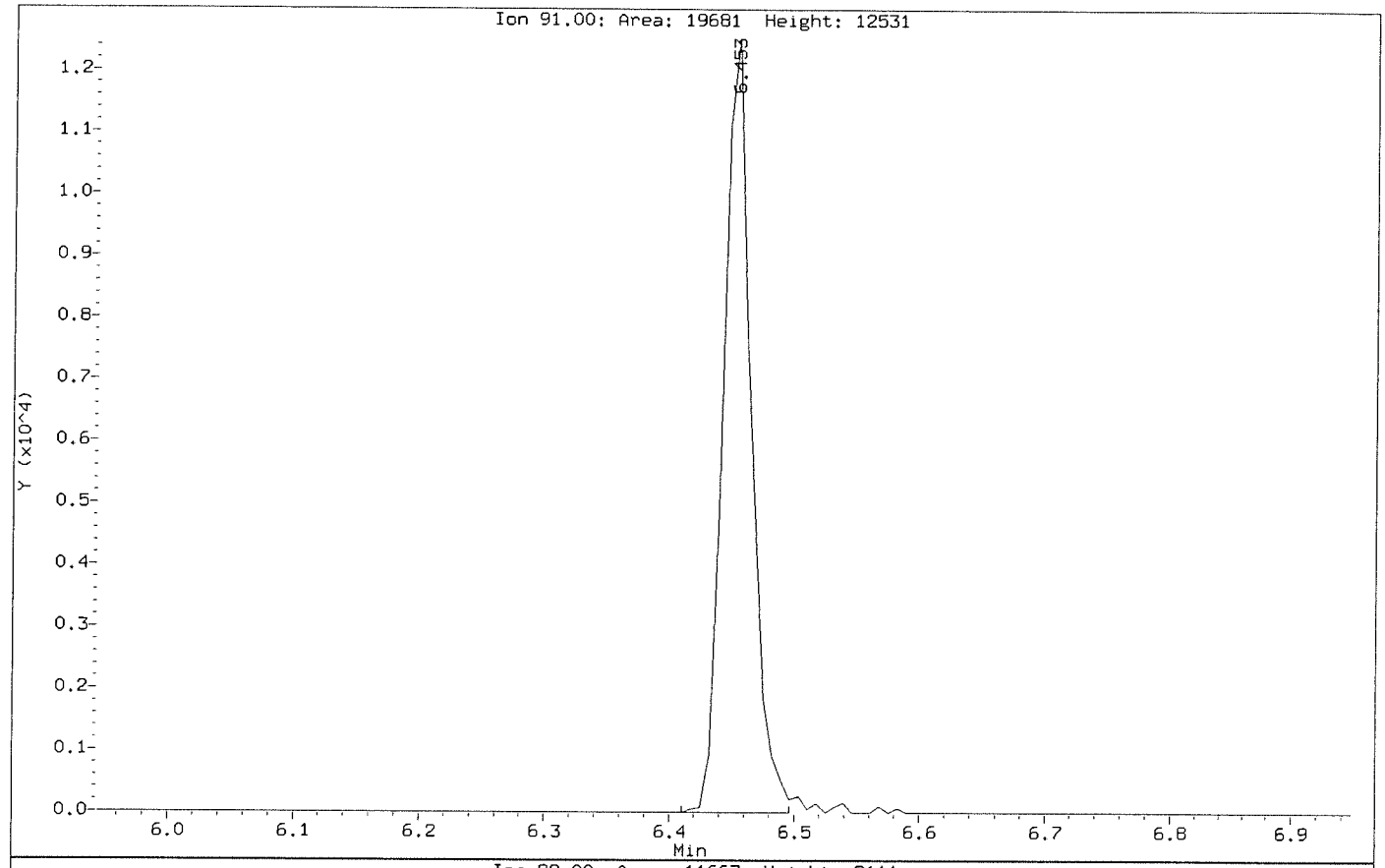
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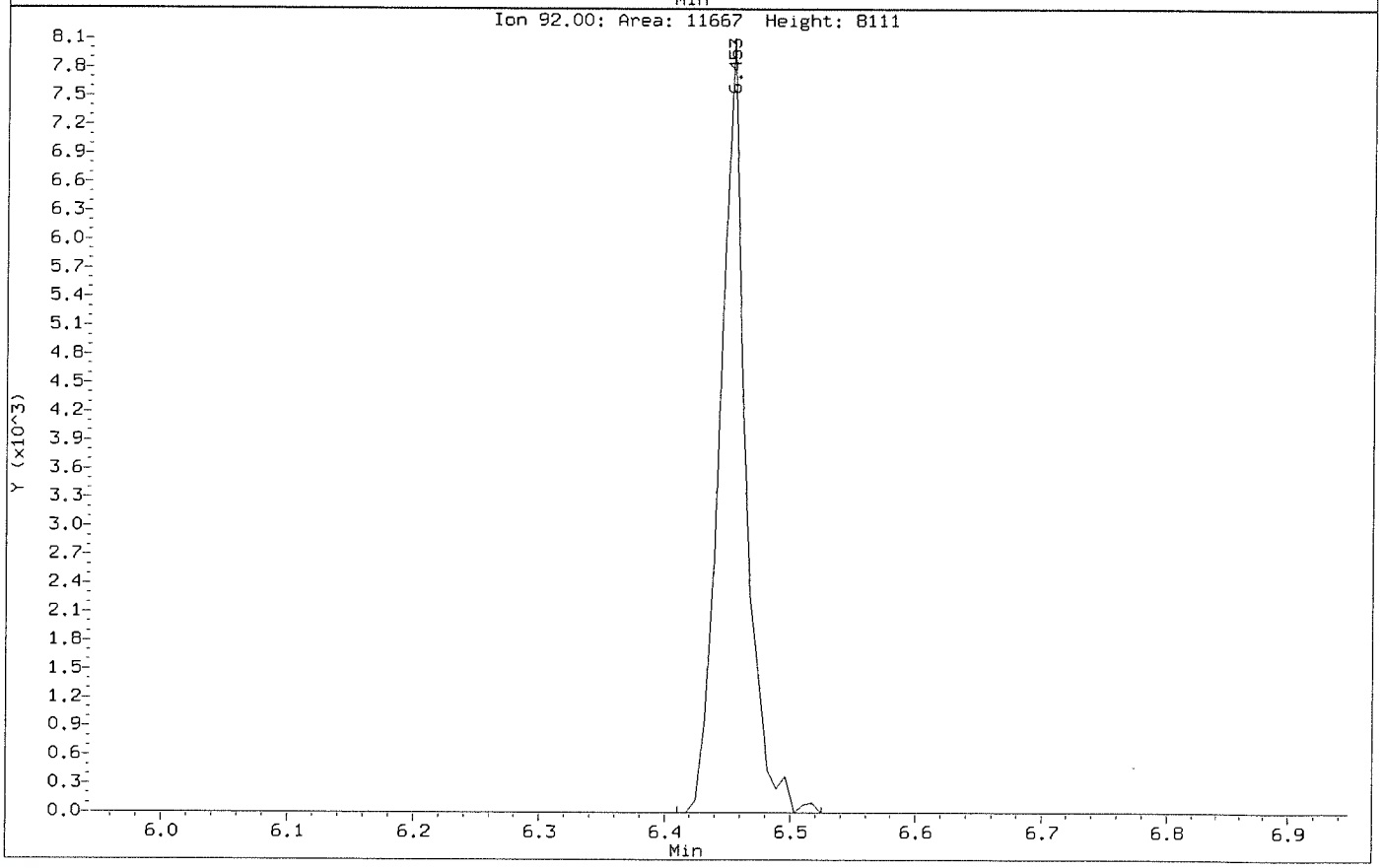




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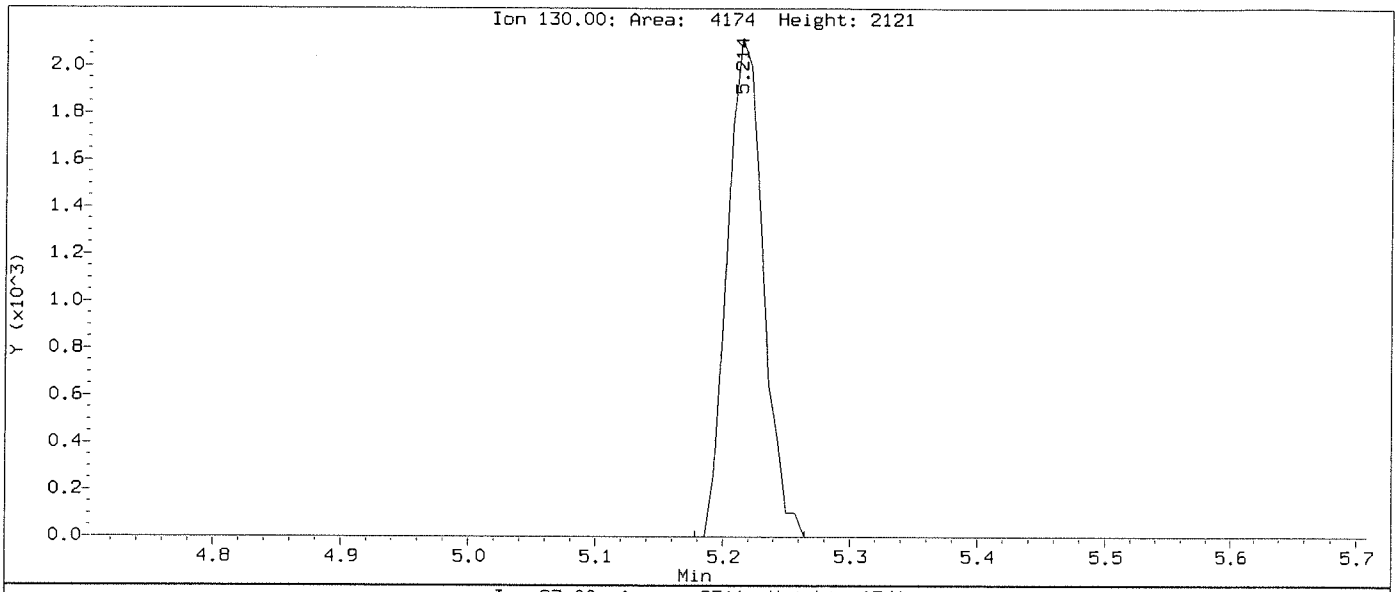
Compound: Toluene
CAS Number: 108-88-3

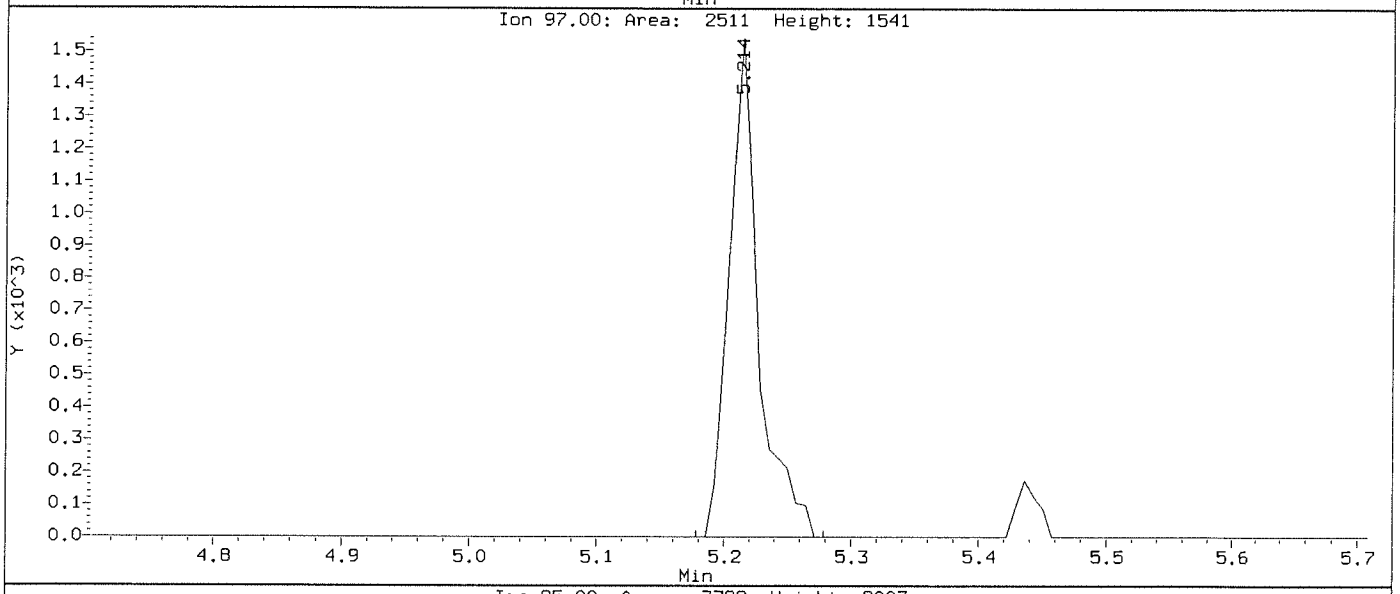


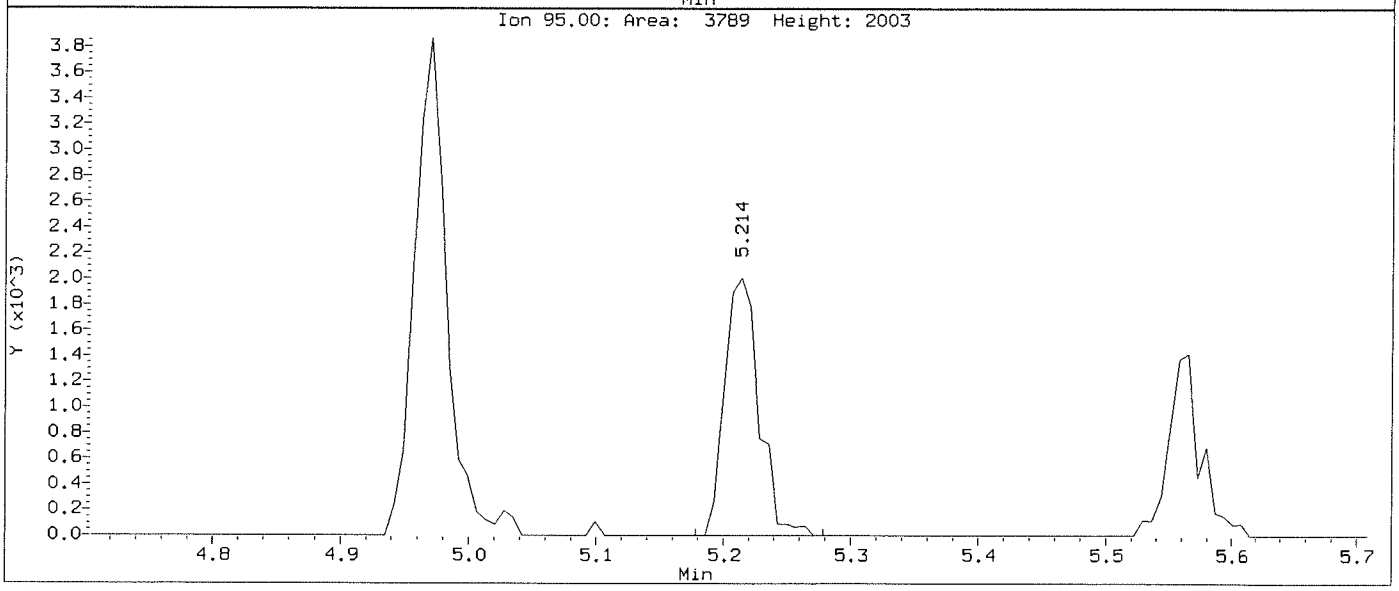


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Client Sample ID: VSTD002

Compound: Trichloroethene
CAS Number: 79-01-6

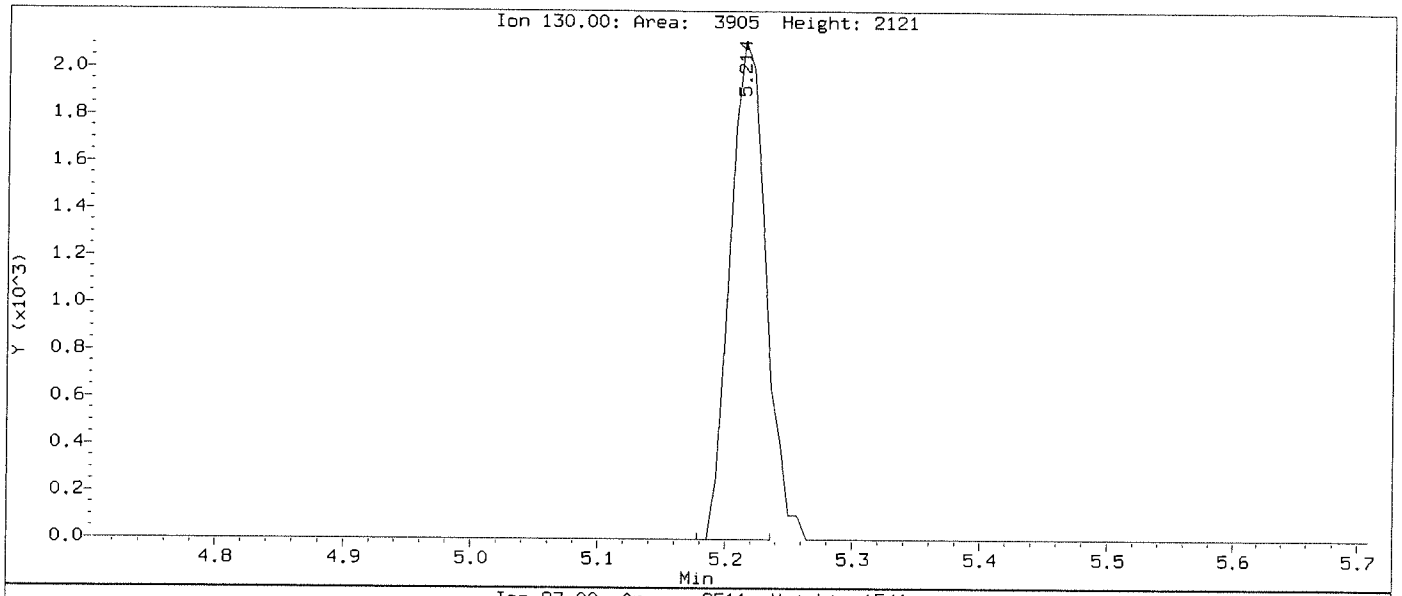


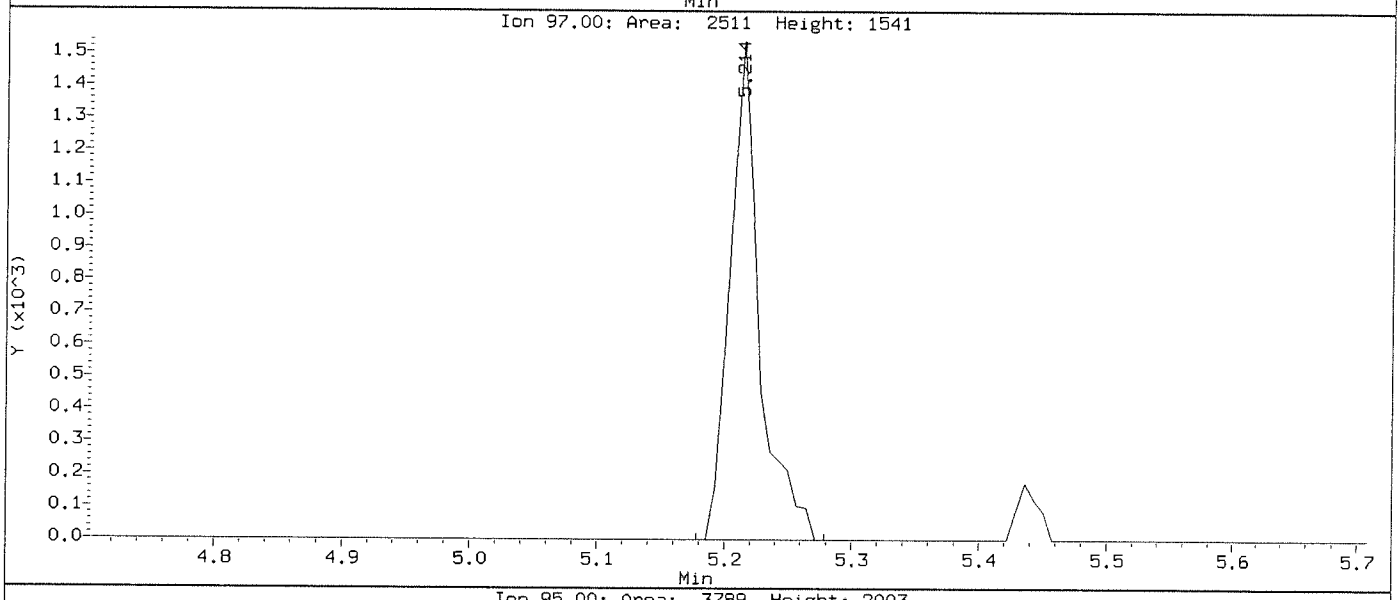


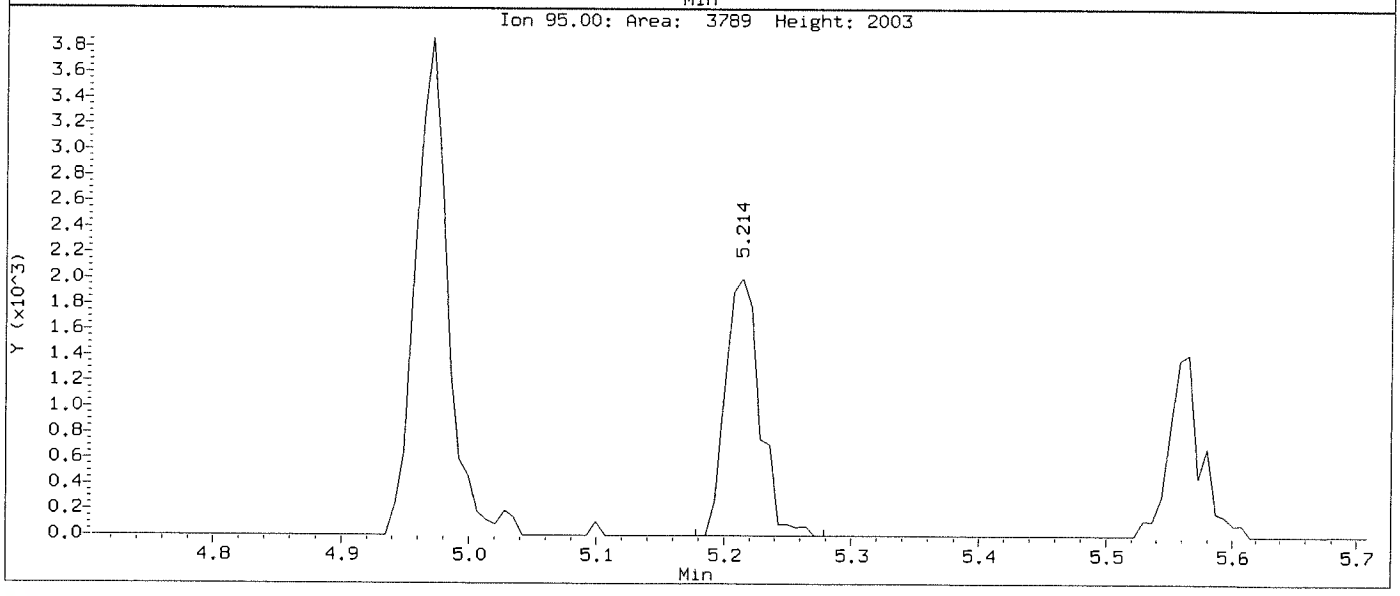


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Client Sample ID: VSTD002

Compound: Trichloroethene
CAS Number: 79-01-6

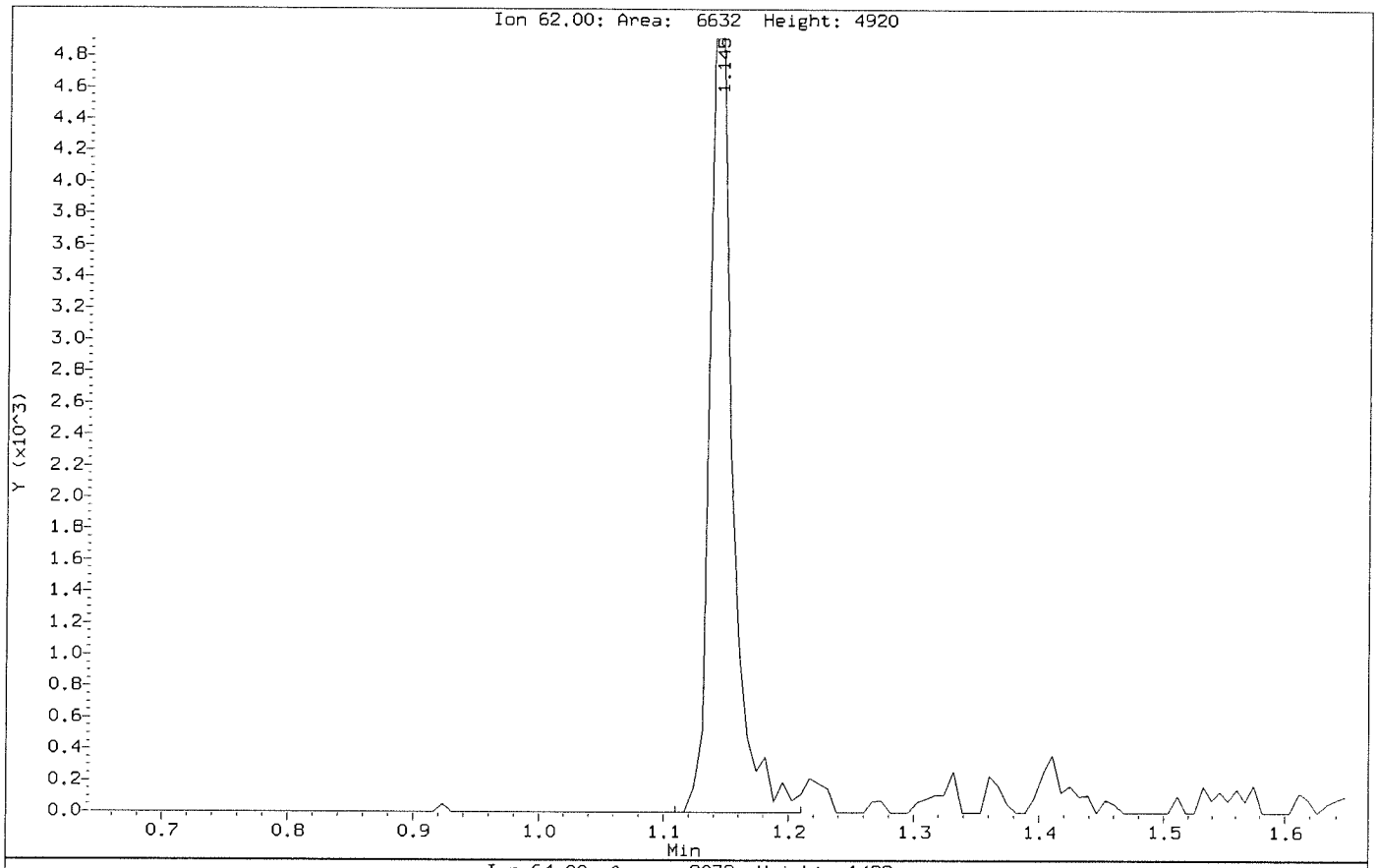


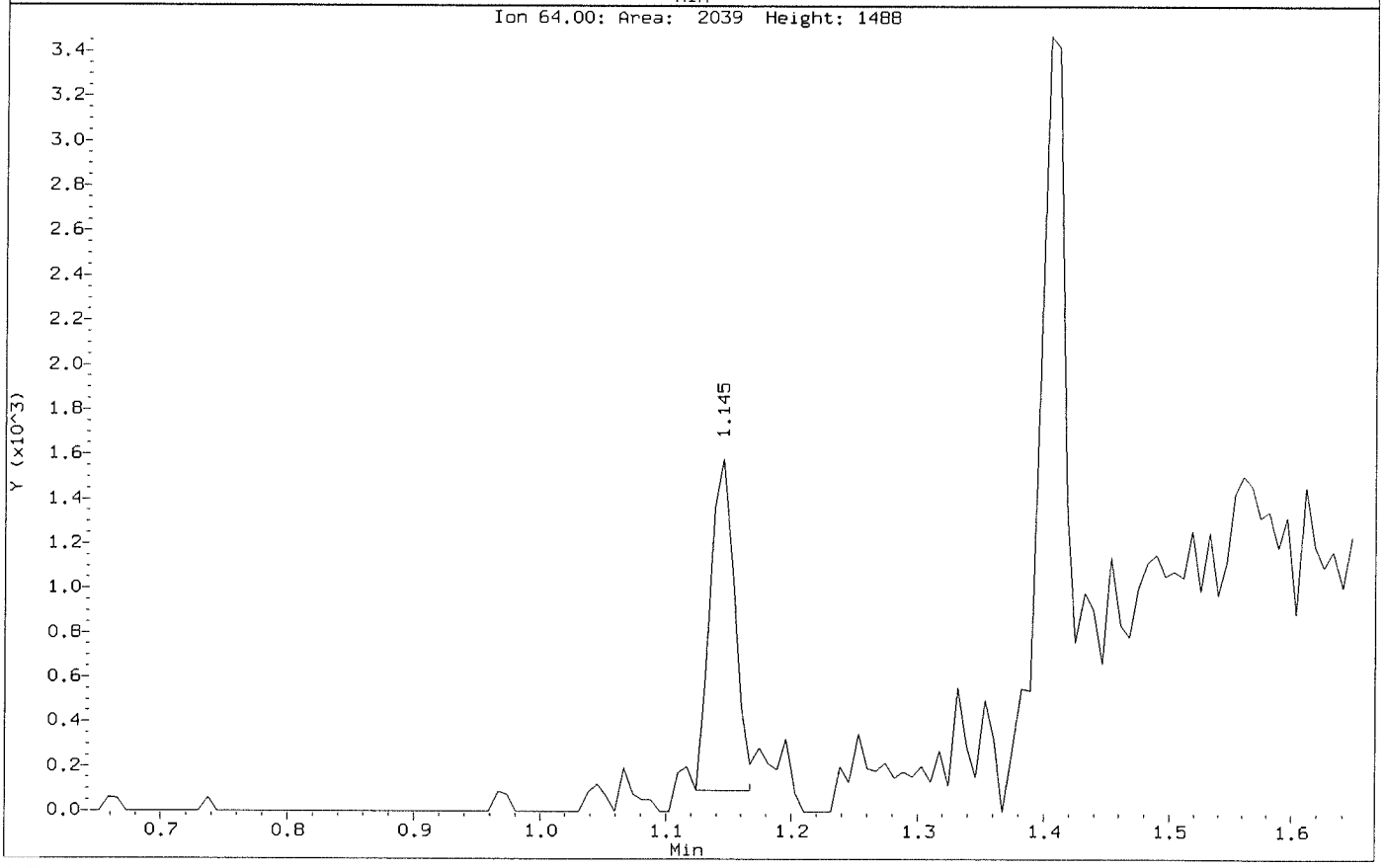




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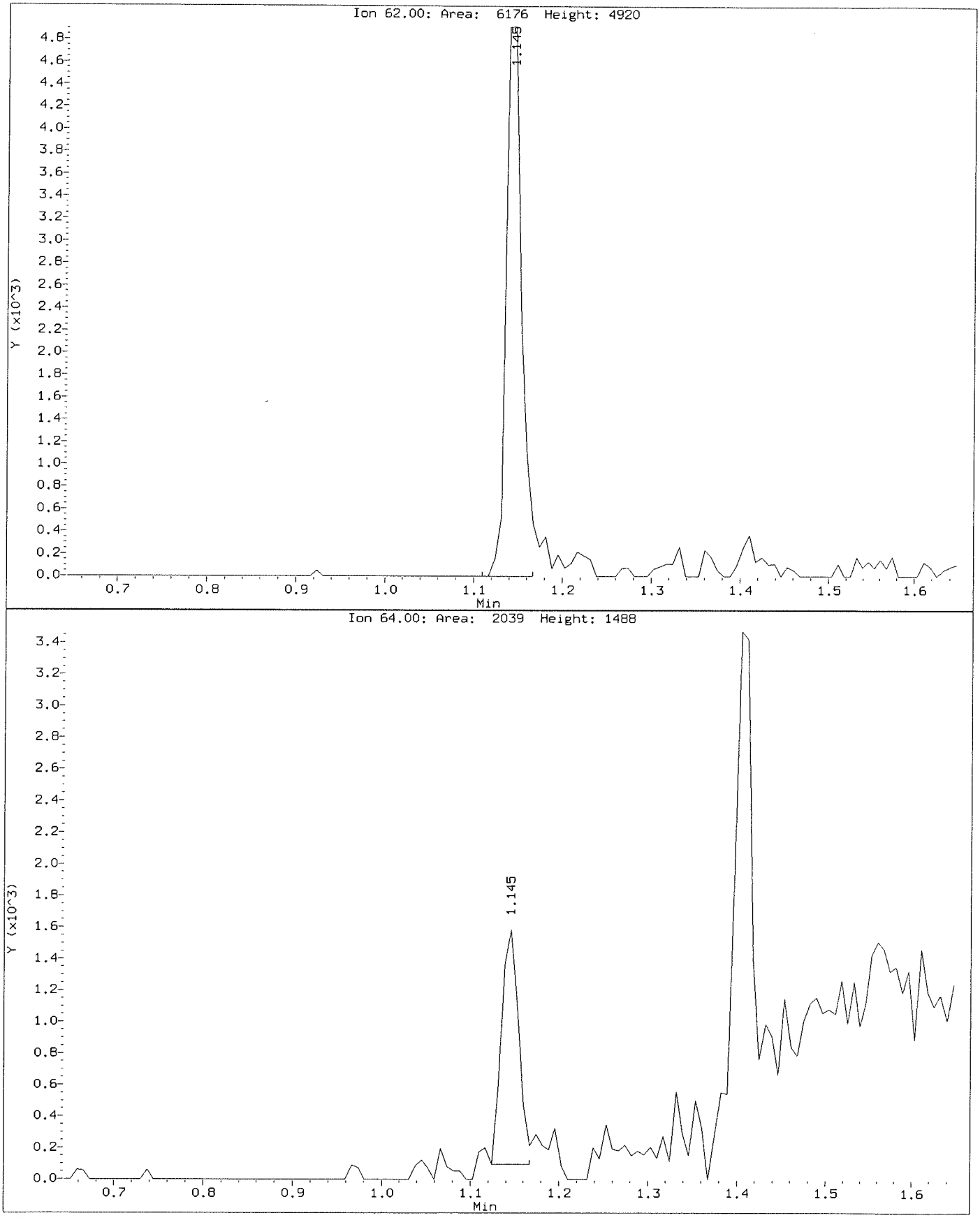
Compound: Vinyl Chloride
CAS Number: 75-01-4





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Injection Date: 03-NOV-2020 13:24
Instrument: voa6.i
Client Sample ID: VSTD002

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



ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110306.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 03-NOV-2020 13:45
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:10 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 13:24 Cal File: X110305.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

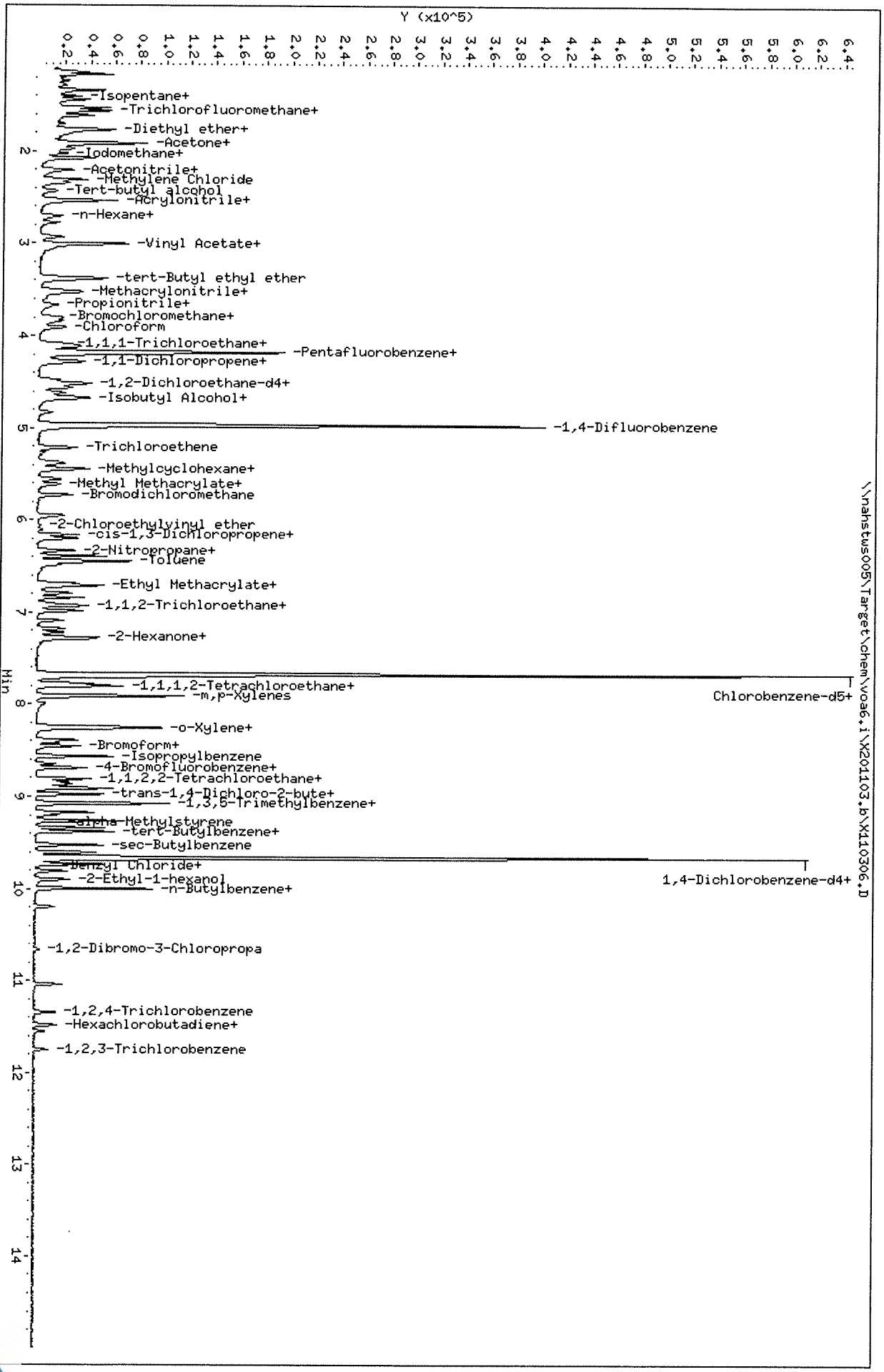
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	138955	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	261095	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	246486	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	109468	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	8863	5.00000	4.73(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	11874	5.00000	5.19
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	29006	5.00000	4.40(a)
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	11013	5.00000	5.45
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	8285	5.00000	4.71(a)
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	13747	5.00000	4.73(a)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	10630	5.00000	5.36
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	7145	5.00000	4.69(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	17341	5.00000	5.19
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	13327	5.00000	5.08
32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	11913	5.00000	4.89(a)
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	2533	5.00000	6.97
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	7499	5.00000	4.87(aMH)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	4083	5.00000	6.24
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	26821	5.00000	4.37(a)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	741	5.00000	5.79
57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	8509	5.00000	4.60(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	14241	5.00000	4.71(a)

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110306.D Page 2
Report Date: 07-Nov-2020 12:10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	14332	5.00000	5.09(M)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	10091	5.00000	5.22(M)
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	24800	5.00000	3.97(a)
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	14409	5.00000	4.49(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	14767	5.00000	4.88(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	16065	5.00000	4.80(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	14015	5.00000	4.87(a)
24	2-Butanone	43	3.602	3.602	(0.861)	6685	10.0000	10.34
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	24673	5.00000	4.79(a)
52	2-Hexanone	43	7.219	7.219	(0.941)	14581	10.0000	12.13
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	28797	5.00000	4.43(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	25607	5.00000	4.33(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	19349	10.0000	10.33
10	Acetone	43	1.976	1.976	(0.473)	13265	10.0000	10.13
37	Benzene	78	4.519	4.519	(0.909)	35701	5.00000	4.89(a)
74	Bromobenzene	156	8.810	8.810	(0.912)	9020	5.00000	4.68(a)
29	Bromochloromethane	128	3.795	3.795	(0.908)	5329	5.00000	5.56
39	Bromodichloromethane	83	5.729	5.729	(1.153)	13327	5.00000	4.96(a)
66	Bromoform	173	8.416	8.416	(1.097)	4618	5.00000	6.65(T)
6	Bromomethane	94	1.339	1.339	(0.320)	12720	5.00000	4.91(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	48187	10.0000	9.89
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	11317	5.00000	4.84(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	23875	5.00000	4.53(a)
7	Chloroethane	64	1.403	1.403	(0.336)	11318	5.00000	5.16(H)
28	Chloroform	83	3.910	3.910	(0.935)	18068	5.00000	5.08
3	Chloromethane	50	1.074	1.074	(0.257)	11006	5.00000	6.37
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	10335	5.00000	5.07
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	14744	5.00000	5.06
55	Dibromochloromethane	129	7.184	7.184	(0.937)	8501	5.00000	4.66(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	7626	5.00000	5.77
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	9243	5.00000	5.13
61	Ethylbenzene	106	7.807	7.807	(1.018)	11027	5.00000	4.12(aH)
91	Hexachlorobutadiene	225	11.489	11.489	(1.189)	2539	5.00000	6.44
67	Isopropylbenzene	105	8.566	8.566	(1.117)	31967	5.00000	6.32
62	m,p-Xylenes	106	7.907	7.907	(1.031)	28591	10.0000	8.93
17	Methylene Chloride	84	2.306	2.306	(0.551)	9949	5.00000	5.21
87	n-Butylbenzene	91	9.999	9.999	(1.035)	22870	5.00000	6.79
73	n-Propylbenzene	91	8.917	8.917	(0.923)	37694	5.00000	4.32(a)
92	Naphthalene	128	11.553	11.553	(1.196)	6669	5.00000	7.20
63	o-Xylene	106	8.244	8.244	(1.075)	13980	5.00000	4.38(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	29458	5.00000	6.35
64	Styrene	104	8.265	8.265	(1.078)	23194	5.00000	4.33(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	20057	5.00000	6.31
56	Tetrachloroethene	164	6.933	6.933	(0.904)	6222	5.00000	4.58(a)
50	Toluene	91	6.453	6.453	(0.841)	42883	5.00000	4.75(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	7804	5.00000	4.50(a)
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	12581	5.00000	4.89(a)
38	Trichloroethene	130	5.207	5.207	(1.048)	8320	5.00000	4.78(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	25518	5.00000	4.87(a)
5	Vinyl Chloride	62	1.145	1.145	(0.274)	15367	5.00000	5.00(MH)

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.

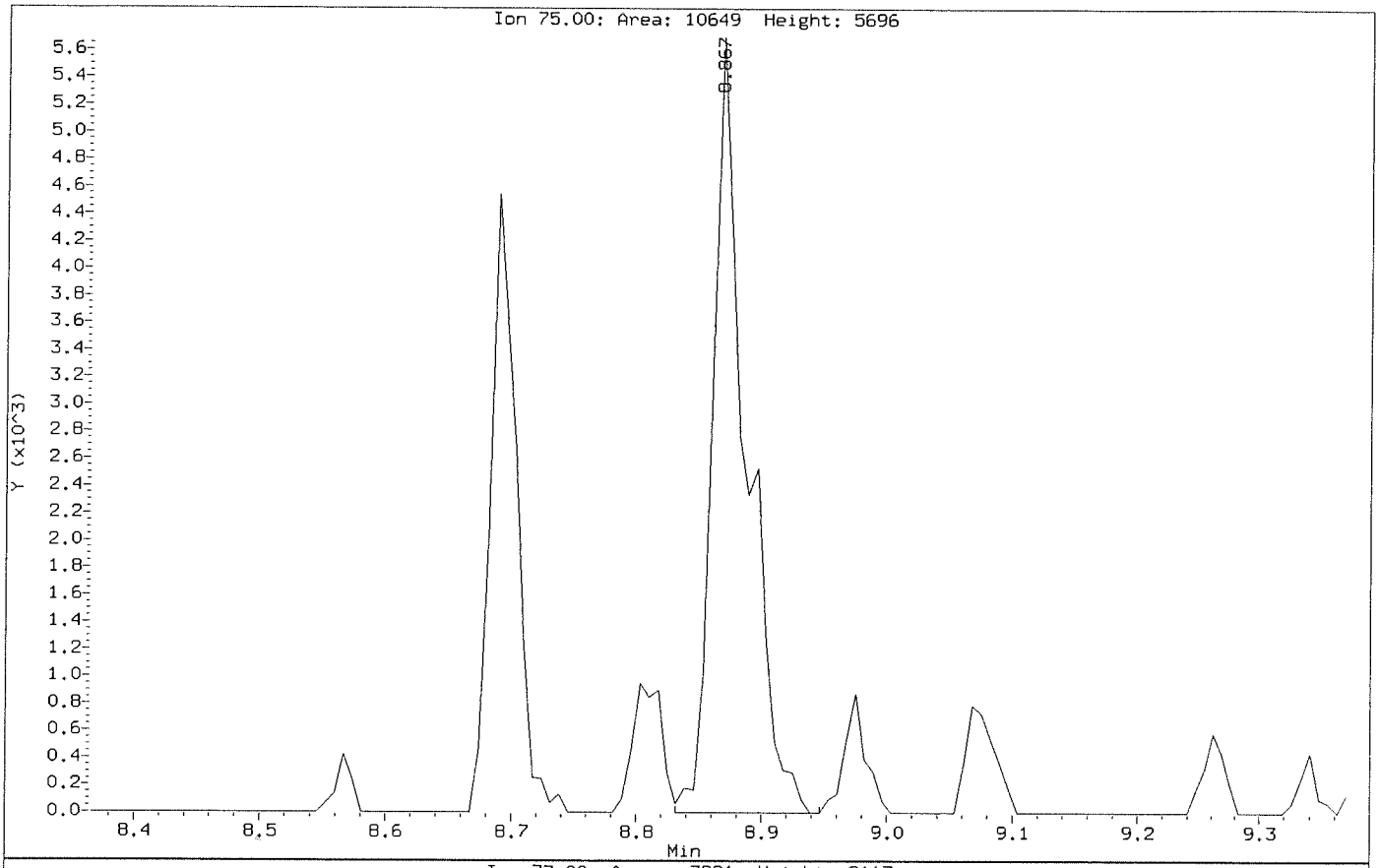


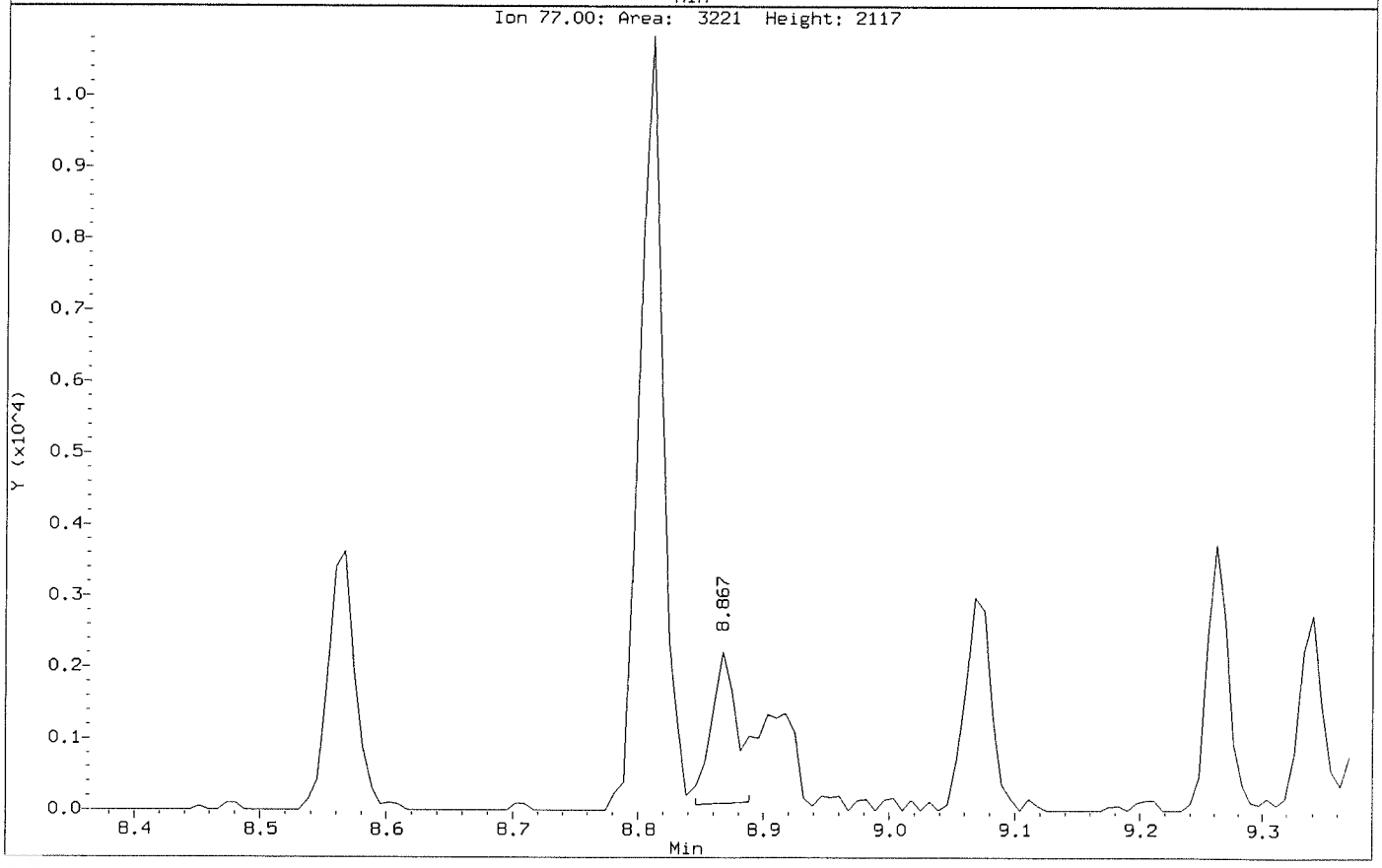
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Date : 03-NOV-2020 13:45
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110306.D
Injection Date: 03-NOV-2020 13:45
Instrument: voa6.i
Client Sample ID: VSTD005

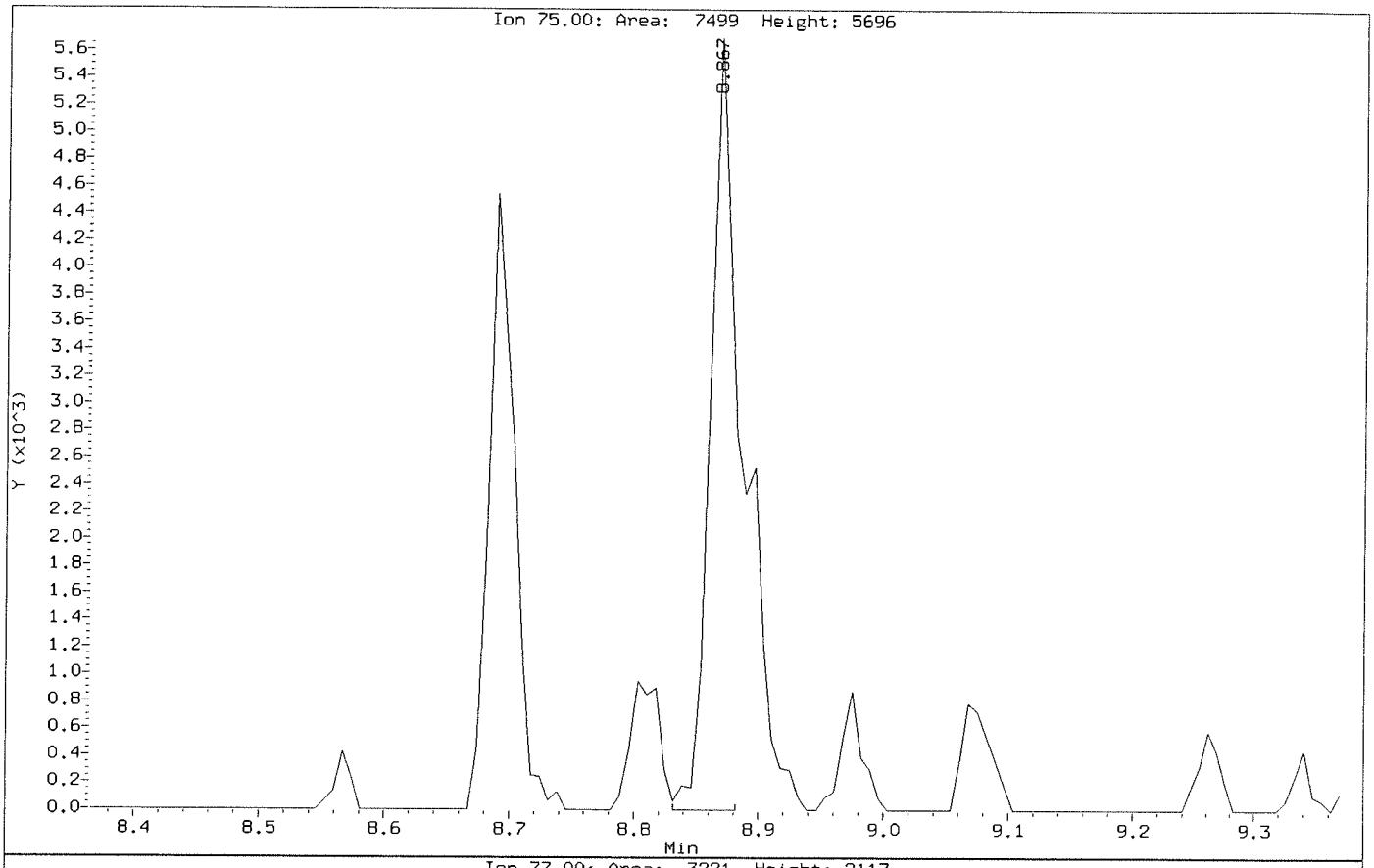
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

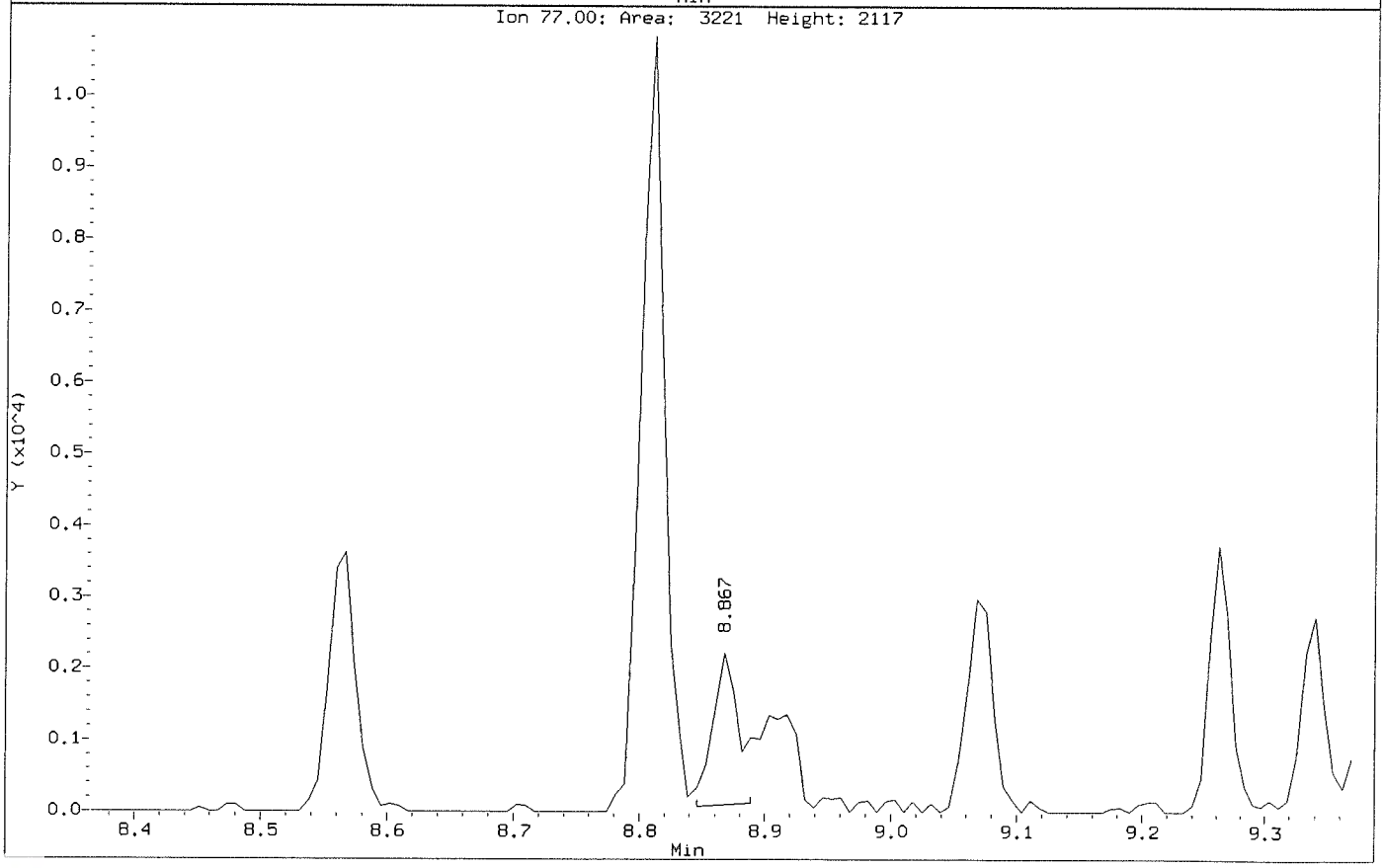




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Injection Date: 03-NOV-2020 13:45
Instrument: voa6.i
Client Sample ID: VSTD005

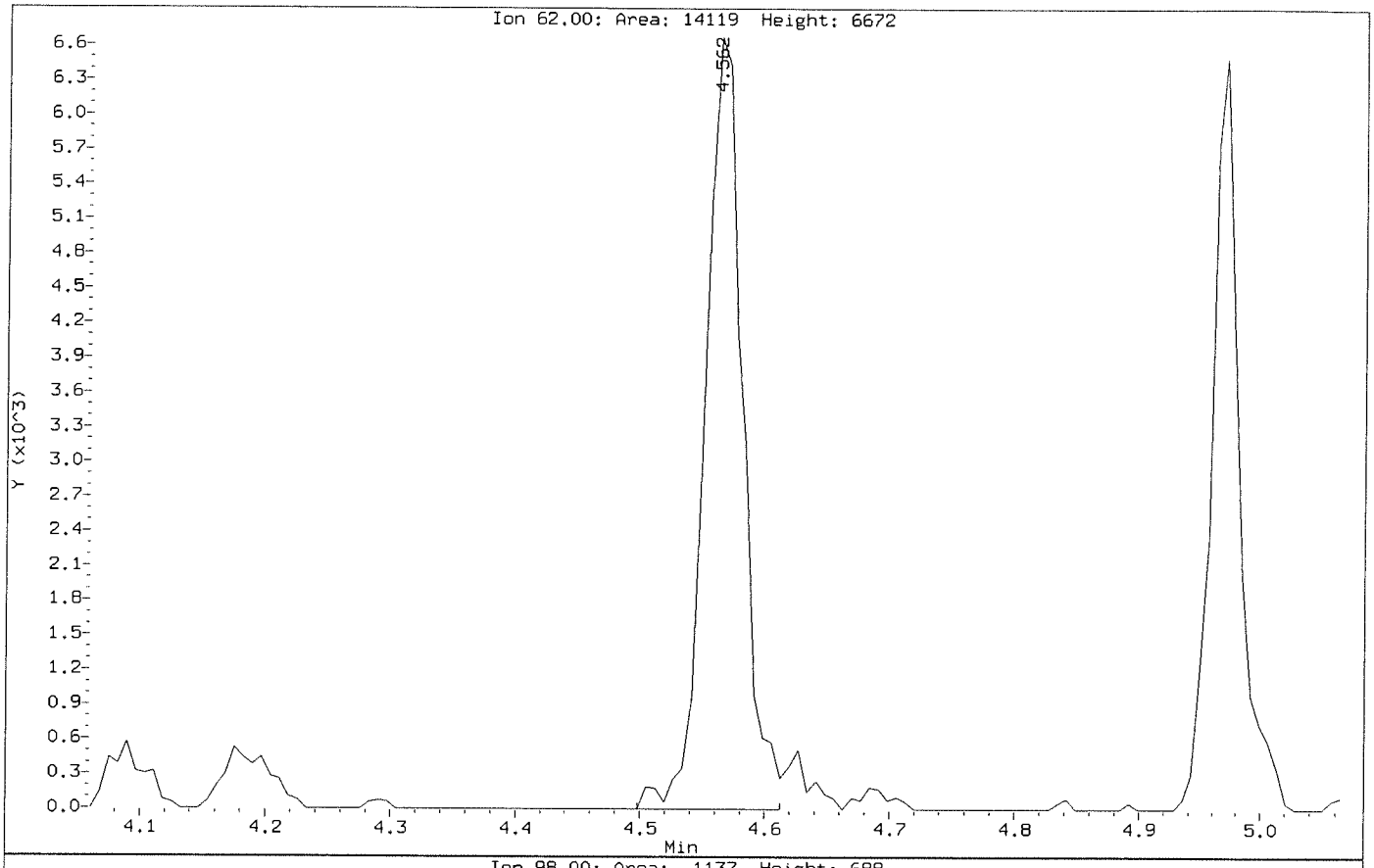
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

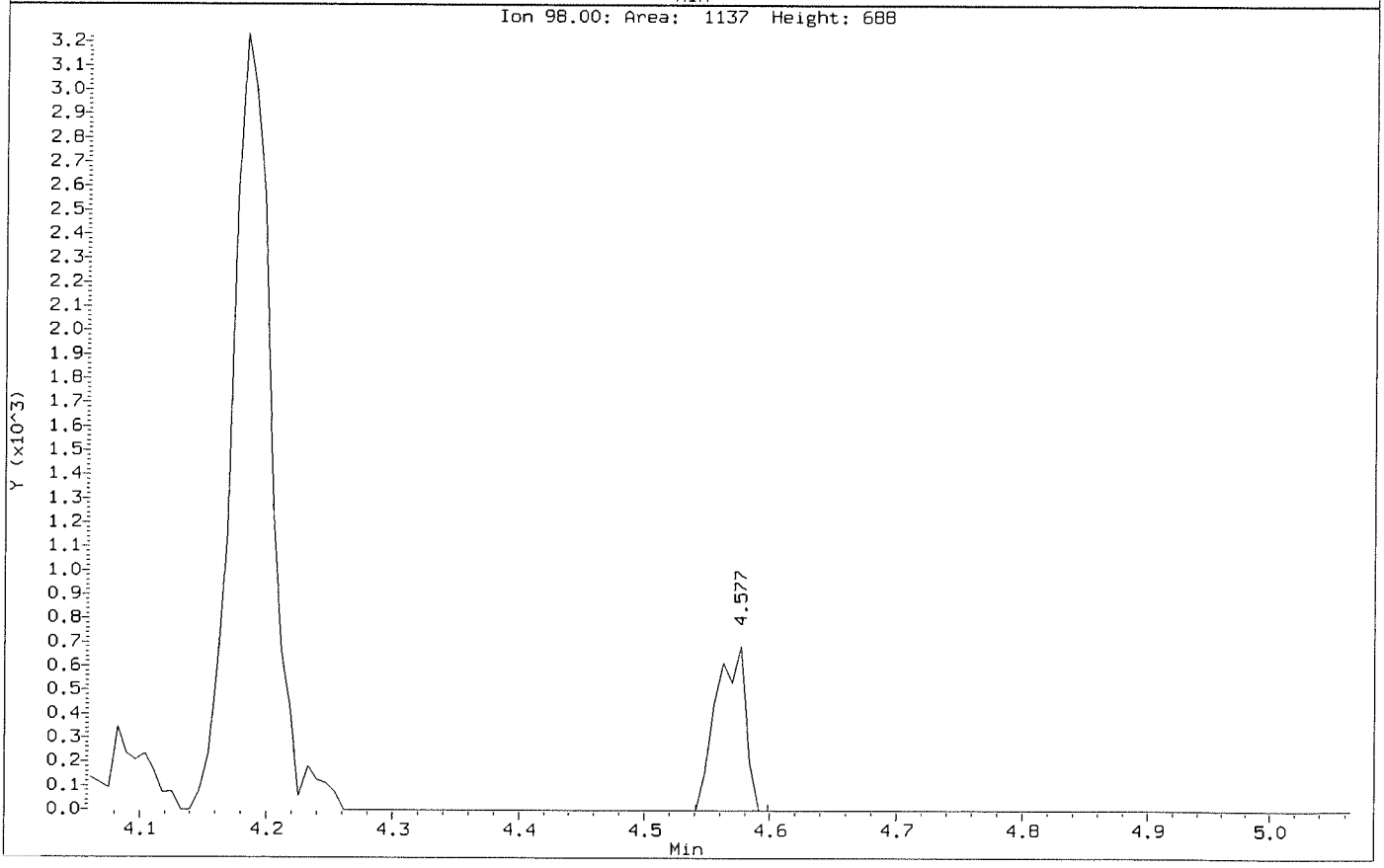




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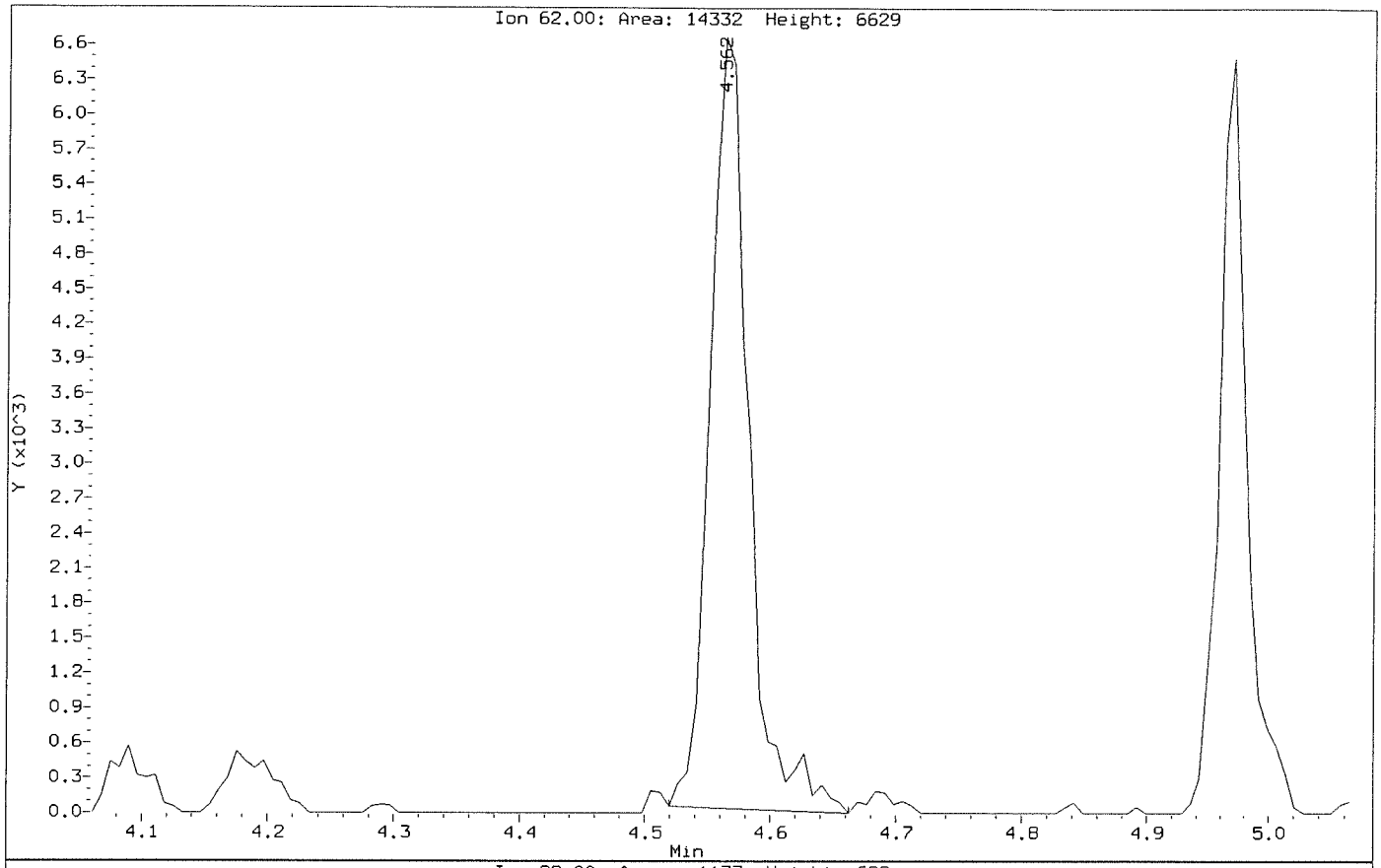
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

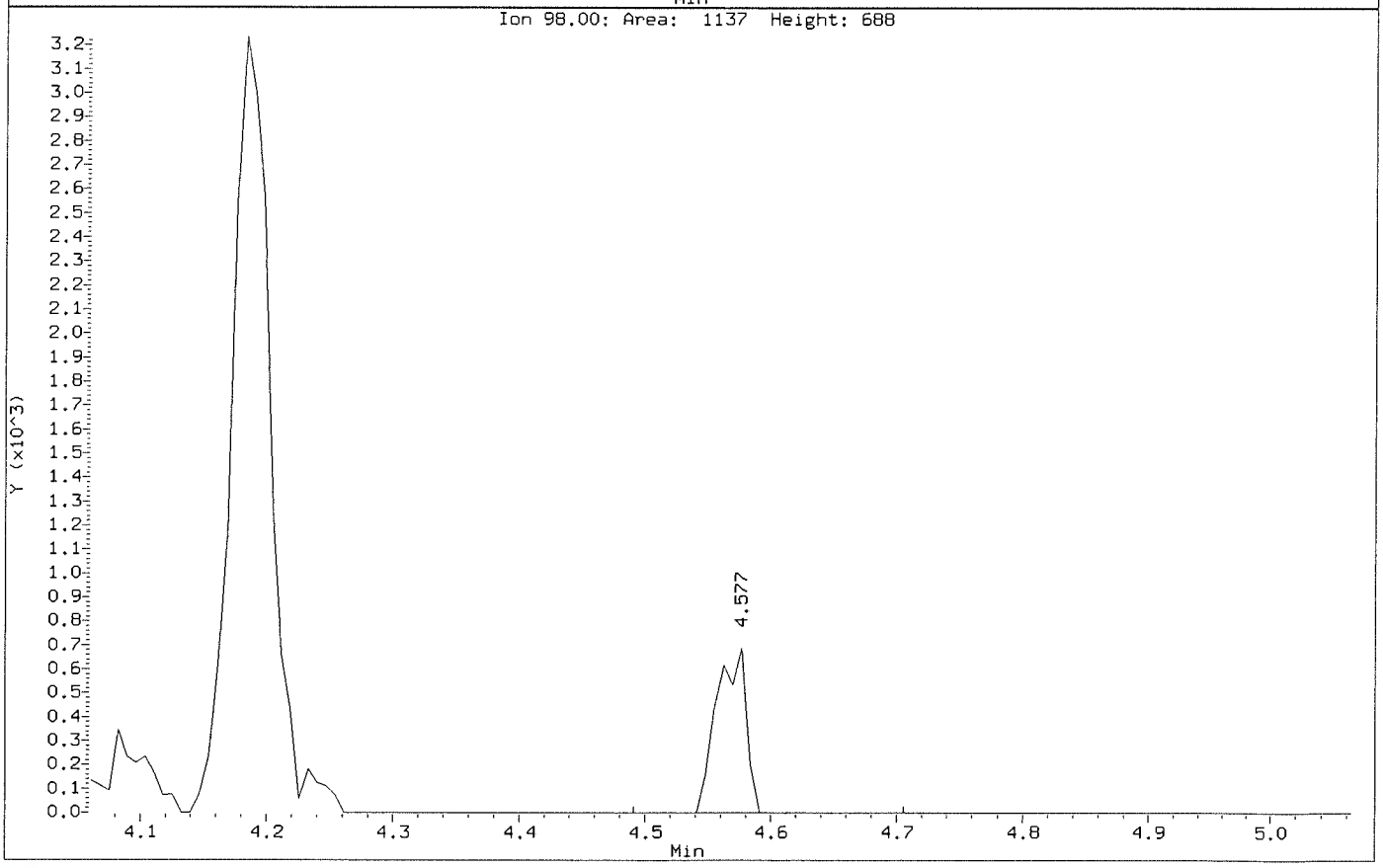




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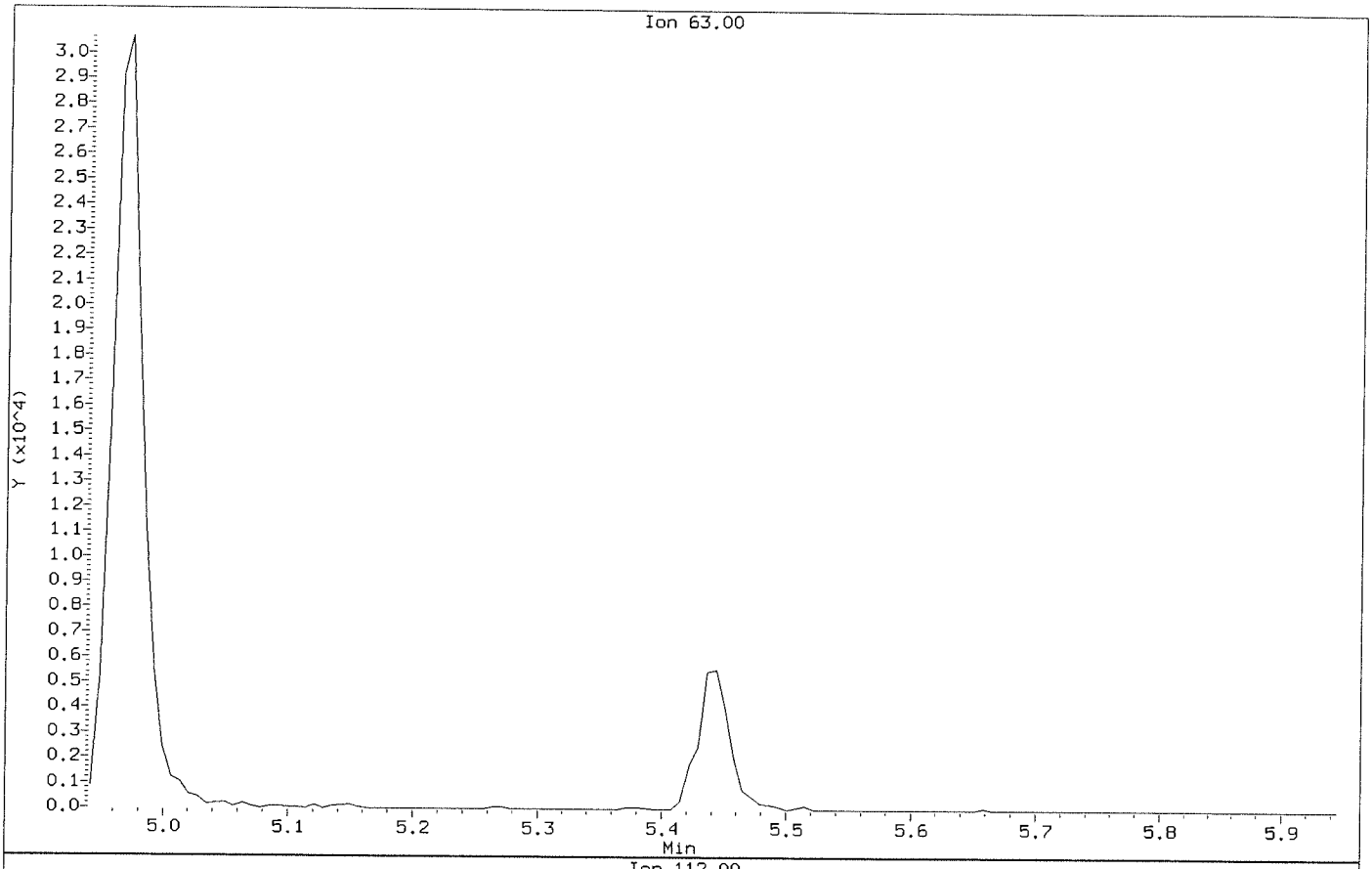
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

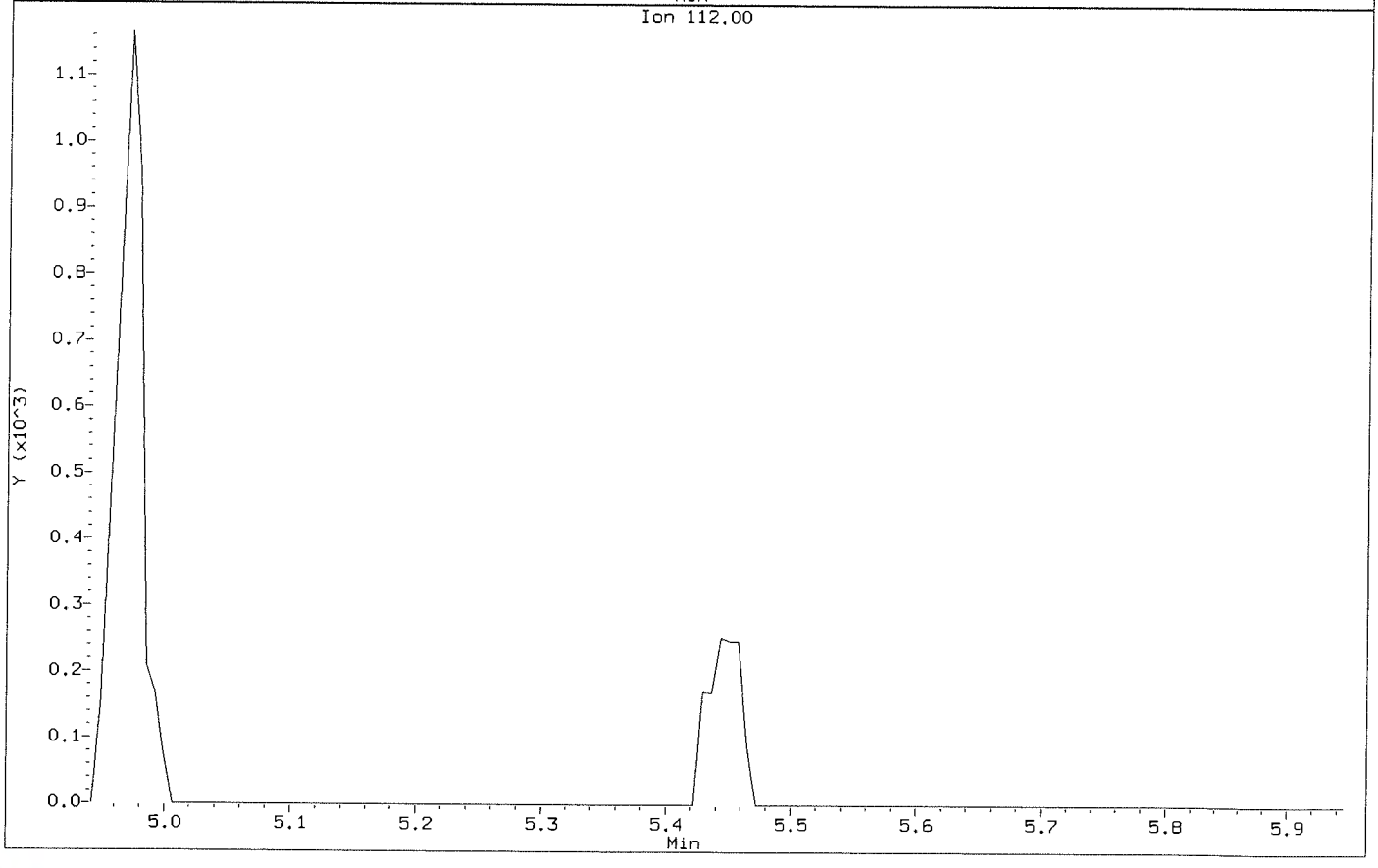




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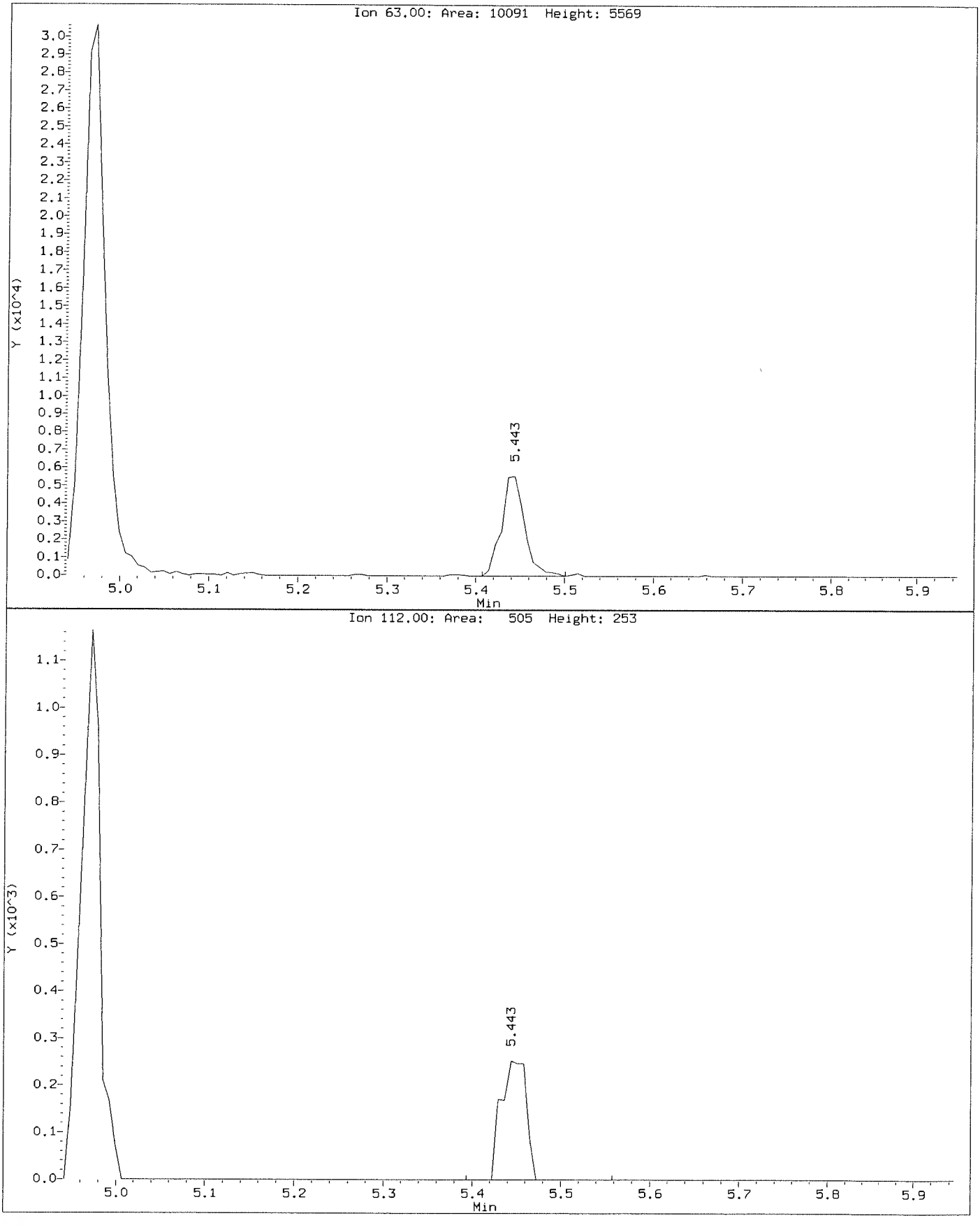
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5





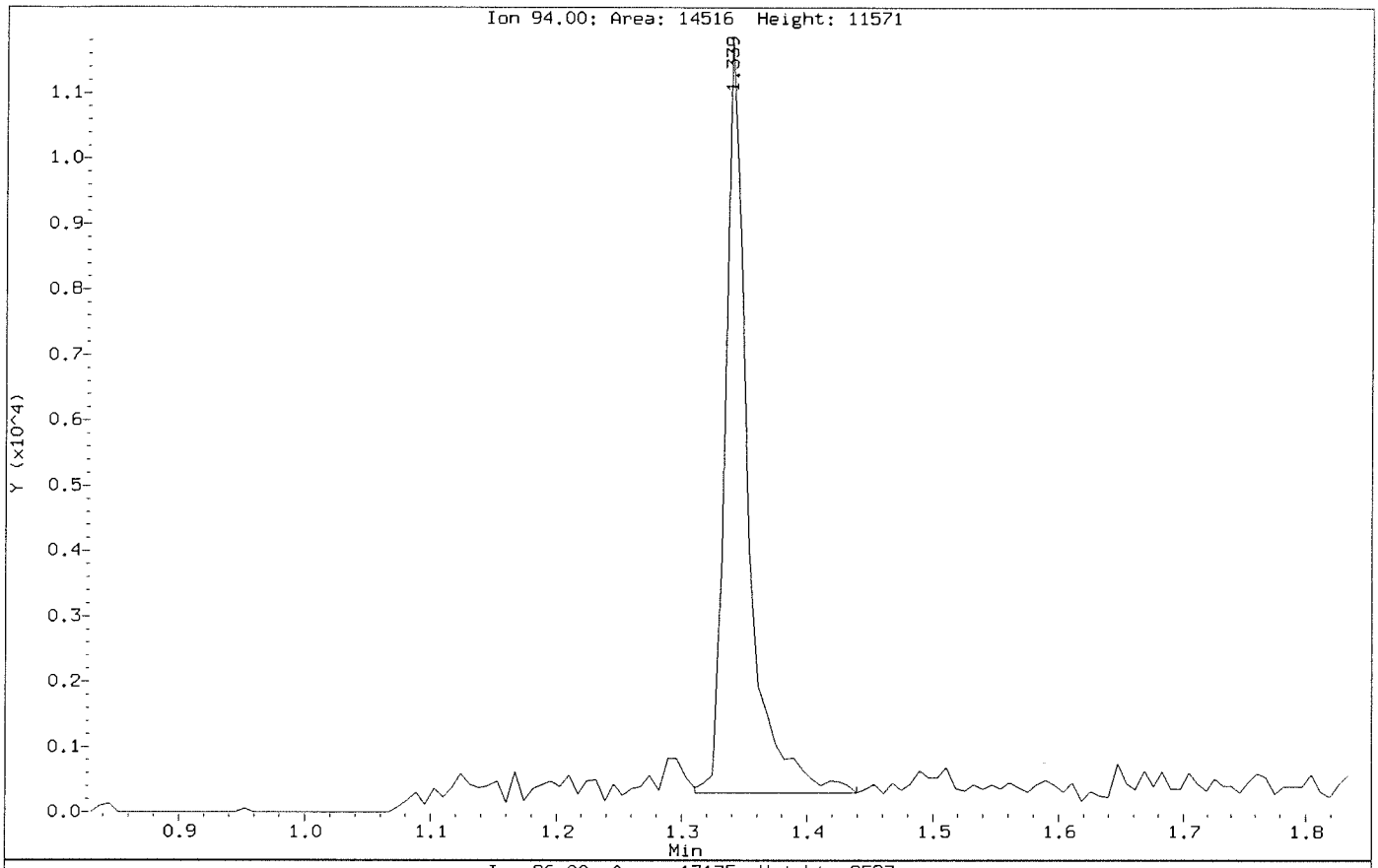
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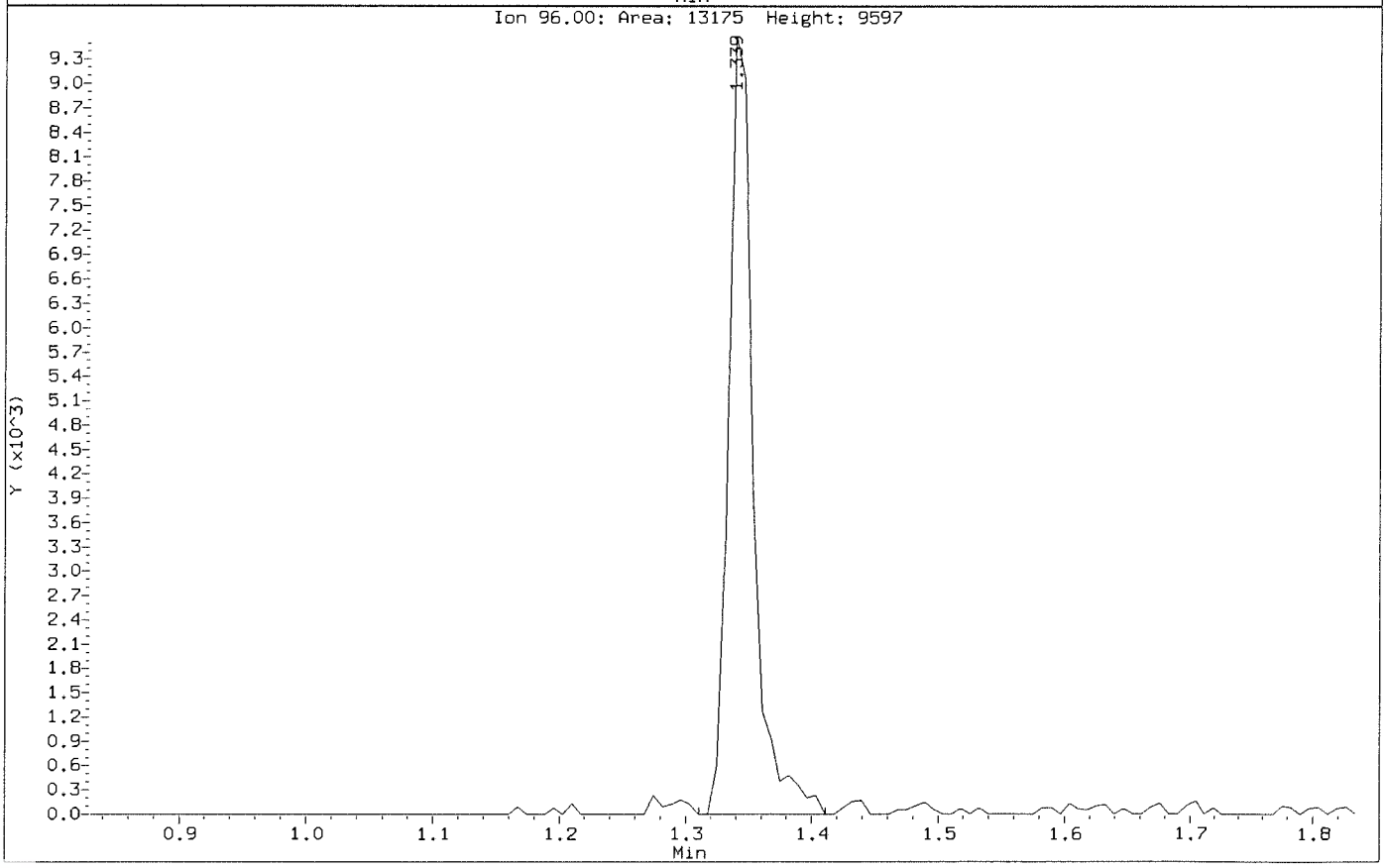
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5



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Instrument: voa6.i
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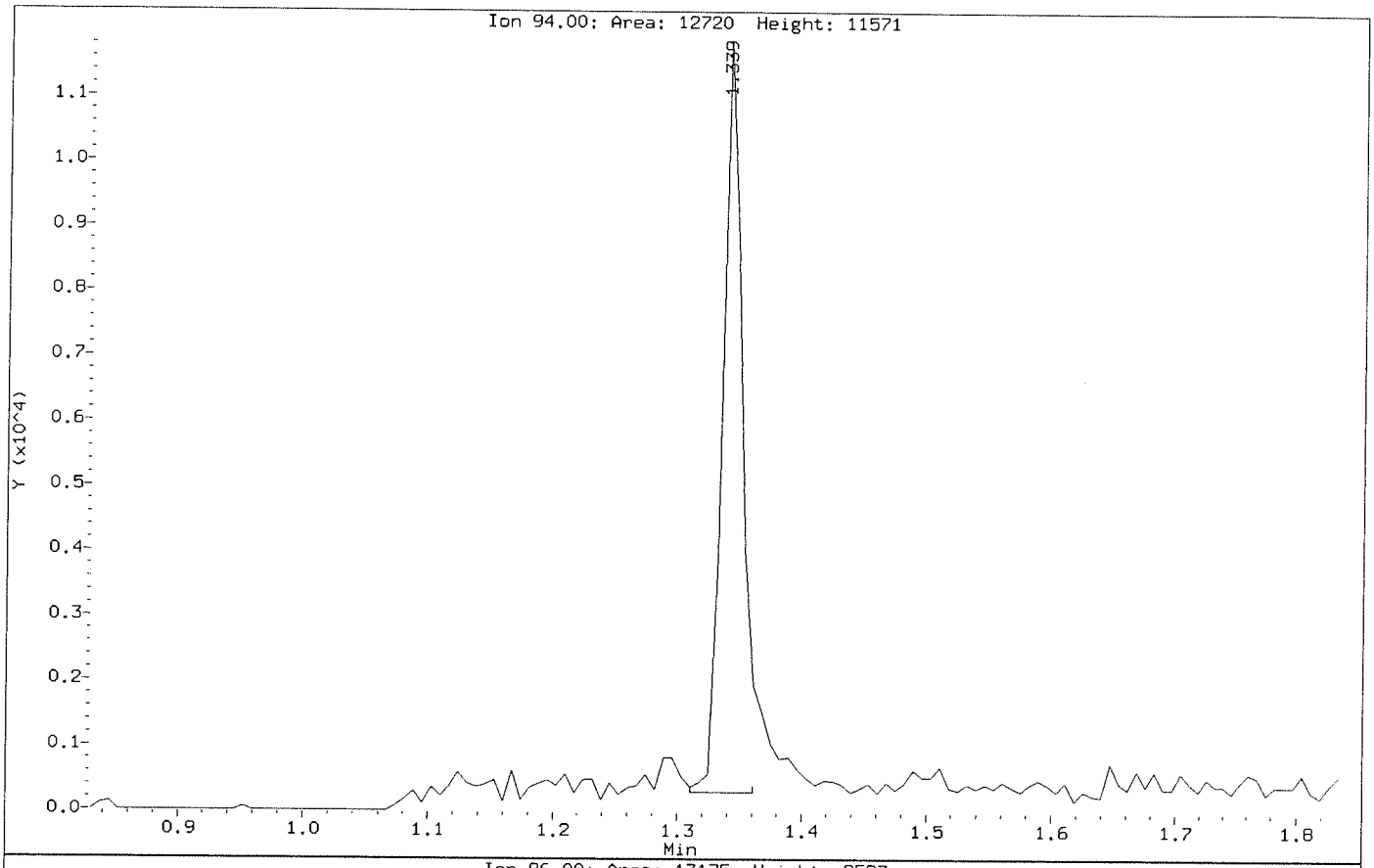
Compound: Bromomethane
CAS Number: 74-83-9

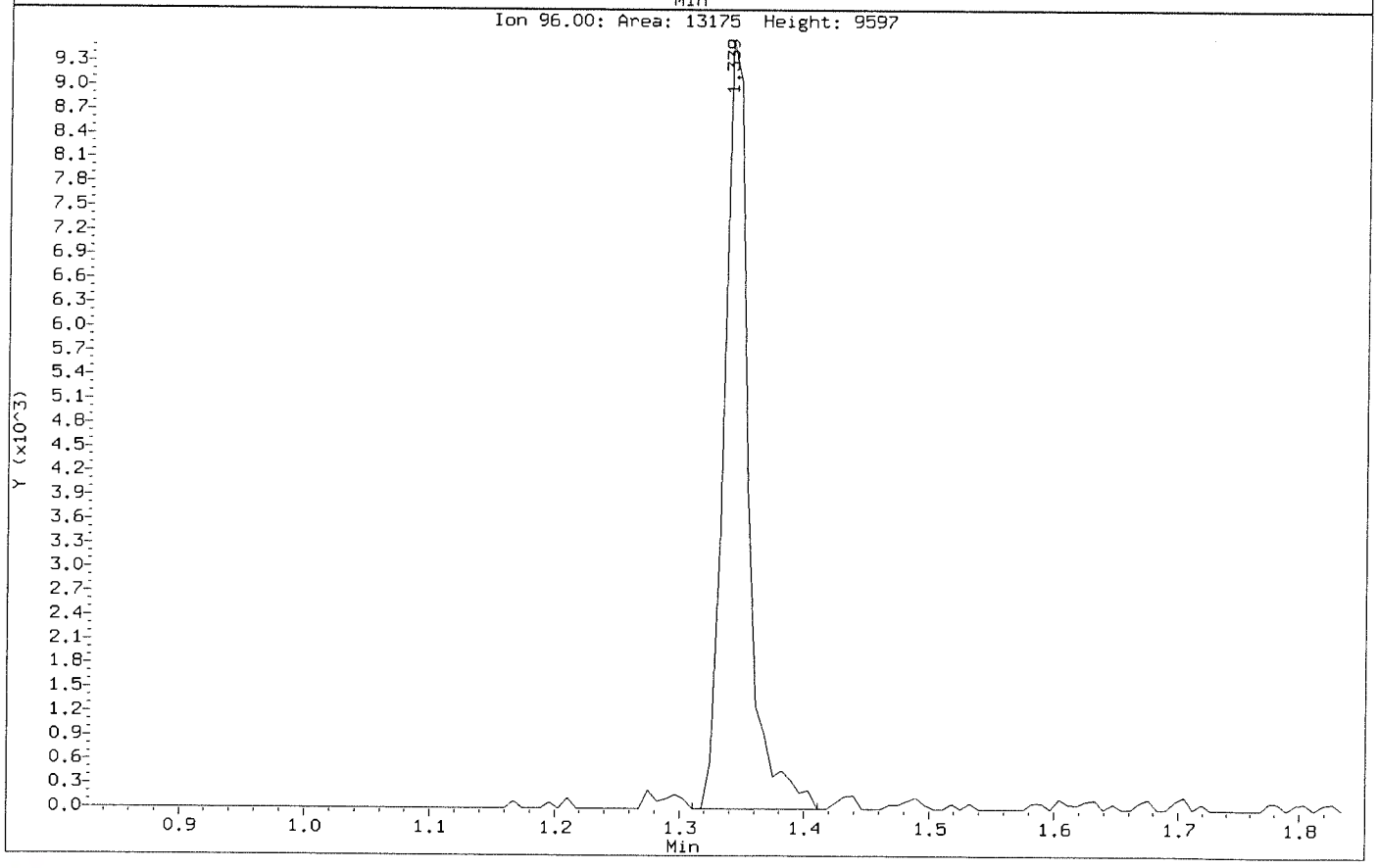




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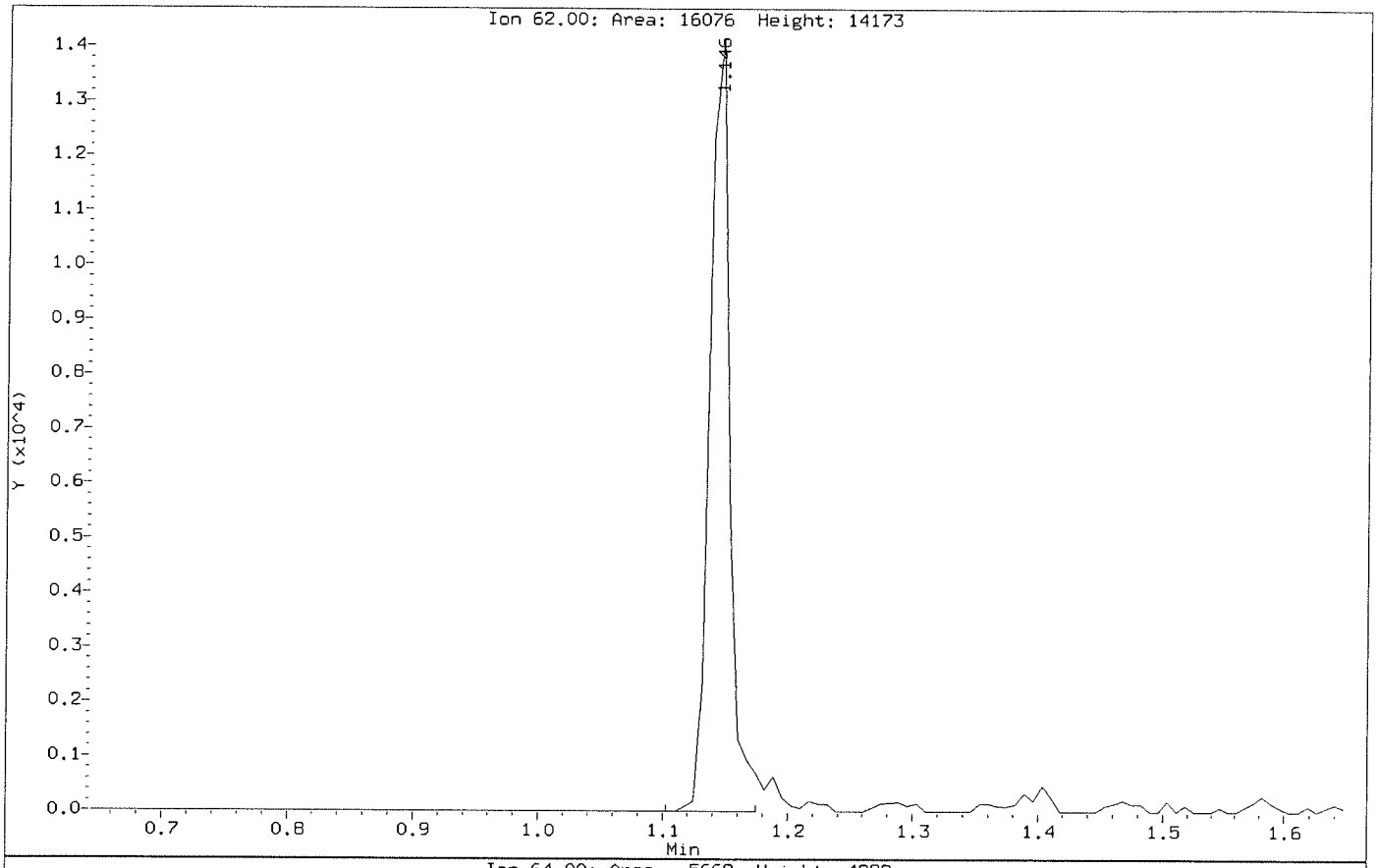
Compound: Bromomethane
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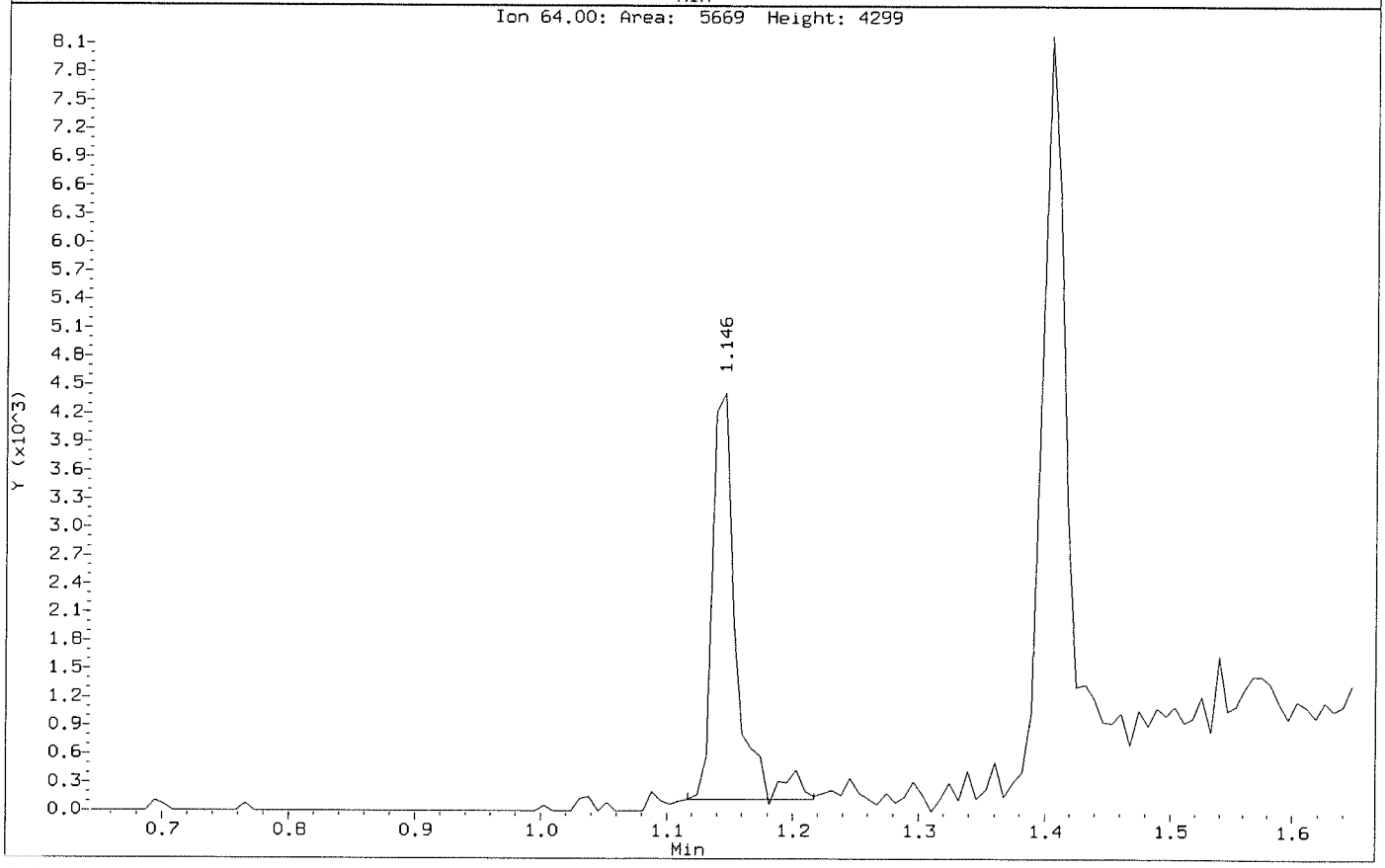




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Instrument: voa6.i
Client Sample ID: VSTD005

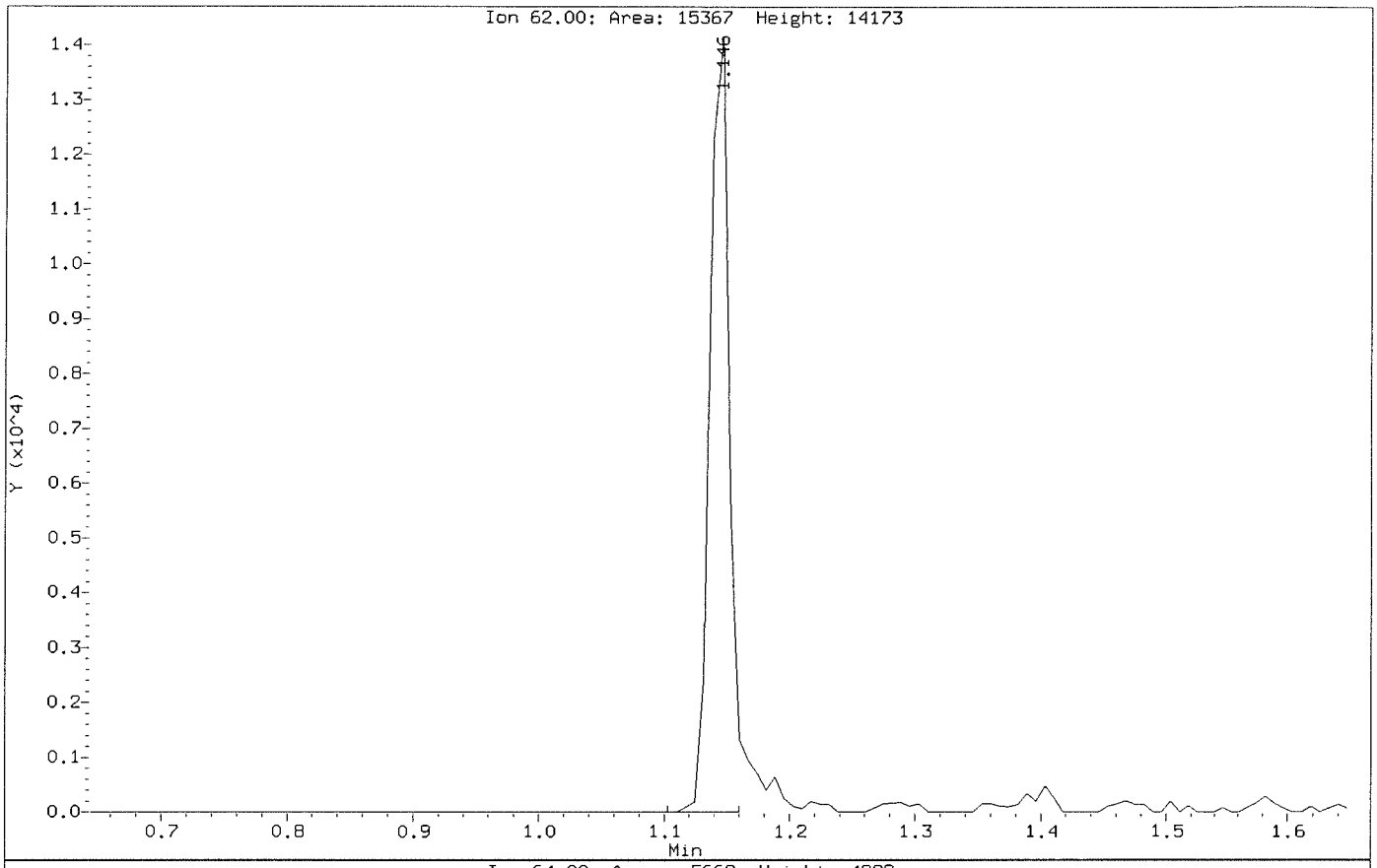
Compound: Vinyl Chloride
CAS Number: 75-01-4

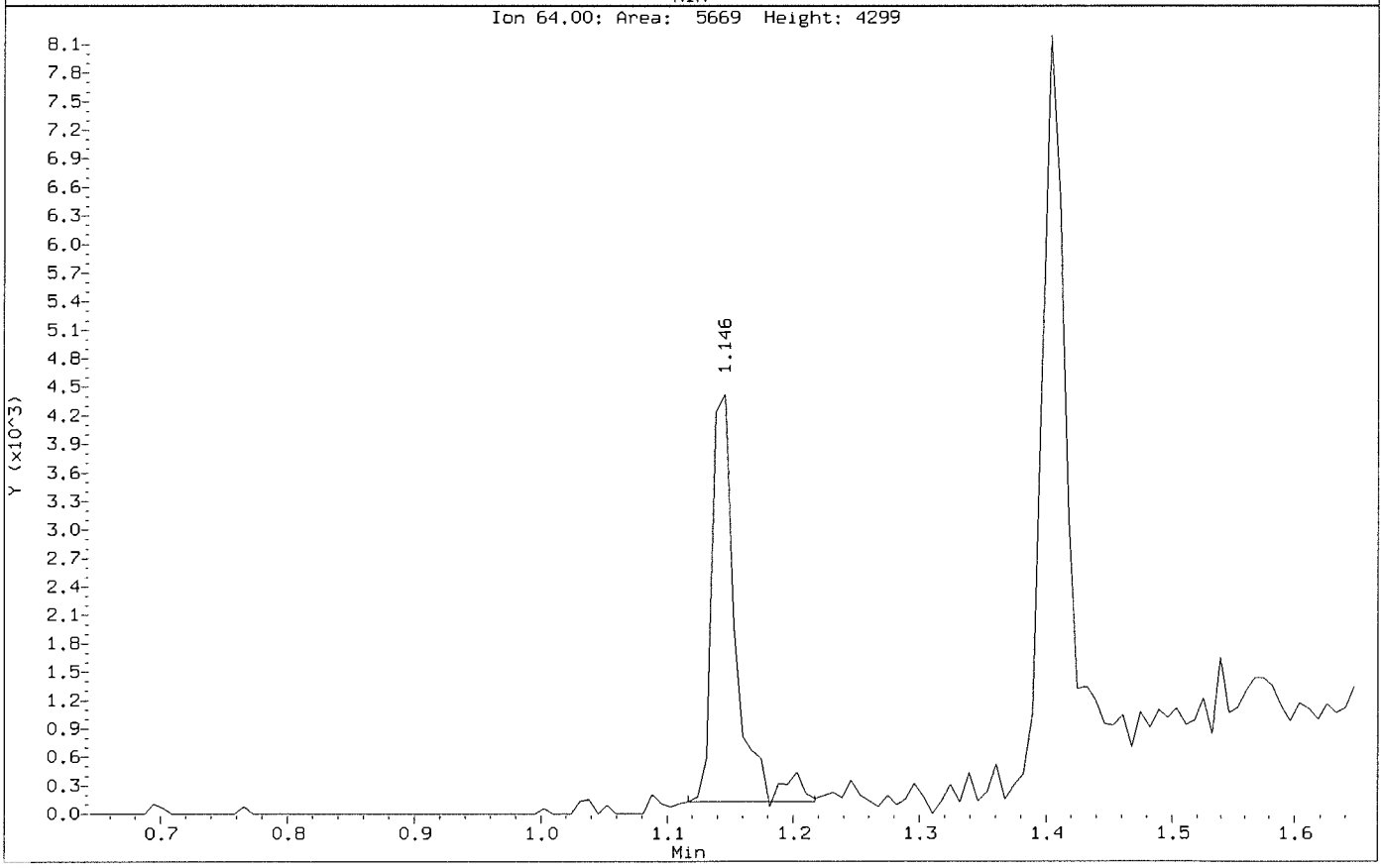




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Injection Date: 03-NOV-2020 13:45
Instrument: voa6.i
Client Sample ID: VSTD005

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





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110307.D Page 1
Report Date: 07-Nov-2020 12:11

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110307.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 03-NOV-2020 14:06
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 13:45 Cal File: X110306.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

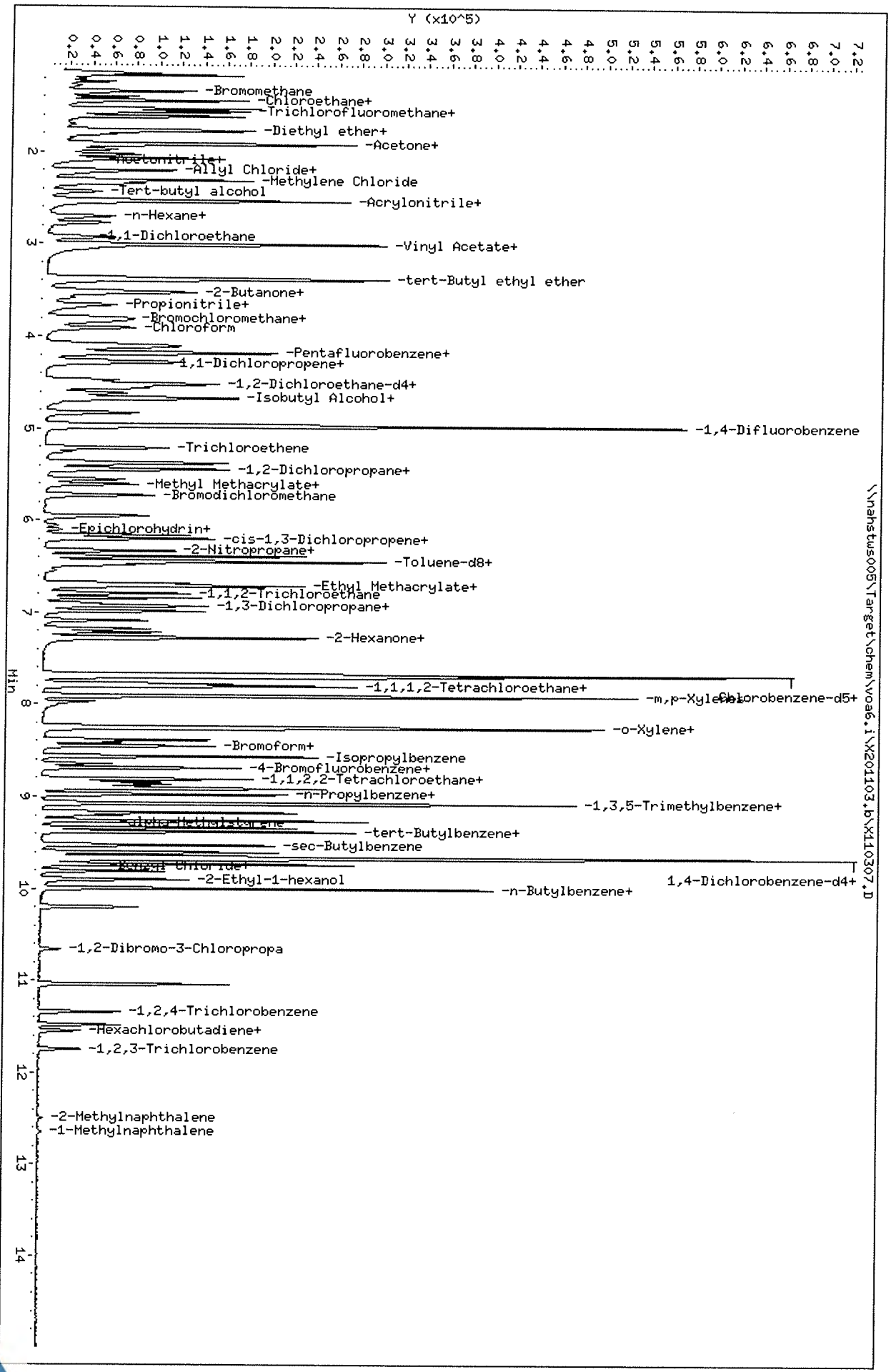
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	144595	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	268568	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	253730	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	113802	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	35558	20.0000	18.26
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	44472	20.0000	19.69
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	120740	20.0000	17.81
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	41523	20.0000	18.99
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	31796	20.0000	17.56
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	51326	20.0000	17.00
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	40864	20.0000	21.42
53 1,1,2-Trichloroethane	83	6.839	6.839	(0.892)	27961	20.0000	17.86
22 1,1-Dichloroethane	63	2.928	2.928	(0.700)	59439	20.0000	17.10
11 1,1-Dichloroethene	96	1.918	1.918	(0.459)	48541	20.0000	17.79
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	40936	20.0000	16.34
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	8500	20.0000	18.57
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	32197	20.0000	20.14 (MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	15476	20.0000	18.09
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	112884	20.0000	17.73
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	2714	20.0000	21.28
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	37219	20.0000	19.56
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	56332	20.0000	17.93

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110307.D Page 2
Report Date: 07-Nov-2020 12:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	52637	20.0000	18.17(M)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	37099	20.0000	18.66
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	108442	20.0000	16.70
83	1,3-Dichlorobenzene	146	9.604	9.604	(0.994)	59583	20.0000	17.86
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	57547	20.0000	18.51
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	63974	20.0000	18.42
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	48643	20.0000	16.25
24	2-Butanone	43	3.587	3.587	(0.858)	24965	40.0000	37.14
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	93782	20.0000	17.54
52	2-Hexanone	43	7.212	7.212	(0.940)	61091	40.0000	38.01
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	116014	20.0000	17.18
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	101444	20.0000	16.50
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	71258	40.0000	36.96
10	Acetone	43	1.976	1.976	(0.473)	43227	40.0000	50.35
37	Benzene	78	4.519	4.519	(0.909)	130565	20.0000	17.40
74	Bromobenzene	156	8.809	8.809	(0.912)	36920	20.0000	18.43
29	Bromochloromethane	128	3.802	3.802	(0.909)	17398	20.0000	17.47
39	Bromodichloromethane	83	5.729	5.729	(1.153)	47793	20.0000	17.32
66	Bromoform	173	8.415	8.415	(1.097)	20267	20.0000	18.22(T)
6	Bromomethane	94	1.338	1.338	(0.320)	44801	20.0000	16.64(M)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	176548	40.0000	34.82
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	39126	20.0000	16.27
59	Chlorobenzene	112	7.699	7.699	(1.004)	95804	20.0000	17.66
7	Chloroethane	64	1.403	1.403	(0.336)	37862	20.0000	16.61
28	Chloroform	83	3.910	3.910	(0.935)	66080	20.0000	17.86
3	Chloromethane	50	1.080	1.080	(0.258)	37225	20.0000	18.73
27	cis-1,2-Dichloroethene	96	3.537	3.537	(0.846)	36891	20.0000	17.39
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	56004	20.0000	18.69
55	Dibromochloromethane	129	7.176	7.176	(0.936)	36071	20.0000	19.23
44	Dibromomethane	93	5.557	5.557	(1.118)	25538	20.0000	18.81
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	31467	20.0000	16.80
61	Ethylbenzene	106	7.799	7.799	(1.017)	44437	20.0000	16.15(H)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	8666	20.0000	15.84
67	Isopropylbenzene	105	8.566	8.566	(1.117)	125533	20.0000	16.77
62	m,p-Xylenes	106	7.907	7.907	(1.031)	115687	40.0000	35.11
17	Methylene Chloride	84	2.305	2.305	(0.551)	34217	20.0000	17.23
87	n-Butylbenzene	91	9.998	9.998	(1.035)	94869	20.0000	16.33
73	n-Propylbenzene	91	8.917	8.917	(0.923)	154045	20.0000	17.00
92	Naphthalene	128	11.546	11.546	(1.195)	22879	20.0000	18.86
63	o-Xylene	106	8.243	8.243	(1.075)	56474	20.0000	17.19
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	115155	20.0000	16.62
64	Styrene	104	8.258	8.258	(1.077)	103951	20.0000	18.87
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	78132	20.0000	16.81
56	Tetrachloroethene	164	6.933	6.933	(0.904)	21904	20.0000	15.68
50	Toluene	91	6.446	6.446	(0.840)	149878	20.0000	16.14
20	trans-1,2-Dichloroethene	96	2.534	2.534	(0.606)	29539	20.0000	16.39
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	50801	20.0000	19.21
38	Trichloroethene	130	5.213	5.213	(1.049)	31185	20.0000	17.42
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	95690	20.0000	17.55
5	Vinyl Chloride	62	1.145	1.145	(0.274)	57375	20.0000	17.95(H)

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

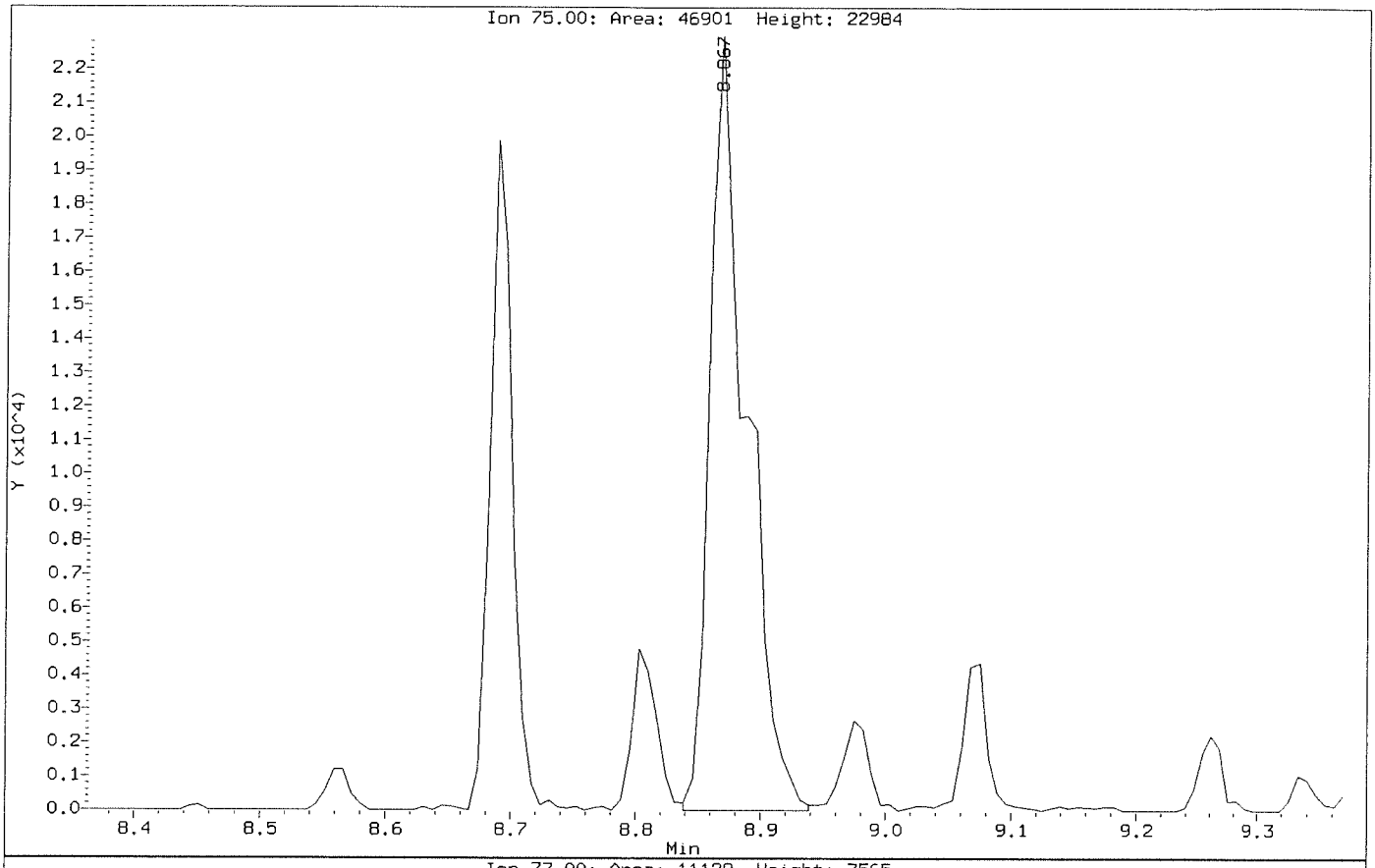


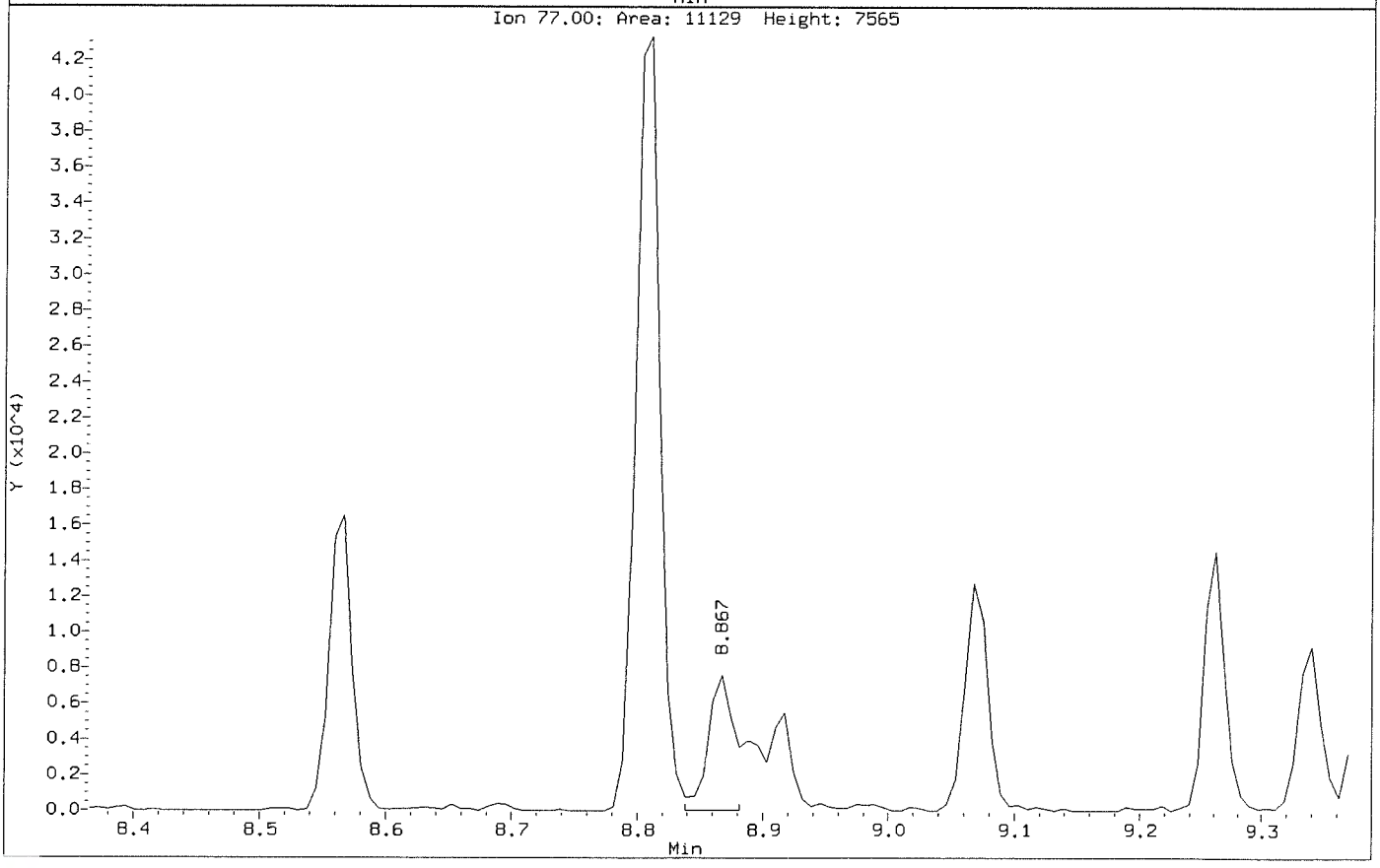
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Date : 03-NOV-2020 14:06
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110307.D
Injection Date: 03-NOV-2020 14:06
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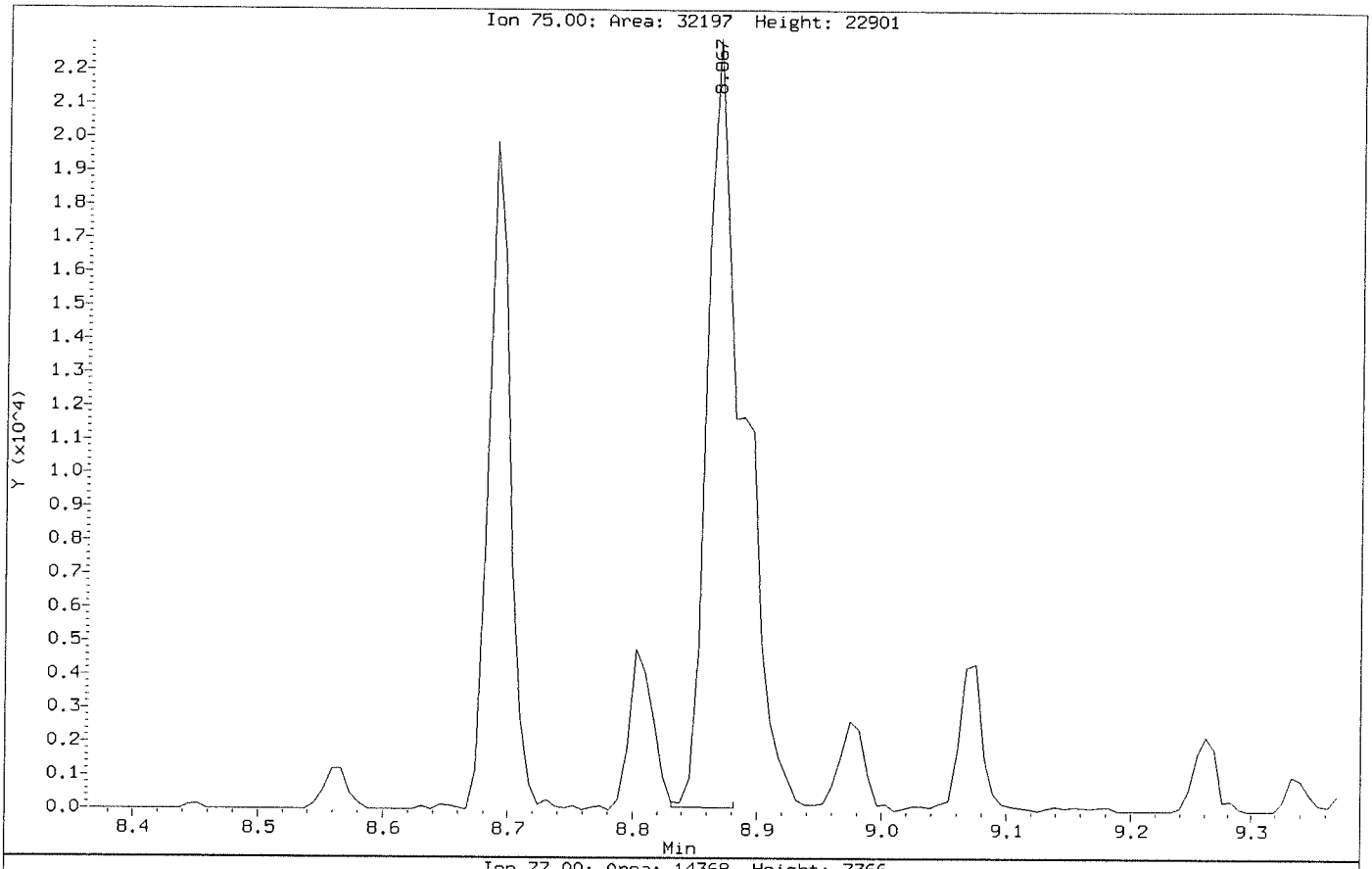
Compound: 1,2,3-Trichloropropane
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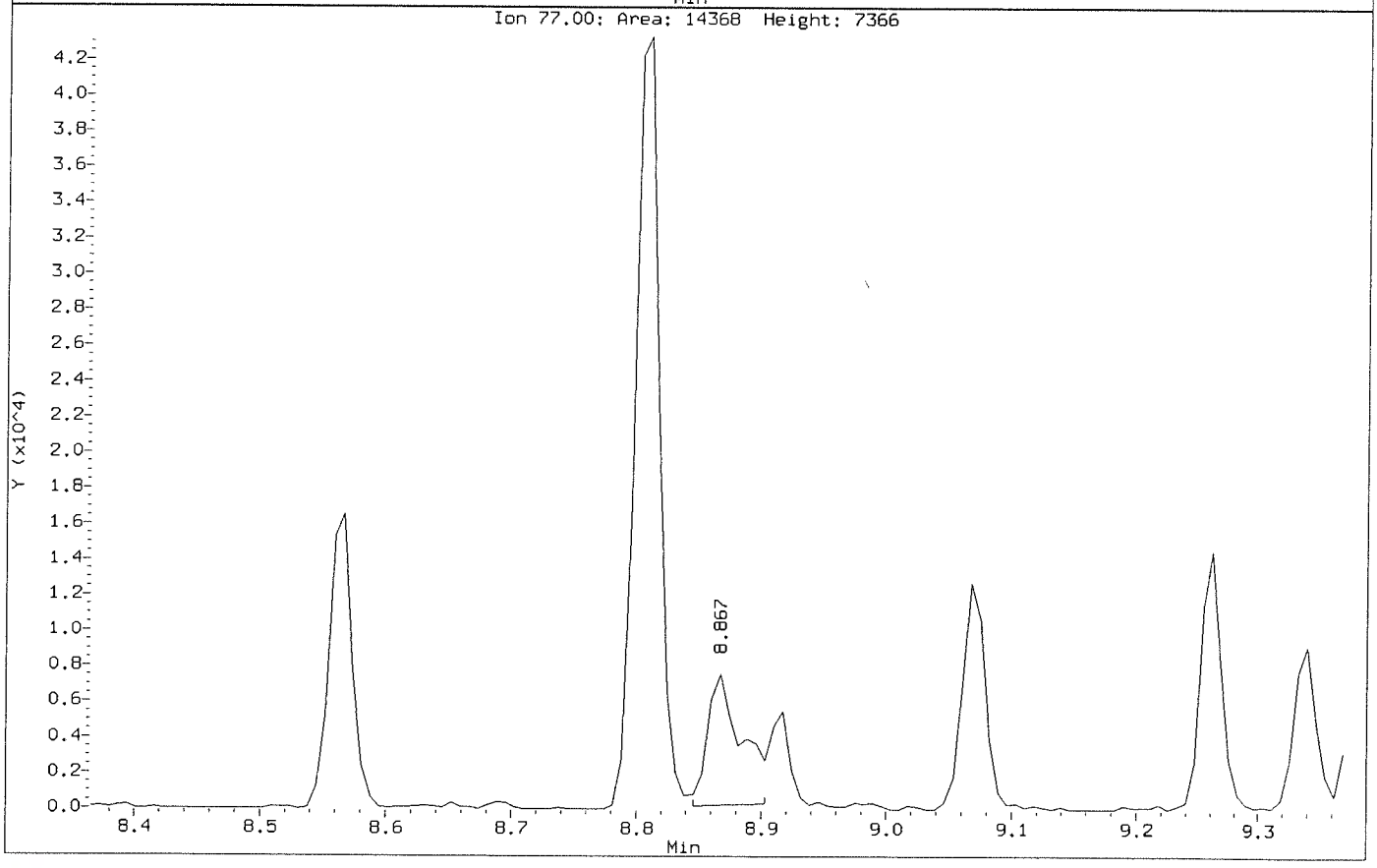




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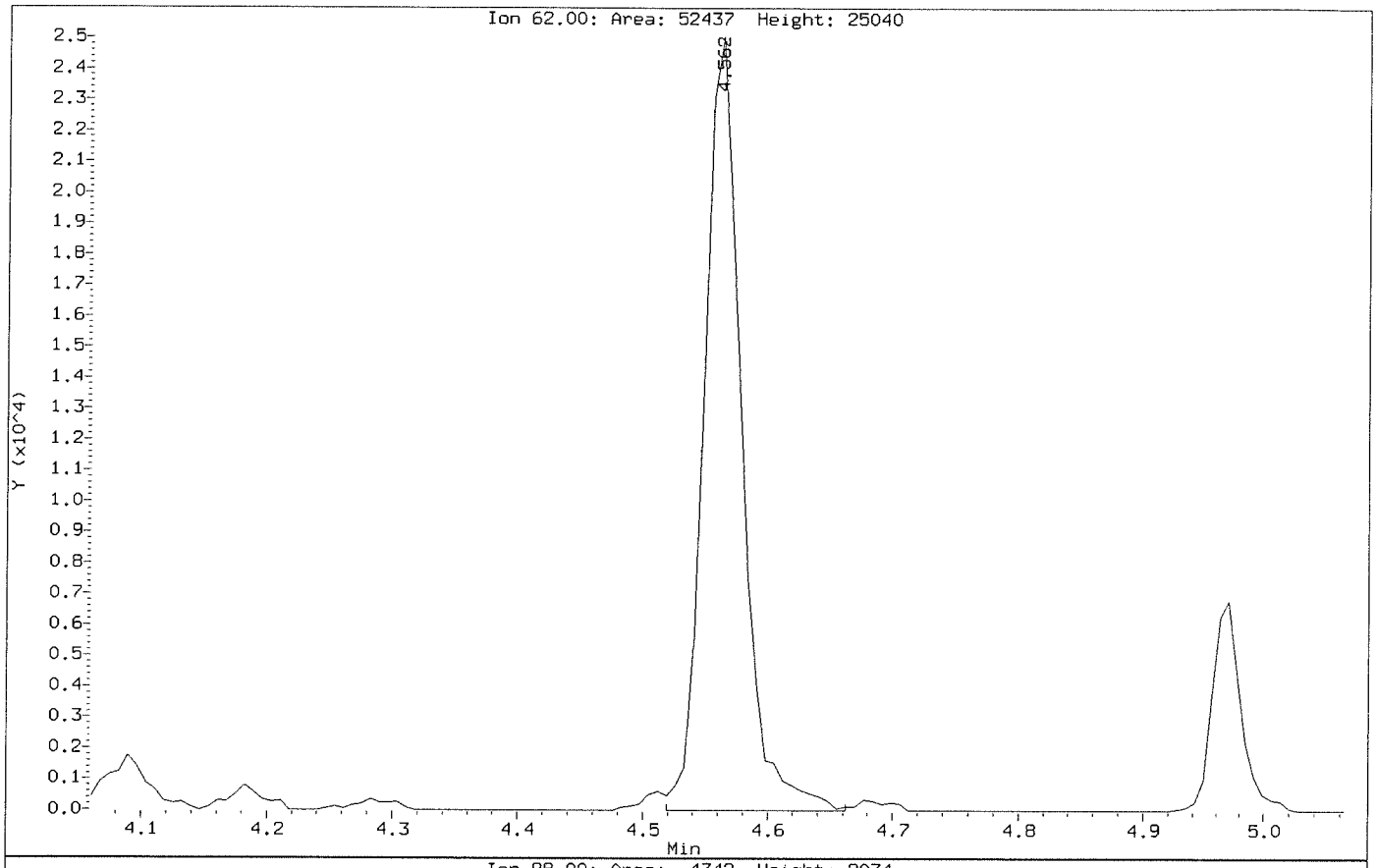
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

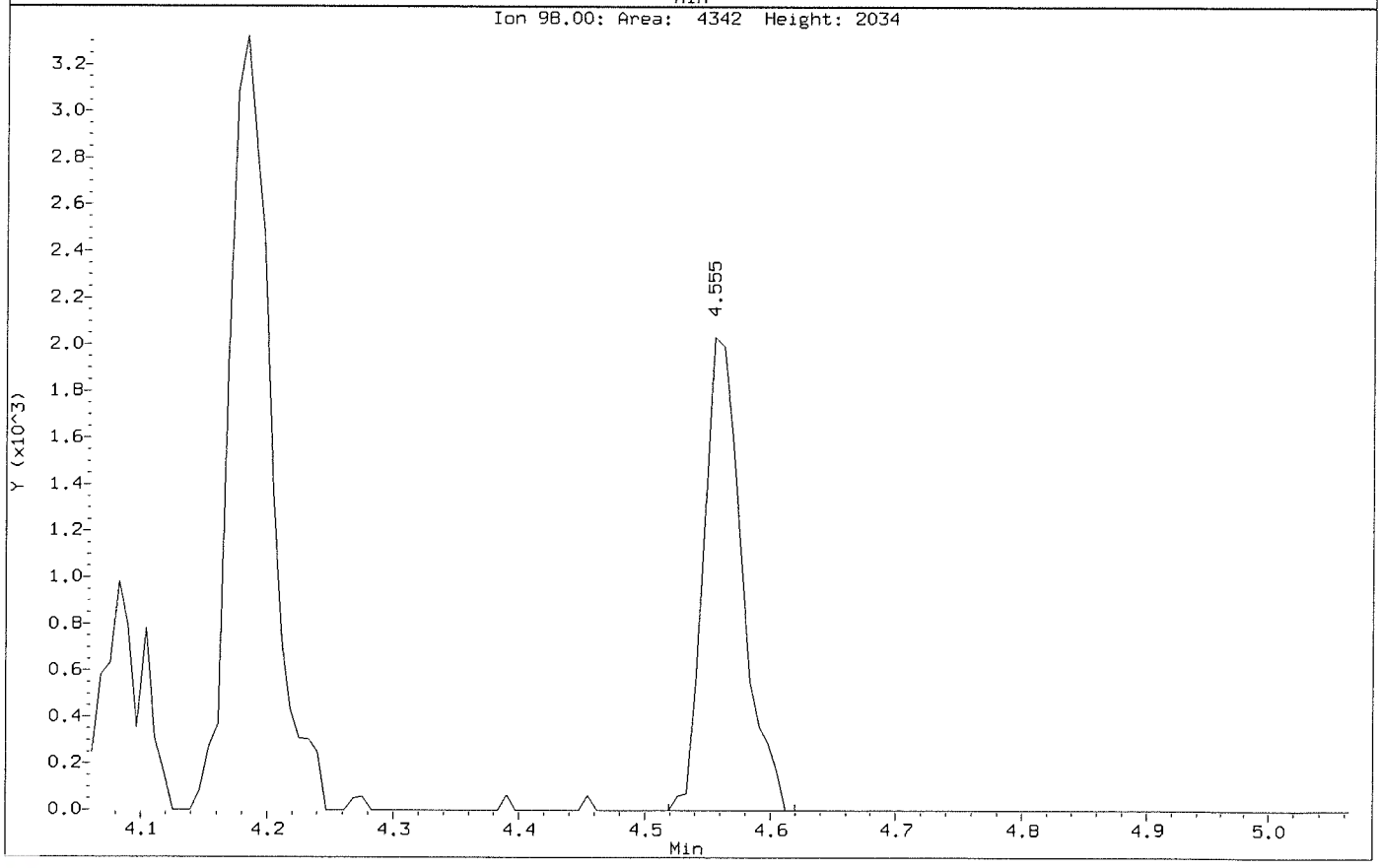




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Injection Date: 03-NOV-2020 14:06
Instrument: voa6.i
Client Sample ID: VSTD020

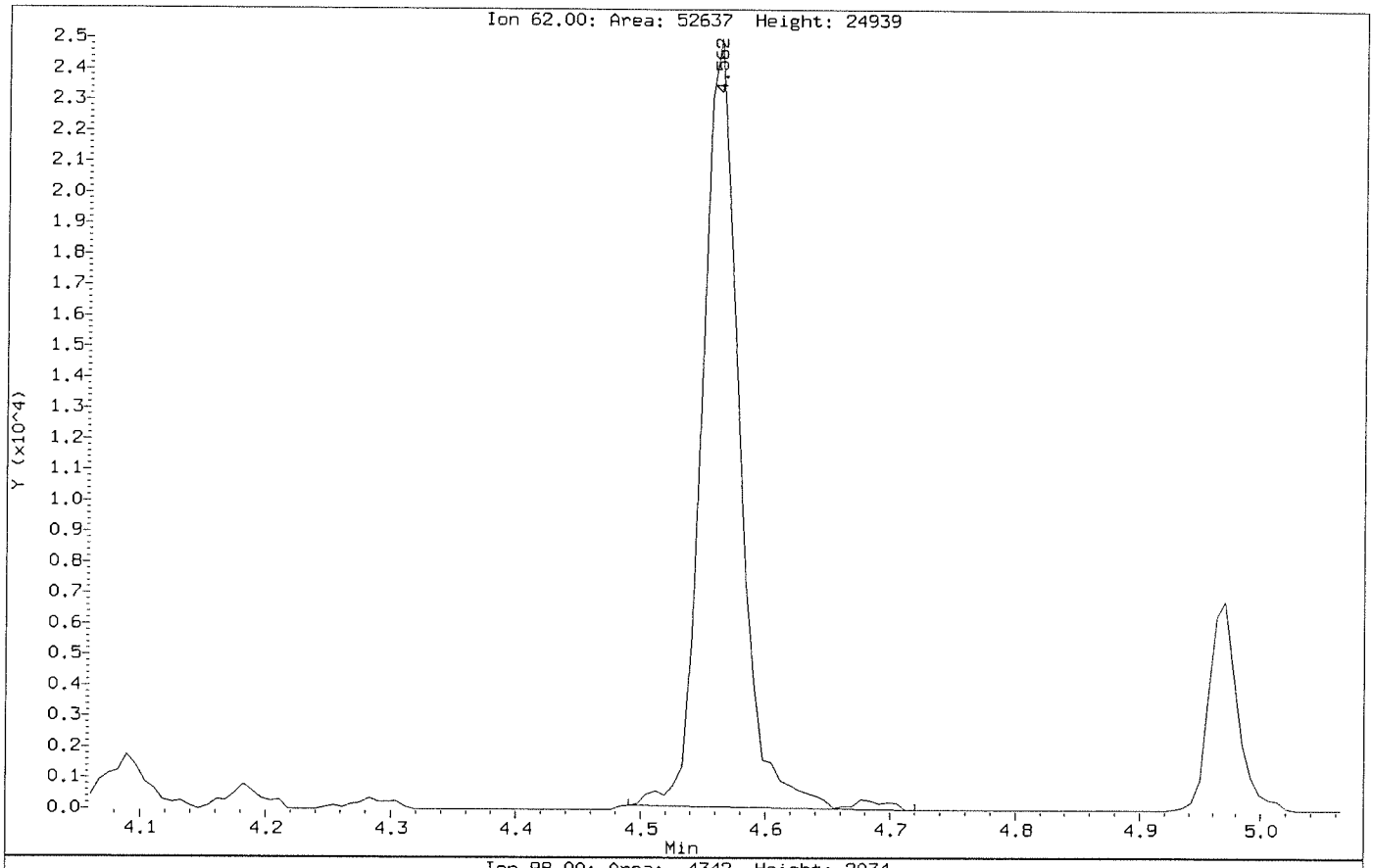
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

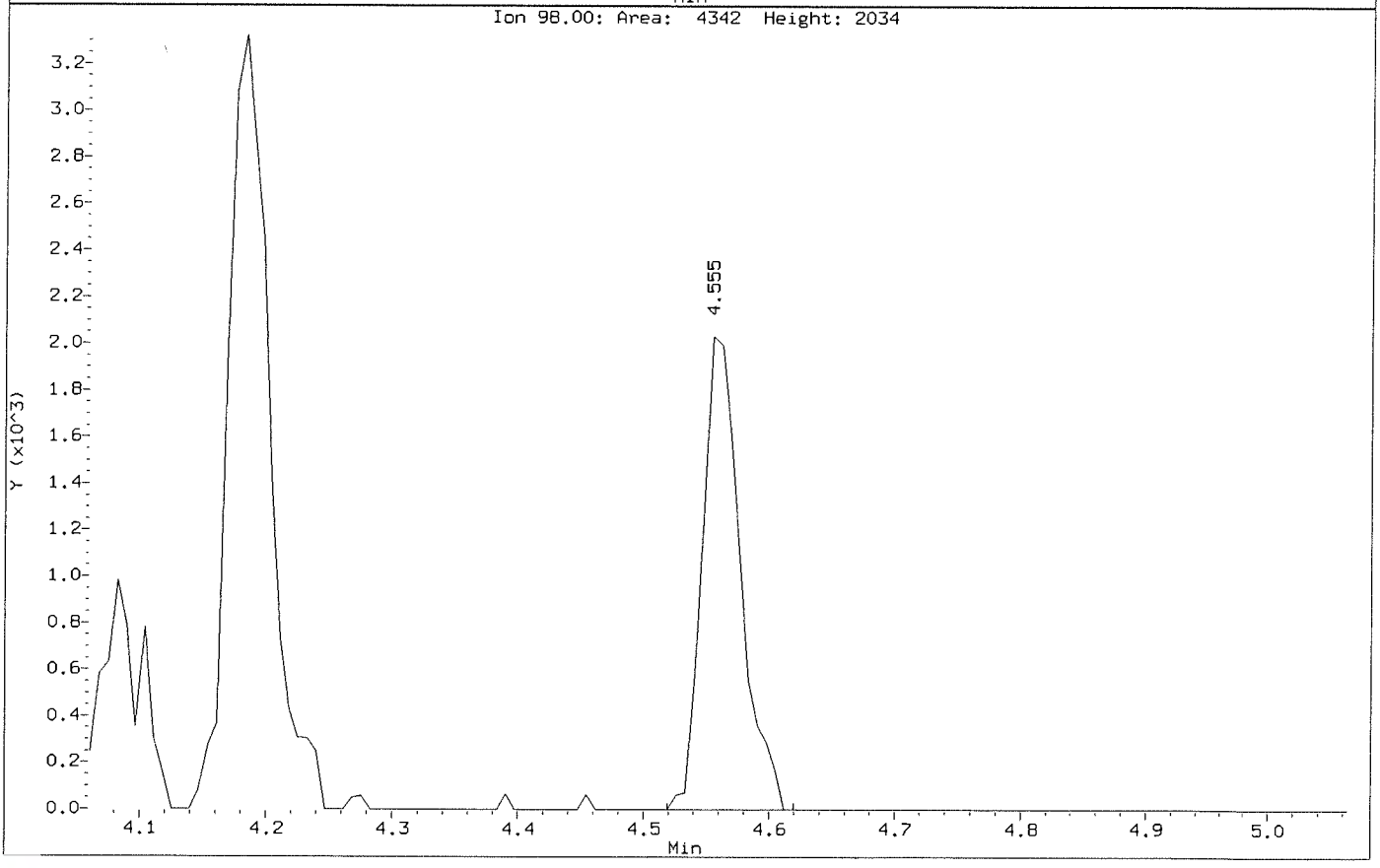




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Client Sample ID: VSTD020

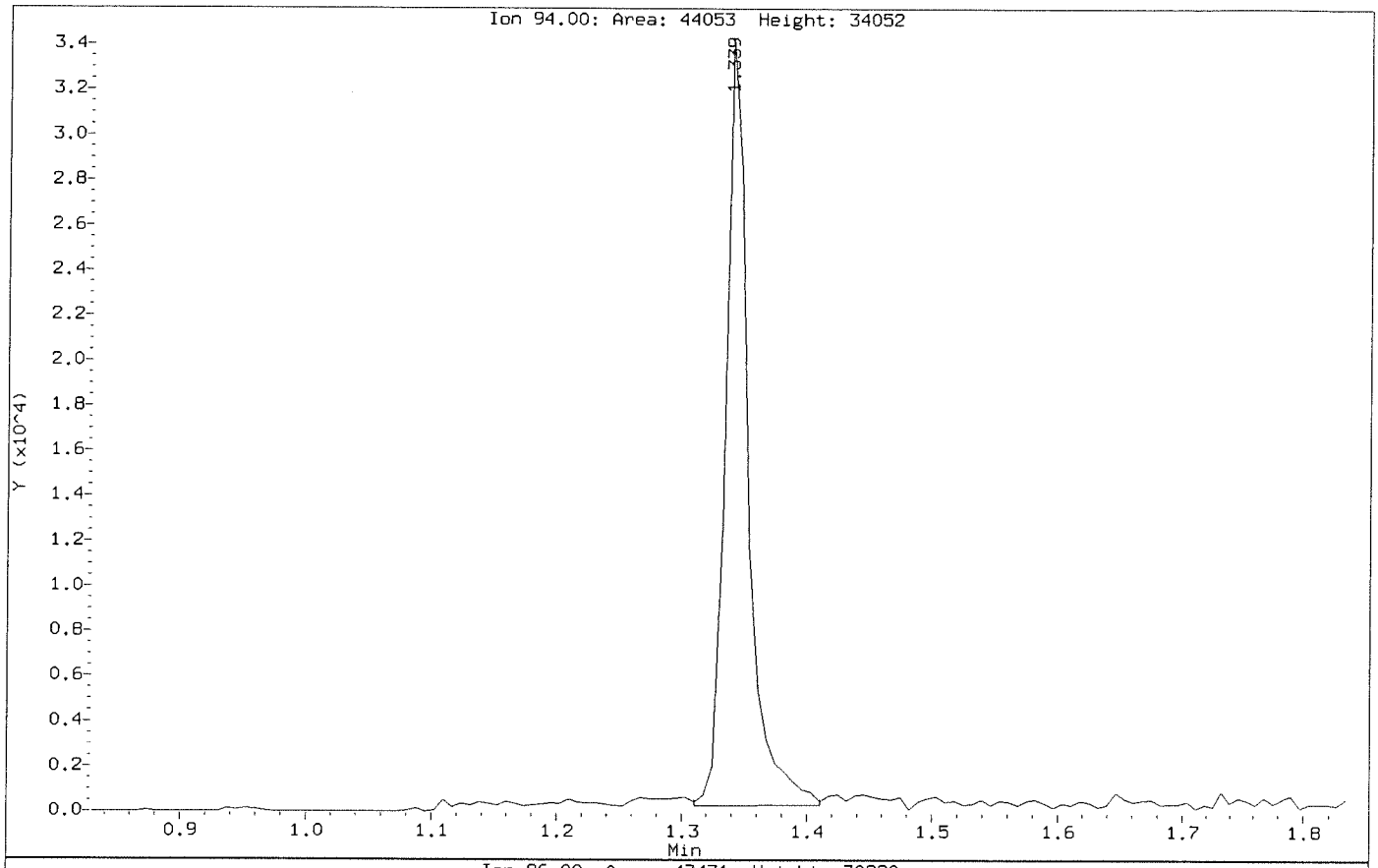
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

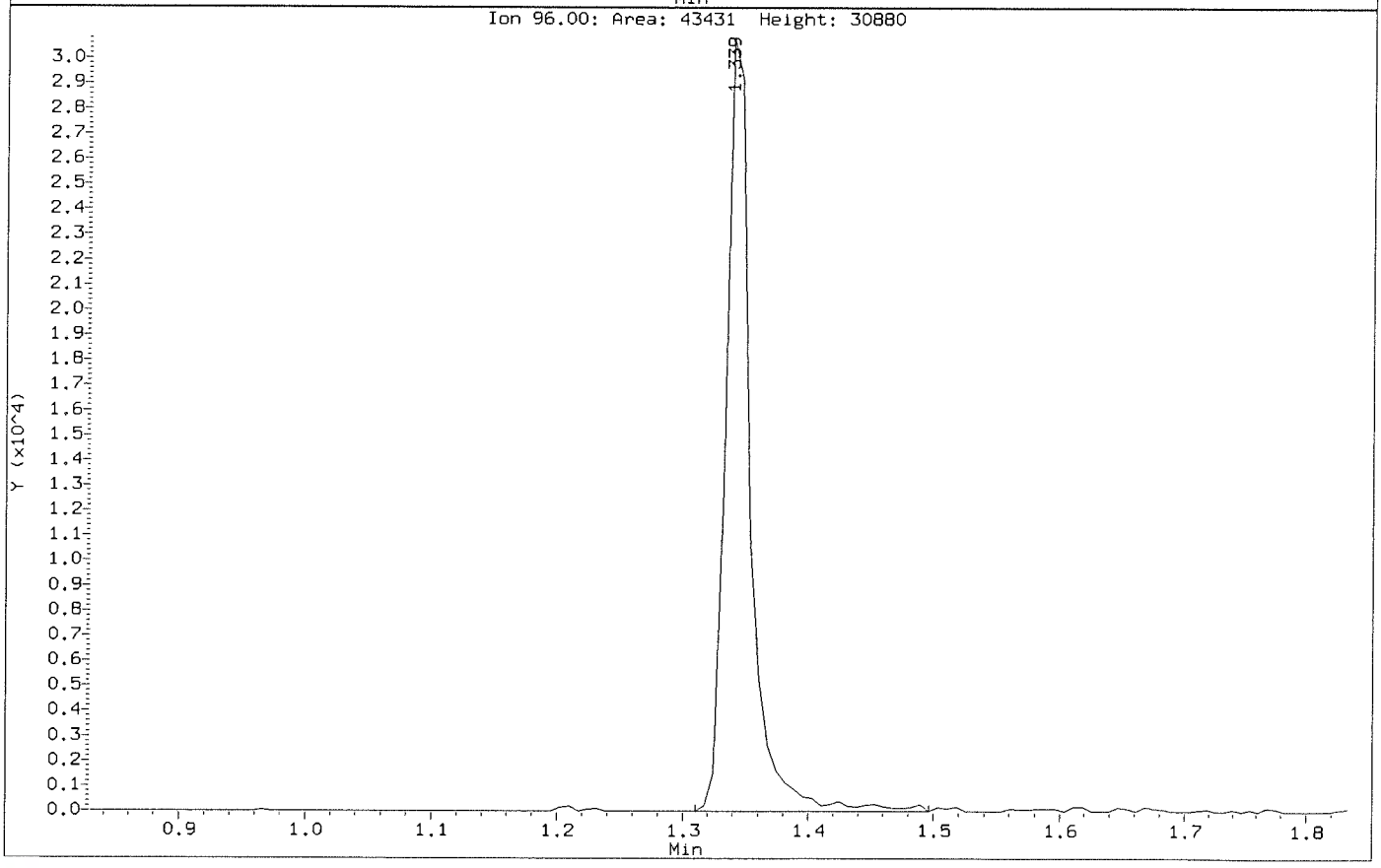




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Injection Date: 03-NOV-2020 14:06
Instrument: voa6.i
Client Sample ID: VSTD020

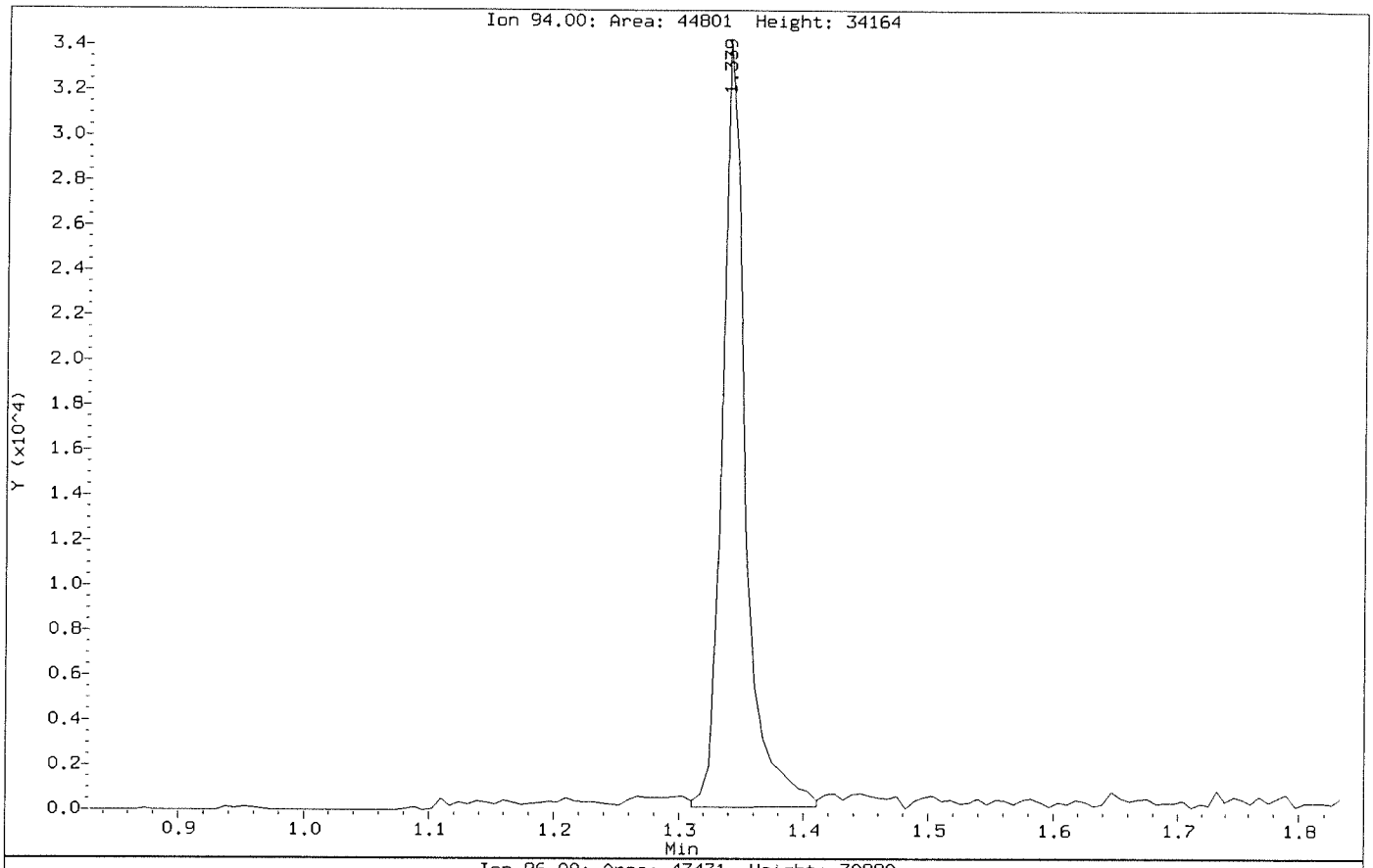
Compound: Bromomethane
CAS Number: 74-83-9

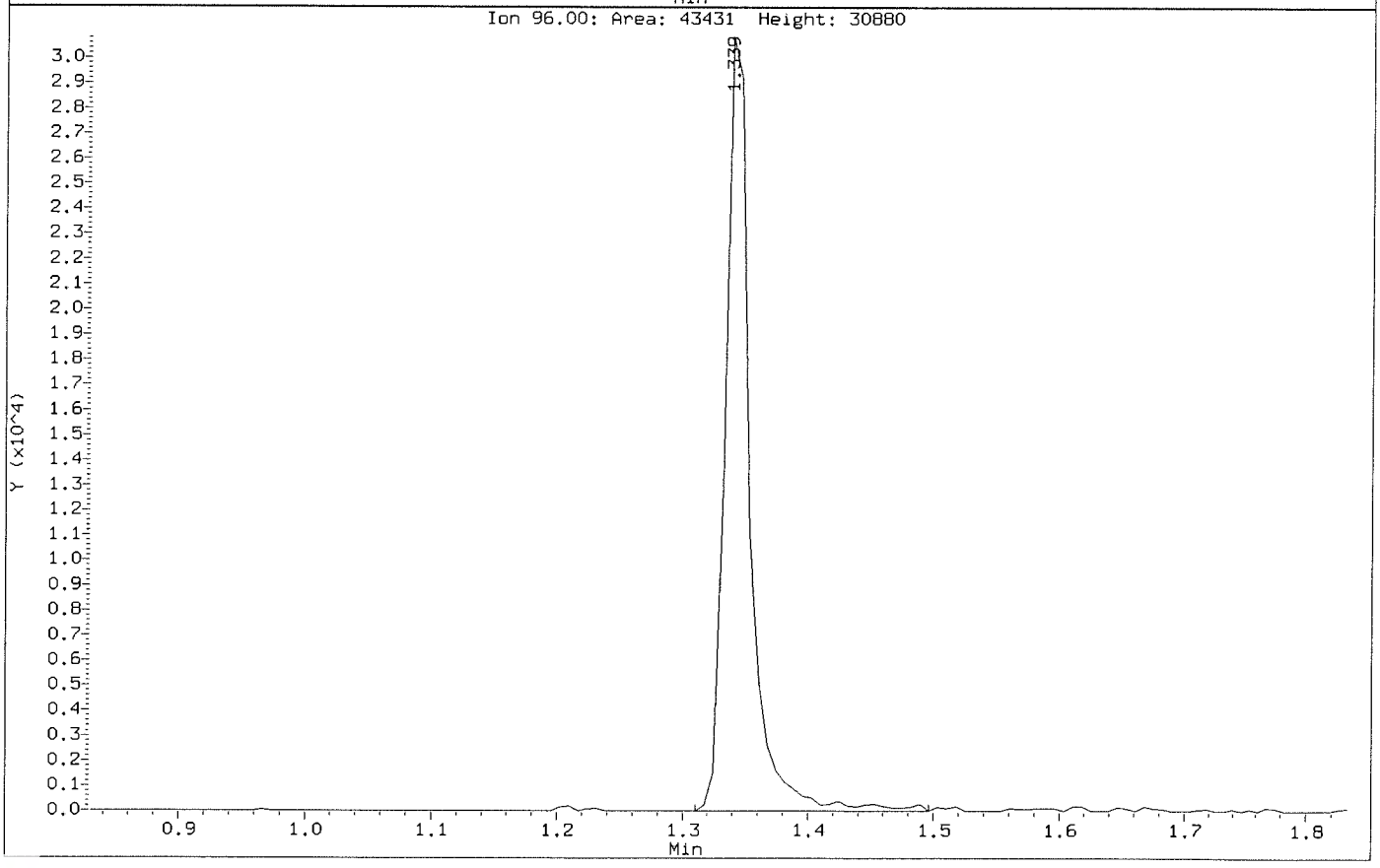




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Injection Date: 03-NOV-2020 14:06
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: Bromomethane
CAS Number: 74-83-9





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110308.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 03-NOV-2020 14:27
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:06 Cal File: X110307.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

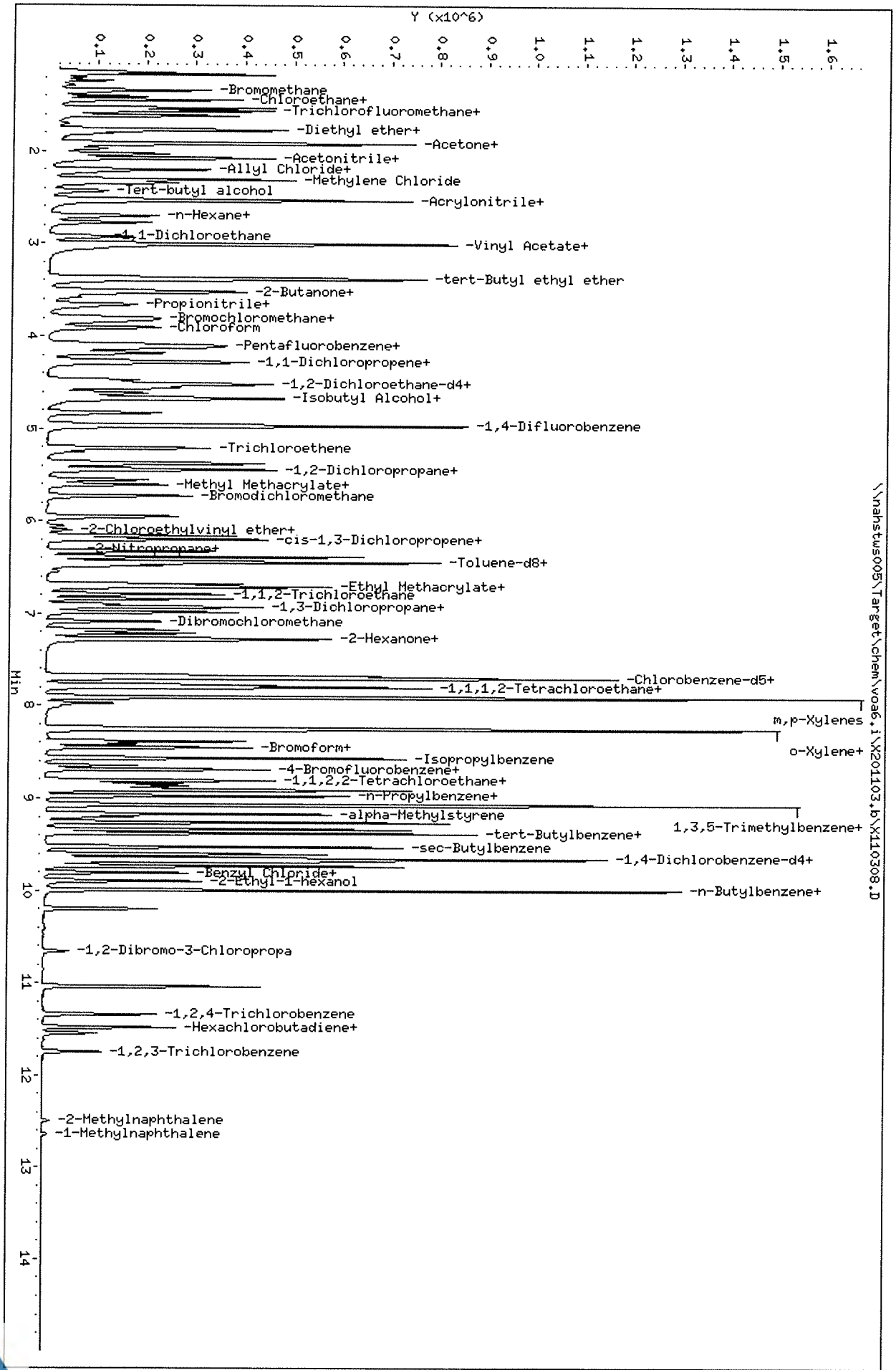
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	155760	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	292364	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	263420	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	124995	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	103962	50.0000	49.56
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	128500	50.0000	51.93
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	337960	50.0000	48.03
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	114211	50.0000	48.87
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	90169	50.0000	47.98
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	153379	50.0000	47.16
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	107818	50.0000	52.29
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	78832	50.0000	48.52
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	166486	50.0000	44.46
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	132708	50.0000	45.15
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	128883	50.0000	47.27
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	26867	50.0000	50.14
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	87173	50.0000	49.66(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	49484	50.0000	49.32
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	332854	50.0000	47.60
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	7134	50.0000	51.41
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	94981	50.0000	48.08
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	162132	50.0000	46.99

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110308.D Page 2
Report Date: 07-Nov-2020 12:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	155709	50.0000	49.39(M)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	100916	50.0000	46.64
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	342306	50.0000	47.99
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	166599	50.0000	45.47
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	158290	50.0000	49.04
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	177241	50.0000	46.46
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	144565	50.0000	44.85
24 2-Butanone	43	3.580	3.580	(0.856)	67284	100.000	92.92
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	258377	50.0000	44.01
52 2-Hexanone	43	7.212	7.212	(0.940)	169392	100.000	95.32
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	343639	50.0000	46.34
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	346256	50.0000	51.28
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	193651	100.000	96.76
10 Acetone	43	1.976	1.976	(0.473)	87016	100.000	101.69
37 Benzene	78	4.519	4.519	(0.909)	384910	50.0000	47.13
74 Bromobenzene	156	8.809	8.809	(0.912)	100247	50.0000	45.57
29 Bromochloromethane	128	3.803	3.803	(0.909)	51820	50.0000	48.30
39 Bromodichloromethane	83	5.729	5.729	(1.153)	146060	50.0000	48.62
66 Bromoform	173	8.416	8.416	(1.097)	56683	50.0000	43.81
6 Bromomethane	94	1.338	1.338	(0.320)	121041	50.0000	41.75
19 Carbon Disulfide	76	2.069	2.069	(0.495)	505351	100.000	92.54
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	125296	50.0000	47.86
59 Chlorobenzene	112	7.692	7.692	(1.003)	254157	50.0000	45.14
7 Chloroethane	64	1.403	1.403	(0.336)	102312	50.0000	41.68
28 Chloroform	83	3.910	3.910	(0.935)	187029	50.0000	46.92
3 Chloromethane	50	1.081	1.081	(0.258)	97255	50.0000	44.19
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	107386	50.0000	47.01
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	163405	50.0000	50.09
55 Dibromochloromethane	129	7.176	7.176	(0.936)	99611	50.0000	51.16
44 Dibromomethane	93	5.557	5.557	(1.118)	73154	50.0000	49.49
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	88848	50.0000	44.04
61 Ethylbenzene	106	7.800	7.800	(1.017)	132902	50.0000	46.53(H)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	31815	50.0000	47.51
67 Isopropylbenzene	105	8.566	8.566	(1.117)	378050	50.0000	43.67
62 m,p-Xylenes	106	7.907	7.907	(1.031)	342459	100.000	100.11
17 Methylene Chloride	84	2.305	2.305	(0.551)	95886	50.0000	44.83
87 n-Butylbenzene	91	9.999	9.999	(1.035)	336254	50.0000	44.69
73 n-Propylbenzene	91	8.917	8.917	(0.923)	463730	50.0000	46.60
92 Naphthalene	128	11.546	11.546	(1.195)	71142	50.0000	49.48
63 o-Xylene	106	8.244	8.244	(1.075)	164212	50.0000	48.17
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	381699	50.0000	44.83
64 Styrene	104	8.258	8.258	(1.077)	285436	50.0000	49.93
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	255346	50.0000	45.11
56 Tetrachloroethene	164	6.933	6.933	(0.904)	69360	50.0000	47.82
50 Toluene	91	6.446	6.446	(0.840)	407320	50.0000	42.25
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	89593	50.0000	46.16
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	149269	50.0000	51.87
38 Trichloroethene	130	5.214	5.214	(1.049)	94571	50.0000	48.53
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	258435	50.0000	44.02
5 Vinyl Chloride	62	1.145	1.145	(0.274)	157895	50.0000	45.87(H)

QC Flag Legend

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

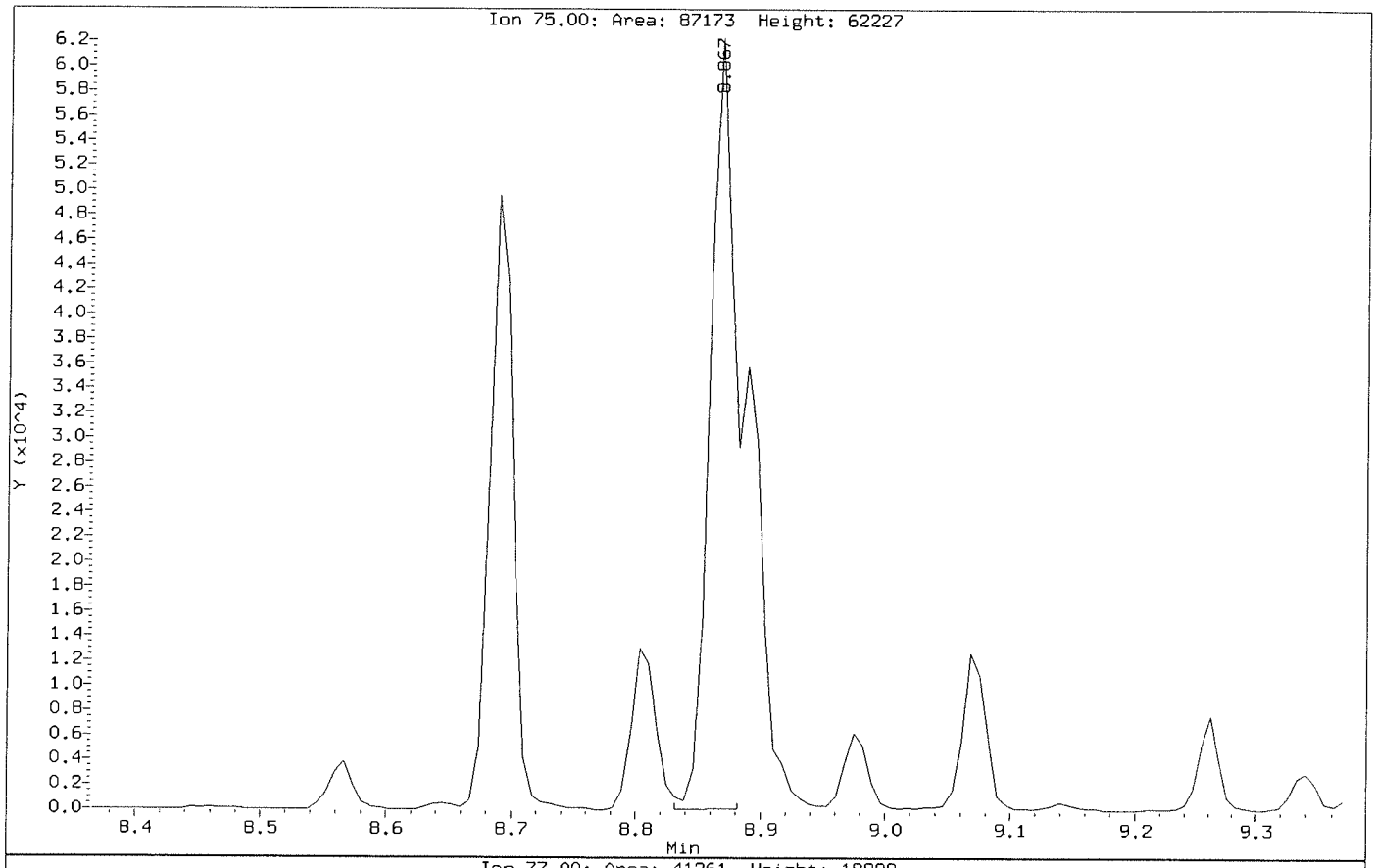


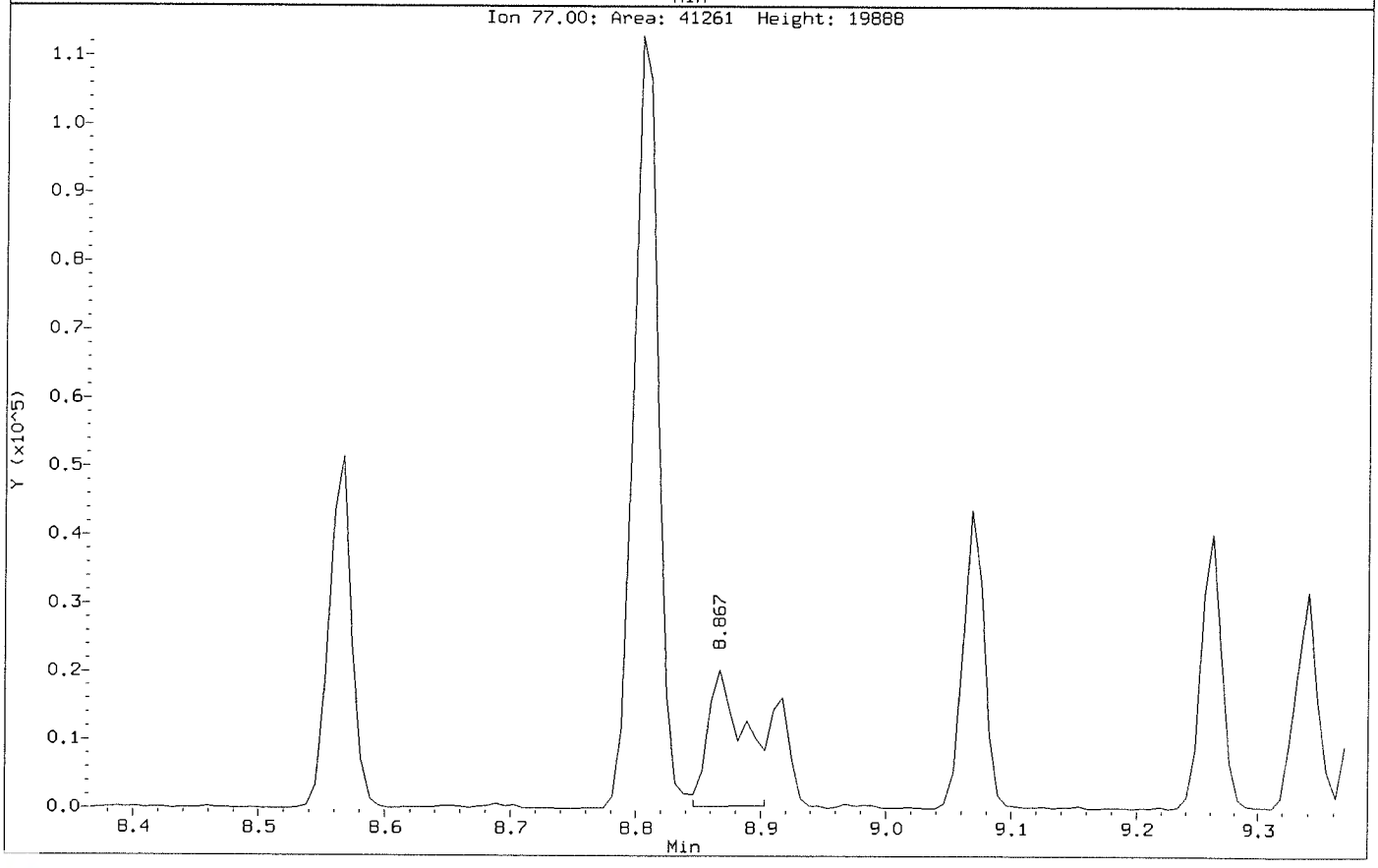
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Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110308.D
Injection Date: 03-NOV-2020 14:27
Instrument: voa6.i
Client Sample ID: VSTD050

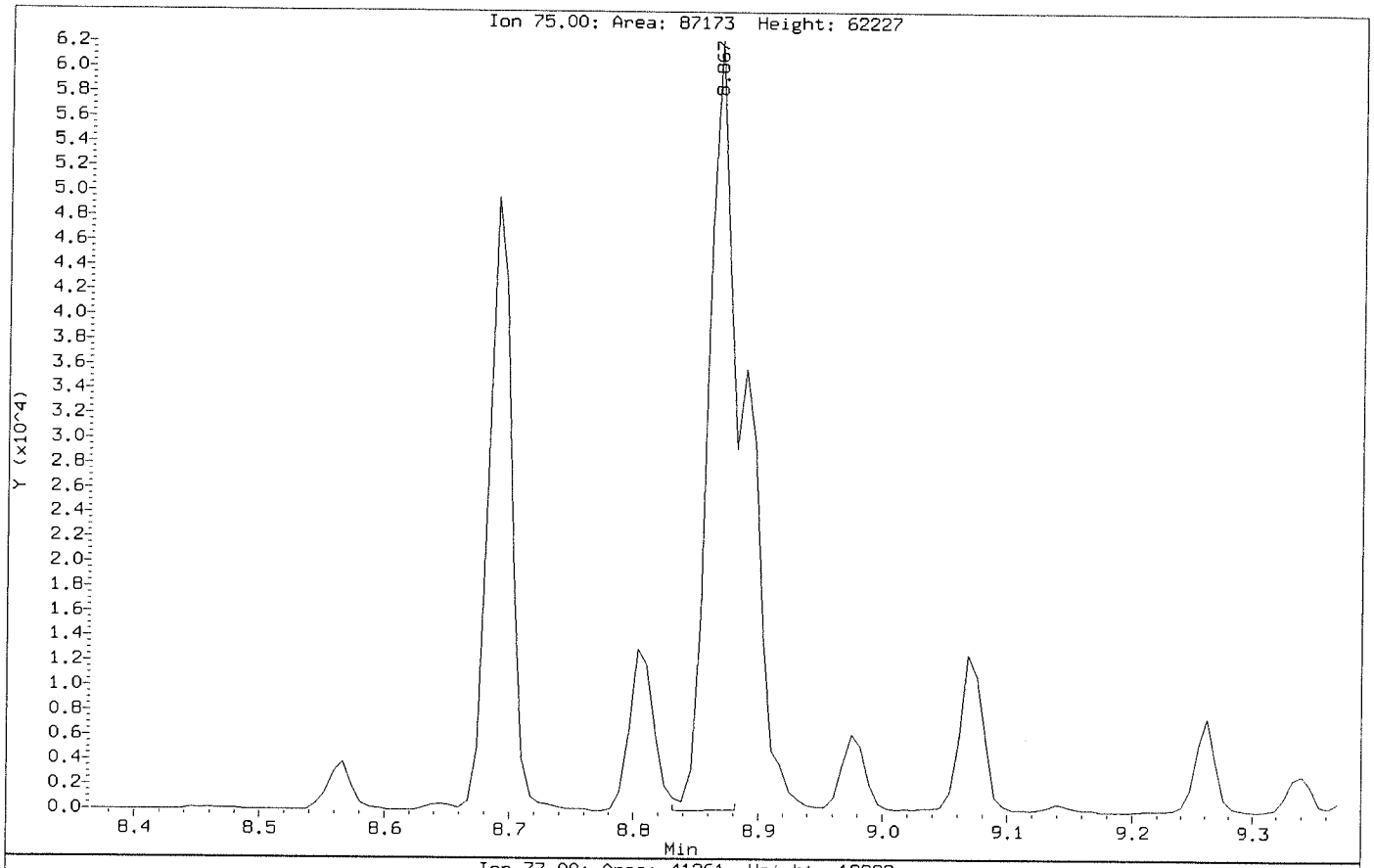
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

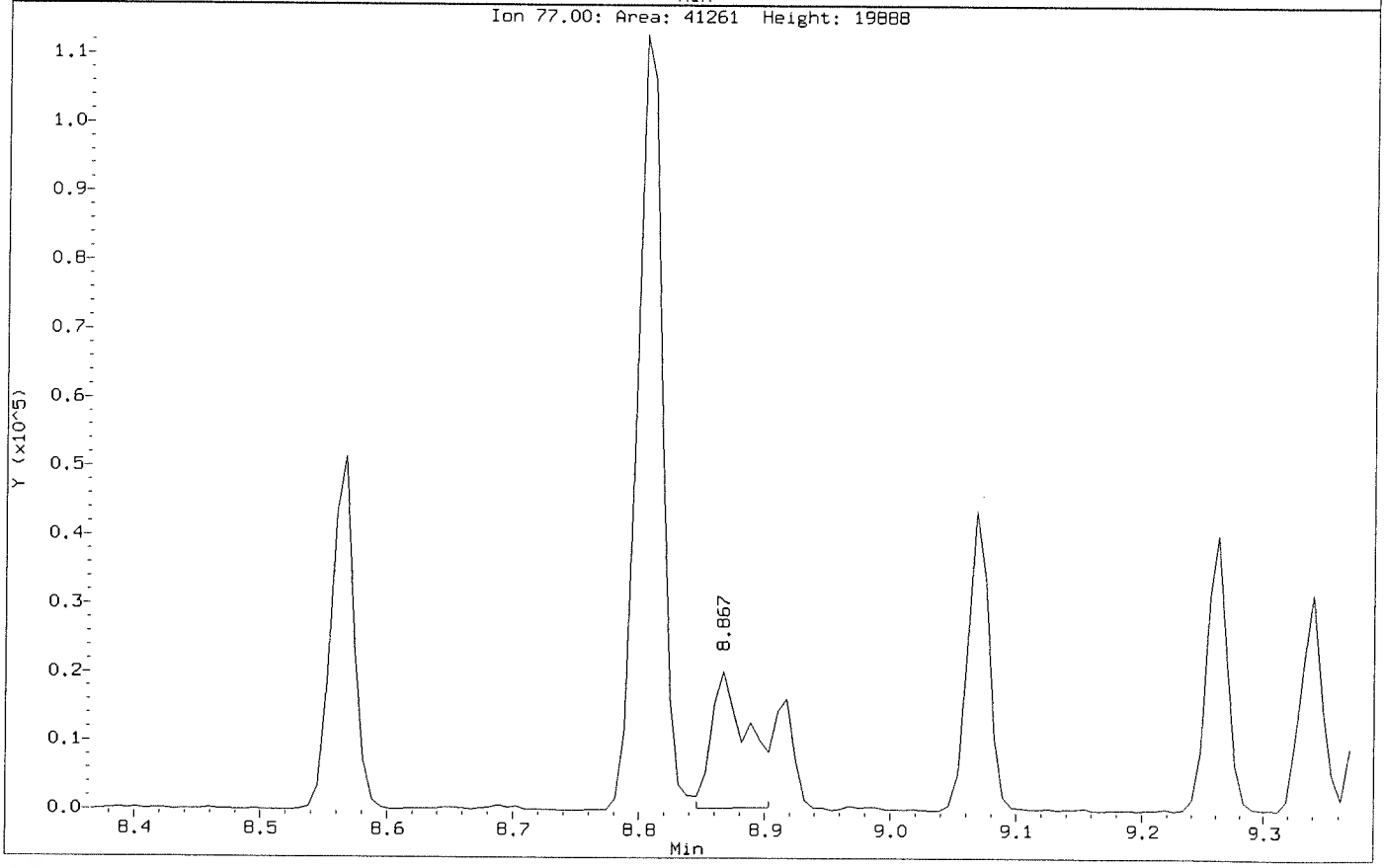




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Injection Date: 03-NOV-2020 14:27
Instrument: voa6.i
Client Sample ID: VSTD050

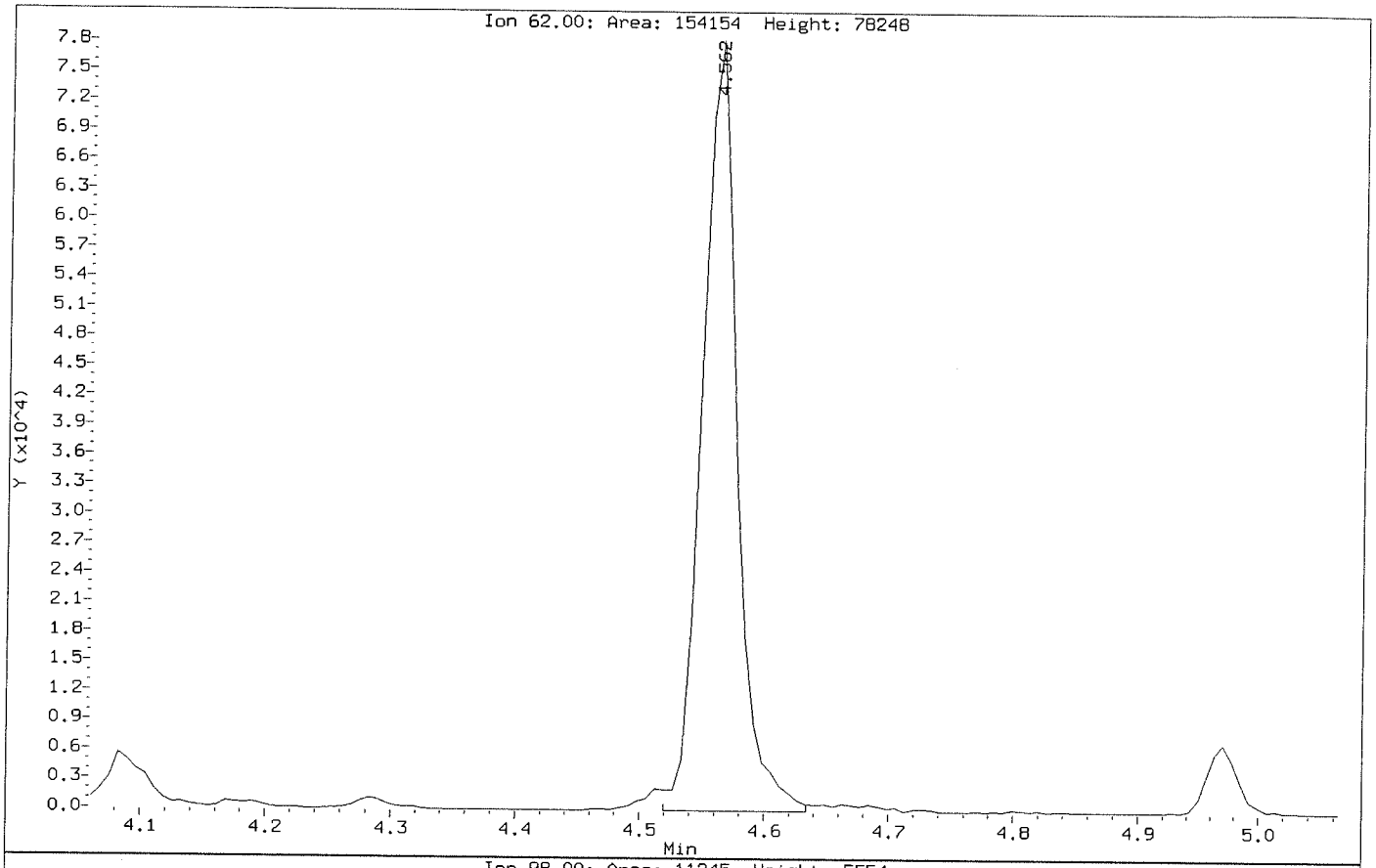
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

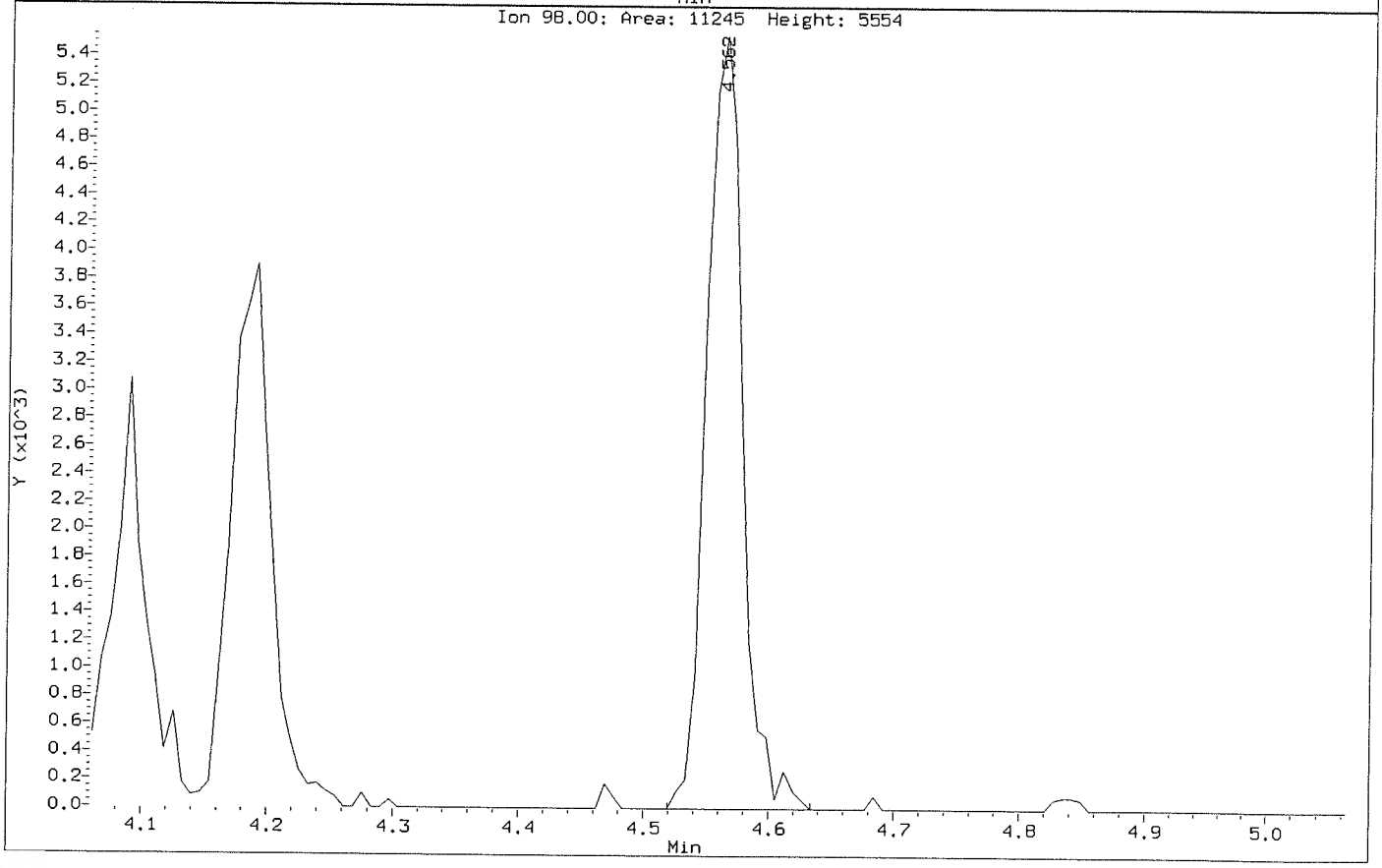




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Injection Date: 03-NOV-2020 14:27
Instrument: voa6.i
Client Sample ID: VSTD050

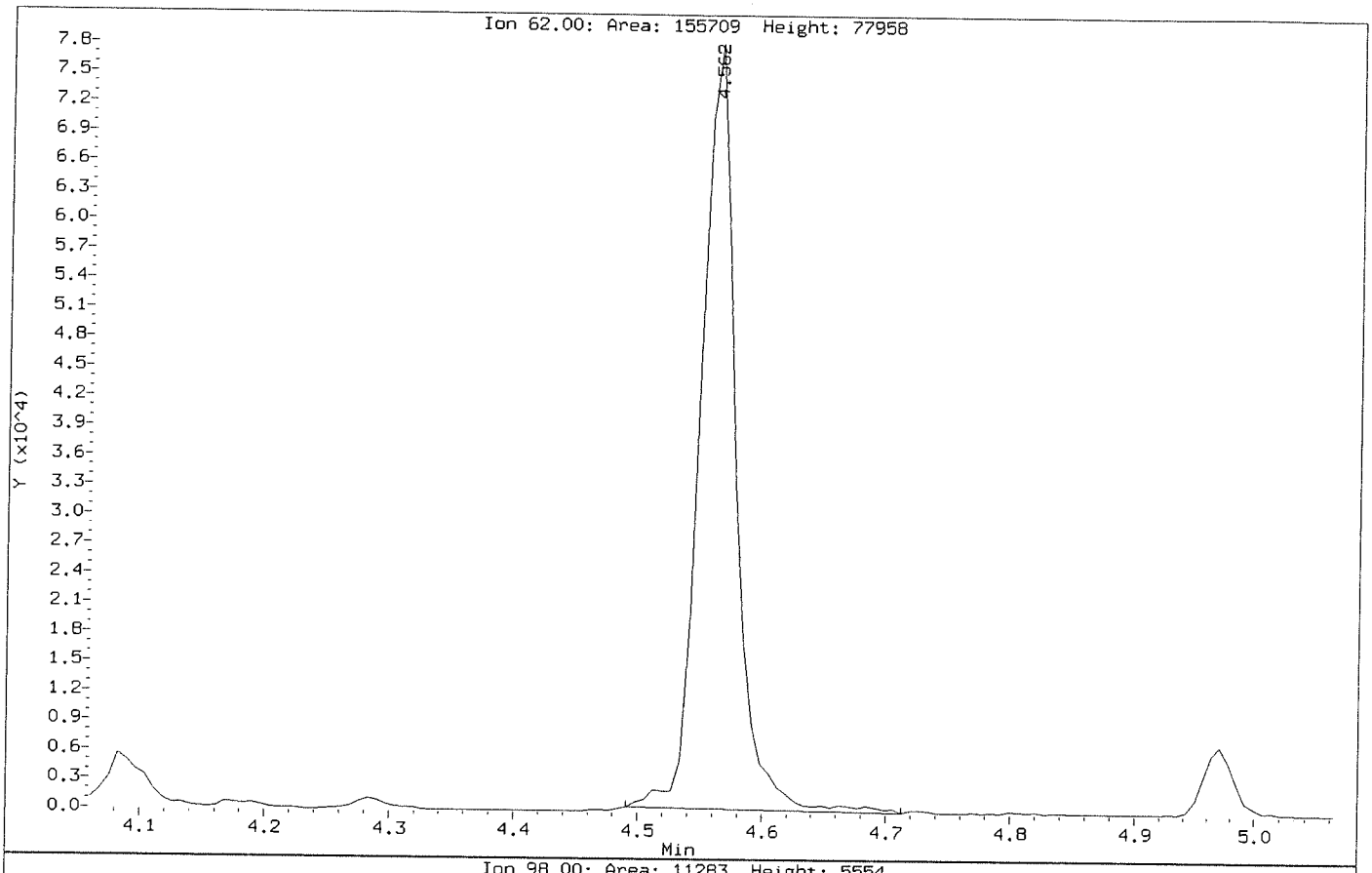
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

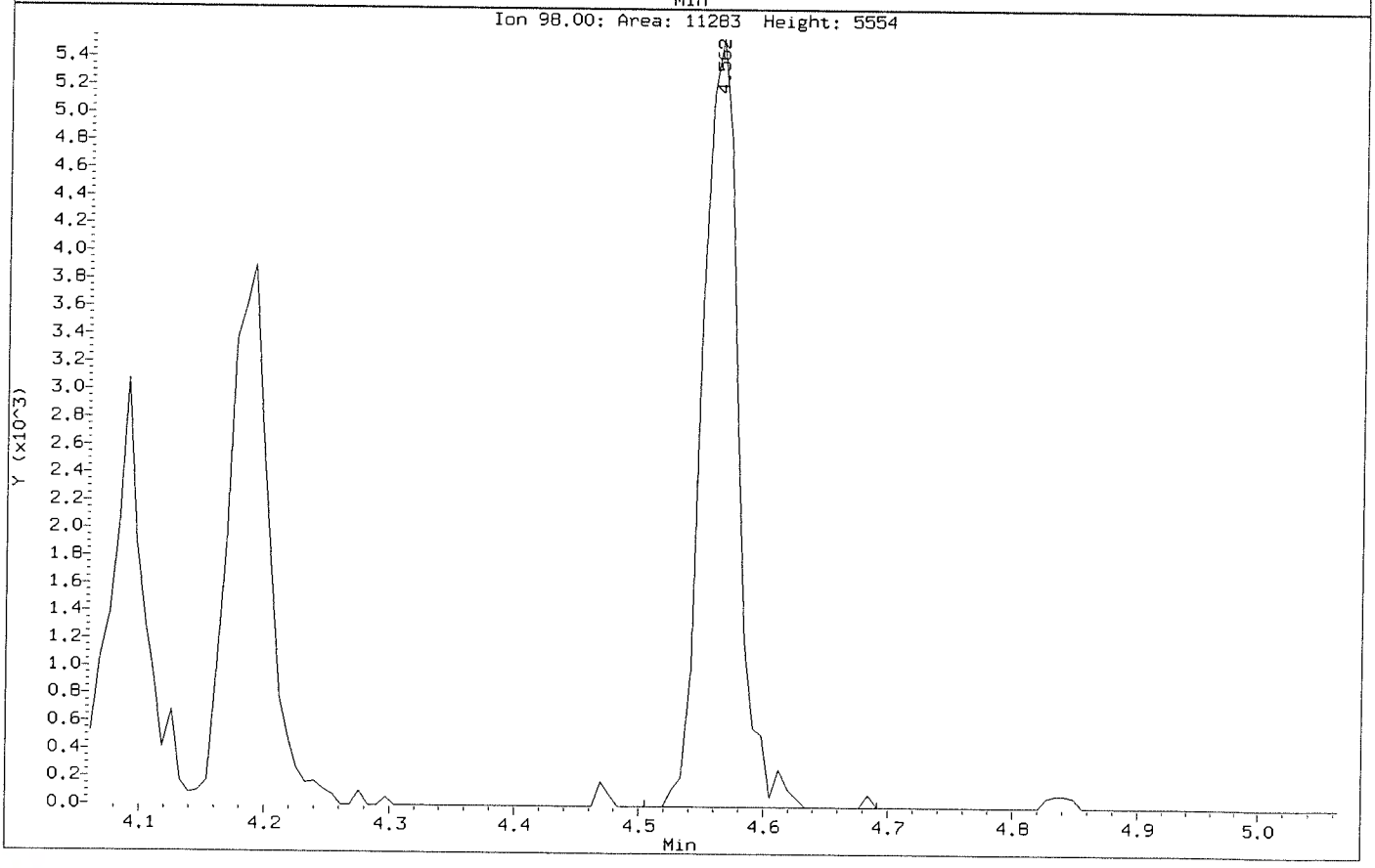




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Injection Date: 03-NOV-2020 14:27
Instrument: voa6.i
Client Sample ID: VSTD050

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





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110309.D Page 1
Report Date: 07-Nov-2020 12:11

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110309.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 03-NOV-2020 14:48
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:27 Cal File: X110308.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

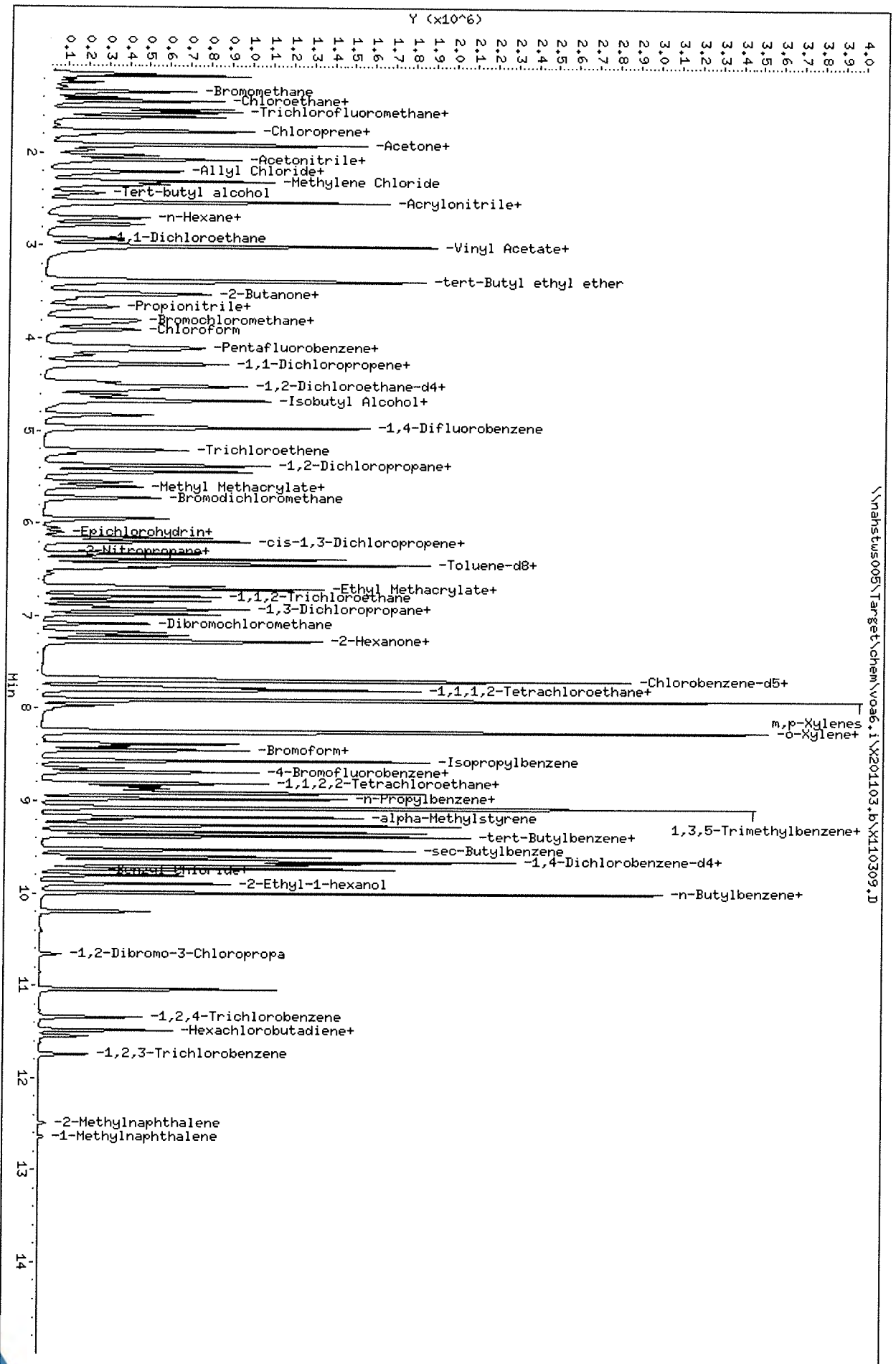
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	154236	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	303407	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	276014	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	137781	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	209542	100.000	100.88
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	253050	100.000	98.38
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	766192	100.000	103.92
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	252308	100.000	99.11
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	207092	100.000	105.17
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	328674	100.000	102.05
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	223385	100.000	98.80
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	166608	100.000	97.86
22 1,1-Dichloroethane	63	2.921	2.921	(0.697)	364051	100.000	98.19
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	268838	100.000	92.38
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	272457	100.000	96.29
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	54420	100.000	90.65
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	190827	100.000	98.63(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	104687	100.000	93.04
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	824431	100.000	106.96
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	14813	100.000	97.15
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	208629	100.000	100.79
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	372696	100.000	98.00

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110309.D Page 2
Report Date: 07-Nov-2020 12:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	300213	100.000	91.76(M)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	206622	100.000	92.02
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	817818	100.000	104.03
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	391011	100.000	96.83
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	329308	100.000	97.37
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	412100	100.000	98.00
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	306687	100.000	96.09
24	2-Butanone	43	3.580	3.580	(0.855)	151796	200.000	211.71(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	615192	100.000	95.06
52	2-Hexanone	43	7.212	7.212	(0.940)	370165	200.000	194.78
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	821631	100.000	100.52
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	816889	100.000	109.77
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	417836	200.000	199.26
10	Acetone	43	1.976	1.976	(0.472)	169628	200.000	208.65(A)
37	Benzene	78	4.519	4.519	(0.909)	815390	100.000	96.21
74	Bromobenzene	156	8.809	8.809	(0.912)	225264	100.000	92.91
29	Bromochloromethane	128	3.802	3.802	(0.908)	107517	100.000	101.21
39	Bromodichloromethane	83	5.729	5.729	(1.153)	287648	100.000	92.27
66	Bromoform	173	8.415	8.415	(1.097)	133700	100.000	94.72
6	Bromomethane	94	1.338	1.338	(0.320)	279247	100.000	97.28
19	Carbon Disulfide	76	2.069	2.069	(0.494)	1041315	200.000	192.57
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	269823	100.000	99.32
59	Chlorobenzene	112	7.699	7.699	(1.004)	577522	100.000	97.90
7	Chloroethane	64	1.403	1.403	(0.335)	211420	100.000	86.99
28	Chloroform	83	3.910	3.910	(0.933)	384387	100.000	97.39
3	Chloromethane	50	1.081	1.081	(0.258)	217141	100.000	98.54
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	216761	100.000	95.83
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	334095	100.000	98.70
55	Dibromochloromethane	129	7.176	7.176	(0.936)	215942	100.000	105.86
44	Dibromomethane	93	5.557	5.557	(1.118)	146776	100.000	95.69
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	213064	100.000	106.67
61	Ethylbenzene	106	7.799	7.799	(1.017)	305086	100.000	101.95(H)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	74152	100.000	97.87
67	Isopropylbenzene	105	8.566	8.566	(1.117)	912871	100.000	97.24
62	m,p-Xylenes	106	7.907	7.907	(1.031)	811392	200.000	226.37(A)
17	Methylene Chloride	84	2.305	2.305	(0.550)	202216	100.000	95.49
87	n-Butylbenzene	91	9.998	9.998	(1.035)	808796	100.000	93.27
73	n-Propylbenzene	91	8.917	8.917	(0.923)	1120519	100.000	102.15
92	Naphthalene	128	11.546	11.546	(1.195)	144587	100.000	89.43
63	o-Xylene	106	8.244	8.244	(1.075)	377365	100.000	105.64
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	940164	100.000	96.91
64	Styrene	104	8.258	8.258	(1.077)	686197	100.000	114.56
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	626984	100.000	97.43
56	Tetrachloroethene	164	6.933	6.933	(0.904)	157441	100.000	103.61
50	Toluene	91	6.446	6.446	(0.840)	923135	100.000	91.39
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	197221	100.000	102.63
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	327079	100.000	109.52
38	Trichloroethene	130	5.206	5.206	(1.048)	193089	100.000	95.49
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	541989	100.000	93.23
5	Vinyl Chloride	62	1.145	1.145	(0.273)	335336	100.000	98.39(H)

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.

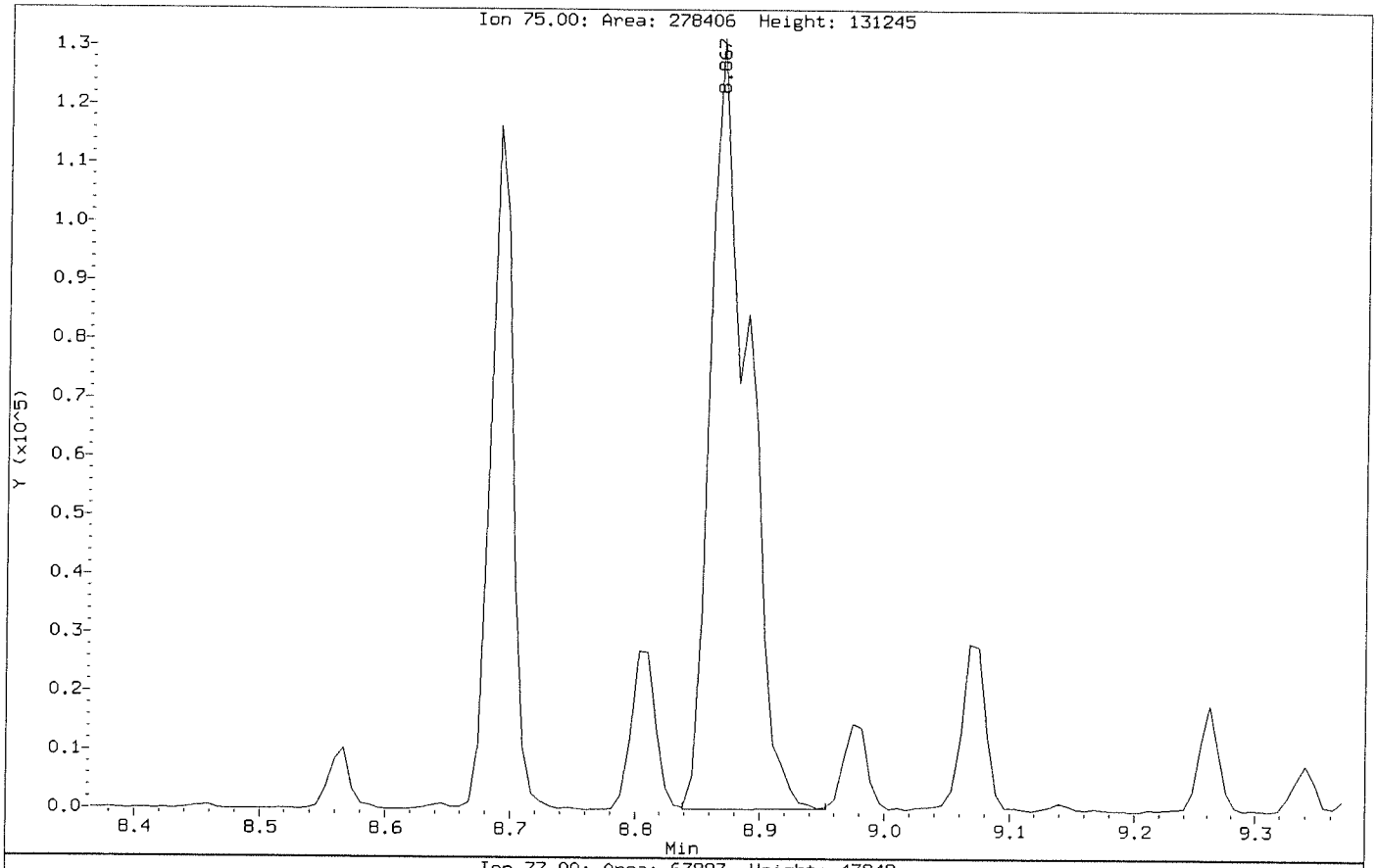


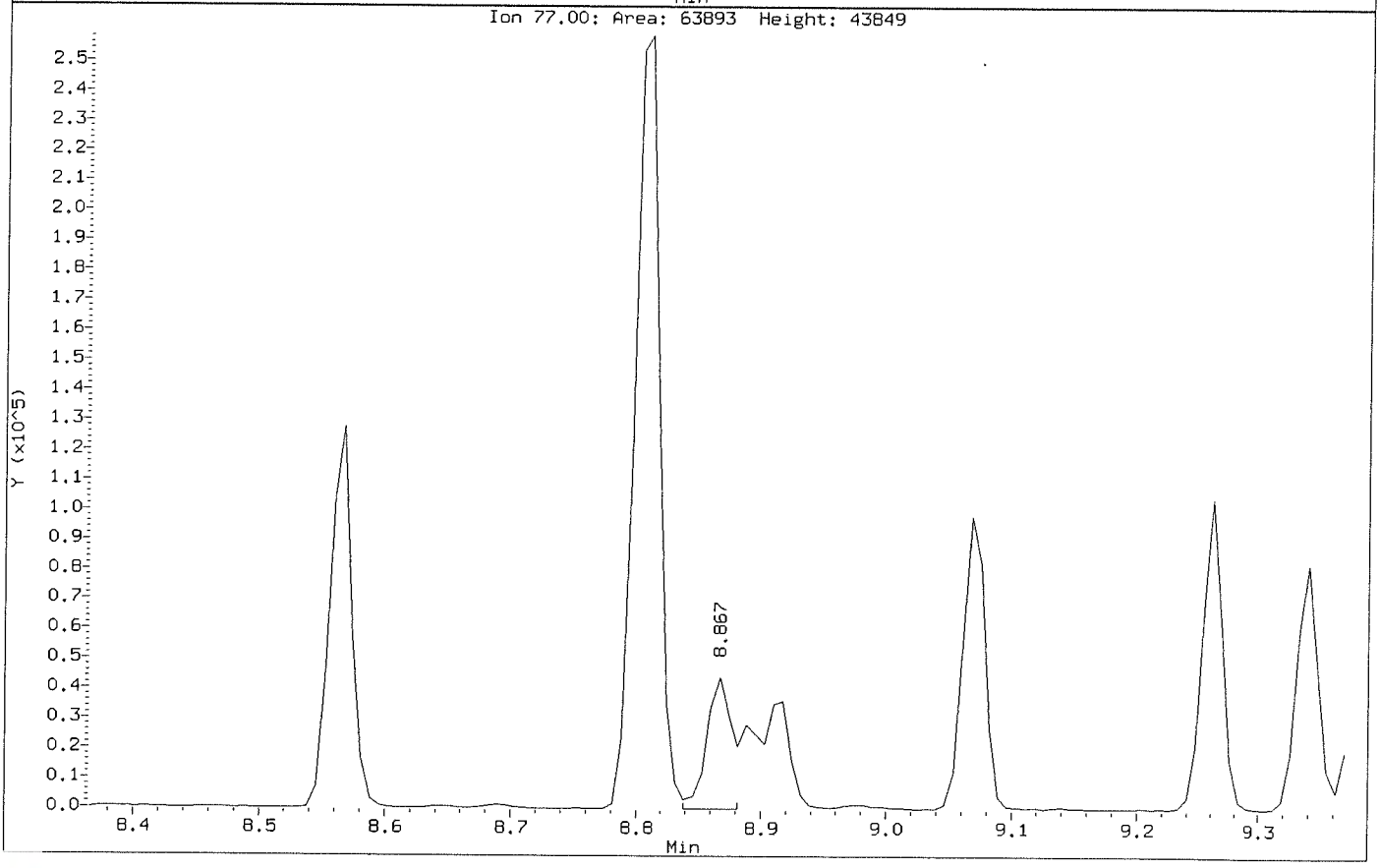
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Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110309.D
Injection Date: 03-NOV-2020 14:48
Instrument: voa6.i
Client Sample ID: VSTD100

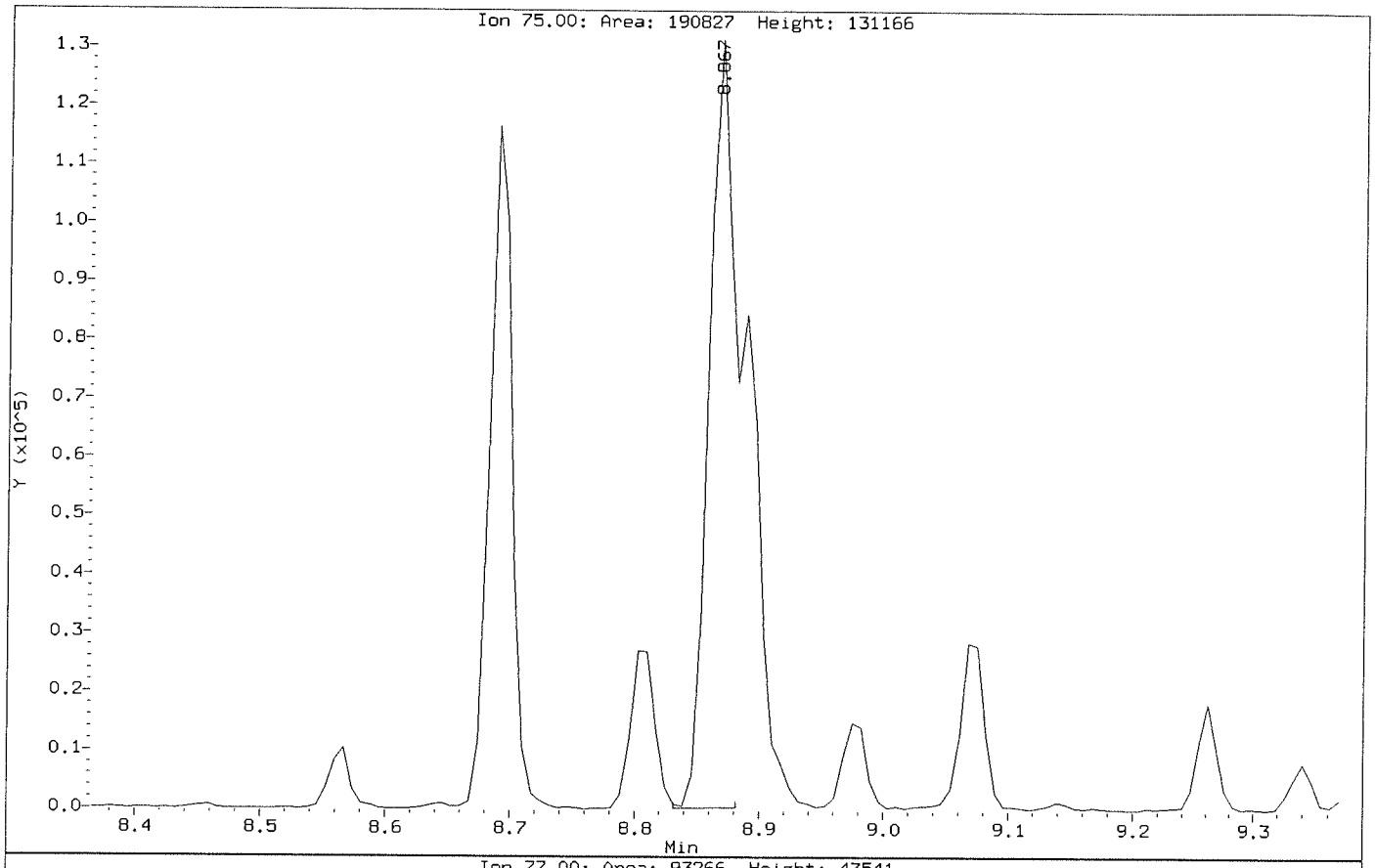
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CAS Number: 96-18-4

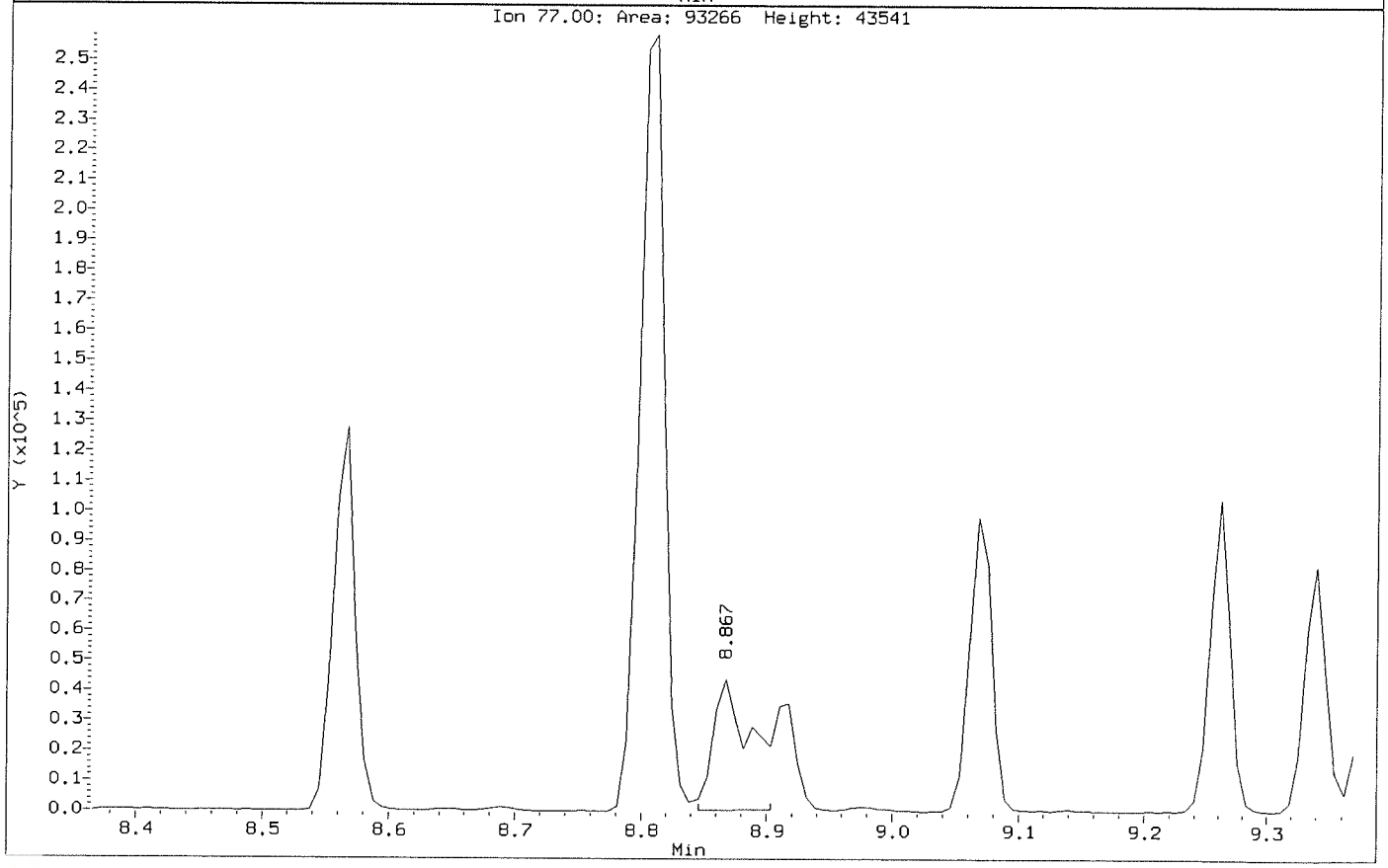




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Instrument: voa6.i
Client Sample ID: VSTD100

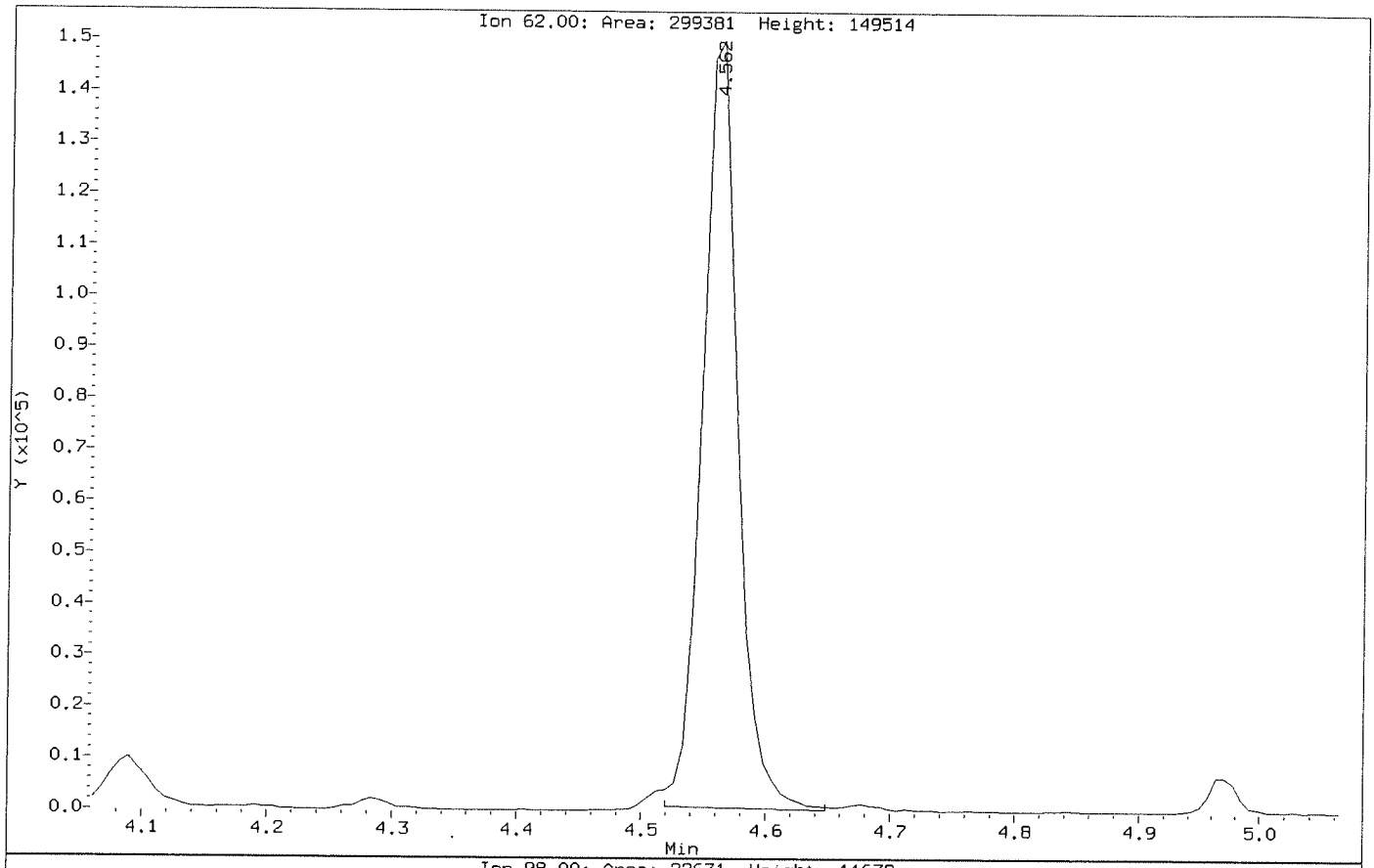
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CAS Number: 96-18-4

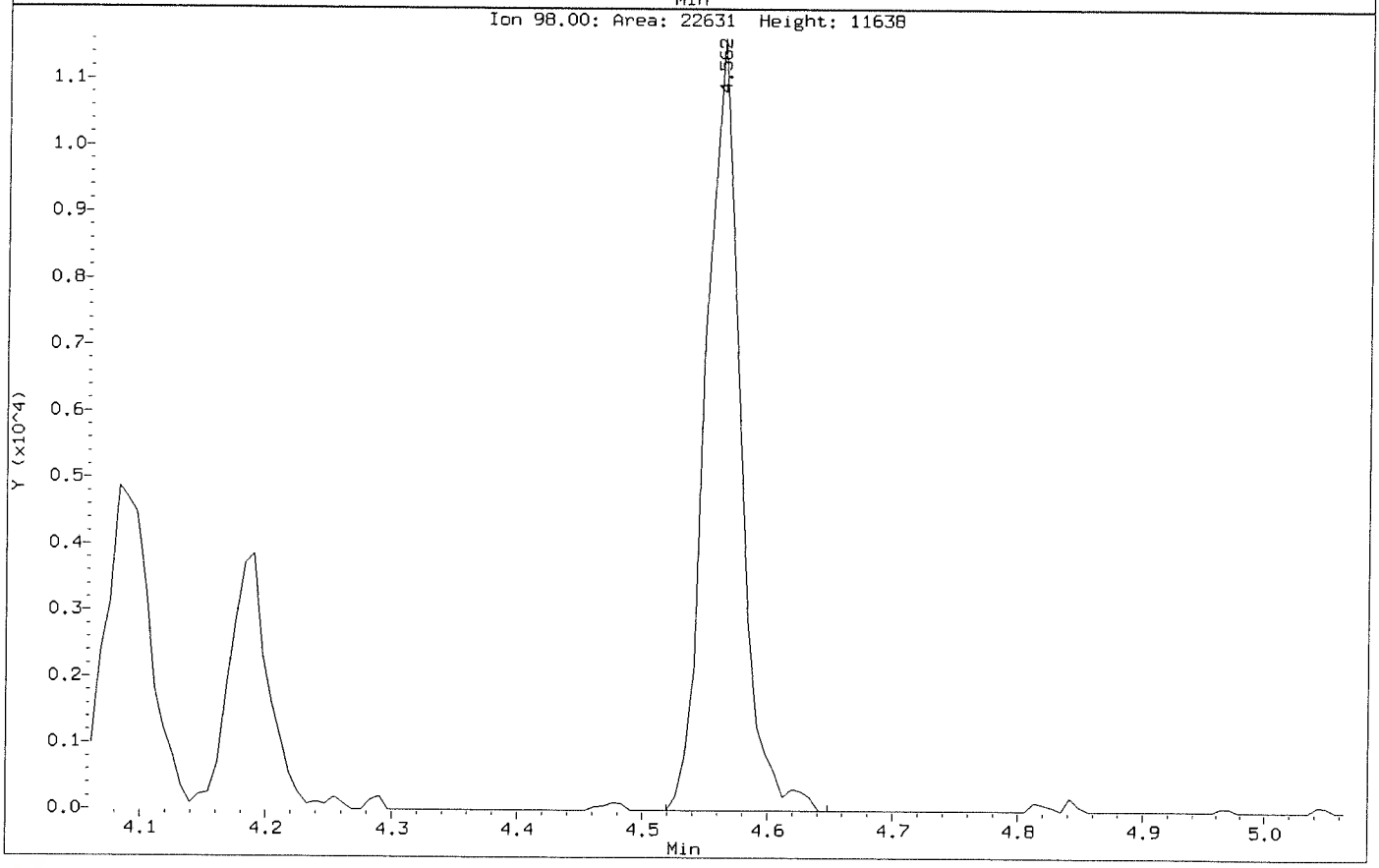




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Instrument: voa6.i
Client Sample ID: VSTD100

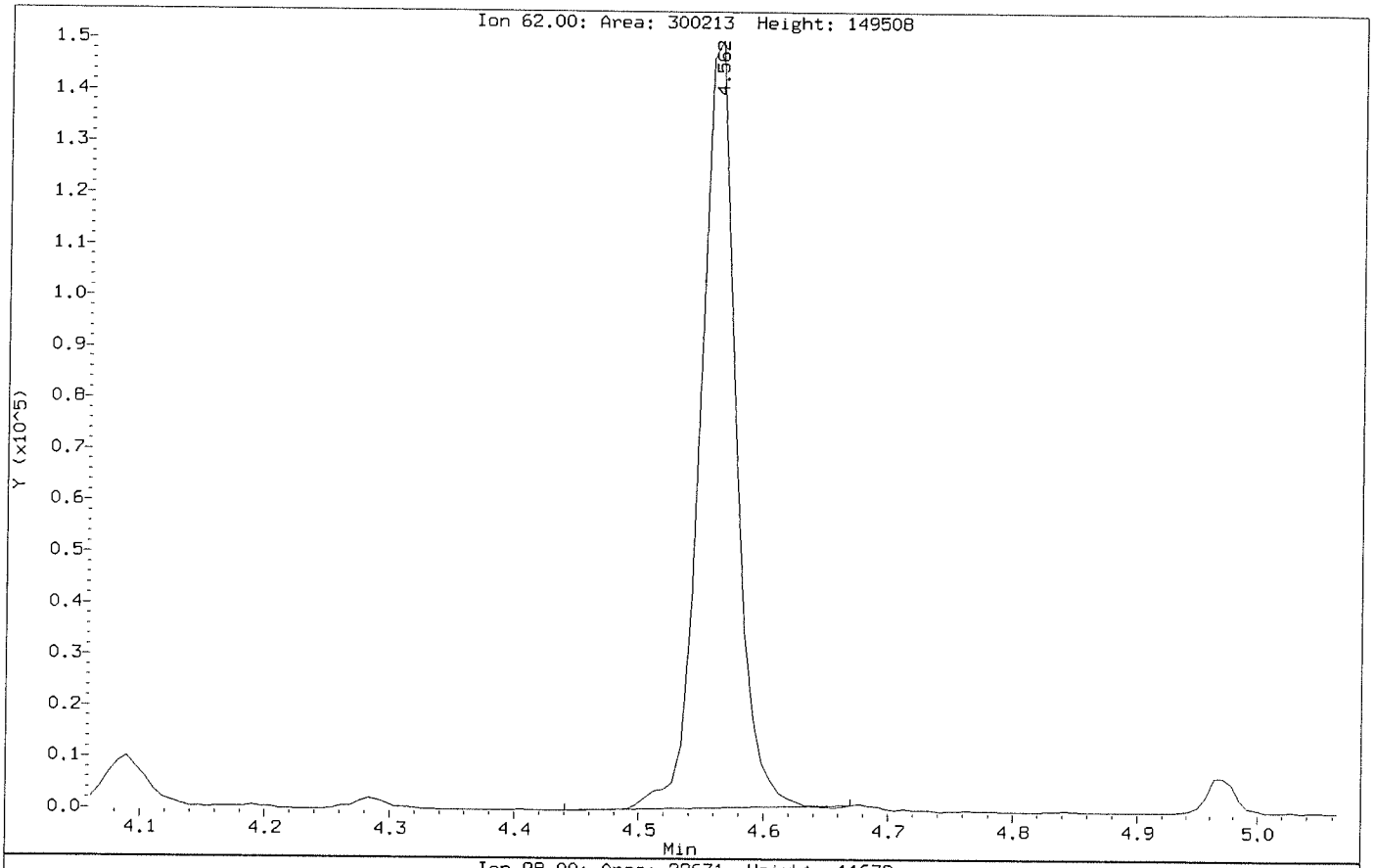
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

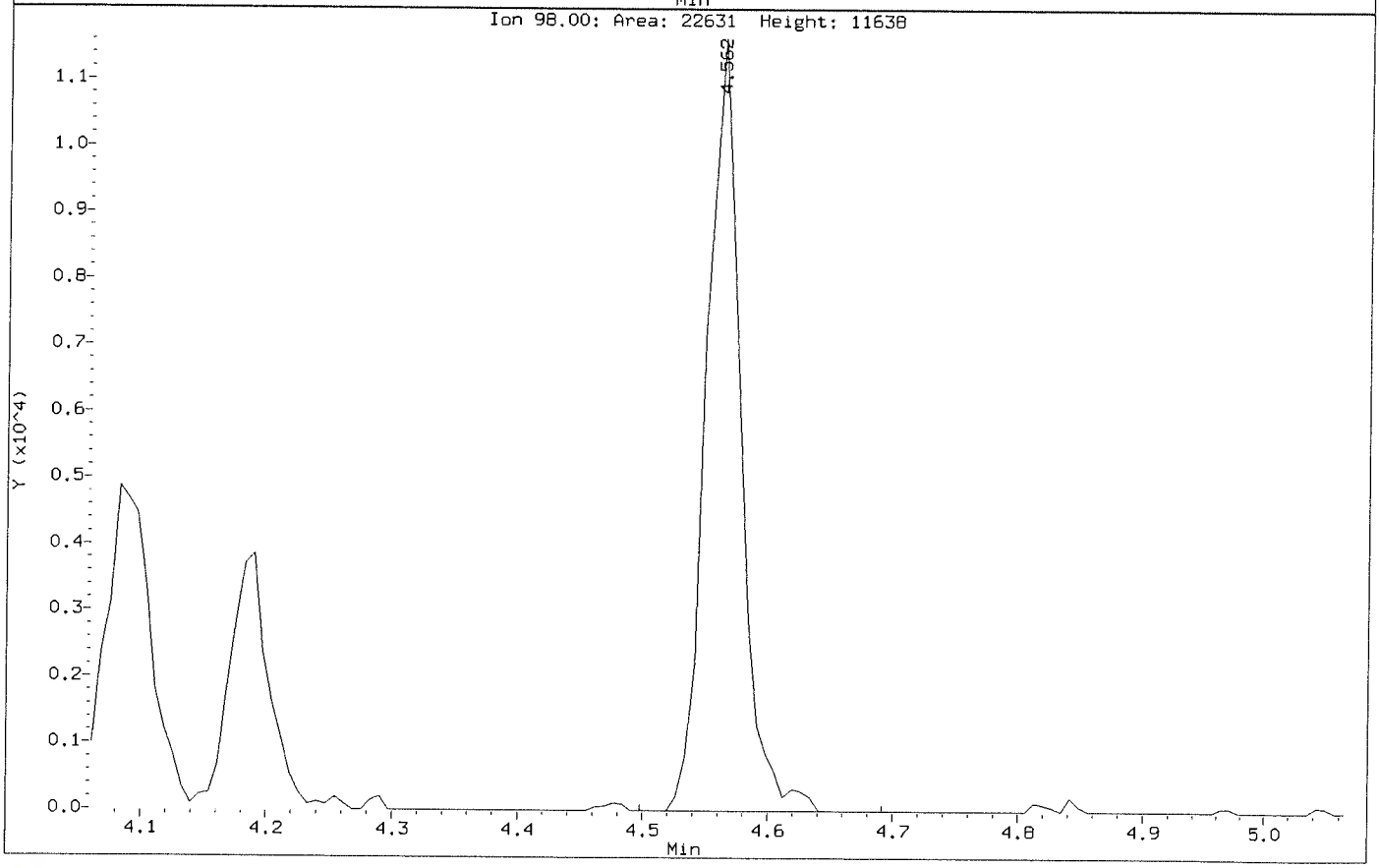




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Injection Date: 03-NOV-2020 14:48
Instrument: voa6.i
Client Sample ID: VSTD100

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





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110310.D Page 1
Report Date: 07-Nov-2020 12:11

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Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110310.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 03-NOV-2020 15:09
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:48 Cal File: X110309.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

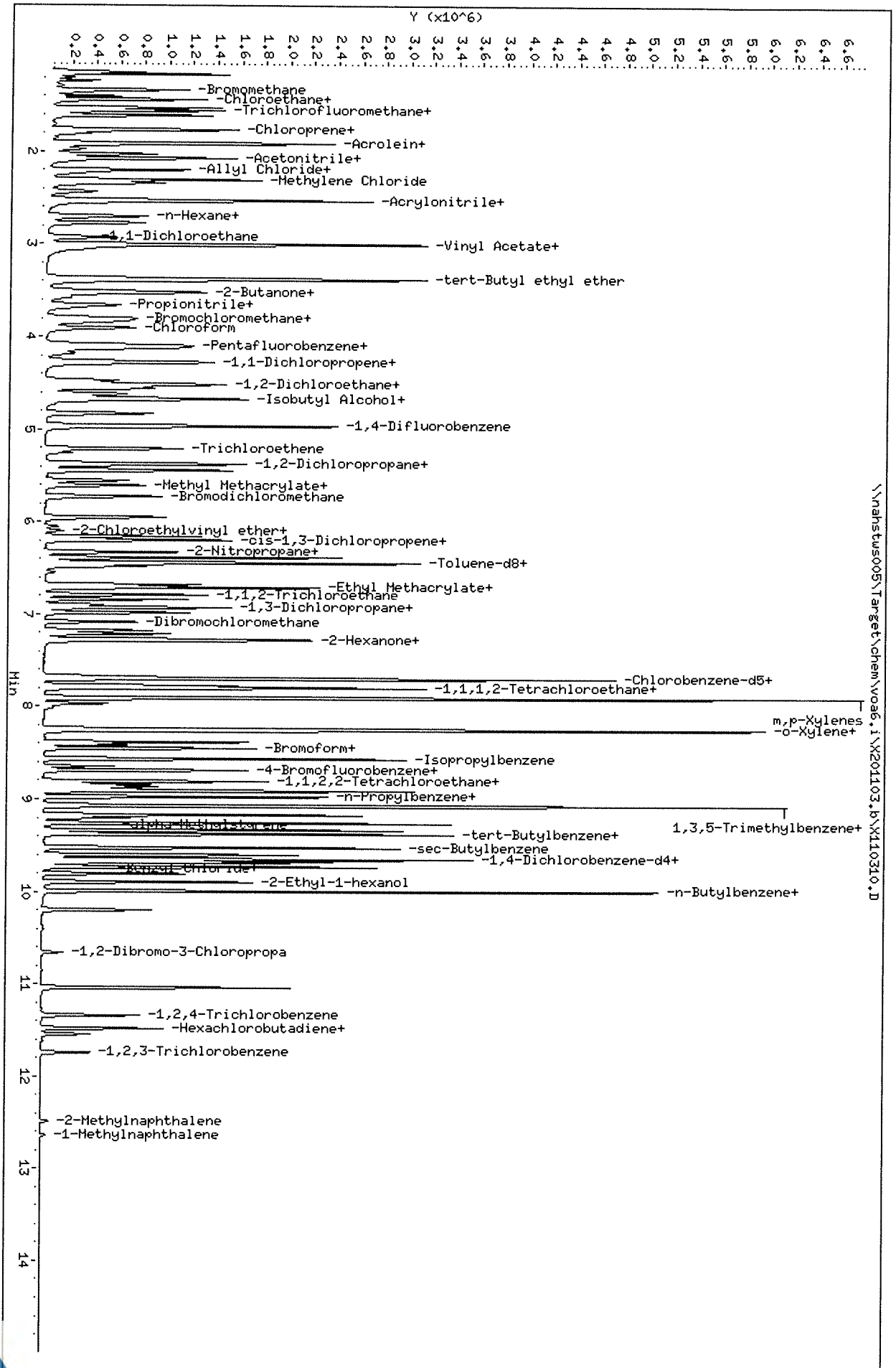
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.189	(1.000)	150132	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	319062	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	282514	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	143769	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	330895	150.000	163.65
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	404360	150.000	150.41
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1195633	150.000	158.44
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	414999	150.000	152.40
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	301933	150.000	149.80
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	518488	150.000	165.39
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	340740	150.000	144.70
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	249826	150.000	143.37
22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	556629	150.000	154.24
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	416396	150.000	147.00
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	431507	150.000	145.02
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	92101	150.000	145.93
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	272838	150.000	135.15(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	173285	150.000	146.56
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	1314841	150.000	163.48
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	23770	150.000	149.59
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	322600	150.000	152.27
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	619401	150.000	156.09

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110310.D Page 2
Report Date: 07-Nov-2020 12:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	479231	150.000	139.29
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	320056	150.000	135.55
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1383111	150.000	168.61
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	620803	150.000	147.33
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	492173	150.000	142.19
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	636039	150.000	144.96
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	489417	150.000	157.54
24 2-Butanone	43	3.580	3.580	(0.855)	204319	300.000	292.75(A)
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	988749	150.000	146.42
52 2-Hexanone	43	7.212	7.212	(0.940)	562101	300.000	287.18(A)
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	1372134	150.000	160.88
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	1303709	150.000	167.89
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	639972	300.000	298.18(A)
10 Acetone	43	1.976	1.976	(0.472)	230937	300.000	295.31(A)
37 Benzene	78	4.519	4.519	(0.909)	1252502	150.000	140.54
74 Bromobenzene	156	8.809	8.809	(0.912)	362503	150.000	143.29
29 Bromochloromethane	128	3.802	3.802	(0.908)	168011	150.000	162.48
39 Bromodichloromethane	83	5.729	5.729	(1.153)	475050	150.000	144.91
66 Bromoform	173	8.415	8.415	(1.097)	217258	150.000	148.55
6 Bromomethane	94	1.338	1.338	(0.320)	477085	150.000	170.75
19 Carbon Disulfide	76	2.069	2.069	(0.494)	1680223	300.000	319.22(A)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	427361	150.000	149.59
59 Chlorobenzene	112	7.699	7.699	(1.004)	924659	150.000	153.15
7 Chloroethane	64	1.403	1.403	(0.335)	335181	150.000	141.69
28 Chloroform	83	3.910	3.910	(0.933)	584502	150.000	152.15
3 Chloromethane	50	1.081	1.081	(0.258)	339041	150.000	157.54
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	341602	150.000	155.15
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	537727	150.000	151.06
55 Dibromochloromethane	129	7.176	7.176	(0.936)	338578	150.000	162.16
44 Dibromomethane	93	5.557	5.557	(1.118)	234844	150.000	145.60
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	319814	150.000	164.50
61 Ethylbenzene	106	7.799	7.799	(1.017)	492161	150.000	160.68(H)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	115884	150.000	145.43
67 Isopropylbenzene	105	8.566	8.566	(1.117)	1491458	150.000	153.66
62 m,p-Xylenes	106	7.907	7.907	(1.031)	1345040	300.000	366.62(A)
17 Methylene Chloride	84	2.305	2.305	(0.550)	313960	150.000	152.31
87 n-Butylbenzene	91	9.999	9.999	(1.035)	1360339	150.000	148.14
73 n-Propylbenzene	91	8.917	8.917	(0.923)	1822963	150.000	159.27
92 Naphthalene	128	11.546	11.546	(1.195)	248976	150.000	146.19
63 o-Xylene	106	8.244	8.244	(1.075)	631024	150.000	172.59
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	1526507	150.000	149.33
64 Styrene	104	8.258	8.258	(1.077)	1142057	150.000	186.28
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	1005736	150.000	148.44
56 Tetrachloroethene	164	6.933	6.933	(0.904)	242642	150.000	156.01
50 Toluene	91	6.453	6.453	(0.841)	1511616	150.000	146.20
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	310203	150.000	165.84
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	487450	150.000	155.22
38 Trichloroethene	130	5.206	5.206	(1.048)	305351	150.000	143.61
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	832871	150.000	147.19
5 Vinyl Chloride	62	1.145	1.145	(0.273)	494633	150.000	149.10

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.



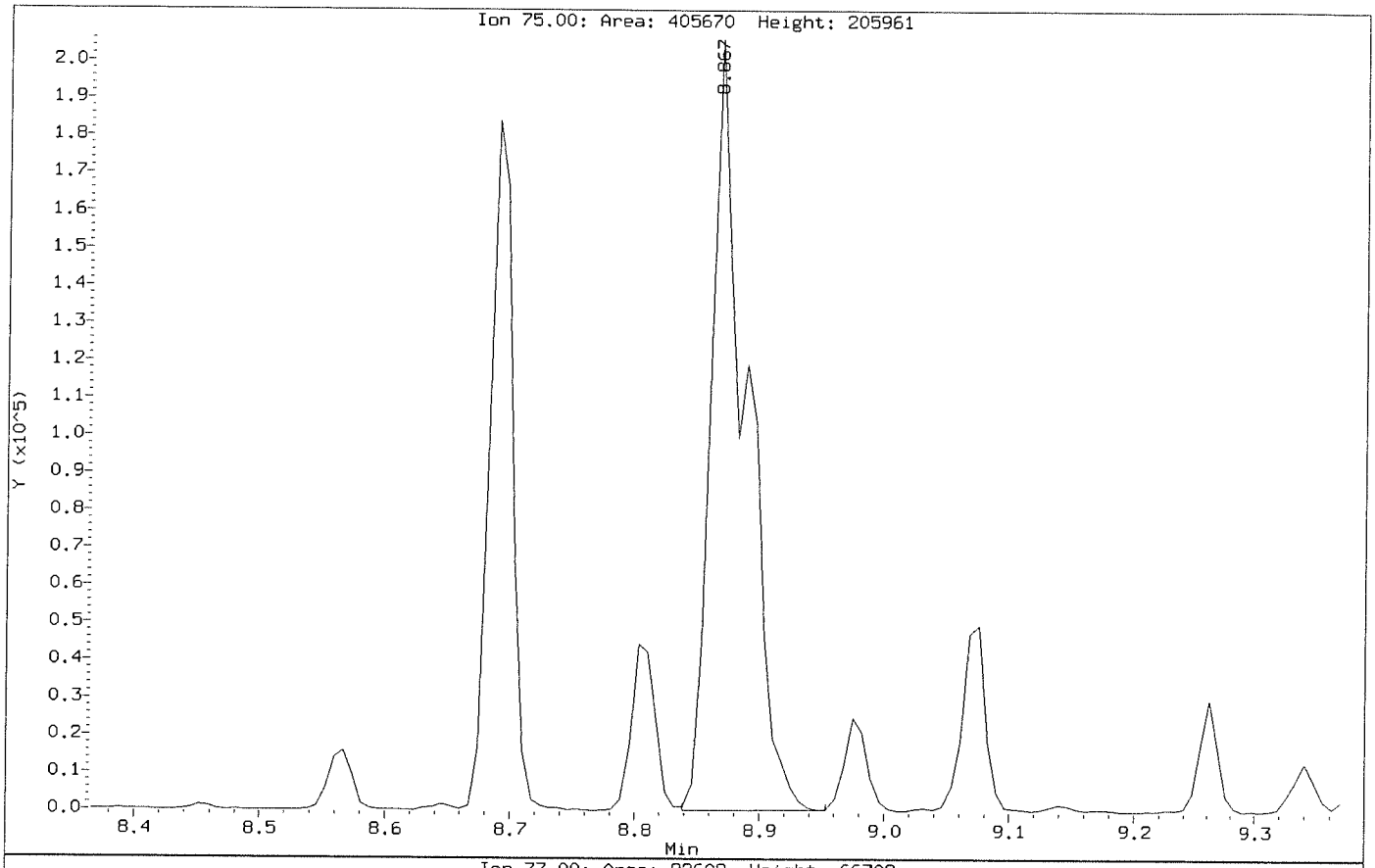
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Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

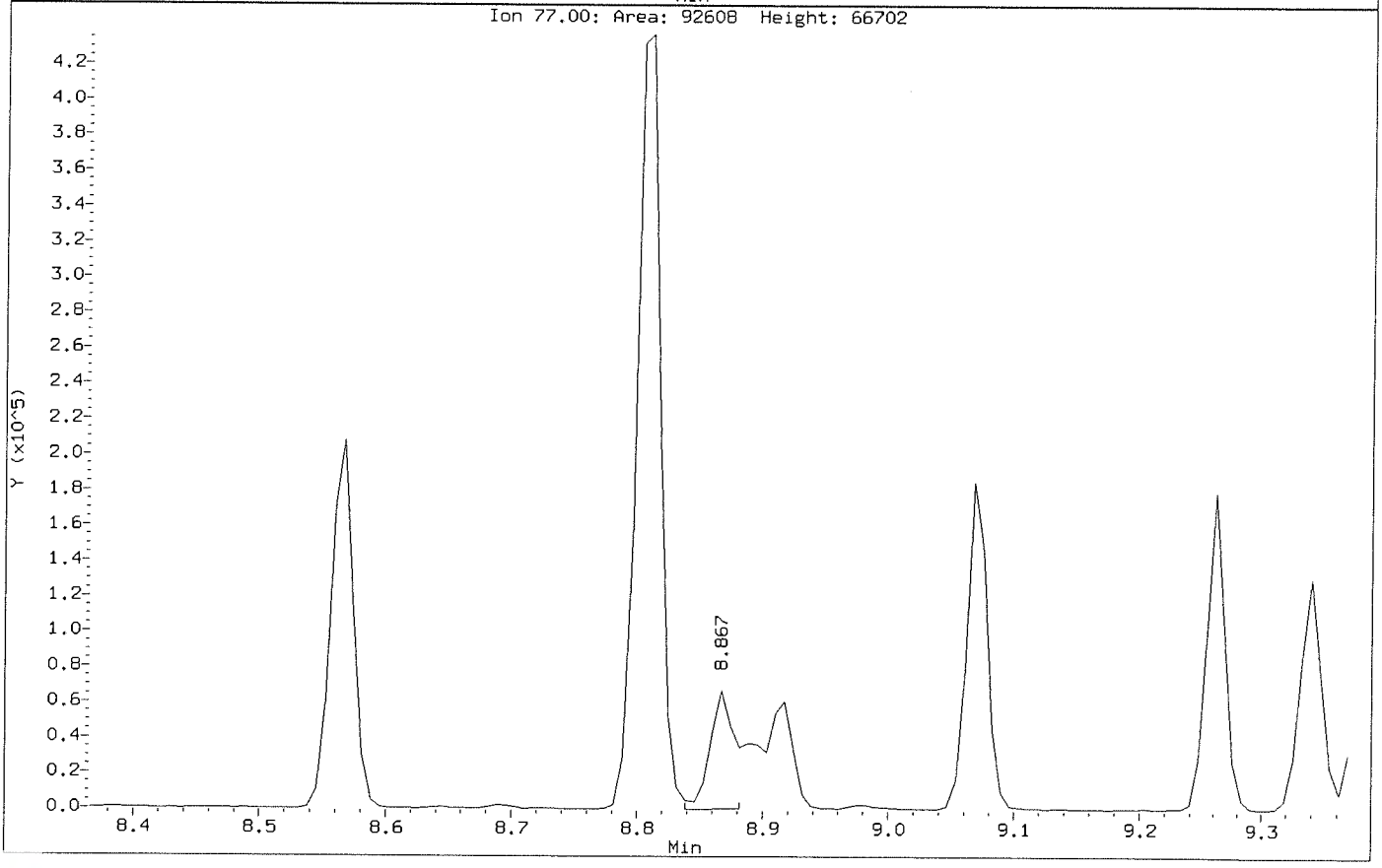
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Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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Injection Date: 03-NOV-2020 15:09
Instrument: voa6.i
Client Sample ID: VSTD150

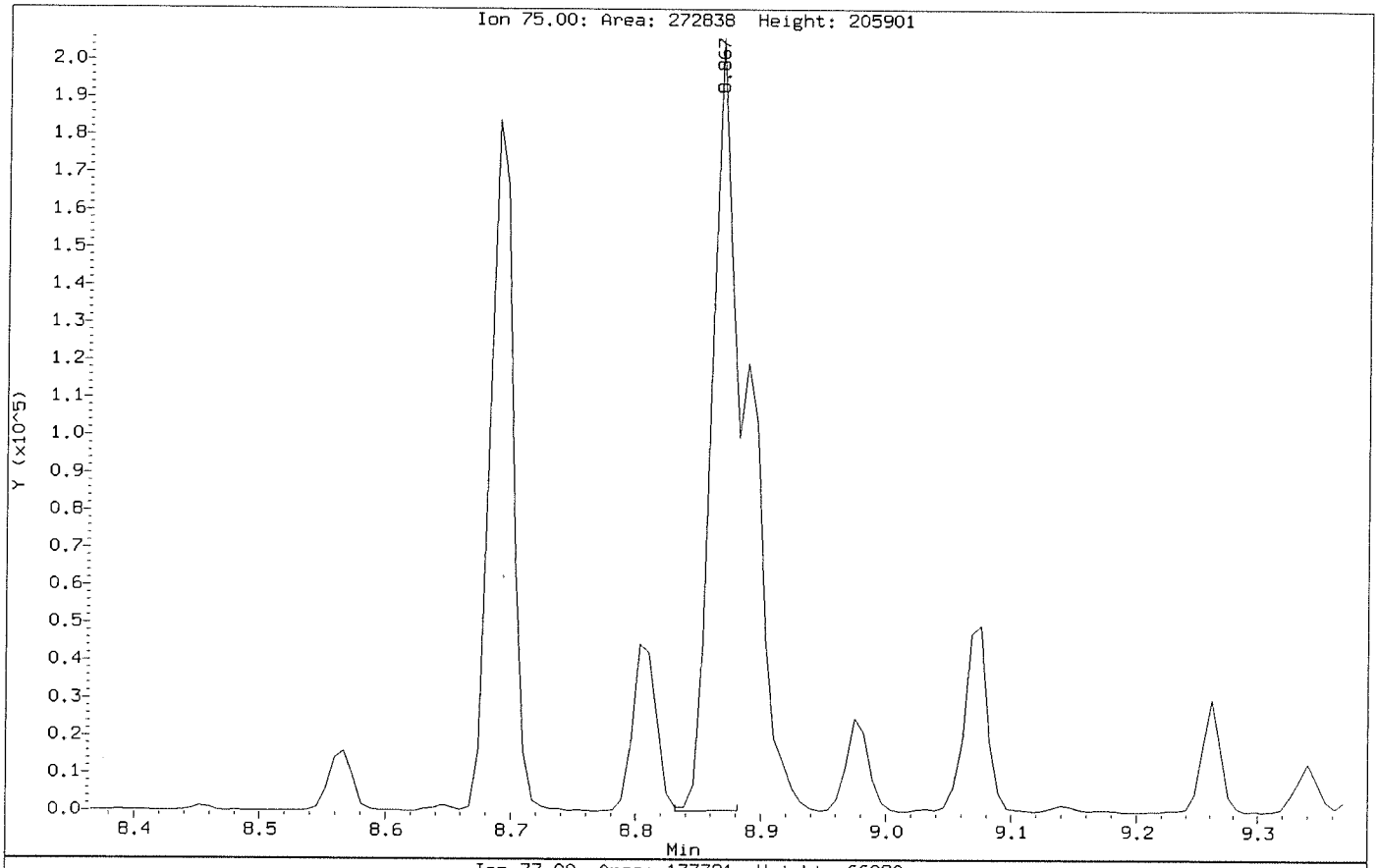
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

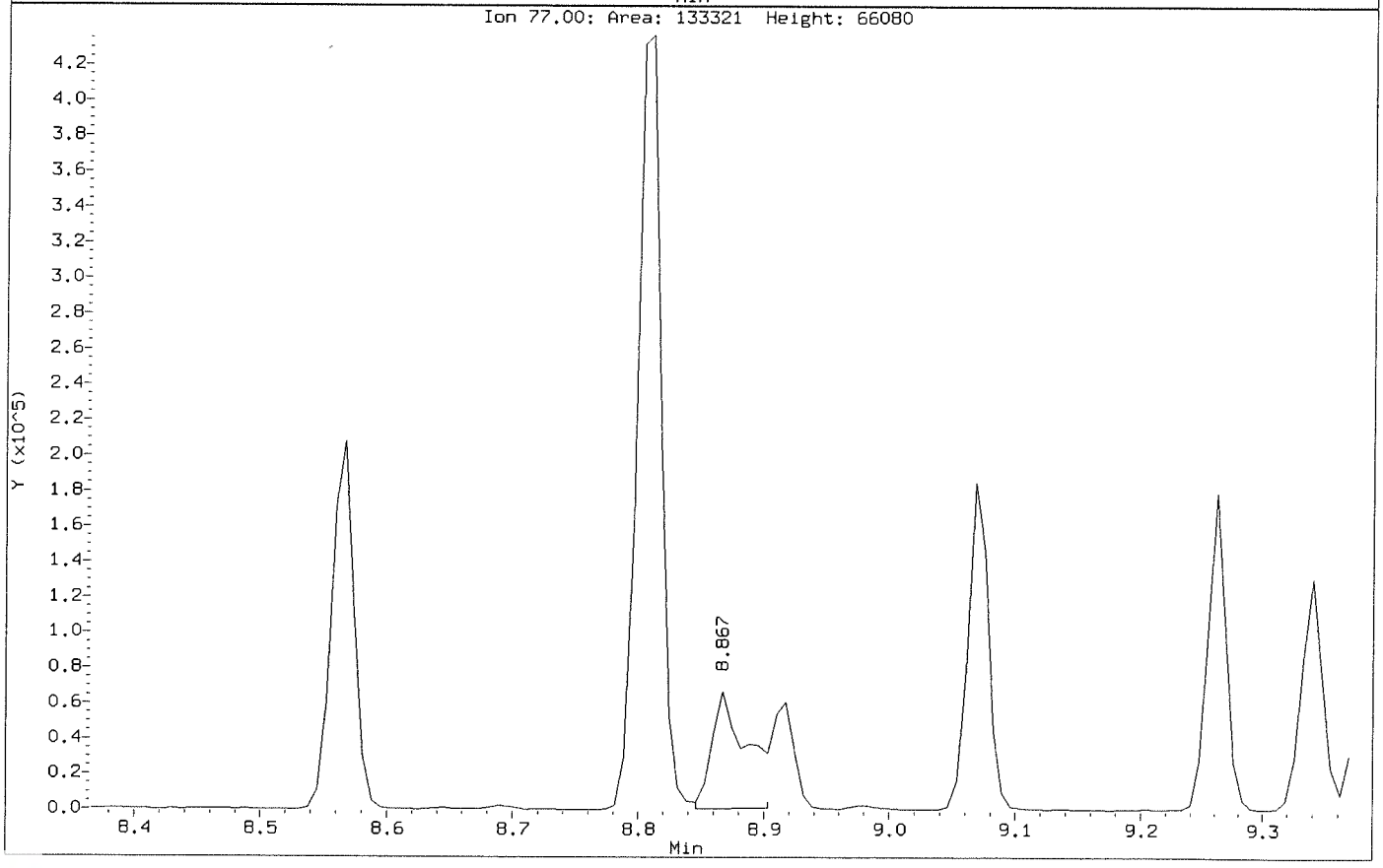




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Instrument: voa6.i
Client Sample ID: VSTD150

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





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110311.D Page 1
Report Date: 07-Nov-2020 12:11

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110311.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 03-NOV-2020 15:30
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 15:09 Cal File: X110310.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

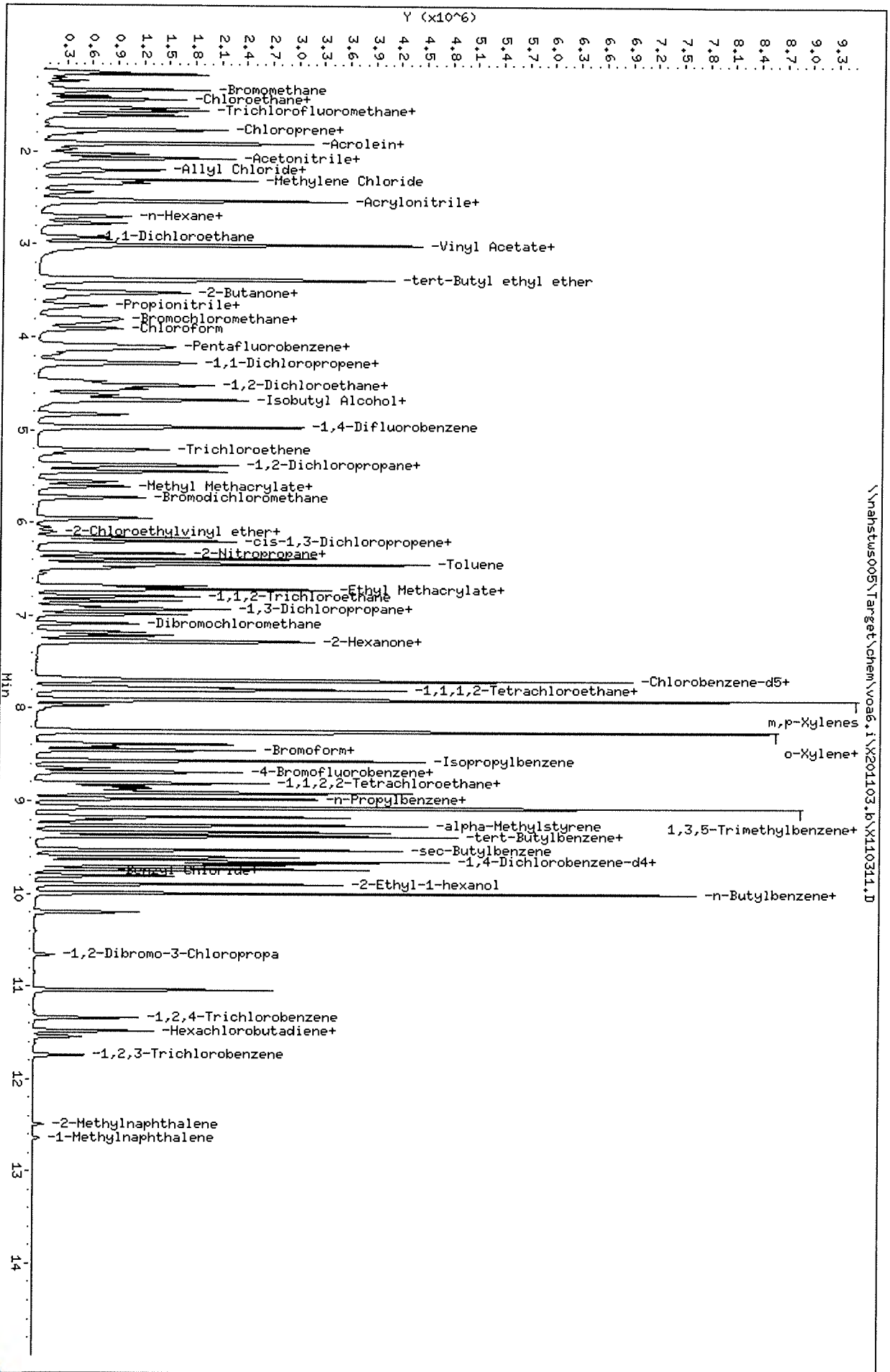
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	153801	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	324078	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	282227	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	147588	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	430753	200.000	207.96(A)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	536735	200.000	183.85
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1620124	200.000	214.91(A)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	565367	200.000	198.95
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	435351	200.000	216.22(A)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	698978	200.000	217.65(A)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	491582	200.000	203.60(A)
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	354012	200.000	203.37(A)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	791619	200.000	214.12(A)
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	570411	200.000	196.57
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	562003	200.000	185.96
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	134528	200.000	206.89(A)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	393201	200.000	189.73(MH)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	250652	200.000	205.79(A)
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	1854516	200.000	224.61(A)
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	32792	200.000	201.15(A)
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	452244	200.000	213.68(A)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	897799	200.000	220.40(A)

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110311.D Page 2
Report Date: 07-Nov-2020 12:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	635677	200.000	181.91
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	440352	200.000	183.61
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1956104	200.000	232.29(A)
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	883985	200.000	204.36(A)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	680537	200.000	196.80
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	899010	200.000	199.60
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	655554	200.000	205.99(A)
24 2-Butanone	43	3.580	3.580	(0.856)	306733	400.000	429.01(A)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	1395914	200.000	201.37(A)
52 2-Hexanone	43	7.212	7.212	(0.940)	809663	400.000	412.44(A)
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	1953690	200.000	223.14(A)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	1839403	200.000	230.74(A)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	903306	400.000	421.30(A)
10 Acetone	43	1.976	1.976	(0.473)	315772	400.000	397.09(A)
37 Benzene	78	4.519	4.519	(0.909)	1684144	200.000	186.04
74 Bromobenzene	156	8.809	8.809	(0.911)	501355	200.000	193.05
29 Bromochloromethane	128	3.795	3.795	(0.908)	231325	200.000	218.38(A)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	636151	200.000	191.05
66 Bromoform	173	8.415	8.415	(1.097)	300900	200.000	204.75(A)
6 Bromomethane	94	1.331	1.331	(0.318)	753213	200.000	263.15(A)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	2350223	400.000	435.86(A)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	579212	200.000	199.61
59 Chlorobenzene	112	7.699	7.699	(1.004)	1336955	200.000	221.66(A)
7 Chloroethane	64	1.403	1.403	(0.336)	478401	200.000	197.41
28 Chloroform	83	3.910	3.910	(0.935)	800151	200.000	203.31(A)
3 Chloromethane	50	1.073	1.073	(0.257)	432608	200.000	196.00
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	464614	200.000	205.99(A)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	709251	200.000	196.17
55 Dibromochloromethane	129	7.176	7.176	(0.936)	460180	200.000	220.62(A)
44 Dibromomethane	93	5.557	5.557	(1.118)	317833	200.000	194.00
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	431478	200.000	216.64(A)
61 Ethylbenzene	106	7.799	7.799	(1.017)	675926	200.000	220.90(AH)
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	168470	200.000	204.98(A)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	2146900	200.000	220.27(A)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	1885210	400.000	514.38(A)
17 Methylene Chloride	84	2.305	2.305	(0.551)	433637	200.000	205.35(A)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	1951034	200.000	205.54(A)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	2540670	200.000	216.23(A)
92 Naphthalene	128	11.546	11.546	(1.194)	363990	200.000	207.28(A)
63 o-Xylene	106	8.244	8.244	(1.075)	890342	200.000	243.77(A)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	2142350	200.000	203.19(A)
64 Styrene	104	8.258	8.258	(1.077)	1649175	200.000	269.28(A)
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	1422110	200.000	203.53(A)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	340454	200.000	219.12(A)
50 Toluene	91	6.446	6.446	(0.840)	2127434	200.000	205.97(A)
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	437555	200.000	228.35(A)
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	688730	200.000	215.92(A)
38 Trichloroethene	130	5.206	5.206	(1.048)	414564	200.000	191.95
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	1151502	200.000	198.65
5 Vinyl Chloride	62	1.145	1.145	(0.274)	681916	200.000	200.66(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.

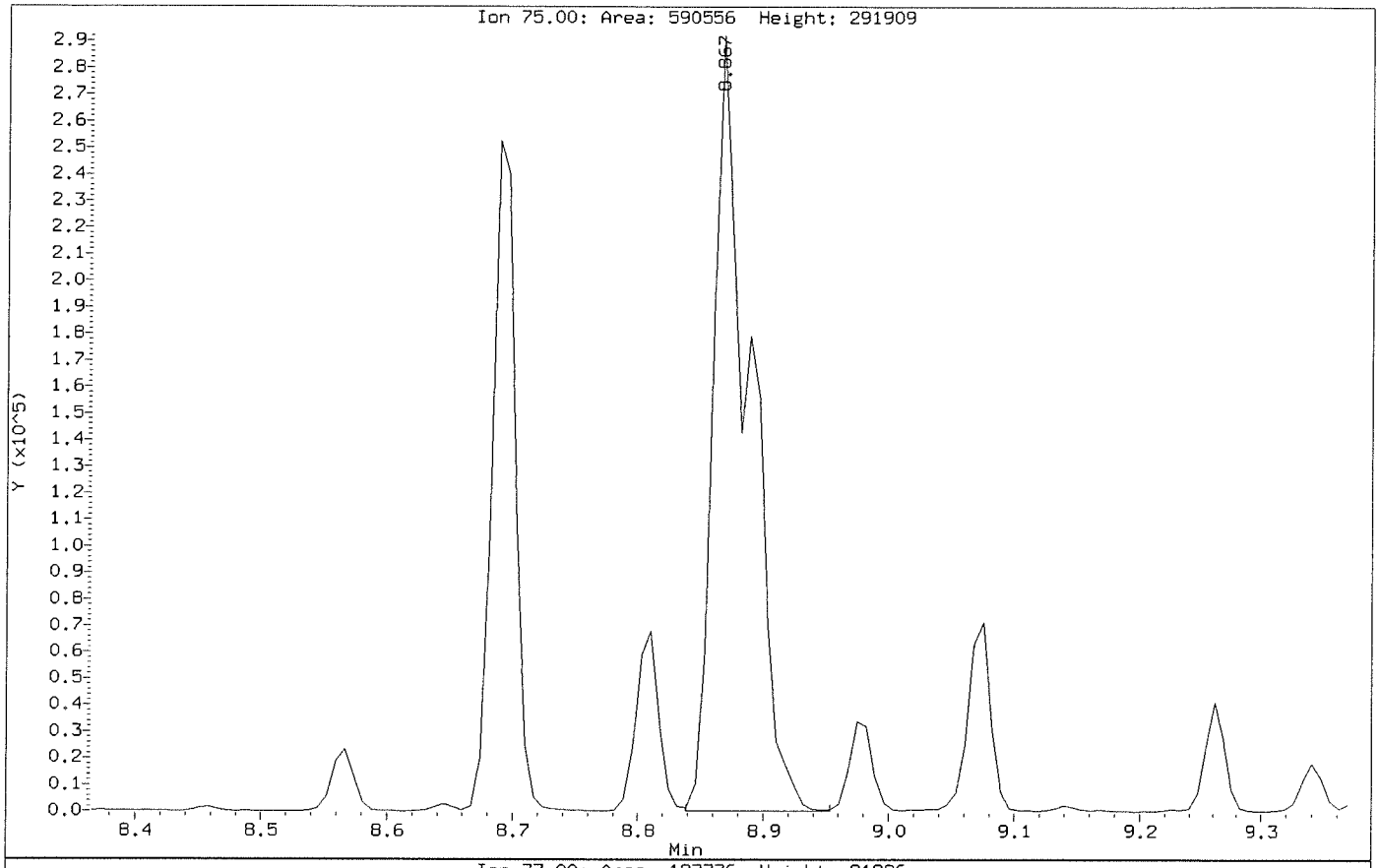


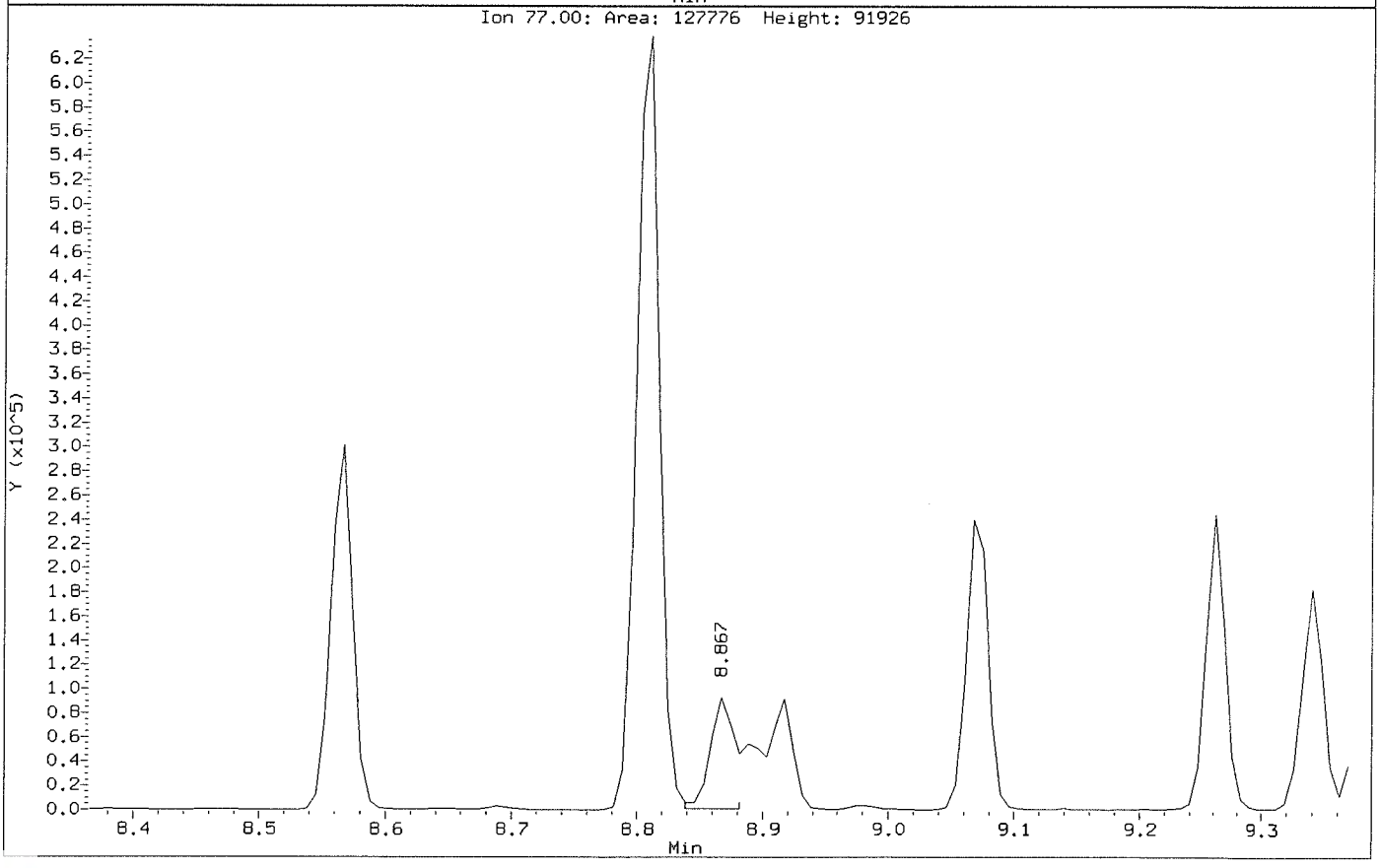
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Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110311.D
Injection Date: 03-NOV-2020 15:30
Instrument: voa6.i
Client Sample ID: VSTD200

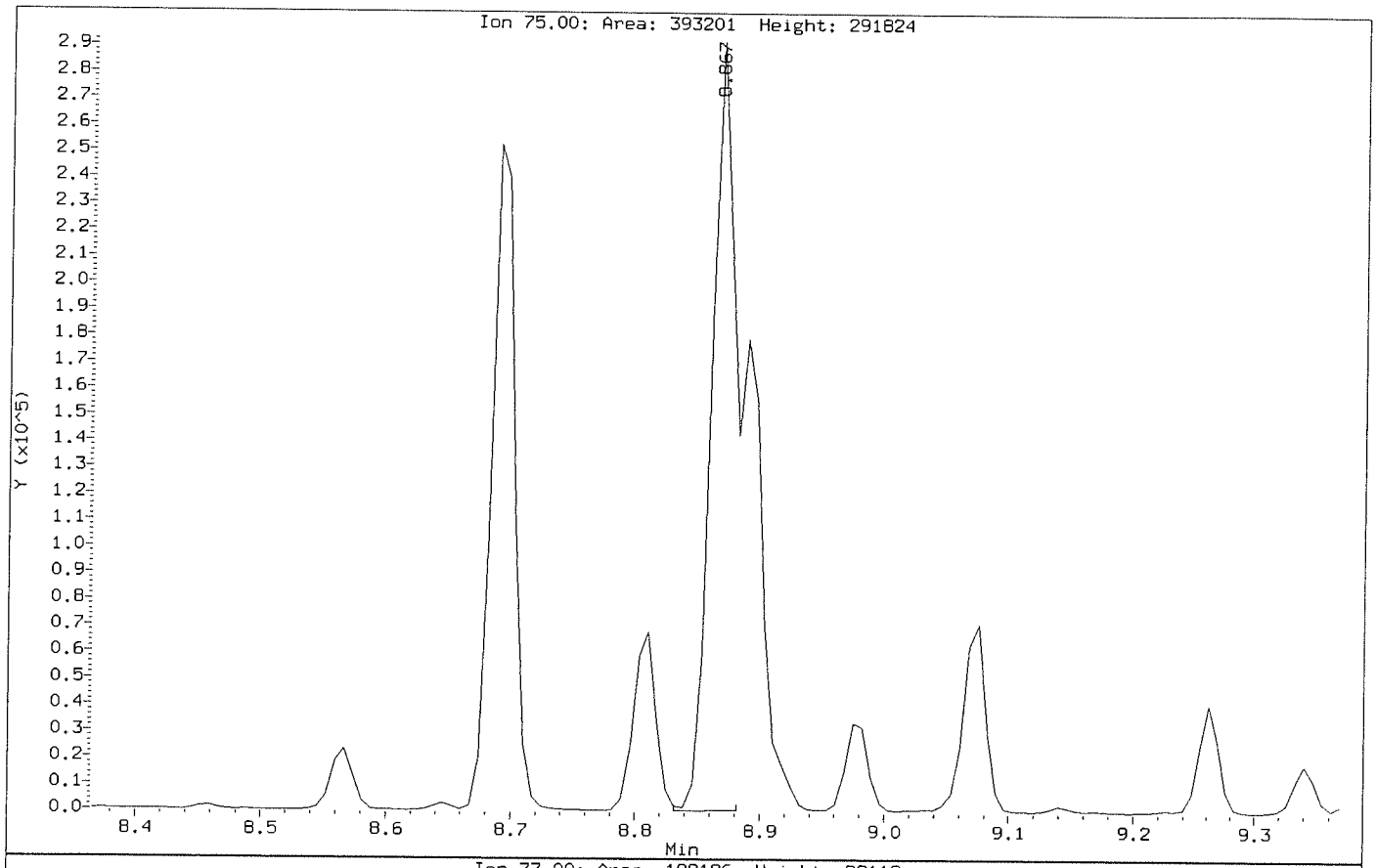
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

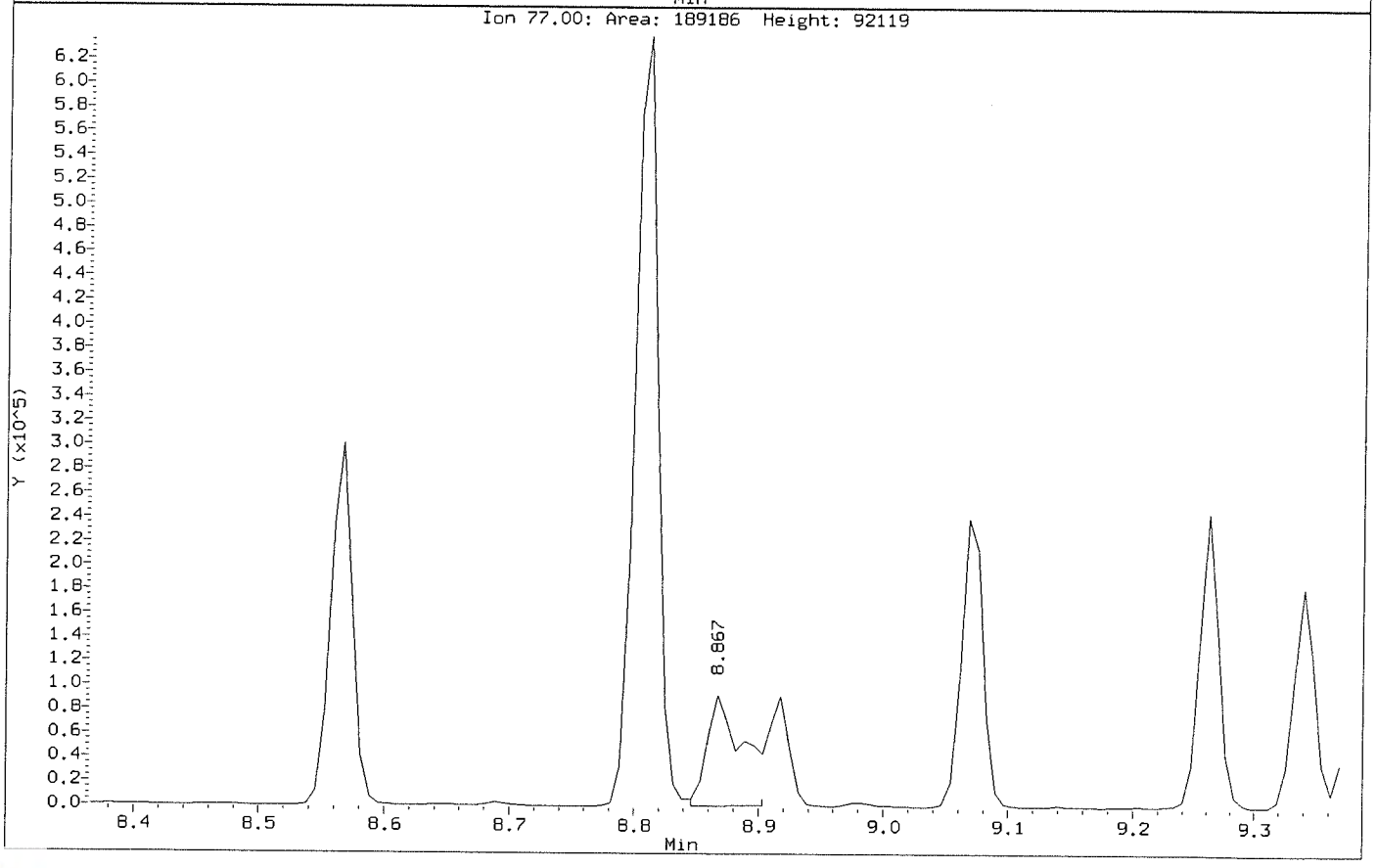




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Injection Date: 03-NOV-2020 15:30
Instrument: voa6.i
Client Sample ID: VSTD200

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





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110314.D Page 1
Report Date: 07-Nov-2020 12:11

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110314.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 03-NOV-2020 16:33
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 15:30 Cal File: X110311.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

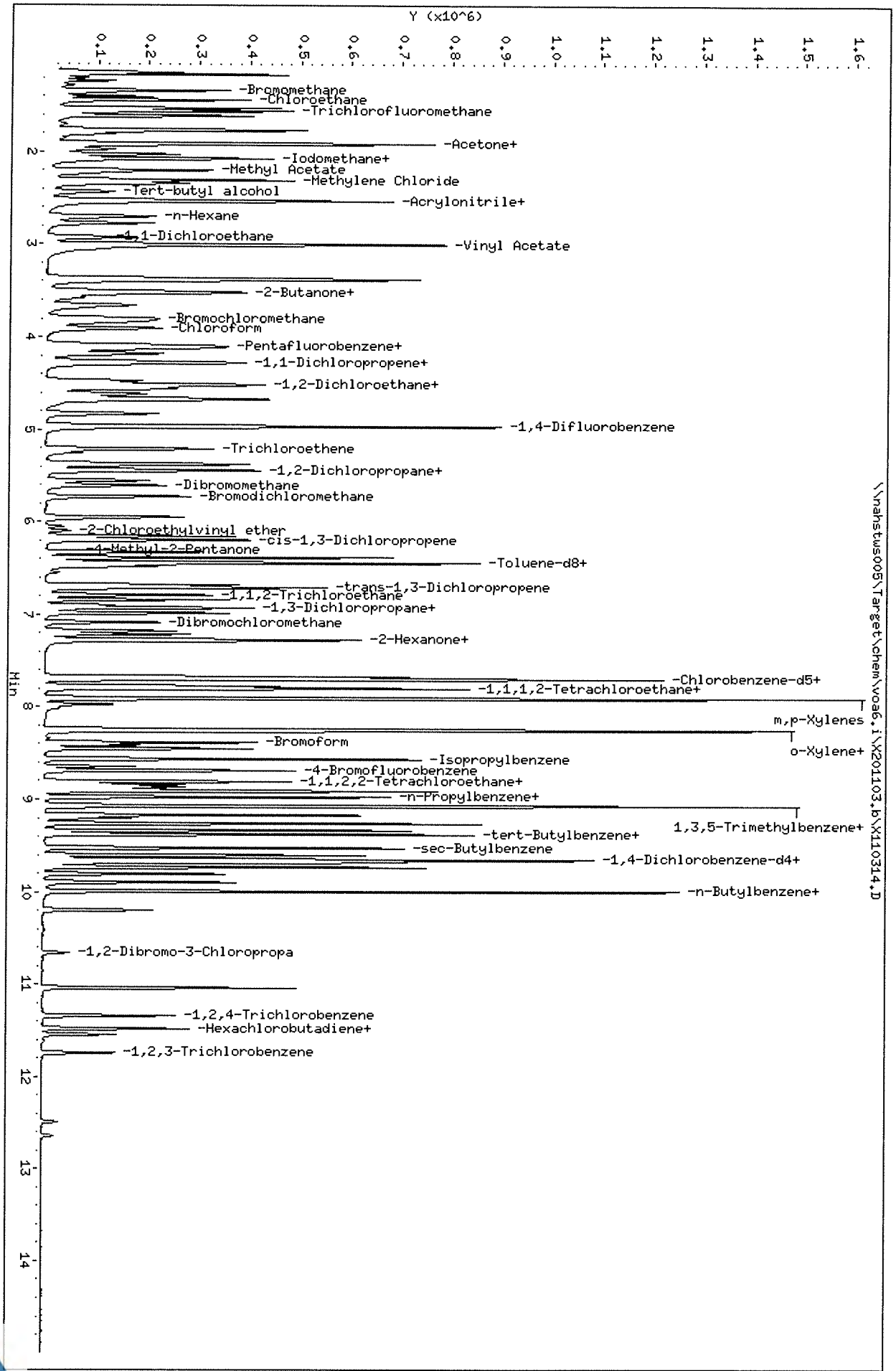
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	154701	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	284123	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	261104	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	123192	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	103020	49.4485	49.44
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	128673	52.3463	52.34
$	48 Toluene-d8	98	6.388	6.388	(0.833)	340698	48.8520	48.85
$	69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	117116	50.4974	50.49
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	87560	47.0058	47.00
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	153859	47.6321	47.63
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	99567	48.9587	48.95
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	76458	47.4763	47.47
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	176813	47.5489	47.54
	11 1,1-Dichloroethene	96	1.919	1.911	(0.459)	137684	47.1720	47.17
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	126039	47.5697	47.56
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	31726	59.7255	59.72(M)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	84889	49.0737	49.07(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	55200	55.5932	55.59
	79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.971)	340152	49.3574	49.35
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	7526	55.0628	55.06
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	93628	47.8174	47.81
	88 1,2-Dichlorobenzene	146	9.991	9.999	(1.034)	163807	48.1775	48.17

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110314.D Page 2
Report Date: 07-Nov-2020 12:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	149514	48.8037	48.80
42 1,2-Dichloropropane	63	5.436	5.443	(1.094)	96091	45.7013	45.70
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	334521	47.5924	47.59
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	171676	47.5497	47.54
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	147318	46.0505	46.05
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	181795	48.3556	48.35
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	153887	48.0748	48.07
24 2-Butanone	43	3.580	3.580	(0.856)	76275	106.062	106.06
76 2-Chlorotoluene	91	8.974	8.981	(0.929)	268722	46.4427	46.44
52 2-Hexanone	43	7.212	7.212	(0.940)	157553	89.6799	89.67
77 4-Chlorotoluene	91	9.075	9.074	(0.939)	341491	46.7282	46.72
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	327925	49.2840	49.28
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	186003	93.7710	93.77
10 Acetone	43	1.976	1.976	(0.473)	100468	119.637	119.63
37 Benzene	78	4.512	4.519	(0.908)	372971	46.9968	46.99
74 Bromobenzene	156	8.809	8.809	(0.912)	98013	45.2158	45.21
29 Bromochloromethane	128	3.803	3.795	(0.909)	51596	48.4265	48.42
39 Bromodichloromethane	83	5.729	5.729	(1.153)	145793	49.9434	49.94
66 Bromoform	173	8.416	8.415	(1.097)	55353	43.2082	43.20
6 Bromomethane	94	1.338	1.331	(0.320)	134679	46.7808	46.78
19 Carbon Disulfide	76	2.069	2.069	(0.495)	500084	92.2039	92.20
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	126484	49.7207	49.72
59 Chlorobenzene	112	7.699	7.699	(1.004)	258238	46.2801	46.28
7 Chloroethane	64	1.403	1.403	(0.336)	109585	44.9568	44.95
28 Chloroform	83	3.910	3.910	(0.935)	185902	46.9630	46.96
3 Chloromethane	50	1.081	1.073	(0.258)	109600	50.0268	50.02
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	108603	47.8702	47.87
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	159724	50.3904	50.39
55 Dibromochloromethane	129	7.176	7.176	(0.936)	96777	50.1517	50.15
44 Dibromomethane	93	5.557	5.557	(1.118)	71493	49.7769	49.77
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	105646	52.7364	52.73
61 Ethylbenzene	106	7.799	7.799	(1.017)	135314	47.8010	47.80
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	34693	52.3265	52.32
67 Isopropylbenzene	105	8.566	8.566	(1.117)	380561	44.3181	44.31
62 m,p-Xylenes	106	7.907	7.907	(1.031)	347106	102.371	102.37
17 Methylene Chloride	84	2.305	2.305	(0.551)	96413	45.3917	45.39
87 n-Butylbenzene	91	9.999	9.999	(1.035)	332776	44.8692	44.86
73 n-Propylbenzene	91	8.917	8.917	(0.923)	471736	48.0993	48.09
92 Naphthalene	128	11.546	11.546	(1.195)	85615	59.9489	59.94(M)
63 o-Xylene	106	8.244	8.244	(1.075)	166386	49.2422	49.24
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	379112	45.1578	45.15
64 Styrene	104	8.258	8.258	(1.077)	291404	51.4307	51.43
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	257934	46.1783	46.17
56 Tetrachloroethene	164	6.933	6.933	(0.904)	65585	45.6276	45.62
50 Toluene	91	6.446	6.446	(0.840)	410858	42.9975	42.99
20 trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	88244	45.7847	45.78
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	144790	51.7768	51.77
38 Trichloroethene	130	5.206	5.206	(1.048)	94335	49.8231	49.82
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	272524	46.7420	46.74
5 Vinyl Chloride	62	1.145	1.145	(0.274)	169292	49.5266	49.52

QC Flag Legend

M - Compound response manually integrated.

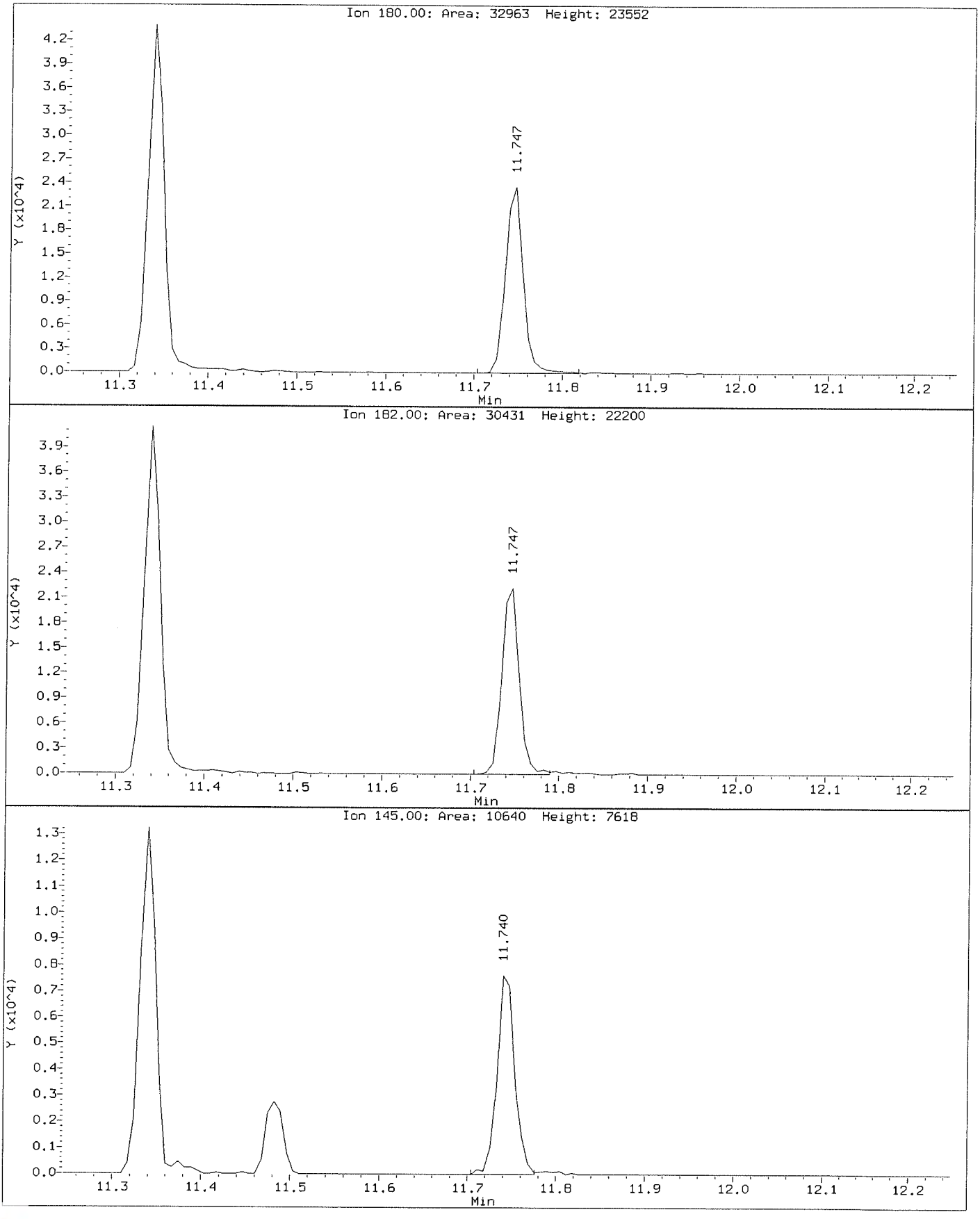


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Purge Volume: 5.0
Column phase: DB624

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

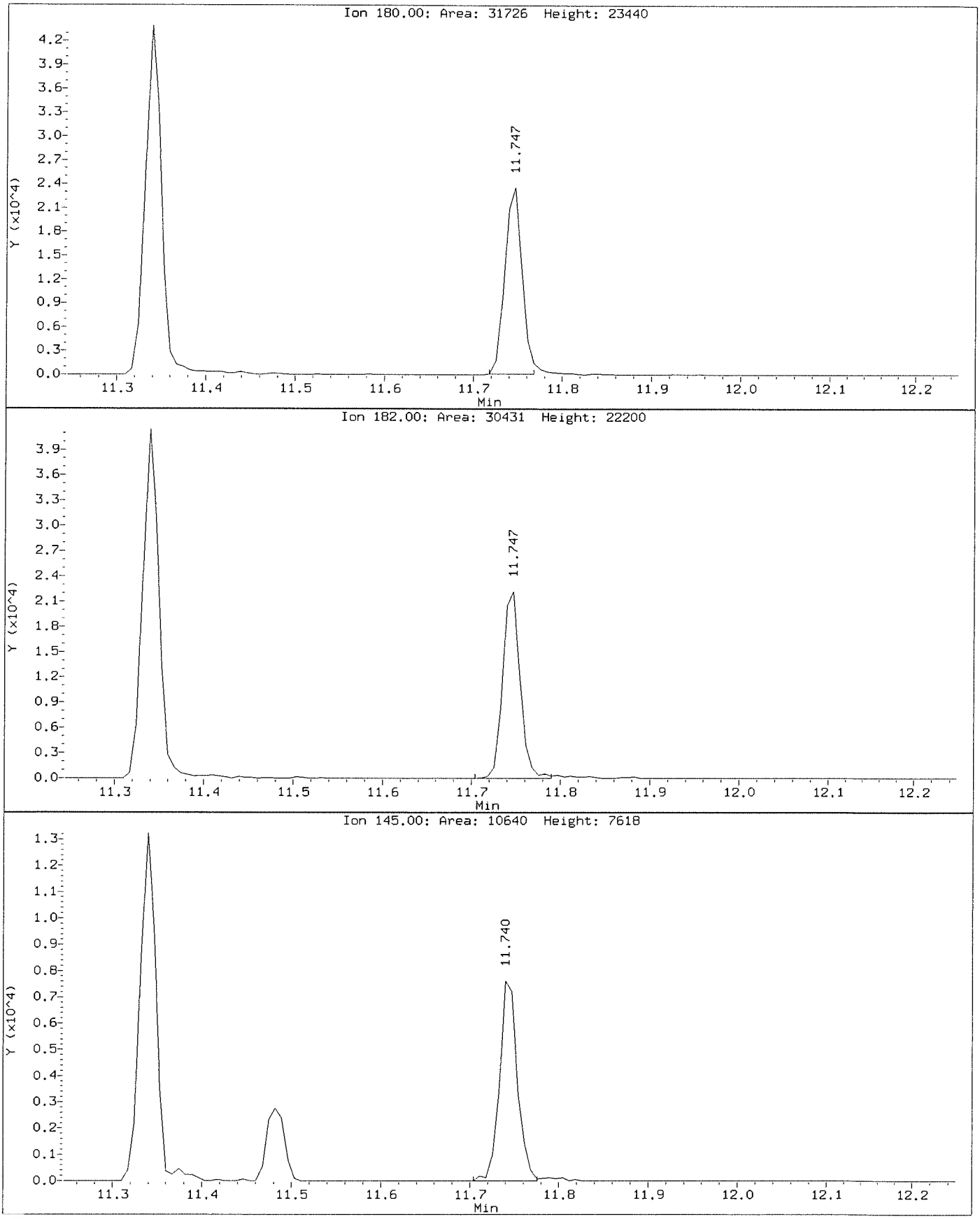
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Instrument: voa6.i
Client Sample ID: ICV

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



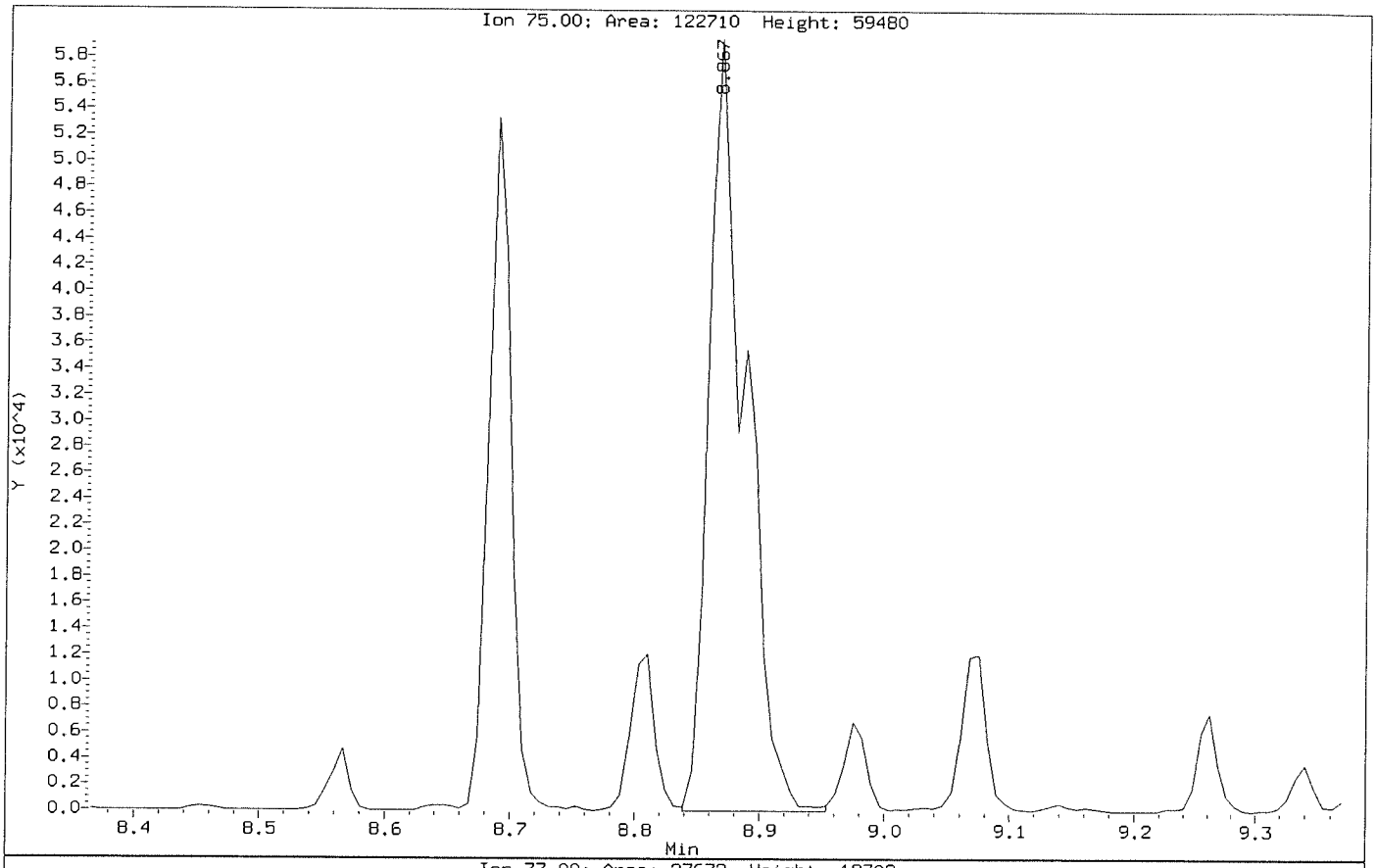
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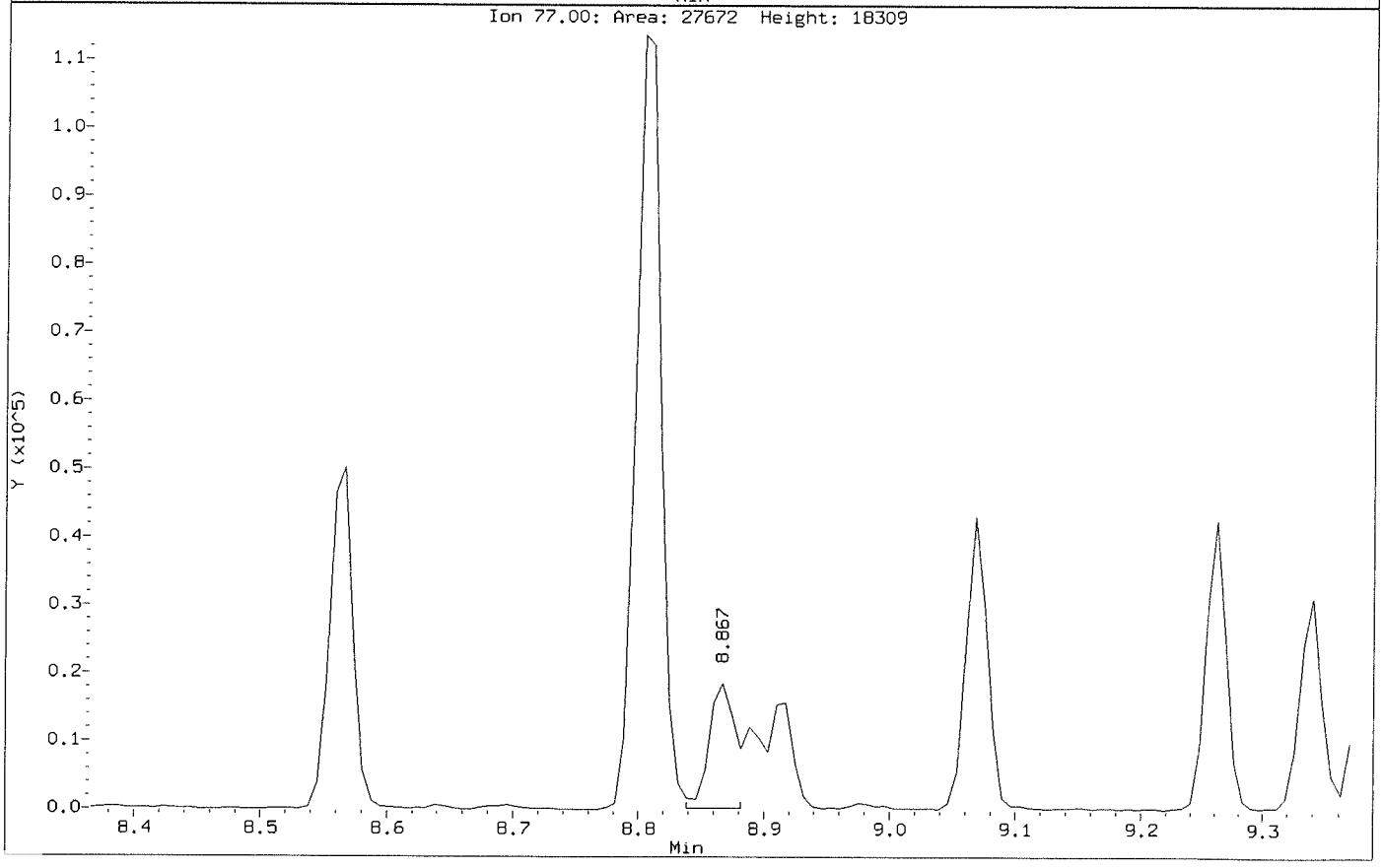
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CAS Number: 87-61-6



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Instrument: voa6.i
Client Sample ID: ICV

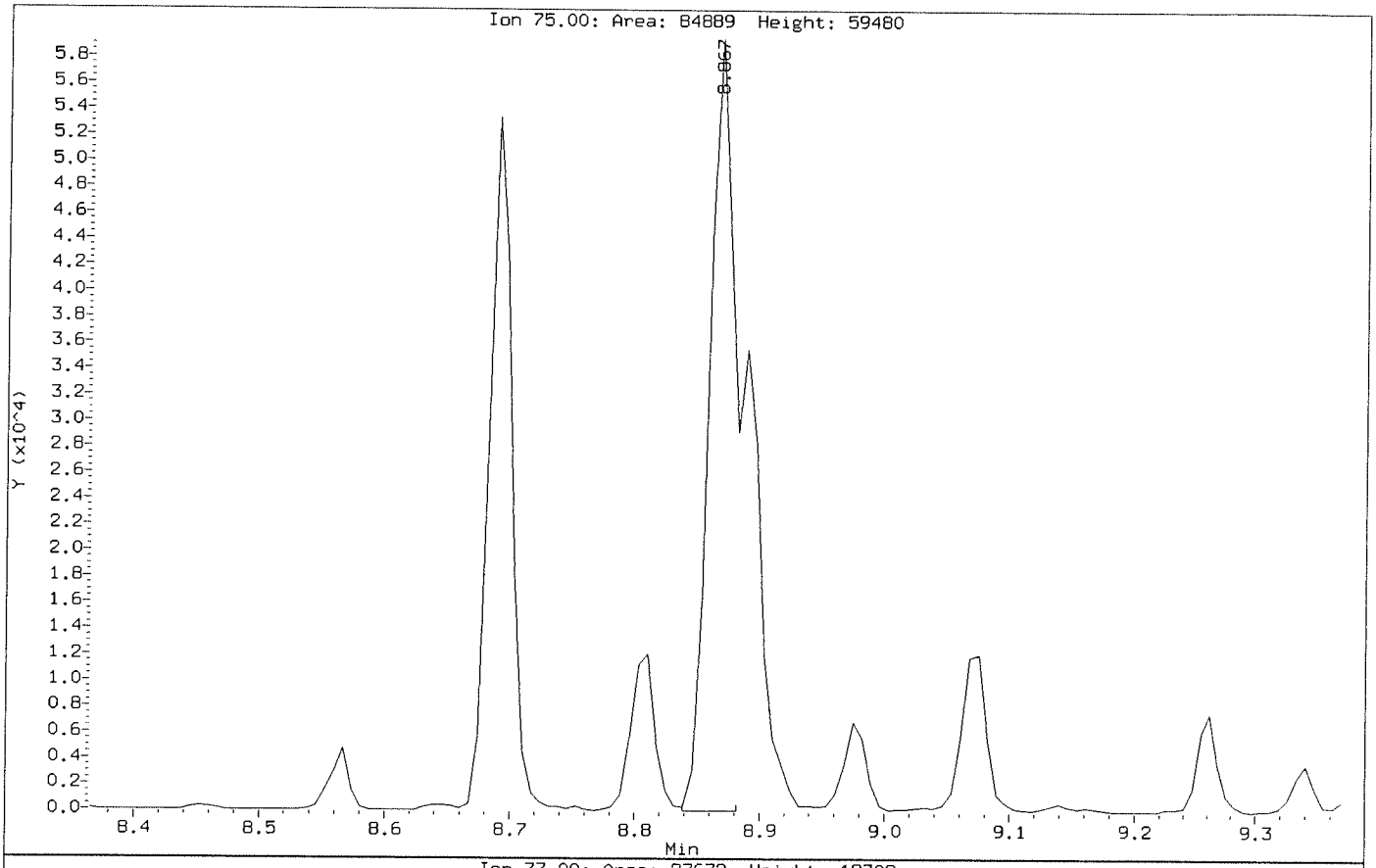
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

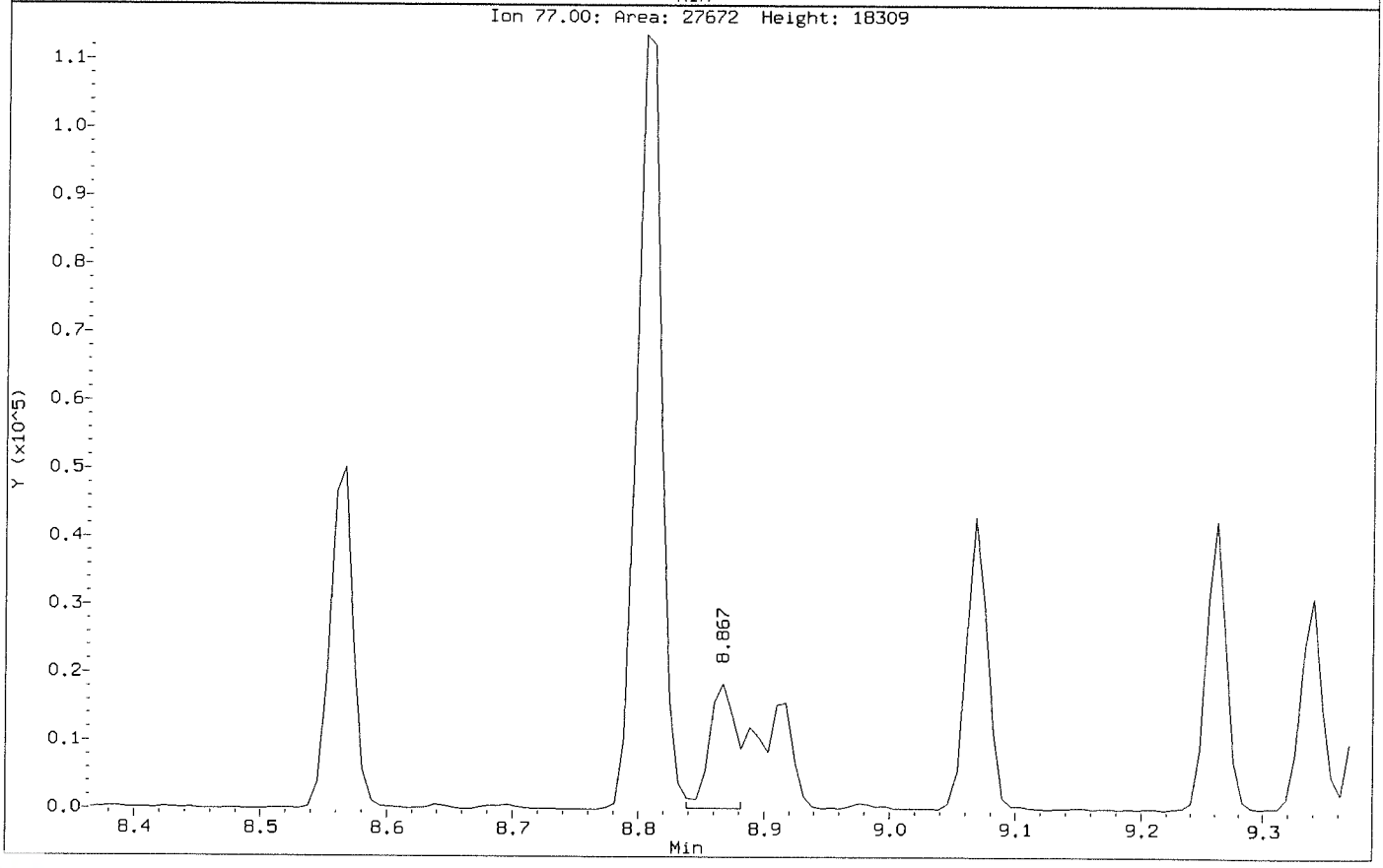




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Injection Date: 03-NOV-2020 16:33
Instrument: voa6.i
Client Sample ID: ICV

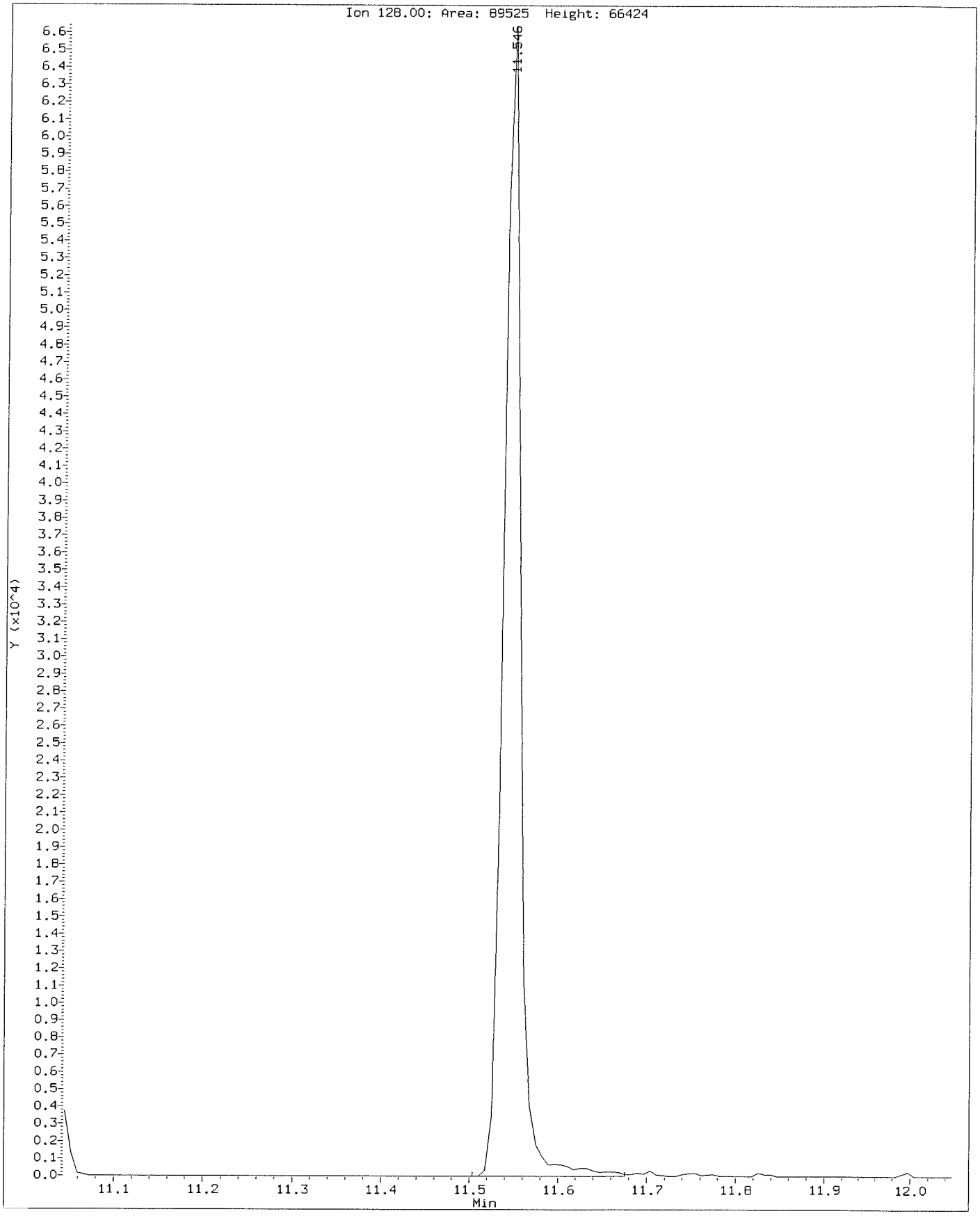
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





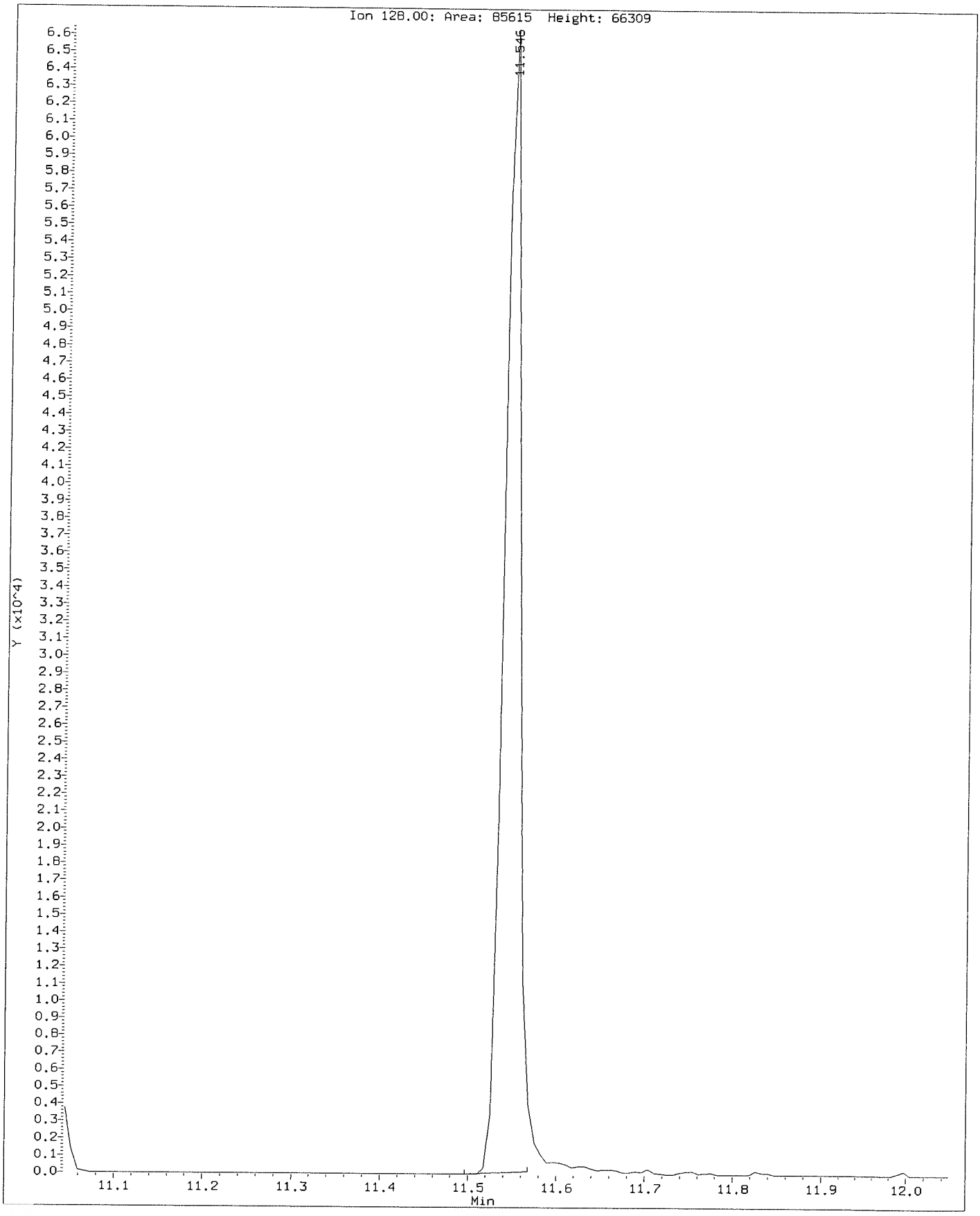
Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110314.D
Injection Date: 03-NOV-2020 16:33
Instrument: voa6.i
Client Sample ID: ICV

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110314.D
Injection Date: 03-NOV-2020 16:33
Instrument: voa6.i
Client Sample ID: ICV

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110316.D Page 1
Report Date: 07-Nov-2020 13:11

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110316.D
Lab Smp Id: VLCSW-201103 Client Smp ID: VLCSW-201103
Inj Date : 03-NOV-2020 17:15
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-201103;VLCSW-201103;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201103.b\8260W.m
Meth Date : 07-Nov-2020 13:09 dev.giga Quant Type: ISTD
Cal Date : 03-NOV-2020 15:30 Cal File: X110311.D
Als bottle: 17 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

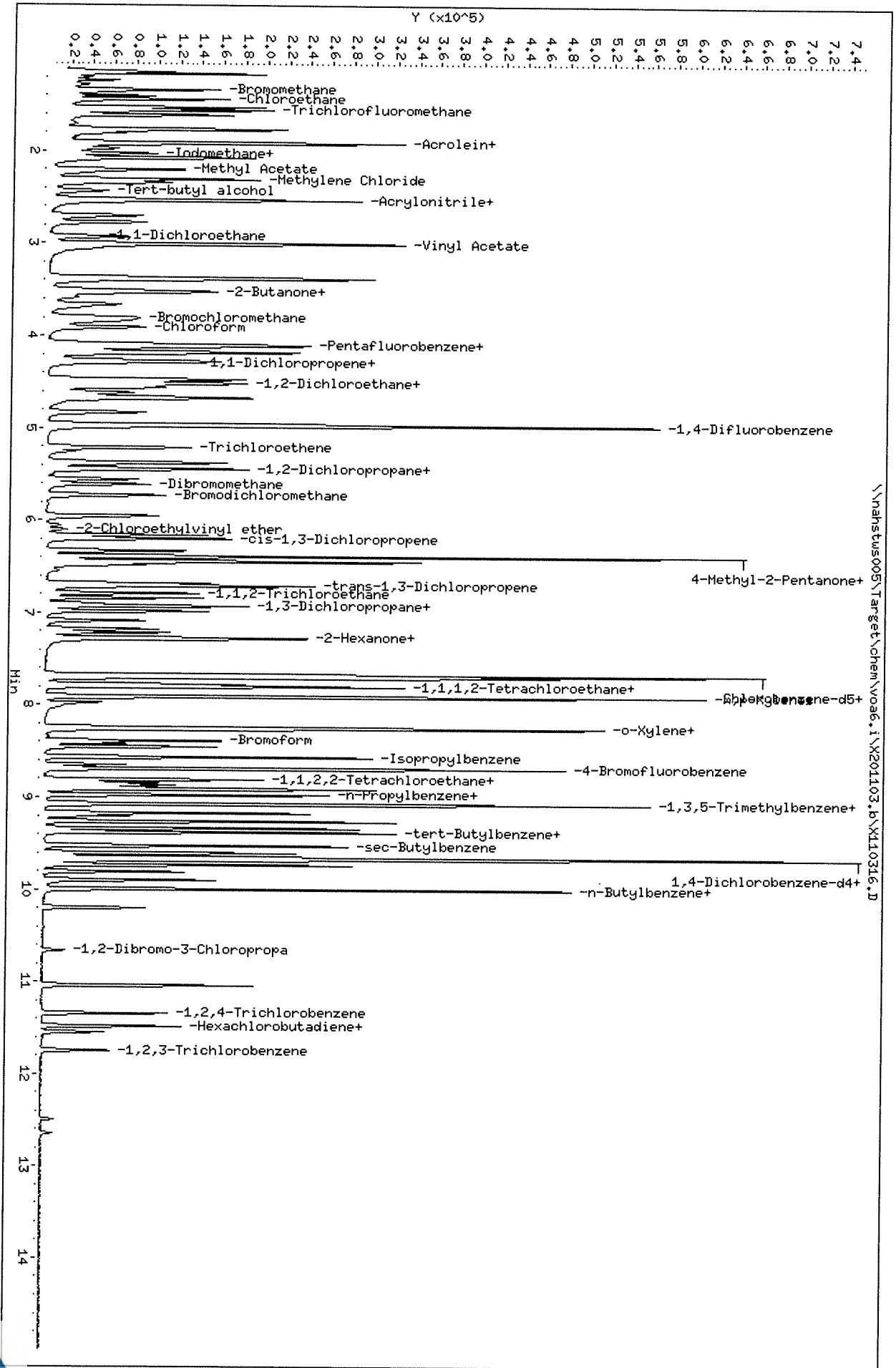
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	157990	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	286594	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	260133	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	116761	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	100119	47.0557	47.05
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	125526	50.1001	50.10
$	48 Toluene-d8	98	6.388	6.388	(0.833)	331714	47.7414	47.74
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	115212	49.8862	49.88
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	34108	18.3789	18.37
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	61375	18.6051	18.60
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	40935	20.9037	20.90
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	30796	19.1940	19.19
	22 1,1-Dichloroethane	63	2.929	2.921	(0.700)	67662	17.8170	17.81
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	56739	19.0347	19.03
	32 1,1-Dichloropropene	75	4.290	4.282	(0.863)	52345	19.5858	19.58
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	13659	28.0954	28.09
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	33808	20.6206	20.62(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	23684	26.1310	26.13
	79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	134845	20.6443	20.64
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	2774	21.2060	21.20
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	36751	18.8394	18.83
	88 1,2-Dichlorobenzene	146	9.998	9.991	(1.035)	63358	19.6607	19.66

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110316.D Page 2
Report Date: 07-Nov-2020 13:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	60212	19.4847	19.48
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	39130	18.4499	18.44
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	130060	19.5228	19.52
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	67925	19.8496	19.84
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	61576	19.3201	19.32
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	70216	19.7054	19.70
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	60645	18.5513	18.55
24	2-Butanone	43	3.588	3.580	(0.858)	27415	37.3277	37.32
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	109155	19.9041	19.90
52	2-Hexanone	43	7.212	7.212	(0.940)	64605	39.0927	39.09
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	130202	18.7976	18.79
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	128999	20.4551	20.45
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	75710	38.3107	38.31
10	Acetone	43	1.976	1.976	(0.473)	43862	46.1437	46.14
37	Benzene	78	4.519	4.519	(0.909)	151222	18.8907	18.89
74	Bromobenzene	156	8.809	8.809	(0.912)	40735	19.8271	19.82
29	Bromochloromethane	128	3.802	3.803	(0.909)	21044	19.3401	19.34
39	Bromodichloromethane	83	5.729	5.729	(1.153)	56023	19.0260	19.02
66	Bromoform	173	8.415	8.416	(1.097)	21884	19.0241	19.02
6	Bromomethane	94	1.338	1.338	(0.320)	56328	19.1582	19.15
19	Carbon Disulfide	76	2.069	2.069	(0.495)	209778	37.8730	37.87
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	48243	18.8008	18.80
59	Chlorobenzene	112	7.699	7.699	(1.004)	100619	18.0997	18.09
7	Chloroethane	64	1.403	1.403	(0.336)	40749	16.3691	16.36
28	Chloroform	83	3.910	3.910	(0.935)	74015	18.3086	18.30
3	Chloromethane	50	1.080	1.081	(0.258)	42772	19.6595	19.65
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	41364	17.8529	17.85
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	62747	19.6250	19.62
55	Dibromochloromethane	129	7.176	7.176	(0.936)	38561	20.0576	20.05
44	Dibromomethane	93	5.557	5.557	(1.118)	28078	19.3807	19.38
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	39053	19.0887	19.08
61	Ethylbenzene	106	7.799	7.799	(1.017)	53299	18.8987	18.89
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	13901	23.4652	23.46
67	Isopropylbenzene	105	8.566	8.566	(1.117)	155823	19.7544	19.75
62	m,p-Xylenes	106	7.907	7.907	(1.031)	127768	37.8228	37.82
17	Methylene Chloride	84	2.305	2.305	(0.551)	37582	17.3255	17.32
87	n-Butylbenzene	91	9.998	9.999	(1.035)	131396	20.7951	20.79
73	n-Propylbenzene	91	8.917	8.917	(0.923)	195677	21.0506	21.05
92	Naphthalene	128	11.546	11.546	(1.195)	34505	26.7212	26.72
63	o-Xylene	106	8.244	8.244	(1.075)	61391	18.2366	18.23
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	154083	20.8724	20.87
64	Styrene	104	8.258	8.258	(1.077)	108817	19.2771	19.27
78	tert-Butylbenzene	119	9.339	9.340	(0.967)	104018	21.0811	21.08
56	Tetrachloroethene	164	6.933	6.933	(0.904)	26909	18.7905	18.79
50	Toluene	91	6.446	6.446	(0.840)	173049	18.1777	18.17
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	36214	18.3982	18.39
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	59187	20.9827	20.98
38	Trichloroethene	130	5.214	5.214	(1.049)	38026	19.9103	19.91
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	109121	18.3263	18.32
5	Vinyl Chloride	62	1.145	1.145	(0.274)	68013	19.4831	19.48

QC Flag Legend

M - Compound response manually integrated.

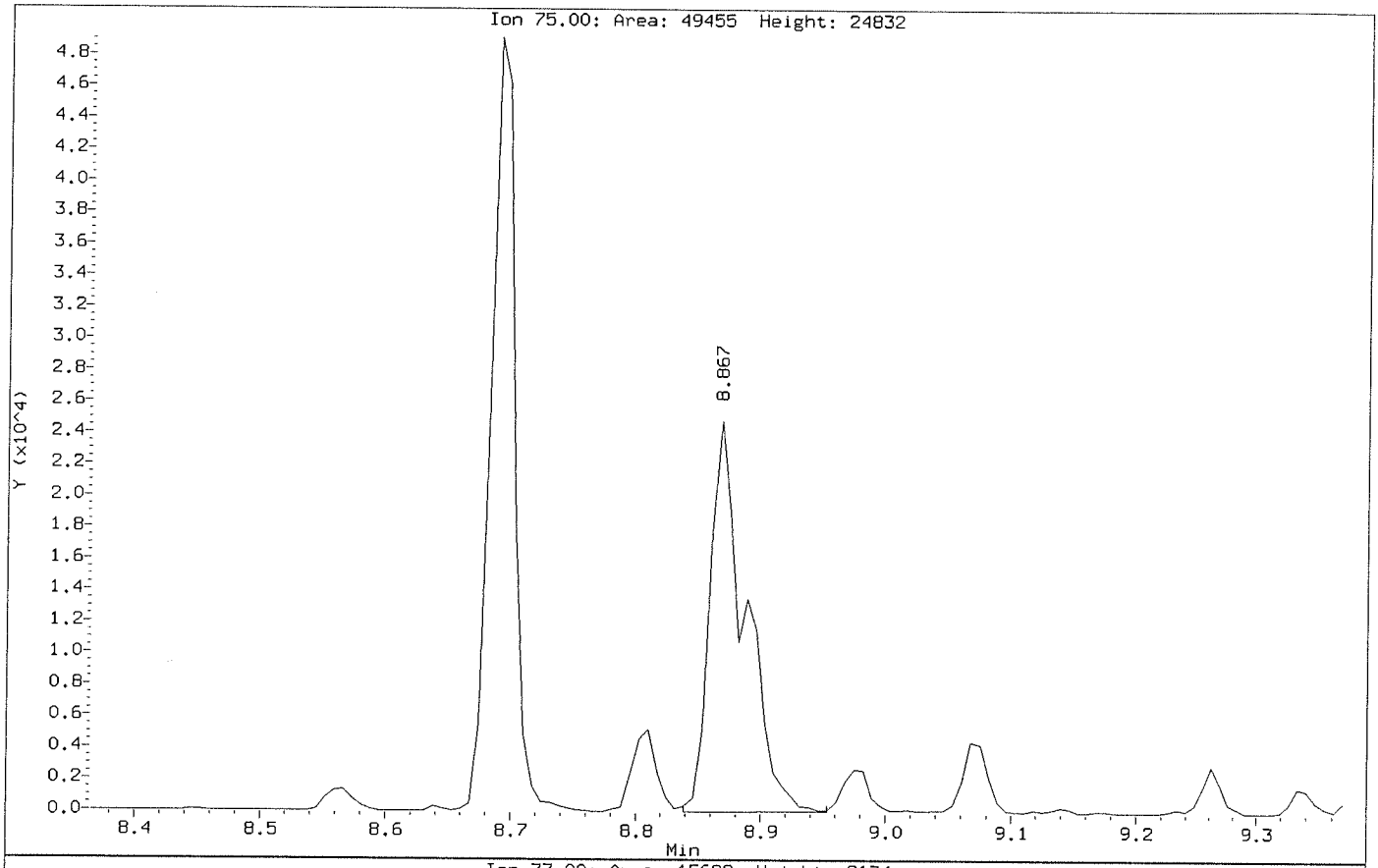


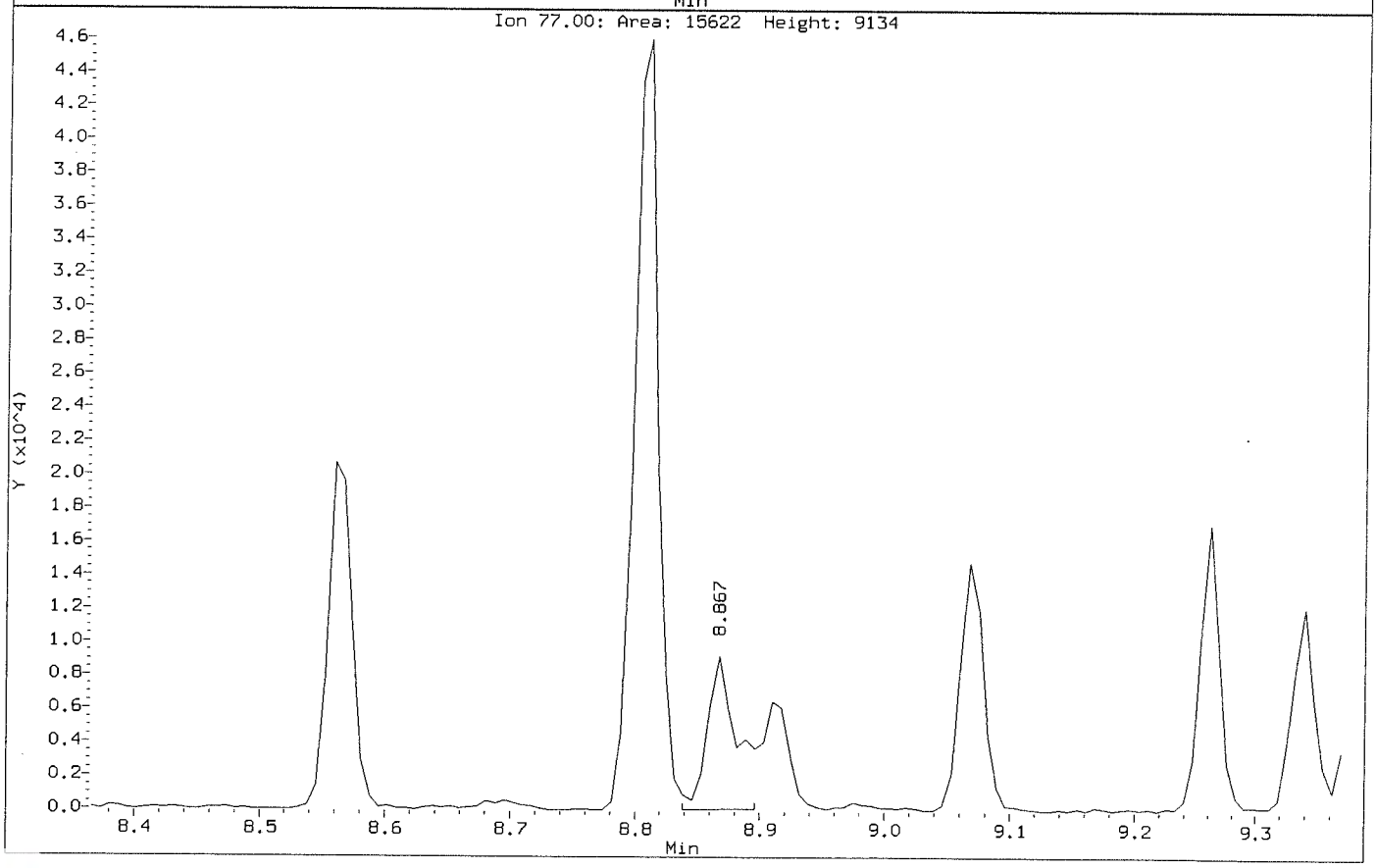
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Date : 03-NOV-2020 17:15
Client ID: WLCSW-201103
Sample Info: VLCSW-201103;VLCSW-201103;3;;LCS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110316.D
Injection Date: 03-NOV-2020 17:15
Instrument: voa6.i
Client Sample ID: VLCSW-201103

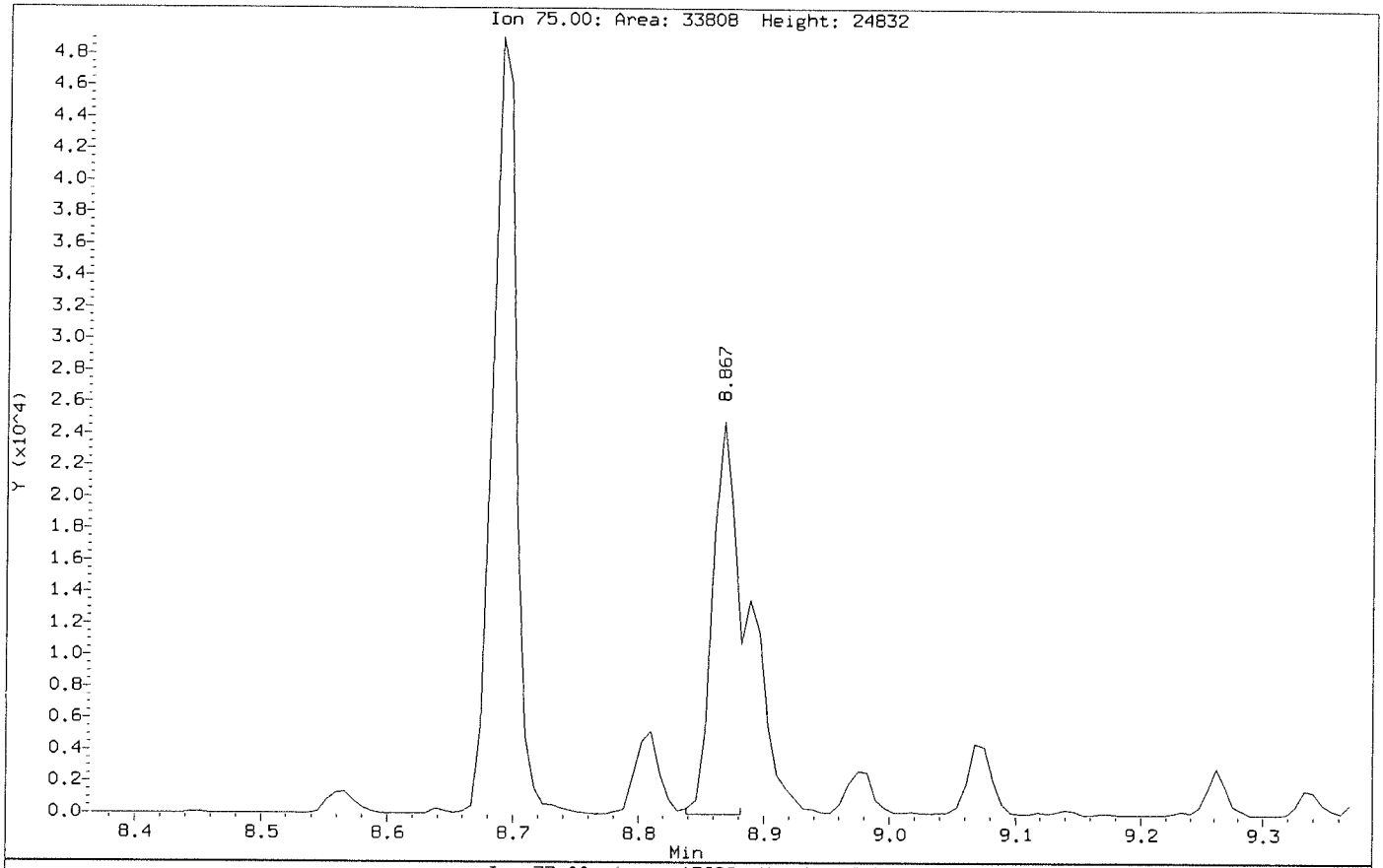
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

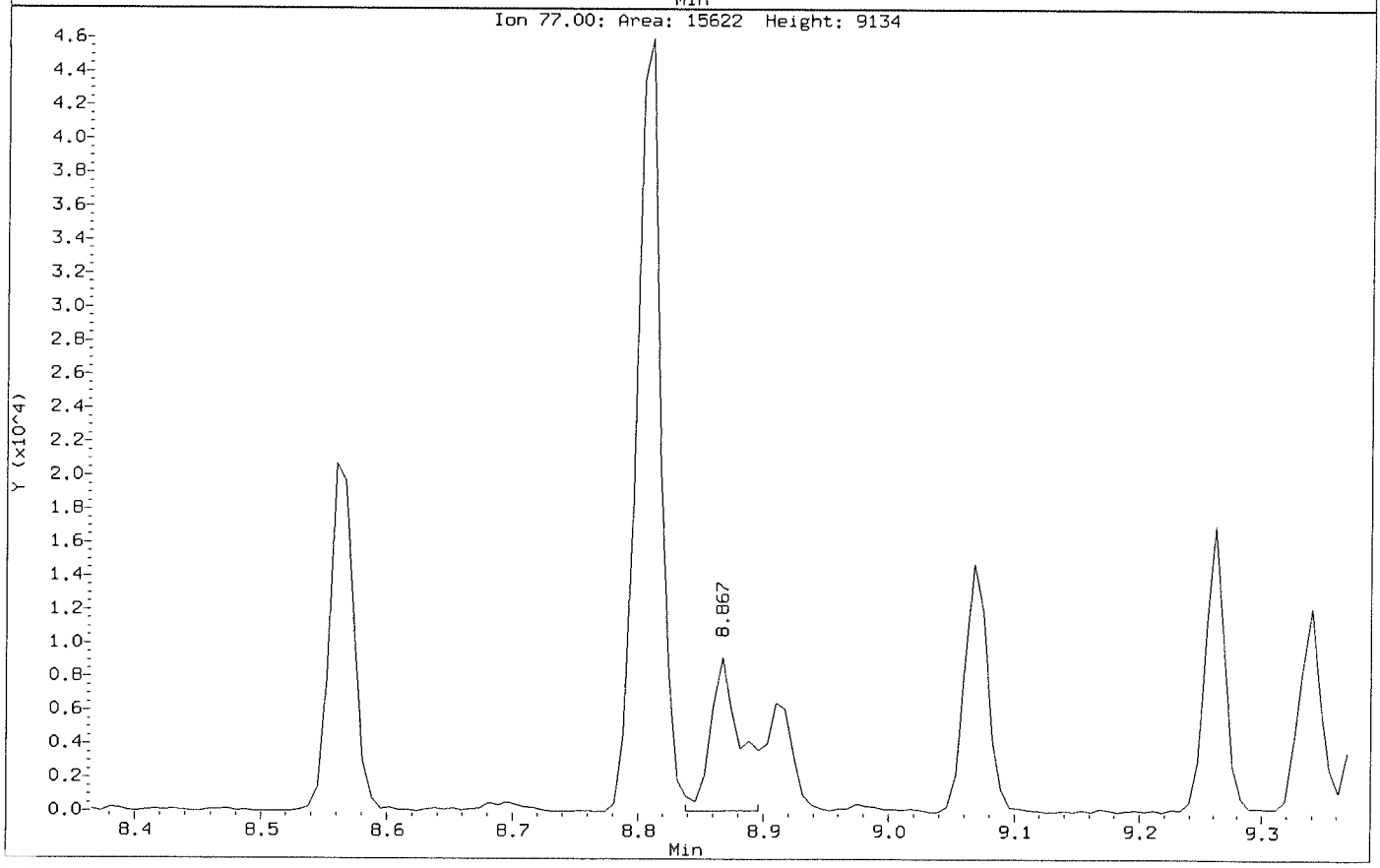




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Injection Date: 03-NOV-2020 17:15
Instrument: voa6.i
Client Sample ID: VLCSW-201103

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





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110319.D Page 1
Report Date: 07-Nov-2020 13:11

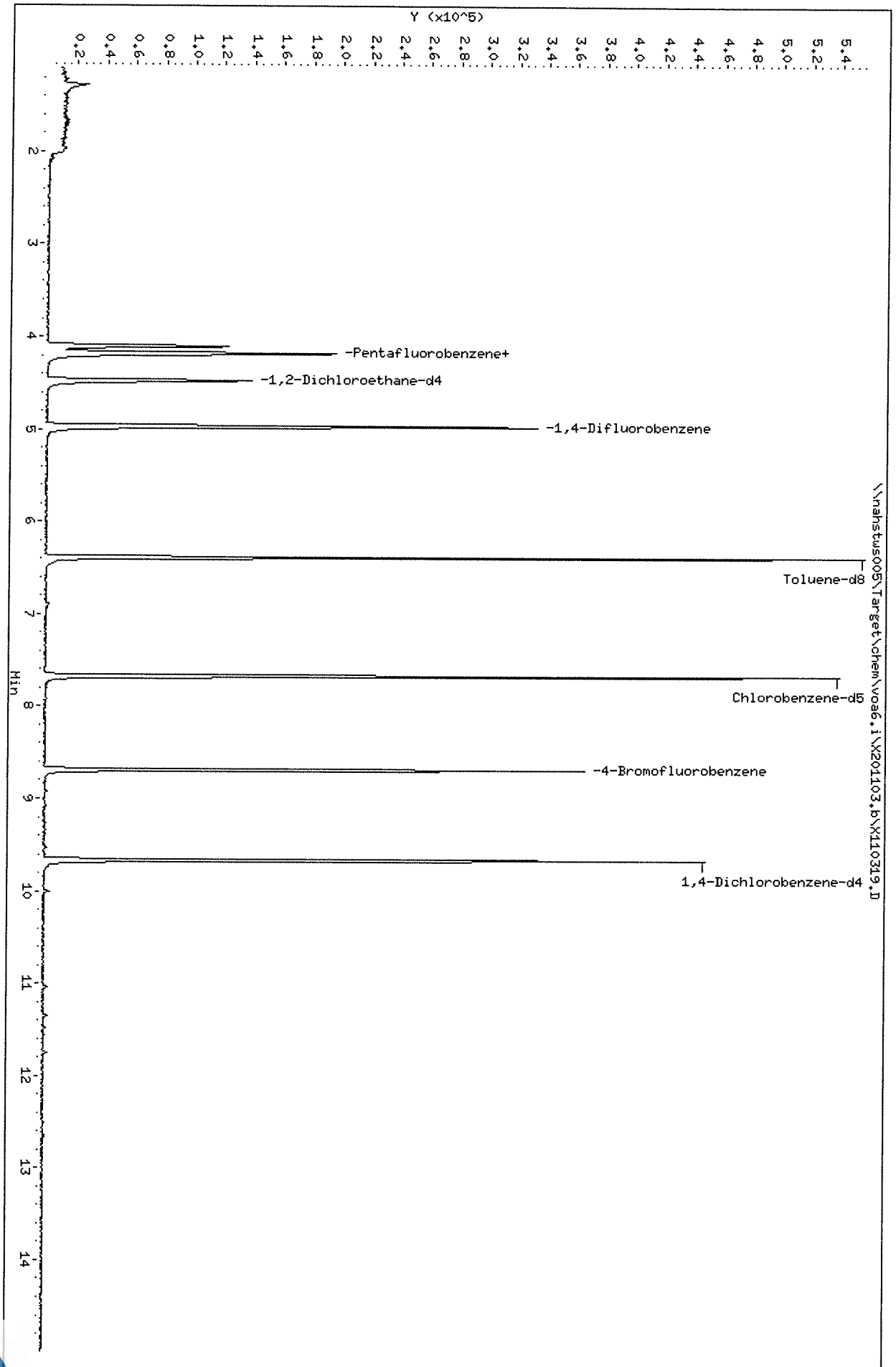
ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110319.D
Lab Smp Id: VBLKW-201103 Client Smp ID: VBLKW-201103
Inj Date : 03-NOV-2020 18:18
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-201103;VBLKW-201103;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201103.b\8260W.m
Meth Date : 07-Nov-2020 13:09 dev.giga Quant Type: ISTD
Cal Date : 03-NOV-2020 15:30 Cal File: X110311.D
Als bottle: 20 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.182	(1.000)	141172	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	242423	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	217885	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	86038	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	79503	41.8177	41.81
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	95947	43.1002	43.10
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	292040	50.1812	50.18
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	86917	45.1058	45.10


Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110319.D
Date : 03-NOV-2020 18:18
Client ID: VBLKW-201103
Sample Info: VBLKW-201103;VBLKW-201103;3;;BLANK
Purge Volume: 5.0
Column phase: DB624
Instrument: voa6.i
Operator: PC
Column diameter: 0.18
Page 2
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\X201103.b\X110319.D

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110320.D Page 1
Report Date: 07-Nov-2020 13:08

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110320.D
Lab Smp Id: HS20101149-02 Client Smp ID: HS20101149-02
Inj Date : 03-NOV-2020 18:39
Operator : PC Inst ID: voa6.i
Smp Info : HS20101149-02;HS20101149-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201103.b\8260W.m
Meth Date : 07-Nov-2020 13:08 dev.giga Quant Type: ISTD
Cal Date : 03-NOV-2020 15:30 Cal File: X110311.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

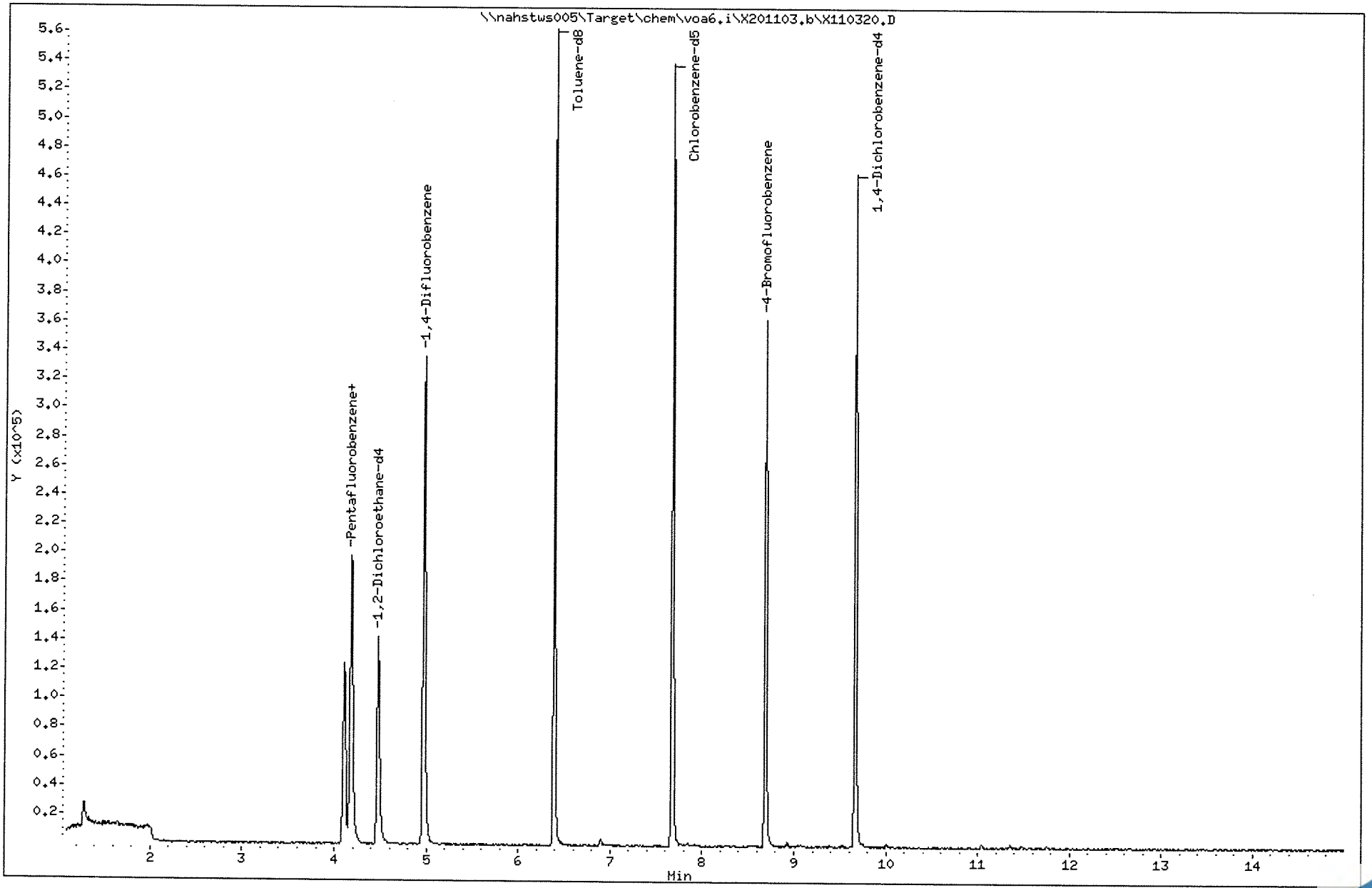
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

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

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	139580	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	243669	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	218629	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	88503	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	79597	42.3446	42.34
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	93585	42.5368	42.53
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	288941	49.4798	49.47
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	89749	46.3692	46.36

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110320.D
Date : 03-NOV-2020 18:39
Client ID: HS20101149-02
Sample Info: HS20101149-02;HS20101149-02;;;
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\X201103.b\X110321.D
Lab Smp Id: HS20101149-01 Client Smp ID: HS20101149-01
Inj Date : 03-NOV-2020 19:00
Operator : PC Inst ID: voa6.i
Smp Info : HS20101149-01;HS20101149-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201103.b\8260W.m
Meth Date : 07-Nov-2020 13:08 dev.giga Quant Type: ISTD
Cal Date : 03-NOV-2020 15:30 Cal File: X110311.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

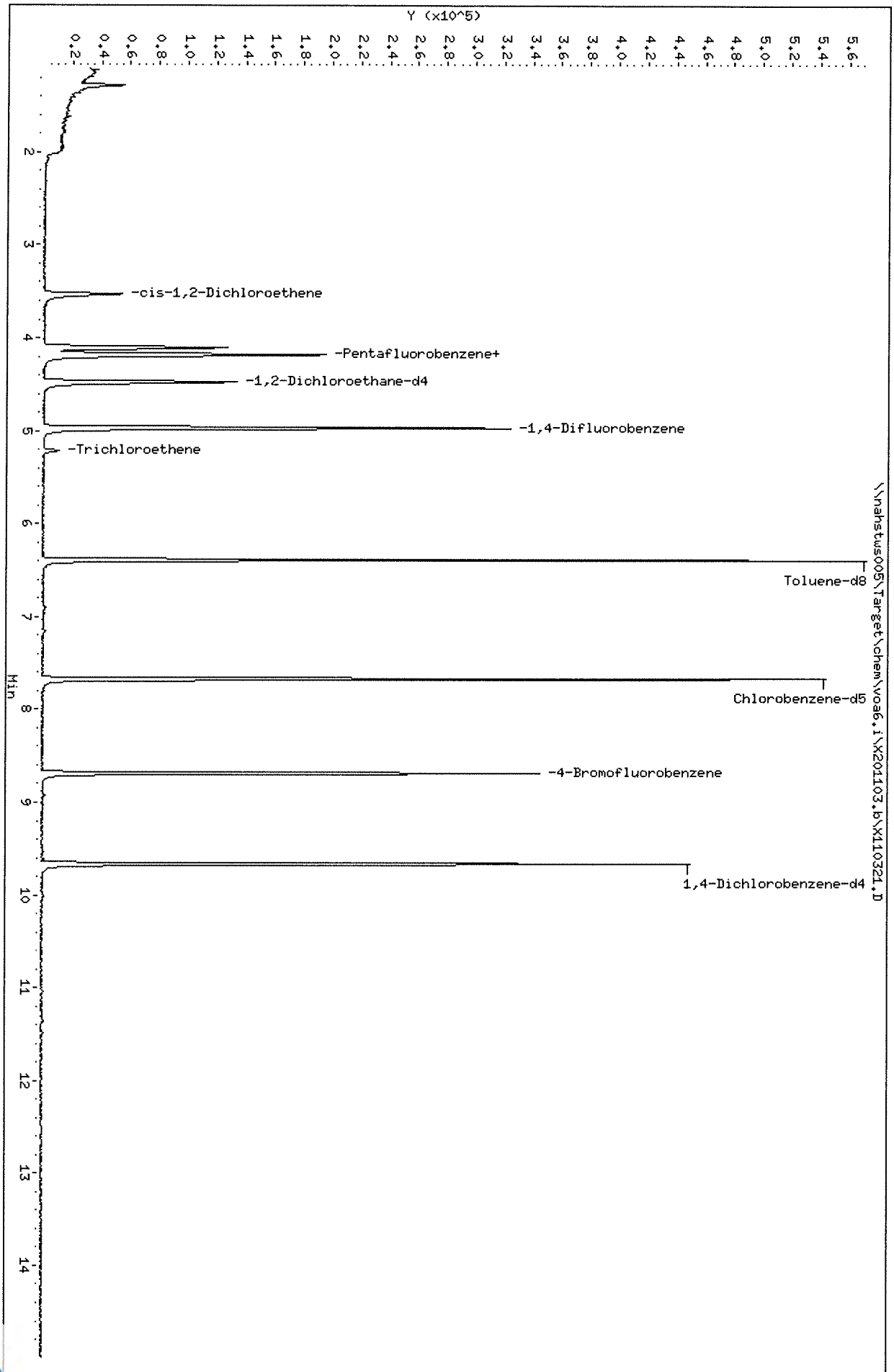
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.182	(1.000)	137314	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	237295	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	212467	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	83572	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	79300	42.8828	42.88
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	94487	43.6195	43.61
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	293956	51.7985	51.79
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	85699	45.5898	45.58
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	25872	12.8479	12.84
38 Trichloroethene	130	5.214	5.214	(1.049)	3505	2.21648	2.21(a)

QC Flag Legend

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

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110321.D
Date : 03-NOV-2020 19:00
Client ID: HS20101149-01
Sample Info: HS20101149-01;HS20101149-01;;;
Purge Volume: 5.0
Column phase: DB624

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



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110321.D

Date : 03-NOV-2020 19:00

Client ID: HS20101149-01

Instrument: voa6.i

Sample Info: HS20101149-01;HS20101149-01;;;

Purge Volume: 5.0

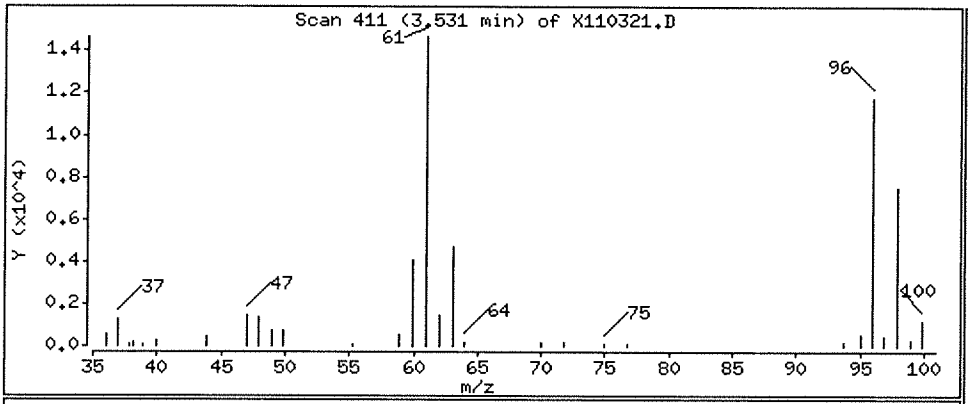
Operator: PC

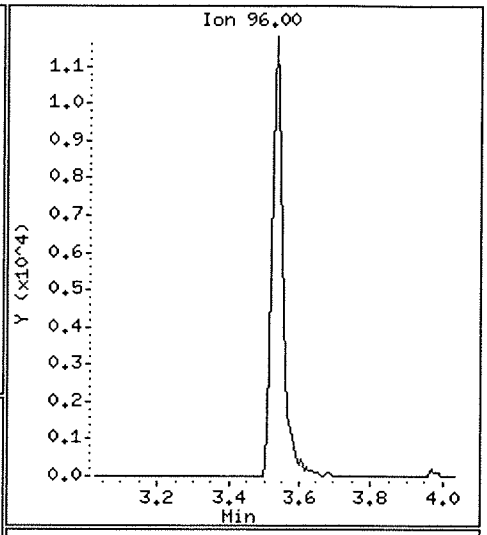
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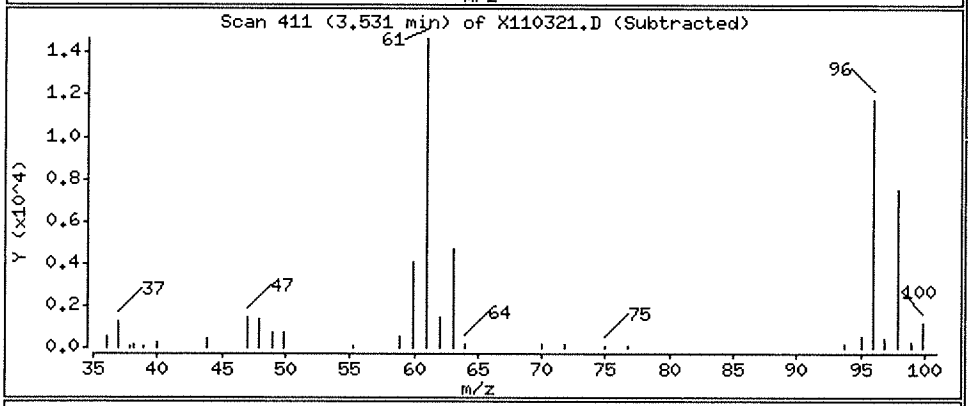
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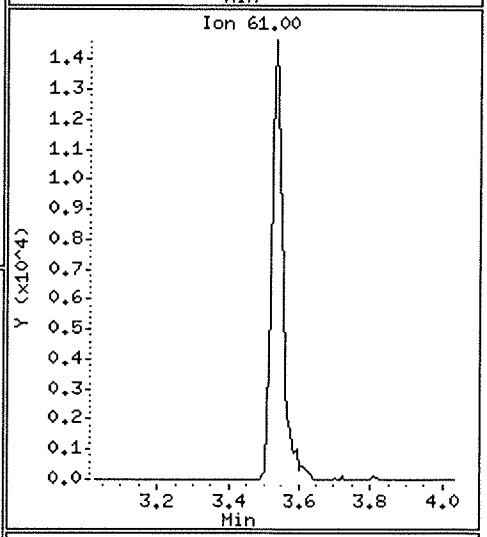
27 cis-1,2-Dichloroethene

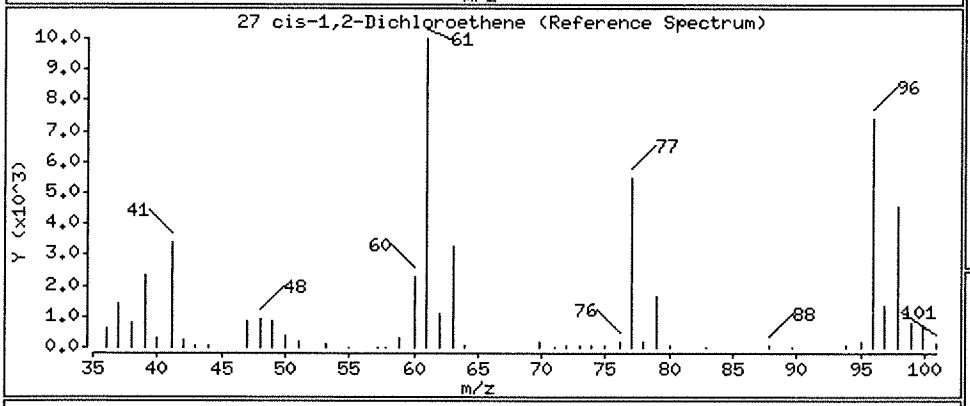
Concentration: 12.84 ug/l

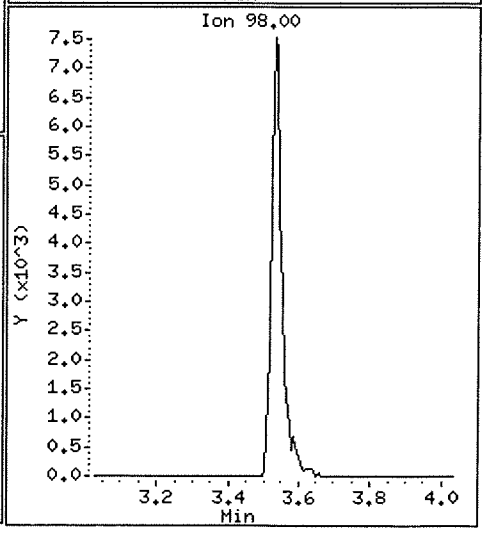


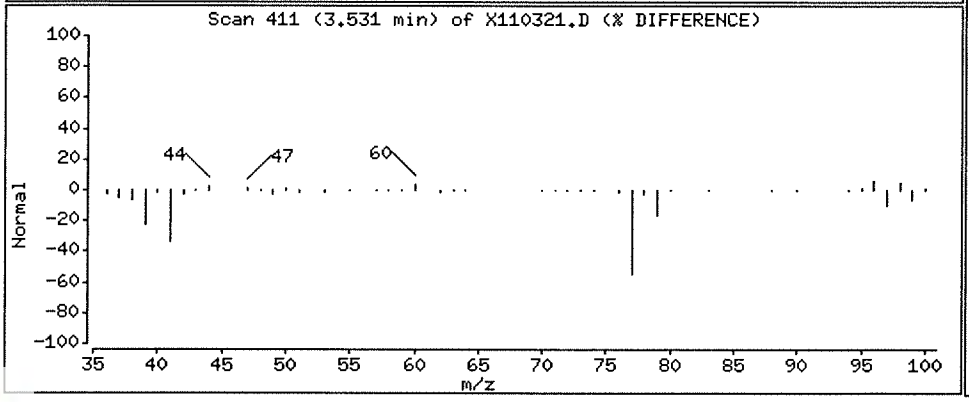












Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110321.D

Date : 03-NOV-2020 19:00

Client ID: HS20101149-01

Instrument: voa6.i

Sample Info: HS20101149-01;HS20101149-01;;;

Purge Volume: 5.0

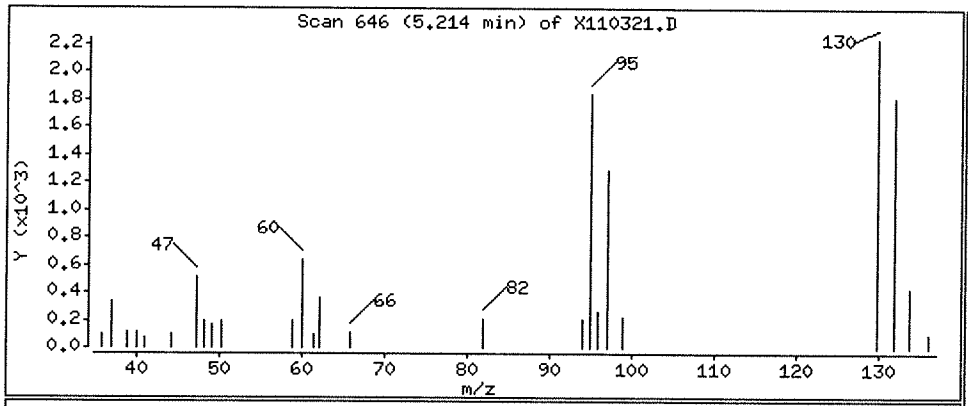
Operator: PC

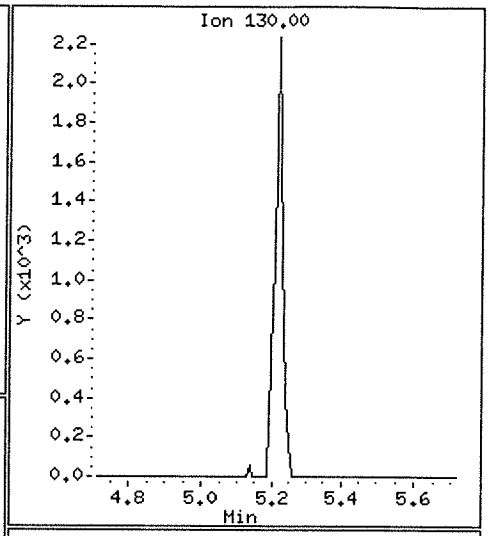
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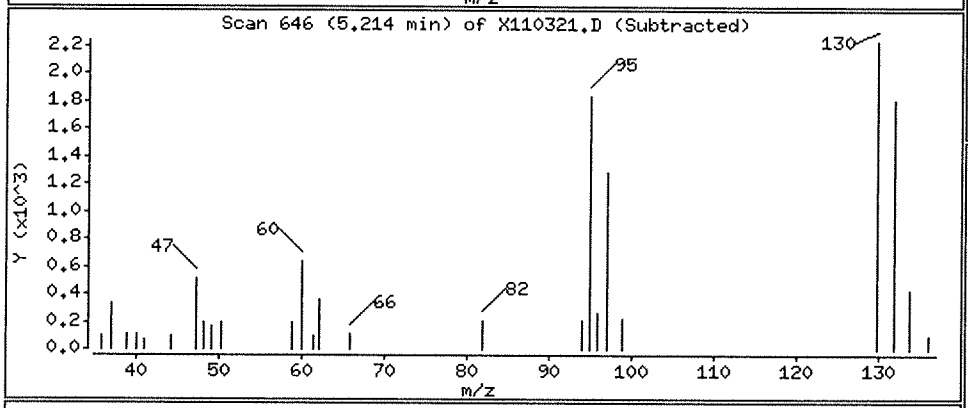
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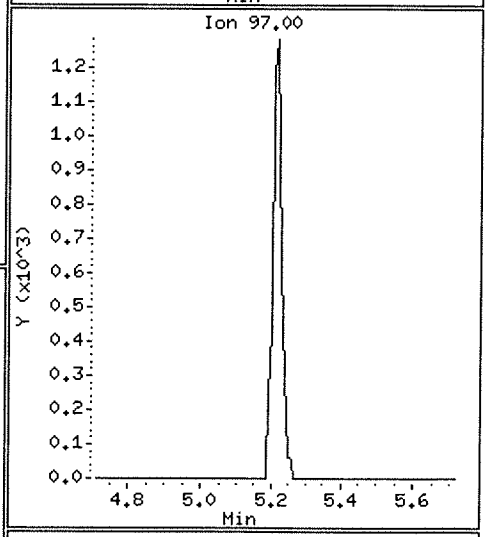
38 Trichloroethene

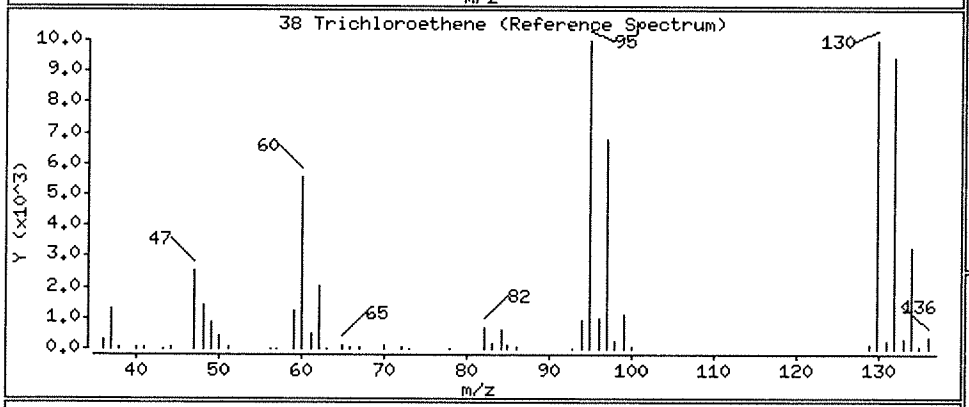
Concentration: 2.21 ug/l

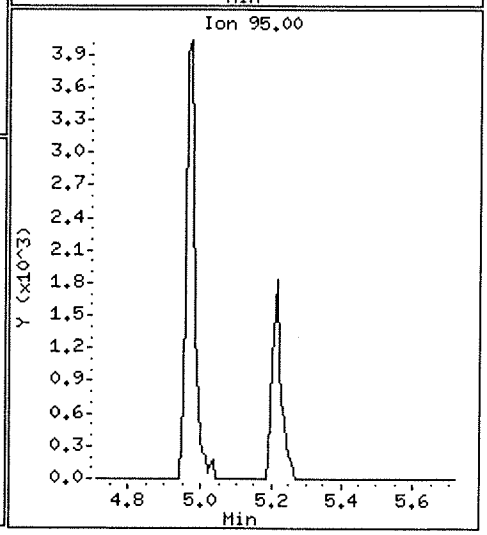


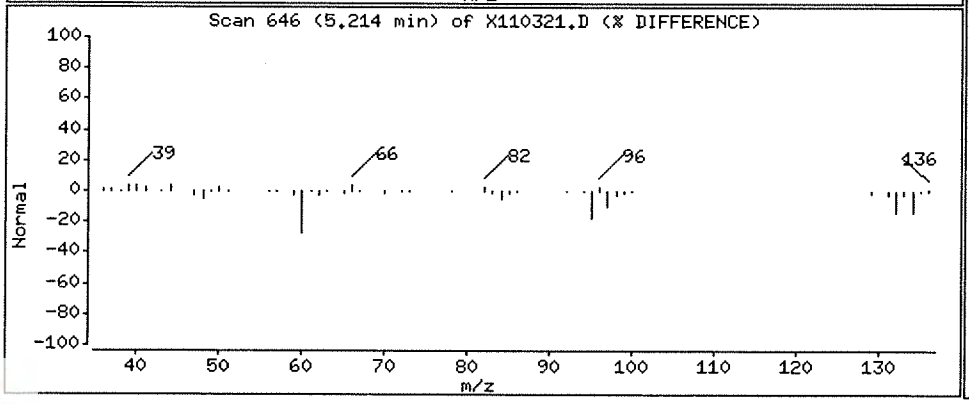












ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110324.D
Lab Smp Id: HS20101123-01MS Client Smp ID: HS20101123-01MS
Inj Date : 03-NOV-2020 20:04
Operator : PC Inst ID: voa6.i
Smp Info : HS20101123-01MS;HS20101123-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201103.b\8260W.m
Meth Date : 07-Nov-2020 13:09 dev.giga Quant Type: ISTD
Cal Date : 03-NOV-2020 15:30 Cal File: X110311.D
Als bottle: 25 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

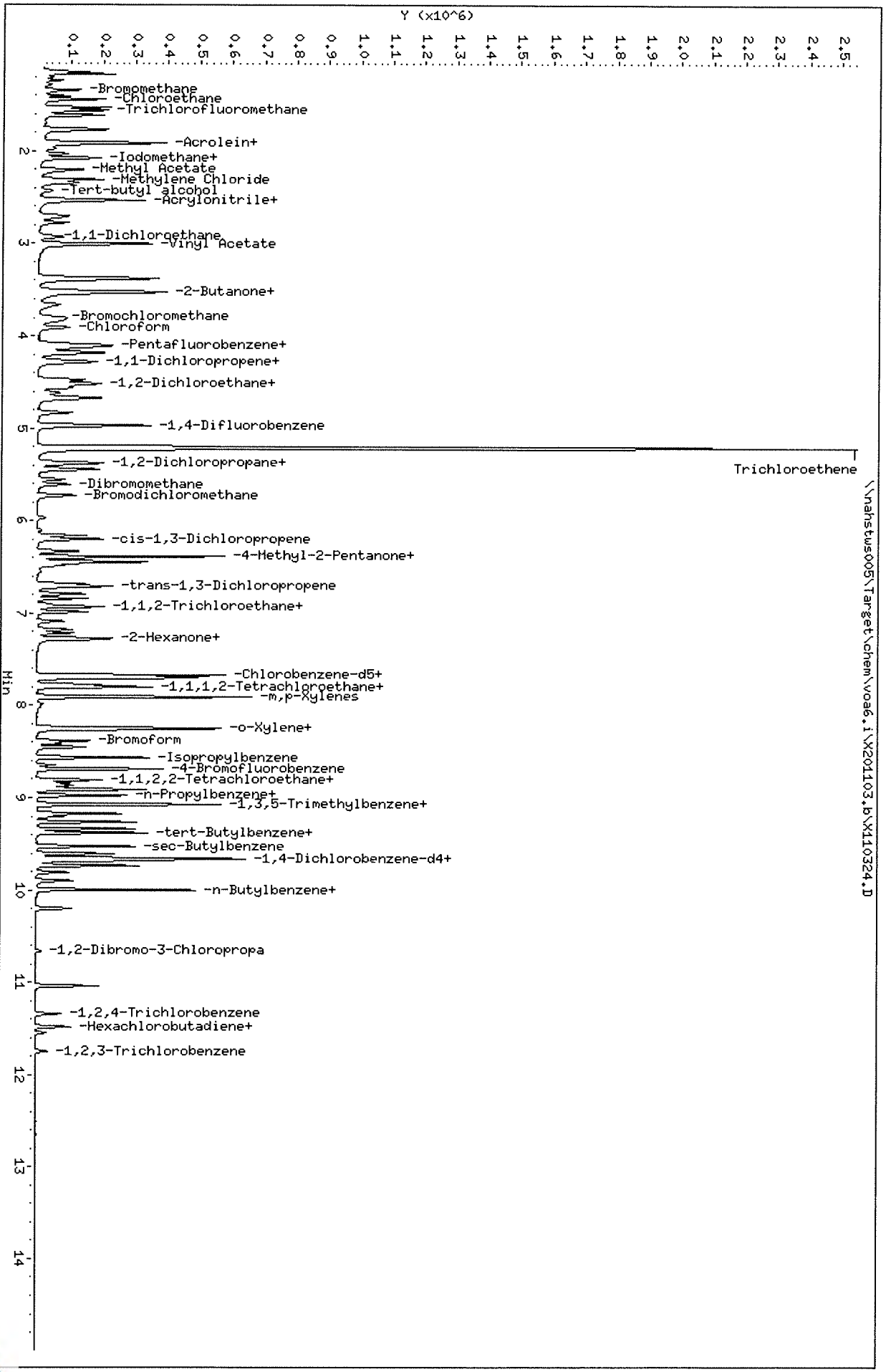
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.182	(1.000)	142531	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	246577	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	223589	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	94097	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	84726	44.1400	44.13
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	102842	45.6654	45.66
$	48 Toluene-d8	98	6.388	6.388	(0.833)	300432	50.3063	50.30
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	93666	47.2843	47.28
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	37013	23.2040	23.20
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	69885	23.4825	23.48
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	40780	25.9793	25.97
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	34992	25.3738	25.37
	22 1,1-Dichloroethane	63	2.929	2.921	(0.699)	70384	20.5440	20.54
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	67182	24.9826	24.98
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	57488	25.0010	25.00
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	8407	21.8754	21.87
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	33335	25.2293	25.22(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	17855	24.5583	24.55
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	141560	26.8922	26.89
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.658	(1.104)	2239	21.2392	21.23
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	38890	23.1943	23.19
	88 1,2-Dichlorobenzene	146	9.999	9.991	(1.035)	61785	23.7904	23.79

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	63861	24.0193	24.01
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	43269	23.7124	23.71
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	138150	25.7319	25.73
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	68095	24.6922	24.69
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	64259	23.4572	23.45
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	69007	24.0306	24.03
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	67291	22.8169	22.81
24	2-Butanone	43	3.580	3.580	(0.855)	22562	34.0518	34.05
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	116147	26.2802	26.28
52	2-Hexanone	43	7.212	7.212	(0.940)	64784	44.9901	44.99
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	135853	24.3375	24.33
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	140897	27.7230	27.72
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	77815	45.8115	45.81
10	Acetone	43	1.976	1.976	(0.472)	31126	34.4331	34.43
37	Benzene	78	4.519	4.519	(0.909)	159865	23.2114	23.21
74	Bromobenzene	156	8.809	8.809	(0.912)	41534	25.0851	25.08
29	Bromochloromethane	128	3.795	3.803	(0.906)	20101	20.4771	20.47
39	Bromodichloromethane	83	5.729	5.729	(1.153)	59052	23.3093	23.30
66	Bromoform	173	8.415	8.416	(1.097)	21724	21.4892	21.48
6	Bromomethane	94	1.338	1.338	(0.320)	54653	20.6046	20.60
19	Carbon Disulfide	76	2.069	2.069	(0.494)	218289	43.6839	43.68
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	55802	25.2758	25.27
59	Chlorobenzene	112	7.699	7.699	(1.004)	106646	22.3194	22.31
7	Chloroethane	64	1.403	1.403	(0.335)	47537	21.1670	21.16
28	Chloroform	83	3.910	3.910	(0.933)	76161	20.8828	20.88
3	Chloromethane	50	1.081	1.081	(0.258)	47278	23.8897	23.88
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	149152	71.3569	71.35
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	65822	23.9278	23.92
55	Dibromochloromethane	129	7.176	7.176	(0.936)	38926	23.5568	23.55
44	Dibromomethane	93	5.557	5.557	(1.118)	29651	23.7880	23.78
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	46103	24.9787	24.97
61	Ethylbenzene	106	7.799	7.799	(1.017)	58526	24.1438	24.14
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	12832	26.5392	26.53
67	Isopropylbenzene	105	8.566	8.566	(1.117)	176833	25.2443	25.24
62	m,p-Xylenes	106	7.907	7.907	(1.031)	139297	47.9753	47.97
17	Methylene Chloride	84	2.305	2.305	(0.550)	39419	20.1433	20.14
87	n-Butylbenzene	91	9.999	9.999	(1.035)	137025	25.8494	25.84
73	n-Propylbenzene	91	8.917	8.917	(0.923)	212889	28.4184	28.41
92	Naphthalene	128	11.546	11.546	(1.195)	20989	20.6937	20.69
63	o-Xylene	106	8.244	8.244	(1.075)	68269	23.5943	23.59
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	168401	27.3661	27.36
64	Styrene	104	8.258	8.258	(1.077)	112003	23.0845	23.08
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	114777	27.9435	27.94
56	Tetrachloroethene	164	6.933	6.933	(0.904)	32528	26.4267	26.42
50	Toluene	91	6.446	6.446	(0.840)	181665	22.2017	22.20
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	39461	22.2222	22.22
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	58786	24.2228	24.22
38	Trichloroethene	130	5.206	5.214	(1.048)	665536	405.026	405.02(A)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	117210	21.8198	21.81
5	Vinyl Chloride	62	1.145	1.145	(0.273)	93169	29.5841	29.58

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

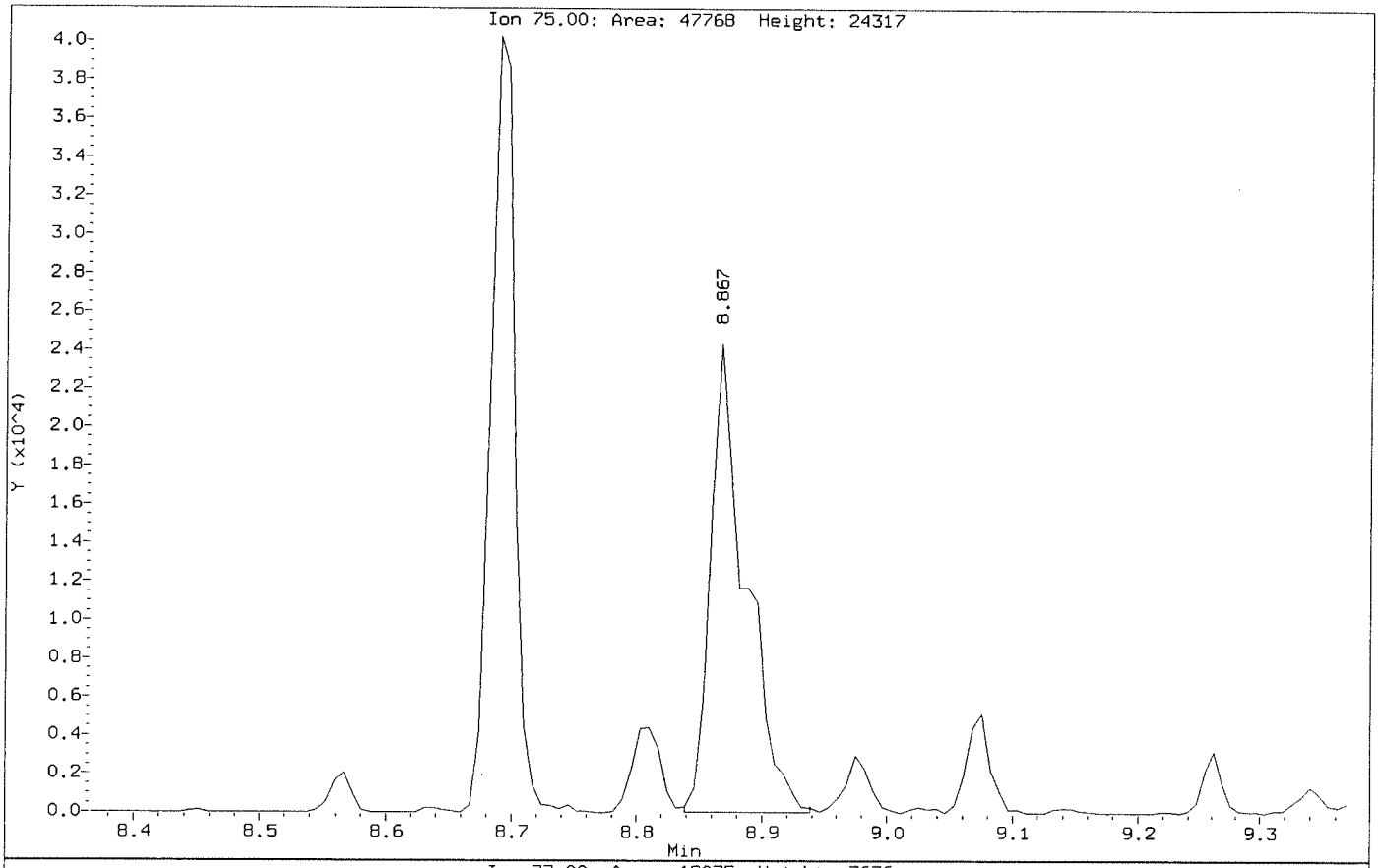


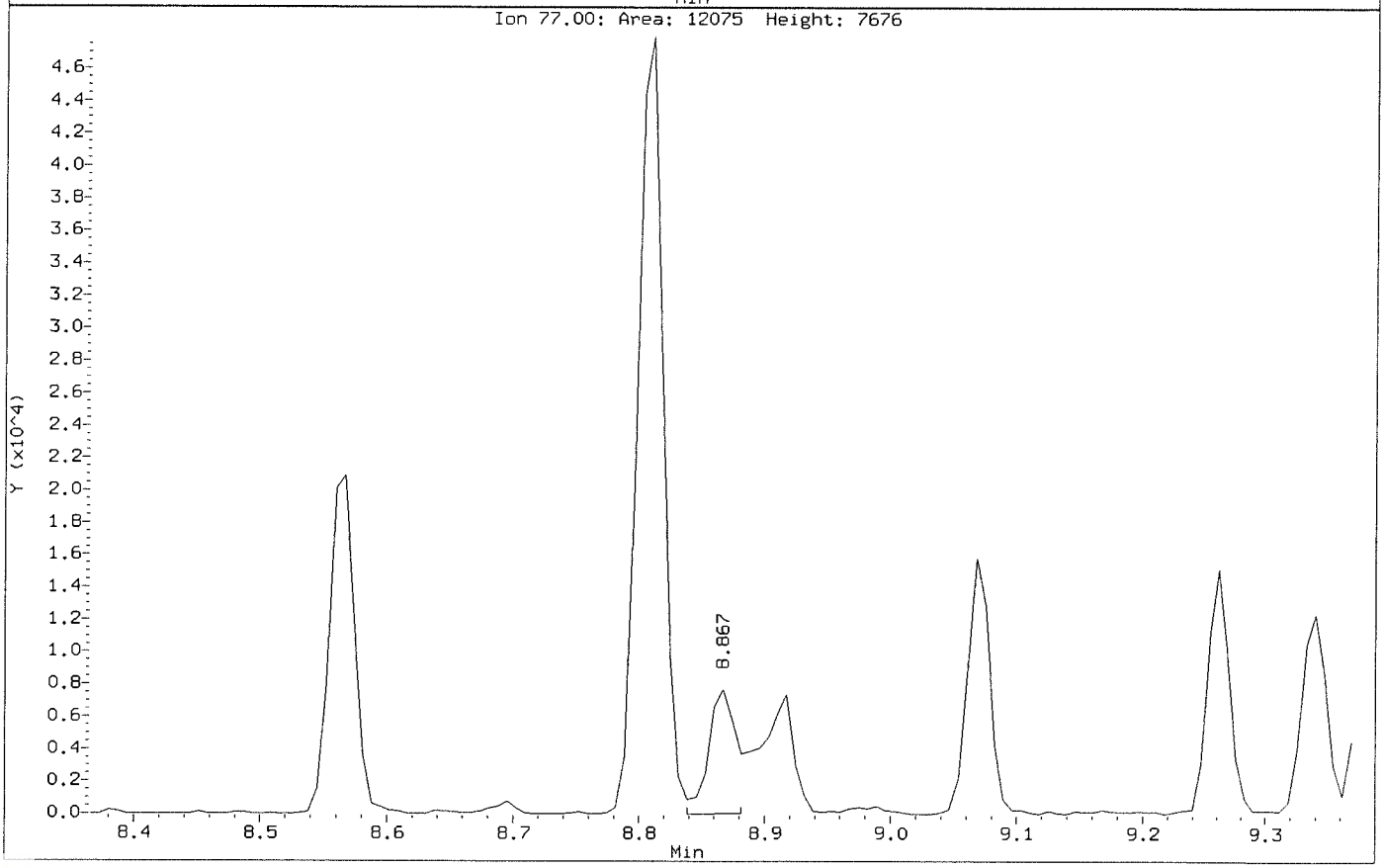
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Date : 03-NOV-2020 20:04
Client ID: HS20101123-01MS
Sample Info: HS20101123-01MS;HS20101123-01MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110324.D
Injection Date: 03-NOV-2020 20:04
Instrument: voa6.i
Client Sample ID: HS20101123-01MS

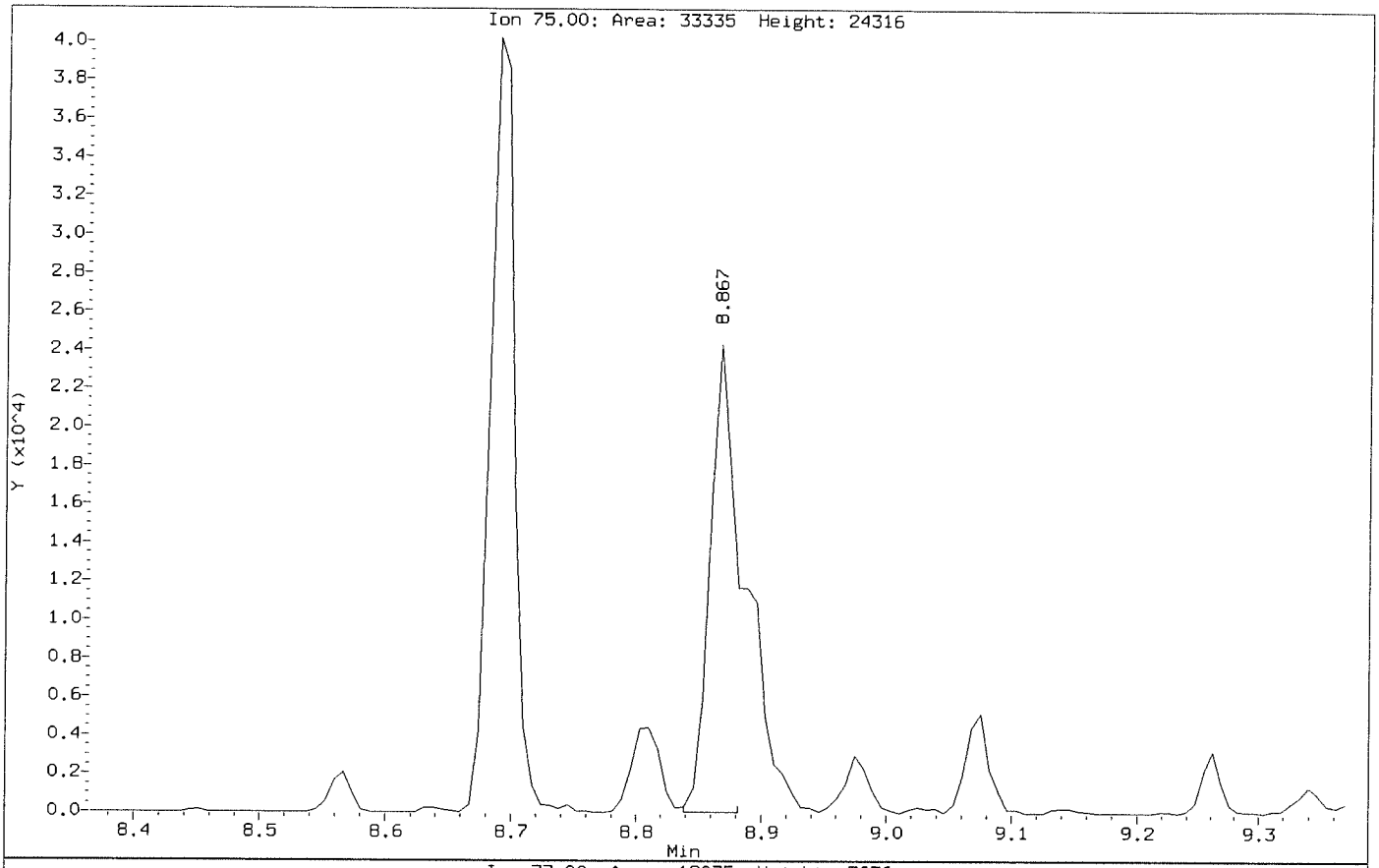
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

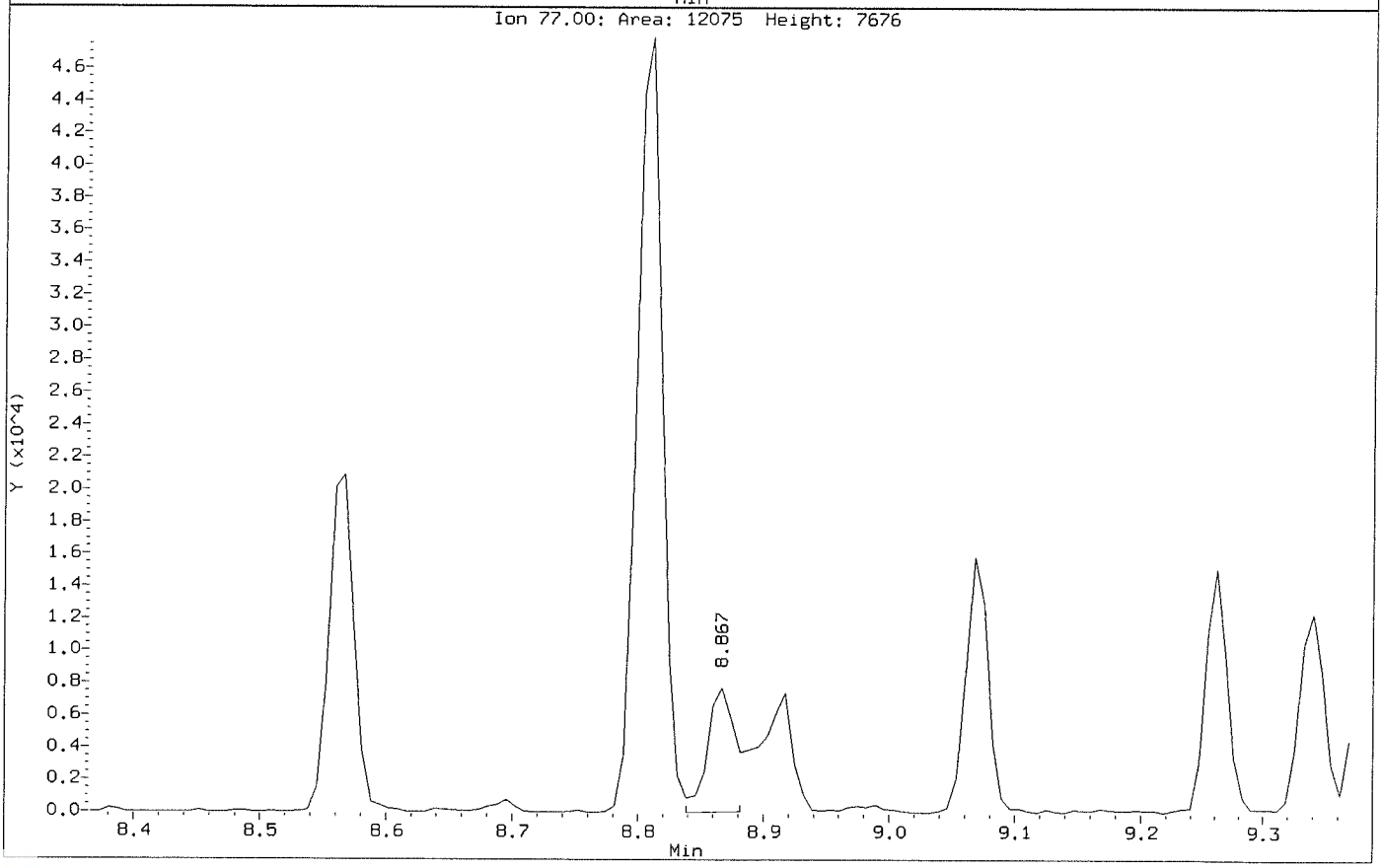




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Injection Date: 03-NOV-2020 20:04
Instrument: voa6.i
Client Sample ID: HS20101123-01MS

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





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110325.D Page 1
Report Date: 07-Nov-2020 13:11

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110325.D
Lab Smp Id: HS20101123-01MSD Client Smp ID: HS20101123-01MSD
Inj Date : 03-NOV-2020 20:25
Operator : PC Inst ID: voa6.i
Smp Info : HS20101123-01MSD;HS20101123-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201103.b\8260W.m
Meth Date : 07-Nov-2020 13:09 dev.giga Quant Type: ISTD
Cal Date : 03-NOV-2020 15:30 Cal File: X110311.D
Als bottle: 25 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

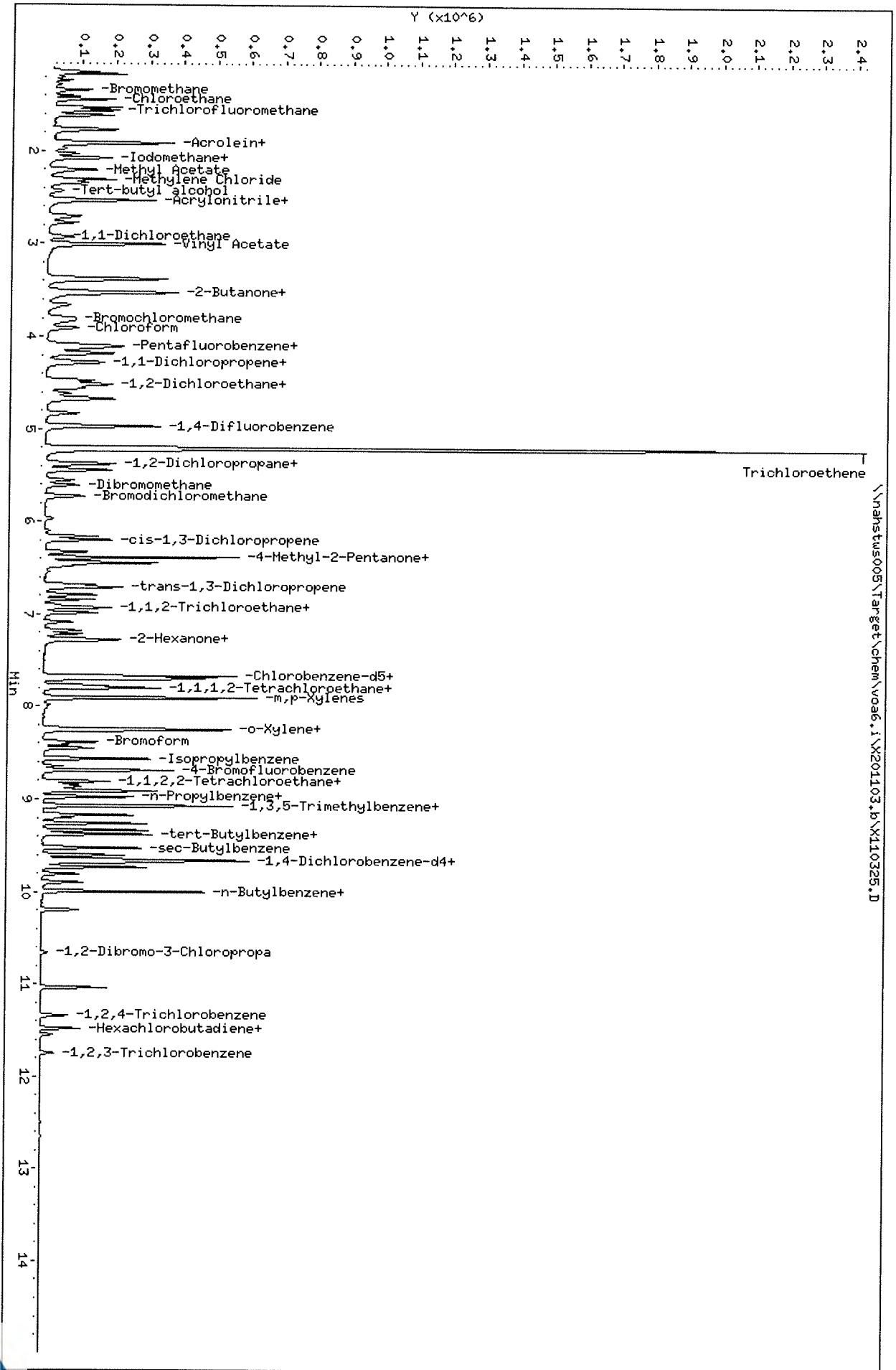
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.182	(1.000)	136956	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	245407	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	217279	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	90157	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	83379	45.2065	45.20
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	97791	45.2067	45.20
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	289225	49.8362	49.83
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	92380	47.9632	47.96
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	35854	23.1302	23.13
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	66482	23.2484	23.24
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	42178	28.0910	28.09
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	31755	23.6953	23.69
22 1,1-Dichloroethane	63	2.929	2.921	(0.699)	70080	21.2879	21.28
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	61773	23.9063	23.90
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	55770	24.3695	24.36
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	8496	22.9763	22.97
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	34026	26.8777	26.87(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	16421	23.6437	23.64
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	134485	26.6647	26.66
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	2469	24.4958	24.49
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	38956	23.9084	23.90
88 1,2-Dichlorobenzene	146	9.999	9.991	(1.034)	60887	24.4692	24.46

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110325.D Page 2
Report Date: 07-Nov-2020 13:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	63735	24.0862	24.08
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	41288	22.7347	22.73
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	133677	25.9869	25.98
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	68617	25.9689	25.96
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	63657	23.9123	23.91
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	70068	25.4664	25.46
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	61458	21.6873	21.68
24 2-Butanone	43	3.580	3.580	(0.855)	22527	35.3830	35.38
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	110231	26.0316	26.03
52 2-Hexanone	43	7.212	7.212	(0.940)	60531	43.4002	43.40
77 4-Chlorotoluene	91	9.074	9.075	(0.939)	131432	24.5744	24.57
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	131968	27.1008	27.10
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	72210	43.7463	43.74
10 Acetone	43	1.976	1.976	(0.472)	32061	37.5397	37.53
37 Benzene	78	4.519	4.519	(0.909)	161600	23.5751	23.57
74 Bromobenzene	156	8.809	8.809	(0.911)	40709	25.6614	25.66
29 Bromochloromethane	128	3.802	3.803	(0.908)	20469	21.7008	21.70
39 Bromodichloromethane	83	5.729	5.729	(1.153)	58662	23.2658	23.26
66 Bromoform	173	8.415	8.416	(1.097)	21581	21.8984	21.89
6 Bromomethane	94	1.338	1.338	(0.320)	53952	21.1683	21.16
19 Carbon Disulfide	76	2.069	2.069	(0.494)	211384	44.0241	44.02
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	53239	24.2299	24.22
59 Chlorobenzene	112	7.699	7.699	(1.004)	102952	22.1720	22.17
7 Chloroethane	64	1.403	1.403	(0.335)	44968	20.8382	20.83
28 Chloroform	83	3.910	3.910	(0.933)	75157	21.4463	21.44
3 Chloromethane	50	1.081	1.081	(0.258)	45087	23.7166	23.71
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	146297	72.8401	72.84
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	64271	23.4754	23.47
55 Dibromochloromethane	129	7.176	7.176	(0.936)	38732	24.1201	24.12
44 Dibromomethane	93	5.557	5.557	(1.118)	29727	23.9626	23.96
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	42024	23.6956	23.69
61 Ethylbenzene	106	7.799	7.799	(1.017)	56004	23.7744	23.77
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	13255	28.4303	28.43
67 Isopropylbenzene	105	8.566	8.566	(1.117)	166462	24.5358	24.53
62 m,p-Xylenes	106	7.907	7.907	(1.031)	137886	48.8685	48.86
17 Methylene Chloride	84	2.305	2.305	(0.550)	38080	20.2512	20.25
87 n-Butylbenzene	91	9.999	9.999	(1.034)	131870	25.9481	25.94
73 n-Propylbenzene	91	8.917	8.917	(0.922)	208645	29.0690	29.06
92 Naphthalene	128	11.546	11.546	(1.194)	24006	24.2882	24.28
63 o-Xylene	106	8.244	8.244	(1.075)	66455	23.6344	23.63
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	163158	27.6432	27.64
64 Styrene	104	8.258	8.258	(1.077)	111918	23.7368	23.73
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	110089	27.9708	27.97
56 Tetrachloroethene	164	6.933	6.933	(0.904)	29962	25.0490	25.04
50 Toluene	91	6.446	6.446	(0.840)	171806	21.6066	21.60
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	37556	22.0103	22.01
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	58318	24.1445	24.14
38 Trichloroethene	130	5.206	5.214	(1.048)	627829	383.900	383.90(A)
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	115692	22.4139	22.41
5 Vinyl Chloride	62	1.145	1.145	(0.273)	88463	29.2332	29.23

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

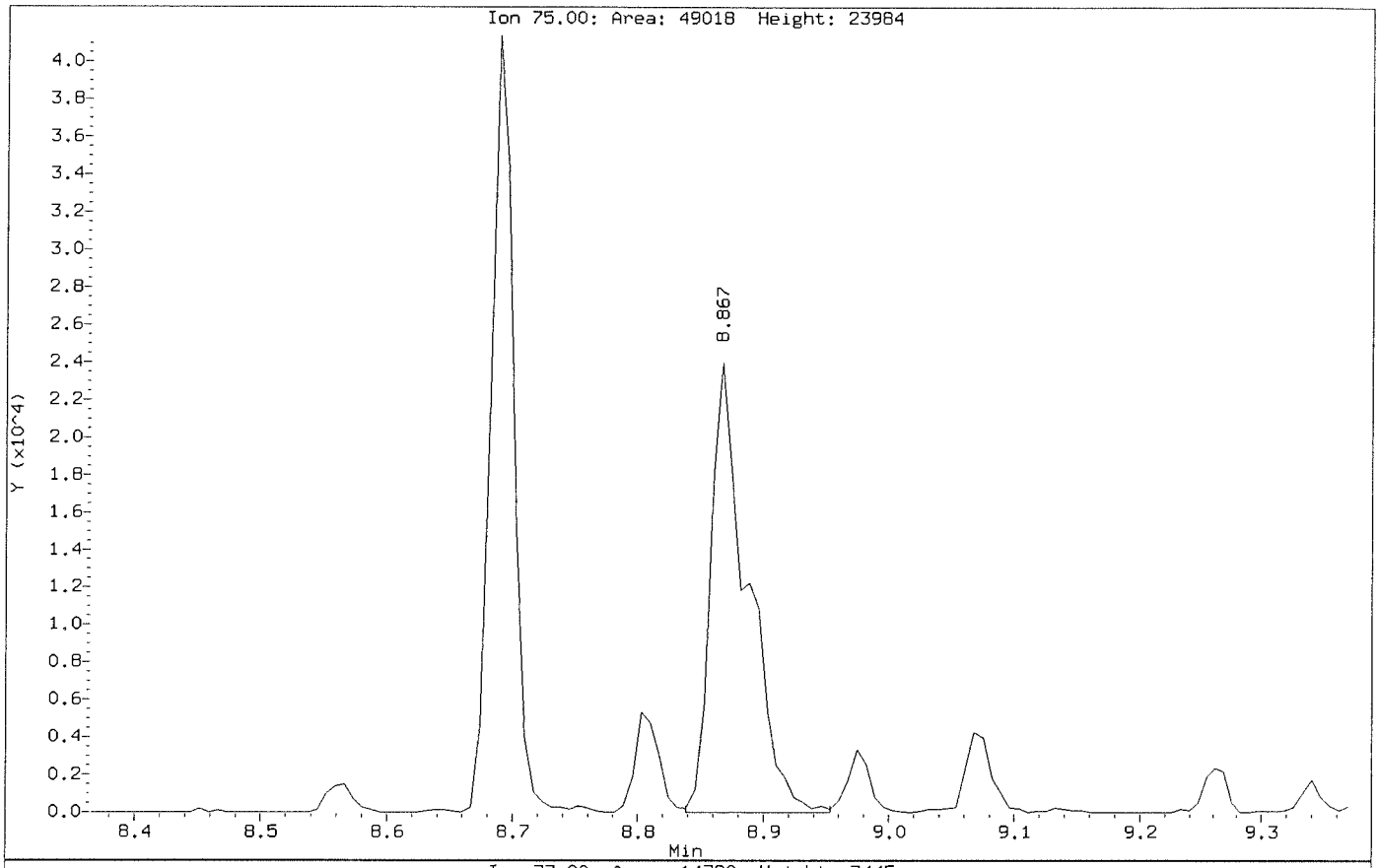


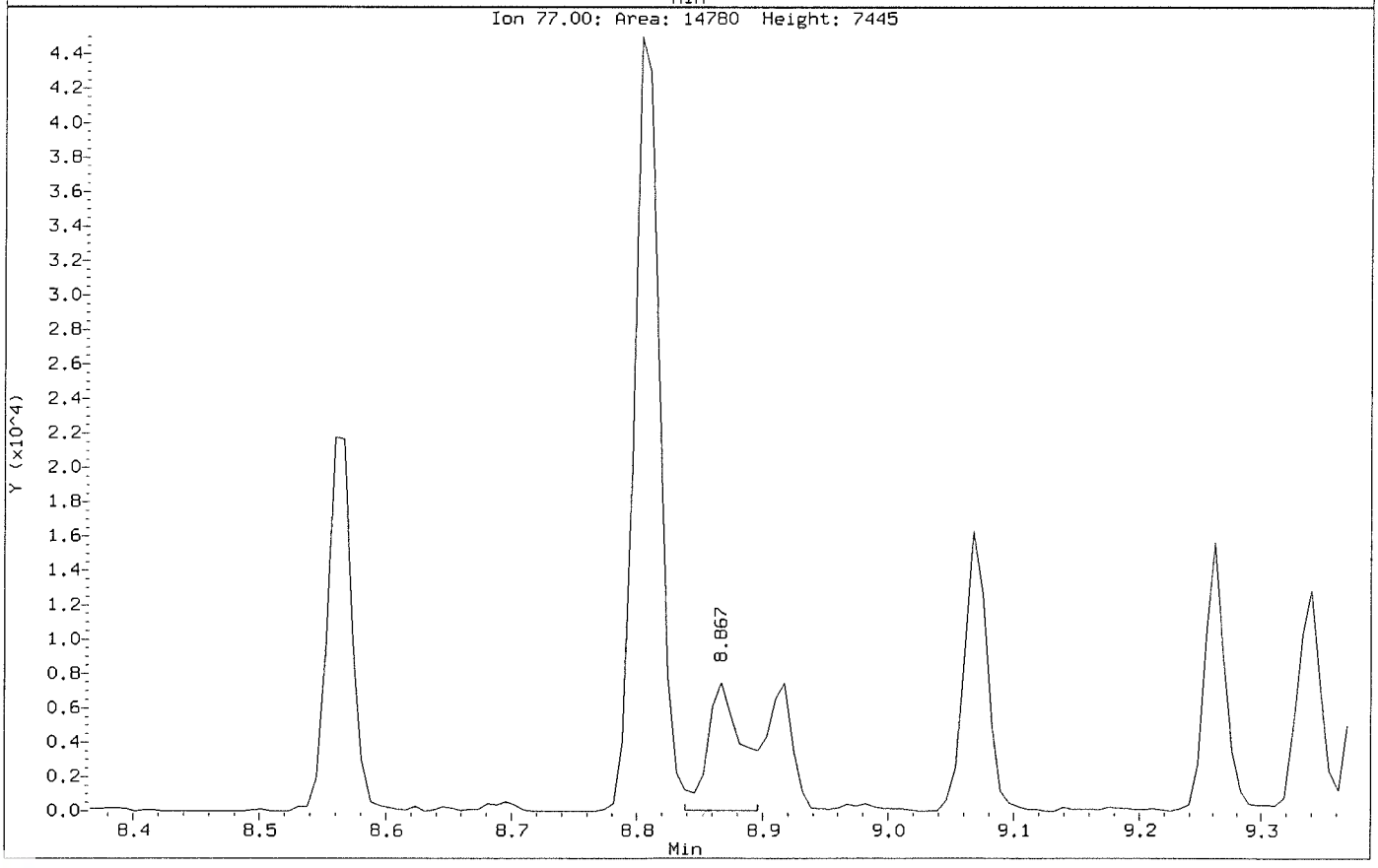
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Sample Info: HS20101123-01MSD;HS20101123-01MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110325.D
Injection Date: 03-NOV-2020 20:25
Instrument: voa6.i
Client Sample ID: HS20101123-01MSD

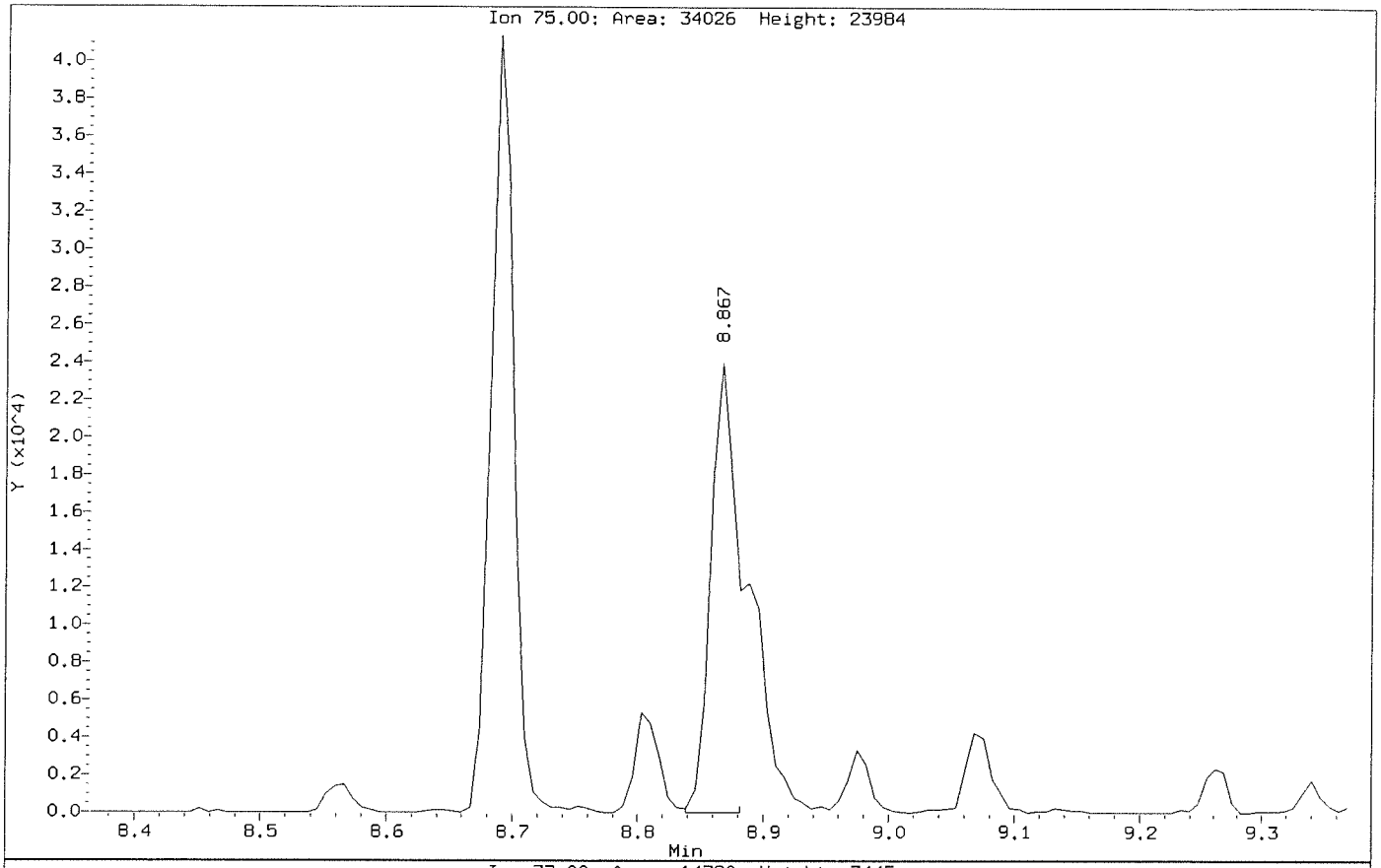
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

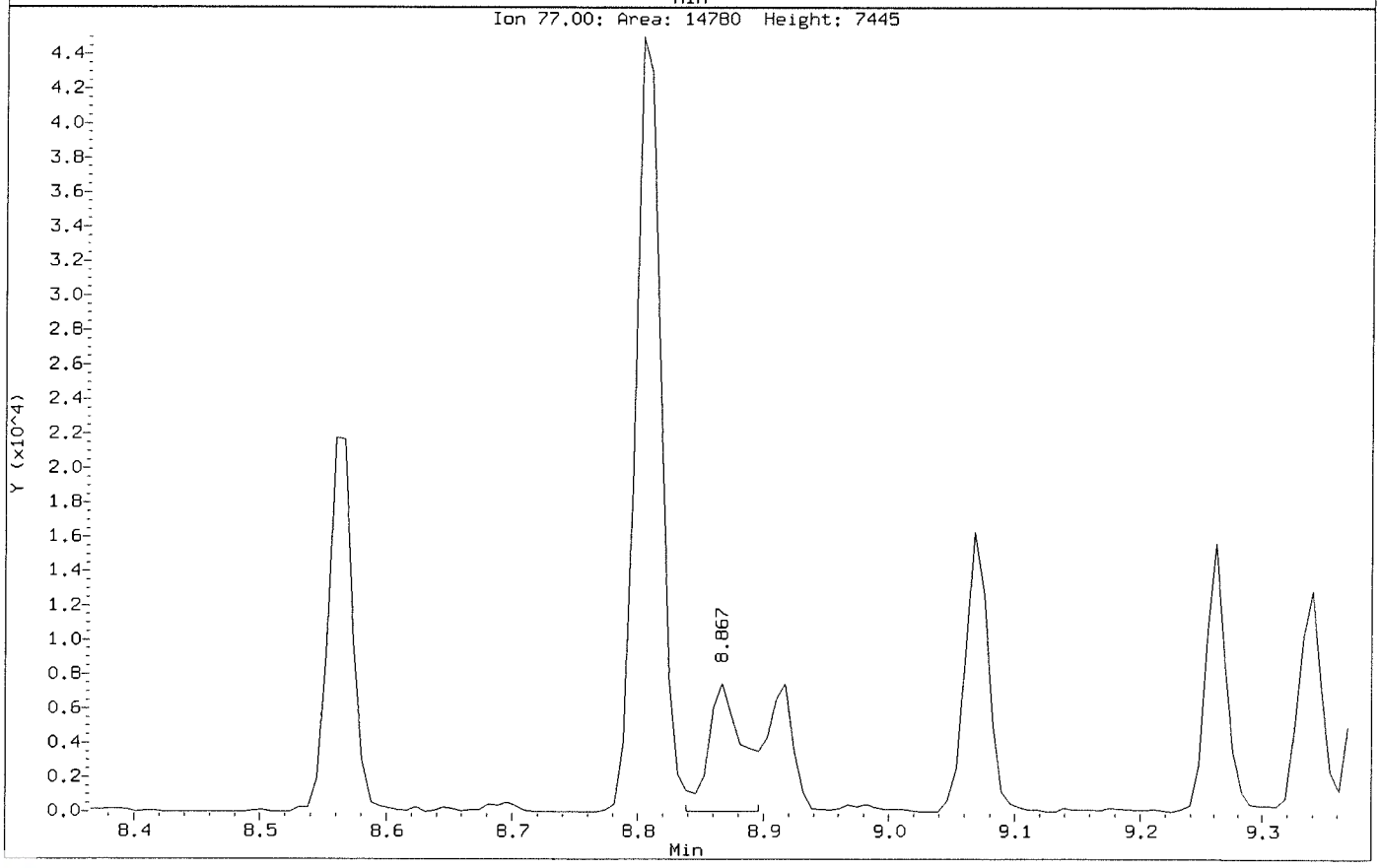




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Injection Date: 03-NOV-2020 20:25
Instrument: voa6.i
Client Sample ID: HS20101123-01MSD

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





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110330.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 03-NOV-2020 22:10
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 13:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 15:30 Cal File: X110311.D
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

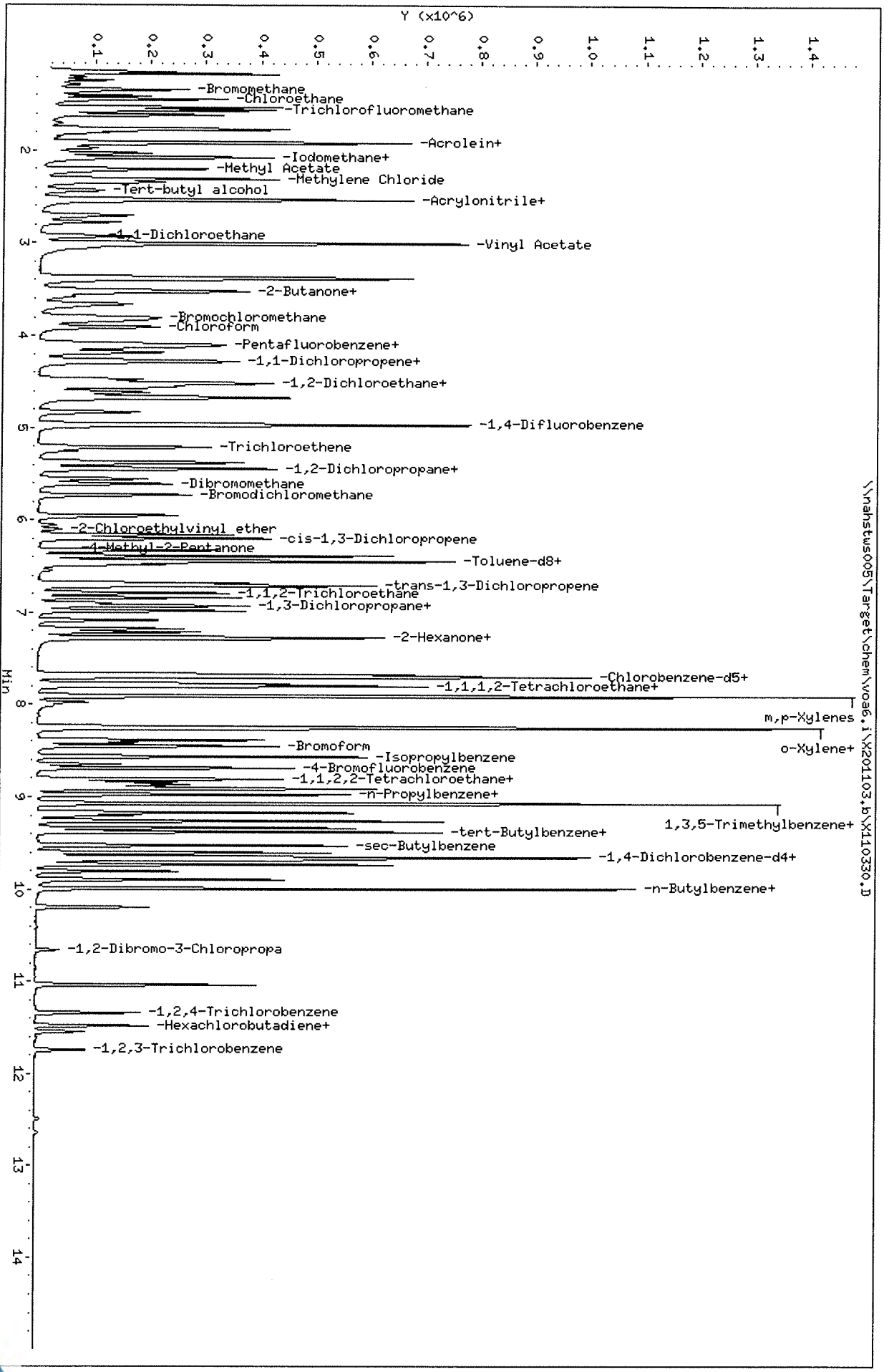
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	152848	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	283383	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	258464	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	123794	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	100333	50.0000	48.74
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	129283	50.0000	53.19
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	335007	50.0000	48.52
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	112090	50.0000	48.88
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	83054	50.0000	45.04
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	143551	50.0000	44.97
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	96612	50.0000	47.25
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	75368	50.0000	47.27
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	161507	50.0000	43.95
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	126947	50.0000	44.02
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	114910	50.0000	43.48
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	21701	50.0000	41.21
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	82970	50.0000	47.73(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	39936	50.0000	40.51
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	286990	50.0000	41.44
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	5597	50.0000	40.66
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	90652	50.0000	46.77
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	145226	50.0000	42.50

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110330.D Page 2
Report Date: 07-Nov-2020 13:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	144132	50.0000	47.16
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	95991	50.0000	45.77
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	287619	50.0000	40.72
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	145770	50.0000	40.17
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	149308	50.0000	47.14
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	151806	50.0000	40.18
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	138721	50.0000	43.86
24	2-Butanone	43	3.580	3.580	(0.856)	62560	100.000	88.04
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	230375	50.0000	39.62
52	2-Hexanone	43	7.212	7.212	(0.940)	162832	100.000	93.46
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	304676	50.0000	41.48
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	274485	50.0000	41.05
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	185761	100.000	94.60
10	Acetone	43	1.976	1.976	(0.473)	74358	100.000	87.42
37	Benzene	78	4.519	4.519	(0.909)	357618	50.0000	45.17
74	Bromobenzene	156	8.809	8.809	(0.912)	93142	50.0000	42.75
29	Bromochloromethane	128	3.803	3.803	(0.909)	49701	50.0000	47.21
39	Bromodichloromethane	83	5.729	5.729	(1.153)	137834	50.0000	47.34
66	Bromoform	173	8.416	8.416	(1.097)	53906	50.0000	42.55
6	Bromomethane	94	1.338	1.338	(0.320)	93027	50.0000	32.70
19	Carbon Disulfide	76	2.069	2.069	(0.495)	467301	100.000	87.20
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	112069	50.0000	44.16
59	Chlorobenzene	112	7.699	7.699	(1.004)	233156	50.0000	42.21
7	Chloroethane	64	1.403	1.403	(0.336)	134342	50.0000	55.78
28	Chloroform	83	3.910	3.910	(0.935)	175762	50.0000	44.93
3	Chloromethane	50	1.081	1.081	(0.258)	83915	50.0000	38.96
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	101705	50.0000	45.37
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	151476	50.0000	47.91
55	Dibromochloromethane	129	7.176	7.176	(0.936)	94842	50.0000	49.65
44	Dibromomethane	93	5.557	5.557	(1.118)	68723	50.0000	47.97
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	85768	50.0000	43.33
61	Ethylbenzene	106	7.799	7.799	(1.017)	116955	50.0000	41.73
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	23032	50.0000	35.35
67	Isopropylbenzene	105	8.566	8.566	(1.117)	317847	50.0000	37.80
62	m,p-Xylenes	106	7.907	7.907	(1.031)	307106	100.000	91.49
17	Methylene Chloride	84	2.305	2.305	(0.551)	90392	50.0000	43.07
87	n-Butylbenzene	91	9.999	9.999	(1.035)	261992	50.0000	35.93
73	n-Propylbenzene	91	8.917	8.917	(0.923)	390794	50.0000	39.65
92	Naphthalene	128	11.546	11.546	(1.195)	56602	50.0000	40.17
63	o-Xylene	106	8.244	8.244	(1.075)	147988	50.0000	44.24
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	300313	50.0000	36.15
64	Styrene	104	8.258	8.258	(1.077)	268667	50.0000	47.90
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	205566	50.0000	37.13
56	Tetrachloroethene	164	6.933	6.933	(0.904)	60611	50.0000	42.59
50	Toluene	91	6.446	6.446	(0.840)	380521	50.0000	40.22
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	84372	50.0000	44.30
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	140163	50.0000	50.25
38	Trichloroethene	130	5.214	5.214	(1.049)	87191	50.0000	46.17
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	240183	50.0000	41.69
5	Vinyl Chloride	62	1.145	1.145	(0.274)	149184	50.0000	44.17

QC Flag Legend

M - Compound response manually integrated.

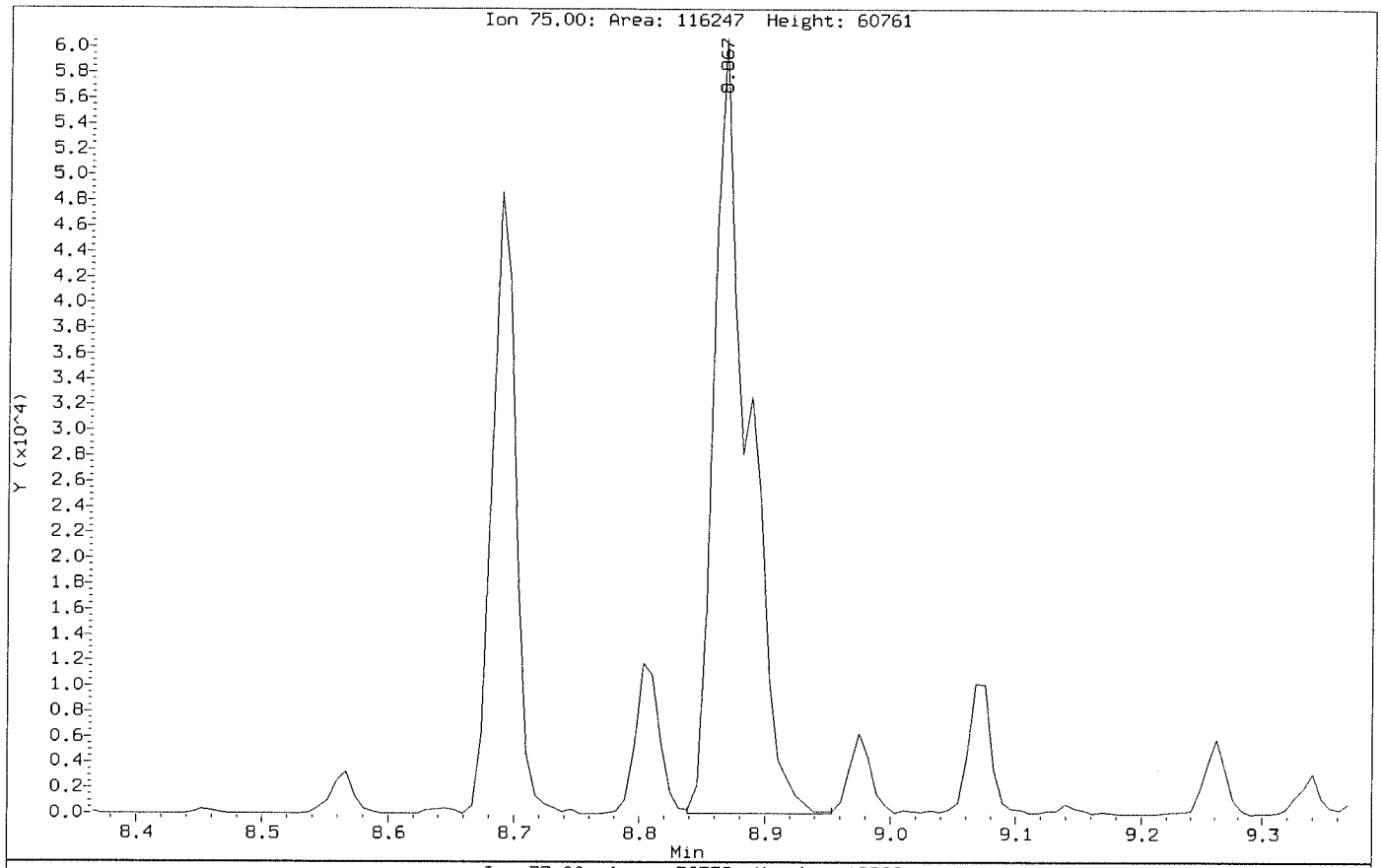


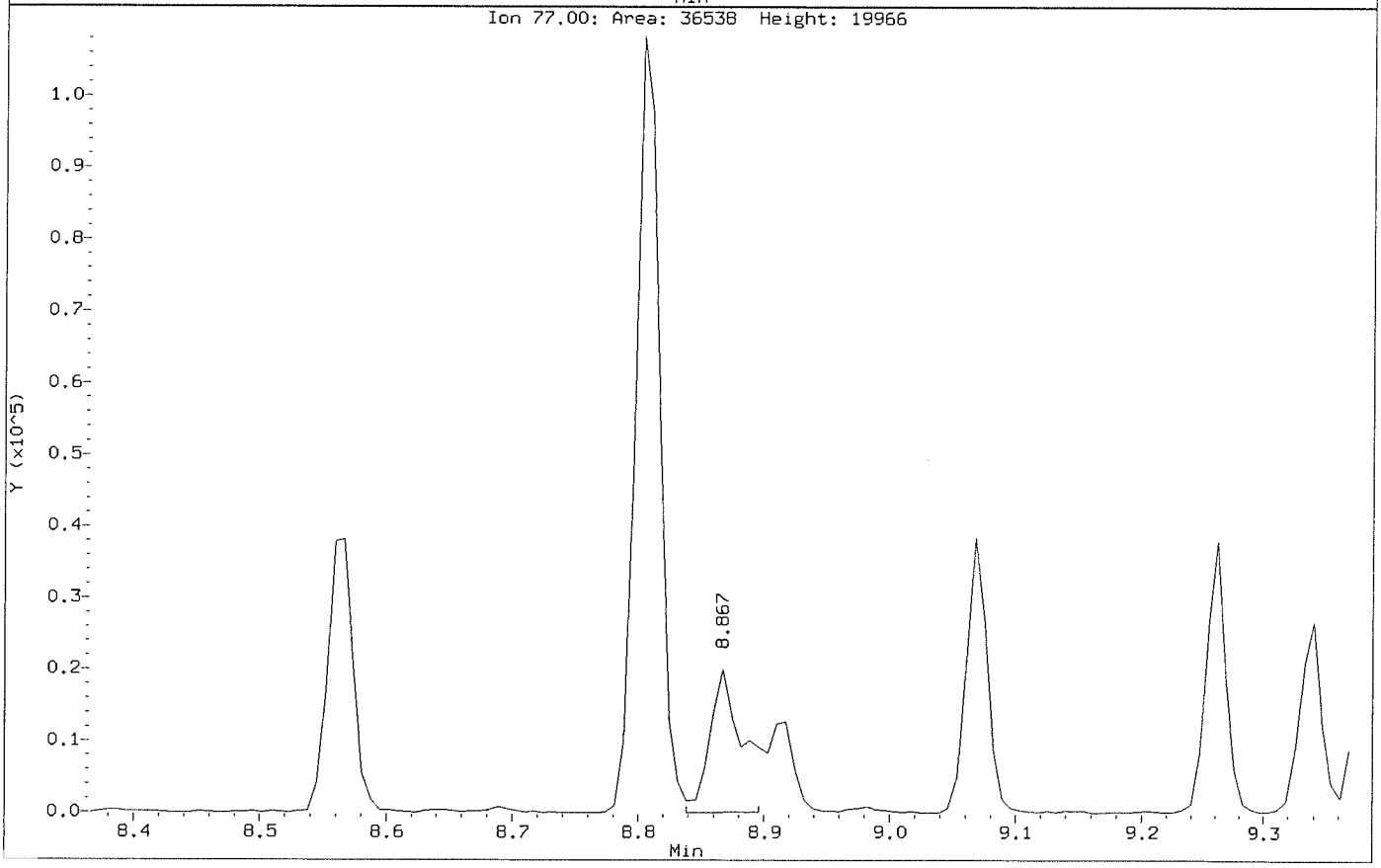
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Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110330.D
Injection Date: 03-NOV-2020 22:10
Instrument: voa6.i
Client Sample ID: CCV-END

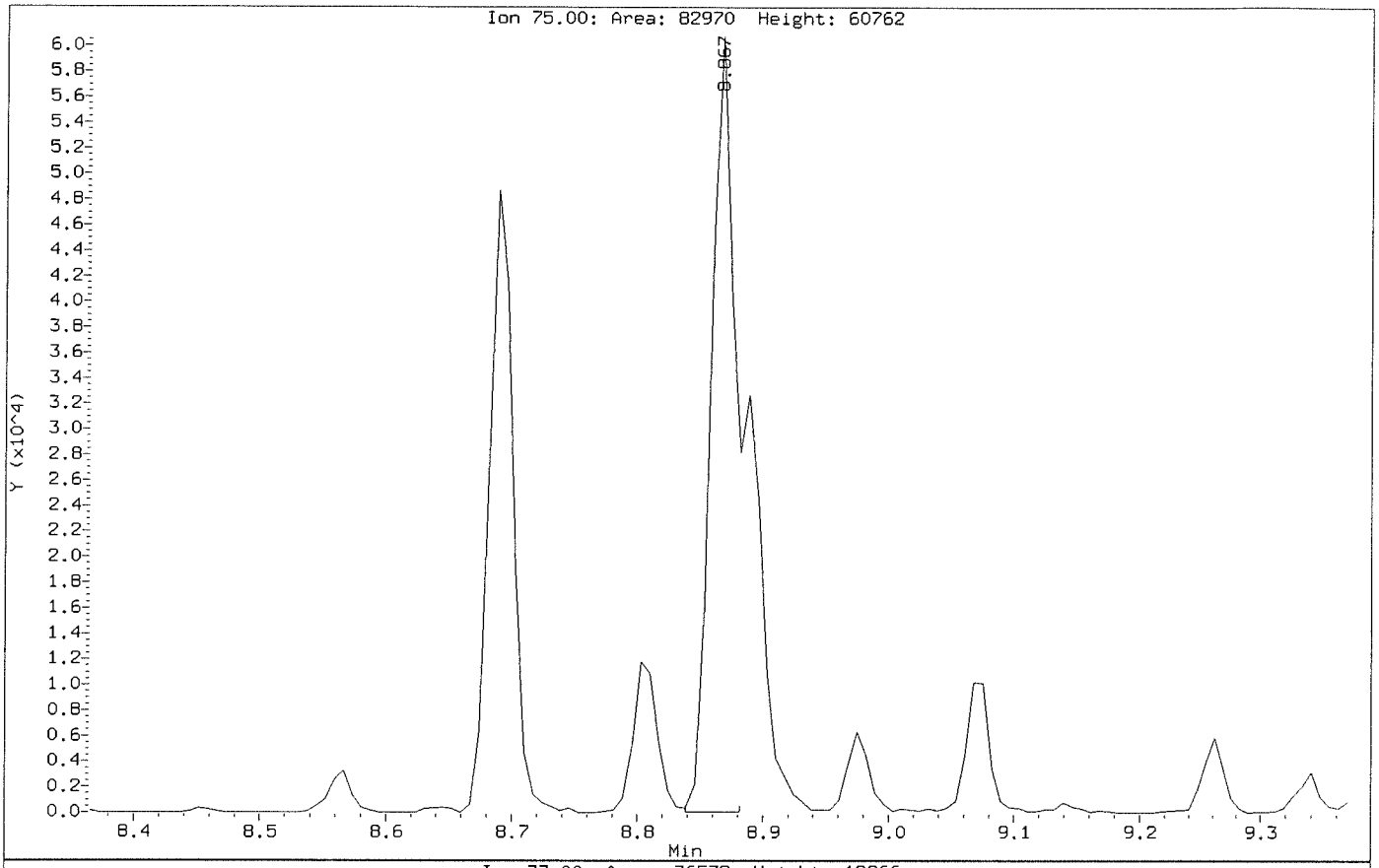
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

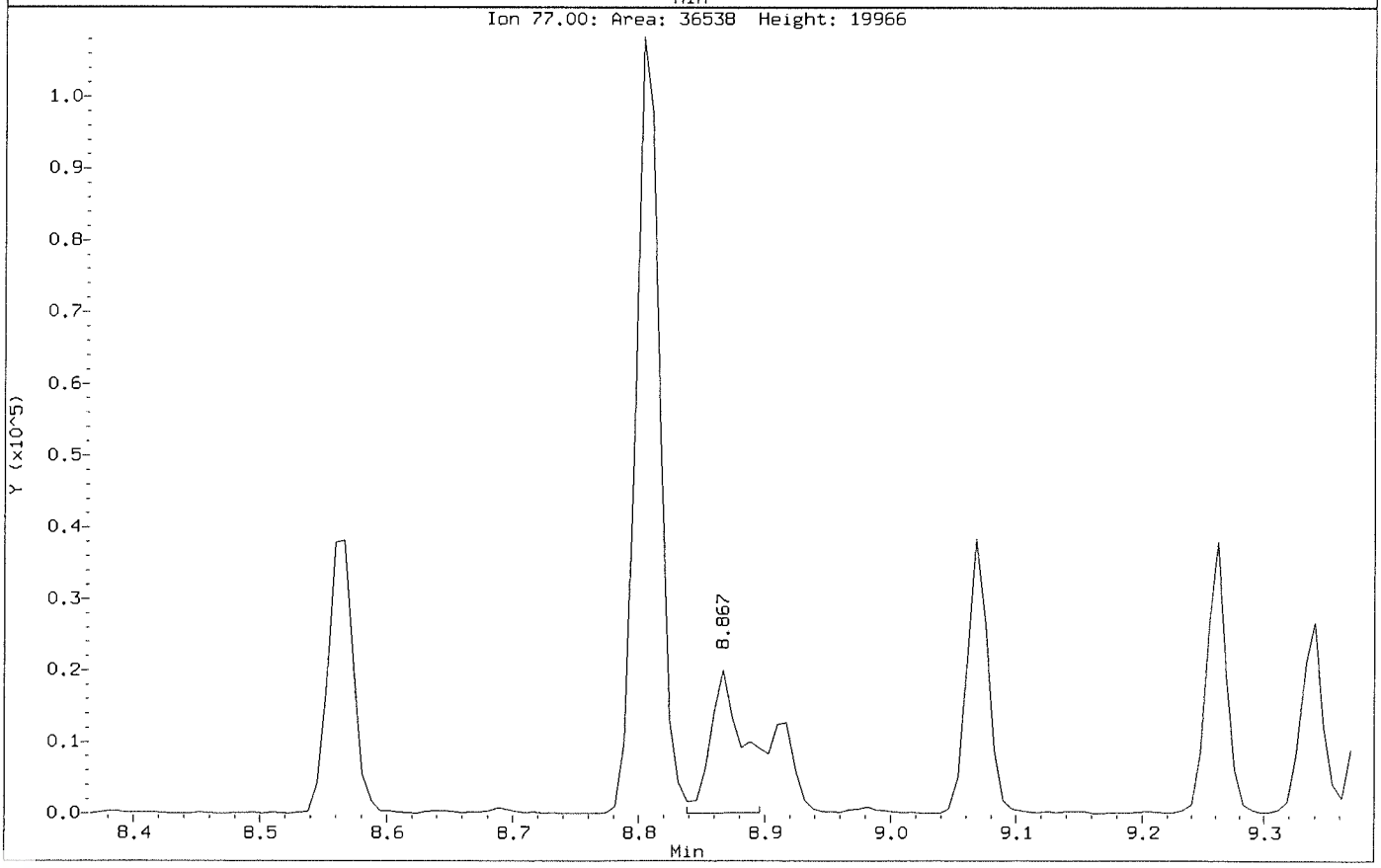




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Injection Date: 03-NOV-2020 22:10
Instrument: voa6.i
Client Sample ID: CCV-END

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





HS20101149 Wet Chem Raw Data (9056_anions_W)

ALS WO# HS20101149

Sequence: 102820
Last Update Operator: alshs.nouser

CD	Name	Type	Position	Dilution	Level	Instrument Method	Processing Method	me	Status	Inject Time
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	STD2	Calibration	BD2	1.00	2	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 11:04:45 AM
	STD3	Calibration	BD3	1.00	3	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 11:22:45 AM
	STD4	Calibration	BD4	1.00	4	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 11:40:48 AM
	STD5	Calibration	BD5	1.00	5	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 11:58:48 AM
	STD6	Calibration	BD6	1.00	6	Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 12:16:48 PM
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	ICB	Unknown	BD8	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	8/11/2020 12:52:50 PM
	CCV	Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	10/28/2020 10:15:08 AM
	CCB	Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	10/28/2020 10:33:09 AM
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	HS20100780-04MSDF10	Unknown	GA4	10.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	10/29/2020 7:15:53 AM
	HS20100780-04MSDDF10	Unknown	GA5	10.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	10/29/2020 7:33:54 AM
	HS20101149-01DF20	Unknown	GB3	20.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	10/29/2020 8:09:56 AM
	CCV	Unknown	BA2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	10/29/2020 8:27:57 AM
	CCB	Unknown	BA3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	10/29/2020 8:45:57 AM
	HS20101149-01	Unknown	GB2	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	10/29/2020 9:03:59 AM
	CCV1	Unknown	BB7	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	10/29/2020 10:52:09 AM
	CCB	Unknown	BA5	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished	10/29/2020 11:10:09 AM

Sequence: 102820
Last Update Operator: alshs.nouser

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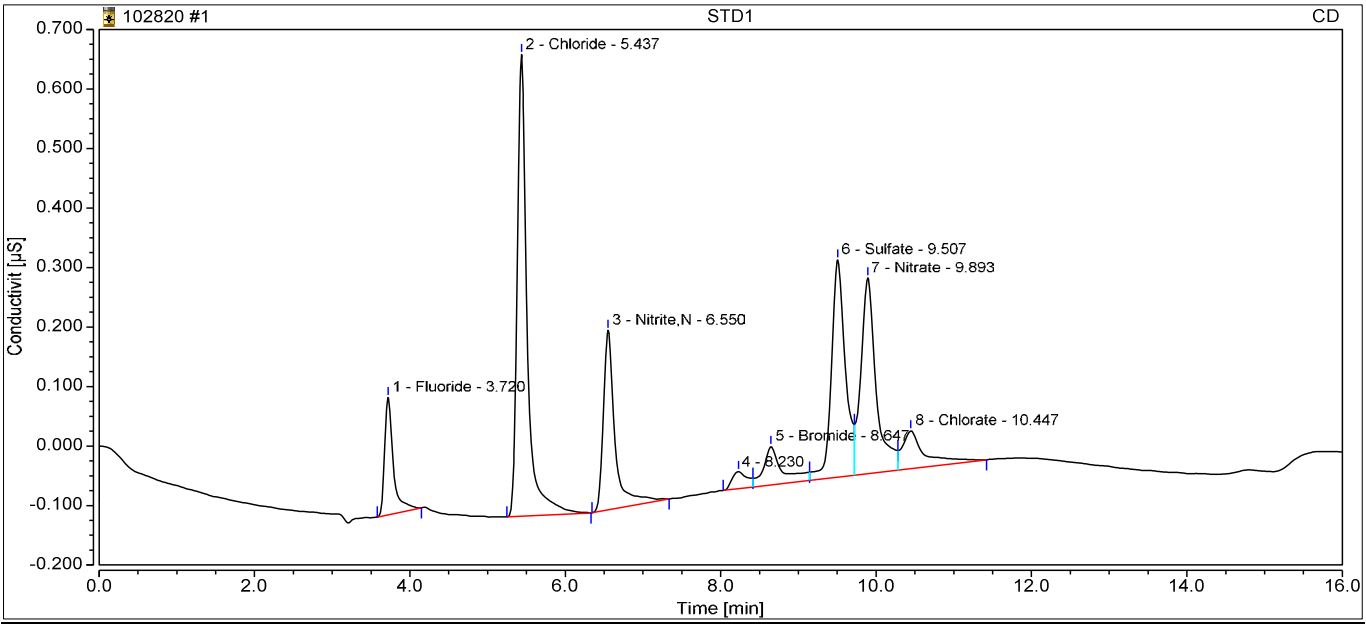
Sequence: 102820
Injection #6: STD6

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*	*17.3553*	*0.99849*	*-0.0040*	*0.3537*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	5.4804	0.99983	0.0129	0.2289	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	6	26.1376	0.99573	0.0186	0.4711	0.0000
5	Bromide	Lin, WithOffset, 1/	Area	6	0.9346	0.99999	0.0083	0.1008	0.0000
6	Sulfate	Lin, WithOffset, 1/	Area	6	5.2843	0.99985	-0.0019	0.1602	0.0000
7	Nitrate	Lin, WithOffset, 1/	Area	6	4.5248	0.99988	0.0144	0.6154	0.0000
8	Chlorate	Lin, WithOffset, 1/	Area	6	13.4374	0.99837	0.0139	0.1019	0.0000
10	Phosphate	Lin, WithOffset, 1/	Area	5	18.5357	0.99714	-0.0737	0.1942	0.0000
Maximum					**26.1376**	0.99999			
Minimum					0.9346	**0.99573**			

1 STD1			
Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**BD1**	*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:	**08/11/2020 10:46**	*Sample Weight:*	**1.0000**

Run Time:

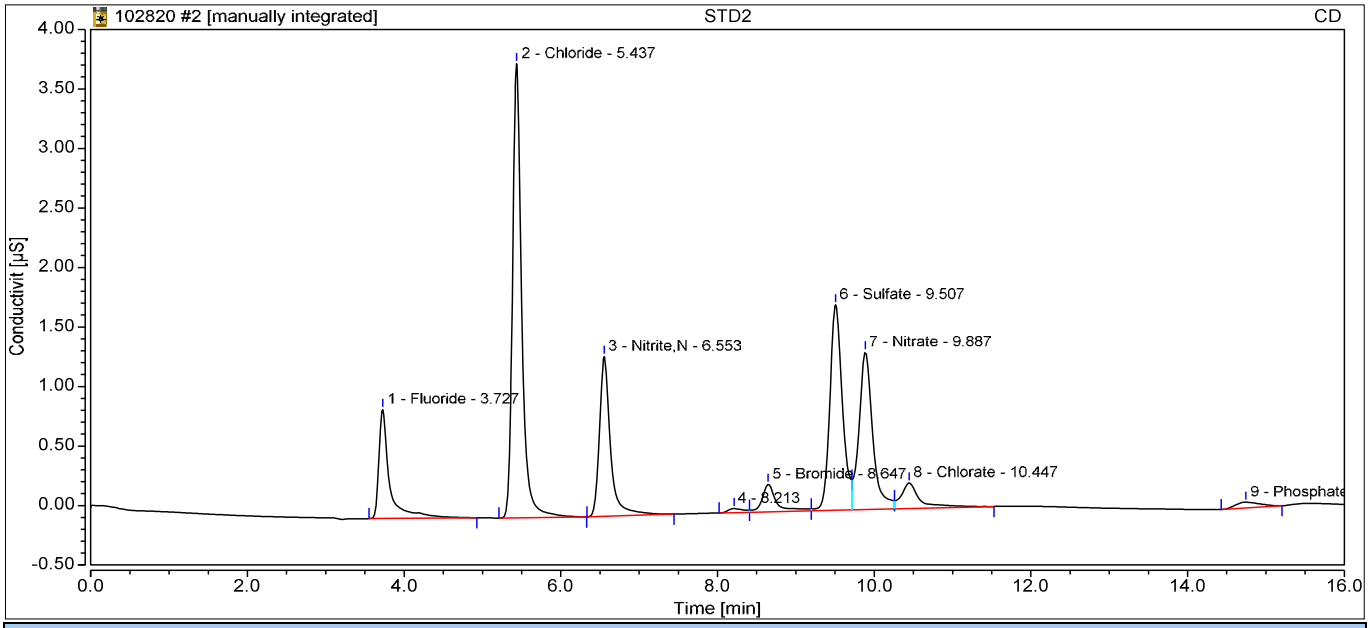


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.025	0.0833	0.0833	1.0000
2	5.44	Chloride	BMB	0.116	0.4487	0.4487	1.0000
3	6.55	Nitrite,N	BMB	0.052	0.0715	0.0715	1.0000
5	8.65	Bromide	M	0.018	0.0997	0.0997	1.0000
6	9.51	Sulfate	M	0.076	0.4861	0.4861	1.0000
7	9.89	Nitrate	M	0.075	0.0985	0.0985	1.0000
8	10.45	Chlorate	MB	0.021	0.0734	0.0734	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.384**		**1.36**	

2 STD2			
Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**BD2**	*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:	**08/11/2020 11:04**	*Sample Weight:*	**1.0000**

Run Time:

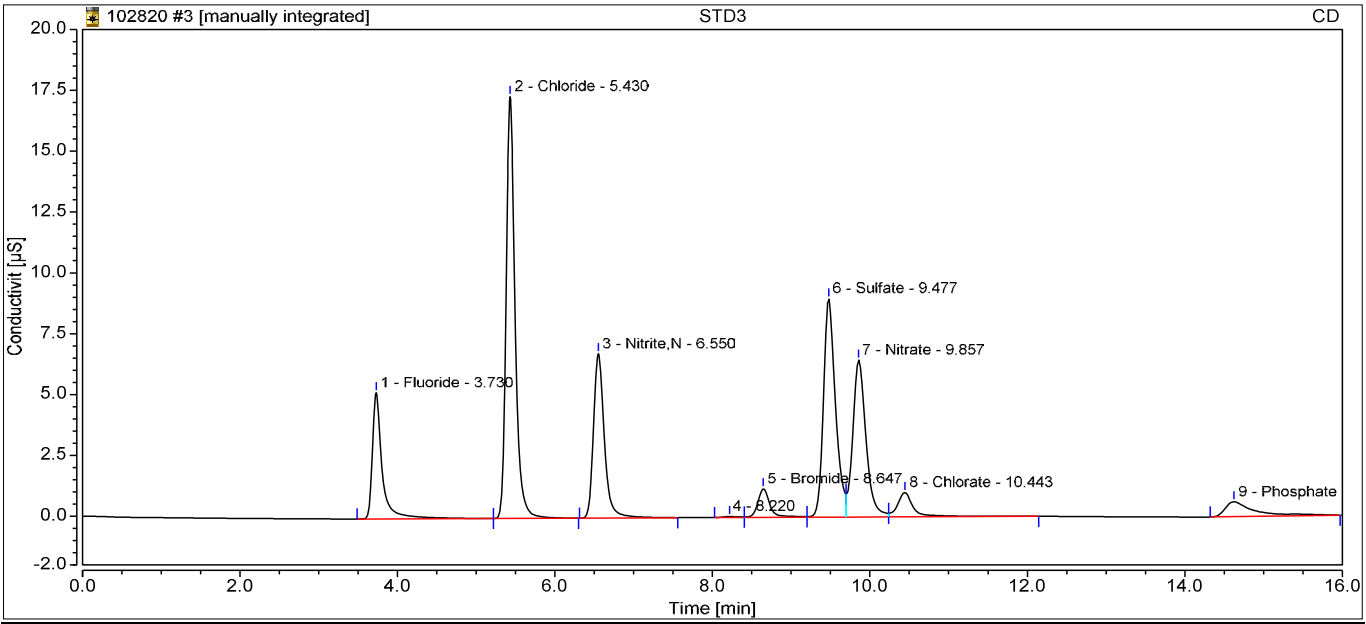


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.145	0.4204	0.4204	1.0000
2	5.44	Chloride	BMB	0.518	2.2084	2.2084	1.0000
3	6.55	Nitrite,N	BMB	0.221	0.4294	0.4294	1.0000
5	8.65	Bromide	M	0.049	0.4041	0.4041	1.0000
6	9.51	Sulfate	M	0.321	2.0151	2.0151	1.0000
7	9.89	Nitrate	M	0.270	0.4147	0.4147	1.0000
8	10.45	Chlorate	MB	0.060	0.4536	0.4536	1.0000
9	14.74	Phosphate	BMB	0.018	0.4703	0.4703	1.0000
Total:			**0.000**	**1.601**		**6.82**	

3 STD3			
Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**BD3**	*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:	**08/11/2020 11:22**	*Sample Weight:*	**1.0000**

Run Time:



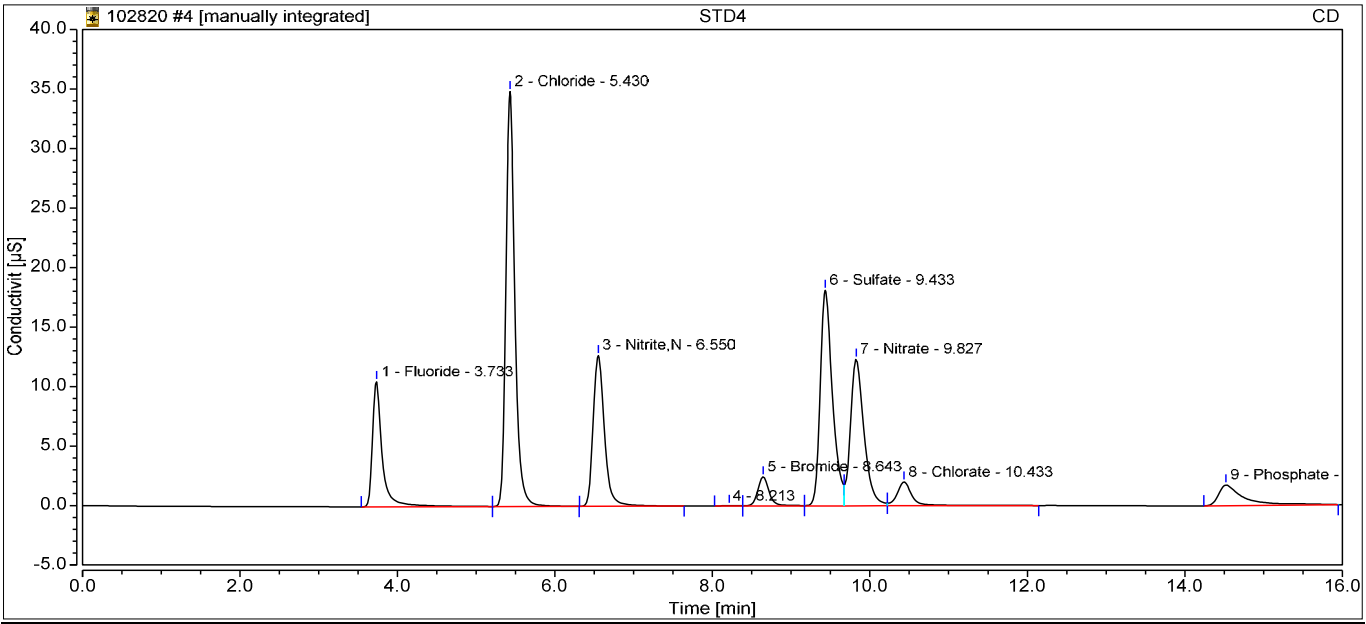
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.745	2.1166	2.1166	1.0000
2	5.43	Chloride	BMB	2.291	9.9533	9.9533	1.0000
3	6.55	Nitrite,N	BMB	1.077	2.2460	2.2460	1.0000
5	8.65	Bromide	M	0.209	1.9882	1.9882	1.0000
6	9.48	Sulfate	M	1.595	9.9688	9.9688	1.0000
7	9.86	Nitrate	M	1.238	1.9883	1.9883	1.0000
8	10.44	Chlorate	MB	0.239	2.2038	2.2038	1.0000
9	14.62	Phosphate	BM *	0.269	1.7634	1.7634	1.0000
Total:			**0.000**	**7.661**		**32.23**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**BD4**	*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:	**08/11/2020 11:40**	*Sample Weight:*	**1.0000**

Run Time:



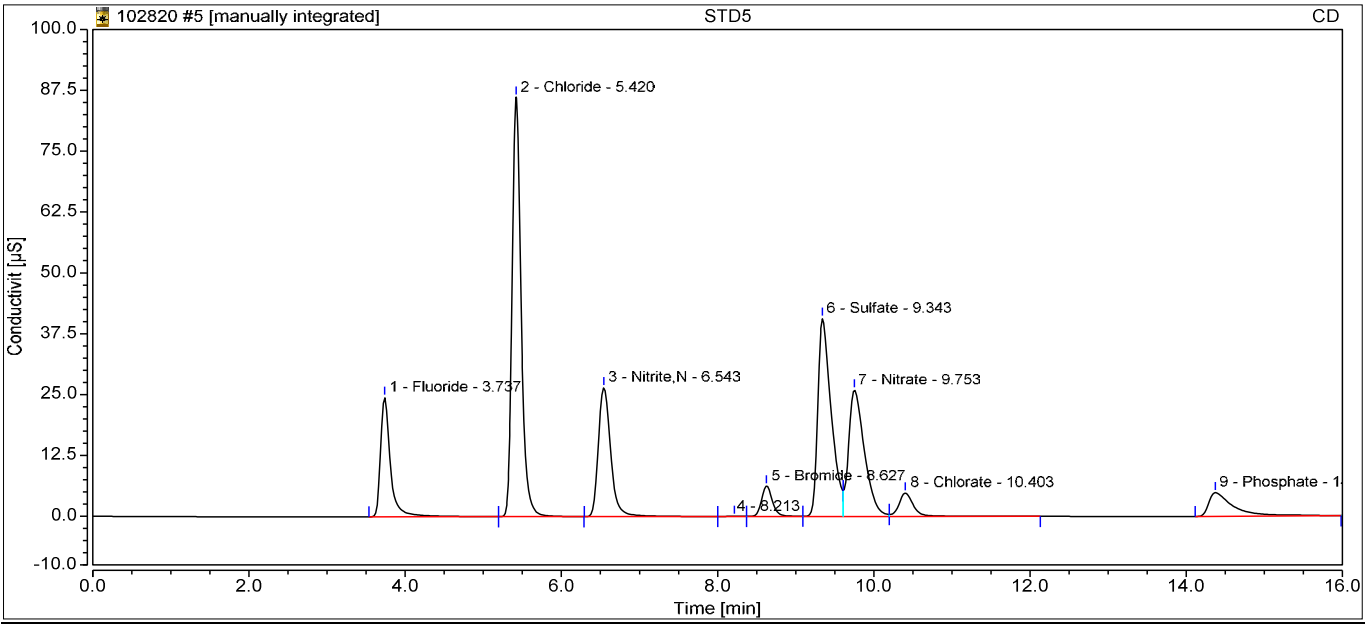
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	1.504	4.2630	4.2630	1.0000
2	5.43	Chloride	BMB	4.613	20.0986	20.0986	1.0000
3	6.55	Nitrite,N	BMB*	2.104	4.4276	4.4276	1.0000
5	8.64	Bromide	M	0.411	3.9946	3.9946	1.0000
6	9.43	Sulfate	M	3.273	20.4465	20.4465	1.0000
7	9.83	Nitrate	M	2.444	3.9482	3.9482	1.0000
8	10.43	Chlorate	MB	0.443	4.2079	4.2079	1.0000
9	14.52	Phosphate	BM *	0.648	3.7157	3.7157	1.0000
Total:			**0.000**	**15.439**		**65.10**	

5 STD5

Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**BD5**	*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:	**08/11/2020 11:58**	*Sample Weight:*	**1.0000**

Run Time:



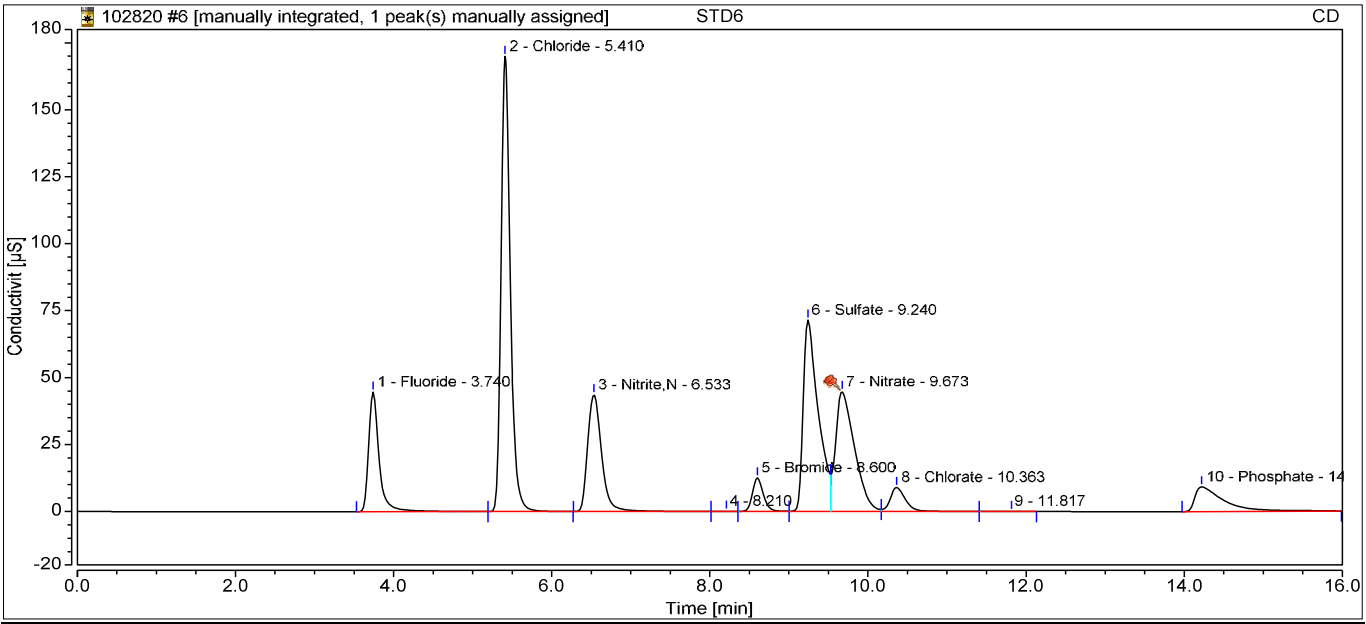
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.611	10.2228	10.2228	1.0000
2	5.42	Chloride	BMB	11.462	50.0272	50.0272	1.0000
3	6.54	Nitrite,N	BMB	4.877	10.3135	10.3135	1.0000
5	8.63	Bromide	M	1.014	9.9796	9.9796	1.0000
6	9.34	Sulfate	M	8.089	50.5200	50.5200	1.0000
7	9.75	Nitrate	M	6.097	9.8832	9.8832	1.0000
8	10.40	Chlorate	MB	1.032	9.9918	9.9918	1.0000
9	14.37	Phosphate	BM *	1.834	9.8223	9.8223	1.0000
Total:			**0.000**	**38.017**		**160.76**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**BD6**	*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:	**08/11/2020 12:16**	*Sample Weight:*	**1.0000**

Run Time:



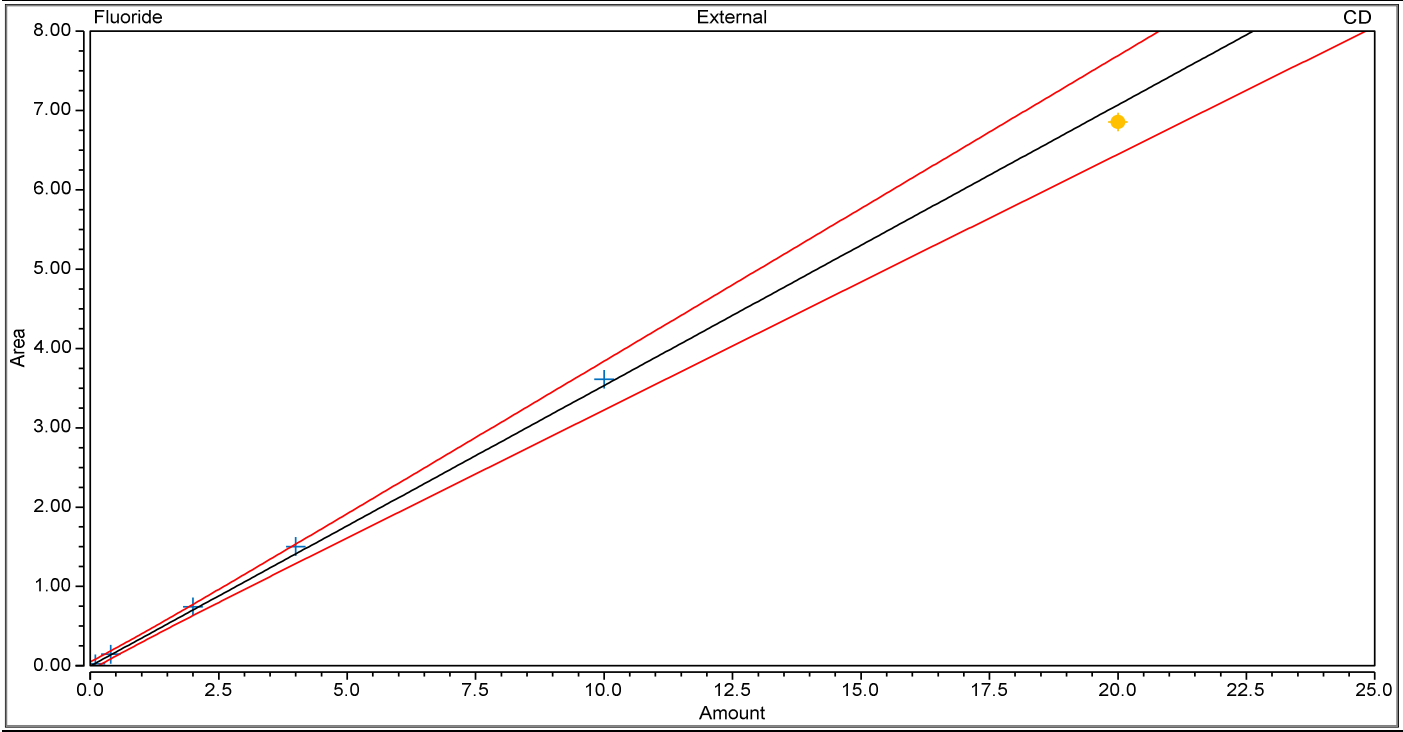
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	6.855	19.3940	19.3940	1.0000
2	5.41	Chloride	BMB	22.844	99.7639	99.7639	1.0000
3	6.53	Nitrite,N	BMB	8.975	19.0121	19.0121	1.0000
5	8.60	Bromide	M	2.028	20.0338	20.0338	1.0000
6	9.24	Sulfate	M	15.864	99.0635	99.0635	1.0000
7	9.67	Nitrate	M ^	12.426	20.1671	20.1671	1.0000
8	10.36	Chlorate	M	2.009	19.5694	19.5694	1.0000
10	14.22	Phosphate	BM *	3.933	20.6283	20.6283	1.0000
Total:			**0.000**	**74.933**		**317.63**	

Calibration

Calibration Details	Fluoride		
Calibration Type	Lin, WithOffset, 1/A	*Offset (C0)*	-0.0040
Evaluation Type	Area	*Slope (C1)*	0.3537
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9985

Calibration Plot **Fluoride**

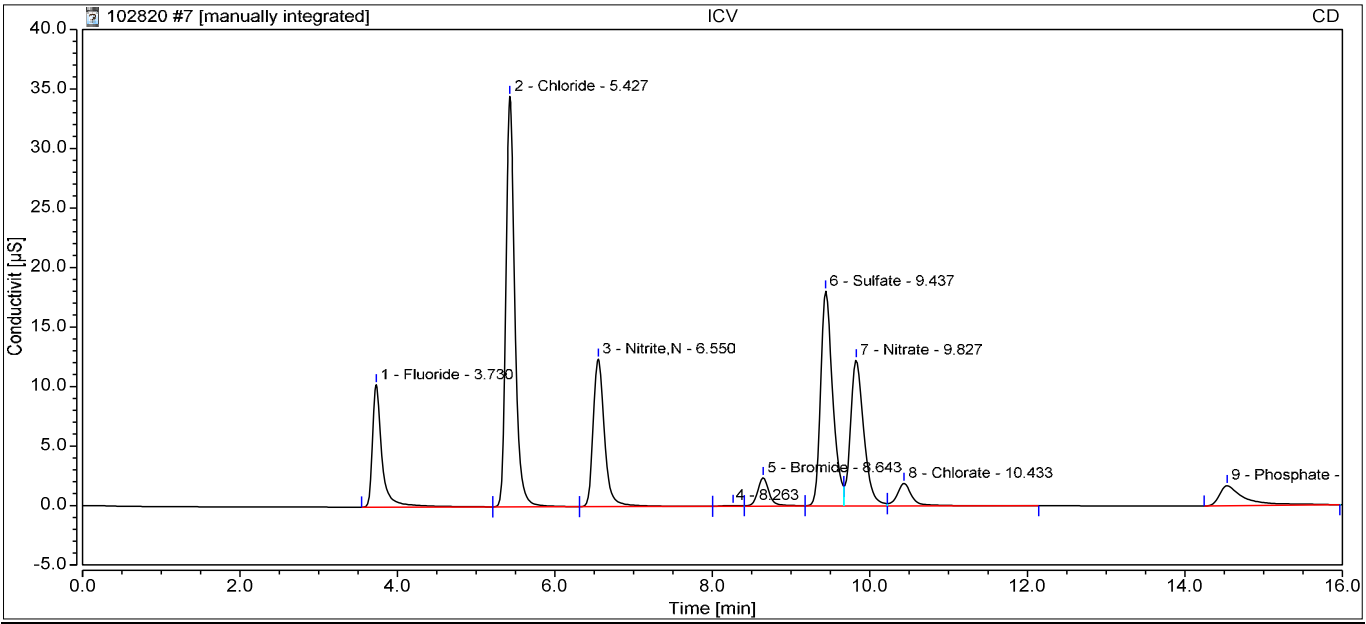


Calibration Results **Fluoride**

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	0.0254	0.0254	0.025	0.197
2	STD2	2	0.4000	0.1446	0.1446	0.145	0.916
3	STD3	3	2.0000	0.7445	0.7445	0.745	5.182
4	STD4	4	4.0000	1.5036	1.5036	1.504	10.507
5	STD5	5	10.0000	3.6113	3.6113	3.611	24.538
6	STD6	6	20.0000	6.8547	6.8547	6.855	44.677

7 ICV			
Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**BD7**	*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:	**08/11/2020 12:34**	*Sample Weight:*	**1.0000**

Run Time:



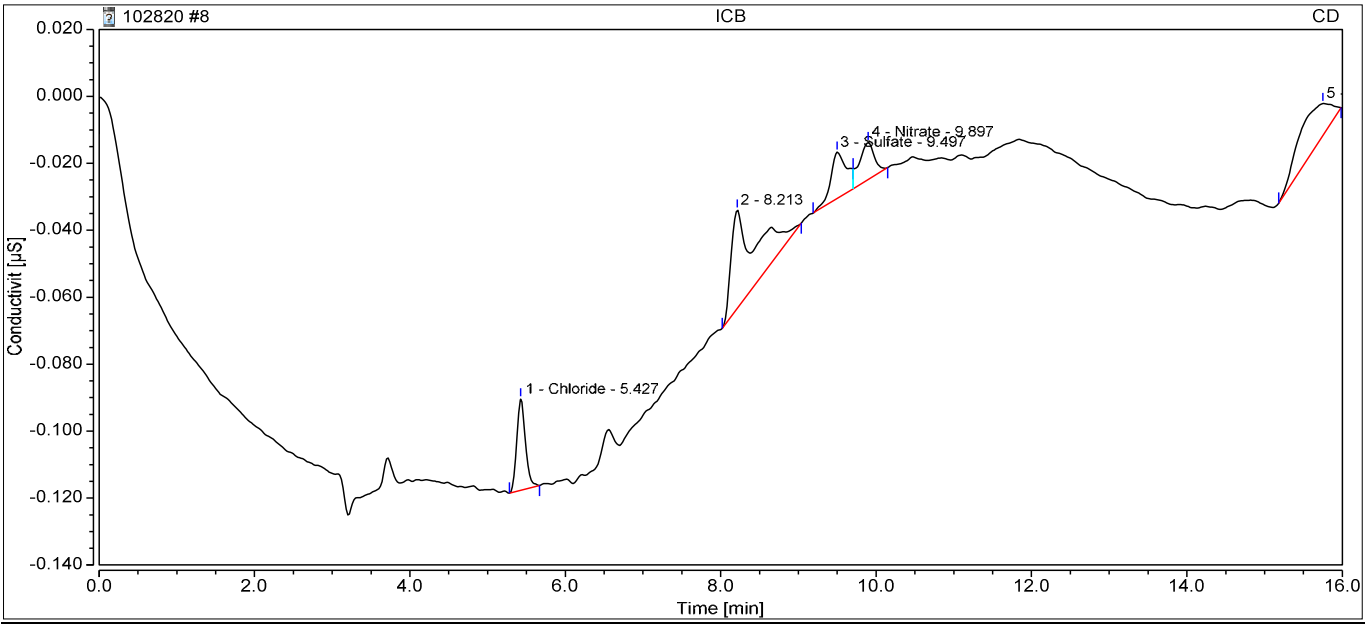
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	1.447	4.1020	4.1020	1.0000
2	5.43	Chloride	BMB	4.553	19.8399	19.8399	1.0000
3	6.55	Nitrite,N	BMB	2.061	4.3359	4.3359	1.0000
5	8.64	Bromide	M	0.413	4.0106	4.0106	1.0000
6	9.44	Sulfate	M	3.227	20.1622	20.1622	1.0000
7	9.83	Nitrate	M	2.405	3.8850	3.8850	1.0000
8	10.43	Chlorate	MB	0.422	4.0019	4.0019	1.0000
9	14.54	Phosphate	BM *	0.631	3.6292	3.6292	1.0000
Total:			**0.000**	**15.159**		**63.97**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**BD8**	*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:	**08/11/2020 12:52**	*Sample Weight:*	**1.0000**

Run Time:



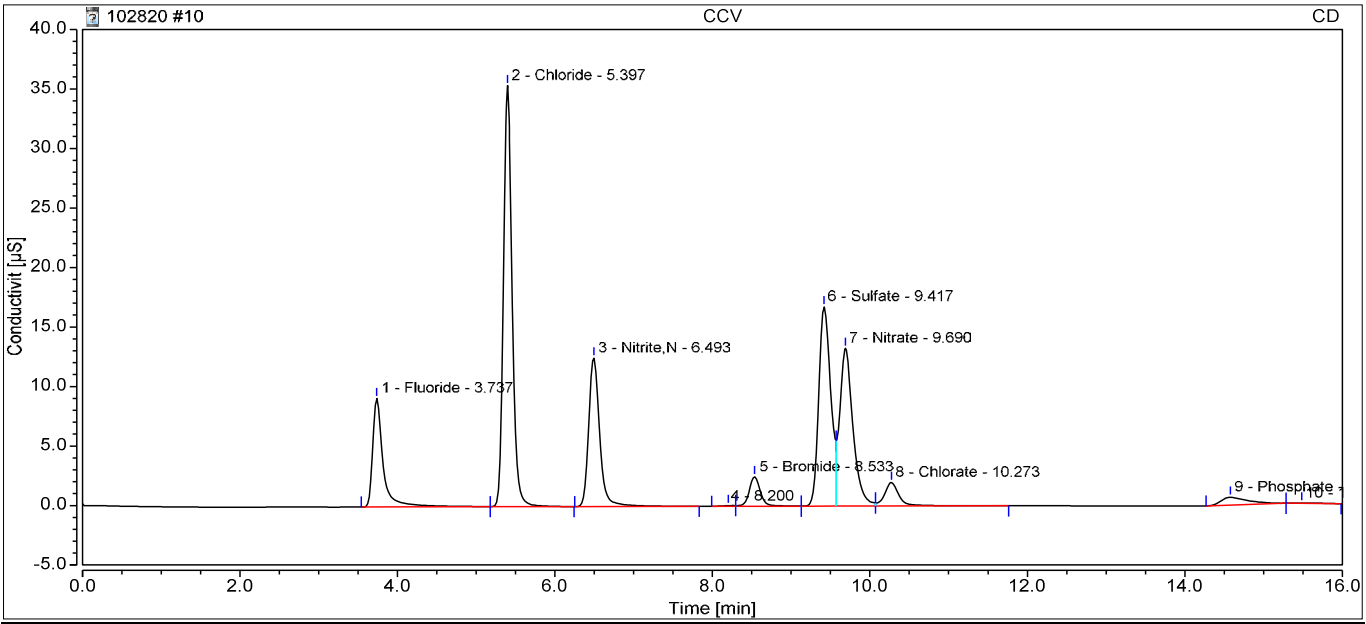
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.43	Chloride	BMB	0.004	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
3	9.50	Sulfate	BM	0.003	0.0318	0.0318	1.0000
4	9.90	Nitrate	MB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.009**		**0.03**	

10 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/28/2020 10:15**	*Sample Weight:*	**1.0000**

Run Time:



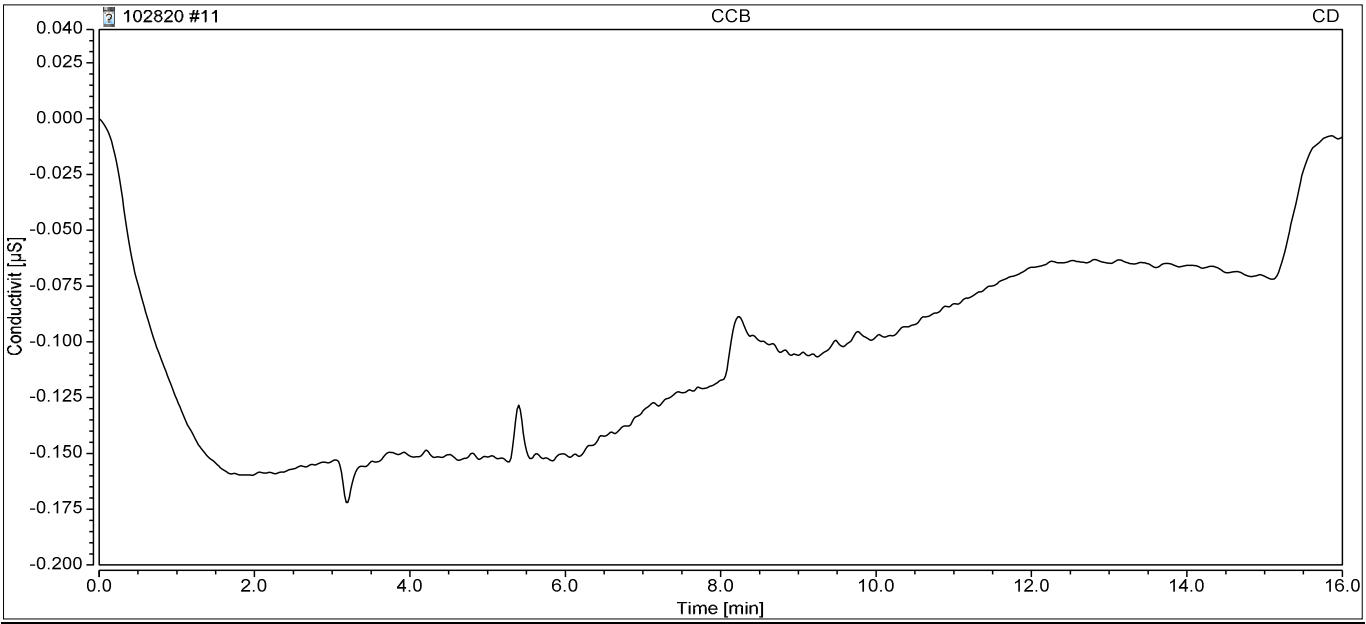
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.402	3.9747	3.9747	1.0000
2	5.40	Chloride	BMB	4.531	19.7433	19.7433	1.0000
3	6.49	Nitrite,N	BMB	2.035	4.2808	4.2808	1.0000
5	8.53	Bromide	M	0.409	3.9786	3.9786	1.0000
6	9.42	Sulfate	M	2.960	18.4947	18.4947	1.0000
7	9.69	Nitrate	M	2.590	4.1849	4.1849	1.0000
8	10.27	Chlorate	MB	0.426	4.0420	4.0420	1.0000
9	14.58	Phosphate	BMB	0.261	1.7212	1.7212	1.0000
Total:			**0.000**	**14.614**		**60.42**	

11 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:	**10/28/2020 10:33**	*Sample Weight:*	**1.0000**

Run Time:



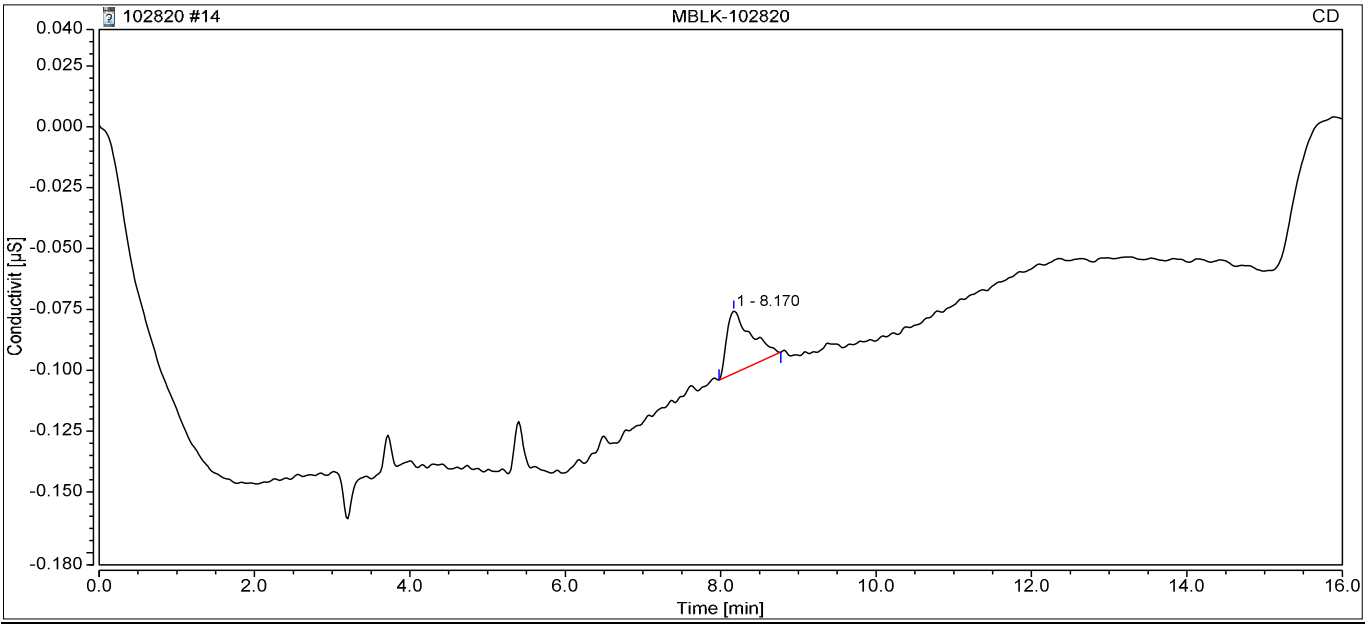
Integration Results

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**	

14 MBLK-102820

Sample Name:	**MBLK-102820**	*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:	**10/28/2020 11:27**	*Sample Weight:*	**1.0000**

Run Time:



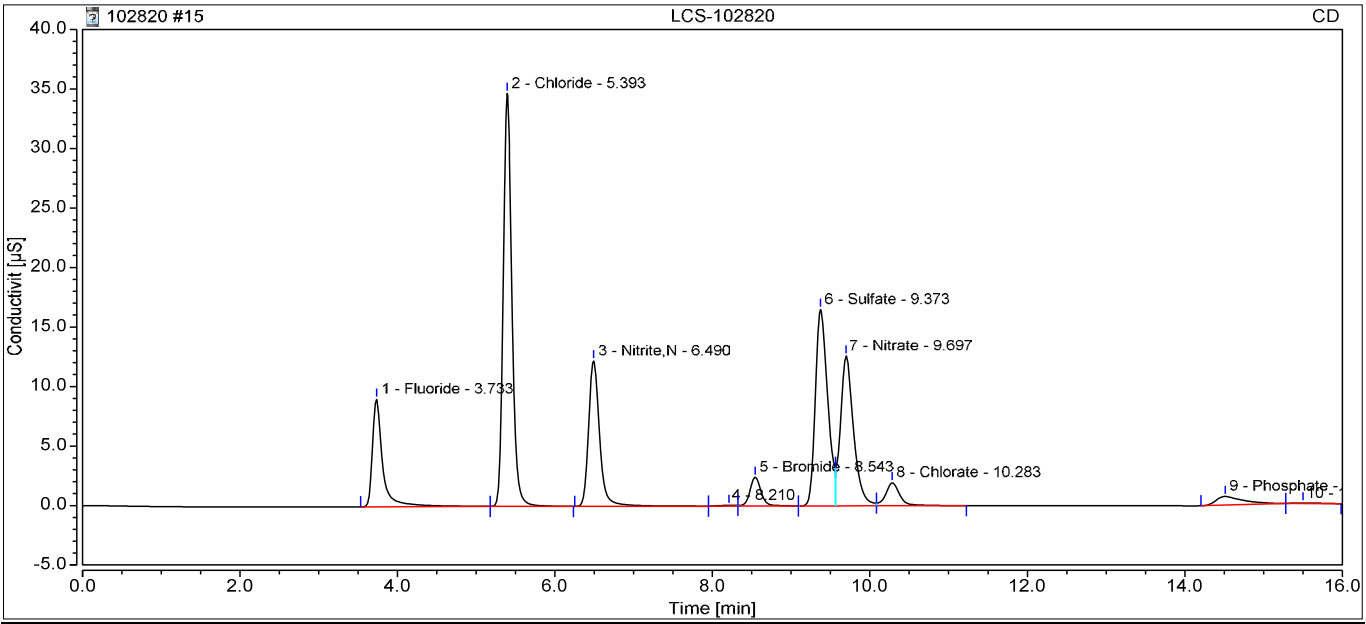
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
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**	

15 LCS-102820

Sample Name:	**LCS-102820**	*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:	**10/28/2020 11:45**	*Sample Weight:*	**1.0000**

Run Time:



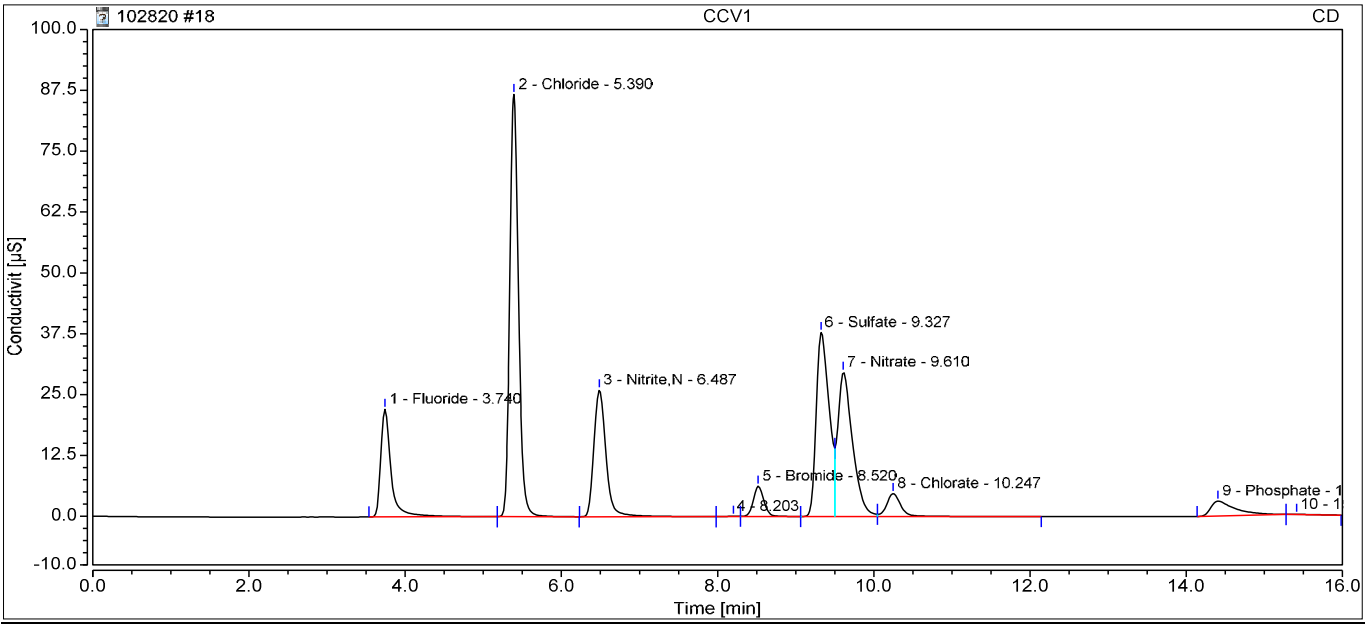
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	1.367	3.8771	3.8771	1.0000
2	5.39	Chloride	BMB	4.454	19.4053	19.4053	1.0000
3	6.49	Nitrite,N	BMB	2.003	4.2118	4.2118	1.0000
5	8.54	Bromide	M	0.397	3.8507	3.8507	1.0000
6	9.37	Sulfate	M	2.979	18.6150	18.6150	1.0000
7	9.70	Nitrate	M	2.448	3.9548	3.9548	1.0000
8	10.28	Chlorate	MB	0.402	3.8108	3.8108	1.0000
9	14.51	Phosphate	BMB	0.288	1.8607	1.8607	1.0000
Total:			**0.000**	**14.338**		**59.59**	

18 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BB8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/28/2020 12:39**	*Sample Weight:*	**1.0000**

Run Time:



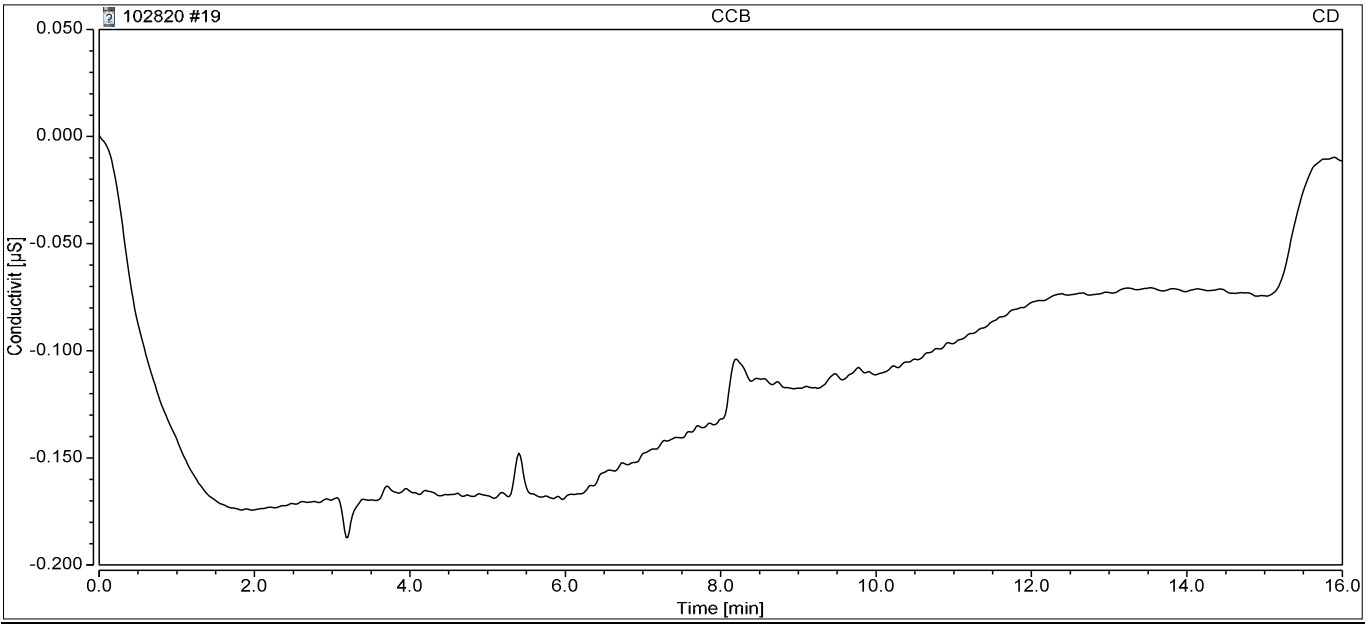
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.413	9.6634	9.6634	1.0000
2	5.39	Chloride	BMB	11.162	48.7181	48.7181	1.0000
3	6.49	Nitrite,N	BMB	4.692	9.9204	9.9204	1.0000
5	8.52	Bromide	M	0.992	9.7525	9.7525	1.0000
6	9.33	Sulfate	M	7.216	45.0702	45.0702	1.0000
7	9.61	Nitrate	M	6.526	10.5801	10.5801	1.0000
8	10.25	Chlorate	MB	1.007	9.7462	9.7462	1.0000
9	14.41	Phosphate	BMB	1.128	6.1860	6.1860	1.0000
Total:			**0.000**	**36.136**		**149.64**	

19 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:	**10/28/2020 12:57**	*Sample Weight:*	**1.0000**

Run Time:



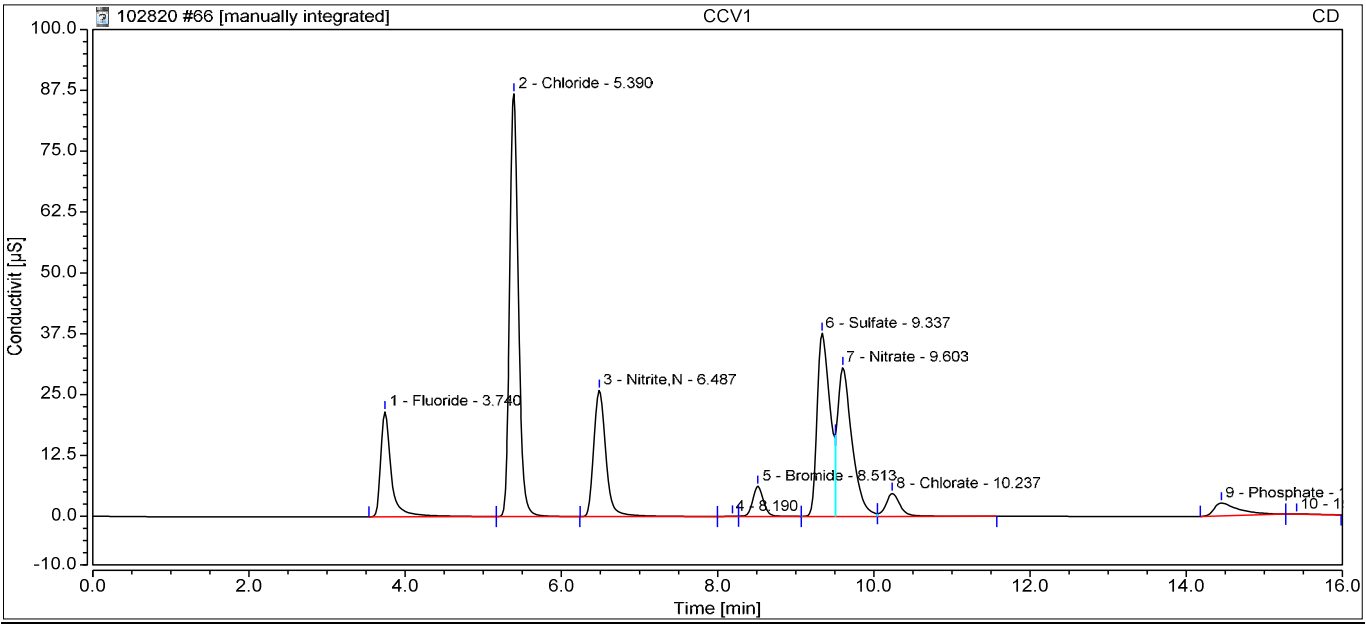
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
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**	

66 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BB8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2020 04:51**	*Sample Weight:*	**1.0000**

Run Time:



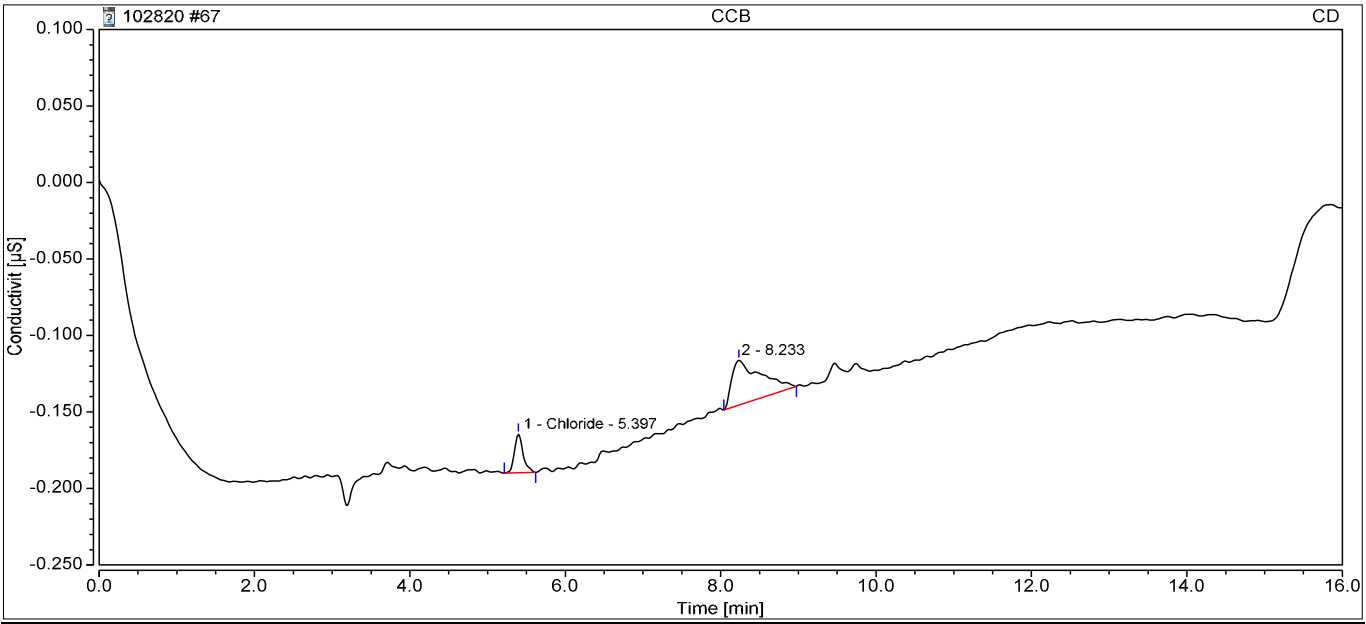
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.405	9.6390	9.6390	1.0000
2	5.39	Chloride	BMB	11.204	48.8991	48.8991	1.0000
3	6.49	Nitrite,N	BMB	4.697	9.9306	9.9306	1.0000
5	8.51	Bromide	M	1.002	9.8572	9.8572	1.0000
6	9.34	Sulfate	M *	7.227	45.1376	45.1376	1.0000
7	9.60	Nitrate	M *	6.564	10.6420	10.6420	1.0000
8	10.24	Chlorate	MB	1.014	9.8061	9.8061	1.0000
9	14.45	Phosphate	BMB	0.976	5.4057	5.4057	1.0000
Total:			**0.000**	**36.088**		**149.32**	

67 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:	**10/29/2020 05:09**	*Sample Weight:*	**1.0000**

Run Time:



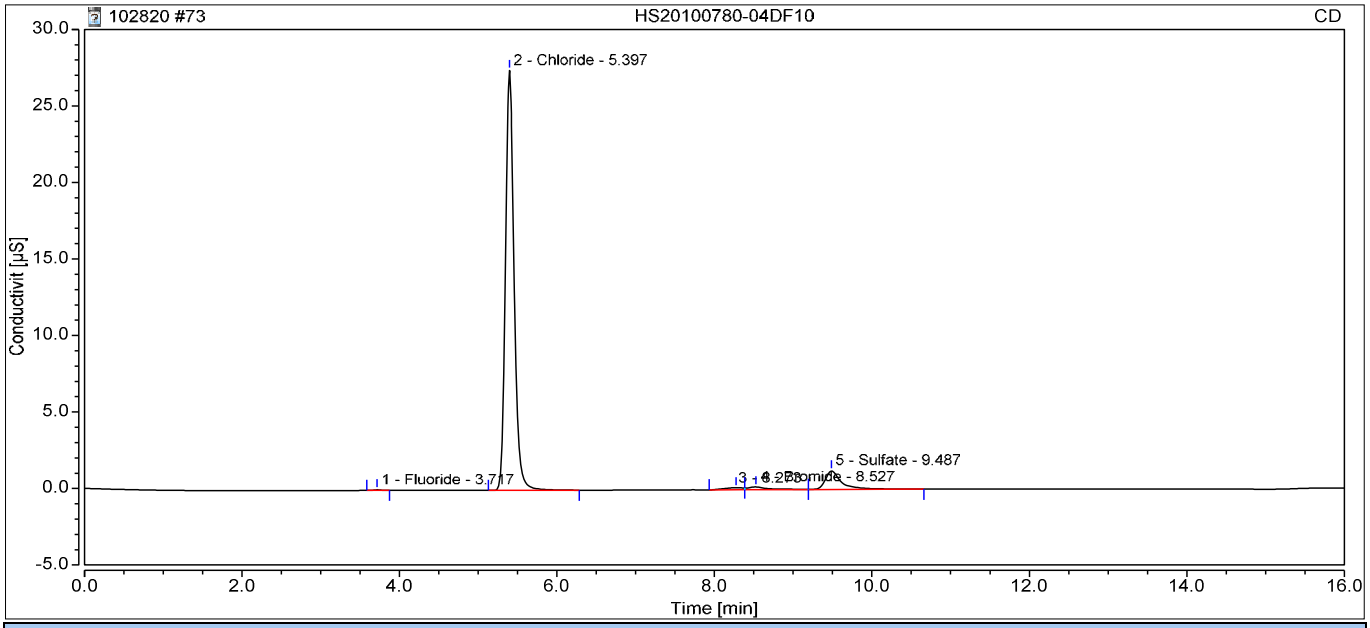
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.40	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

73 HS20100780-04DF10

Sample Name:	**HS20100780-04DF10**	*Injection Volume:*	**5.00**
Vial Number:	**GA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**10/29/2020 06:57**	*Sample Weight:*	**1.0000**

Run Time:



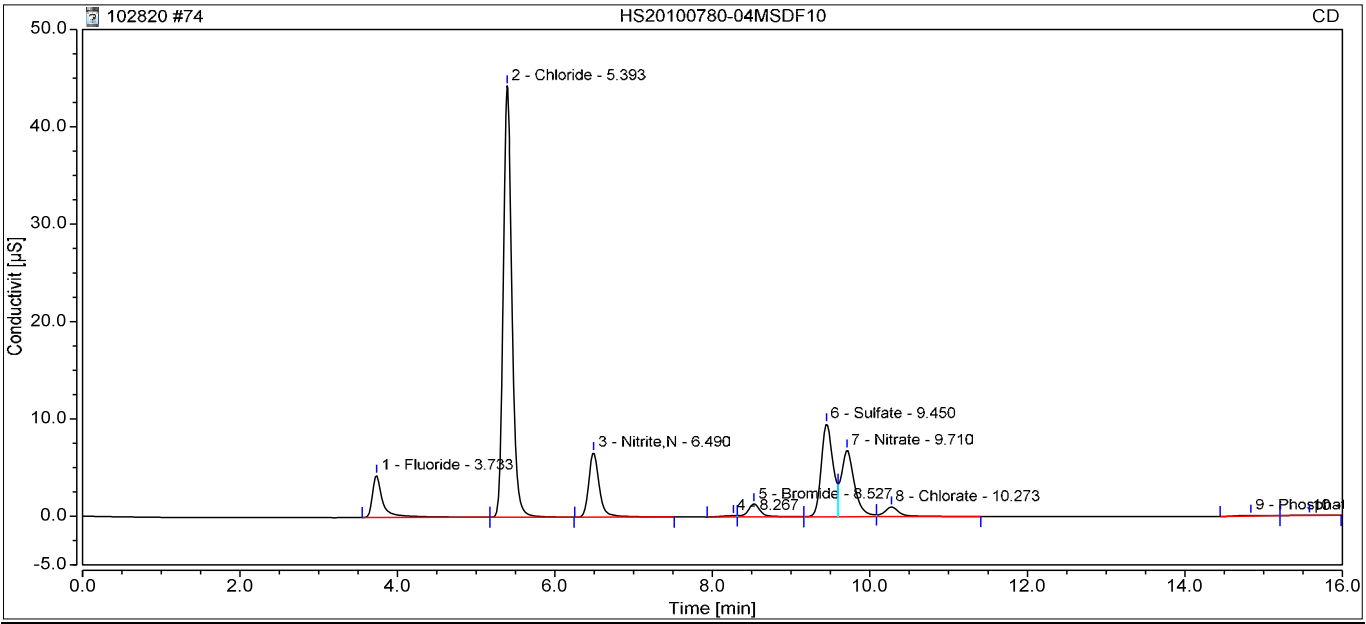
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.004	0.0233	0.2325	10.0000
2	5.40	Chloride	BMB	3.518	15.3149	153.1486	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
4	8.53	Bromide	M	0.056	0.4767	4.7673	10.0000
5	9.49	Sulfate	MB	0.291	1.8294	18.2937	10.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	10.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	10.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	10.0000
Total:			**0.000**	**3.869**		**176.44**	

74 HS20100780-04MSDF10

Sample Name:	**HS20100780-04MSDF10**	*Injection Volume:*	**5.00**
Vial Number:	**GA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**10/29/2020 07:15**	*Sample Weight:*	**1.0000**

Run Time:



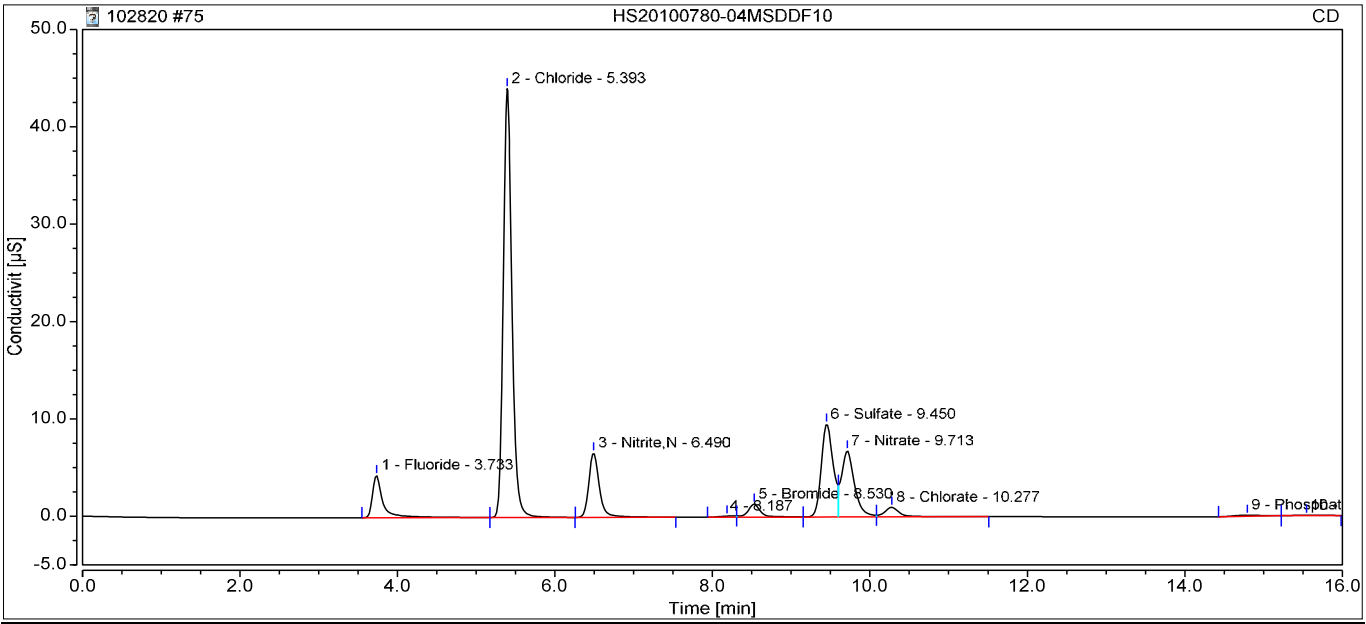
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.671	1.9085	19.0846	10.0000
2	5.39	Chloride	BMB	5.686	24.7901	247.9006	10.0000
3	6.49	Nitrite,N	BMB	1.037	2.1624	21.6242	10.0000
5	8.53	Bromide	M	0.251	2.4040	24.0399	10.0000
6	9.45	Sulfate	M	1.667	10.4187	104.1870	10.0000
7	9.71	Nitrate	M	1.337	2.1488	21.4879	10.0000
8	10.27	Chlorate	MB	0.226	2.0773	20.7729	10.0000
9	14.84	Phosphate	BMB	0.028	0.5228	5.2279	10.0000
Total:			**0.000**	**10.902**		**464.32**	

75 HS20100780-04MSDDF10

Sample Name:	**HS20100780-04MSDDF10**	*Injection Volume:*	**5.00**
Vial Number:	**GA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**10/29/2020 07:33**	*Sample Weight:*	**1.0000**

Run Time:

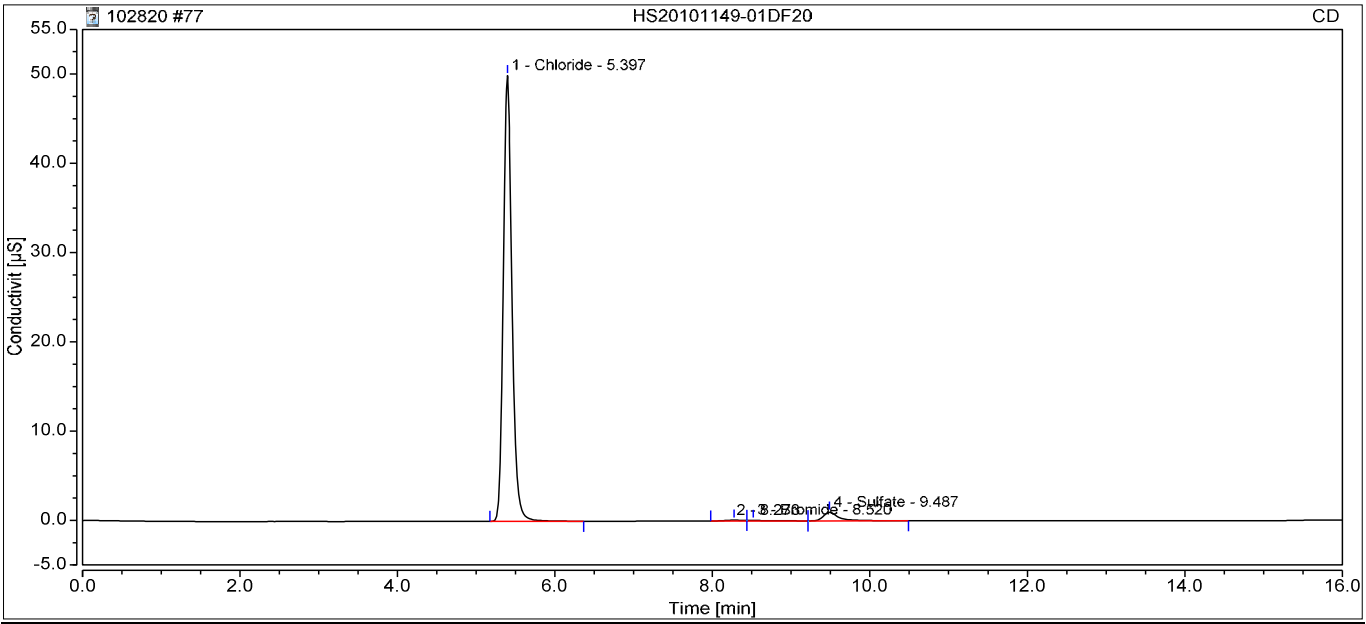


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.671	1.9094	19.0936	10.0000
2	5.39	Chloride	BMB	5.649	24.6273	246.2730	10.0000
3	6.49	Nitrite,N	BMB	1.034	2.1562	21.5622	10.0000
5	8.53	Bromide	M	0.249	2.3889	23.8891	10.0000
6	9.45	Sulfate	M	1.674	10.4612	104.6119	10.0000
7	9.71	Nitrate	M	1.309	2.1036	21.0361	10.0000
8	10.28	Chlorate	MB	0.223	2.0505	20.5052	10.0000
9	14.79	Phosphate	BMB	0.042	0.5965	5.9648	10.0000
Total:			**0.000**	**10.851**		**462.94**	

77	*HS20101149-01DF20*		
Sample Name:	**HS20101149-01DF20**	*Injection Volume:*	**5.00**
Vial Number:	**GB3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**20.0000**
Recording Time:	**10/29/2020 08:09**	*Sample Weight:*	**1.0000**

Run Time:



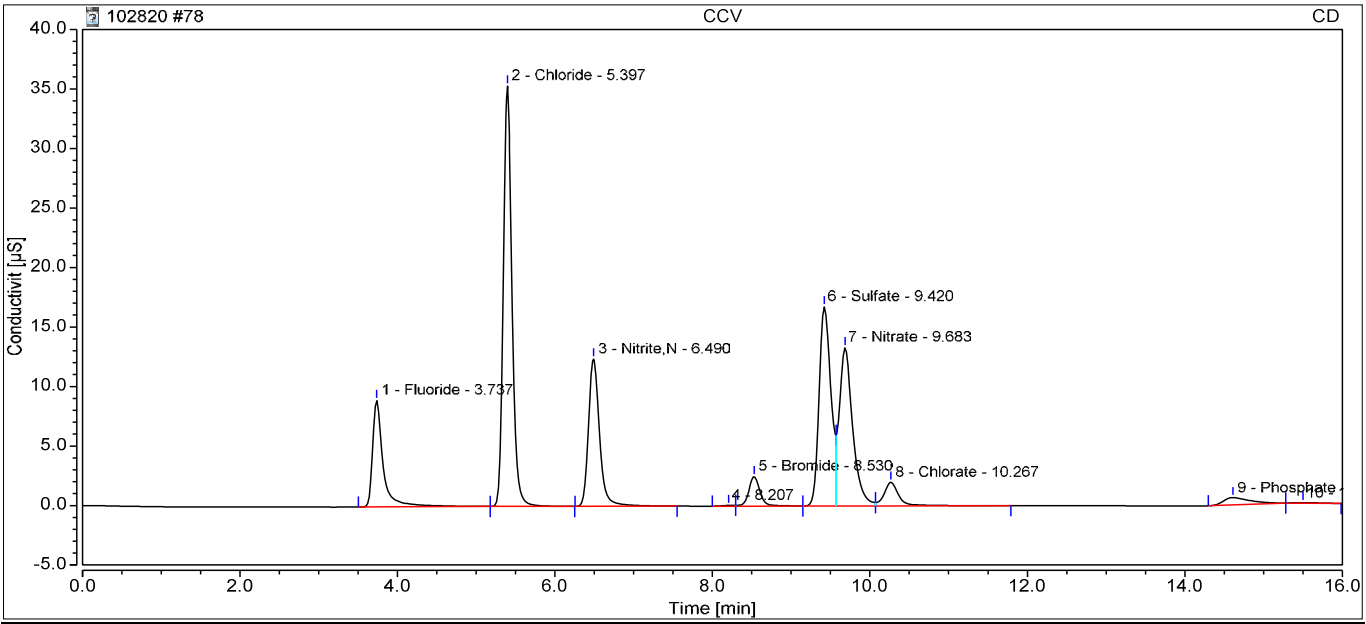
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	20.0000
1	5.40	Chloride	BMB	6.428	28.0303	560.6050	20.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	20.0000
3	8.52	Bromide	M	0.024	0.1540	3.0800	20.0000
4	9.49	Sulfate	MB	0.223	1.4050	28.1000	20.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	20.0000
Total:			**0.000**	**6.675**		**591.79**	

78 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:	**10/29/2020 08:27**	*Sample Weight:*	**1.0000**

Run Time:



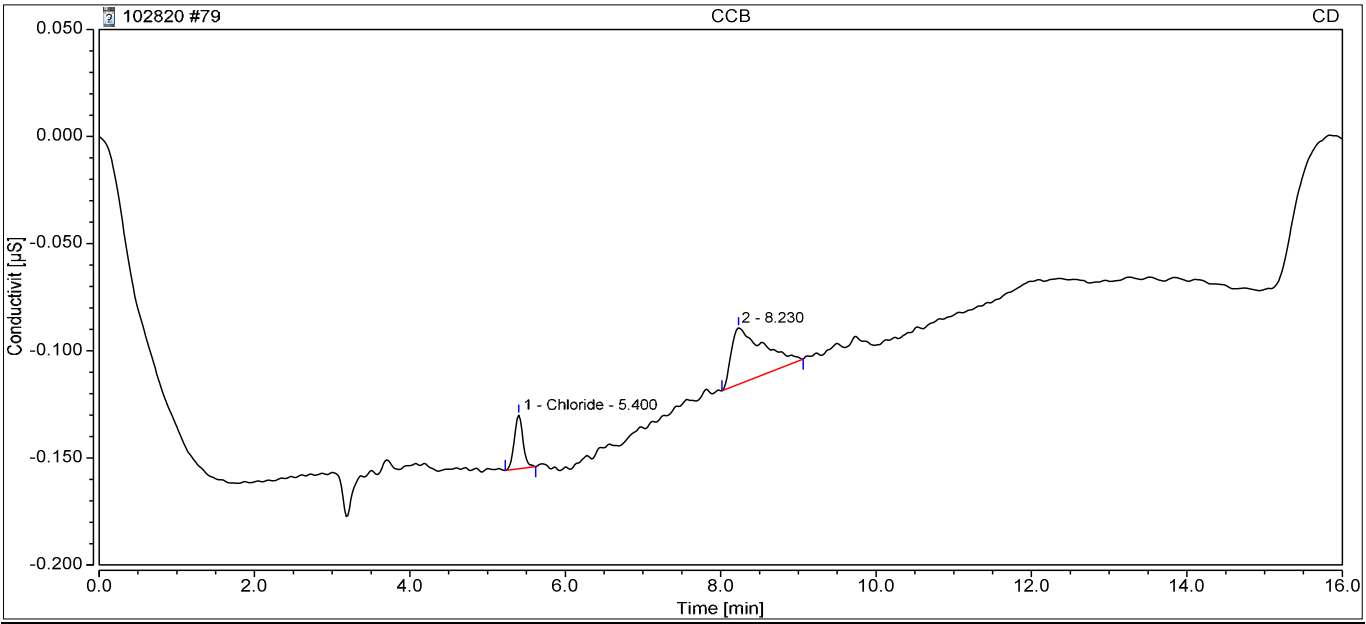
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.388	3.9364	3.9364	1.0000
2	5.40	Chloride	BMB	4.533	19.7507	19.7507	1.0000
3	6.49	Nitrite,N	BMB	2.030	4.2695	4.2695	1.0000
5	8.53	Bromide	M	0.411	3.9959	3.9959	1.0000
6	9.42	Sulfate	M	2.910	18.1809	18.1809	1.0000
7	9.68	Nitrate	M	2.633	4.2553	4.2553	1.0000
8	10.27	Chlorate	MB	0.434	4.1230	4.1230	1.0000
9	14.61	Phosphate	BMB	0.242	1.6232	1.6232	1.0000
Total:			**0.000**	**14.581**		**60.13**	

79 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:	**10/29/2020 08:45**	*Sample Weight:*	**1.0000**

Run Time:

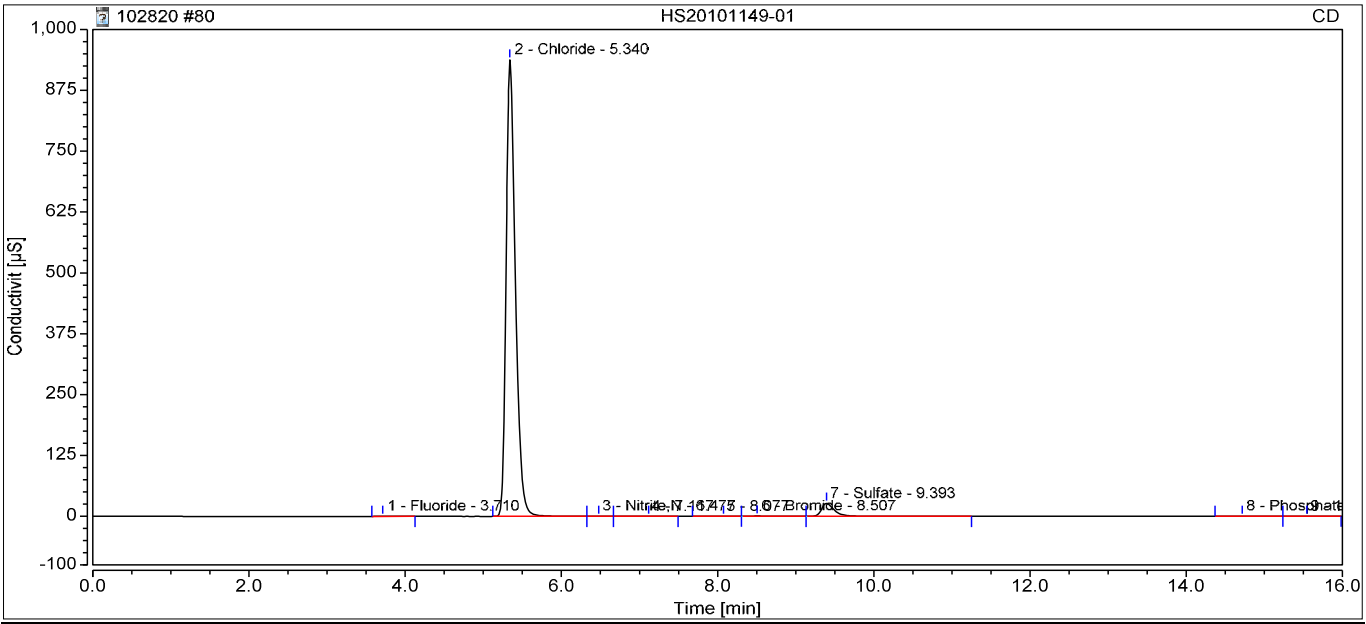


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.40	Chloride	BMB	0.003	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.00**	

80 HS20101149-01			
Sample Name:	**HS20101149-01**	*Injection Volume:*	**5.00**
Vial Number:	**GB2**	*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:	**10/29/2020 09:03**	*Sample Weight:*	**1.0000**

Run Time:



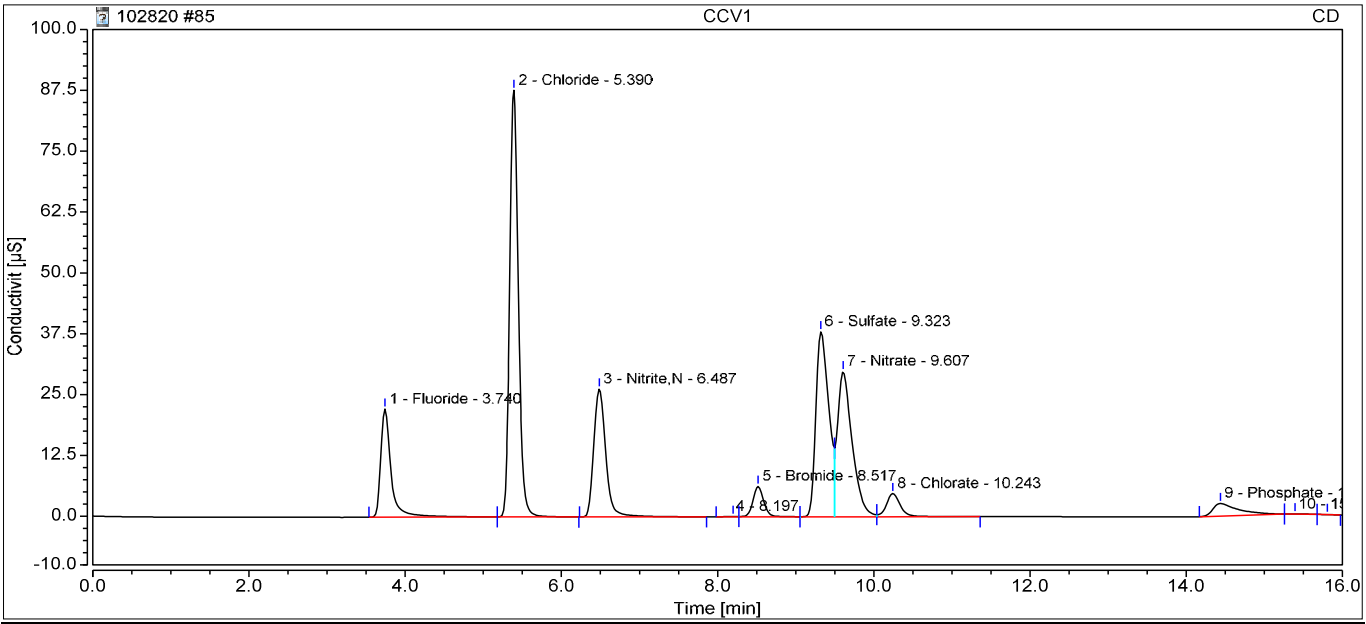
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.71	Fluoride	BMB	0.026	0.0836	0.0836	1.0000
2	5.34	Chloride	BMB	128.923	563.2776	563.2776	1.0000
3	6.48	Nitrite,N	BMB	0.032	0.0285	0.0285	1.0000
6	8.51	Bromide	M	0.151	1.4181	1.4181	1.0000
7	9.39	Sulfate	MB	5.153	32.1878	32.1878	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
8	14.72	Phosphate	BMB	0.070	0.7375	0.7375	1.0000
Total:			**0.000**	**134.354**		**597.73**	

85 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BB7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2020 10:52**	*Sample Weight:*	**1.0000**

Run Time:



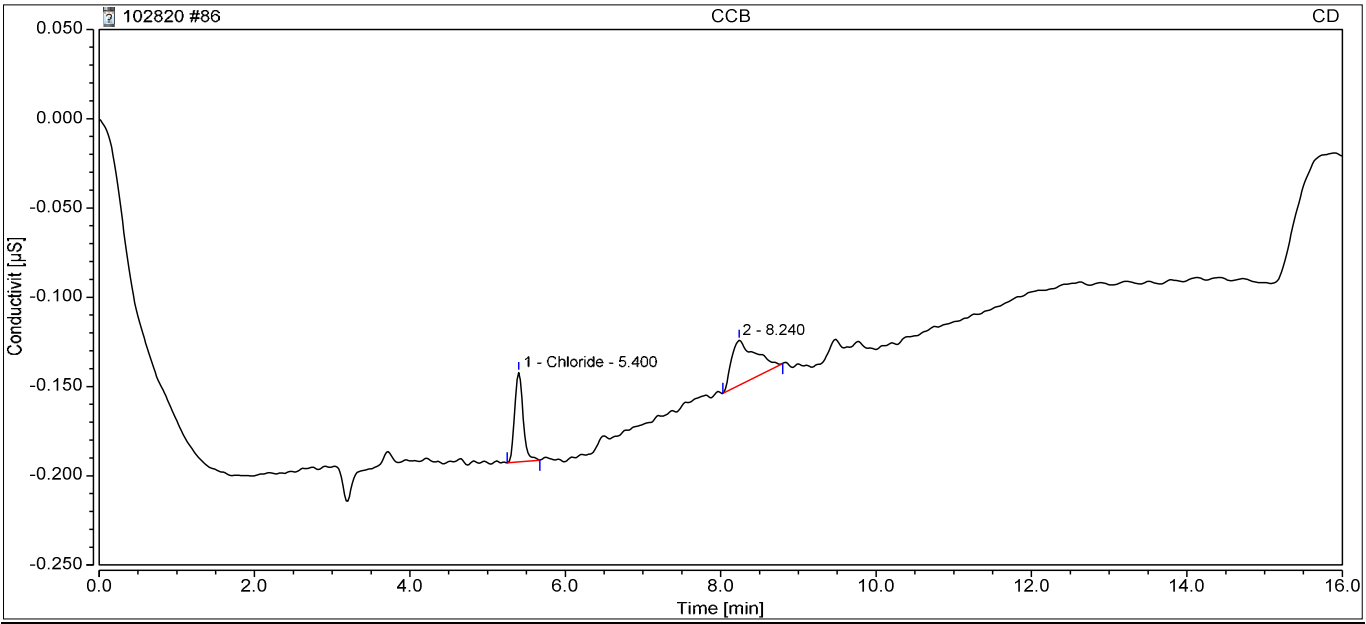
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.412	9.6601	9.6601	1.0000
2	5.39	Chloride	BMB	11.202	48.8935	48.8935	1.0000
3	6.49	Nitrite,N	BMB	4.696	9.9298	9.9298	1.0000
5	8.52	Bromide	M	0.996	9.8010	9.8010	1.0000
6	9.32	Sulfate	M	7.281	45.4713	45.4713	1.0000
7	9.61	Nitrate	M	6.510	10.5551	10.5551	1.0000
8	10.24	Chlorate	MB	0.985	9.5288	9.5288	1.0000
9	14.44	Phosphate	BMB	0.979	5.4181	5.4181	1.0000
Total:			**0.000**	**36.062**		**149.26**	

86 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:	**10/29/2020 11:10**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.40	Chloride	BMB	0.006	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**	**0.006**		**0.00**	

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

WorkOrder: HS20101403

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

13-Nov-2020

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

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HS20101403 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20101403

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

November 12, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20101403**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Oct 28, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: DAYNA.FISHER
RJ Modashia
Project Manager

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20101403

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20101403-01	LH18/24-SP650_102720	Water		27-Oct-2020 14:00	28-Oct-2020 09:15	☐
HS20101403-02	LH18/24-SP650_102720-AIX	Water		27-Oct-2020 14:00	28-Oct-2020 09:15	☐
HS20101403-03	LH18/24-SP650_102720-Between	Water		27-Oct-2020 14:00	28-Oct-2020 09:15	☐

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20101403

Work Order Comments

• The analysis for Perchlorate was subcontracted to our ALS Houston TX, High Resolution Lab. Final report attached.

Work Order Comments

• The analyses for TOC was subcontracted to ALS Environmental in Kelso, WA. Final Report attached.

WetChemistry by Method E350.3

Batch ID: R371882

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

WetChemistry by Method E365.3

Batch ID: R371548

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

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20101403
Sample ID: LH18/24-SP650_102720
Lab ID:HS20101403-01
Collection Date: 27-Oct-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: YP
Nitrogen, Ammonia (As N)	**12**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	03-Nov-2020 09:00
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.93**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	28-Oct-2020 11:00
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	12-Nov-2020 14:11

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

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20101403
Sample ID: LH18/24-SP650_102720-AIX
Lab ID:HS20101403-02
Collection Date: 27-Oct-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	06-Nov-2020 14:07

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

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Weekly Samples WorkOrder:HS20101403
Sample ID: LH18/24-SP650_102720-Between Lab ID:HS20101403-03
Collection Date: 27-Oct-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	06-Nov-2020 14:07

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

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20101403

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R371548 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20101403-01	LH18/24-SP650_102720	27 Oct 2020 14:00			28 Oct 2020 11:00	10
Batch ID: R371882 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20101403-01	LH18/24-SP650_102720	27 Oct 2020 14:00			03 Nov 2020 09:00	1
Batch ID: R372138 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20101403-02	LH18/24-SP650_102720-AIX	27 Oct 2020 14:00			06 Nov 2020 14:07	1
HS20101403-03	LH18/24-SP650_102720-Between	27 Oct 2020 14:00			06 Nov 2020 14:07	1
Batch ID: R372496 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20101403-01	LH18/24-SP650_102720	27 Oct 2020 14:00			12 Nov 2020 14:11	1

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20101403

QC BATCH REPORT

Batch ID: R371548 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-371548** Units: **mg/L** Analysis Date: **28-Oct-2020 11:00**
Client ID: Run ID: **UV-2450_371548** SeqNo: **5806369** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-371548** Units: **mg/L** Analysis Date: **28-Oct-2020 11:00**
Client ID: Run ID: **UV-2450_371548** SeqNo: **5806370** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.258	0.0250	0.25	0	103	85 - 115				

MS Sample ID: **HS20101395-05MS** Units: **mg/L** Analysis Date: **28-Oct-2020 11:00**
Client ID: Run ID: **UV-2450_371548** SeqNo: **5806399** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.418	0.0250	0.25	0.148	108	80 - 120				

MSD Sample ID: **HS20101395-05MSD** Units: **mg/L** Analysis Date: **28-Oct-2020 11:00**
Client ID: Run ID: **UV-2450_371548** SeqNo: **5806400** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.419	0.0250	0.25	0.148	108	80 - 120	0.418	0.239	20	

The following samples were analyzed in this batch: HS20101403-01

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20101403

QC BATCH REPORT

Batch ID: R371882 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-R371882** Units: **mg/L** Analysis Date: **03-Nov-2020 09:00**
Client ID: Run ID: **WetChem_HS_371882** SeqNo: **5814054** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-R371882** Units: **mg/L** Analysis Date: **03-Nov-2020 09:00**
Client ID: Run ID: **WetChem_HS_371882** SeqNo: **5814053** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.23	0.20	10	0	102	80 - 120				

MS Sample ID: **HS20101480-02MS** Units: **mg/L** Analysis Date: **03-Nov-2020 09:00**
Client ID: Run ID: **WetChem_HS_371882** SeqNo: **5814056** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	35.17	0.20	10	24.5	107	80 - 120				

MSD Sample ID: **HS20101480-02MSD** Units: **mg/L** Analysis Date: **03-Nov-2020 09:00**
Client ID: Run ID: **WetChem_HS_371882** SeqNo: **5814055** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	35.25	0.20	10	24.5	107	80 - 120	35.17	0.207	20	

The following samples were analyzed in this batch: HS20101403-01

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20101403**

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: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20101403

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20101403-01	LH18/24-SP650_102720	Login	10/28/2020 12:28:58 PM	PMG	WET262
HS20101403-01	LH18/24-SP650_102720	Login	10/28/2020 12:28:58 PM	PMG	WET262
HS20101403-01	LH18/24-SP650_102720	Login	10/28/2020 12:28:58 PM	PMG	Sub
HS20101403-02	LH18/24-SP650_102720-AIX	Login	10/28/2020 12:28:58 PM	PMG	Sub

ALS Houston, US Date: 12-Nov-20

Sample Receipt Checklist

Work Order ID: HS20101403 **Date/Time Received:** 28-Oct-2020 09:15

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Paresh M. Giga	28-Oct-2020 12:31	**Reviewed by:**	/S/ RJ Modashia	28-Oct-2020 15:26
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **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	☐	1 Page(s)	
Chain of custody signed when relinquished and received?	Yes	☑	No	☐	COC IDs:None	
Samplers name present on COC?	Yes	☐	No	☑		
Chain of custody agrees with sample labels?	Yes	☑	No	☐		
Samples in proper container/bottle?	Yes	☑	No	☐		
Sample containers intact?	Yes	☑	No	☐		
Sufficient sample volume for indicated test?	Yes	☑	No	☐		
All samples received within holding time?	Yes	☑	No	☐		
Container/Temp Blank temperature in compliance?	Yes	☑	No	☐		

Temperature(s)/Thermometer(s):	1.3C U/c				IR31	
Cooler(s)/Kit(s):	25172					
Date/Time sample(s) sent to storage:	10/28/2020 12:40					
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: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20101403
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_102720	Water	10/27/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_102720	Water	10/27/20 / 14:00		1			X		NONE	
LH18/24-SP650_102720_AIX	Water	10/27/20 / 14:00		1				X	NONE	
LH18/24-SP650_102720_Between	Water	10/27/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
	10/27/20	14:30									

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Mascorro	10/28/20	09:15							

Remarks: Cooler 25172 1421
Temp 1.3°C CFO

(Word) S:\M-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

25172

CUSTODY SEAL

Date: 10/27/20 Time: 1430
Name: Scott Beesinger
Company: Bhate

Seal Broken By: SM
Date: 10/28/20

25172

Must Deliver Next Business Day
Time and Tempature Sensitive!

25172

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 09SEP20
ACTWGT: 1.00 LB MAN
CAD: 3001130/CAFE3211
DIMS: 19x16x13 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656

REF ADDITIONAL BOTTLES - RQ 73689 - RJ

MMA:

Express E

FedEx
TRK# 0221 1891 8880 1500

WED - 28 OCT 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

November 06, 2020 Service Request No:E2001050

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

Laboratory Results for: HS20101403

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 28, 2020
For your reference, these analyses have been assigned our service request number **E2001050.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001050
Project:	HS20101403	**Date Received:**	10/28/20
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

Two samples were received for analysis at ALS Environmental in Houston on 10/28/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000557: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS & LCSD recoveries are within QC limits. The MS/MSD was performed on an unrelated sample.

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

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

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

Client: ALS Environmental - US **Service Request:**E2001050
Project: HS20101403

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001050-001	LH18/24-SP650_102720-AIX	10/27/2020	1400
E2001050-002	LH18/24-SP650_102720-Between	10/27/2020	1400

Service Request Summary

Folder #: **E2001050**
Client Name: ALS Environmental - US
Project Name: HS20101403
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/28/20
Internal Due Date: 11/11/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20101403
EDD: No EDD Specified

2 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 10D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001050-001	LH18/24-SP650_102720-AIX	Water	10/27/20 1400	**IV**
E2001050-002	LH18/24-SP650_102720-Between	Water	10/27/20 1400	**IV**

Service Request Summary

Folder #: **E2001050**
Client Name: ALS Environmental - US
Project Name: HS20101403
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 10/28/20
Internal Due Date: 11/11/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: HS20101403
EDD: No EDD Specified

2 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 10D
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	2	Level II due 11/11,level IV 11/18

Data Qualifiers

Lab Standard

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

Data Qualifiers

Lab Standard

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

ALS Laboratory Group

Acronyms

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

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State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Washington Department of Health	C819	11/14/2020

ALS

Chain of Custody

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

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

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15058**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20101403
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20101403-02**	**LH18/24-SP650_102720-AIX**	**Water**	**27 Oct 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			11 Nov 2020
2.	**HS20101403-03**	**LH18/24-SP650_102720-Between**	**Water**	**27 Oct 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			11 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: J. Madsen Date/Time:

Received By: Date/Time: 10/27/20 1346

Cooler ID(s): Temperature(s):

01021820

Cooler Receipt Form

ALS Environmental

Project Chemist CH

Client/Project ALS-HI

Thermometer ID 1031

Date/Time Received: 10/28/20 Initials: CH

Date/Time Logged in: 10/28/20 Initials CH

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

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

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

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		10/28/20	1340	CH	0.9	☒
						☐
						☐
						☐

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

Notes, Discrepancies, & Resolutions:

Service request Label:

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

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 369061 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/4/20 15:00

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000959-001	LOD Perchlorate Water	.01	6850/ClO4			Water	10mL	
2	E2000959-002	LOQ Perchlorate Water	.01	6850/ClO4			Water	10mL	
3	E2001050-001	LH18/24-SP650_102720-AIX	.01	6850/ClO4 DOD			Water	10mL	
4	E2001050-002	LH18/24-SP650_102720-Between	.01	6850/ClO4 DOD			Water	10mL	
5	E2001054-001	16RW09-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2001054-002	16RW10-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2001054-003	16RW06-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2001054-004	16RW07-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2001054-005	16PM14-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2001054-006	16PM14-2010226-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2001054-007	16PM06-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2001054-008	16PM09-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2001054-009	16PM02-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2001054-010	16PM03-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2001054-011	16SW01-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2001054-012	16SW02-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
17	E2001054-013	16SW03-2010226	.01	6850/ClO4 DOD			Ground Water	10mL	
18	EQ2000557-01	MB		6850/ClO4 DOD			Liquid	10mL	
19	EQ2000557-02	LCS		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000557-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000557-04	16RW09-2010226 MS	.01	6850/ClO4 DOD			Liquid	10mL	
22	EQ2000557-05	16RW09-2010226 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000557-02	1.00µL	EQ2000557-02	1.00µL	EQ2000557-03	1.00µL	EQ2000557-03	1.00µL	EQ2000557-04	1.00µL	EQ2000557-05	1.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 212340 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2000959-001	100.00µL	E2000959-002	100.00µL	E2001050-001	100.00µL	E2001050-002	100.00µL	E2001054-001	100.00µL	E2001054-002	100.00µL
E2001054-003	100.00µL	E2001054-004	100.00µL	E2001054-005	100.00µL	E2001054-006	100.00µL	E2001054-007	100.00µL	E2001054-008	100.00µL
E2001054-009	100.00µL	E2001054-010	100.00µL	E2001054-011	100.00µL	E2001054-012	100.00µL	E2001054-013	100.00µL	EQ2000557-01	100.00µL
EQ2000557-01	100.00µL	EQ2000557-02	100.00µL	EQ2000557-02	100.00µL	EQ2000557-03	100.00µL	EQ2000557-03	100.00µL	EQ2000557-04	100.00µL
EQ2000557-05	100.00µL										

Preparation Information Benchsheet

Prep Run#: 369061 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/4/20 15:00

Preparation Steps

Step: Preparation
Started: 11/4/20 15:00
Finished: 11/4/20 16:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 11/4/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	10/27/20 1400
Sample Matrix:	Water	**Date Received:**	10/28/20
		Date Extracted:	11/4/20
		Date Analyzed:	11/4/20 18:43
Sample Name:	LH18/24-SP650_102720-AIX	**Units:**	µg/L
Lab Code:	E2001050-001	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	702183
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201104\20201104_015	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	10/27/20 1400
Sample Matrix:	Water	**Date Received:**	10/28/20
		Date Extracted:	11/4/20
		Date Analyzed:	11/4/20 18:51
Sample Name:	LH18/24-SP650_102720-Between	**Units:**	µg/L
Lab Code:	E2001050-002	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	702183
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201104\20201104_016	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**6.64**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/20
		Date Analyzed:	11/4/20 17:48
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000557-01	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	702183
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201104\20201104_008	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	ND	U	0.100	0.0500	0.0250	

Accuracy & Precision

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10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20101403
Sample Matrix: Water

Service Request: E2001050
Date Analyzed: 11/ 4/20

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

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 369061

	Lab Control Sample EQ2000557-02			Duplicate Lab Control Sample EQ2000557-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.118	0.100	118	0.119	0.100	119	84 - 119	<1	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/20
		Date Analyzed:	11/4/20 17:56
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000557-02	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	702183
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201104\20201104_009	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.118**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/20
		Date Analyzed:	11/4/20 18:04
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000557-03	**Basis:**	NA

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

Analytical Method:	6850	**Analysis Lot:**	702183
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201104\20201104_010	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.119**		0.100	0.0500	0.0250	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/ 5/20

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

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2001054-001	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS Matrix Spike EQ2000557-04				Batch QCDMS Duplicate Matrix Spike EQ2000557-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.120	0.235	0.100	115	0.229	0.100	108	84 - 119	3	15

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

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/20
		Date Analyzed:	11/5/20 13:46
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000557-04	**Basis:**	NA
Run Type:	Matrix Spike		

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

Analytical Method:	6850	**Analysis Lot:**	702385
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201105\20201105_011	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.235**		0.200	0.100	0.0500	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001050
Project:	HS20101403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/20
		Date Analyzed:	11/5/20 13:54
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000557-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

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

Analytical Method:	6850	**Analysis Lot:**	702385
Prep Method:	Method	**Extraction Lot:**	369061
Data File Name:	I:\LCMS01\DATA\20201105\20201105_012	**Instrument Name:**	E-LCMS-01
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	LOQ	LOD	MDL	Note
14797-73-0	Perchlorate	**0.229**		0.200	0.100	0.0500	

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

November 11, 2020 **Analytical Report for Service Request No:** K2009923

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

RE: ALS Houston DOD TOC / HS20101403

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory October 30, 2020
For your reference, these analyses have been assigned our service request number **K2009923.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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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: ALS Houston DOD TOC
Sample Matrix: Water

Service Request: K2009923
Date Received: 10/30/2020

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:

One water sample was received for analysis at ALS Environmental on 10/30/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Noe D. Davis Date 11/11/2020

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

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

K2009923

SAMPLING STATE: **Dept of Defense**

COC ID: **15057**

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:	HS20101403
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20101403-01**	**LH18/24-SP650_102720**	**Water**	**27 Oct 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			11 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: 10/29/2020 1800

Received By: _____ Date/Time: 10/30/20 1000

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

PM RL

Cooler Receipt and Preservation Form

Client ALS / Houston Service Request K20 09928

Received: 10/30/20 Opened: 10/30/20 By: L Unloaded: 10/30/20 By: L

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
1.3	—	IR01	15062	1		1891 8852 1535	
			15057				

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:**	K2009923
Project:	ALS Houston DOD TOC/HS20101403	**Date Collected:**	10/27/20
Sample Matrix:	Water	**Date Received:**	10/30/20
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
LH18/24-SP650_102720	K2009923-001	**1.68**	0.50	0.20	0.07	1	11/07/20 13:38	
Method Blank	K2009923-MB	ND U	0.50	0.20	0.07	1	11/07/20 13:38	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2009923
Project:	ALS Houston DOD TOC/HS20101403	**Date Analyzed:**	11/07/20
Sample Matrix:	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:	702585

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2009923-LCS	25.8	25.0	103	83-117

HS20101403 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)

ALS WO# HS20101403

NH_AMM_W_ISE/350.3

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31220**

Ion Selective Electrode Logbook

Analyst: YP					Date: 11/3/20 9:00 AM		
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F							
Probe Calibration Date: 11/3/20		Cal Std ID: 3150108 01~05			Probe ID: X01 - 11806		
Std Level		mV	Conc., mg/L:		Sodium Thiosulfate ID:		
STD 1 (mg/L):	0.2	137.2	0.200		Std Level	mV	Conc., mg/L:
STD 2 (mg/L):	1	94.9	1.004		STD 4 (mg/L): 10	36.7	9.998
STD 3 (mg/L):	5	55.0	5.001		STD 5 (mg/L): 50	-4.1	50.037
LSC / MS Spike ID: 3100602320					ICAL Date & Slope: 98-9x.1 -58.3 mV		
ICV Cal STD ID: 3150108 01							
DPD Reagent ID: 3100602819							

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/–)	Comments
ICV		50ml	50ml		10.172			
CCB		↓	↓		0.006			
MBLK					0.007			
LCS					10.233			
HS2010480-01		1ml	50ml	50X	9.756		-ve	
-02		50ml			24.500		-ve	
-02MS					35.173			
-02MSD					35.246			
-03					32.801		-ve	
HS2010403-01					12.480		-ve	
1342-01					0.184		-ve	
1373-01		5ml		10X	5.104		-ve	
CCV		50ml			10.875			
CCB		↓			0.009			
HS2010542-01		5ml		10X	5.916		-ve	
CCV		50ml			9.981			
CCB		↓	↓		0.010			

Batch ID: 311879 / 371882	Reported By YP	Reviewed By: MD

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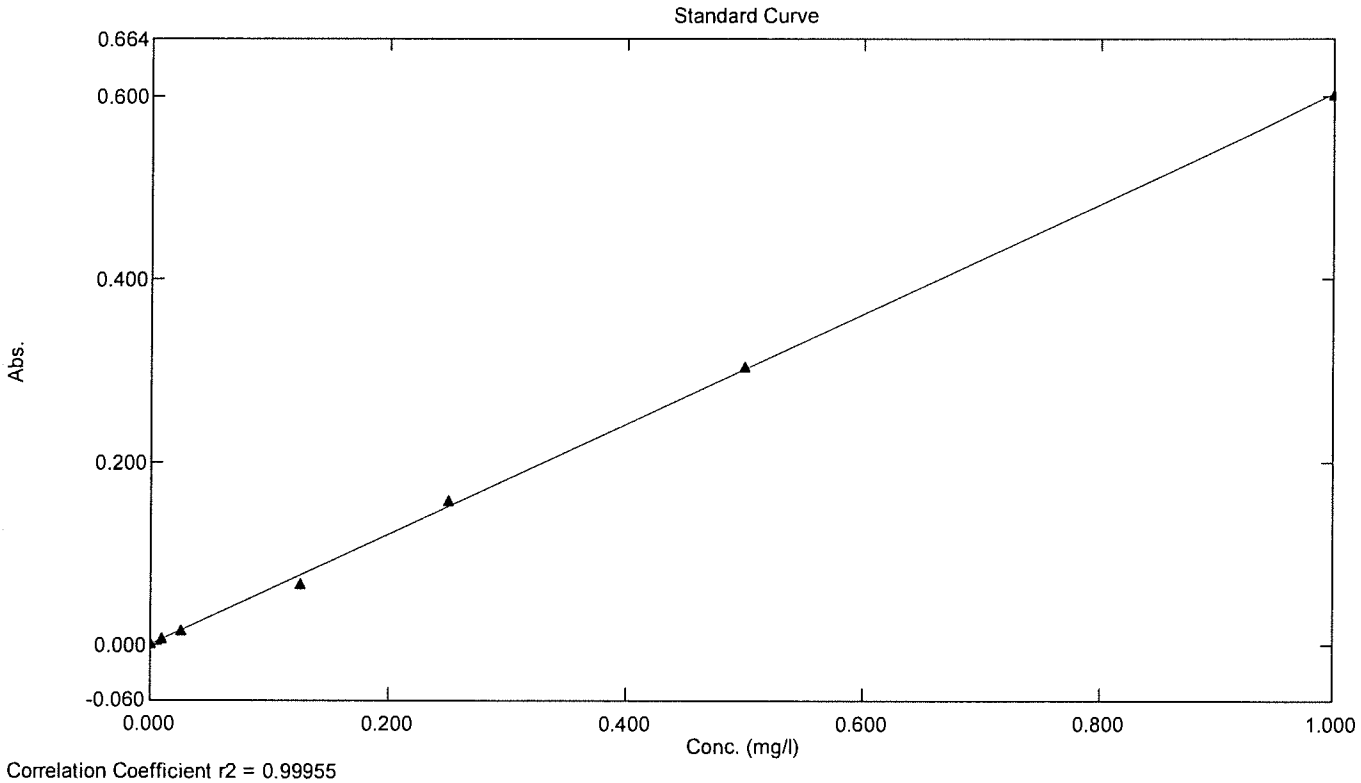
HS20101403 Wet Chem Raw Data (P-ORTHO)

ALS WO# HS20101403

Standard Table Report

11/13/2020 11:27:56 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\102820_P_ORTHO_W.pho



Correlation Coefficient r2 = 0.99955

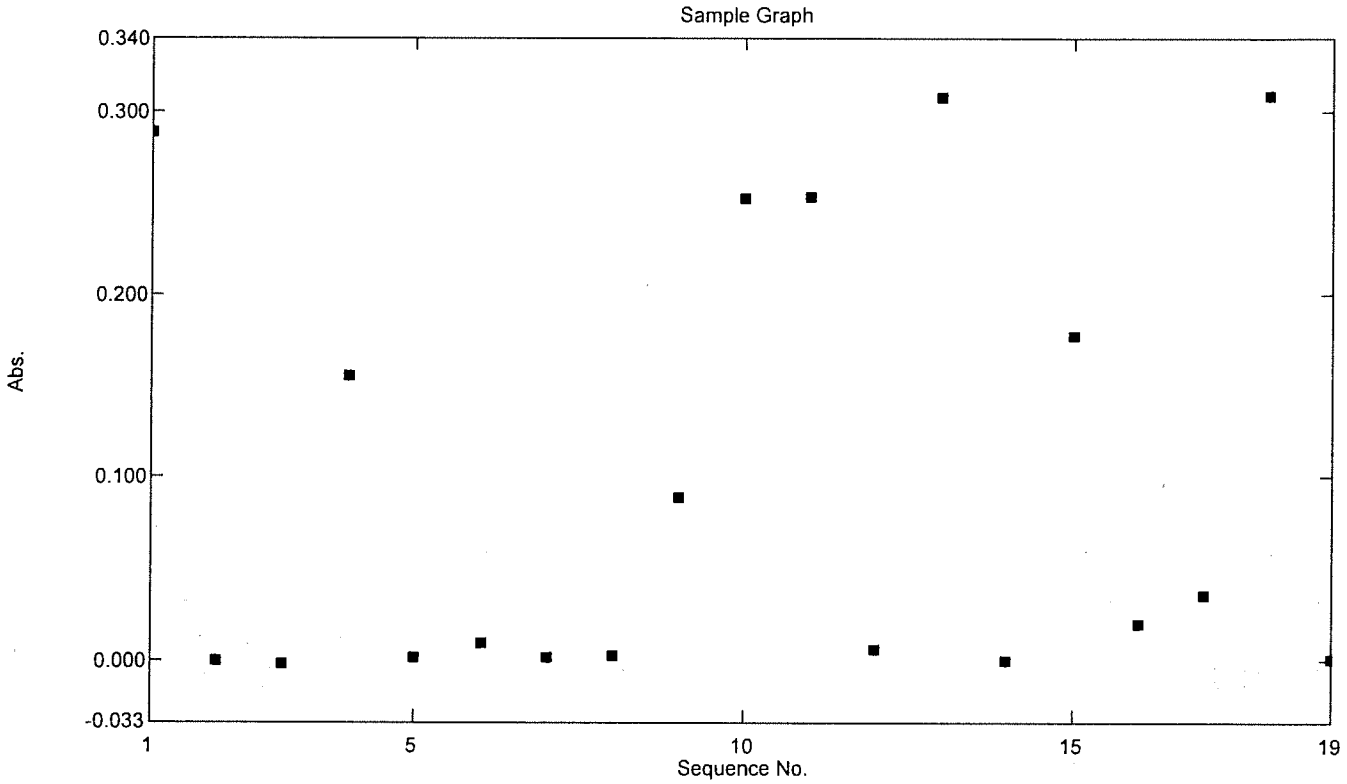
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	0.002	1.000	
2	STD2	Standard		0.010	0.007	1.000	
3	STD3	Standard		0.025	0.015	1.000	
4	STD4	Standard		0.125	0.066	1.000	
5	STD5	Standard		0.250	0.157	1.000	
6	STD6	Standard		0.500	0.305	1.000	
7	STD7	Standard		1.000	0.602	1.000	
8							

Sample Table Report

11/13/2020 11:26:36 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\102820_P_ORTHO_W.ph



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.477	0.288	314067502 WC-14
2	CCB	Unknown		0.000	0.000	
3	MBLK	Unknown		-0.004	-0.002	
4	LCS	Unknown		0.258	0.156	314067501 WC-14
5	HS20101394.01	Unknown		0.003	0.002	11:00AM
6	HS20101394.02	Unknown		0.016	0.010	11:01AM
7	HS20101394.03	Unknown		0.003	0.002	11:02AM
8	HS20101394.04	Unknown		0.004	0.002	11:03AM
9	HS20101394.05	Unknown		0.148	0.089	11:04AM
10	HS20101394.05MS	Unknown		0.418	0.252	11:05AM
11	HS20101394.05MS	Unknown		0.419	0.253	11:05AM
12	HS20101395.01	Unknown		0.009	0.006	11:06AM
13	CCV2	Unknown		0.509	0.307	C-315010404 UV-11
14	CCB2	Unknown		0.000	0.000	
15	HS20101403.01	Unknown		0.293	0.177	PF:10X,12:54PM
16	HS20100264.27	Unknown		0.034	0.020	
17	HS20100264.28	Unknown		0.059	0.036	
18	CCV3	Unknown		0.511	0.309	
19	CCB3	Unknown		0.001	0.000	

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

WorkOrder: HS20110120

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

01-Dec-2020

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

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HS20110120 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20110120

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

November 23, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20110120**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Nov 04, 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: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20110120

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20110120-01	LH18/24-SP650_110320	Water		03-Nov-2020 14:00	04-Nov-2020 09:30	☐
HS20110120-02	LH18/24-SP650_110320-AIX	Water		03-Nov-2020 14:00	04-Nov-2020 09:30	☐

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20110120

Work Order Comments

• The analysis for TOC was subcontracted to ALS Environmental in Kelso WA. Final report attached.

The analysis for Perchlorate was subcontracted to ALS High Res Lab Houston, TX. Final report attached.

WetChemistry by Method E350.3

Batch ID: R372766

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

WetChemistry by Method E365.3

Batch ID: R372077

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

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20110120
Sample ID: LH18/24-SP650_110320
Lab ID:HS20110120-01
Collection Date: 03-Nov-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: MZD
Nitrogen, Ammonia (As N)	**13**	a	**0.10**	**0.20**	**0.20**	**mg/L**	1	17-Nov-2020 12:00
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**2.59**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	04-Nov-2020 12:39
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	18-Nov-2020 17:20

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

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20110120
Sample ID: LH18/24-SP650_110320-AIX
Lab ID:HS20110120-02
Collection Date: 03-Nov-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	23-Nov-2020 10:46

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

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20110120

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R372077 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20110120-01	LH18/24-SP650_110320	03 Nov 2020 14:00			04 Nov 2020 12:39	10
Batch ID: R372766 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20110120-01	LH18/24-SP650_110320	03 Nov 2020 14:00			17 Nov 2020 12:00	1
Batch ID: R372897 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20110120-01	LH18/24-SP650_110320	03 Nov 2020 14:00			18 Nov 2020 17:20	1
Batch ID: R373181 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20110120-02	LH18/24-SP650_110320-AIX	03 Nov 2020 14:00			23 Nov 2020 10:46	1

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20110120

QC BATCH REPORT

Batch ID: R372077 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-372077** Units: **mg/L** Analysis Date: **04-Nov-2020 12:39**
Client ID: Run ID: **UV-2450_372077** SeqNo: **5818567** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-372077** Units: **mg/L** Analysis Date: **04-Nov-2020 12:39**
Client ID: Run ID: **UV-2450_372077** SeqNo: **5818568** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.265	0.0250	0.25	0	106	85 - 115				

MS Sample ID: **HS20110120-01MS** Units: **mg/L** Analysis Date: **04-Nov-2020 12:40**
Client ID: **LH18/24-SP650_110320** Run ID: **UV-2450_372077** SeqNo: **5818569** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	5.16	0.250	2.5	2.59	103	80 - 120				

MSD Sample ID: **HS20110120-01MSD** Units: **mg/L** Analysis Date: **04-Nov-2020 12:40**
Client ID: **LH18/24-SP650_110320** Run ID: **UV-2450_372077** SeqNo: **5818570** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	5.14	0.250	2.5	2.59	102	80 - 120	5.16	0.388	20	

The following samples were analyzed in this batch: HS20110120-01

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20110120

QC BATCH REPORT

Batch ID: R372766 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-372766** Units: **mg/L** Analysis Date: **17-Nov-2020 12:00**
Client ID: Run ID: **WetChem_HS_372766** SeqNo: **5835939** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.20	0.20								U

LCS Sample ID: **LCS-372766** Units: **mg/L** Analysis Date: **17-Nov-2020 12:00**
Client ID: Run ID: **WetChem_HS_372766** SeqNo: **5835940** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.22	0.20	10	0	102	80 - 120				

MS Sample ID: **HS20110452-01MS** Units: **mg/L** Analysis Date: **17-Nov-2020 12:00**
Client ID: Run ID: **WetChem_HS_372766** SeqNo: **5835942** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.09	0.20	10	0.335	97.5	80 - 120				

MSD Sample ID: **HS20110452-01MSD** Units: **mg/L** Analysis Date: **17-Nov-2020 12:00**
Client ID: Run ID: **WetChem_HS_372766** SeqNo: **5835943** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.07	0.20	10	0.335	97.3	80 - 120	10.09	0.189	20	

The following samples were analyzed in this batch: HS20110120-01

ALS Houston, US Date: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20110120**

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: 23-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20110120

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20110120-01	LH18/24-SP650_110320	Login	11/4/2020 11:51:27 AM	PMG	WET367
HS20110120-01	LH18/24-SP650_110320	Login	11/4/2020 11:51:27 AM	PMG	WET367
HS20110120-01	LH18/24-SP650_110320	Login	11/4/2020 11:51:27 AM	PMG	Sub
HS20110120-02	LH18/24-SP650_110320-AIX	Login	11/4/2020 11:51:27 AM	PMG	Sub

ALS Houston, US Date: 23-Nov-20

Sample Receipt Checklist

Work Order ID: HS20110120 **Date/Time Received:** **04-Nov-2020 09:30**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Paresh M. Giga	04-Nov-2020 11:53	**Reviewed by:**	/S/ RJ Modashia	04-Nov-2020 16:09
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **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 ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.7C U/C	IR31
Cooler(s)/Kit(s):	46559	
Date/Time sample(s) sent to storage:	11/4/2020 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:

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

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20110120
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_110320	Water	11/03/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_110320	Water	11/03/20 / 14:00		1			X		NONE	
LH18/24–SP650_110320_AIX	Water	11/03/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
	11/03/20	14:30		11/4/2020	09:2						

For Lab Use Only

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

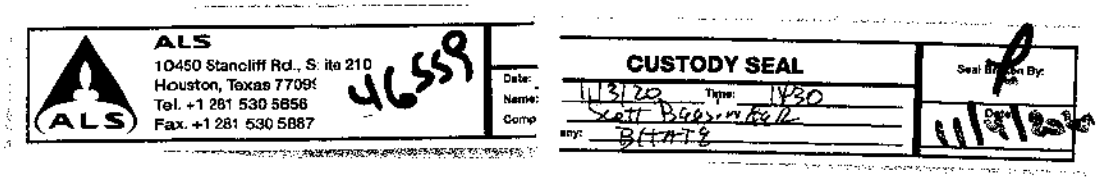
Remarks:

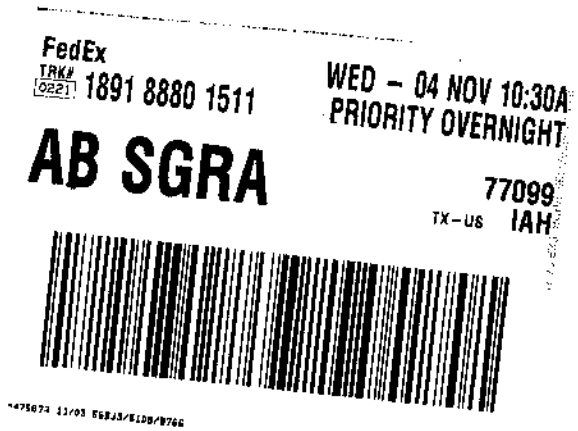
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ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5856
Fax. +1 281 530 5887
46559
Date:
Name:
Comp
any:
CUSTODY SEAL
Time:
Seal Broken By:
Date:


FedEx
TRK#
0221
1891 8880 1511
WED - 04 NOV 10:30A
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US IAH

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

November 18, 2020 **Analytical Report for Service Request No:** K2010199

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

RE: ALS Houston DOD TOC

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 05, 2020
For your reference, these analyses have been assigned our service request number **K2010199.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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Case Narrative
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General Chemistry

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: ALS Houston DOD TOC
Sample Matrix: Water

Service Request: K2010199
Date Received: 11/05/2020

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:

One water sample was received for analysis at ALS Environmental on 11/05/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Noe D. Davis Date 11/18/2020

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

K20101919

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:** **15097**

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:	HS20110120
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110120-01**	**LH18/24-SP650_110320**	**Water**	**03 Nov 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			18 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: J. MARCANTEL Date/Time: 11/04/20 18:00

Received By: Date/Time: 11/5/20 1015

Cooler ID(s): Temperature(s):

PM KL

Cooler Receipt and Preservation Form

Client AIP-Houston Service Request K20 10195

Received: 11/5/20 Opened: 11/5/20 By: BR Unloaded: 11/5/20 By: BR

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 2 front
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
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
0.9	—	IR1		—		189188824946	

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:**	K2010199
Project:	ALS Houston DOD TOC	**Date Collected:**	11/3/20
Sample Matrix:	Water	**Date Received:**	11/5/20
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
LH18/24-SP650_110320	K2010199-001	**1.20**	0.50	0.20	0.07	1	11/11/20 17:58	
Method Blank	K2010199-MB	ND U	0.50	0.20	0.07	1	11/11/20 17:58	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010199
Project:	ALS Houston DOD TOC	**Date Analyzed:**	11/11/20
Sample Matrix:	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:	703161

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2010199-LCS	25.9	25.0	104	83-117

November 23, 2020 Service Request No:E2001081

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

Laboratory Results for: HS20110120

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 04, 2020
For your reference, these analyses have been assigned our service request number **E2001081.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001081
Project:	HS20110120	**Date Received:**	11/04/20
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 11/04/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000584: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

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

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

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

Client: ALS Environmental - US **Service Request:**E2001081
Project: HS20110120

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001081-001	LH18/24-SP650_110320-AIX	11/3/2020	1400

Service Request Summary

Folder #: **E2001081**
Client Name: ALS Environmental - US
Project Name: HS20110120
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: TWOODS
Date Received: 11/04/20
Internal Due Date: 11/19/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110120
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 10B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001081-001	LH18/24-SP650_110320-AIX	Water	11/03/20 1400	**IV**

Service Request Summary

Folder #: **E2001081**
Client Name: ALS Environmental - US
Project Name: HS20110120
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: TWOODS
Date Received: 11/04/20
Internal Due Date: 11/19/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110120
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 10B
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	level II 11/18, level IV due 11/25

Data Qualifiers

Lab Standard

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

Data Qualifiers

Lab Standard

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

ALS Laboratory Group

Acronyms

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

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

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

ALS

Chain of Custody

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

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

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15098**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110120
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110120-02**	**LH18/24-SP650_110320-AIX**	**Water**	**03 Nov 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			18 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: J. Modashia Date/Time: 11/04/20 18:00

Received By: CA Date/Time: 11/4/20 18:00

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID IR31

Date/Time Received: 11/4/20 Initials: CH Date/Time Logged in: 11/4/20 Initials CH

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

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

3. Were custody seals on coolers? ○ Yes ✓ No If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

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

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
—		11/4/20	1800	CH	3.1	X
						☐
						☐
						☐

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

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

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

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

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

Notes, Discrepancies, & Resolutions:

Service request Label:

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

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 369483 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/10/20 08:50

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001078-001	COBS_1 (1388-006)	.01	6850/ClO4			Water	10mL	
2	E2001078-002	COBS_3 (1388-007)	.01	6850/ClO4			Water	10mL	
3	E2001078-003	NOBS_1 (1388-008)	.01	6850/ClO4			Water	10mL	
4	E2001078-004	NOBS_2 (1388-009)	.01	6850/ClO4			Water	10mL	
5	E2001078-005	Orestock_2 (1388-010)	.01	6850/ClO4			Water	10mL	
6	E2001078-006	Orestock_4 (1388-011)	.01	6850/ClO4			Water	10mL	
7	E2001078-007	Orestock_1 (1388-012)	.01	6850/ClO4			Water	10mL	
8	E2001078-008	Orestock_3 (1388-013)	.01	6850/ClO4			Water	10mL	
9	E2001078-009	HEAP_2 (1388-014)	.01	6850/ClO4			Water	10mL	
10	E2001078-010	HEAP_4 (1388-015)	.01	6850/ClO4			Water	10mL	
11	E2001078-011	HEAP_5 (1388-016)	.01	6850/ClO4			Water	10mL	
12	E2001078-012	HEAP_8 (1388-017)	.01	6850/ClO4			Water	10mL	
13	E2001078-013	NOBS_1 Dup (1388-008 DUP)	.01	6850/ClO4			Water	10mL	
14	E2001078-014	Prep Blank	.01	6850/ClO4			Water	10mL	
15	EQ2000584-01	MB		6850/ClO4			Liquid	10mL	
16	EQ2000584-02	LCS		6850/ClO4			Liquid	10mL	
17	EQ2000584-03	DLCS		6850/ClO4			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000584-02 100.00µL EQ2000584-03 100.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 213952 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2001078-001 100.00µL E2001078-002 100.00µL E2001078-003 100.00µL E2001078-004 100.00µL E2001078-005 100.00µL E2001078-006 100.00µL
E2001078-007 100.00µL E2001078-008 100.00µL E2001078-014 100.00µL EQ2000584-01 100.00µL EQ2000584-02 100.00µL EQ2000584-03 100.00µL

Preparation Steps

Step: Preparation
Started: 11/10/20 08:50
Finished: 11/10/20 09:20
By: GRIVERA
Comments

Preparation Information Benchsheet

Prep Run#: 369483
Team: Semivoa GCMS/GRIVERA
Prep WorkFlow: GenExt28Day
Prep Method: Method
Status: Prepped
Prep Date/Time: 11/10/20 08:50

Comments:

Reviewed By: GR Date: 11/10/2020

Chain of Custody

Relinquished By: Date:

Received By: Date:

Extracts Examined
Yes No

Analytical Results

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Collected:**	11/ 3/20 1400
Sample Matrix:	Water	**Date Received:**	11/ 4/20
Sample Name:	LH18/24-SP650_110320-AIX	**Units:**	µg/L
Lab Code:	E2001081-001	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	11/10/20	11/20/20 16:44	369486	704366	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000586-01	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	11/10/20	11/20/20 16:20	369486	704366	

Accuracy & Precision

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20110120
Sample Matrix: Water

Service Request: E2001081
Date Analyzed: 11/20/20

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

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 369486

	Lab Control Sample EQ2000586-02			Duplicate Lab Control Sample EQ2000586-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.111	0.100	111	0.115	0.100	115	84 - 119	3	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000586-02	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.111**		0.100	0.0500	0.0250	1	11/10/20	11/20/20 16:28	369486	704366	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000586-03	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.115**		0.100	0.0500	0.0250	1	11/10/20	11/20/20 16:36	369486	704366	

Initial Calibration

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

20201120

ALS Environmental

ICAL Date: 11/20/2020
Cal. Std. xp: 5/20/2020
ICAL ID: **EC2000050**

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20201120_016	Perchlorate6850b.lcm	1x	☒	3100808-05	11/20/2020 14:36
2	PERCHLORATE2		20201120_018	Perchlorate6850b.lcm	1x	☒	3100808-07	11/20/2020 14:52
3	PERCHLORATE3		20201120_019	Perchlorate6850b.lcm	1x	☒	3100808-08	11/20/2020 15:00
4	PERCHLORATE4		20201120_020	Perchlorate6850b.lcm	1x	☒	3100808-09	11/20/2020 15:08
5	PERCHLORATE5		20201120_021	Perchlorate6850b.lcm	1x	☒	3100808-10	11/20/2020 15:16
6	PERCHLORATE6		20201120_022	Perchlorate6850b.lcm	1x	☒	3100809-01	11/20/2020 15:24
7	PERCHLORATE7		20201120_023	Perchlorate6850b.lcm	1x	☒	3100809-02	11/20/2020 15:32
8	PERCHLORATE8		20201120_024	Perchlorate6850b.lcm	1x	☒	3100809-03	11/20/2020 15:40
9	PERCHLORATE9		20201120_025	Perchlorate6850b.lcm	1x	☒	3100809-04	11/20/2020 15:47
10	PERCHLORATEICV		20201120_026	Perchlorate6850b.lcm	1x	☒	3100809-06	11/20/2020 15:55
11	LODV		20201120_027	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:03
12	ICS		20201120_028	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:11
13	EQ2000586-01		20201120_029	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:20
14	EQ2000586-02		20201120_030	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:28
15	EQ2000586-03		20201120_031	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:36
16	E2001081-001		20201120_032	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:44
17	PERCHLORATE7		20201120_033	Perchlorate6850b.lcm	1x	☒	3100809-02	11/20/2020 16:52
18								
19								
20								
21								
22								
23								
24								
25								

Initial Calibration - Detailed Report

Calibration ID: EC2000050 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000050-01	PERCHLORATE1	20201120_016	11/20/2020 14:36
02	EC2000050-02	PERCHLORATE2	20201120_018	11/20/2020 14:52
03	EC2000050-03	PERCHLORATE3	20201120_019	11/20/2020 15:00
04	EC2000050-04	PERCHLORATE4	20201120_020	11/20/2020 15:08
05	EC2000050-05	PERCHLORATE5	20201120_021	11/20/2020 15:16
06	EC2000050-06	PERCHLORATE6	20201120_022	11/20/2020 15:24
07	EC2000050-07	PERCHLORATE7	20201120_023	11/20/2020 15:32
08	EC2000050-08	PERCHLORATE8	20201120_024	11/20/2020 15:40
09	EC2000050-09	PERCHLORATE9	20201120_025	11/20/2020 15:47

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 7.806** **Average RF = 0.09894**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1127	02	0.7000	0.1025	03	1.0000	0.1097	04	2.0000	0.09461
05	5.0000	0.09774	06	10.0000	0.09166	07	20.0000	0.09494	08	30.0000	0.09516
09	50.0000	0.09147									

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.114	13.9	02	0.7000	0.725	3.6	03	1.0000	1.11	10.9
04	2.0000	1.91	-4.4	05	5.0000	4.94	-1.2	06	10.0000	9.26	-7.4
07	20.0000	19.2	-4.0	08	30.0000	28.9	-3.8	09	50.0000	46.2	-7.5

Initial Calibration Verification Summary Report

Calibration ID:	EC2000050	**Instrument ID:**	E-LCMS-01
Datafile ID:	20201120_026	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000050-10	T	Average RF	10	10.631	ng/mL	6.3	<= 15

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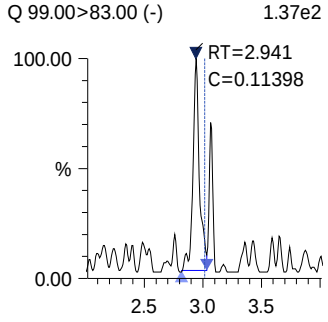
PERCHLORATE1

Date acquired: 11/20/2020 2:36:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_016.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	11/20/2020 2:36:56 PM	524	0.11398	20201120_016	2.941	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	11/20/2020 2:36:56 PM	46484	1.00000	20201120_016	2.933	25.0000	1.0000	5

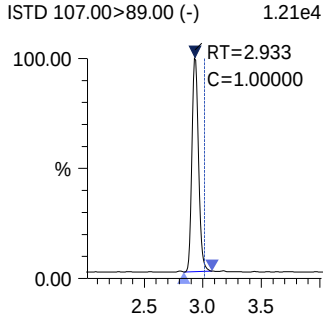
Perchlorate

Conc 0.11398
Area 524



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 46484



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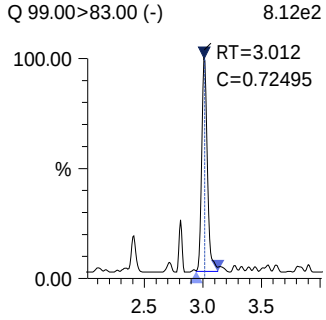
PERCHLORATE2

Date acquired: 11/20/2020 2:52:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_018.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	11/20/2020 2:52:40 PM	2749	0.72495	20201120_018	3.012	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE2	11/20/2020 2:52:40 PM	38328	1.00000	20201120_018	3.010	25.0000	1.0000	7

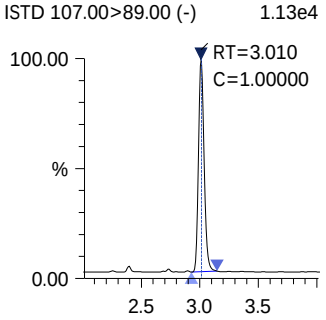
Perchlorate

Conc 0.72495
Area 2749



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 38328



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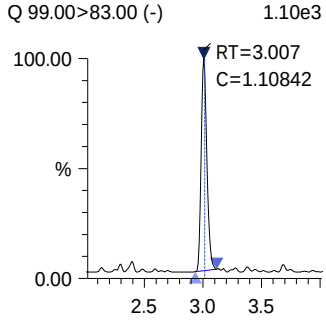
PERCHLORATE3

Date acquired: 11/20/2020 3:00:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_019.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	11/20/2020 3:00:32 PM	3760	1.10842	20201120_019	3.007	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE3	11/20/2020 3:00:32 PM	34282	1.00000	20201120_019	3.006	25.0000	1.0000	8

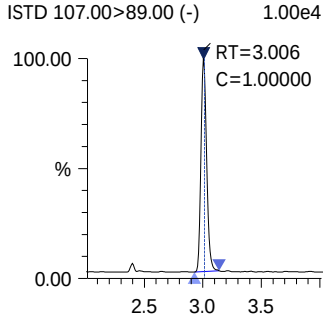
Perchlorate

Conc 1.10842
Area 3760



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 34282



ALS Group Houston

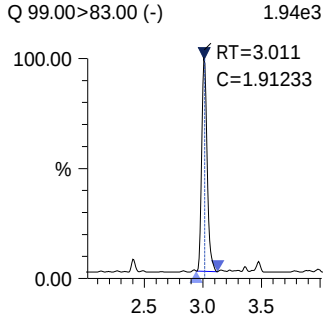
PERCHLORATE4

Date acquired: 11/20/2020 3:08:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_020.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	11/20/2020 3:08:28 PM	6379	1.91233	20201120_020	3.011	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE4	11/20/2020 3:08:28 PM	33713	1.00000	20201120_020	3.010	25.0000	1.0000	9

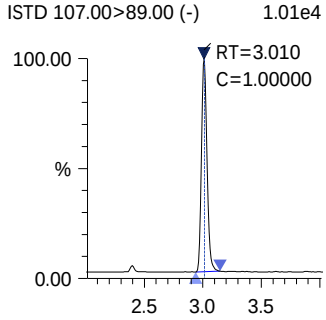
Perchlorate

Conc 1.91233
Area 6379



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 33713



ALS Group Houston

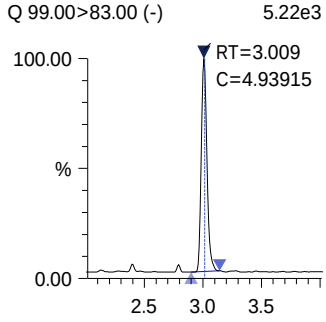
PERCHLORATE5

Date acquired: 11/20/2020 3:16:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_021.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	11/20/2020 3:16:20 PM	17781	4.93915	20201120_021	3.009	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE5	11/20/2020 3:16:20 PM	36384	1.00000	20201120_021	3.006	25.0000	1.0000	10

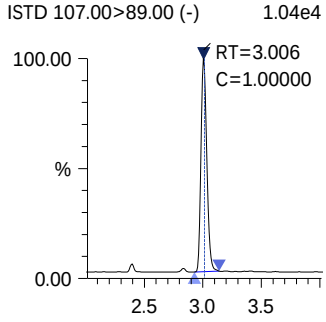
Perchlorate

Conc 4.93915
Area 17781



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 36384



ALS Group Houston

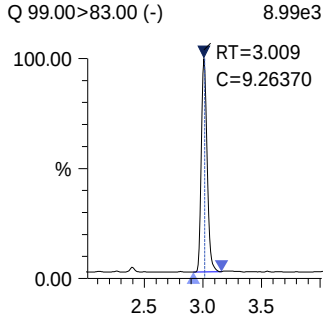
PERCHLORATE6

Date acquired: 11/20/2020 3:24:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_022.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	11/20/2020 3:24:13 PM	31502	9.26370	20201120_022	3.009	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE6	11/20/2020 3:24:13 PM	34369	1.00000	20201120_022	3.008	25.0000	1.0000	4

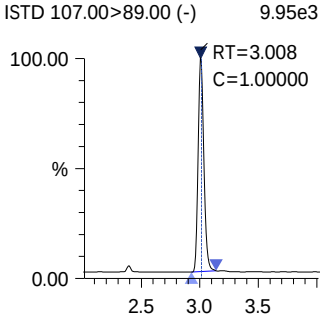
Perchlorate

Conc 9.26370
Area 31502



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 34369



ALS Group Houston

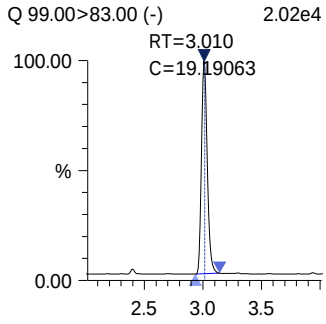
PERCHLORATE7

Date acquired: 11/20/2020 3:32:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_023.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	11/20/2020 3:32:09 PM	70100	19.19063	20201120_023	3.010	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE7	11/20/2020 3:32:09 PM	36918	1.00000	20201120_023	3.009	25.0000	1.0000	11

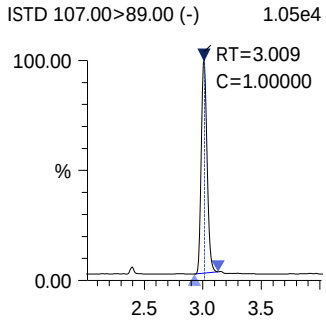
Perchlorate

Conc 19.19063
Area 70100



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 36918



ALS Group Houston

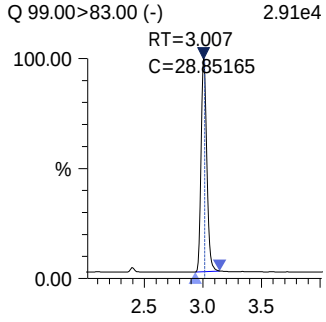
PERCHLORATE8

Date acquired: 11/20/2020 3:40:03 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_024.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	11/20/2020 3:40:03 PM	99386	28.85165	20201120_024	3.007	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE8	11/20/2020 3:40:03 PM	34815	1.00000	20201120_024	3.005	25.0000	1.0000	12

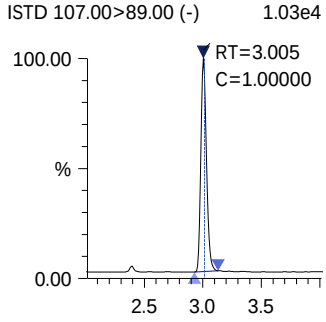
Perchlorate

Conc 28.85165
Area 99386



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 34815



ALS Group Houston

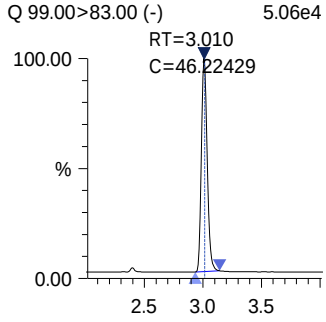
PERCHLORATE9

Date acquired: 11/20/2020 3:47:58 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_025.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	11/20/2020 3:47:58 PM	177227	46.22429	20201120_025	3.010	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE9	11/20/2020 3:47:58 PM	38750	1.00000	20201120_025	3.009	25.0000	1.0000	13

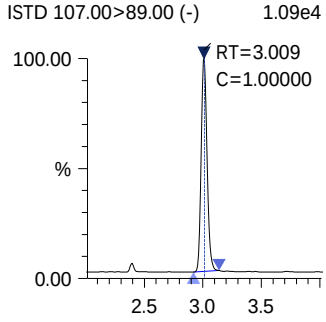
Perchlorate

Conc 46.22429
Area 177227



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 38750



ALS Group Houston

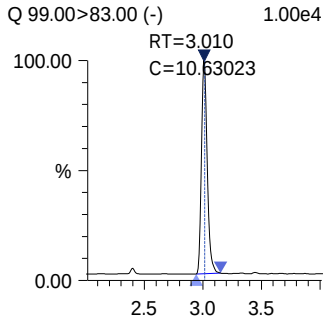
PERCHLORATEICV

Date acquired: 11/20/2020 3:55:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_026.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	11/20/2020 3:55:54 PM	34758	10.63023	20201120_026	3.010	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	11/20/2020 3:55:54 PM	33046	1.00000	20201120_026	3.010	25.0000	1.0000	14

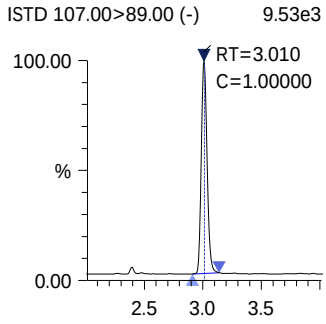
Perchlorate

Conc 10.63023
Area 34758



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 33046



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20201120

ALS Environmental

ICAL Date: 11/20/2020
Cal. Std. xp: 5/20/2020
ICAL ID: **EC2000050**

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20201120_016	Perchlorate6850b.lcm	1x	☒	3100808-05	11/20/2020 14:36
2	PERCHLORATE2		20201120_018	Perchlorate6850b.lcm	1x	☒	3100808-07	11/20/2020 14:52
3	PERCHLORATE3		20201120_019	Perchlorate6850b.lcm	1x	☒	3100808-08	11/20/2020 15:00
4	PERCHLORATE4		20201120_020	Perchlorate6850b.lcm	1x	☒	3100808-09	11/20/2020 15:08
5	PERCHLORATE5		20201120_021	Perchlorate6850b.lcm	1x	☒	3100808-10	11/20/2020 15:16
6	PERCHLORATE6		20201120_022	Perchlorate6850b.lcm	1x	☒	3100809-01	11/20/2020 15:24
7	PERCHLORATE7		20201120_023	Perchlorate6850b.lcm	1x	☒	3100809-02	11/20/2020 15:32
8	PERCHLORATE8		20201120_024	Perchlorate6850b.lcm	1x	☒	3100809-03	11/20/2020 15:40
9	PERCHLORATE9		20201120_025	Perchlorate6850b.lcm	1x	☒	3100809-04	11/20/2020 15:47
10	PERCHLORATEICV		20201120_026	Perchlorate6850b.lcm	1x	☒	3100809-06	11/20/2020 15:55
11	LODV		20201120_027	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:03
12	ICS		20201120_028	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:11
13	EQ2000586-01		20201120_029	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:20
14	EQ2000586-02		20201120_030	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:28
15	EQ2000586-03		20201120_031	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:36
16	E2001081-001		20201120_032	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:44
17	PERCHLORATE7		20201120_033	Perchlorate6850b.lcm	1x	☒	3100809-02	11/20/2020 16:52
18								
19								
20								
21								
22								
23								
24								
25								

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20110120

Service Request: E2001081
Date Analyzed: 11/20/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20201120\20201120_026

Calibration Date: 11/20/20
Calibration ID: EC2000050
Analysis Lot: 704366
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.6	0.09850	0.1052	6.8	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20110120

Service Request: E2001081
Date Analyzed: 11/20/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20201120\20201120_033

Calibration Date: 11/20/20
Calibration ID: EC2000050
Analysis Lot: 704366
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.36	0.09850	0.09261	-6.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Analyzed:**	11/20/20 15:55

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20201120\20201120_026	**Lab Code:**	EQ2000607-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	704366
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	36,964	3.00
	Upper Limit ==>	55,446	5.00
	Lower Limit ==>	18,482	1.00
Associated Analyses			
Continuing Calibration Verification	EQ2000607-01	33,046	3.01
Method Blank	EQ2000586-01	35,408	2.93
Lab Control Sample	EQ2000586-02	37,920	3.01
Duplicate Lab Control Sample	EQ2000586-03	34,299	3.01
LH18/24-SP650_110320-AIX	E2001081-001	18,574	3.00

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20110120

Service Request: E2001081
Date Analyzed: 11/20/20 16:52

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

File ID: I:\LCMS01\DATA\20201120\20201120_033
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000607-02
Analysis Lot: 704366
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	36,964	3.00
	Upper Limit ==>	55,446	5.00
	Lower Limit ==>	18,482	1.00
Associated Analyses			
Continuing Calibration Verification	EQ2000607-02	36,227	2.97

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

ALS Group Houston

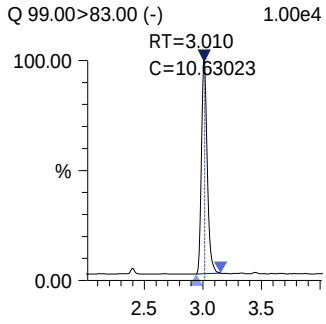
PERCHLORATEICV

Date acquired: 11/20/2020 3:55:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_026.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	11/20/2020 3:55:54 PM	34758	10.63023	20201120_026	3.010	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	11/20/2020 3:55:54 PM	33046	1.00000	20201120_026	3.010	25.0000	1.0000	14

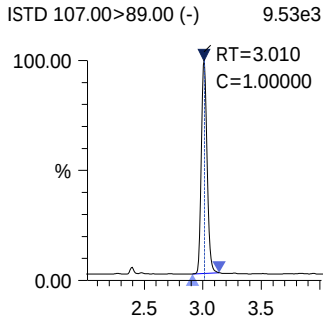
Perchlorate

Conc 10.63023
Area 34758



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 33046



ALS Group Houston

EQ2000586-01

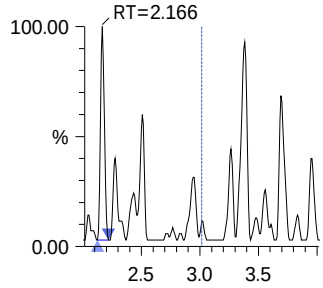
Date acquired: 11/20/2020 4:20:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_029.lcd
Vial: 52 | Inj. Volume: 25.0000uL | Tray: 3

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000586-01	11/20/2020 4:20:27 PM	----	----	20201120_029	----	25.0000	1.0000	52
Sodium Perchlorate-18O4_IS	EQ2000586-01	11/20/2020 4:20:27 PM	35408	1.00000	20201120_029	2.927	25.0000	1.0000	52

Perchlorate

Conc ----
Area ----

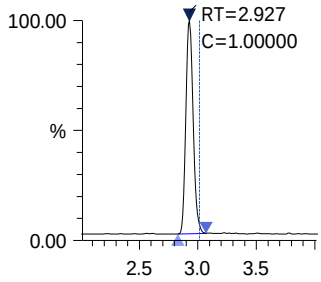
Q 99.00>83.00 (-) 6.80e1



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 35408

ISTD 107.00>89.00 (-) 8.34e3



ALS Group Houston

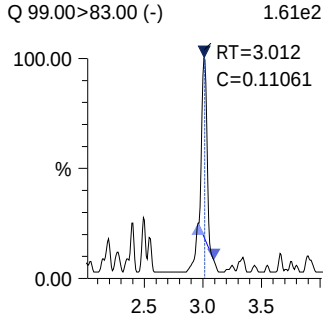
EQ2000586-02

Date acquired: 11/20/2020 4:28:18 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_030.lcd
Vial: 53 | Inj. Volume: 25.0000uL | Tray: 3

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000586-02	11/20/2020 4:28:18 PM	415	0.11061	20201120_030	3.012	25.0000	1.0000	53
Sodium Perchlorate-18O4_IS	EQ2000586-02	11/20/2020 4:28:18 PM	37920	1.00000	20201120_030	3.007	25.0000	1.0000	53

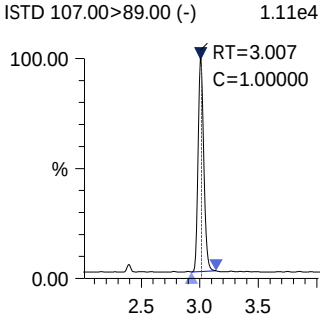
Perchlorate

Conc 0.11061
Area 415



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 37920



ALS Group Houston

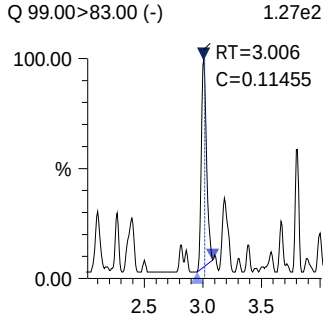
EQ2000586-03

Date acquired: 11/20/2020 4:36:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_031.lcd
Vial: 54 | Inj. Volume: 25.0000uL | Tray: 3

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000586-03	11/20/2020 4:36:13 PM	389	0.11455	20201120_031	3.006	25.0000	1.0000	54
Sodium Perchlorate-18O4_IS	EQ2000586-03	11/20/2020 4:36:13 PM	34299	1.00000	20201120_031	3.008	25.0000	1.0000	54

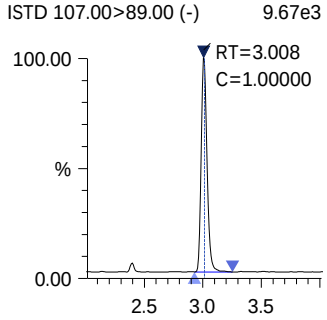
Perchlorate

Conc 0.11455
Area 389



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 34299



ALS Group Houston

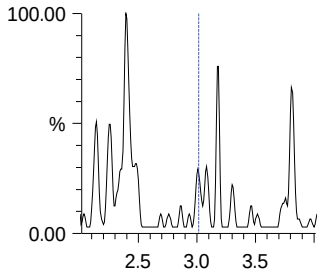
E2001081-001

Date acquired: 11/20/2020 4:44:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_032.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 4

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	E2001081-001	11/20/2020 4:44:09 PM	----	----	20201120_032	----	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	E2001081-001	11/20/2020 4:44:09 PM	18574	1.00000	20201120_032	2.997	25.0000	1.0000	3

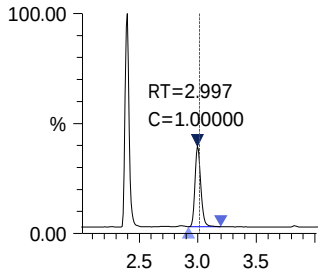
Perchlorate

Conc ----
Area ----
Q 99.00>83.00 (-) 8.10e1



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 18574
ISTD 107.00>89.00 (-) 1.41e4



ALS Group Houston

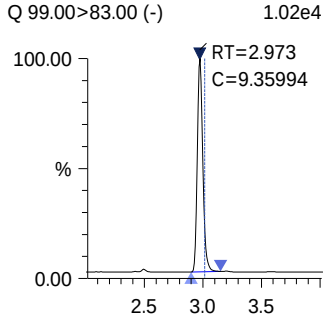
PERCHLORATE7

Date acquired: 11/20/2020 4:52:07 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_033.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	11/20/2020 4:52:07 PM	33550	9.35994	20201120_033	2.973	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	11/20/2020 4:52:07 PM	36227	1.00000	20201120_033	2.972	25.0000	1.0000	4

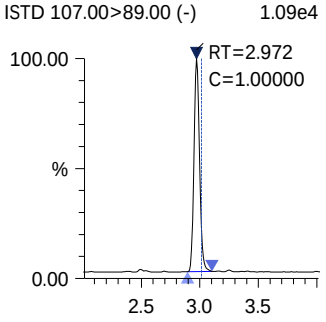
Perchlorate

Conc 9.35994
Area 33550



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 36227



HS20110120 Wet Chem Raw Data (NIT-AMM_W- E350.3 - ISE)

ALS WO# HS20110120

NIT-AMN-W-ISE /3503

ALS Laboratory Group

Logbook **31514**

Ion Selective Electrode Logbook

Analyst: MD	Date: 11/17/20 12:11PM
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F	

Probe Calibration Date:	Cal Std ID:			Probe ID:
11/17/20	3150119(01-06)			XL-250 X01-11806
Std Level		mV	Conc., mg/L:	Sodium Thiosulfate ID:
STD 1 (mg/L):	0.2	130.3	0.199	Std Level / mV / Conc., mg/L:
STD 2 (mg/L):	1	93.7	0.998	STD 4 (mg/L): 10 / 35.4 / 10.010
STD 3 (mg/L):	5	53.0	4.993	STD 5 (mg/L): 50 / ~5.3 / 50.14
LSC / MS Spike ID:	3100602922			ICAL Date & Slope:
ICV Cal STD ID:	3150111901			98.7+/-58.2mV
DPD Reagent ID:	3100602819			

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/-)	Comments
ICV					10.143			
CCB					0.009			
MBIK					0.008			
LCS					10.223			
HS20110120-01					13.021		-ve	
452-01					0.335		-ve	
452-01MS					10.088			
452-01MSD					10.069			
456-01					44.828		-ve	
510-01					13.878		-ve	
518-01				200X	6.077		+ve	
518-02				200X	17.677		-ve	
CCV					10.542			
CCB					0.008			
HS20110 518-03				10X	5.739		-ve	
I 518-04				10X	4.859		-ve	
CCV					10.757			
CCB					0.010			
			MD 11/17/20					

Batch ID:	Reported By	Reviewed By:
3727661 3727768	MD	KV

©2018 ALS Laboratory Group

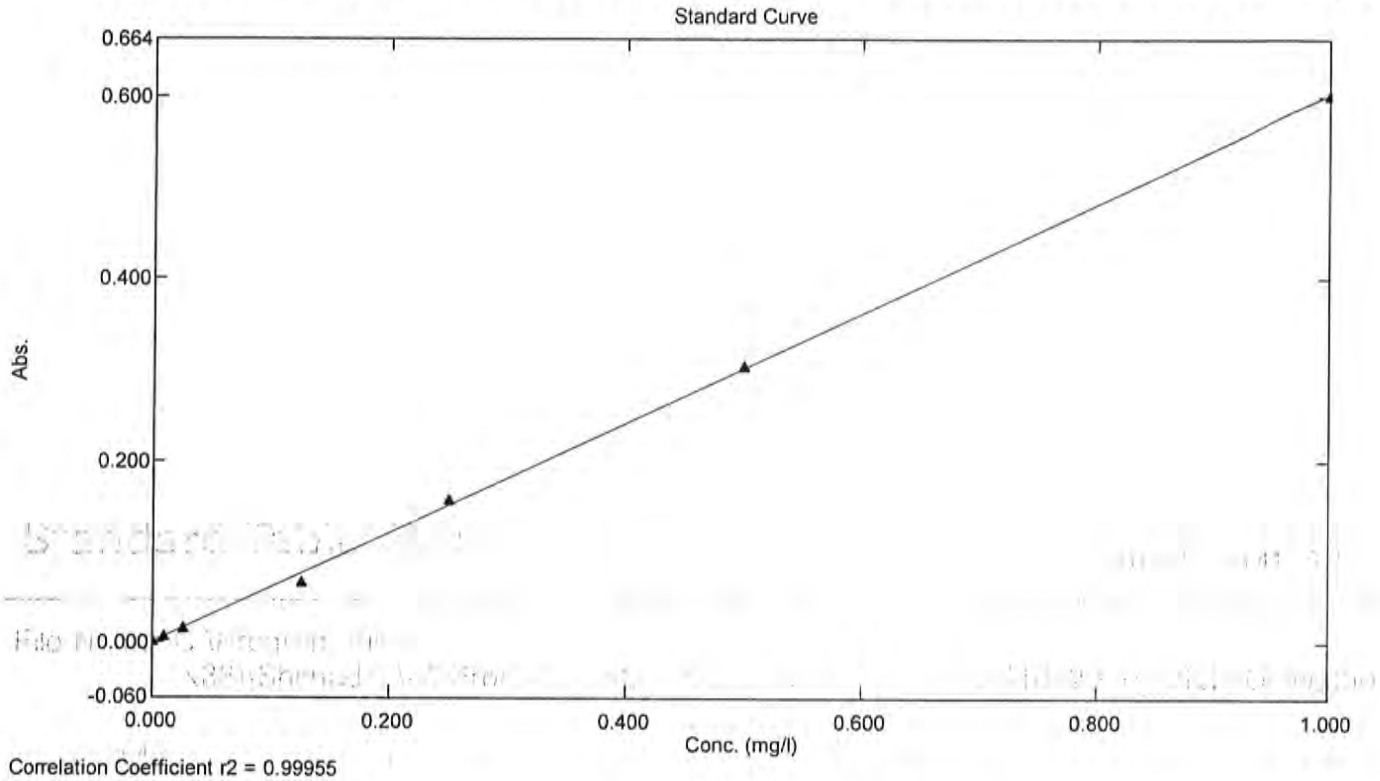
HS20110120 Wet Chem Raw Data (P-ORTHO)

ALS WO# HS20110120

Standard Table Report

12/01/2020 04:41:15 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\110420_P_ORTHO_W.pho



Correlation Coefficient r2 = 0.99955

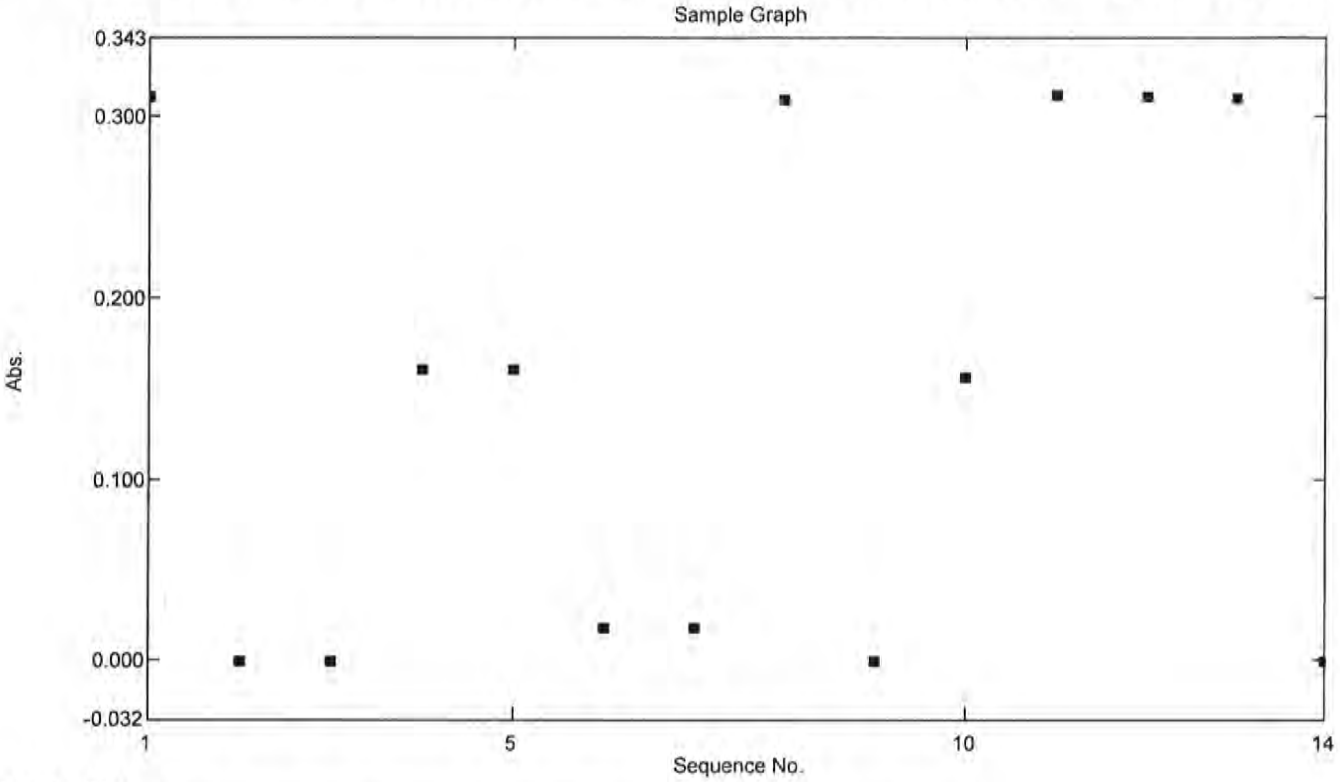
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	0.002	1.000	
2	STD2	Standard		0.010	0.007	1.000	
3	STD3	Standard		0.025	0.015	1.000	
4	STD4	Standard		0.125	0.066	1.000	
5	STD5	Standard		0.250	0.157	1.000	
6	STD6	Standard		0.500	0.305	1.000	
7	STD7	Standard		1.000	0.602	1.000	
8							

Sample Table Report

12/01/2020 04:41:19 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\110420_P_ORTHO_W.ph



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.514	0.310	314067502 WC-14
2	CCB	Unknown		-0.000	-0.000	
3	MBLK	Unknown		-0.001	-0.000	
4	LCS	Unknown		0.265	0.160	314067501 WC-14
5	LCSD	Unknown		0.265	0.160	
6	HS20110027.01	Unknown		0.030	0.018	08:53AMPF:50X,SAMP
7	HS20110032.01	Unknown		0.030	0.018	08:54AMPF:50X,SAMP
8	CCV2	Unknown		0.511	0.309	
9	CCB2	Unknown		-0.001	-0.001	C-315010905 UV-11
10	HS20110120.01	Unknown		0.259	0.156	PF:10X,12:39PM
11	HS20110120.01MS	Unknown		0.516	0.312	PF:10X,12:40PM
12	HS20110120.01MS	Unknown		0.514	0.310	PF:10X,12:40PM
13	CCV3	Unknown		0.512	0.309	
14	CCB3	Unknown		-0.001	-0.001	
15						

HS20110120 ALS Kelso Tier IV K2010199

ALS WO# HS20110120

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

November 18, 2020

Analytical Report for Service Request No: K2010199

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

RE: ALS Houston DOD TOC

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 05, 2020
For your reference, these analyses have been assigned our service request number **K2010199.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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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: ALS Houston DOD TOC
Sample Matrix: Water

Service Request: K2010199
Date Received: 11/05/2020

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:

One water sample was received for analysis at ALS Environmental on 11/05/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by _____ Date 11/18/2020

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

K2010199

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:** **15097**

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:	HS20110120
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110120-01**	**LH18/24-SP650_110320**	**Water**	**03 Nov 2020 14:00**
	TOC: Provide DOD Level II and Level IV reports in separate pdf			18 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: J. Modashia Date/Time: 11/04/20 18:00

Received By: Date/Time: 11/5/20 1015

Cooler ID(s): Temperature(s):

PM KL

Cooler Receipt and Preservation Form

Client AIP-Houston Service Request K20 10195

Received: 11/5/20 Opened: 11/5/20 By: BR Unloaded: 11/5/20 By: BR

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 2 front
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
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
0.9	—	IR01		—		191888249466	

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:**	K2010199
Project:	ALS Houston DOD TOC	**Date Collected:**	11/3/20
Sample Matrix:	Water	**Date Received:**	11/5/20
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
LH18/24-SP650_110320	K2010199-001	**1.20**	0.50	0.20	0.07	1	11/11/20 17:58	
Method Blank	K2010199-MB	ND U	0.50	0.20	0.07	1	11/11/20 17:58	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010199
Project:	ALS Houston DOD TOC	**Date Analyzed:**	11/11/20
Sample Matrix:	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:	703161

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2010199-LCS	25.9	25.0	104	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2010199
Project: ALS Houston DOD TOC

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	703161	KQ2017857-05	11/11/20 17:58	25.0	25.6	103	90-110
CCV2	703161	KQ2017857-06	11/11/20 17:58	25.0	25.6	103	90-110
CCV3	703161	KQ2017857-07	11/11/20 17:58	25.0	25.1	101	90-110
CCV4	703161	KQ2017857-08	11/11/20 17:58	25.0	26.8	107	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2010199
Project: ALS Houston DOD TOC

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	703161	KQ2017857-09	11/11/20 17:58	0.50	0.20	0.07	ND	U
CCB2	703161	KQ2017857-10	11/11/20 17:58	0.50	0.20	0.07	ND	U
CCB3	703161	KQ2017857-11	11/11/20 17:58	0.50	0.20	0.07	ND	U
CCB4	703161	KQ2017857-12	11/11/20 17:58	0.50	0.20	0.07	0.38	J

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2010199
Project:	ALS Houston DOD TOC	**Date Collected:**	11/3/20
Sample Matrix:	Water	**Date Received:**	11/5/20
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
LH18/24-SP650_110320	K2010199-001	**1.20**	0.50	0.20	0.07	1	11/11/20 17:58	
Method Blank	K2010199-MB	ND U	0.50	0.20	0.07	1	11/11/20 17:58	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2010199
Project:	ALS Houston DOD TOC	**Date Analyzed:**	11/11/20
Sample Matrix:	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:	703161

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2010199-LCS	25.9	25.0	104	83-117

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) K2009246, 10044, 10124, 10127, 10199, 10200, 10258, 10363

Tier: I II II II IV IV II IV

Date Analyzed: 11/11/20

Analyst: MAS Run # 703161

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:

- RPD between K2010200-001 Parent & Dup is high but results are less than 5x MRL

Final Approved by: QC Date: 11/14/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-01 **Analyst:** MSPECHT **Analysis Lot:** 703161 **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
K2009246-001	Carbon, Total Organic	N/A		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/11/20 17:58:00	N	I
K2009246-002	Carbon, Total Organic	N/A		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/11/20 17:58:00	N	I
K2010044-001	Carbon, Total Organic	N/A		Ground Water	1.63 mg/L	10 mL	1.63 mg/L	1	0.07	0.50			11/11/20 17:58:00	N	II
K2010044-002	Carbon, Total Organic	N/A		Ground Water	8.33 mg/L	10 mL	8.33 mg/L	1	0.07	0.50			11/11/20 17:58:00	N	II
K2010124-001	Carbon, Total Organic	N/A		Water	0.47 mg/L	10 mL	0.47 mg/L J	1	0.07	0.50			11/11/20 17:58:00	N	II
K2010124-002	Carbon, Total Organic	N/A		Water	0.84 mg/L	10 mL	0.84 mg/L	1	0.07	0.50			11/11/20 17:58:00	N	II
K2010127-001	Carbon, Total Organic	N/A		Water	1.97 mg/L	10 mL	1.97 mg/L	1	0.07	0.50			11/11/20 17:58:00	N	II
K2010127-002	Carbon, Total Organic	N/A		Water	0.48 mg/L	10 mL	0.48 mg/L J	1	0.07	0.50			11/11/20 17:58:00	N	II
K2010127-003	Carbon, Total Organic	N/A		Water	0.31 mg/L	10 mL	0.31 mg/L J	1	0.07	0.50			11/11/20 17:58:00	N	II
K2010127-004	Carbon, Total Organic	N/A		Water	0.27 mg/L	10 mL	0.27 mg/L J	1	0.07	0.50			11/11/20 17:58:00	N	II
K2010199-001	Carbon, Total Organic	N/A		Water	1.20 mg/L	10 mL	1.20 mg/L	1	0.07	0.50			11/11/20 17:58:00	N	IV
K2010200-001	Carbon, Total Organic	N/A		Ground Water	1.45 mg/L	10 mL	1.45 mg/L	1	0.07	0.50			11/11/20 17:58:00	Y	IV
K2010200-002	Carbon, Total Organic	N/A		Ground Water	1.17 mg/L	10 mL	1.17 mg/L	1	0.07	0.50			11/11/20 17:58:00	N	IV
K2010200-003	Carbon, Total Organic	N/A		Ground Water	1.21 mg/L	10 mL	1.21 mg/L	1	0.07	0.50			11/11/20 17:58:00	N	IV
K2010258-001	Carbon, Total Organic	N/A		Water	7.44 mg/L	10 mL	7.44 mg/L	1	0.07	0.50			11/11/20 17:58:00	N	II
K2010363-001	Carbon, Total Organic	N/A		Ground Water	1.93 mg/L	10 mL	1.93 mg/L	1	0.07	0.50			11/11/20 17:58:00	N	IV
K2010363-002	Carbon, Total Organic	N/A		Ground Water	35.32 mg/L	10 mL	177 mg/L	5	0.4	2.5			11/11/20 17:58:00	N	IV
K2010363-003	Carbon, Total Organic	N/A		Ground Water	35.54 mg/L	10 mL	178 mg/L	5	0.4	2.5			11/11/20 17:58:00	N	IV
K2010363-004	Carbon, Total Organic	N/A		Ground Water	3.32 mg/L	10 mL	3.32 mg/L	1	0.07	0.50			11/11/20 17:58:00	Y	IV
K2010363-005	Carbon, Total Organic	N/A		Ground Water	3.96 mg/L	10 mL	19.8 mg/L	5	0.4	2.5			11/11/20 17:58:00	N	IV
KQ2017857-01	Carbon, Total Organic	MS	K2010200-001	Ground Water	23.37 mg/L	10 mL	23.4 mg/L	1	0.07	0.50	88		11/11/20 17:58:00	N	IV
KQ2017857-02	Carbon, Total Organic	DUP	K2010200-001	Ground Water	1.28 mg/L	10 mL	1.28 mg/L	1	0.07	0.50		12*	11/11/20 17:58:00	N	IV
KQ2017857-03	Carbon, Total Organic	MS	K2010363-004	Ground Water	28.00 mg/L	10 mL	28.0 mg/L	1	0.07	0.50	99		11/11/20 17:58:00	N	IV
KQ2017857-04	Carbon, Total Organic	DUP	K2010363-004	Ground Water	3.15 mg/L	10 mL	3.15 mg/L	1	0.07	0.50		5	11/11/20 17:58:00	N	IV
KQ2017857-05	Carbon, Total Organic	CCV		Reagent Water	25.63 mg/L	10 mL	25.6 mg/L	1					11/11/20 17:58:00	N	I
KQ2017857-06	Carbon, Total Organic	CCV		Reagent Water	25.65 mg/L	10 mL	25.6 mg/L	1					11/11/20 17:58:00	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:** 703161 **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
KQ2017857-07	Carbon, Total Organic	CCV		Reagent Water	25.15 mg/L	10 mL	25.1 mg/L	1					11/11/20 17:58:00	N	I
KQ2017857-08	Carbon, Total Organic	CCV		Reagent Water	26.79 mg/L	10 mL	26.8 mg/L	1					11/11/20 17:58:00	N	I
KQ2017857-09	Carbon, Total Organic	CCB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/11/20 17:58:00	N	I
KQ2017857-10	Carbon, Total Organic	CCB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/11/20 17:58:00	N	I
KQ2017857-11	Carbon, Total Organic	CCB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/11/20 17:58:00	N	I
KQ2017857-12	Carbon, Total Organic	CCB		Reagent Water	0.38 mg/L	10 mL	0.38 mg/L J	1	0.07	0.50			11/11/20 17:58:00	N	I
KQ2017857-13	Carbon, Total Organic	MB		Reagent Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			11/11/20 17:58:00	N	I
KQ2017857-14	Carbon, Total Organic	LCS		Reagent Water	25.94 mg/L	10 mL	25.9 mg/L	1	0.07	0.50	104		11/11/20 17:58:00	N	I

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Schedule: 11112020

Version: 3
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/11/12 09:51 - 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	K2009246-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
4	Sample	K2009246-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
5	Sample	K2010199-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
6	Sample	K2010200-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
7	Sample	K2010200-001DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2010200-001MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2010200-002	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	K2010200-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2010363-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2010363-002 -NH outside range	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2010363-003 5X -NH	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2010363-004 Possible carry over	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2010363-004DUP	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2010363-004MS	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2010363-005 5X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2010258-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2010044-001	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 -NH Extra	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm] -NH (extra)	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	K2010044-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2010124-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2010124-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2010127-001	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
25	Sample	K2010127-002	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2010127-003	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2010127-004	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2010363-002 5X	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2010363-003 5X	CAS_salt_010711 (CAS_salt_010711)	2	True	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: 11112020

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 - 11112020
Wednesday, November 11, 2020 05:58 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/11/12 12:00 - Thursday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	11112020	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) (v2) Fusion1 (Fusion1) (v3)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/11/11 17:58

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	15.72	28.71	12.99	49.55	05:21
2	TC Clean	7.69	20.42	12.73	50.19	04:06
3	TC Clean	1.17	14.12	12.94	50.15	03:48
4	TC Clean	1.33	14.08	12.76	50.26	03:48

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/11/11 18:19

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.18	12.78	12.96	49.71	05:14
2	TC Clean	3.97	16.78	12.82	50.03	04:04
3	TC Clean	0.90	13.66	12.77	50.03	03:56
4	TC Clean	0.45	13.47	13.02	50.04	03:54

Sample Type: Clean From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/11/11 18:41

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.77	12.15	12.92	49.58	05:22
2	TC Clean	3.79	16.54	12.75	50.16	04:03
3	TC Clean	1.09	13.84	12.76	50.15	03:48
4	TC Clean	0.75	13.61	12.86	50.22	03:45

Sample Type: Blank (Creating v1477) From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/11/11 19:03

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	-0.23	12.51	12.74	49.60	05:11
2	TC Clean	3.86	16.63	12.77	50.10	04:03
3	TC Clean	1.03	13.80	12.77	50.09	03:46
4	TC Clean	0.86	13.61	12.76	50.13	03:57
5	Reagent Blank	5.57	18.36	12.79	50.15	05:05
6	Acid Blank	0.04	12.74	12.69	49.78	05:30

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.0017 ppm	0.0000 ppm	0.0000%	2020/11/11 19:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0017	0.0166	9.29	22.05	12.76	50.44	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	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)	25.6303 ppm (PASS)	0.0000 ppm	0%	2020/11/11 19:51

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.6303	256.3028	189.68	202.65	12.97	50.52	10:34

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 2

	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%	2020/11/11 20:06

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.16	20.00	12.84	50.52	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/11 20:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.96	19.74	12.78	50.51	10:36

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 2

	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)	25.9435 ppm (PASS)	0.0000 ppm	0%	2020/11/11 20:36

Pos	Base Analysis	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time

	Type									
C	TOC	25.0 ppm	1	25.9435	259.4347	191.88	204.83	12.95	50.60	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	25 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	2	TOC	ICS	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/11 20:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	9.18	22.13	12.95	50.58	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	K2009246-001	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/11 21:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.35	19.29	12.94	50.63	10:27
2	TOC	0.0000	0.0000	6.55	19.23	12.68	50.66	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	K2009246-002	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/11 21:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.29	19.25	12.96	50.65	10:26
2	TOC	0.0000	0.0000	6.23	19.20	12.96	50.69	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	5	TOC	K2010199-001	1.1984 ppm	0.0109 ppm	0.9100%	2020/11/11 22:01

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2061	12.0611	17.74	30.42	12.68	50.68	10:27
2	TOC	1.1907	11.9071	17.63	30.64	13.01	50.72	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC)	CAS_salt_010711	CAS_salt_010711

(v1477) (v4) (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	6	TOC	K2010200-001	1.4476 ppm	0.1137 ppm	7.8500%	2020/11/11 22:29

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.5280	15.2799	19.99	32.87	12.87	50.70	10:26
2	TOC	1.3672	13.6719	18.87	31.99	13.13	50.70	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2010200-001DUP	1.2812 ppm	0.0718 ppm	5.6000%	2020/11/11 22:57

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.3320	13.3198	18.62	31.64	13.02	50.74	10:29
2	TOC	1.2305	12.3048	17.91	31.28	13.38	50.72	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2010200-001MS	23.3658 ppm	0.3688 ppm	1.5800%	2020/11/11 23:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	23.6266	236.2662	175.01	188.05	13.04	50.75	10:30
2	TOC	23.1050	231.0501	171.35	184.56	13.21	50.75	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2010200-002	1.1668 ppm	0.0999 ppm	8.5600%	2020/11/11 23:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2375	12.3747	17.95	31.09	13.13	50.77	10:28
2	TOC	1.0962	10.9620	16.96	30.11	13.15	50.85	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	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)	25.6480 ppm (PASS)	0.0000 ppm	0%	2020/11/12 00:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.6480	256.4795	189.81	202.99	13.18	50.87	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 2

	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%	2020/11/12 00:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.99	20.14	13.14	50.88	10:31

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 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2010200-003	1.2149 ppm	0.1450 ppm	11.9300%	2020/11/12 00:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.3174	13.1744	18.52	31.77	13.26	50.93	10:30
2	TOC	1.1124	11.1245	17.08	30.27	13.19	50.94	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2010363-001	1.9311 ppm	0.0967 ppm	5.0100%	2020/11/12 01:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.9994	19.9942	23.30	36.45	13.15	50.97	10:28
2	TOC	1.8627	18.6271	22.34	35.68	13.34	50.99	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2010363-002	116.6571 ppm	2.7258 ppm	2.3400%	2020/11/12 01:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	118.5845	1185.8449	841.12	854.53	13.40	50.98	10:27
2	TOC	114.7297	1147.2965	814.08	827.82	13.74	51.00	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2010363-003 5X	37.6717 ppm	1.2955 ppm	3.4400%	2020/11/12 02:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	38.5878	385.8779	279.96	293.66	13.70	51.01	10:31
2	TOC	36.7557	367.5567	267.11	280.85	13.74	51.04	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2010363-004	4.7879 ppm	0.8417 ppm	17.5800%	2020/11/12 02:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.3831	53.8312	47.04	60.50	13.47	51.04	10:27
2	TOC	4.1928	41.9278	38.69	52.37	13.69	51.03	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

-Nh Possibl carry over

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2010363-004DUP	3.6486 ppm	0.1721 ppm	4.7200%	2020/11/12 03:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.7702	37.7025	35.72	49.25	13.53	51.03	10:24
2	TOC	3.5269	35.2690	34.02	47.44	13.42	51.03	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

-Nh Possib carry over

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2010363-004MS	28.0016 ppm	0.3127 ppm	1.1200%	2020/11/12 03:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	28.2227	282.2274	207.25	220.78	13.53	51.04	10:28

2	TOC	27.7805	277.8053	204.15	217.66	13.51	51.03	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K2010363-005 5X	3.9648 ppm	0.0387 ppm	0.9800%	2020/11/12 04:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.9375	39.3746	36.89	50.33	13.43	51.03	10:27
2	TOC	3.9922	39.9220	37.28	50.85	13.57	51.03	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2010258-001	7.4371 ppm	0.1160 ppm	1.5600%	2020/11/12 04:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.5192	75.1916	62.02	75.48	13.46	51.02	10:26
2	TOC	7.3551	73.5508	60.87	74.35	13.48	51.02	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2010044-001	1.6322 ppm	0.0310 ppm	1.9000%	2020/11/12 05:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6542	16.5416	20.88	34.14	13.27	51.03	10:29
2	TOC	1.6102	16.1025	20.57	34.01	13.44	51.04	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	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)	25.1456 ppm (PASS)	0.0000 ppm	0%	2020/11/12 05:32

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.1456	251.4559	186.28	199.80	13.51	51.00	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 2

	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%	2020/11/12 05:47

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.41	22.79	13.38	50.99	10:29

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/11/12 06:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.47	21.90	13.43	50.97	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Check Standard --> LCS From Schedule Version 2

	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)	25.7897 ppm (PASS)	0.0000 ppm	0%	2020/11/12 06:16

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	25.7897	257.8965	190.80	204.27	13.47	50.98	10:28

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 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2010044-002	8.3282 ppm	0.1719 ppm	2.0600%	2020/11/12 06:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.4498	84.4976	68.55	82.07	13.52	50.97	10:26
2	TOC	8.2067	82.0671	66.84	80.30	13.45	50.95	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2010124-001	0.4655 ppm	0.0013 ppm	0.2800%	2020/11/12 06:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4645	4.6453	12.53	26.04	13.50	50.97	10:28
2	TOC	0.4664	4.6639	12.55	25.86	13.31	50.94	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2010124-002	0.8355 ppm	0.0289 ppm	3.4600%	2020/11/12 07:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8151	8.1508	14.99	28.47	13.48	50.93	10:28
2	TOC	0.8560	8.5599	15.28	28.84	13.56	50.93	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	K2010127-001	1.9736 ppm	0.0433 ppm	2.2000%	2020/11/12 07:55

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.0043	20.0427	23.33	36.76	13.43	50.90	10:29
2	TOC	1.9430	19.4297	22.90	36.47	13.57	50.93	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2010127-002	0.4811 ppm	0.0159 ppm	3.3100%	2020/11/12 08:23

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4923	4.9233	12.73	25.93	13.20	50.90	10:26

2	TOC	0.4698	4.6981	12.57	25.88	13.31	50.89	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2010127-003	0.3081 ppm	0.0357 ppm	11.5800%	2020/11/12 08:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2829	2.8292	11.26	24.52	13.26	50.88	10:27
2	TOC	0.3334	3.3338	11.61	24.45	12.84	50.85	10:23

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K2010127-004	0.2731 ppm	0.0000 ppm	0.0000%	2020/11/12 09:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2731	2.7308	11.19	24.28	13.09	50.87	10:27
2	TOC	0.2731	2.7308	11.19	24.23	13.04	50.85	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K2010363-002 5X	35.3245 ppm	0.4896 ppm	1.3900%	2020/11/12 09:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	34.9783	349.7829	254.64	267.76	13.12	50.78	10:30
2	TOC	35.6707	356.7068	259.50	272.68	13.18	50.80	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2010363-003 5X	35.5433 ppm	0.0424 ppm	0.1200%	2020/11/12 10:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	35.5133	355.1330	258.39	271.52	13.12	50.81	10:28
2	TOC	35.5733	355.7331	258.82	271.77	12.96	50.80	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC)	CAS_salt_010711	CAS_salt_010711

(v1477) (v4) (v38)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	26.7854 ppm (PASS)	0.0000 ppm	0%	2020/11/12 10:47

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.7854	267.8540	197.79	210.92	13.13	50.80	10:29

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 3

	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)	0.3809 ppm (PASS)	0.0000 ppm	0%	2020/11/12 11:02

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.3809	3.8090	12.56	25.57	13.01	50.78	10:31

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
v1476	1.8310	0.0180	0.0000	0.0000	0.0000	2020/11/10 20:24	Fusion1 (Fusion1)
v1477	1.8577	0.0430	0.0000	0.0000	0.0000	2020/11/11 19:37	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	2020/11/12 11:17

Fusion Report - 11122020B
Thursday, November 12, 2020 02:14 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/11/12 16:18 - Thursday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	11122020B	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: 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)	26.2324 ppm (PASS)	0.0000 ppm	0%	2020/11/12 14:14

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.2324	262.3243	193.91	206.77	12.86	50.58	10:29

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%	2020/11/12 14:29

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.72	21.54	12.83	50.58	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria	Do Nothing	CAS_salt_010711	CAS_salt_010711	0 ppmC

met.	(v4)	(v38)

Sample Type: Sample — From Schedule Version 1

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	30	TOC	K2010363-004	3.3211 ppm	0.0212 ppm	0.6400%	2020/11/12 14:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.3061	33.0609	32.47	45.39	12.92	50.58	10:28
2	TOC	3.3360	33.3602	32.68	45.65	12.97	50.58	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	31	TOC	K2010363-004DUP	3.1459 ppm	0.0893 ppm	2.8400%	2020/11/12 15:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.0827	30.8270	30.90	43.94	13.04	50.60	10:29
2	TOC	3.2090	32.0901	31.78	44.69	12.90	50.57	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 9.2744 (IC) (v1477)	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)	25.9784 ppm (PASS)	0.0000 ppm	0%	2020/11/12 15:40

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.9784	259.7840	192.13	204.80	12.67	50.55	10:34

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%	2020/11/12 15:55

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.65	21.43	12.78	50.56	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v38)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1477	1.8577	0.0430	0.0000	0.0000	0.0000	2020/11/11 19:37	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version: v38
Ver Creation: 2020/06/13 16:40
Comment:
Operator: Fusion1 (Fusion1)
Basic Analysis Type: TOC

Calibration curve formula: TOC: y = 7.015x + 9.892
r^2 value: TOC: r^2 = 0.99974

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
Ver Creation: 2019/02/21 17:57
Comment:
Operator: Fusion1 (Fusion1)

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	2020/11/12 16:10

ALS Environmental

StarLIMS Run: 703161

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-8-35-K

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-08-57D

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: 11/11/2020
Reviewed By:	Date Reviewed: 11/14/20

HS20110120 - Sub Perch Report IV (E2001081)

ALS WO# HS20110120

November 23, 2020 Service Request No:E2001081

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

Laboratory Results for: HS20110120

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 04, 2020
For your reference, these analyses have been assigned our service request number **E2001081.**

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

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

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

Certificate of Analysis

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

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001081
Project:	HS20110120	**Date Received:**	11/04/20
Sample Matrix:	W		

CASE NARRATIVE

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

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 11/04/20.

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

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000584: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

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

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

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

Client: ALS Environmental - US **Service Request:**E2001081
Project: HS20110120

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001081-001	LH18/24-SP650_110320-AIX	11/3/2020	1400

Service Request Summary

Folder #: **E2001081**
Client Name: ALS Environmental - US
Project Name: HS20110120
Project Number:

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

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: TWOODS
Date Received: 11/04/20
Internal Due Date: 11/19/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110120
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 10B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001081-001	LH18/24-SP650_110320-AIX	Water	11/03/20 1400	**IV**

Service Request Summary

Folder #:	**E2001081**
Client Name:	ALS Environmental - US
Project Name:	HS20110120
Project Number:	

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

Project Chemist:	Corey Grandits
Originating Lab:	HOUSTON
Logged By:	TWOODS
Date Received:	11/04/20
Internal Due Date:	11/19/2020
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	Y
Report to MDL?:	Y
P.O. Number:	HS20110120
EDD:	No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved

Location: EHRMS-WIC 10B

Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	level II 11/18, level IV due 11/25

Data Qualifiers

Lab Standard

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

Data Qualifiers

Lab Standard

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

ALS Laboratory Group

Acronyms

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

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

ALS

Chain of Custody

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

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

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15098**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110120
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110120-02**	**LH18/24-SP650_110320-AIX**	**Water**	**03 Nov 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			18 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: 11/04/20 18:00

Received By: _____ Date/Time: 11/4/20 18:00

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

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID IR31

Date/Time Received: 11/4/20 Initials: CH

Date/Time Logged in: 11/4/20 Initials CH

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

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

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

If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

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

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

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

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
—		11/4/20	1800	CH	3.1	X
						☐
						☐
						☐

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

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

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

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

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

Notes, Discrepancies, & Resolutions:

Service request Label:

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

SAMPLE ACCEPTANCE POLICY

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

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

- ✓ Intact on outside of cooler, signed and dated

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

The following is required on each COC:

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

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

Sample Integrity (mandatory):

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

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

Temperature Requirement (varies by sample matrix):

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

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

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
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Preparation Information Benchsheet

Prep Run#: 369483 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/10/20 08:50

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001078-001	COBS_1 (1388-006)	.01	6850/ClO4			Water	10mL	
2	E2001078-002	COBS_3 (1388-007)	.01	6850/ClO4			Water	10mL	
3	E2001078-003	NOBS_1 (1388-008)	.01	6850/ClO4			Water	10mL	
4	E2001078-004	NOBS_2 (1388-009)	.01	6850/ClO4			Water	10mL	
5	E2001078-005	Orestock_2 (1388-010)	.01	6850/ClO4			Water	10mL	
6	E2001078-006	Orestock_4 (1388-011)	.01	6850/ClO4			Water	10mL	
7	E2001078-007	Orestock_1 (1388-012)	.01	6850/ClO4			Water	10mL	
8	E2001078-008	Orestock_3 (1388-013)	.01	6850/ClO4			Water	10mL	
9	E2001078-009	HEAP_2 (1388-014)	.01	6850/ClO4			Water	10mL	
10	E2001078-010	HEAP_4 (1388-015)	.01	6850/ClO4			Water	10mL	
11	E2001078-011	HEAP_5 (1388-016)	.01	6850/ClO4			Water	10mL	
12	E2001078-012	HEAP_8 (1388-017)	.01	6850/ClO4			Water	10mL	
13	E2001078-013	NOBS_1 Dup (1388-008 DUP)	.01	6850/ClO4			Water	10mL	
14	E2001078-014	Prep Blank	.01	6850/ClO4			Water	10mL	
15	EQ2000584-01	MB		6850/ClO4			Liquid	10mL	
16	EQ2000584-02	LCS		6850/ClO4			Liquid	10mL	
17	EQ2000584-03	DLCS		6850/ClO4			Liquid	10mL	

Spiking Solutions

Name: Perchlorate Intermediate Stock1 Inventory ID 209764 Logbook Ref: Perchlorate Int. Stock1 51820 Expires On: 11/18/2020

EQ2000584-02 100.00µL EQ2000584-03 100.00µL

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 213952 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2001078-001 100.00µL E2001078-002 100.00µL E2001078-003 100.00µL E2001078-004 100.00µL E2001078-005 100.00µL E2001078-006 100.00µL
E2001078-007 100.00µL E2001078-008 100.00µL E2001078-014 100.00µL EQ2000584-01 100.00µL EQ2000584-02 100.00µL EQ2000584-03 100.00µL

Preparation Steps

Step: Preparation
Started: 11/10/20 08:50
Finished: 11/10/20 09:20
By: GRIVERA
Comments

Preparation Information Benchsheet

Prep Run#: 369483
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/10/20 08:50

Comments: _____

Reviewed By: GR Date: 11/10/2020

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Collected:**	11/ 3/20 1400
Sample Matrix:	Water	**Date Received:**	11/ 4/20
Sample Name:	LH18/24-SP650_110320-AIX	**Units:**	µg/L
Lab Code:	E2001081-001	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	11/10/20	11/20/20 16:44	369486	704366	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000586-01	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	11/10/20	11/20/20 16:20	369486	704366	

Accuracy & Precision

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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20110120
Sample Matrix: Water

Service Request: E2001081
Date Analyzed: 11/20/20

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

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 369486

	Lab Control Sample EQ2000586-02			Duplicate Lab Control Sample EQ2000586-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.111	0.100	111	0.115	0.100	115	84 - 119	3	15

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

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000586-02	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.111**		0.100	0.0500	0.0250	1	11/10/20	11/20/20 16:28	369486	704366	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000586-03	**Basis:**	NA

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

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.115**		0.100	0.0500	0.0250	1	11/10/20	11/20/20 16:36	369486	704366	

Initial Calibration

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

20201120

ALS Environmental

ICAL Date: 11/20/2020
Cal. Std. xp: 5/20/2020
ICAL ID: **EC2000050**

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20201120_016	Perchlorate6850b.lcm	1x	☒	3100808-05	11/20/2020 14:36
2	PERCHLORATE2		20201120_018	Perchlorate6850b.lcm	1x	☒	3100808-07	11/20/2020 14:52
3	PERCHLORATE3		20201120_019	Perchlorate6850b.lcm	1x	☒	3100808-08	11/20/2020 15:00
4	PERCHLORATE4		20201120_020	Perchlorate6850b.lcm	1x	☒	3100808-09	11/20/2020 15:08
5	PERCHLORATE5		20201120_021	Perchlorate6850b.lcm	1x	☒	3100808-10	11/20/2020 15:16
6	PERCHLORATE6		20201120_022	Perchlorate6850b.lcm	1x	☒	3100809-01	11/20/2020 15:24
7	PERCHLORATE7		20201120_023	Perchlorate6850b.lcm	1x	☒	3100809-02	11/20/2020 15:32
8	PERCHLORATE8		20201120_024	Perchlorate6850b.lcm	1x	☒	3100809-03	11/20/2020 15:40
9	PERCHLORATE9		20201120_025	Perchlorate6850b.lcm	1x	☒	3100809-04	11/20/2020 15:47
10	PERCHLORATEICV		20201120_026	Perchlorate6850b.lcm	1x	☒	3100809-06	11/20/2020 15:55
11	LODV		20201120_027	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:03
12	ICS		20201120_028	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:11
13	EQ2000586-01		20201120_029	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:20
14	EQ2000586-02		20201120_030	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:28
15	EQ2000586-03		20201120_031	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:36
16	E2001081-001		20201120_032	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:44
17	PERCHLORATE7		20201120_033	Perchlorate6850b.lcm	1x	☒	3100809-02	11/20/2020 16:52
18								
19								
20								
21								
22								
23								
24								
25								

Initial Calibration - Detailed Report

Calibration ID: EC2000050 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000050-01	PERCHLORATE1	20201120_016	11/20/2020 14:36
02	EC2000050-02	PERCHLORATE2	20201120_018	11/20/2020 14:52
03	EC2000050-03	PERCHLORATE3	20201120_019	11/20/2020 15:00
04	EC2000050-04	PERCHLORATE4	20201120_020	11/20/2020 15:08
05	EC2000050-05	PERCHLORATE5	20201120_021	11/20/2020 15:16
06	EC2000050-06	PERCHLORATE6	20201120_022	11/20/2020 15:24
07	EC2000050-07	PERCHLORATE7	20201120_023	11/20/2020 15:32
08	EC2000050-08	PERCHLORATE8	20201120_024	11/20/2020 15:40
09	EC2000050-09	PERCHLORATE9	20201120_025	11/20/2020 15:47

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 7.806** **Average RF = 0.09894**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1127	02	0.7000	0.1025	03	1.0000	0.1097	04	2.0000	0.09461
05	5.0000	0.09774	06	10.0000	0.09166	07	20.0000	0.09494	08	30.0000	0.09516
09	50.0000	0.09147									

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.114	13.9	02	0.7000	0.725	3.6	03	1.0000	1.11	10.9
04	2.0000	1.91	-4.4	05	5.0000	4.94	-1.2	06	10.0000	9.26	-7.4
07	20.0000	19.2	-4.0	08	30.0000	28.9	-3.8	09	50.0000	46.2	-7.5

Initial Calibration Verification Summary Report

Calibration ID:	EC2000050	**Instrument ID:**	E-LCMS-01
Datafile ID:	20201120_026	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000050-10	T	Average RF	10	10.631	ng/mL	6.3	<= 15

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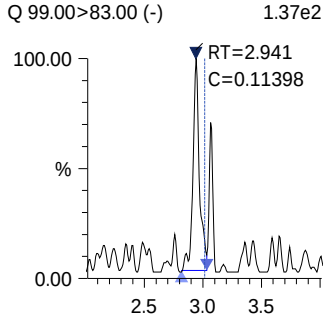
PERCHLORATE1

Date acquired: 11/20/2020 2:36:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_016.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	11/20/2020 2:36:56 PM	524	0.11398	20201120_016	2.941	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	11/20/2020 2:36:56 PM	46484	1.00000	20201120_016	2.933	25.0000	1.0000	5

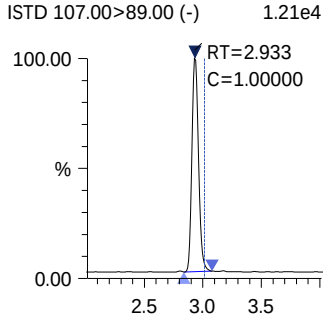
Perchlorate

Conc 0.11398
Area 524



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 46484



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PERCHLORATE2

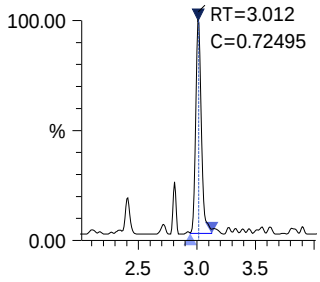
Date acquired: 11/20/2020 2:52:40 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_018.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	11/20/2020 2:52:40 PM	2749	0.72495	20201120_018	3.012	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE2	11/20/2020 2:52:40 PM	38328	1.00000	20201120_018	3.010	25.0000	1.0000	7

Perchlorate

Conc 0.72495
Area 2749

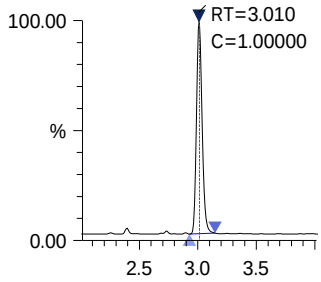
Q 99.00>83.00 (-) 8.12e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 38328

ISTD 107.00>89.00 (-) 1.13e4



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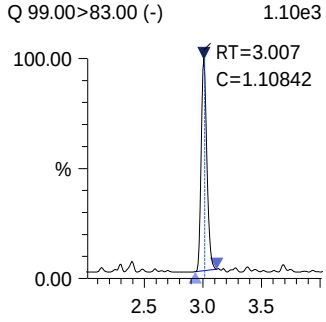
PERCHLORATE3

Date acquired: 11/20/2020 3:00:32 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_019.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	11/20/2020 3:00:32 PM	3760	1.10842	20201120_019	3.007	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE3	11/20/2020 3:00:32 PM	34282	1.00000	20201120_019	3.006	25.0000	1.0000	8

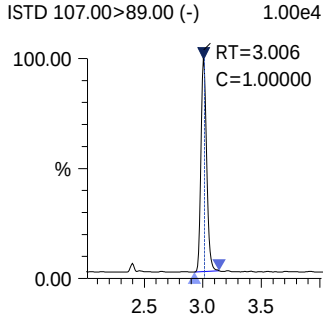
Perchlorate

Conc 1.10842
Area 3760



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 34282



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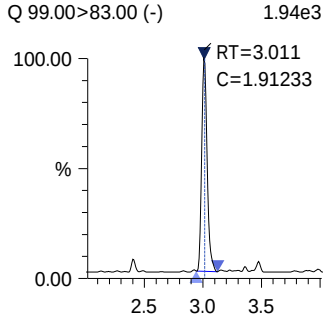
PERCHLORATE4

Date acquired: 11/20/2020 3:08:28 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_020.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	11/20/2020 3:08:28 PM	6379	1.91233	20201120_020	3.011	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE4	11/20/2020 3:08:28 PM	33713	1.00000	20201120_020	3.010	25.0000	1.0000	9

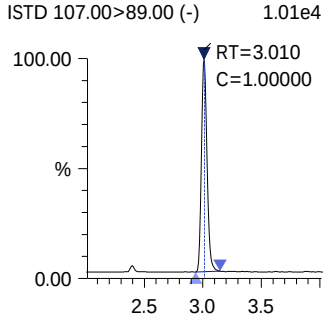
Perchlorate

Conc 1.91233
Area 6379



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 33713



ALS Group Houston

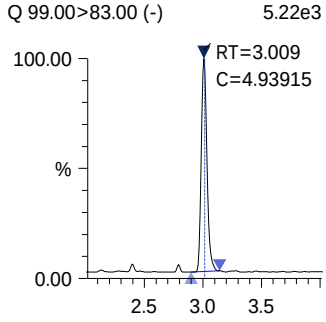
PERCHLORATE5

Date acquired: 11/20/2020 3:16:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_021.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	11/20/2020 3:16:20 PM	17781	4.93915	20201120_021	3.009	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE5	11/20/2020 3:16:20 PM	36384	1.00000	20201120_021	3.006	25.0000	1.0000	10

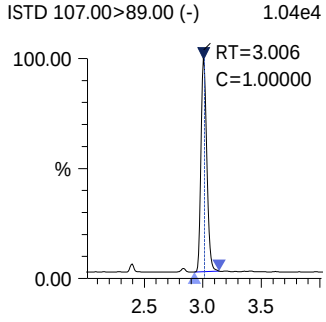
Perchlorate

Conc 4.93915
Area 17781



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 36384



ALS Group Houston

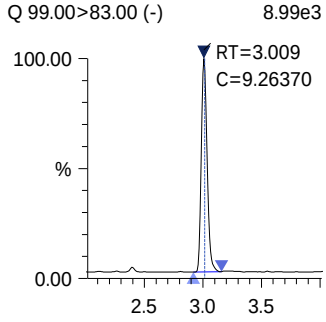
PERCHLORATE6

Date acquired: 11/20/2020 3:24:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_022.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	11/20/2020 3:24:13 PM	31502	9.26370	20201120_022	3.009	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE6	11/20/2020 3:24:13 PM	34369	1.00000	20201120_022	3.008	25.0000	1.0000	4

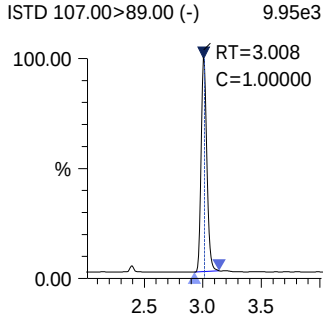
Perchlorate

Conc 9.26370
Area 31502



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 34369



ALS Group Houston

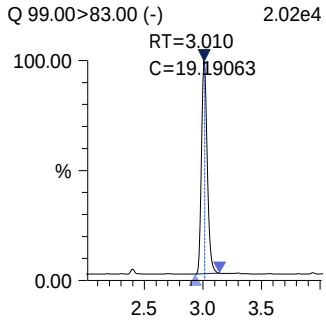
PERCHLORATE7

Date acquired: 11/20/2020 3:32:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_023.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	11/20/2020 3:32:09 PM	70100	19.19063	20201120_023	3.010	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE7	11/20/2020 3:32:09 PM	36918	1.00000	20201120_023	3.009	25.0000	1.0000	11

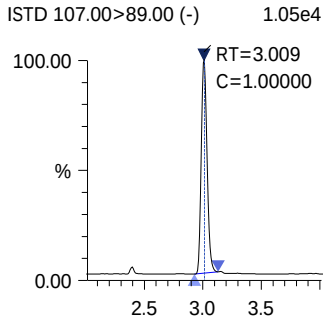
Perchlorate

Conc 19.19063
Area 70100



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 36918



ALS Group Houston

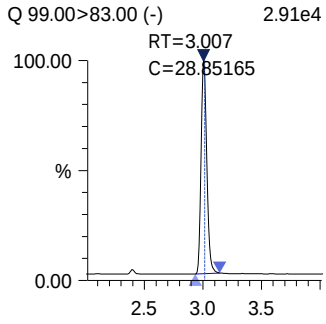
PERCHLORATE8

Date acquired: 11/20/2020 3:40:03 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_024.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	11/20/2020 3:40:03 PM	99386	28.85165	20201120_024	3.007	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE8	11/20/2020 3:40:03 PM	34815	1.00000	20201120_024	3.005	25.0000	1.0000	12

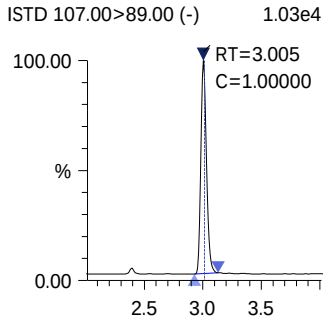
Perchlorate

Conc 28.85165
Area 99386



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 34815



ALS Group Houston

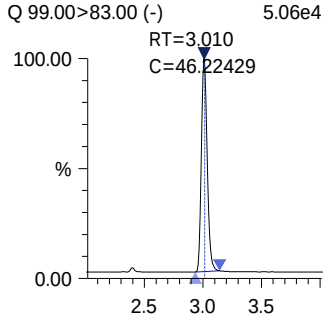
PERCHLORATE9

Date acquired: 11/20/2020 3:47:58 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_025.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	11/20/2020 3:47:58 PM	177227	46.22429	20201120_025	3.010	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE9	11/20/2020 3:47:58 PM	38750	1.00000	20201120_025	3.009	25.0000	1.0000	13

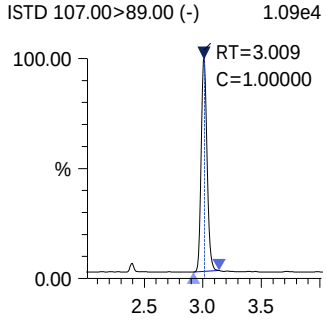
Perchlorate

Conc 46.22429
Area 177227



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 38750



ALS Group Houston

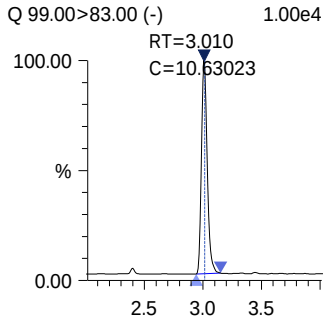
PERCHLORATEICV

Date acquired: 11/20/2020 3:55:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_026.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	11/20/2020 3:55:54 PM	34758	10.63023	20201120_026	3.010	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	11/20/2020 3:55:54 PM	33046	1.00000	20201120_026	3.010	25.0000	1.0000	14

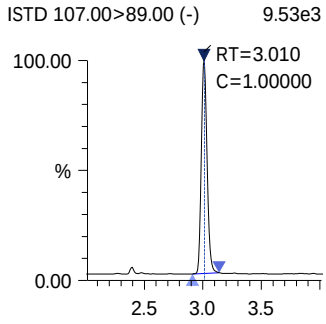
Perchlorate

Conc 10.63023
Area 34758



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 33046



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20201120

ALS Environmental

ICAL Date: 11/20/2020
Cal. Std. xp: 5/20/2020
ICAL ID: **EC2000050**

1st Review: Grivera
2nd Review: Kneir

Injection Log
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100807-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
1	PERCHLORATE1		20201120_016	Perchlorate6850b.lcm	1x	☒	3100808-05	11/20/2020 14:36
2	PERCHLORATE2		20201120_018	Perchlorate6850b.lcm	1x	☒	3100808-07	11/20/2020 14:52
3	PERCHLORATE3		20201120_019	Perchlorate6850b.lcm	1x	☒	3100808-08	11/20/2020 15:00
4	PERCHLORATE4		20201120_020	Perchlorate6850b.lcm	1x	☒	3100808-09	11/20/2020 15:08
5	PERCHLORATE5		20201120_021	Perchlorate6850b.lcm	1x	☒	3100808-10	11/20/2020 15:16
6	PERCHLORATE6		20201120_022	Perchlorate6850b.lcm	1x	☒	3100809-01	11/20/2020 15:24
7	PERCHLORATE7		20201120_023	Perchlorate6850b.lcm	1x	☒	3100809-02	11/20/2020 15:32
8	PERCHLORATE8		20201120_024	Perchlorate6850b.lcm	1x	☒	3100809-03	11/20/2020 15:40
9	PERCHLORATE9		20201120_025	Perchlorate6850b.lcm	1x	☒	3100809-04	11/20/2020 15:47
10	PERCHLORATEICV		20201120_026	Perchlorate6850b.lcm	1x	☒	3100809-06	11/20/2020 15:55
11	LODV		20201120_027	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:03
12	ICS		20201120_028	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:11
13	EQ2000586-01		20201120_029	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:20
14	EQ2000586-02		20201120_030	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:28
15	EQ2000586-03		20201120_031	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:36
16	E2001081-001		20201120_032	Perchlorate6850b.lcm	1x	☒		11/20/2020 16:44
17	PERCHLORATE7		20201120_033	Perchlorate6850b.lcm	1x	☒	3100809-02	11/20/2020 16:52
18								
19								
20								
21								
22								
23								
24								
25								

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20110120

Service Request: E2001081
Date Analyzed: 11/20/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20201120\20201120_026

Calibration Date: 11/20/20
Calibration ID: EC2000050
Analysis Lot: 704366
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.6	0.09850	0.1052	6.8	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20110120

Service Request: E2001081
Date Analyzed: 11/20/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20201120\20201120_033

Calibration Date: 11/20/20
Calibration ID: EC2000050
Analysis Lot: 704366
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	9.36	0.09850	0.09261	-6.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Analyzed:**	11/20/20 15:55

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20201120\20201120_026	**Lab Code:**	EQ2000607-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	704366
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	36,964	3.00
	Upper Limit ==>	55,446	5.00
	Lower Limit ==>	18,482	1.00
Associated Analyses			
Continuing Calibration Verification	EQ2000607-01	33,046	3.01
Method Blank	EQ2000586-01	35,408	2.93
Lab Control Sample	EQ2000586-02	37,920	3.01
Duplicate Lab Control Sample	EQ2000586-03	34,299	3.01
LH18/24-SP650_110320-AIX	E2001081-001	18,574	3.00

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2001081
Project:	HS20110120	**Date Analyzed:**	11/20/20 16:52

Internal Standard Area and RT Summary

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

File ID:	I:\LCMS01\DATA\20201120\20201120_033	**Lab Code:**	EQ2000607-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	704366
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	36,964	3.00
	Upper Limit ==>	55,446	5.00
	Lower Limit ==>	18,482	1.00
Associated Analyses			
Continuing Calibration Verification	EQ2000607-02	36,227	2.97

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

ALS Group Houston

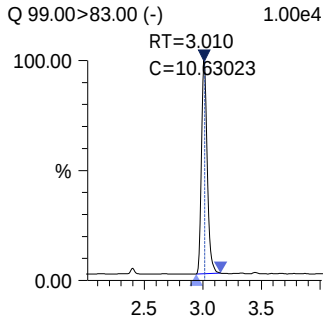
PERCHLORATEICV

Date acquired: 11/20/2020 3:55:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_026.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	11/20/2020 3:55:54 PM	34758	10.63023	20201120_026	3.010	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	11/20/2020 3:55:54 PM	33046	1.00000	20201120_026	3.010	25.0000	1.0000	14

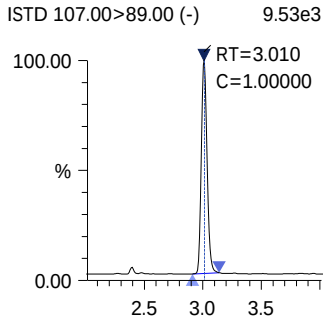
Perchlorate

Conc 10.63023
Area 34758



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 33046



ALS Group Houston

EQ2000586-01

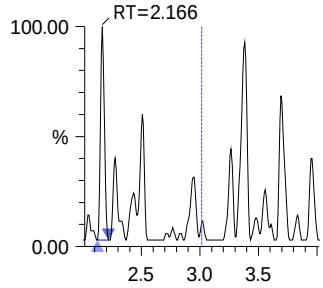
Date acquired: 11/20/2020 4:20:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_029.lcd
Vial: 52 | Inj. Volume: 25.0000uL | Tray: 3

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000586-01	11/20/2020 4:20:27 PM	----	----	20201120_029	----	25.0000	1.0000	52
Sodium Perchlorate-18O4_IS	EQ2000586-01	11/20/2020 4:20:27 PM	35408	1.00000	20201120_029	2.927	25.0000	1.0000	52

Perchlorate

Conc ----
Area ----

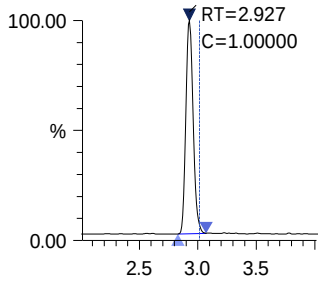
Q 99.00>83.00 (-) 6.80e1



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 35408

ISTD 107.00>89.00 (-) 8.34e3



ALS Group Houston

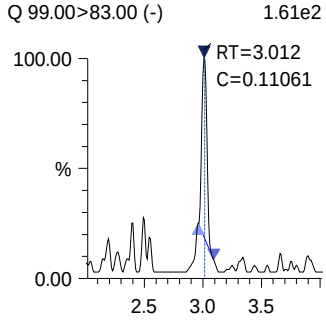
EQ2000586-02

Date acquired: 11/20/2020 4:28:18 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_030.lcd
Vial: 53 | Inj. Volume: 25.0000uL | Tray: 3

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000586-02	11/20/2020 4:28:18 PM	415	0.11061	20201120_030	3.012	25.0000	1.0000	53
Sodium Perchlorate-18O4_IS	EQ2000586-02	11/20/2020 4:28:18 PM	37920	1.00000	20201120_030	3.007	25.0000	1.0000	53

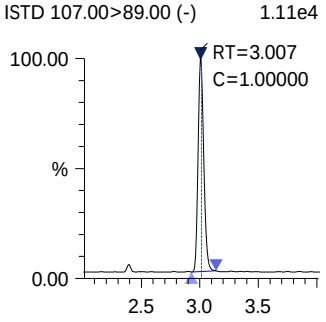
Perchlorate

Conc 0.11061
Area 415



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 37920



ALS Group Houston

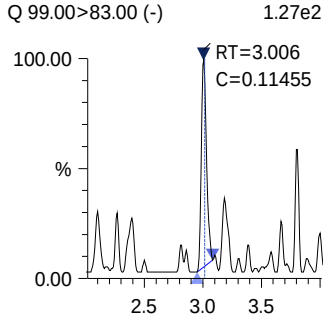
EQ2000586-03

Date acquired: 11/20/2020 4:36:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_031.lcd
Vial: 54 | Inj. Volume: 25.0000uL | Tray: 3

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000586-03	11/20/2020 4:36:13 PM	389	0.11455	20201120_031	3.006	25.0000	1.0000	54
Sodium Perchlorate-18O4_IS	EQ2000586-03	11/20/2020 4:36:13 PM	34299	1.00000	20201120_031	3.008	25.0000	1.0000	54

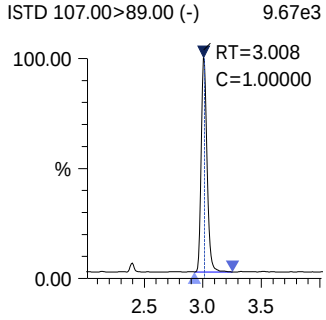
Perchlorate

Conc 0.11455
Area 389



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 34299



ALS Group Houston

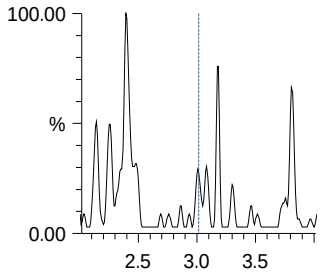
E2001081-001

Date acquired: 11/20/2020 4:44:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_032.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 4

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	E2001081-001	11/20/2020 4:44:09 PM	----	----	20201120_032	----	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	E2001081-001	11/20/2020 4:44:09 PM	18574	1.00000	20201120_032	2.997	25.0000	1.0000	3

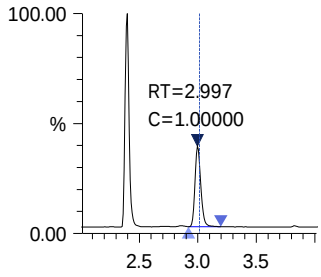
Perchlorate

Conc ----
Area ----
Q 99.00>83.00 (-) 8.10e1



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 18574
ISTD 107.00>89.00 (-) 1.41e4



ALS Group Houston

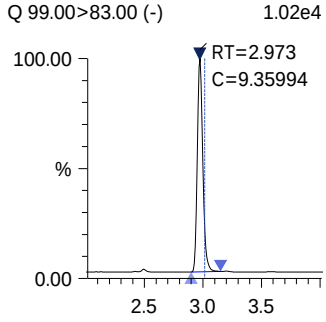
PERCHLORATE7

Date acquired: 11/20/2020 4:52:07 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20201120\20201120_033.lcd
Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	11/20/2020 4:52:07 PM	33550	9.35994	20201120_033	2.973	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	11/20/2020 4:52:07 PM	36227	1.00000	20201120_033	2.972	25.0000	1.0000	4

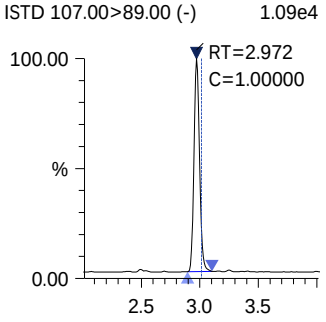
Perchlorate

Conc 9.35994
Area 33550



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 36227



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

WorkOrder: HS20110121

Longhorn GW Treatment Plant Bi Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

22-Nov-2020

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

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  - Trip Blank
  - Dates Report
  - QC
  - Acronyms
  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
  - COC
- HS20110121 8260_W_DOD Raw Data
- HS20110121 Wet Chem Raw Data (9056_anions_W)

HS20110121 Longhorn GW Treatment Plant Bi Weekly Samples Final

ALS WO# HS20110121

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

November 12, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20110121**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia Olive,

ALS Environmental received 2 sample(s) on Nov 04, 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: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20110121

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20110121-01	LH18/24-SP650_110320	Water		03-Nov-2020 14:00	04-Nov-2020 09:30	☐
HS20110121-02	Trip Blank	Water	CG-100620-216	03-Nov-2020 00:00	04-Nov-2020 09:30	☐

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20110121

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R372017

Sample ID: HS20101419-01MS

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

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: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Sample ID: LH18/24-SP650_110320
Collection Date: 03-Nov-2020 14:00

ANALYTICAL REPORT
WorkOrder:HS20110121
Lab ID:HS20110121-01
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	04-Nov-2020 16:54
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	04-Nov-2020 16:54
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	04-Nov-2020 16:54
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	04-Nov-2020 16:54
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	04-Nov-2020 16:54
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	04-Nov-2020 16:54
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54

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

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Sample ID: LH18/24-SP650_110320
Collection Date: 03-Nov-2020 14:00

ANALYTICAL REPORT
WorkOrder:HS20110121
Lab ID:HS20110121-01
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
cis-1,2-Dichloroethene	**12**		**0.20**	**0.50**	**1.0**	**UG/L**	1	04-Nov-2020 16:54
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	04-Nov-2020 16:54
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	04-Nov-2020 16:54
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:54
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:54
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Trichloroethene	**1.3**		**0.20**	**0.50**	**1.0**	**UG/L**	1	04-Nov-2020 16:54
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:54
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:54
Surr: 1,2-Dichloroethane-d4	*89.3*			**0**	*81-118*	*%REC*	*1*	*04-Nov-2020 16:54*
Surr: 4-Bromofluorobenzene	*95.2*			**0**	*85-114*	*%REC*	*1*	*04-Nov-2020 16:54*
Surr: Dibromofluoromethane	*85.9*			**0**	*80-119*	*%REC*	*1*	*04-Nov-2020 16:54*
Surr: Toluene-d8	*98.1*			**0**	*89-112*	*%REC*	*1*	*04-Nov-2020 16:54*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: YP
Chloride	**620**		**2.00**	**5.00**	**5.00**	**mg/L**	10	11-Nov-2020 23:12
Sulfate	**34.4**		**0.200**	**0.500**	**0.500**	**mg/L**	1	11-Nov-2020 22:54

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

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Sample ID: Trip Blank
Collection Date: 03-Nov-2020 00:00

ANALYTICAL REPORT
WorkOrder:HS20110121
Lab ID:HS20110121-02
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	04-Nov-2020 16:33
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	04-Nov-2020 16:33
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	04-Nov-2020 16:33
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
4-Isopropyltoluene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	04-Nov-2020 16:33
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	04-Nov-2020 16:33
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	04-Nov-2020 16:33
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33

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

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20110121
Sample ID: Trip Blank Lab ID:HS20110121-02
Collection Date: 03-Nov-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Isopropylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	04-Nov-2020 16:33
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	04-Nov-2020 16:33
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Nov-2020 16:33
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Nov-2020 16:33
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Styrene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Tetrachloroethene	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	04-Nov-2020 16:33
Surr: 1,2-Dichloroethane-d4	*85.4*			**0**	*81-118*	*%REC*	*1*	*04-Nov-2020 16:33*
Surr: 4-Bromofluorobenzene	*89.7*			**0**	*85-114*	*%REC*	*1*	*04-Nov-2020 16:33*
Surr: Dibromofluoromethane	*83.6*			**0**	*80-119*	*%REC*	*1*	*04-Nov-2020 16:33*
Surr: Toluene-d8	*101*			**0**	*89-112*	*%REC*	*1*	*04-Nov-2020 16:33*

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

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R372017 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20110121-01	LH18/24-SP650_110320	03 Nov 2020 14:00			04 Nov 2020 16:54	1
HS20110121-02	Trip Blank	03 Nov 2020 00:00			04 Nov 2020 16:33	1
Batch ID: R372517 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20110121-01	LH18/24-SP650_110320	03 Nov 2020 14:00			11 Nov 2020 23:12	10
HS20110121-01	LH18/24-SP650_110320	03 Nov 2020 14:00			11 Nov 2020 22:54	1

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201104** Units: **UG/L** Analysis Date: **04-Nov-2020 11:59**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817374** 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-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
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-201104** Units: **UG/L** Analysis Date: **04-Nov-2020 11:59**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817374** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
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	0.50	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	*43.13*	*1.0*	*50*	*0*	*86.3*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.57*	*1.0*	*50*	*0*	*95.1*	*85 - 114*				
Surr: Dibromofluoromethane	*43.83*	*1.0*	*50*	*0*	*87.7*	*80 - 119*				
Surr: Toluene-d8	*51.54*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201104** Units: **UG/L** Analysis Date: **04-Nov-2020 11:17**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817373** 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	17.06	1.0	20	0	85.3	78 - 124				
1,1,1-Trichloroethane	17.2	1.0	20	0	86.0	74 - 131				
1,1,2,2-Tetrachloroethane	19.95	1.0	20	0	99.8	71 - 121				
1,1,2-Trichloroethane	18.77	1.0	20	0	93.9	80 - 119				
1,1-Dichloroethane	18.44	1.0	20	0	92.2	77 - 125				
1,1-Dichloroethene	19.59	1.0	20	0	98.0	71 - 131				
1,1-Dichloropropene	16.91	1.0	20	0	84.6	78 - 125				
1,2,3-Trichlorobenzene	16.76	1.0	20	0	83.8	69 - 129				
1,2,3-Trichloropropane	20.21	1.0	20	0	101	73 - 122				
1,2,4-Trichlorobenzene	18.85	1.0	20	0	94.2	69 - 130				
1,2,4-Trimethylbenzene	16.15	1.0	20	0	80.8	76 - 124				
1,2-Dibromo-3-chloropropane	18.08	1.0	20	0	90.4	62 - 128				
1,2-Dibromoethane	18.75	1.0	20	0	93.7	77 - 121				
1,2-Dichlorobenzene	16.75	1.0	20	0	83.7	80 - 119				
1,2-Dichloroethane	17.71	1.0	20	0	88.6	73 - 128				
1,2-Dichloropropane	17.33	1.0	20	0	86.6	78 - 122				
1,3,5-Trimethylbenzene	15.62	1.0	20	0	78.1	75 - 124				
1,3-Dichlorobenzene	17.24	1.0	20	0	86.2	80 - 119				
1,3-Dichloropropane	18.4	1.0	20	0	92.0	80 - 119				
1,4-Dichlorobenzene	16.67	1.0	20	0	83.3	79 - 118				
2,2-Dichloropropane	17.88	1.0	20	0	89.4	60 - 139				
2-Butanone	36.88	2.0	40	0	92.2	56 - 143				
2-Chlorotoluene	16.7	1.0	20	0	83.5	79 - 122				
2-Hexanone	37.09	2.0	40	0	92.7	57 - 139				
4-Chlorotoluene	16.05	1.0	20	0	80.3	78 - 122				
4-Isopropyltoluene	15.77	1.0	20	0	78.8	77 - 127				
4-Methyl-2-pentanone	35.63	2.0	40	0	89.1	67 - 130				
Acetone	50.52	2.0	40	0	126	39 - 160				
Benzene	17.58	1.0	20	0	87.9	79 - 120				
Bromobenzene	16.87	1.0	20	0	84.3	80 - 120				
Bromochloromethane	20.33	1.0	20	0	102	78 - 123				
Bromodichloromethane	18.34	1.0	20	0	91.7	79 - 125				
Bromoform	18.88	1.0	20	0	94.4	66 - 130				
Bromomethane	19.21	1.0	20	0	96.1	53 - 141				

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-201104** Units: **UG/L** Analysis Date: **04-Nov-2020 11:17**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817373** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.15	2.0	40	0	92.9	64 - 133				
Carbon tetrachloride	16.35	1.0	20	0	81.8	72 - 136				
Chlorobenzene	17.31	1.0	20	0	86.5	82 - 118				
Chloroethane	17.9	1.0	20	0	89.5	60 - 138				
Chloroform	18.75	1.0	20	0	93.7	79 - 124				
Chloromethane	20.03	1.0	20	0	100	50 - 139				
cis-1,2-Dichloroethene	17.8	1.0	20	0	89.0	78 - 123				
cis-1,3-Dichloropropene	18.62	1.0	20	0	93.1	75 - 124				
Dibromochloromethane	18.83	1.0	20	0	94.2	74 - 126				
Dibromomethane	19.69	1.0	20	0	98.4	79 - 123				
Dichlorodifluoromethane	16.93	1.0	20	0	84.7	32 - 152				
Ethylbenzene	16.89	1.0	20	0	84.4	79 - 121				
Hexachlorobutadiene	16.63	1.0	20	0	83.2	66 - 134				
Isopropylbenzene	15.74	1.0	20	0	78.7	72 - 131				
m,p-Xylene	33.39	2.0	40	0	83.5	80 - 121				
Methylene chloride	17.81	2.0	20	0	89.1	74 - 124				
Naphthalene	20.52	1.0	20	0	103	61 - 128				
n-Butylbenzene	15.71	1.0	20	0	78.5	75 - 128				
n-Propylbenzene	16.08	1.0	20	0	80.4	76 - 126				
o-Xylene	16.53	1.0	20	0	82.7	78 - 122				
sec-Butylbenzene	15.74	1.0	20	0	78.7	77 - 126				
Styrene	17.75	1.0	20	0	88.7	78 - 123				
tert-Butylbenzene	16.29	1.0	20	0	81.5	78 - 124				
Tetrachloroethene	15.4	1.0	20	0	77.0	74 - 129				
Toluene	16.16	1.0	20	0	80.8	80 - 121				
trans-1,2-Dichloroethene	17.49	1.0	20	0	87.5	75 - 124				
trans-1,3-Dichloropropene	18.97	1.0	20	0	94.8	73 - 127				
Trichloroethene	18.05	1.0	20	0	90.3	79 - 123				
Trichlorofluoromethane	18.19	1.0	20	0	90.9	65 - 141				
Vinyl chloride	18.62	1.0	20	0	93.1	58 - 137				
Surr: 1,2-Dichloroethane-d4	*52.73*	*1.0*	*50*	*0*	*105*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*50.55*	*1.0*	*50*	*0*	*101*	*85 - 114*				
Surr: Dibromofluoromethane	*49.34*	*1.0*	*50*	*0*	*98.7*	*80 - 119*				
Surr: Toluene-d8	*48.52*	*1.0*	*50*	*0*	*97.0*	*89 - 112*				

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20101419-01MS** Units: **UG/L** Analysis Date: **04-Nov-2020 15:09**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817383** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	211.7	10	200	0	106	78 - 124				
1,1,1-Trichloroethane	212.3	10	200	0	106	74 - 131				
1,1,2,2-Tetrachloroethane	242.7	10	200	0	121	71 - 121				S
1,1,2-Trichloroethane	207.3	10	200	0	104	80 - 119				
1,1-Dichloroethane	215.6	10	200	0	108	77 - 125				
1,1-Dichloroethene	256.8	10	200	7.216	125	71 - 131				
1,1-Dichloropropene	226.9	10	200	0	113	78 - 125				
1,2,3-Trichlorobenzene	229.1	10	200	0	115	69 - 129				
1,2,3-Trichloropropane	227.3	10	200	0	114	73 - 122				
1,2,4-Trichlorobenzene	217.9	10	200	0	109	69 - 130				
1,2,4-Trimethylbenzene	222.8	10	200	0	111	76 - 124				
1,2-Dibromo-3-chloropropane	207.7	10	200	0	104	62 - 128				
1,2-Dibromoethane	227.2	10	200	0	114	77 - 121				
1,2-Dichlorobenzene	212.7	10	200	0	106	80 - 119				
1,2-Dichloroethane	219.2	10	200	0	110	73 - 128				
1,2-Dichloropropane	224	10	200	0	112	78 - 122				
1,3,5-Trimethylbenzene	220.6	10	200	0	110	75 - 124				
1,3-Dichlorobenzene	223.9	10	200	0	112	80 - 119				
1,3-Dichloropropane	221.8	10	200	0	111	80 - 119				
1,4-Dichlorobenzene	215.3	10	200	0	108	79 - 118				
2,2-Dichloropropane	217.9	10	200	0	109	60 - 139				
2-Butanone	392.3	20	400	0	98.1	56 - 143				
2-Chlorotoluene	221.4	10	200	0	111	79 - 122				
2-Hexanone	435.8	20	400	0	109	57 - 139				
4-Chlorotoluene	208.7	10	200	0	104	78 - 122				
4-Isopropyltoluene	230.4	10	200	0	115	77 - 127				
4-Methyl-2-pentanone	414.6	20	400	0	104	67 - 130				
Acetone	457.8	20	400	0	114	39 - 160				
Benzene	219.7	10	200	0	110	79 - 120				
Bromobenzene	220.7	10	200	0	110	80 - 120				
Bromochloromethane	223.6	10	200	0	112	78 - 123				
Bromodichloromethane	221.5	10	200	0	111	79 - 125				
Bromoform	202.6	10	200	0	101	66 - 130				
Bromomethane	186.1	10	200	0	93.0	53 - 141				

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20101419-01MS** Units: **UG/L** Analysis Date: **04-Nov-2020 15:09**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817383** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	439.1	20	400	0	110	64 - 133				
Carbon tetrachloride	229.8	10	200	0	115	72 - 136				
Chlorobenzene	217.5	10	200	0	109	82 - 118				
Chloroethane	210.4	10	200	0	105	60 - 138				
Chloroform	217	10	200	0	109	79 - 124				
Chloromethane	223.2	10	200	0	112	50 - 139				
cis-1,2-Dichloroethene	490.9	10	200	293.3	98.8	78 - 123				
cis-1,3-Dichloropropene	220.8	10	200	0	110	75 - 124				
Dibromochloromethane	233.9	10	200	0	117	74 - 126				
Dibromomethane	226.9	10	200	0	113	79 - 123				
Dichlorodifluoromethane	251.4	10	200	0	126	32 - 152				
Ethylbenzene	220.7	10	200	0	110	79 - 121				
Hexachlorobutadiene	301.3	10	200	0	151	66 - 134				S
Isopropylbenzene	225.3	10	200	0	113	72 - 131				
m,p-Xylene	457.1	20	400	0	114	80 - 121				
Methylene chloride	199	20	200	0	99.5	74 - 124				
Naphthalene	200	10	200	0	100.0	61 - 128				
n-Butylbenzene	230.9	10	200	0	115	75 - 128				
n-Propylbenzene	237.2	10	200	0	119	76 - 126				
o-Xylene	213.8	10	200	0	107	78 - 122				
sec-Butylbenzene	237.5	10	200	0	119	77 - 126				
Styrene	229.3	10	200	0	115	78 - 123				
tert-Butylbenzene	233.8	10	200	0	117	78 - 124				
Tetrachloroethene	230.1	10	200	0	115	74 - 129				
Toluene	207	10	200	0	104	80 - 121				
trans-1,2-Dichloroethene	226.2	10	200	0	113	75 - 124				
trans-1,3-Dichloropropene	235	10	200	0	117	73 - 127				
Trichloroethene	1214	10	200	981.1	116	79 - 123				O
Trichlorofluoromethane	245.5	10	200	0	123	65 - 141				
Vinyl chloride	277.1	10	200	33.28	122	58 - 137				
Surr: 1,2-Dichloroethane-d4	*443.7*	*10*	*500*	*0*	*88.7*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*482*	*10*	*500*	*0*	*96.4*	*85 - 114*				
Surr: Dibromofluoromethane	*448.9*	*10*	*500*	*0*	*89.8*	*80 - 119*				
Surr: Toluene-d8	*482.4*	*10*	*500*	*0*	*96.5*	*89 - 112*				

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20101419-01MSD** Units: **UG/L** Analysis Date: **04-Nov-2020 15:30**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817384** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	214.8	10	200	0	107	78 - 124	211.7	1.43	20	
1,1,1-Trichloroethane	221.7	10	200	0	111	74 - 131	212.3	4.34	20	
1,1,2,2-Tetrachloroethane	268.1	10	200	0	134	71 - 121	242.7	9.97	20	S
1,1,2-Trichloroethane	232.4	10	200	0	116	80 - 119	207.3	11.4	20	
1,1-Dichloroethane	210.6	10	200	0	105	77 - 125	215.6	2.38	20	
1,1-Dichloroethene	240.5	10	200	7.216	117	71 - 131	256.8	6.54	20	
1,1-Dichloropropene	241.4	10	200	0	121	78 - 125	226.9	6.23	20	
1,2,3-Trichlorobenzene	240.6	10	200	0	120	69 - 129	229.1	4.92	20	
1,2,3-Trichloropropane	254.7	10	200	0	127	73 - 122	227.3	11.4	20	S
1,2,4-Trichlorobenzene	233.7	10	200	0	117	69 - 130	217.9	6.99	20	
1,2,4-Trimethylbenzene	246.9	10	200	0	123	76 - 124	222.8	10.2	20	
1,2-Dibromo-3-chloropropane	283.6	10	200	0	142	62 - 128	207.7	30.9	20	SR
1,2-Dibromoethane	234.2	10	200	0	117	77 - 121	227.2	3.05	20	
1,2-Dichlorobenzene	240.4	10	200	0	120	80 - 119	212.7	12.2	20	S
1,2-Dichloroethane	214	10	200	0	107	73 - 128	219.2	2.36	20	
1,2-Dichloropropane	223.3	10	200	0	112	78 - 122	224	0.297	20	
1,3,5-Trimethylbenzene	232.6	10	200	0	116	75 - 124	220.6	5.31	20	
1,3-Dichlorobenzene	240.6	10	200	0	120	80 - 119	223.9	7.21	20	S
1,3-Dichloropropane	227.7	10	200	0	114	80 - 119	221.8	2.64	20	
1,4-Dichlorobenzene	237.5	10	200	0	119	79 - 118	215.3	9.78	20	S
2,2-Dichloropropane	224	10	200	0	112	60 - 139	217.9	2.76	20	
2-Butanone	381.7	20	400	0	95.4	56 - 143	392.3	2.74	20	
2-Chlorotoluene	245.5	10	200	0	123	79 - 122	221.4	10.3	20	S
2-Hexanone	452.6	20	400	0	113	57 - 139	435.8	3.77	20	
4-Chlorotoluene	226.1	10	200	0	113	78 - 122	208.7	7.98	20	
4-Isopropyltoluene	236.4	10	200	0	118	77 - 127	230.4	2.54	20	
4-Methyl-2-pentanone	417.9	20	400	0	104	67 - 130	414.6	0.795	20	
Acetone	410.6	20	400	0	103	39 - 160	457.8	10.9	20	
Benzene	227.1	10	200	0	114	79 - 120	219.7	3.29	20	
Bromobenzene	241.2	10	200	0	121	80 - 120	220.7	8.85	20	S
Bromochloromethane	214.6	10	200	0	107	78 - 123	223.6	4.11	20	
Bromodichloromethane	226.4	10	200	0	113	79 - 125	221.5	2.19	20	
Bromoform	209.2	10	200	0	105	66 - 130	202.6	3.21	20	
Bromomethane	174.8	10	200	0	87.4	53 - 141	186.1	6.25	20	

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

QC BATCH REPORT

Batch ID: R372017 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20101419-01MSD** Units: **UG/L** Analysis Date: **04-Nov-2020 15:30**
Client ID: Run ID: **VOA6_372017** SeqNo: **5817384** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	431.3	20	400	0	108	64 - 133	439.1	1.81	20	
Carbon tetrachloride	238.6	10	200	0	119	72 - 136	229.8	3.78	20	
Chlorobenzene	224.1	10	200	0	112	82 - 118	217.5	2.99	20	
Chloroethane	179.9	10	200	0	89.9	60 - 138	210.4	15.6	20	
Chloroform	203.6	10	200	0	102	79 - 124	217	6.38	20	
Chloromethane	219.7	10	200	0	110	50 - 139	223.2	1.58	20	
cis-1,2-Dichloroethene	481.8	10	200	293.3	94.3	78 - 123	490.9	1.87	20	
cis-1,3-Dichloropropene	229.7	10	200	0	115	75 - 124	220.8	3.95	20	
Dibromochloromethane	248	10	200	0	124	74 - 126	233.9	5.86	20	
Dibromomethane	235.9	10	200	0	118	79 - 123	226.9	3.88	20	
Dichlorodifluoromethane	246.2	10	200	0	123	32 - 152	251.4	2.08	20	
Ethylbenzene	226.6	10	200	0	113	79 - 121	220.7	2.64	20	
Hexachlorobutadiene	267.7	10	200	0	134	66 - 134	301.3	11.8	20	
Isopropylbenzene	224.1	10	200	0	112	72 - 131	225.3	0.503	20	
m,p-Xylene	492.6	20	400	0	123	80 - 121	457.1	7.48	20	S
Methylene chloride	194.4	20	200	0	97.2	74 - 124	199	2.32	20	
Naphthalene	247.4	10	200	0	124	61 - 128	200	21.2	20	R
n-Butylbenzene	230	10	200	0	115	75 - 128	230.9	0.384	20	
n-Propylbenzene	248.5	10	200	0	124	76 - 126	237.2	4.65	20	
o-Xylene	229.2	10	200	0	115	78 - 122	213.8	6.94	20	
sec-Butylbenzene	236	10	200	0	118	77 - 126	237.5	0.622	20	
Styrene	227.3	10	200	0	114	78 - 123	229.3	0.903	20	
tert-Butylbenzene	244.3	10	200	0	122	78 - 124	233.8	4.38	20	
Tetrachloroethene	236	10	200	0	118	74 - 129	230.1	2.53	20	
Toluene	216.4	10	200	0	108	80 - 121	207	4.42	20	
trans-1,2-Dichloroethene	221.6	10	200	0	111	75 - 124	226.2	2.07	20	
trans-1,3-Dichloropropene	227.7	10	200	0	114	73 - 127	235	3.13	20	
Trichloroethene	1188	10	200	981.1	103	79 - 123	1214	2.14	20	O
Trichlorofluoromethane	239.9	10	200	0	120	65 - 141	245.5	2.33	20	
Vinyl chloride	256.1	10	200	33.28	111	58 - 137	277.1	7.86	20	
Surr: 1,2-Dichloroethane-d4	*428.8*	*10*	*500*	*0*	*85.8*	*81 - 118*	*443.7*	*3.43*	*20*	
Surr: 4-Bromofluorobenzene	*476.3*	*10*	*500*	*0*	*95.3*	*85 - 114*	*482*	*1.2*	*20*	
Surr: Dibromofluoromethane	*438.1*	*10*	*500*	*0*	*87.6*	*80 - 119*	*448.9*	*2.43*	*20*	
Surr: Toluene-d8	*492.8*	*10*	*500*	*0*	*98.6*	*89 - 112*	*482.4*	*2.13*	*20*	

ALS Houston, US Date: 12-Nov-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20110121

QC BATCH REPORT

Batch ID:	**R372017 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20110121-01 HS20110121-02

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20110121

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
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				
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
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
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: HS20110121-01

ALS Houston, US Date: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20110121**

QUALIFIERS, ACRONYMS, UNITS

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

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

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
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: 12-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20110121

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20110121-01	LH18/24-SP650_110320	Login	11/4/2020 12:06:18 PM	PMG	WET249
HS20110121-01	LH18/24-SP650_110320	Login	11/4/2020 12:06:18 PM	PMG	VOA223
HS20110121-02	Trip Blank	Login	11/4/2020 12:06:18 PM	PMG	VOA223

ALS Houston, US Date: 12-Nov-20

Sample Receipt Checklist

Work Order ID: HS20110121 **Date/Time Received:** **04-Nov-2020 09:30**

Client Name: Bhate Environmental **Received by:** **Jared R. Makan**

Completed By:	/S/ Paresh M. Giga	04-Nov-2020 12:08	**Reviewed by:**	/S/ RJ Modashia	04-Nov-2020 16:10
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **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 ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.7C U/c	IR31
Cooler(s)/Kit(s):	46559	
Date/Time sample(s) sent to storage:	11/4/2020 12:15	

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 ATTN: R.J. Modashia

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

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT
BI-WEEKLY SAMPLES

Prepared By:
Scott Beesinger

P.O Number

HS20110121
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Bi Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC	Analyses: CHLORIDE, SULFATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_110320	Water	11/03/20 / 14:00		3	3		HCL	
LH18/24-SP650_110320	Water	11/03/20 / 14:00		1		1	NONE	
Trip Blank	Water	11/03/20		2	2		HCL	

Additional Remarks: **Standard TAT on other parameters**

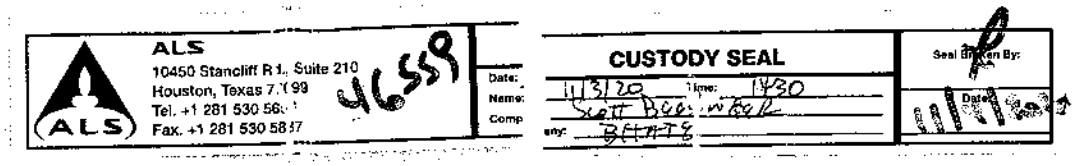
Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	11/03/20	14:30	JM	11/4/2020	09:30						

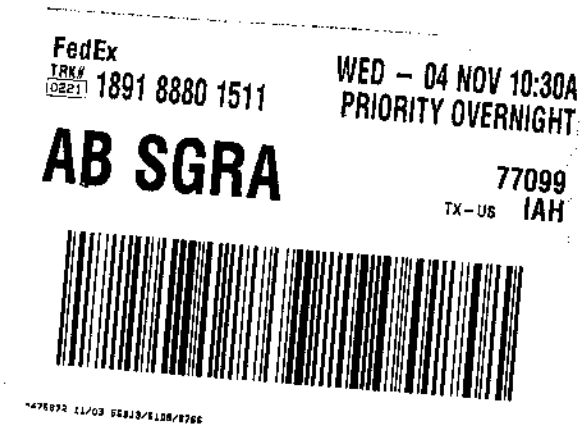
For Lab Use Only

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

Remarks
46559 Gic. 0.70
431
cif o.c.

(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
46559
Date:
Name:
Comp
any:
CUSTODY SEAL
Time:
Seal Broken By:
Date:


FedEx
TRK#
0221
1891 8880 1511
WED – 04 NOV 10:30A
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US
IAH

HS20110121 8260_W_DOD Raw Data

ALS WO# HS20110121

MSVOA06 -Logbook

Batch: 42316 **Analyst:** Devak Giga

Date: 11-03-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	11-03-2020 11:40 am	1.00	0.00 mL	0.00 mL	X110301.D	Liquid	Y	NA
2	VSTD000.25	ICAL1	11-03-2020 12:01 pm	1.00	5.00 mL	0.00 mL	X110302.D	Liquid	Y	NA
3	VSTD000.5	ICAL2	11-03-2020 12:43 pm	1.00	5.00 mL	0.00 mL	X110303.D	Liquid	Y	NA
4	VSTD001	ICAL3	11-03-2020 01:04 pm	1.00	5.00 mL	0.00 mL	X110304.D	Liquid	Y	NA
5	VSTD002	ICAL4	11-03-2020 01:24 pm	1.00	5.00 mL	0.00 mL	X110305.D	Liquid	Y	NA
6	VSTD005	ICAL5	11-03-2020 01:45 pm	1.00	5.00 mL	0.00 mL	X110306.D	Liquid	Y	NA
7	VSTD020	ICAL6	11-03-2020 02:06 pm	1.00	5.00 mL	0.00 mL	X110307.D	Liquid	Y	NA
8	VSTD050	ICAL7	11-03-2020 02:27 pm	1.00	5.00 mL	0.00 mL	X110308.D	Liquid	Y	NA
9	VSTD100	ICAL8	11-03-2020 02:48 pm	1.00	5.00 mL	0.00 mL	X110309.D	Liquid	Y	NA
10	VSTD150	ICAL9	11-03-2020 03:09 pm	1.00	5.00 mL	0.00 mL	X110310.D	Liquid	Y	NA
11	VSTD200	ICAL	11-03-2020 03:30 pm	1.00	5.00 mL	0.00 mL	X110311.D	Liquid	Y	NA
12	BLANK	SAMP	11-03-2020 03:51 pm	1.00	5.00 mL	0.00 mL	X110312.D	Liquid	Y	NA
13	BLANK	SAMP	11-03-2020 04:12 pm	1.00	5.00 mL	0.00 mL	X110313.D	Liquid	Y	NA
14	ICV	ICV	11-03-2020 04:33 pm	1.00	5.00 mL	0.00 mL	X110314.D	Liquid	Y	NA
15	BLANK	SAMP	11-03-2020 04:54 pm	1.00	5.00 mL	0.00 mL	X110315.D	Liquid	Y	NA
16	VLCSW-201103	LCS	11-03-2020 05:15 pm	1.00	5.00 mL	0.00 mL	X110316.D	Liquid	Y	NA
17	BLK	SAMP	11-03-2020 05:36 pm	1.00	5.00 mL	0.00 mL	X110317.D	Liquid	Y	NA
18	BLK	SAMP	11-03-2020 05:57 pm	1.00	5.00 mL	0.00 mL	X110318.D	Liquid	Y	NA
19	VBLKW-201103	MBLK	11-03-2020 06:18 pm	1.00	5.00 mL	0.00 mL	X110319.D	Liquid	Y	NA
20	HS20101149-02	SAMP	11-03-2020 06:39 pm	1.00	5.00 mL	0.00 mL	X110320.D	Liquid	Y	NA
21	HS20101149-01	SAMP	11-03-2020 07:00 pm	1.00	5.00 mL	0.00 mL	X110321.D	Liquid	Y	NA
22	HS20101123-12	SAMP	11-03-2020 07:21 pm	1.00	5.00 mL	0.00 mL	X110322.D	Liquid	Y	NA
23	HS20101123-01	SAMP	11-03-2020 07:42 pm	1.00	5.00 mL	0.00 mL	X110323.D	Liquid	Y	NA
24	HS20101123-01MS	MS	11-03-2020 08:04 pm	1.00	5.00 mL	0.00 mL	X110324.D	Liquid	Y	NA
25	HS20101123-01MSD	MSD	11-03-2020 08:25 pm	1.00	5.00 mL	0.00 mL	X110325.D	Liquid	Y	NA
26	HS20101123-01	SAMP	11-03-2020 08:46 pm	5.00	5.00 mL	0.00 mL	X110326.D	Liquid	Y	NA
27	HS20101123-02	SAMP	11-03-2020 09:07 pm	1.00	5.00 mL	0.00 mL	X110327.D	Liquid	Y	NA
28	HS20101123-03	SAMP	11-03-2020 09:28 pm	1.00	5.00 mL	0.00 mL	X110328.D	Liquid	Y	NA
29	HS20101123-04	SAMP	11-03-2020 09:49 pm	1.00	5.00 mL	0.00 mL	X110329.D	Liquid	Y	NA
30	CCV-END	CCV	11-03-2020 10:10 pm	1.00	5.00 mL	0.00 mL	X110330.D	Liquid	Y	NA
31	BFB	TUNE	11-03-2020 10:31 pm	1.00	0.00 mL	0.00 mL	Y110301a.D	Liquid	Y	NA
32	BFB	TUNE	11-03-2020 10:52 pm	1.00	0.00 mL	0.00 mL	Y110302.D	Liquid	Y	NA
33	CCV	CCV	11-03-2020 11:13 pm	1.00	5.00 mL	0.00 mL	Y110303.D	Liquid	Y	NA
34	BLANK	SAMP	11-03-2020 11:34 pm	1.00	5.00 mL	0.00 mL	Y110304.D	Liquid	Y	NA
35	VLCSW-201103	LCS	11-03-2020 11:55 pm	1.00	5.00 mL	0.00 mL	Y110305.D	Liquid	Y	NA
36	BLK	SAMP	11-04-2020 12:16 am	1.00	5.00 mL	0.00 mL	Y110306.D	Liquid	Y	NA
37	VBLKW-201103	MBLK	11-04-2020 12:37 am	1.00	5.00 mL	0.00 mL	Y110307.D	Liquid	Y	NA
38	HS20101240-10	SAMP	11-04-2020 12:58 am	1.00	5.00 mL	0.00 mL	Y110308.D	Liquid	Y	NA
39	HS20101123-10	SAMP	11-04-2020 01:19 am	500.0(	5.00 mL	0.00 mL	Y110309.D	Liquid	Y	NA
40	HS20101123-11	SAMP	11-04-2020 01:40 am	500.0(	5.00 mL	0.00 mL	Y110310.D	Liquid	Y	NA
41	HS20101240-09	SAMP	11-04-2020 02:01 am	500.0(	5.00 mL	0.00 mL	Y110311.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS20101123-05	SAMP	11-04-2020 02:22 am	5.00	5.00 mL	0.00 mL	Y110312.D	Liquid	Y	NA
43	HS20101123-05	SAMP	11-04-2020 02:43 am	25.00	5.00 mL	0.00 mL	Y110313.D	Liquid	Y	NA
44	HS20101123-05MS	MS	11-04-2020 03:04 am	25.00	5.00 mL	0.00 mL	Y110314.D	Liquid	Y	NA
45	HS20101123-05MSD	MSD	11-04-2020 03:25 am	25.00	5.00 mL	0.00 mL	Y110315.D	Liquid	Y	NA
46	BLK	SAMP	11-04-2020 03:46 am	1.00	5.00 mL	0.00 mL	Y110316.D	Liquid	Y	NA
47	HS20101240-01	SAMP	11-04-2020 04:07 am	1.00	5.00 mL	0.00 mL	Y110317.D	Liquid	Y	NA
48	HS20101240-02	SAMP	11-04-2020 04:29 am	1.00	5.00 mL	0.00 mL	Y110318.D	Liquid	Y	NA
49	HS20101240-03	SAMP	11-04-2020 04:50 am	1.00	5.00 mL	0.00 mL	Y110319.D	Liquid	Y	NA
50	HS20101240-06	SAMP	11-04-2020 05:11 am	1.00	5.00 mL	0.00 mL	Y110320.D	Liquid	Y	NA
51	HS20101240-04	SAMP	11-04-2020 05:32 am	1.00	5.00 mL	0.00 mL	Y110321.D	Liquid	Y	NA
52	HS20101240-04	SAMP	11-04-2020 05:53 am	10.00	5.00 mL	0.00 mL	Y110322.D	Liquid	Y	NA
53	HS20101123-06	SAMP	11-04-2020 06:14 am	5.00	5.00 mL	0.00 mL	Y110323.D	Liquid	Y	NA
54	HS20101123-06	SAMP	11-04-2020 06:35 am	25.00	5.00 mL	0.00 mL	Y110324.D	Liquid	Y	NA
55	HS20101123-07	SAMP	11-04-2020 06:56 am	5.00	5.00 mL	0.00 mL	Y110325.D	Liquid	Y	NA
56	HS20101123-07	SAMP	11-04-2020 07:17 am	50.00	5.00 mL	0.00 mL	Y110326.D	Liquid	Y	NA
57	HS20101123-08	SAMP	11-04-2020 07:38 am	5.00	5.00 mL	0.00 mL	Y110327.D	Liquid	Y	NA
58	HS20101123-08	SAMP	11-04-2020 07:59 am	50.00	5.00 mL	0.00 mL	Y110328.D	Liquid	Y	NA
59	HS20101123-09	SAMP	11-04-2020 08:20 am	50.00	5.00 mL	0.00 mL	Y110329.D	Liquid	Y	NA
60	HS20101123-09	SAMP	11-04-2020 08:41 am	500.0(	5.00 mL	0.00 mL	Y110330.D	Liquid	Y	NA
61	CCV-END	CCV	11-04-2020 09:02 am	1.00	5.00 mL	0.00 mL	Y110331.D	Liquid	Y	NA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110121

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
cis-1,3-Dichloropropene	50.00	50.39	101	80-120
trans-1,3-Dichloroprope	50.00	51.77	104	80-120
1,3-Dichlorobenzene	50.00	47.54	95	80-120
2,2-Dichloropropane	50.00	48.07	96	80-120
1,1-Dichloropropene	50.00	47.56	95	80-120
Dibromomethane	50.00	49.77	100	80-120
1,2-Dibromoethane	50.00	47.81	96	80-120
trans-1,2-Dichloroethen	50.00	45.78	92	80-120
1,1,1,2-Tetrachloroetha	50.00	47.00	94	80-120
1,1,1-Trichloroethane	50.00	47.63	95	80-120
1,1,2,2-Tetrachloroetha	50.00	48.95	98	80-120
1,1,2-Trichloroethane	50.00	47.47	95	80-120
1,1-Dichloroethane	50.00	47.54	95	80-120
1,1-Dichloroethene	50.00	47.17	94	80-120
Trichloroethene	50.00	49.82	100	80-120
1,2,3-Trichlorobenzene	50.00	59.72	119	80-120
Trichlorofluoromethane	50.00	46.74	93	80-120
1,2,4-Trichlorobenzene	50.00	55.59	111	80-120
1,2,4-Trimethylbenzene	50.00	49.35	99	80-120
Tetrachloroethene	50.00	45.62	91	80-120
1,2-Dichlorobenzene	50.00	48.17	96	80-120
1,2-Dichloroethane	50.00	48.80	98	80-120
1,2-Dichloropropane	50.00	45.70	91	80-120
1,3,5-Trimethylbenzene	50.00	47.59	95	80-120
1,3-Dichloropropane	50.00	46.05	92	80-120
1,4-Dichlorobenzene	50.00	48.35	97	80-120
Toluene	50.00	42.99	86	80-120
2-Butanone	100.00	106.06	106	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.: HS20110121

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
2-Chlorotoluene	50.00	46.44	93	80-120
2-Hexanone	100.00	89.67	90	80-120
4-Chlorotoluene	50.00	46.72	93	80-120
tert-Butylbenzene	50.00	46.17	92	80-120
4-Methyl-2-Pentanone	100.00	93.77	94	80-120
Acetone	100.00	119.63	120	80-120
Benzene	50.00	46.99	94	80-120
Bromobenzene	50.00	45.21	90	80-120
Bromochloromethane	50.00	48.42	97	80-120
Bromodichloromethane	50.00	49.94	100	80-120
Bromoform	50.00	43.20	86	80-120
Bromomethane	50.00	46.78	94	80-120
Carbon Disulfide	100.00	92.20	92	80-120
Carbon Tetrachloride	50.00	49.72	99	80-120
Chlorobenzene	50.00	46.28	92	80-120
Chloroethane	50.00	44.95	90	80-120
Chloroform	50.00	46.96	94	80-120
Chloromethane	50.00	50.02	100	80-120
cis-1,2-Dichloroethene	50.00	47.87	96	80-120
Dibromochloromethane	50.00	50.15	100	80-120
Dichlorodifluoromethane	50.00	52.73	105	80-120
Ethylbenzene	50.00	47.80	96	80-120
Hexachlorobutadiene	50.00	52.32	105	80-120
Isopropylbenzene	50.00	44.31	89	80-120
m,p-Xylenes	100.00	102.37	102	80-120
Methylene Chloride	50.00	45.39	91	80-120
n-Butylbenzene	50.00	44.86	90	80-120
n-Propylbenzene	50.00	48.09	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: Case No.: SAS No.: SDG No.: HS20110121

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Naphthalene	50.00	59.94	120	80-120
o-Xylene	50.00	49.24	98	80-120
sec-Butylbenzene	50.00	45.15	90	80-120
Styrene	50.00	51.43	103	80-120
Vinyl Chloride	50.00	49.52	99	80-120
1,2,3-Trichloropropane	50.00	49.07	98	80-120
p-Isopropyltoluene	50.00	49.28	98	80-120
1,2-Dibromo-3-Chloropro	50.00	55.06	110	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: Case No.: SAS No.: SDG No.: HS20110121

Lab File ID: X110301 BFB Injection Date: 11/03/20

Instrument ID: VOA6 BFB Injection Time: 1140

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	26.5
75	30.0 - 60.0% of mass 95	57.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	1.3 (1.6)1
174	Greater than 50.0% of mass 95	82.0
175	5.0 - 9.0% of mass 174	6.5 (7.9)1
176	95.0 - 101.0% of mass 174	78.9 (96.3)1
177	5.0 - 9.0% of mass 176	4.5 (5.7)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X110302	11/03/20	1201
02	VSTD000.5	VSTD000.5	X110303	11/03/20	1243
03	VSTD001	VSTD001	X110304	11/03/20	1304
04	VSTD002	VSTD002	X110305	11/03/20	1324
05	VSTD005	VSTD005	X110306	11/03/20	1345
06	VSTD020	VSTD020	X110307	11/03/20	1406
07	VSTD050	VSTD050	X110308	11/03/20	1427
08	VSTD100	VSTD100	X110309	11/03/20	1448
09	VSTD150	VSTD150	X110310	11/03/20	1509
10	VSTD200	VSTD200	X110311	11/03/20	1530
11	ICV	ICV	X110314	11/03/20	1633
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.: HS20110121

Instrument ID: VOA6 Calibration Date(s): 11/03/20 11/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1201 1530

LAB FILE ID: RF0.25: X110302 RF0.5: X110303 RF1: X110304
RF2: X110305 RF5: X110306 RF20: X110307

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
cis-1,3-Dichloropropene		0.555	0.555	0.606	0.565	0.521
trans-1,3-Dichloropropene		0.505	0.434	0.446	0.482	0.473
1,3-Dichlorobenzene		1.878	1.622	1.375	1.316	1.309
2,2-Dichloropropane		1.236	1.097	1.053	1.008	0.841
1,1-Dichloropropene		0.587	0.468	0.530	0.456	0.381
Dibromomethane		0.234	0.228	0.300	0.292	0.238
1,2-Dibromoethane		0.442	0.390	0.310	0.345	0.367
trans-1,2-Dichloroethene		0.674	0.606	0.639	0.562	0.511
1,1,1,2-Tetrachloroethane		0.414	0.388	0.299	0.336	0.313
1,1,1-Trichloroethane		1.186	0.964	1.031	0.989	0.887
1,1,2,2-Tetrachloroethane		1417	1837	3824	10630	40864
1,1,2-Trichloroethane		0.396	0.324	0.281	0.290	0.275
1,1-Dichloroethane		1.450	1.221	1.098	1.248	1.028
1,1-Dichloroethene		1.141	1.038	0.937	0.959	0.839
Trichloroethene		0.415	0.317	0.377	0.319	0.290
1,2,3-Trichlorobenzene		370	511	1012	2533	8500
Trichlorofluoromethane		2.234	2.132	1.965	1.836	1.654
1,2,4-Trichlorobenzene		448	1196	2022	4083	15476
1,2,4-Trimethylbenzene		3.271	2.645	2.483	2.450	2.480
Tetrachloroethene		0.332	0.300	0.240	0.252	0.216
1,2-Dichlorobenzene		1.564	1.358	1.354	1.301	1.238
1,2-Dichloroethane		0.666	0.598	0.531	0.549	0.490
1,2-Dichloropropane		0.479	0.383	0.377	0.386	0.345
1,3,5-Trimethylbenzene		3.313	2.742	2.746	2.266	2.382
1,3-Dichloropropane		0.732	0.640	0.594	0.599	0.567
1,4-Dichlorobenzene		1.675	1.640	1.634	1.468	1.405
Toluene		2.297	2.090	1.978	1.740	1.477
2-Butanone		0.238	0.229	0.230	0.240	0.216
2-Chlorotoluene		2.999	2.505	2.360	2.254	2.060
2-Hexanone		2217	2282	5963	14581	61091
4-Chlorotoluene		3.757	2.811	2.726	2.631	2.548
tert-Butylbenzene		3197	4630	9232	20057	78132
4-Methyl-2-Pentanone		0.475	0.328	0.348	0.392	0.351
Acetone		3564	3869	6814	13265	43227
Benzene		1.791	1.521	1.407	1.367	1.215
Bromobenzene		1.068	1.030	0.876	0.824	0.811
Bromochloromethane		0.265	0.362	0.357	0.384	0.301
Bromodichloromethane		0.652	0.496	0.559	0.510	0.445
Bromoform		543	772	1884	4618	20267
Bromomethane		1.097	0.978	0.937	0.915	0.774
Carbon Disulfide		1.826	1.783	1.822	1.734	1.526
Carbon Tetrachloride		0.490	0.504	0.471	0.433	0.364
Chlorobenzene		1.191	1.217	1.010	0.969	0.944
Chloroethane		0.849	0.977	0.931	0.814	0.655

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011012

Instrument ID: VOA6 Calibration Date(s): 11/03/20 11/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1201 1530

LAB FILE ID: RF0.25: X110302 RF0.5: X110303 RF1: X110304
RF2: X110305 RF5: X110306 RF20: X110307

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Chloroform		1.342	1.228	1.457	1.300	1.142
Chloromethane		1628	2614	4801	11006	37225
cis-1,2-Dichloroethene		0.899	0.654	0.758	0.744	0.638
Dibromochloromethane		0.386	0.338	0.326	0.345	0.355
Dichlorodifluoromethane		0.665	0.653	0.627	0.665	0.544
Ethylbenzene		0.625	0.598	0.534	0.447	0.438
Hexachlorobutadiene		348	486	1206	2539	8666
Isopropylbenzene		4684	7329	13777	31967	125533
m,p-Xylenes		0.720	0.603	0.543	0.580	0.570
Methylene Chloride		0.727	0.763	0.707	0.716	0.592
n-Butylbenzene		3247	5444	11381	22870	94869
n-Propylbenzene		5.006	3.812	3.874	3.443	3.384
Naphthalene		632	1364	2622	6669	22879
o-Xylene		0.665	0.587	0.608	0.567	0.556
sec-Butylbenzene		4540	7265	13806	29458	115155
Styrene		1.143	0.959	0.938	0.941	1.024
Vinyl Chloride		1.215	1.206	1.116	1.106	0.992
1,2,3-Trichloropropane		0.780	0.800	0.658	0.685	0.707
p-Isopropyltoluene		2.596	2.546	2.722	2.339	2.228
1,2-Dibromo-3-Chloropropane			69	195	741	2714
1,2-Dichloroethane-d4		1490	2593	5018	11874	44472
Dibromofluoromethane		0.661	0.697	0.668	0.638	0.615
Toluene-d8		1.597	1.287	1.252	1.177	1.190
4-Bromofluorobenzene		1396	2114	4690	11013	41523

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011012

Instrument ID: VOA6 Calibration Date(s): 11/03/20 11/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1201 1530

LAB FILE ID: RF50: X110308 RF100: X110309 RF150: X110310
RF200: X110311

COMPOUND	RF50	RF100	RF150	RF200
cis-1,3-Dichloropropene	0.559	0.550	0.562	0.547
trans-1,3-Dichloropropene	0.510	0.539	0.509	0.531
1,3-Dichlorobenzene	1.333	1.419	1.439	1.497
2,2-Dichloropropane	0.928	0.994	1.087	1.066
1,1-Dichloropropene	0.441	0.449	0.451	0.434
Dibromomethane	0.250	0.242	0.245	0.245
1,2-Dibromoethane	0.360	0.378	0.381	0.401
trans-1,2-Dichloroethene	0.575	0.639	0.689	0.711
1,1,1,2-Tetrachloroethane	0.342	0.375	0.356	0.386
1,1,1-Trichloroethane	0.985	1.065	1.151	1.136
1,1,2,2-Tetrachloroethane	107818	223385	340740	491582
1,1,2-Trichloroethane	0.299	0.302	0.295	0.314
1,1-Dichloroethane	1.069	1.180	1.236	1.287
1,1-Dichloroethene	0.852	0.872	0.924	0.927
Trichloroethene	0.323	0.318	0.319	0.320
1,2,3-Trichlorobenzene	26867	54420	92101	134528
Trichlorofluoromethane	1.659	1.757	1.849	1.872
1,2,4-Trichlorobenzene	49484	104687	173285	250652
1,2,4-Trimethylbenzene	2.663	2.992	3.048	3.141
Tetrachloroethene	0.263	0.285	0.286	0.302
1,2-Dichlorobenzene	1.297	1.352	1.436	1.521
1,2-Dichloroethane	0.532	0.495	0.501	0.490
1,2-Dichloropropane	0.345	0.340	0.334	0.340
1,3,5-Trimethylbenzene	2.738	2.968	3.207	3.313
1,3-Dichloropropane	0.601	0.596	0.581	0.603
1,4-Dichlorobenzene	1.418	1.495	1.475	1.523
Toluene	1.546	1.672	1.784	1.884
2-Butanone	0.216	0.246	0.227	0.249
2-Chlorotoluene	2.067	2.232	2.292	2.364
2-Hexanone	169392	370165	562101	809663
4-Chlorotoluene	2.749	2.982	3.181	3.309
tert-Butylbenzene	255346	626984	1005736	1422110
4-Methyl-2-Pentanone	0.368	0.378	0.378	0.400
Acetone	87016	169628	230937	315772
Benzene	1.316	1.344	1.308	1.299
Bromobenzene	0.802	0.817	0.840	0.849
Bromochloromethane	0.333	0.348	0.373	0.376
Bromodichloromethane	0.500	0.474	0.496	0.491
Bromoform	56683	133700	217258	300900
Bromomethane	0.777	0.905	1.059	
Carbon Disulfide	1.622	1.688	1.865	1.910
Carbon Tetrachloride	0.428	0.445	0.446	0.447
Chlorobenzene	0.965	1.046	1.091	1.184
Chloroethane	0.657	0.685	0.744	0.778

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011012

Instrument ID: VOA6 Calibration Date(s): 11/03/20 11/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1201 1530

LAB FILE ID: RF50: X110308 RF100: X110309 RF150: X110310
RF200: X110311

COMPOUND	RF50	RF100	RF150	RF200
Chloroform	1.201	1.246	1.298	1.301
Chloromethane	97255	217141	339041	432608
cis-1,2-Dichloroethene	0.689	0.703	0.758	0.755
Dibromochloromethane	0.378	0.391	0.399	0.408
Dichlorodifluoromethane	0.570	0.691	0.710	0.701
Ethylbenzene	0.504	0.553	0.581	0.599
Hexachlorobutadiene	31815	74152	115884	168470
Isopropylbenzene	378050	912871	1491458	
m,p-Xylenes	0.650	0.735	0.793	
Methylene Chloride	0.616	0.656	0.697	0.705
n-Butylbenzene	336254	808796	1360339	1951034
n-Propylbenzene	3.710	4.066	4.227	4.304
Naphthalene	71142	144587	248976	363990
o-Xylene	0.623	0.684	0.744	0.789
sec-Butylbenzene	381699	940164	1526507	2142350
Styrene	1.084	1.243	1.347	
Vinyl Chloride	1.014	1.087	1.098	1.108
1,2,3-Trichloropropane	0.697	0.692	0.632	0.666
p-Isopropyltoluene	2.770	2.964	3.023	3.116
1,2-Dibromo-3-Chloropropane	7134	14813	23770	32792
1,2-Dichloroethane-d4	128500	253050	404360	
Dibromofluoromethane	0.667	0.679	0.735	0.700
Toluene-d8	1.283	1.388	1.411	1.435
4-Bromofluorobenzene	114211	252308	414999	565367

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011012

Instrument ID: VOA6 Calibration Date(s): 11/03/20 11/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1201 1530

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
cis-1,3-Dichloropropene	AVRG		0.55780943		3.955	15.000
trans-1,3-Dichloropropene	AVRG		0.49211543		7.391	15.000
1,3-Dichlorobenzene	AVRG		1.46537724		12.558	15.000
2,2-Dichloropropane	AVRG		1.03457358		10.794	15.000
1,1-Dichloropropene	AVRG		0.46627025		12.750	15.000
Dibromomethane	AVRG		0.25275475		10.153	15.000
1,2-Dibromoethane	AVRG		0.37495263		9.802	15.000
trans-1,2-Dichloroethene	AVRG		0.62293308		10.488	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.35670595		10.518	15.000
1,1,1-Trichloroethane	AVRG		1.04399886		9.473	15.000
1,1,2,2-Tetrachloroethane	LINR	-1.18e-002	1.22607927		0.9988660	0.9900000
1,1,2-Trichloroethane	AVRG		0.30839143		11.677	15.000
1,1-Dichloroethane	AVRG		1.20185017		10.670	15.000
1,1-Dichloroethene	AVRG		0.94335689		10.151	15.000
Trichloroethene	AVRG		0.33320083		11.461	15.000
1,2,3-Trichlorobenzene	LINR	3.538e-002	4.50090118		0.9962012	0.9900000
Trichlorofluoromethane	AVRG		1.88440525		10.508	15.000
1,2,4-Trichlorobenzene	LINR	3.525e-002	2.40273119		0.9974951	0.9900000
1,2,4-Trimethylbenzene	AVRG		2.79709892		11.338	15.000
Tetrachloroethene	AVRG		0.27525384		12.943	15.000
1,2-Dichlorobenzene	AVRG		1.37998821		7.772	15.000
1,2-Dichloroethane	AVRG		0.53912868		10.962	15.000
1,2-Dichloropropane	AVRG		0.37001393		12.328	15.000
1,3,5-Trimethylbenzene	AVRG		2.85281152		13.381	15.000
1,3-Dichloropropane	AVRG		0.61260091		7.998	15.000
1,4-Dichlorobenzene	AVRG		1.52588695		6.557	15.000
Toluene	AVRG		1.82980395		14.346	15.000
2-Butanone	AVRG		0.23243307		5.170	15.000
2-Chlorotoluene	AVRG		2.34840479		12.008	15.000
2-Hexanone	LINR	7.417e-002	2.84952067		0.9976837	0.9900000
4-Chlorotoluene	AVRG		2.96611559		13.086	15.000
tert-Butylbenzene	LINR	4.988e-002	0.41728152		0.9983081	0.9900000
4-Methyl-2-Pentanone	AVRG		0.37984642		11.098	15.000
Acetone	LINR	-0.1746572	3.95328097		0.9984390	0.9900000
Benzene	AVRG		1.39659388		12.173	15.000
Bromobenzene	AVRG		0.87979464		11.244	15.000
Bromochloromethane	AVRG		0.34435784		11.365	15.000
Bromodichloromethane	AVRG		0.51371499		11.709	15.000
Bromoform	LINR	6.227e-002	3.78260975		0.9973049	0.9900000
Bromomethane	AVRG		0.93048543		12.546	15.000
Carbon Disulfide	AVRG		1.75295469		7.027	15.000
Carbon Tetrachloride	AVRG		0.44767391		9.012	15.000
Chlorobenzene	AVRG		1.06851845		9.991	15.000
Chloroethane	AVRG		0.78782987		14.767	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011012

Instrument ID: VOA6 Calibration Date(s): 11/03/20 11/03/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1201 1530

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Chloroform	AVRG		1.27939613		7.057	15.000
Chloromethane	LINR	1.757e-002	1.38746336		0.9973772	0.9900000
cis-1,2-Dichloroethene	AVRG		0.73325309		10.535	15.000
Dibromochloromethane	AVRG		0.36952464		7.956	15.000
Dichlorodifluoromethane	AVRG		0.64746942		8.872	15.000
Ethylbenzene	AVRG		0.54207886		12.387	15.000
Hexachlorobutadiene	LINR	4.656e-002	3.55079816		0.9979368	0.9900000
Isopropylbenzene	LINR	5.23e-002	0.57225016		0.9958485	0.9900000
m,p-Xylenes	AVRG		0.64929693		13.963	15.000
Methylene Chloride	AVRG		0.68649235		8.025	15.000
n-Butylbenzene	LINR	7.209e-002	0.30552156		0.9964224	0.9900000
n-Propylbenzene	AVRG		3.98059418		12.499	15.000
Naphthalene	LINR	4.279e-002	1.66365308		0.9954951	0.9900000
o-Xylene	AVRG		0.64704750		12.405	15.000
sec-Butylbenzene	LINR	5.28e-002	0.27632223		0.9981941	0.9900000
Styrene	AVRG		1.08499974		13.894	15.000
Vinyl Chloride	AVRG		1.10477653		6.709	15.000
1,2,3-Trichloropropane	AVRG		0.70208557		7.819	15.000
p-Isopropyltoluene	AVRG		2.70057524		11.256	15.000
1,2-Dibromo-3-Chloropropane	LINR	-6.79e-003	18.1373969		0.9996332	0.9900000
1,2-Dichloroethane-d4	2ORDR	-9.78e-003	1.33740959	-8.05e-002	0.9996886	0.9900000
Dibromofluoromethane	AVRG		0.67335658		5.250	15.000
Toluene-d8	AVRG		1.33549893		10.085	15.000
4-Bromofluorobenzene	2ORDR	6.046e-003	2.31167671	-0.1639271	0.9997602	0.9900000

FORM VI VOA

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110301.D

Date : 03-NOV-2020 11:40

Client ID: BFB

Instrument: voa6.i

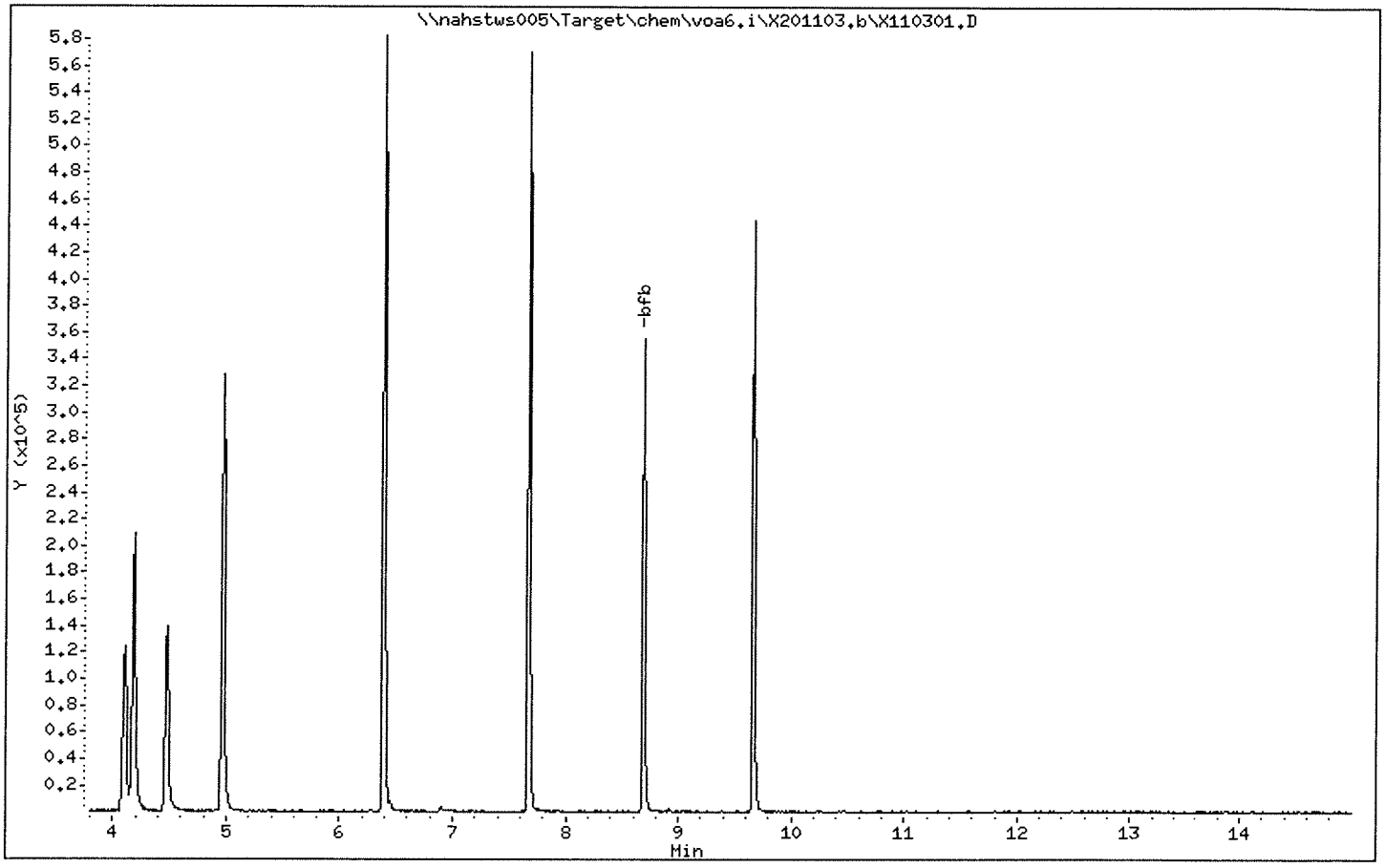
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110301.D

Date : 03-NOV-2020 11:40

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

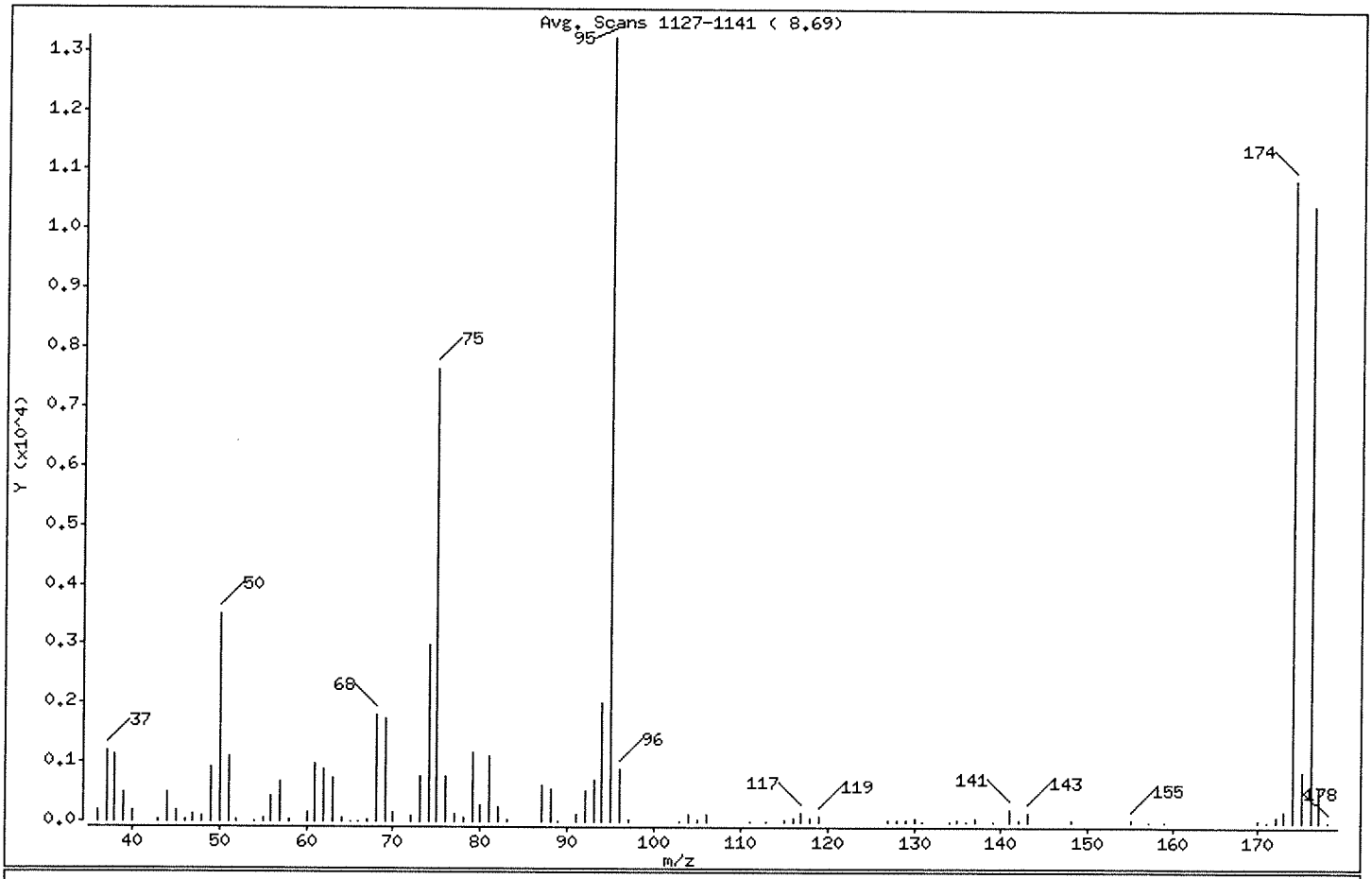
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	26.52
75	30.00 - 60.00% of mass 95	57.75
96	5.00 - 9.00% of mass 95	6.71
173	Less than 2.00% of mass 174	1.32 (1.61)
174	Greater than 50.00% of mass 95	81.97
175	5.00 - 9.00% of mass 174	6.45 (7.87)
176	95.00 - 101.00% of mass 174	78.92 (96.28)
177	5.00 - 9.00% of mass 176	4.53 (5.75)

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110301.D

Date : 03-NOV-2020 11:40

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X110301.D
Spectrum: Avg. Scans 1127-1141 (8.69)
Location of Maximum: 95.00
Number of points: 90

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	185	63.00	745	91.00	120	134.00	4
37.00	1197	64.00	71	92.00	528	135.00	31
38.00	1127	65.00	14	93.00	713	136.00	5
39.00	487	66.00	6	94.00	2013	137.00	53
40.00	173	67.00	42	95.00	13233	139.00	4
43.00	32	68.00	1785	96.00	888	141.00	210
44.00	480	69.00	1734	97.00	28	142.00	28
45.00	181	70.00	151	103.00	9	143.00	160
46.00	40	72.00	93	104.00	117	148.00	27
47.00	125	73.00	763	105.00	30	155.00	41
48.00	105	74.00	2992	106.00	114	157.00	15
49.00	906	75.00	7642	111.00	4	159.00	6
50.00	3510	76.00	747	113.00	10	170.00	36
51.00	1099	77.00	116	115.00	20	171.00	15
52.00	44	78.00	67	116.00	55	172.00	79
54.00	8	79.00	1145	117.00	138	173.00	175
55.00	76	80.00	279	118.00	52	174.00	10847
56.00	436	81.00	1110	119.00	100	175.00	854
57.00	659	82.00	238	127.00	17	176.00	10443
58.00	31	83.00	26	128.00	37	177.00	600
60.00	166	87.00	603	129.00	38	178.00	14
61.00	965	88.00	560	130.00	60		
62.00	880	89.00	6	131.00	3		

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110302.D Page 1
Report Date: 07-Nov-2020 12:10

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110302.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 03-NOV-2020 12:01
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:10 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:27 Cal File: X110308.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	149848	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	278125	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	261293	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	109498	50.0000	
$	30 Dibromofluoromethane	113	4.110	4.110	(0.981)	841	0.25000	0.41(aM)
$	35 1,2-Dichloroethane-d4	65	4.497	4.497	(1.074)	928	0.25000	(Ta)
$	48 Toluene-d8	98	6.403	6.403	(0.835)	2652	0.25000	0.37(Ta)
$	69 4-Bromofluorobenzene	95	8.702	8.702	(1.134)	1826	0.25000	1.10(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	519	0.25000	0.27(aM)
	31 1,1,1-Trichloroethane	97	4.103	4.103	(0.979)	622	0.25000	0.19(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	547	0.25000	(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	405	0.25000	0.25(aM)
	22 1,1-Dichloroethane	63	2.943	2.943	(0.703)	1138	0.25000	0.31(aM)
	11 1,1-Dichloroethene	96	1.911	1.911	(0.456)	1028	0.25000	0.36(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	938	0.25000	0.36(a)
	93 1,2,3-Trichlorobenzene	180	11.753	11.753	(1.216)	95	0.25000	1.96(aM)
	71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	435	0.25000	0.28(aM)
	90 1,2,4-Trichlorobenzene	180	11.359	11.359	(1.176)	228	0.25000	2.01(aM)
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	1643	0.25000	0.26(a)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	370	0.25000	0.18(aM)
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	699	0.25000	0.23(a)
	33 1,2-Dichloroethane	62	4.576	4.576	(0.921)	567	0.25000	0.18(aM)

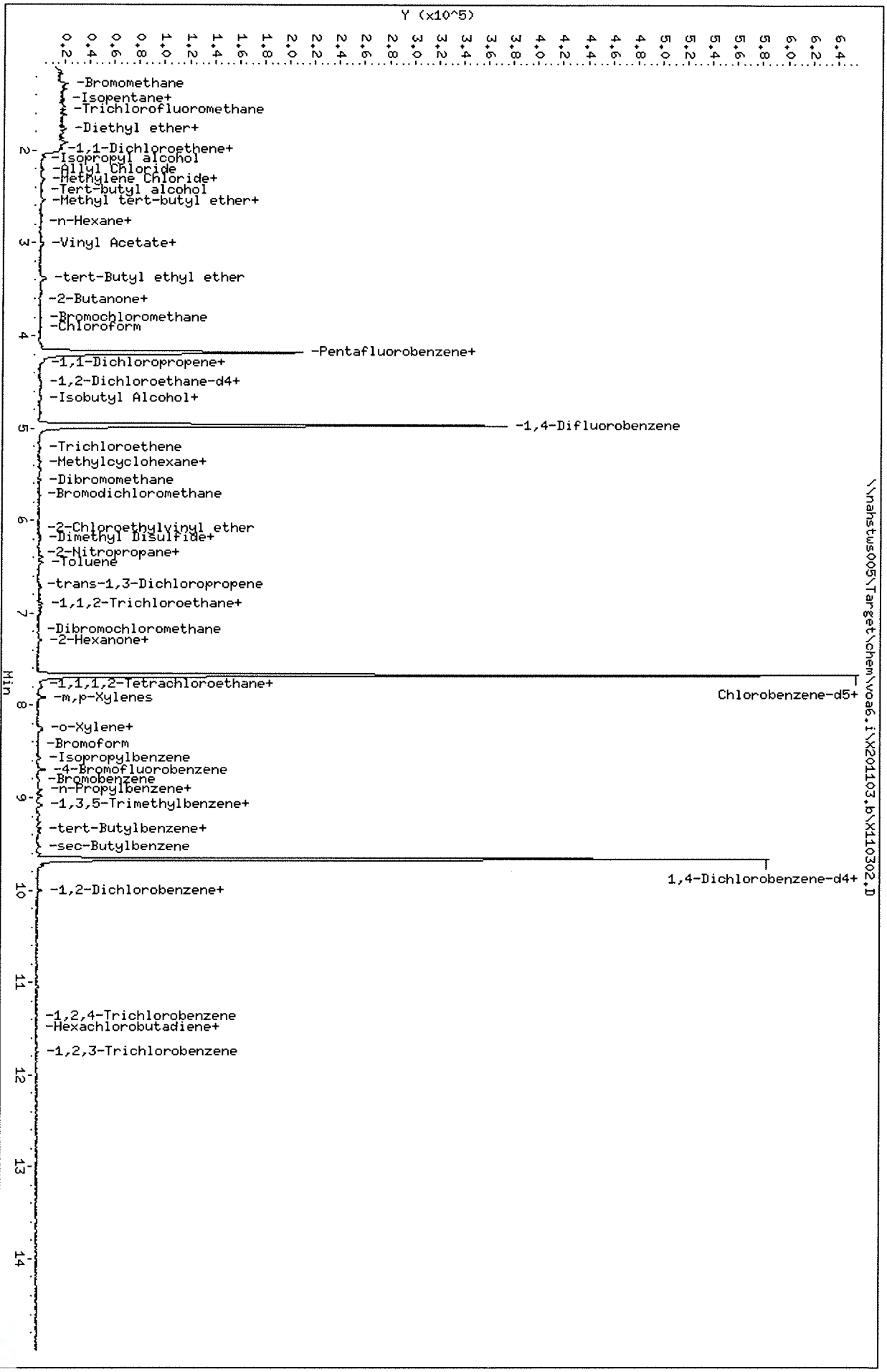
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	623	0.25000	0.30 (aM)
75	1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	1416	0.25000	0.22 (a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	752	0.25000	0.23 (aM)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	957	0.25000	0.29 (aM)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	882	0.25000	0.26 (a)
26	2,2-Dichloropropane	77	3.523	3.523	(0.841)	869	0.25000	0.28 (aM)
24	2-Butanone	43	3.616	3.616	(0.863)	323	0.50000	0.46 (aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.930)	1752	0.25000	0.34 (a)
52	2-Hexanone	43	7.234	7.234	(0.943)	495	0.50000	3.97 (TaM)
77	4-Chlorotoluene	91	9.082	9.082	(0.940)	1793	0.25000	0.27 (a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1464	0.25000	0.24 (aM)
45	4-Methyl-2-Pentanone	43	6.345	6.345	(0.827)	1232	0.50000	0.62 (aM)
10	Acetone	43	1.983	1.983	(0.473)	3056	0.50000	(aM)
37	Benzene	78	4.519	4.519	(0.909)	2148	0.25000	0.27 (a)
74	Bromobenzene	156	8.824	8.824	(0.913)	587	0.25000	0.30 (aM)
29	Bromochloromethane	128	3.810	3.810	(0.909)	172	0.25000	0.16 (aM)
39	Bromodichloromethane	83	5.722	5.722	(1.151)	789	0.25000	0.27 (aM)
66	Bromoform	173	8.415	8.415	(1.097)	175	0.25000	3.23 (aM)
6	Bromomethane	94	1.338	1.338	(0.320)	1031	0.25000	0.36 (aM)
19	Carbon Disulfide	76	2.069	2.069	(0.494)	3196	0.50000	0.60 (aM)
34	Carbon Tetrachloride	117	4.261	4.261	(0.857)	613	0.25000	0.24 (aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	1728	0.25000	0.30 (a)
7	Chloroethane	64	1.403	1.403	(0.335)	749	0.25000	0.31 (aMH)
28	Chloroform	83	3.917	3.917	(0.935)	1211	0.25000	0.31 (a)
3	Chloromethane	50	1.073	1.073	(0.256)	777	0.25000	1.23 (aM)
27	cis-1,2-Dichloroethene	96	3.523	3.523	(0.841)	519	0.25000	0.23 (aM)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	1015	0.25000	0.32 (aM)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	431	0.25000	0.22 (aM)
44	Dibromomethane	93	5.572	5.572	(1.121)	413	0.25000	0.29 (aM)
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	457	0.25000	0.23 (aM)
61	Ethylbenzene	106	7.807	7.807	(1.018)	557	0.25000	0.19 (aM)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	52	0.25000	2.41 (aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1922	0.25000	2.82 (aM)
62	m,p-Xylenes	106	7.914	7.914	(1.032)	2023	0.50000	0.59 (a)
17	Methylene Chloride	84	2.313	2.313	(0.552)	711	0.25000	0.34 (aM)
87	n-Butylbenzene	91	9.998	9.998	(1.035)	1325	0.25000	3.78 (aM)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	2084	0.25000	0.23 (a)
92	Naphthalene	128	11.574	11.574	(1.198)	138	0.25000	2.24 (aM)
63	o-Xylene	106	8.251	8.251	(1.076)	936	0.25000	0.27 (a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	1554	0.25000	2.83 (aM)
64	Styrene	104	8.272	8.272	(1.078)	1368	0.25000	0.24 (aM)
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	1532	0.25000	2.78 (Ta)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	461	0.25000	0.32 (aM)
50	Toluene	91	6.460	6.460	(0.842)	1816	0.25000	0.18 (aM)
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.603)	541	0.25000	0.28 (aM)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	622	0.25000	0.22 (aM)
38	Trichloroethene	130	5.214	5.214	(1.049)	548	0.25000	0.29 (aM)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	1444	0.25000	0.25 (a)
5	Vinyl Chloride	62	1.145	1.145	(0.273)	1079	0.25000	0.32 (aMH)

QC Flag Legend

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

QC Flag Legend

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



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Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;
Purge Volume: 5.0
Column phase: DB624

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

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110303.D Page 1
Report Date: 07-Nov-2020 12:10

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110303.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 03-NOV-2020 12:43
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:10 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 12:01 Cal File: X110302.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

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

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

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	148094	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	267010	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	253498	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	108599	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.981)	979	0.50000	0.49(a)
$	35 1,2-Dichloroethane-d4	65	4.490	4.490	(1.072)	1490	0.50000	0.18(Ta)
$	48 Toluene-d8	98	6.388	6.388	(0.833)	4048	0.50000	0.59(Ta)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	1396	0.50000	0.93(aM)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1050	0.50000	0.58(aM)
	31 1,1,1-Trichloroethane	97	4.096	4.096	(0.978)	1757	0.50000	0.56(aM)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1417	0.50000	0.21(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1003	0.50000	0.64(aM)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	2147	0.50000	0.60(aM)
	11 1,1-Dichloroethene	96	1.912	1.912	(0.456)	1690	0.50000	0.60(aM)
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	1568	0.50000	0.62(aM)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	370	0.50000	2.53(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	847	0.50000	0.55(aMH)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	448	0.50000	2.25(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	3552	0.50000	0.58(aM)
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	1121	0.50000	0.58(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	1698	0.50000	0.56(aM)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	1777	0.50000	0.61(aM)

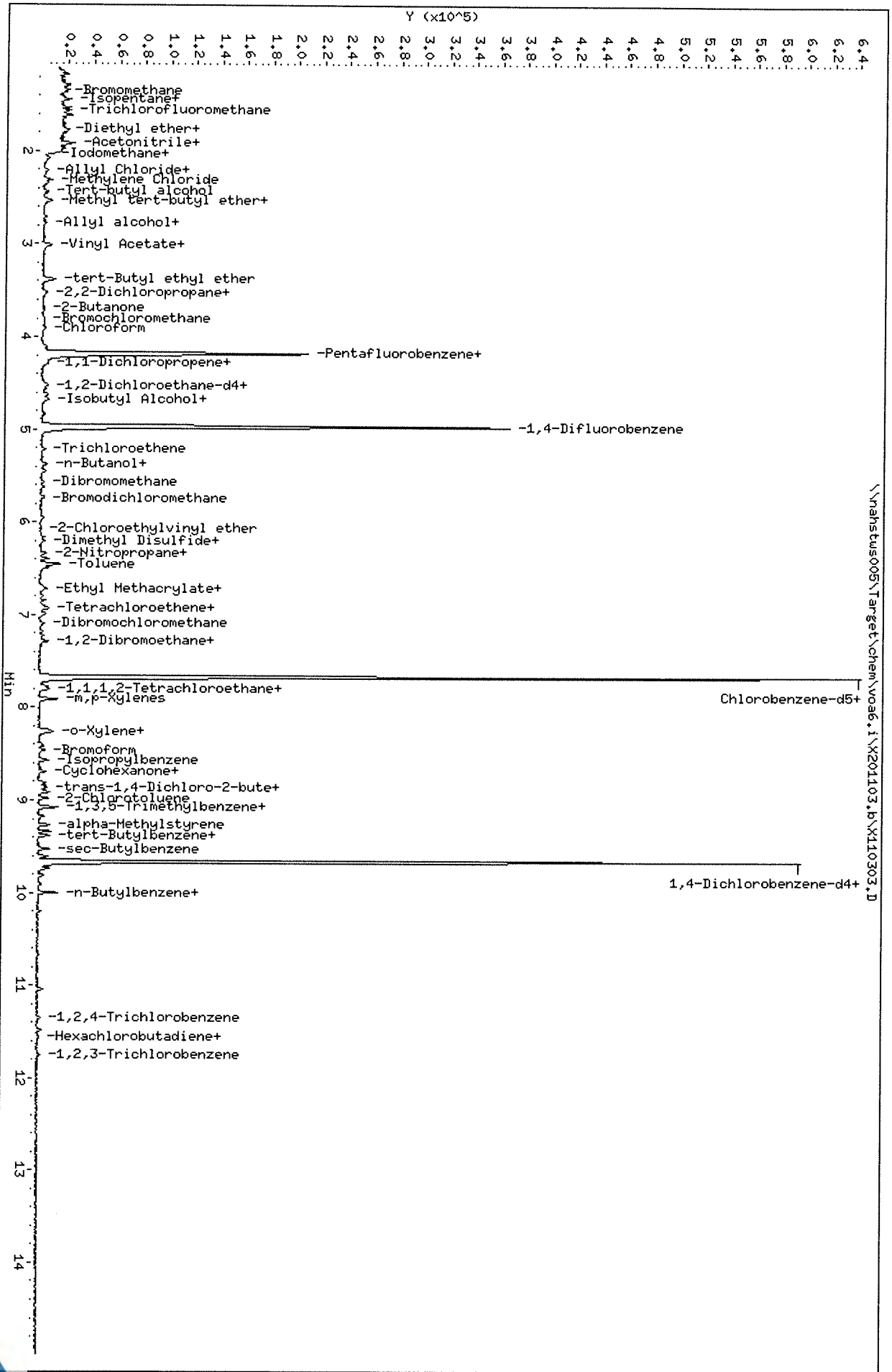
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	1279	0.50000	0.64 (aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	3598	0.50000	0.58 (a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	2039	0.50000	0.64 (aM)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	1856	0.50000	0.59 (aM)
84	1,4-Dichlorobenzene	146	9.691	9.691	(1.003)	1819	0.50000	0.54 (aM)
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	1831	0.50000	0.59 (aM)
24	2-Butanone	43	3.609	3.609	(0.862)	704	1.00000	1.02 (aM)
76	2-Chlorotoluene	91	8.981	8.981	(0.930)	3257	0.50000	0.63 (aM)
52	2-Hexanone	43	7.219	7.219	(0.941)	2217	1.00000	4.95 (aM)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	4080	0.50000	0.63 (aM)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2819	0.50000	0.48 (aM)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	2407	1.00000	1.24 (aM)
10	Acetone	43	1.983	1.983	(0.473)	3564	1.00000	(aM)
37	Benzene	78	4.519	4.519	(0.909)	4782	0.50000	0.64 (aM)
74	Bromobenzene	156	8.810	8.810	(0.912)	1160	0.50000	0.60 (aM)
29	Bromochloromethane	128	3.810	3.810	(0.909)	392	0.50000	0.38 (aM)
39	Bromodichloromethane	83	5.744	5.744	(1.156)	1742	0.50000	0.63 (aM)
66	Bromoform	173	8.416	8.416	(1.097)	543	0.50000	3.51 (aM)
6	Bromomethane	94	1.346	1.346	(0.321)	1625	0.50000	0.58 (aM)
19	Carbon Disulfide	76	2.076	2.076	(0.496)	5407	1.00000	1.04 (a)
34	Carbon Tetrachloride	117	4.283	4.283	(0.862)	1308	0.50000	0.54 (aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	3020	0.50000	0.55 (a)
7	Chloroethane	64	1.403	1.403	(0.335)	1257	0.50000	0.53 (aM)
28	Chloroform	83	3.917	3.917	(0.935)	1987	0.50000	0.52 (a)
3	Chloromethane	50	1.081	1.081	(0.258)	1628	0.50000	1.64 (aM)
27	cis-1,2-Dichloroethene	96	3.523	3.523	(0.841)	1332	0.50000	0.61 (aM)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1481	0.50000	0.49 (aM)
55	Dibromochloromethane	129	7.184	7.184	(0.937)	978	0.50000	0.52 (a)
44	Dibromomethane	93	5.572	5.572	(1.121)	625	0.50000	0.46 (aM)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	985	0.50000	0.51 (aM)
61	Ethylbenzene	106	7.814	7.814	(1.019)	1584	0.50000	0.57 (aH)
91	Hexachlorobutadiene	225	11.474	11.474	(1.188)	348	0.50000	2.89 (aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	4684	0.50000	3.14 (a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	3648	1.00000	1.10 (a)
17	Methylene Chloride	84	2.306	2.306	(0.550)	1077	0.50000	0.52 (aM)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	3247	0.50000	4.06 (a)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	5436	0.50000	0.62 (a)
92	Naphthalene	128	11.553	11.553	(1.196)	632	0.50000	2.62 (aM)
63	o-Xylene	106	8.244	8.244	(1.075)	1686	0.50000	0.51 (a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	4540	0.50000	3.21 (aM)
64	Styrene	104	8.265	8.265	(1.078)	2898	0.50000	0.52 (aM)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	3197	0.50000	3.10 (aM)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	841	0.50000	0.60 (a)
50	Toluene	91	6.453	6.453	(0.841)	5824	0.50000	0.62 (aM)
20	trans-1,2-Dichloroethene	96	2.549	2.549	(0.609)	998	0.50000	0.54 (aM)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	1348	0.50000	0.51 (aM)
38	Trichloroethene	130	5.207	5.207	(1.048)	1109	0.50000	0.62 (aM)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	3308	0.50000	0.59 (a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	1800	0.50000	0.55 (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.

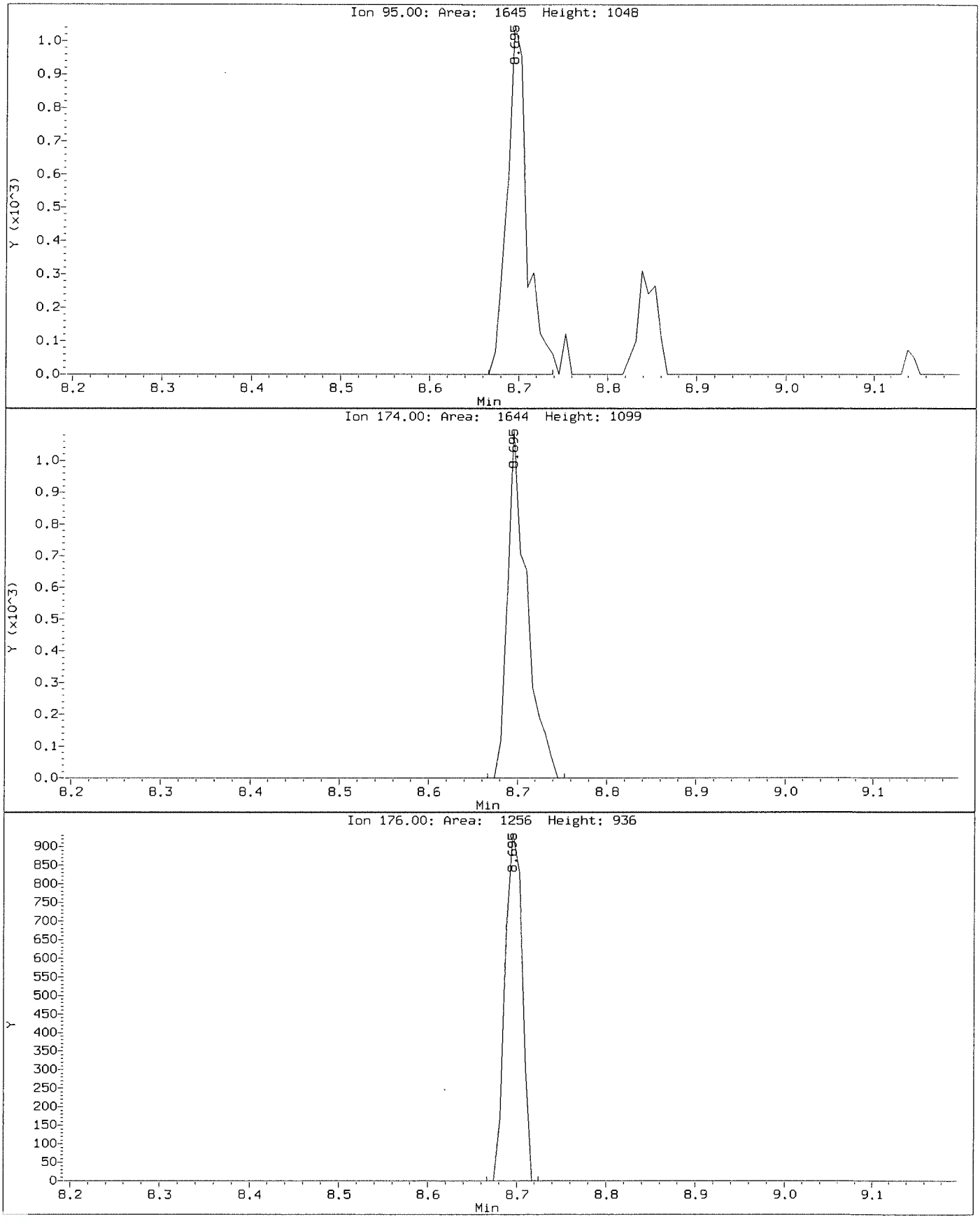


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Purge Volume: 5.0
Column phase: DB624

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

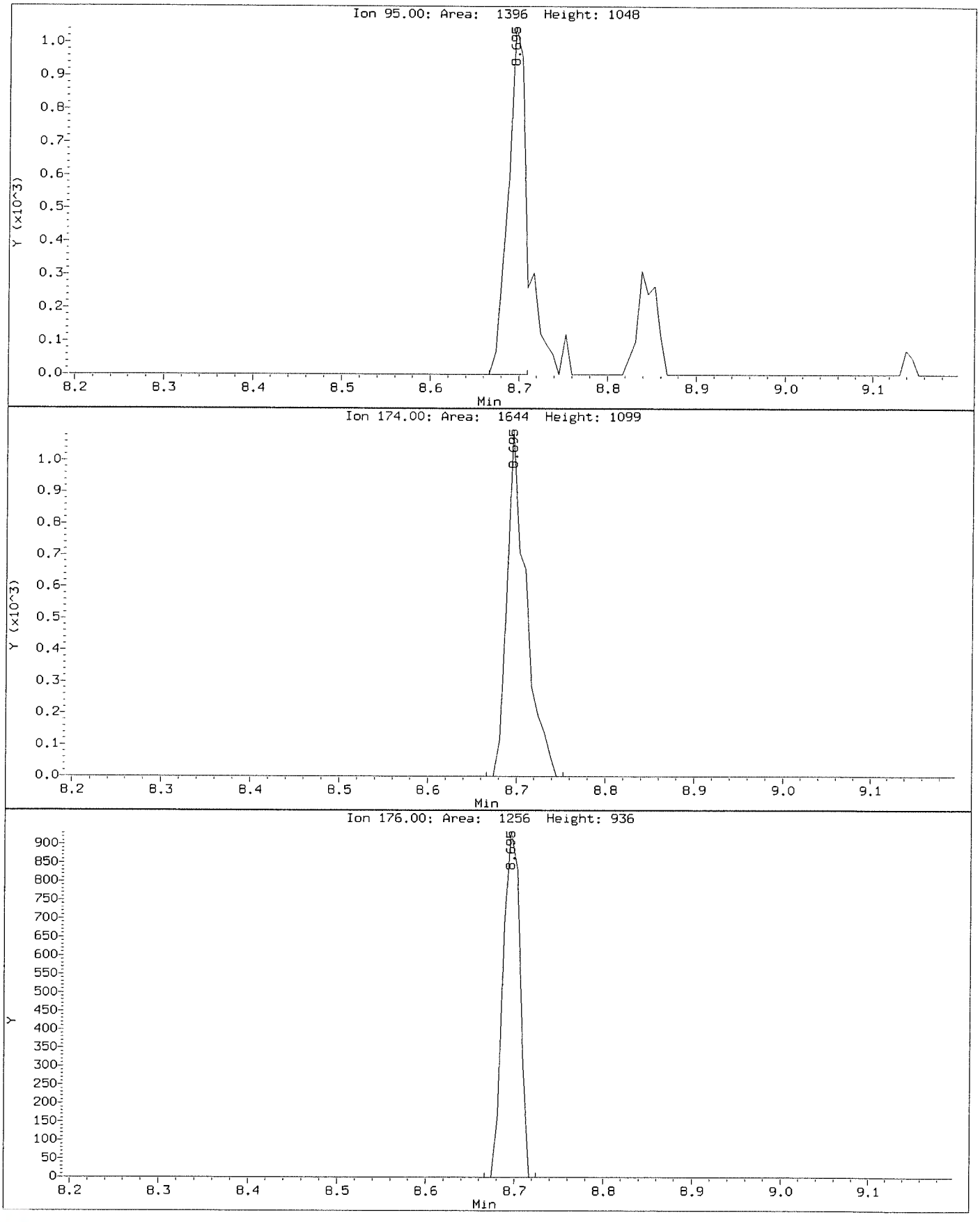
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Instrument: voa6.i
Client Sample ID: VSTD000.5

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



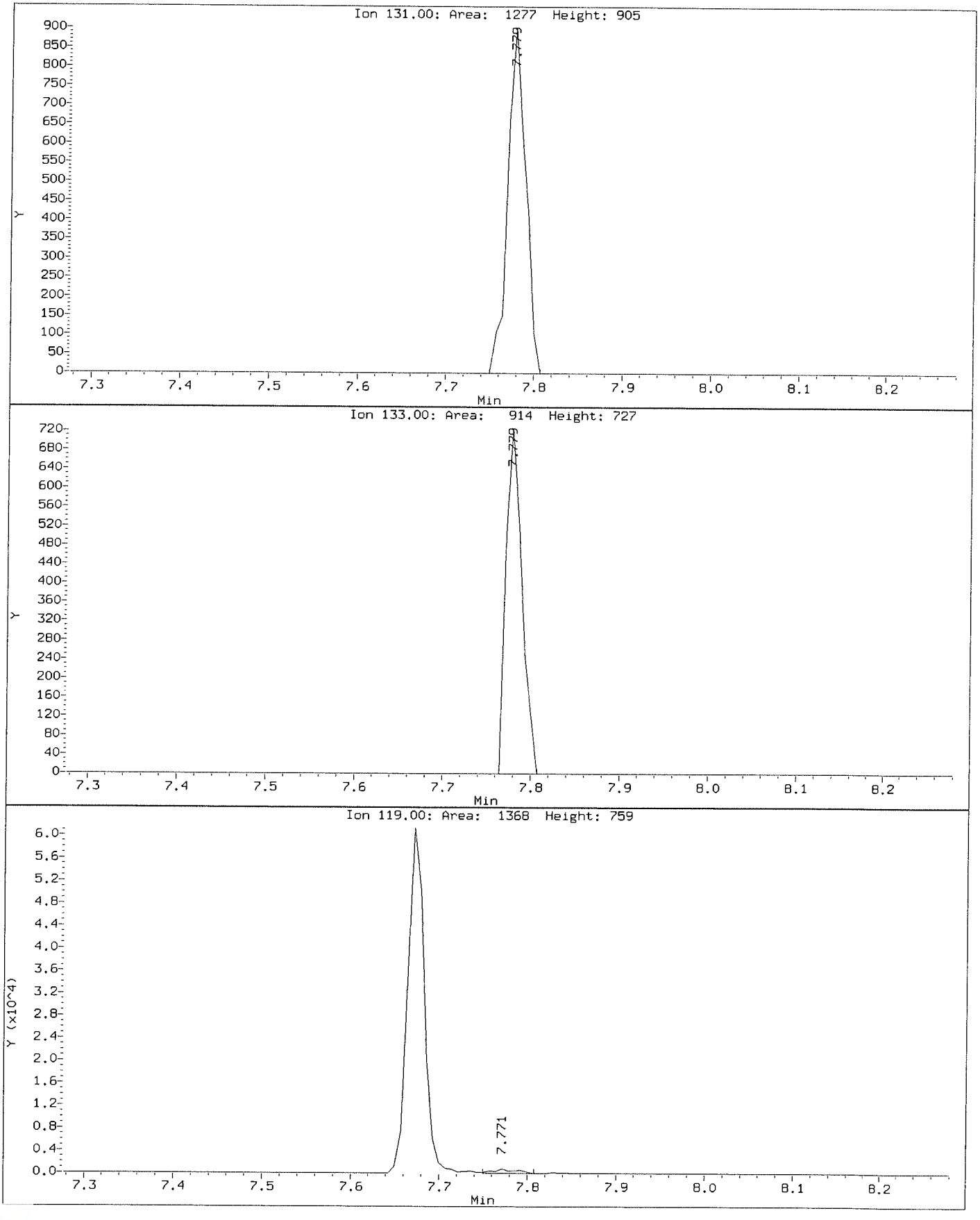
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



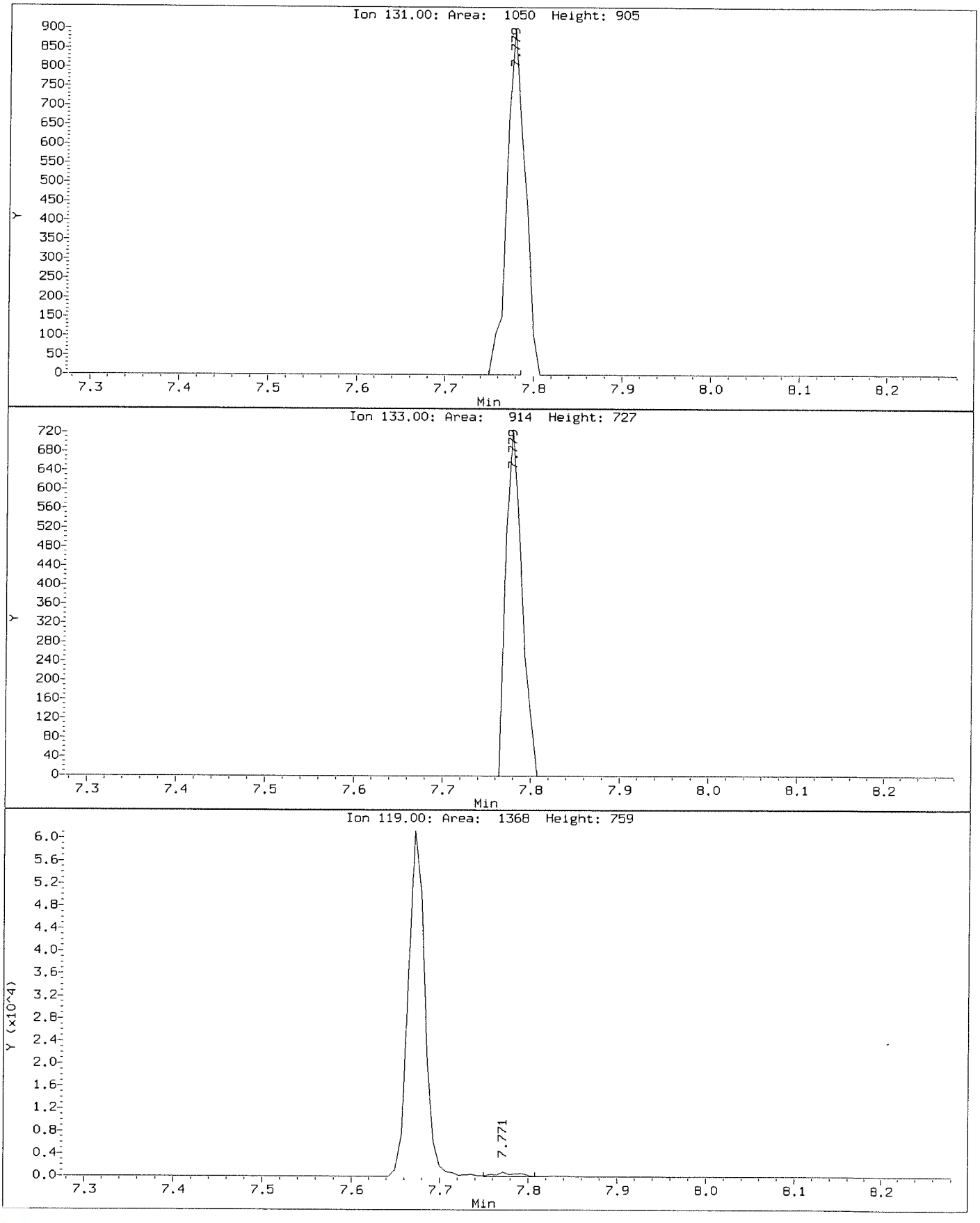
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,1,2-Tetrachloroethane
CAS Number: 630-20-6



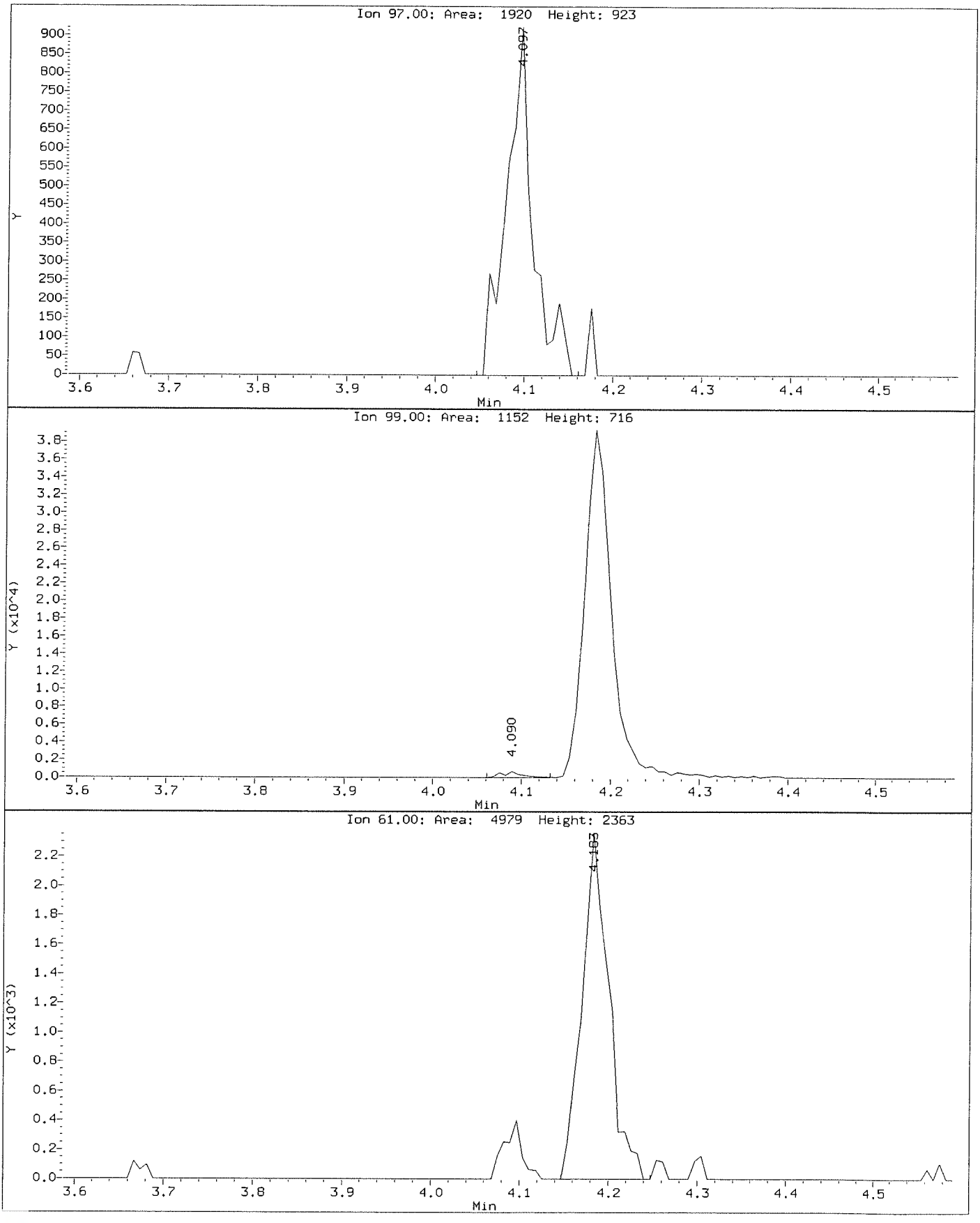
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Client Sample ID: VSTD000.5

Compound: 1,1,1,2-Tetrachloroethane
CAS Number: 630-20-6



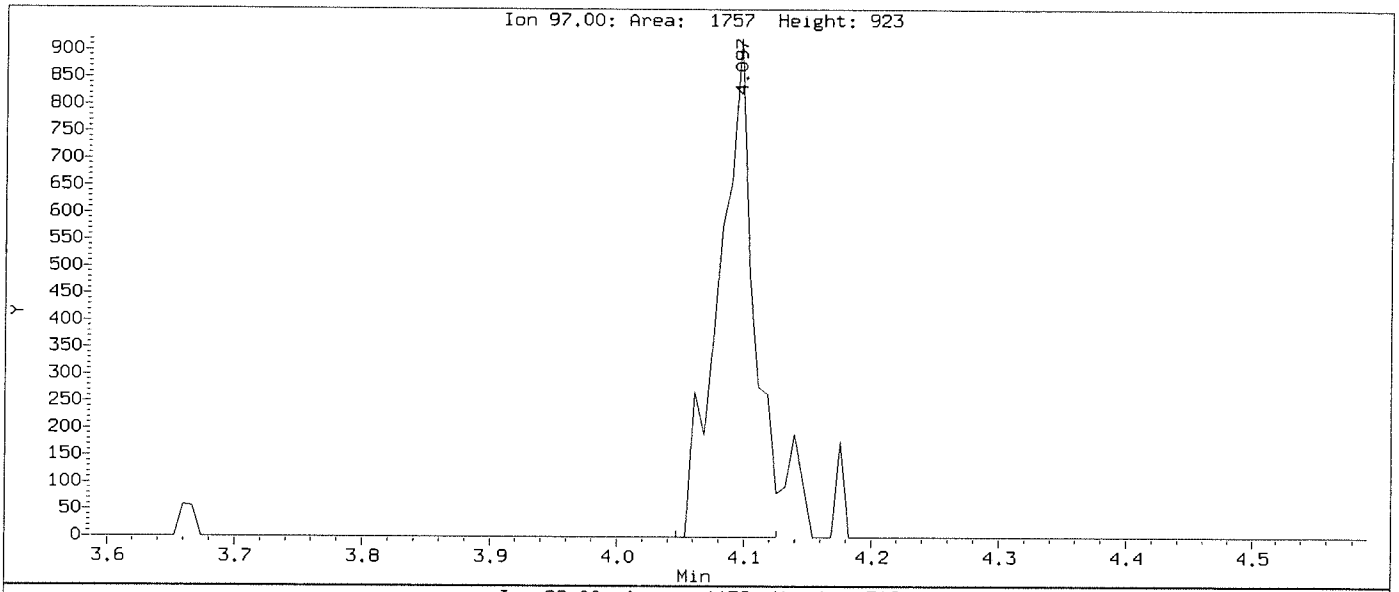
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Instrument: voa6.i
Client Sample ID: VSTD000.5

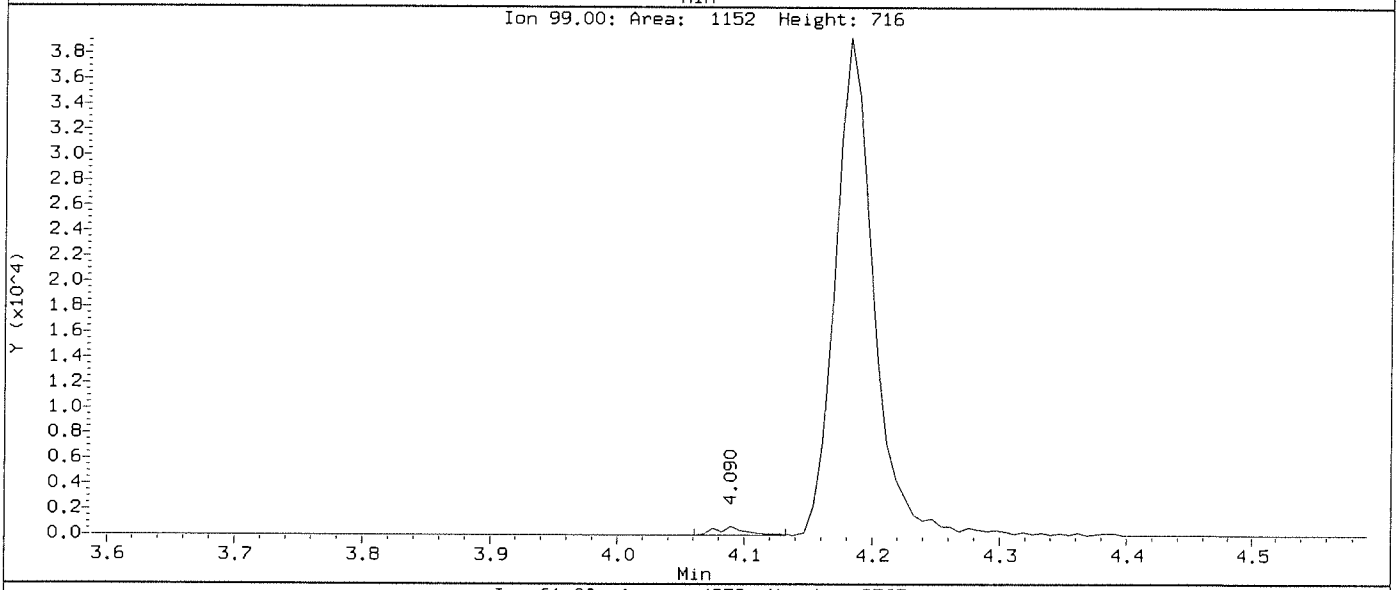
Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6

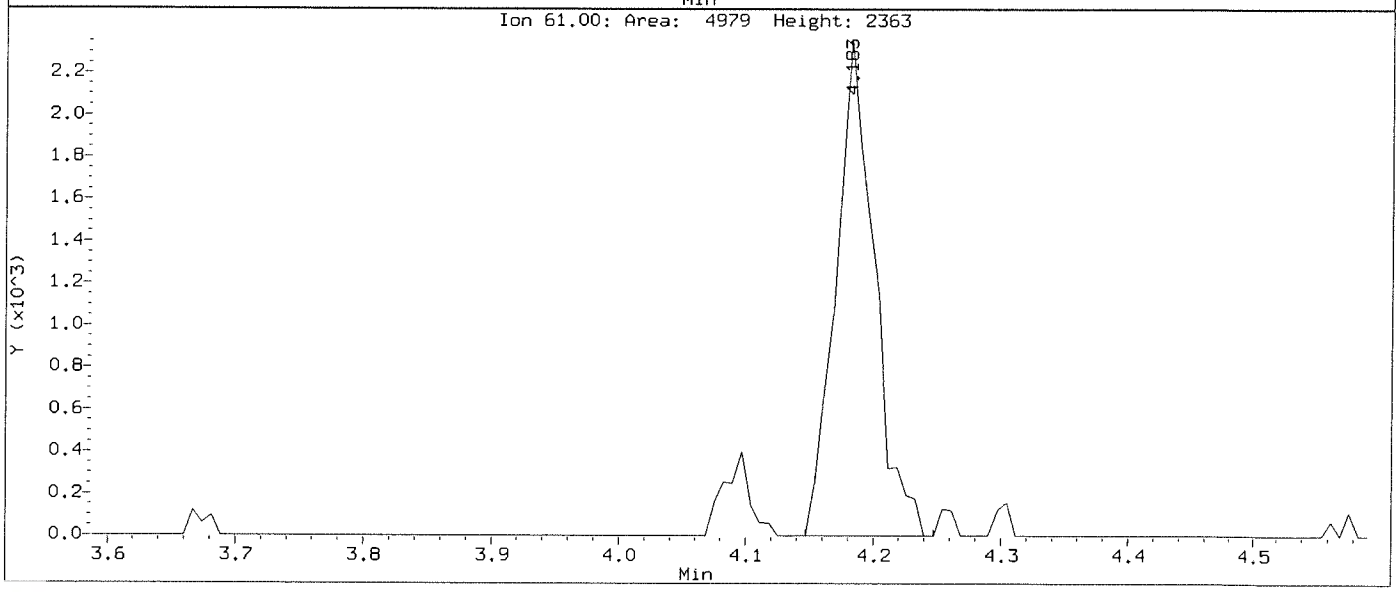


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1,1-Trichloroethane
CAS Number: 71-55-6

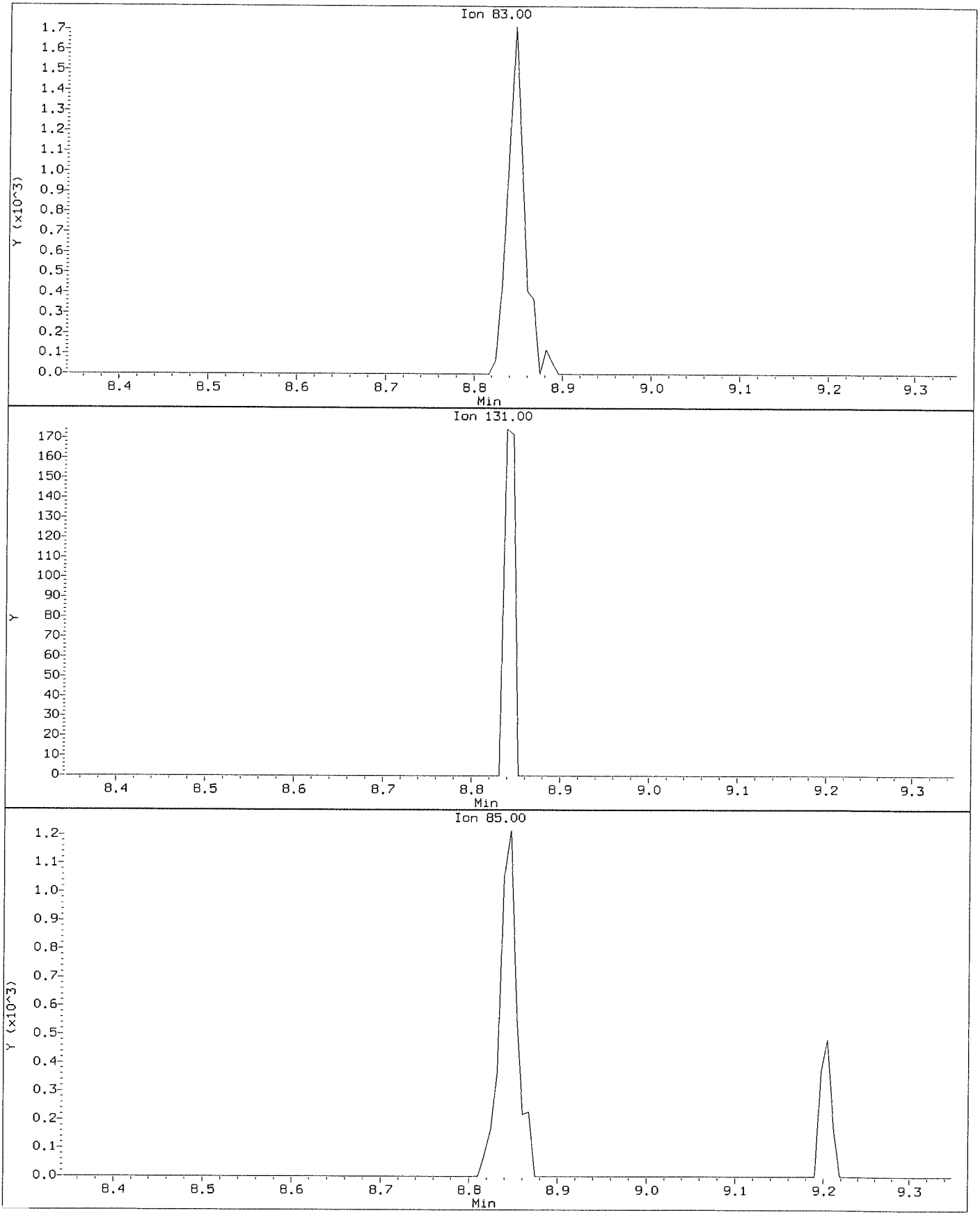






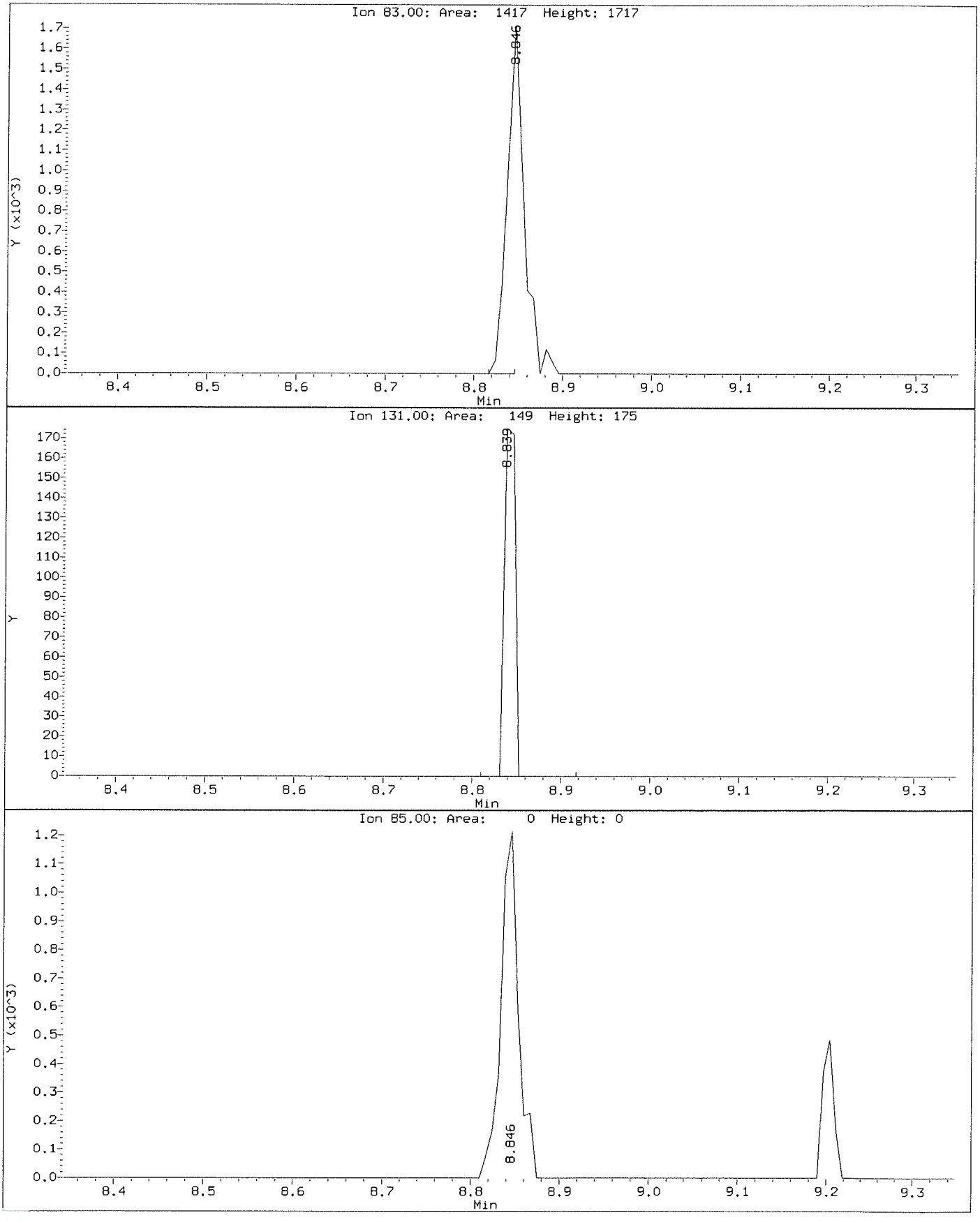
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



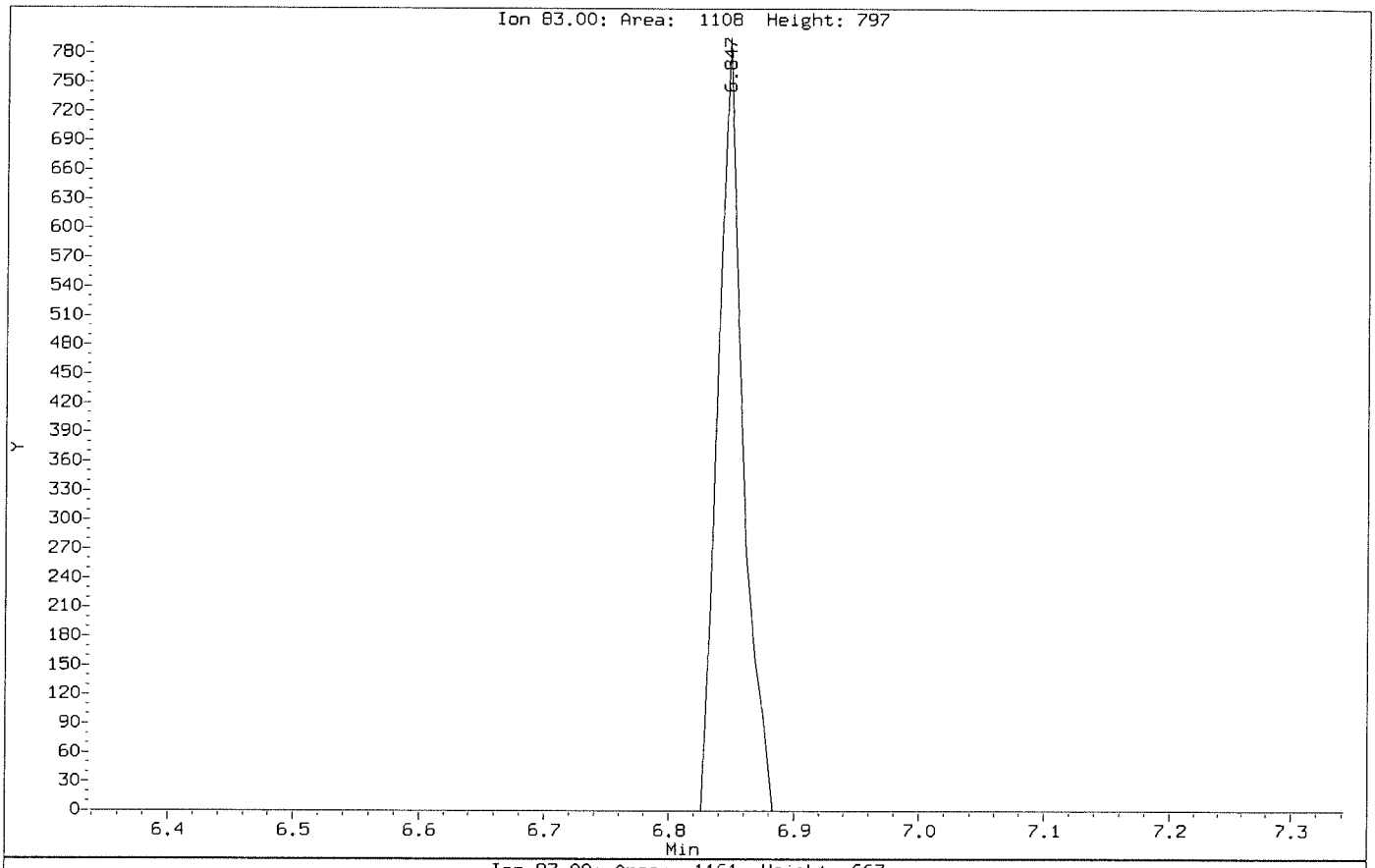
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Client Sample ID: VSTD000.5

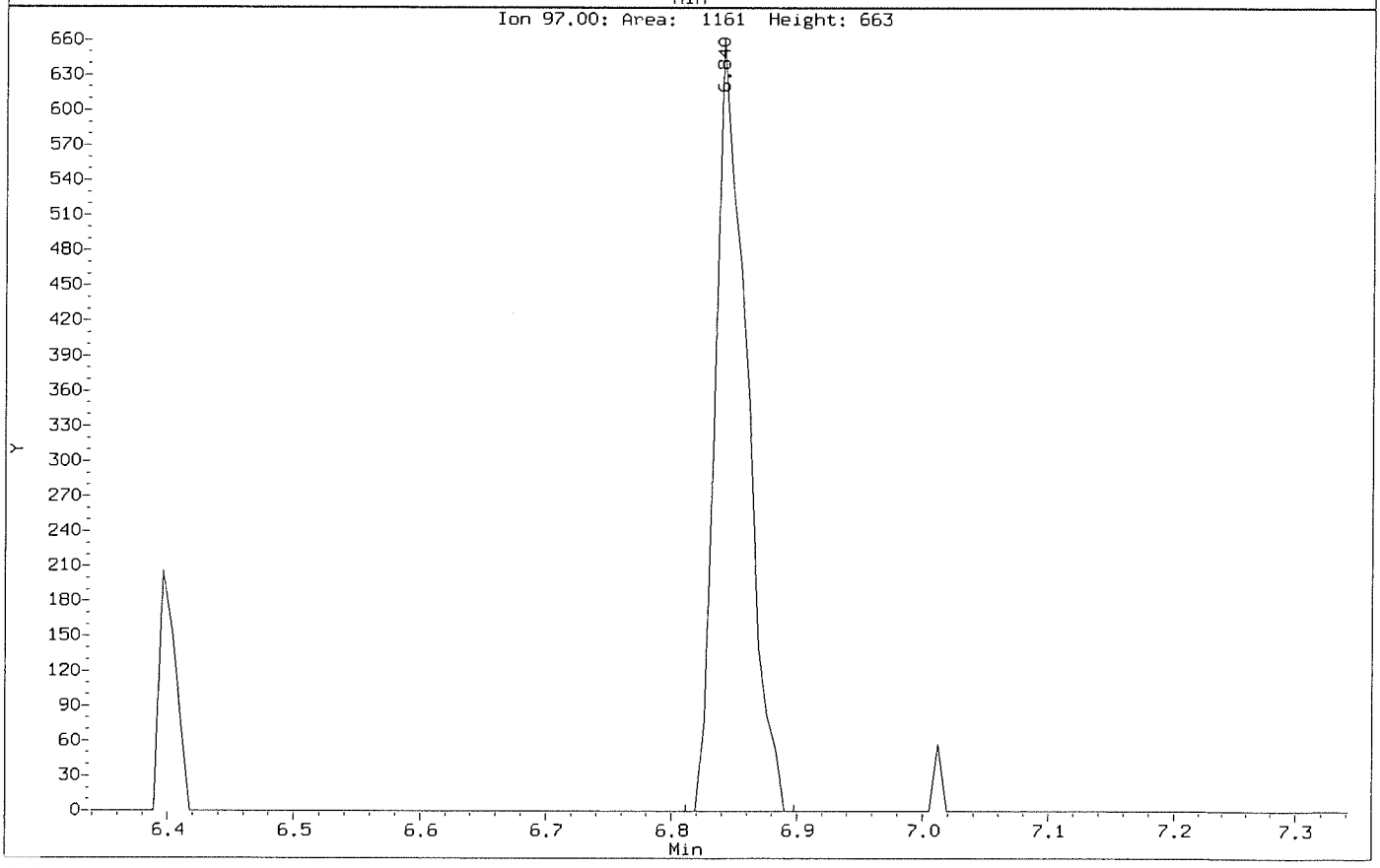
Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

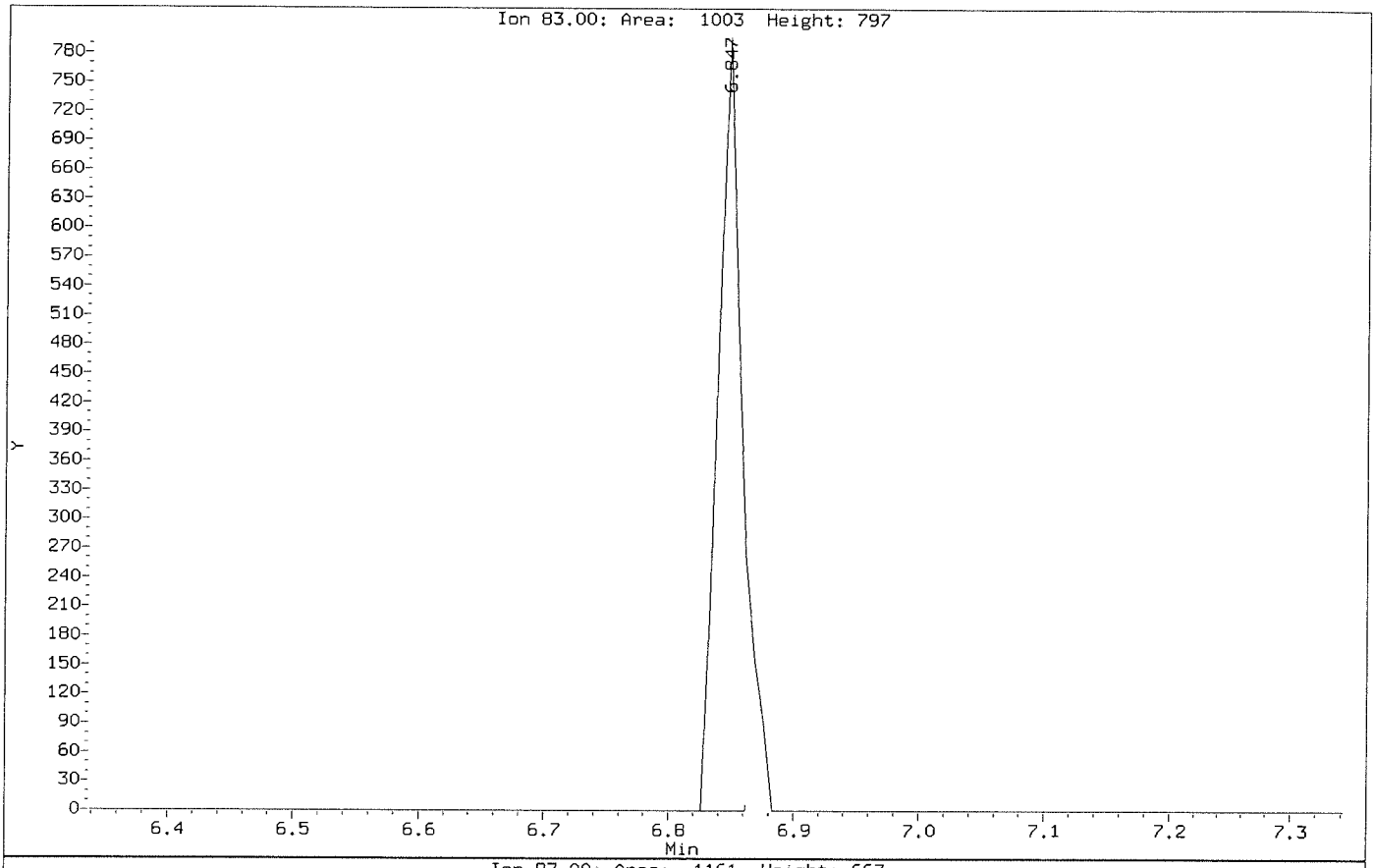
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5

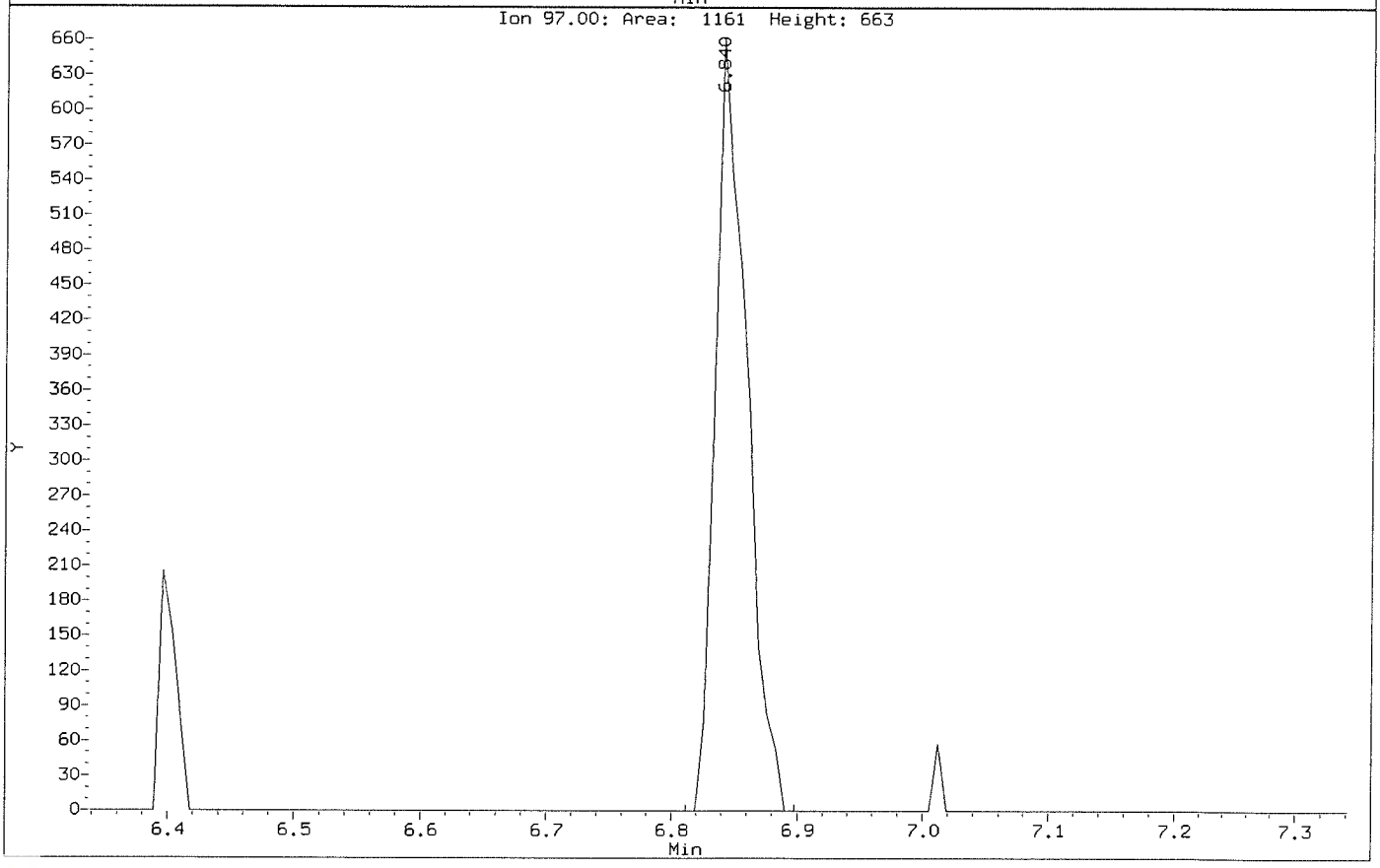




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Injection Date: 03-NOV-2020 12:43
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Client Sample ID: VSTD000.5

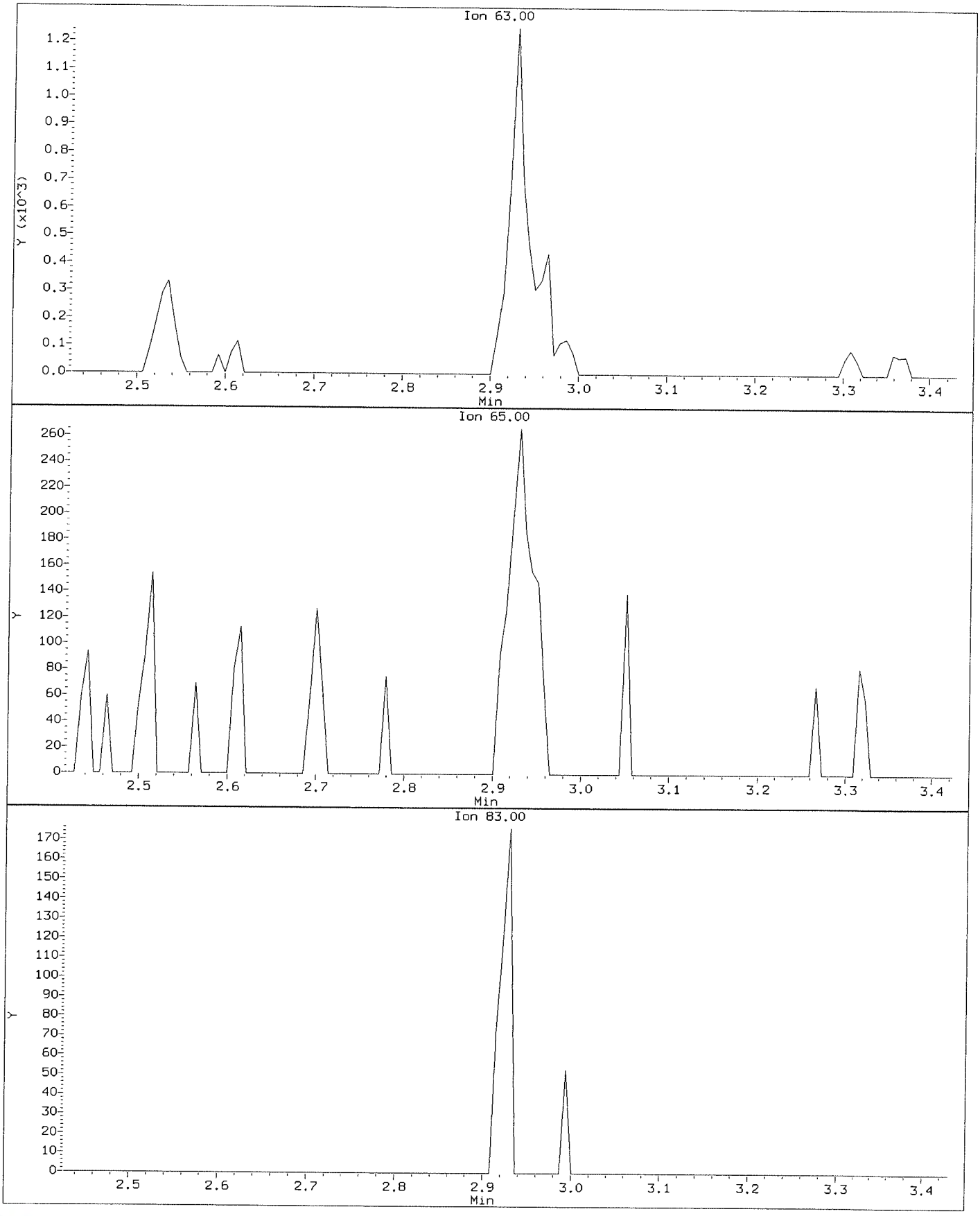
Compound: 1,1,2-Trichloroethane
CAS Number: 79-00-5





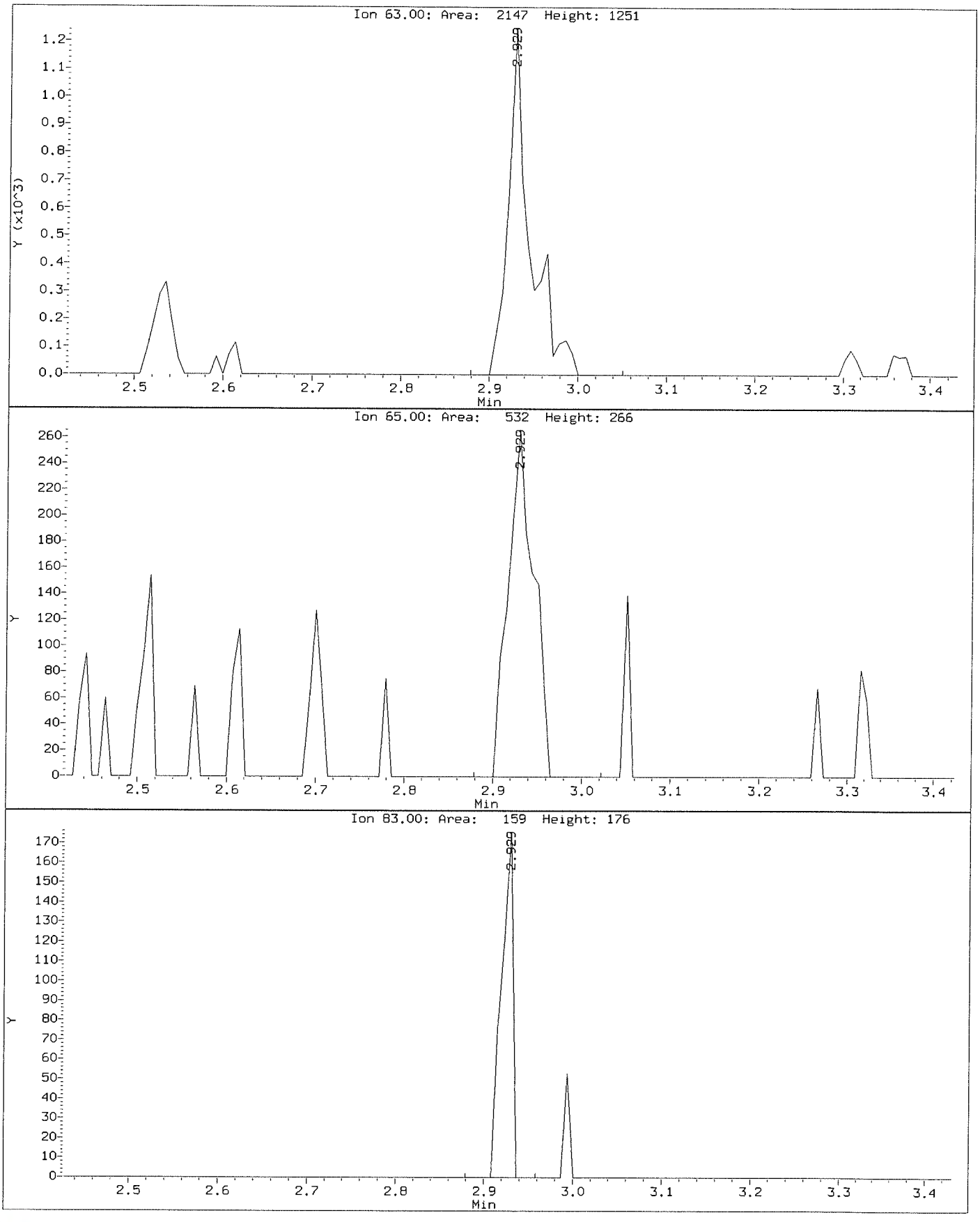
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethane
CAS Number: 75-34-3



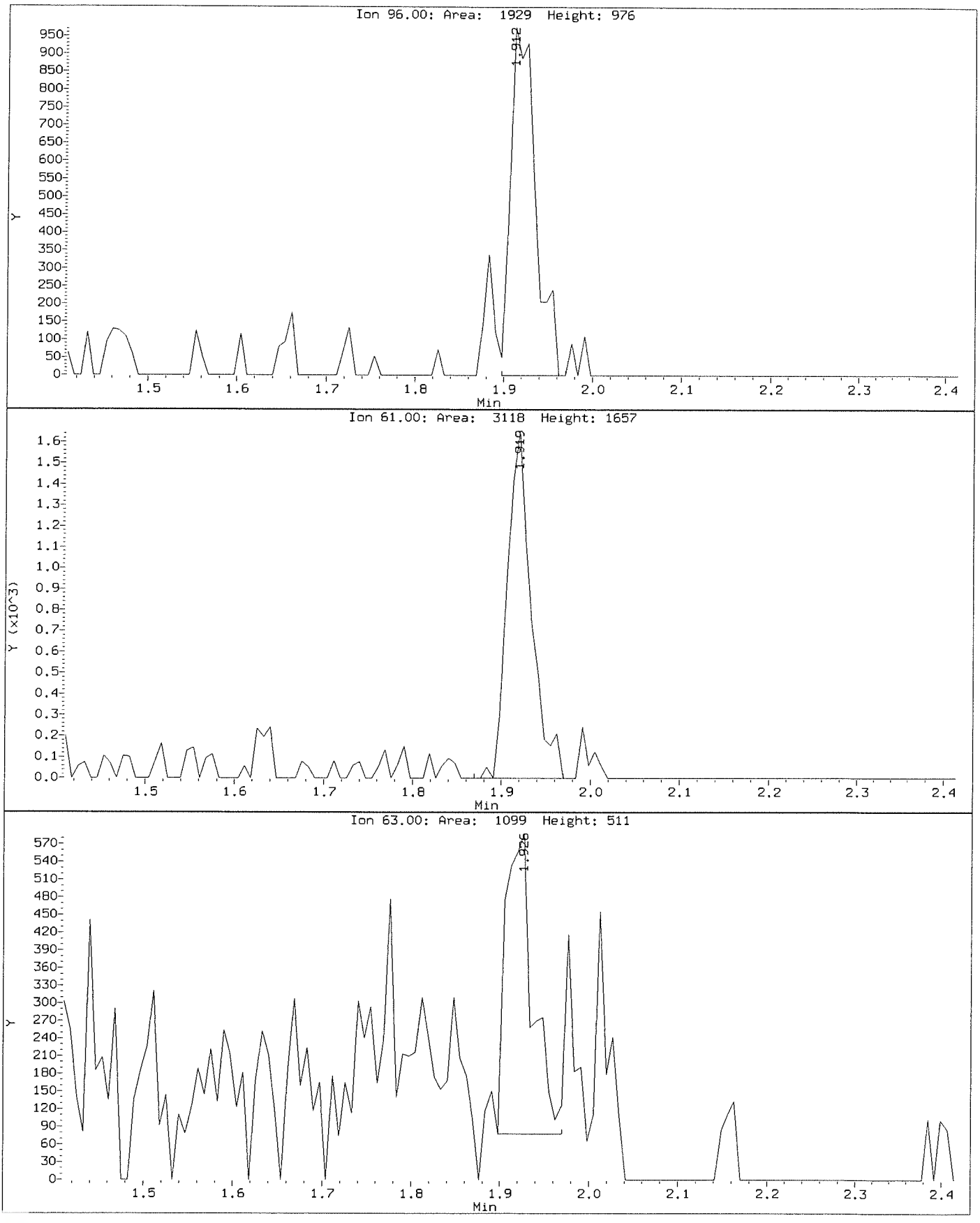
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloroethane
CAS Number: 75-34-3



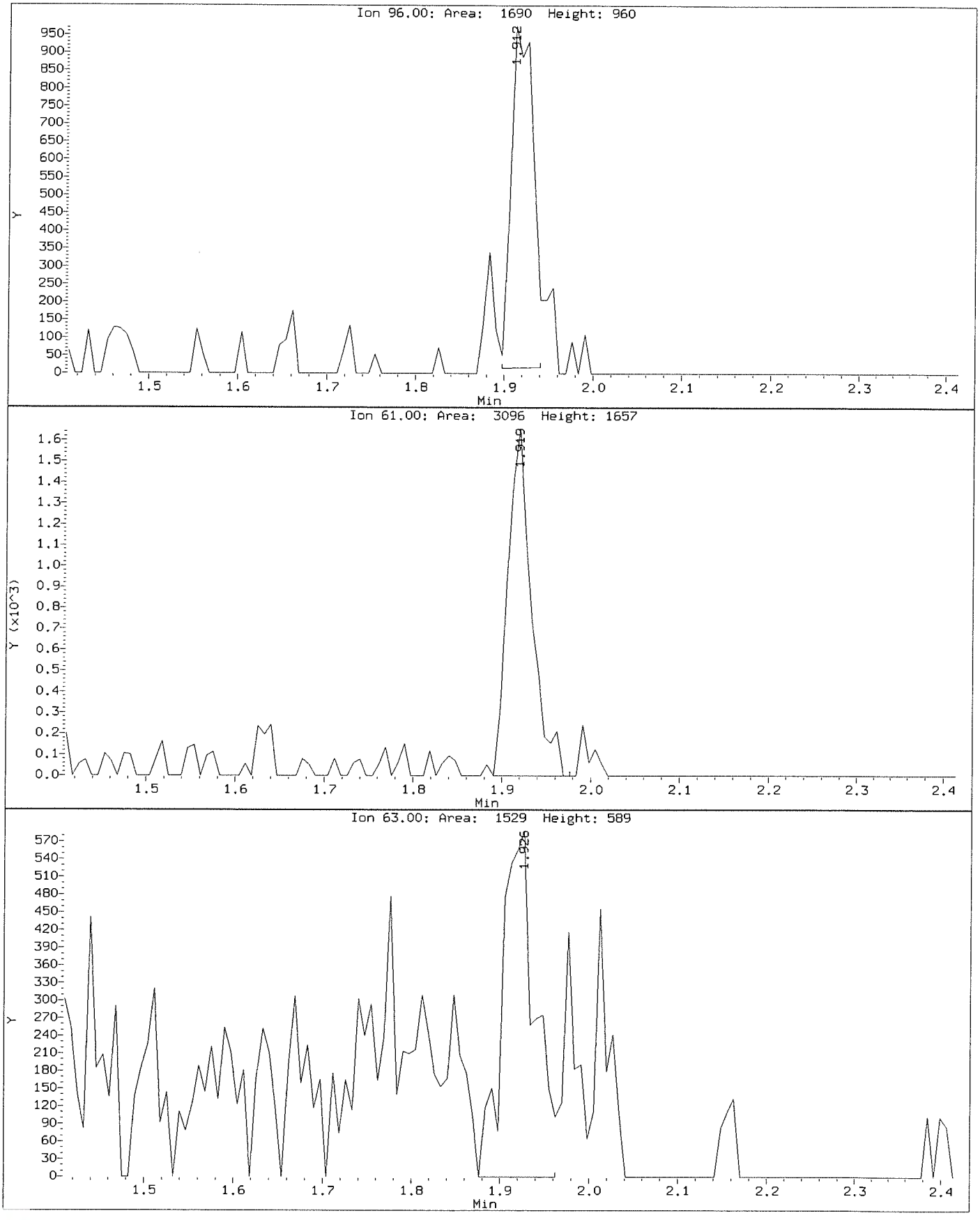
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

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



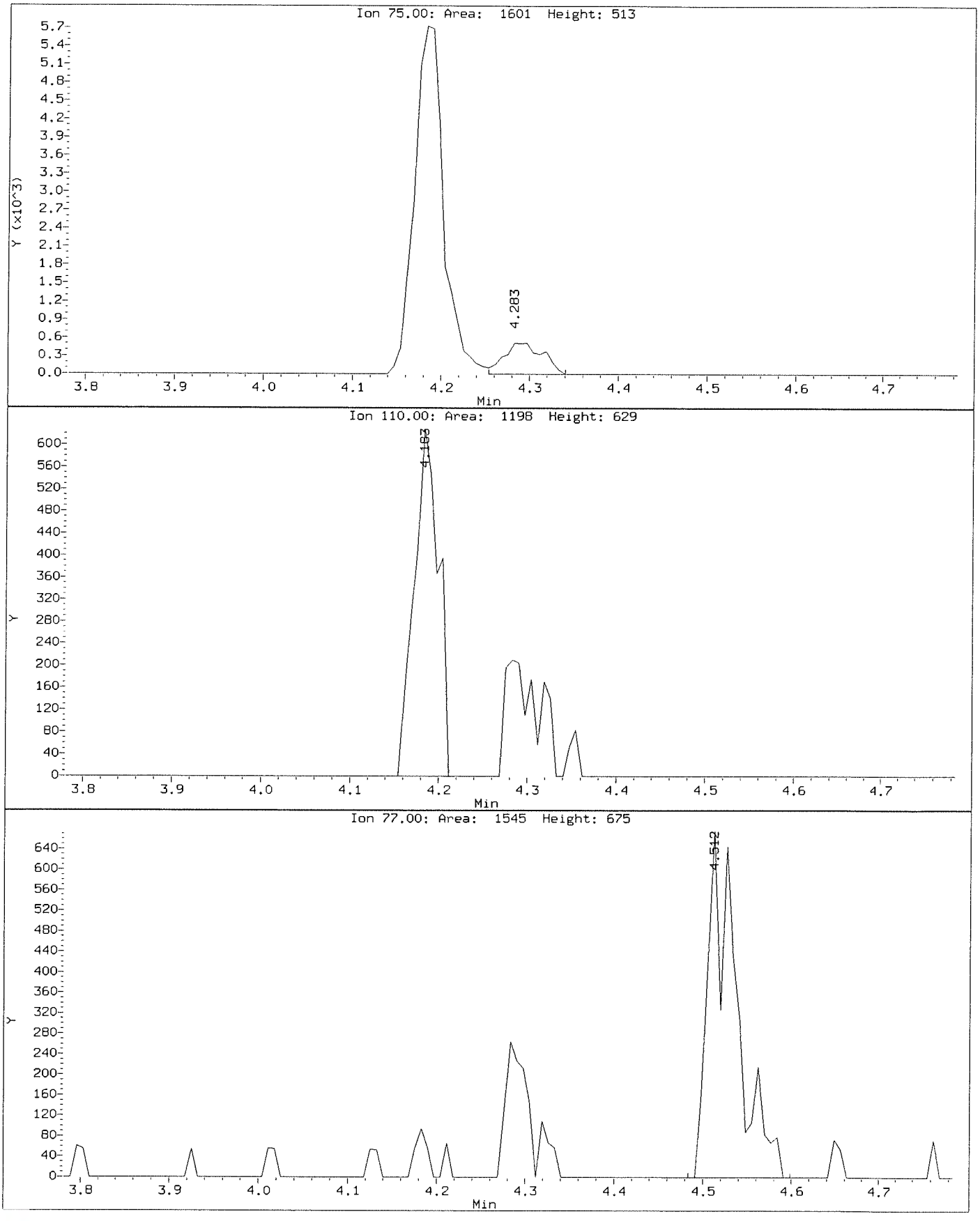
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Instrument: voa6.i
Client Sample ID: VSTD000.5

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



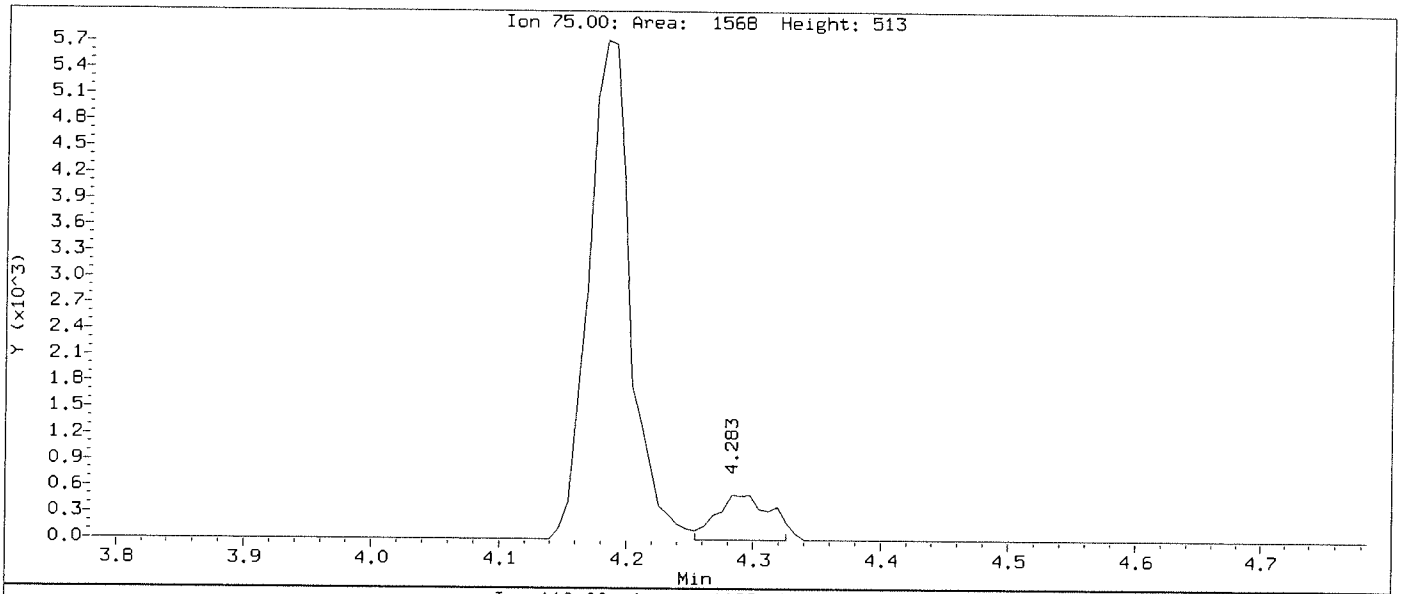
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Client Sample ID: VSTD000.5

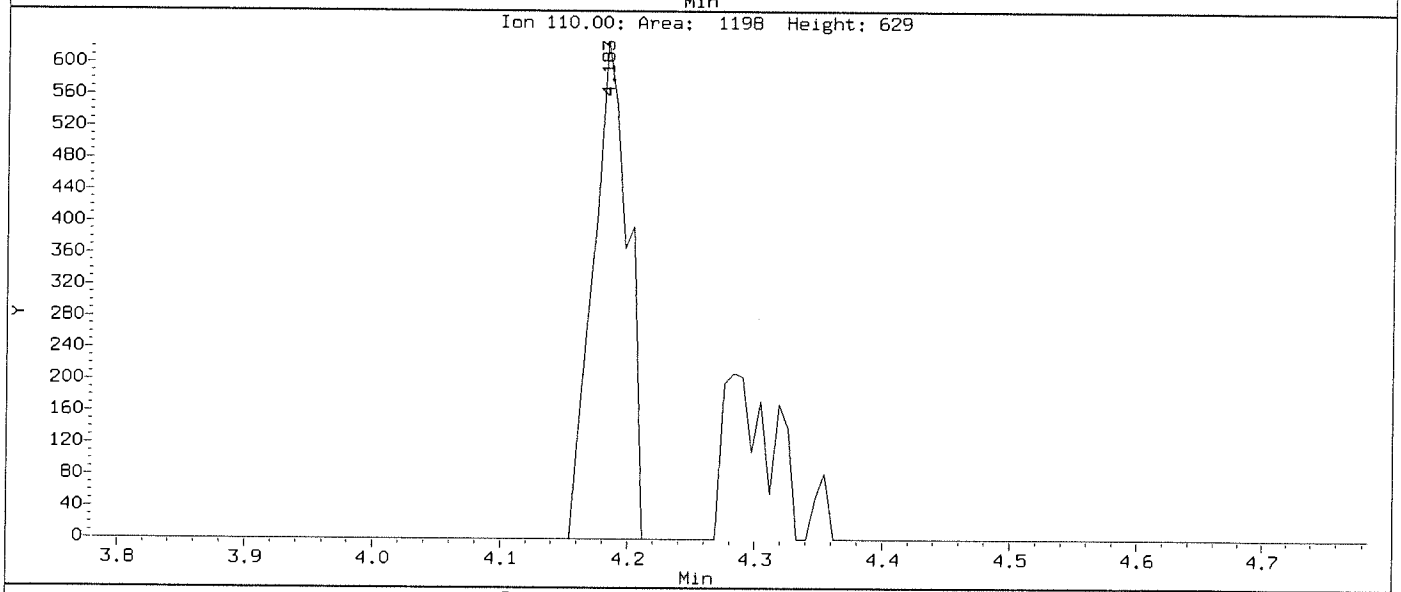
Compound: 1,1-Dichloropropene
CAS Number: 563-58-6

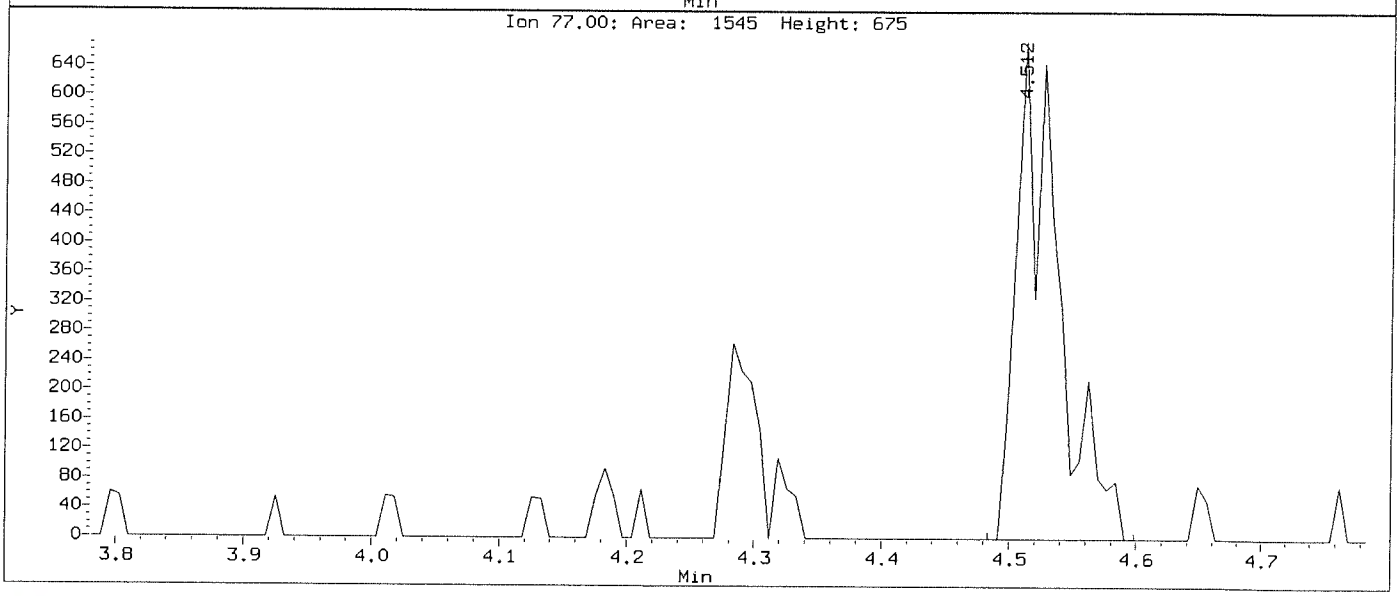


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6

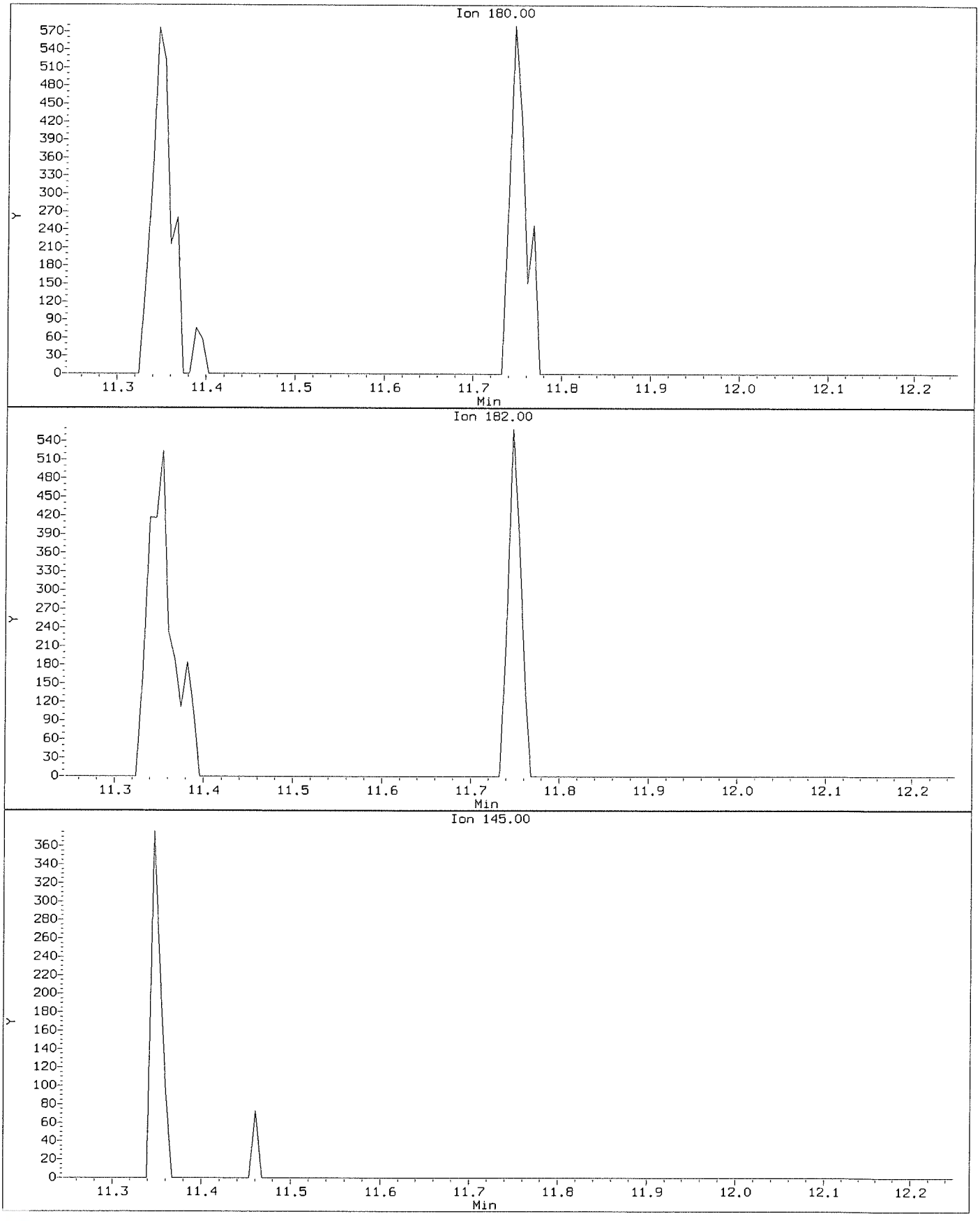






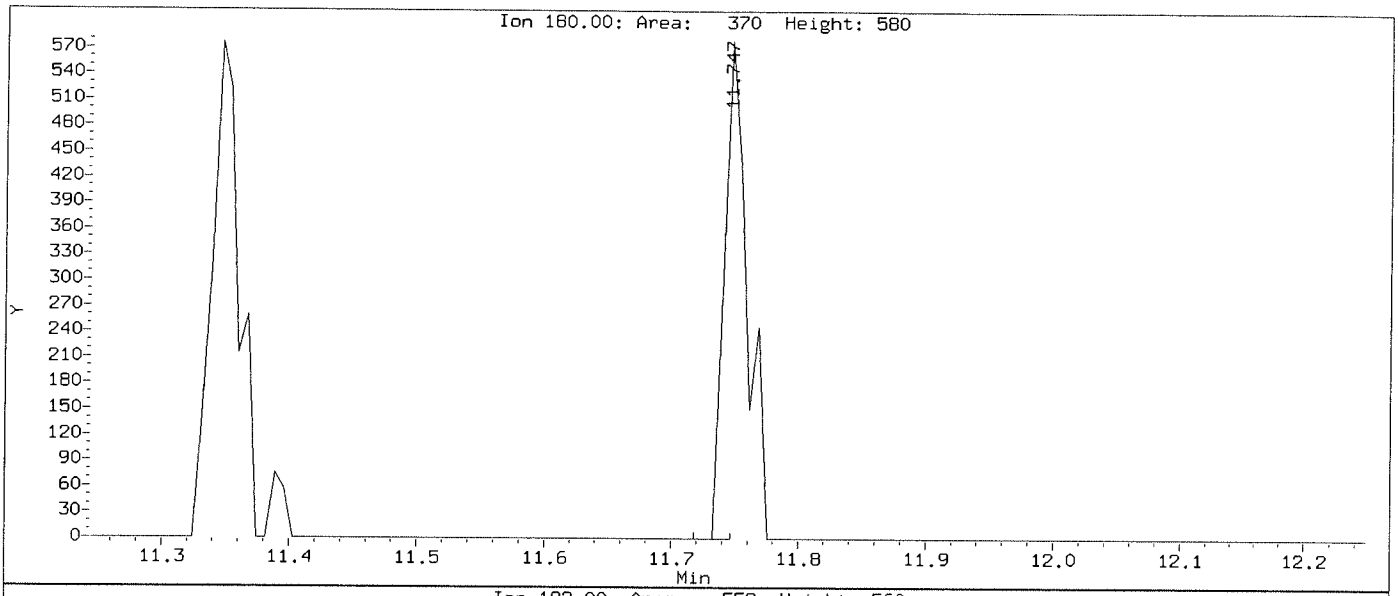
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Client Sample ID: VSTD000.5

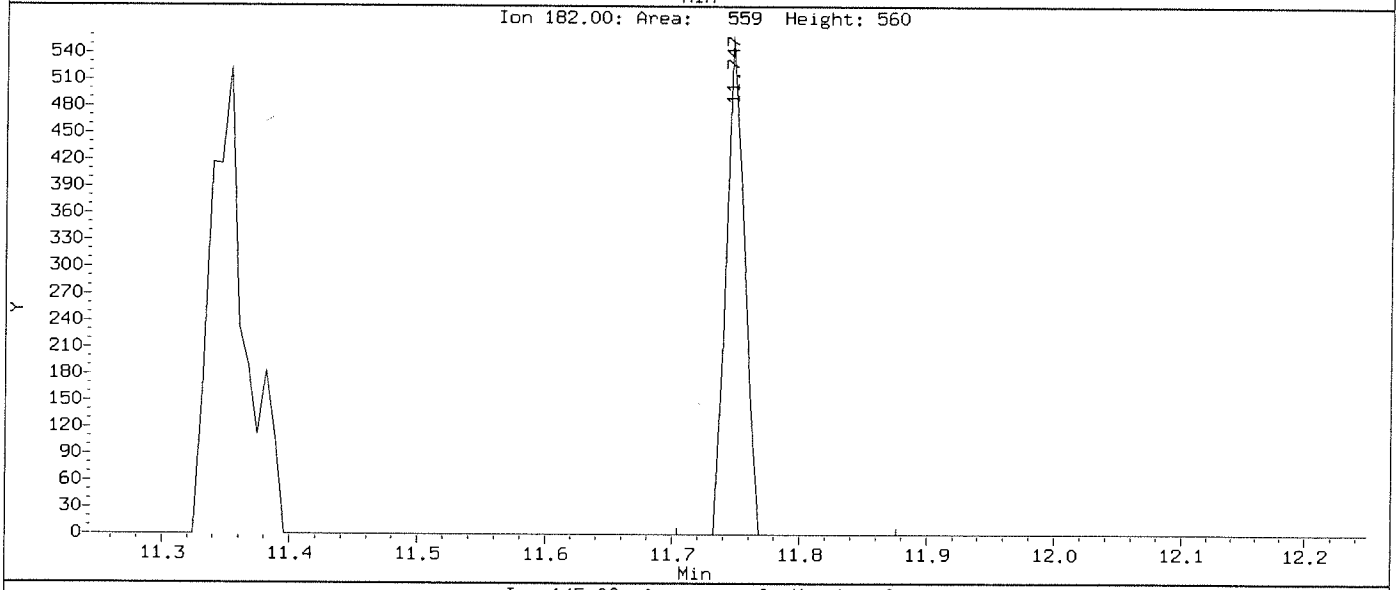
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

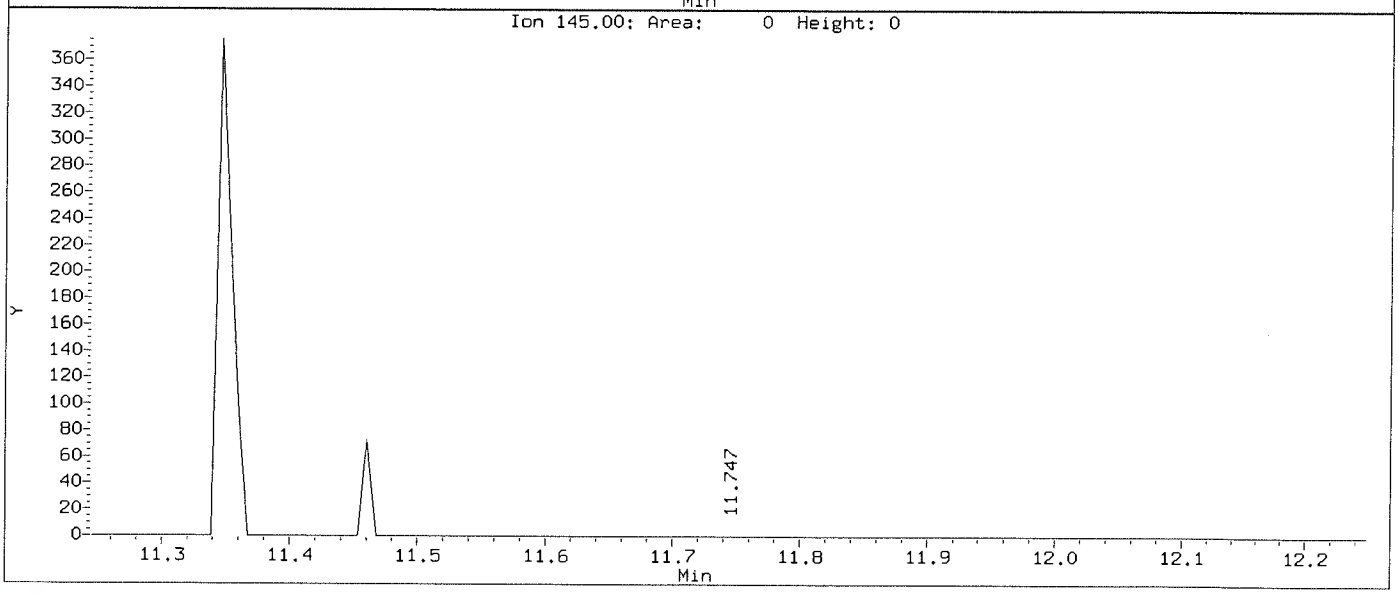


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

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

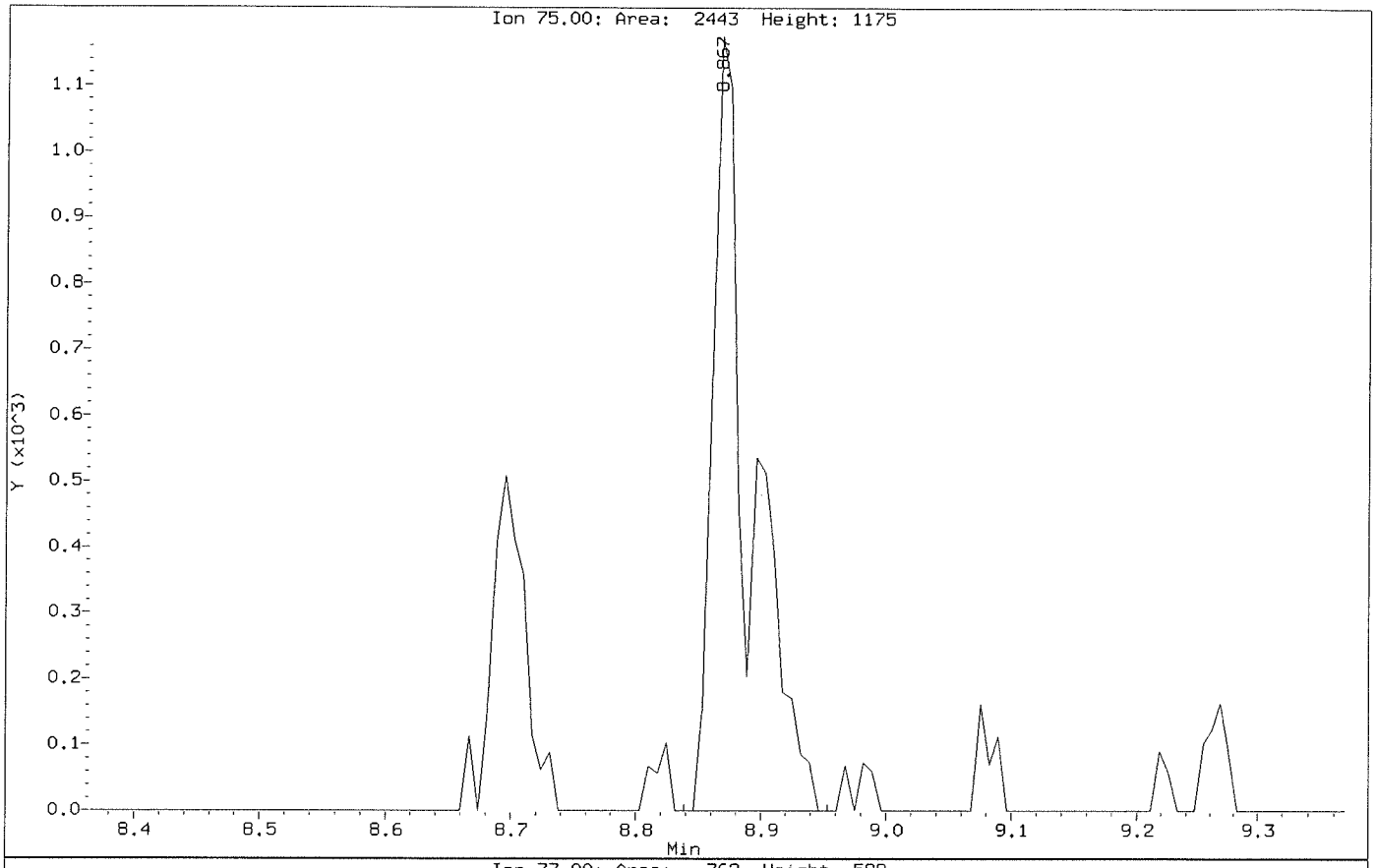


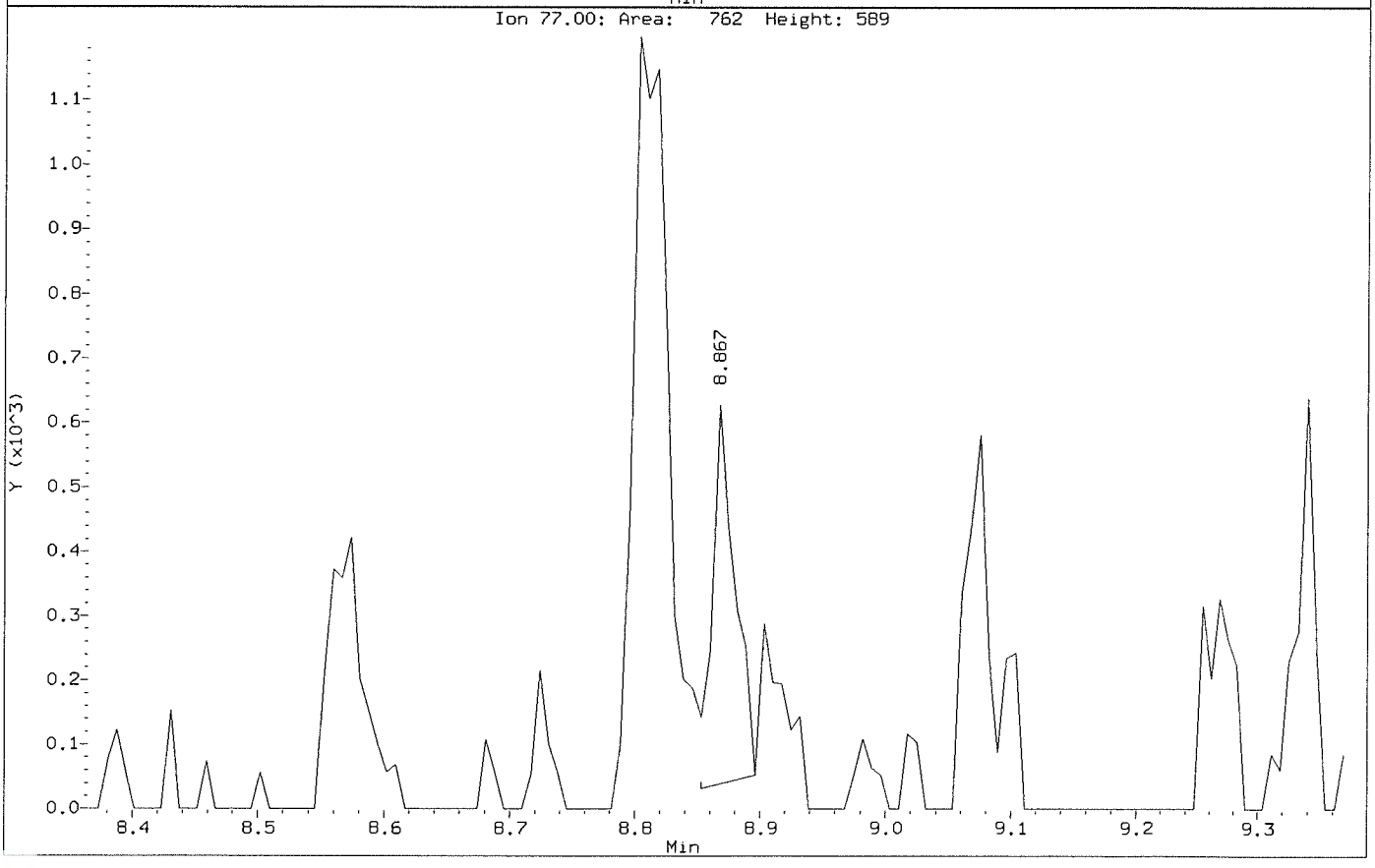




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Client Sample ID: VSTD000.5

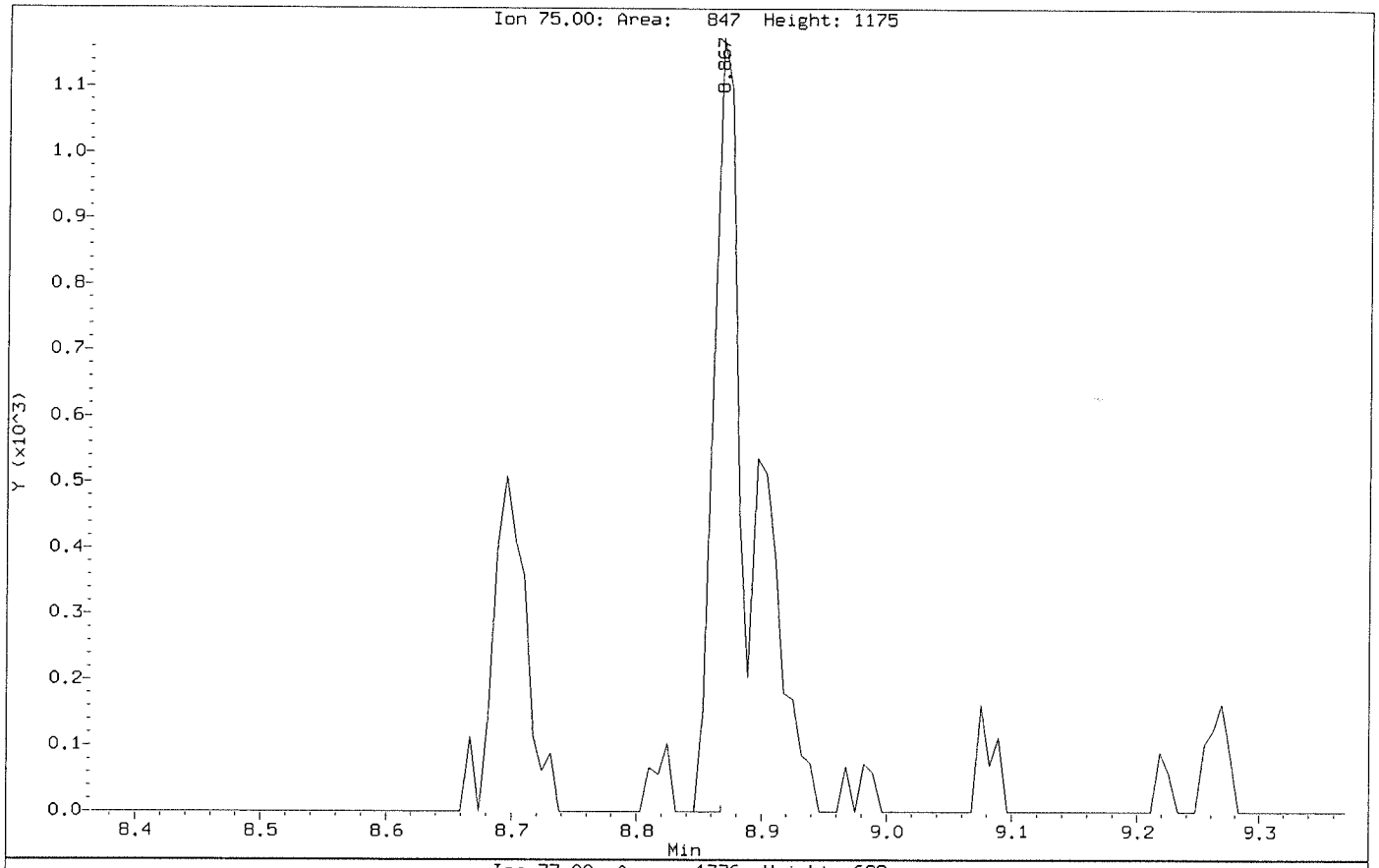
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

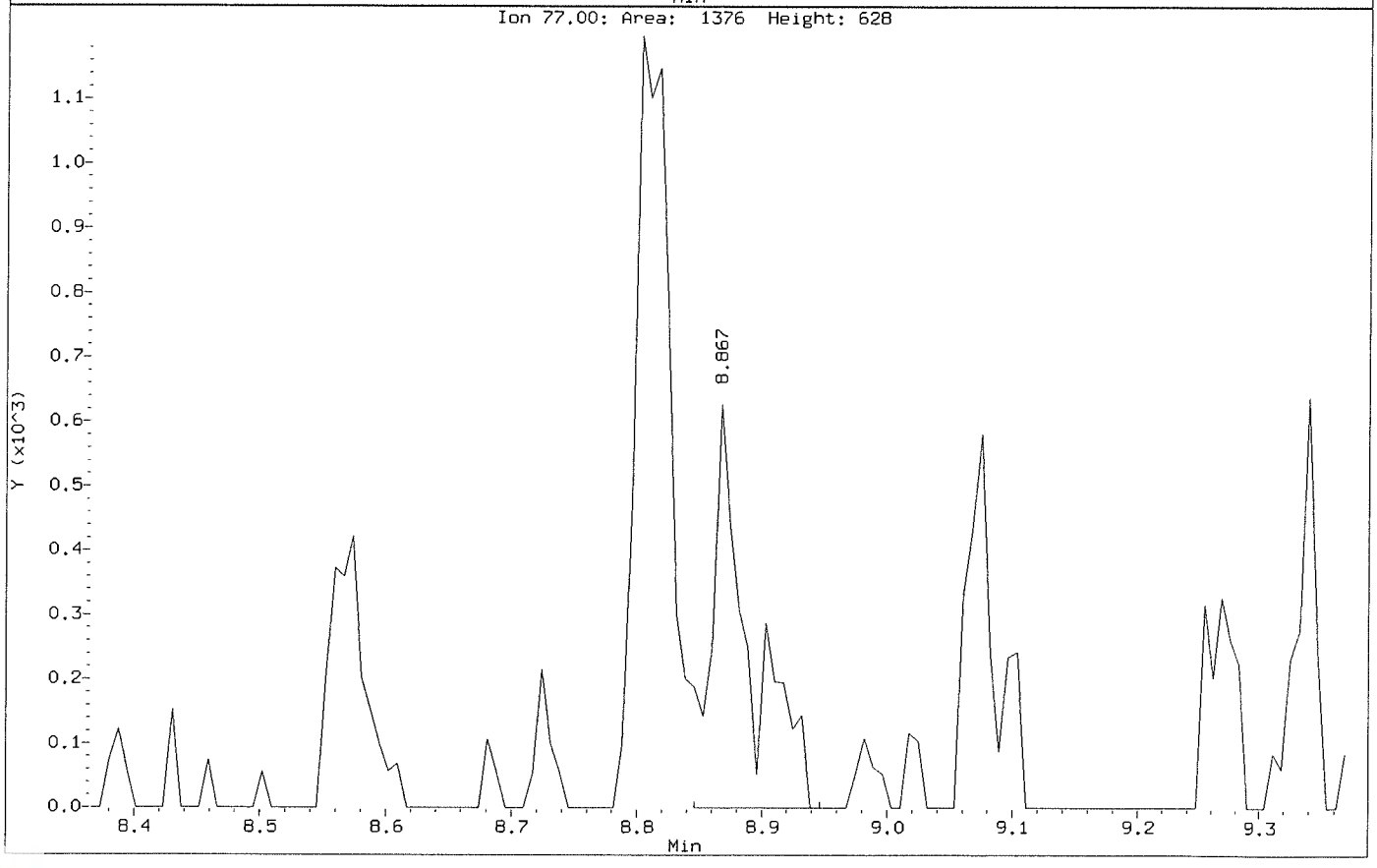




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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

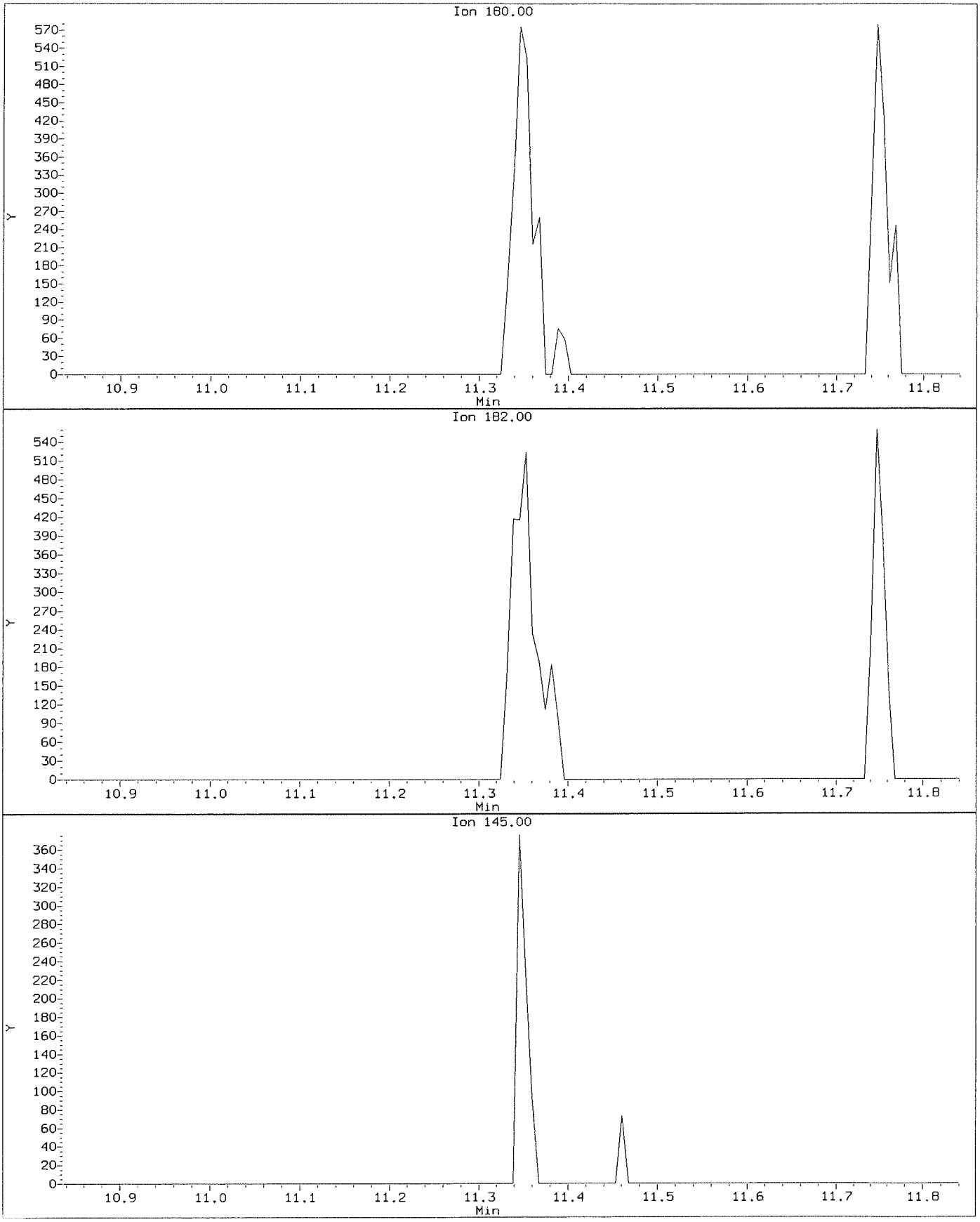
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





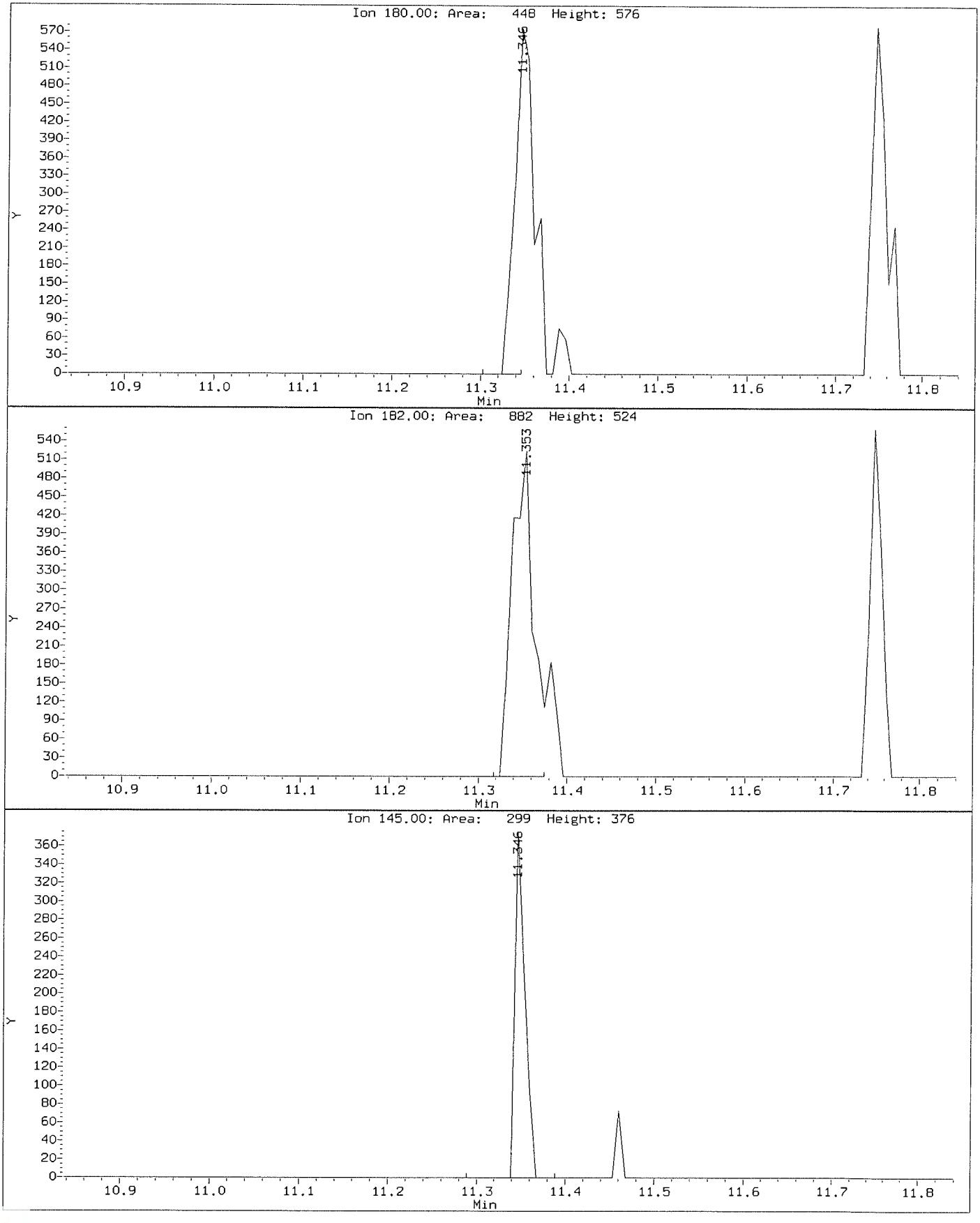
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



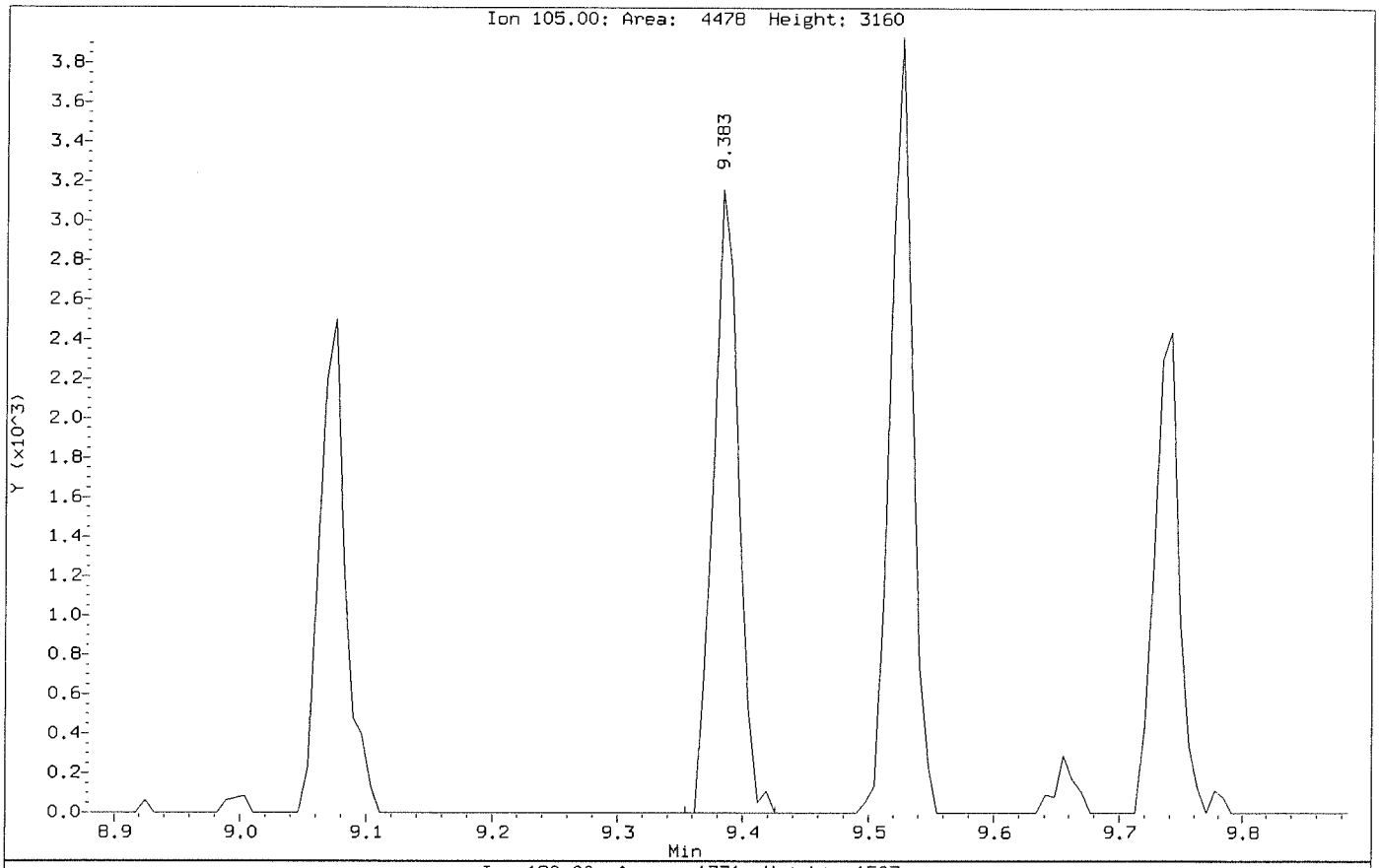
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Instrument: voa6.i
Client Sample ID: VSTD000.5

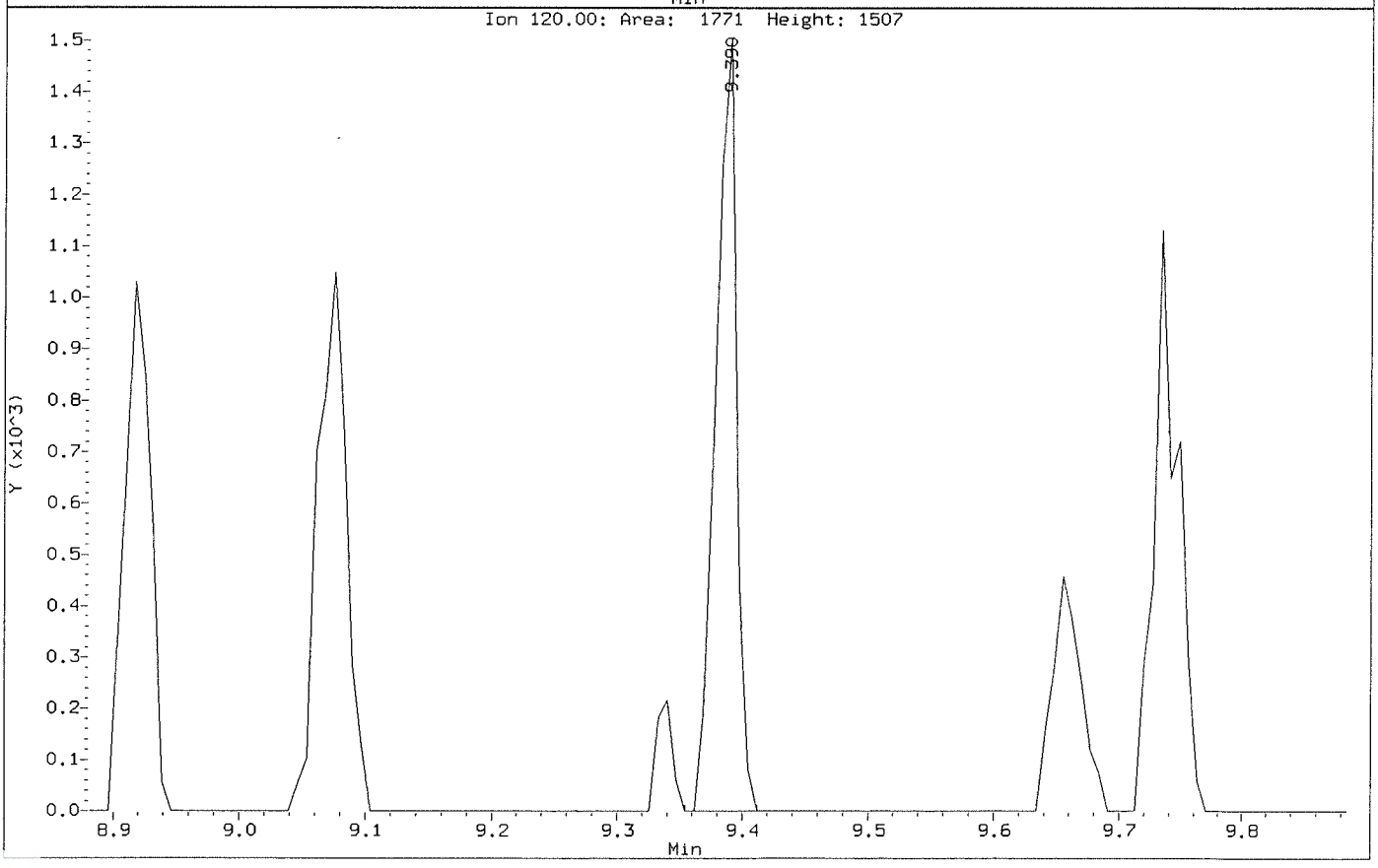
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



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Client Sample ID: VSTD000.5

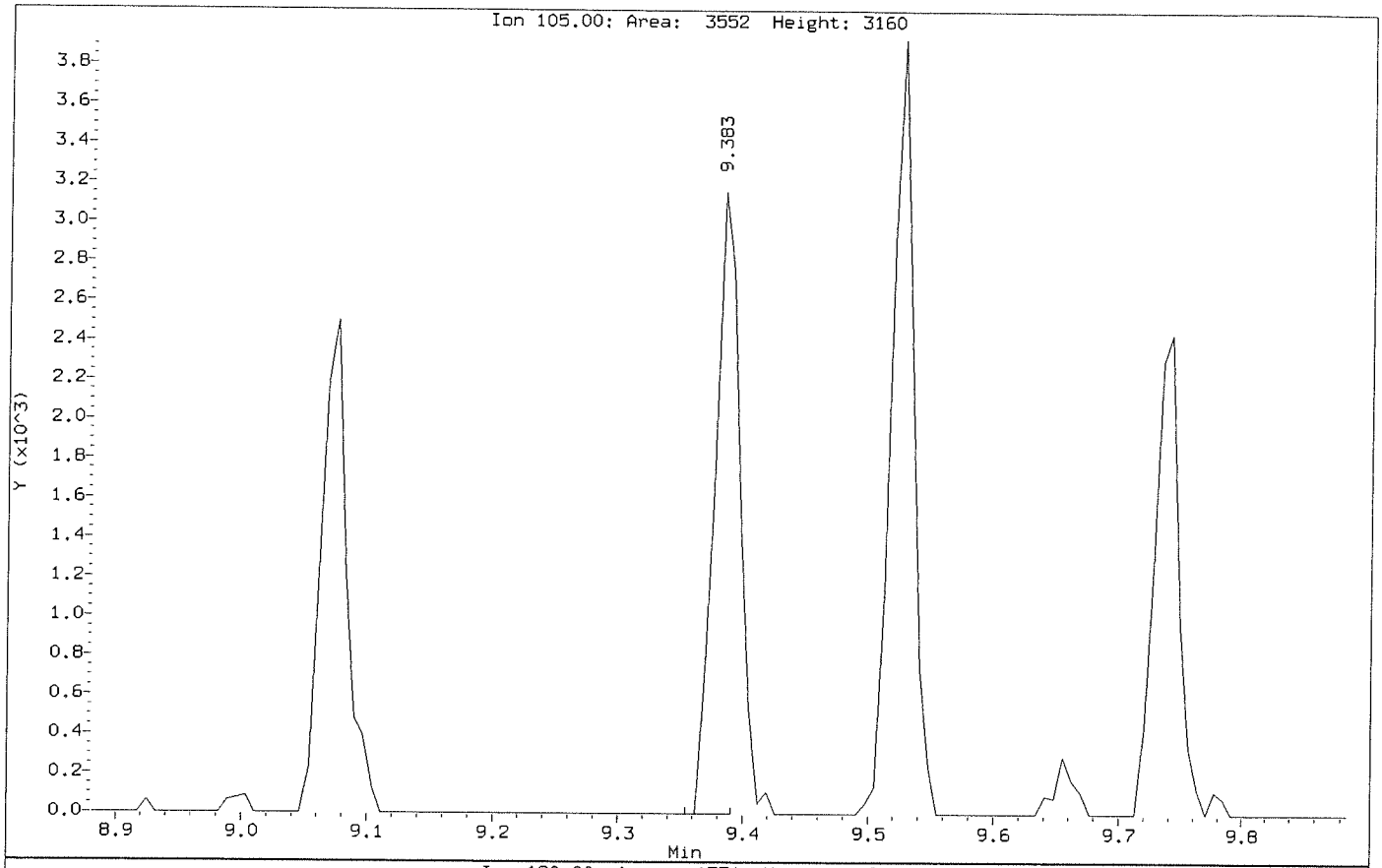
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6

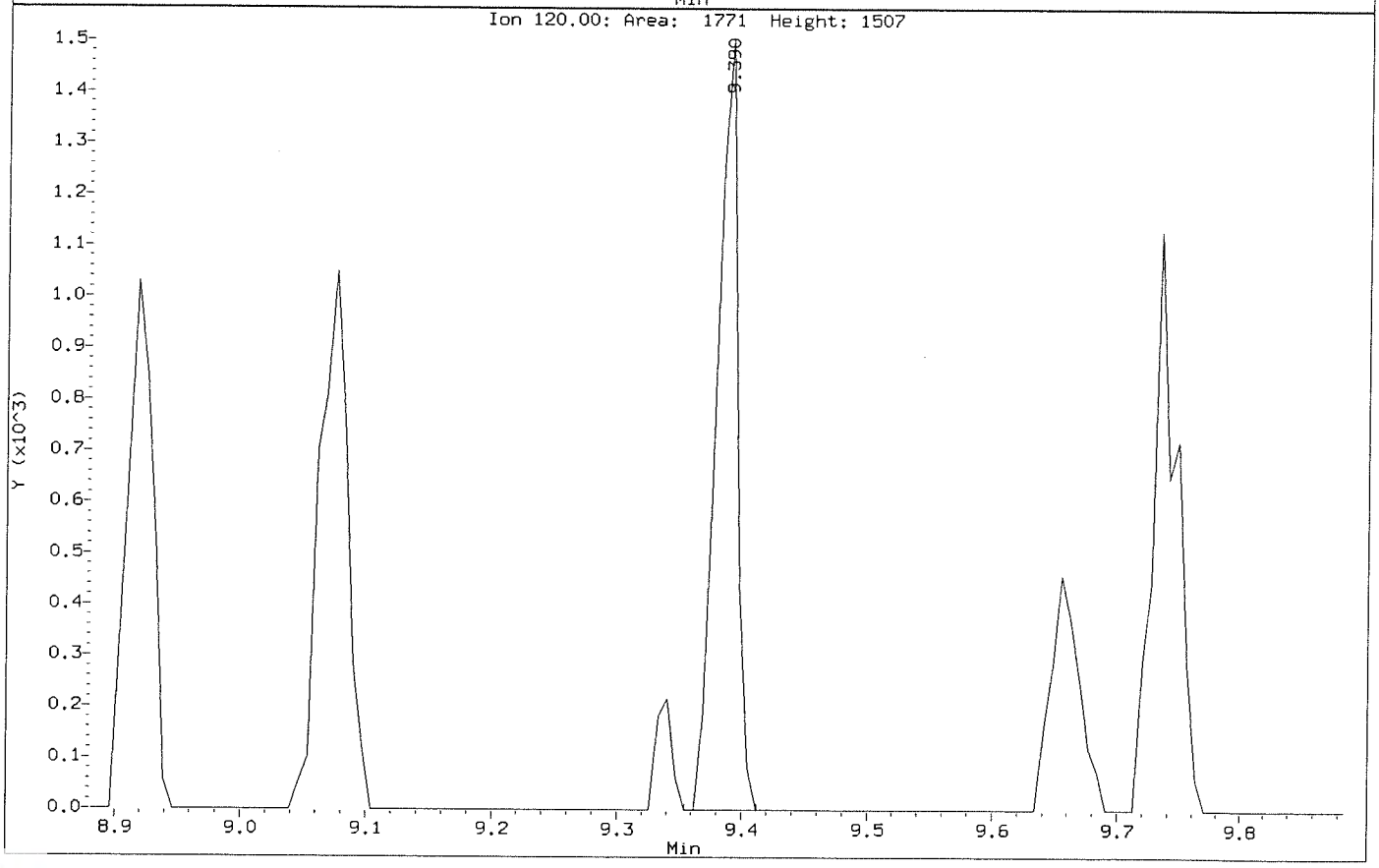




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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

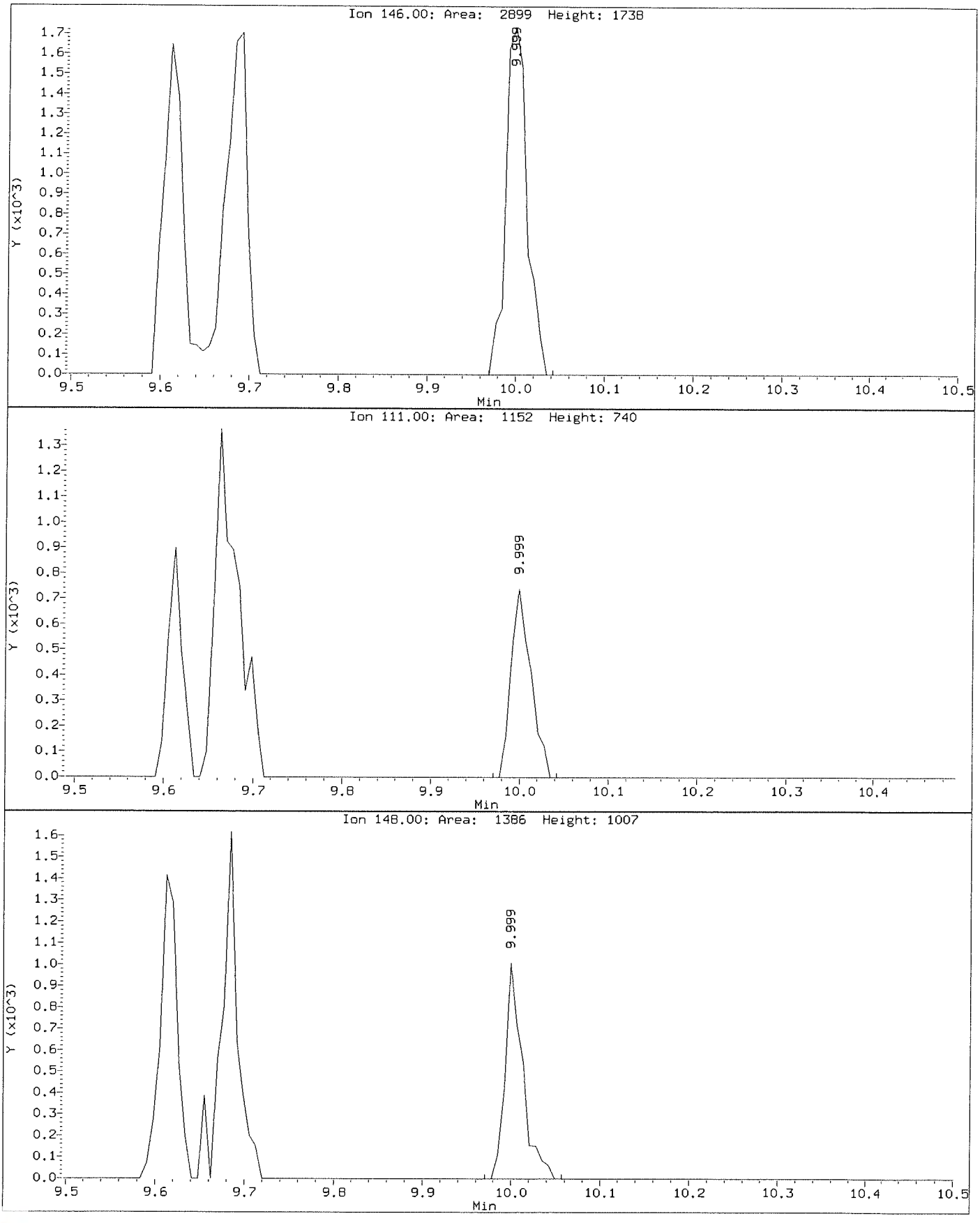
Compound: 1,2,4-Trimethylbenzene
CAS Number: 95-63-6





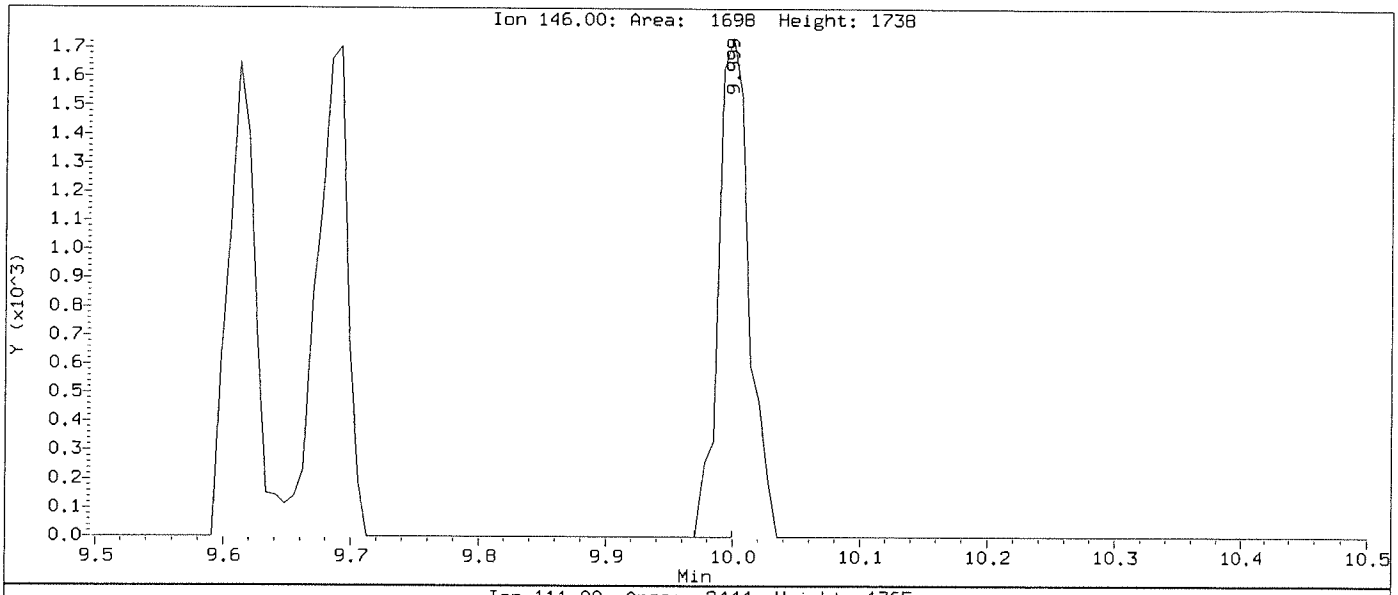
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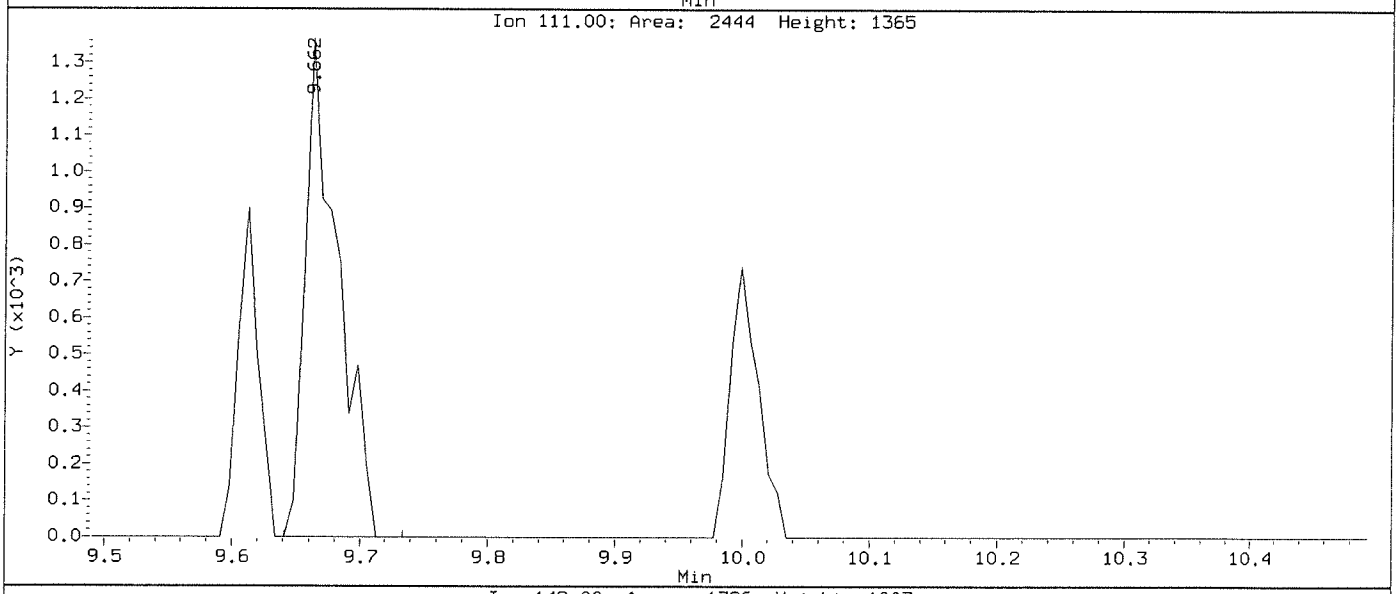
Compound: 1,2-Dichlorobenzene
CAS Number: 95-50-1

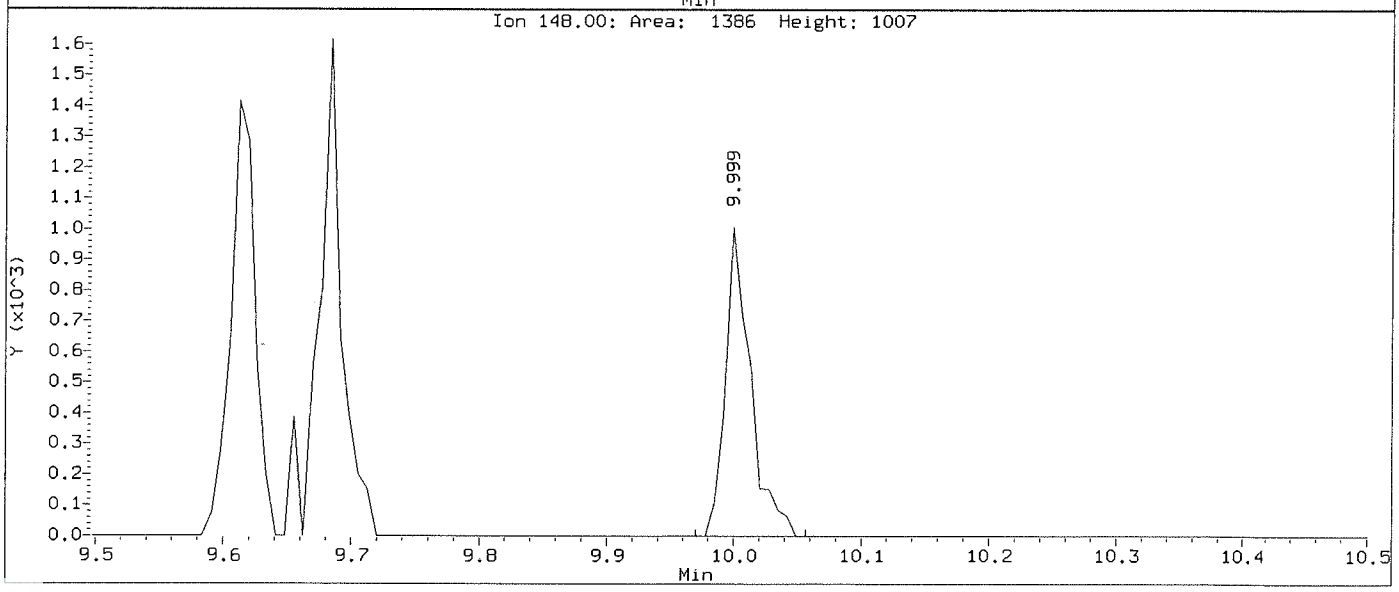


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,2-Dichlorobenzene
CAS Number: 95-50-1

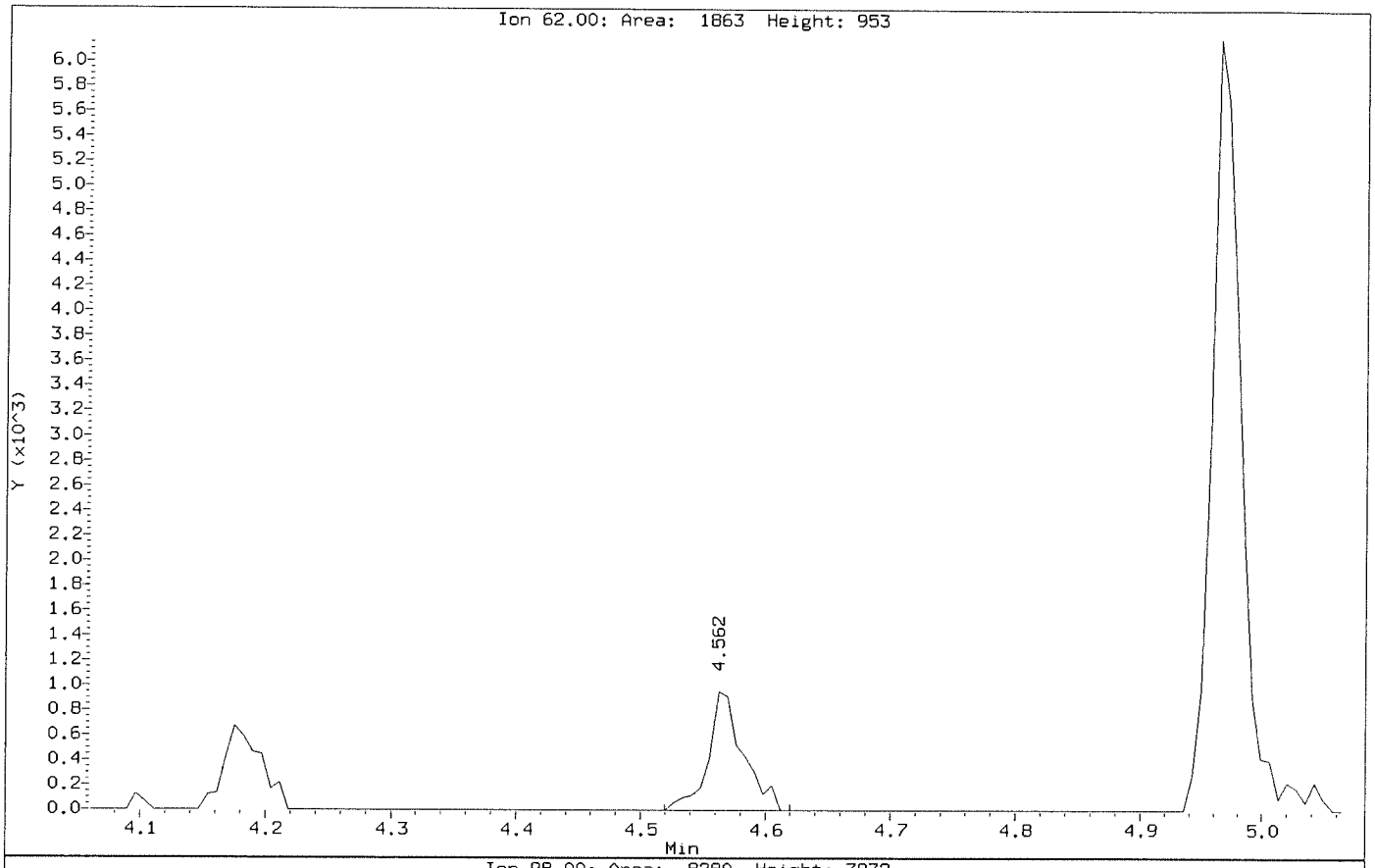


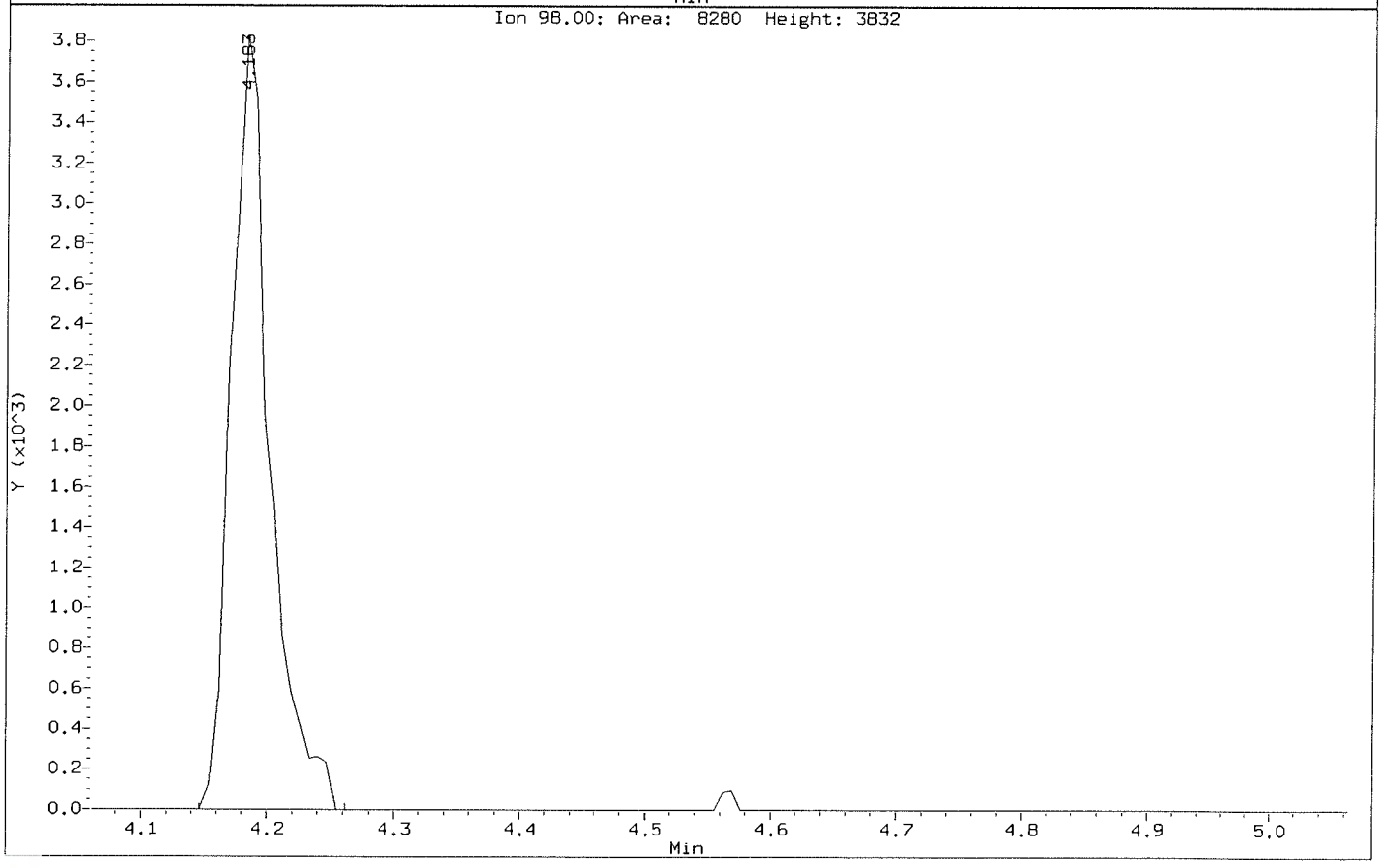




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Client Sample ID: VSTD000.5

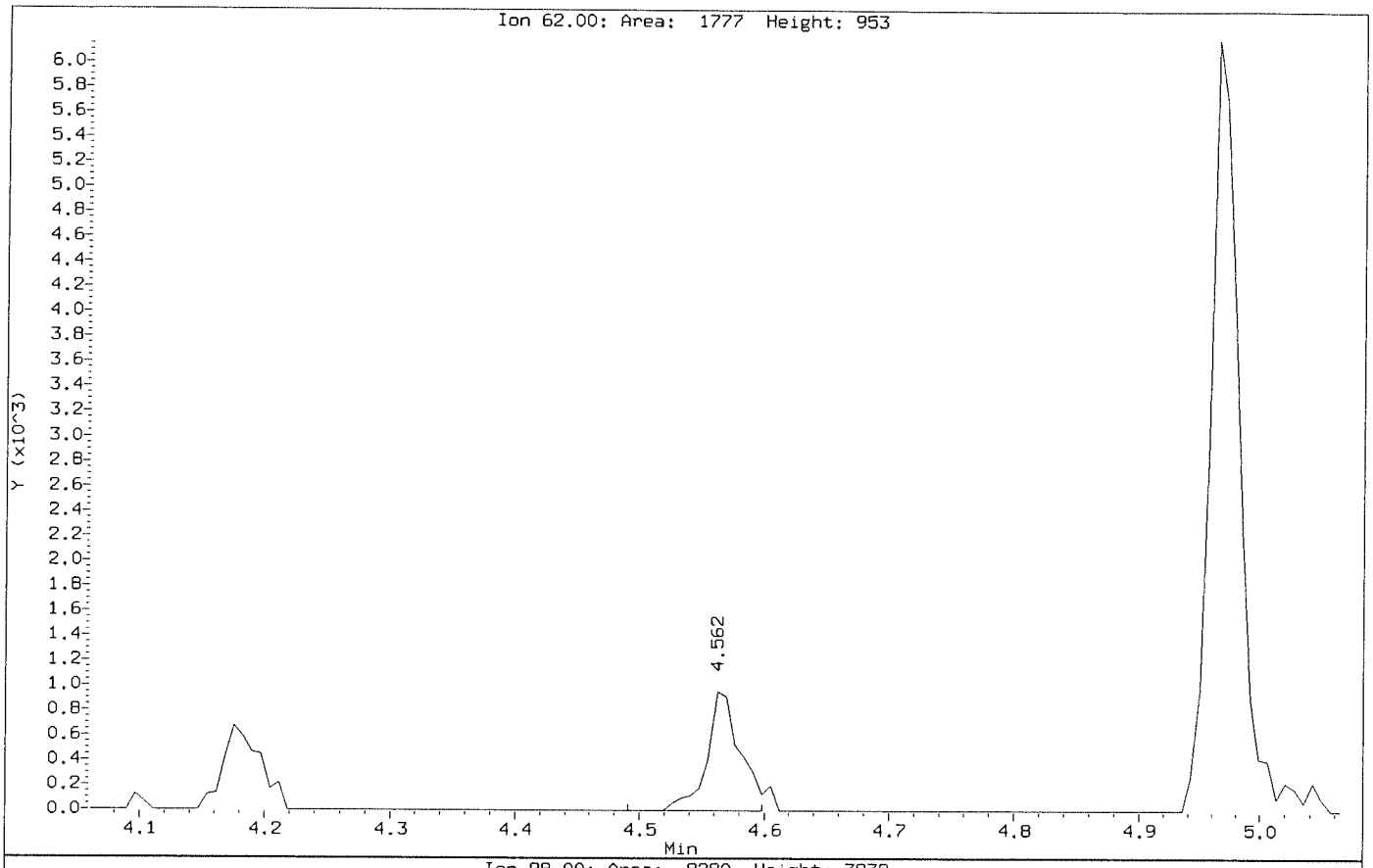
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

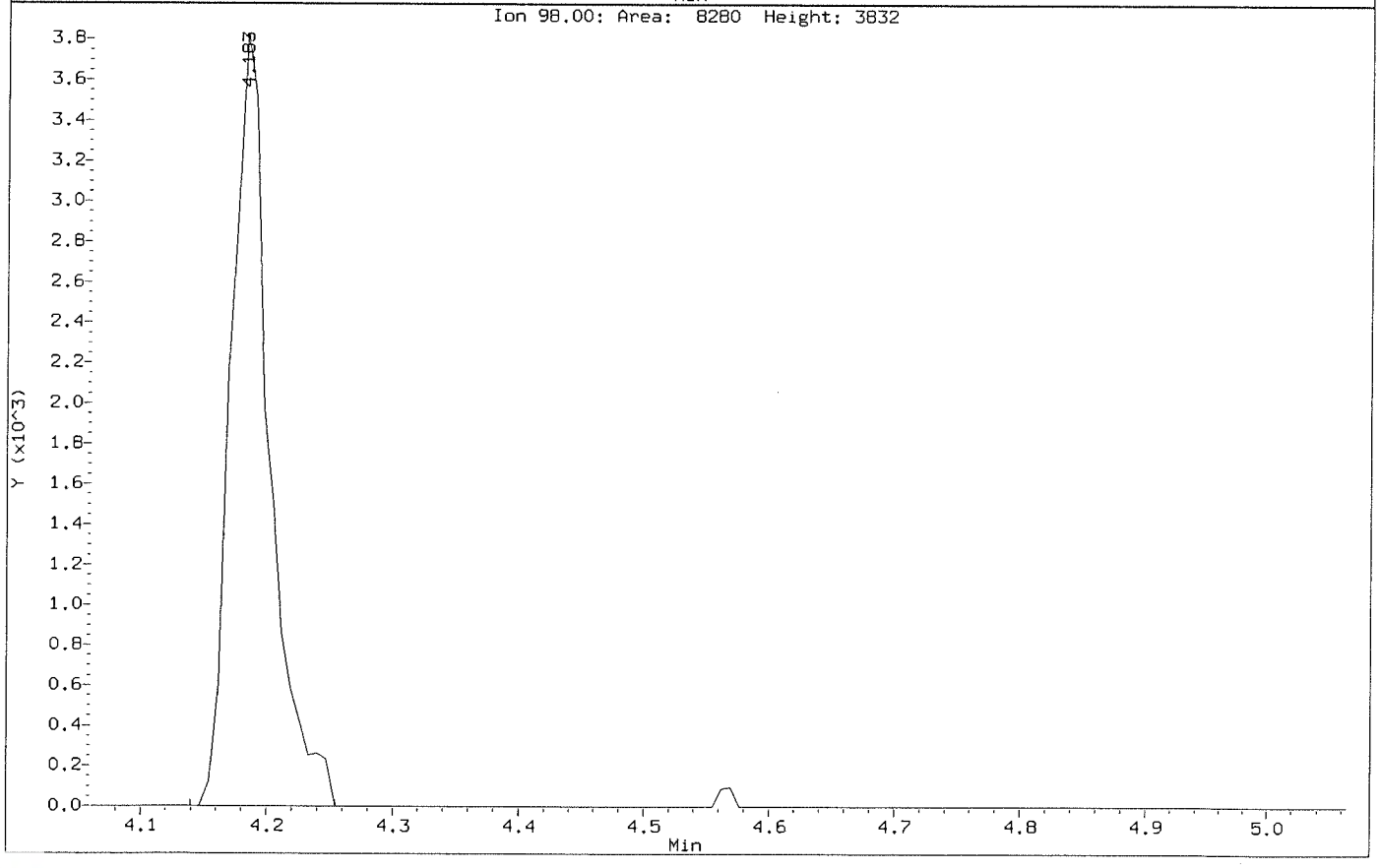




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Client Sample ID: VSTD000.5

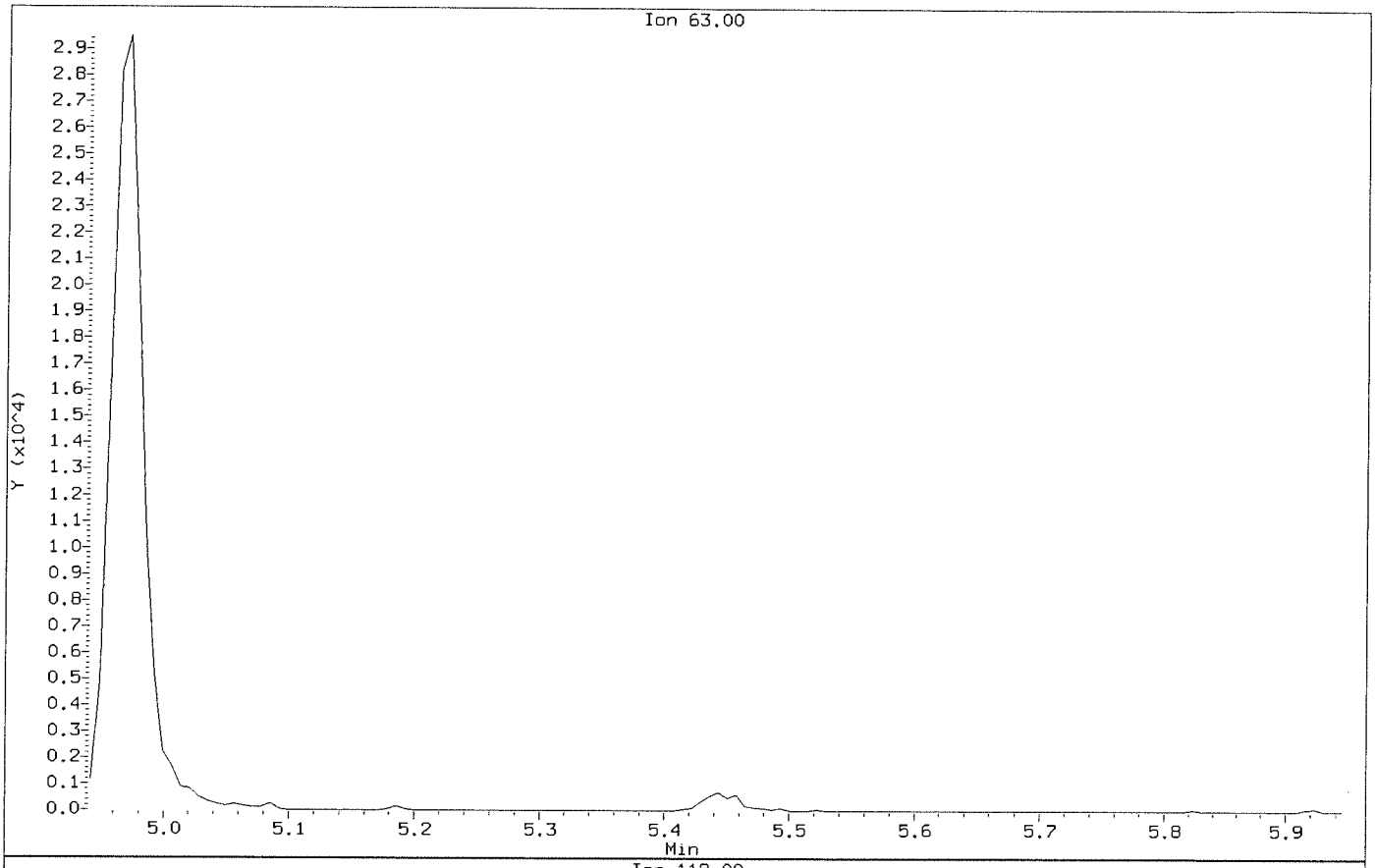
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

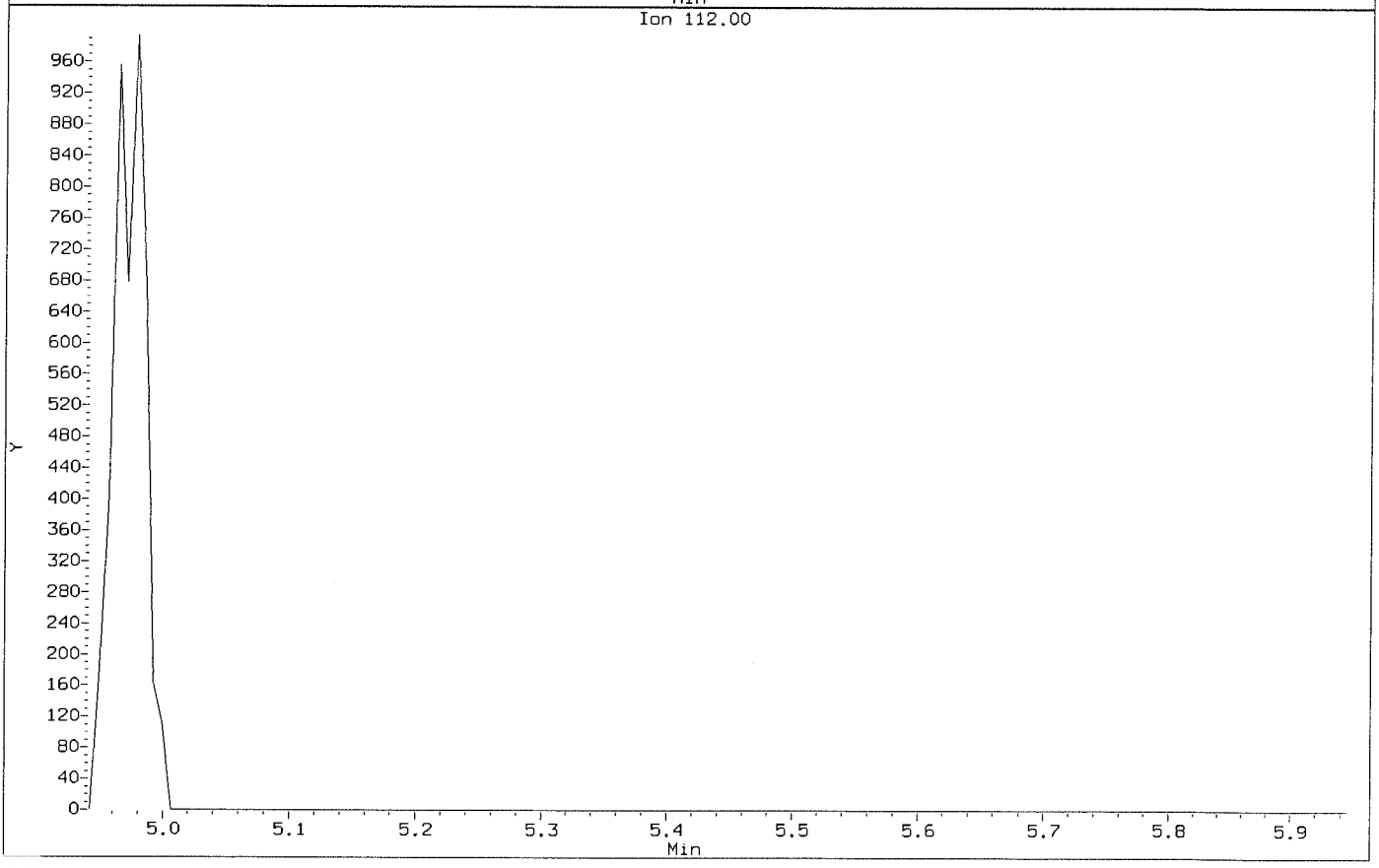




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Instrument: voa6.i
Client Sample ID: VSTD000.5

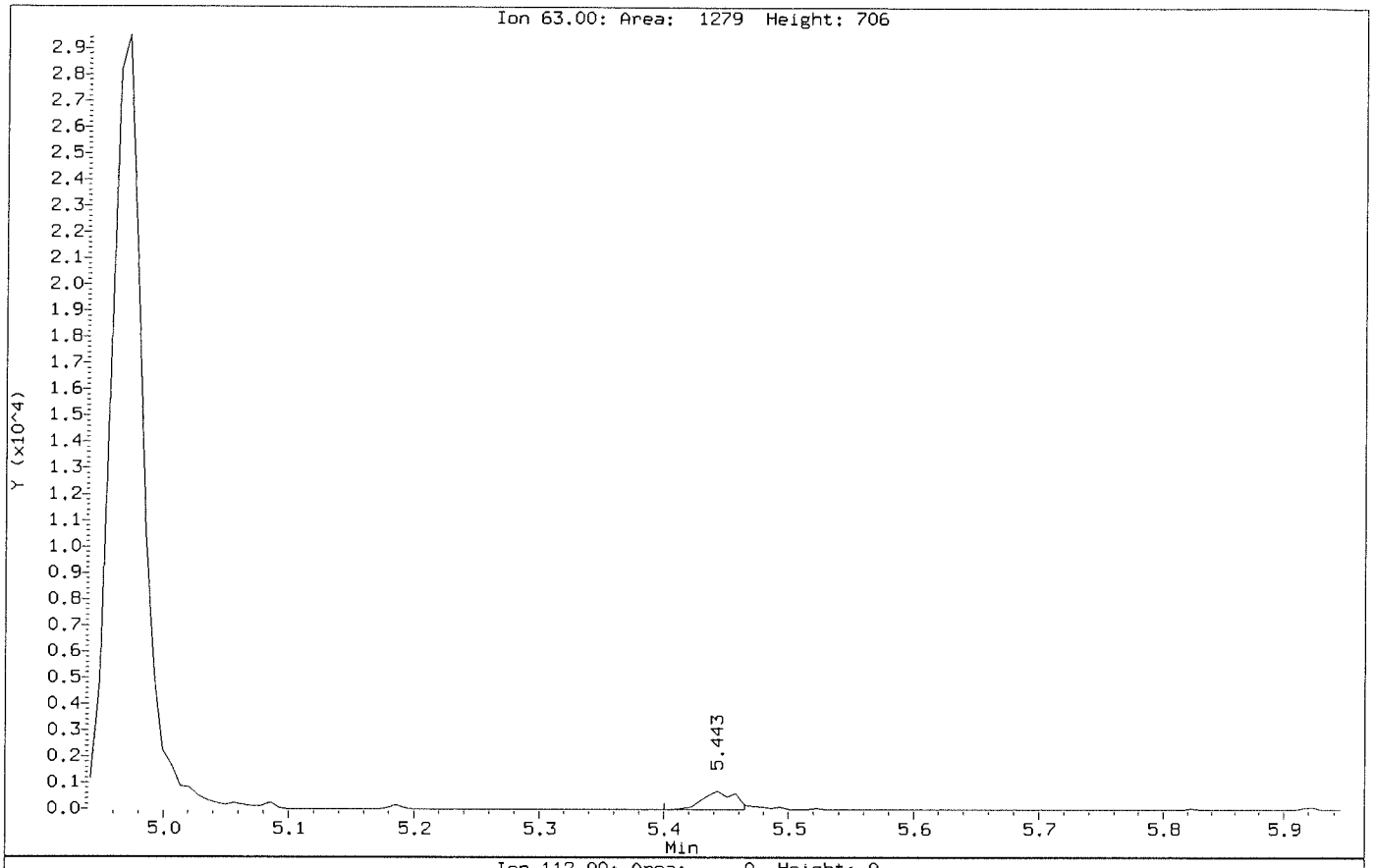
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

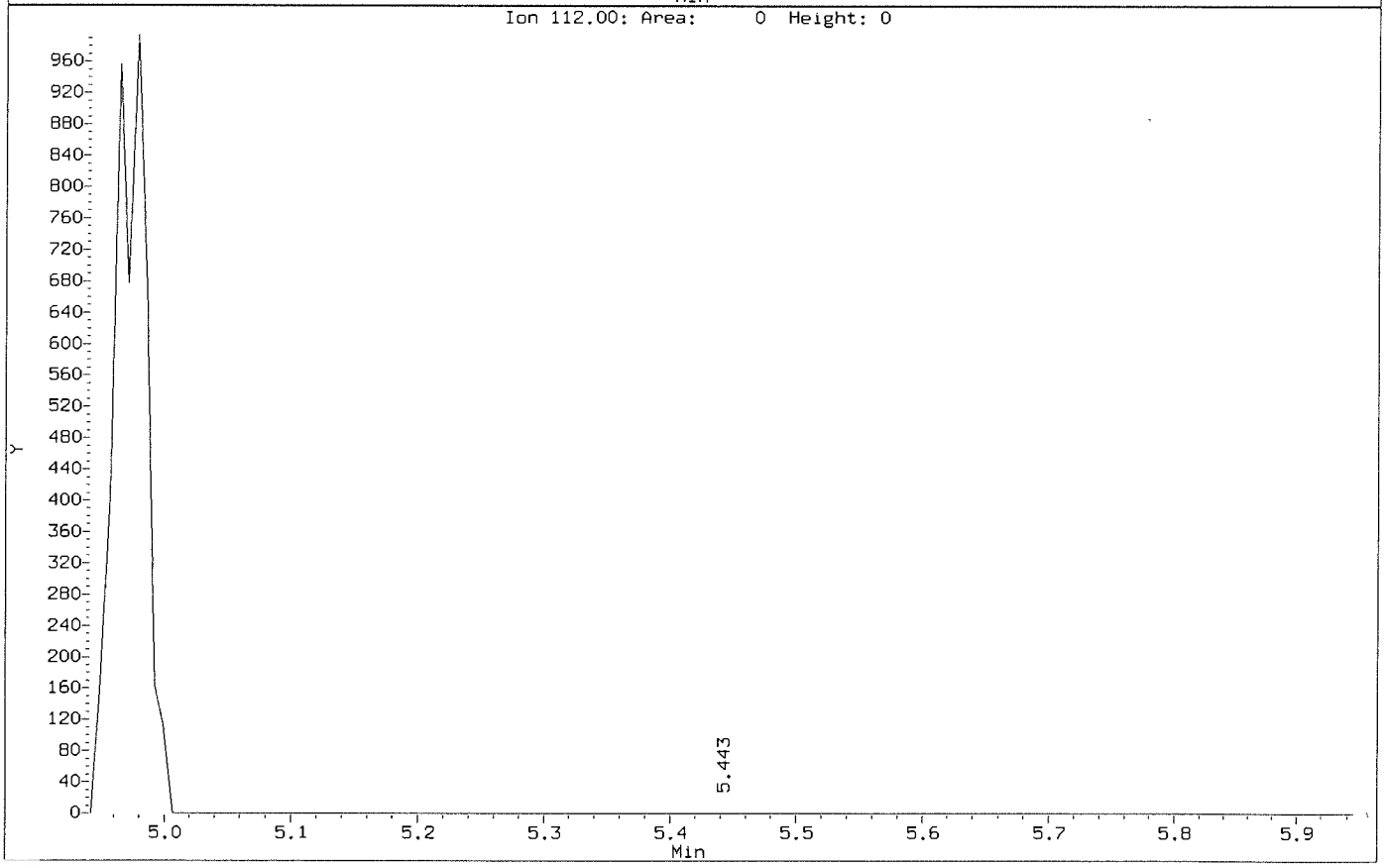




Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110303.D
Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

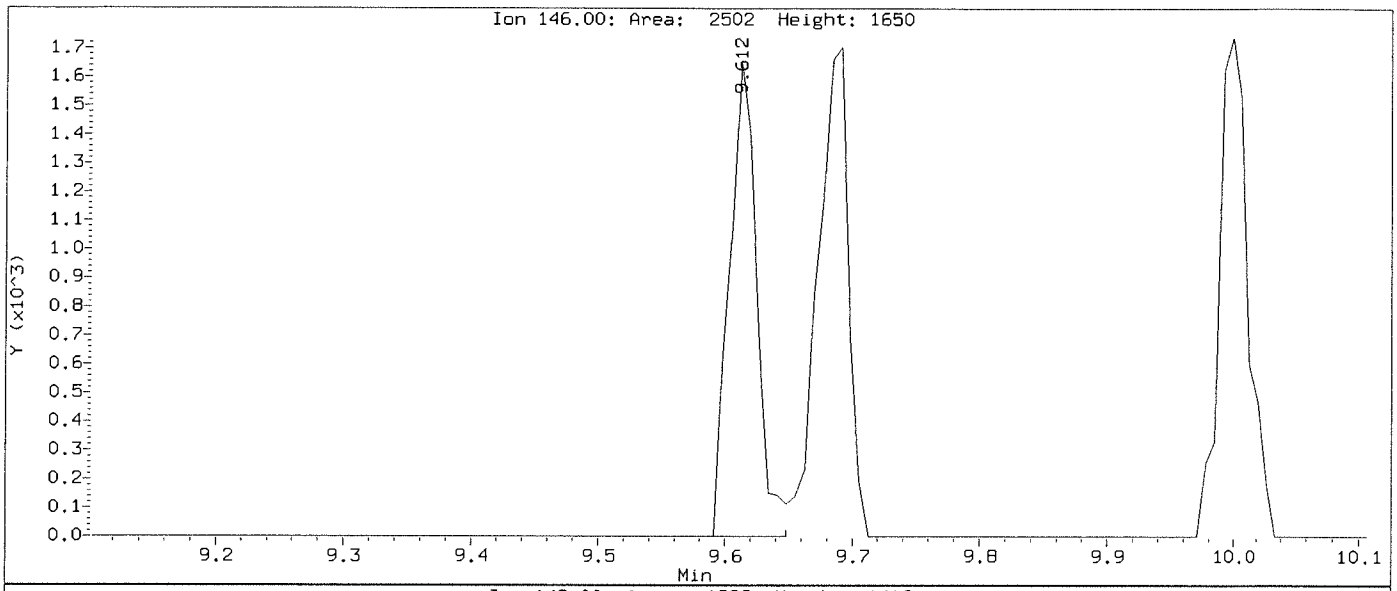
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

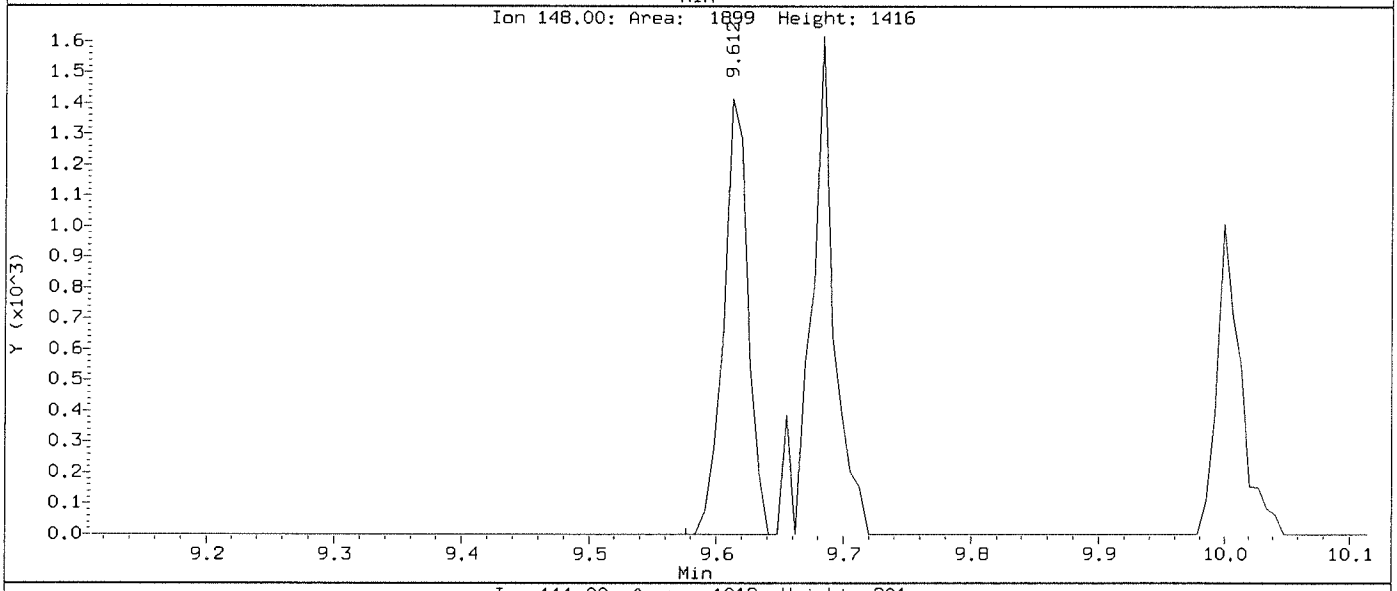


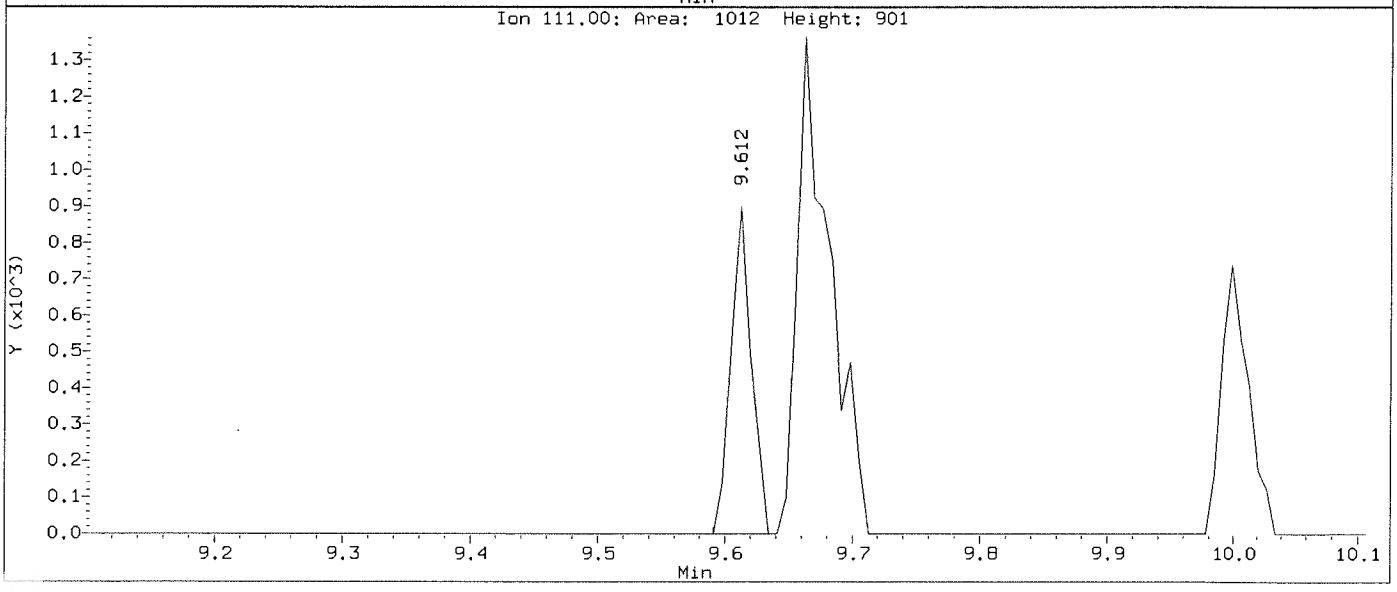


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1

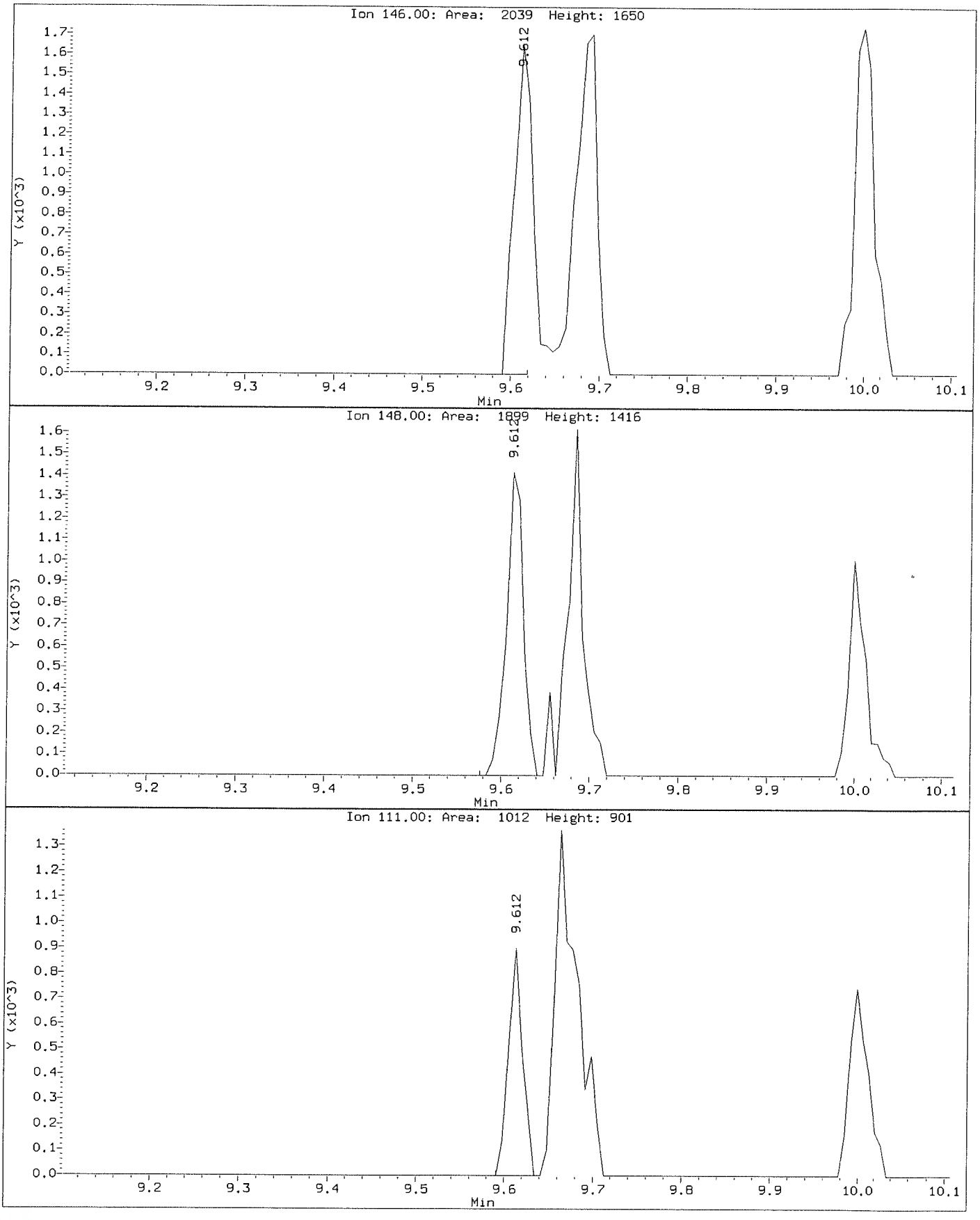






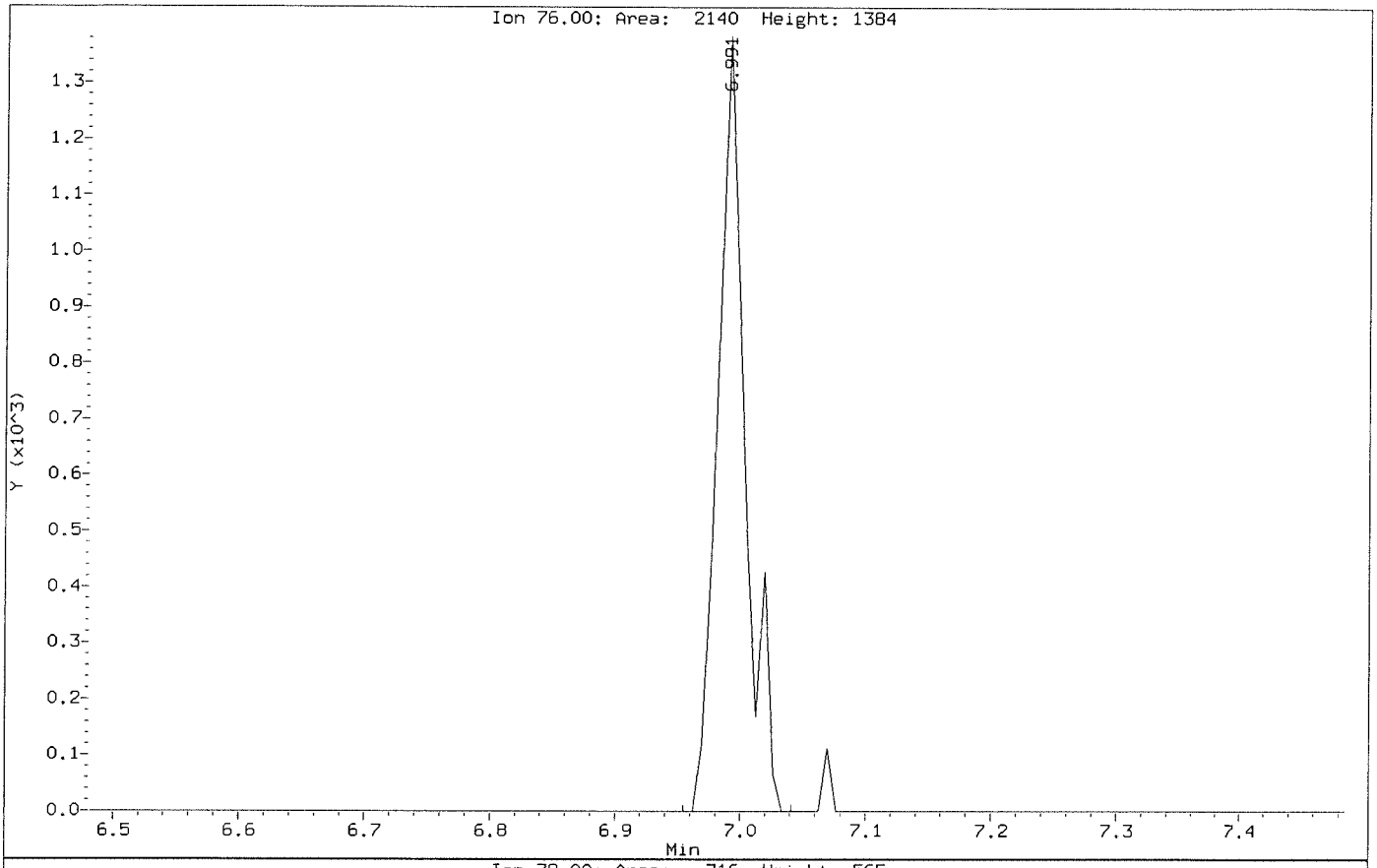
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

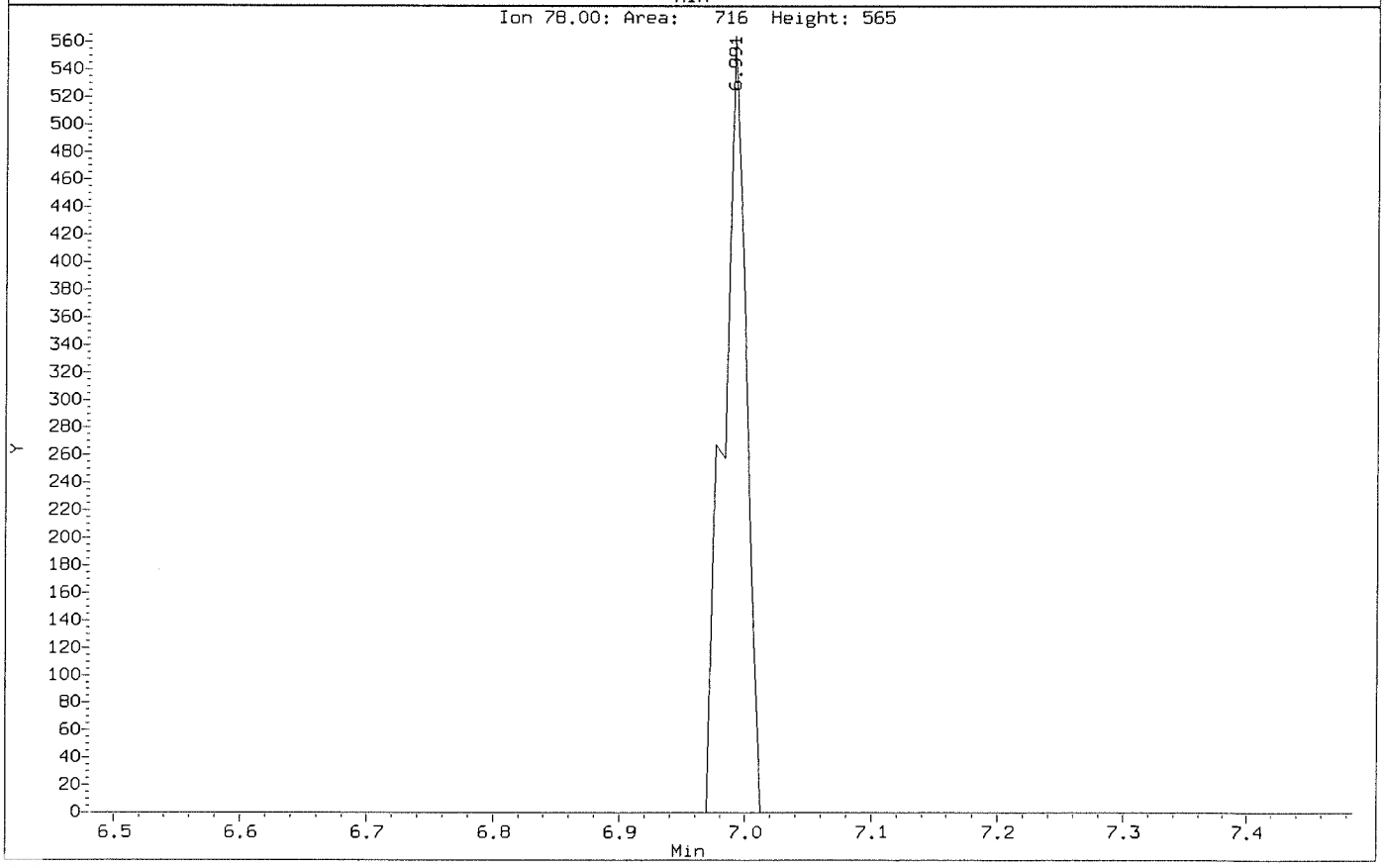
Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1



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Instrument: voa6.i
Client Sample ID: VSTD000.5

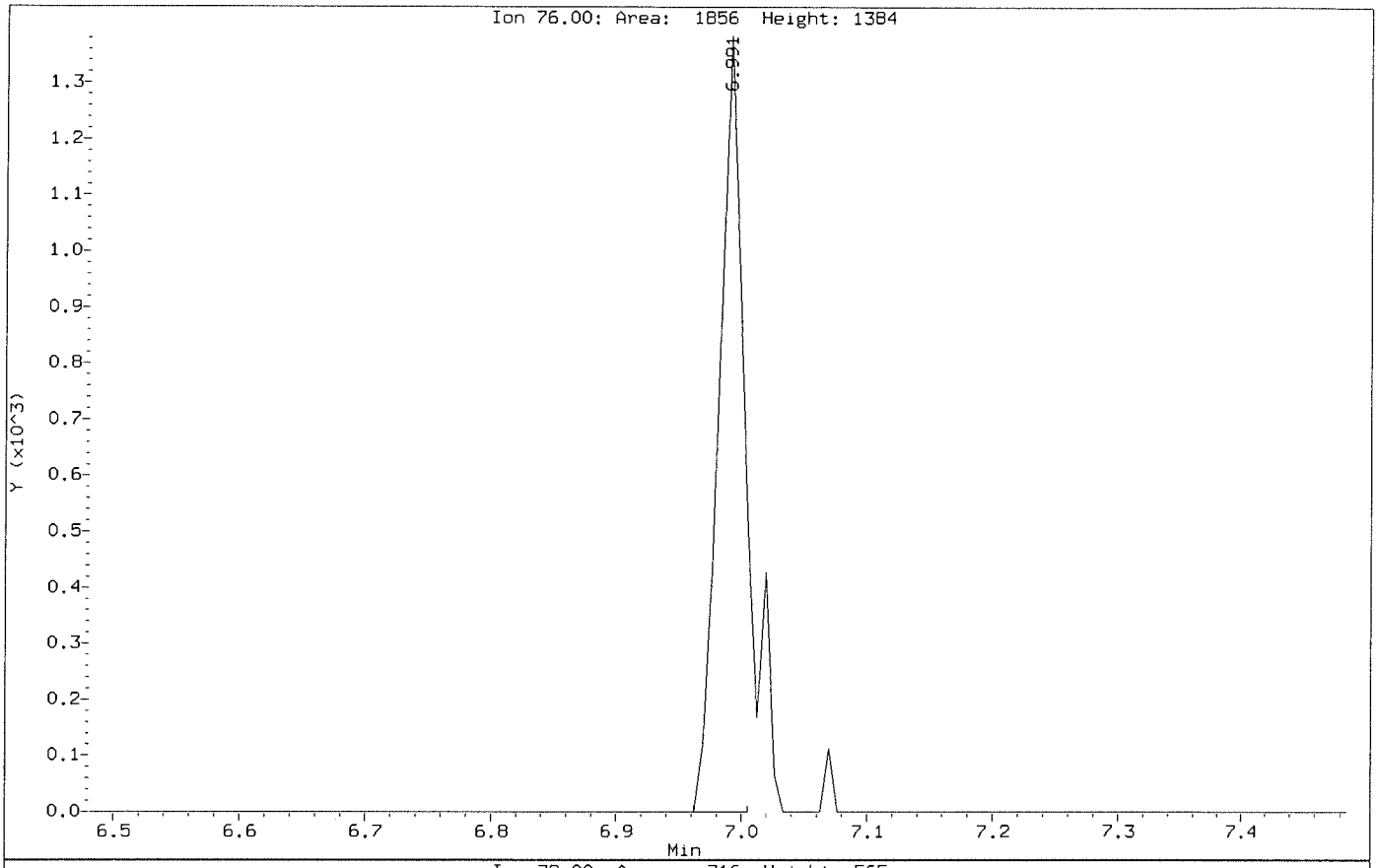
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

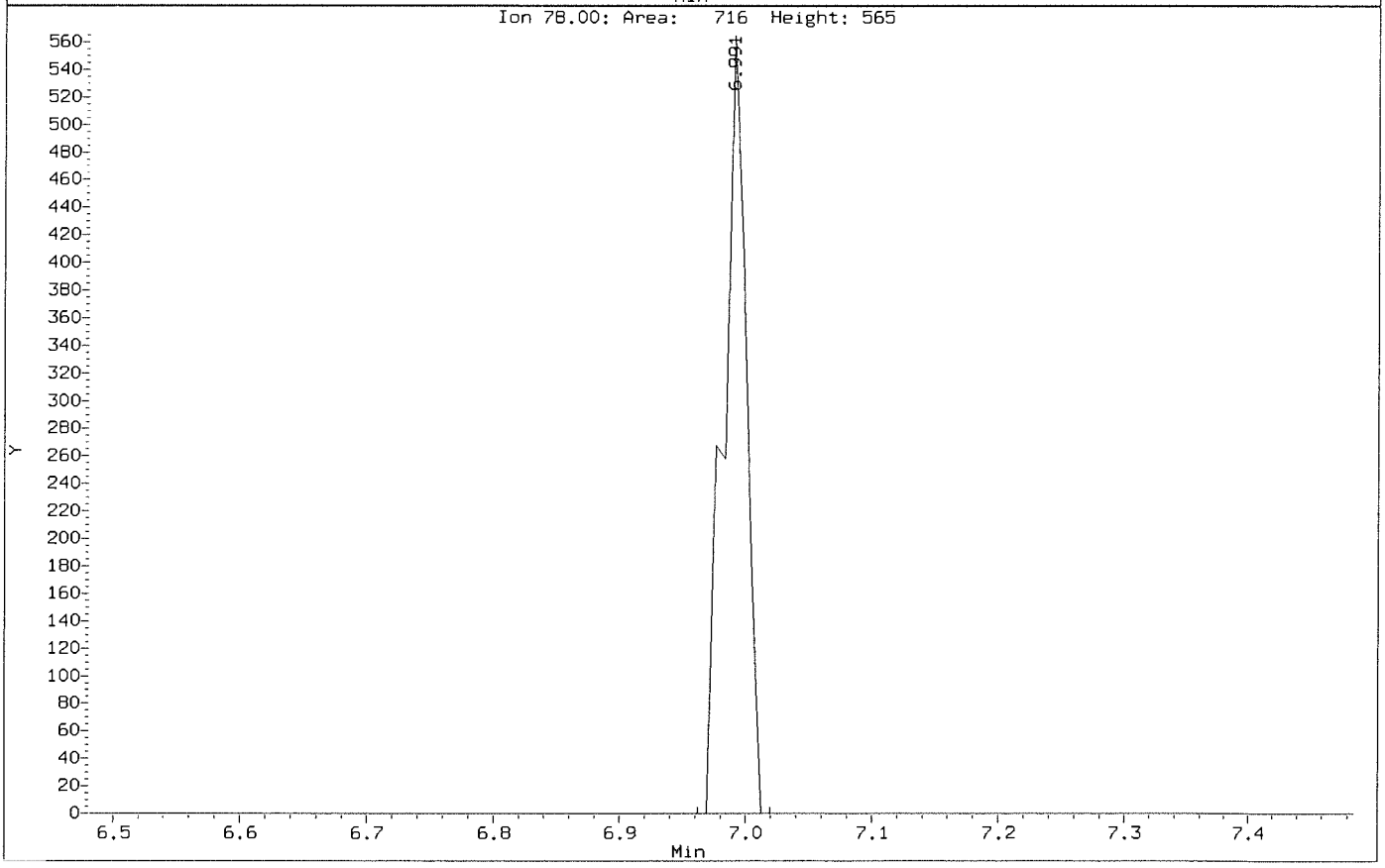




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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

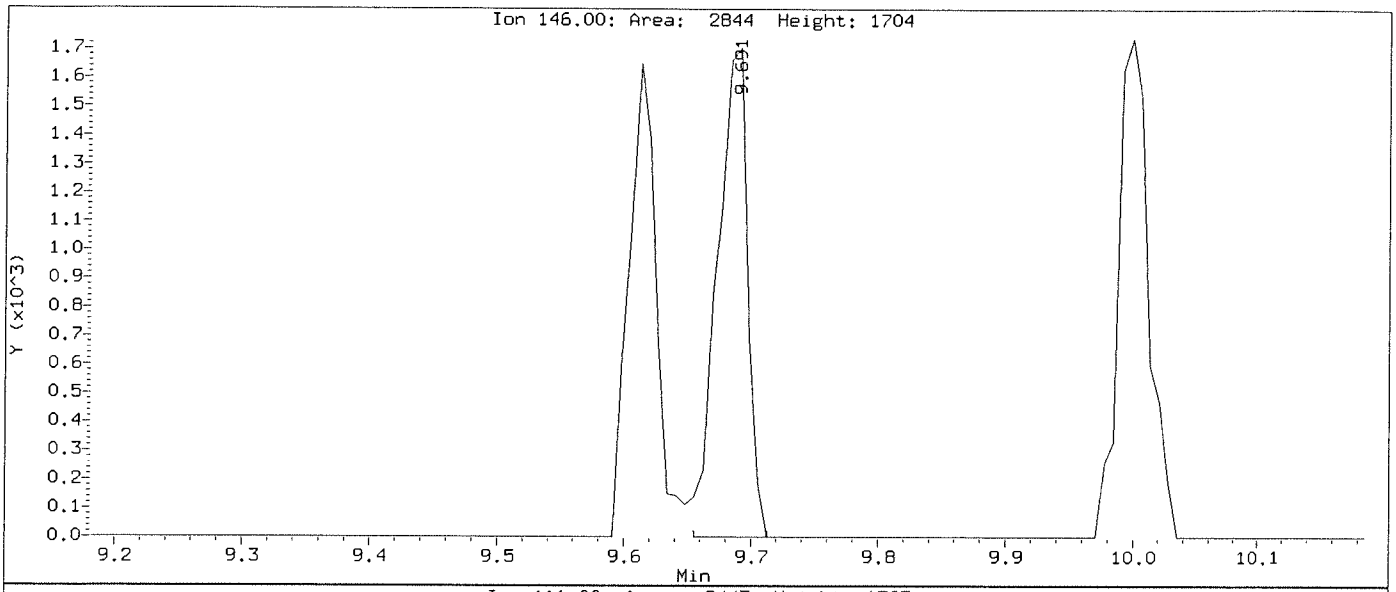
Compound: 1,3-Dichloropropane
CAS Number: 142-28-9

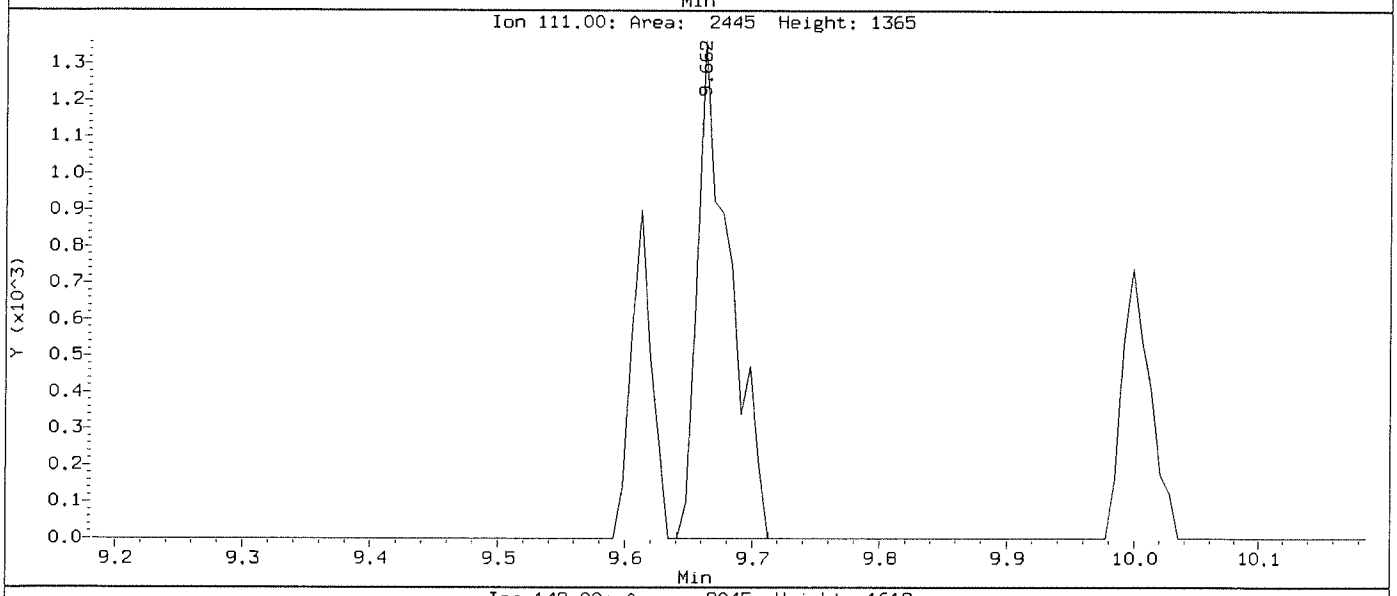


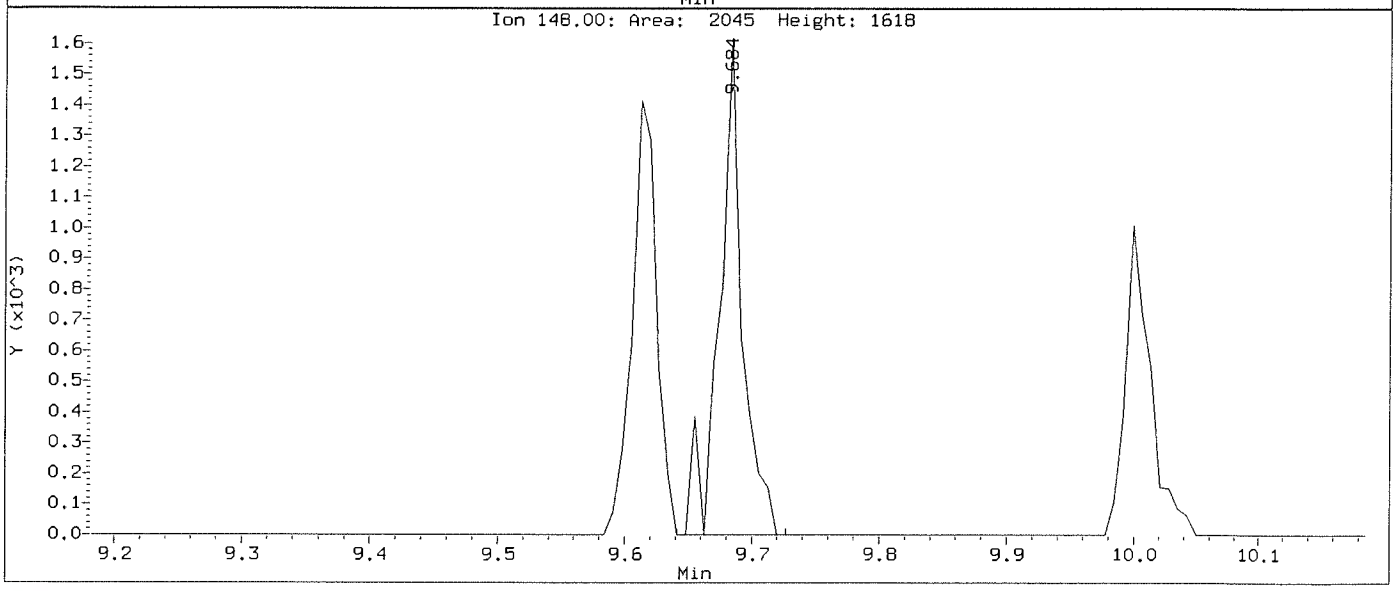


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

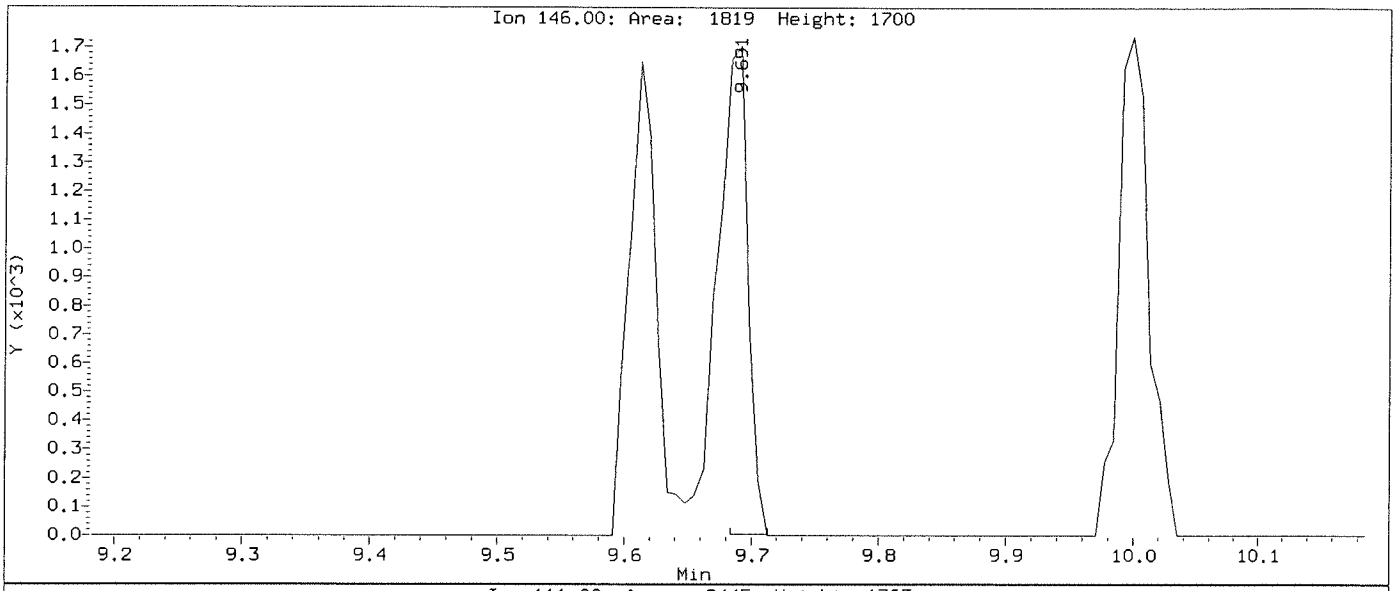


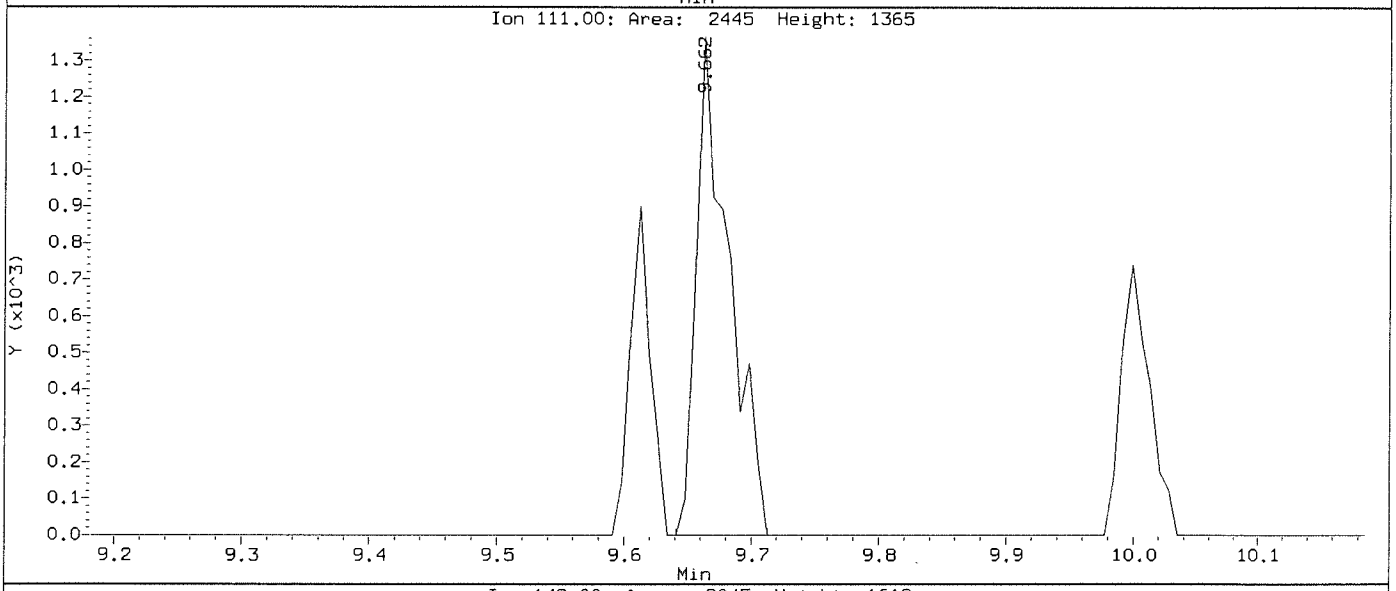


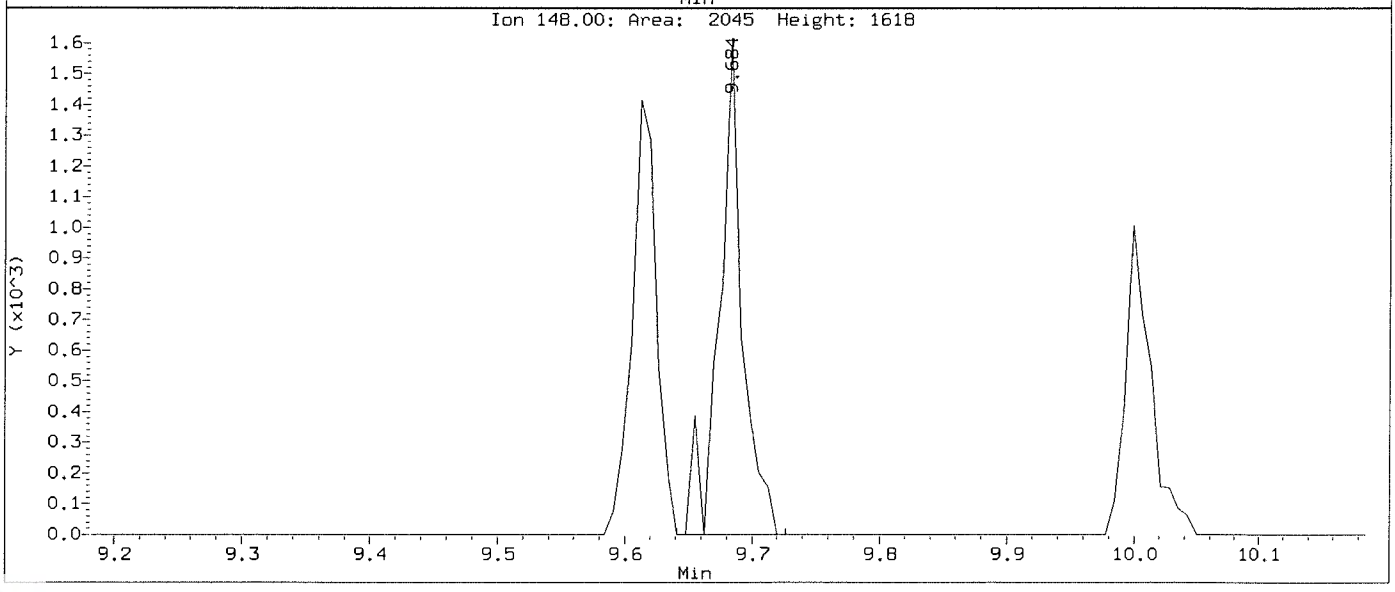


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

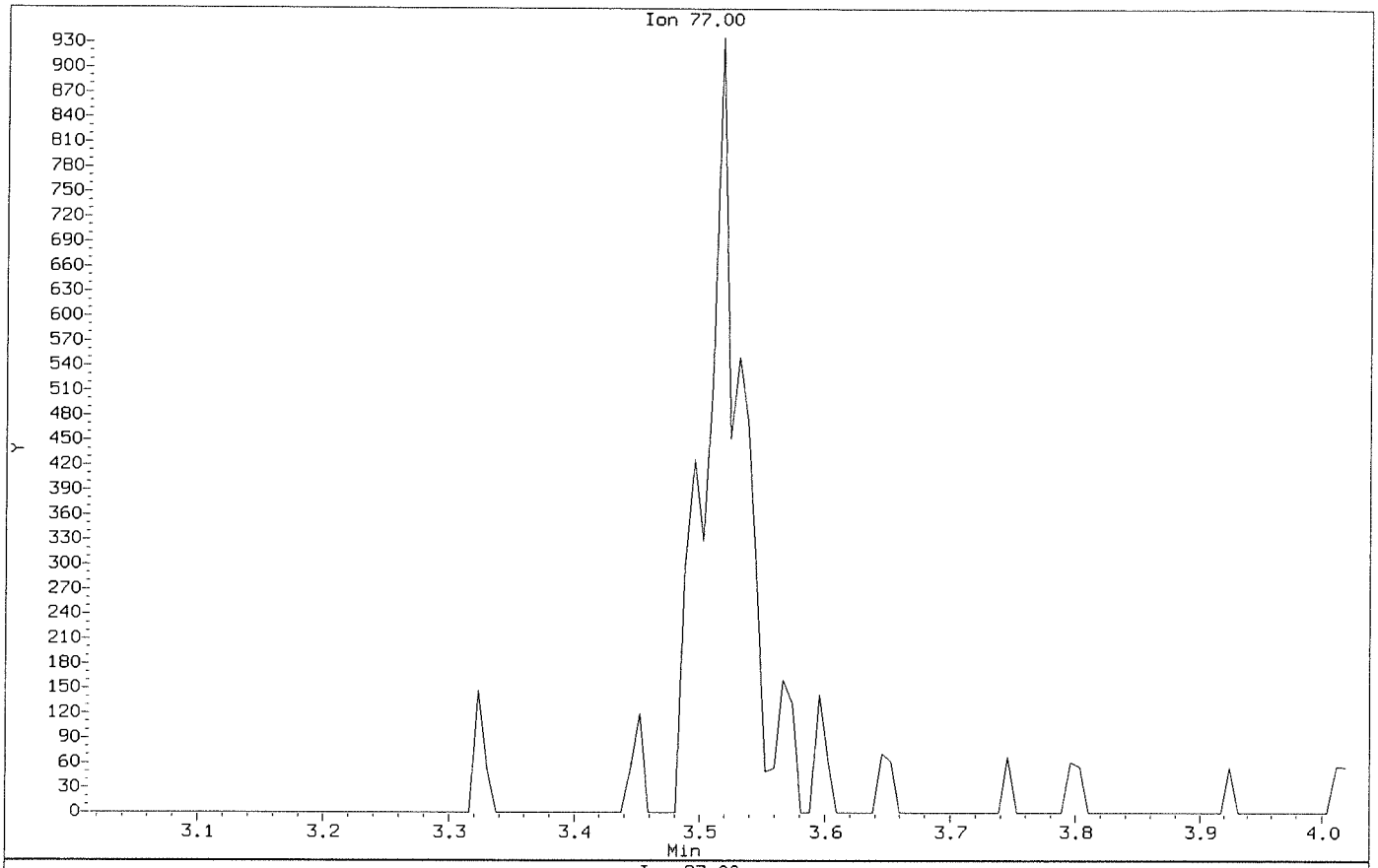


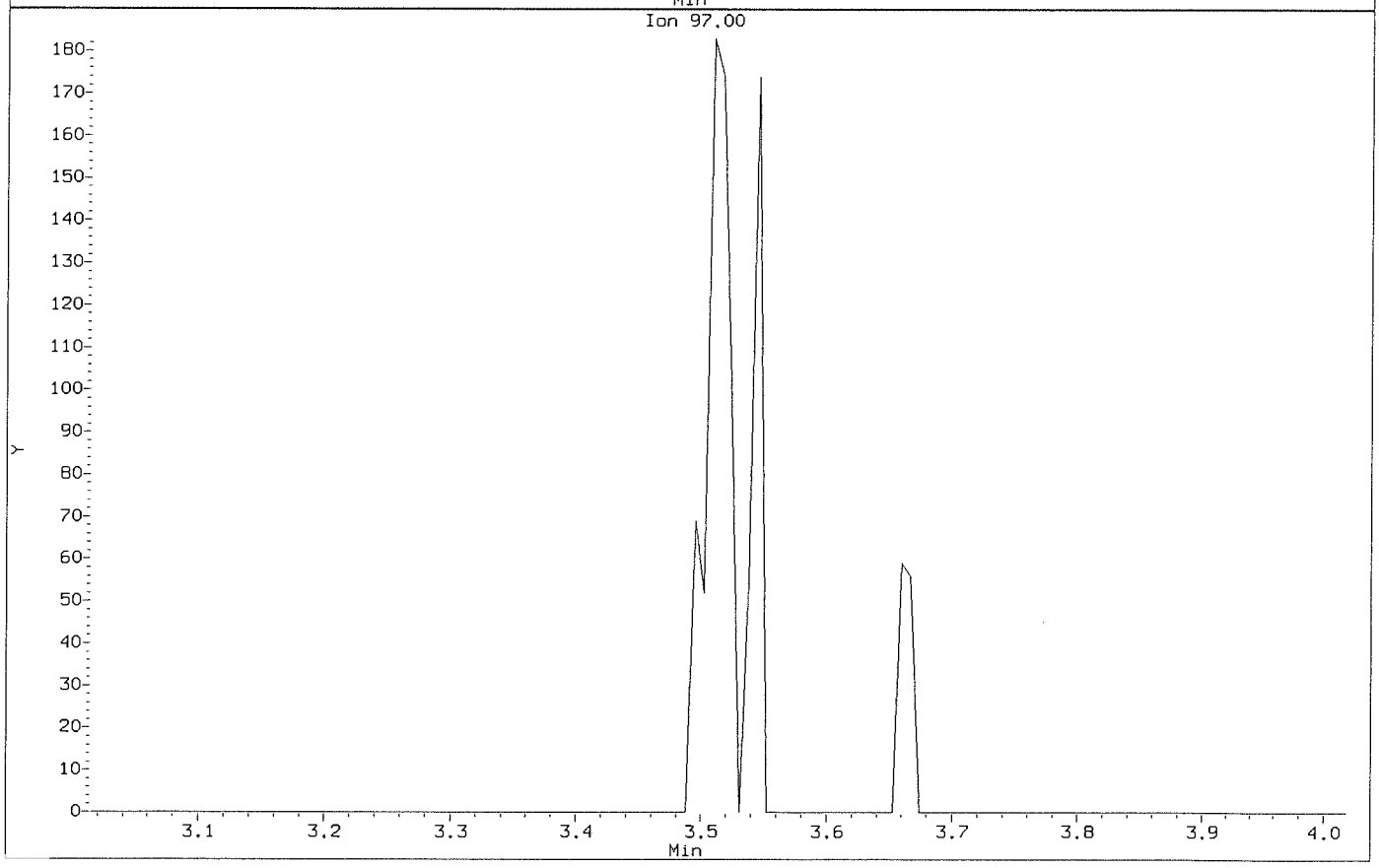




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Client Sample ID: VSTD000.5

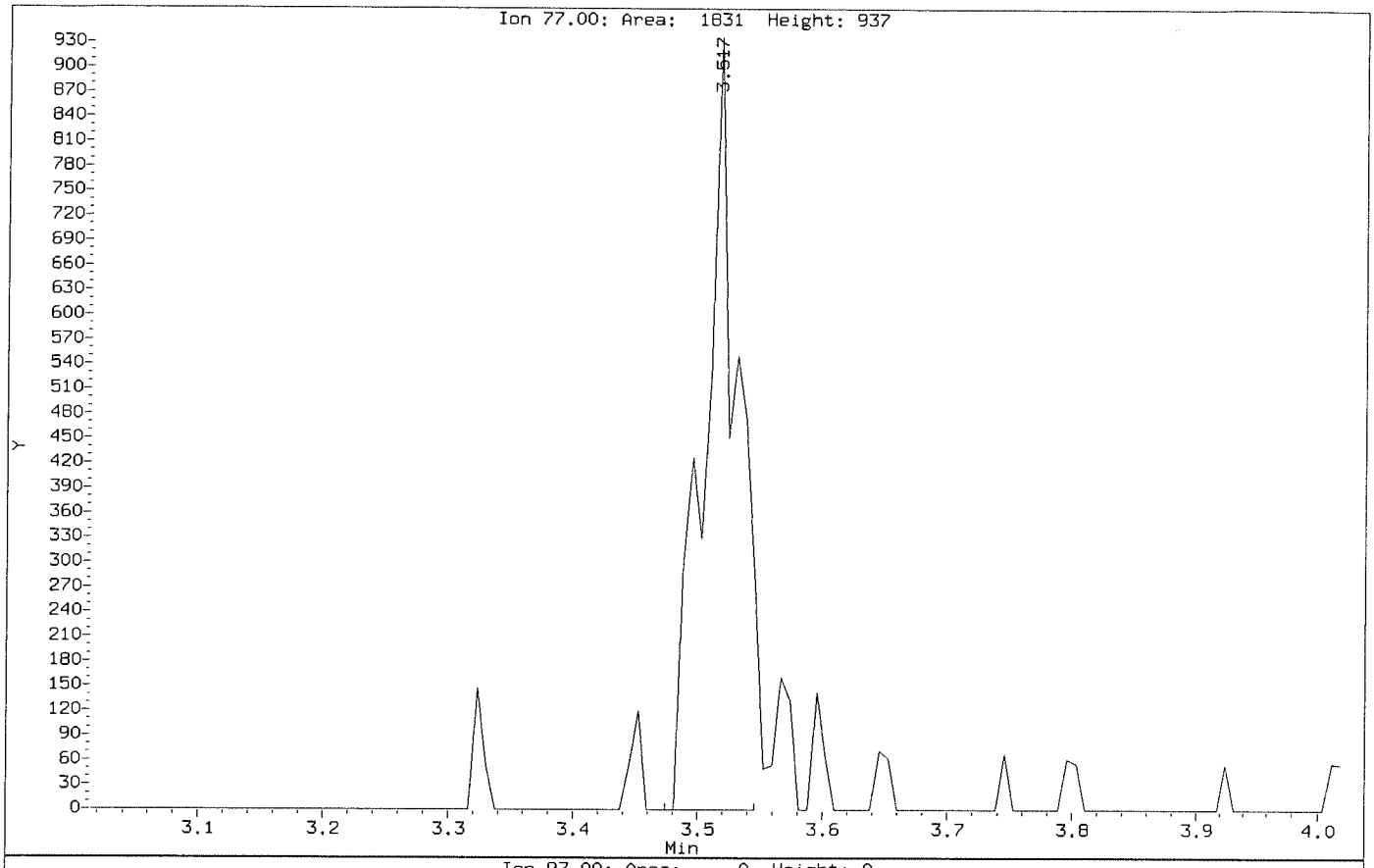
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

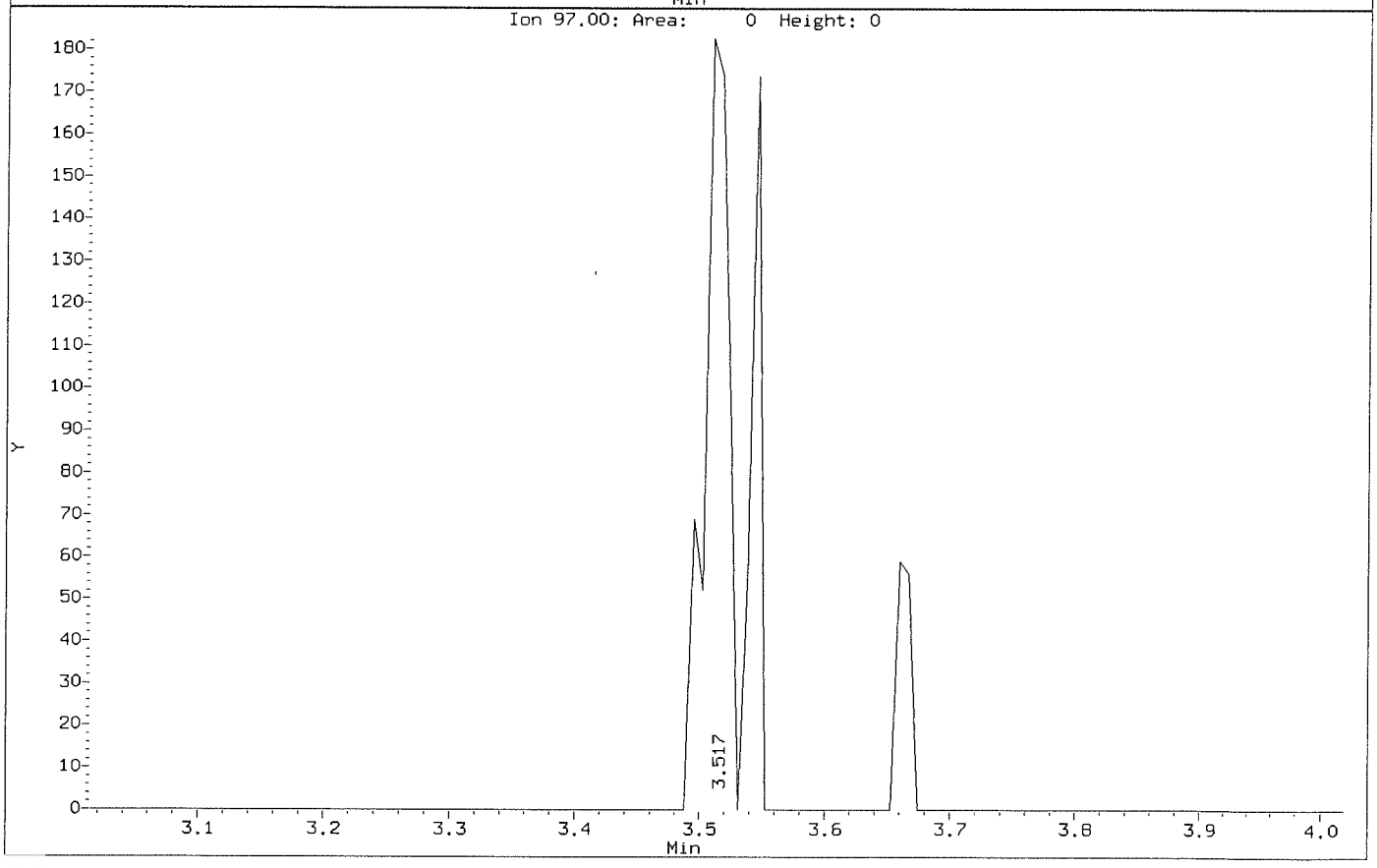




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Instrument: voa6.i
Client Sample ID: VSTD000.5

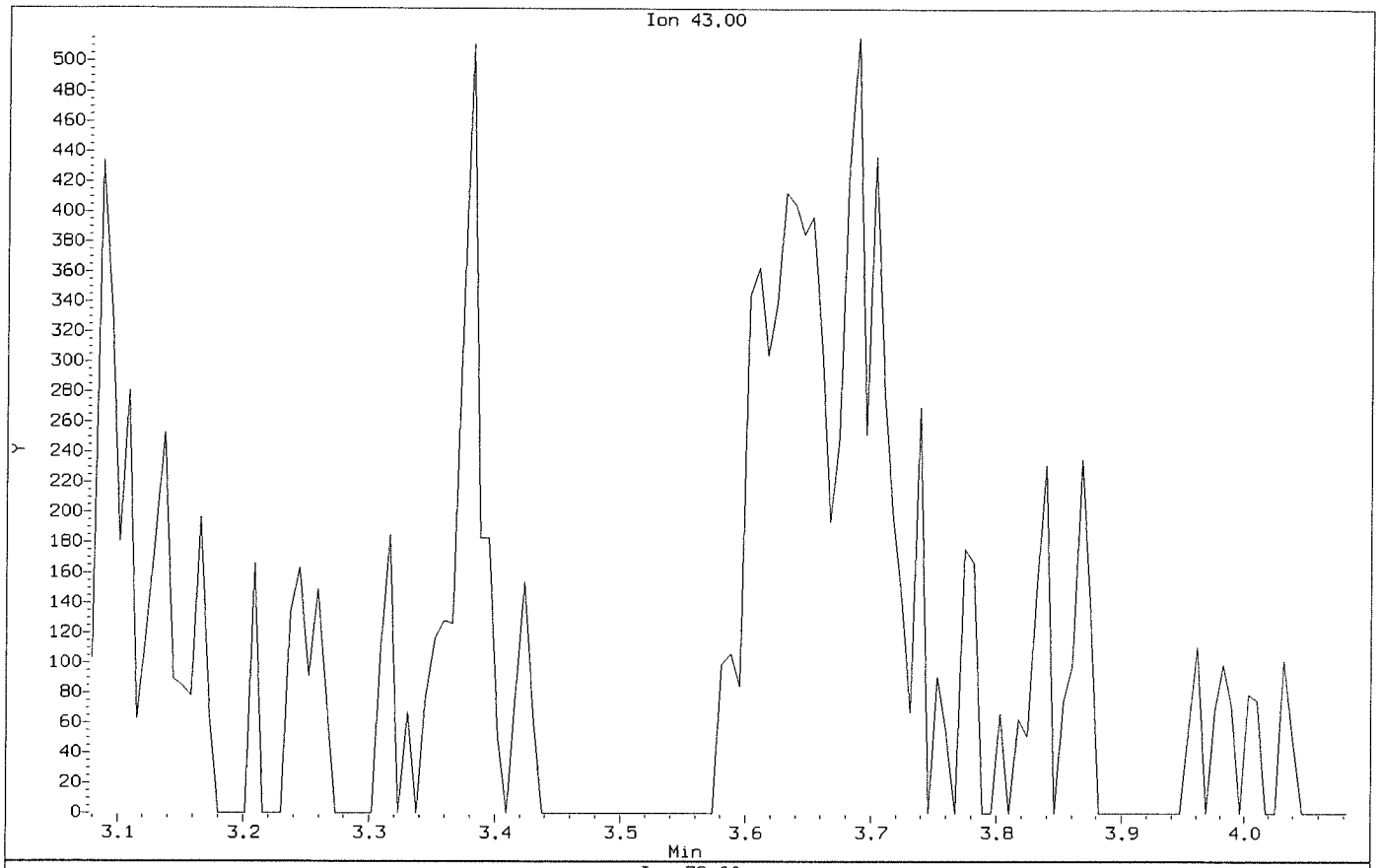
Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

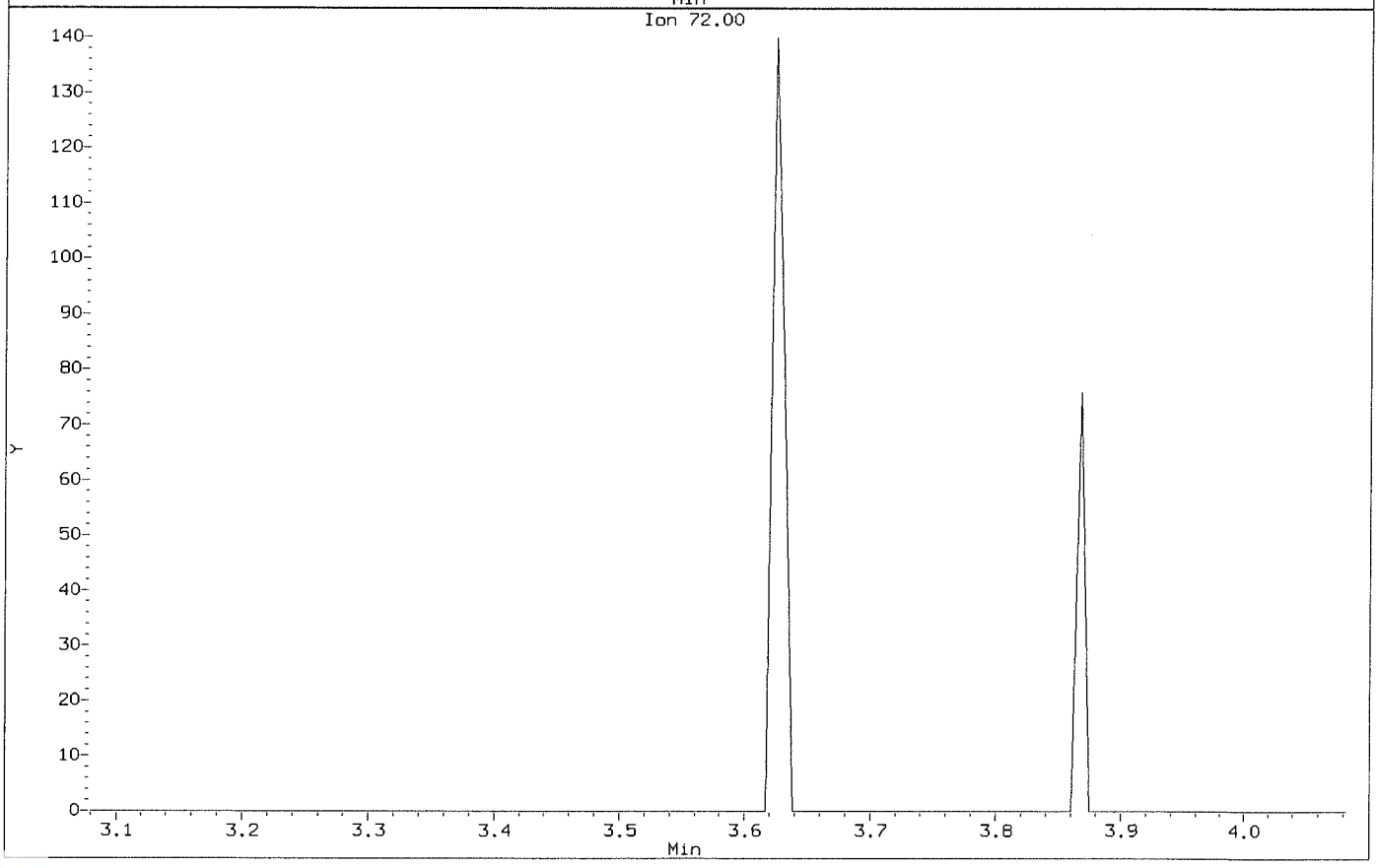




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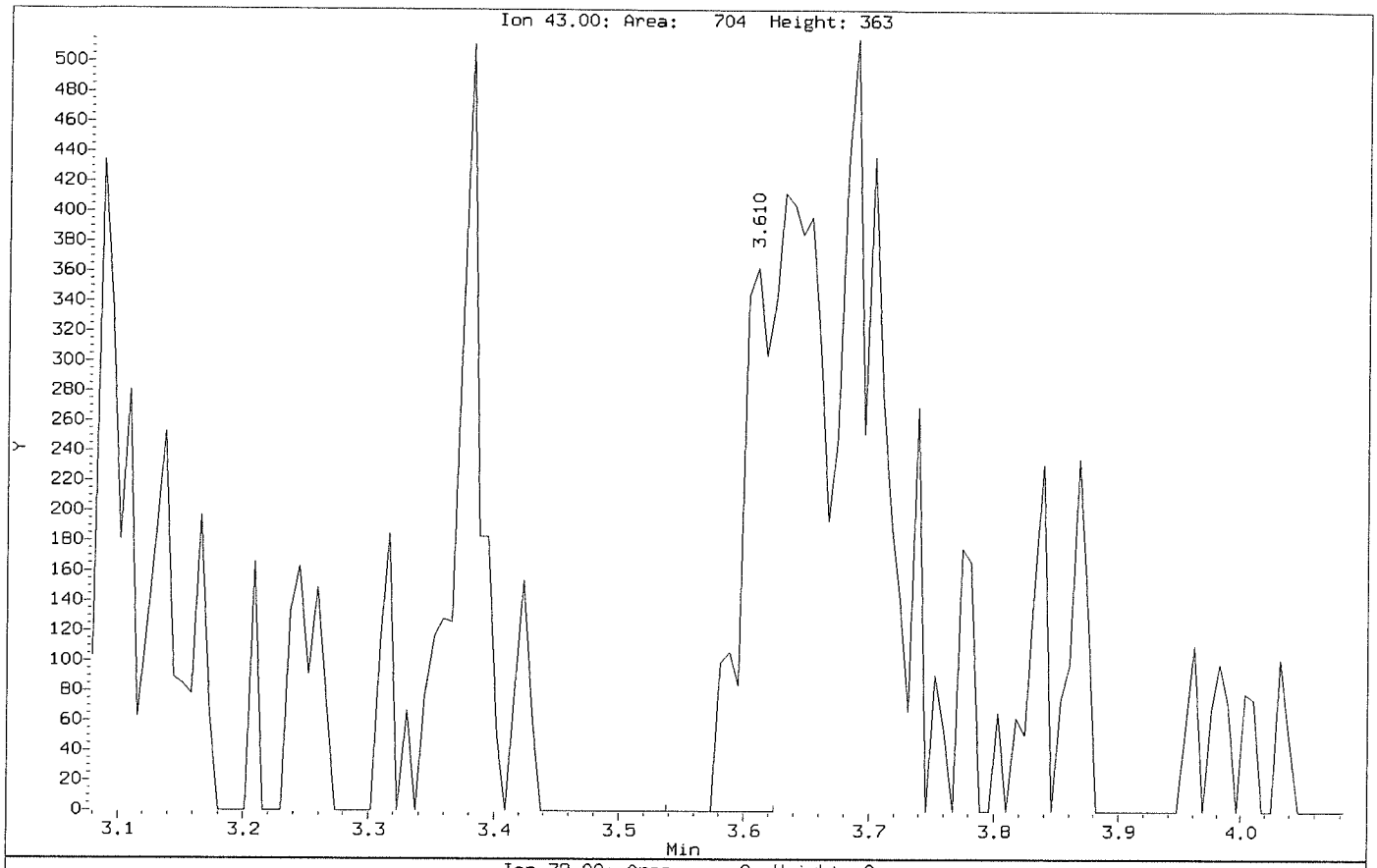
Compound: 2-Butanone
CAS Number: 78-93-3

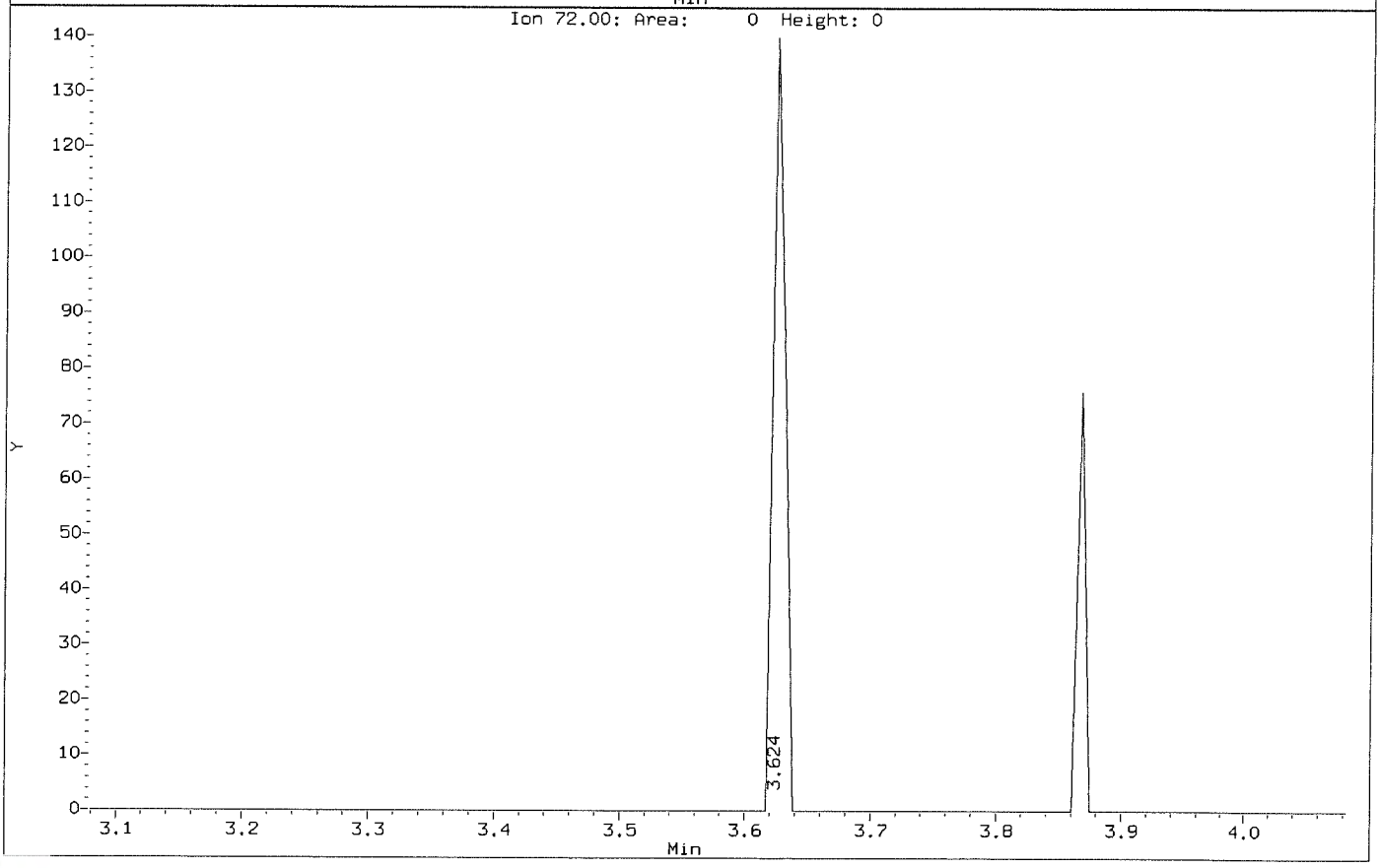




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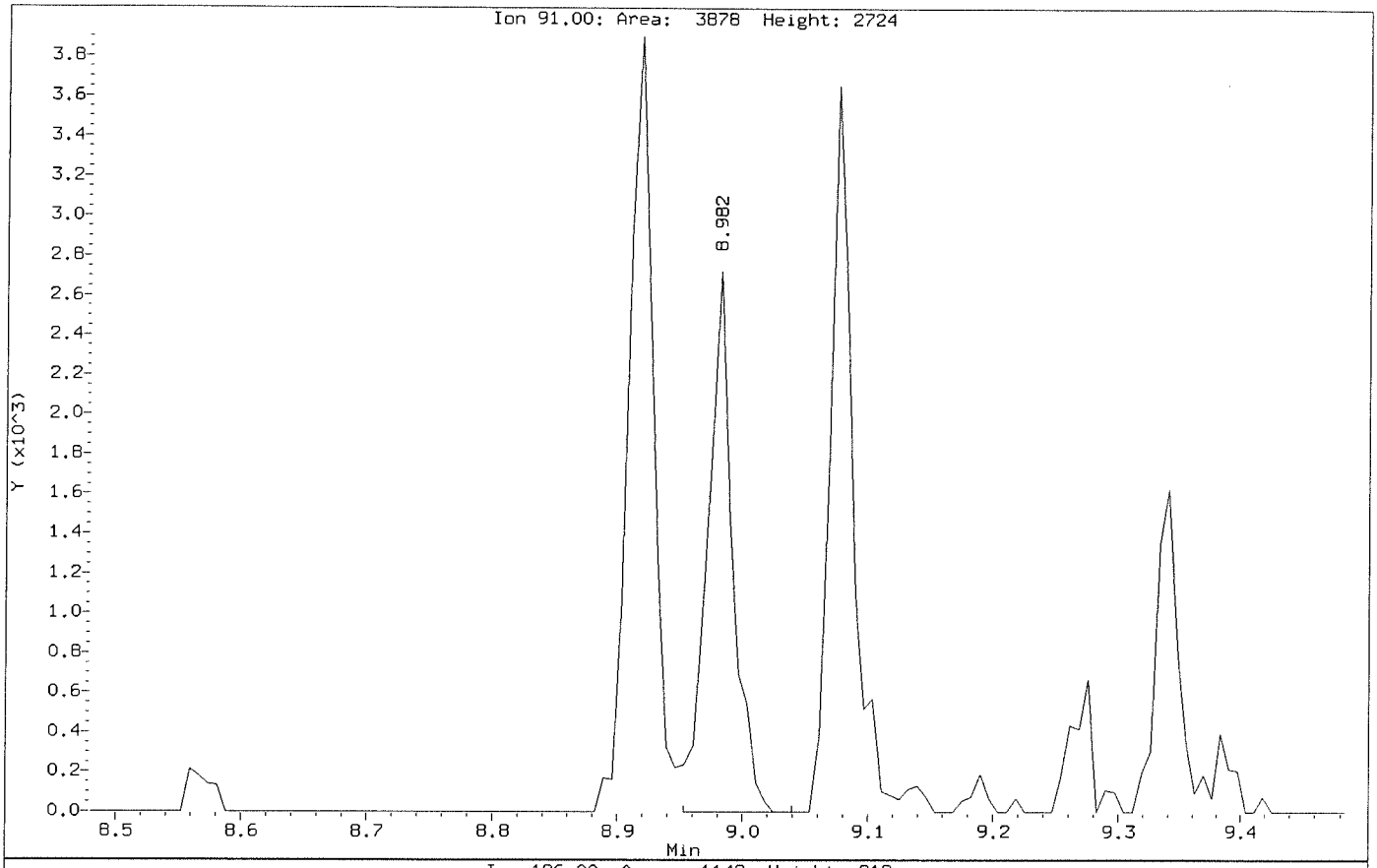
Compound: 2-Butanone
CAS Number: 78-93-3

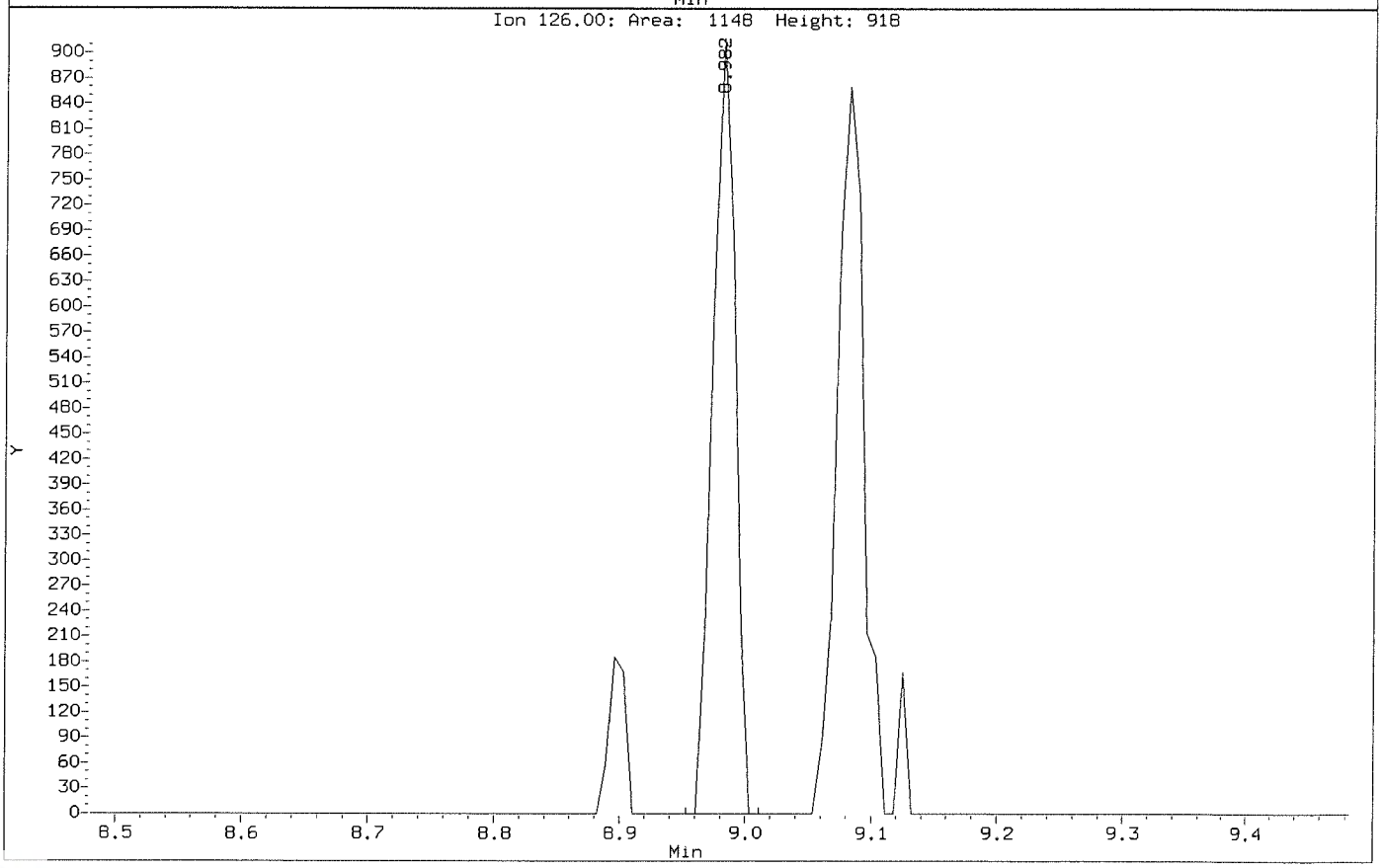




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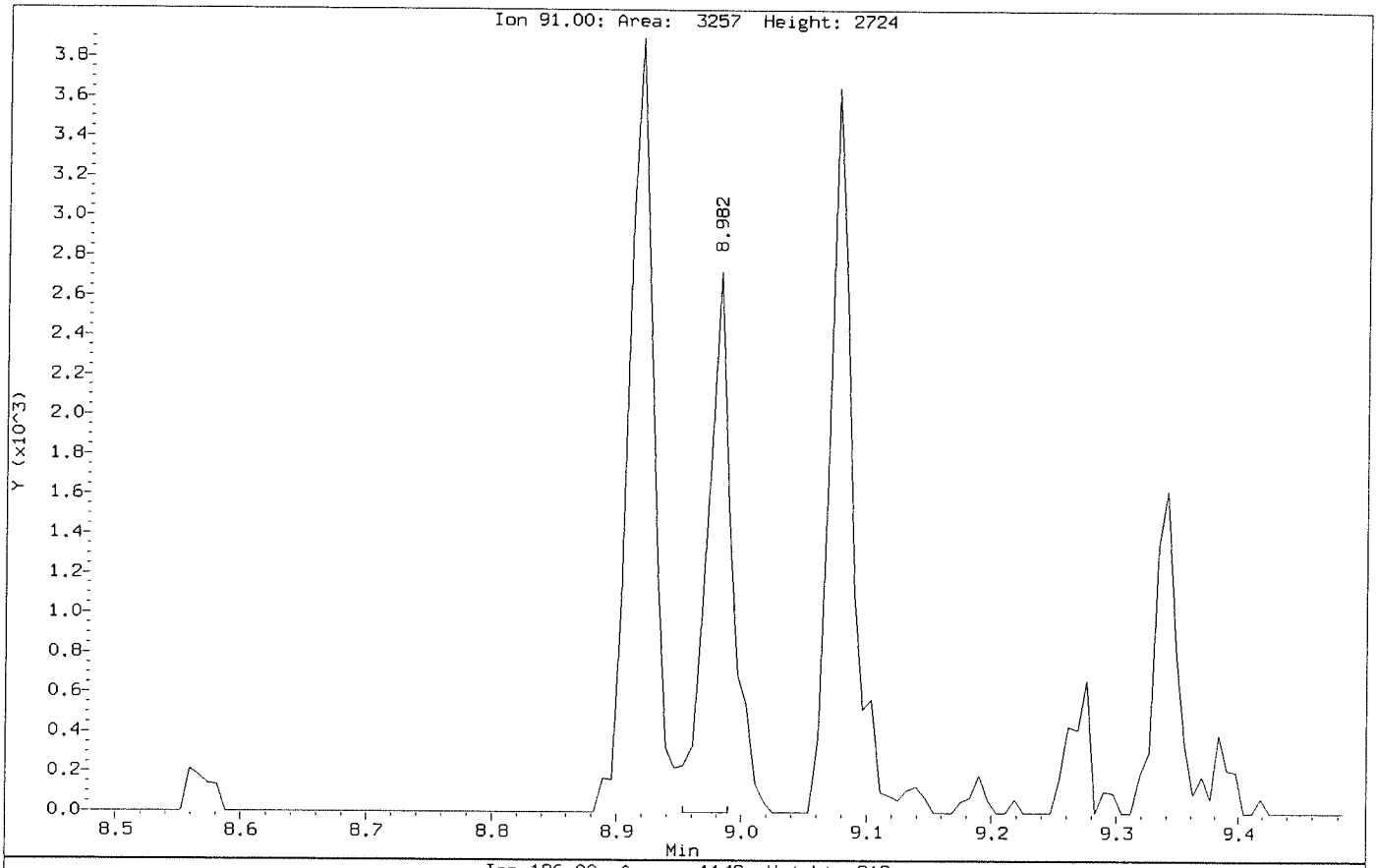
Compound: 2-Chlorotoluene
CAS Number: 95-49-8

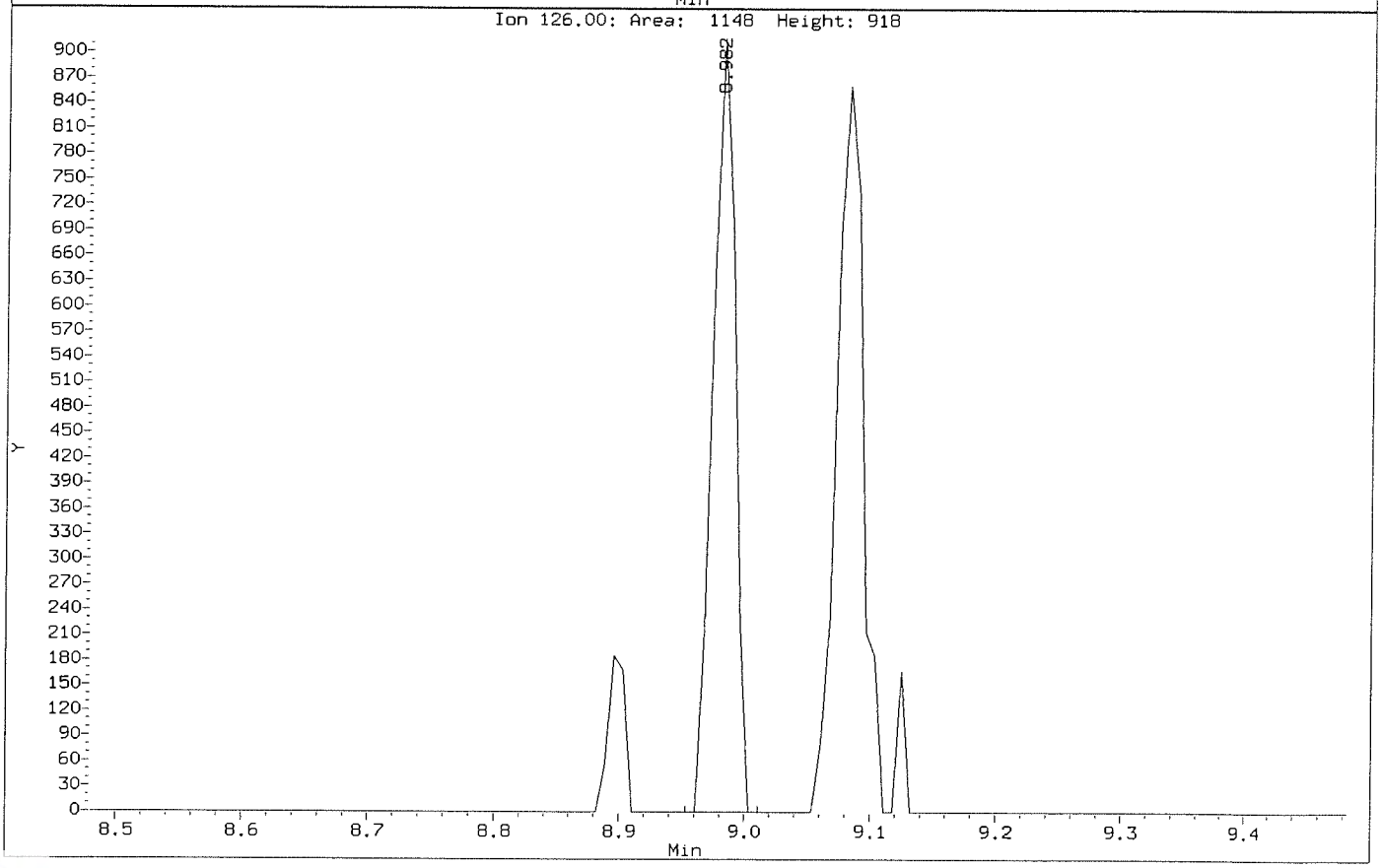




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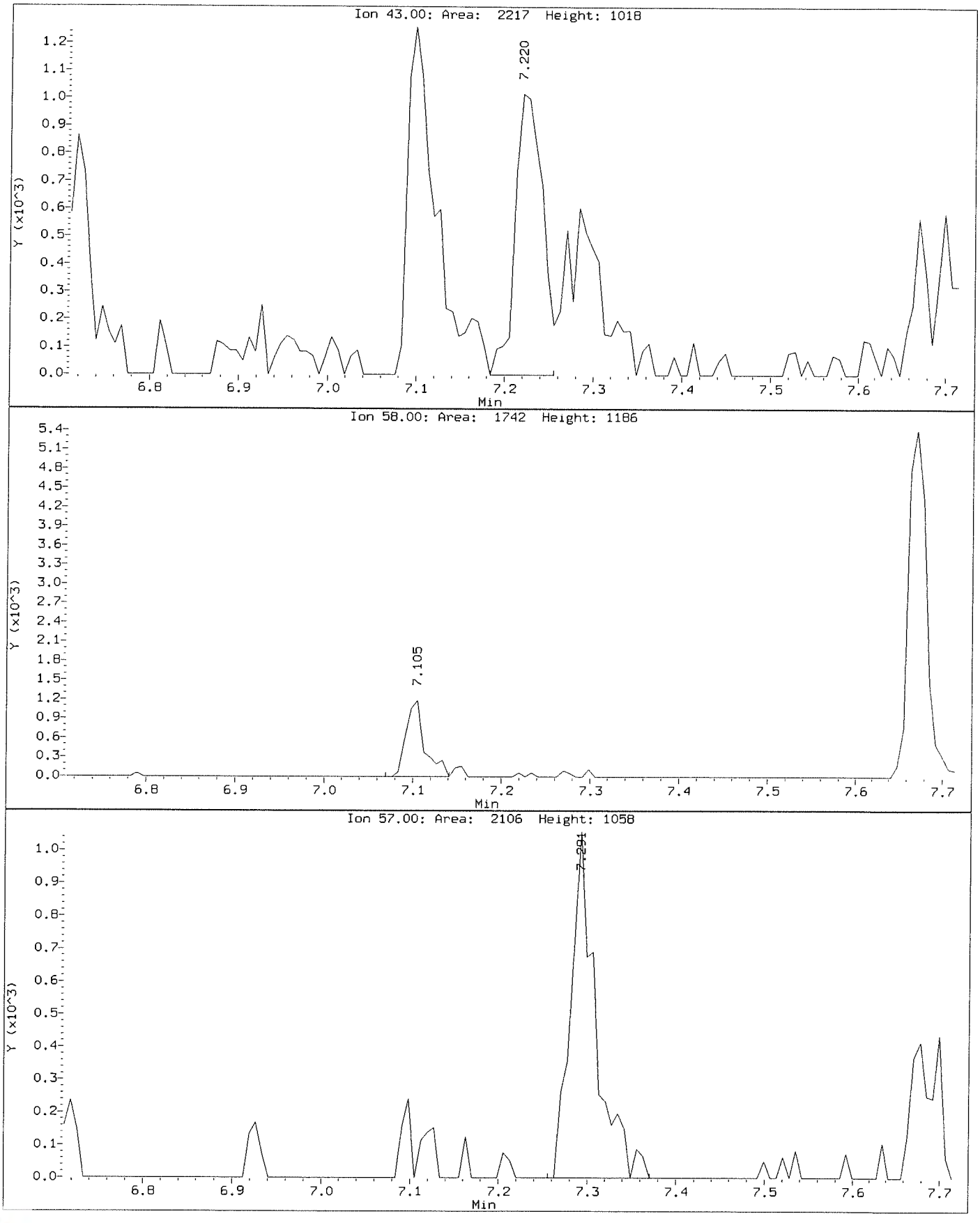
Compound: 2-Chlorotoluene
CAS Number: 95-49-8





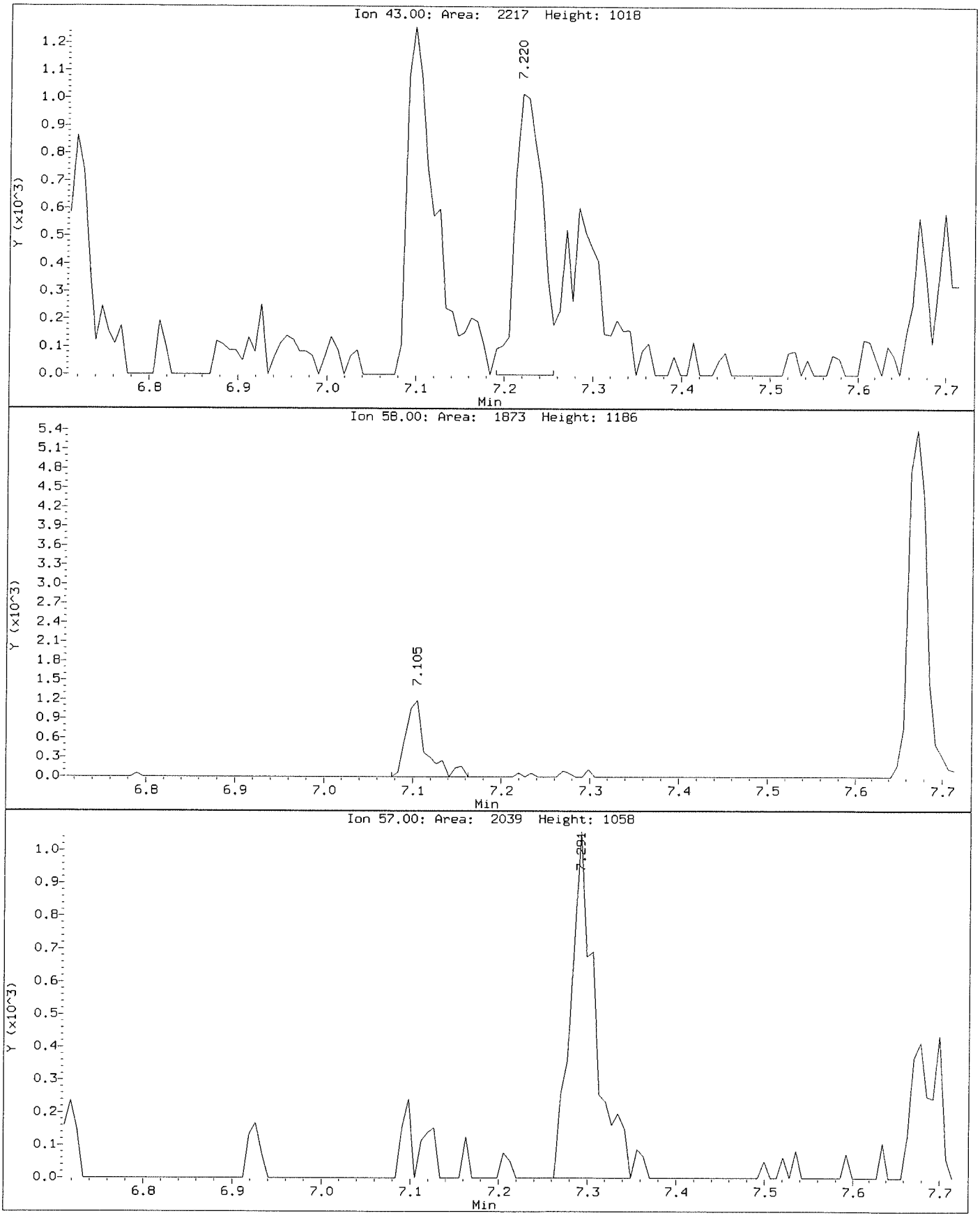
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 2-Hexanone
CAS Number: 591-78-6



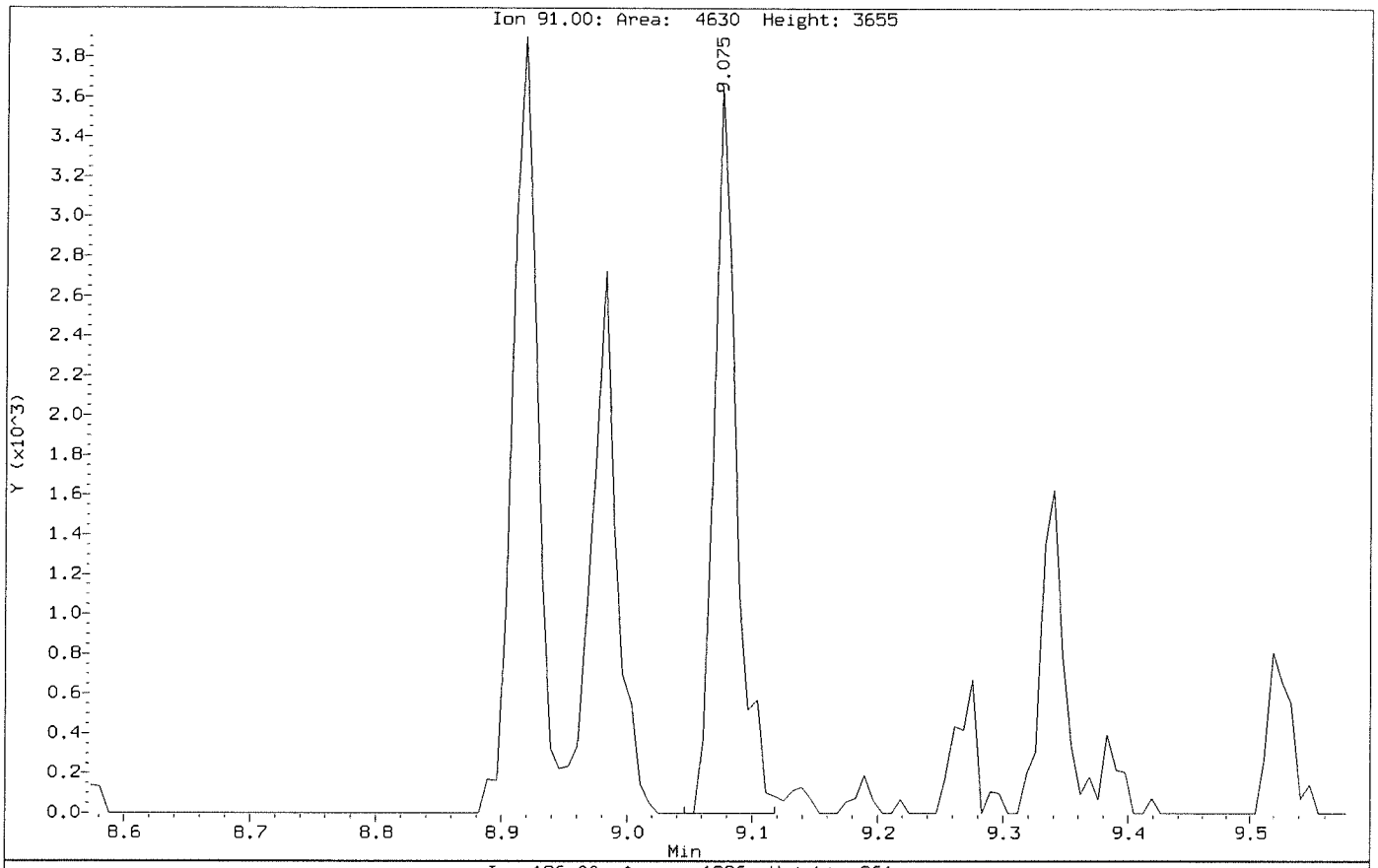
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Client Sample ID: VSTD000.5

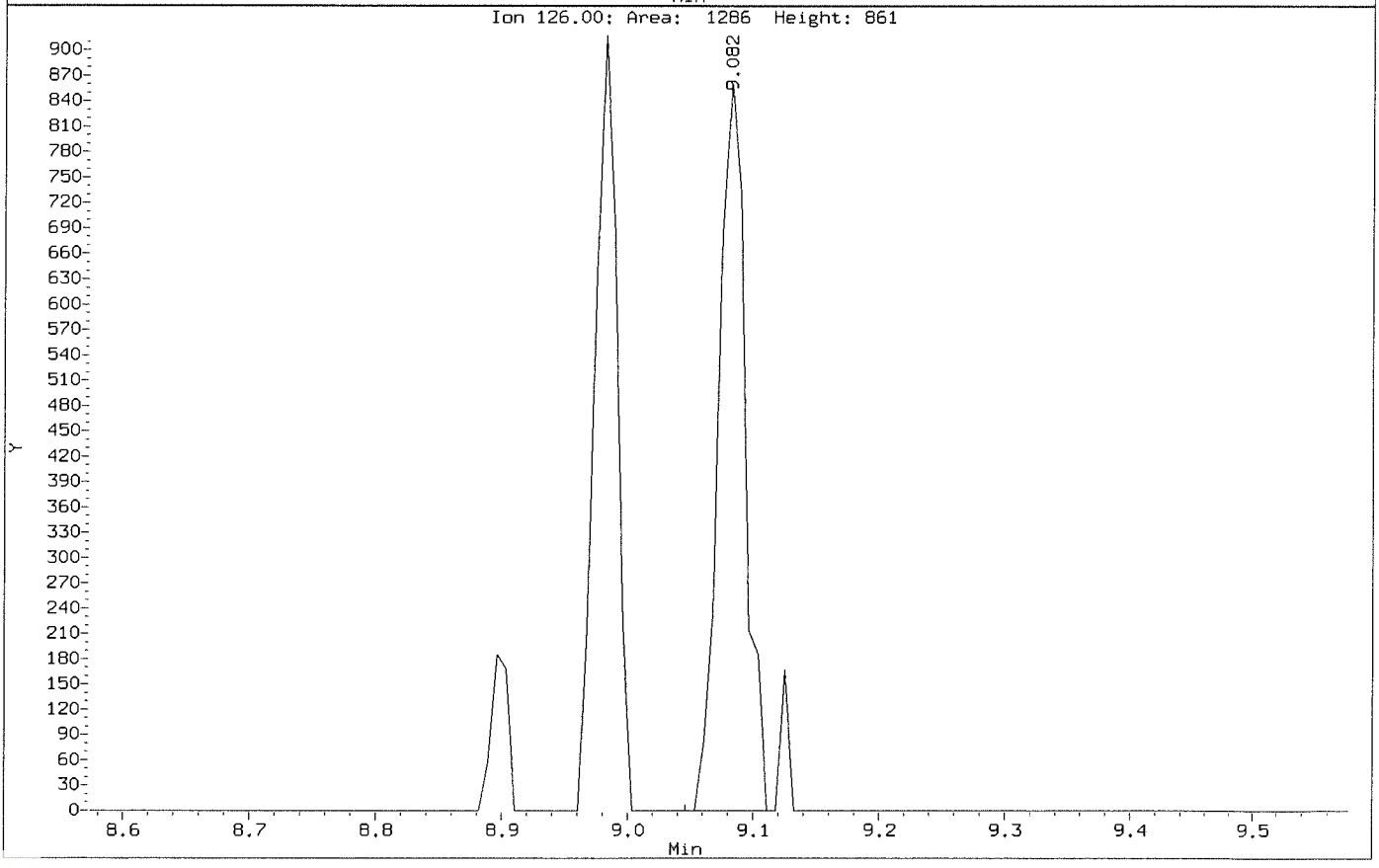
Compound: 2-Hexanone
CAS Number: 591-78-6



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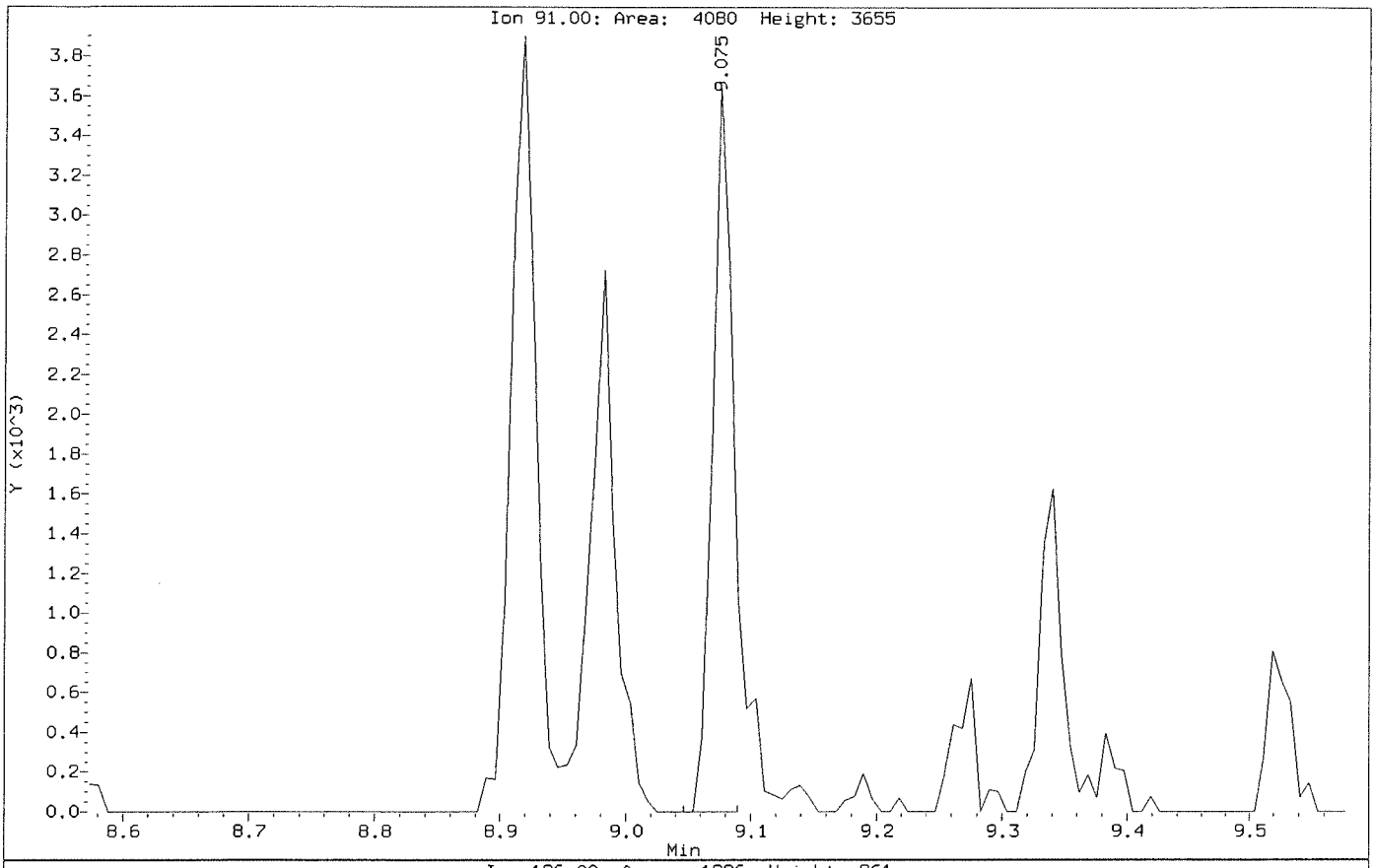
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

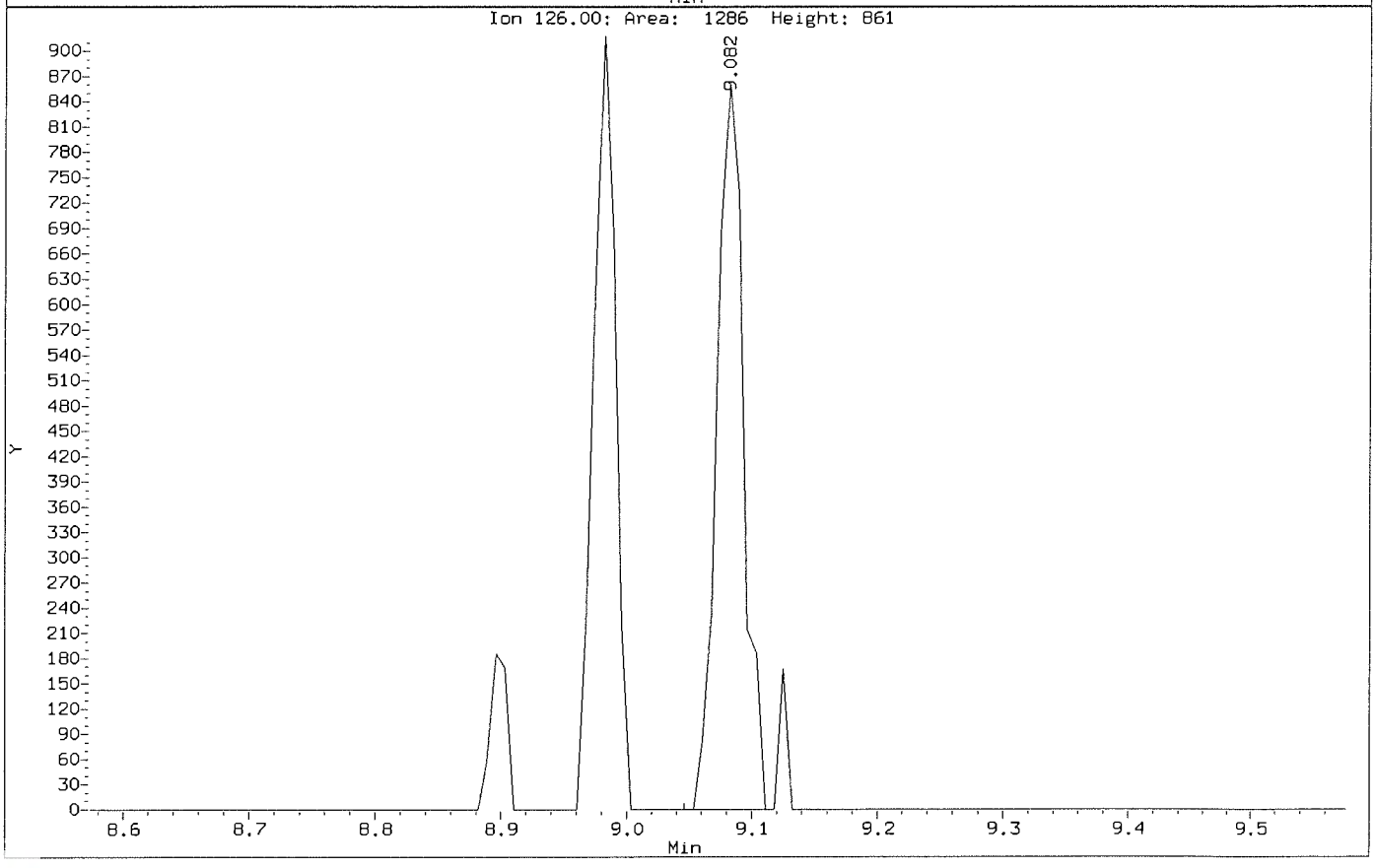




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Client Sample ID: VSTD000.5

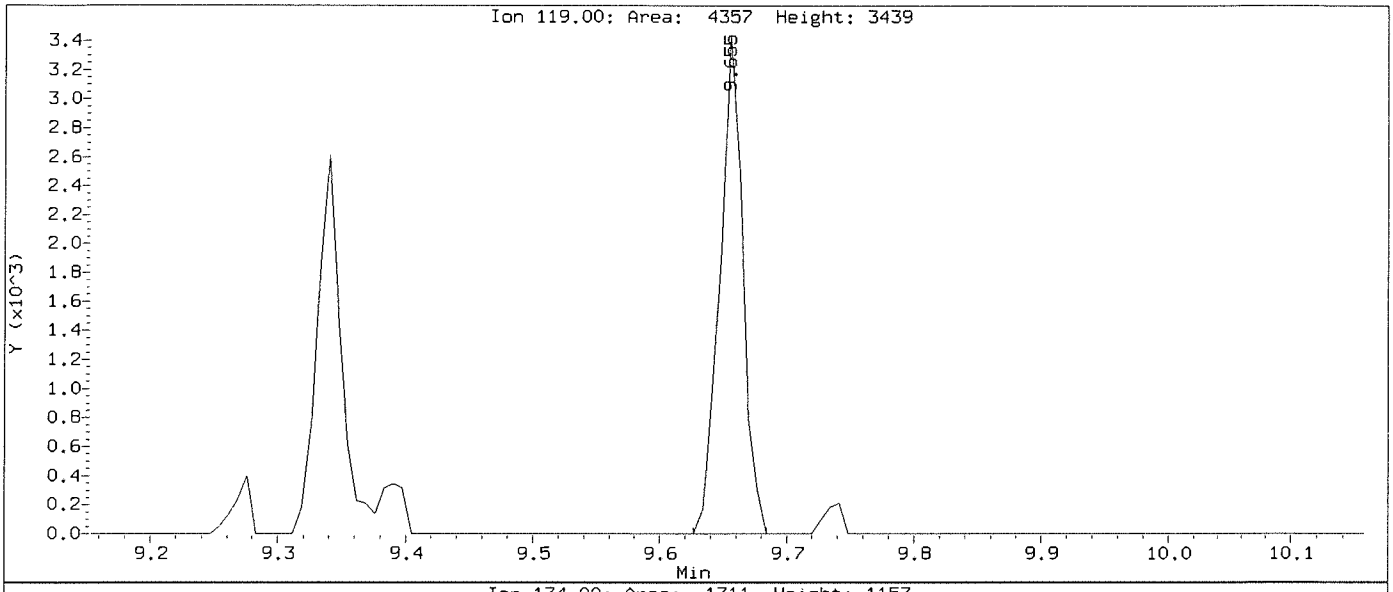
Compound: 4-Chlorotoluene
CAS Number: 106-43-4

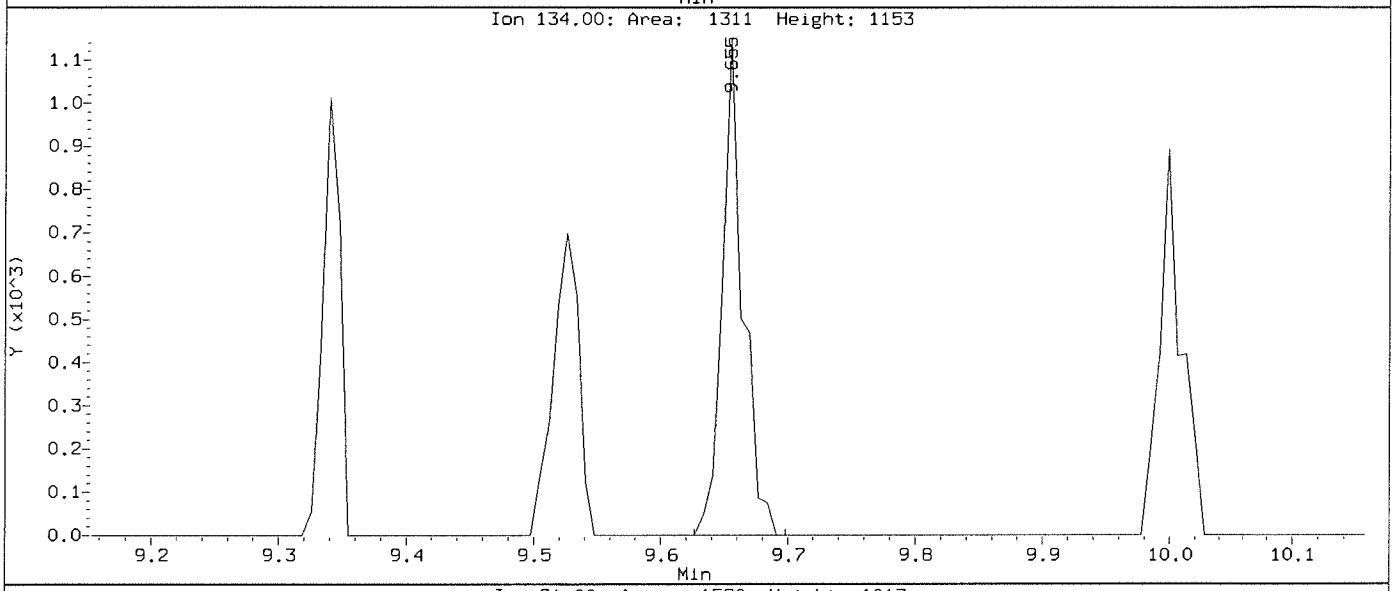


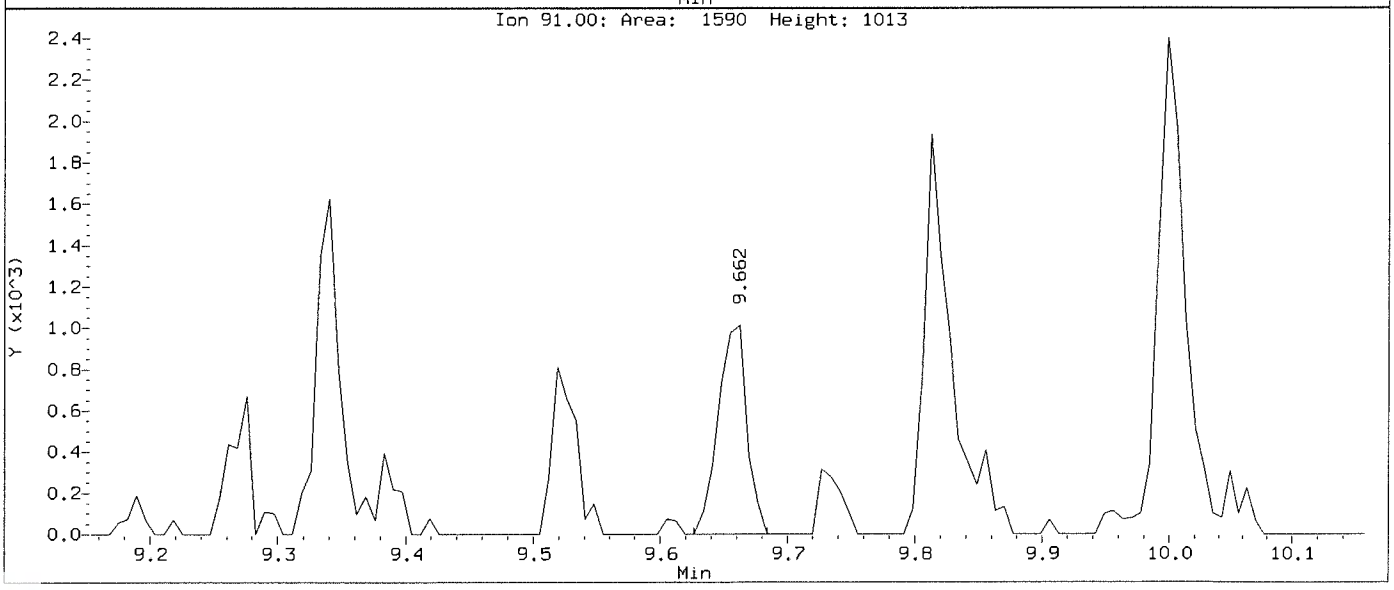


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6

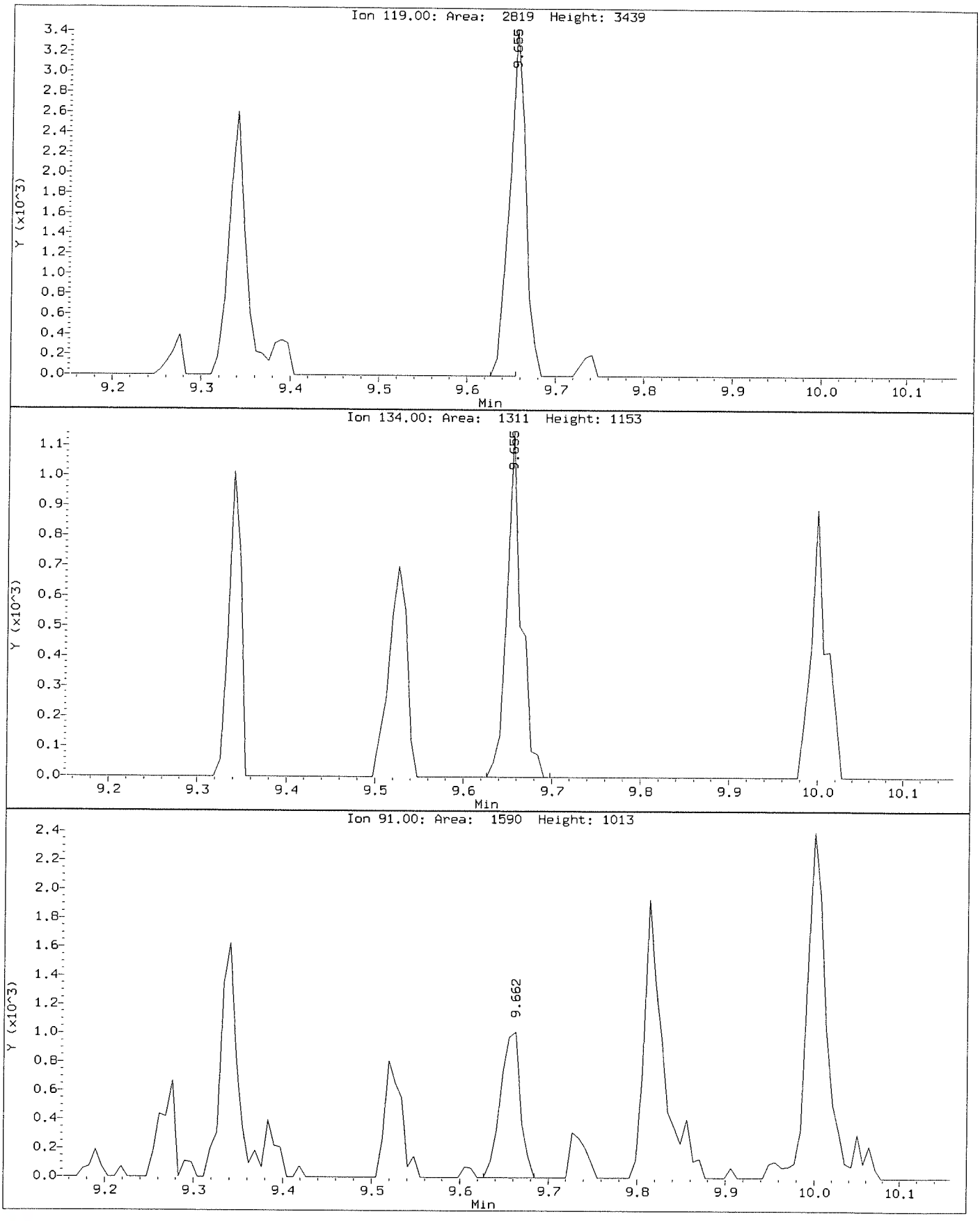






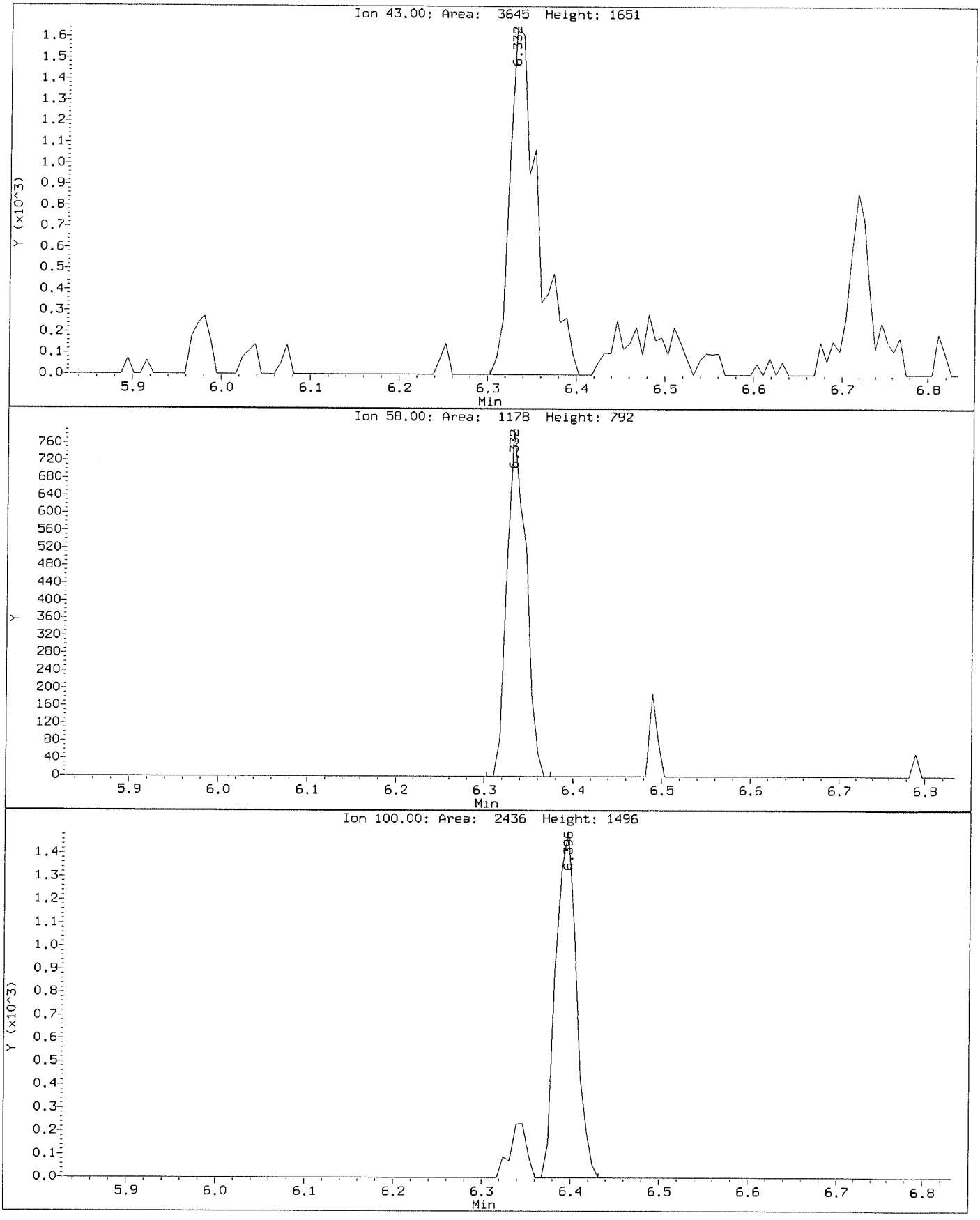
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



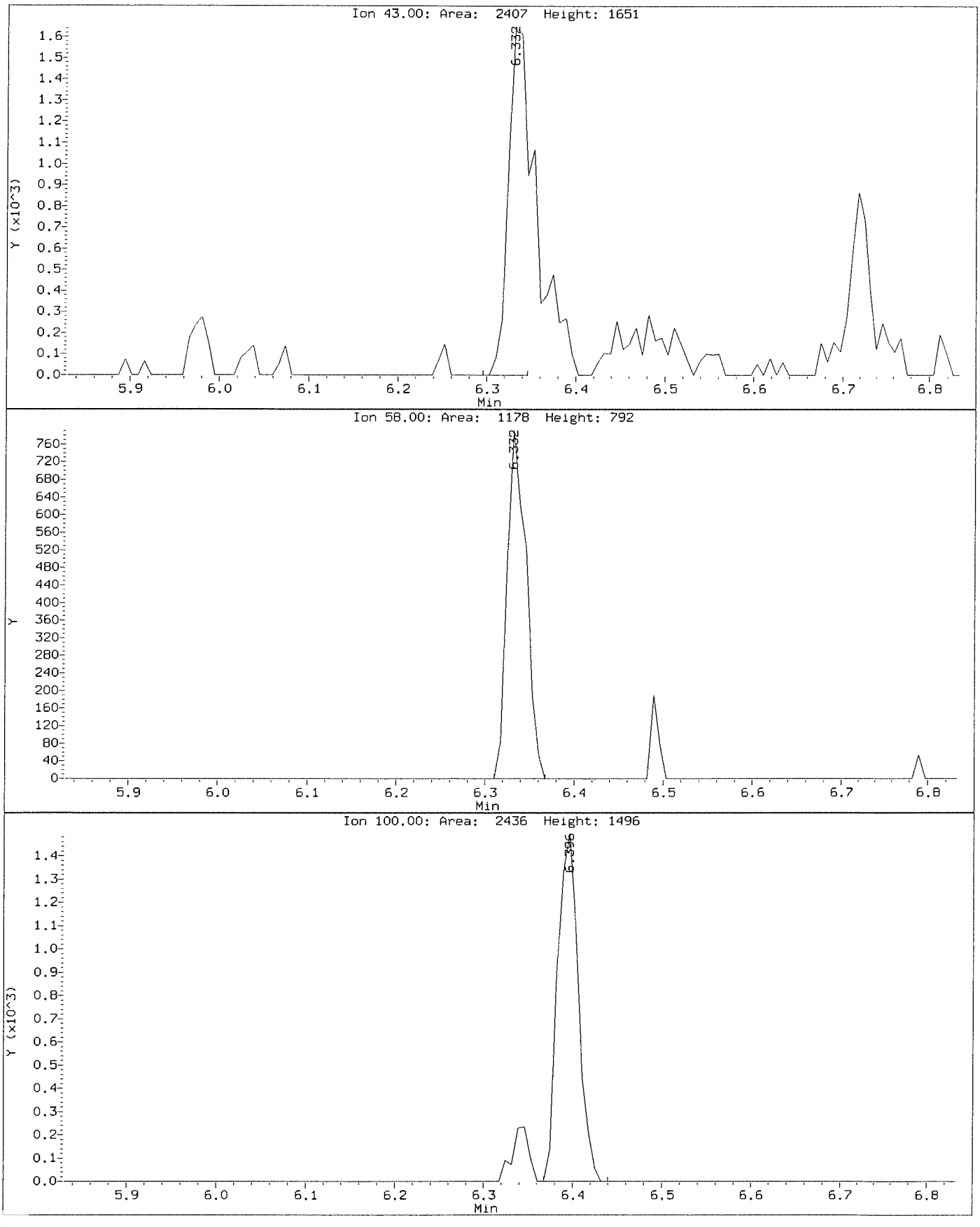
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: 4-Methyl-2-Pentanone
CAS Number: 108-10-1



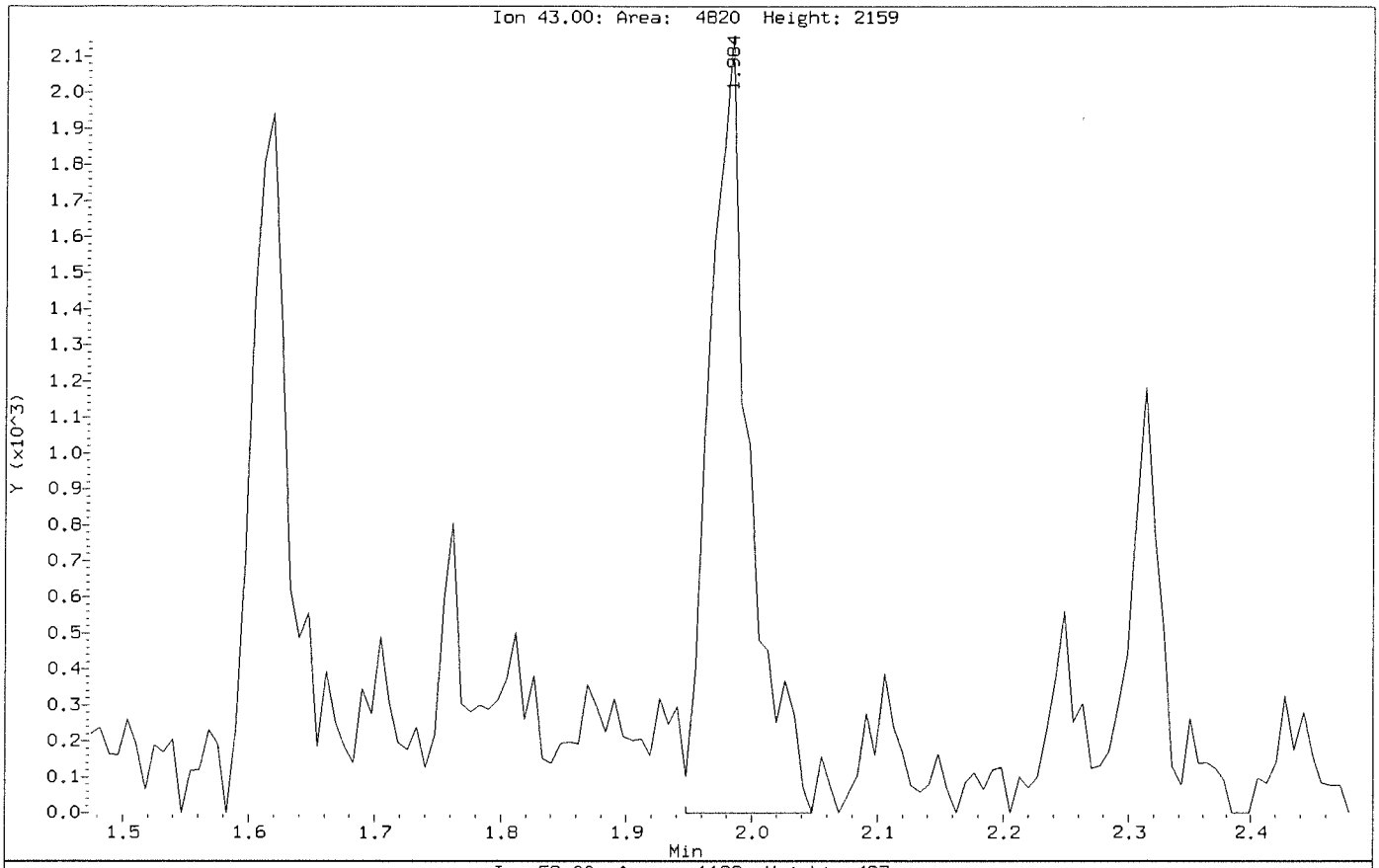
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Client Sample ID: VSTD000.5

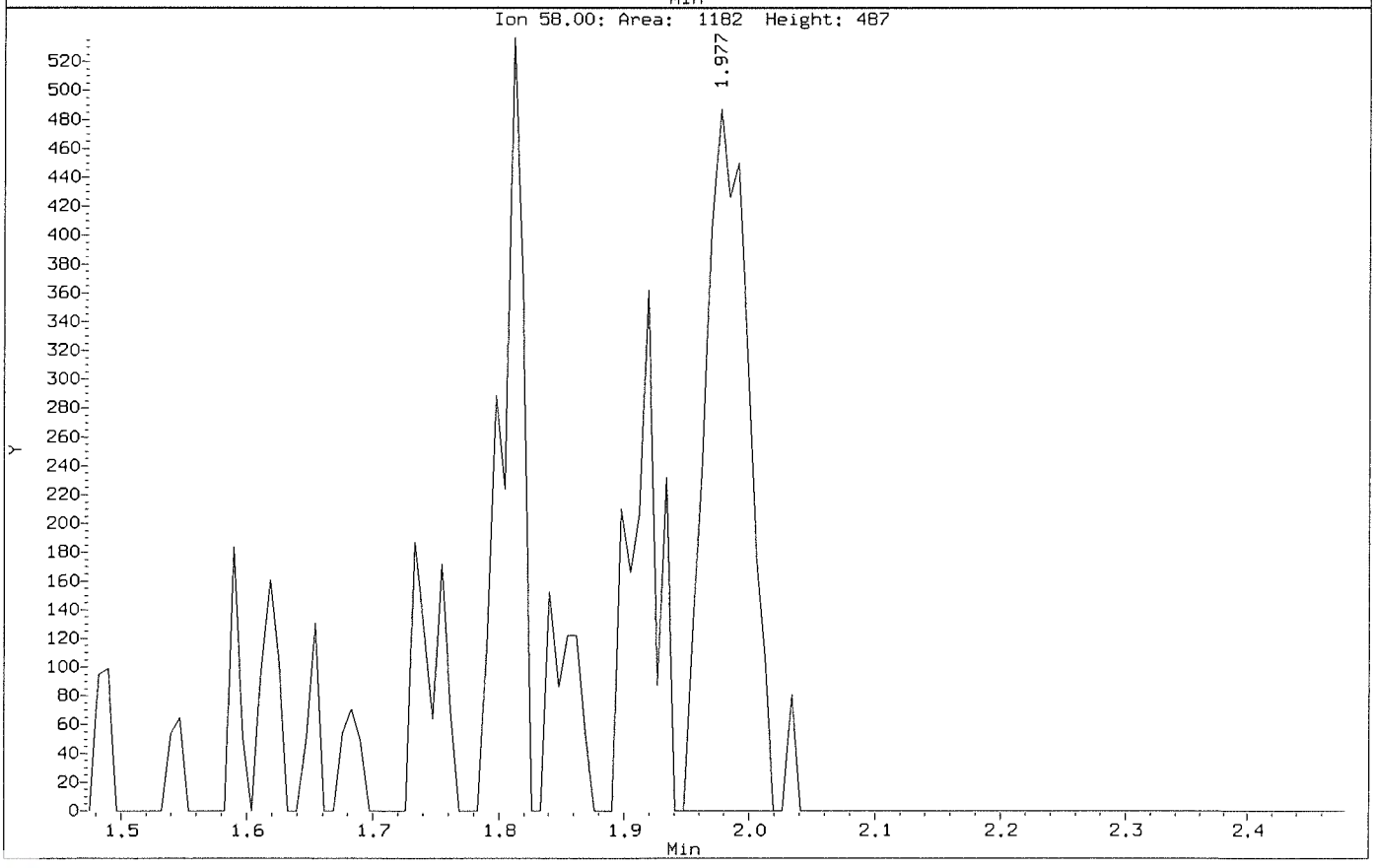
Compound: 4-Methyl-2-Pentanone
CAS Number: 108-10-1



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110303.D
Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

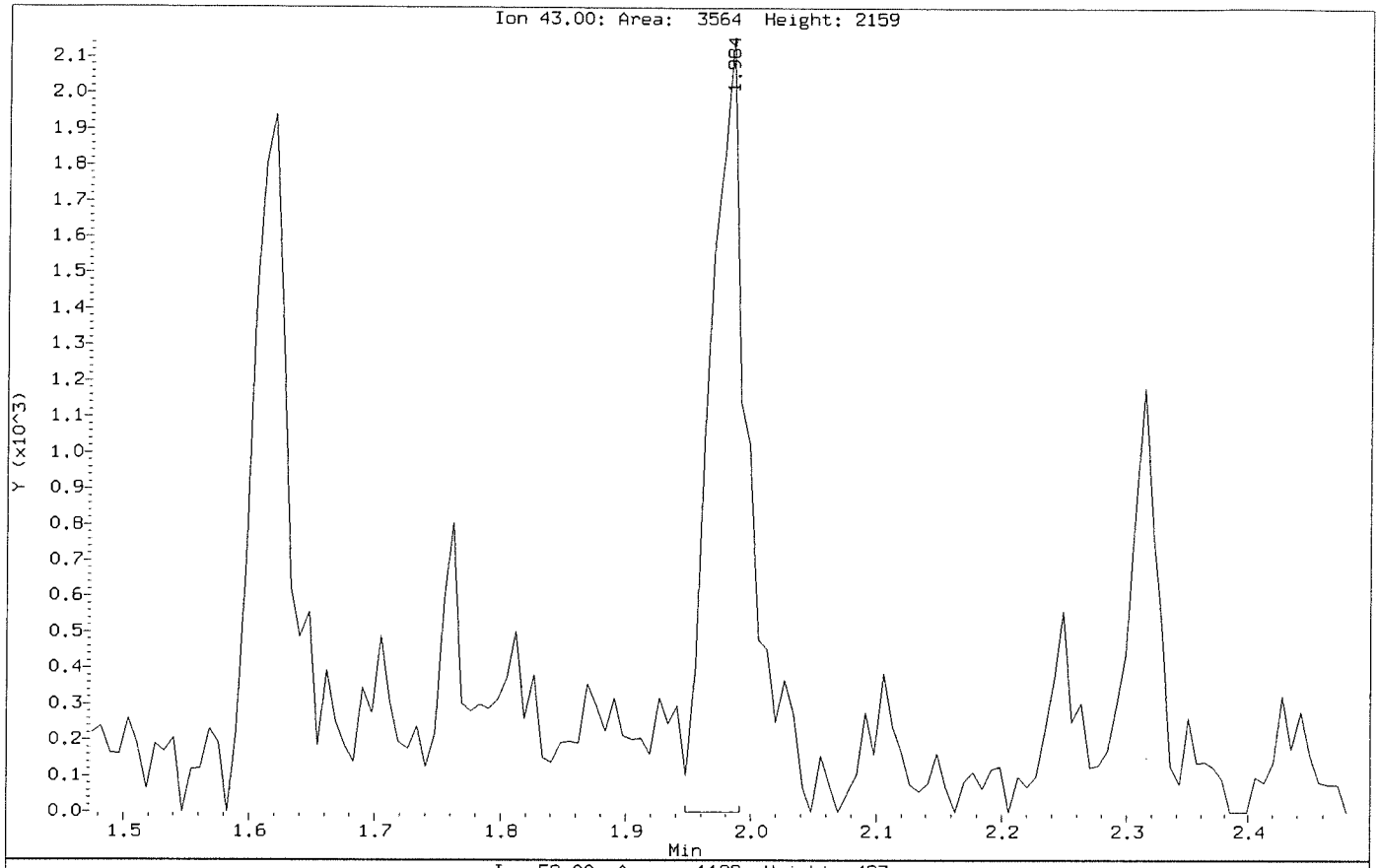
Compound: Acetone
CAS Number: 67-64-1

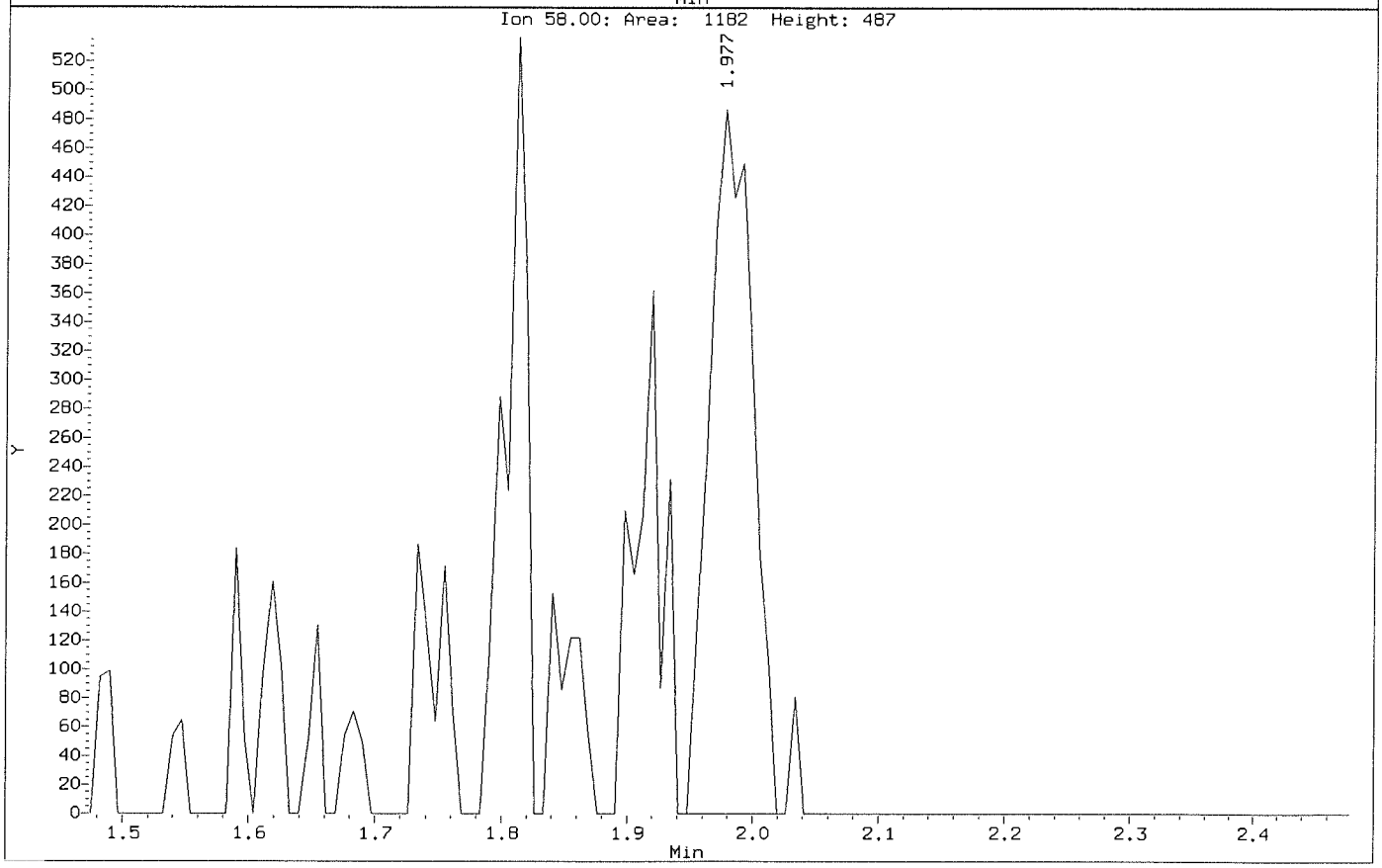




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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.1
Client Sample ID: VSTD000.5

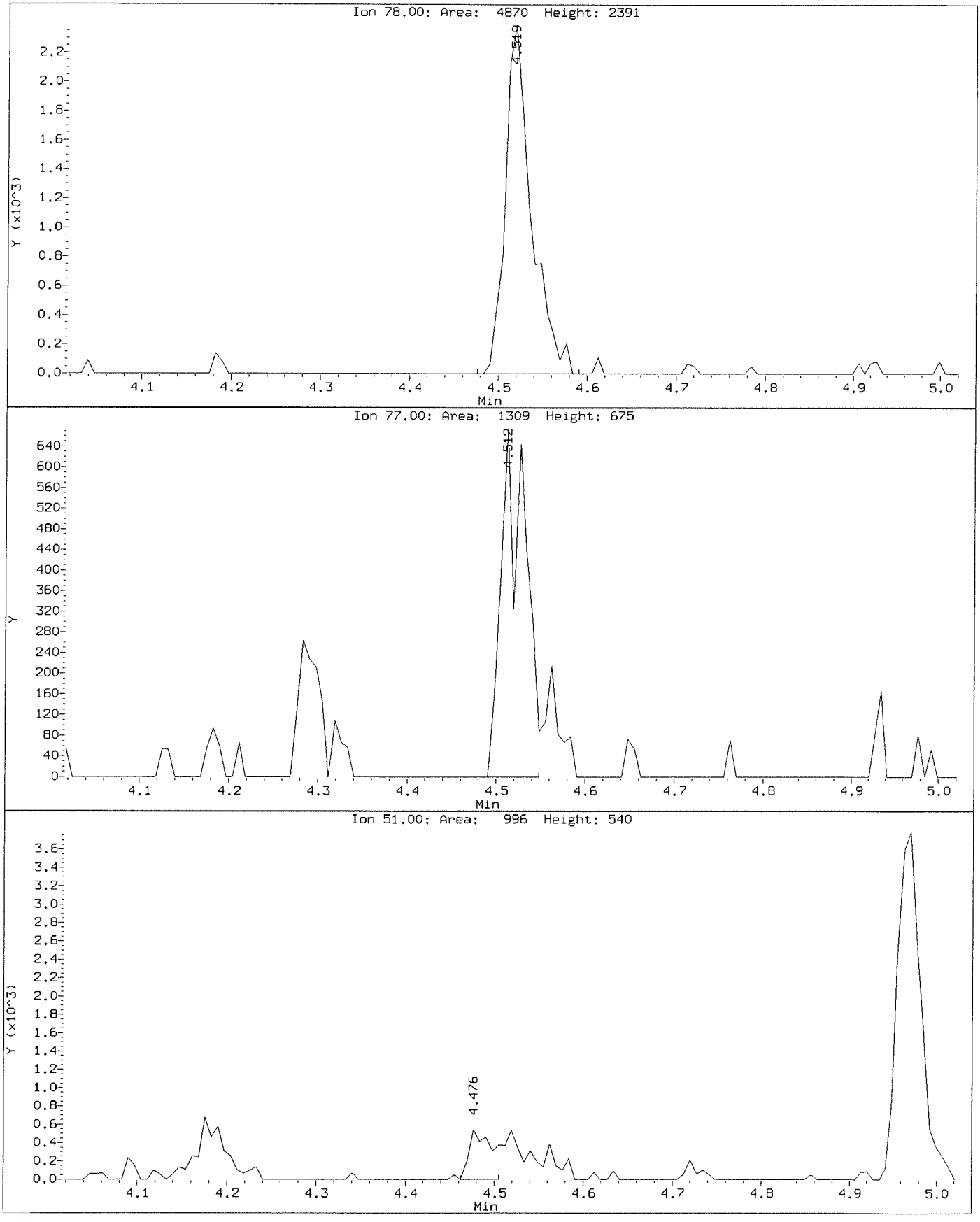
Compound: Acetone
CAS Number: 67-64-1





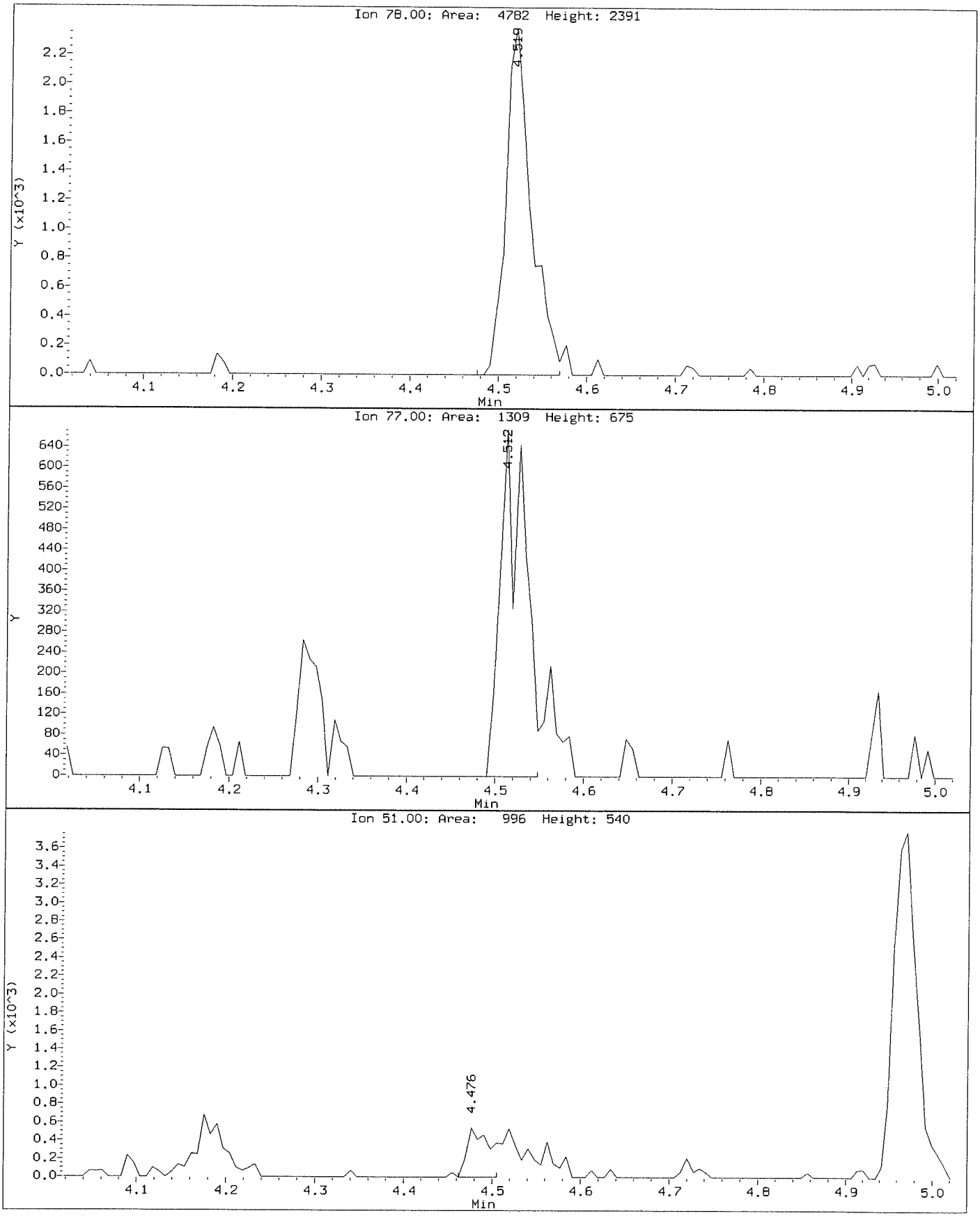
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Benzene
CAS Number: 71-43-2



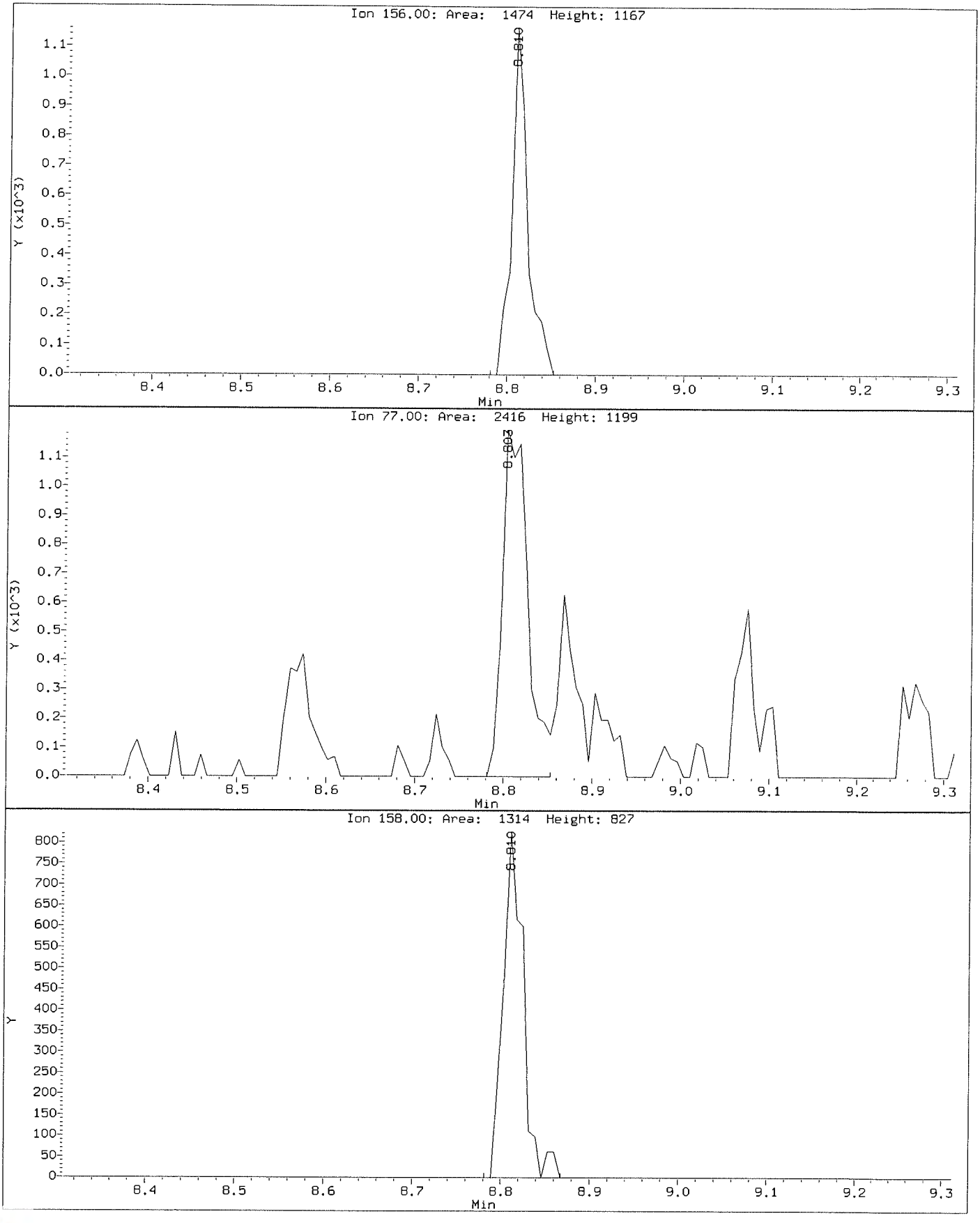
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Benzene
CAS Number: 71-43-2



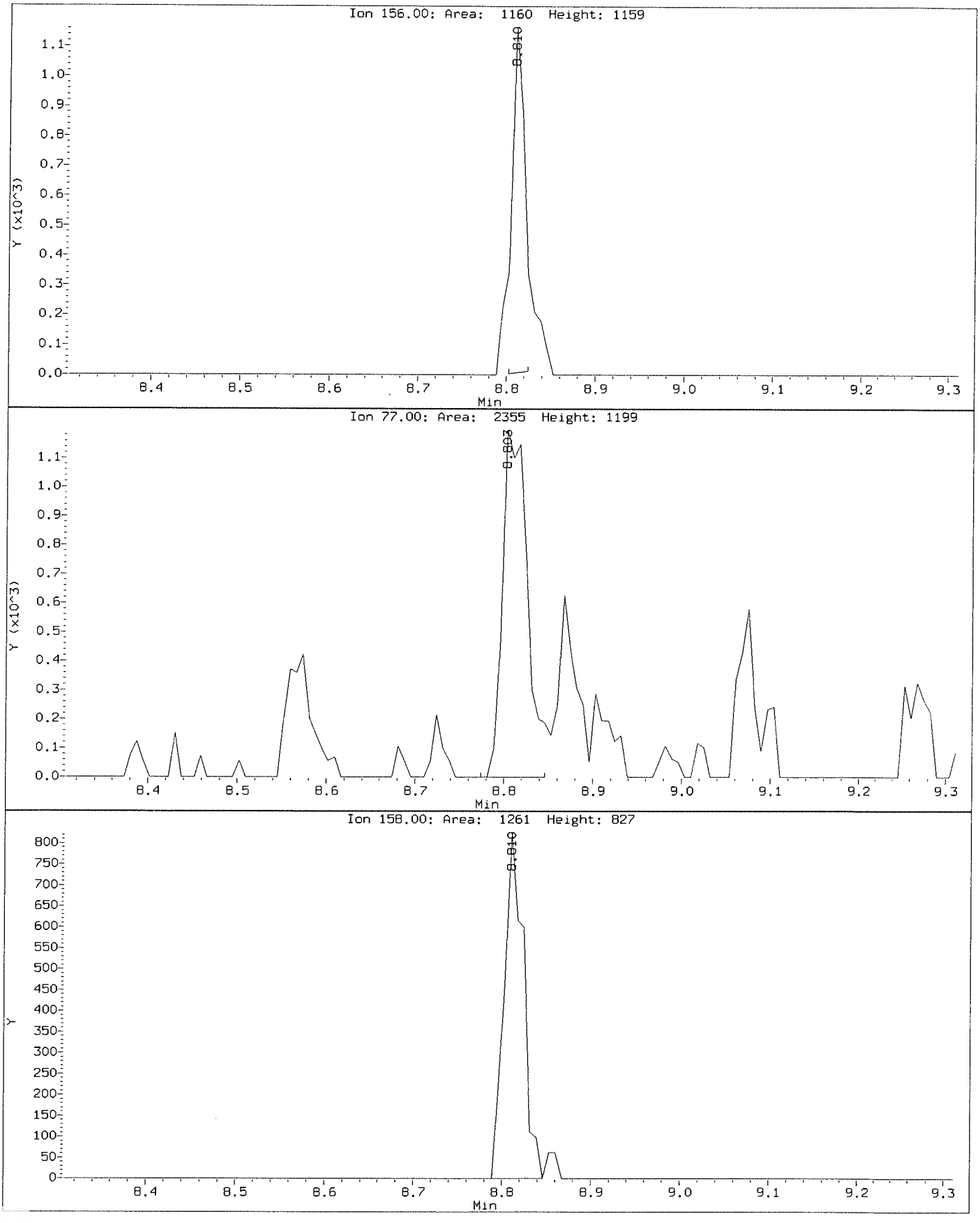
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromobenzene
CAS Number: 108-86-1



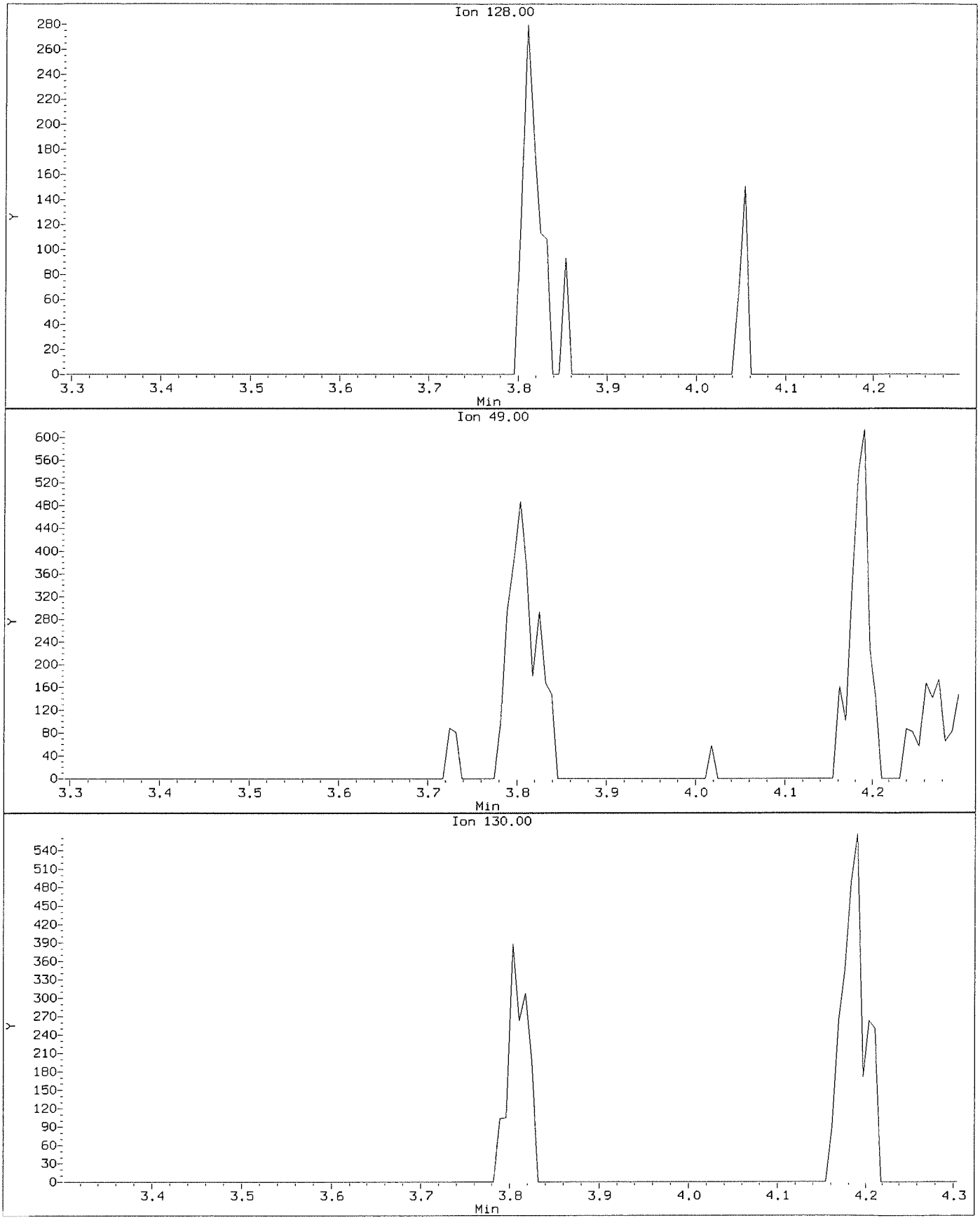
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromobenzene
CAS Number: 108-86-1



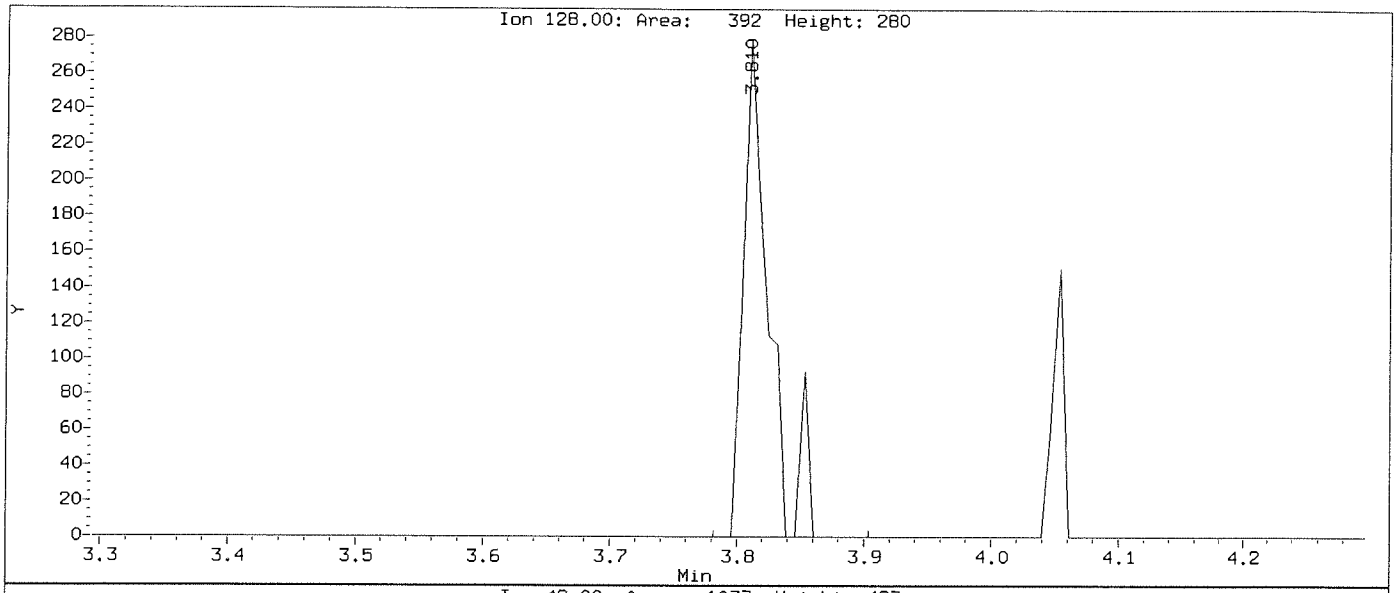
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

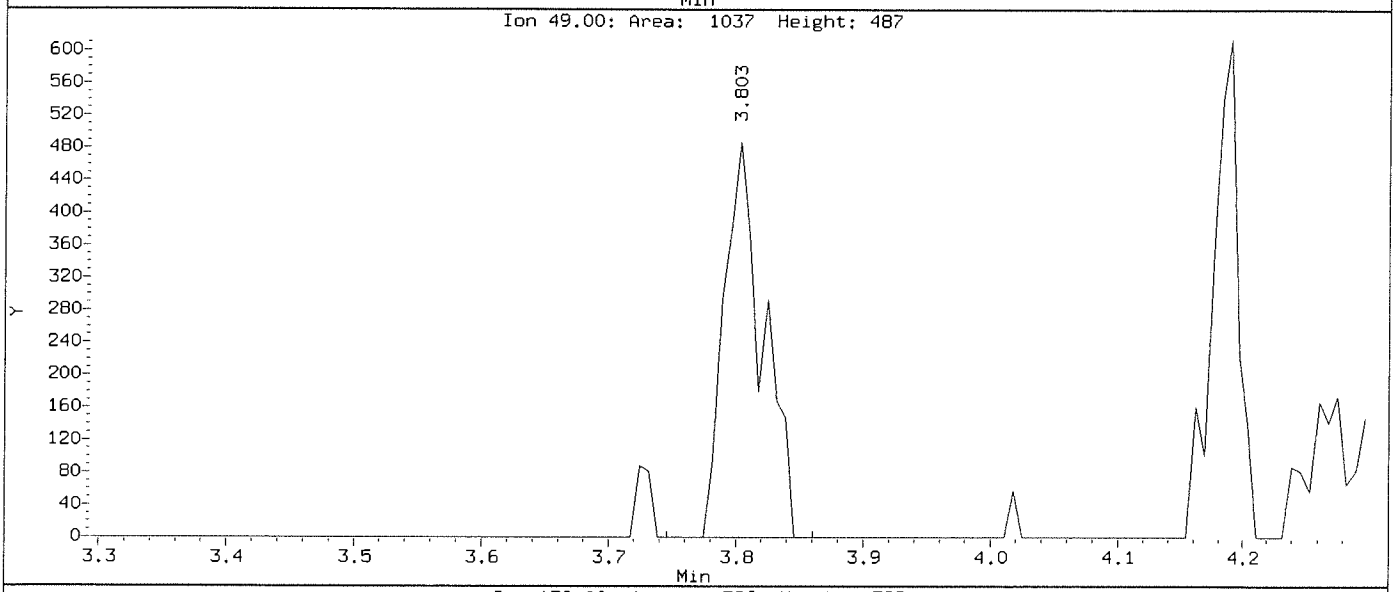
Compound: Bromochloromethane
CAS Number: 74-97-5

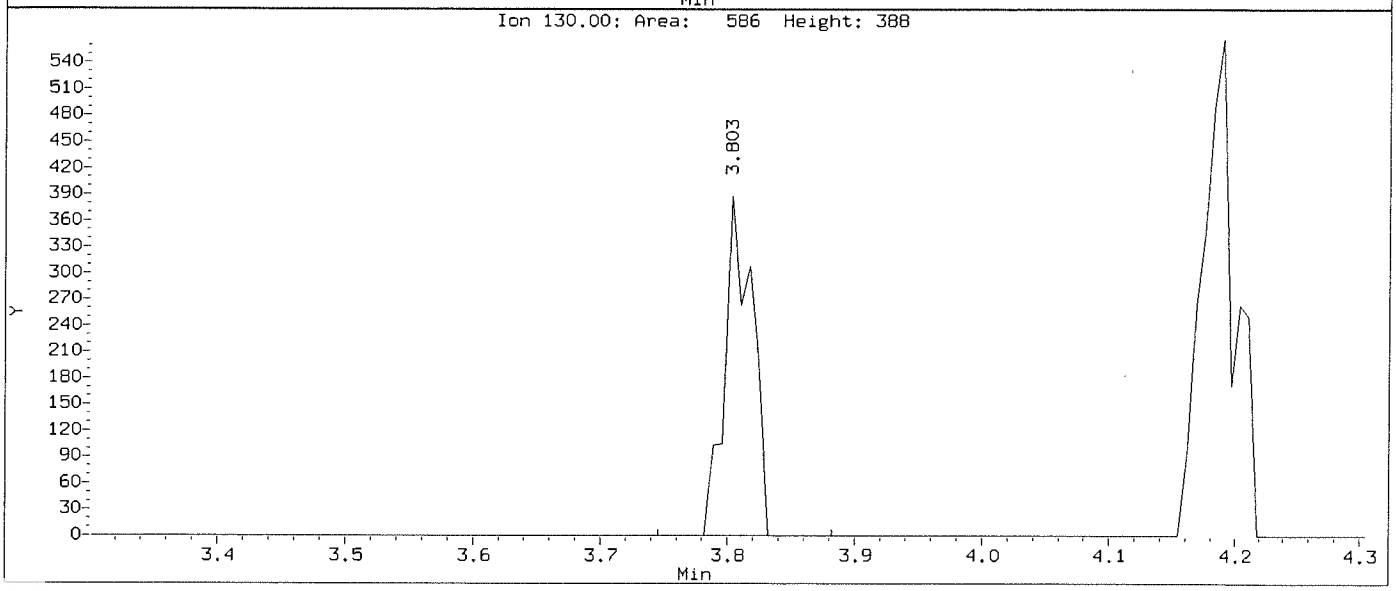


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromochloromethane
CAS Number: 74-97-5

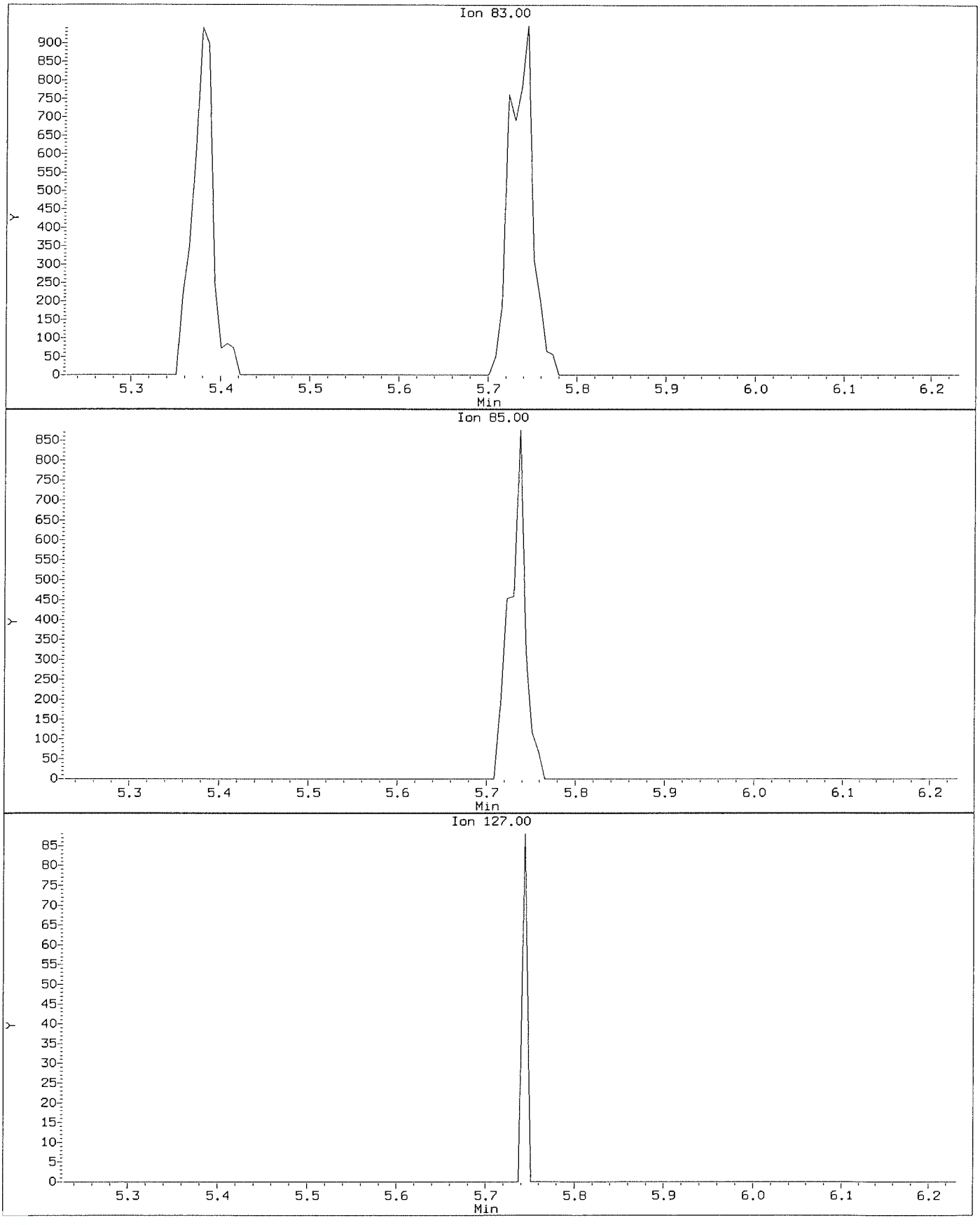






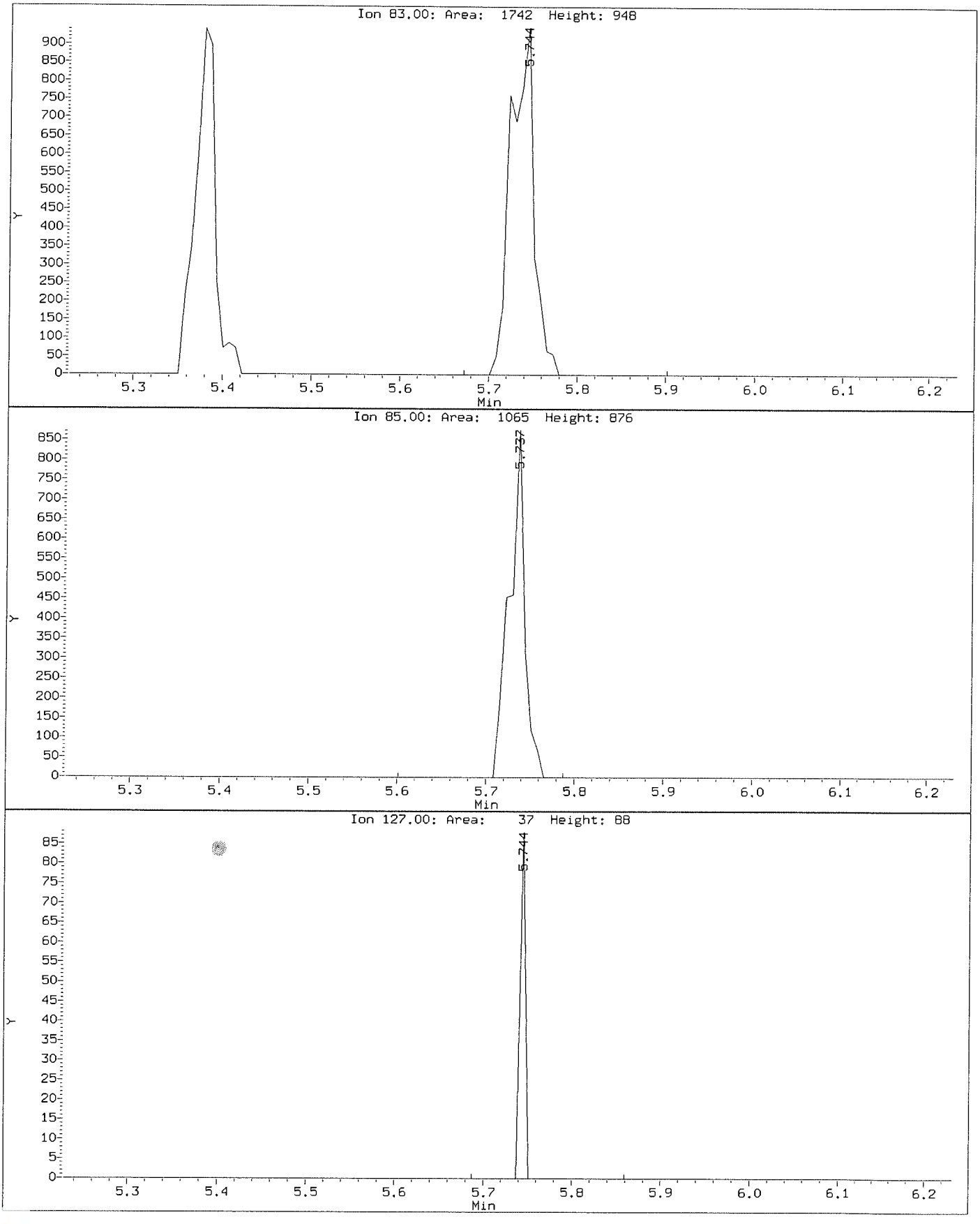
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



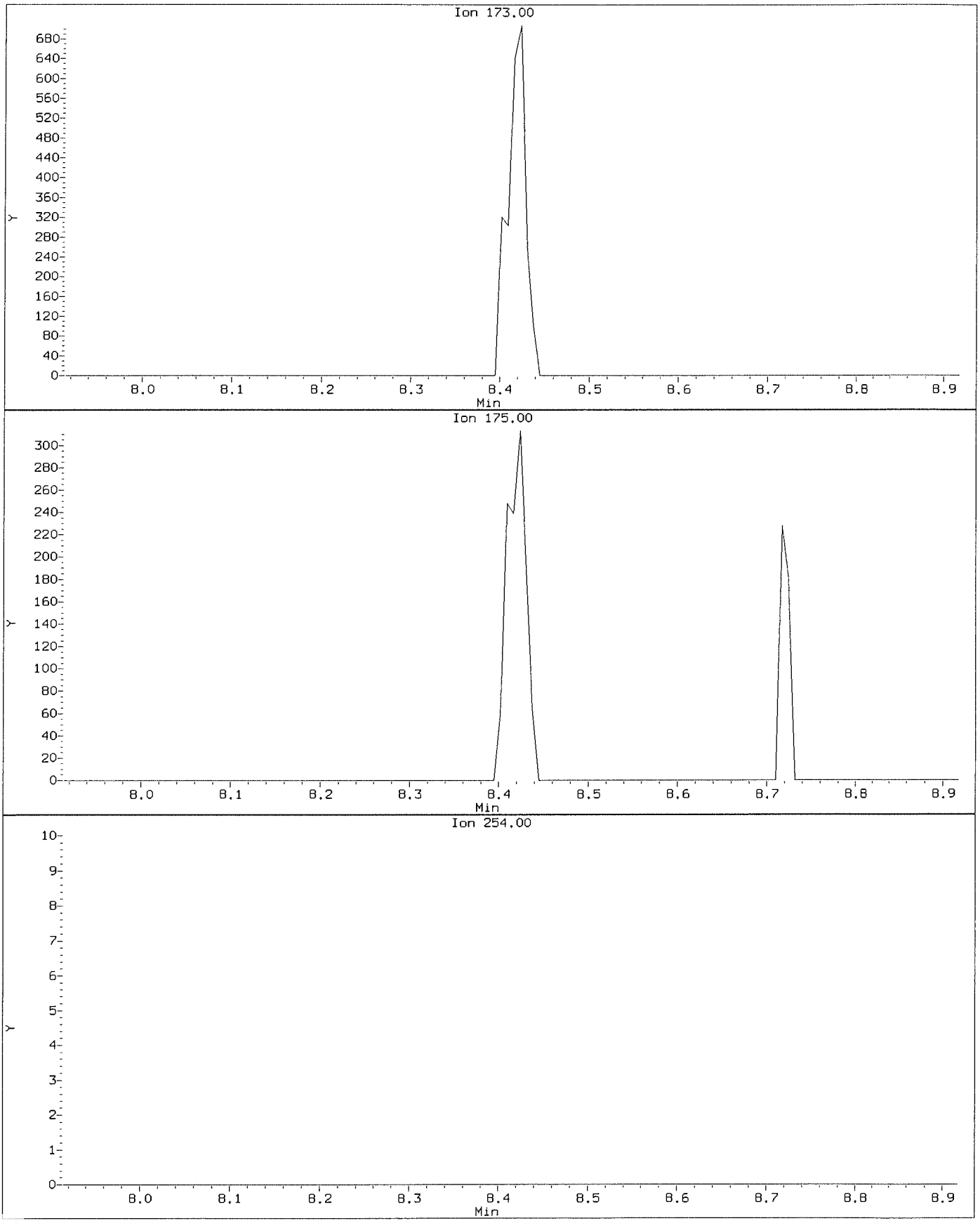
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromodichloromethane
CAS Number: 75-27-4



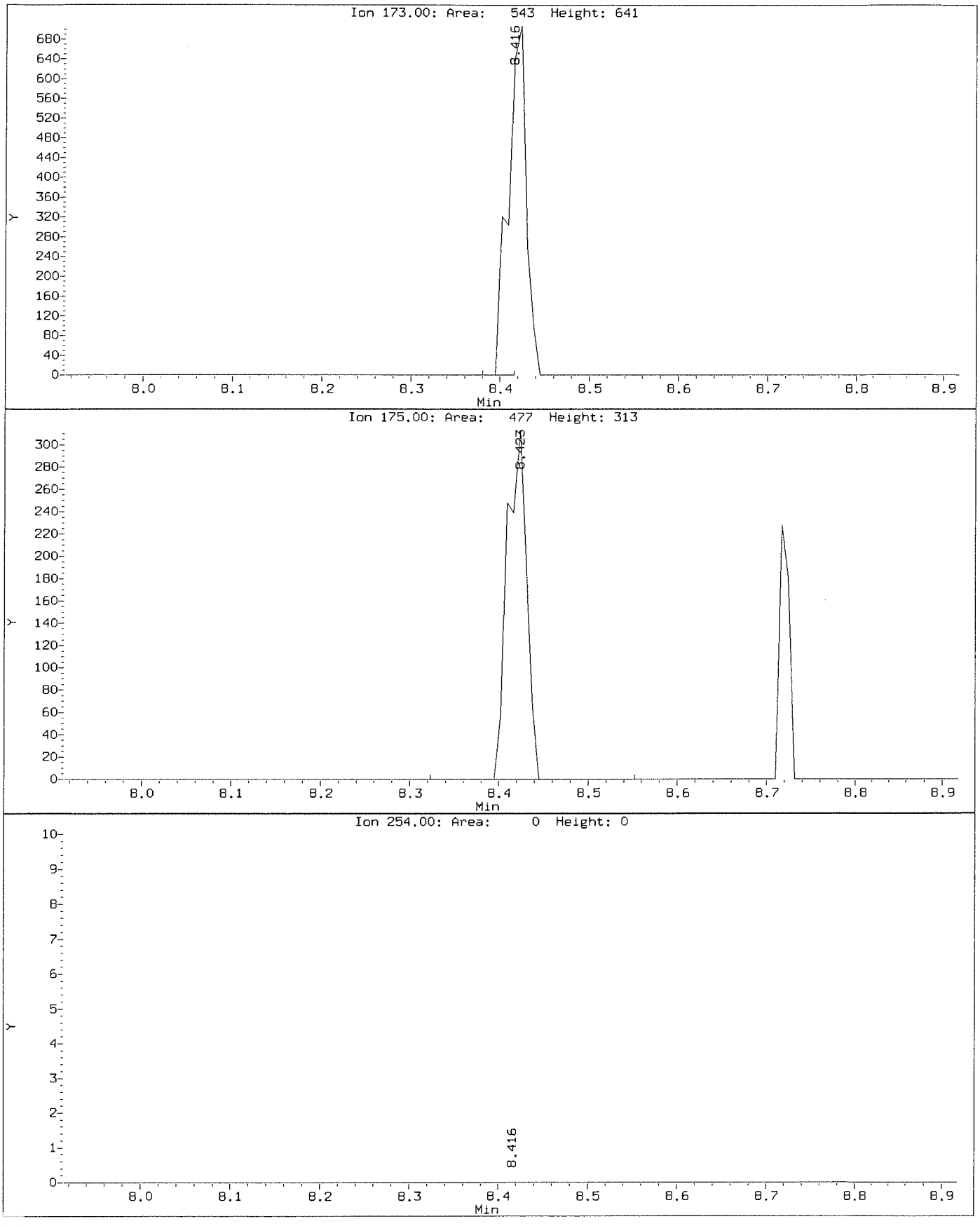
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Bromoform
CAS Number: 75-25-2



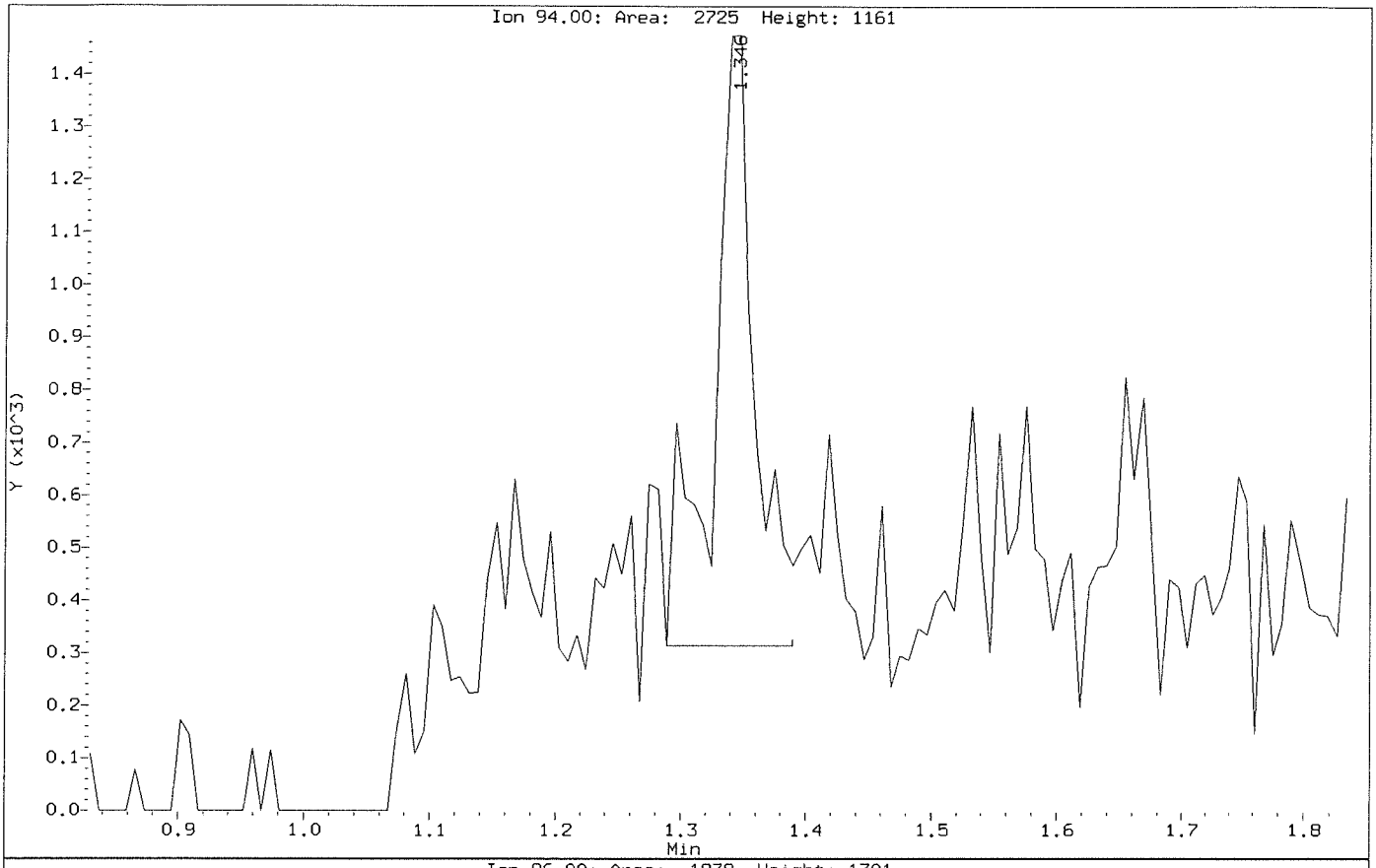
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Client Sample ID: VSTD000.5

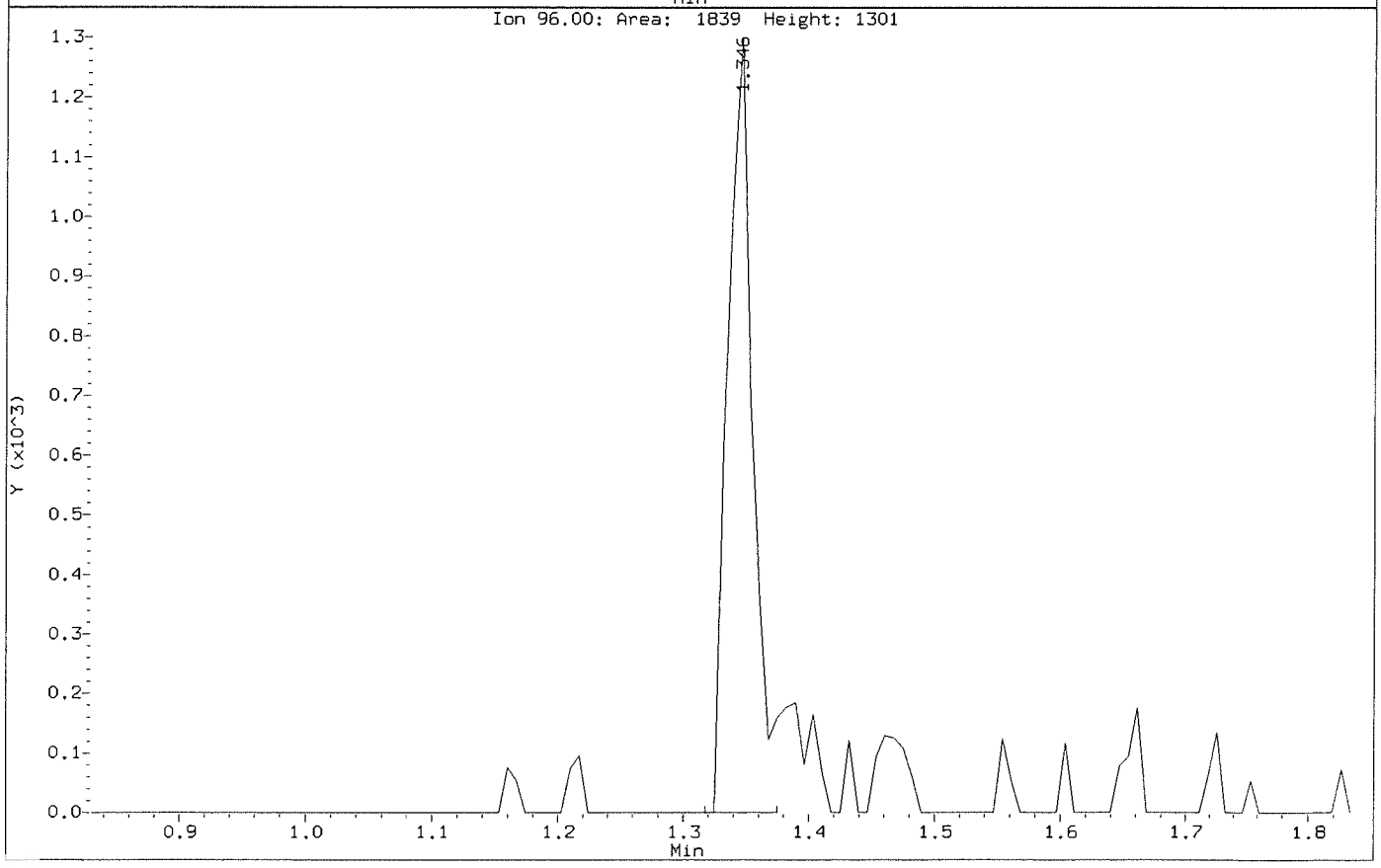
Compound: Bromoform
CAS Number: 75-25-2



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110303.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

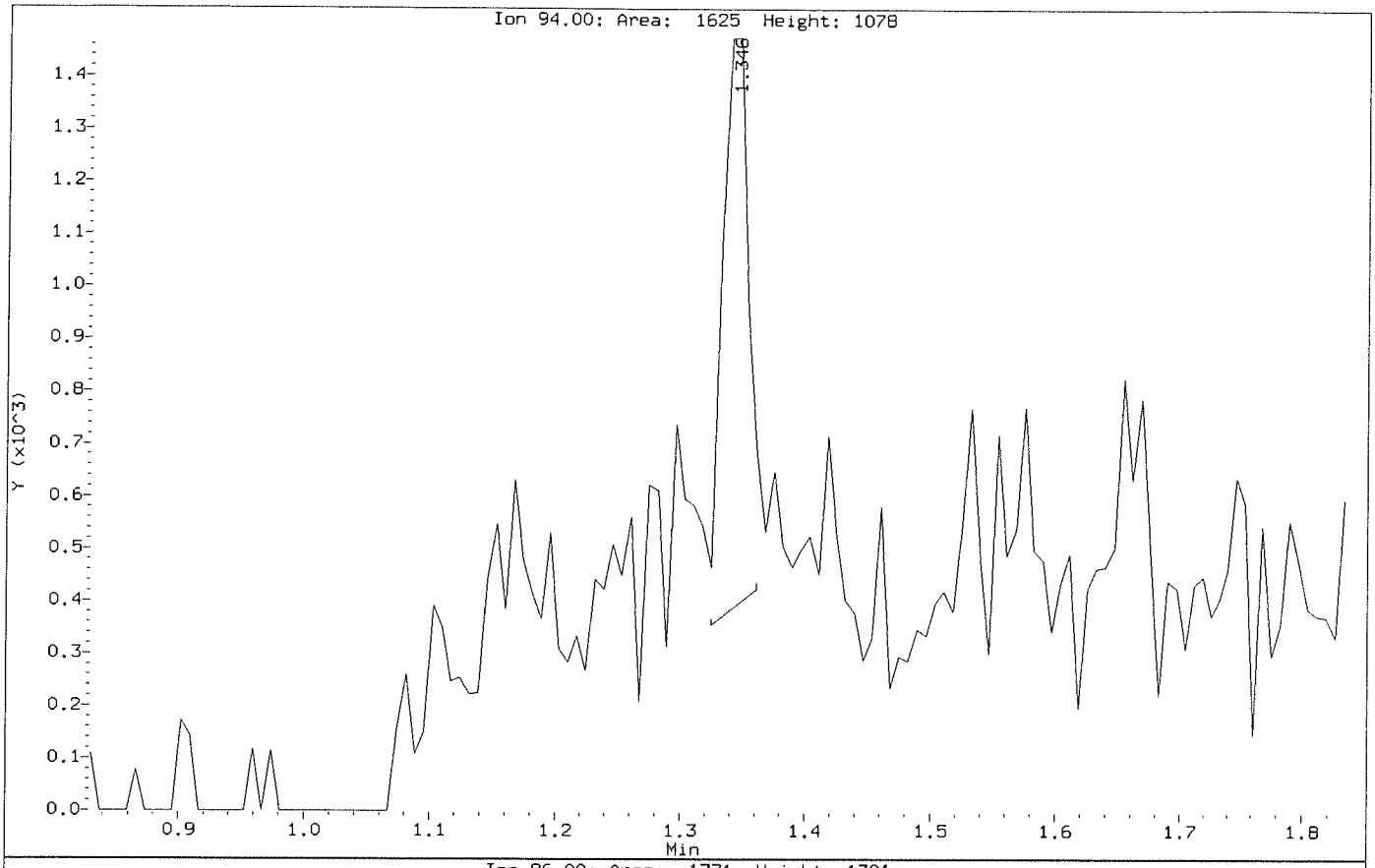
Compound: Bromomethane
CAS Number: 74-83-9

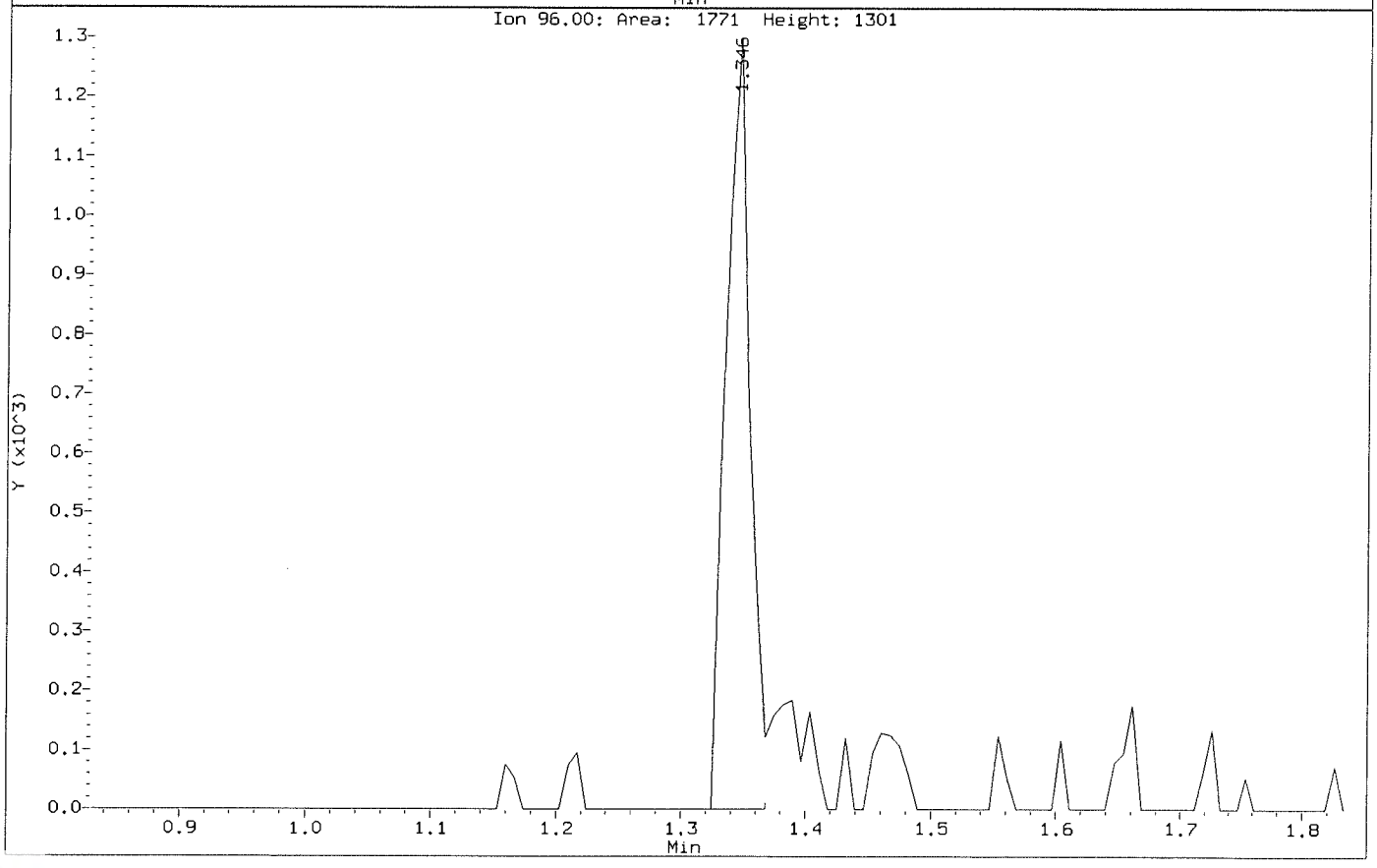




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Client Sample ID: VSTD000.5

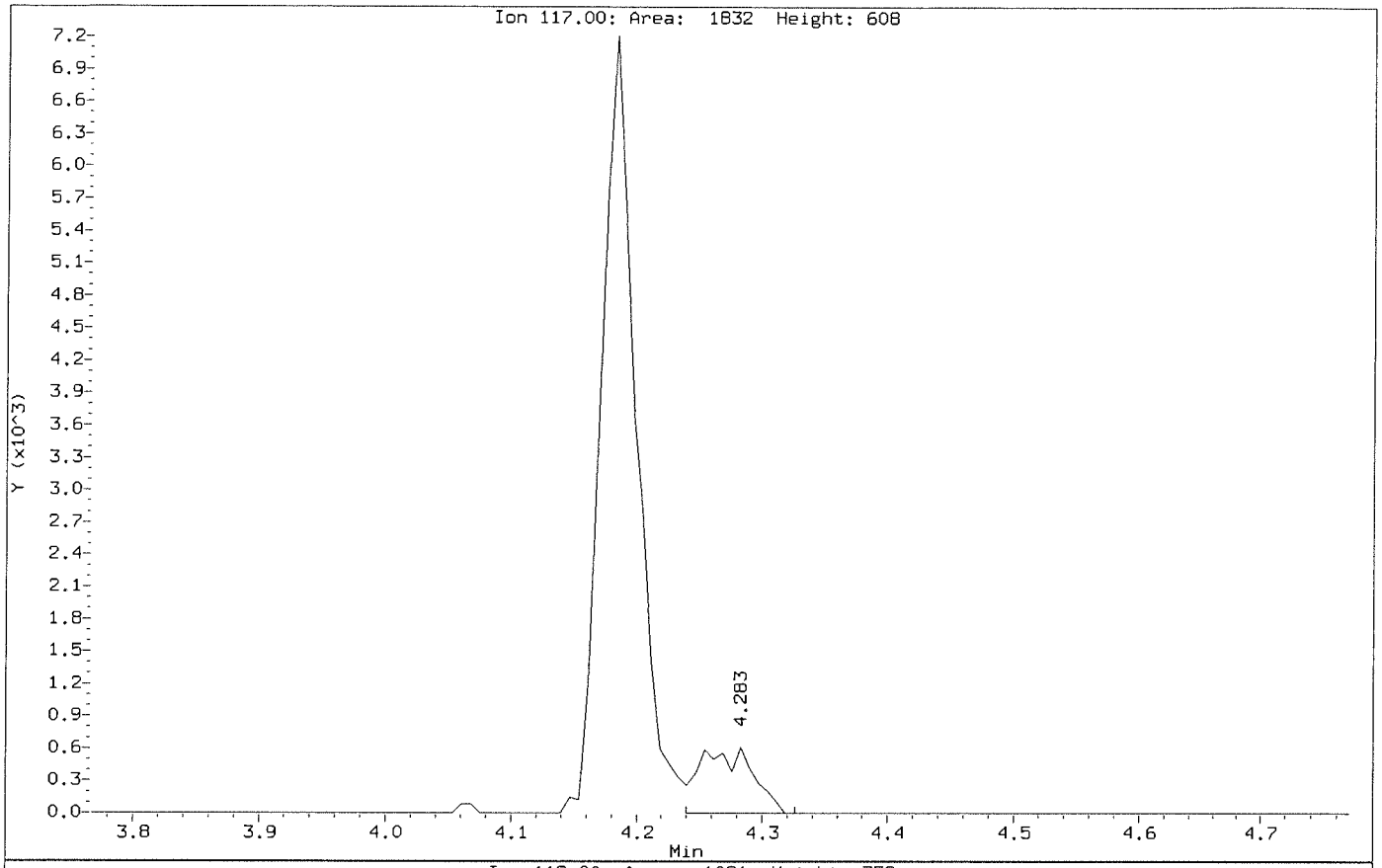
Compound: Bromomethane
CAS Number: 74-83-9

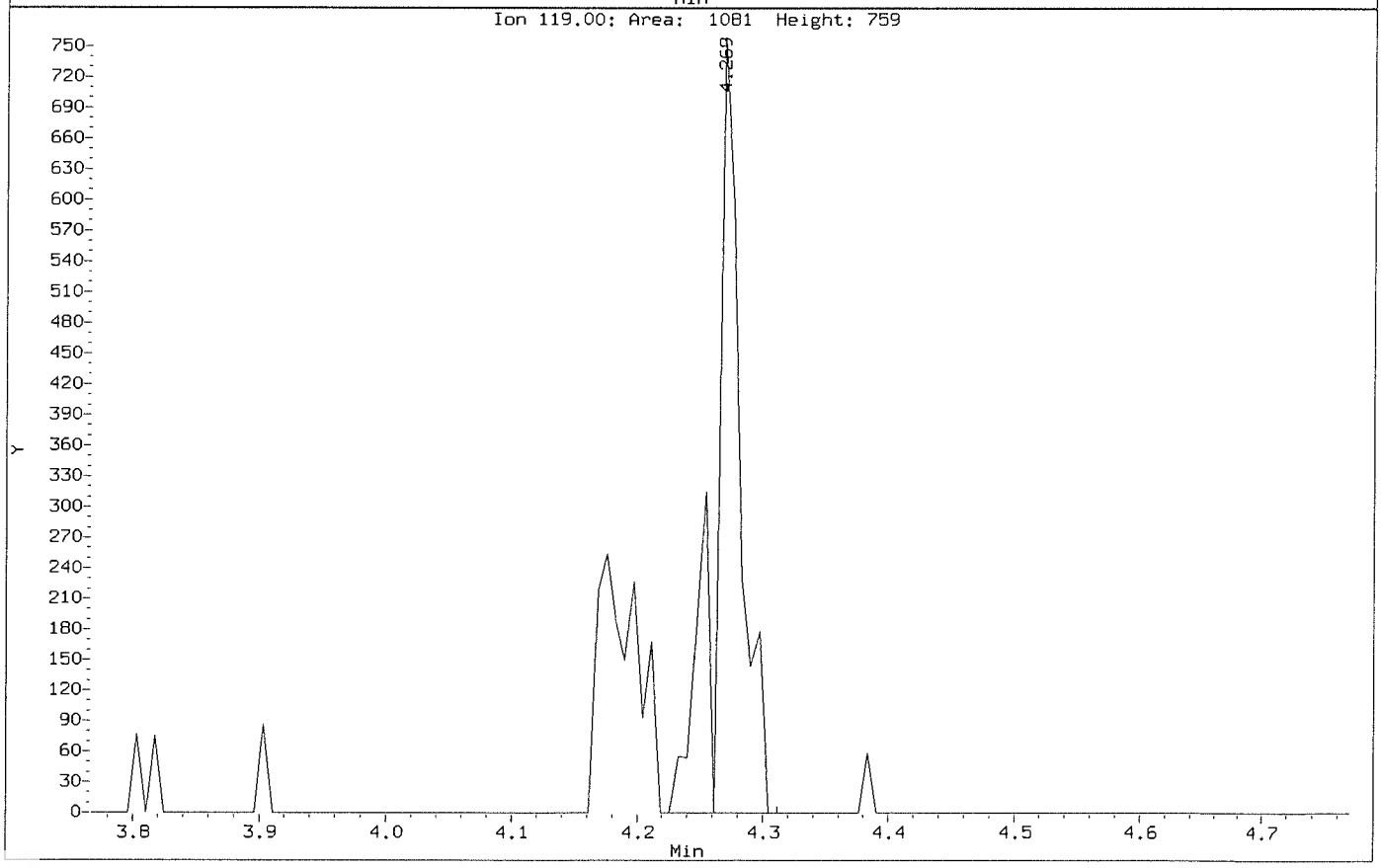




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Instrument: voa6.i
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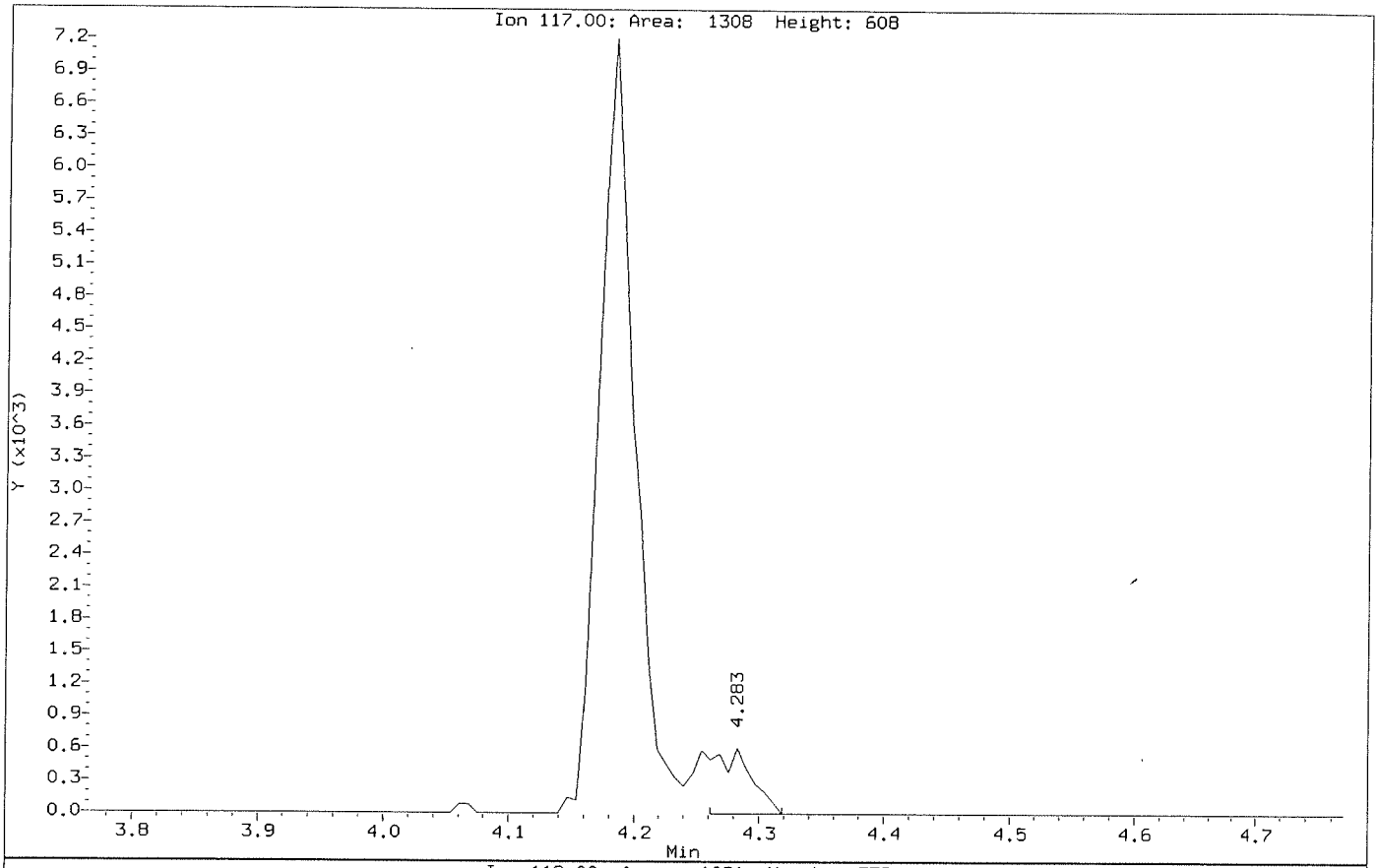
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

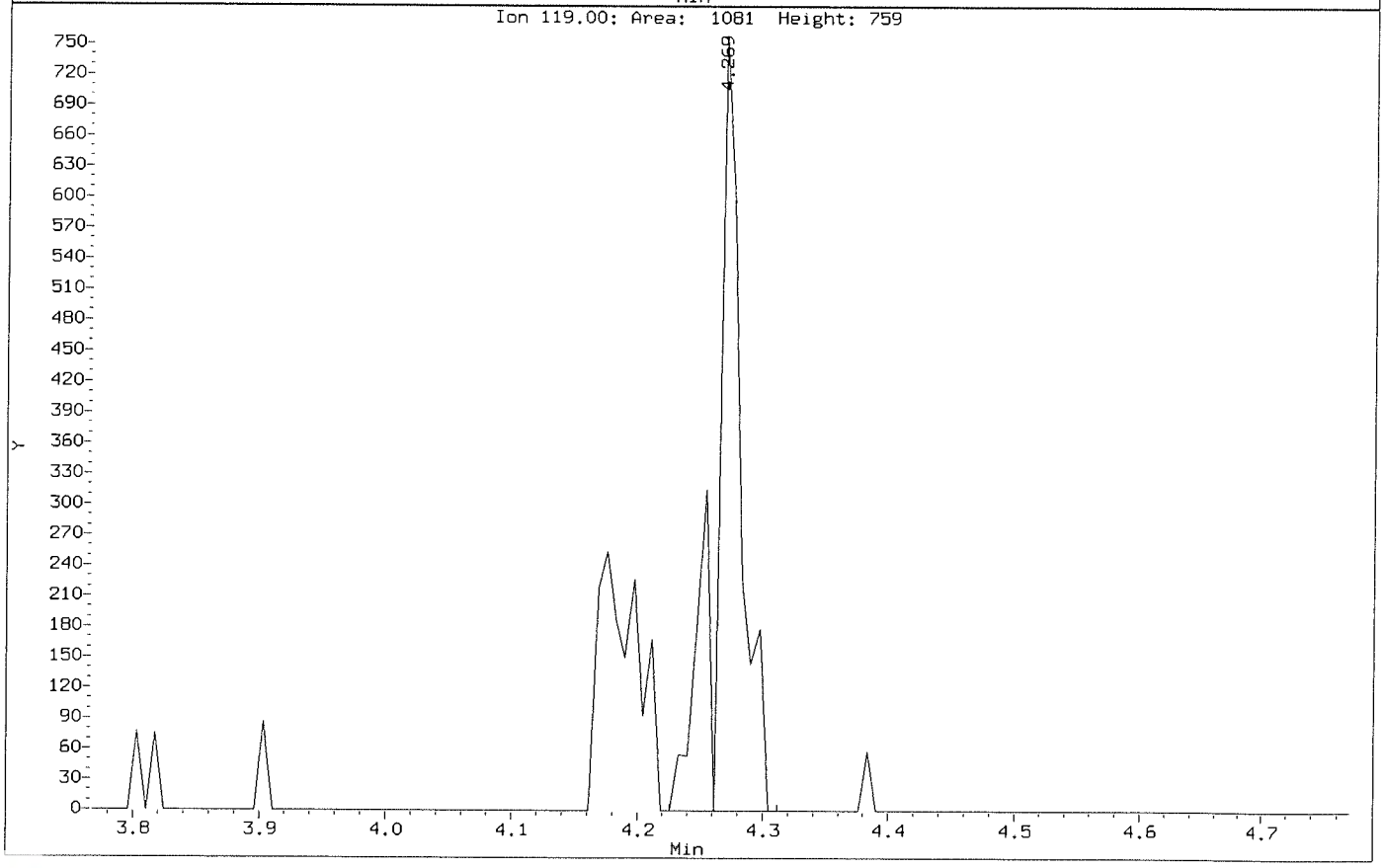




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Client Sample ID: VSTD000.5

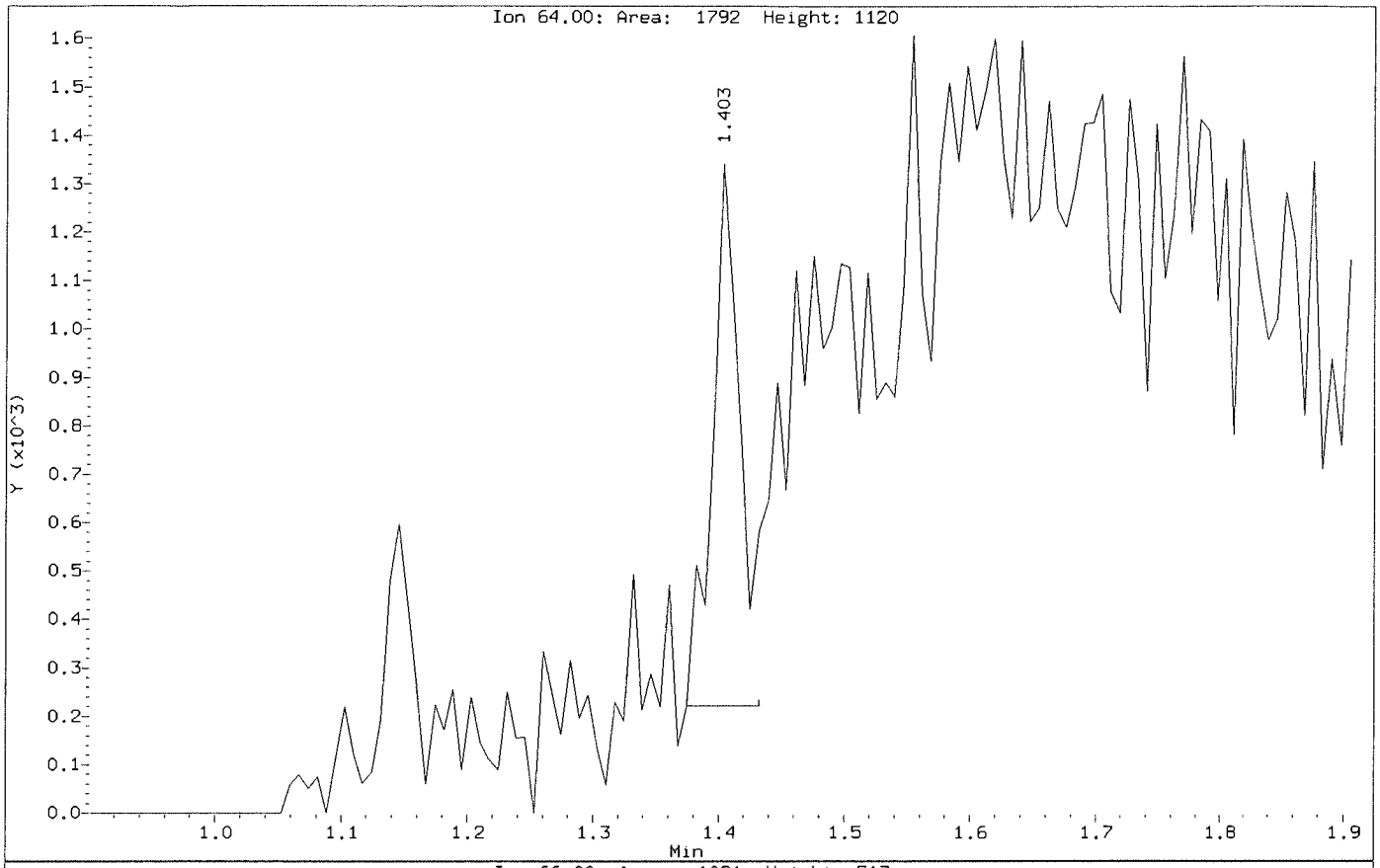
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

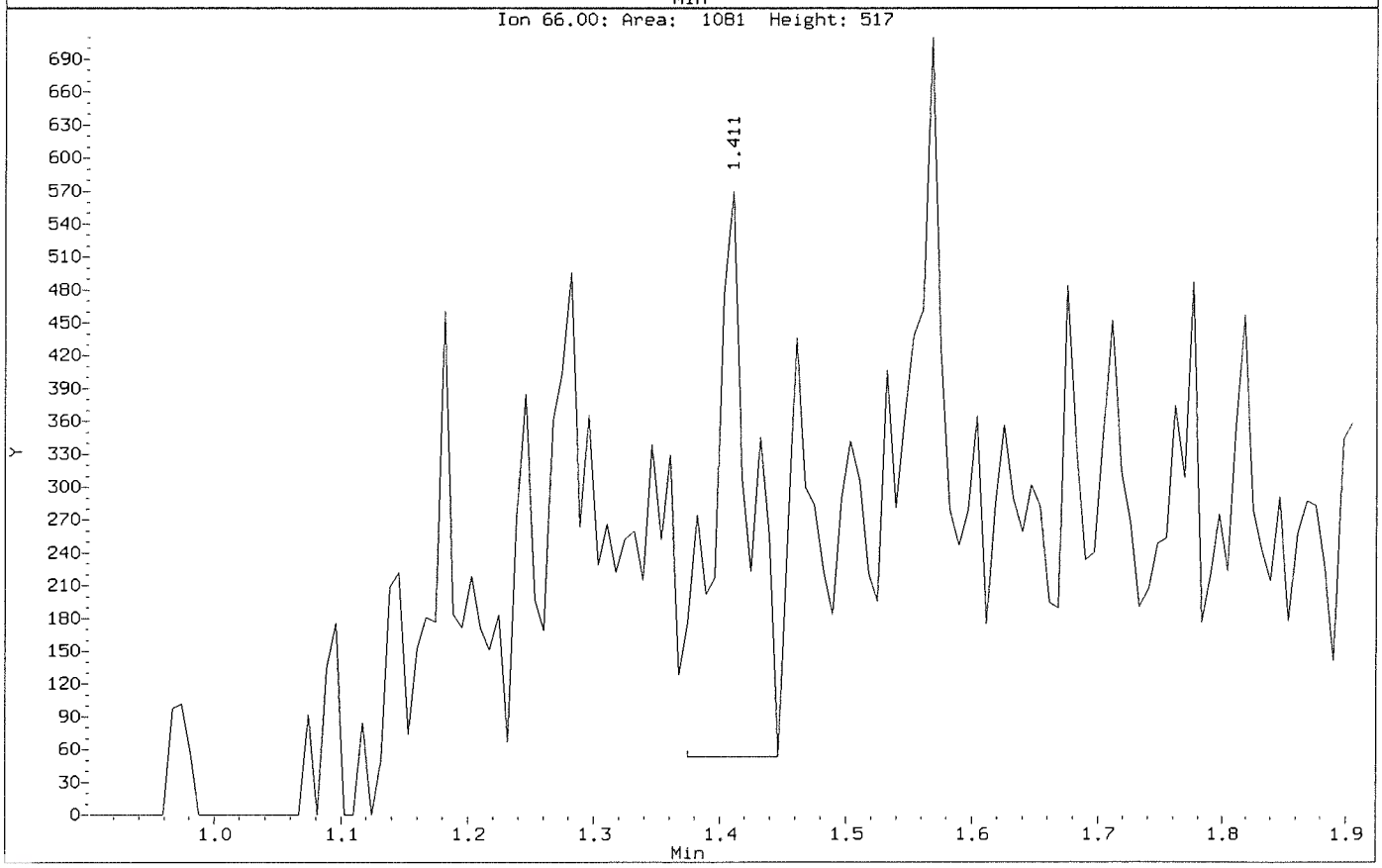




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Client Sample ID: VSTD000.5

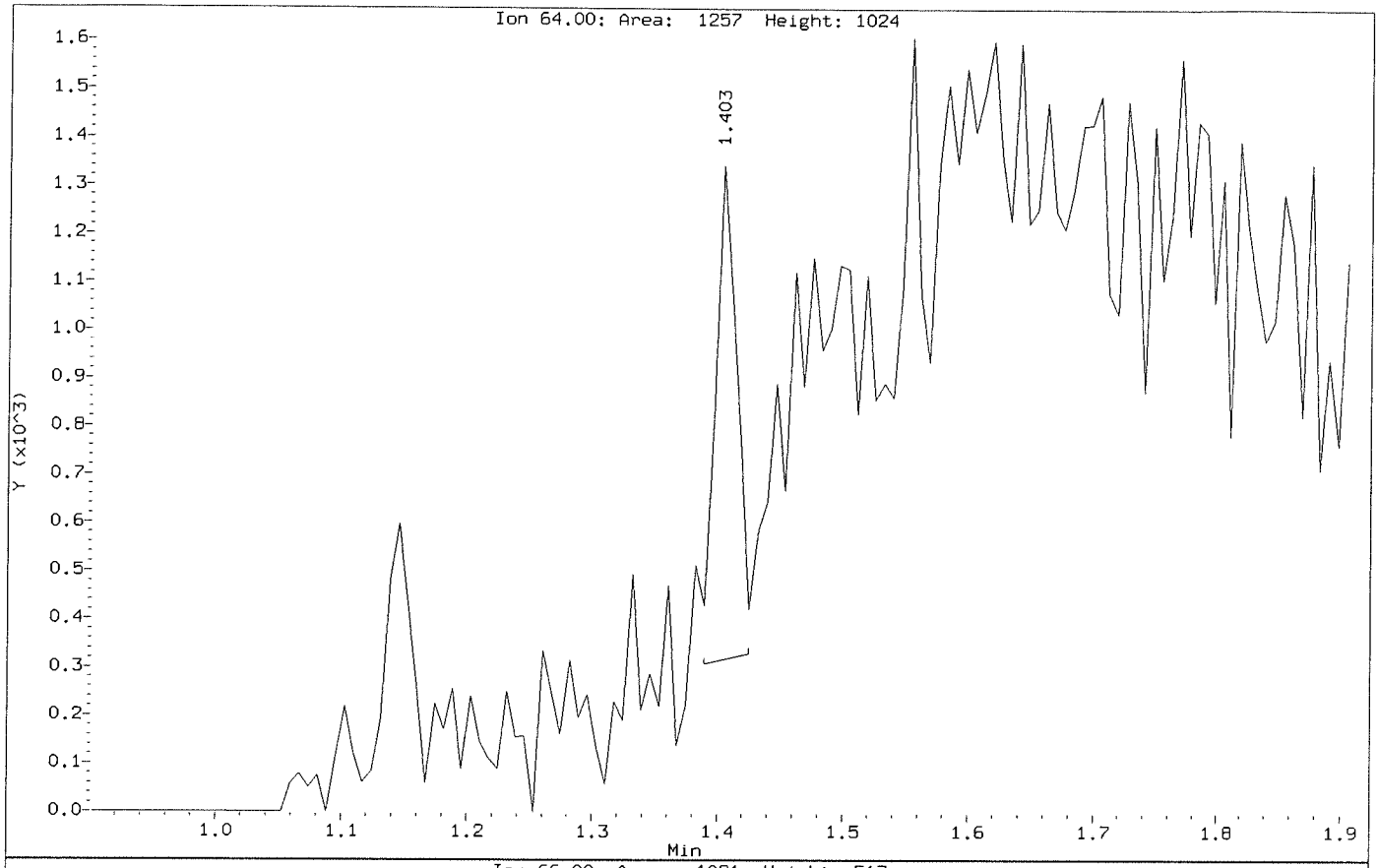
Compound: Chloroethane
CAS Number: 75-00-3

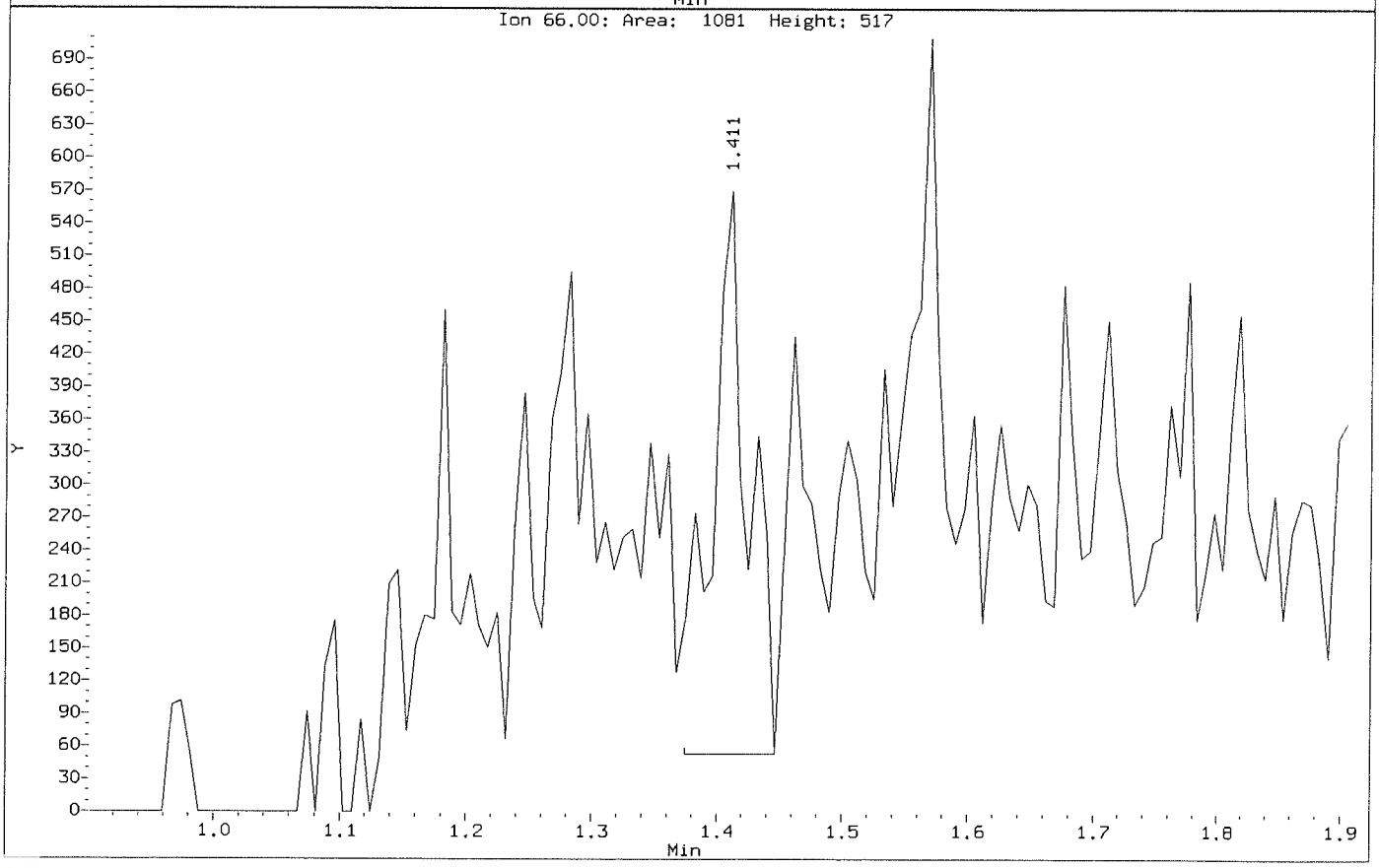




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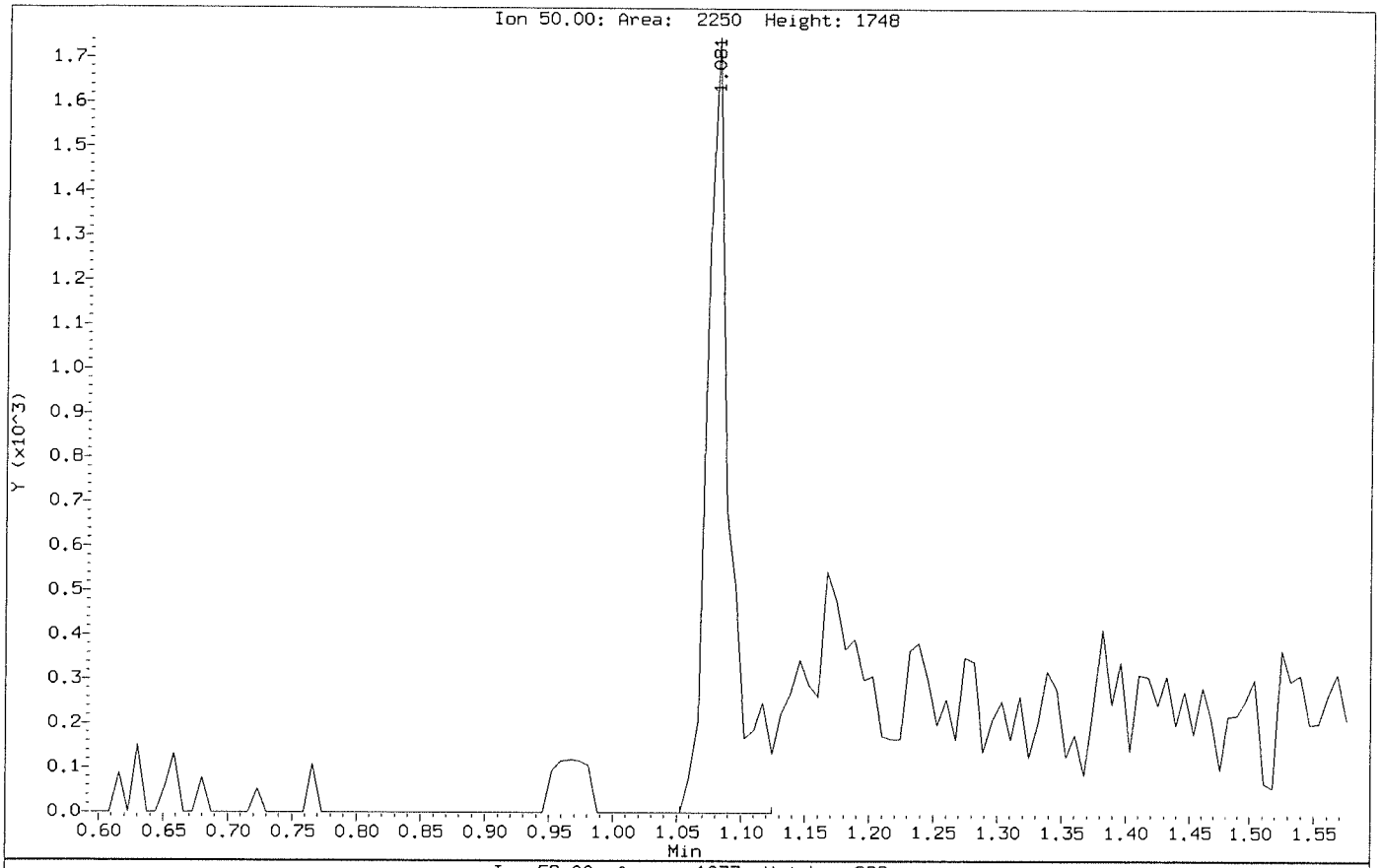
Compound: Chloroethane
CAS Number: 75-00-3

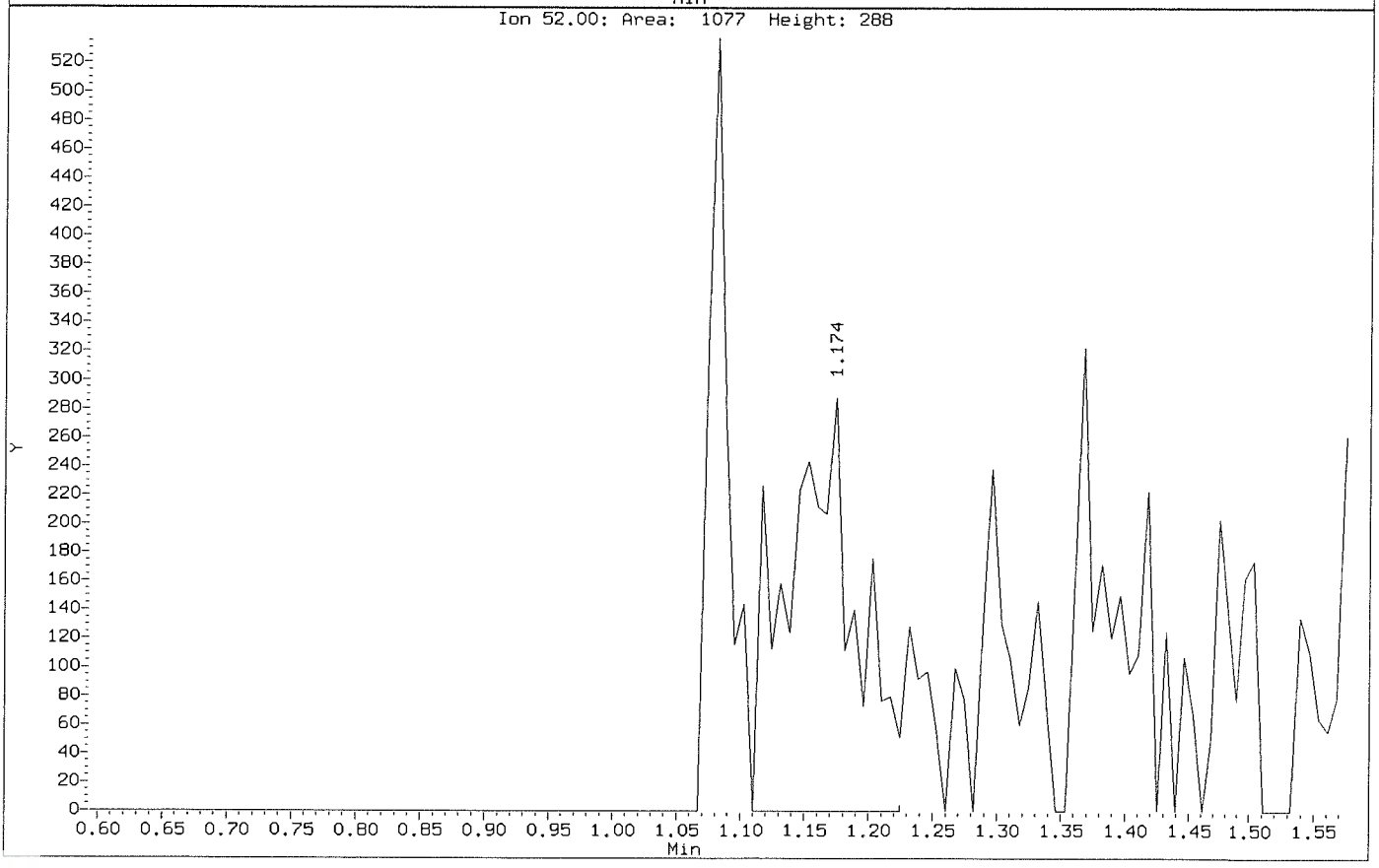




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Instrument: voa6.i
Client Sample ID: VSTD000.5

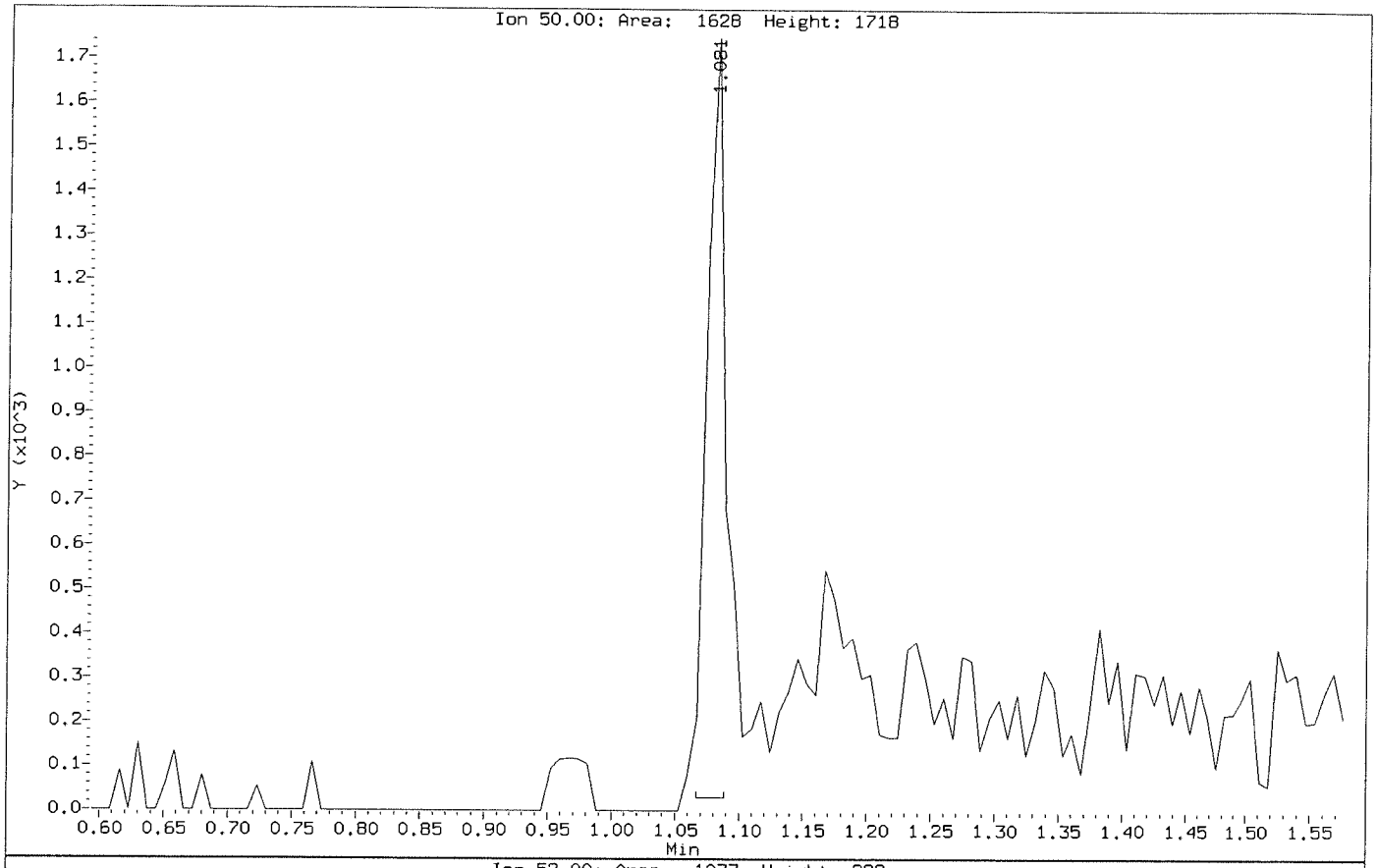
Compound: Chloromethane
CAS Number: 74-87-3

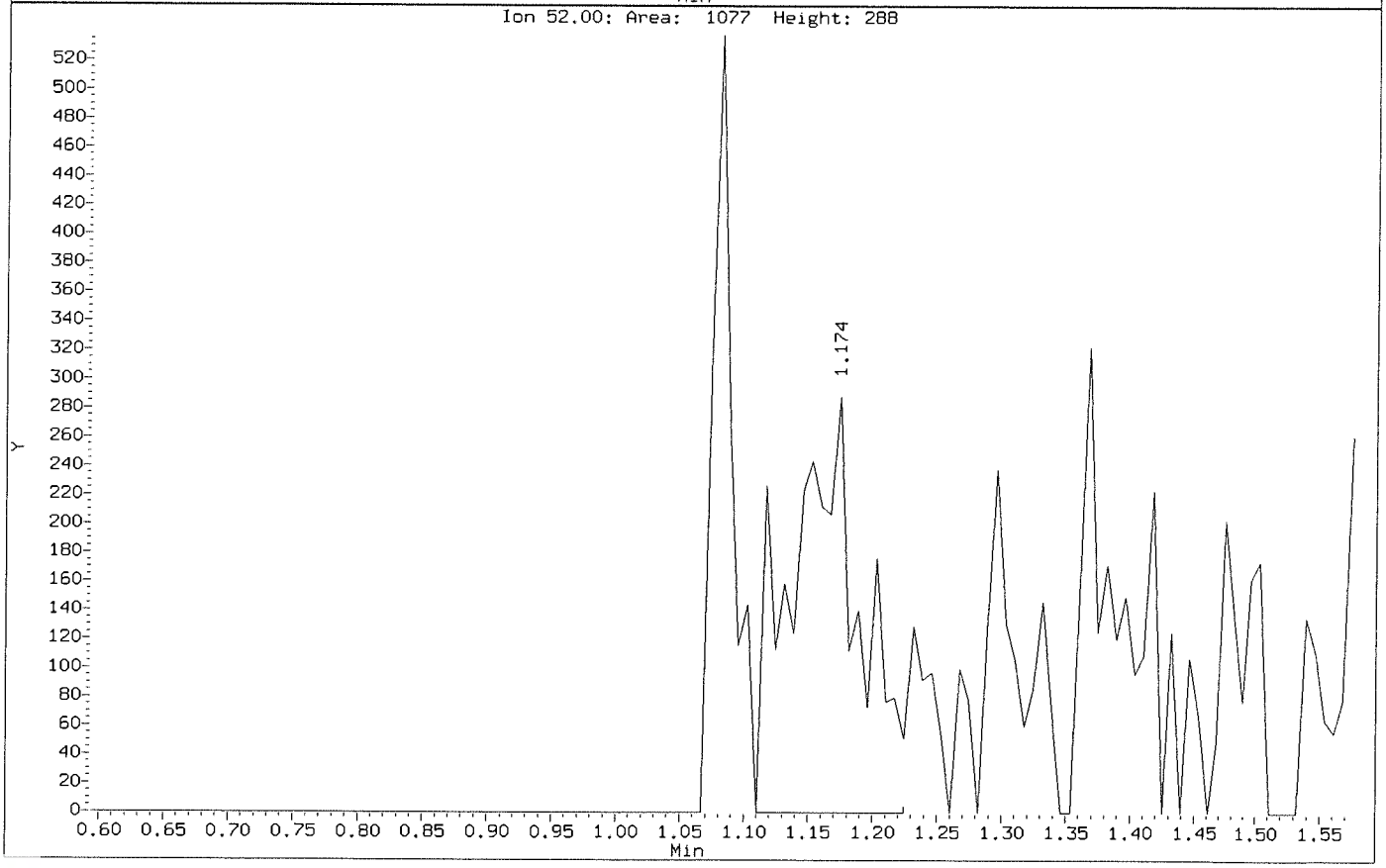




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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
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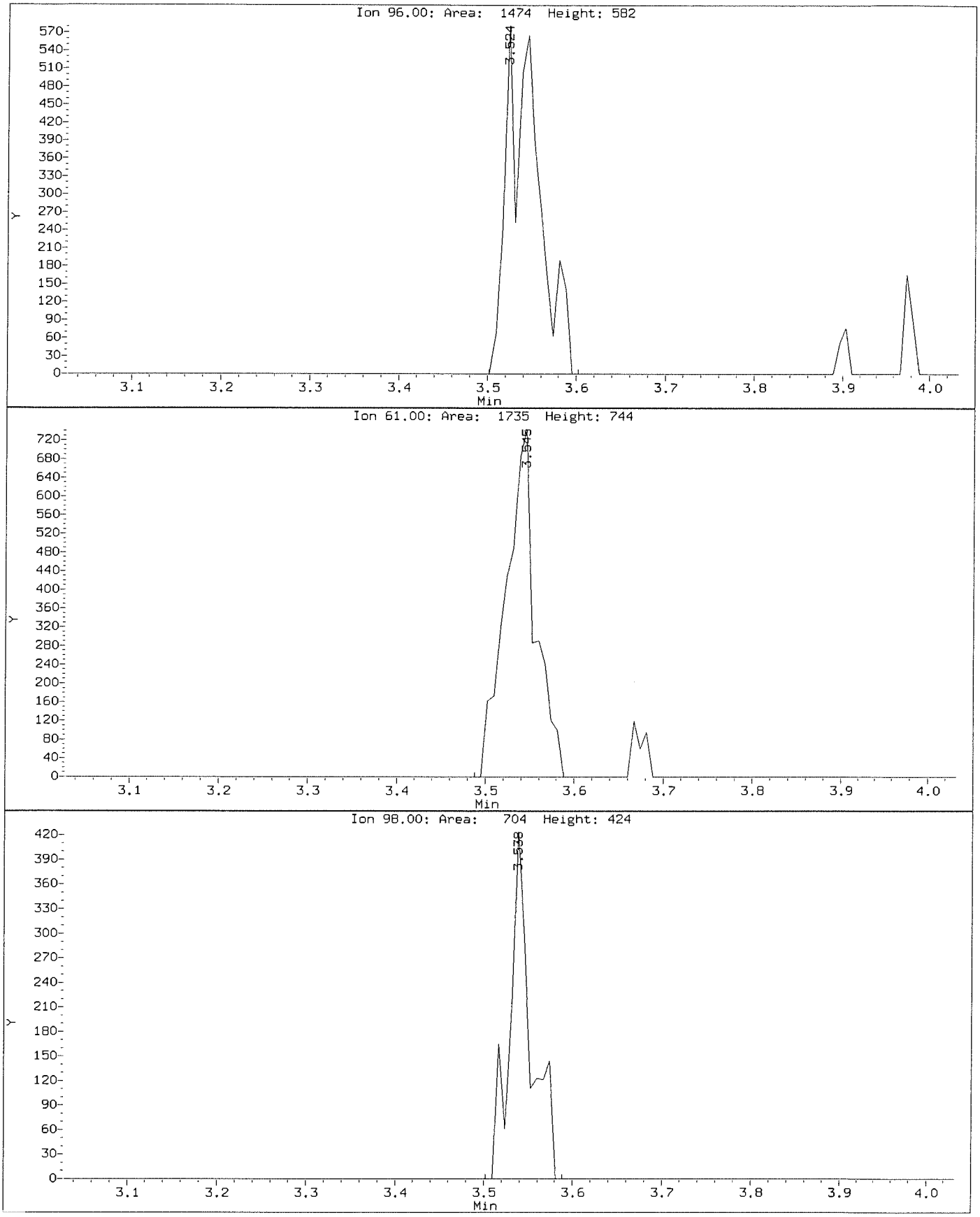
Compound: Chloromethane
CAS Number: 74-87-3





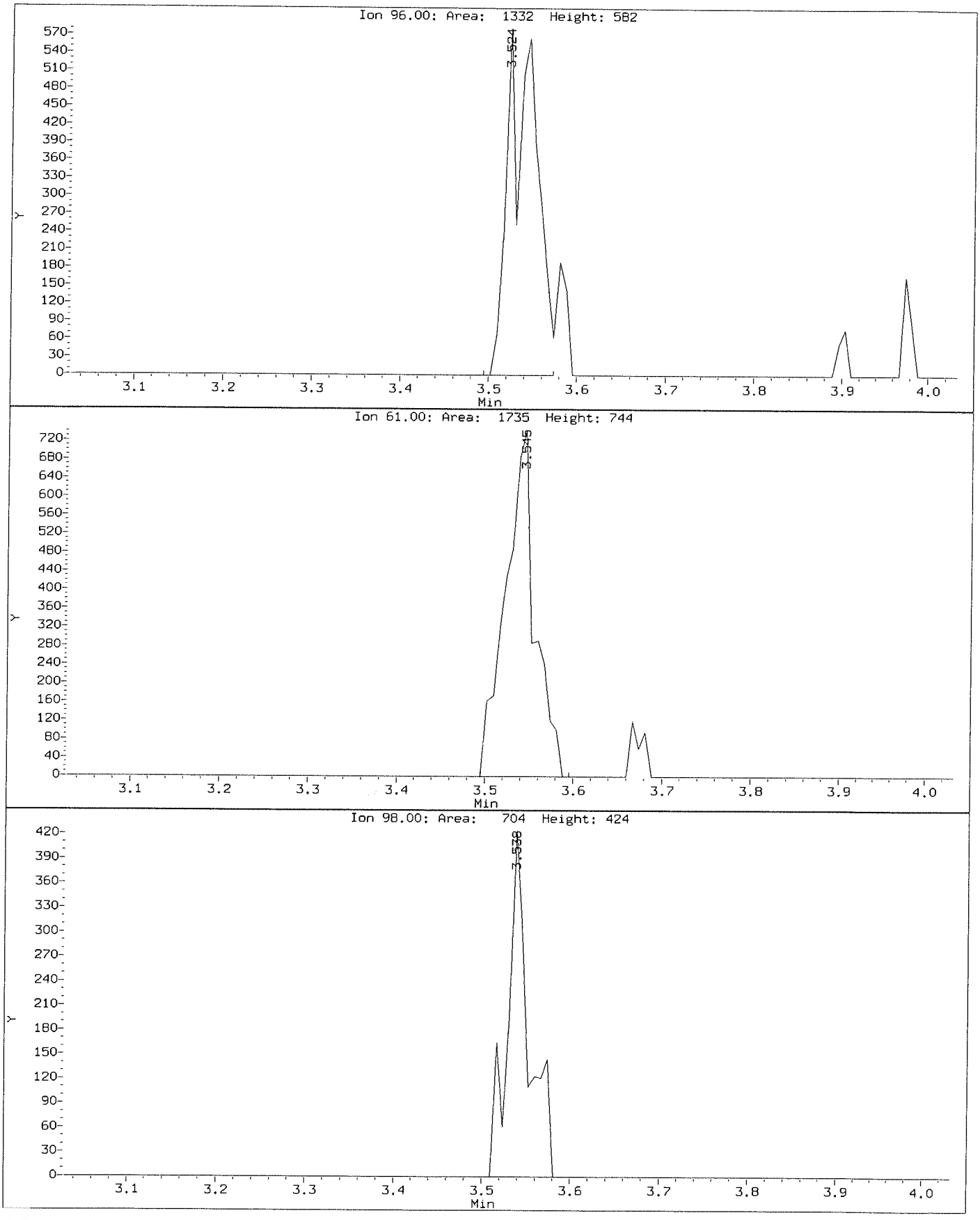
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



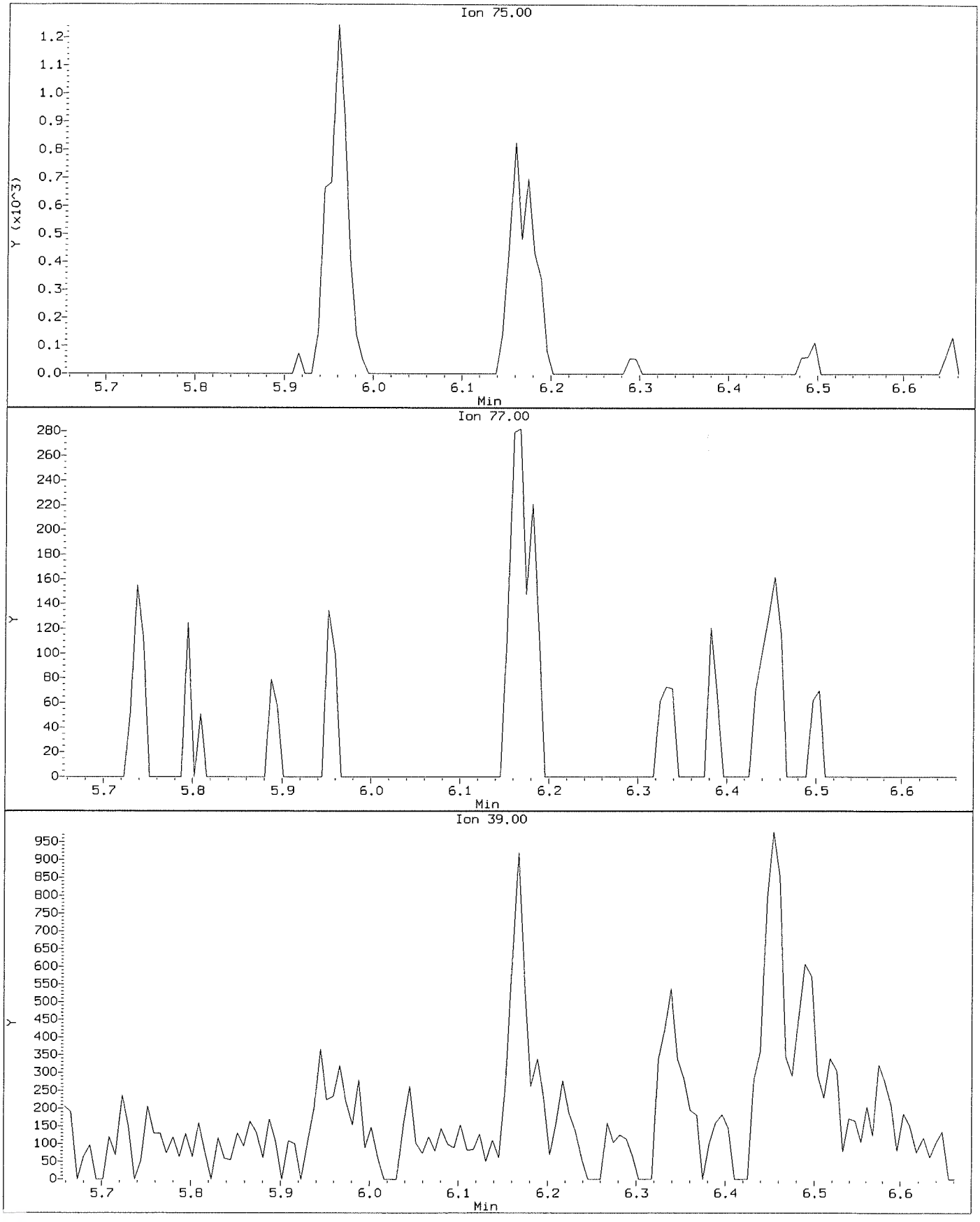
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2



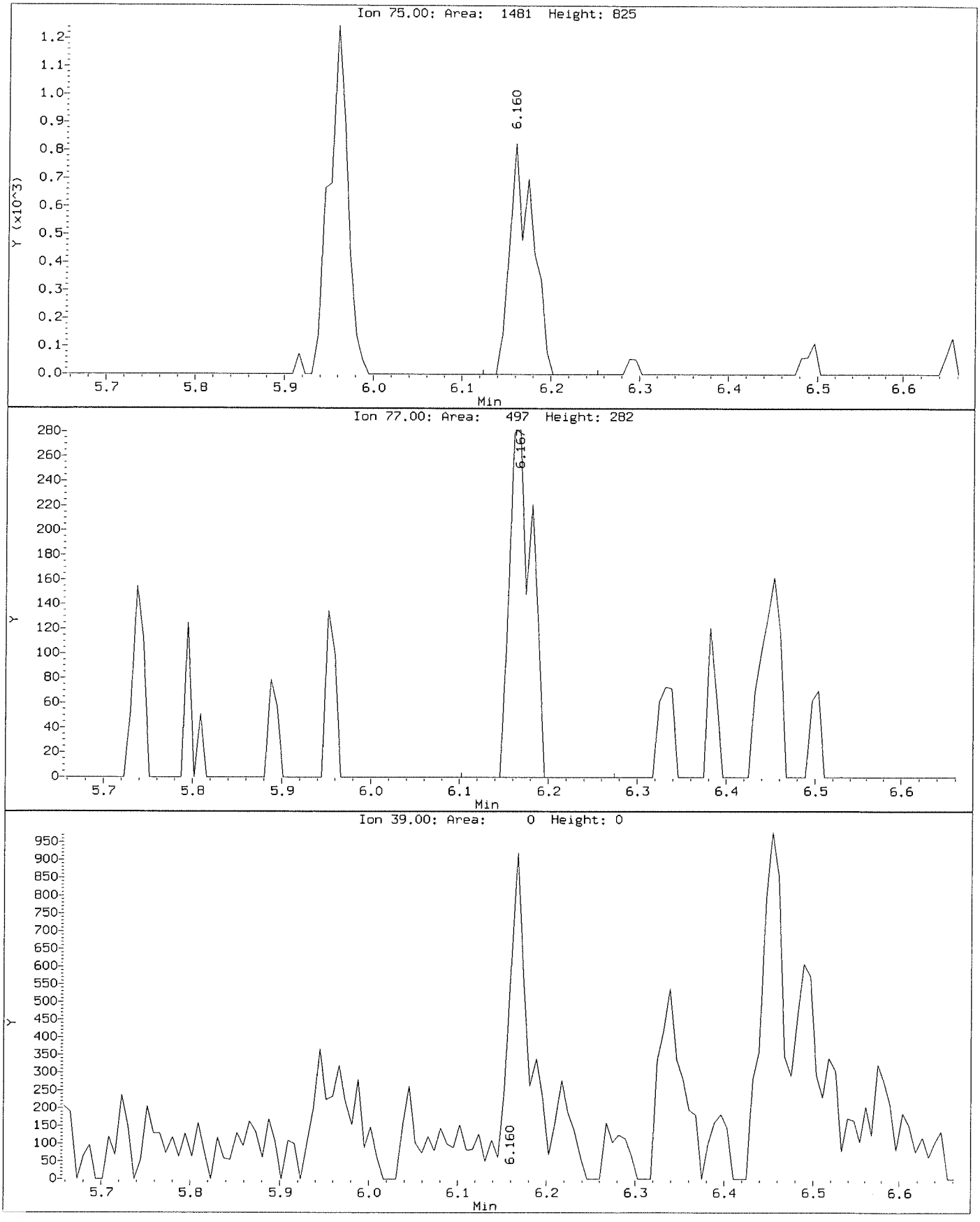
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,3-Dichloropropene
CAS Number: 10061-01-5



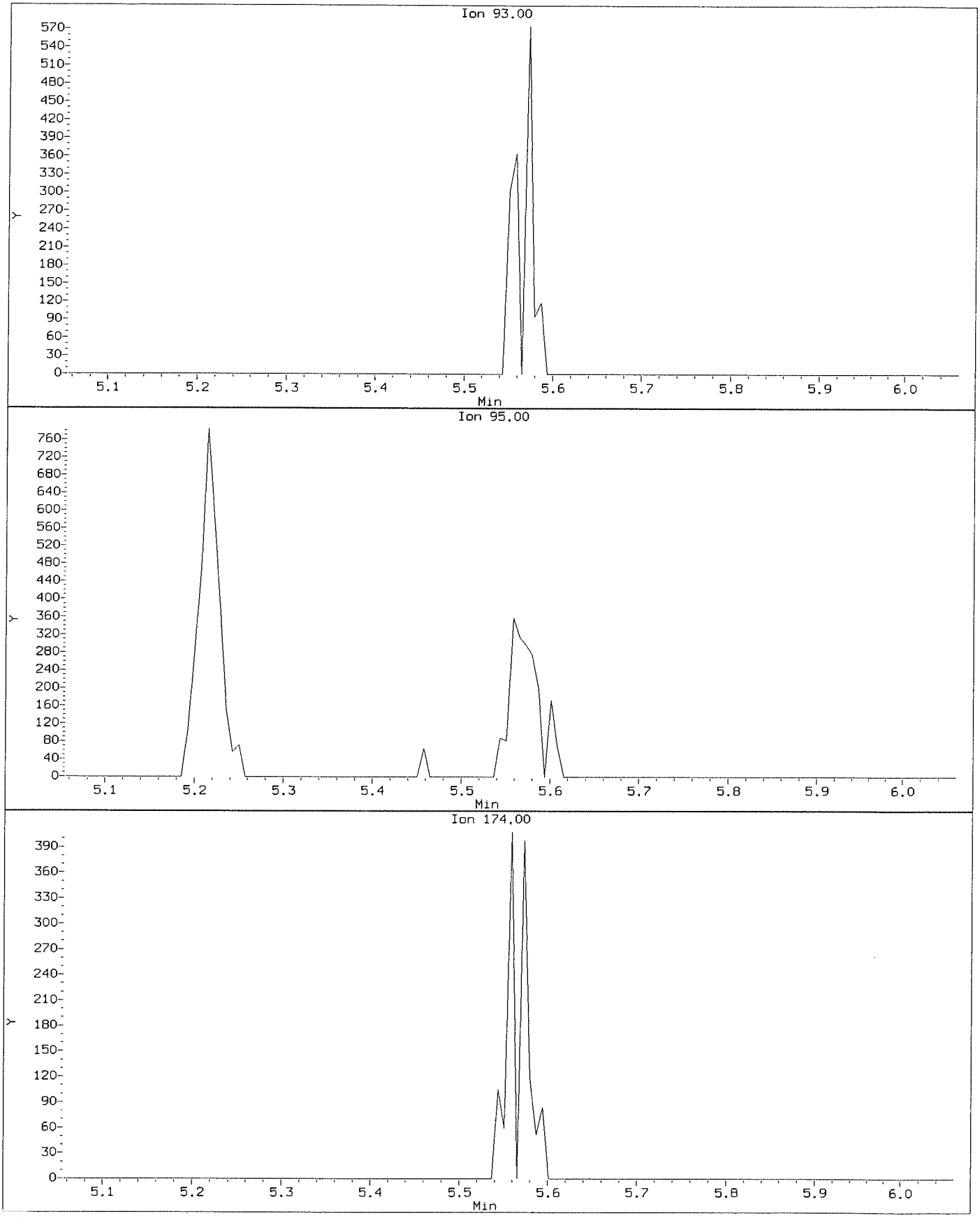
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: cis-1,3-Dichloropropene
CAS Number: 10061-01-5



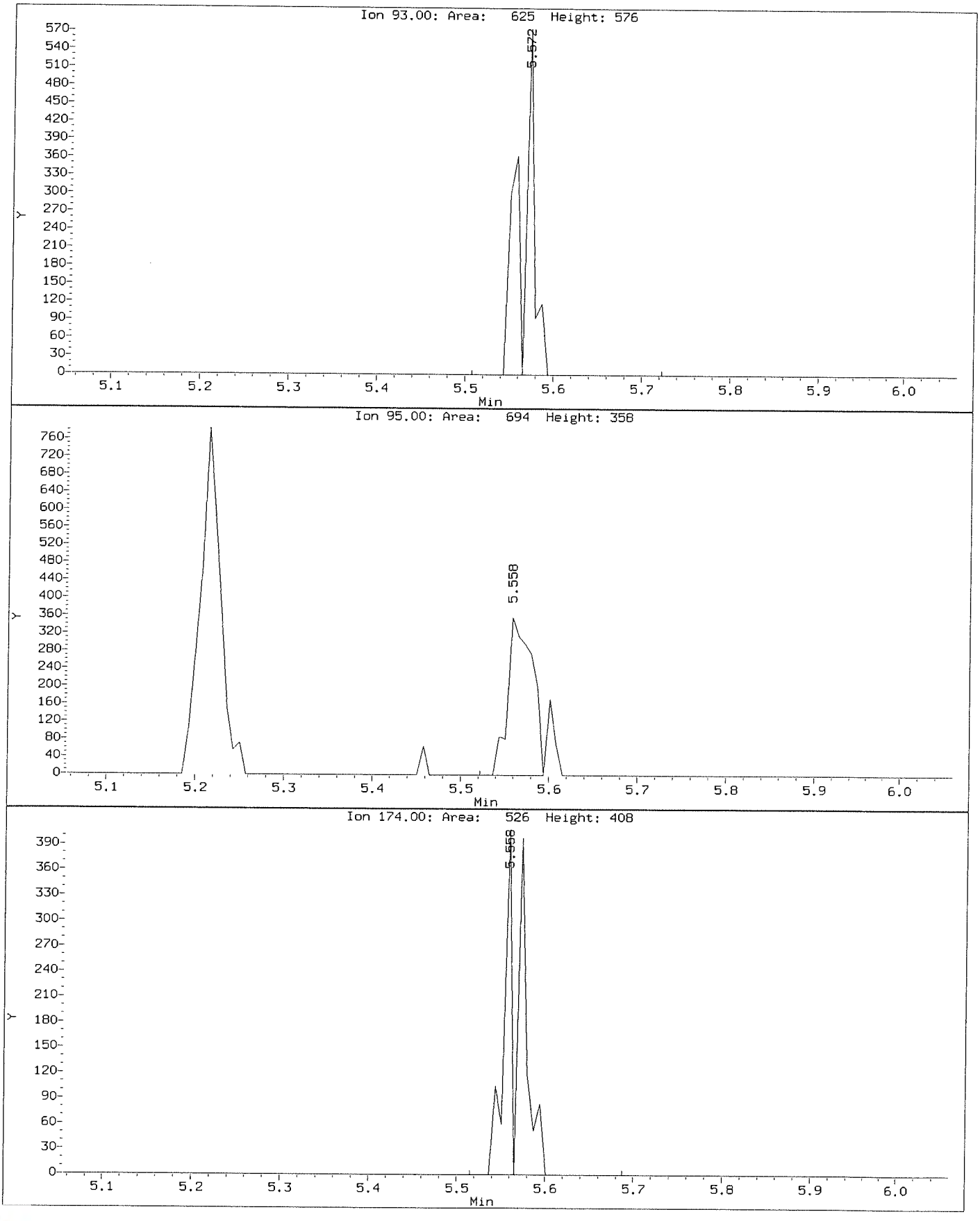
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Dibromomethane
CAS Number: 74-95-3



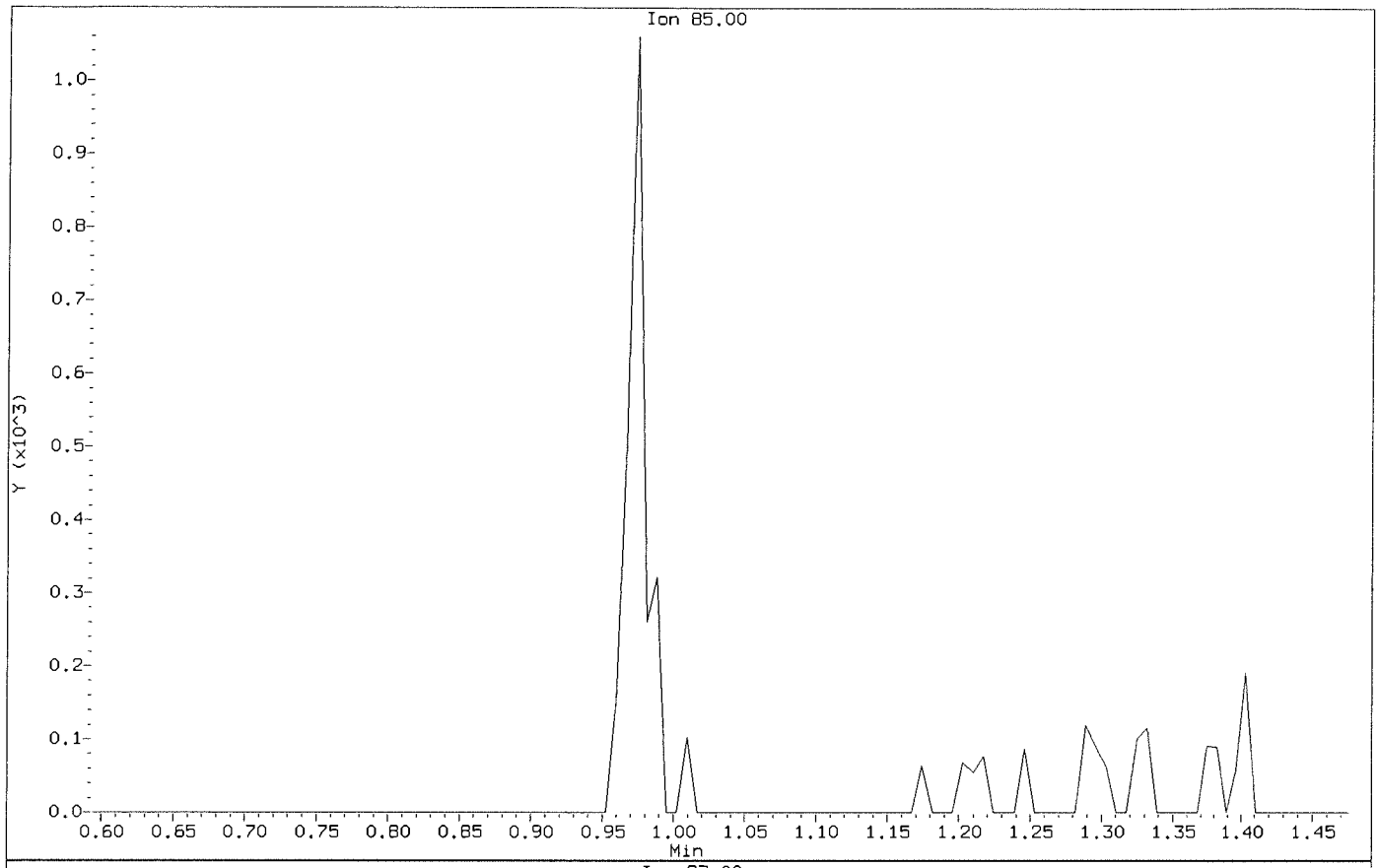
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Client Sample ID: VSTD000.5

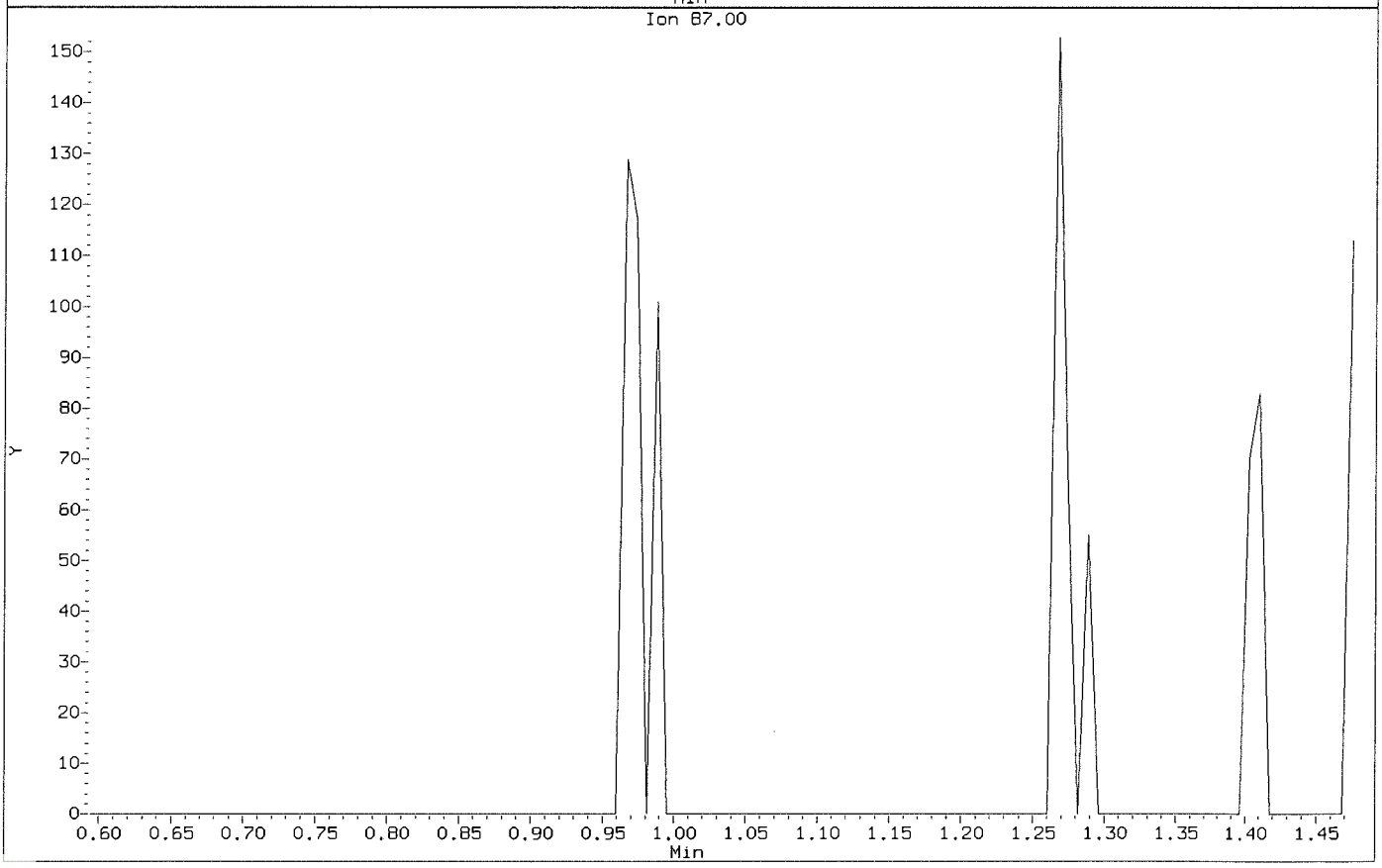
Compound: Dibromomethane
CAS Number: 74-95-3



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110303.D
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Instrument: voa6.i
Client Sample ID: VSTD000.5

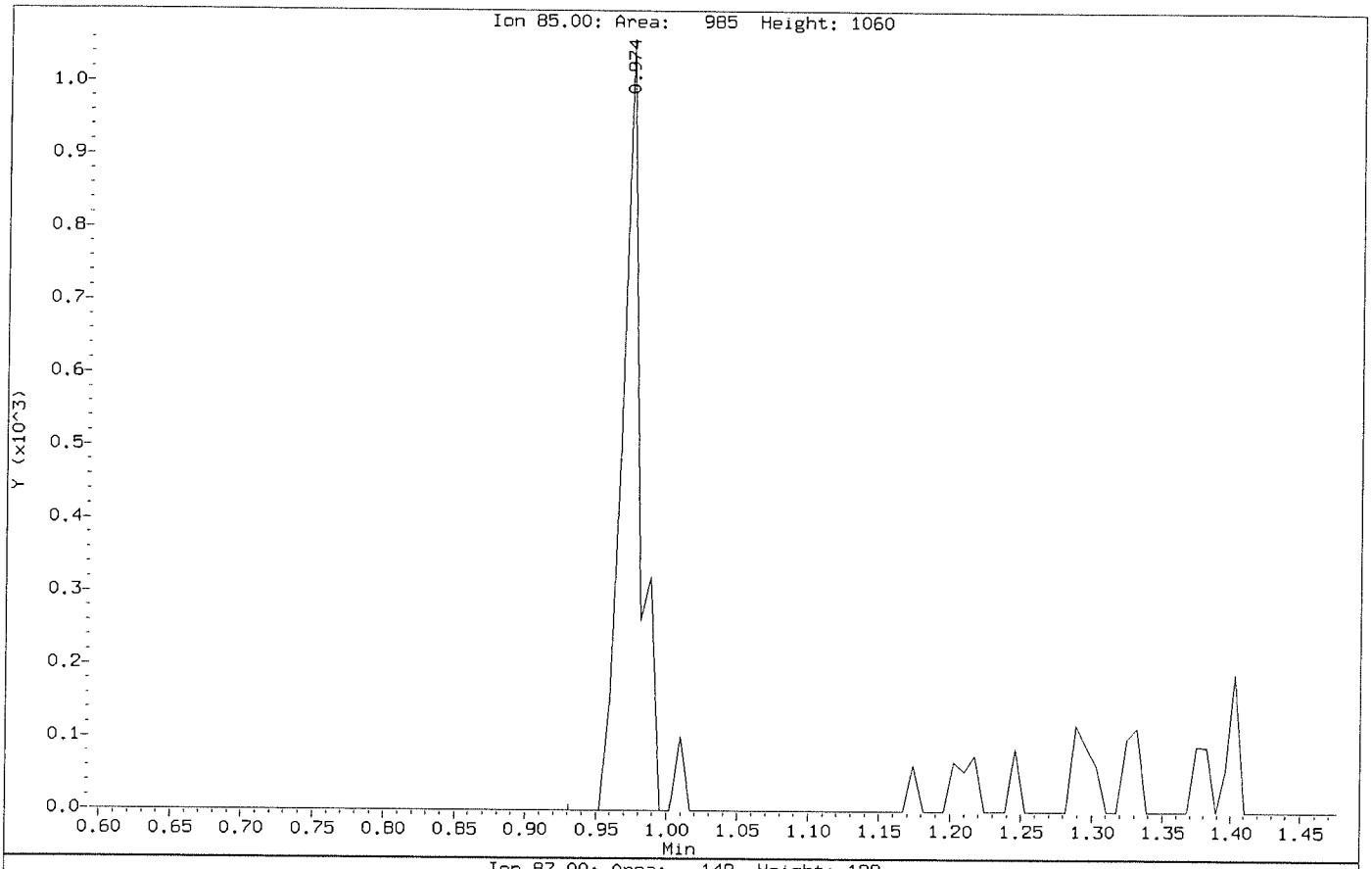
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8

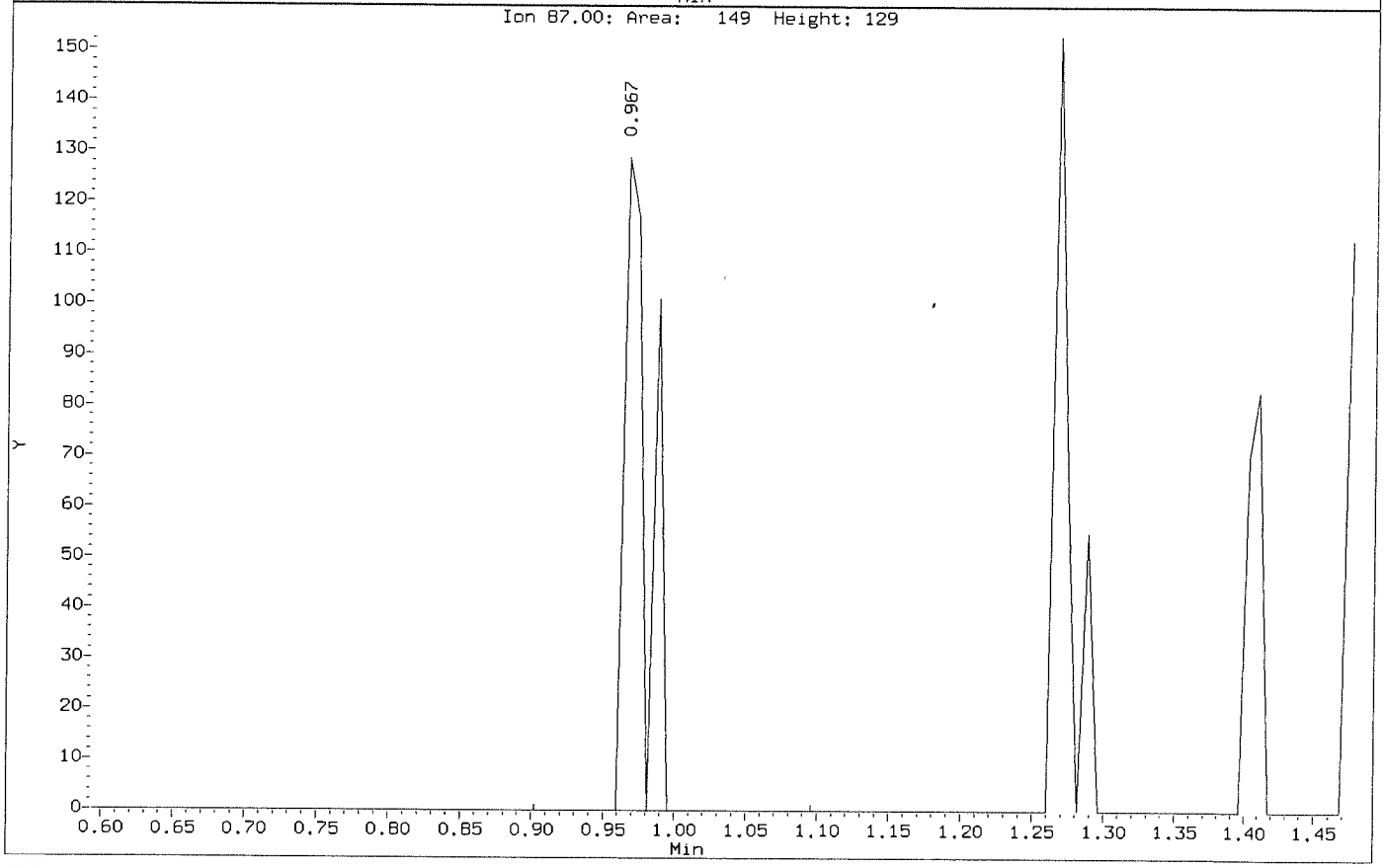




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Instrument: voa6.i
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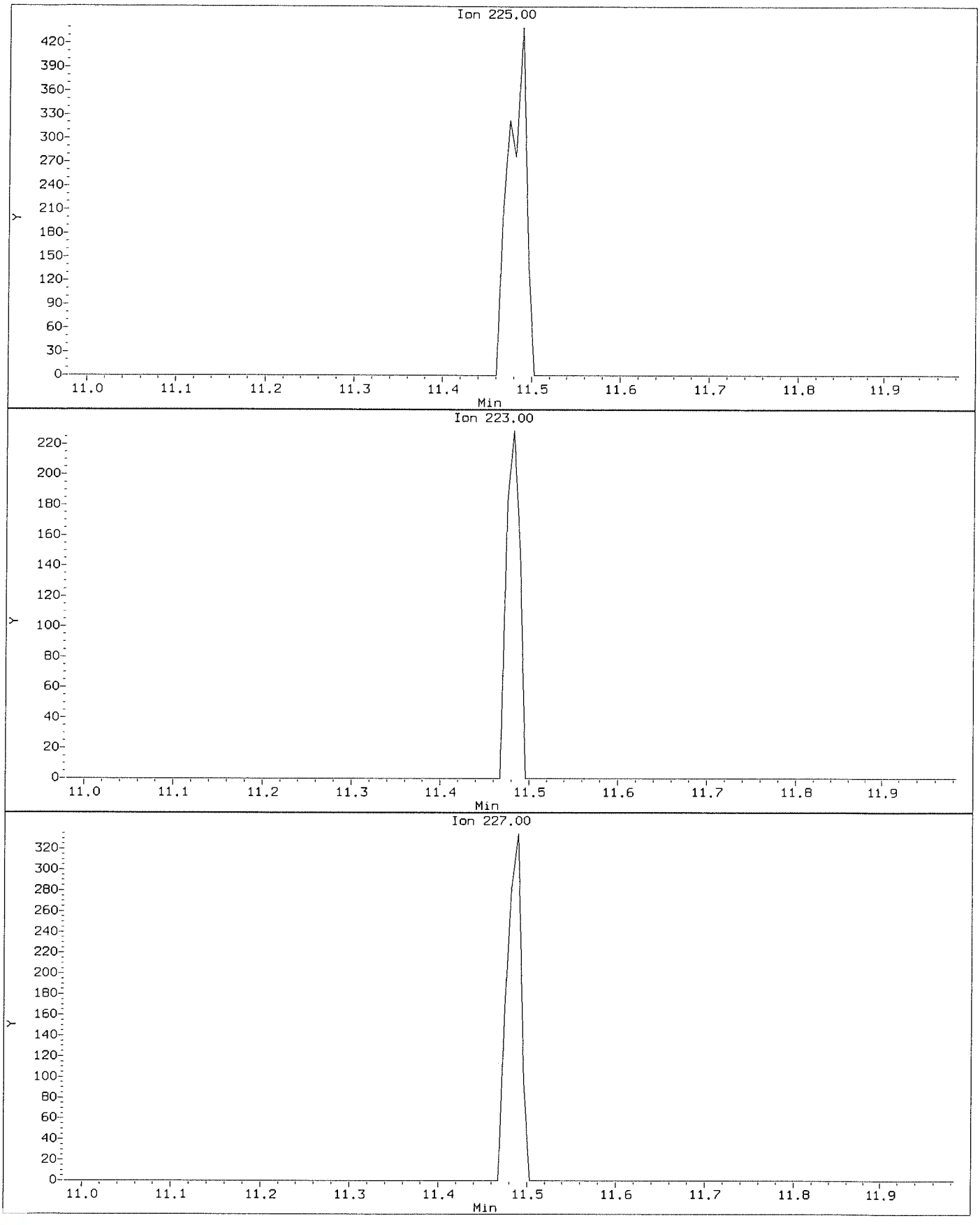
Compound: Dichlorodifluoromethane
CAS Number: 75-71-8





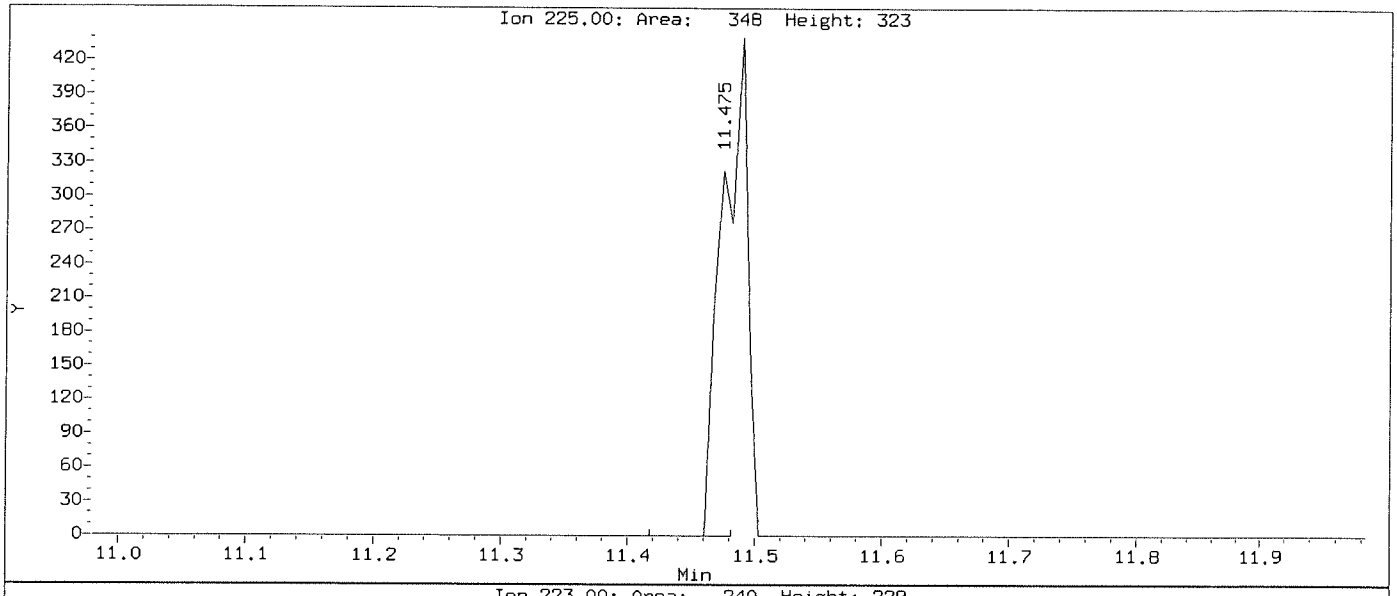
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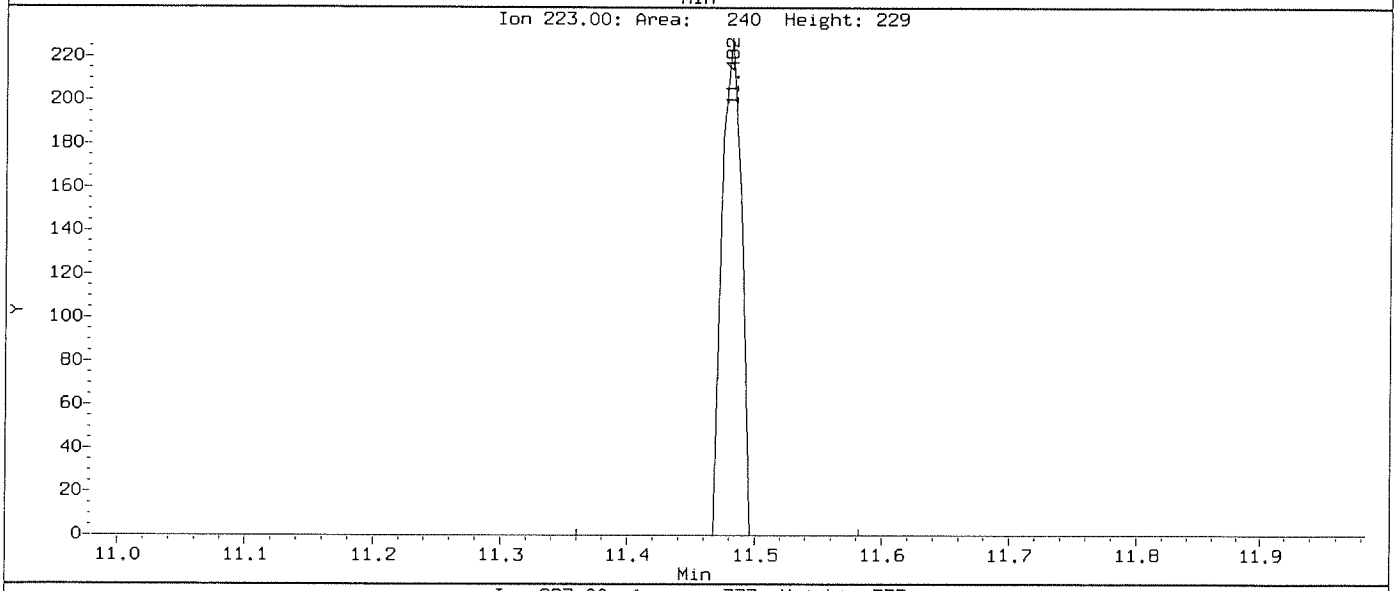
Compound: Hexachlorobutadiene
CAS Number: 87-68-3

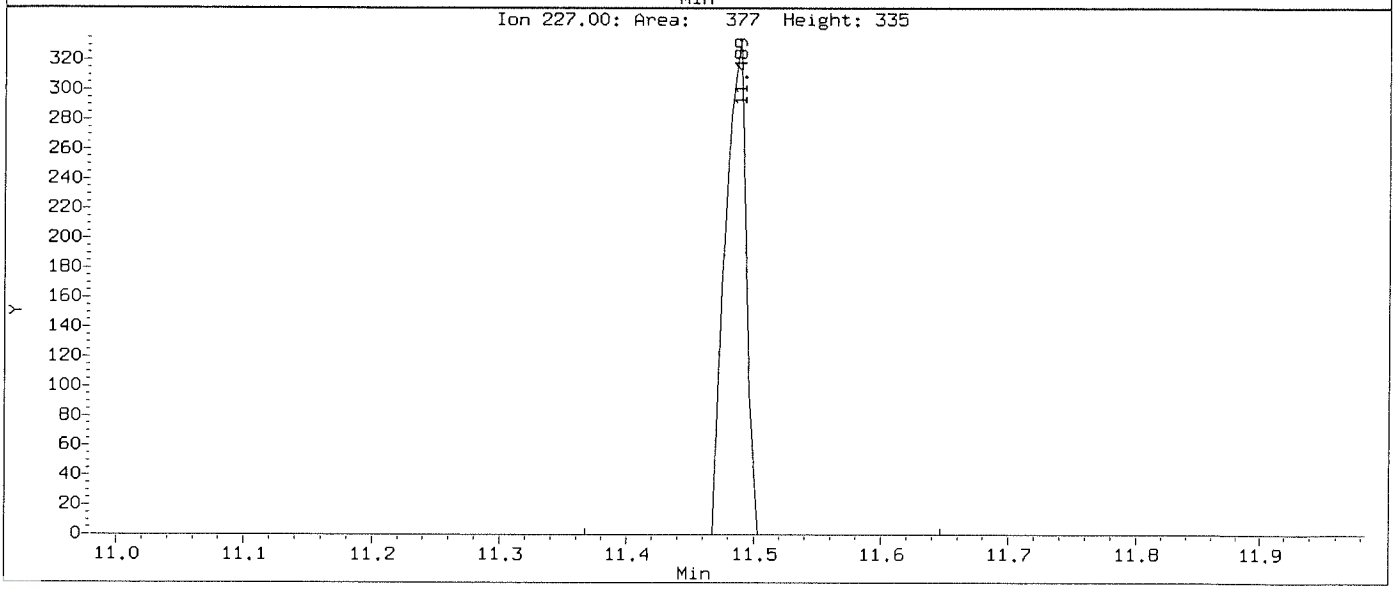


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

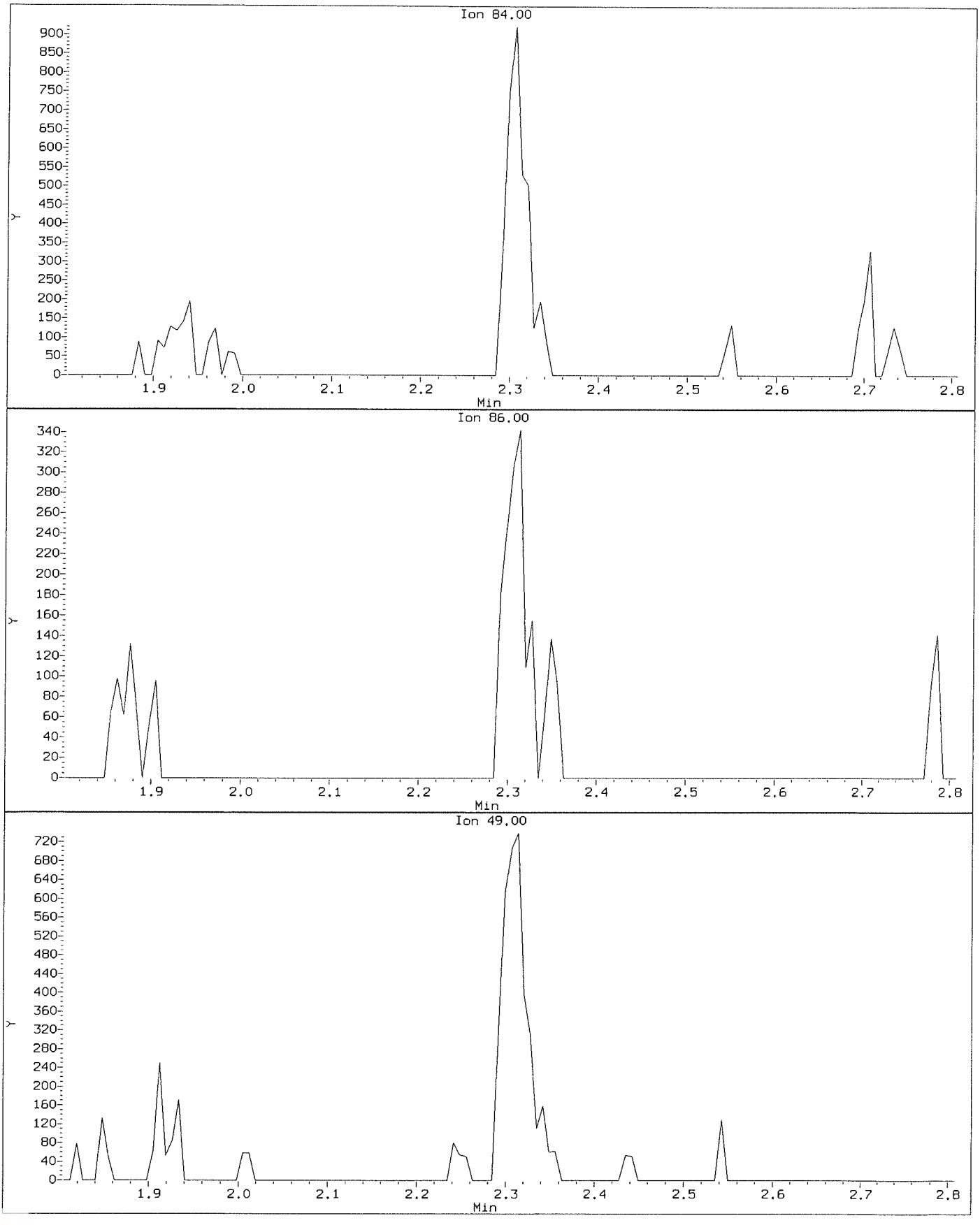






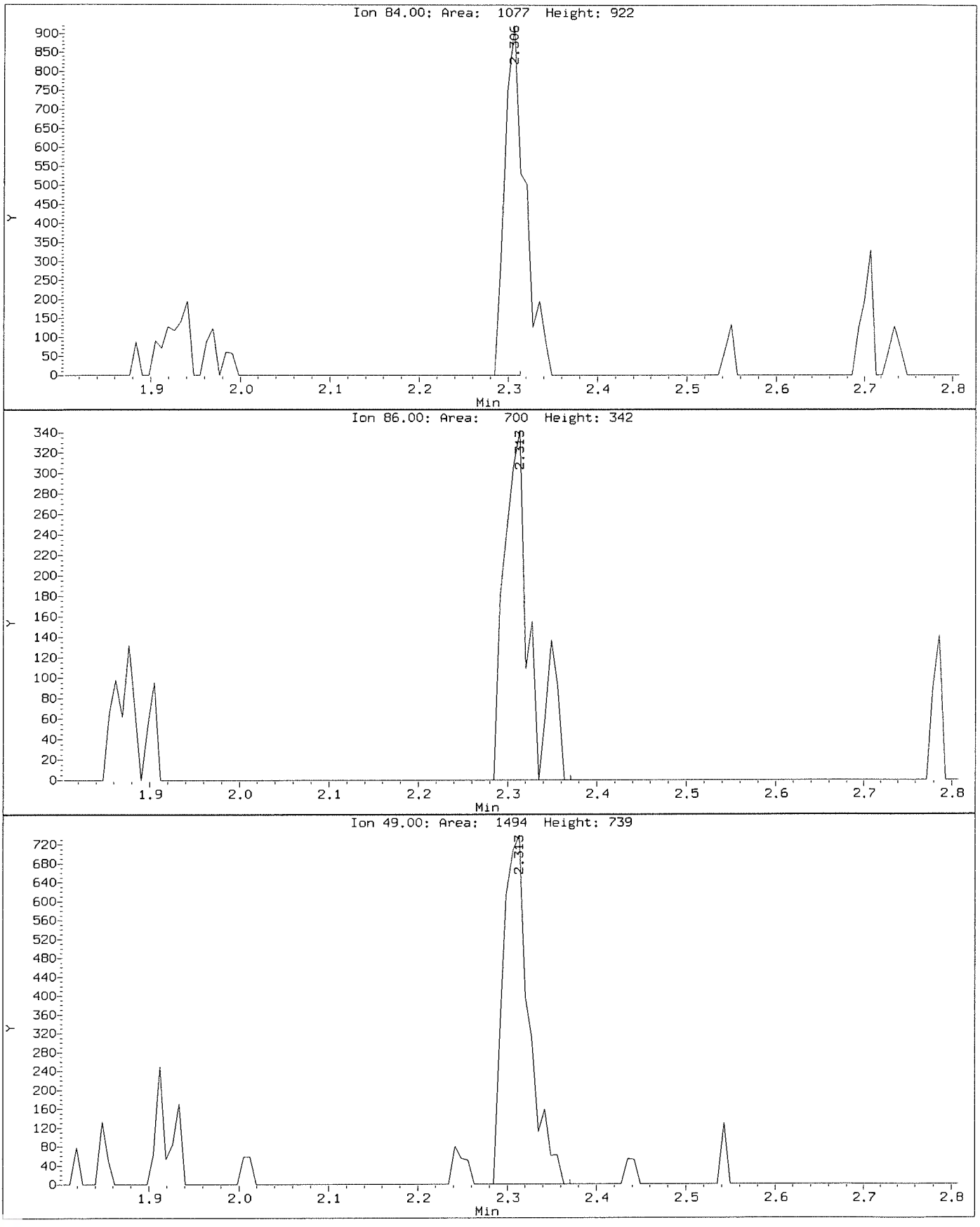
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2



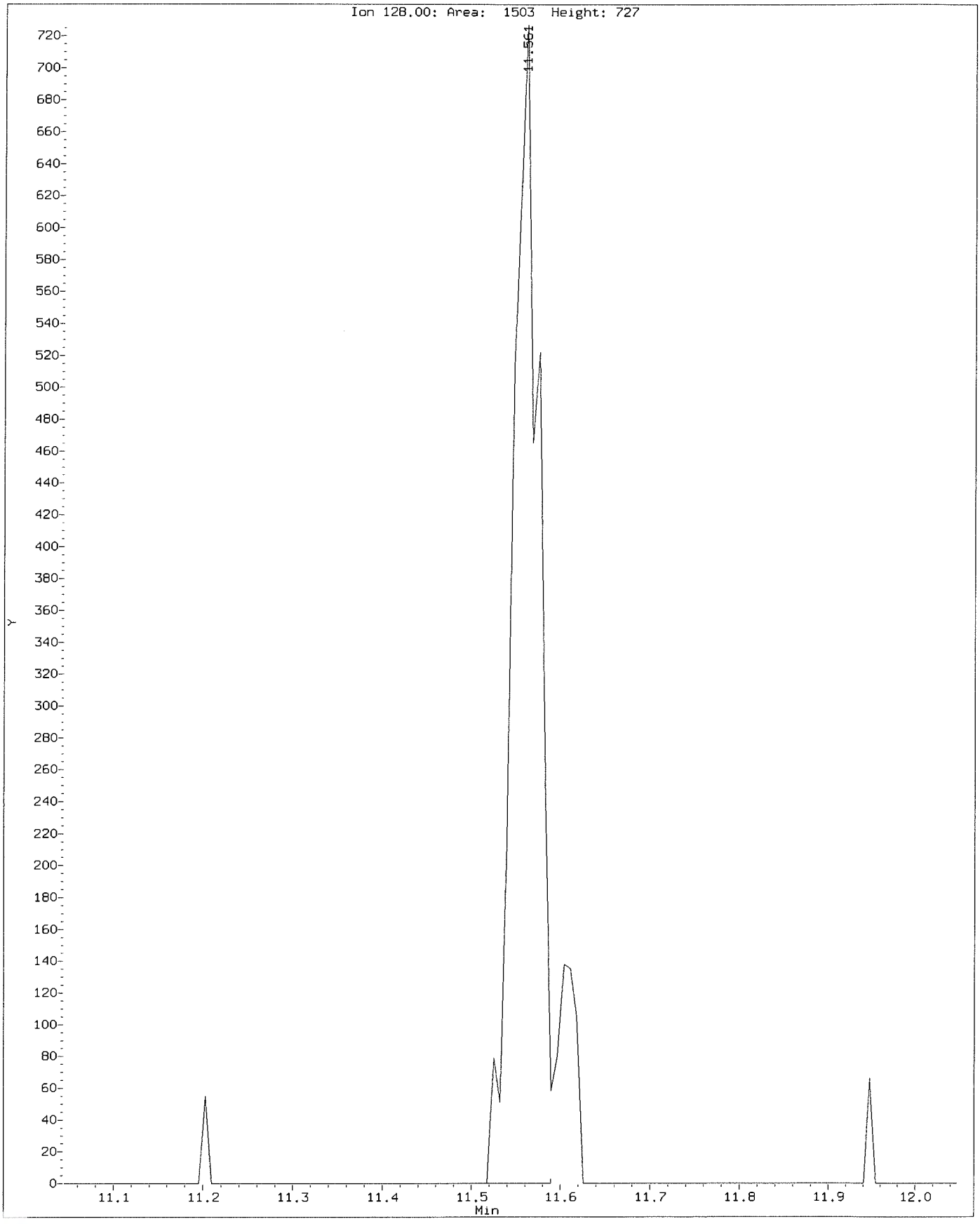
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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Methylene Chloride
CAS Number: 75-09-2



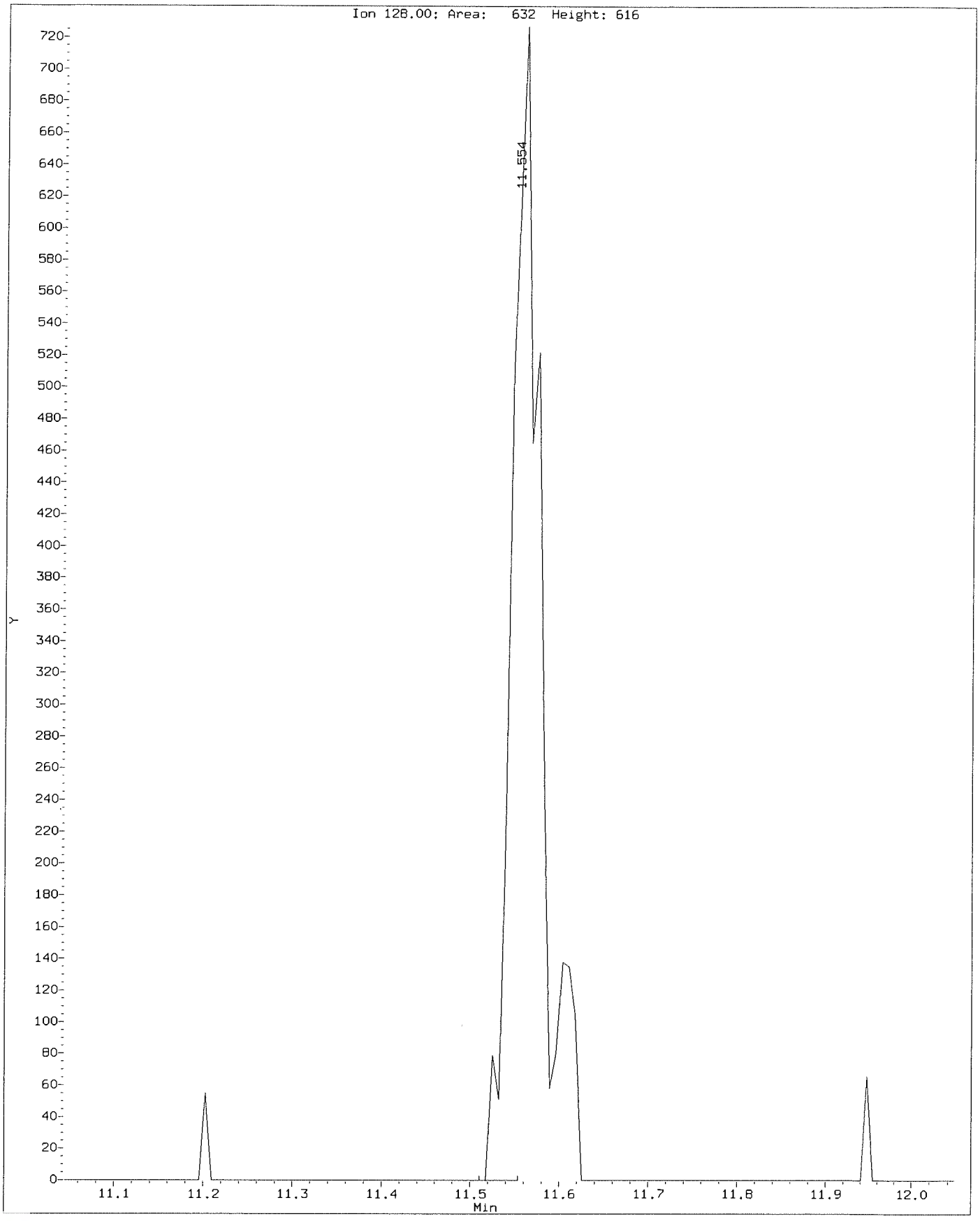
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Naphthalene
CAS Number: 91-20-3



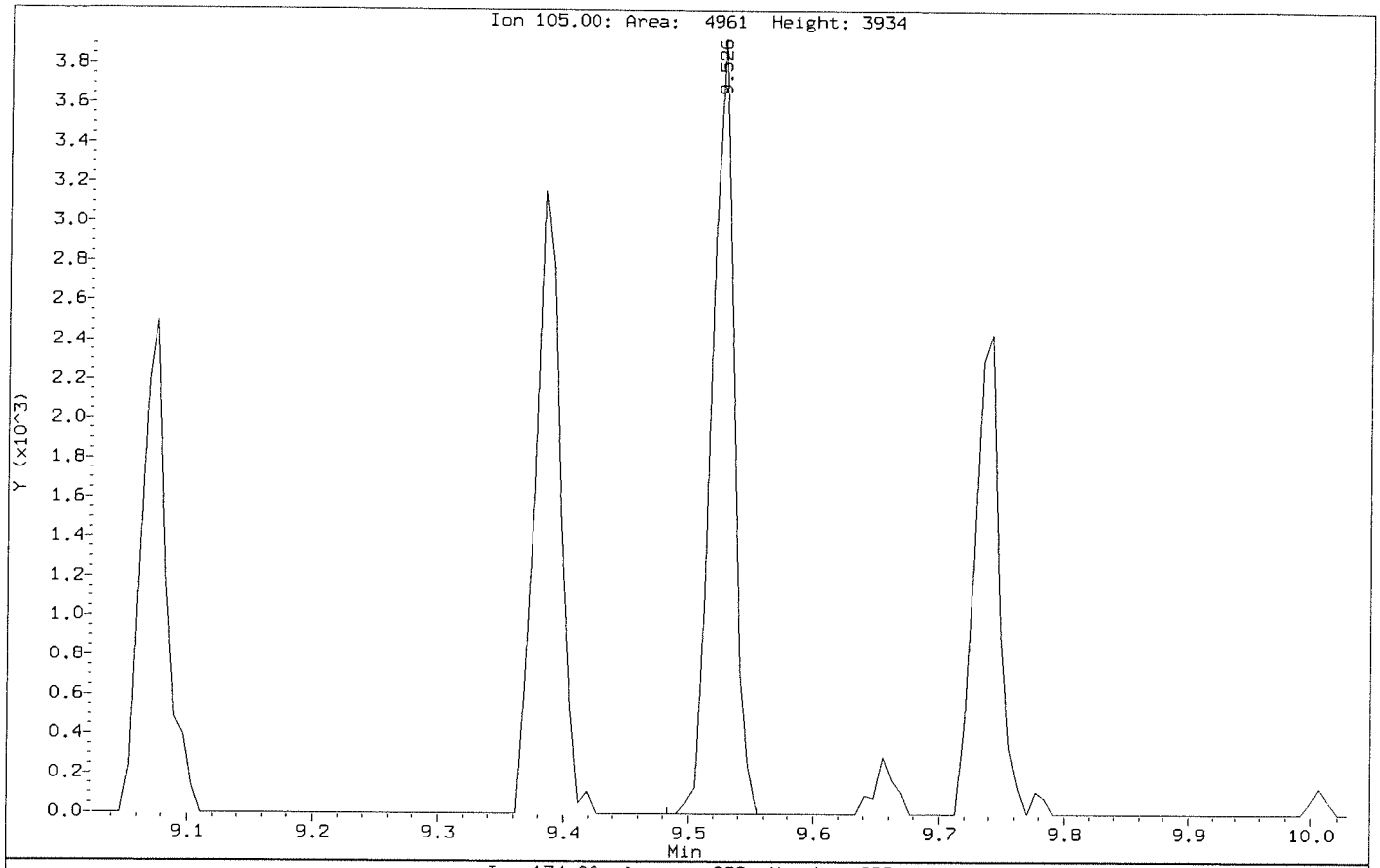
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Instrument: voa6.i
Client Sample ID: VSTD000.5

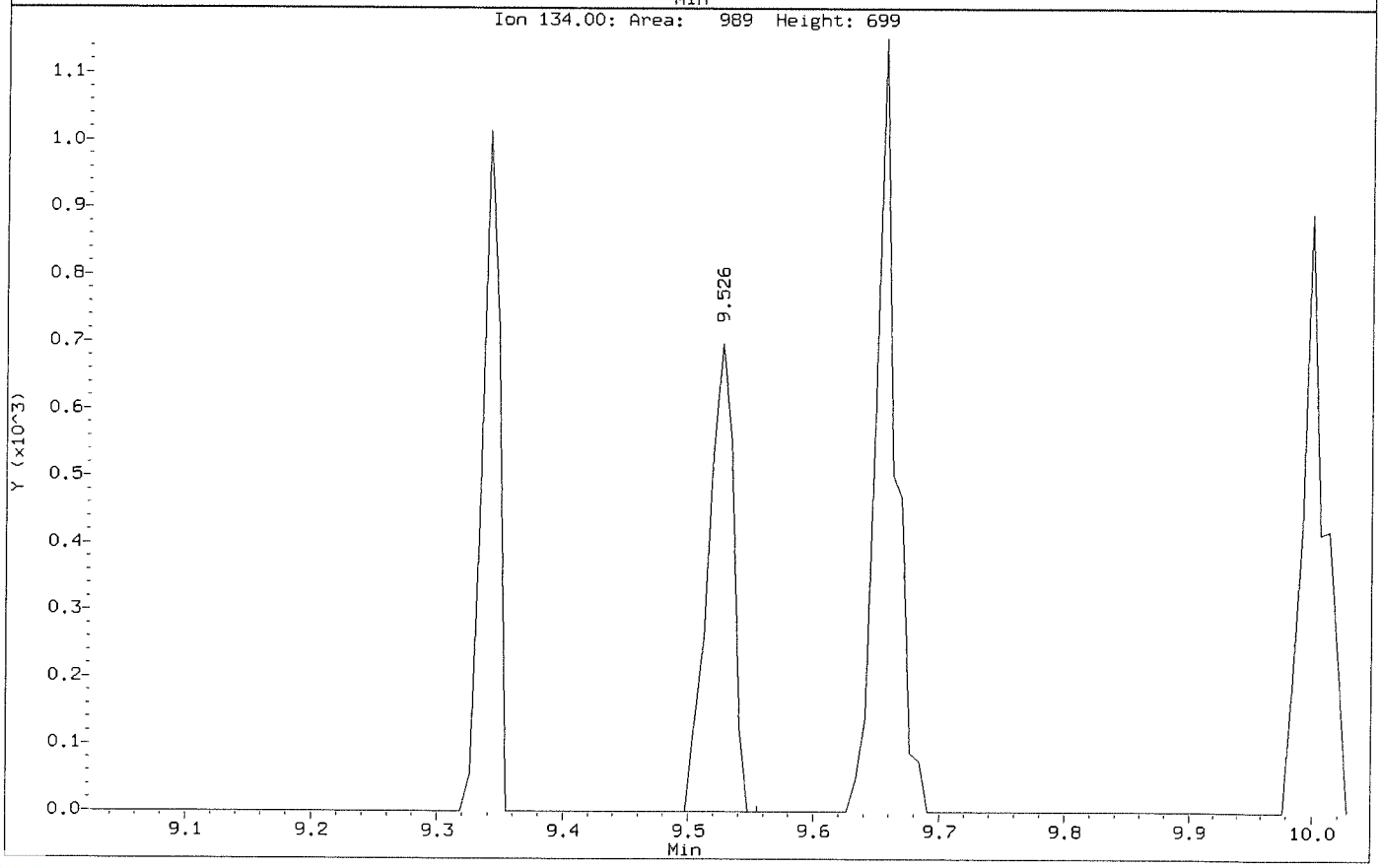
Compound: Naphthalene
CAS Number: 91-20-3



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Instrument: voa6.i
Client Sample ID: VSTD000.5

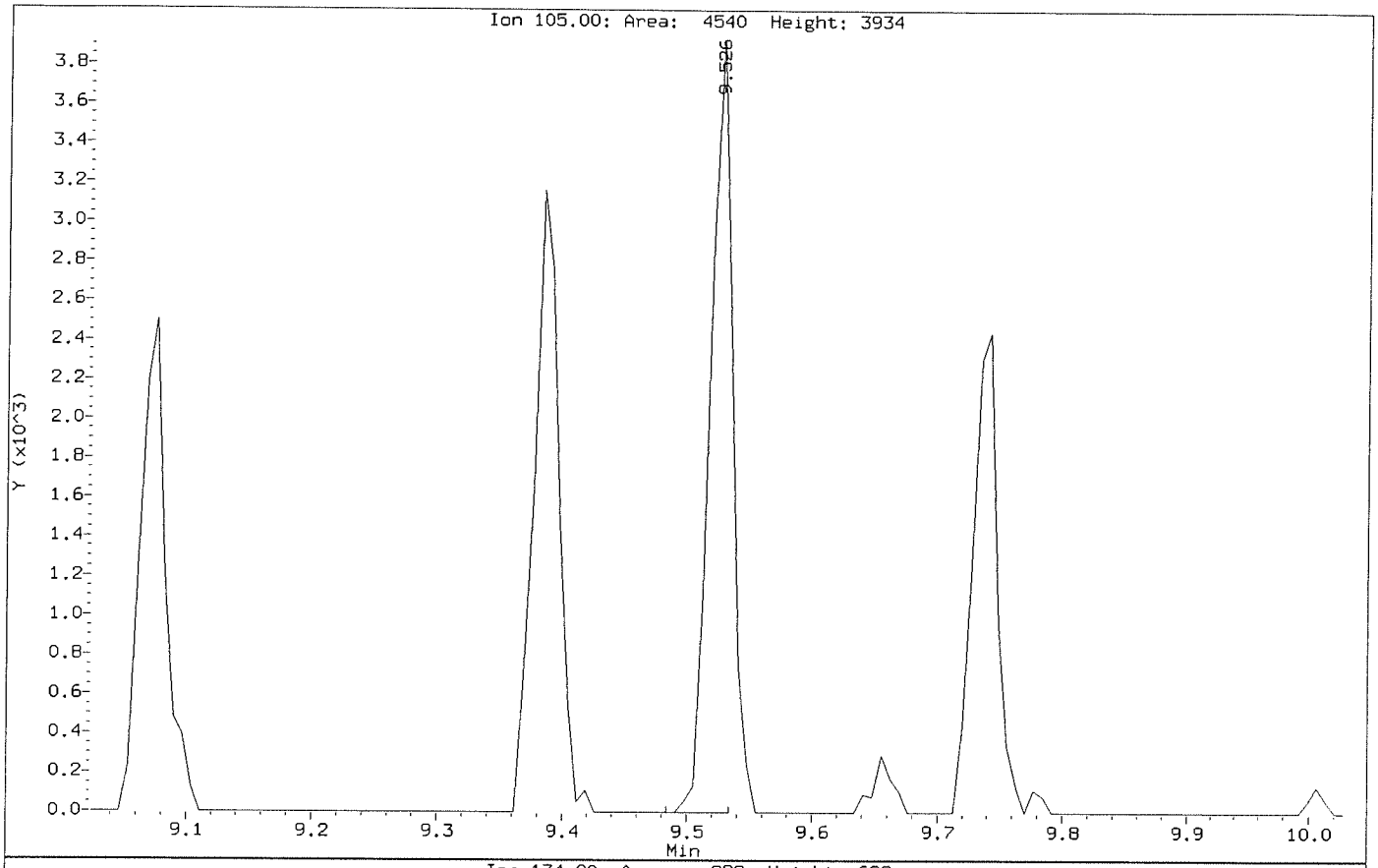
Compound: sec-Butylbenzene
CAS Number: 135-98-8

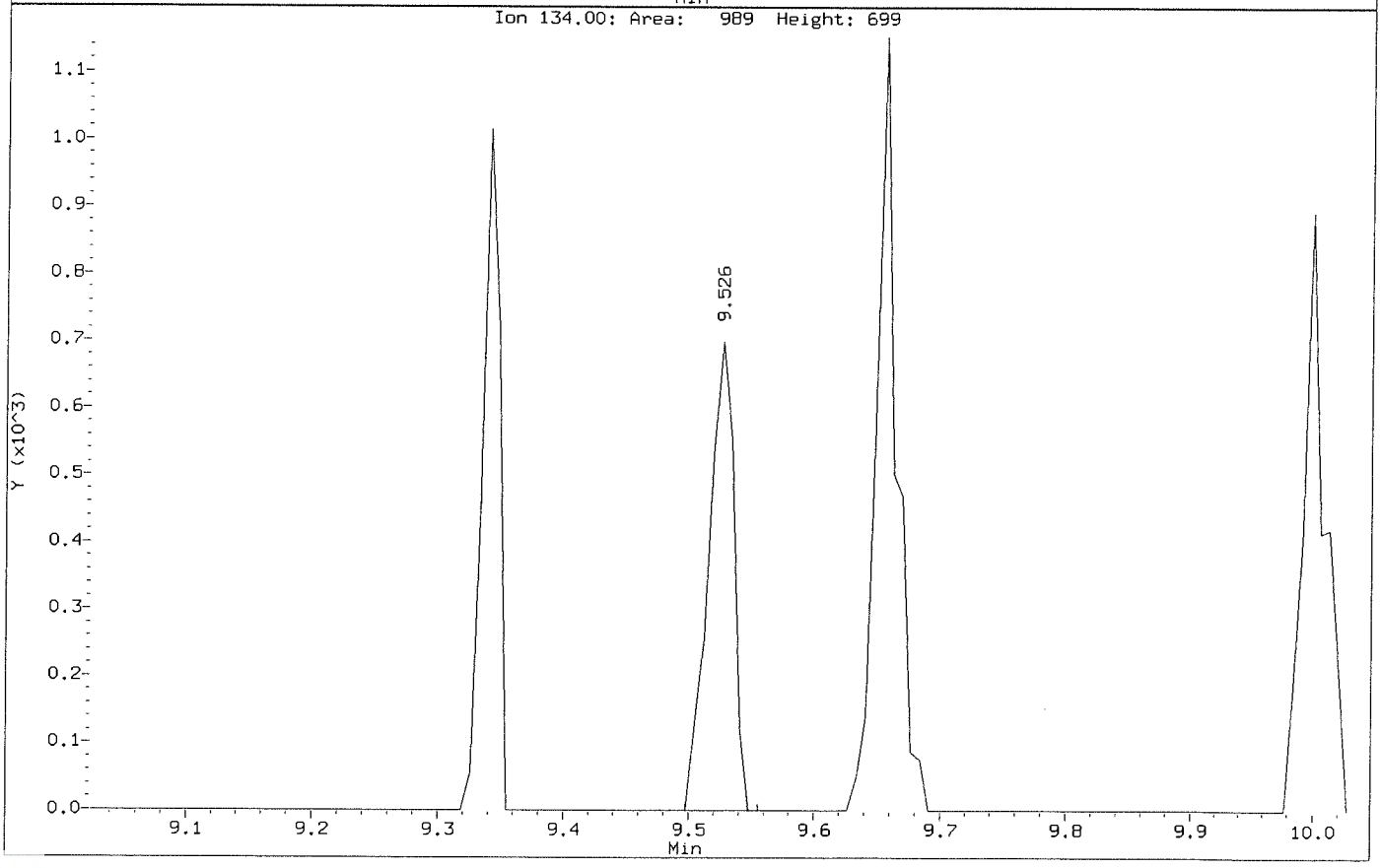




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Instrument: voa6.i
Client Sample ID: VSTD000.5

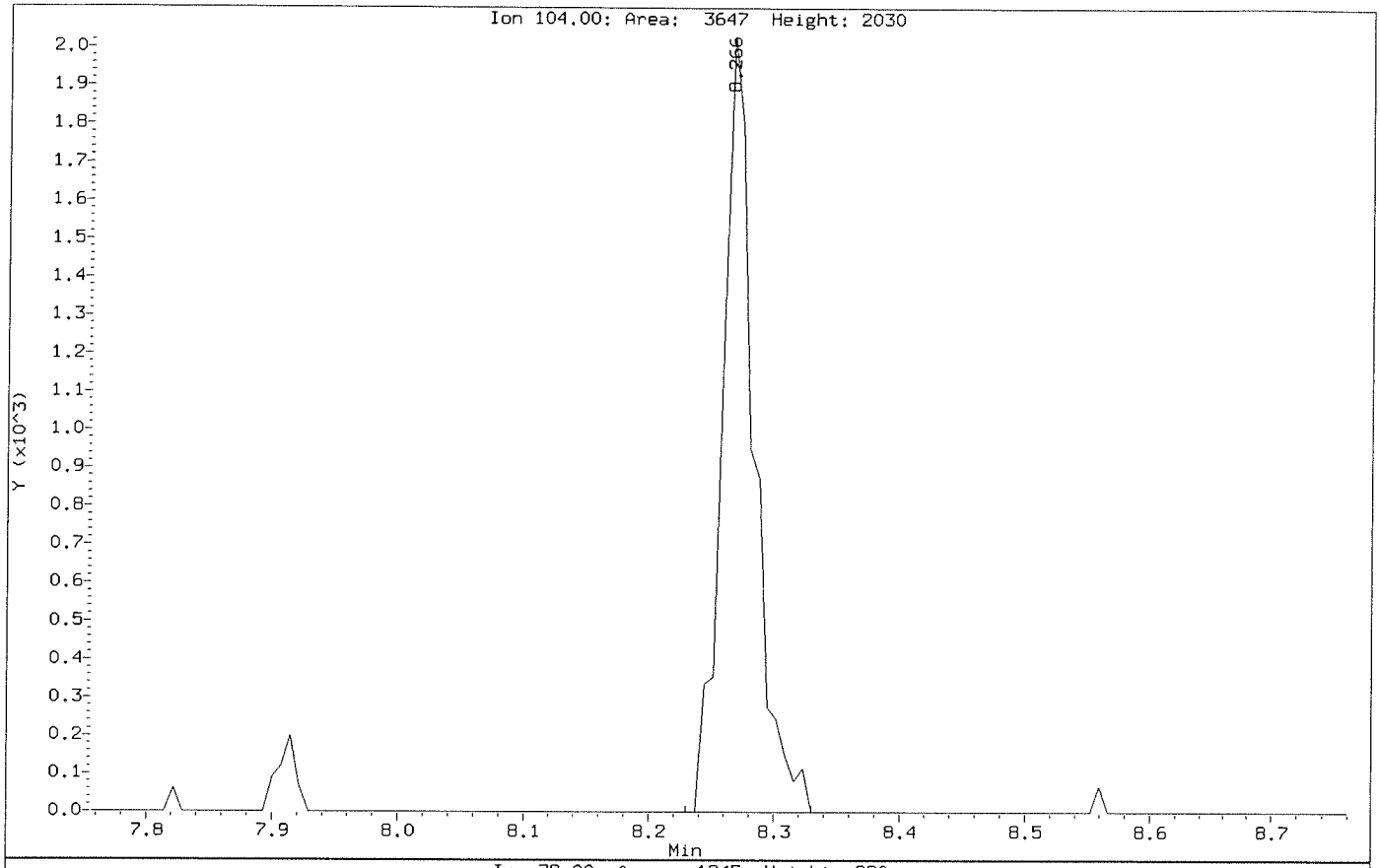
Compound: sec-Butylbenzene
CAS Number: 135-98-8

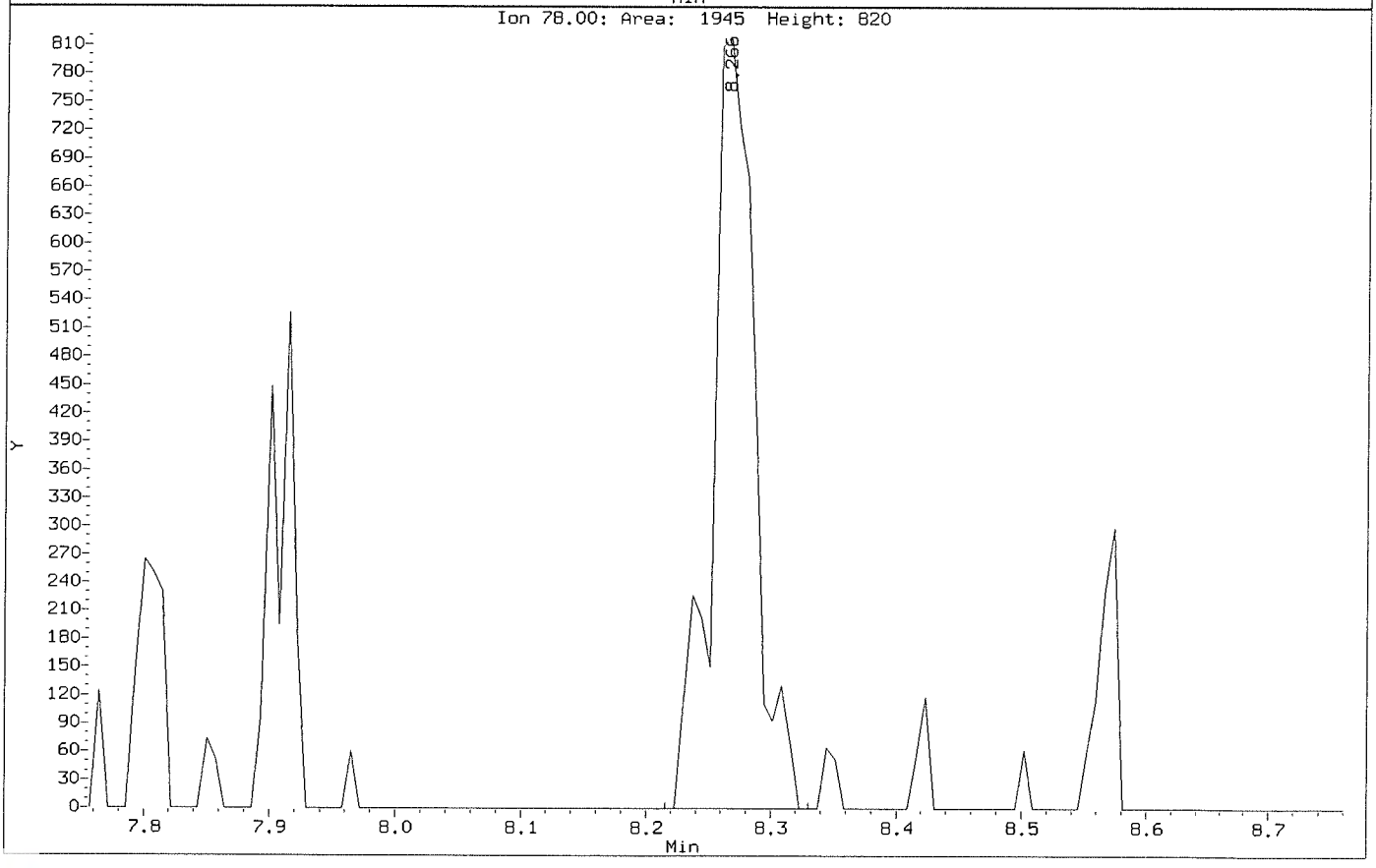




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Instrument: voa6.i
Client Sample ID: VSTD000.5

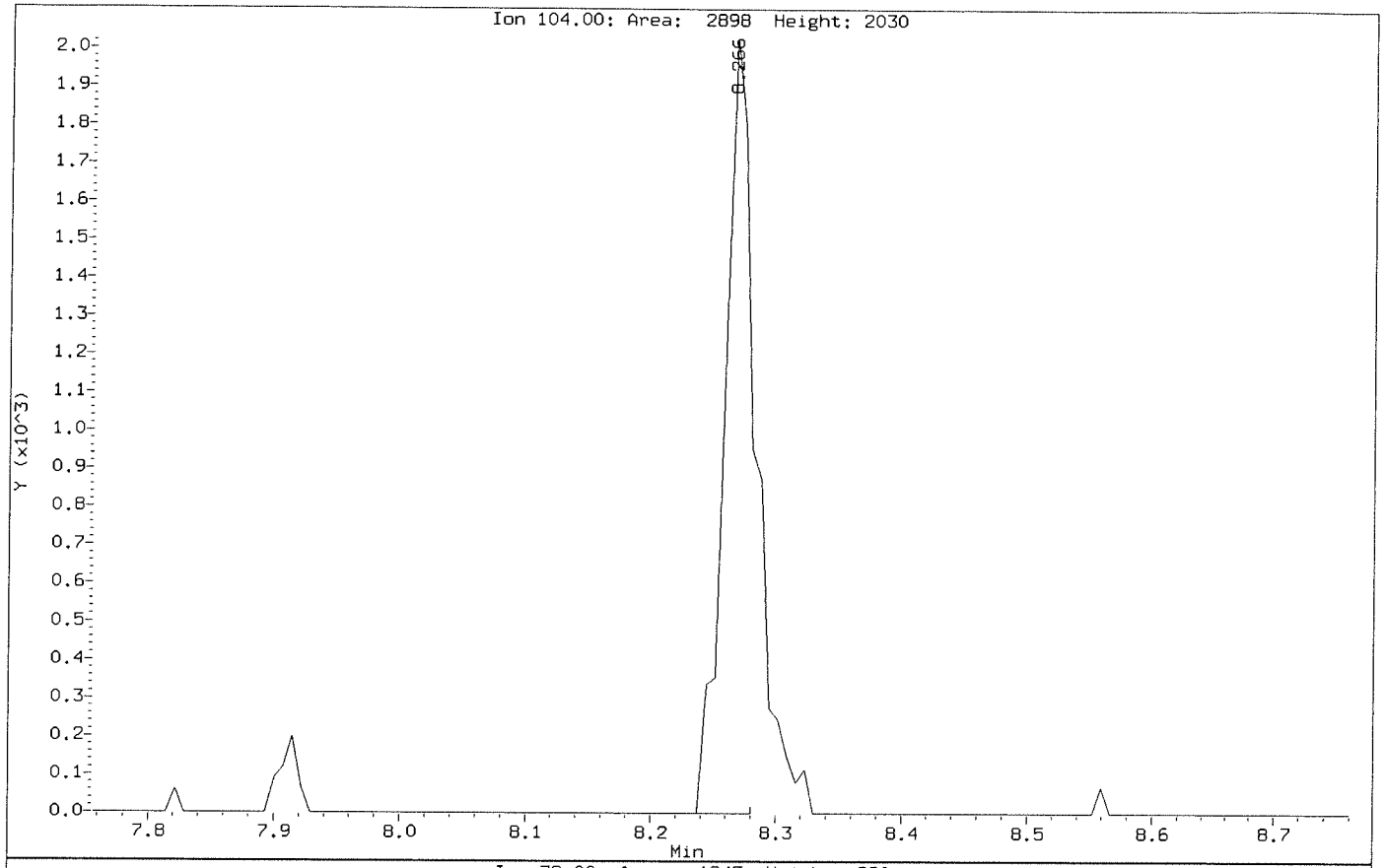
Compound: Styrene
CAS Number: 100-42-5

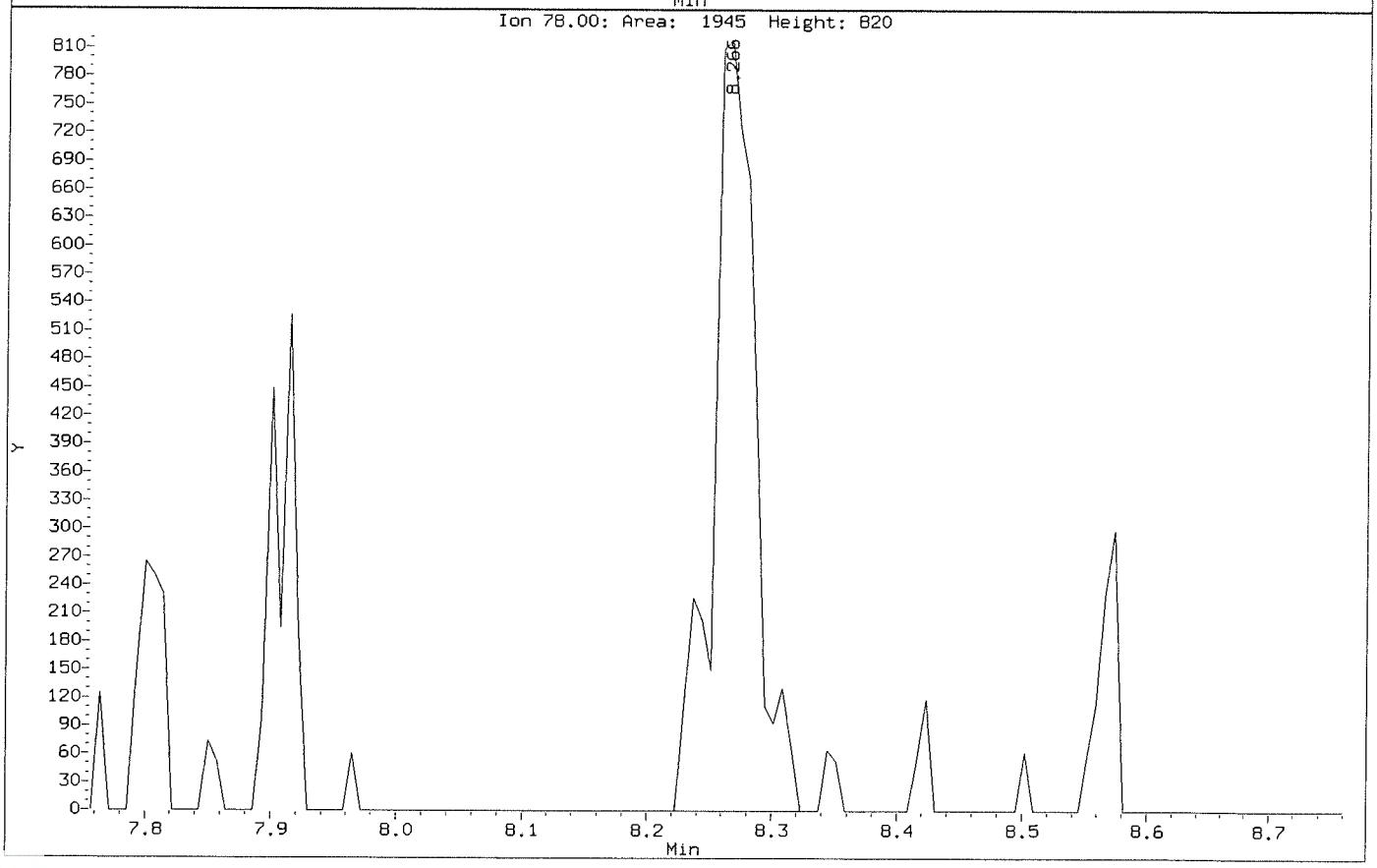




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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

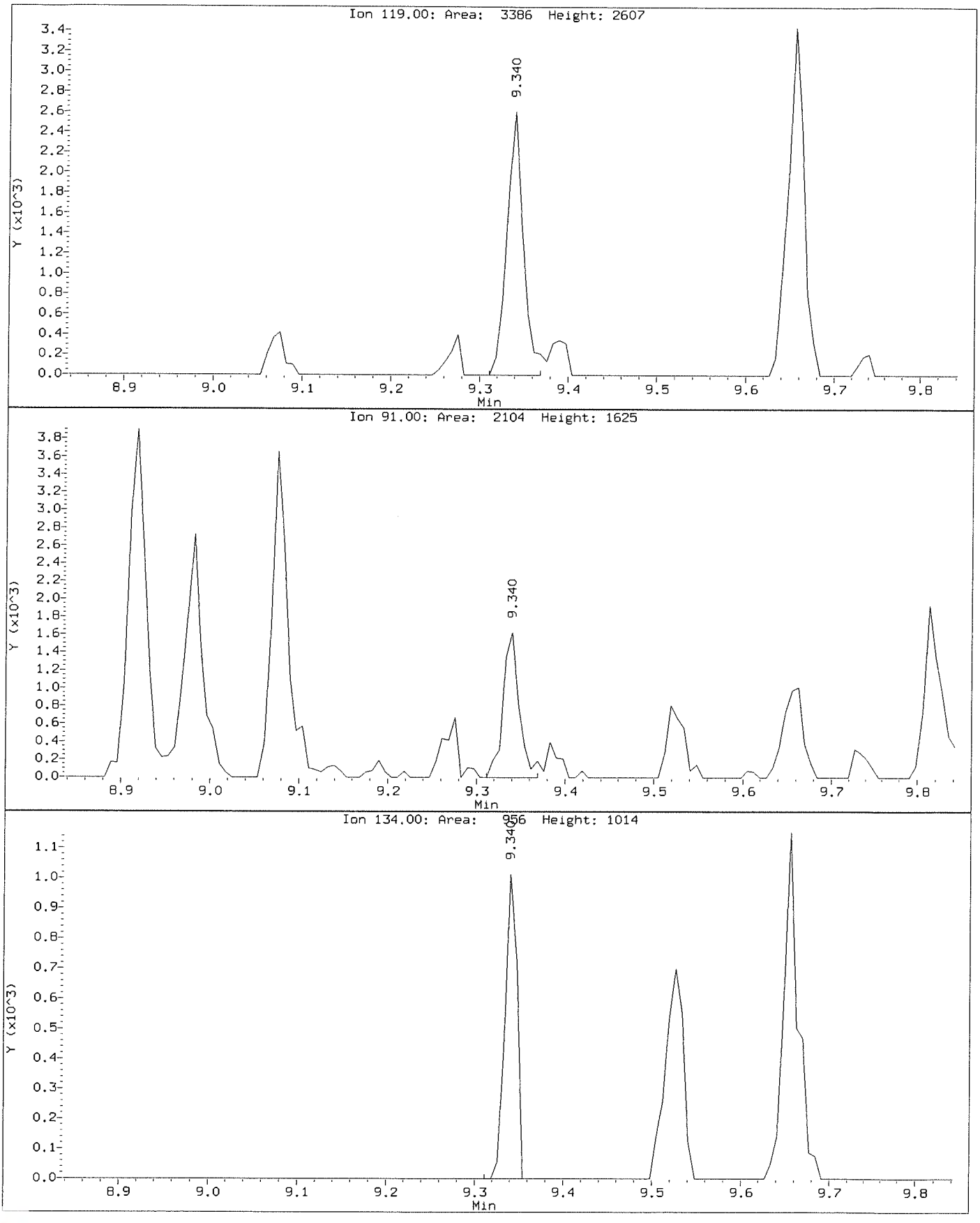
Compound: Styrene
CAS Number: 100-42-5





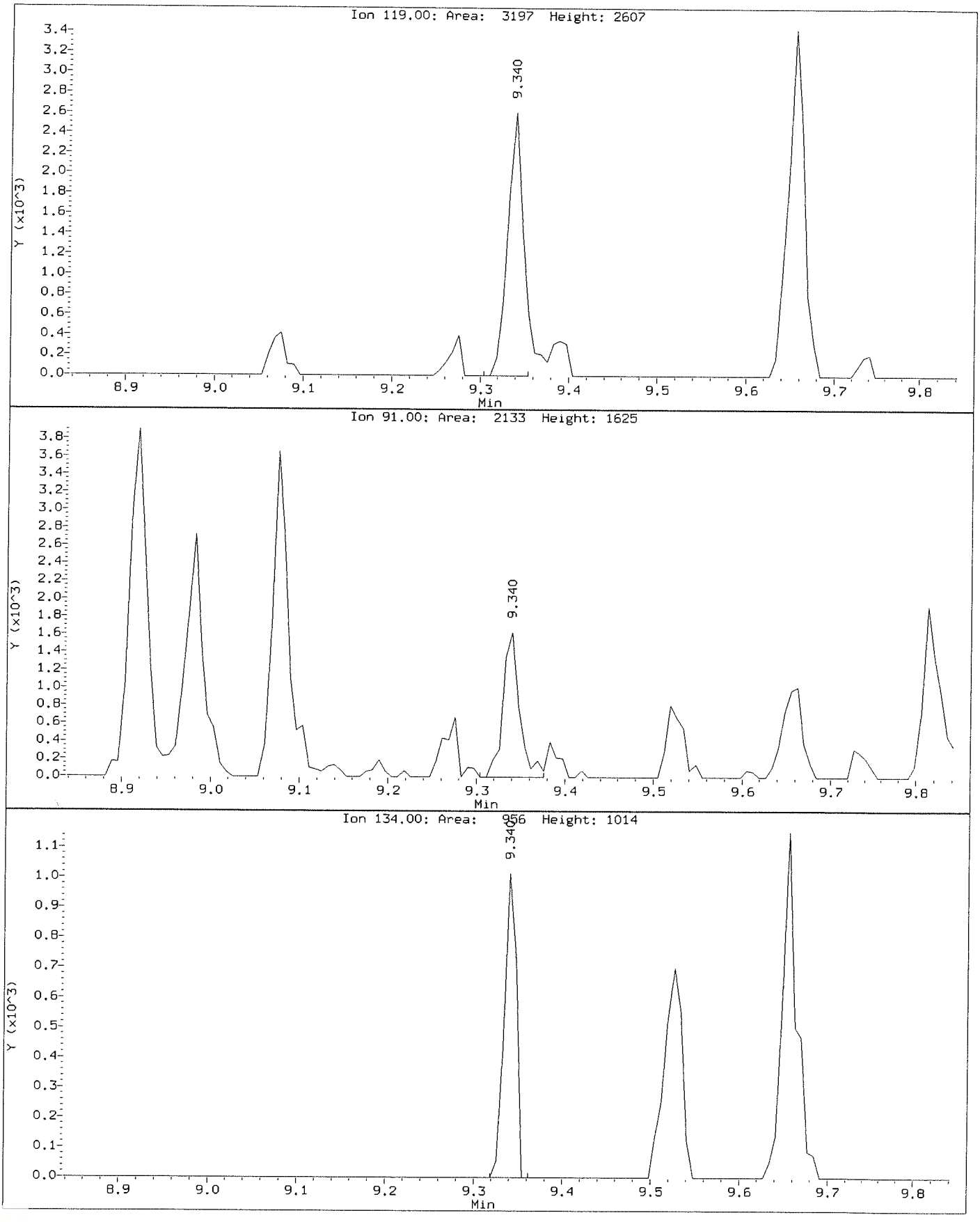
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: tert-Butylbenzene
CAS Number: 98-06-6



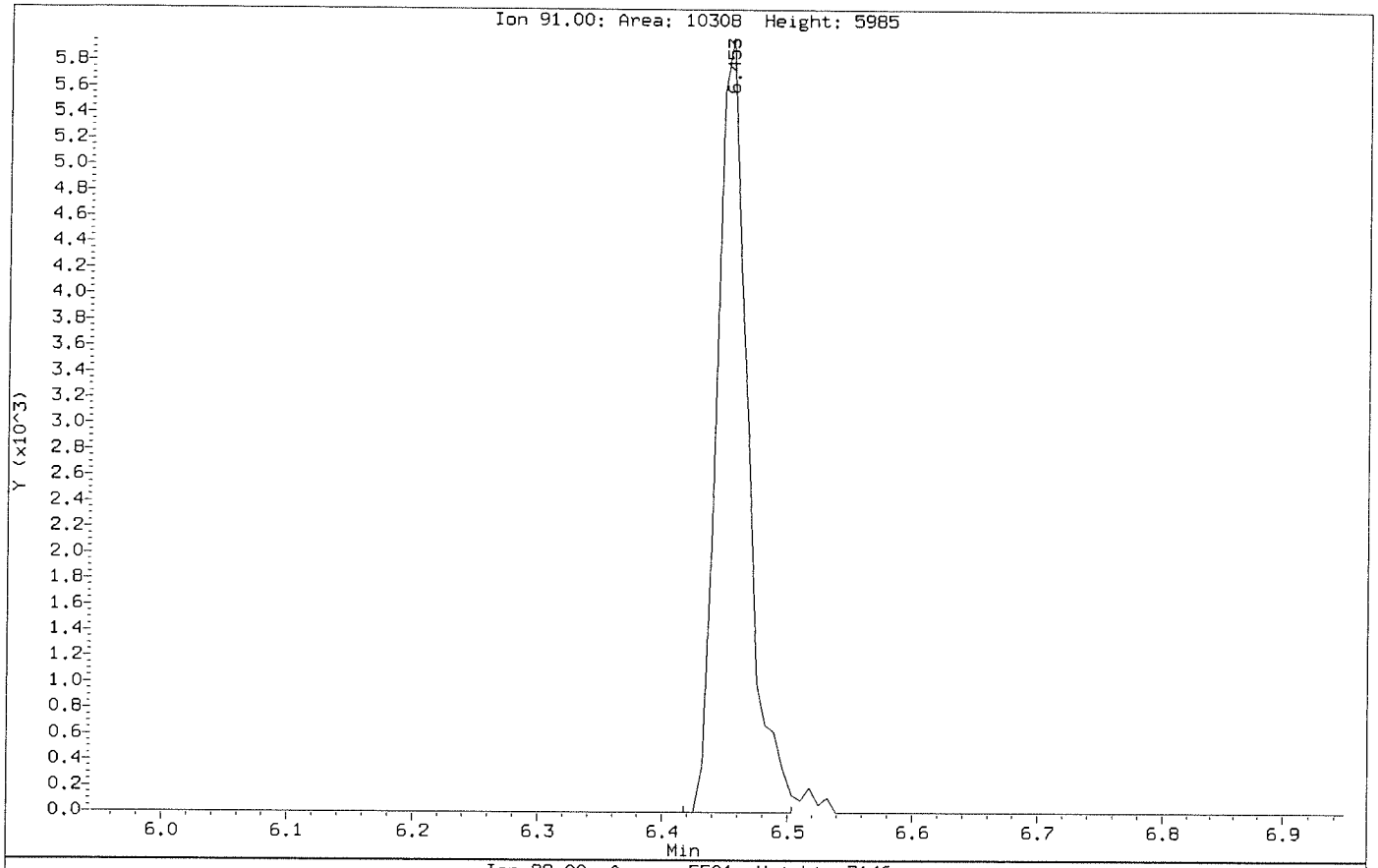
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Client Sample ID: VSTD000.5

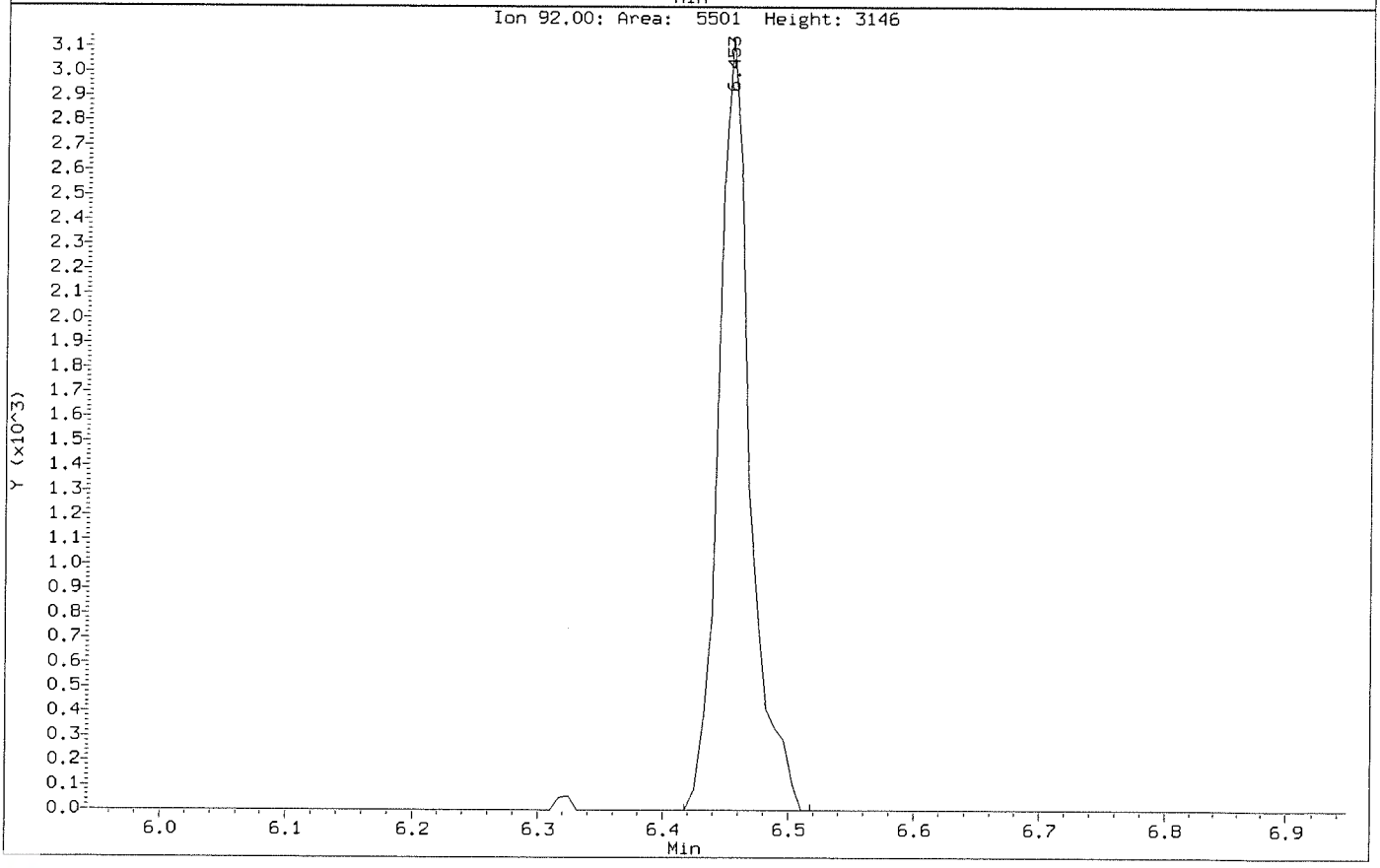
Compound: tert-Butylbenzene
CAS Number: 98-06-6



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Instrument: voa6.i
Client Sample ID: VSTD000.5

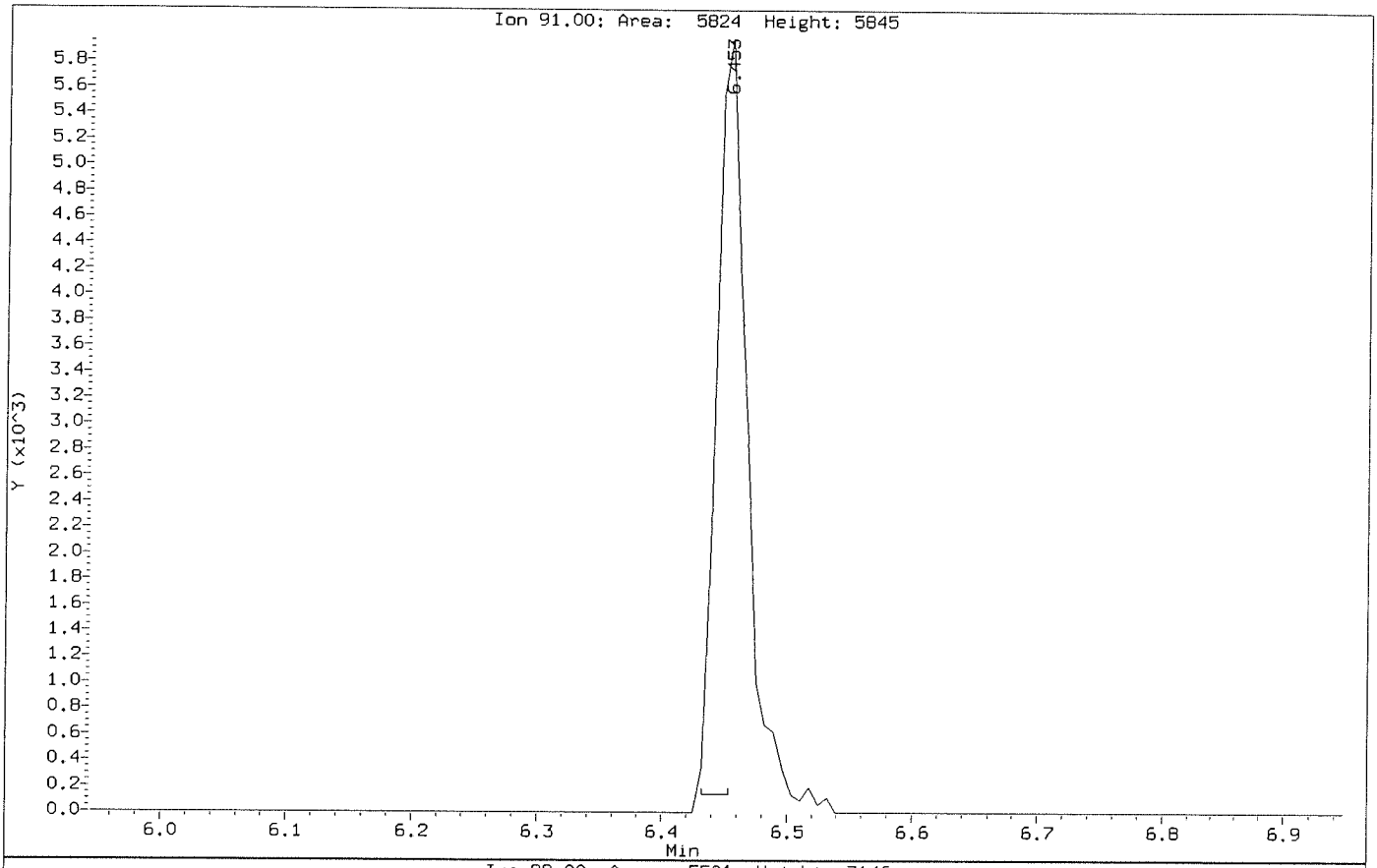
Compound: Toluene
CAS Number: 108-88-3

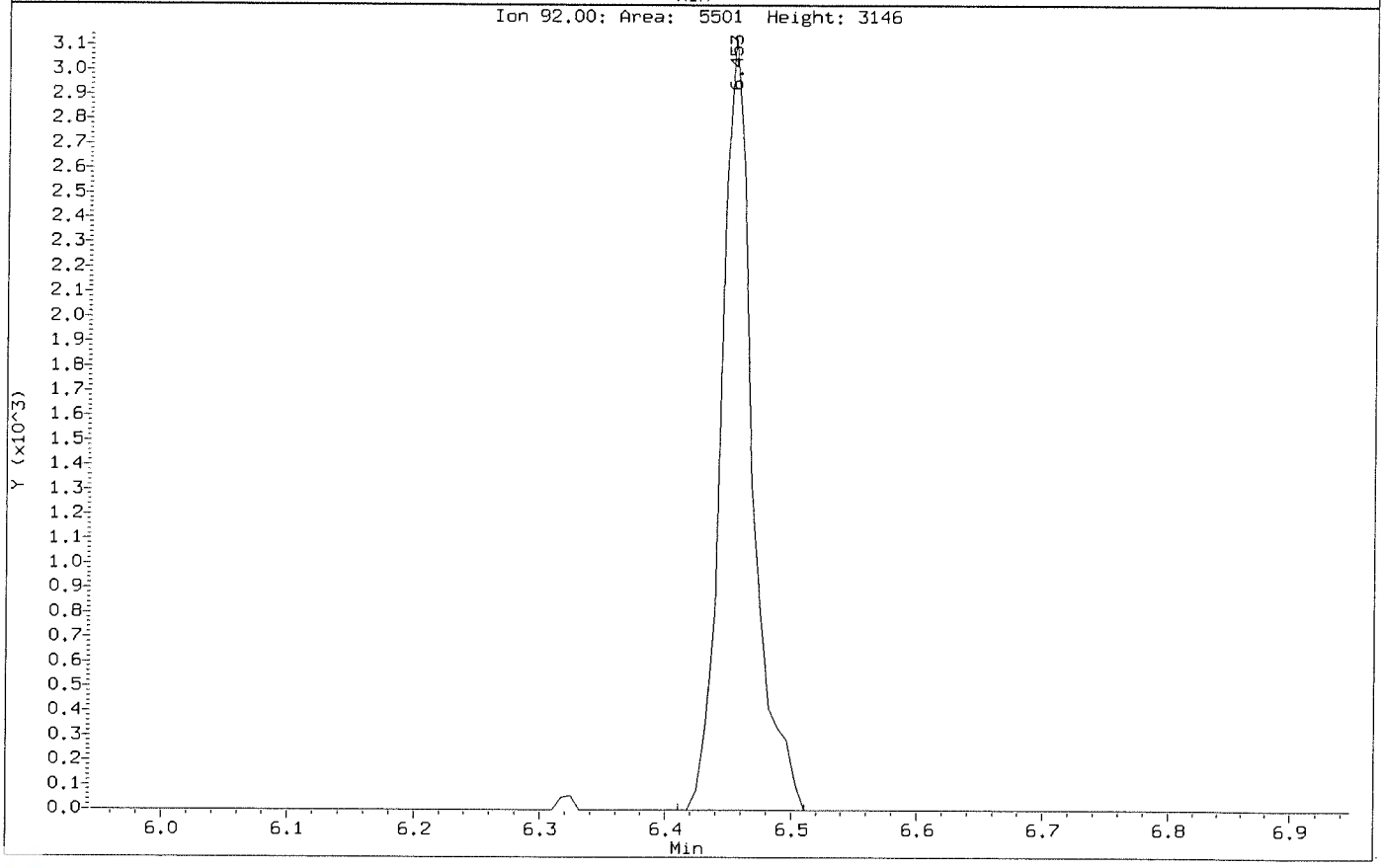




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Client Sample ID: VSTD000.5

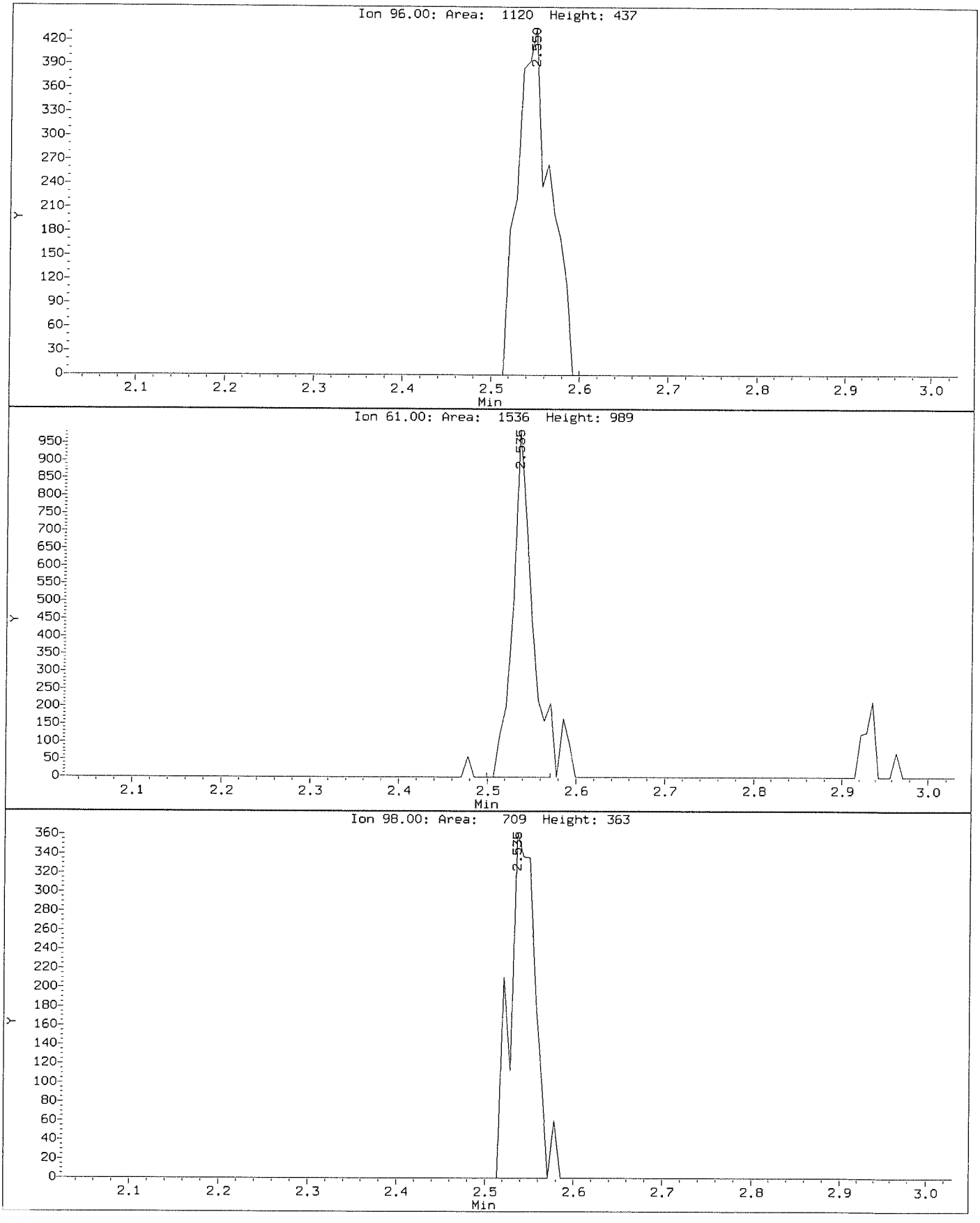
Compound: Toluene
CAS Number: 108-88-3





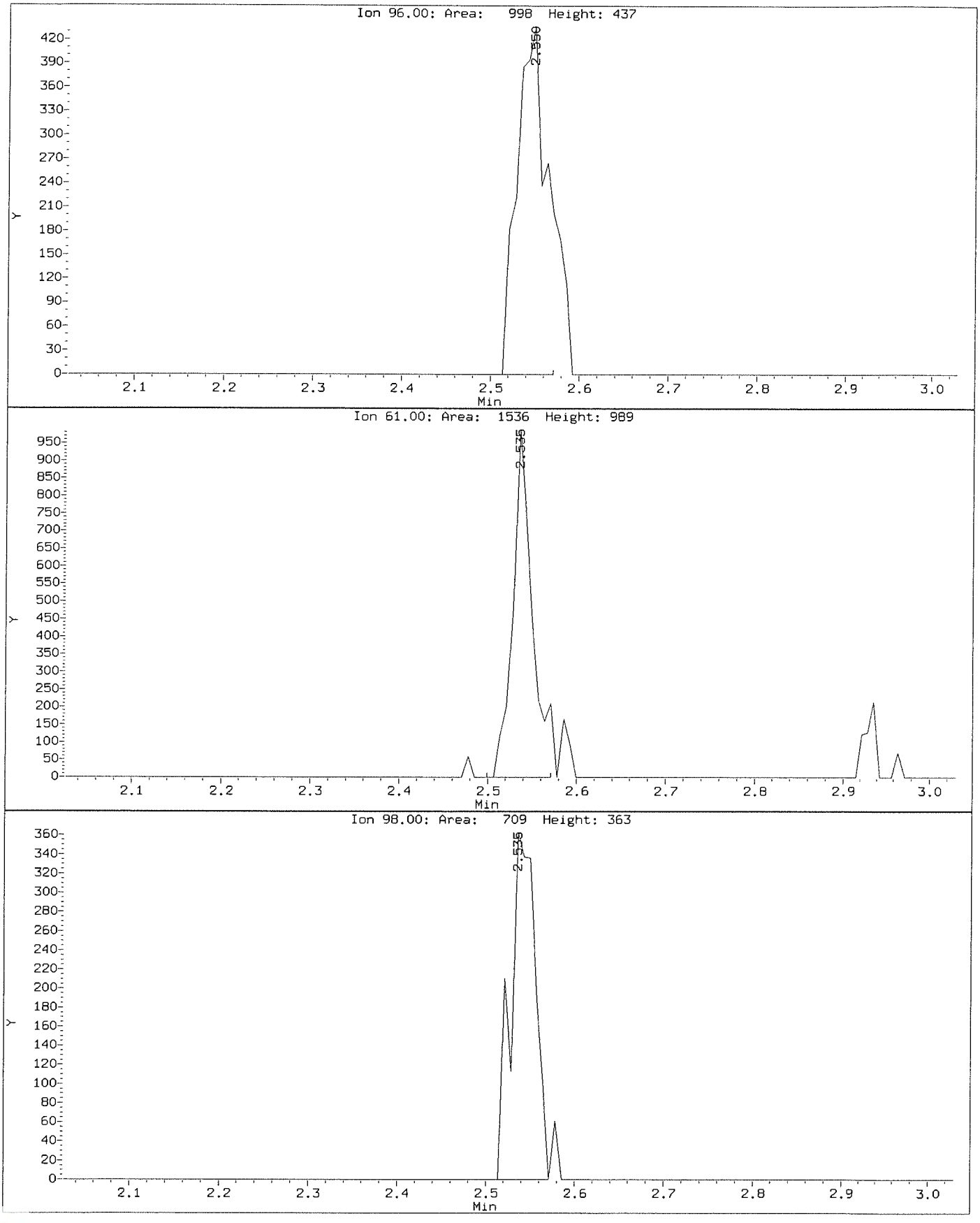
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5



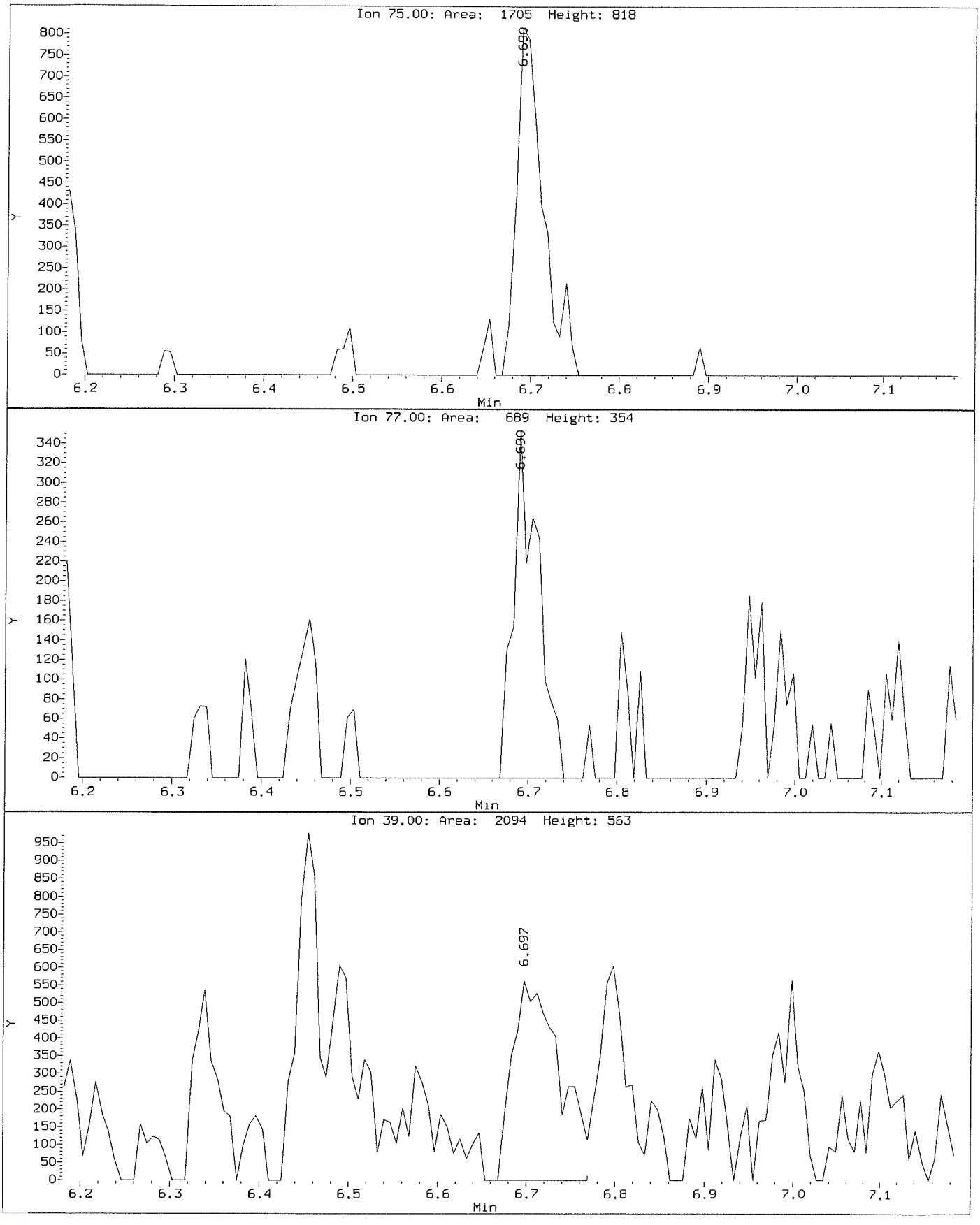
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5



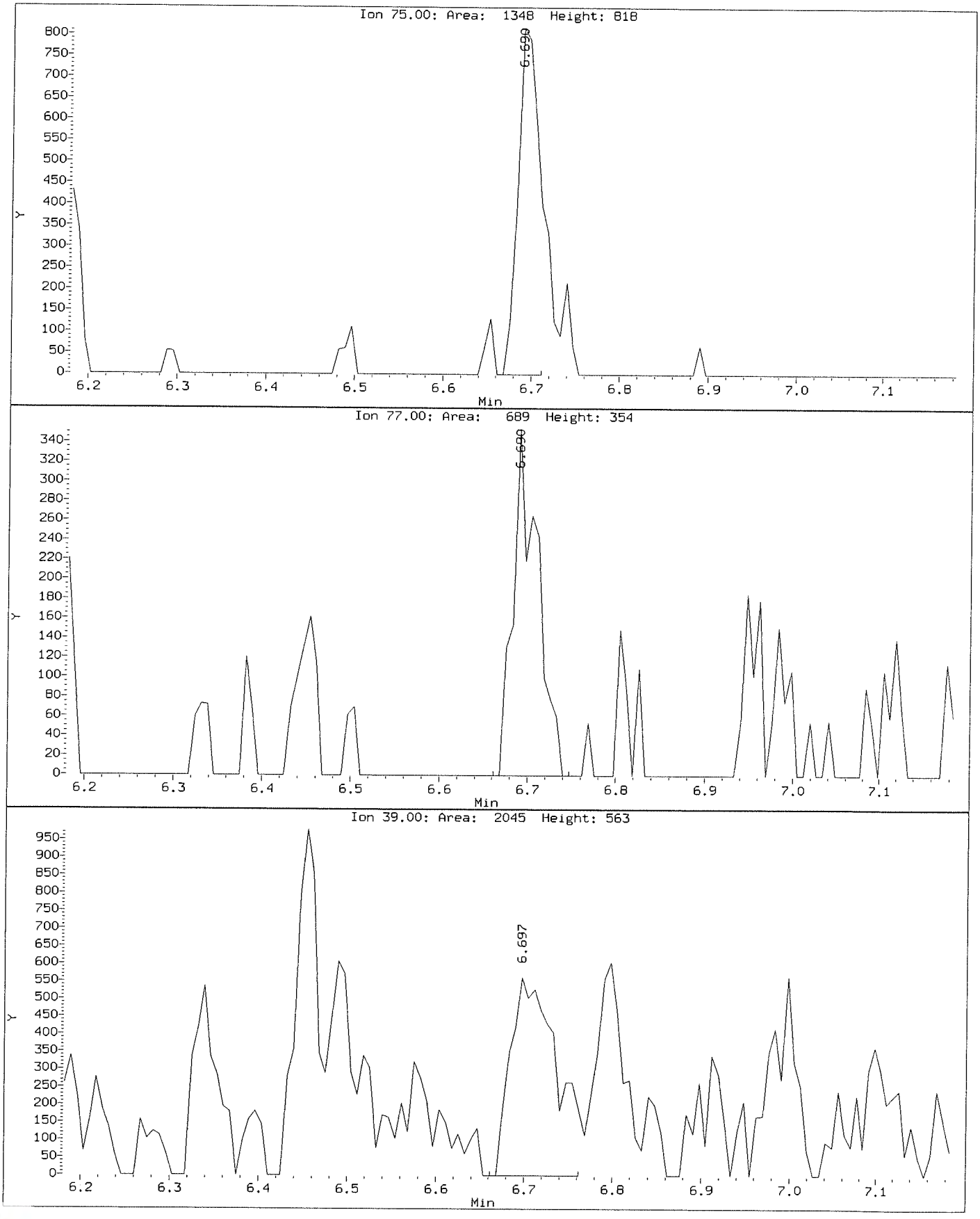
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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: trans-1,3-Dichloropropene
CAS Number: 10061-02-6



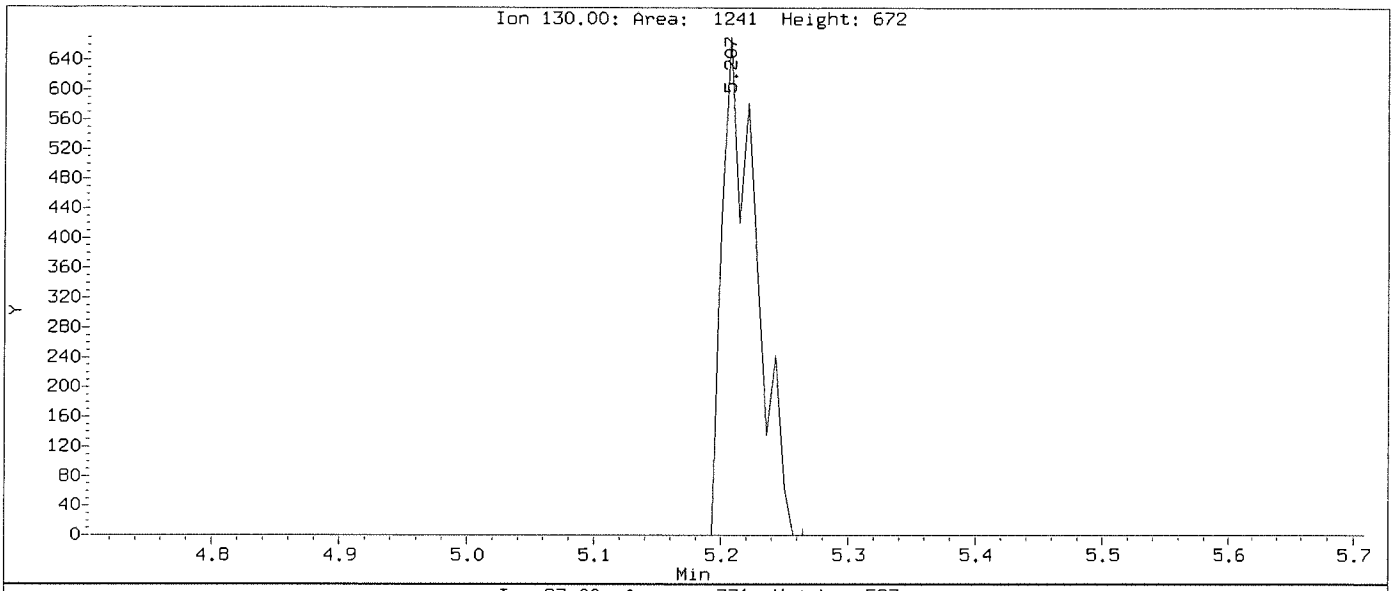
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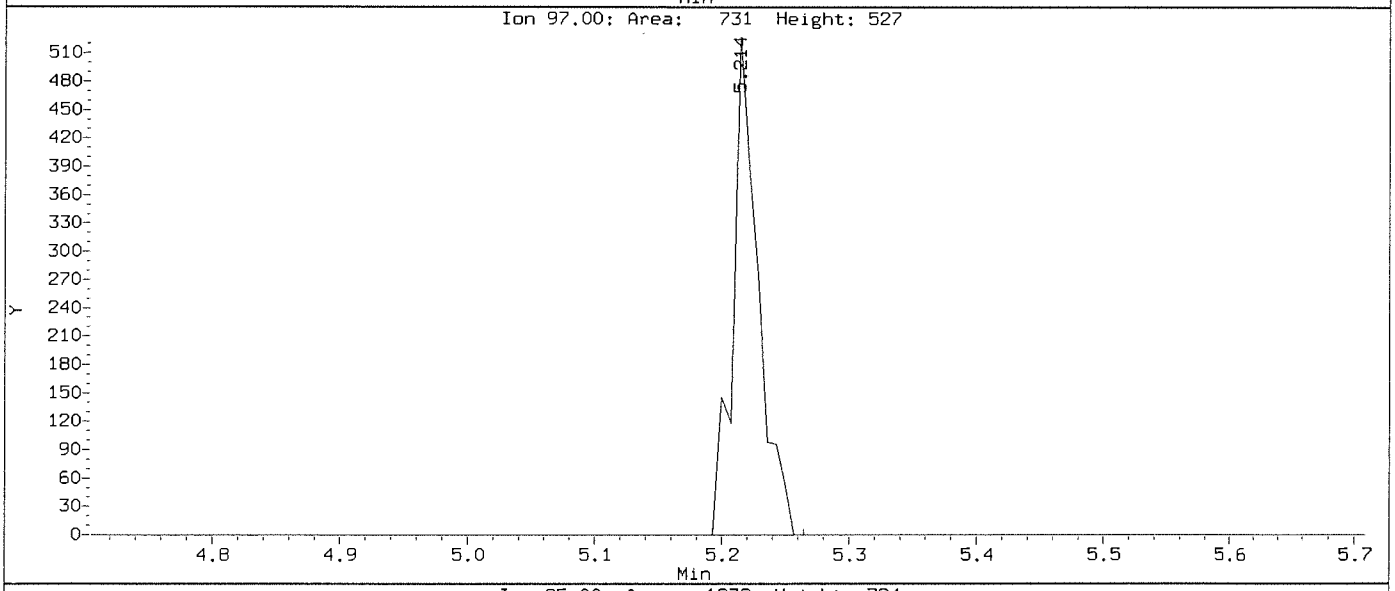
Compound: trans-1,3-Dichloropropene
CAS Number: 10061-02-6

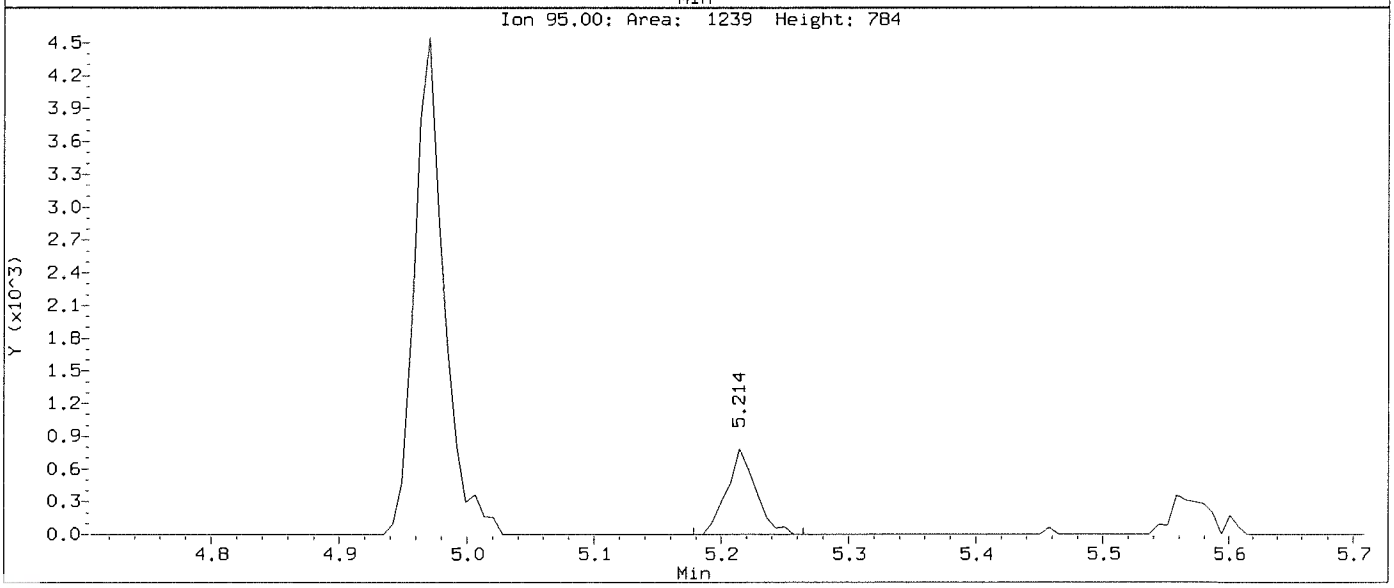


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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Trichloroethene
CAS Number: 79-01-6

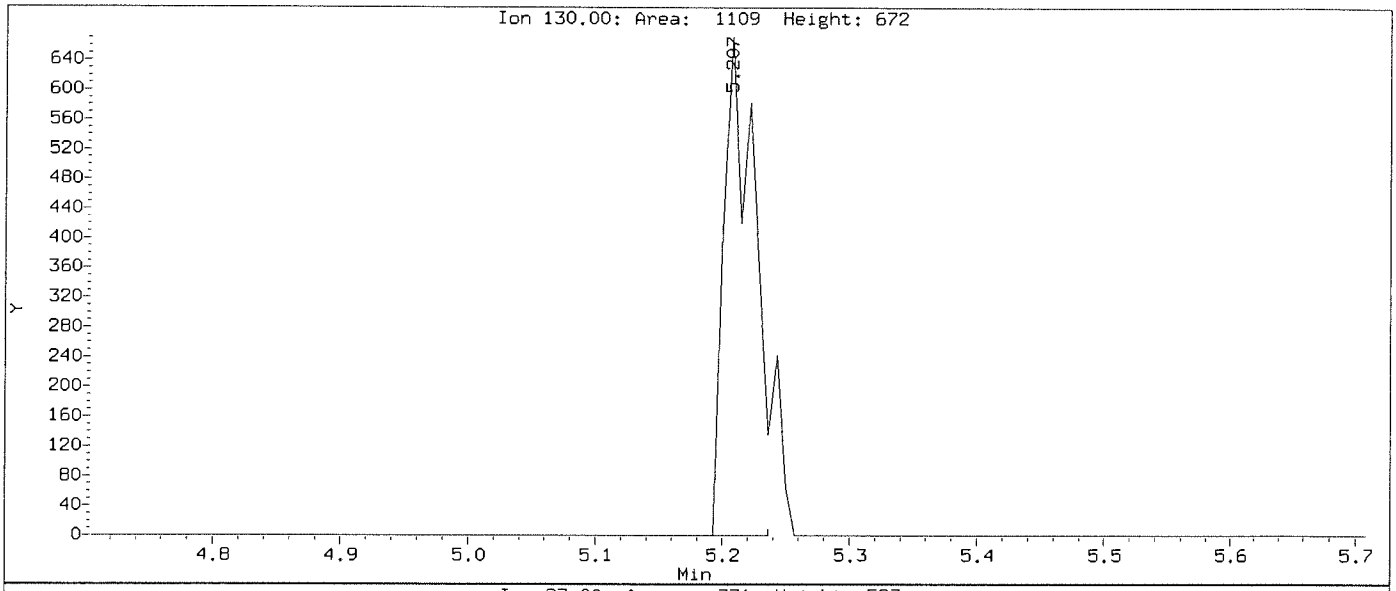


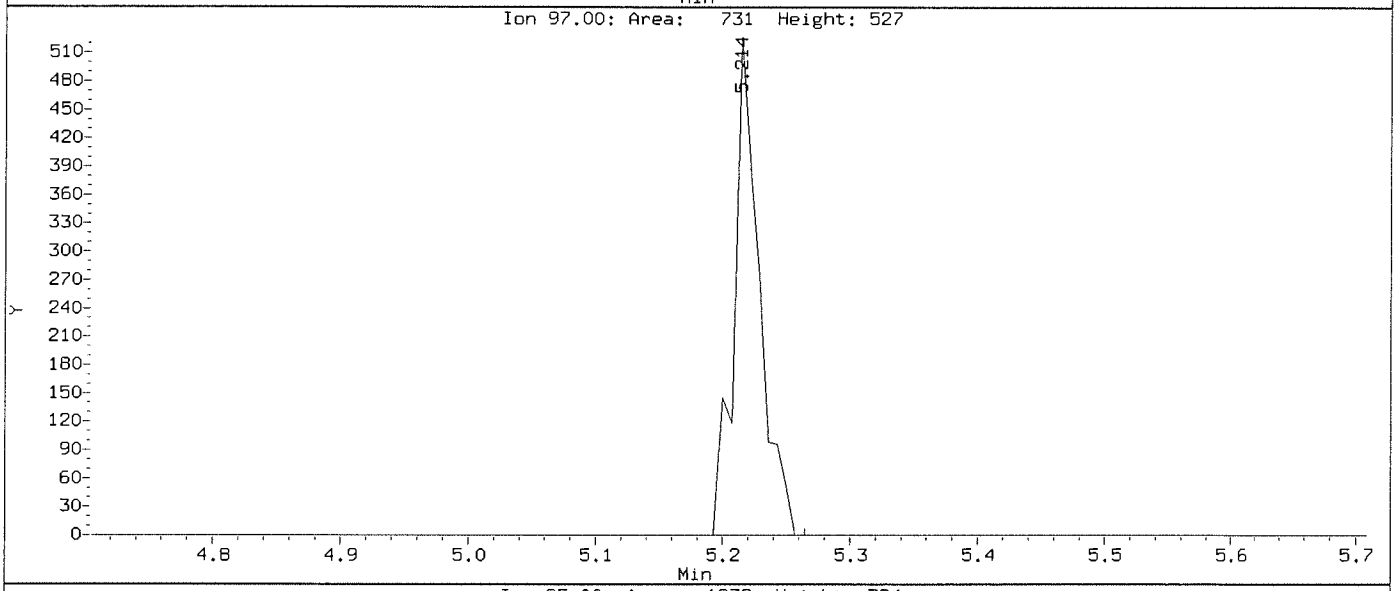


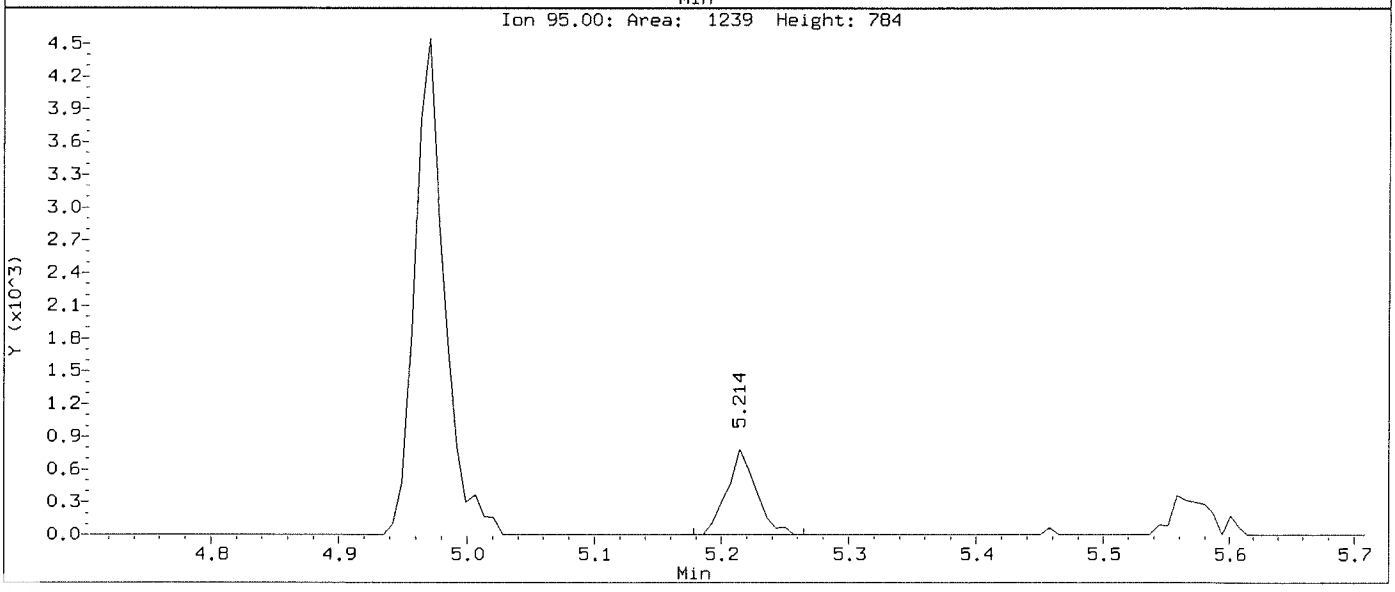


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Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Trichloroethene
CAS Number: 79-01-6

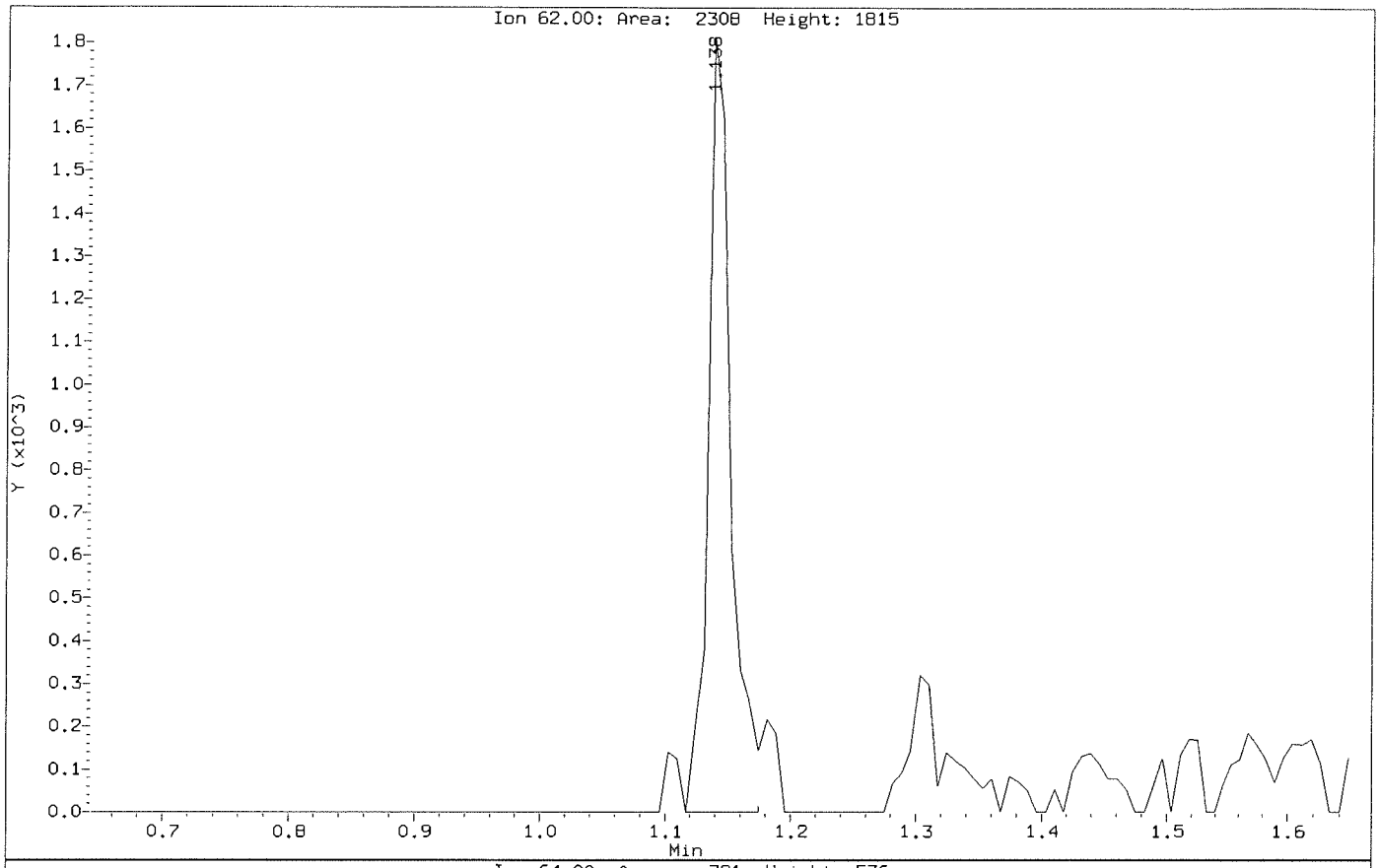


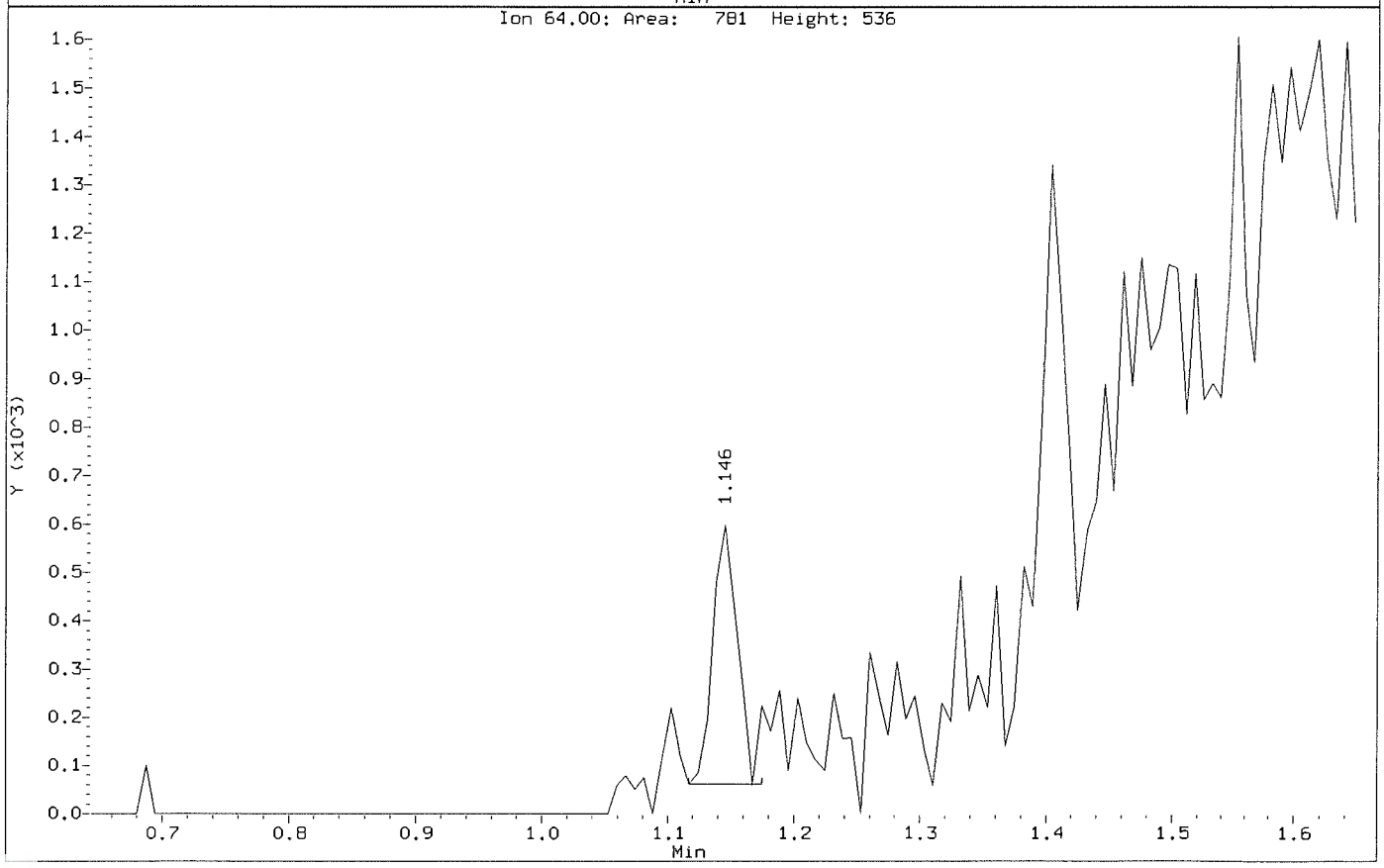




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Instrument: voa6.i
Client Sample ID: VSTD000.5

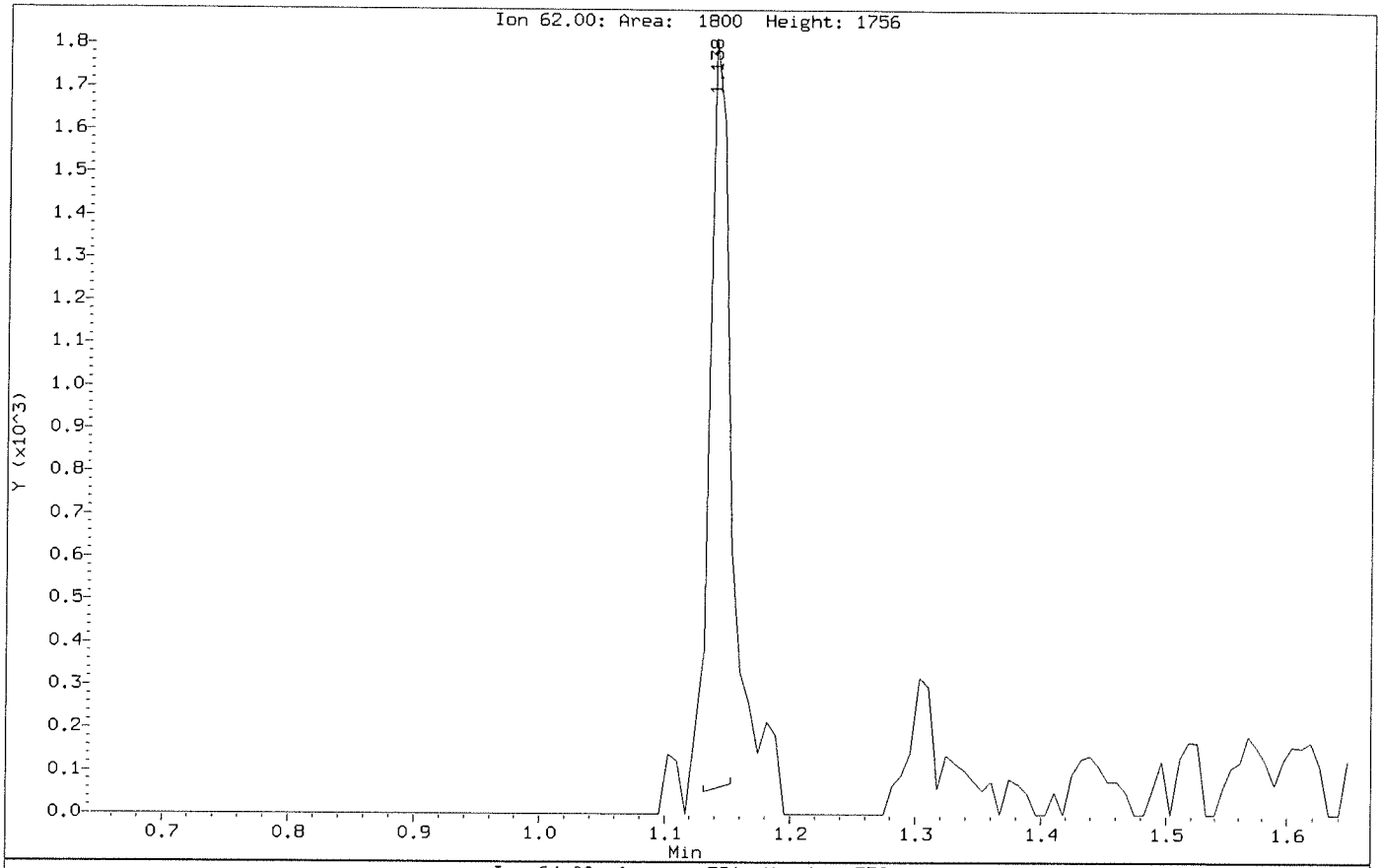
Compound: Vinyl Chloride
CAS Number: 75-01-4

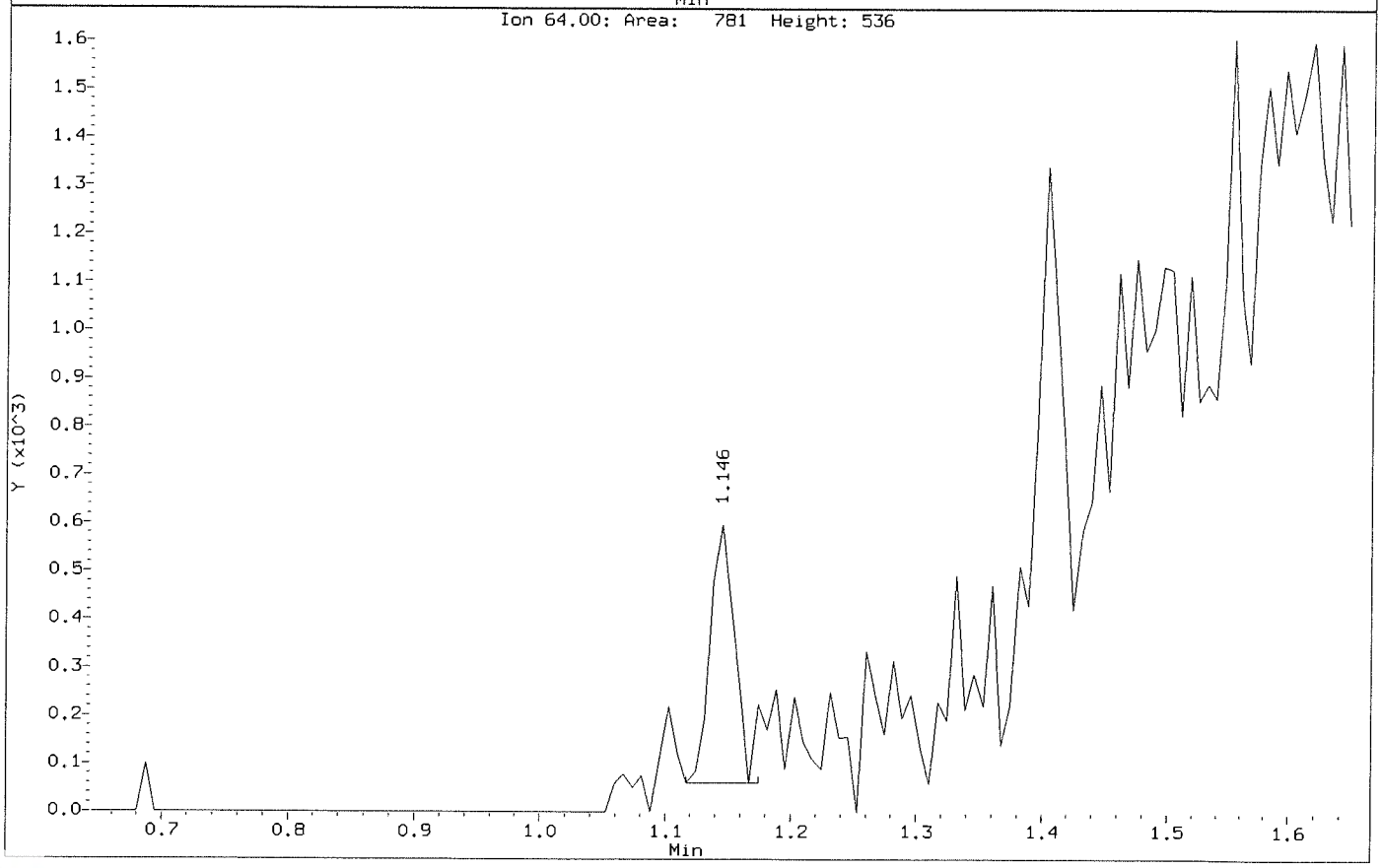




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Injection Date: 03-NOV-2020 12:43
Instrument: voa6.i
Client Sample ID: VSTD000.5

Compound: Vinyl Chloride
CAS Number: 75-01-4





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110304.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 03-NOV-2020 13:04
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:10 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 12:43 Cal File: X110303.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

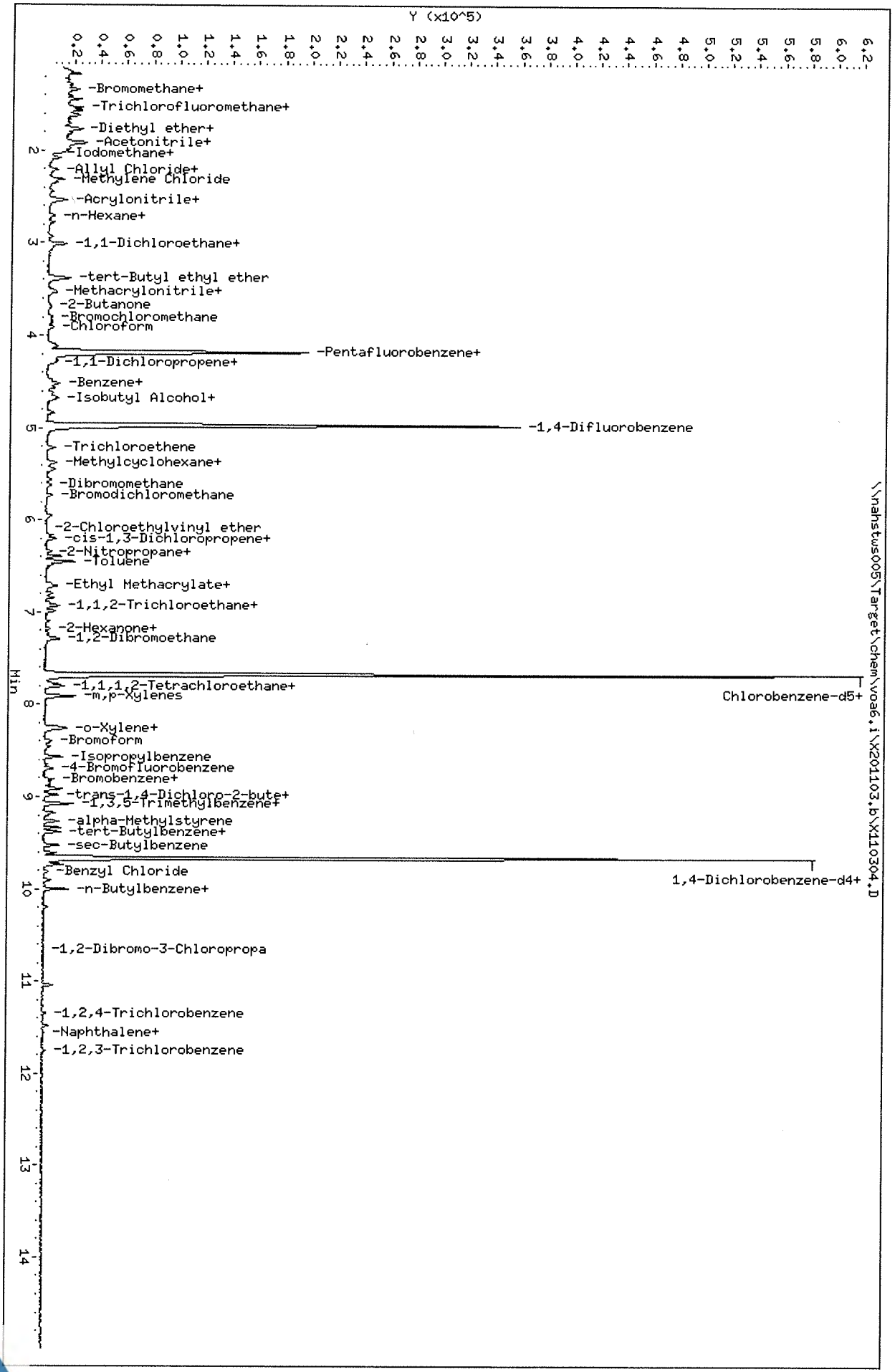
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	140540	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	259506	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	246266	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	105397	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	1960	1.00000	1.03(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	2593	1.00000	0.74(TaM)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	6340	1.00000	0.96(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	2114	1.00000	1.29(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1911	1.00000	1.08(a)
31 1,1,1-Trichloroethane	97	4.096	4.096	(0.979)	2711	1.00000	0.92(a)
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	1837	1.00000	0.47(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1596	1.00000	1.05(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	3433	1.00000	1.01(Ta)
11 1,1-Dichloroethene	96	1.926	1.926	(0.461)	2918	1.00000	1.10(aM)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	2429	1.00000	1.00(a)
93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	511	1.00000	2.86(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	1686	1.00000	1.13(aMH)
90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.175)	1196	1.00000	3.12(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	5576	1.00000	0.94(a)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	69	1.00000	0.25(aM)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	1923	1.00000	1.04(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	2862	1.00000	0.98(a)

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110304.D Page 2
Report Date: 07-Nov-2020 12:10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.569	4.569	(0.919)	3106	1.00000	1.11(aM)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	1987	1.00000	1.03(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	5780	1.00000	0.96(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	3420	1.00000	1.10(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	3155	1.00000	1.04(a)
84	1,4-Dichlorobenzene	146	9.691	9.691	(1.003)	3457	1.00000	1.07(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	3084	1.00000	1.06(a)
24	2-Butanone	43	3.631	3.631	(0.868)	1288	2.00000	1.97(aM)
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	5281	1.00000	1.06(a)
52	2-Hexanone	43	7.226	7.226	(0.942)	2282	2.00000	5.02
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	5926	1.00000	0.94(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	5368	1.00000	0.94(a)
45	4-Methyl-2-Pentanone	43	6.345	6.345	(0.827)	3233	2.00000	1.72(a)
10	Acetone	43	1.969	1.969	(0.471)	3869	2.00000	(aM)
37	Benzene	78	4.519	4.519	(0.909)	7894	1.00000	1.08(a)
74	Bromobenzene	156	8.809	8.809	(0.912)	2171	1.00000	1.17(a)
29	Bromochloromethane	128	3.803	3.803	(0.909)	1019	1.00000	1.05(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	2575	1.00000	0.96(aM)
66	Bromoform	173	8.423	8.423	(1.098)	772	1.00000	3.70(aM)
6	Bromomethane	94	1.338	1.338	(0.320)	2749	1.00000	1.05(aM)
19	Carbon Disulfide	76	2.076	2.076	(0.497)	10025	2.00000	2.03(a)
34	Carbon Tetrachloride	117	4.275	4.275	(0.860)	2614	1.00000	1.12(aM)
59	Chlorobenzene	112	7.692	7.692	(1.003)	5993	1.00000	1.13(a)
7	Chloroethane	64	1.403	1.403	(0.336)	2747	1.00000	1.24(aM)
28	Chloroform	83	3.917	3.917	(0.937)	3452	1.00000	0.95(a)
3	Chloromethane	50	1.081	1.081	(0.258)	2614	1.00000	2.16(aM)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	1838	1.00000	0.89(a)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	2882	1.00000	0.99(a)
55	Dibromochloromethane	129	7.183	7.183	(0.937)	1663	1.00000	0.91(a)
44	Dibromomethane	93	5.565	5.565	(1.120)	1182	1.00000	0.90(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	1836	1.00000	1.00(a)
61	Ethylbenzene	106	7.800	7.800	(1.017)	2944	1.00000	1.10(aH)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	486	1.00000	3.14(aM)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	7329	1.00000	3.46(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	5943	2.00000	1.85(a)
17	Methylene Chloride	84	2.305	2.305	(0.551)	2145	1.00000	1.11(a)
87	n-Butylbenzene	91	9.999	9.999	(1.035)	5444	1.00000	4.39(a)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	8035	1.00000	0.95(a)
92	Naphthalene	128	11.560	11.560	(1.196)	1364	1.00000	3.21(a)
63	o-Xylene	106	8.244	8.244	(1.075)	2891	1.00000	0.90(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	7265	1.00000	3.59(a)
64	Styrene	104	8.265	8.265	(1.078)	4725	1.00000	0.88(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	4630	1.00000	3.41(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	1480	1.00000	1.09(a)
50	Toluene	91	6.453	6.453	(0.841)	10292	1.00000	1.14(aM)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	1705	1.00000	0.97(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	2250	1.00000	0.88(a)
38	Trichloroethene	130	5.206	5.206	(1.048)	1646	1.00000	0.95(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	5994	1.00000	1.13(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	3389	1.00000	1.09(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.

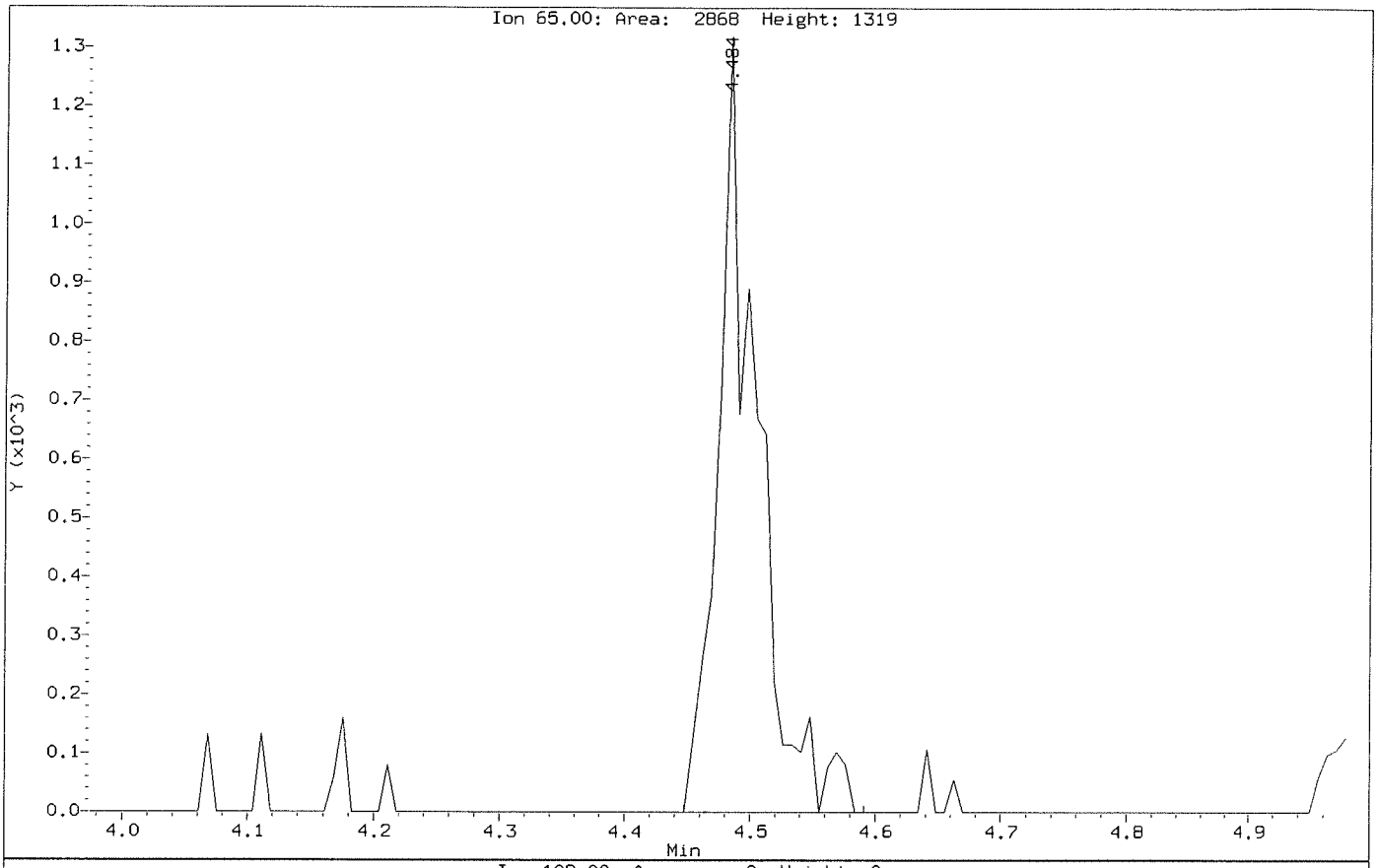


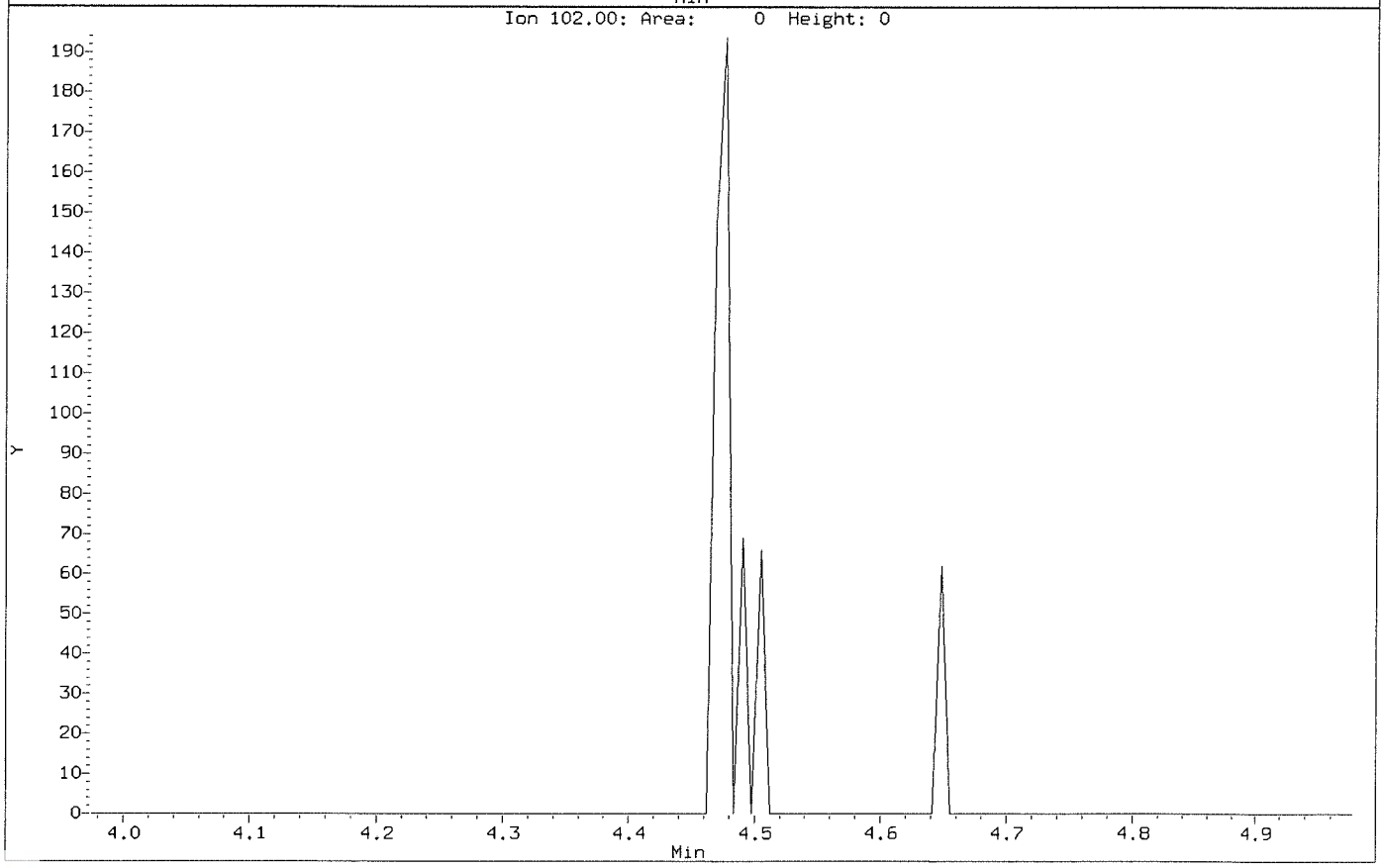
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Date : 03-NOV-2020 13:04
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110304.D
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Instrument: voa6.i
Client Sample ID: VSTD001

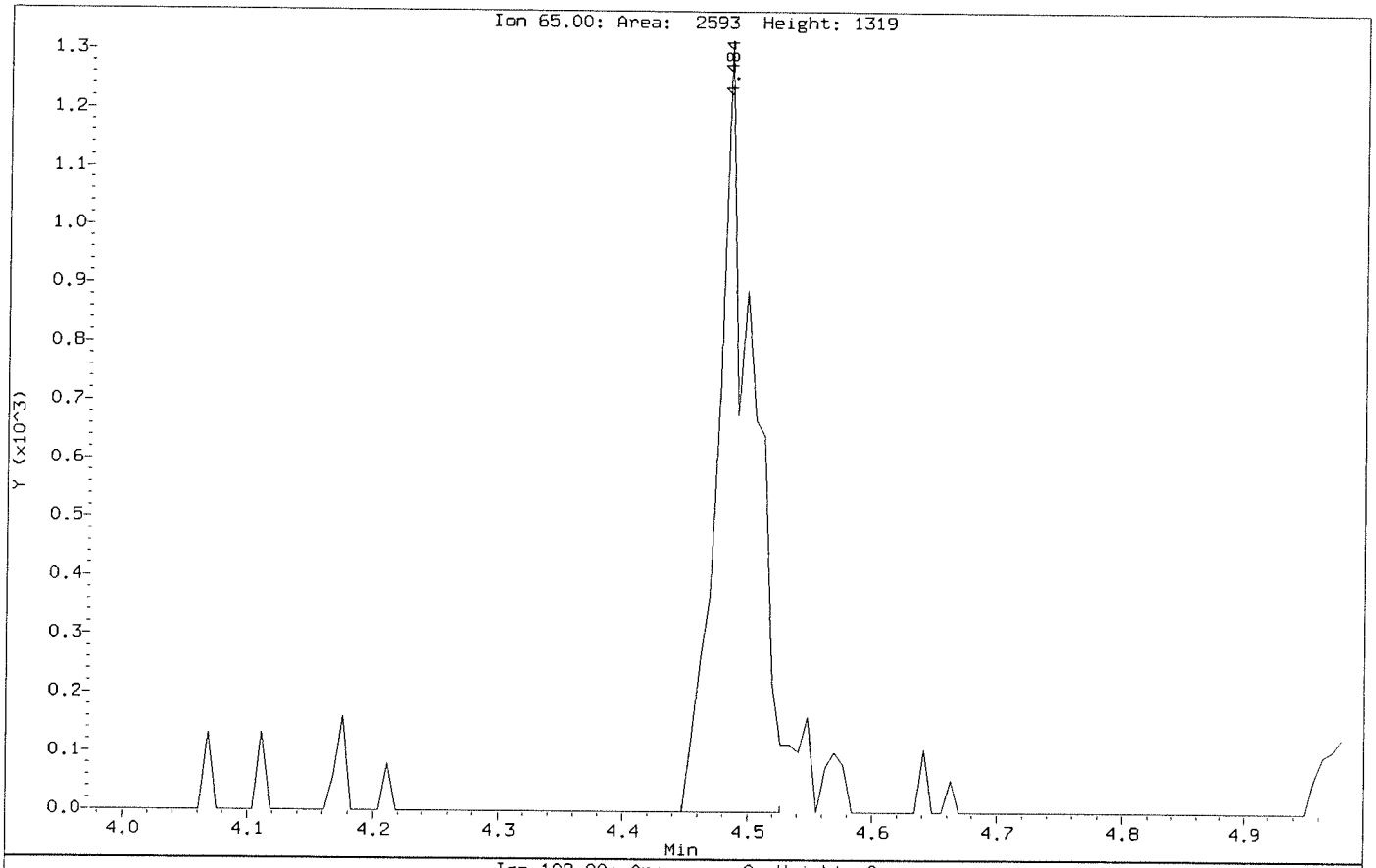
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CAS Number: 17060-07-0

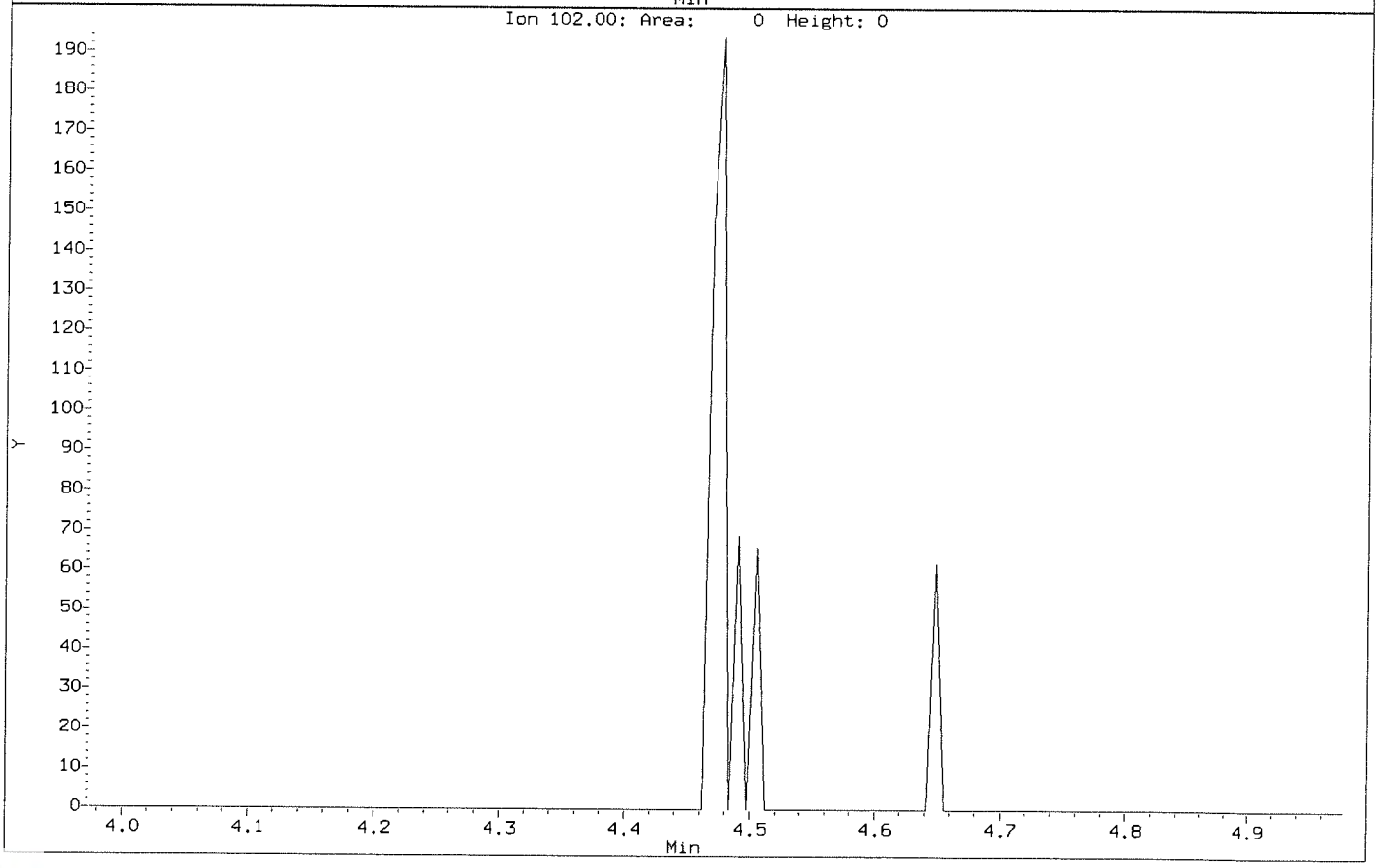




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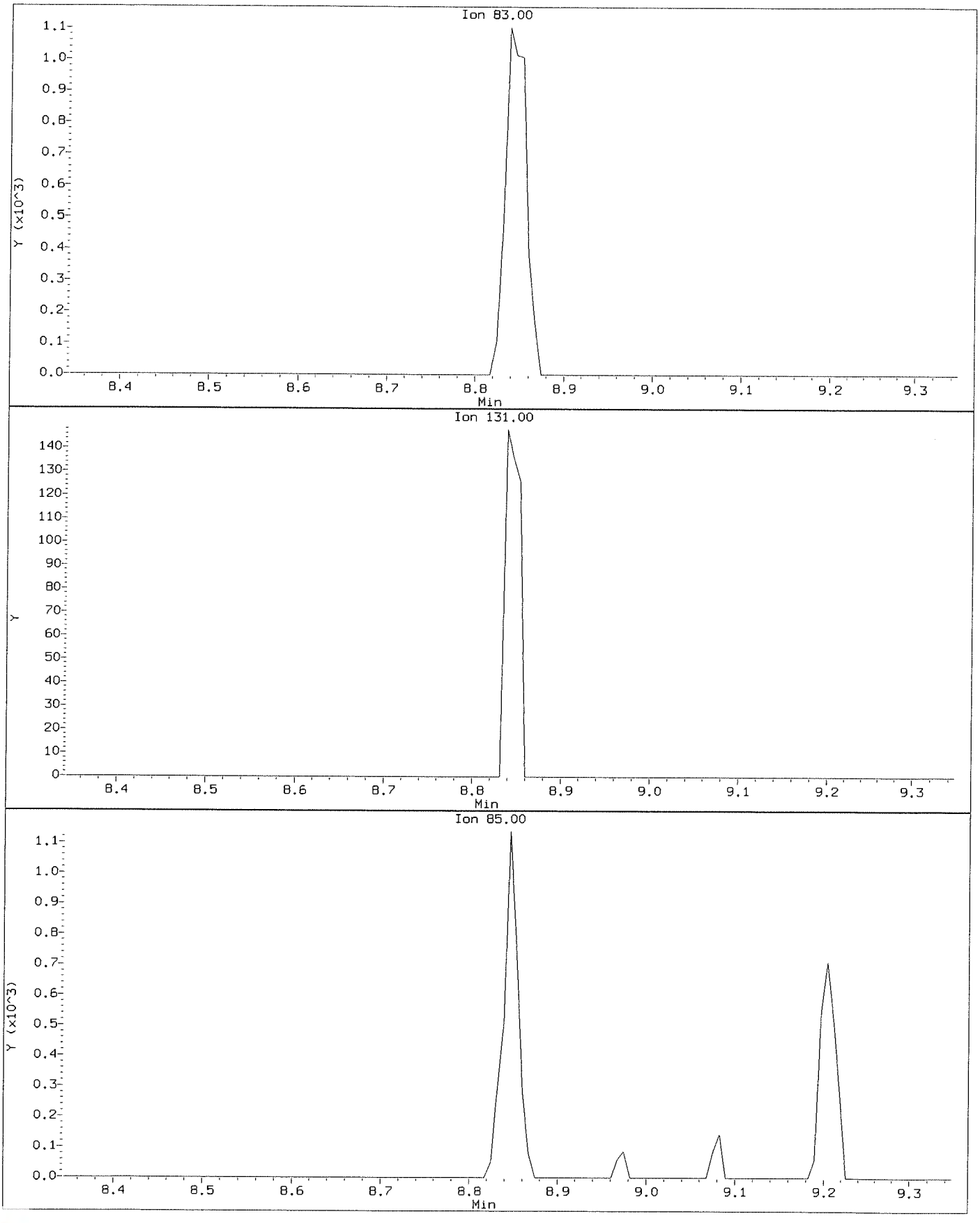
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CAS Number: 17060-07-0





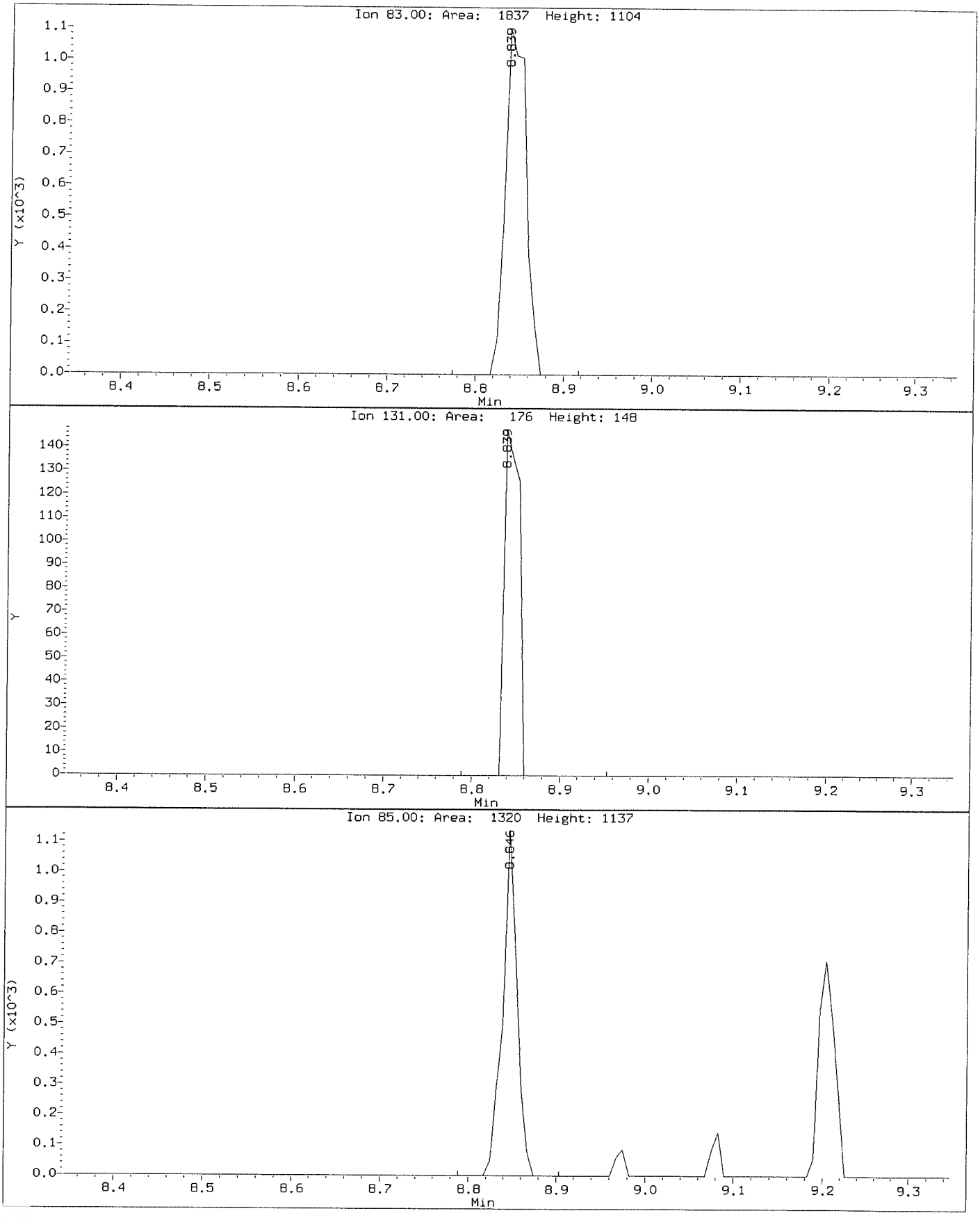
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Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



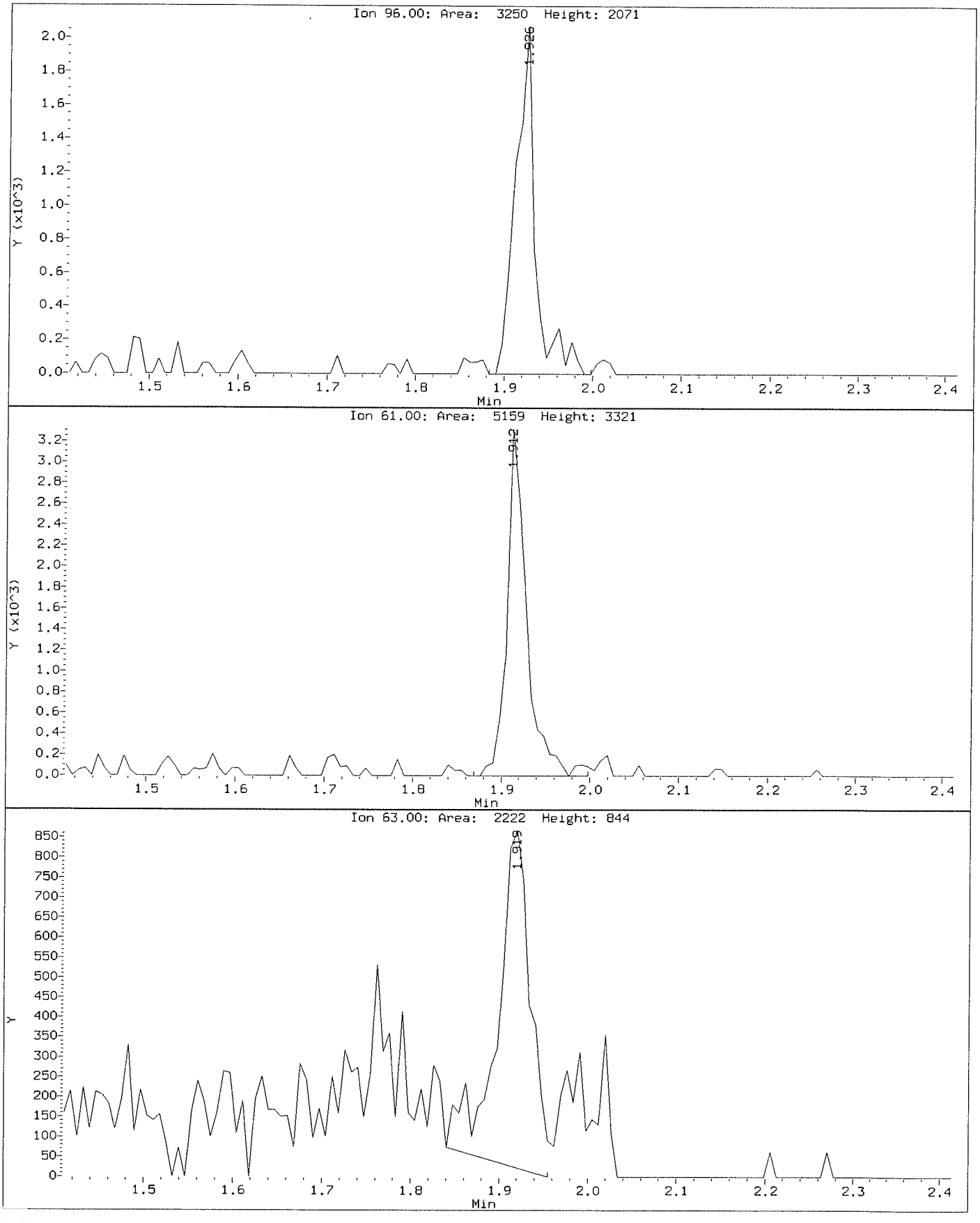
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Client Sample ID: VSTD001

Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



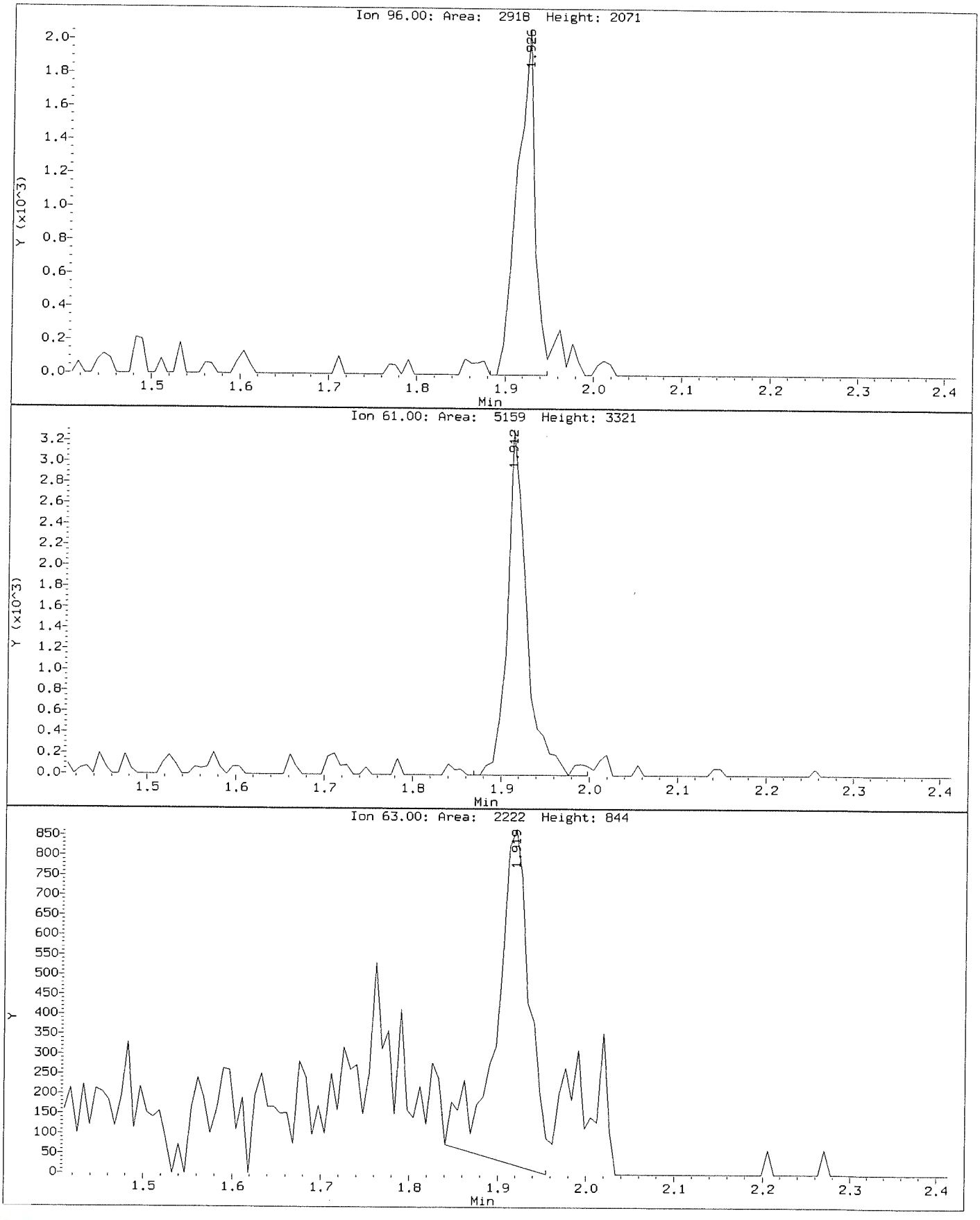
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Client Sample ID: VSTD001

Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



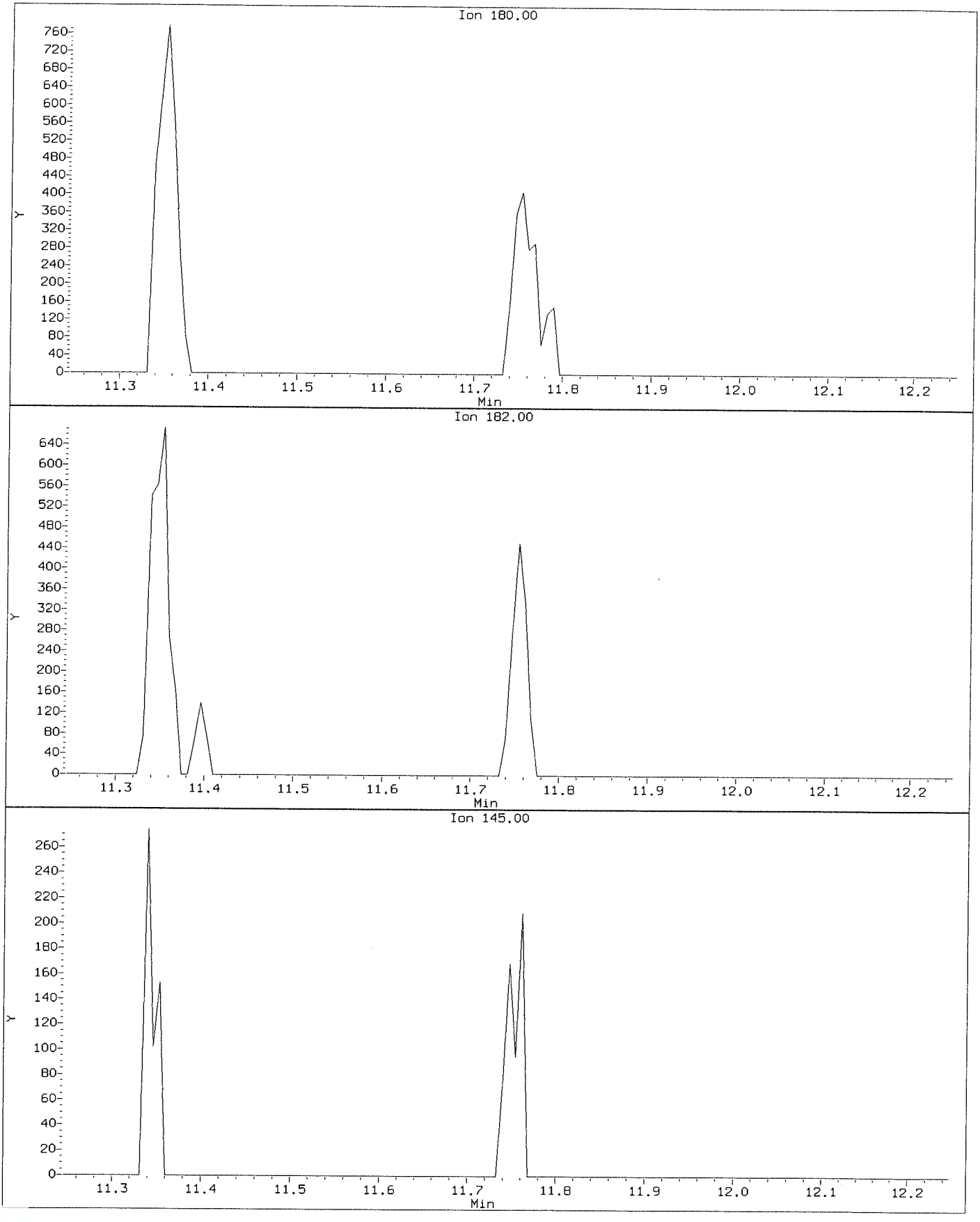
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Compound: 1,1-Dichloroethene
CAS Number: 75-35-4



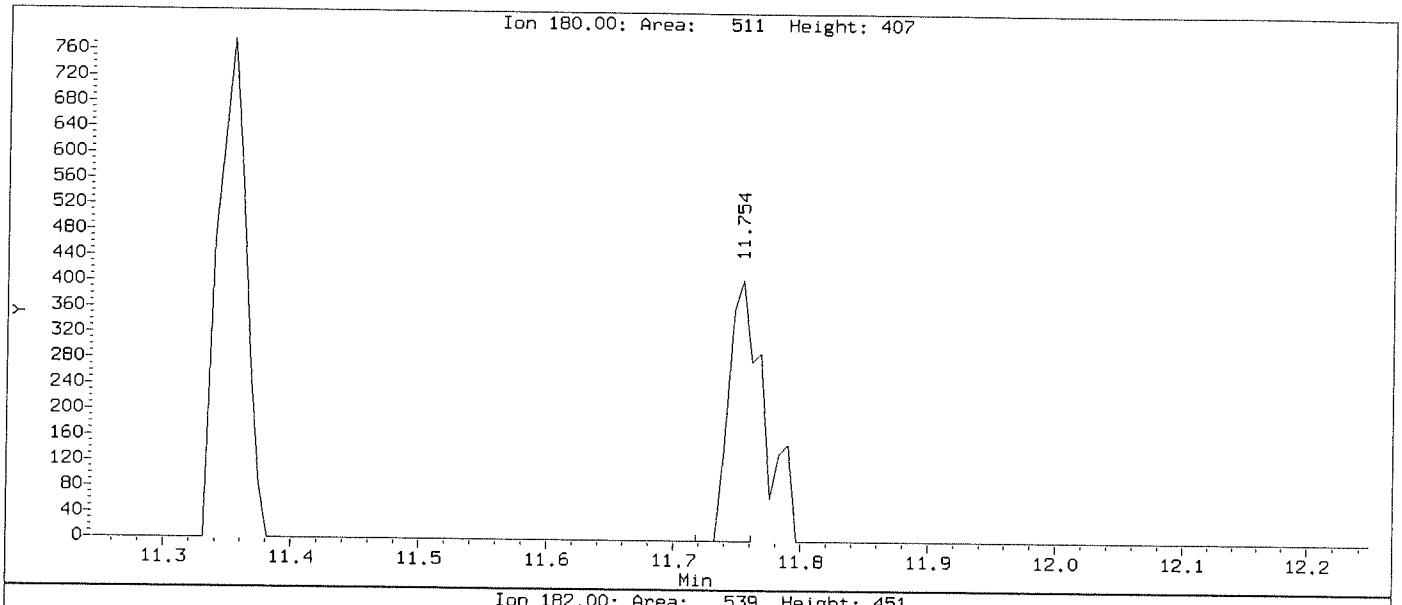
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Instrument: voa6.i
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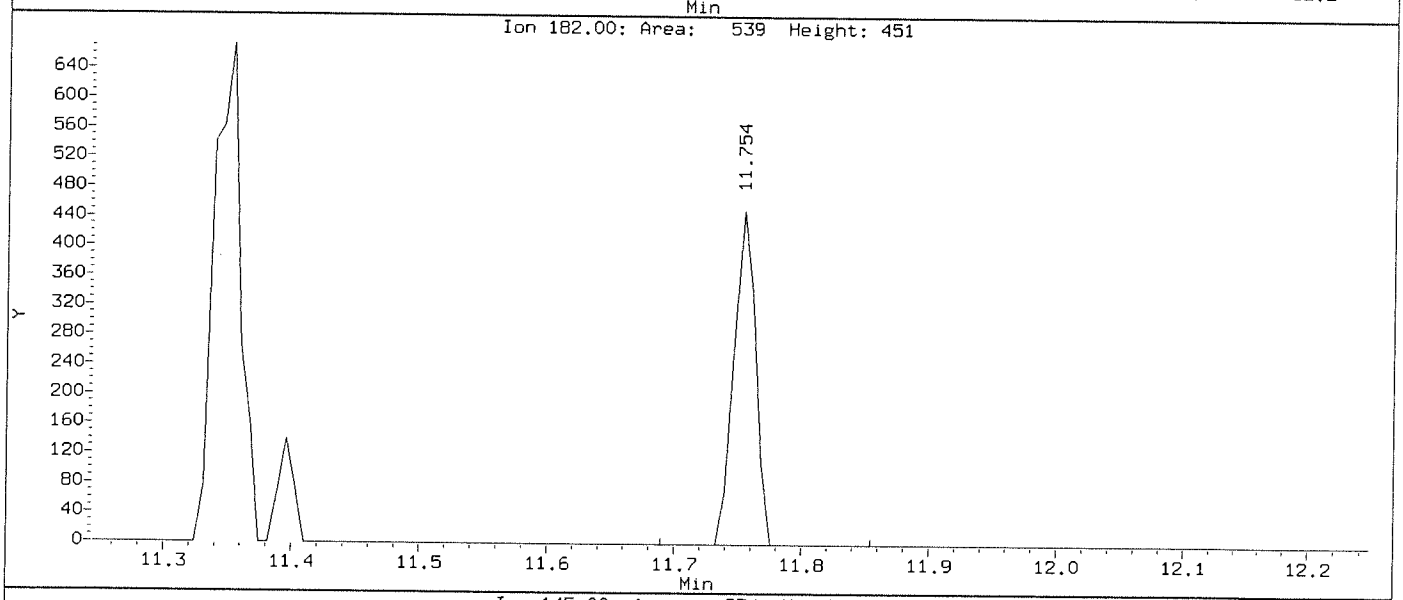
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

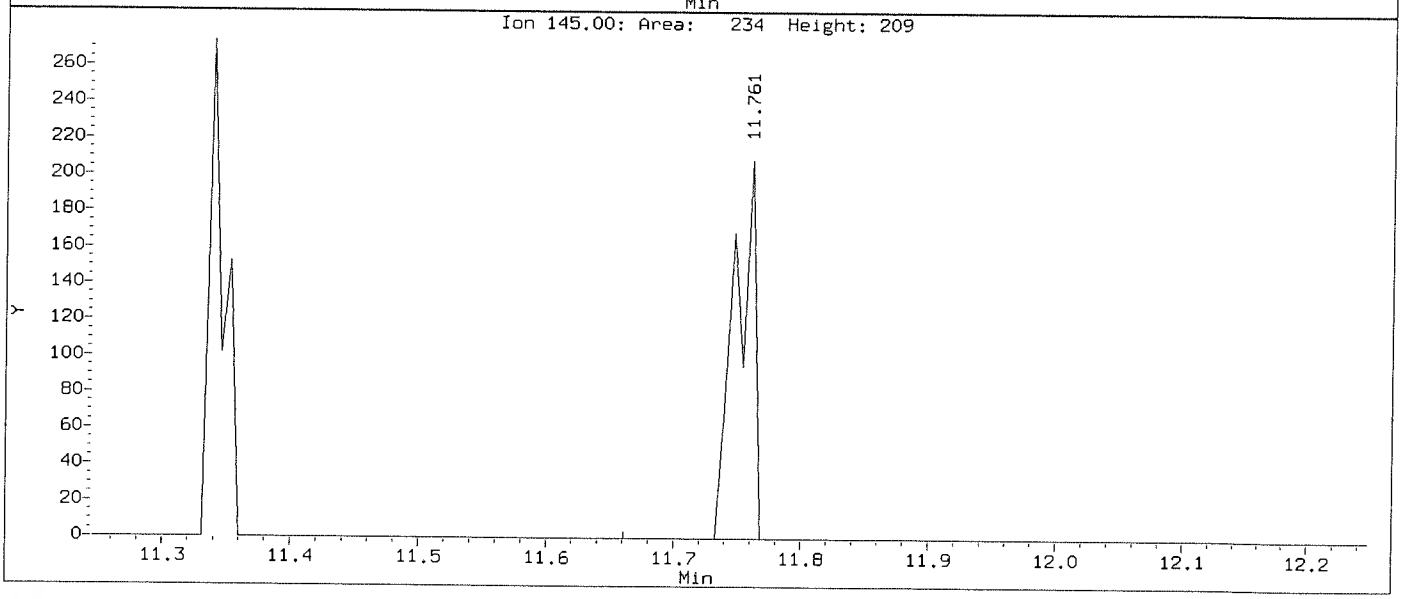


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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6

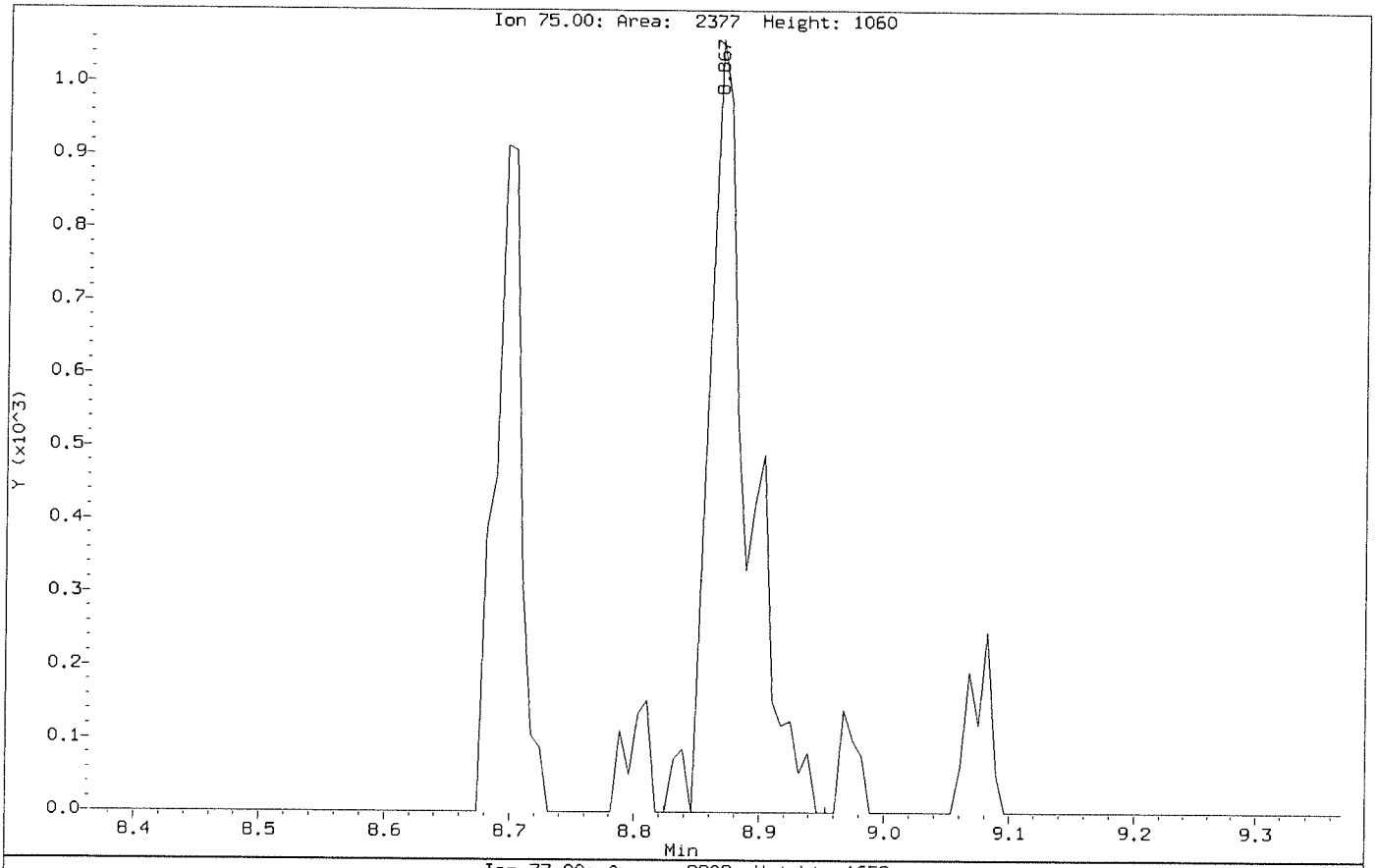


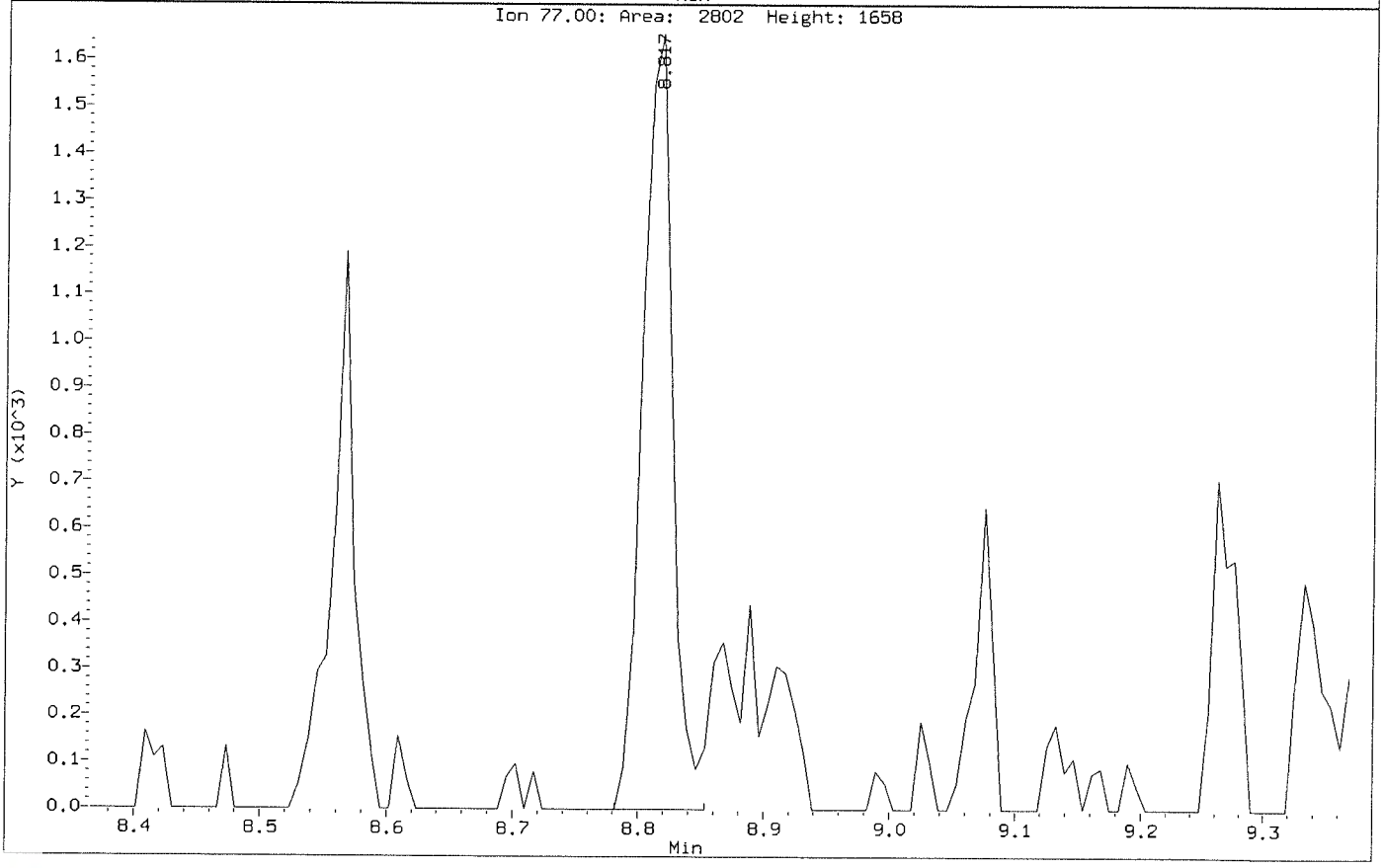




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Instrument: voa6.i
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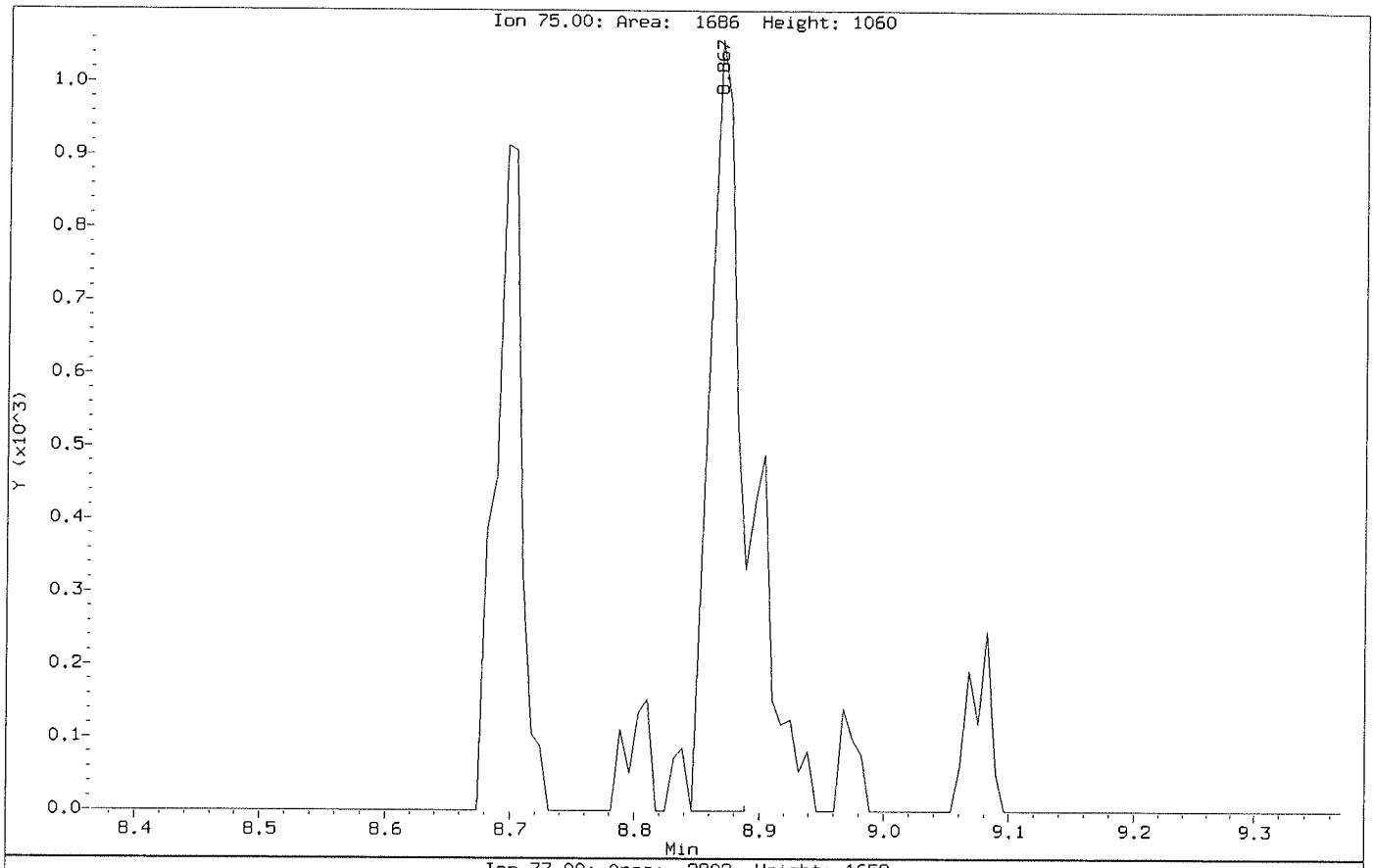
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

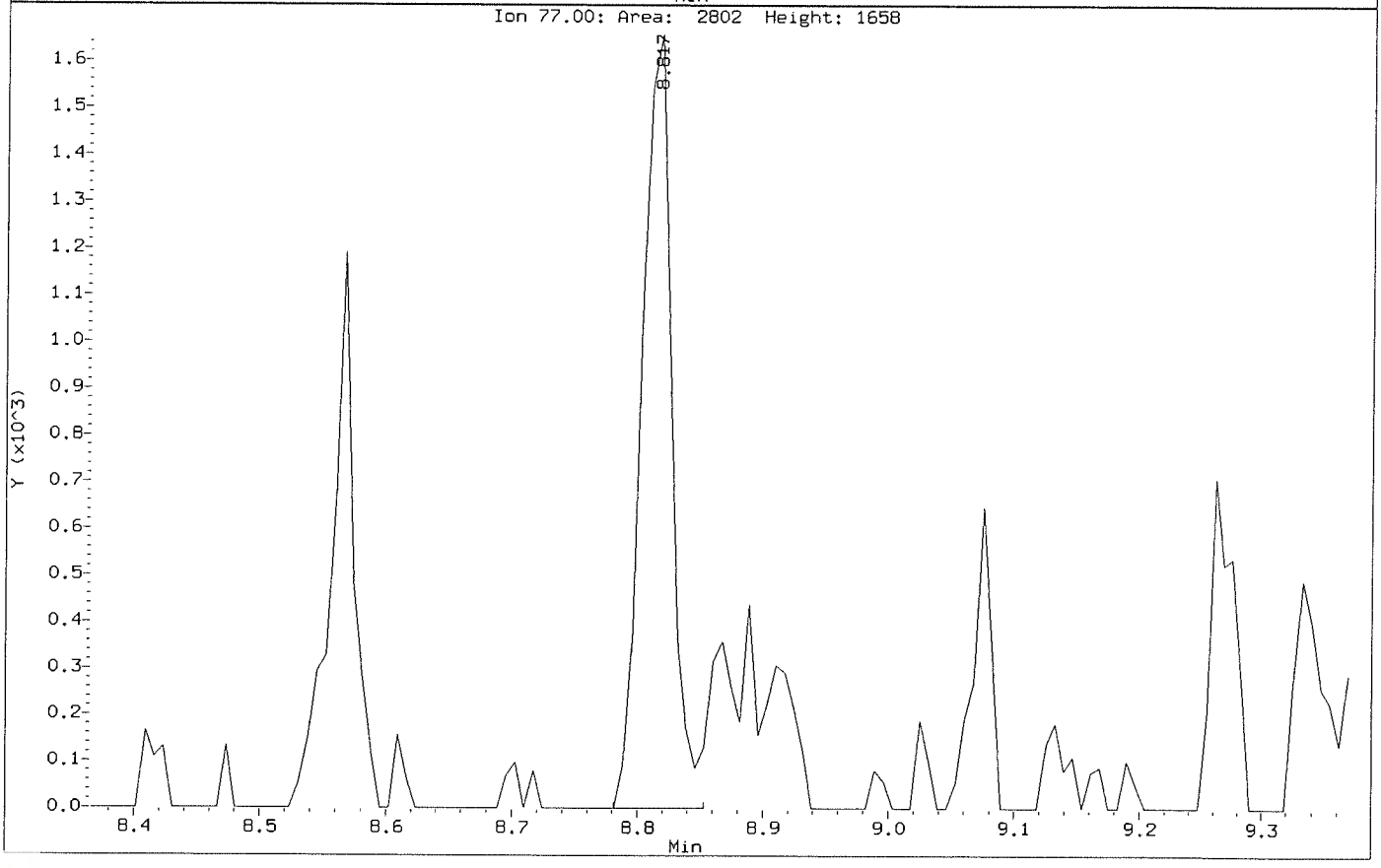




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Instrument: voa6.i
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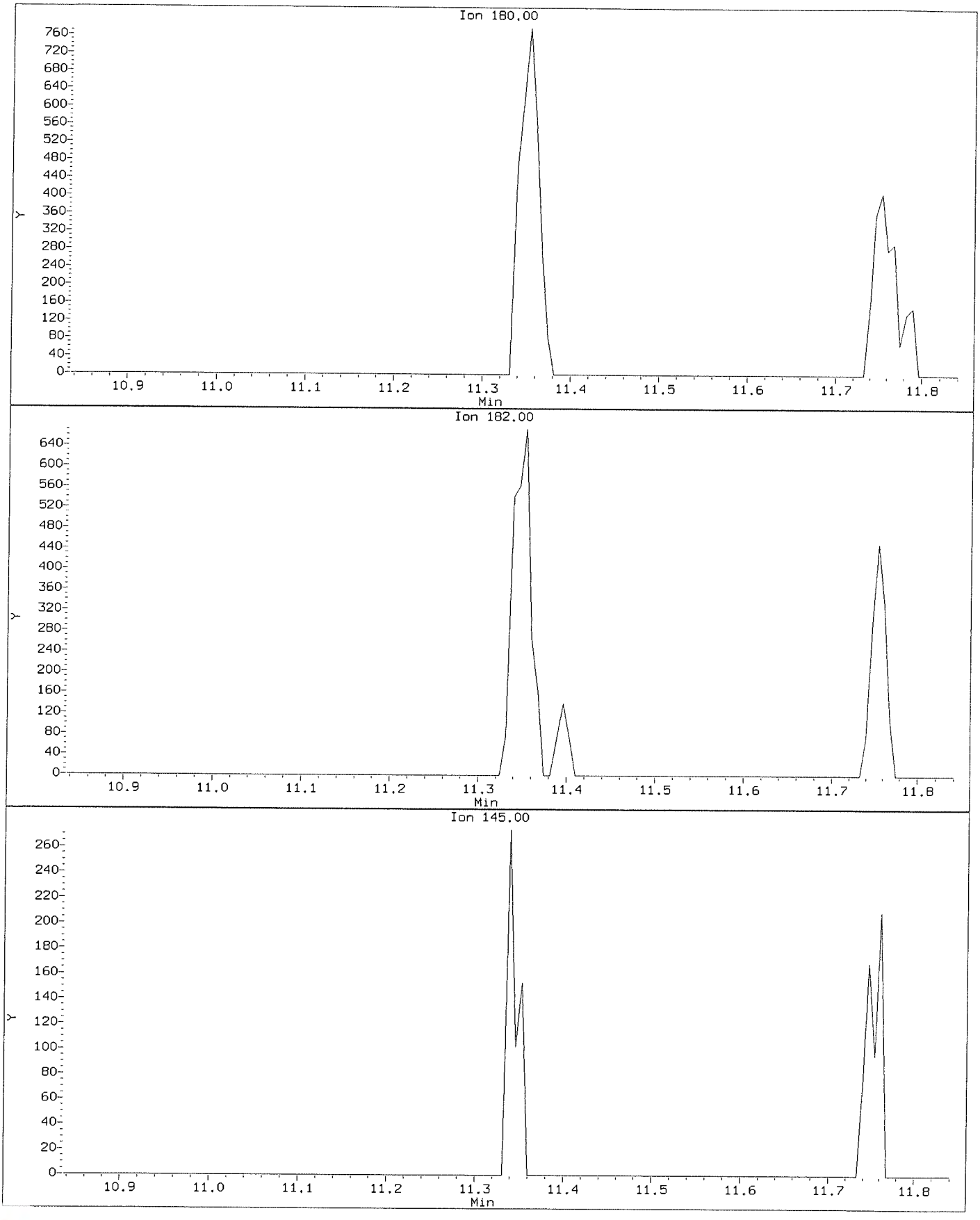
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





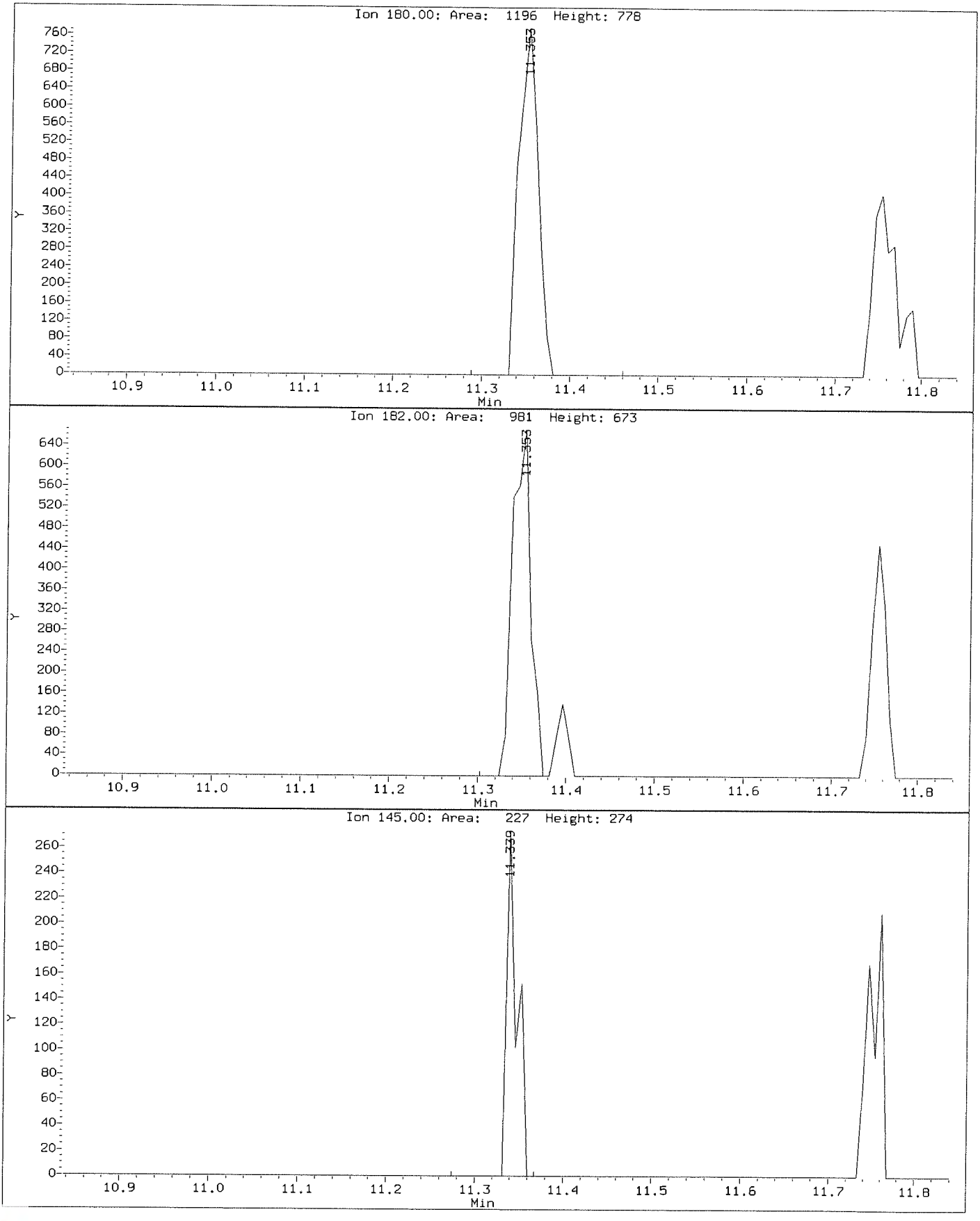
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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



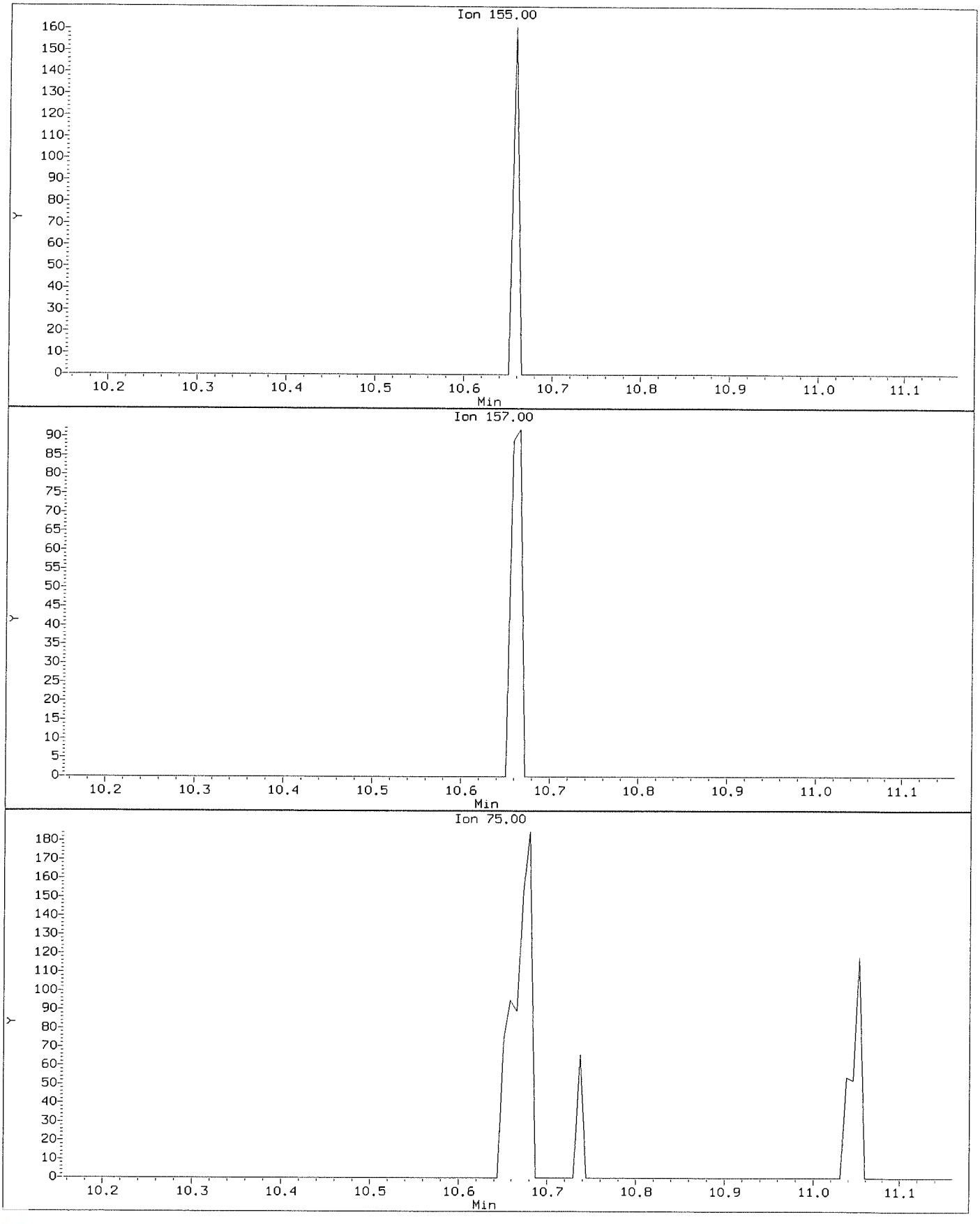
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



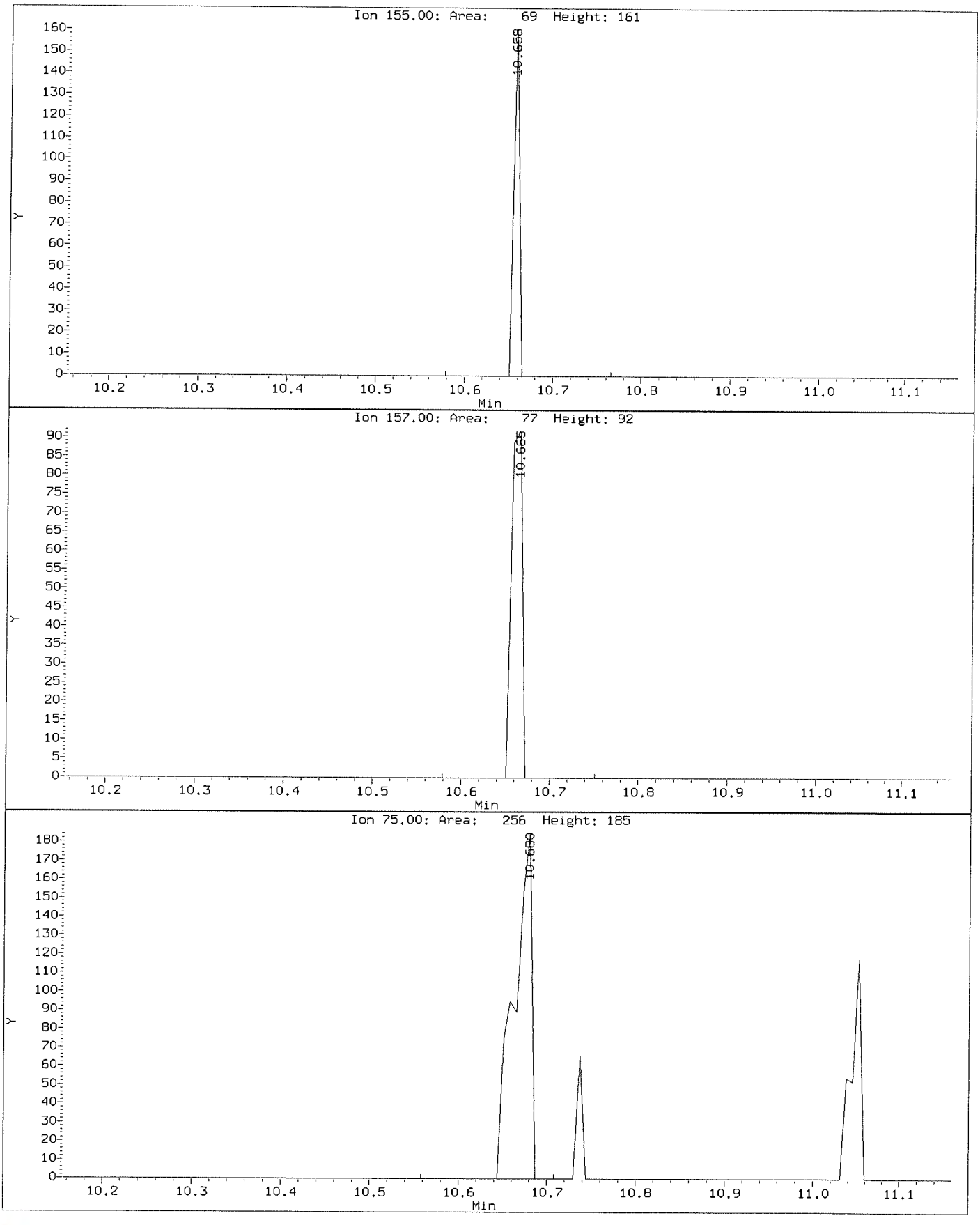
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Instrument: voa6.i
Client Sample ID: VSTD001

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



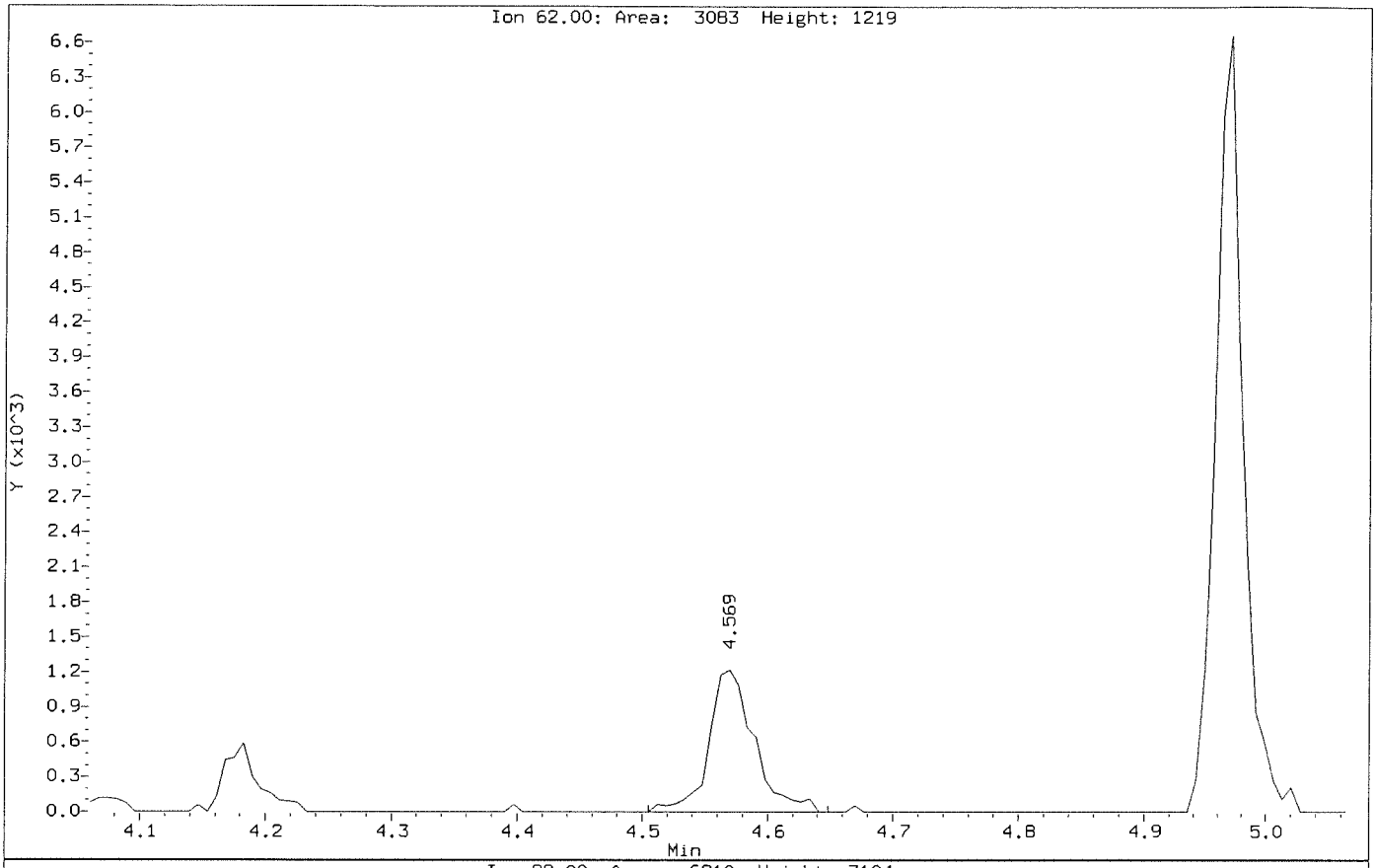
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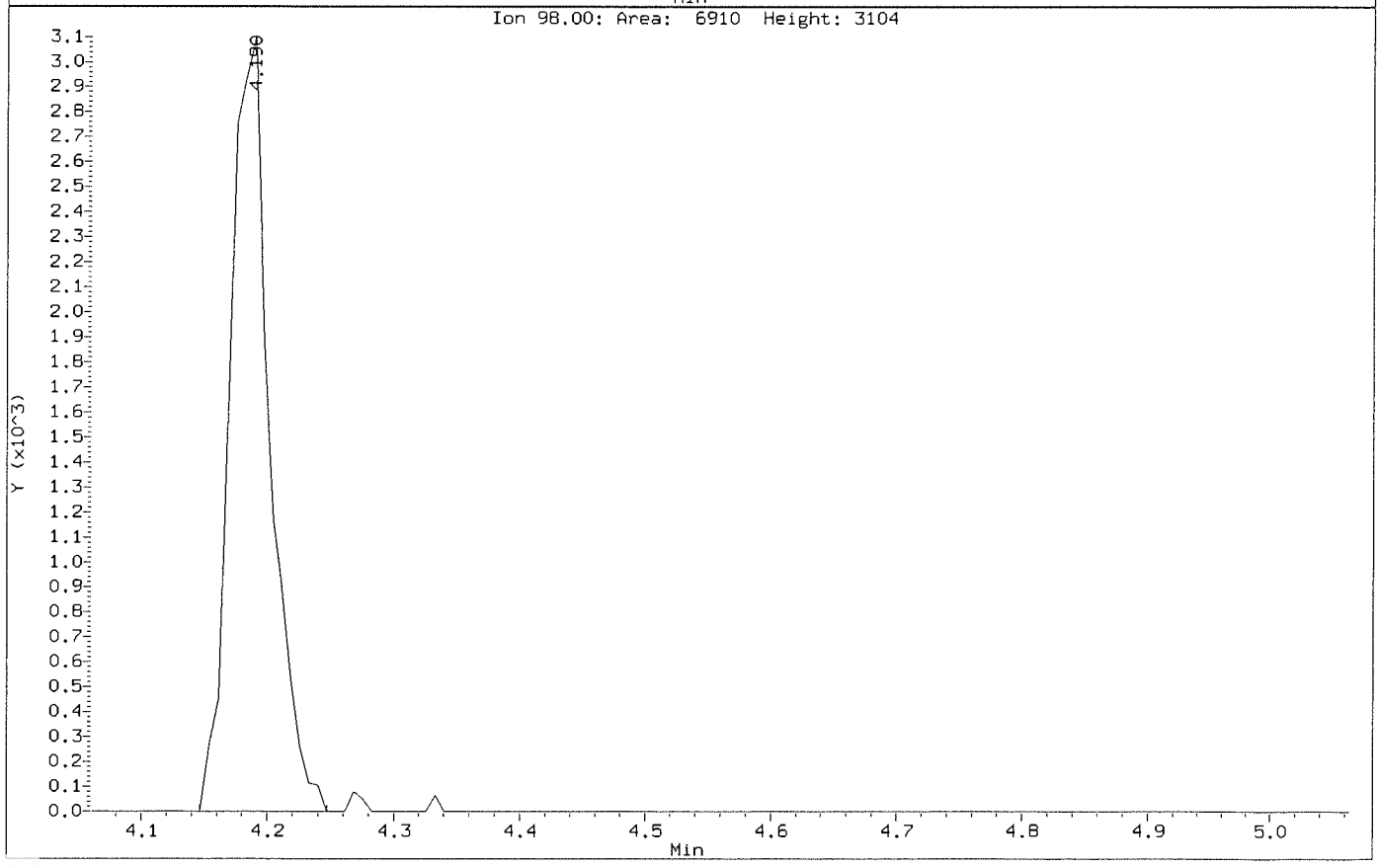
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Client Sample ID: VSTD001

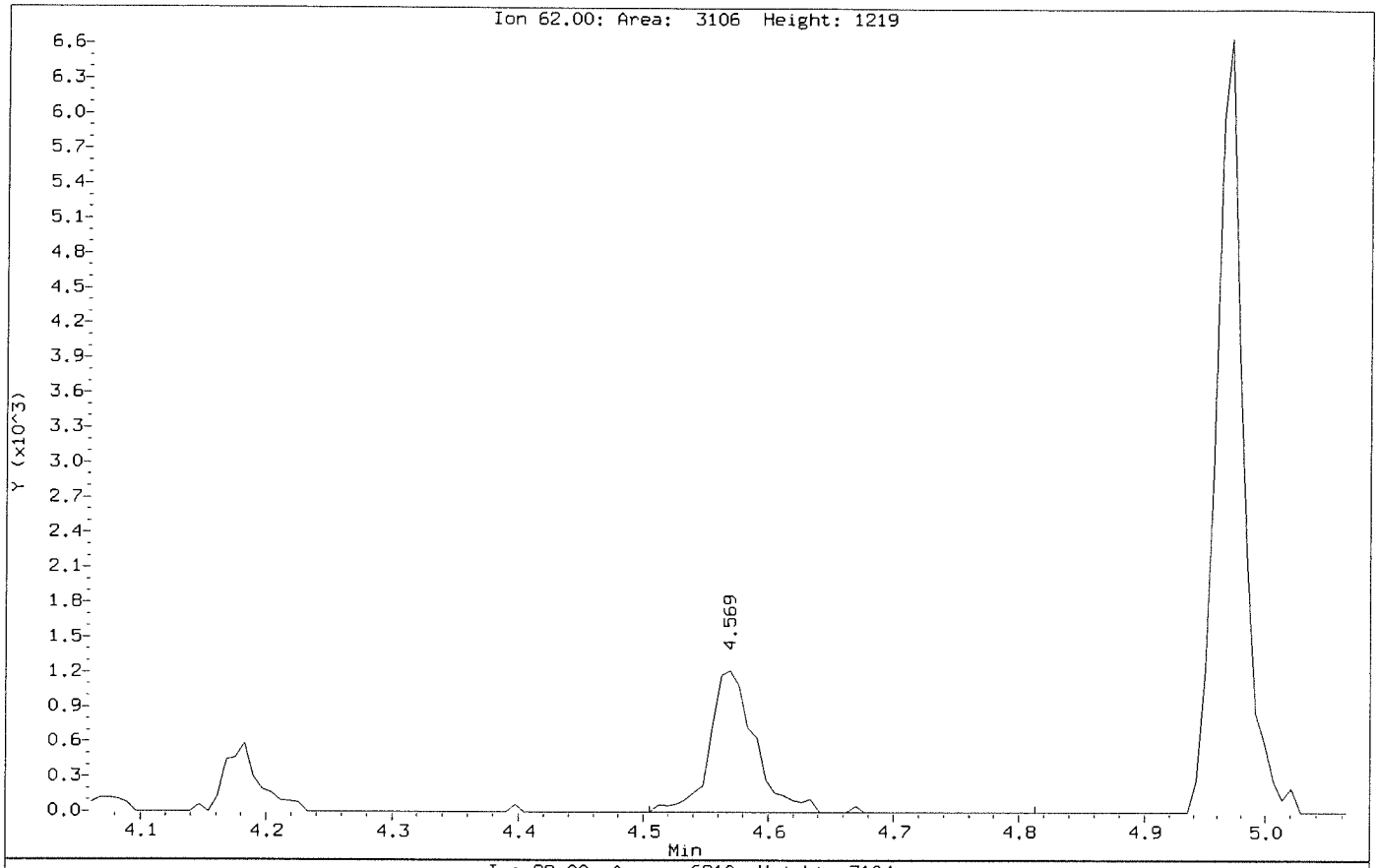
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

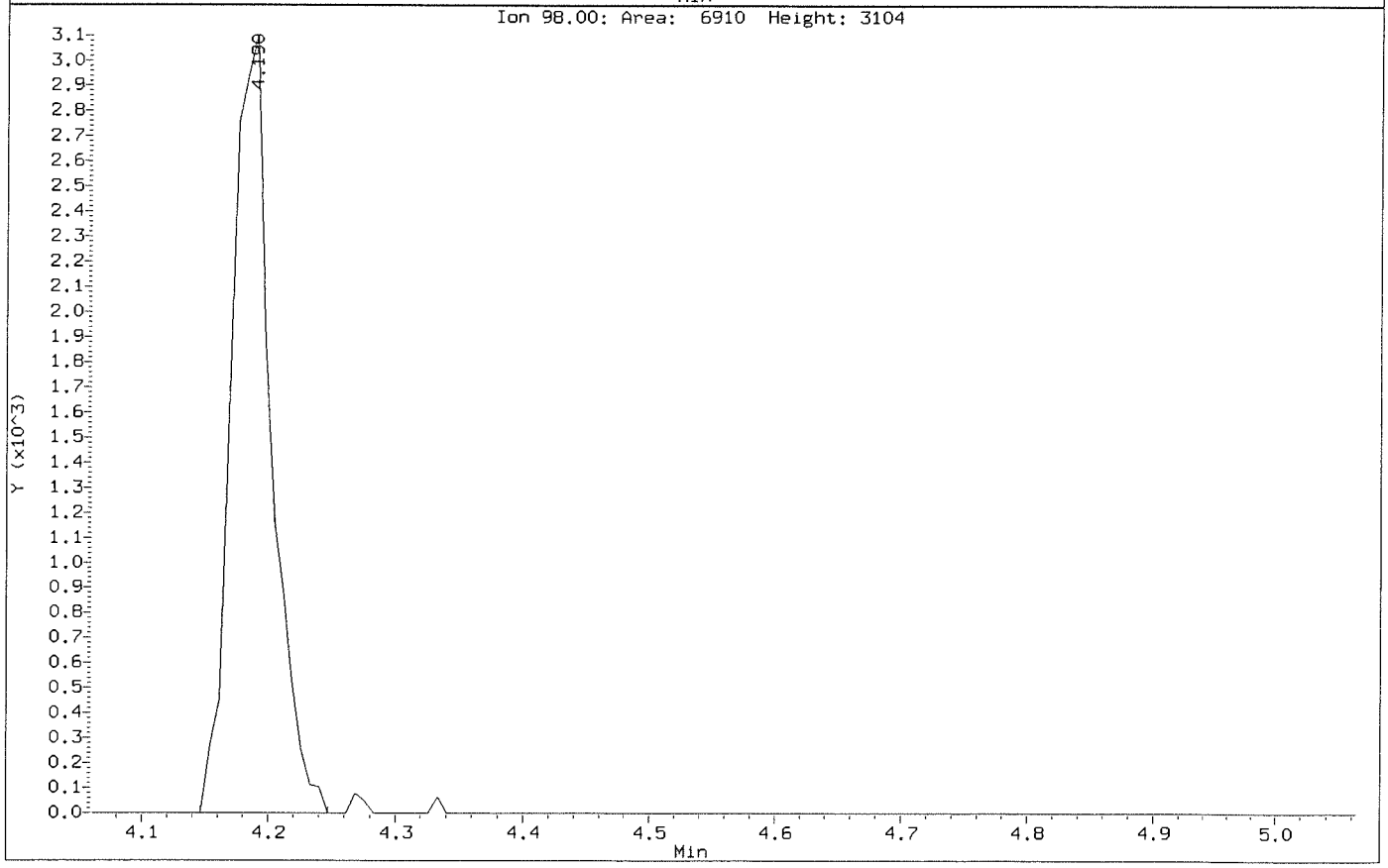




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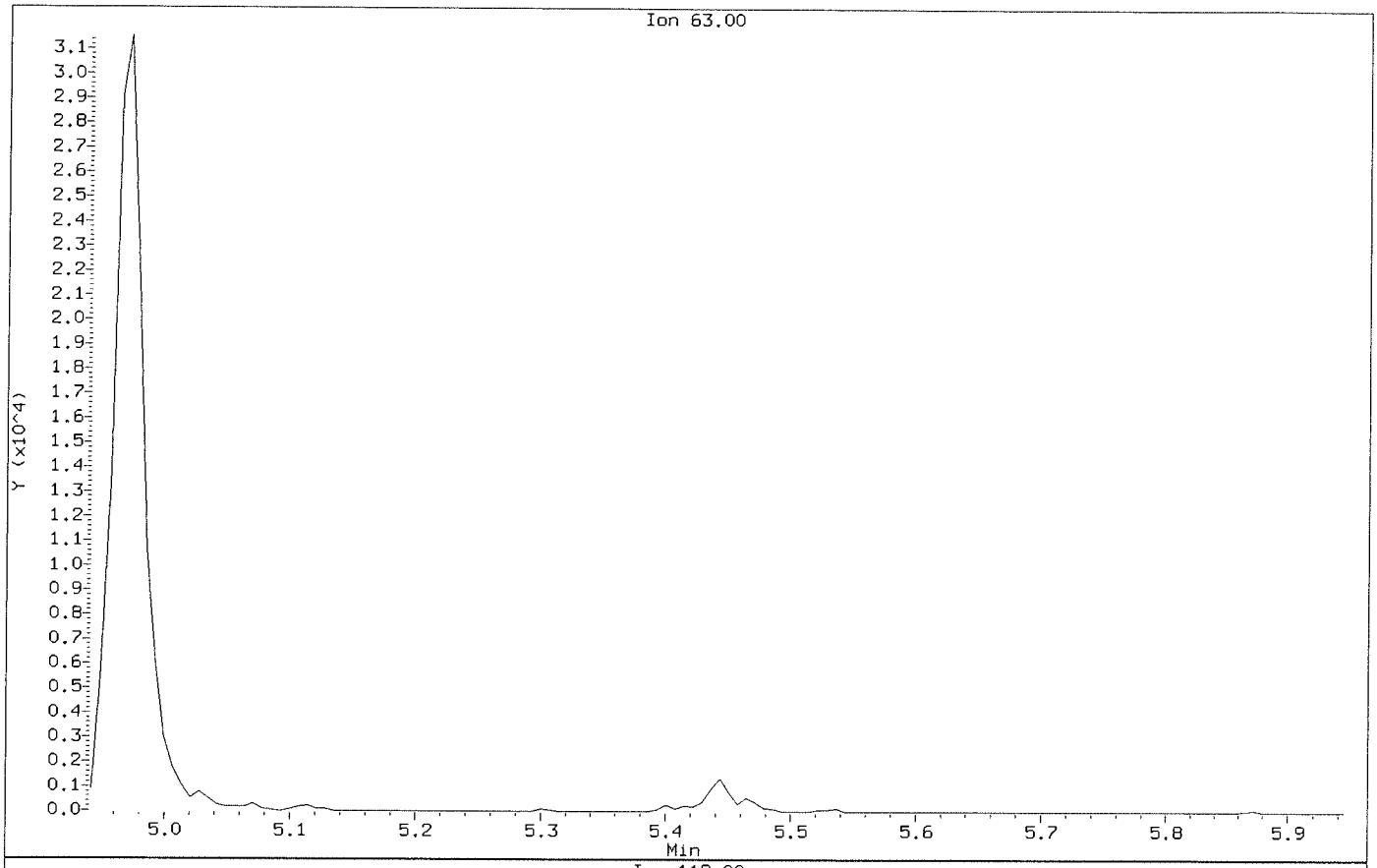
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

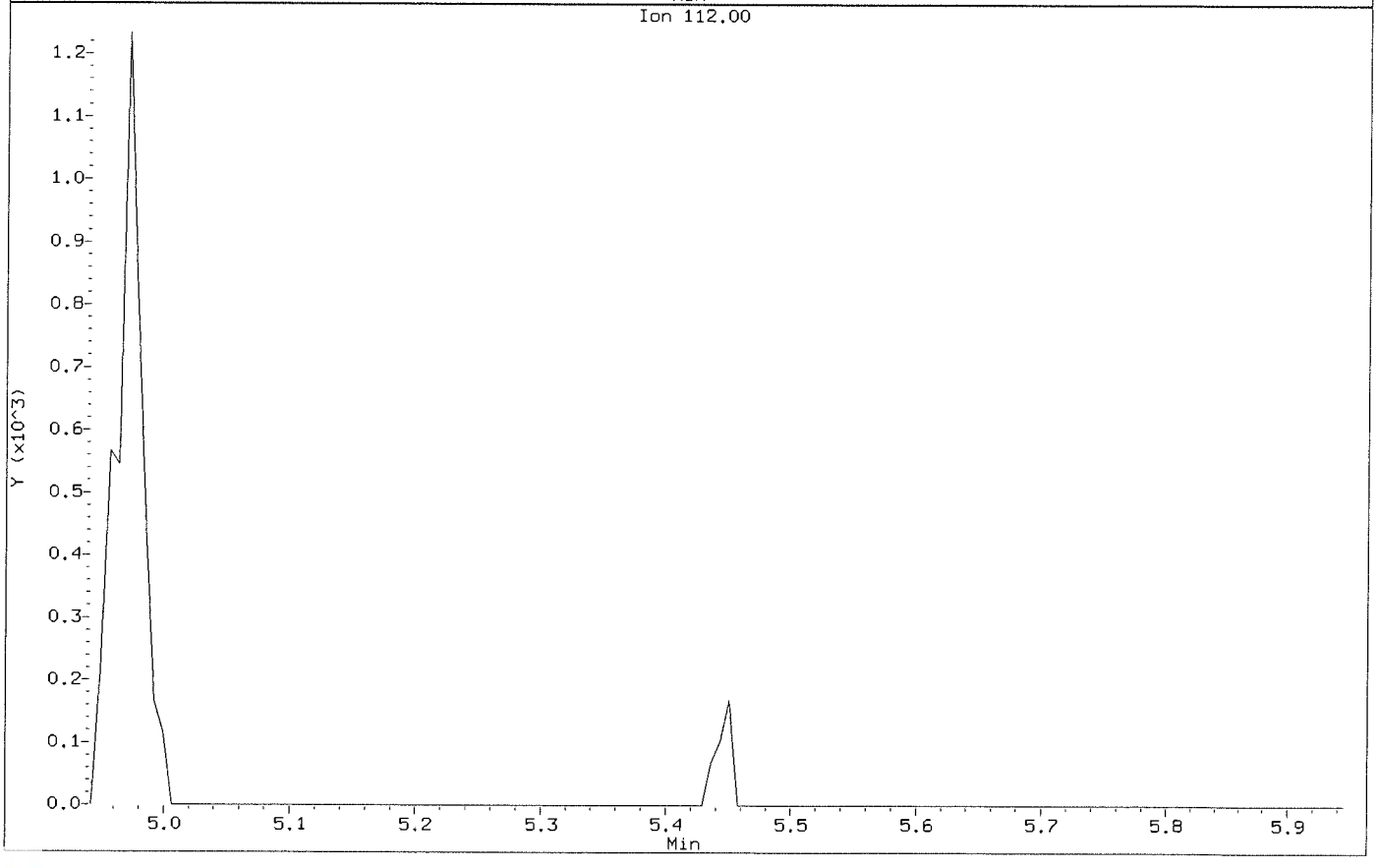




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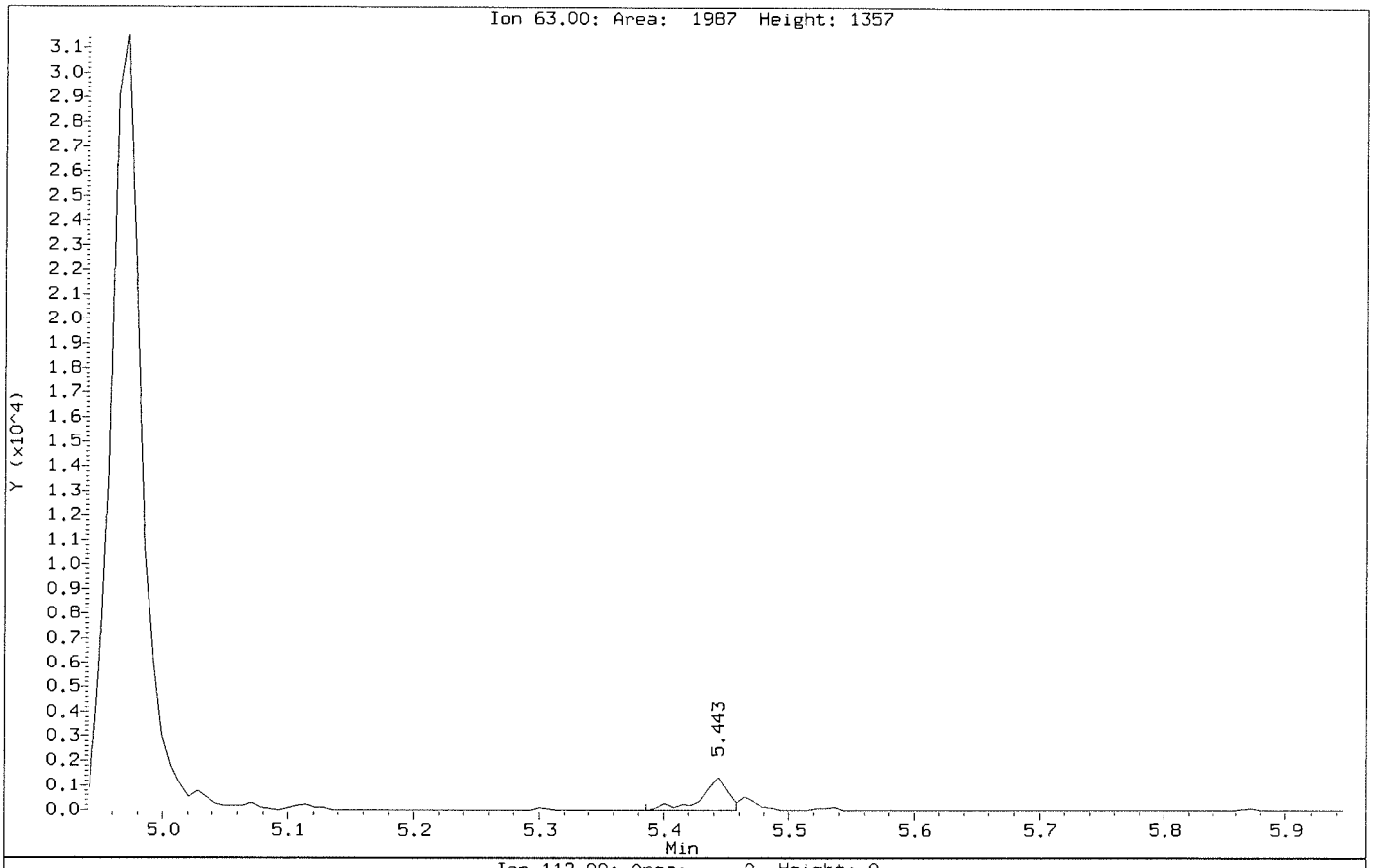
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CAS Number: 78-87-5

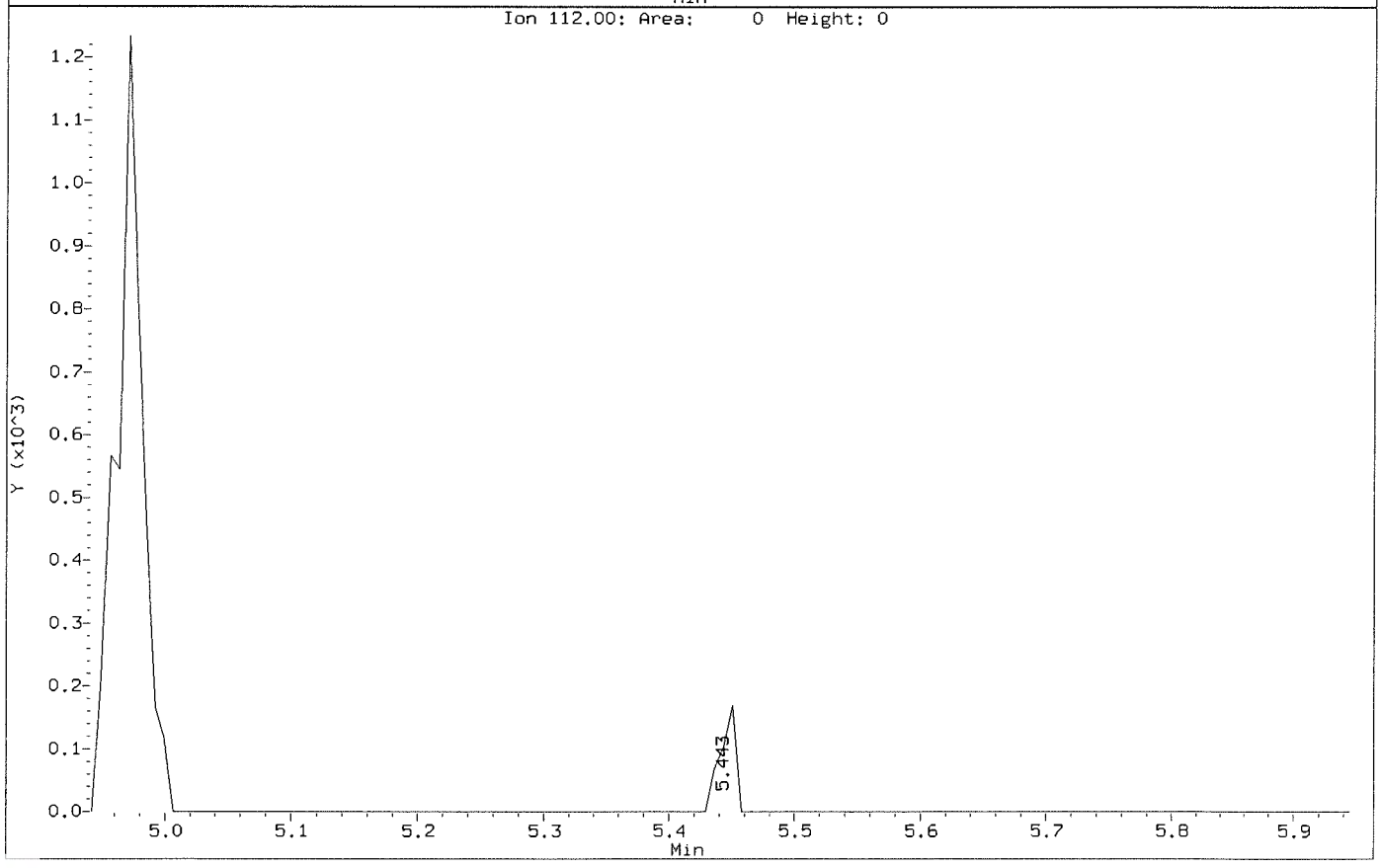




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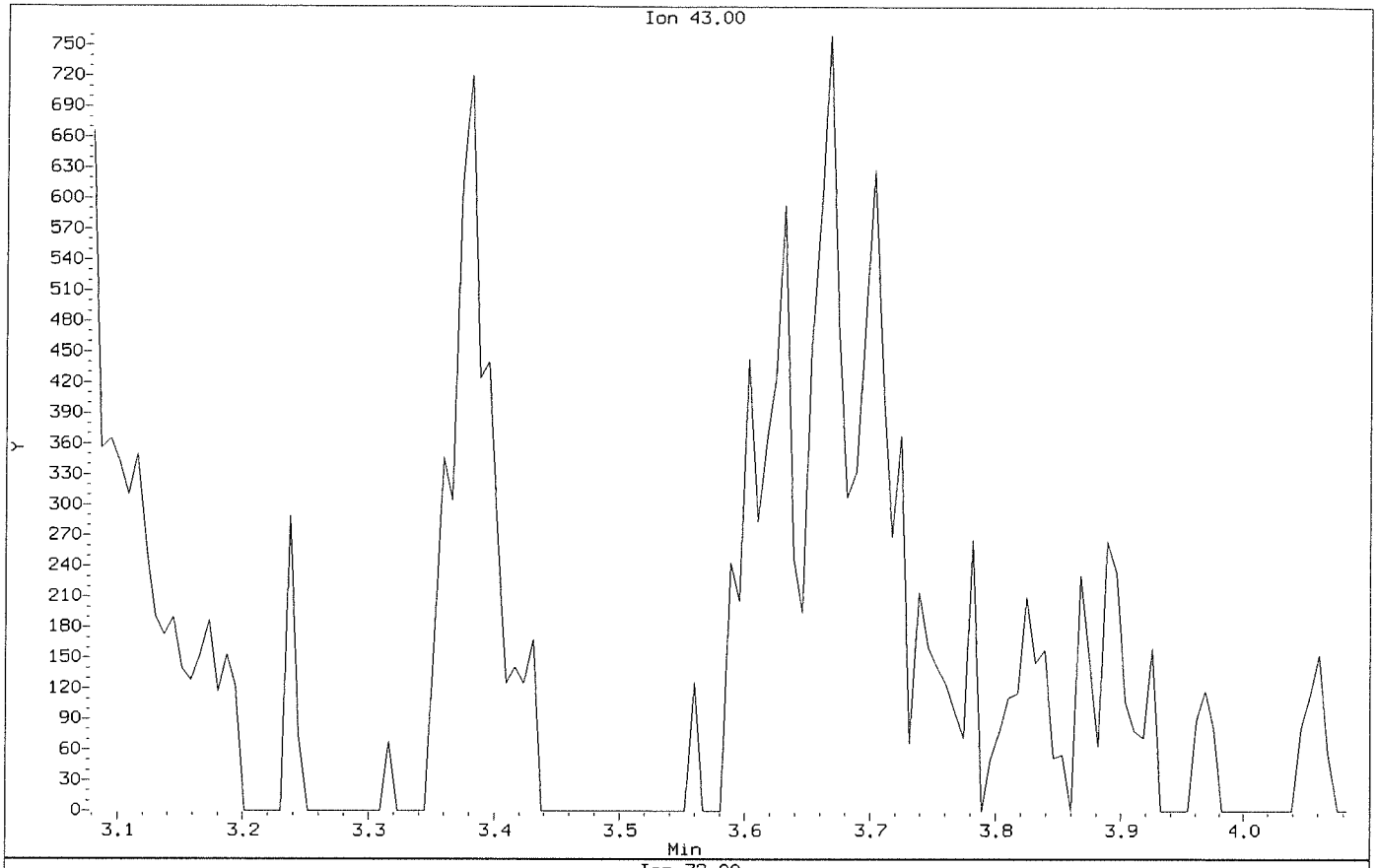
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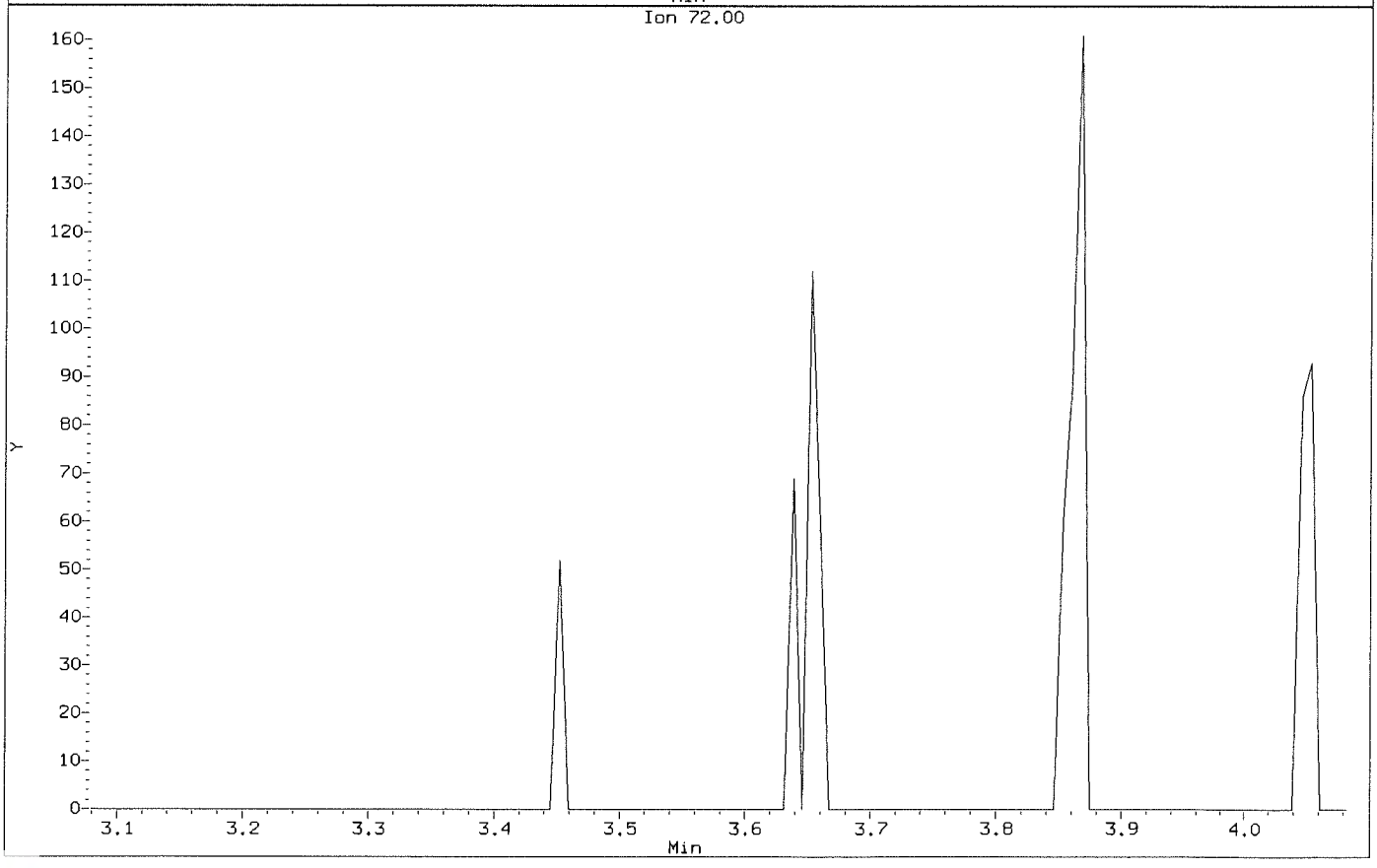




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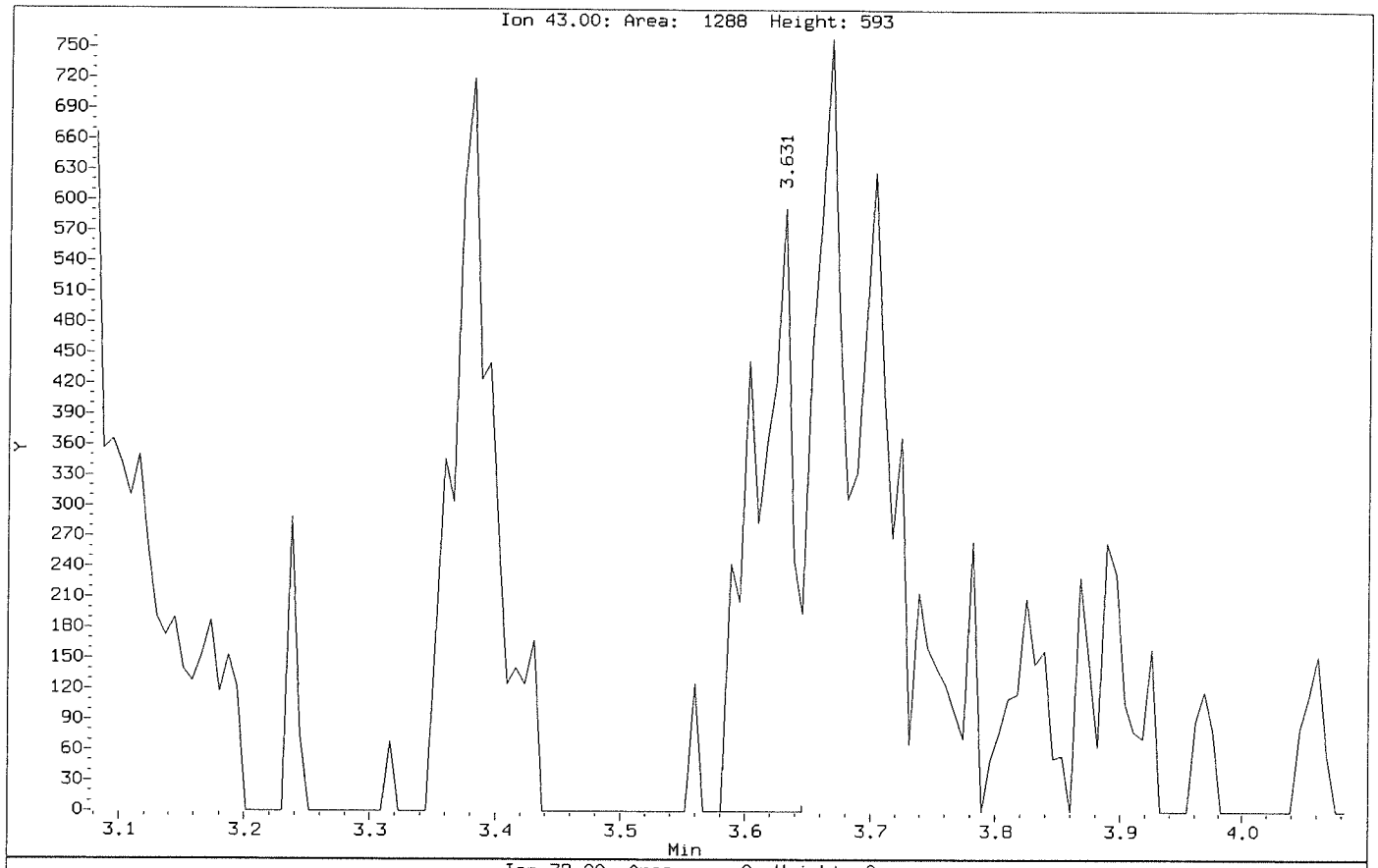
Compound: 2-Butanone
CAS Number: 78-93-3

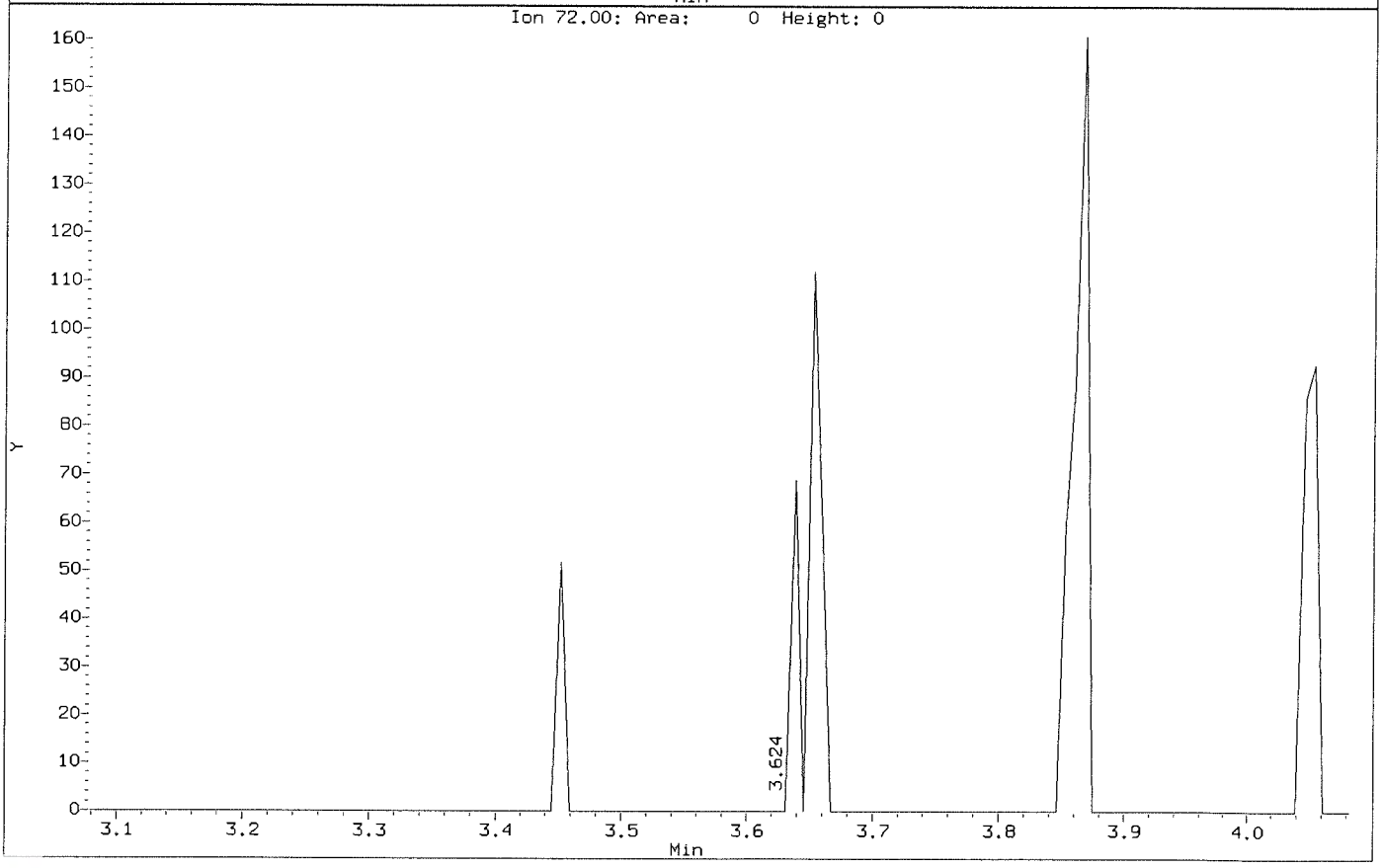




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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

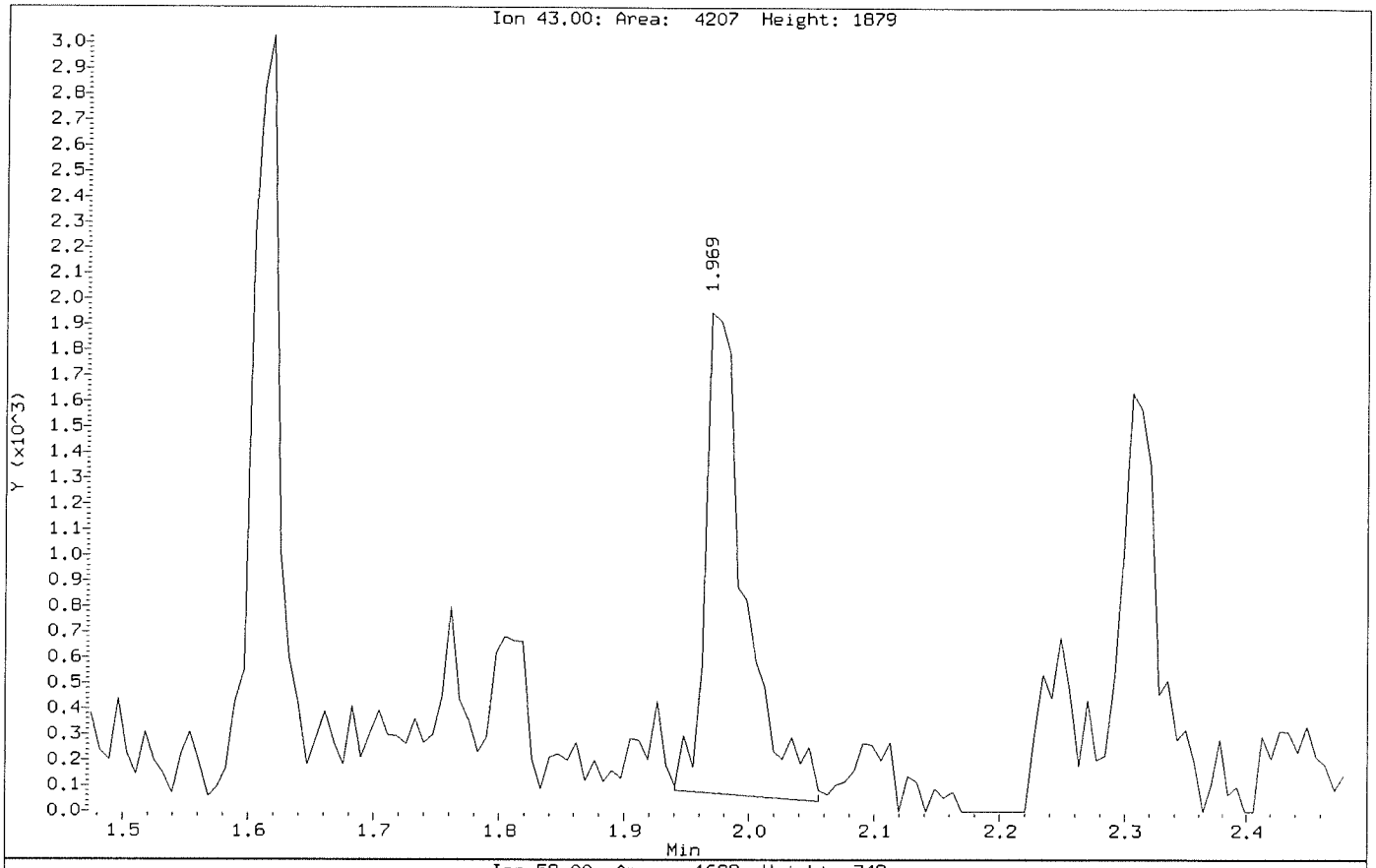
Compound: 2-Butanone
CAS Number: 78-93-3

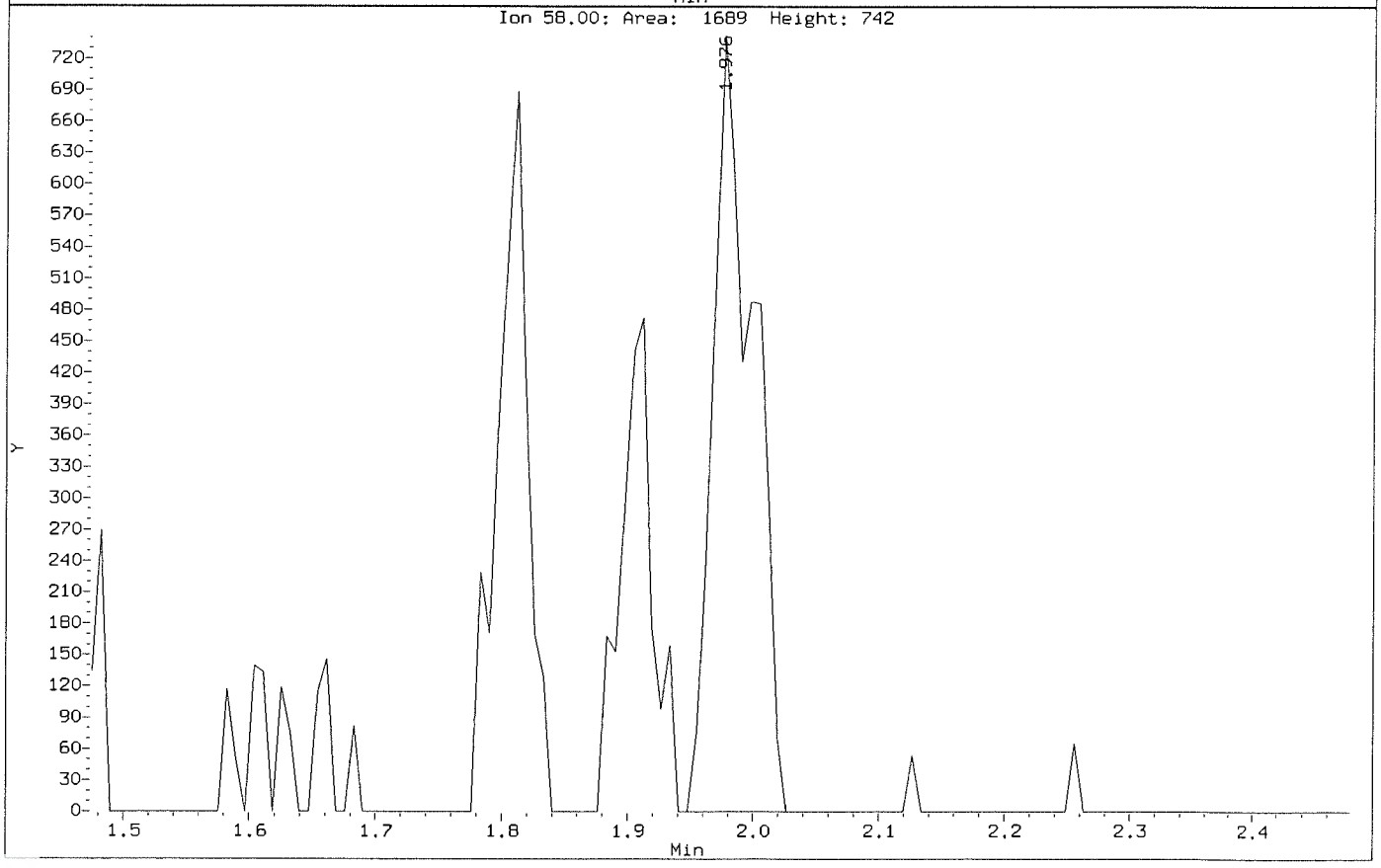




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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

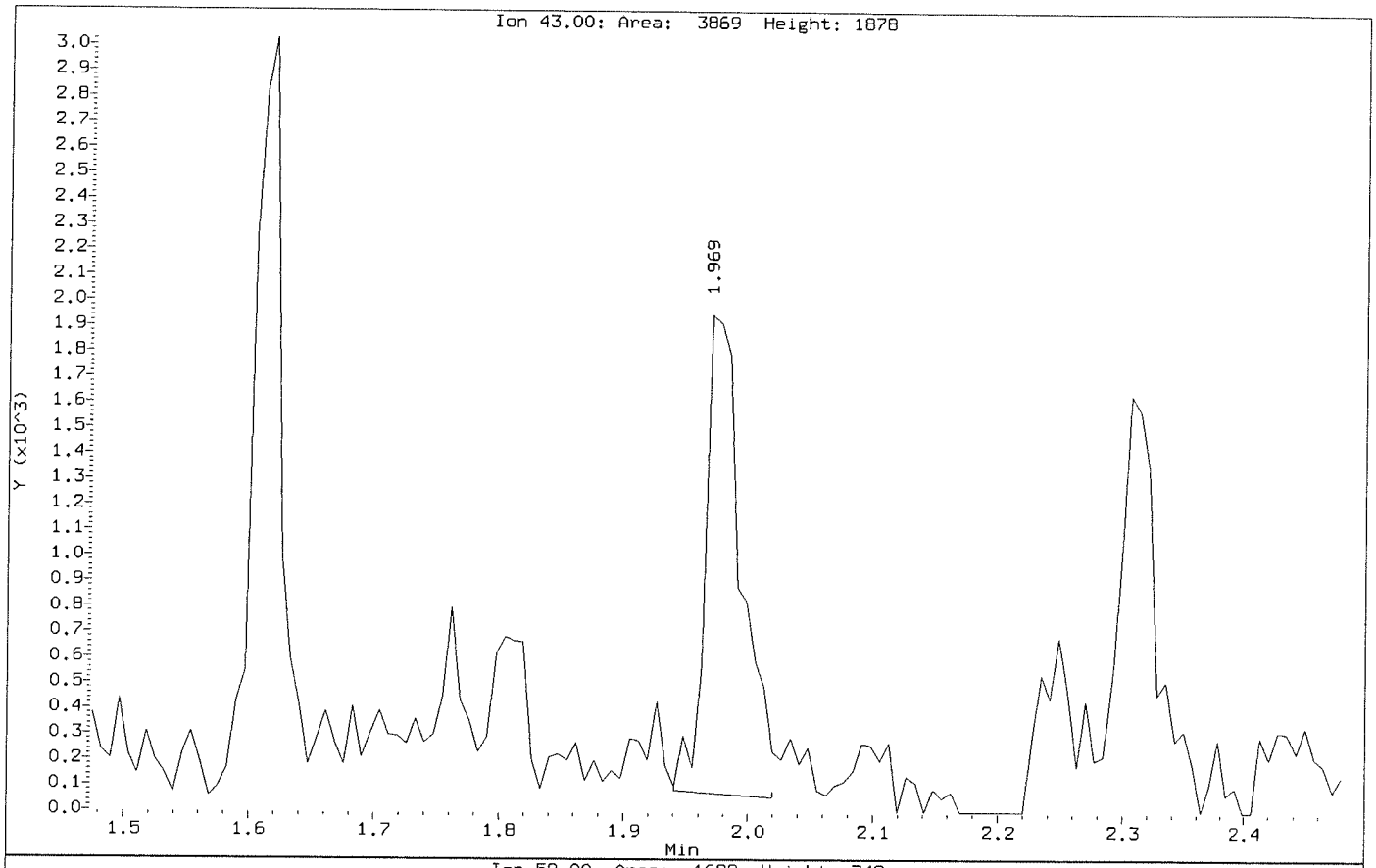
Compound: Acetone
CAS Number: 67-64-1

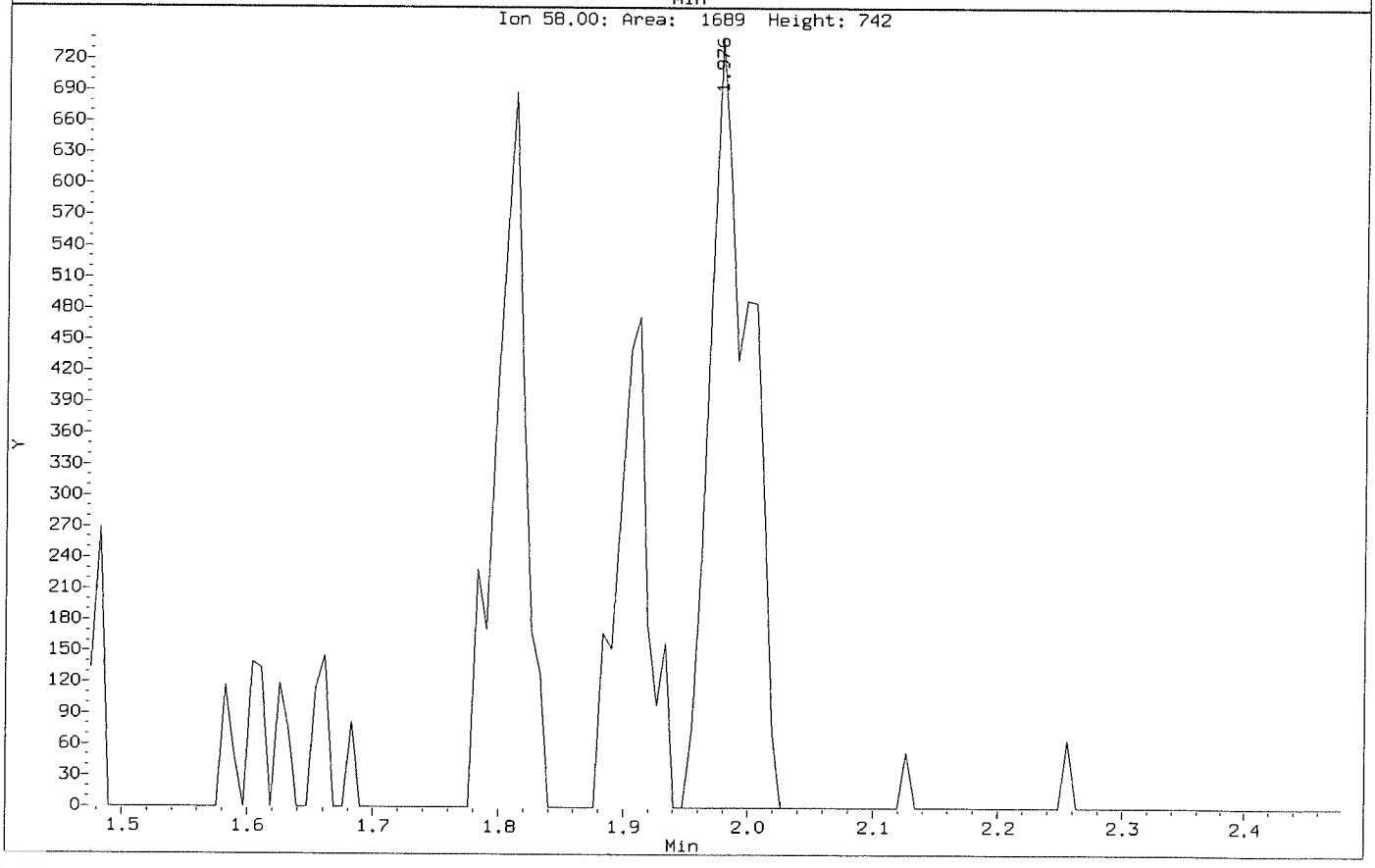




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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

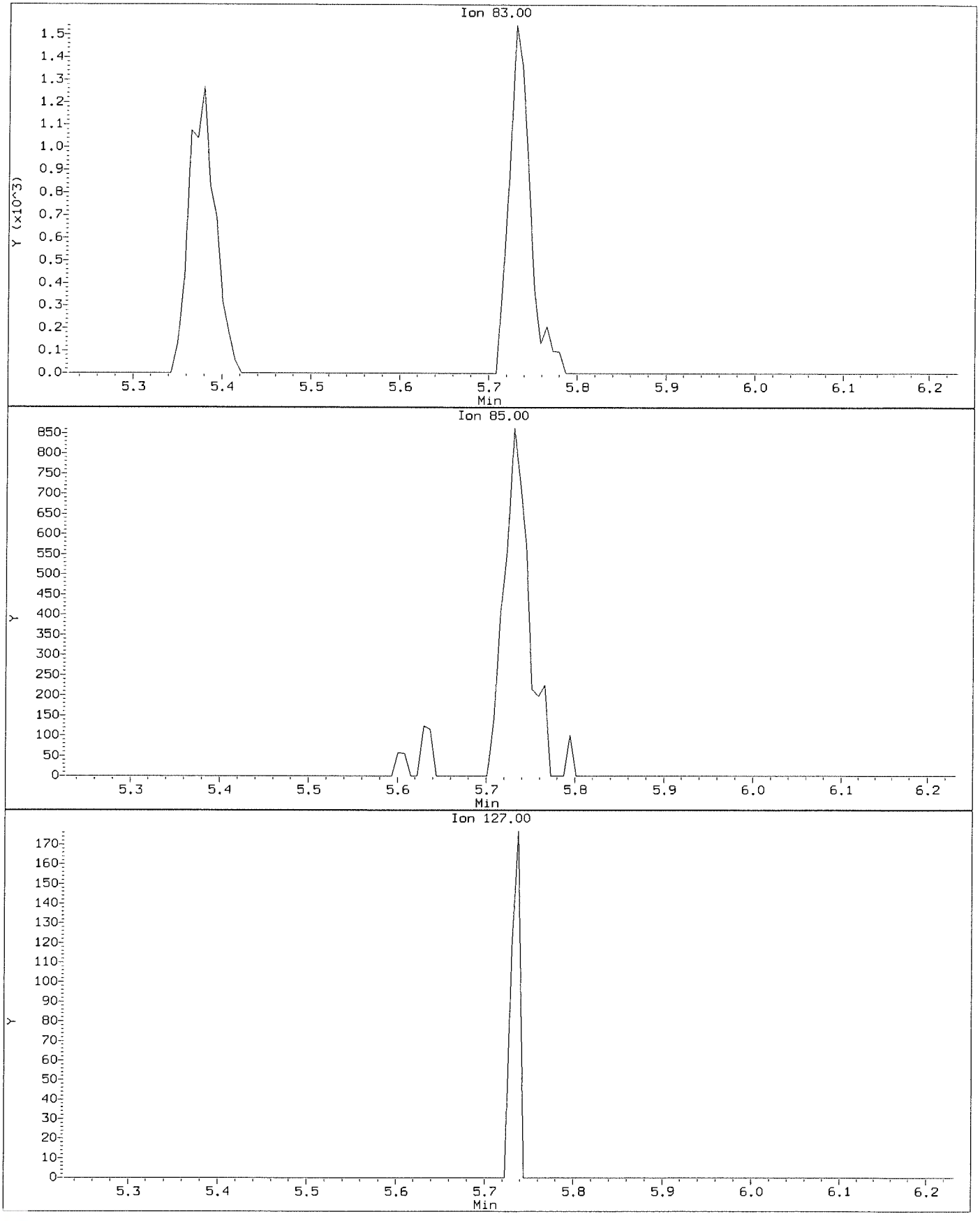
Compound: Acetone
CAS Number: 67-64-1





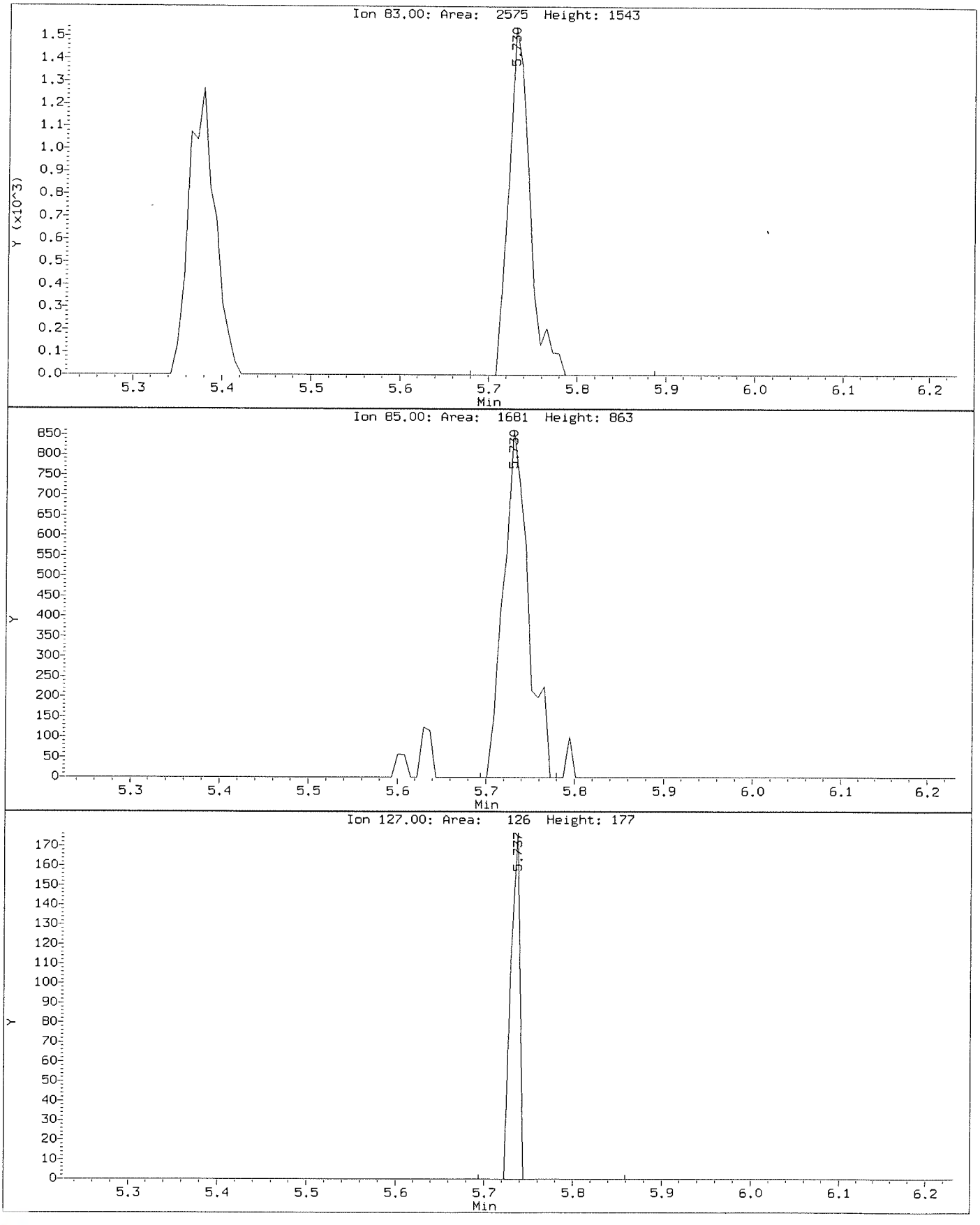
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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



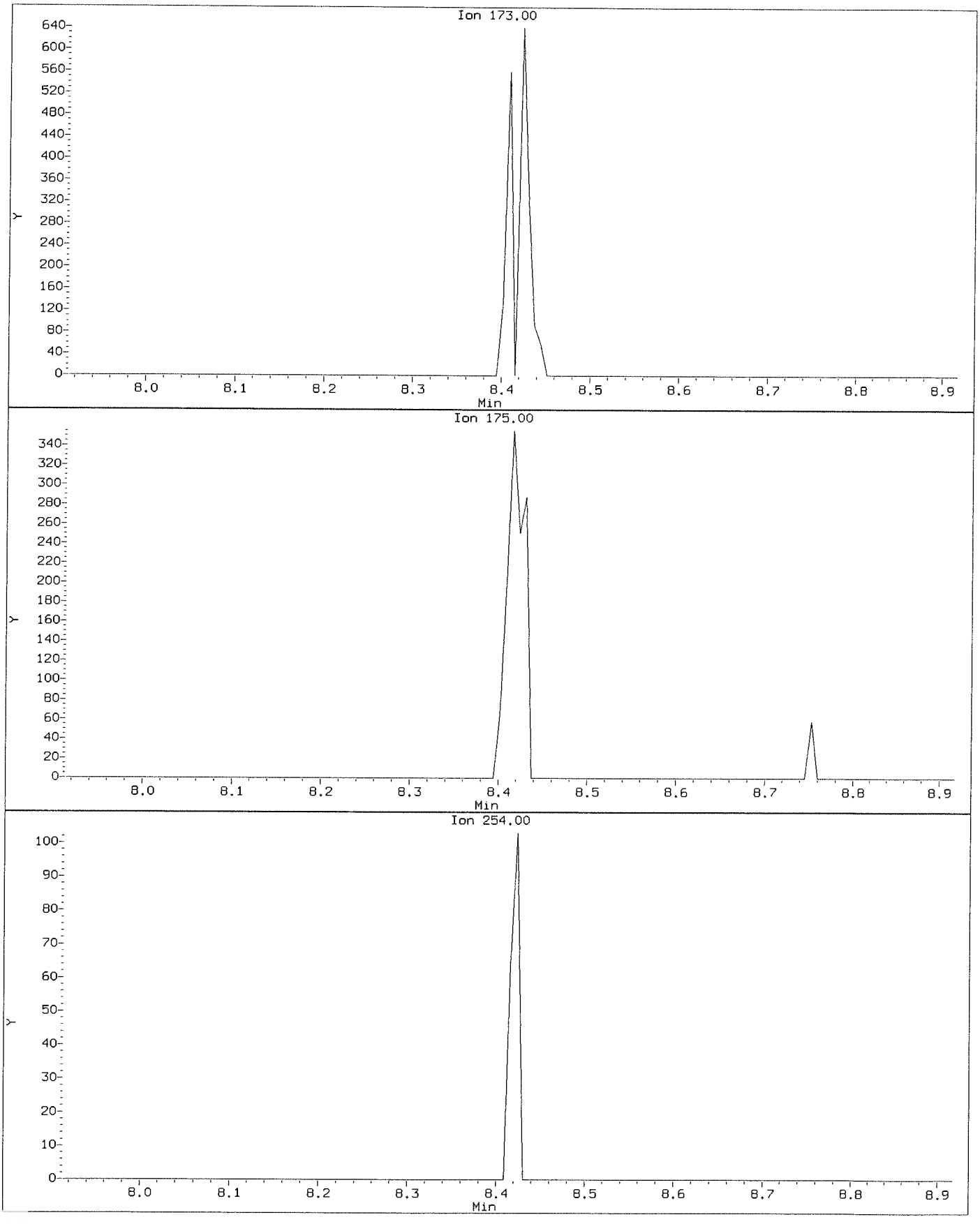
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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromodichloromethane
CAS Number: 75-27-4



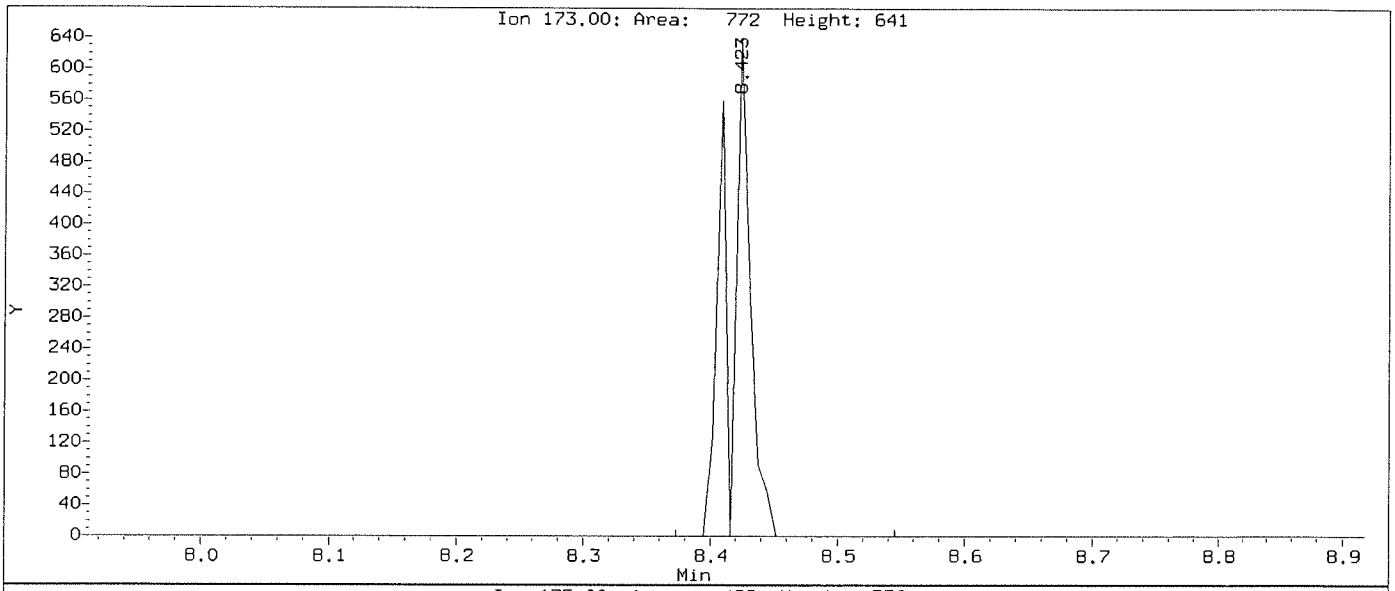
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Client Sample ID: VSTD001

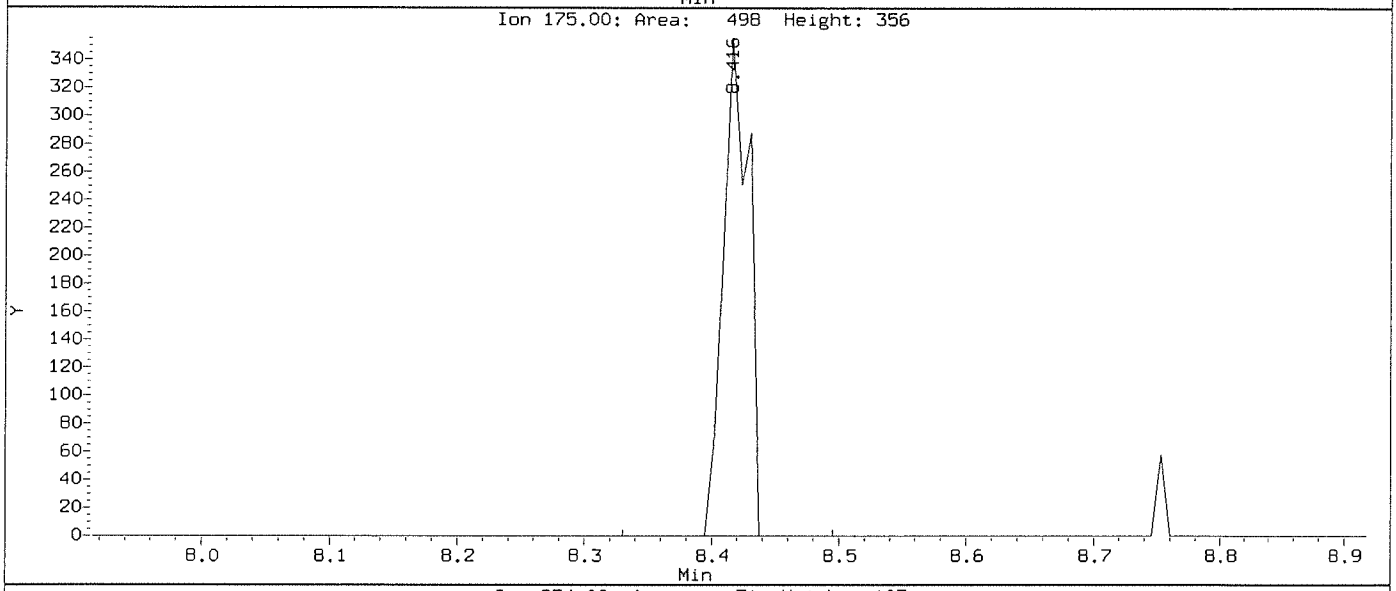
Compound: Bromoform
CAS Number: 75-25-2

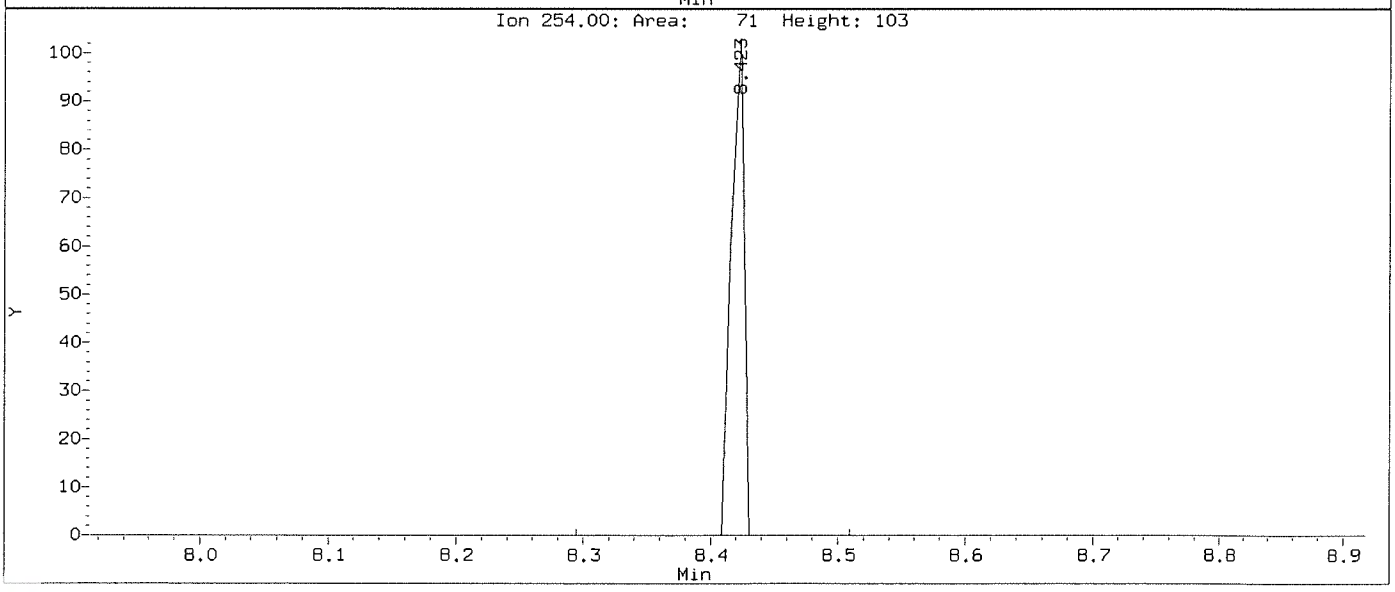


Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110304.D
Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Bromoform
CAS Number: 75-25-2

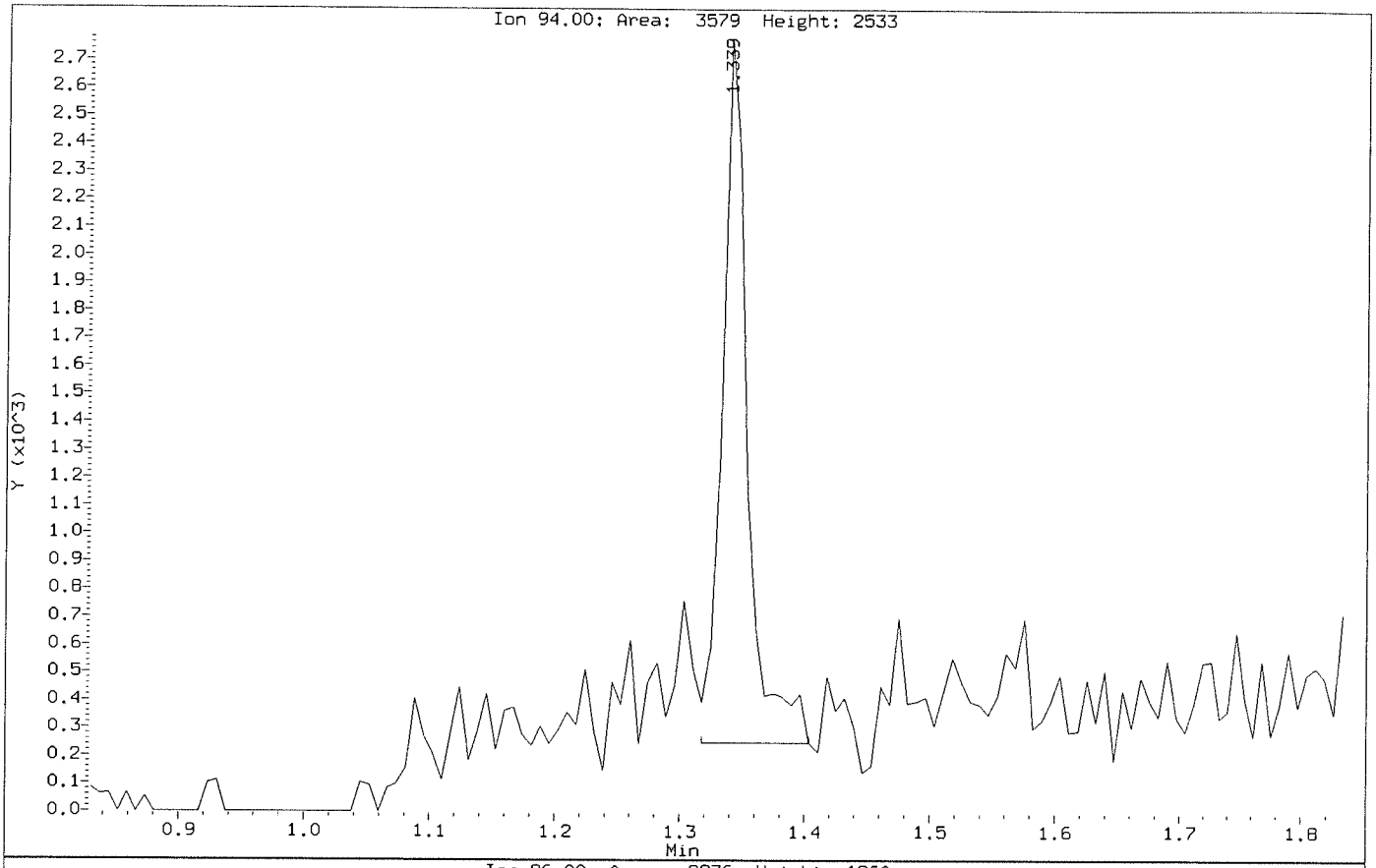


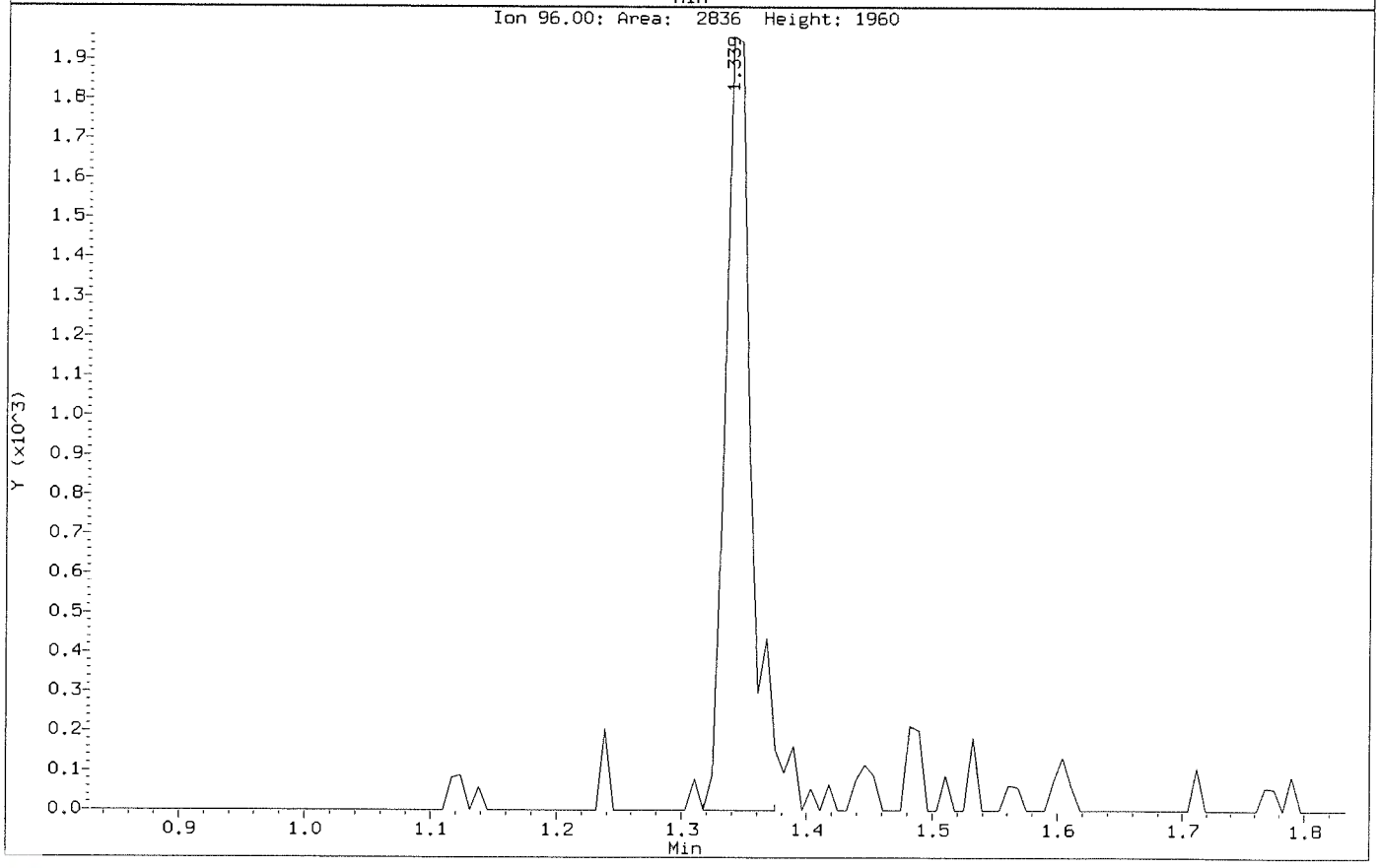




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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

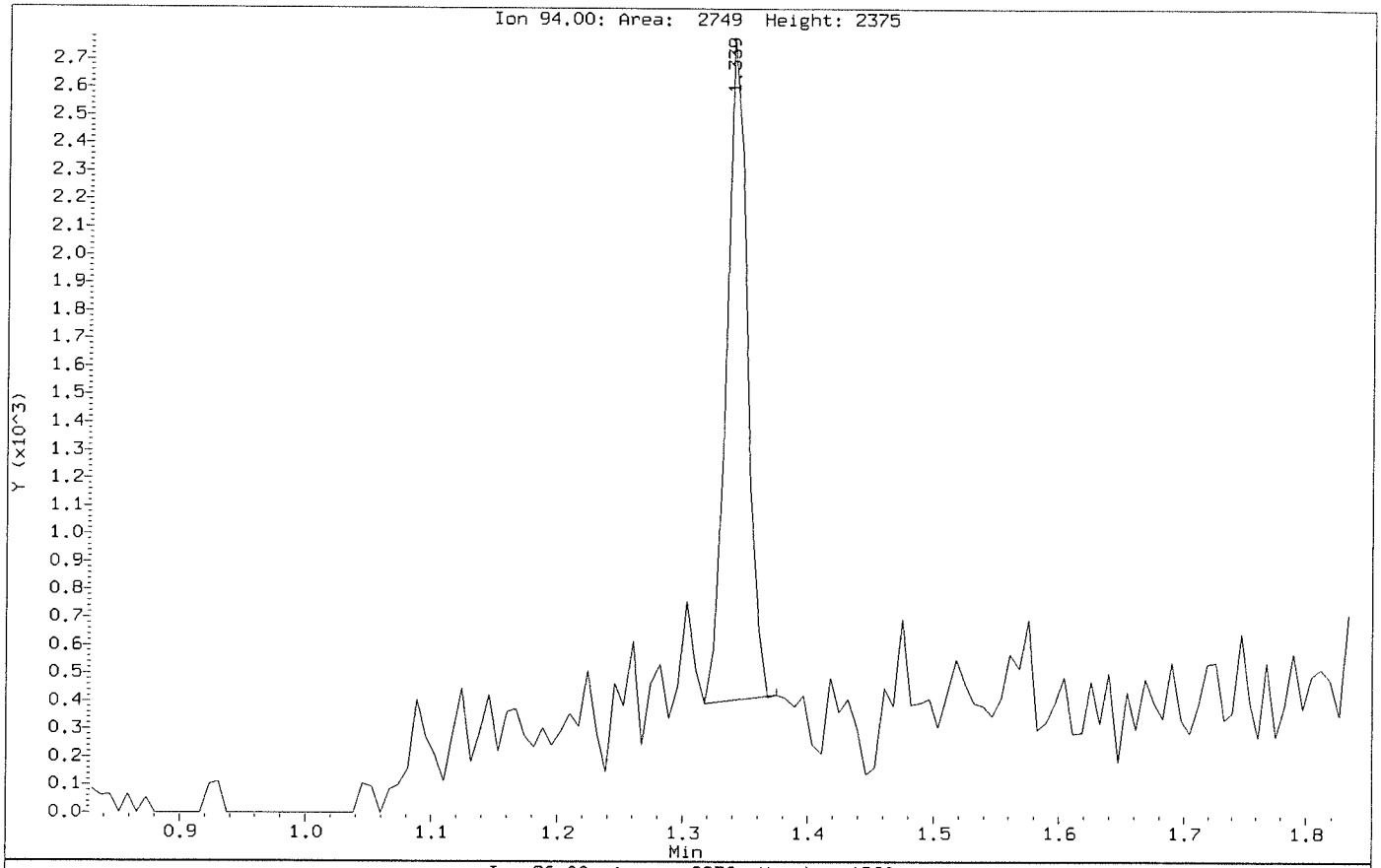
Compound: Bromomethane
CAS Number: 74-83-9

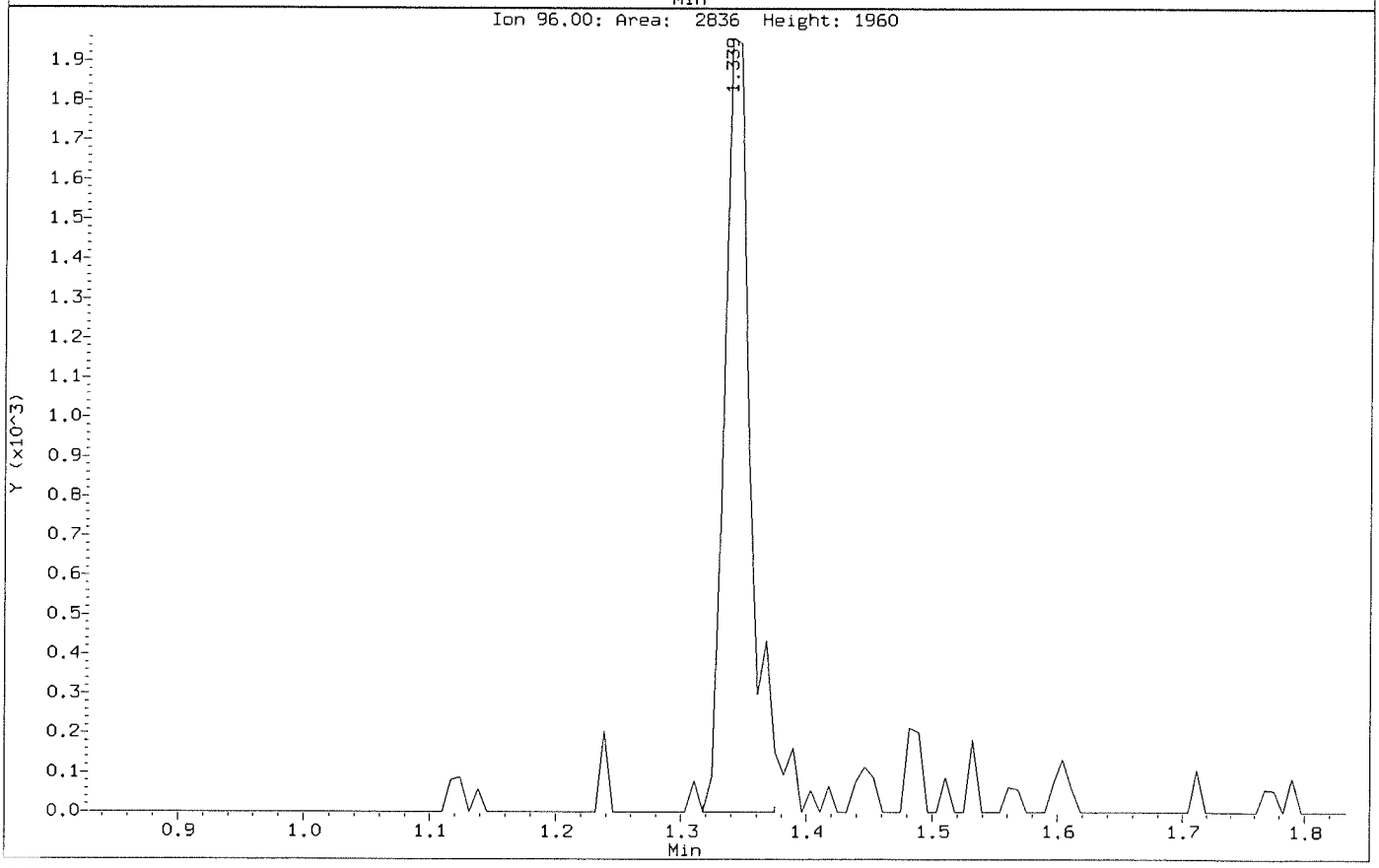




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Injection Date: 03-NOV-2020 13:04
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Client Sample ID: VSTD001

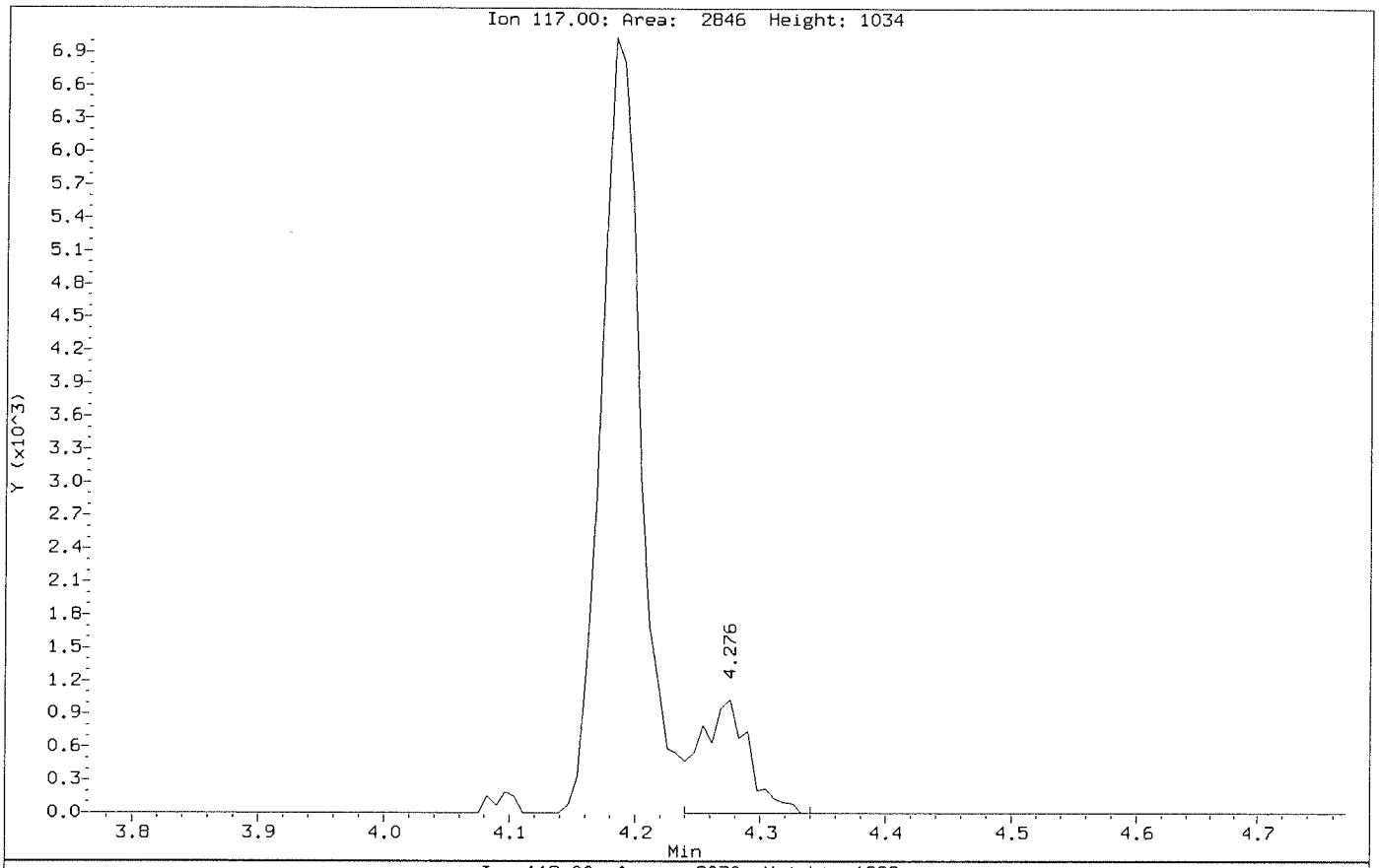
Compound: Bromomethane
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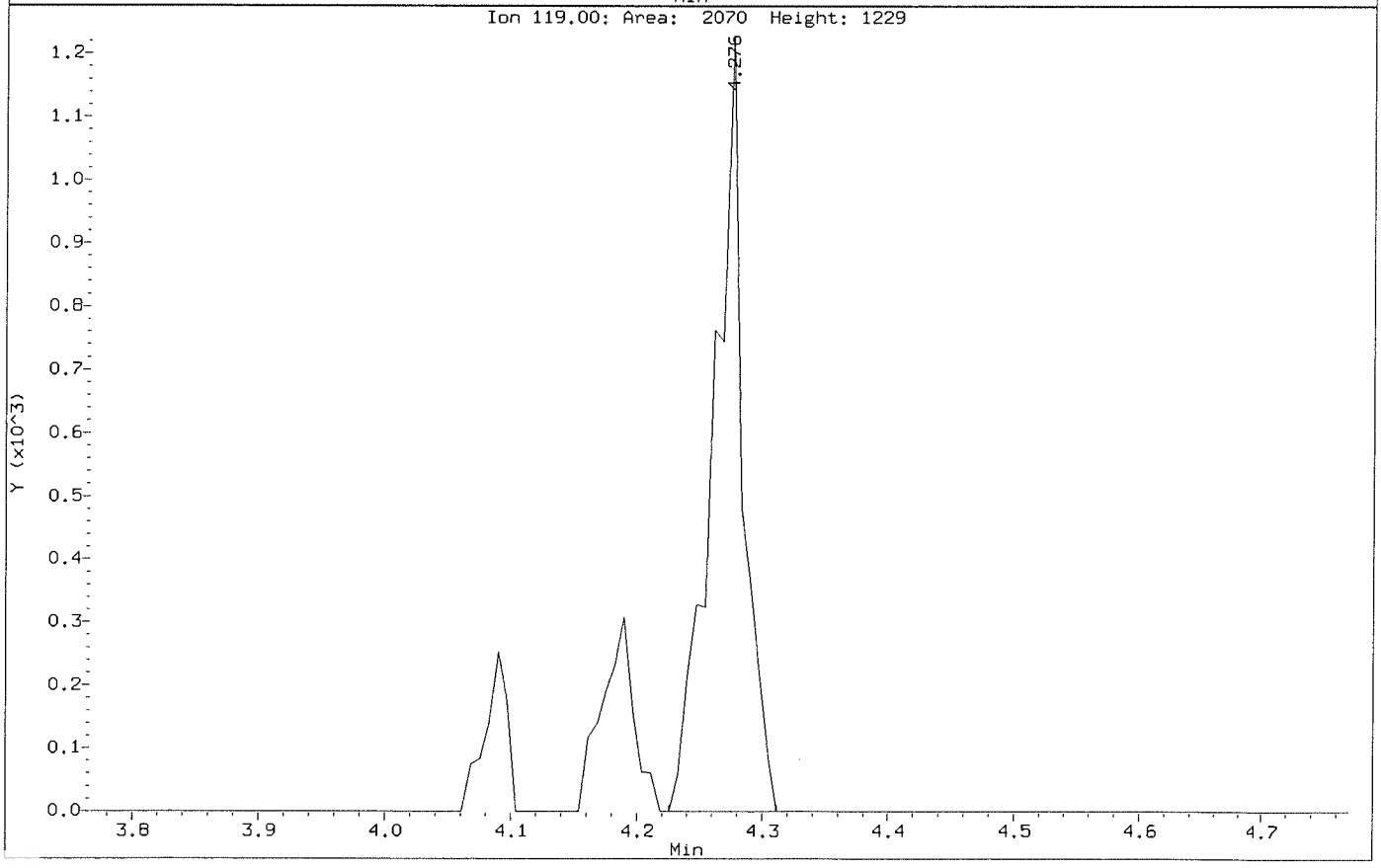




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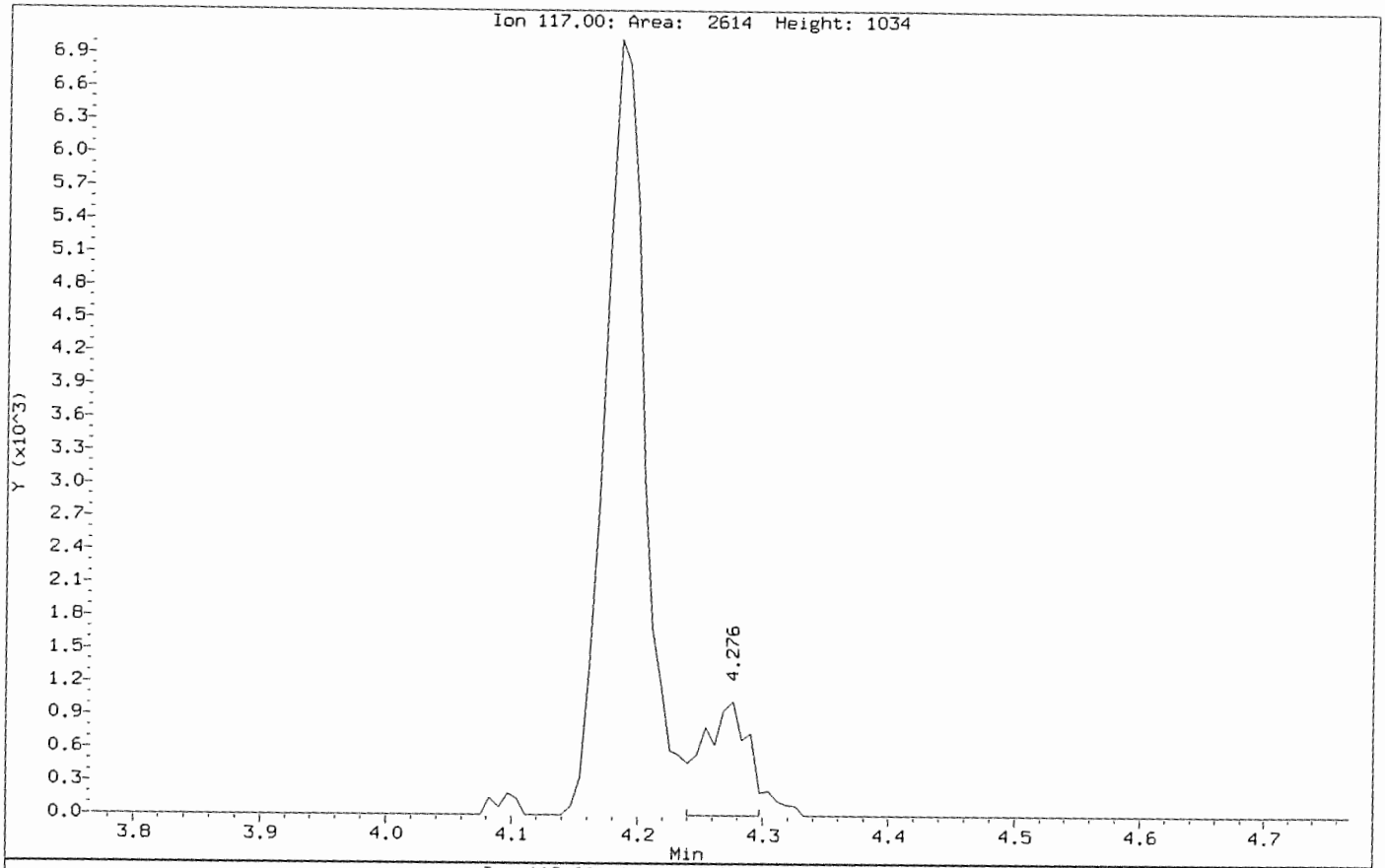
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

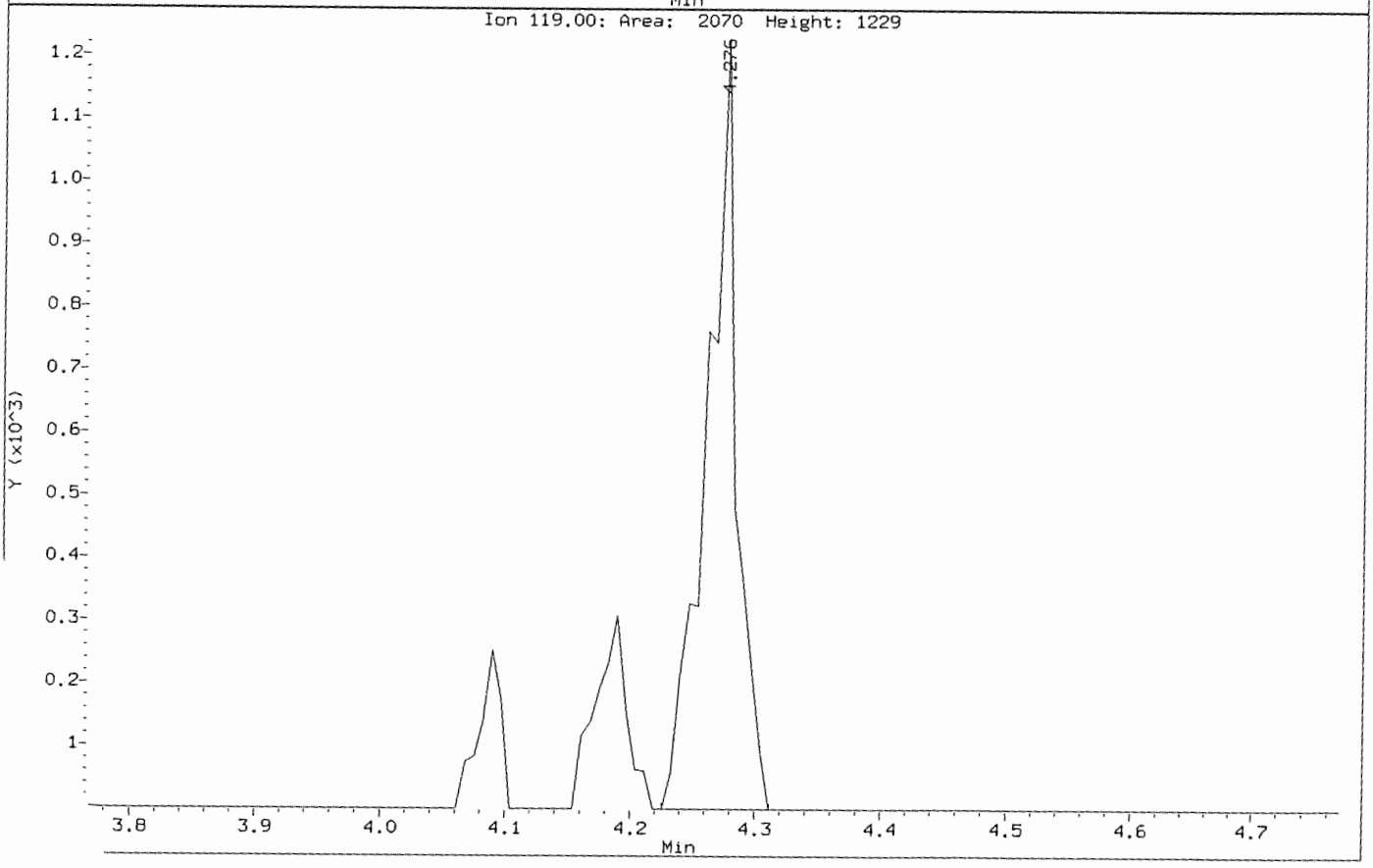




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Injection Date: 03-NOV-2020 13:04
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Client Sample ID: VSTD001

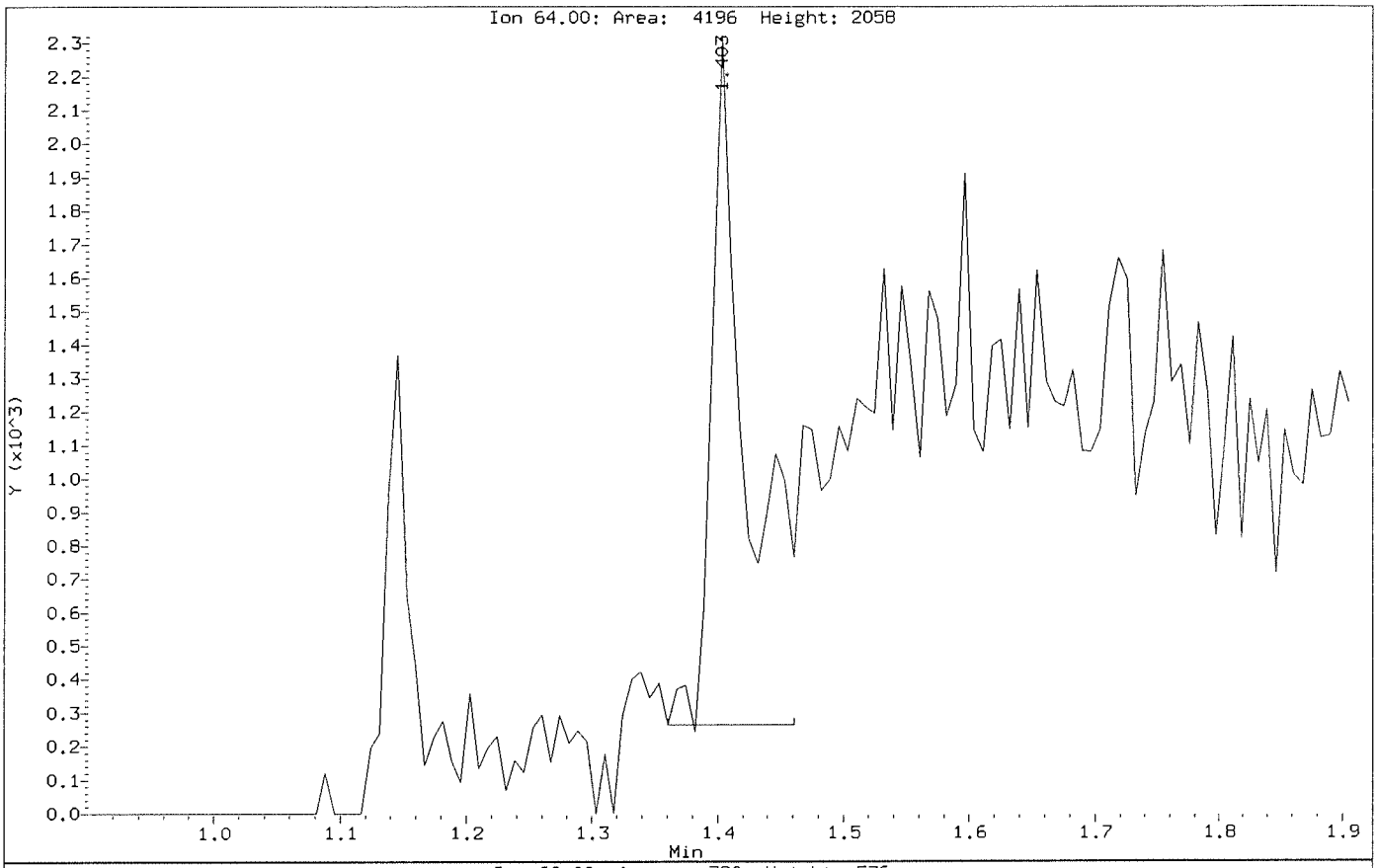
Compound: Carbon Tetrachloride
CAS Number: 56-23-5

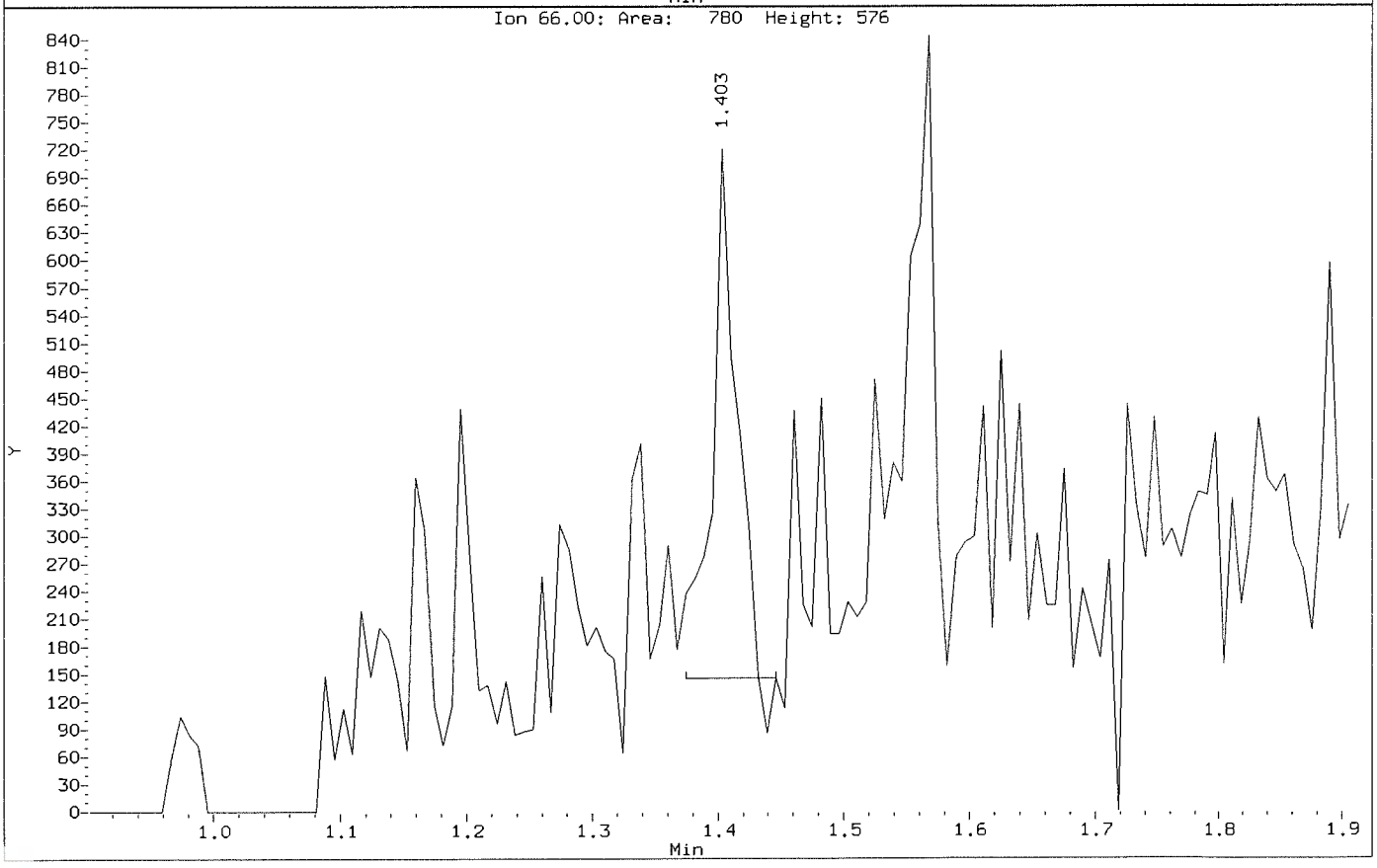




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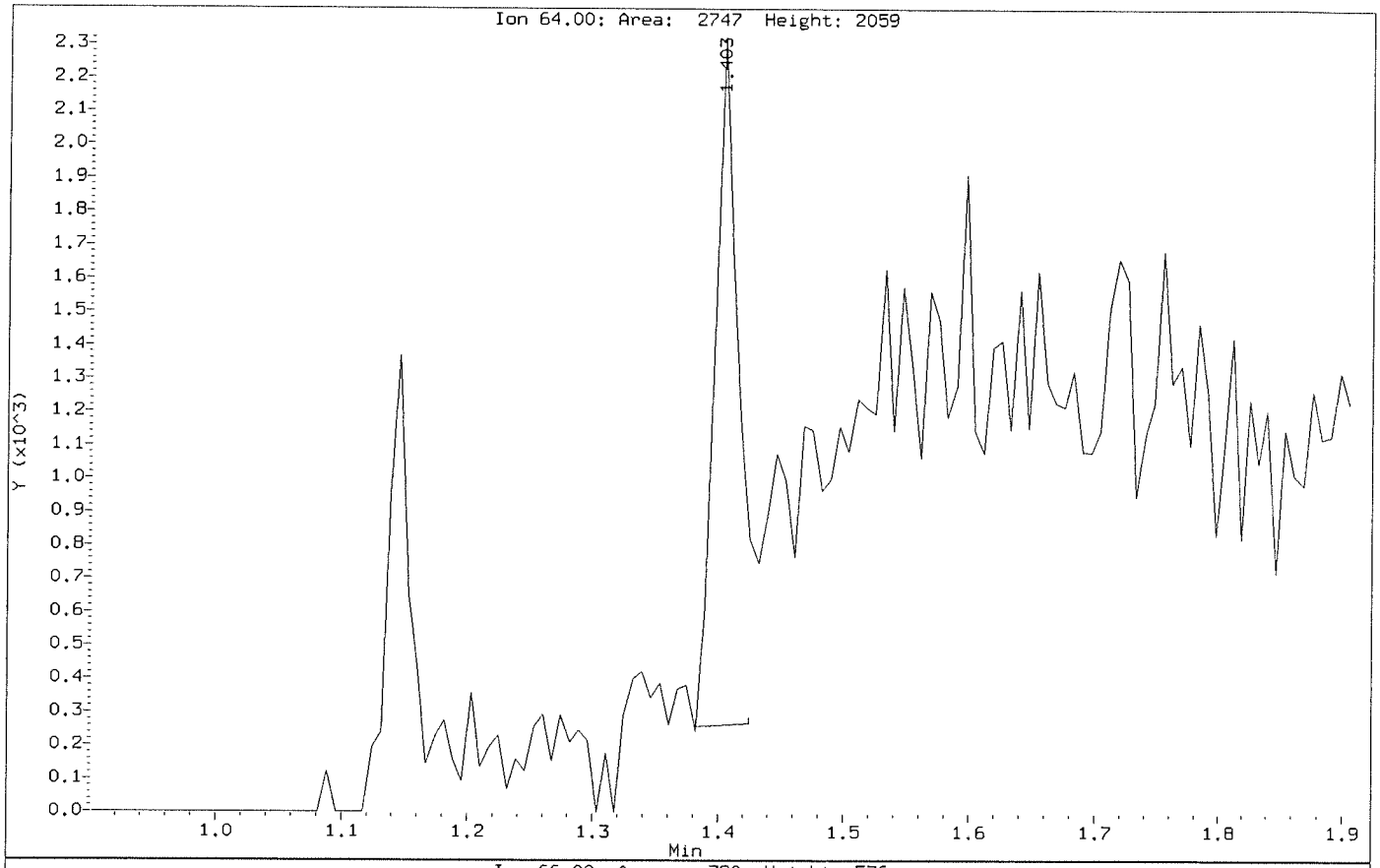
Compound: Chloroethane
CAS Number: 75-00-3

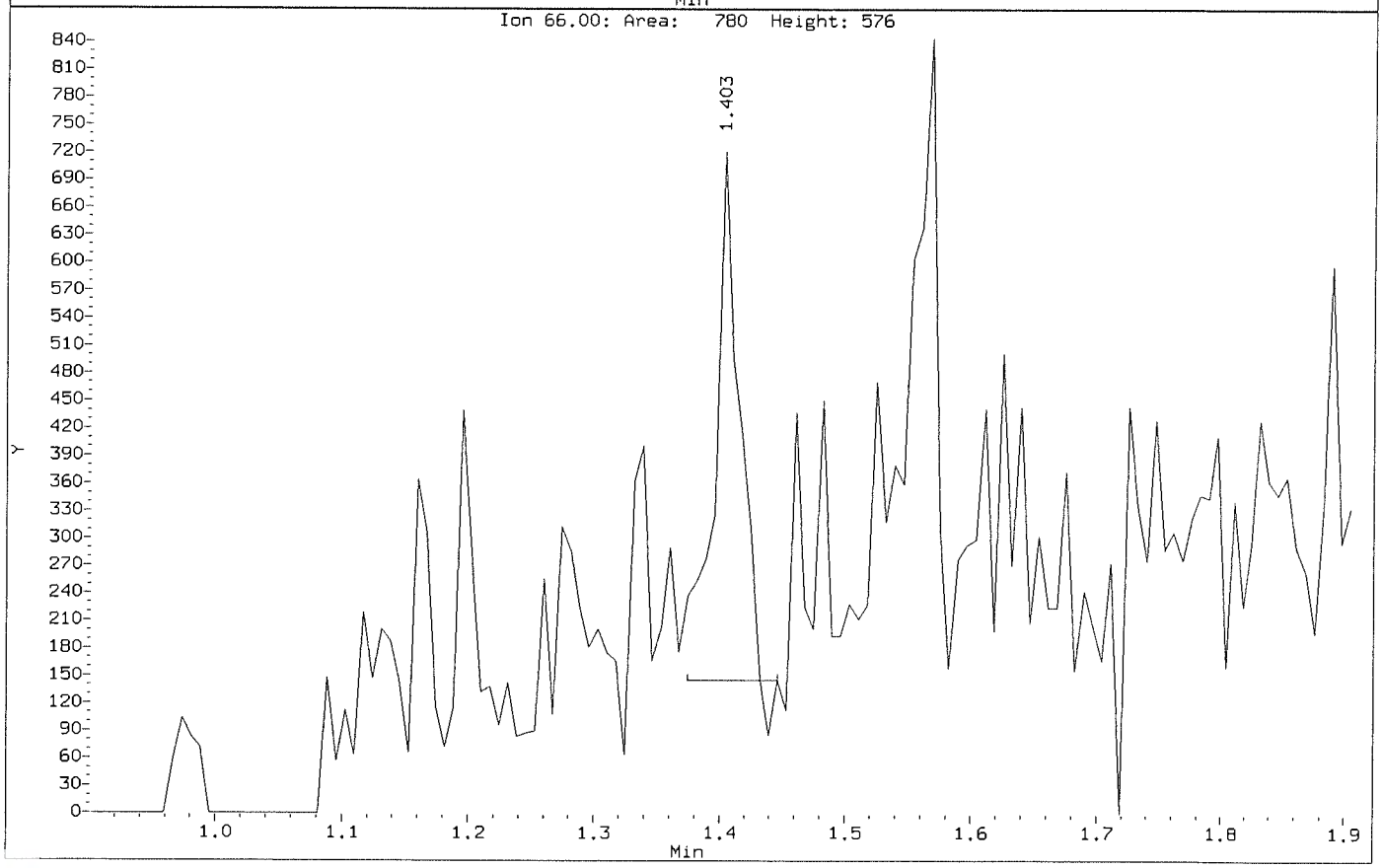




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Injection Date: 03-NOV-2020 13:04
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Client Sample ID: VSTD001

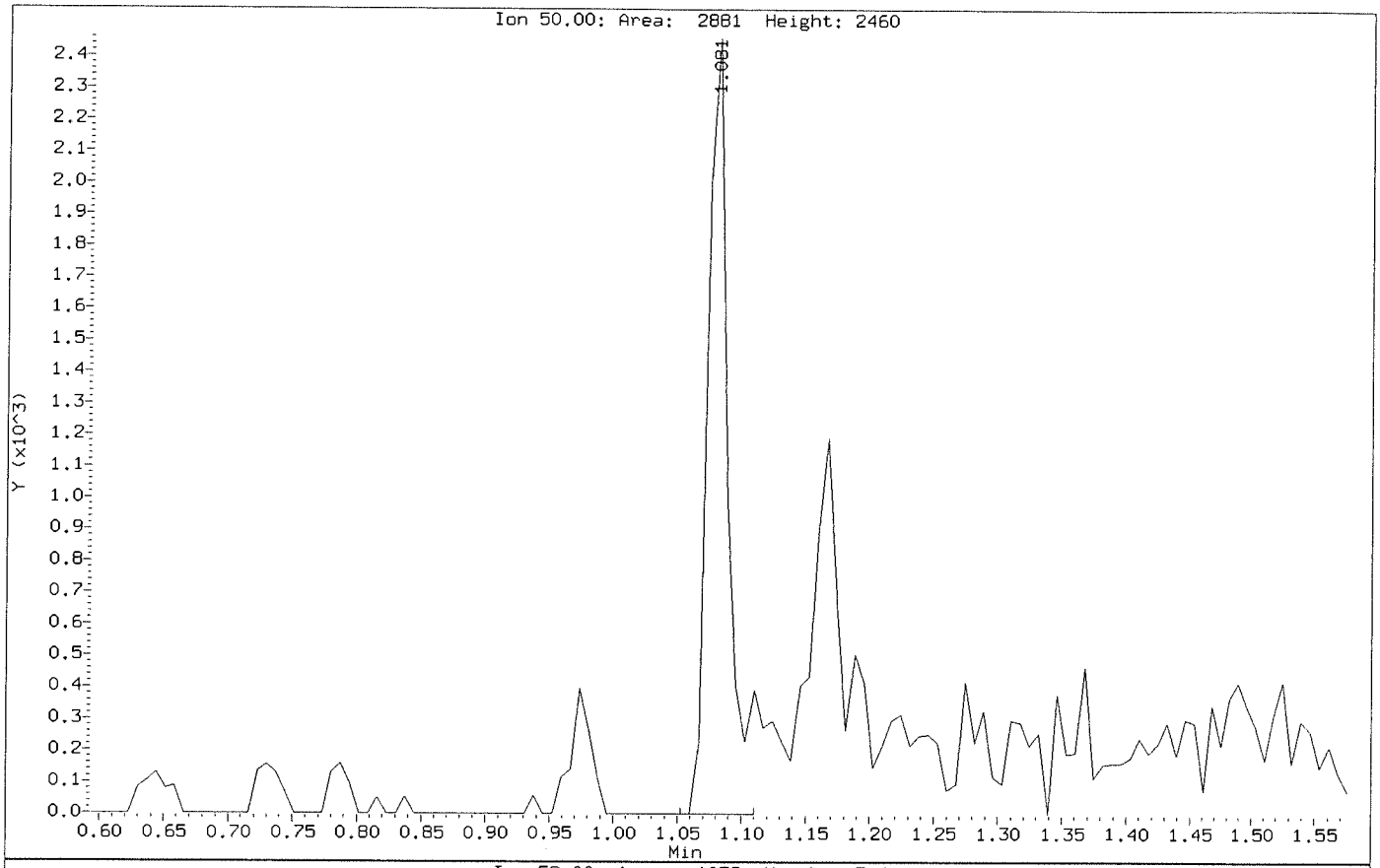
Compound: Chloroethane
CAS Number: 75-00-3

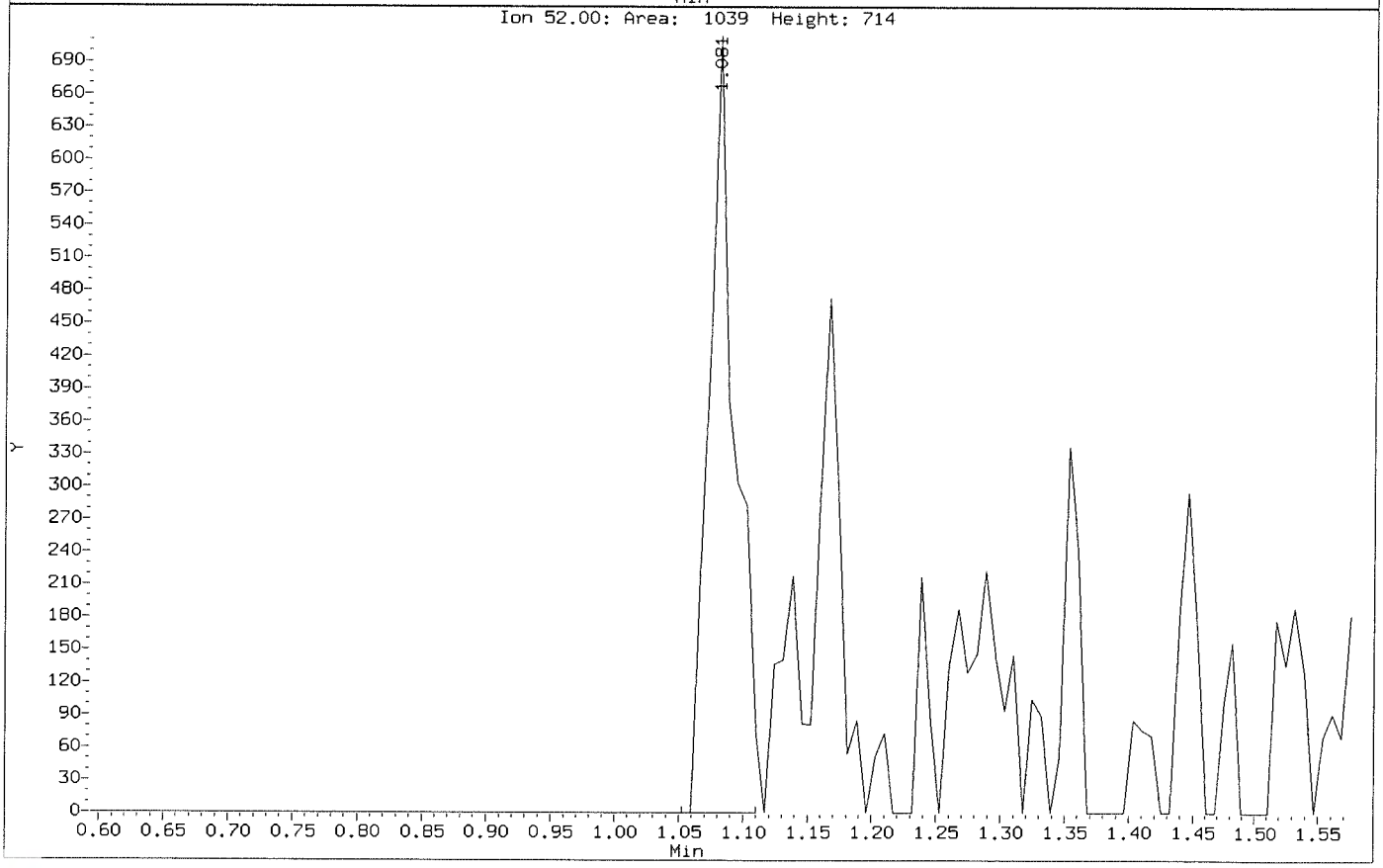




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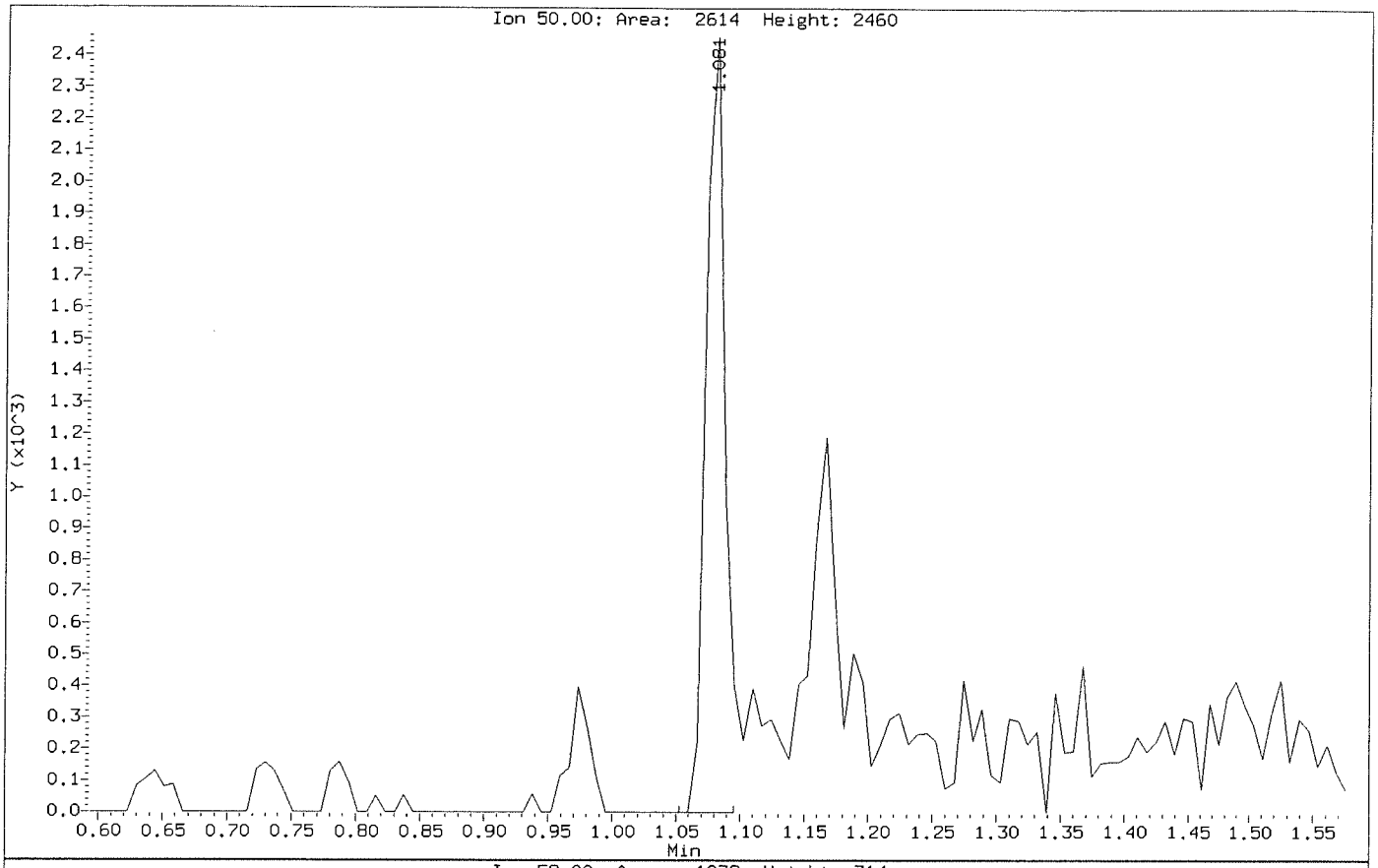
Compound: Chloromethane
CAS Number: 74-87-3

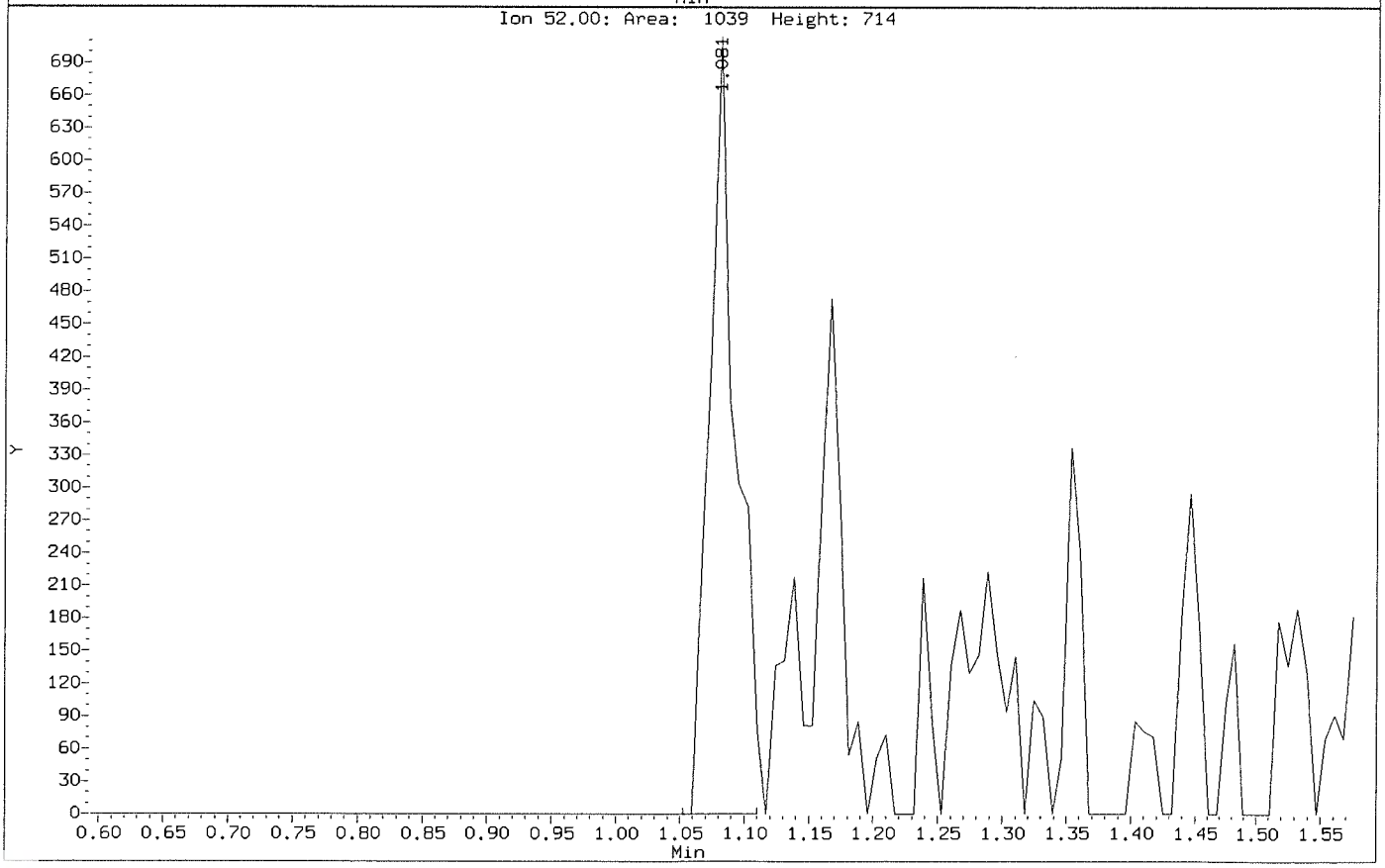




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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

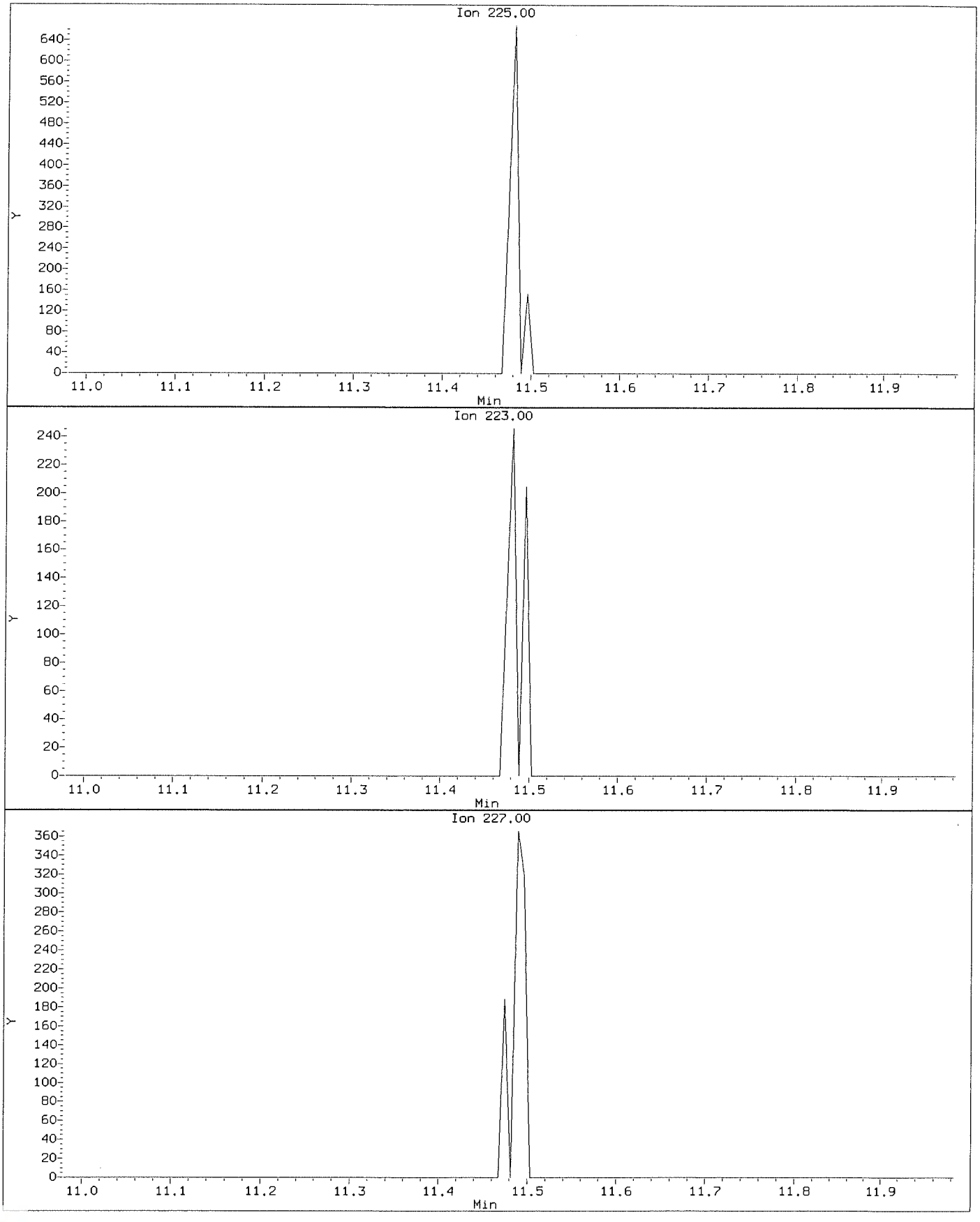
Compound: Chloromethane
CAS Number: 74-87-3





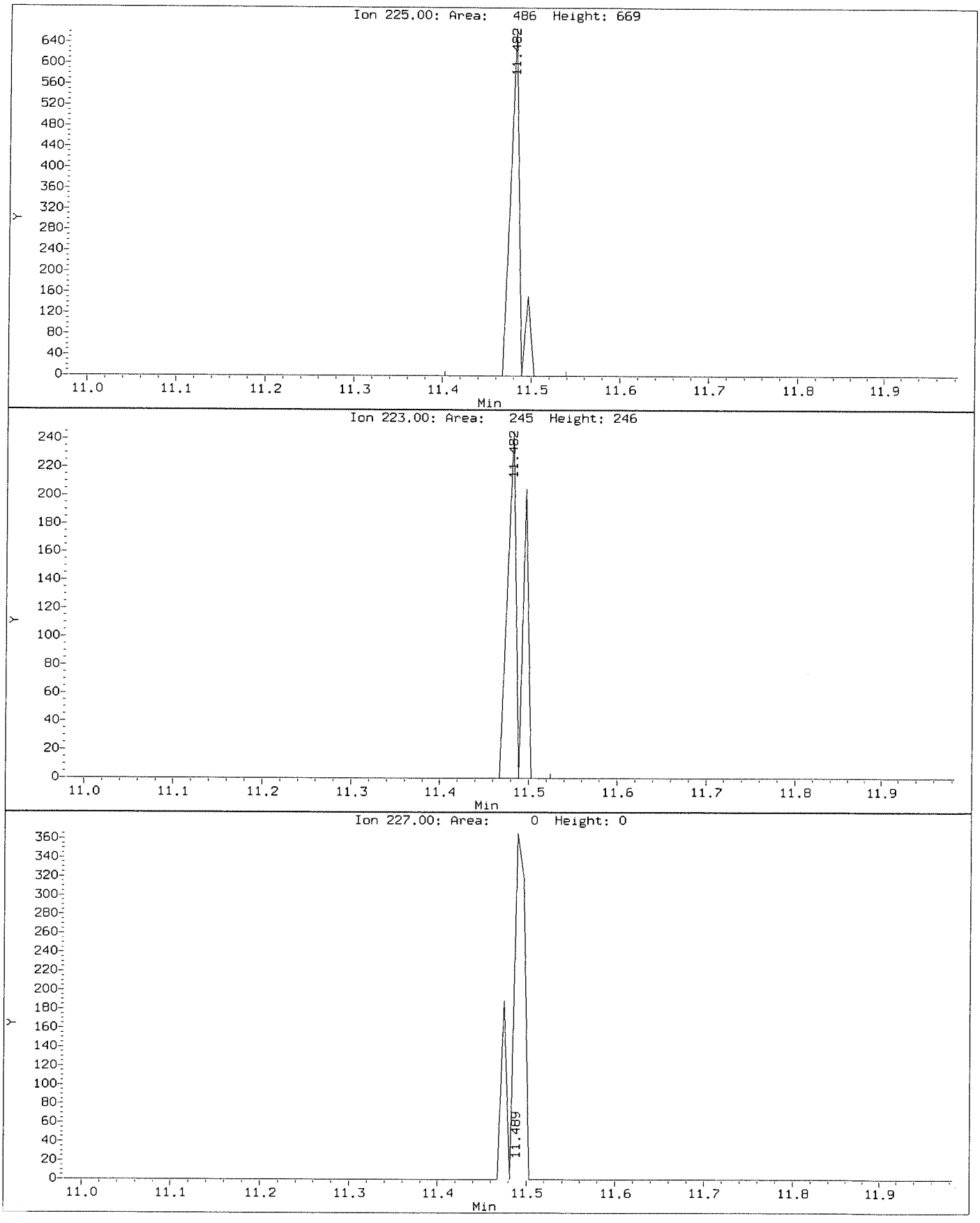
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Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

Compound: Hexachlorobutadiene
CAS Number: 87-68-3



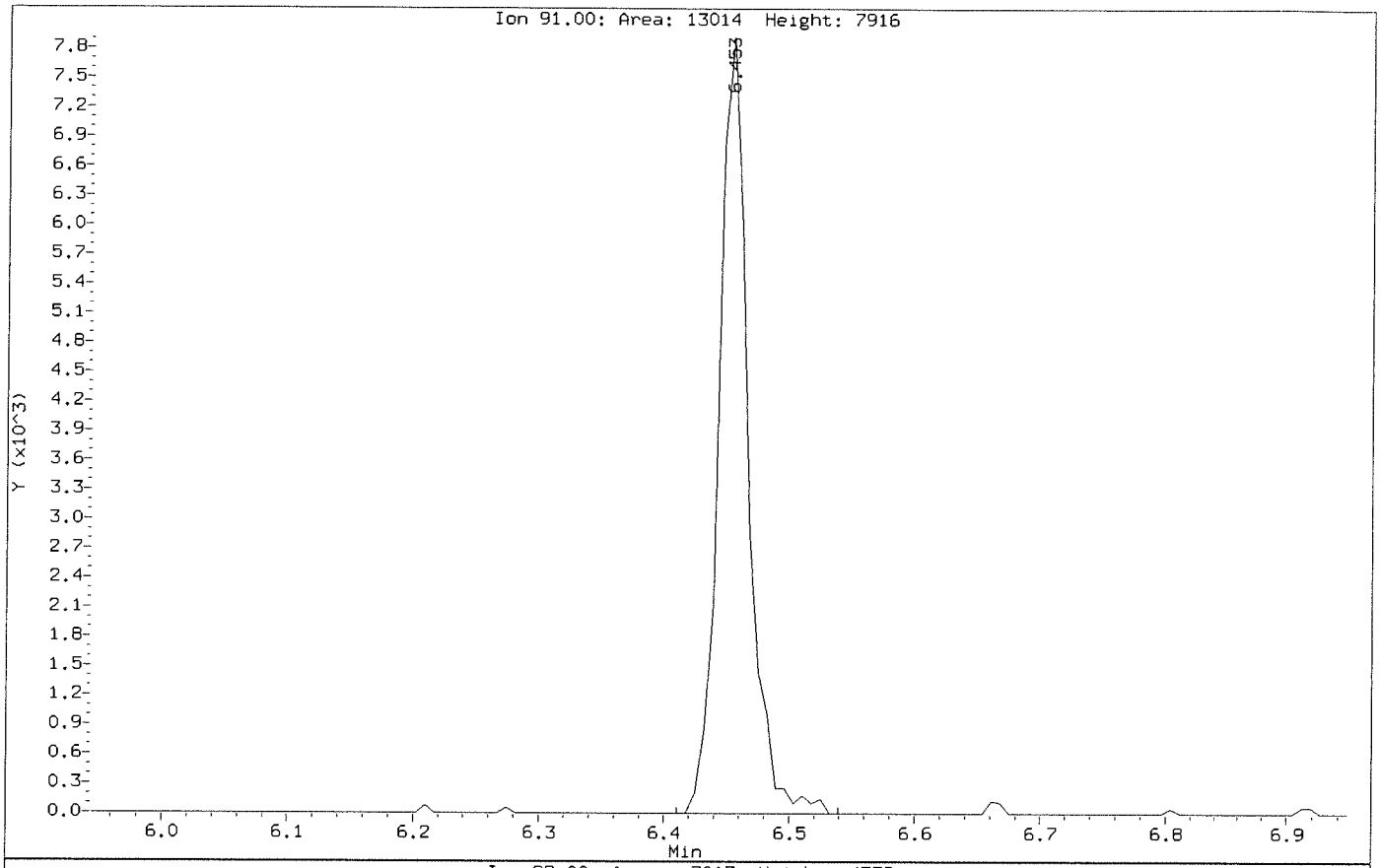
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Client Sample ID: VSTD001

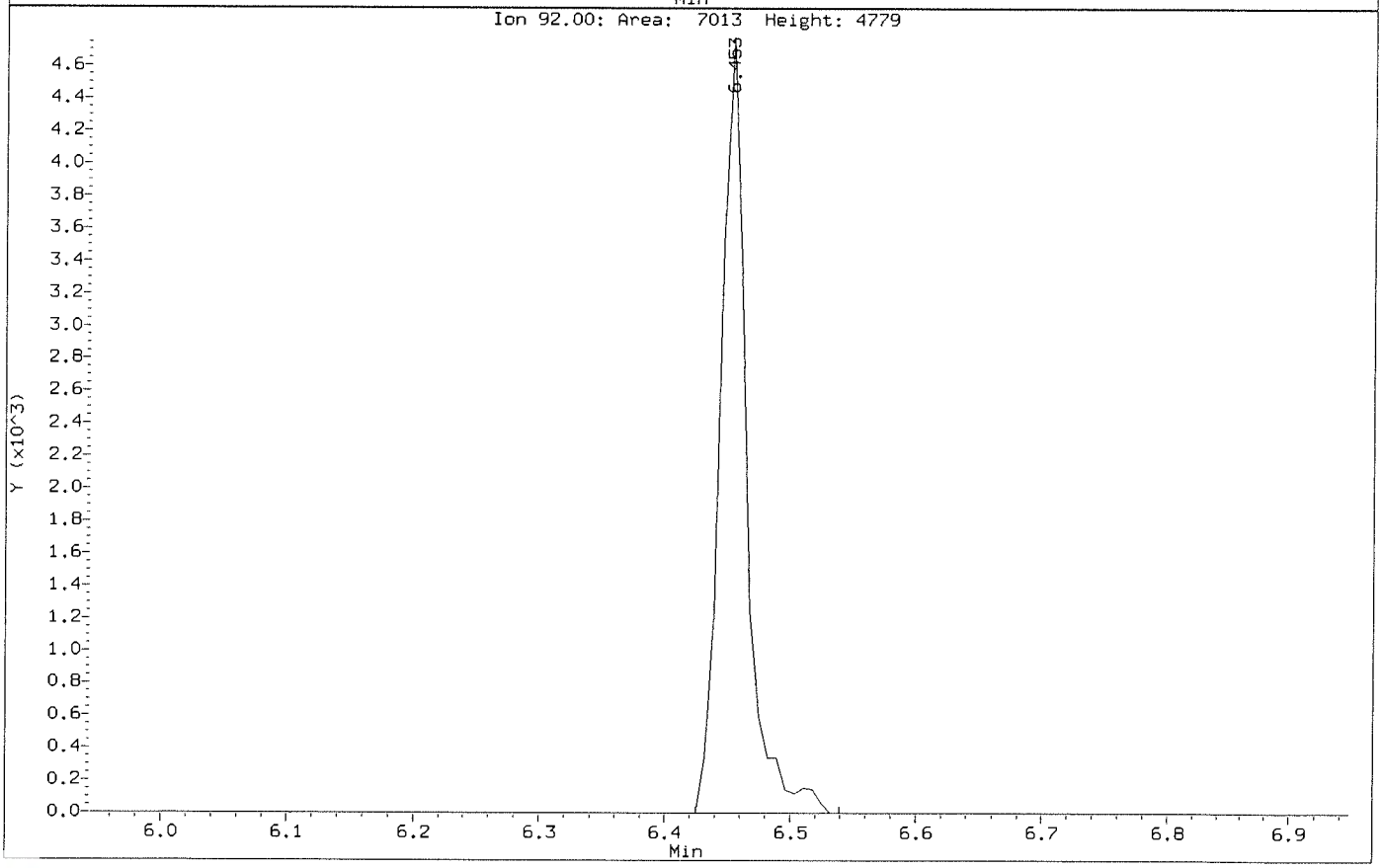
Compound: Hexachlorobutadiene
CAS Number: 87-68-3



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110304.D
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Instrument: voa6.i
Client Sample ID: VSTD001

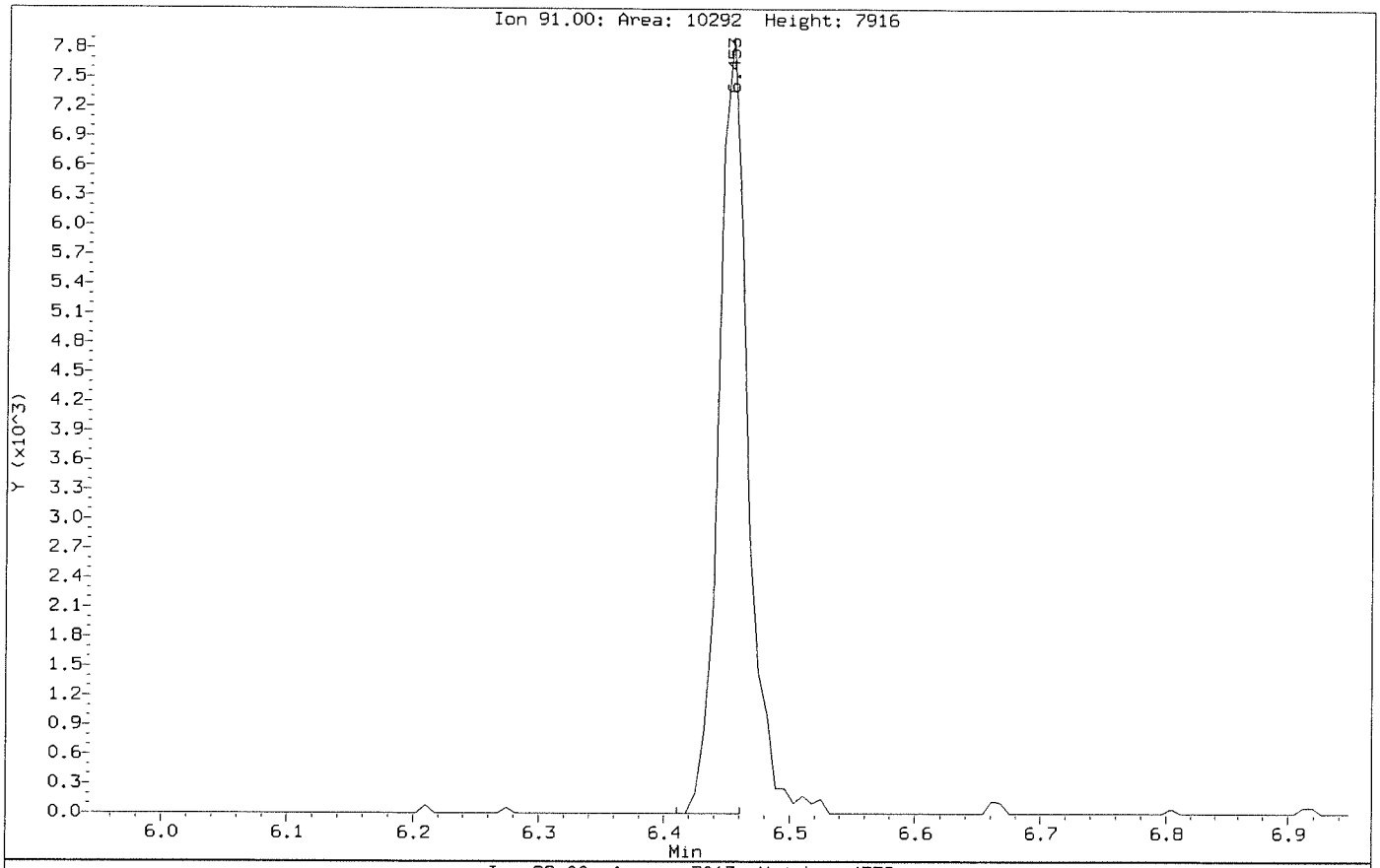
Compound: Toluene
CAS Number: 108-88-3

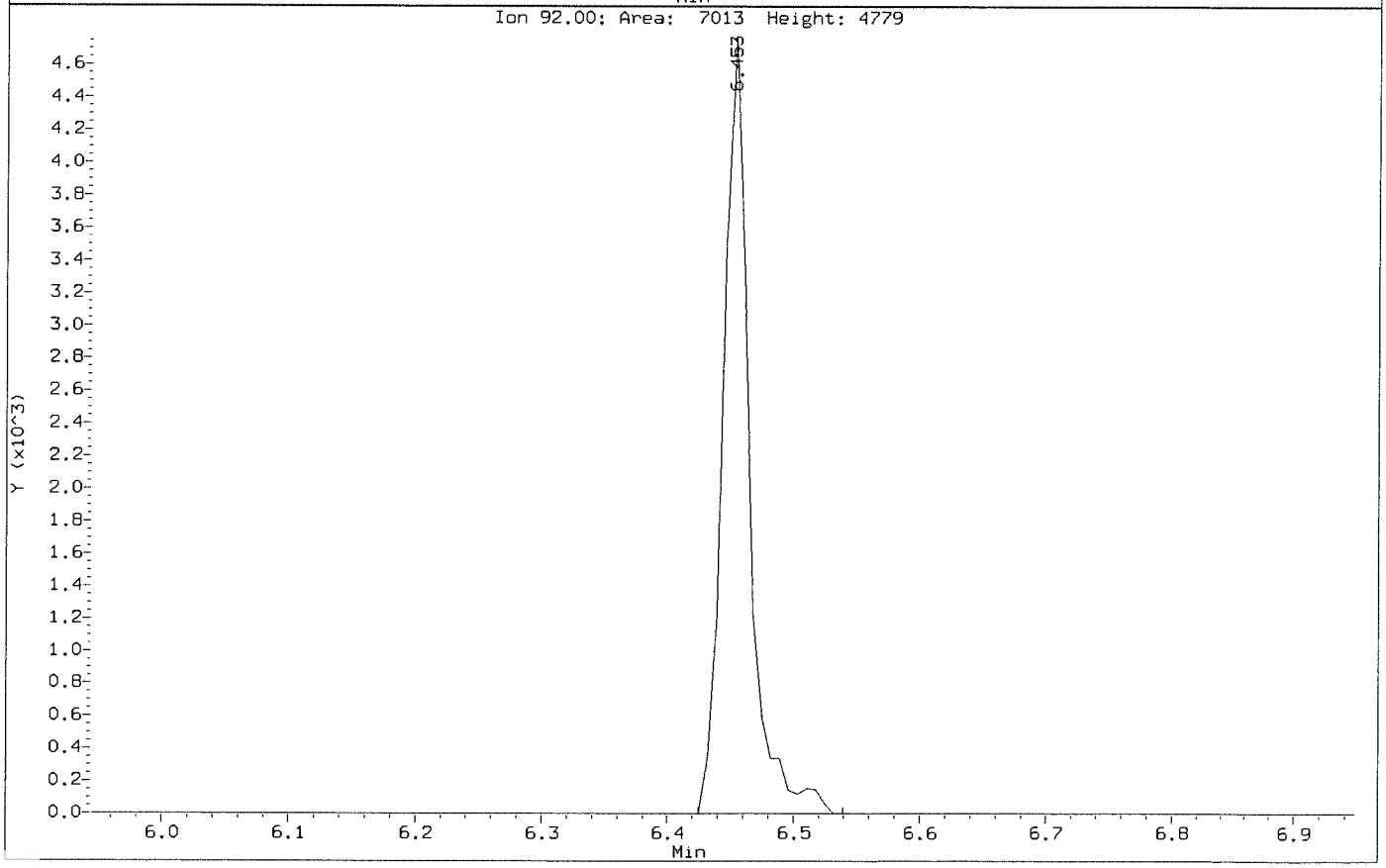




Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110304.D
Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

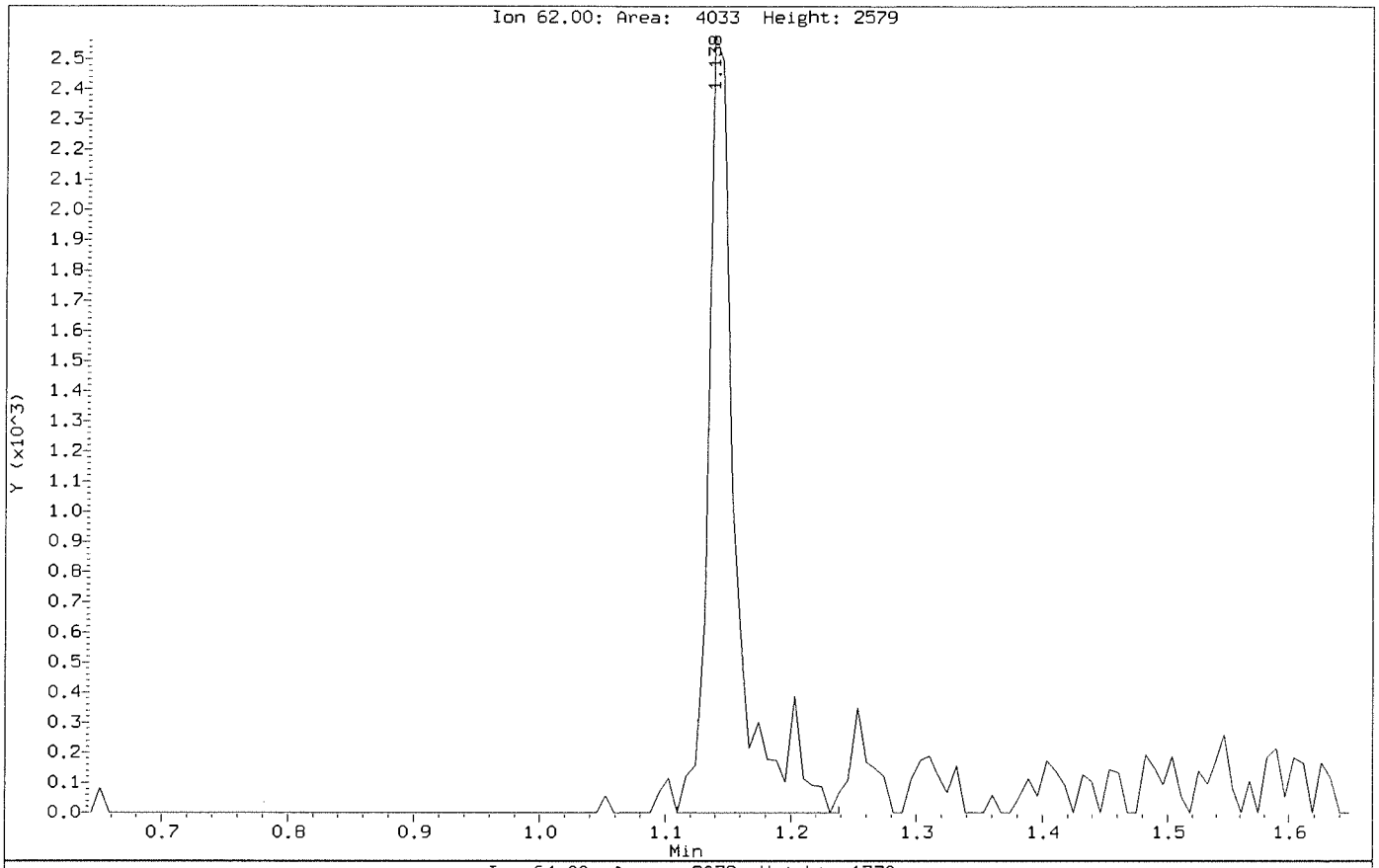
Compound: Toluene
CAS Number: 108-88-3

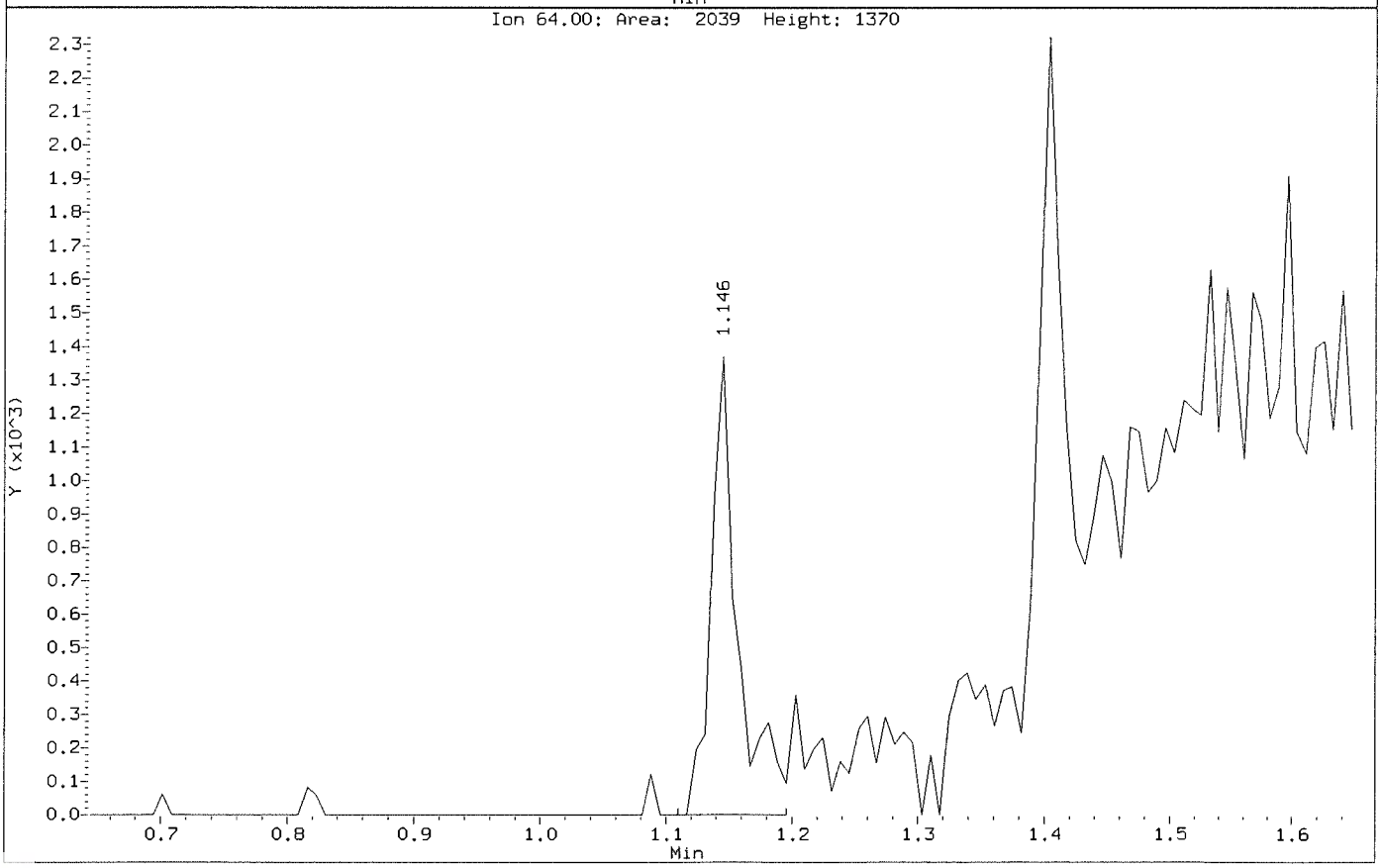




Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110304.D
Injection Date: 03-NOV-2020 13:04
Instrument: voa6.i
Client Sample ID: VSTD001

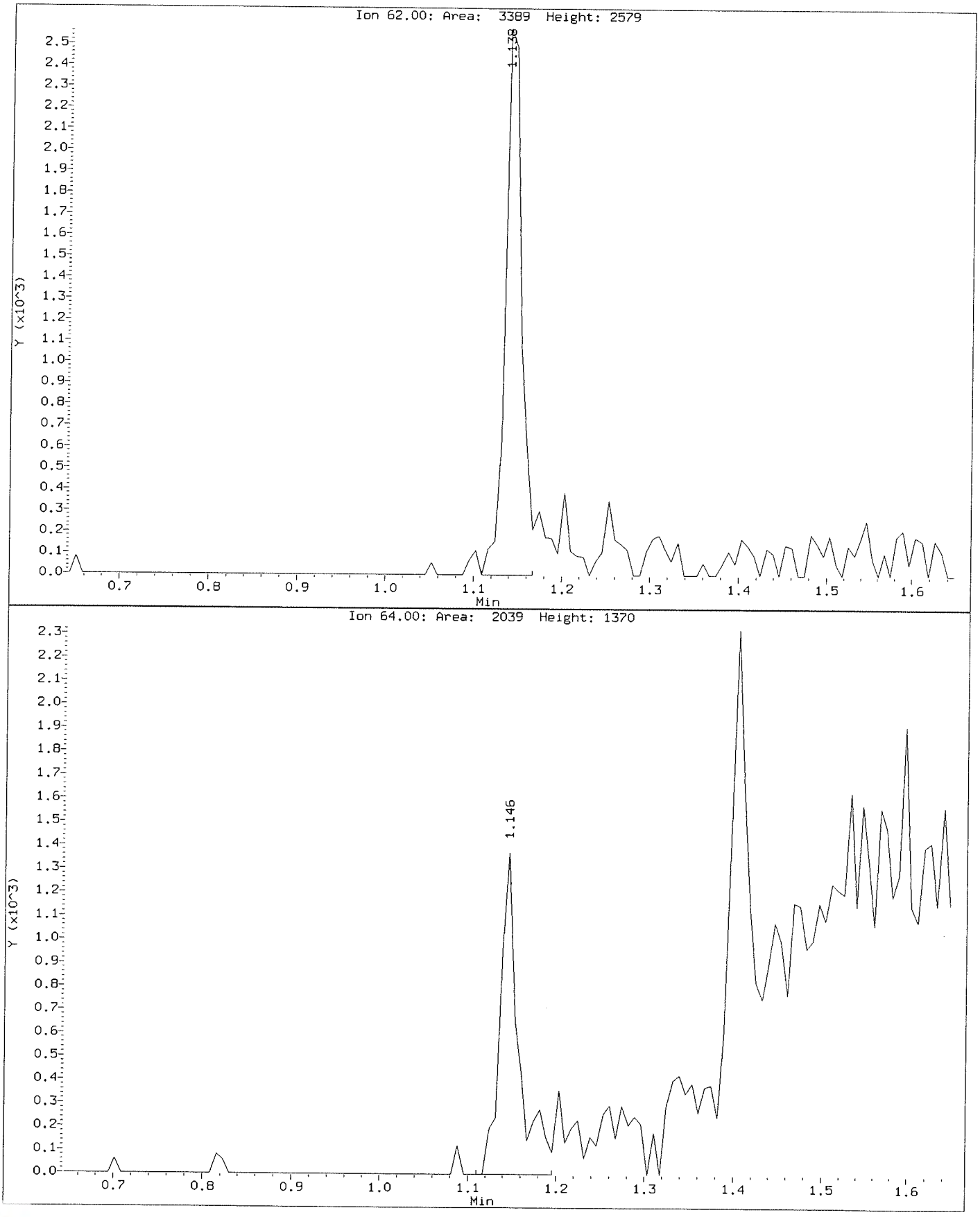
Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110304.D
Injection Date: 03-NOV-2020 13:04
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\X201103.b\X110305.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 03-NOV-2020 13:24
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:10 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 13:04 Cal File: X110304.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

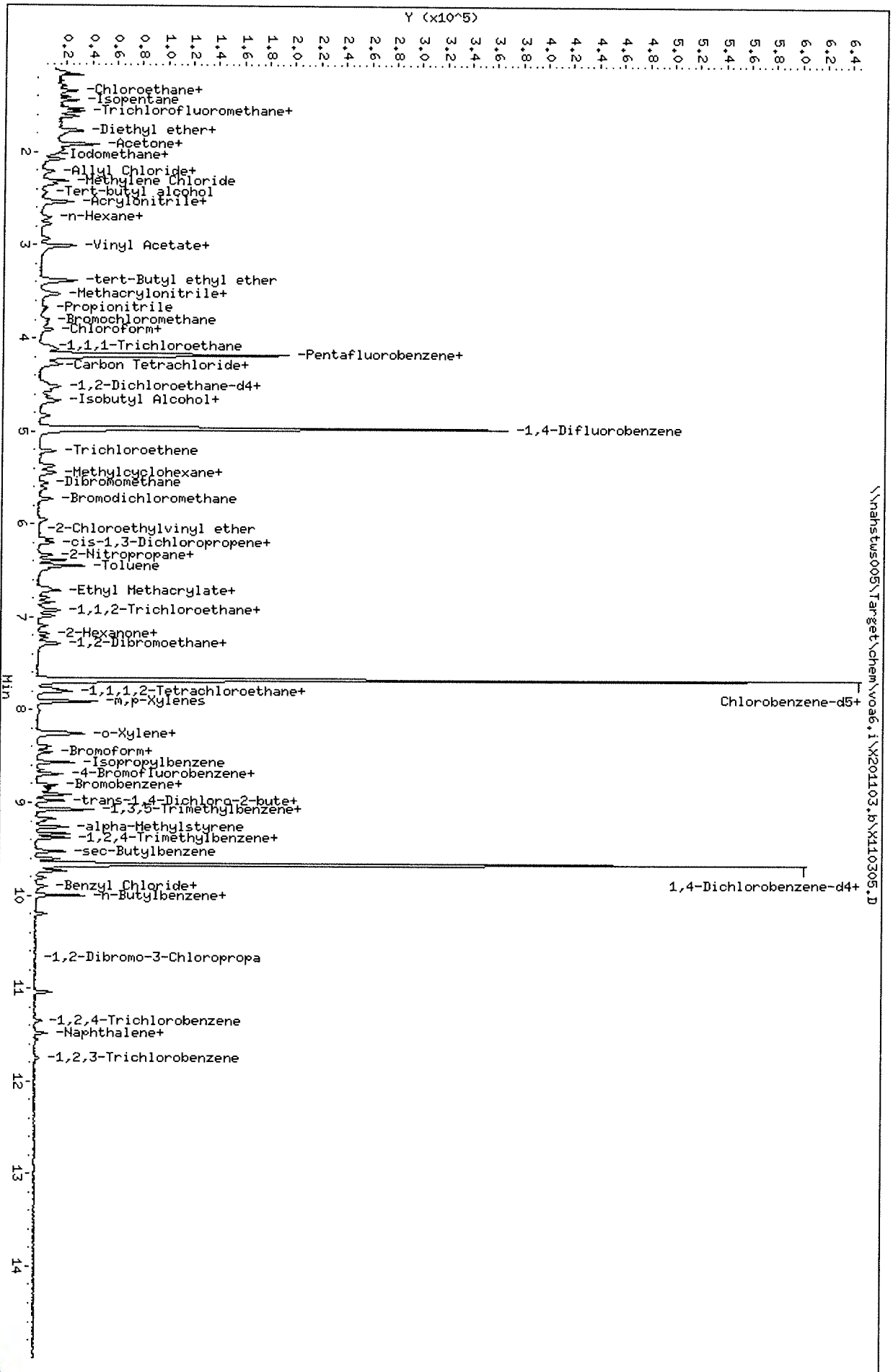
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	138290	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	259024	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	248739	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	106098	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	3693	2.00000	1.98(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	5018	2.00000	1.93(a)
$	48 Toluene-d8	98	6.388	6.388	(0.833)	12459	2.00000	1.87(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	4690	2.00000	2.47(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	2979	2.00000	1.67(a)
	31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	5702	2.00000	1.97(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	3824	2.00000	1.62(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2796	2.00000	1.82(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	6075	2.00000	1.82(a)
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	5185	2.00000	1.98(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	5488	2.00000	2.27(aM)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	1012	2.00000	3.91(aM)
	71 1,2,3-Trichloropropane	75	8.874	8.874	(0.918)	2793	2.00000	1.87(aMH)
	90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.175)	2022	2.00000	4.05(aM)
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	10539	2.00000	1.77(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	195	2.00000	1.32(aM)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	3087	2.00000	1.65(a)
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	5745	2.00000	1.96(a)

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110305.D Page 2
Report Date: 07-Nov-2020 12:10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	5501	2.00000	1.96(aM)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	3903	2.00000	2.03(aM)
75 1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	11653	2.00000	1.92(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	5834	2.00000	1.87(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	5906	2.00000	1.93(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	6935	2.00000	2.14(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	5827	2.00000	2.03(a)
24 2-Butanone	43	3.588	3.588	(0.858)	2551	4.00000	3.96(aM)
76 2-Chlorotoluene	91	8.981	8.981	(0.930)	10018	2.00000	2.01(a)
52 2-Hexanone	43	7.219	7.219	(0.941)	5963	4.00000	7.12
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	11569	2.00000	1.83(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	11552	2.00000	2.01(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	6934	4.00000	3.66(a)
10 Acetone	43	1.983	1.983	(0.474)	6814	4.00000	1.00(a)
37 Benzene	78	4.519	4.519	(0.909)	14575	2.00000	2.01(a)
74 Bromobenzene	156	8.809	8.809	(0.912)	3717	2.00000	1.99(a)
29 Bromochloromethane	128	3.810	3.810	(0.911)	1977	2.00000	2.07(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	5791	2.00000	2.17(aM)
66 Bromoform	173	8.423	8.423	(1.098)	1884	2.00000	4.54(Ta)
6 Bromomethane	94	1.338	1.338	(0.320)	5183	2.00000	2.01(aM)
19 Carbon Disulfide	76	2.076	2.076	(0.497)	20159	4.00000	4.15(a)
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	4884	2.00000	2.10(a)
59 Chlorobenzene	112	7.699	7.699	(1.004)	10046	2.00000	1.88(a)
7 Chloroethane	64	1.403	1.403	(0.336)	5151	2.00000	2.36(a)
28 Chloroform	83	3.910	3.910	(0.935)	8058	2.00000	2.27(a)
3 Chloromethane	50	1.073	1.073	(0.257)	4801	2.00000	3.28(aM)
27 cis-1,2-Dichloroethene	96	3.537	3.537	(0.846)	4196	2.00000	2.06(a)
46 cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	6278	2.00000	2.17(a)
55 Dibromochloromethane	129	7.176	7.176	(0.936)	3239	2.00000	1.76(a)
44 Dibromomethane	93	5.557	5.557	(1.118)	3114	2.00000	2.37(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	3469	2.00000	1.93(a)
61 Ethylbenzene	106	7.799	7.799	(1.017)	5316	2.00000	1.97(aH)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	1206	2.00000	4.34(aM)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	13777	2.00000	4.19(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	10809	4.00000	3.34(aM)
17 Methylene Chloride	84	2.305	2.305	(0.551)	3913	2.00000	2.06(a)
87 n-Butylbenzene	91	9.998	9.998	(1.035)	11381	2.00000	5.24
73 n-Propylbenzene	91	8.917	8.917	(0.923)	16441	2.00000	1.94(a)
92 Naphthalene	128	11.553	11.553	(1.196)	2622	2.00000	4.19(a)
63 o-Xylene	106	8.244	8.244	(1.075)	6045	2.00000	1.87(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	13806	2.00000	4.43(a)
64 Styrene	104	8.265	8.265	(1.078)	9334	2.00000	1.72(a)
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	9232	2.00000	4.30(aM)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	2392	2.00000	1.74(a)
50 Toluene	91	6.453	6.453	(0.841)	19681	2.00000	2.16(aM)
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	3535	2.00000	2.05(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	4619	2.00000	1.81(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	3905	2.00000	2.26(aM)
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	10872	2.00000	2.08(a)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	6176	2.00000	2.02(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.

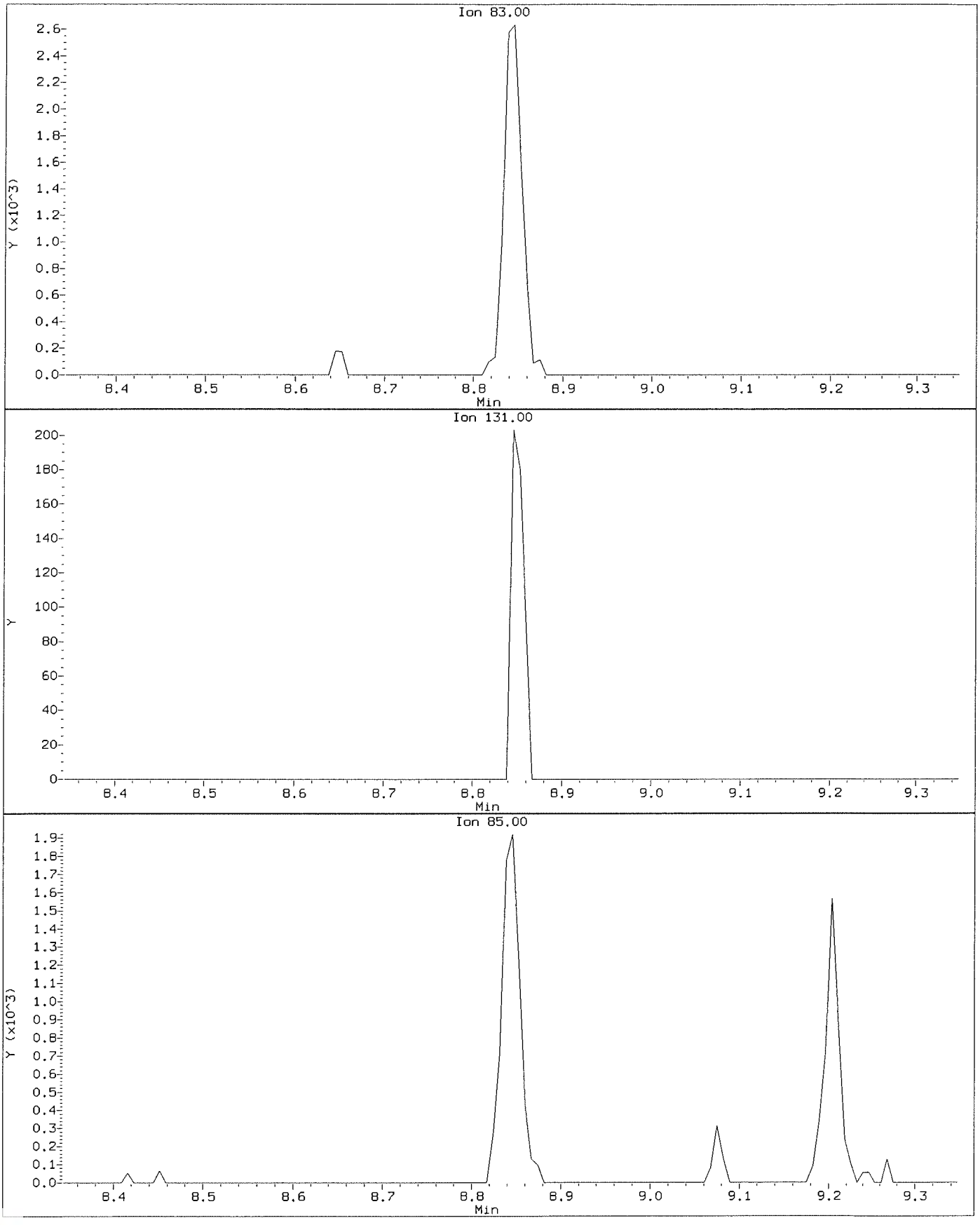


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Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

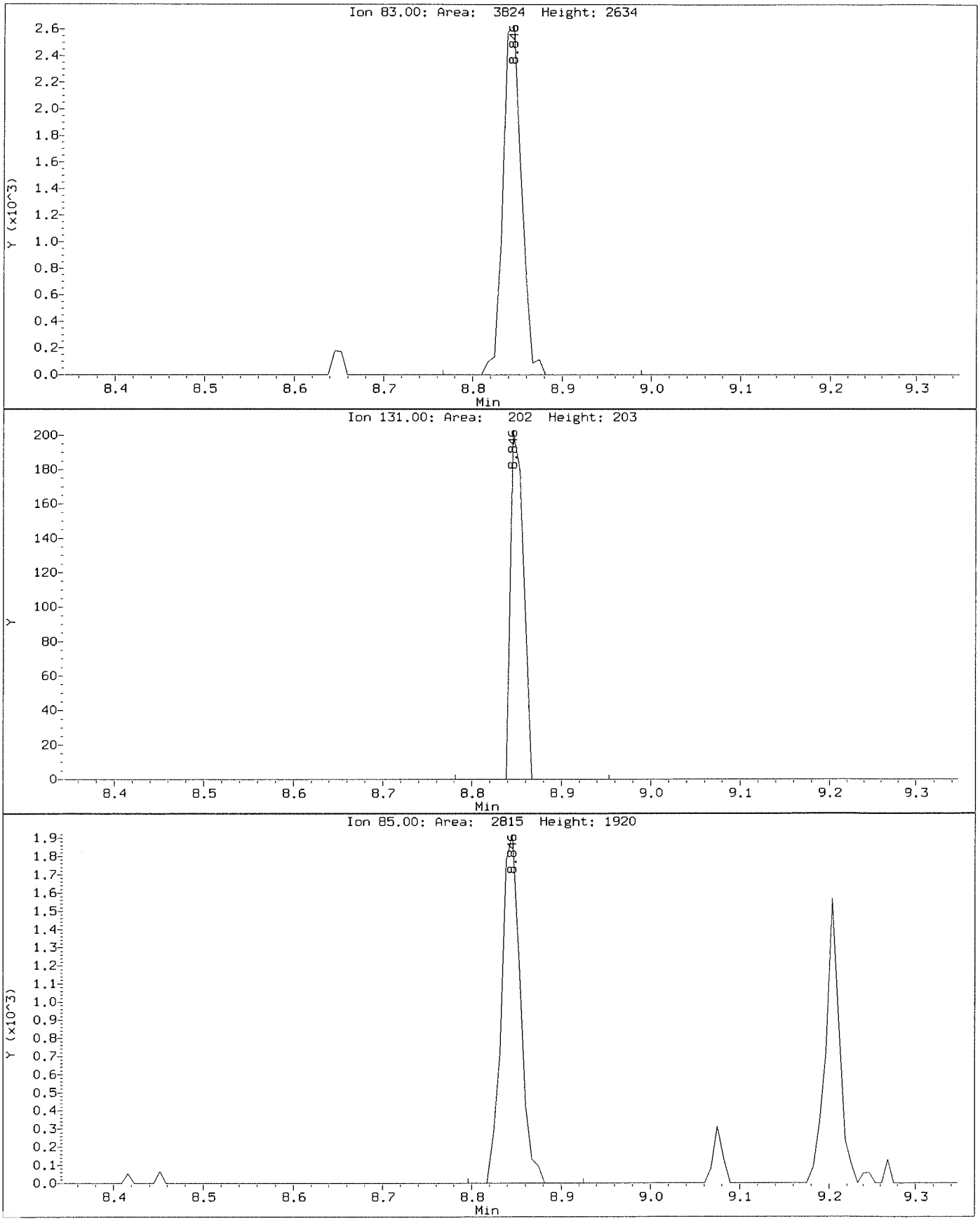
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Compound: 1,1,2,2-Tetrachloroethane
CAS Number: 79-34-5



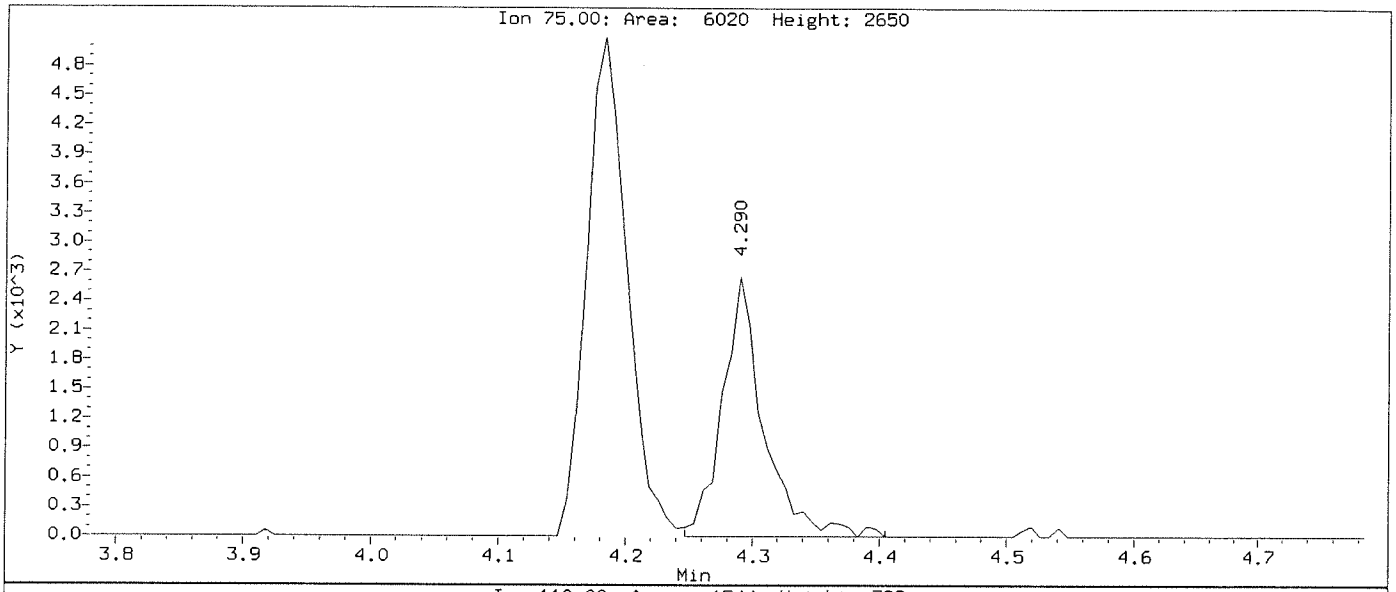
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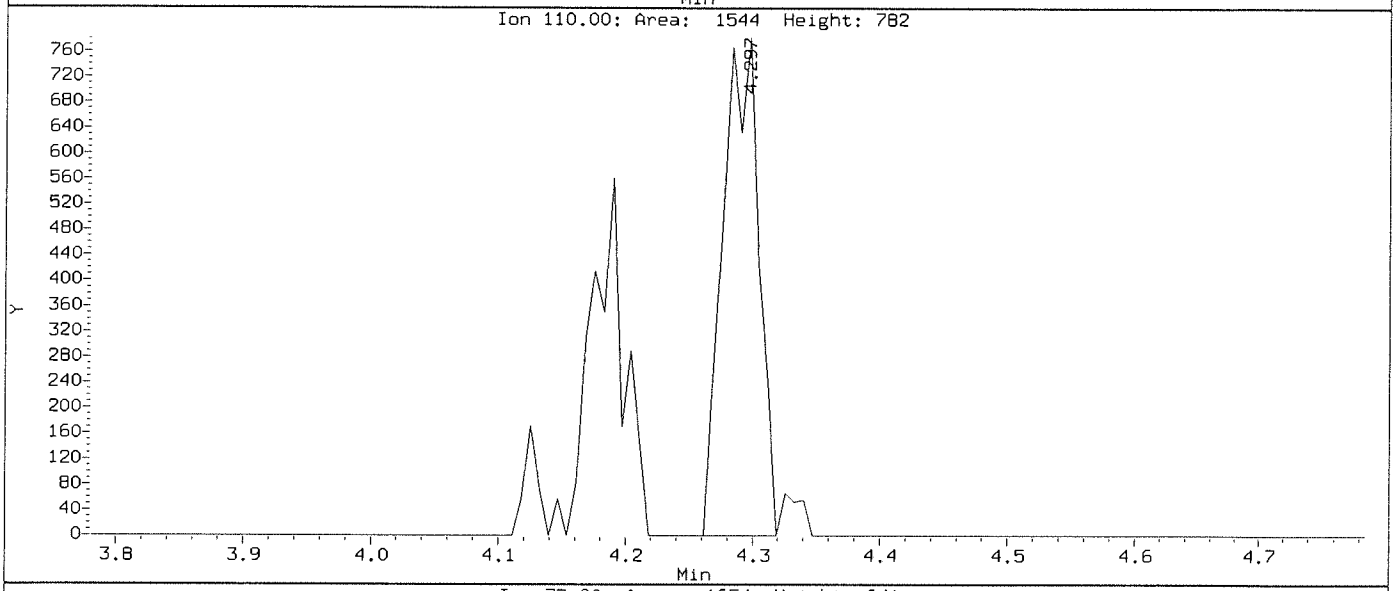
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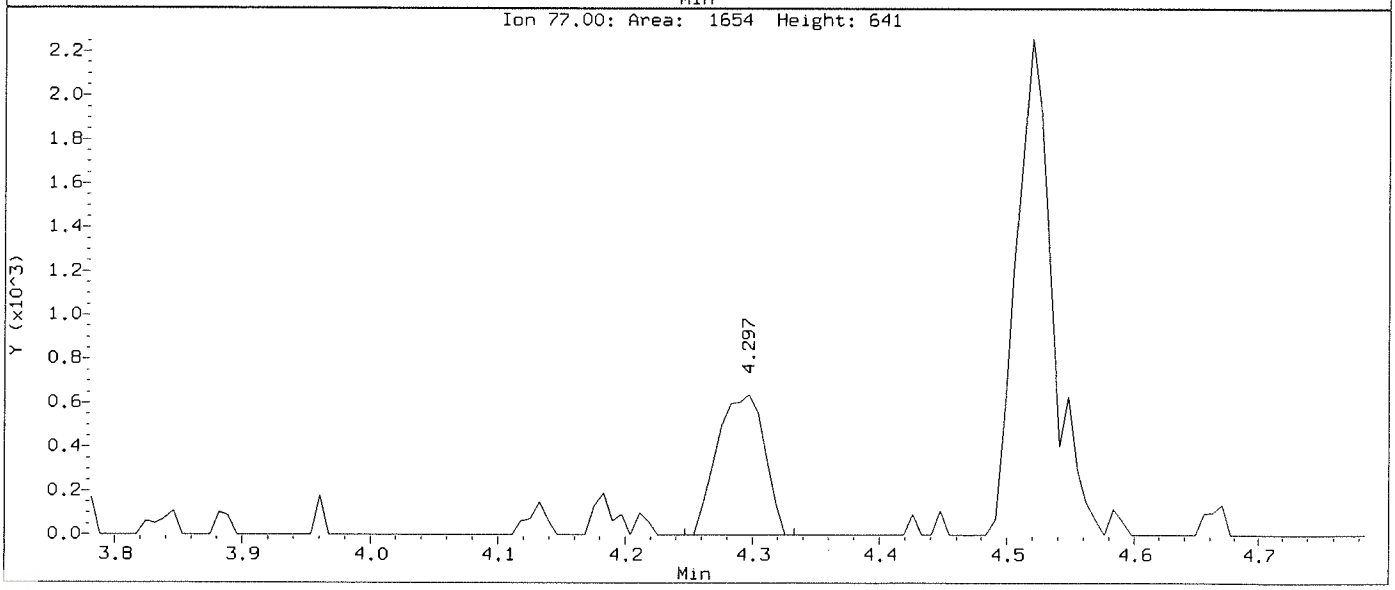


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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,1-Dichloropropene
CAS Number: 563-58-6

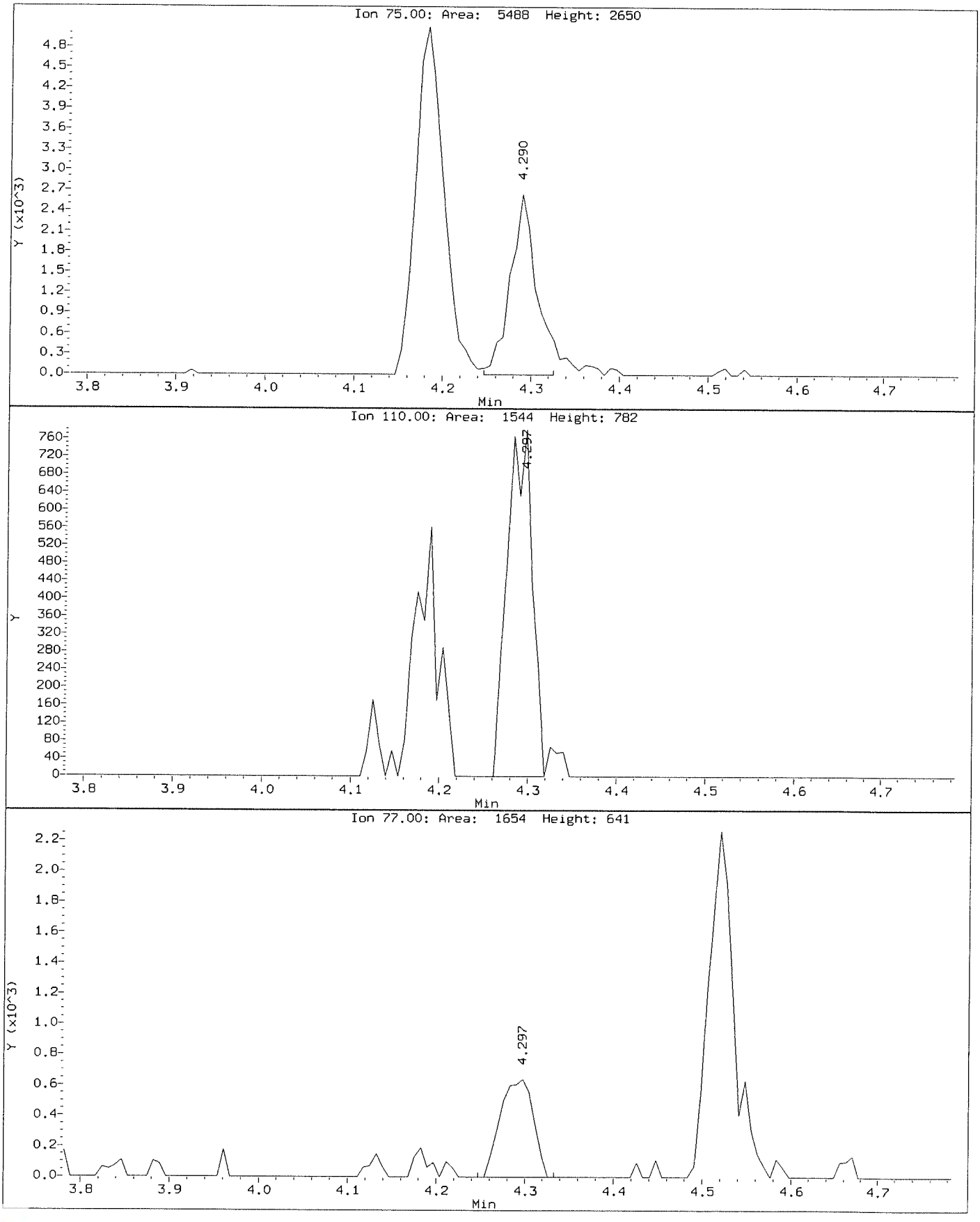






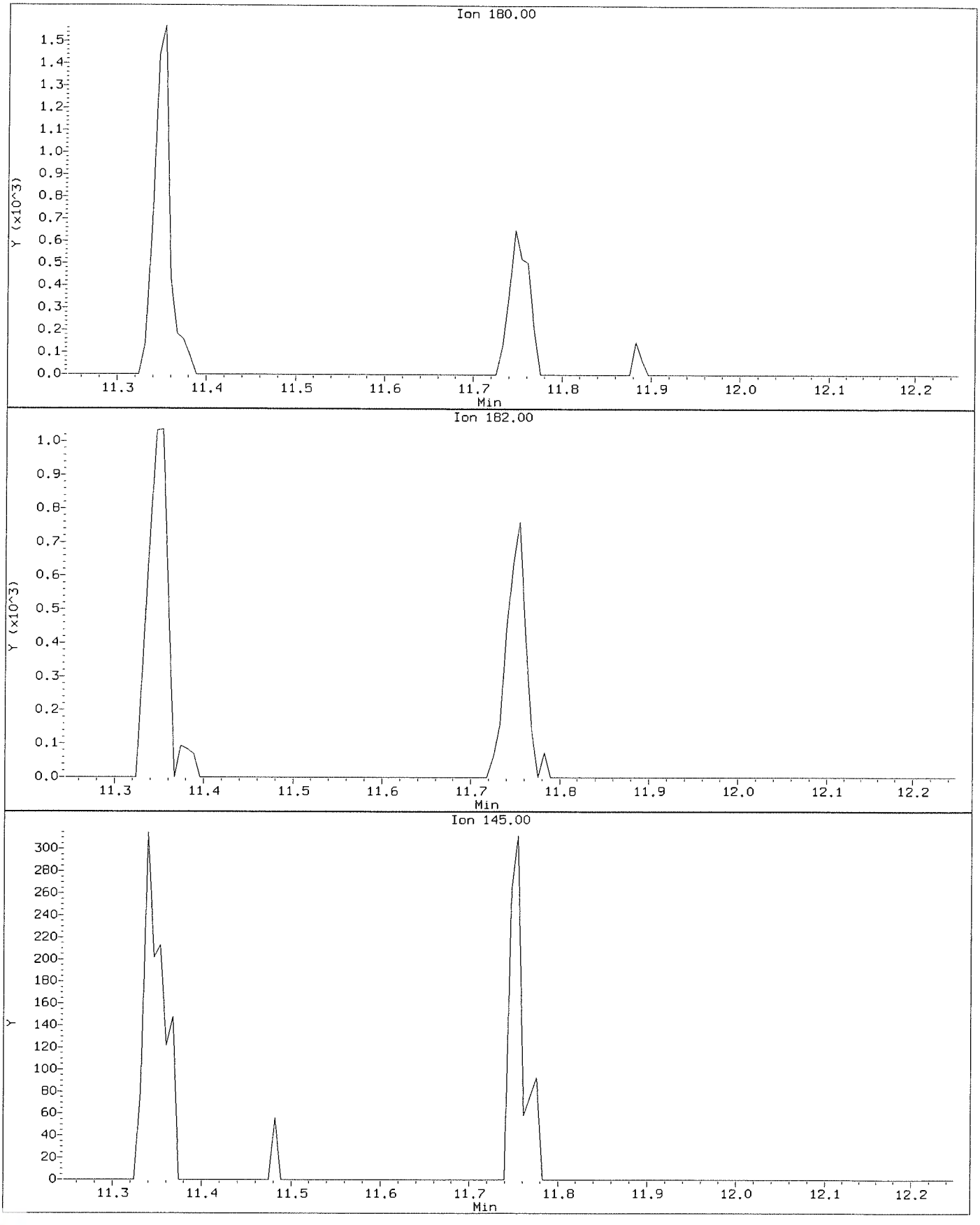
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Compound: 1,1-Dichloropropene
CAS Number: 563-58-6



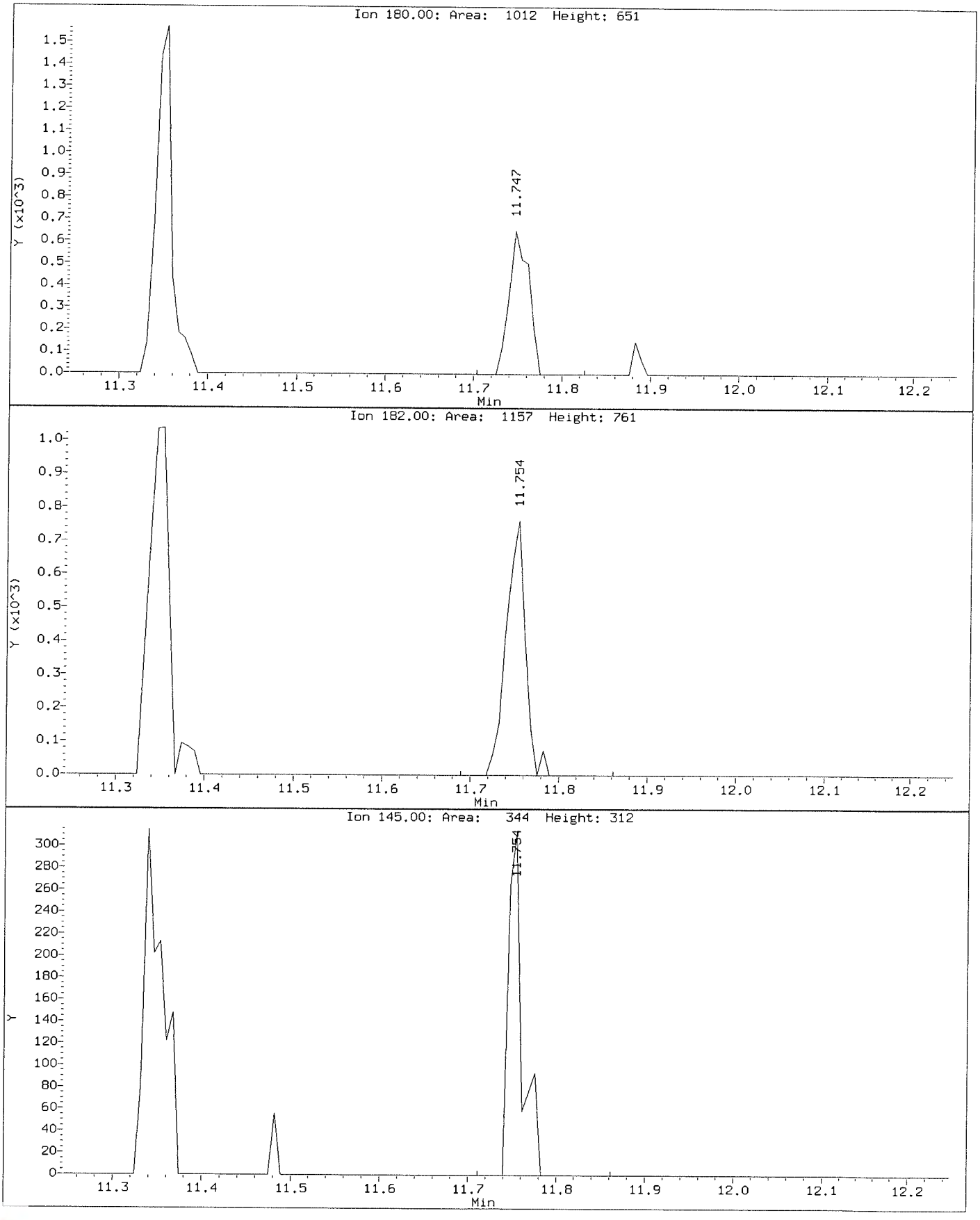
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Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



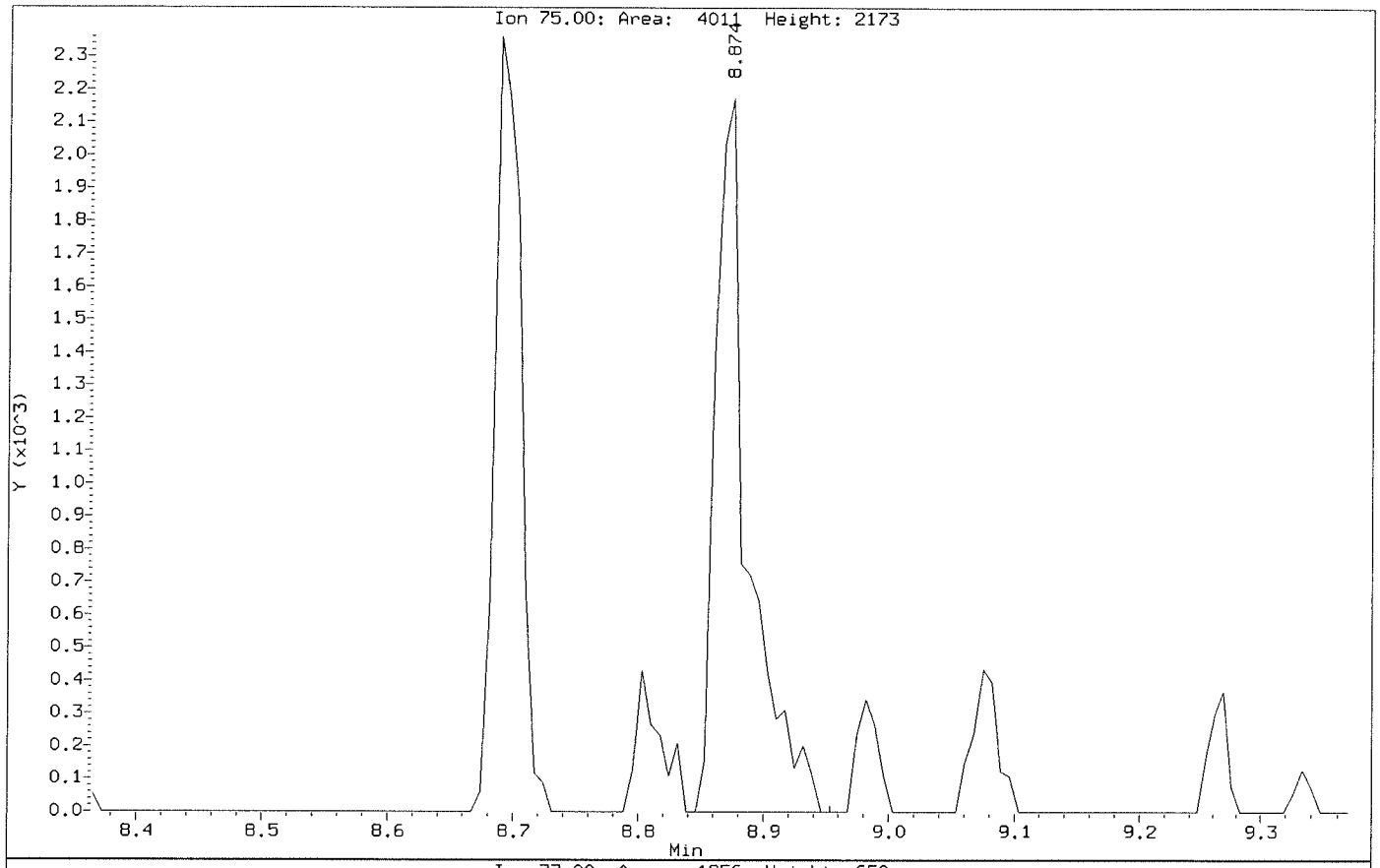
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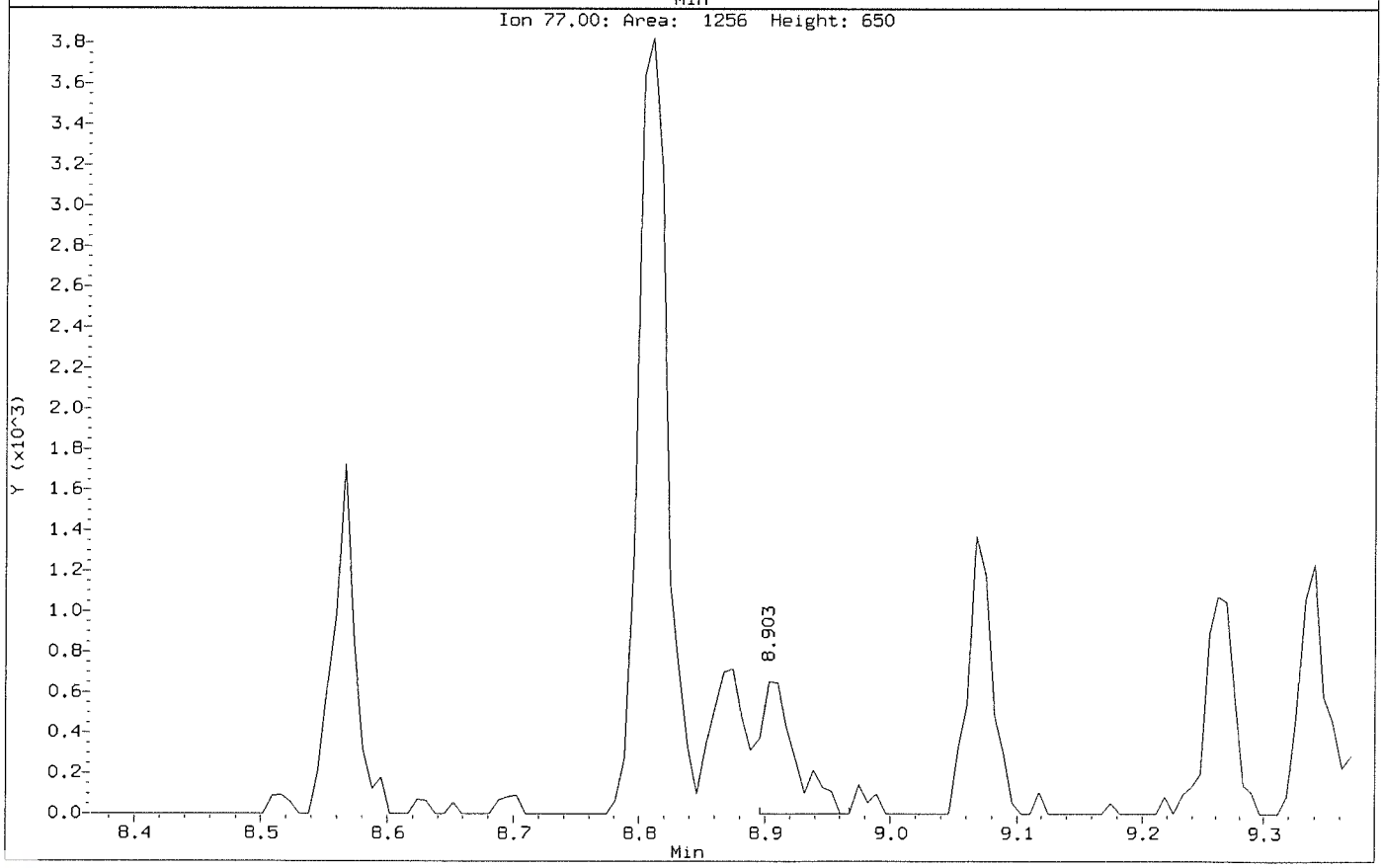
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CAS Number: 87-61-6



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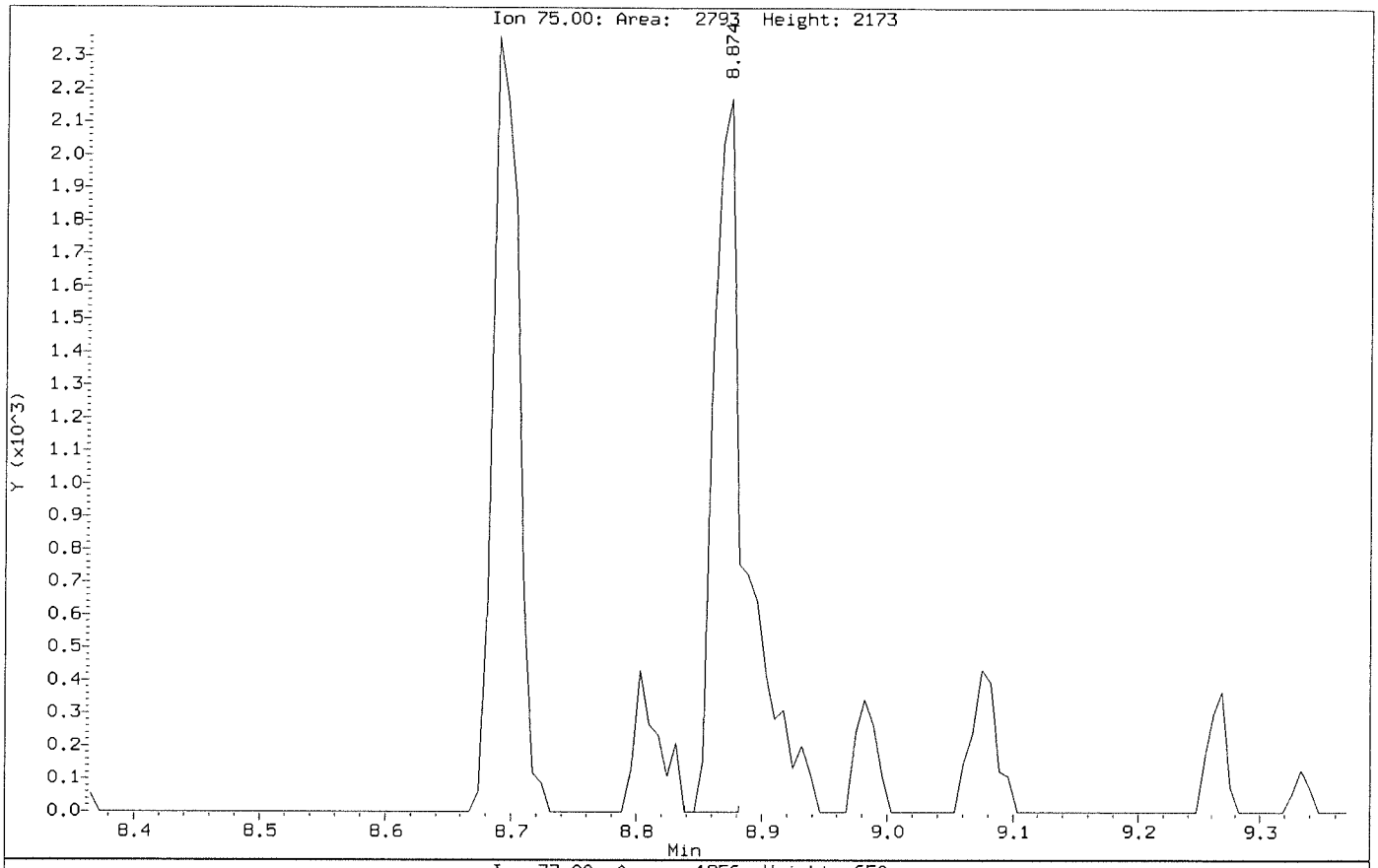
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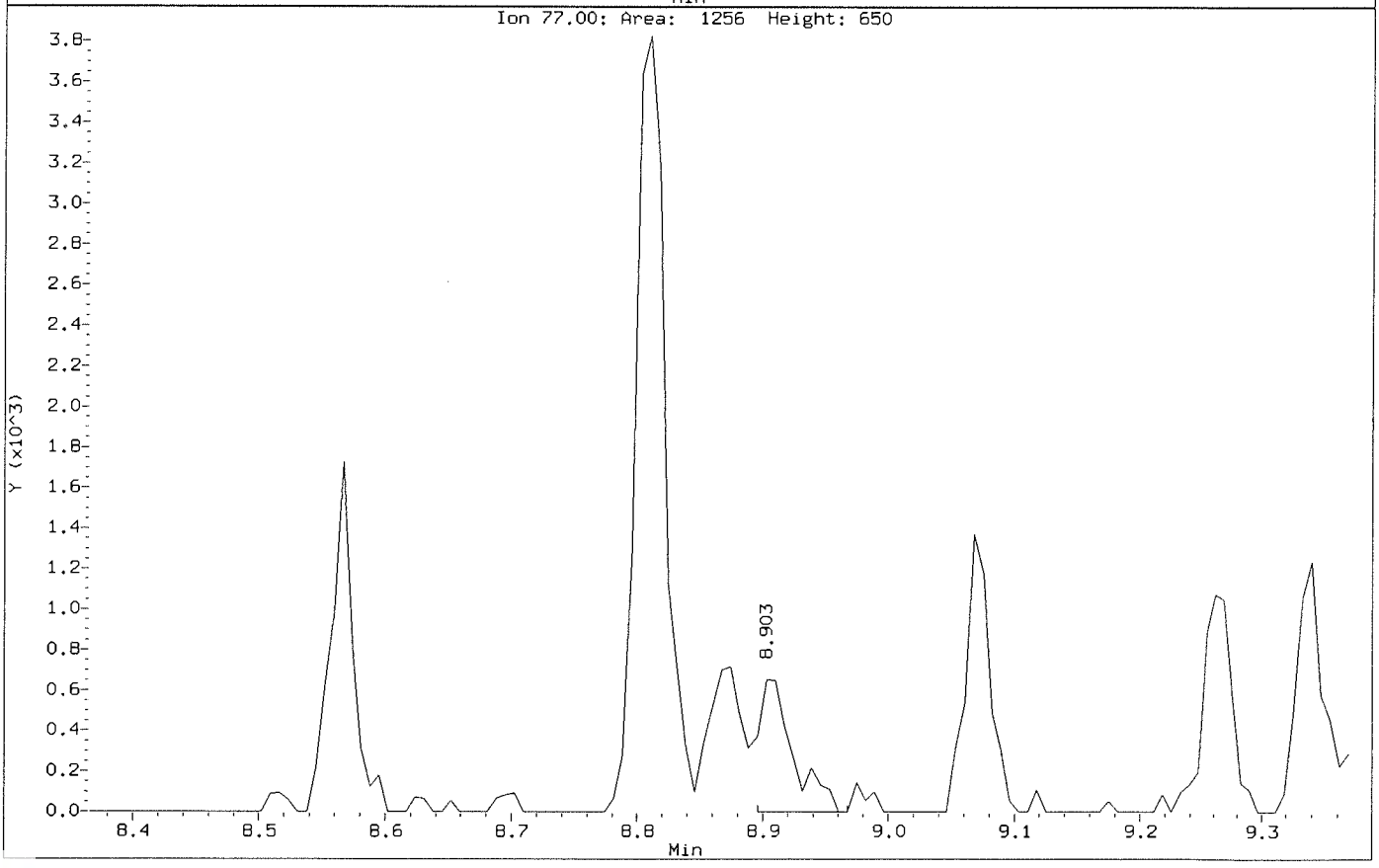




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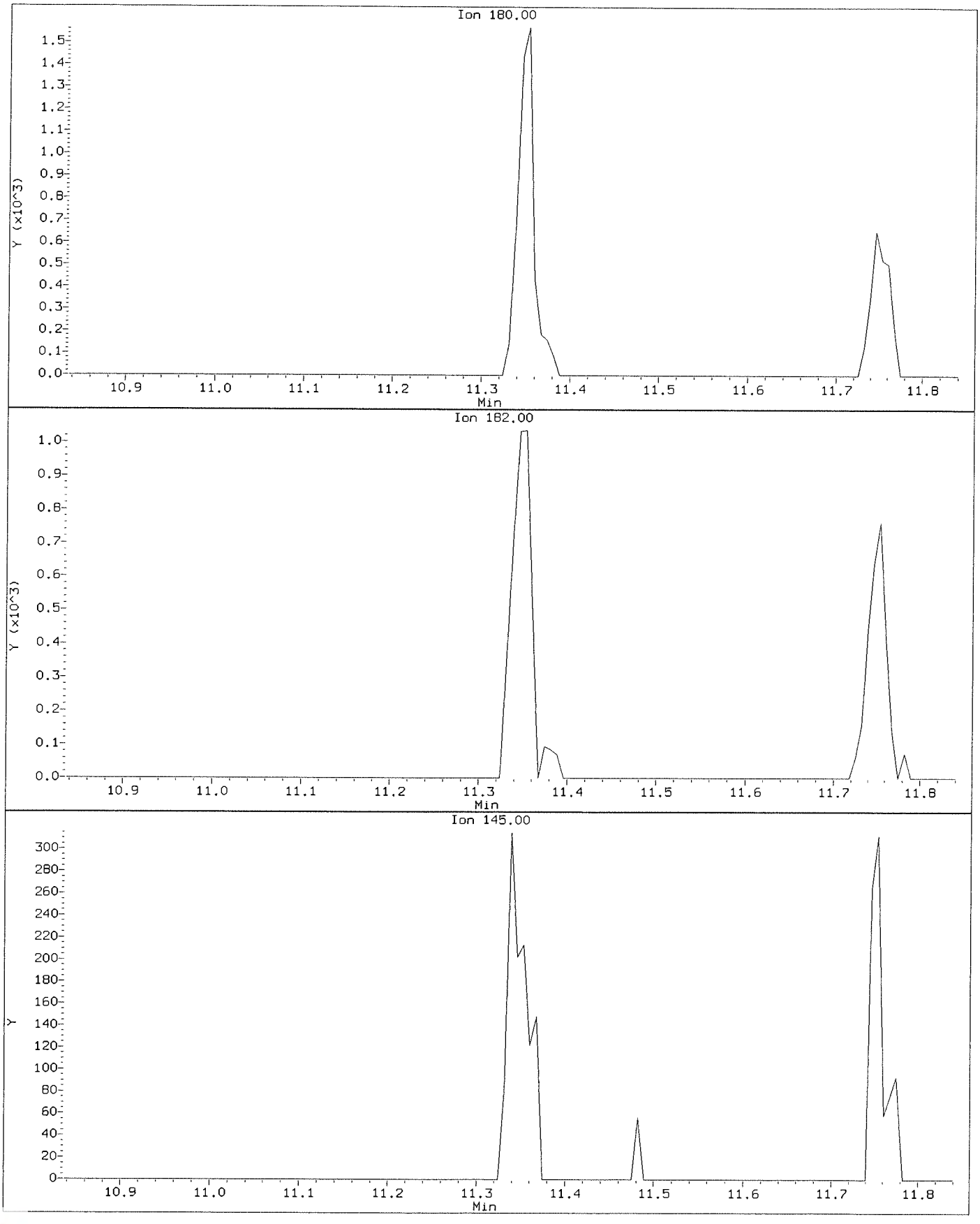
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





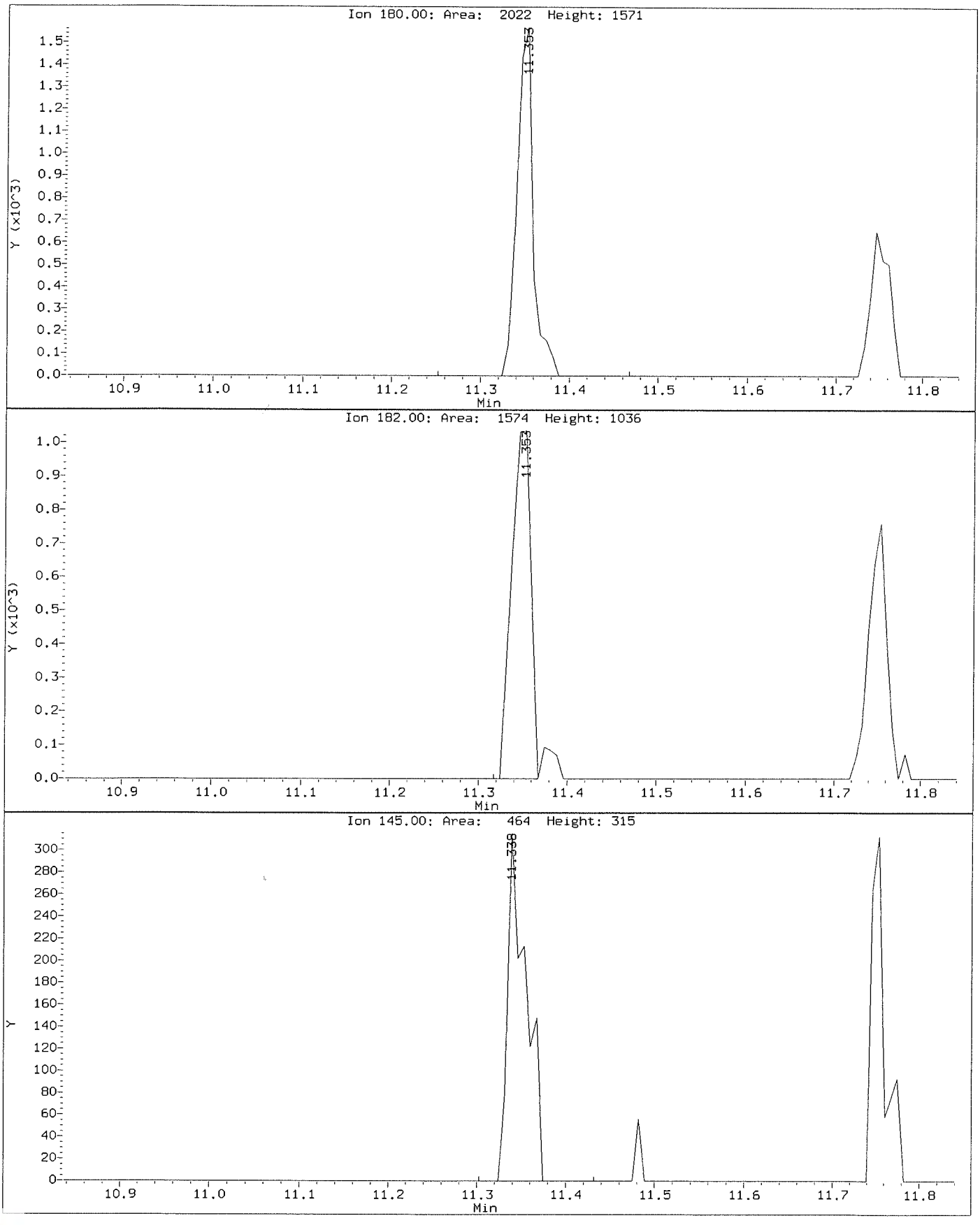
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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



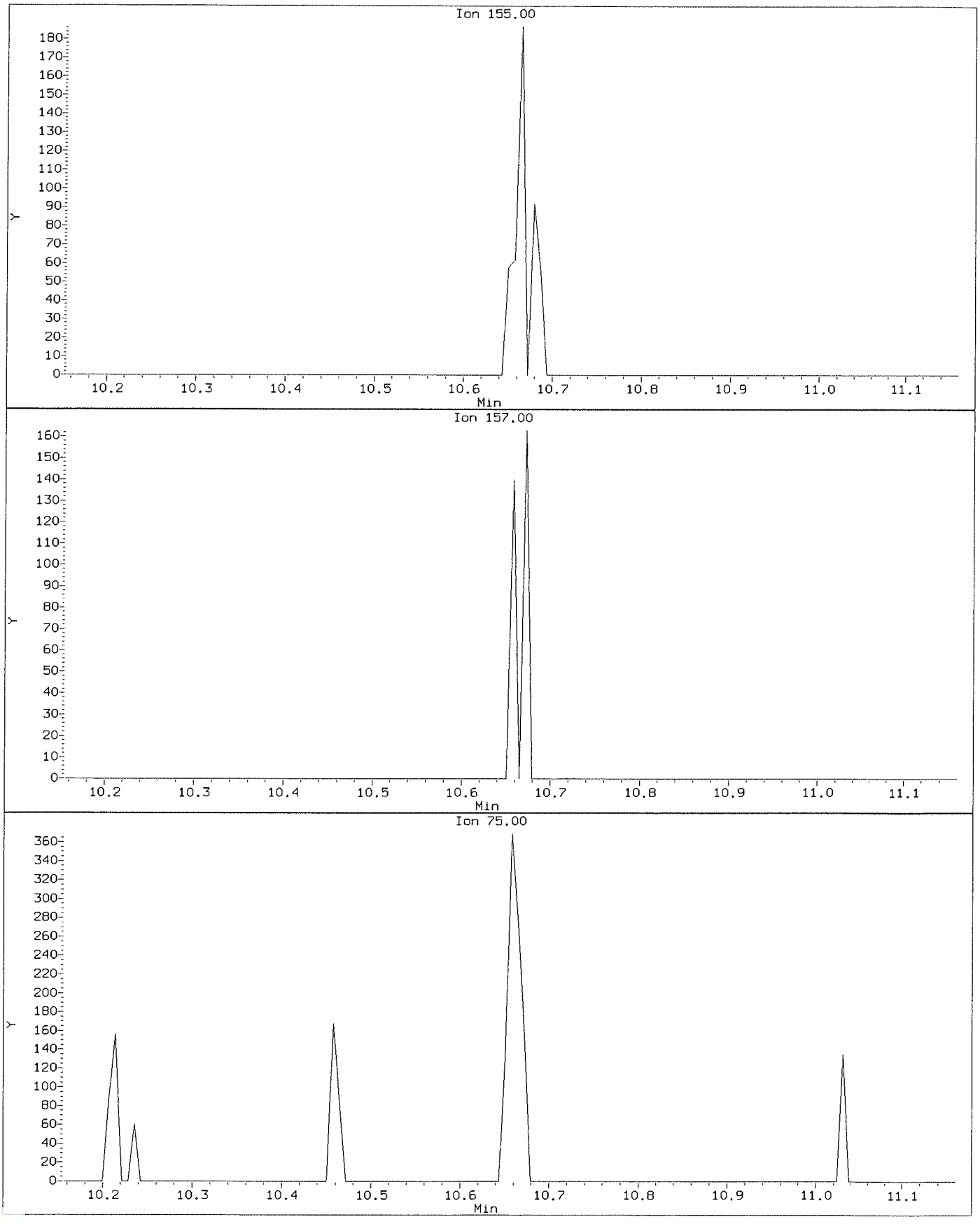
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Client Sample ID: VSTD002

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



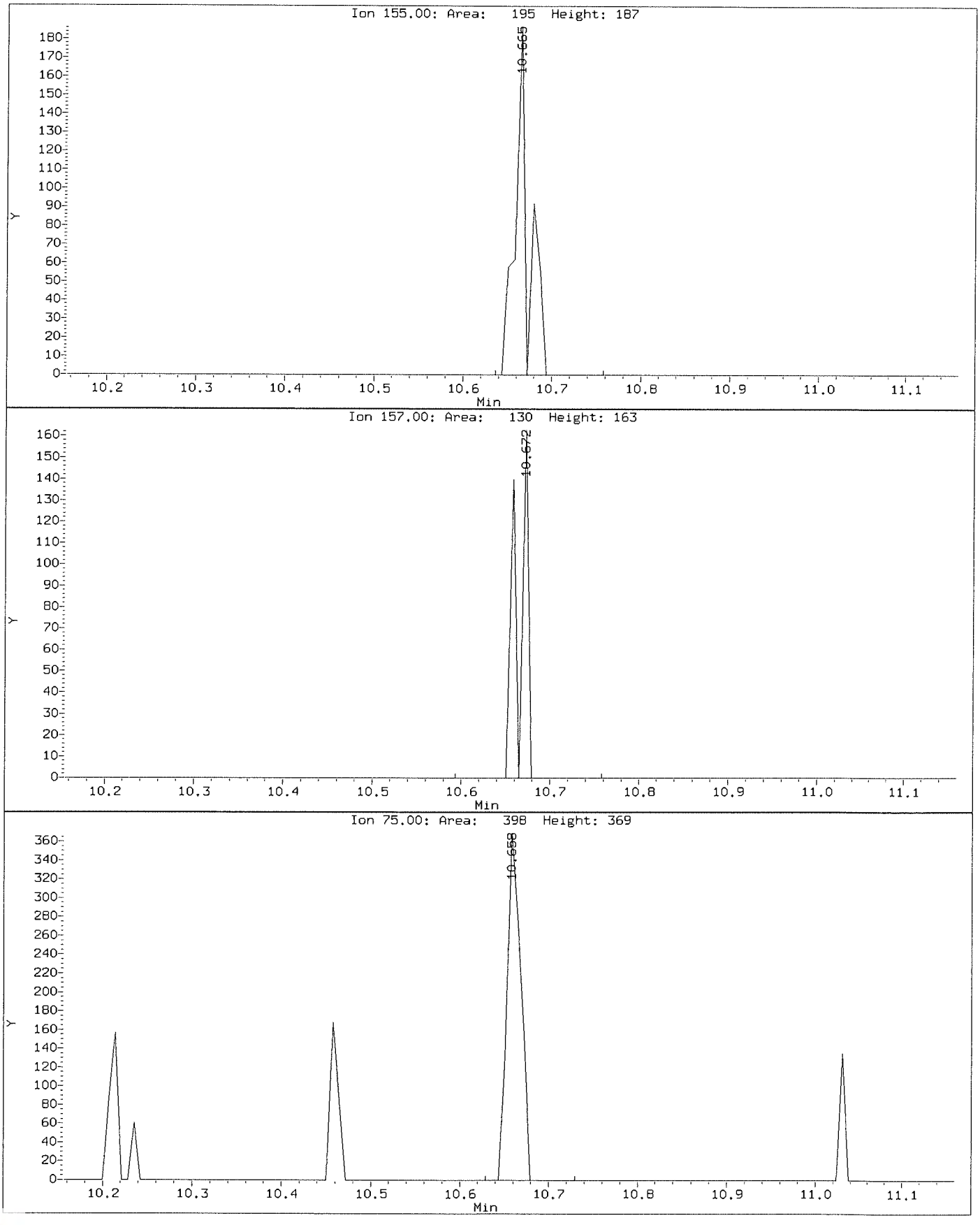
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Injection Date: 03-NOV-2020 13:24
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



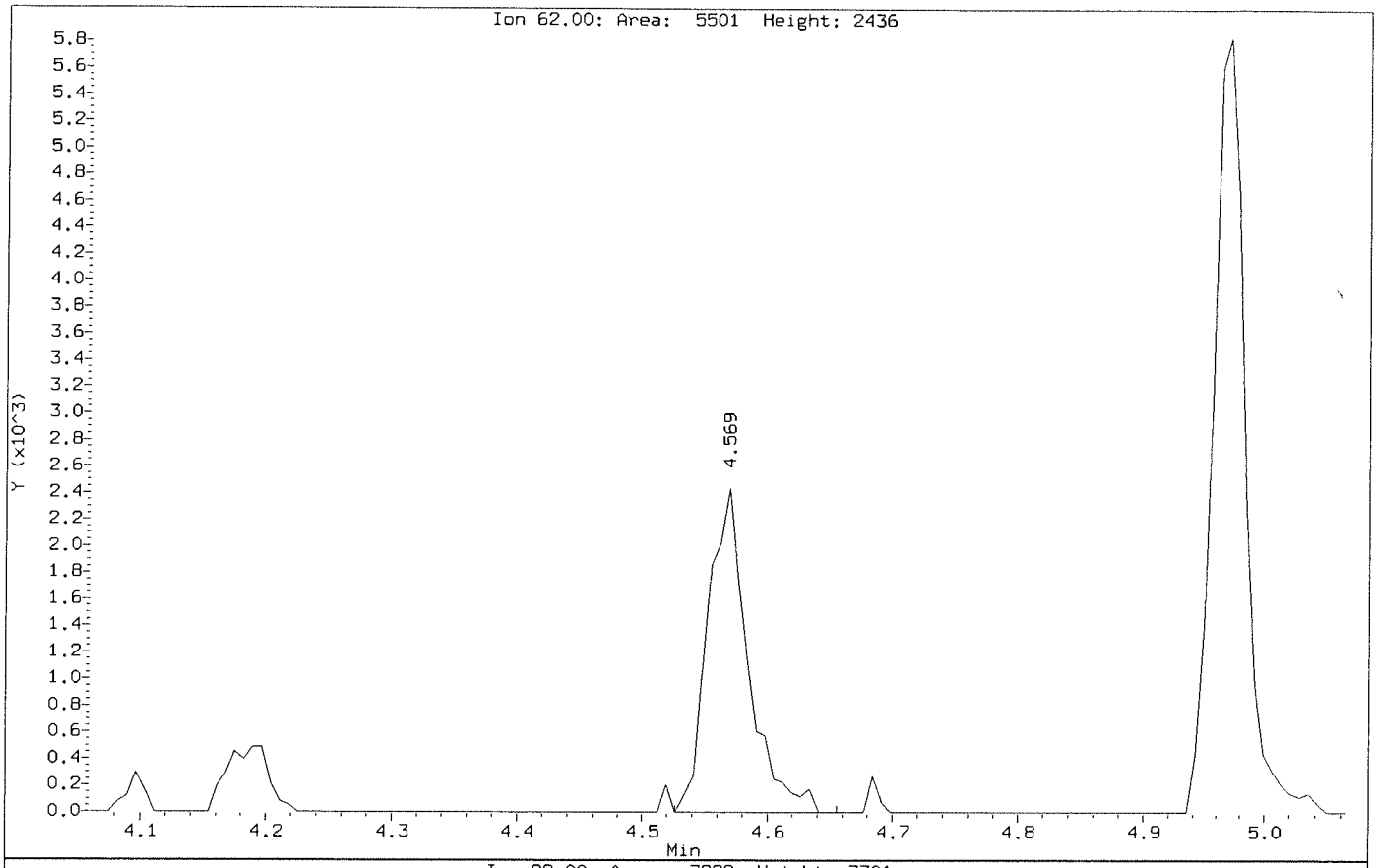
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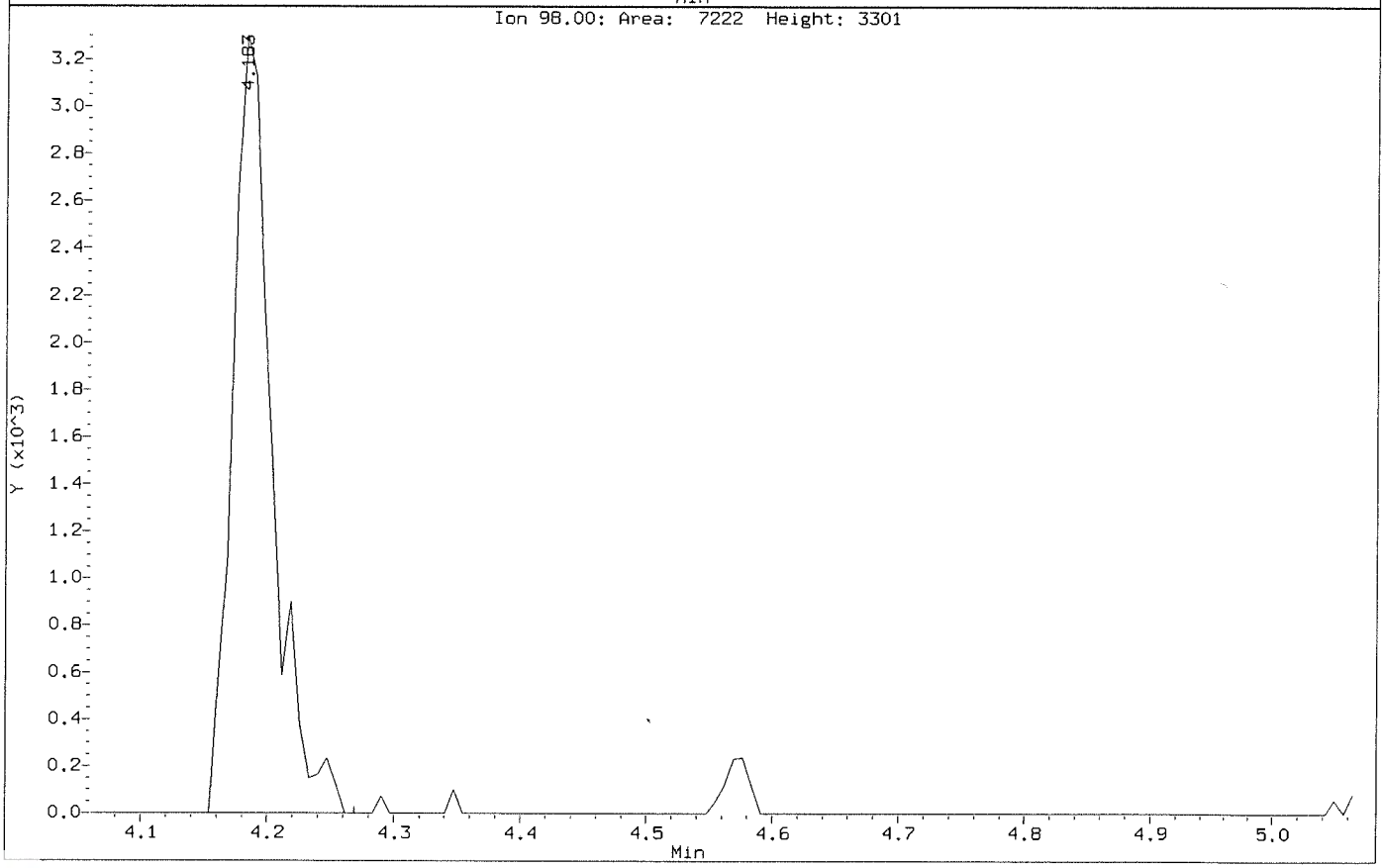
Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8



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Instrument: voa6.i
Client Sample ID: VSTD002

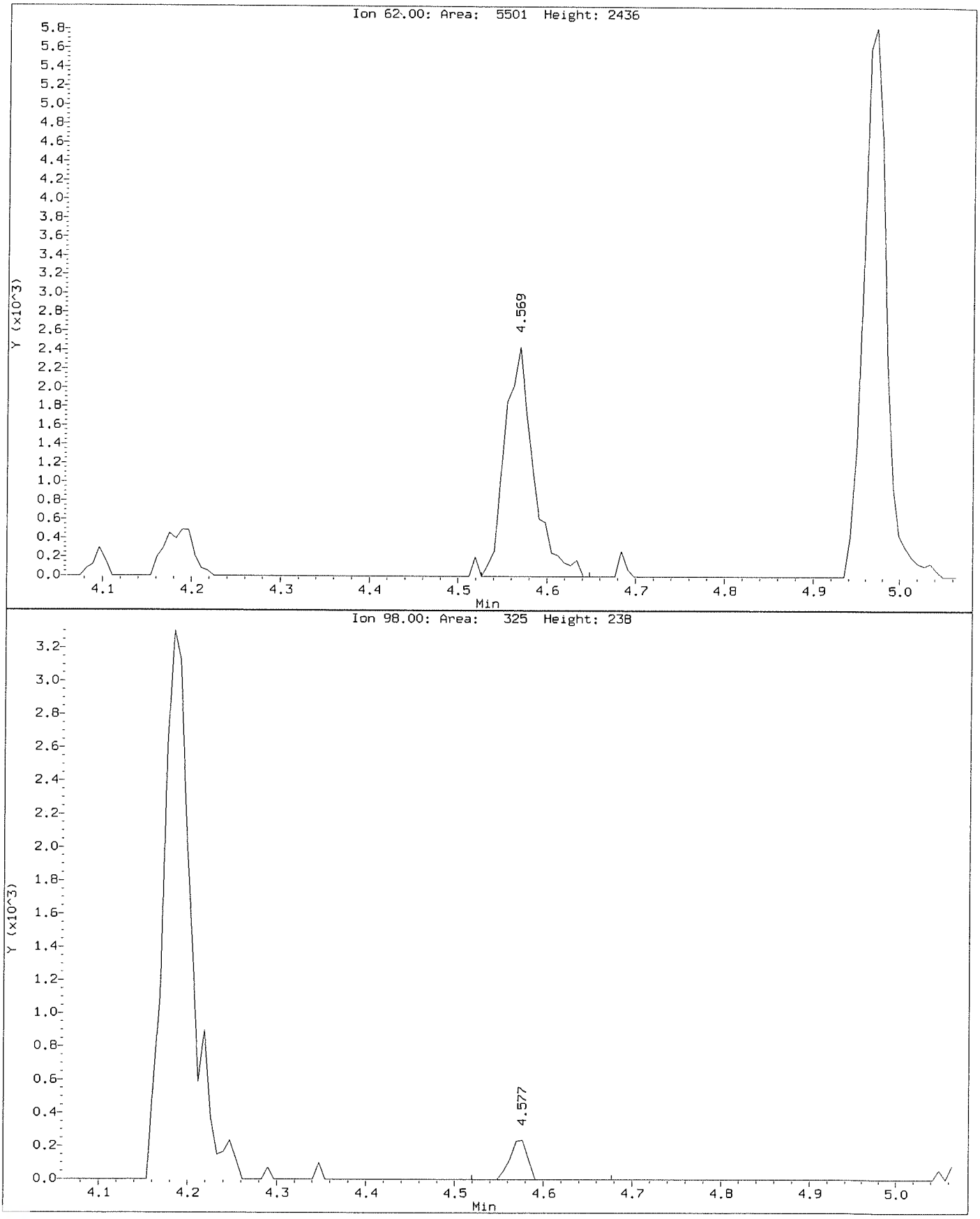
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2





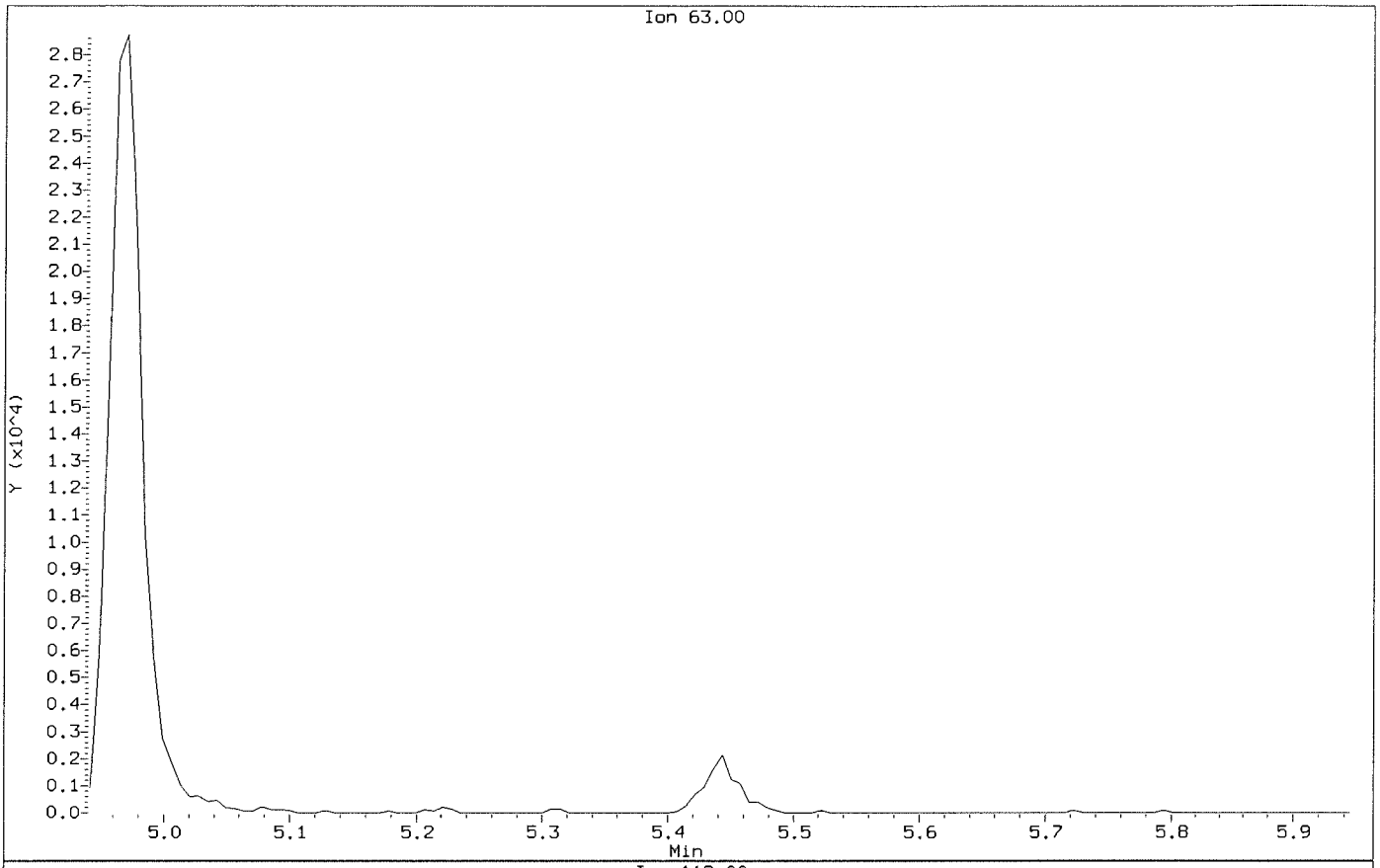
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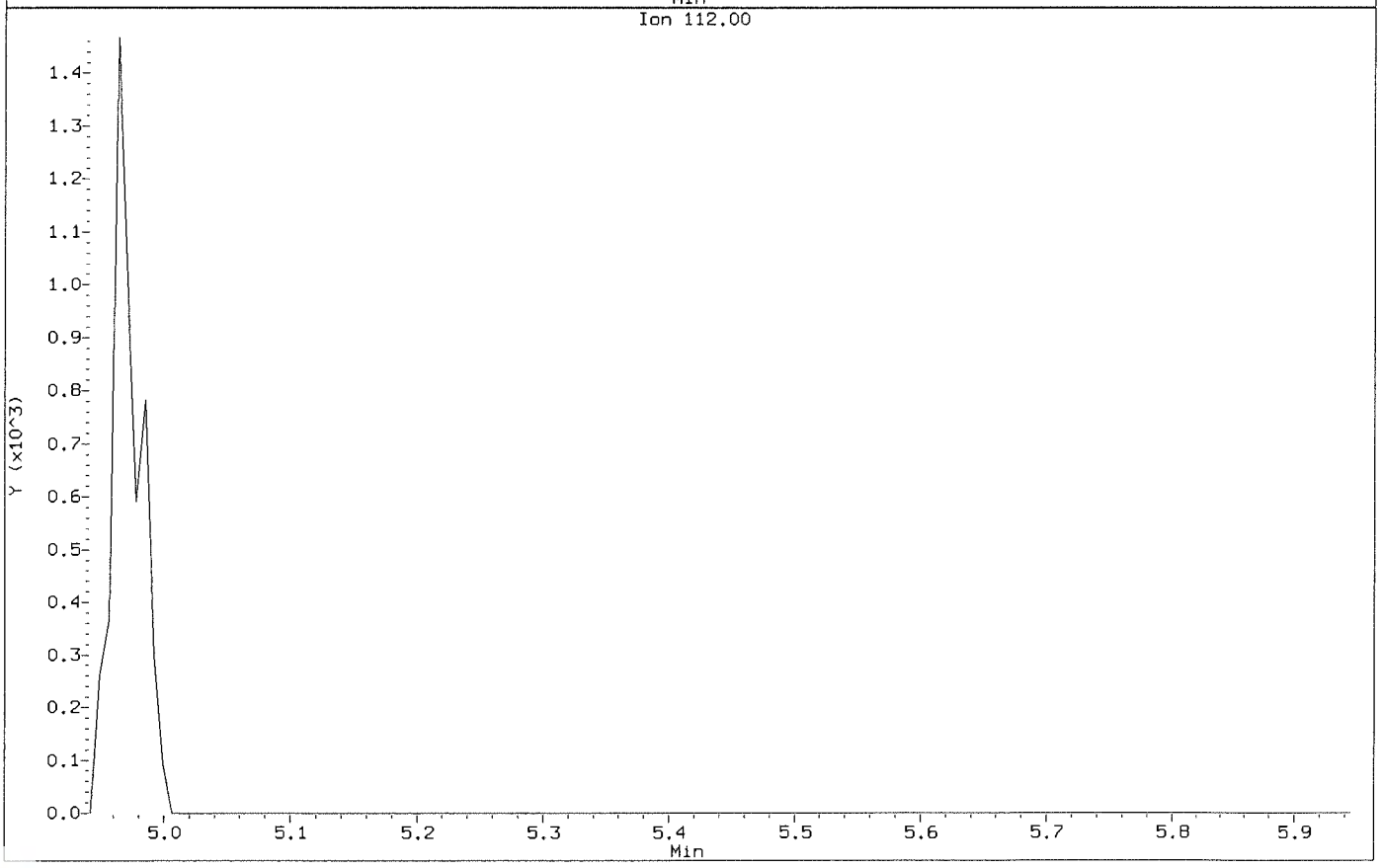
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2



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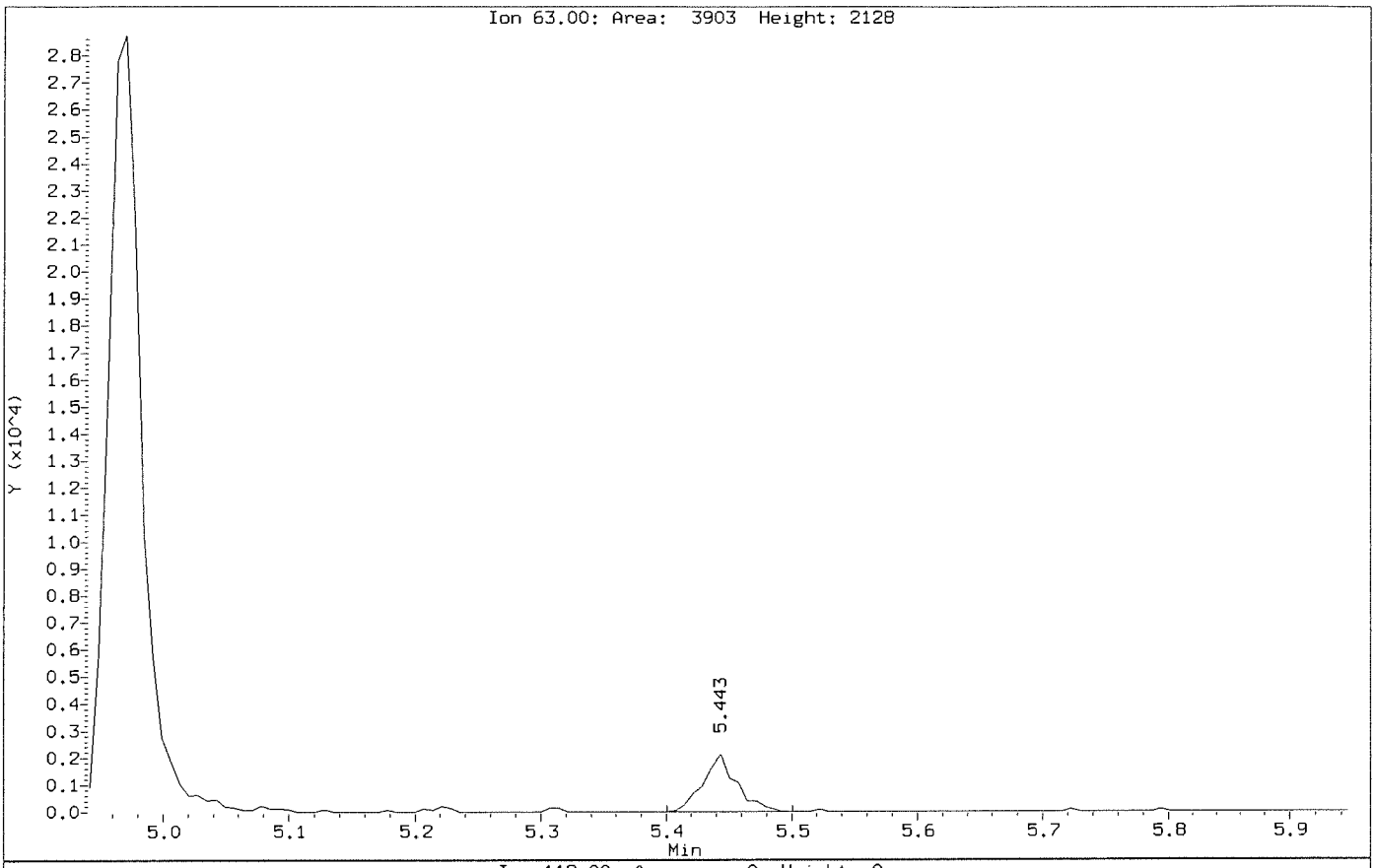
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

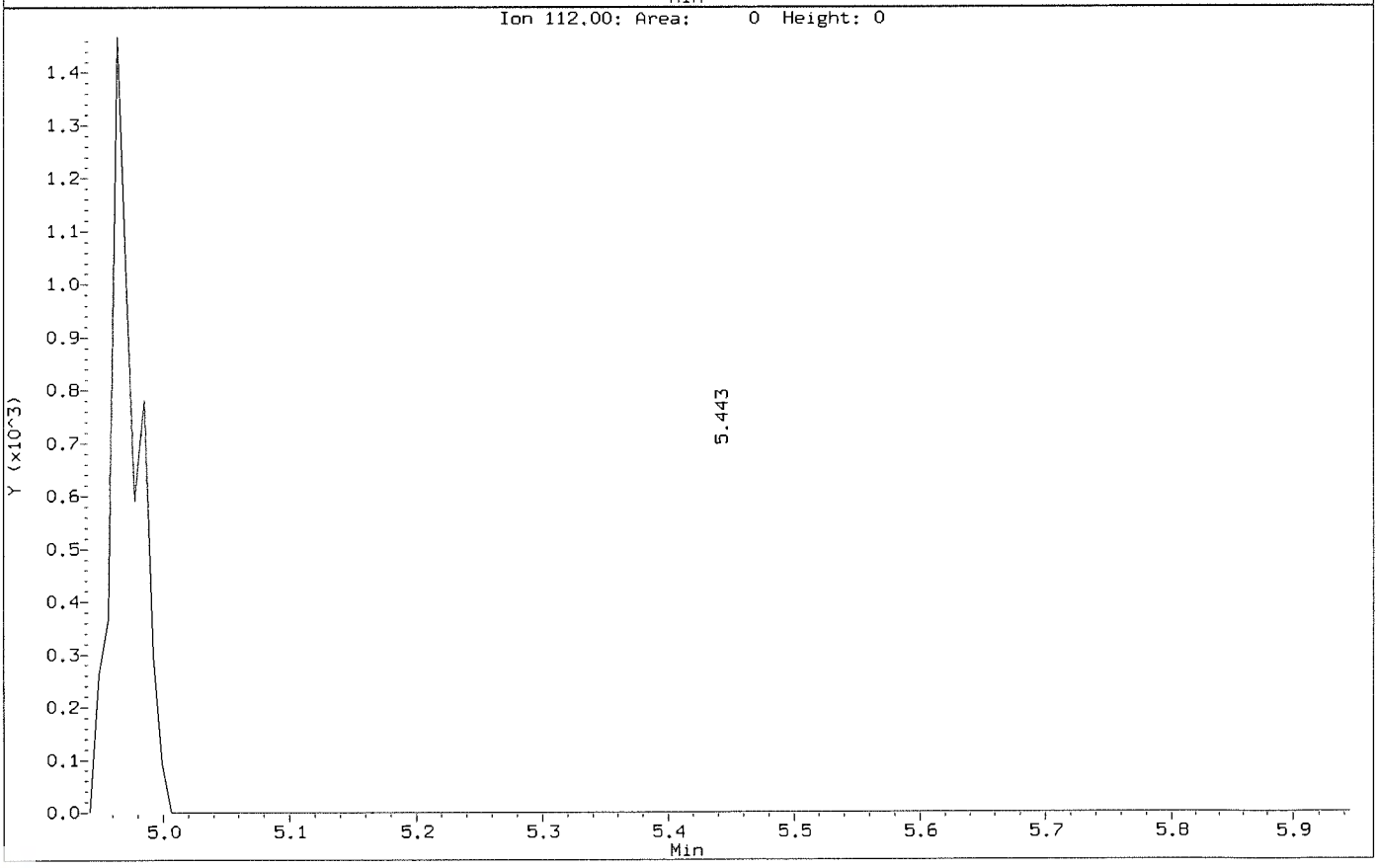




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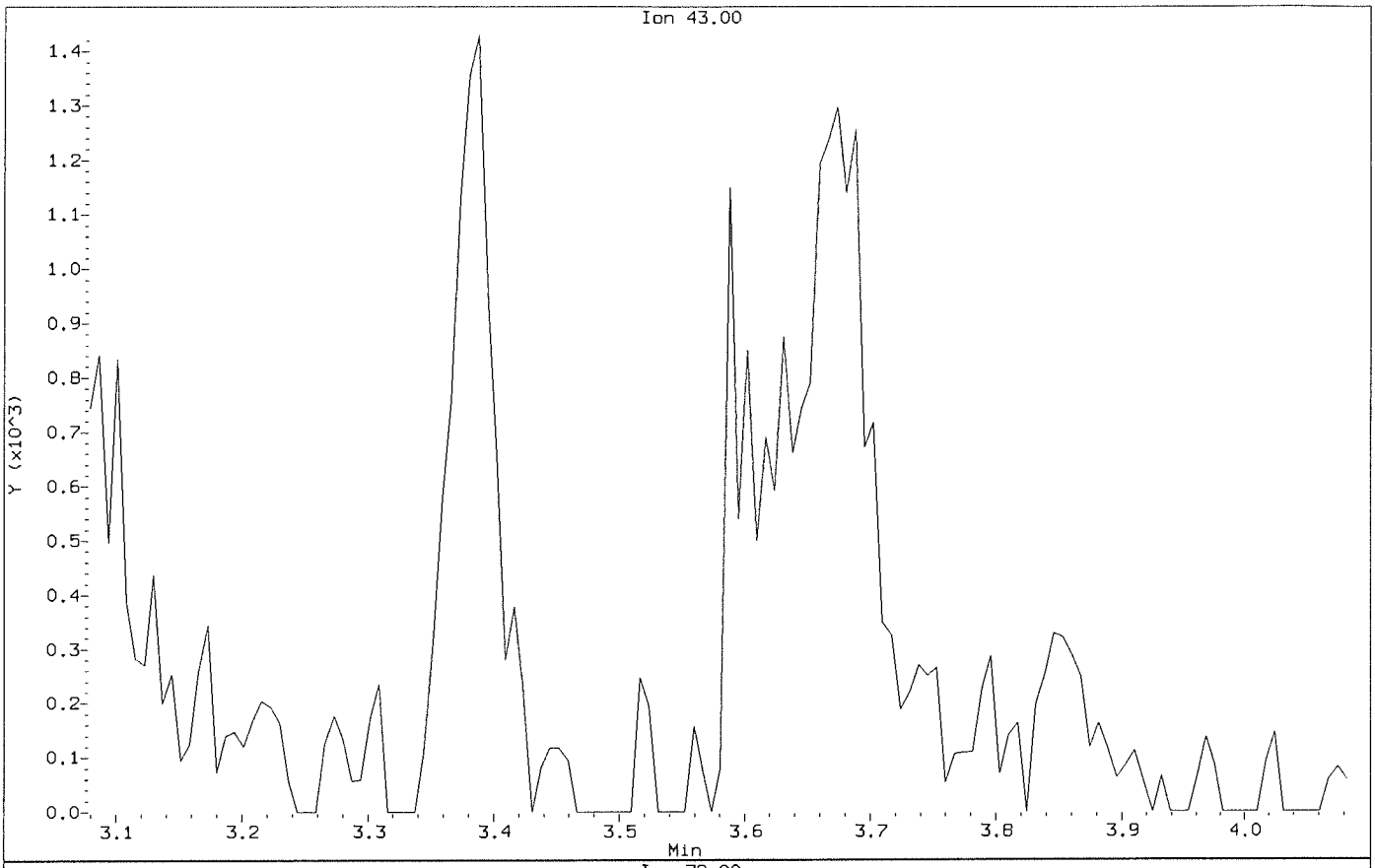
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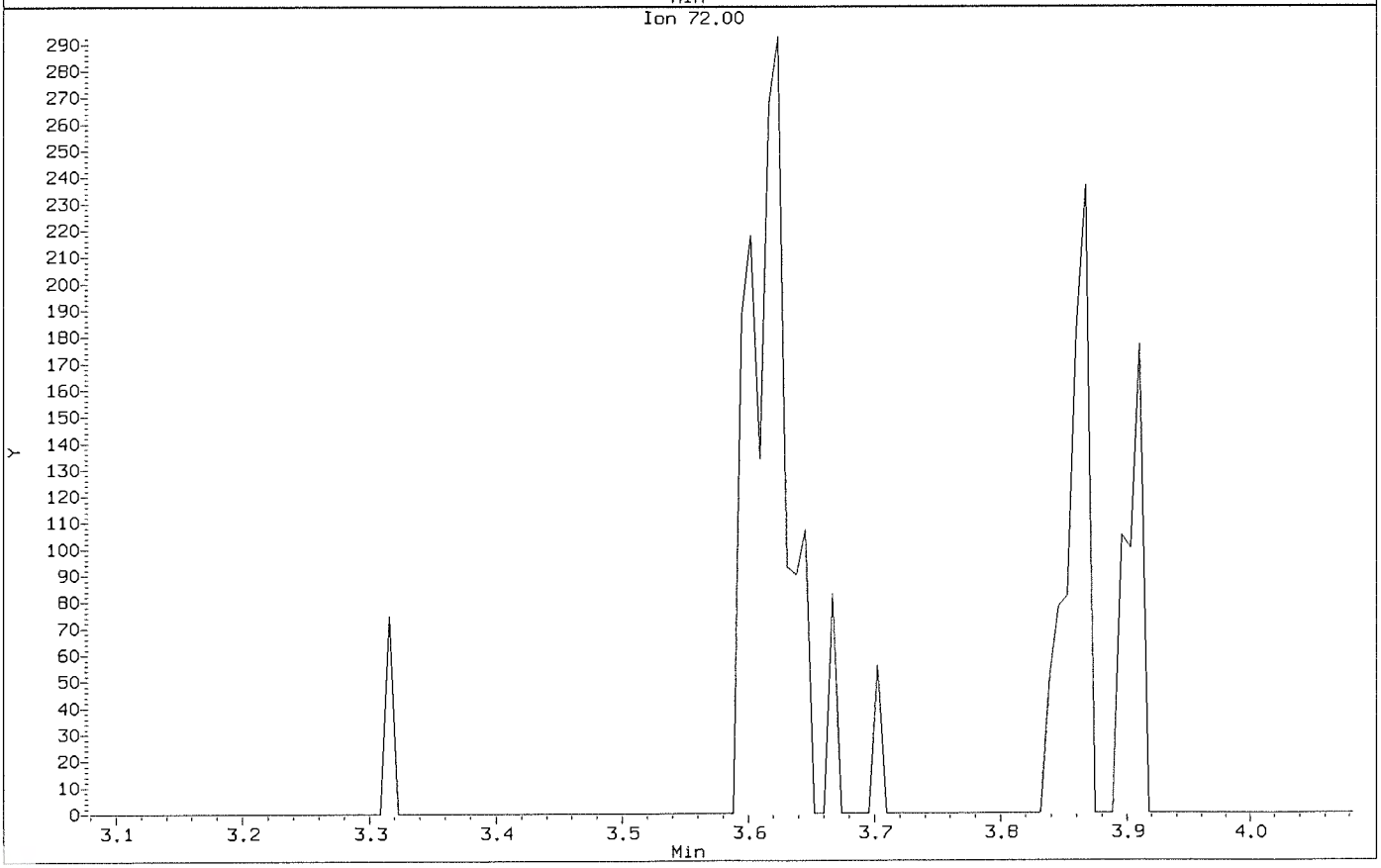




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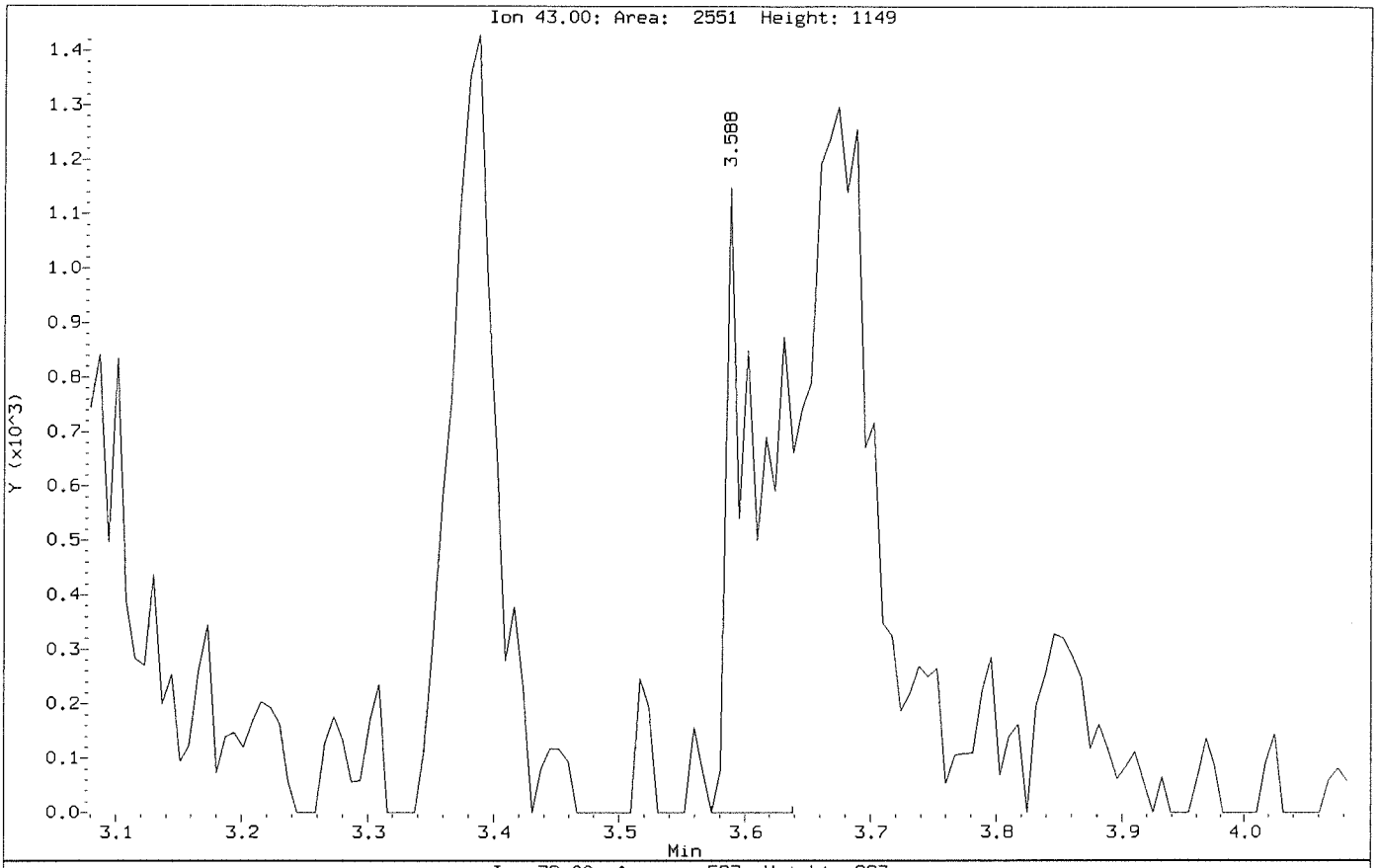
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CAS Number: 78-93-3

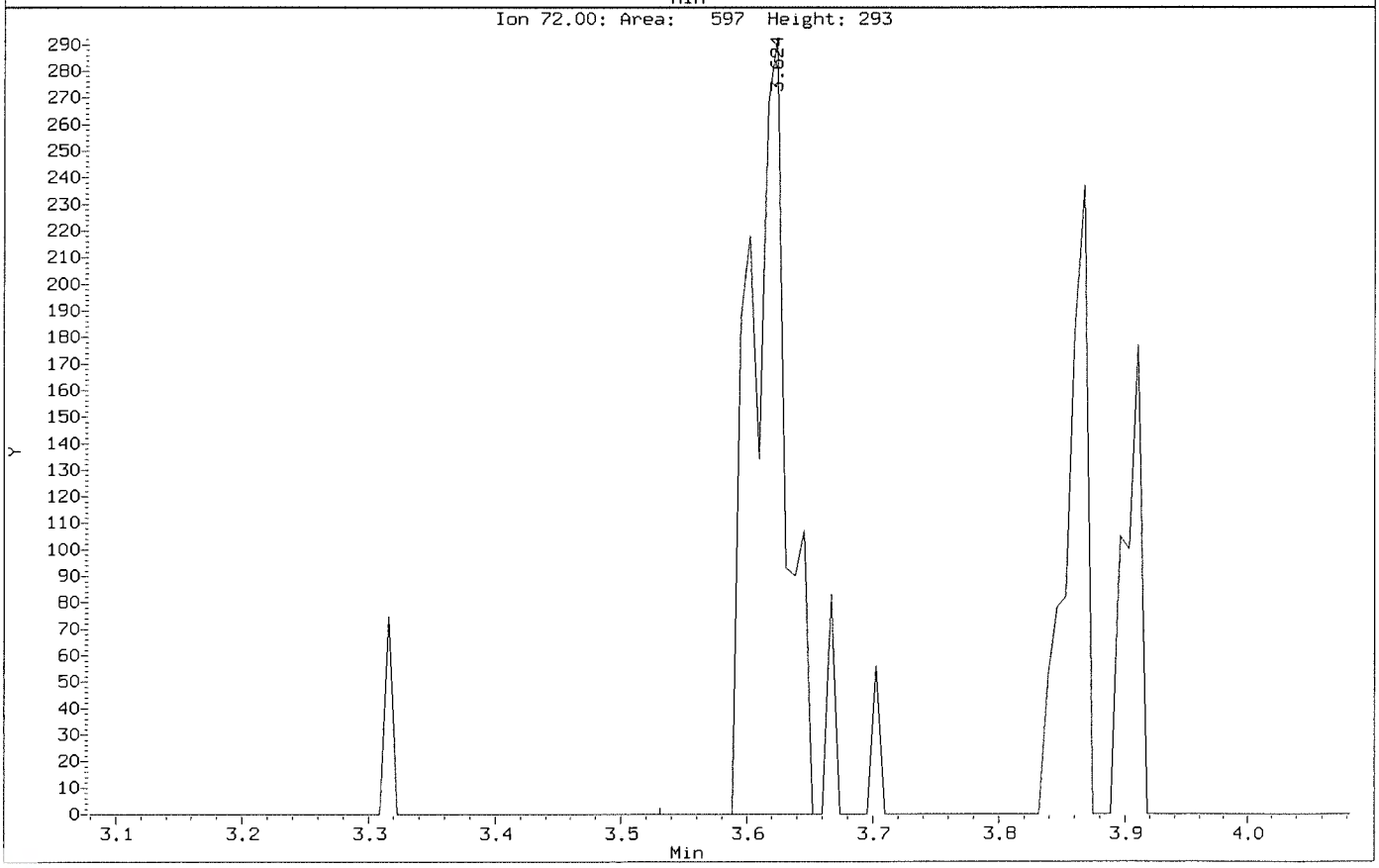




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Instrument: voa6.i
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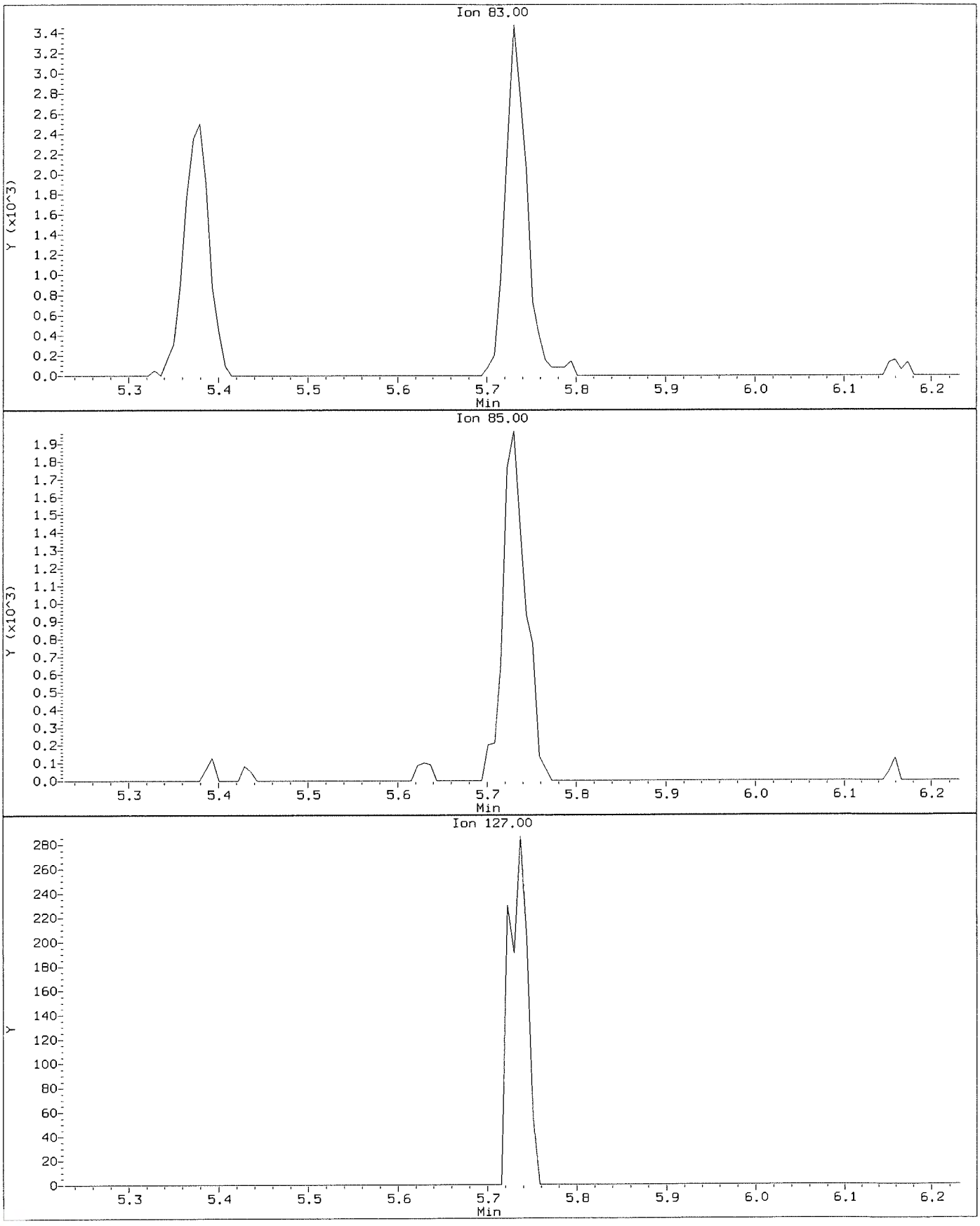
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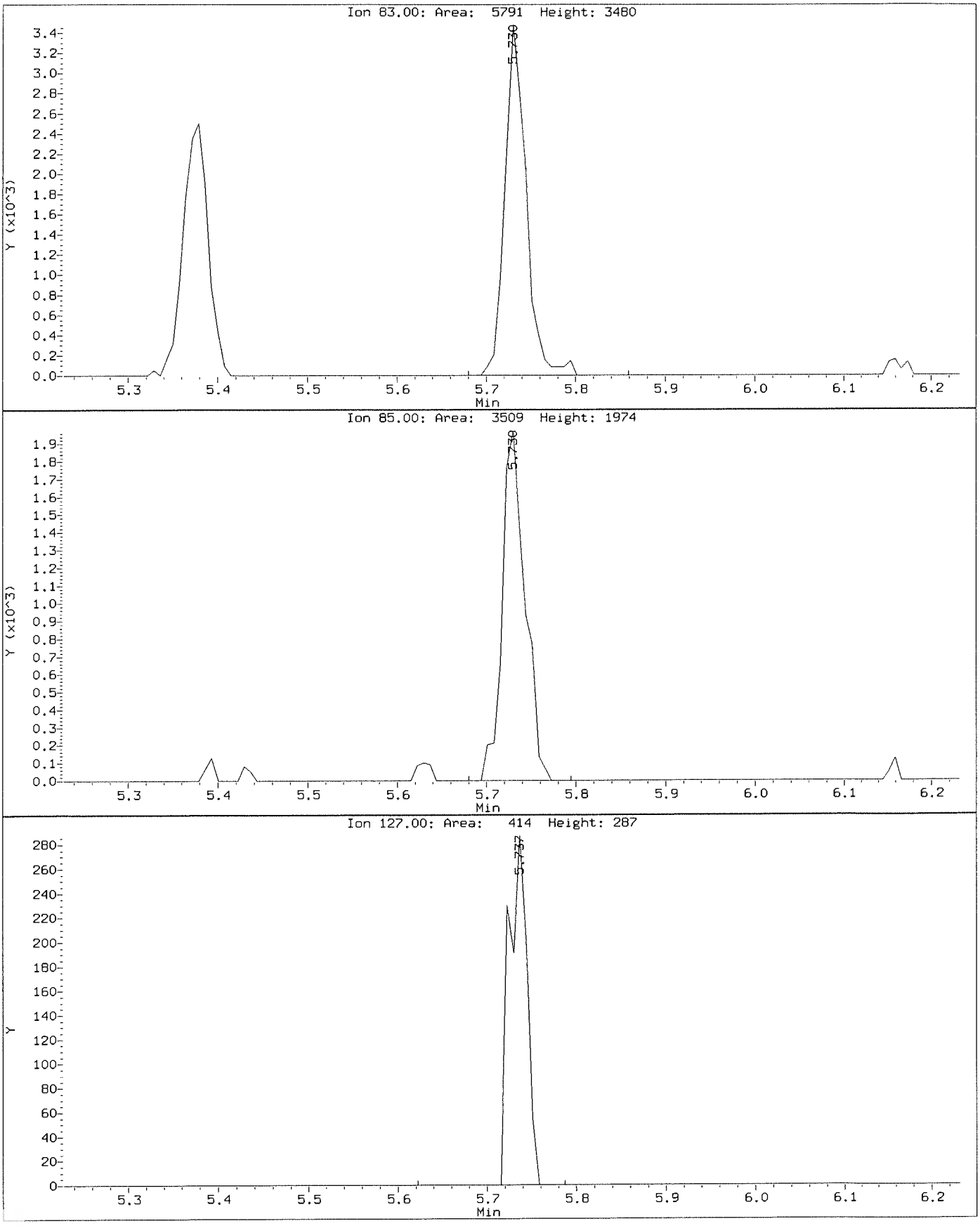
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Injection Date: 03-NOV-2020 13:24
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Bromodichloromethane
CAS Number: 75-27-4



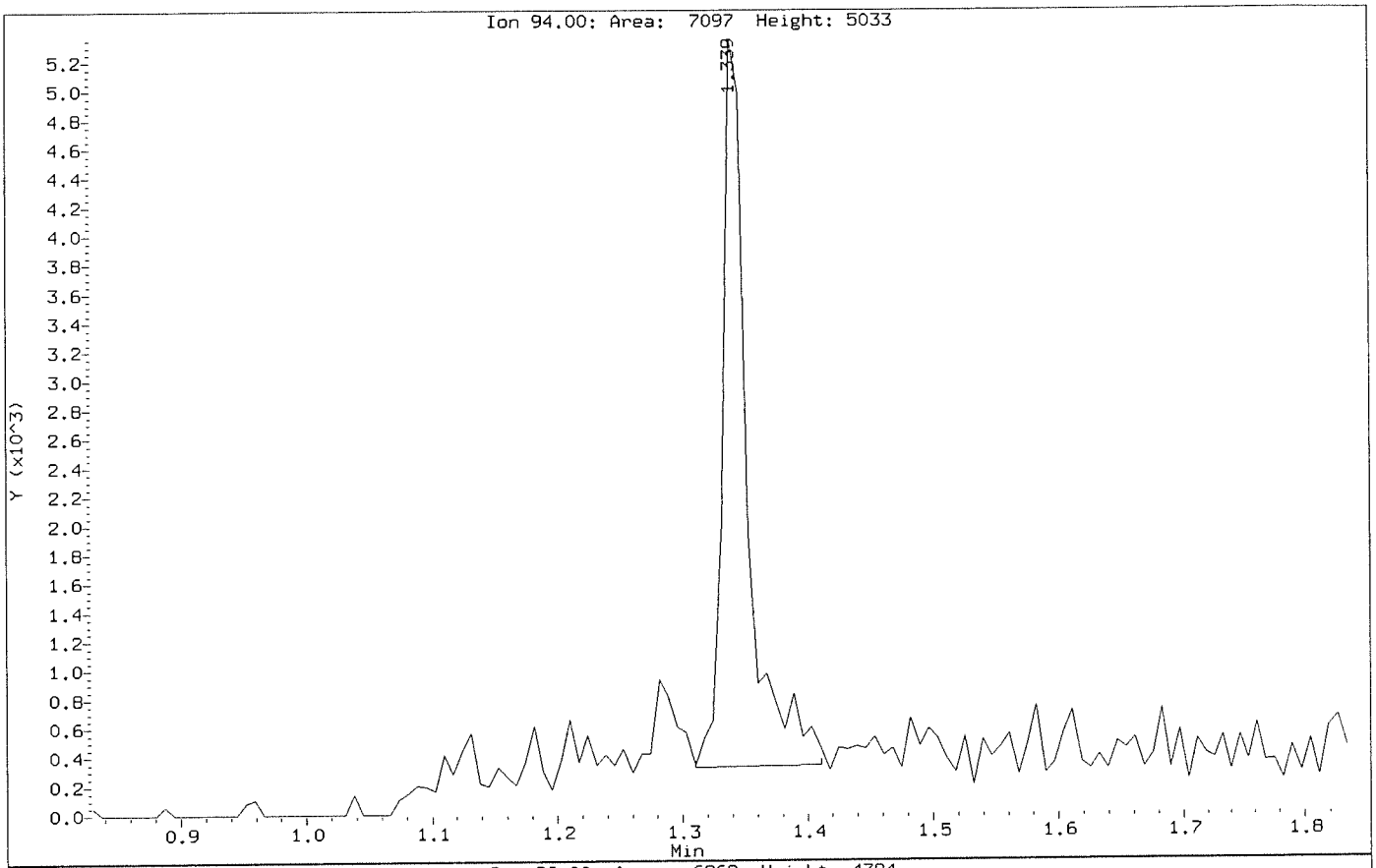
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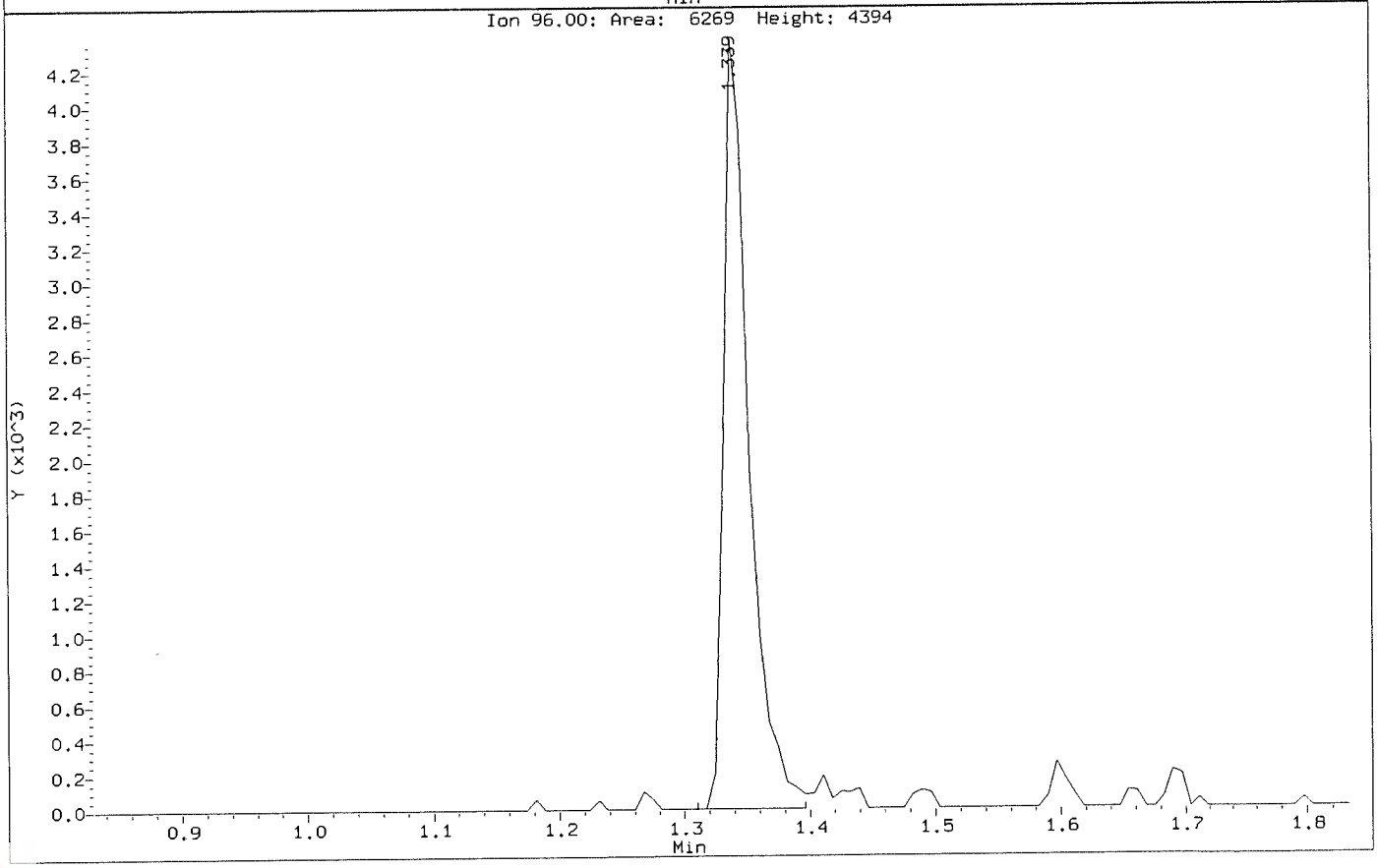
Compound: Bromodichloromethane
CAS Number: 75-27-4



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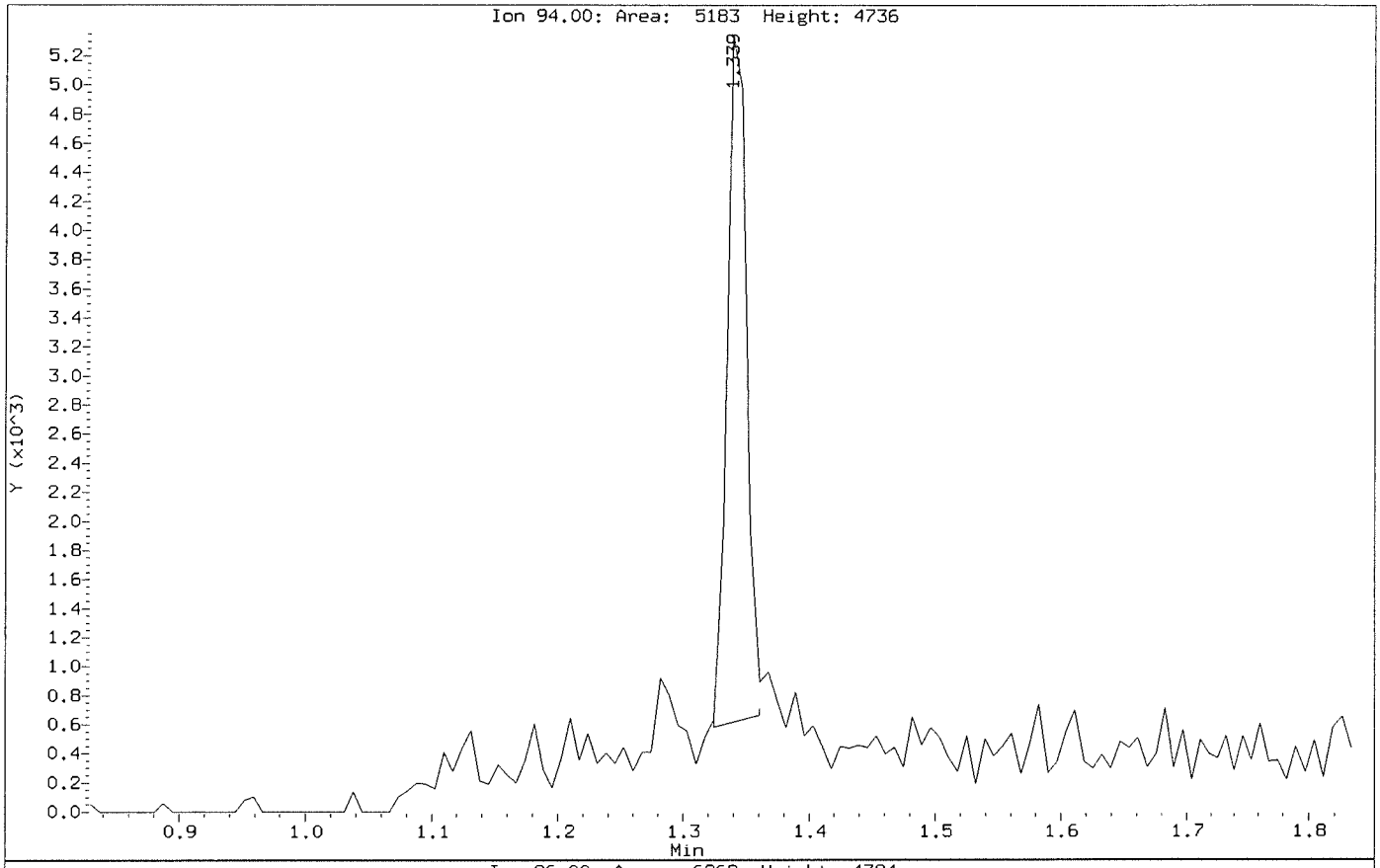
Compound: Bromomethane
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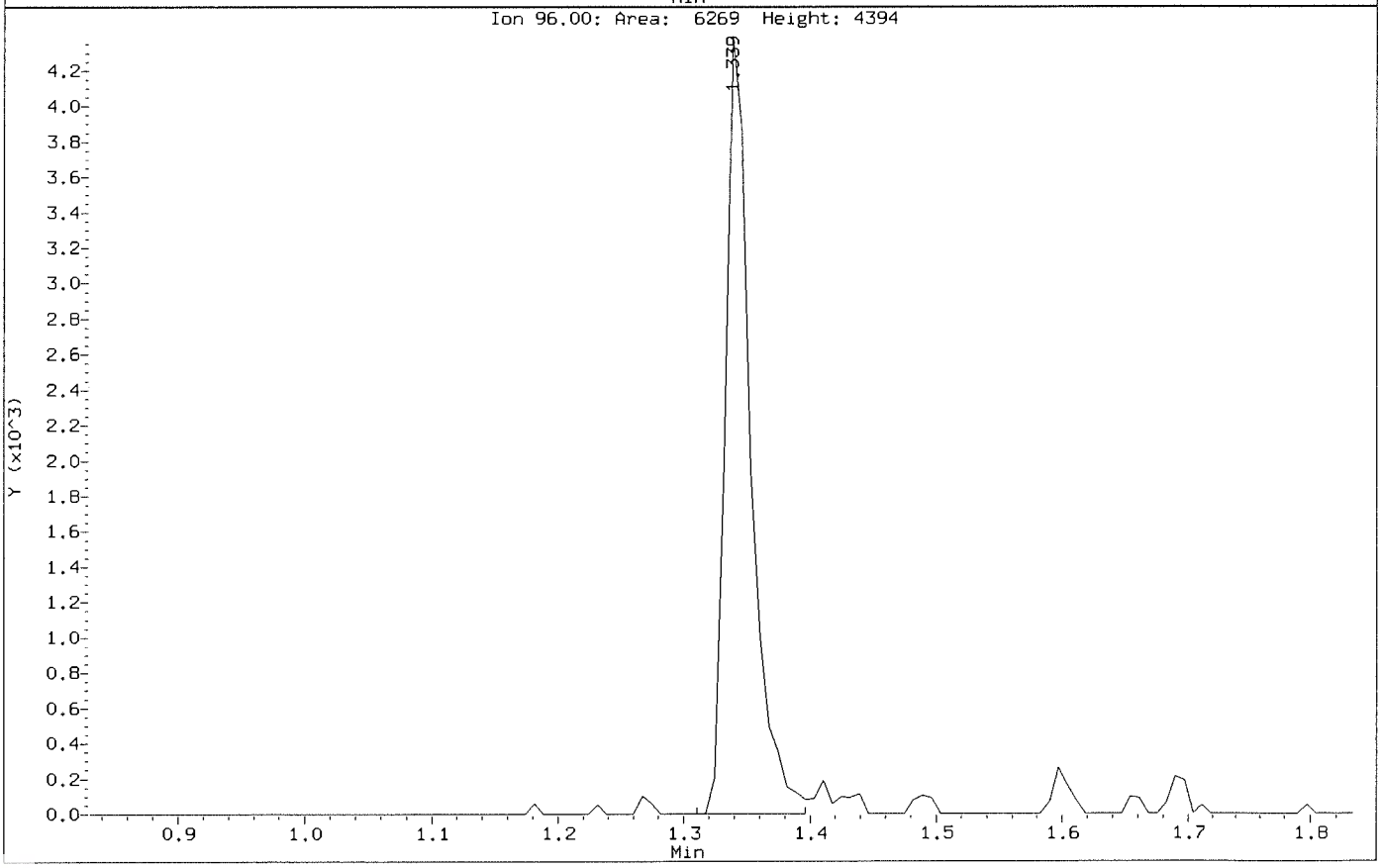




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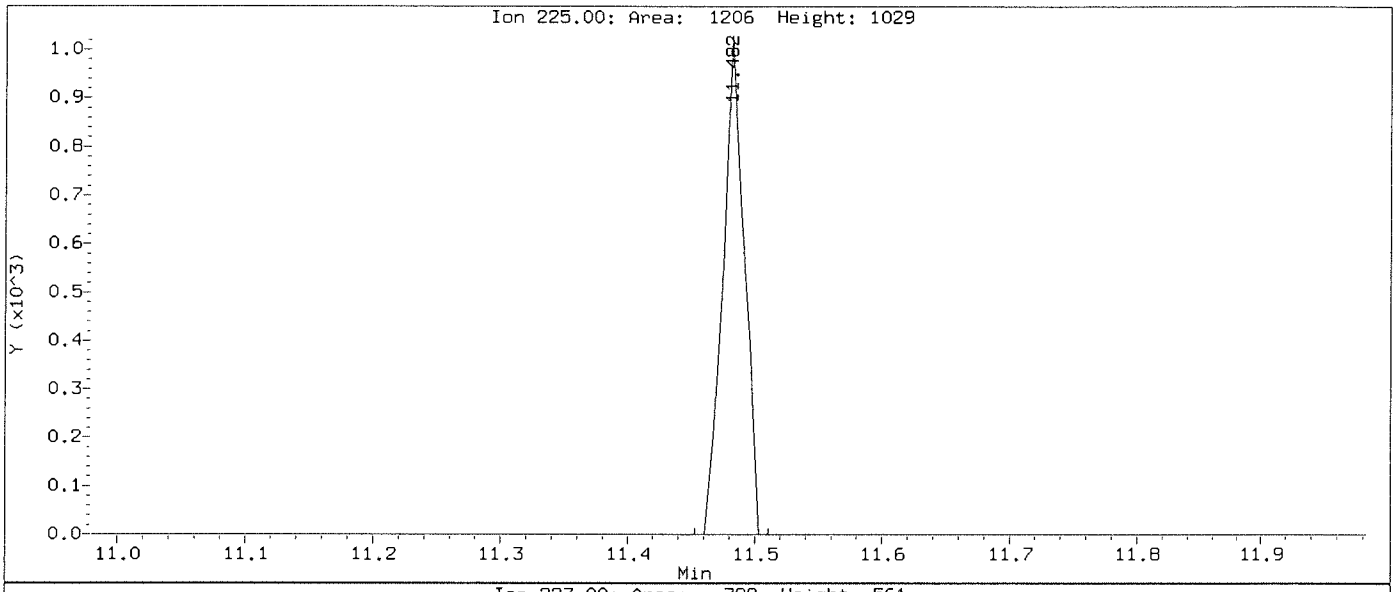
Compound: Bromomethane
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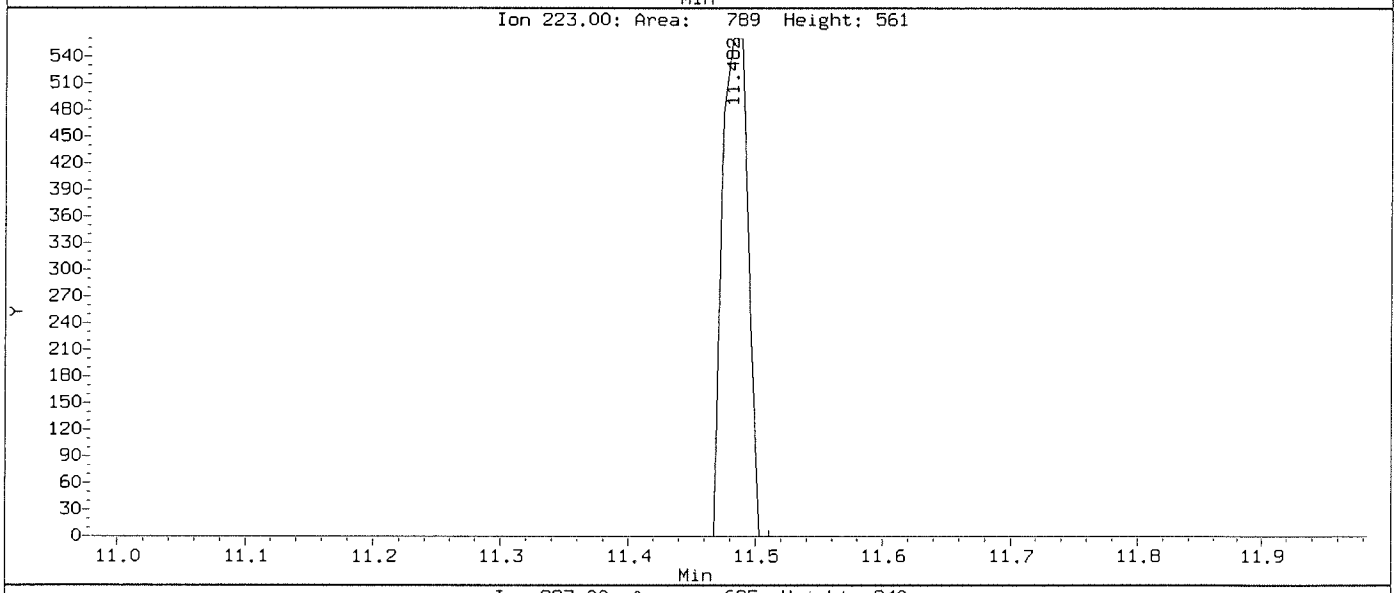


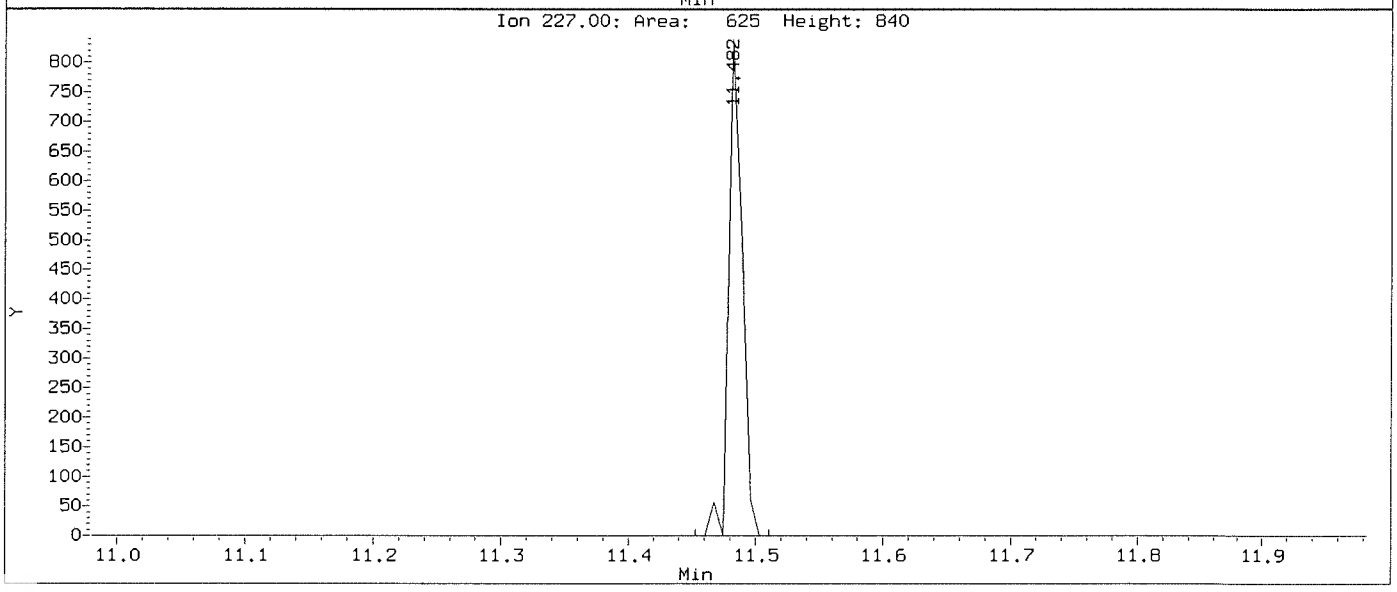


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Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Hexachlorobutadiene
CAS Number: 87-68-3

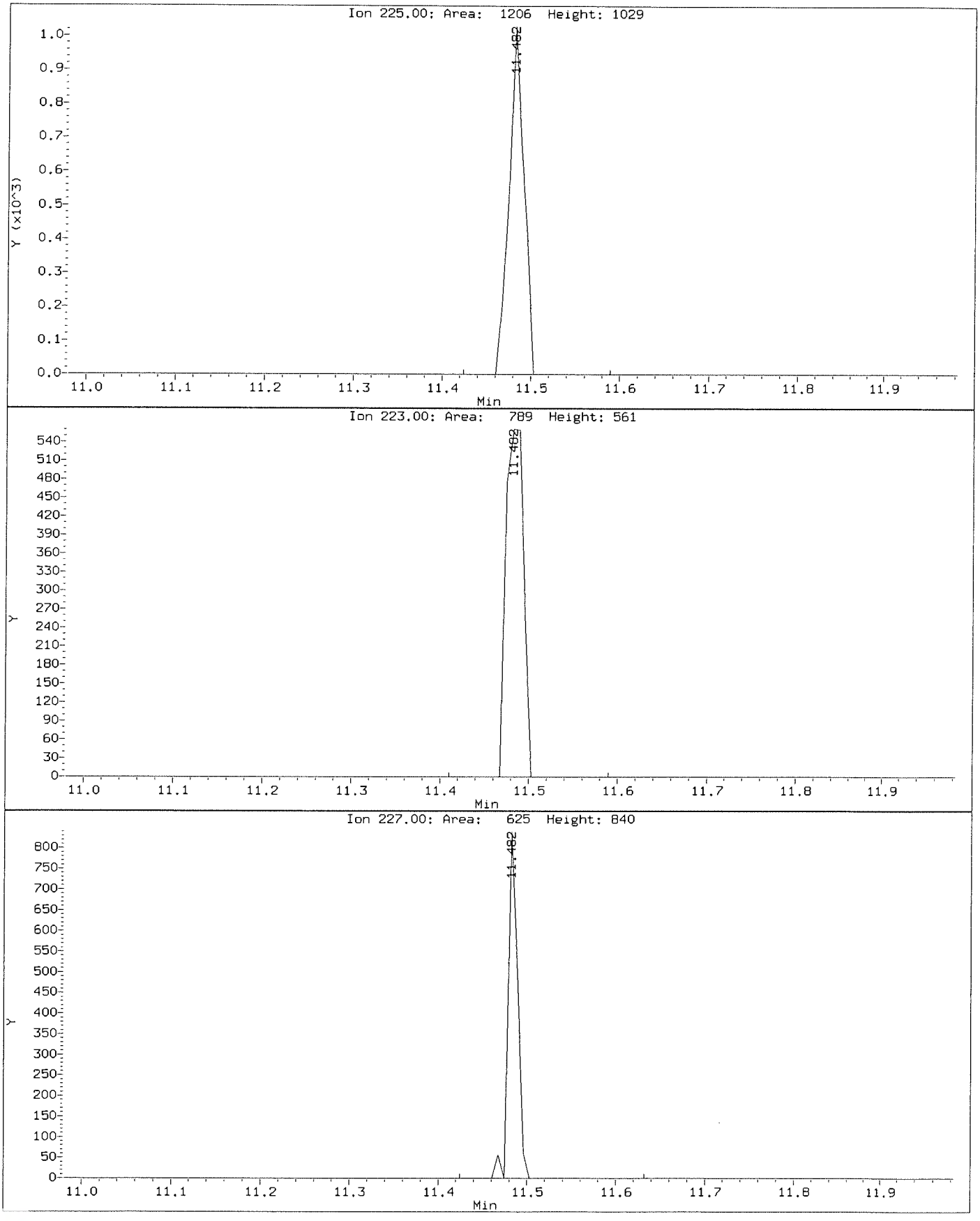






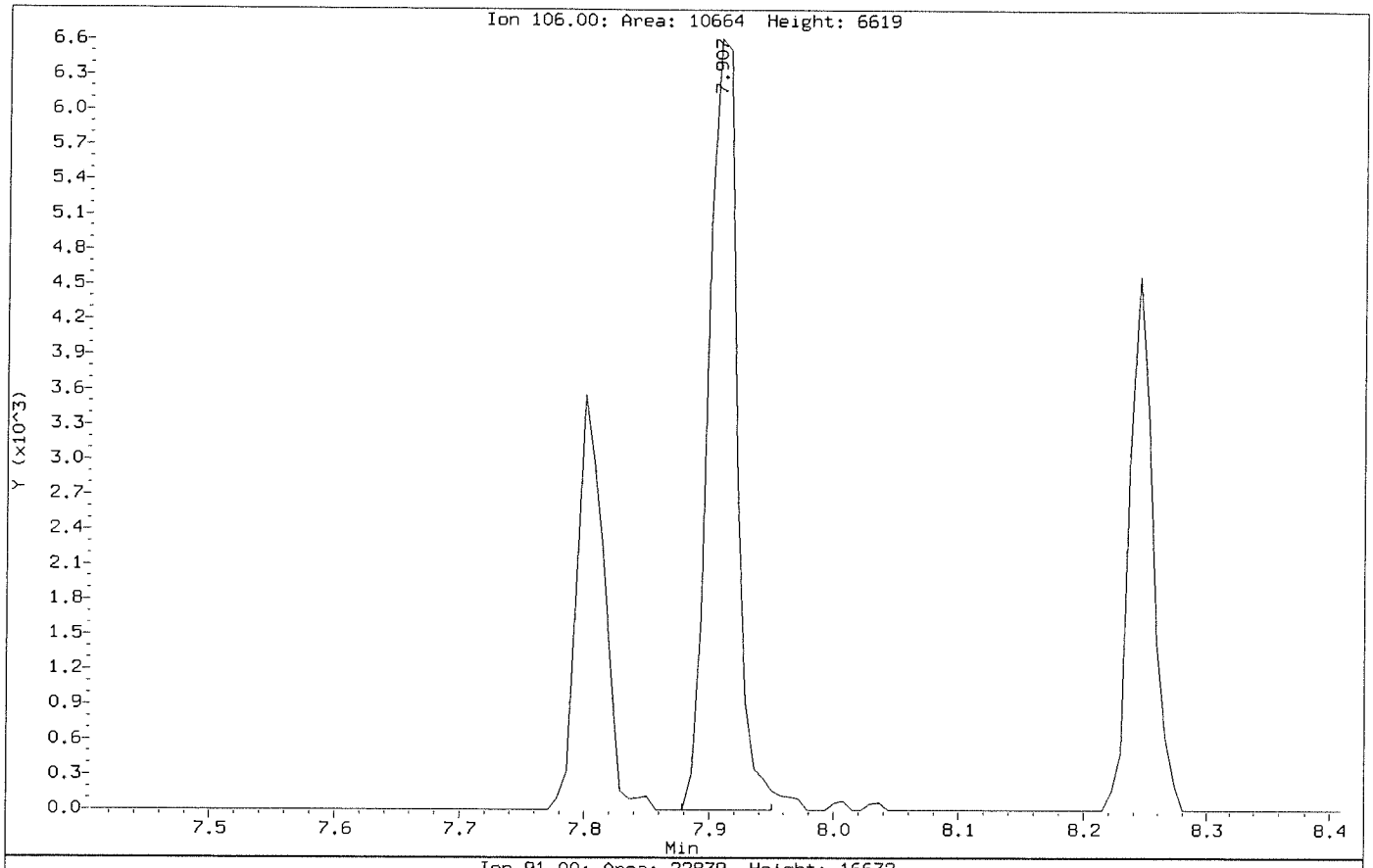
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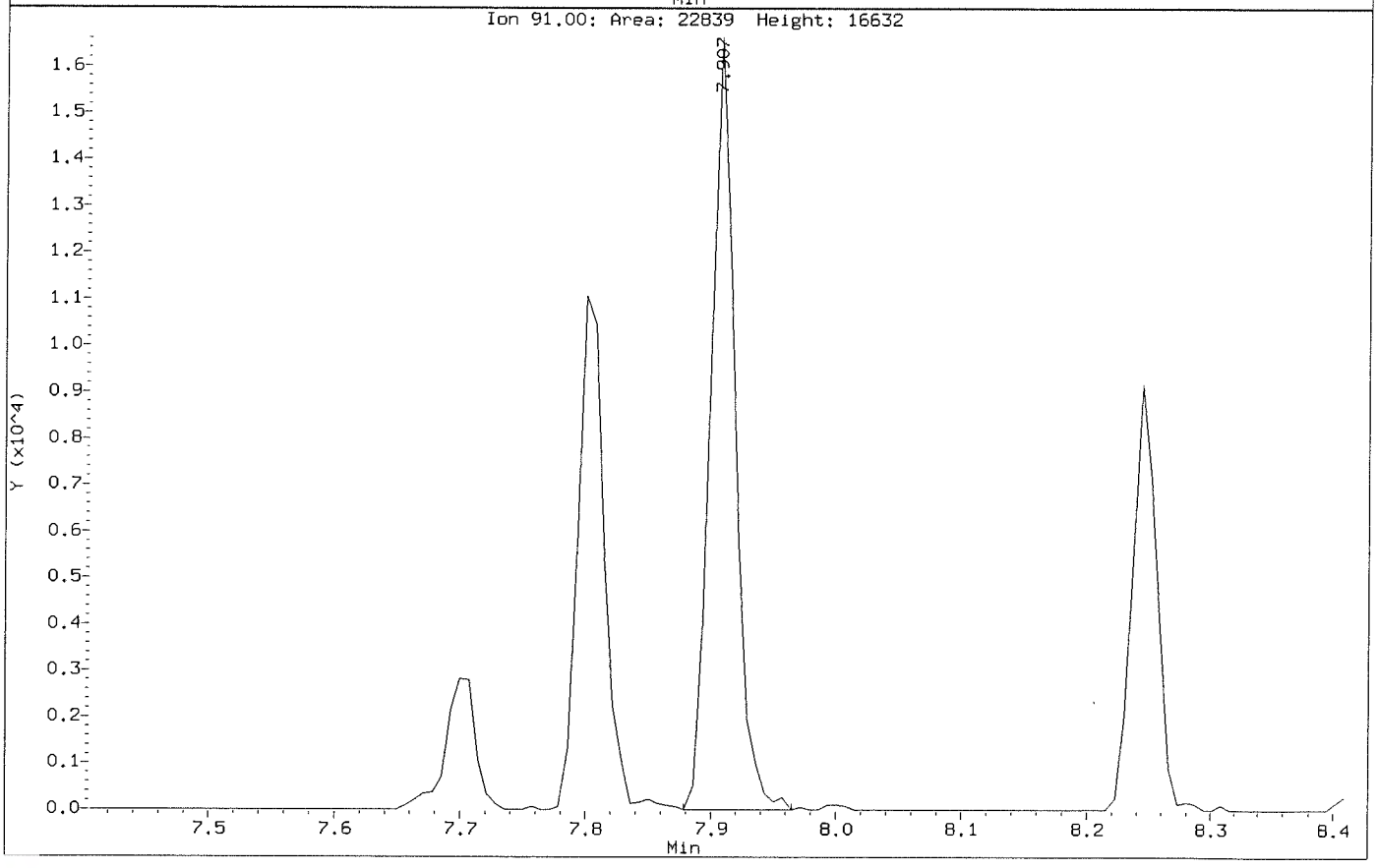
Compound: Hexachlorobutadiene
CAS Number: 87-68-3



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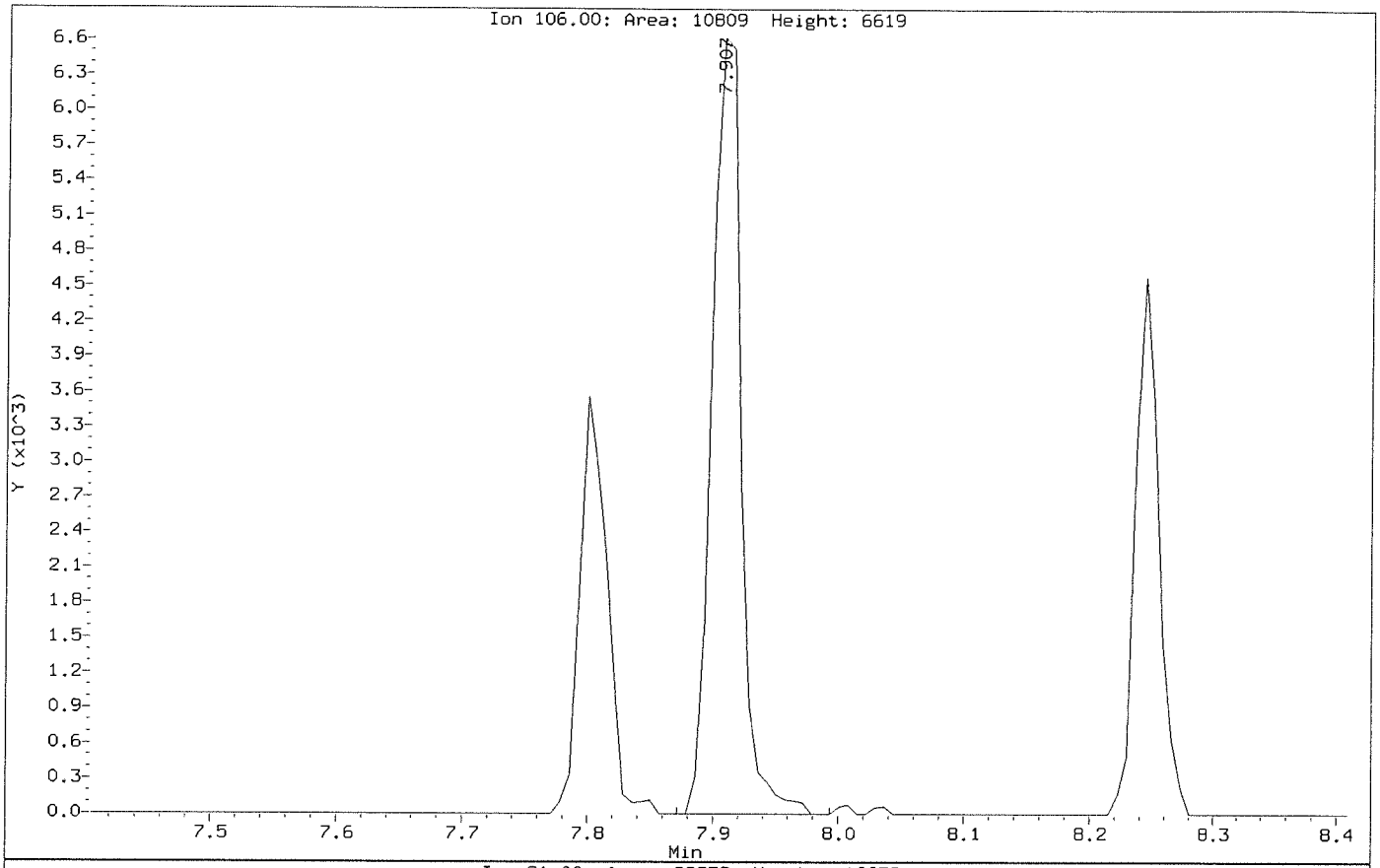
Compound: m,p-Xylenes
CAS Number:

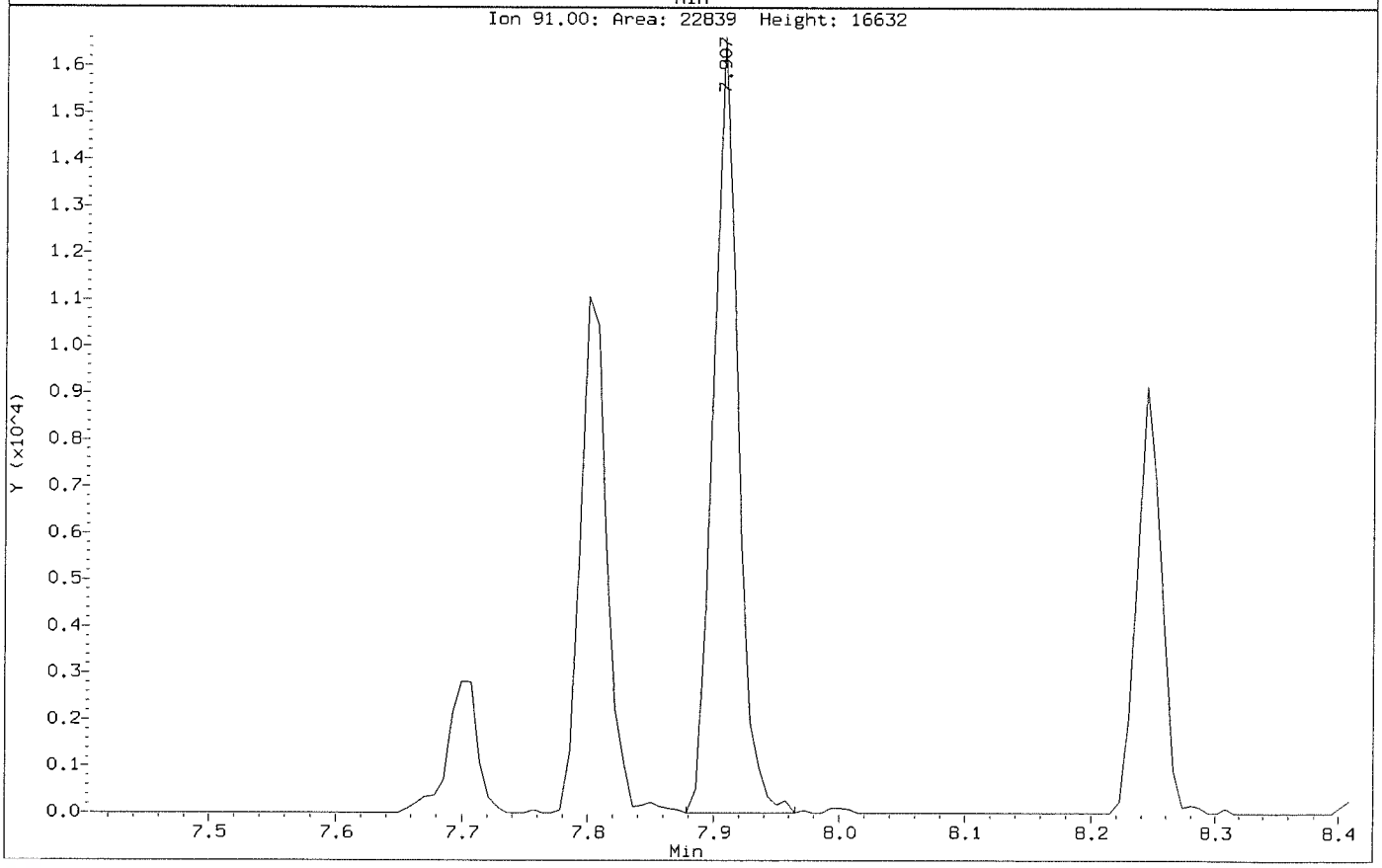




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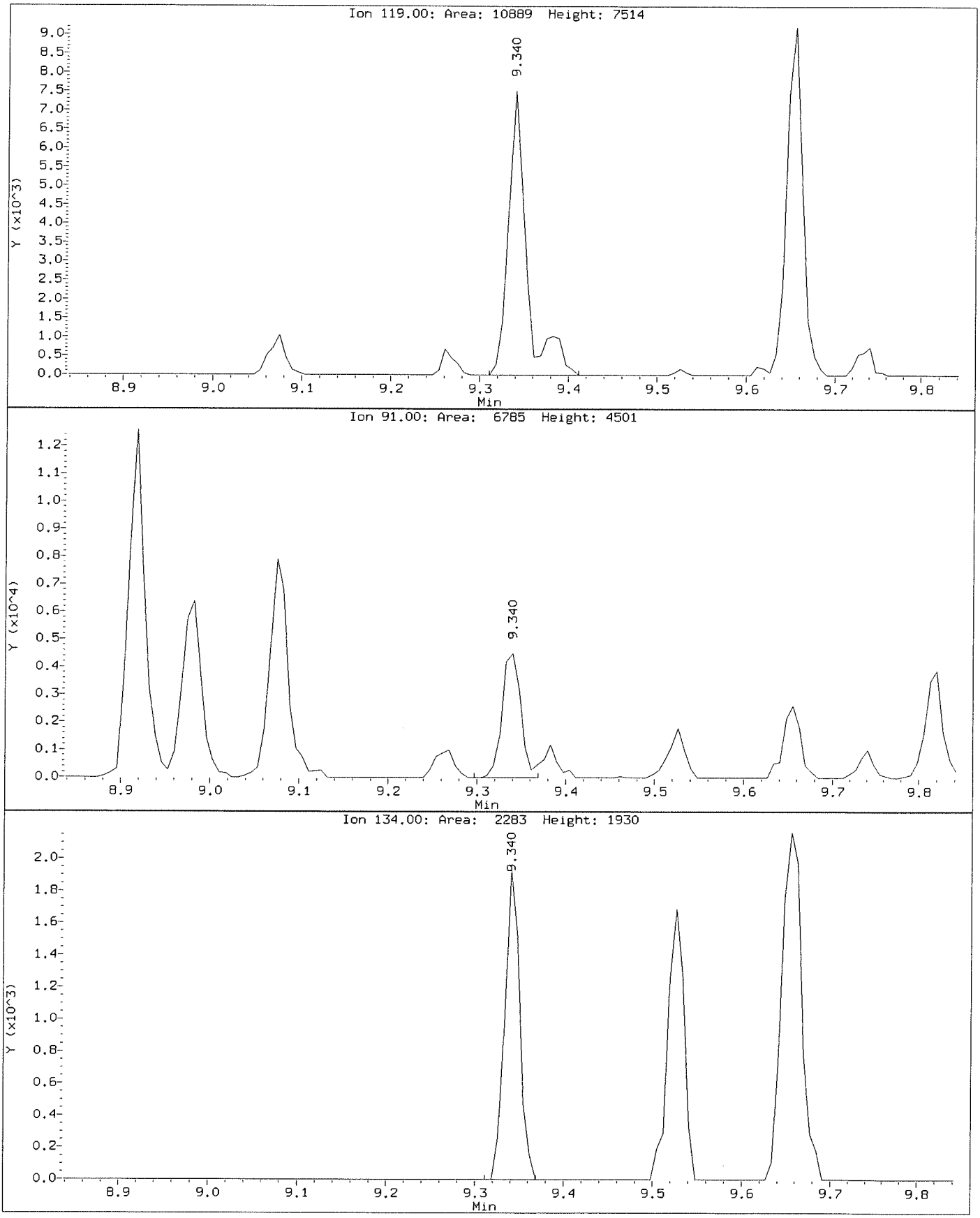
Compound: m,p-Xylenes
CAS Number:





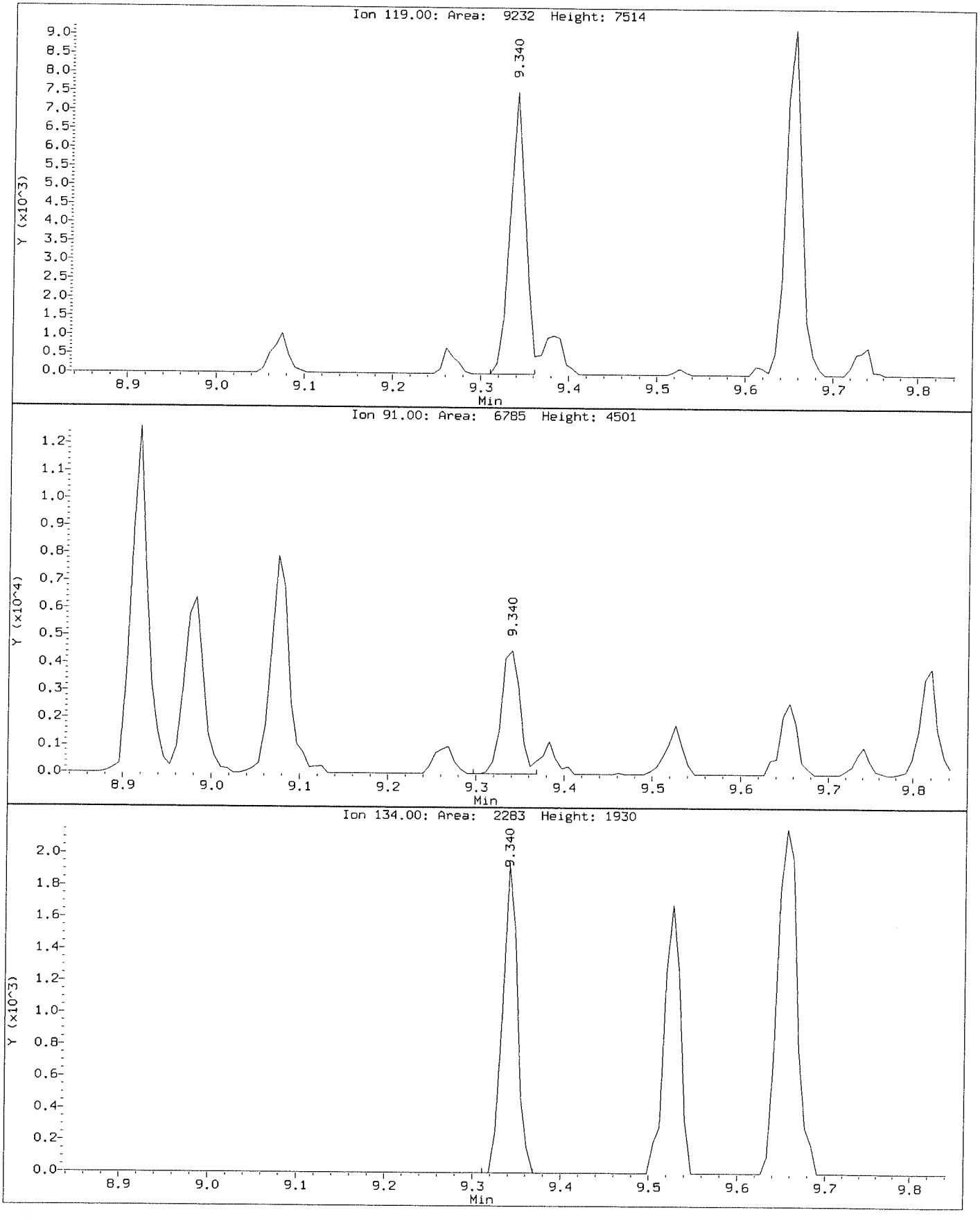
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Client Sample ID: VSTD002

Compound: tert-Butylbenzene
CAS Number: 98-06-6



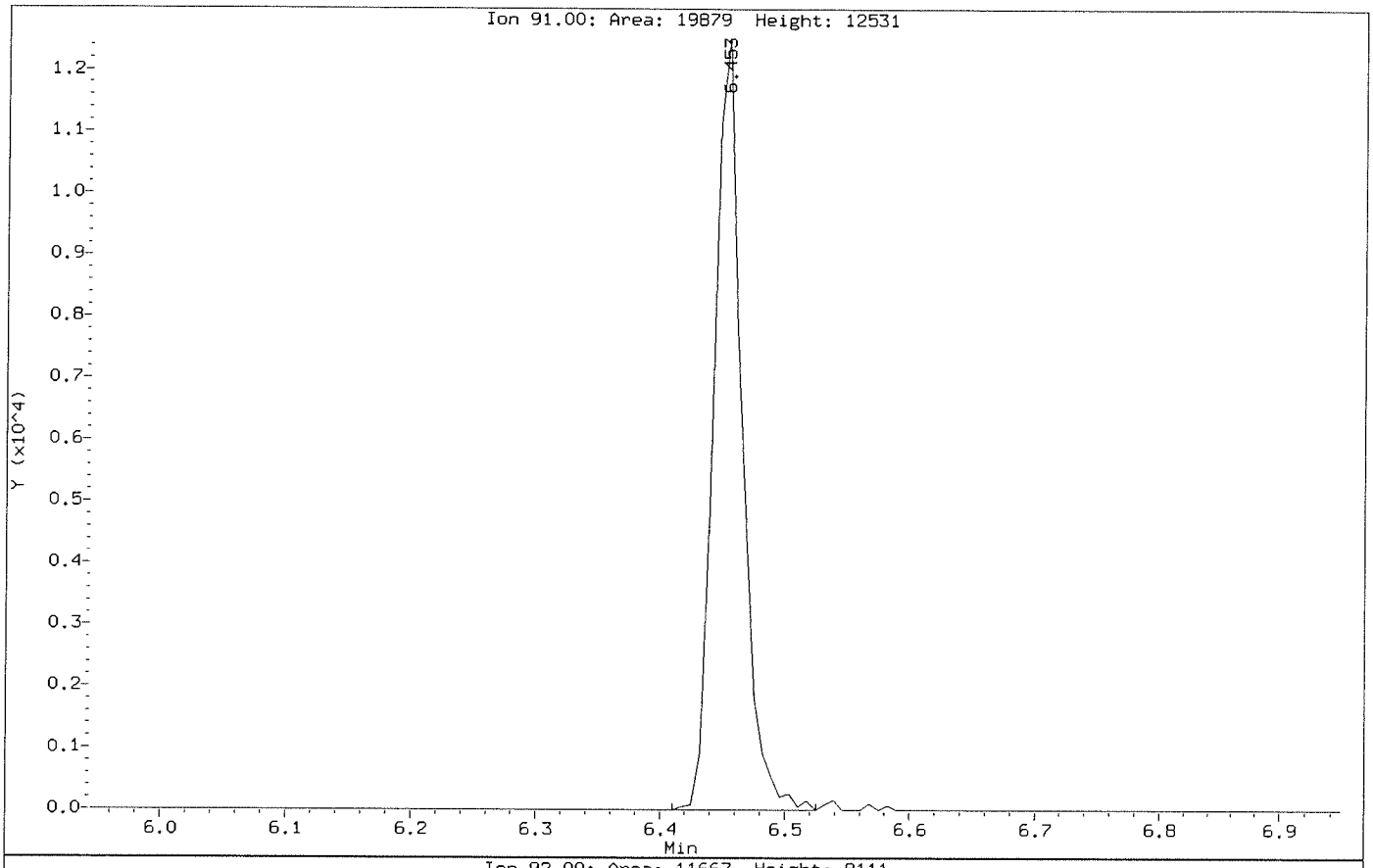
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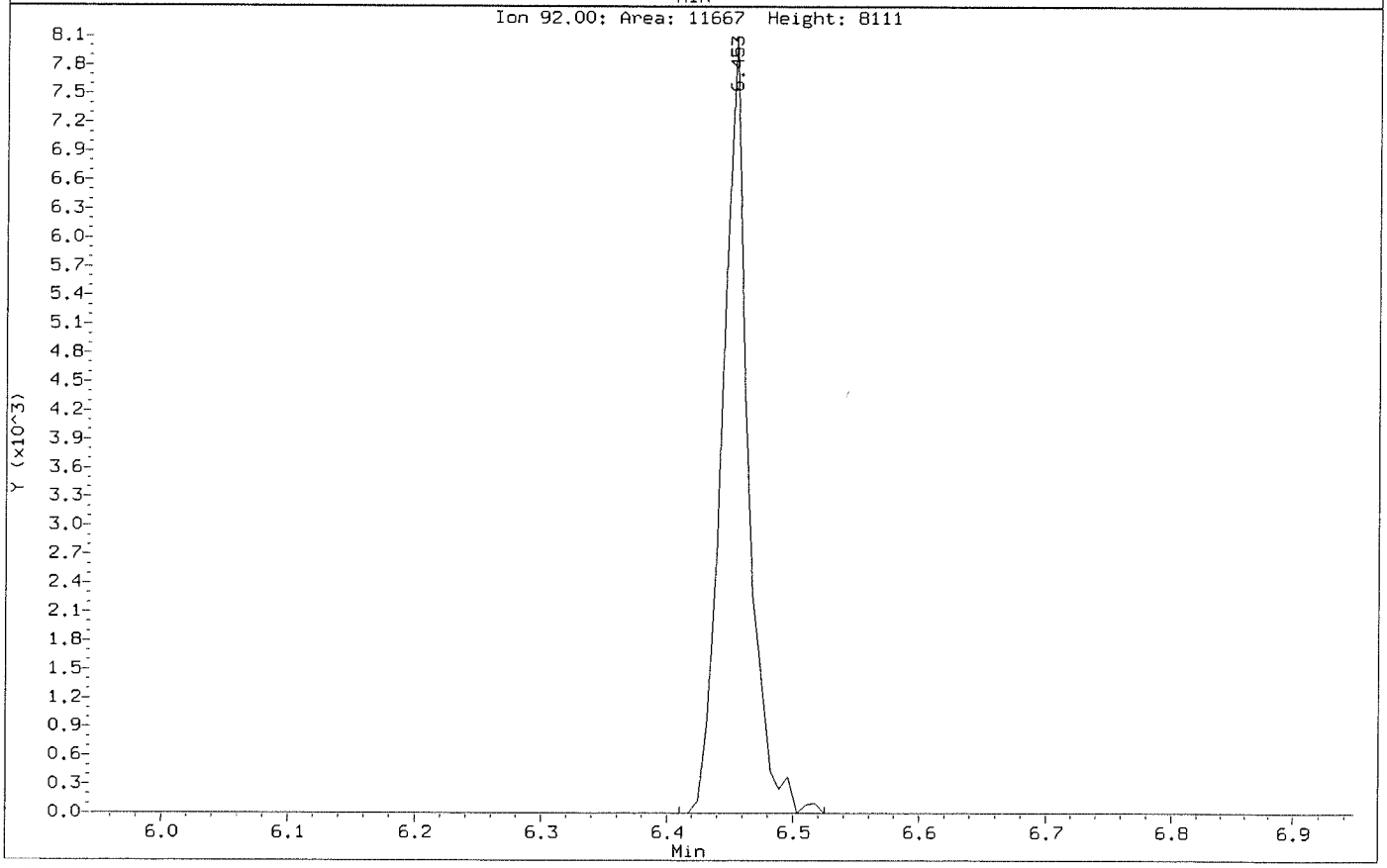
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CAS Number: 98-06-6



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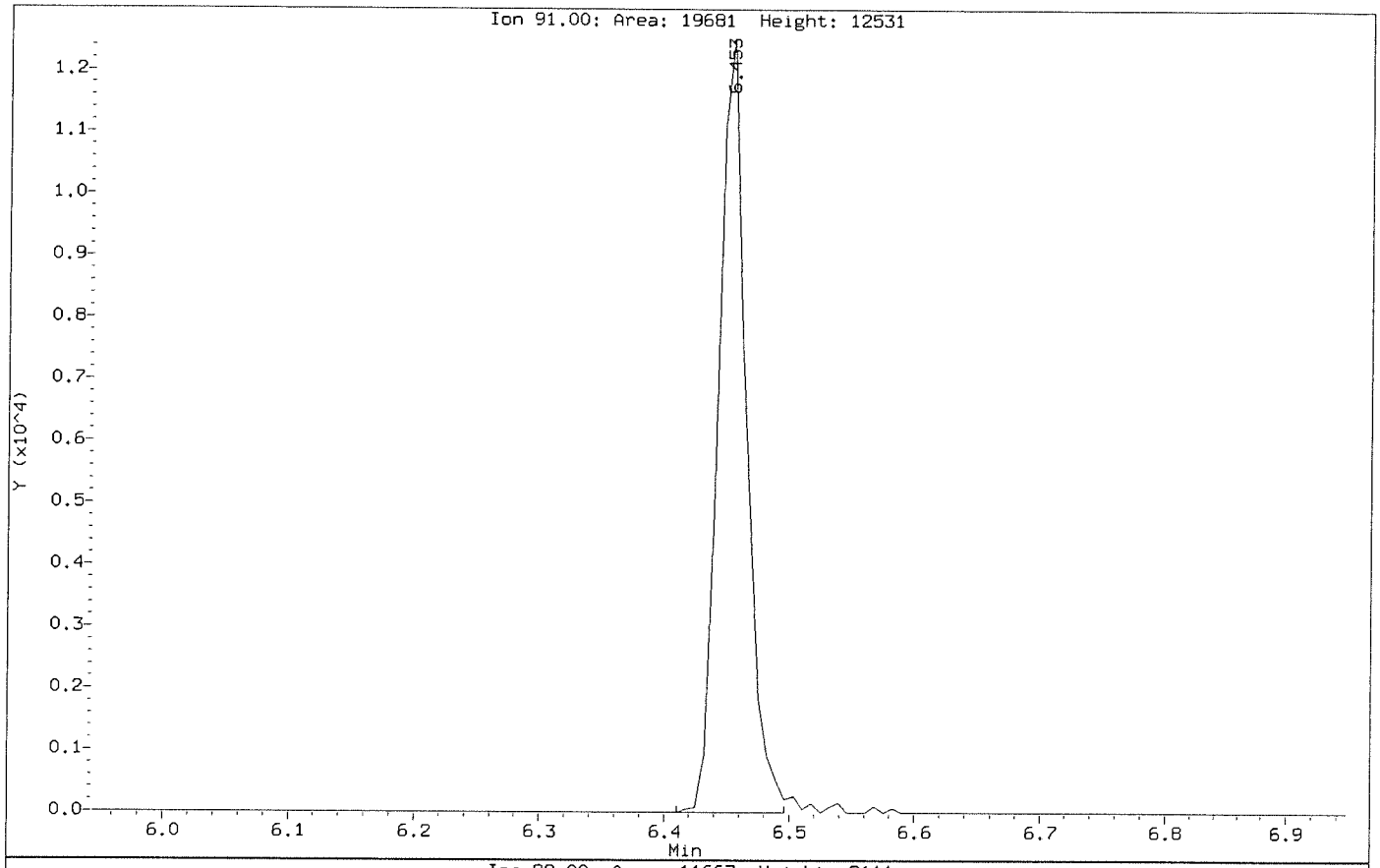
Compound: Toluene
CAS Number: 108-88-3

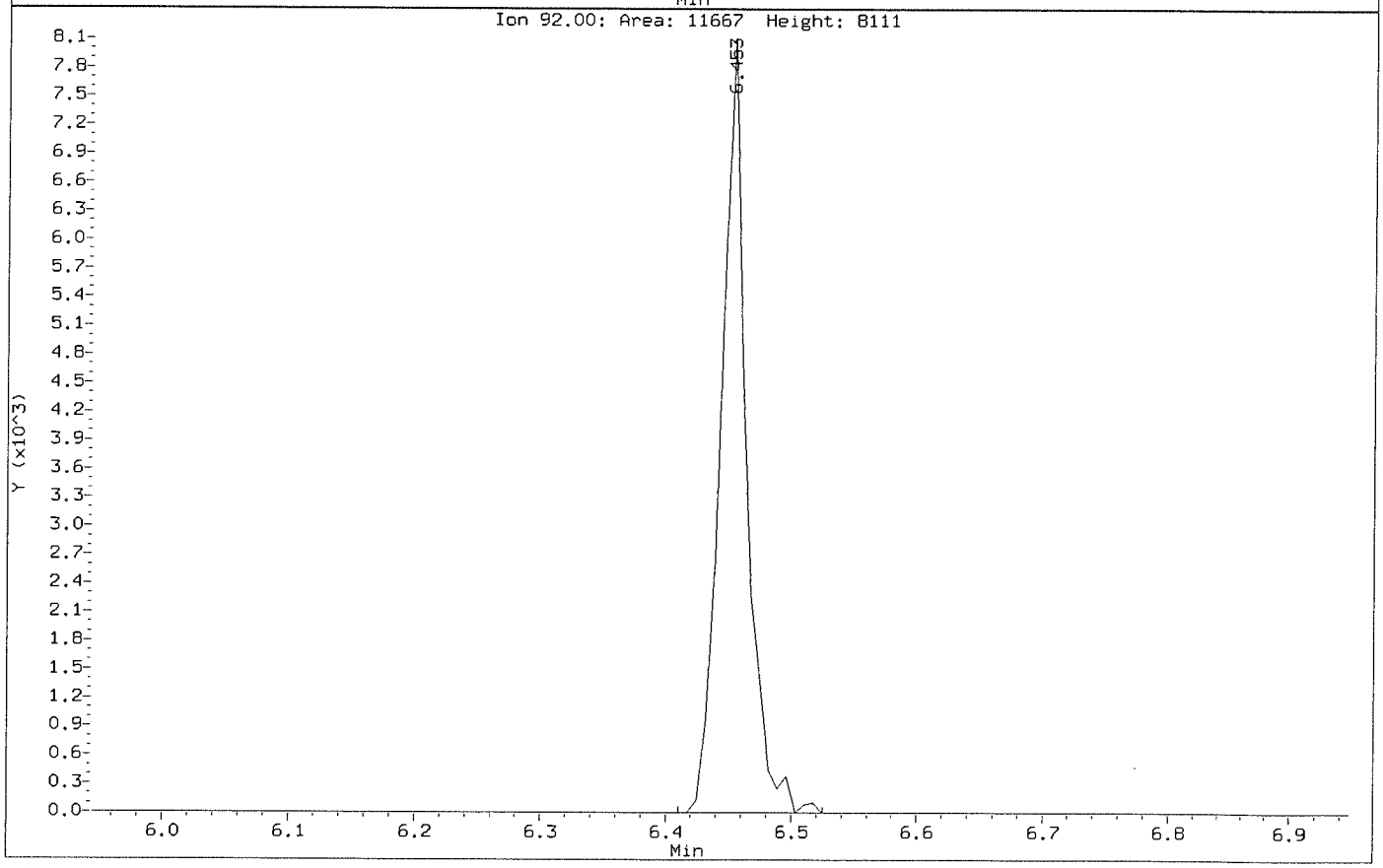




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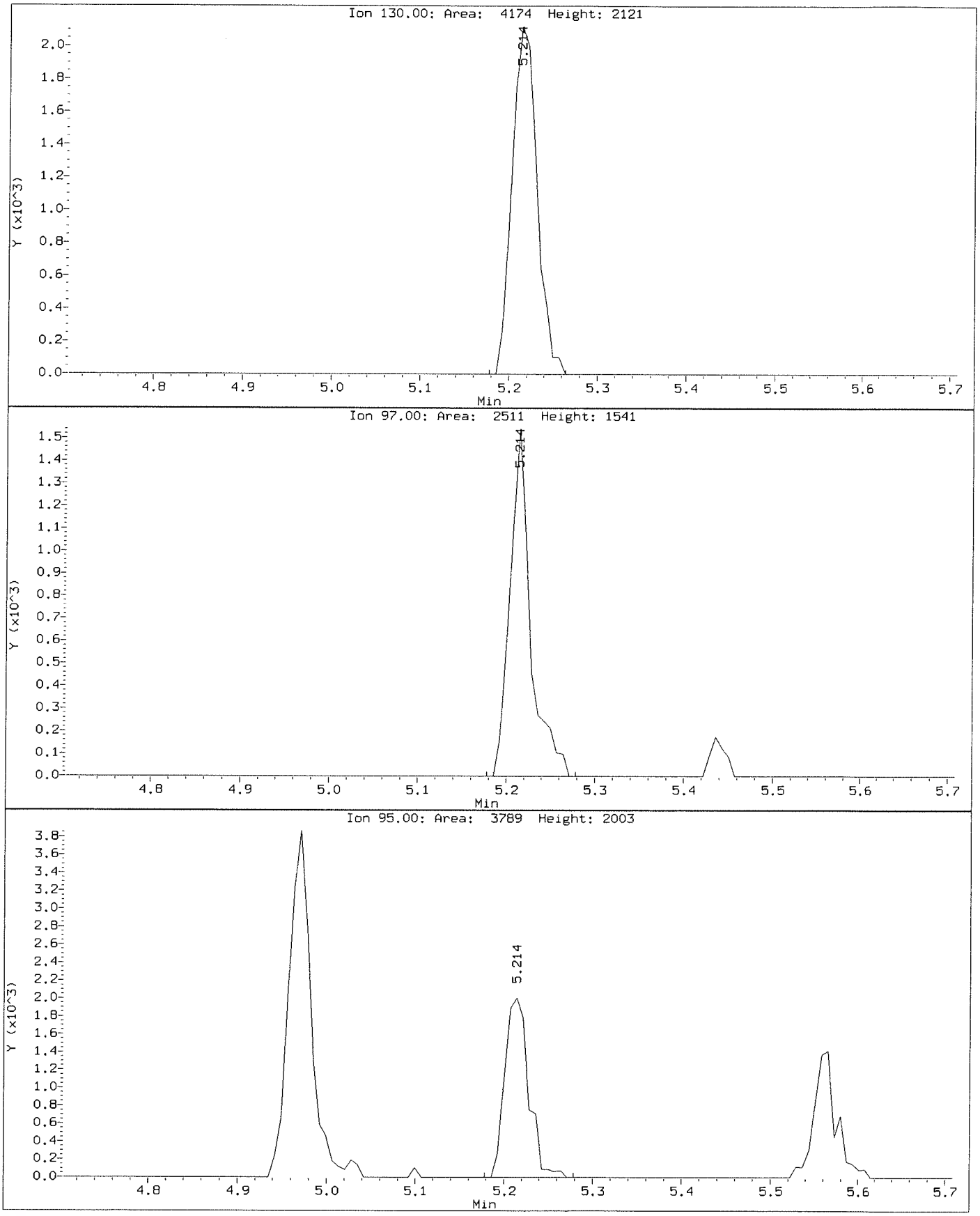
Compound: Toluene
CAS Number: 108-88-3





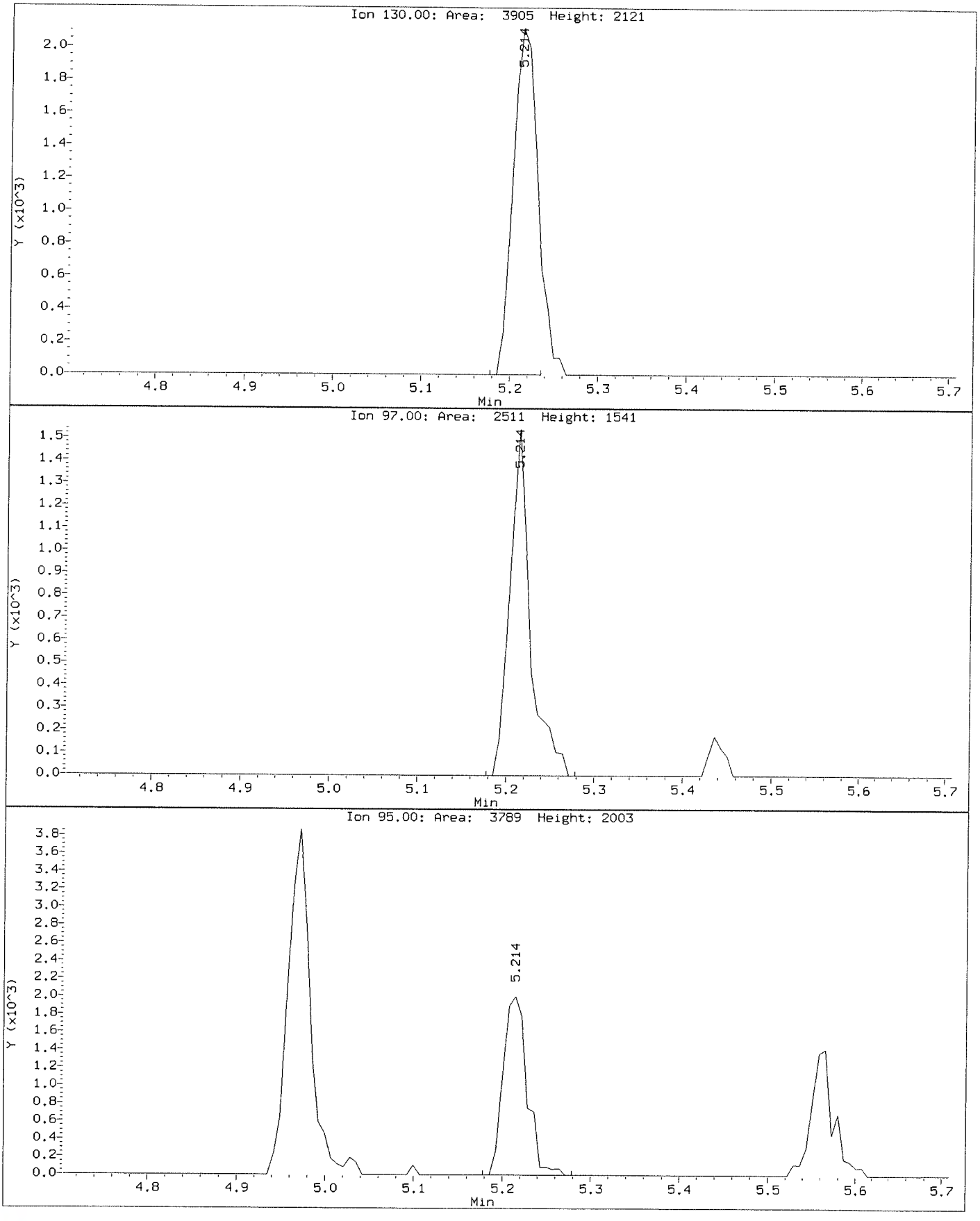
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Injection Date: 03-NOV-2020 13:24
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Trichloroethene
CAS Number: 79-01-6



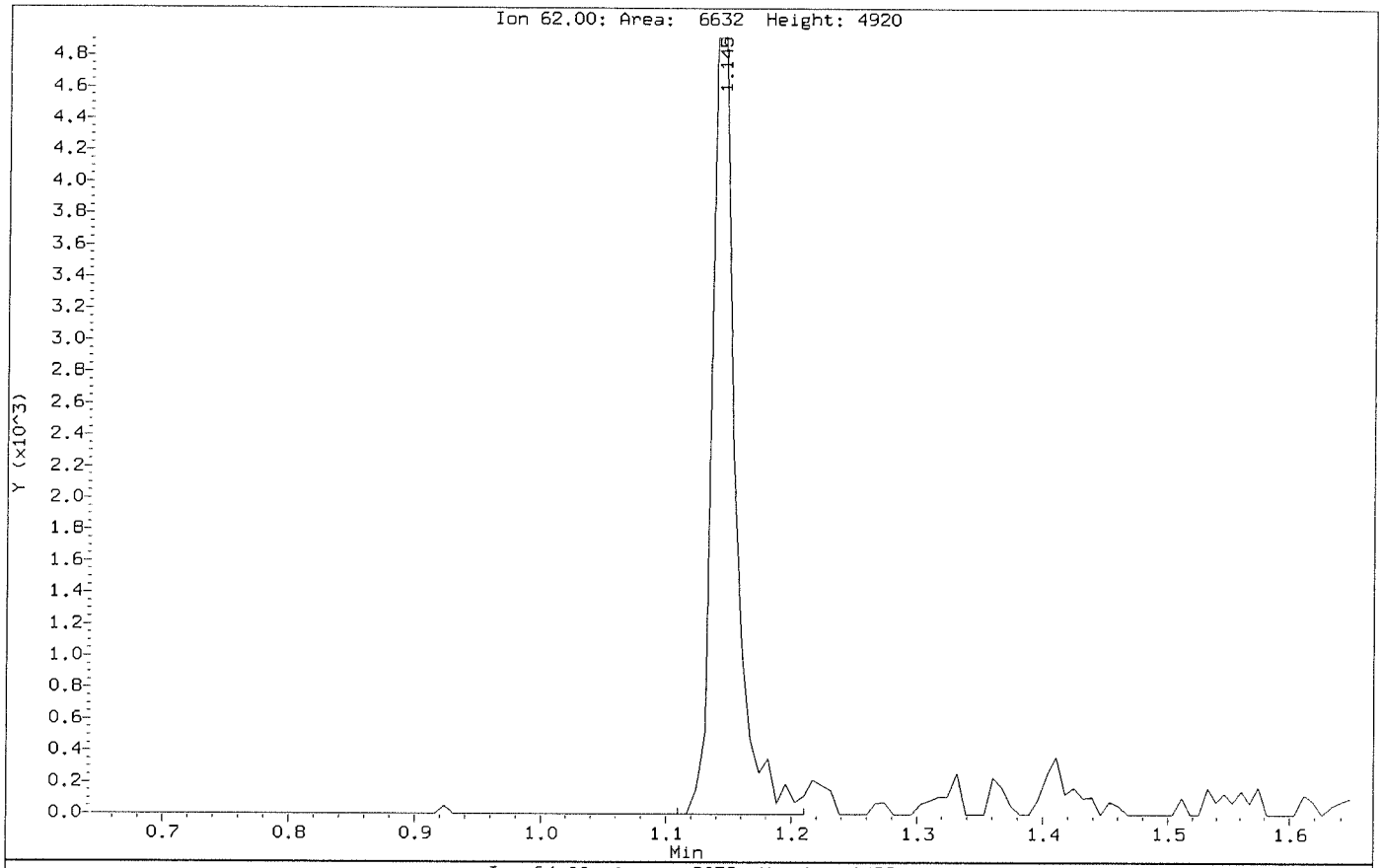
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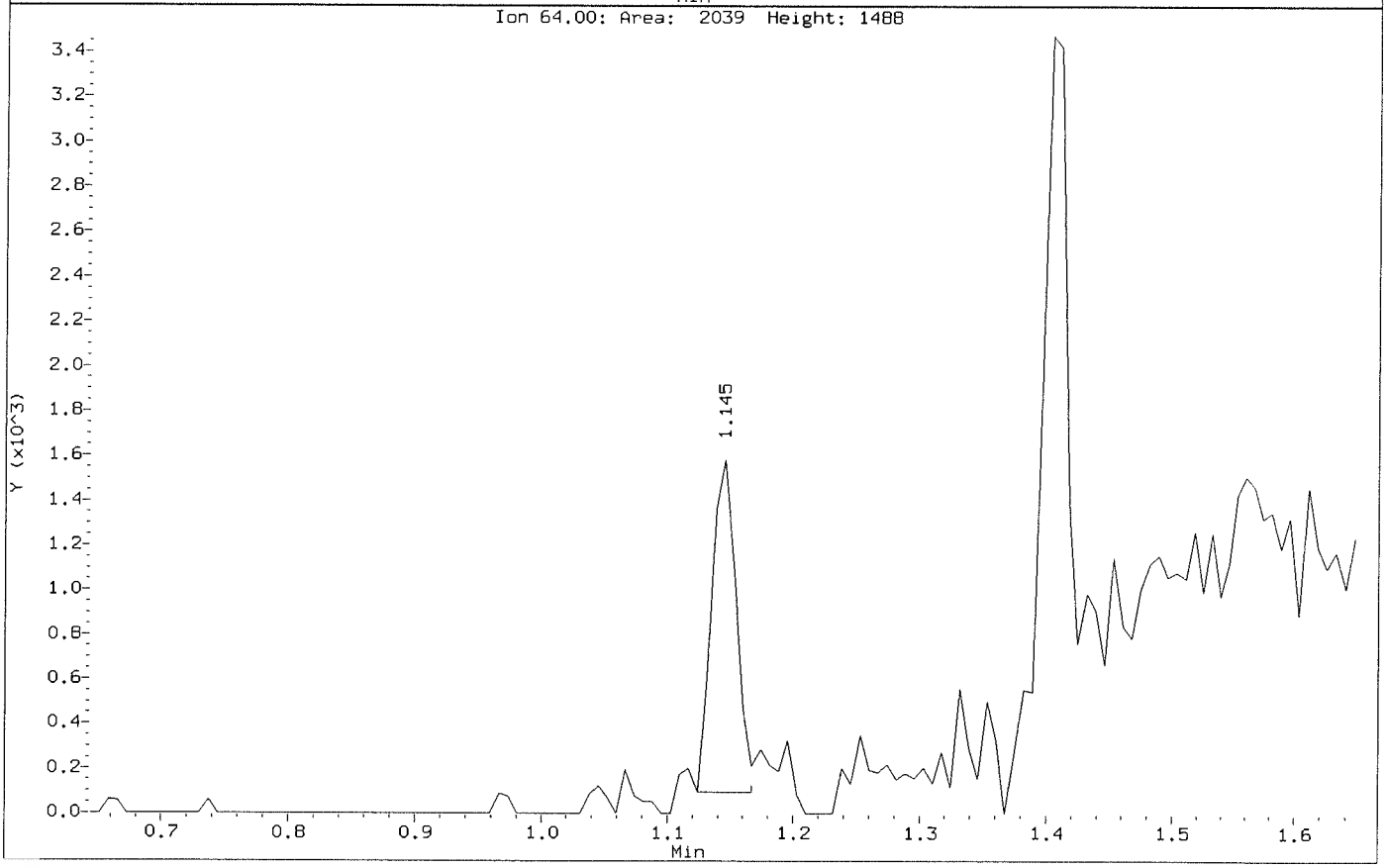
Compound: Trichloroethene
CAS Number: 79-01-6



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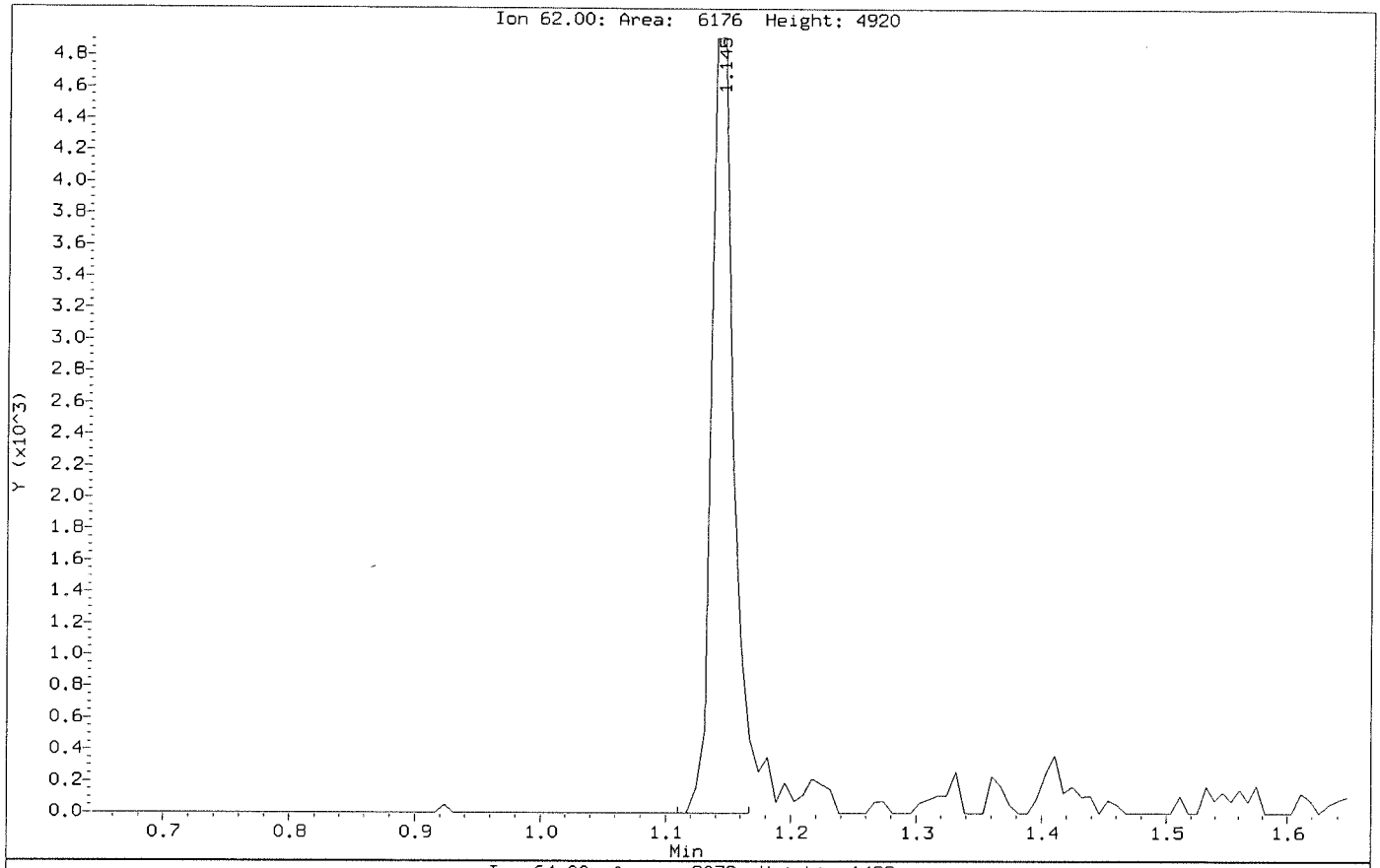
Compound: Vinyl Chloride
CAS Number: 75-01-4

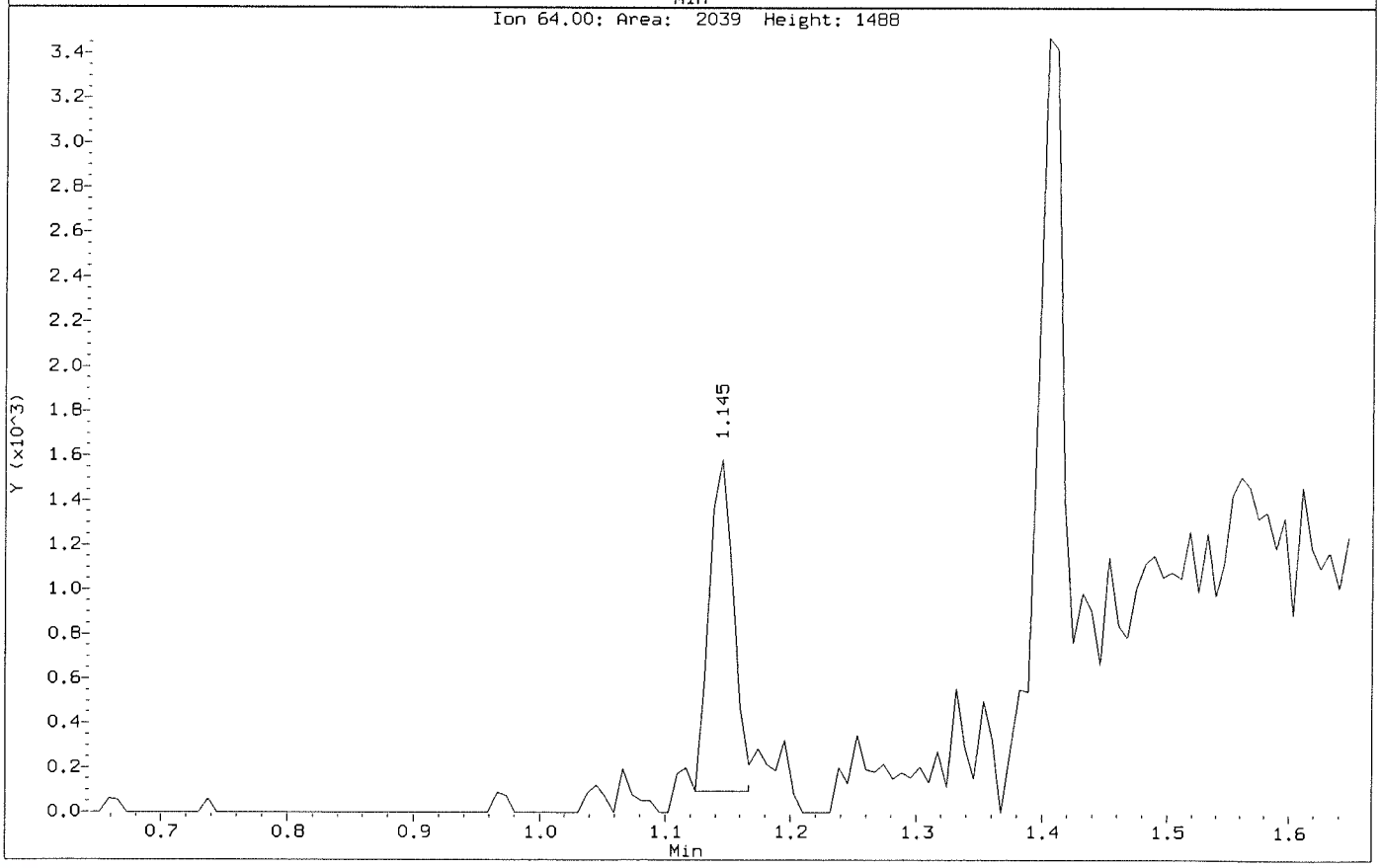




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Injection Date: 03-NOV-2020 13:24
Instrument: voa6.i
Client Sample ID: VSTD002

Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110306.D Page 1
Report Date: 07-Nov-2020 12:10

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110306.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 03-NOV-2020 13:45
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:10 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 13:24 Cal File: X110305.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

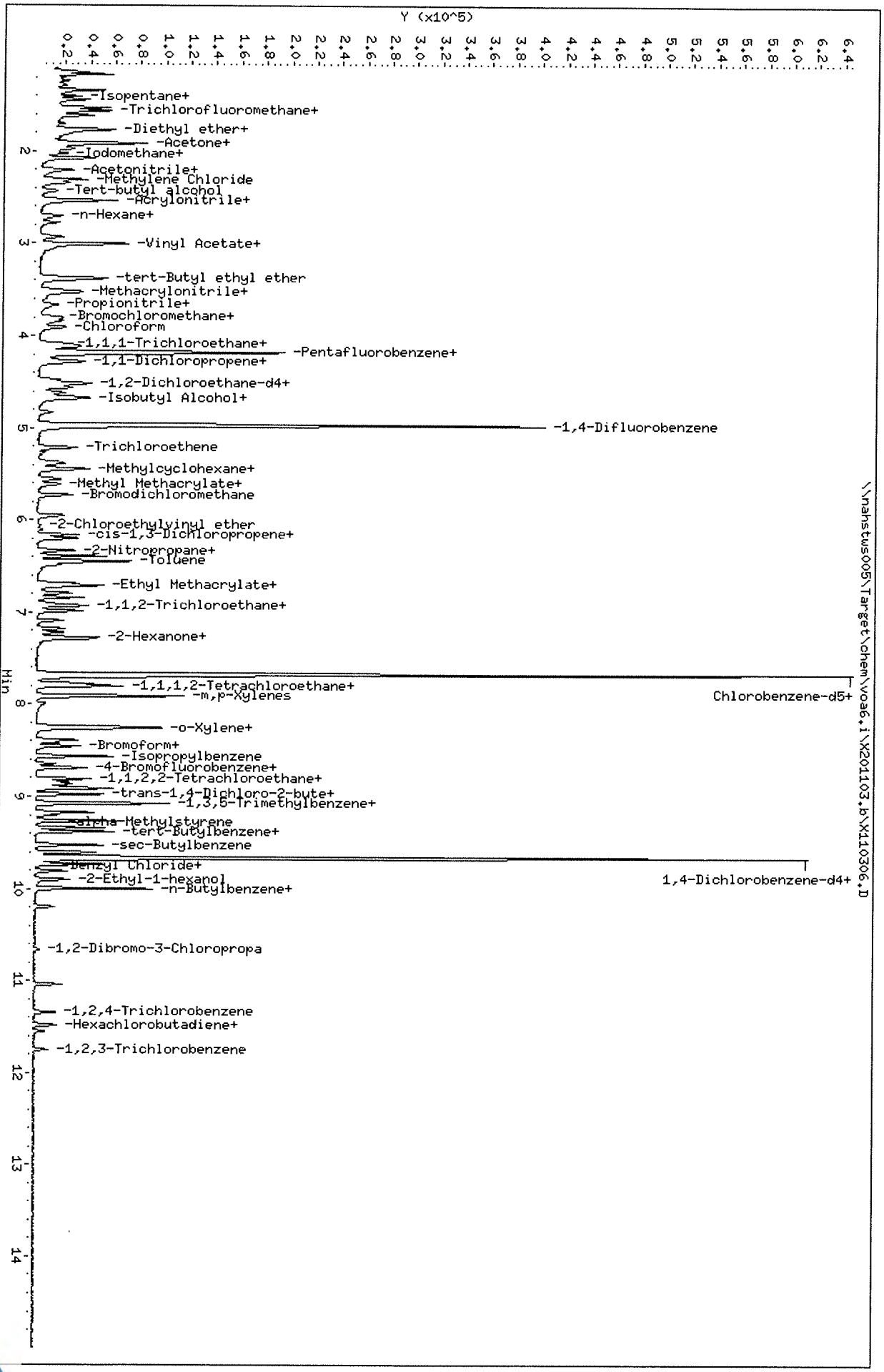
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	138955	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	261095	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	246486	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	109468	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	8863	5.00000	4.73(a)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	11874	5.00000	5.19
$	48 Toluene-d8	98	6.388	6.388	(0.833)	29006	5.00000	4.40(a)
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	11013	5.00000	5.45
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	8285	5.00000	4.71(a)
	31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	13747	5.00000	4.73(a)
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	10630	5.00000	5.36
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	7145	5.00000	4.69(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	17341	5.00000	5.19
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	13327	5.00000	5.08
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	11913	5.00000	4.89(a)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	2533	5.00000	6.97
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	7499	5.00000	4.87(aMH)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	4083	5.00000	6.24
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	26821	5.00000	4.37(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	741	5.00000	5.79
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	8509	5.00000	4.60(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	14241	5.00000	4.71(a)

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110306.D Page 2
Report Date: 07-Nov-2020 12:10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	14332	5.00000	5.09(M)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	10091	5.00000	5.22(M)
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	24800	5.00000	3.97(a)
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	14409	5.00000	4.49(a)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	14767	5.00000	4.88(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	16065	5.00000	4.80(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	14015	5.00000	4.87(a)
24 2-Butanone	43	3.602	3.602	(0.861)	6685	10.0000	10.34
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	24673	5.00000	4.79(a)
52 2-Hexanone	43	7.219	7.219	(0.941)	14581	10.0000	12.13
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	28797	5.00000	4.43(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	25607	5.00000	4.33(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	19349	10.0000	10.33
10 Acetone	43	1.976	1.976	(0.473)	13265	10.0000	10.13
37 Benzene	78	4.519	4.519	(0.909)	35701	5.00000	4.89(a)
74 Bromobenzene	156	8.810	8.810	(0.912)	9020	5.00000	4.68(a)
29 Bromochloromethane	128	3.795	3.795	(0.908)	5329	5.00000	5.56
39 Bromodichloromethane	83	5.729	5.729	(1.153)	13327	5.00000	4.96(a)
66 Bromoform	173	8.416	8.416	(1.097)	4618	5.00000	6.65(T)
6 Bromomethane	94	1.339	1.339	(0.320)	12720	5.00000	4.91(aM)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	48187	10.0000	9.89
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	11317	5.00000	4.84(a)
59 Chlorobenzene	112	7.699	7.699	(1.004)	23875	5.00000	4.53(a)
7 Chloroethane	64	1.403	1.403	(0.336)	11318	5.00000	5.16(H)
28 Chloroform	83	3.910	3.910	(0.935)	18068	5.00000	5.08
3 Chloromethane	50	1.074	1.074	(0.257)	11006	5.00000	6.37
27 cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	10335	5.00000	5.07
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	14744	5.00000	5.06
55 Dibromochloromethane	129	7.184	7.184	(0.937)	8501	5.00000	4.66(a)
44 Dibromomethane	93	5.558	5.558	(1.118)	7626	5.00000	5.77
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	9243	5.00000	5.13
61 Ethylbenzene	106	7.807	7.807	(1.018)	11027	5.00000	4.12(aH)
91 Hexachlorobutadiene	225	11.489	11.489	(1.189)	2539	5.00000	6.44
67 Isopropylbenzene	105	8.566	8.566	(1.117)	31967	5.00000	6.32
62 m,p-Xylenes	106	7.907	7.907	(1.031)	28591	10.0000	8.93
17 Methylene Chloride	84	2.306	2.306	(0.551)	9949	5.00000	5.21
87 n-Butylbenzene	91	9.999	9.999	(1.035)	22870	5.00000	6.79
73 n-Propylbenzene	91	8.917	8.917	(0.923)	37694	5.00000	4.32(a)
92 Naphthalene	128	11.553	11.553	(1.196)	6669	5.00000	7.20
63 o-Xylene	106	8.244	8.244	(1.075)	13980	5.00000	4.38(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	29458	5.00000	6.35
64 Styrene	104	8.265	8.265	(1.078)	23194	5.00000	4.33(a)
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	20057	5.00000	6.31
56 Tetrachloroethene	164	6.933	6.933	(0.904)	6222	5.00000	4.58(a)
50 Toluene	91	6.453	6.453	(0.841)	42883	5.00000	4.75(a)
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	7804	5.00000	4.50(a)
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	12581	5.00000	4.89(a)
38 Trichloroethene	130	5.207	5.207	(1.048)	8320	5.00000	4.78(a)
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	25518	5.00000	4.87(a)
5 Vinyl Chloride	62	1.145	1.145	(0.274)	15367	5.00000	5.00(MH)

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.

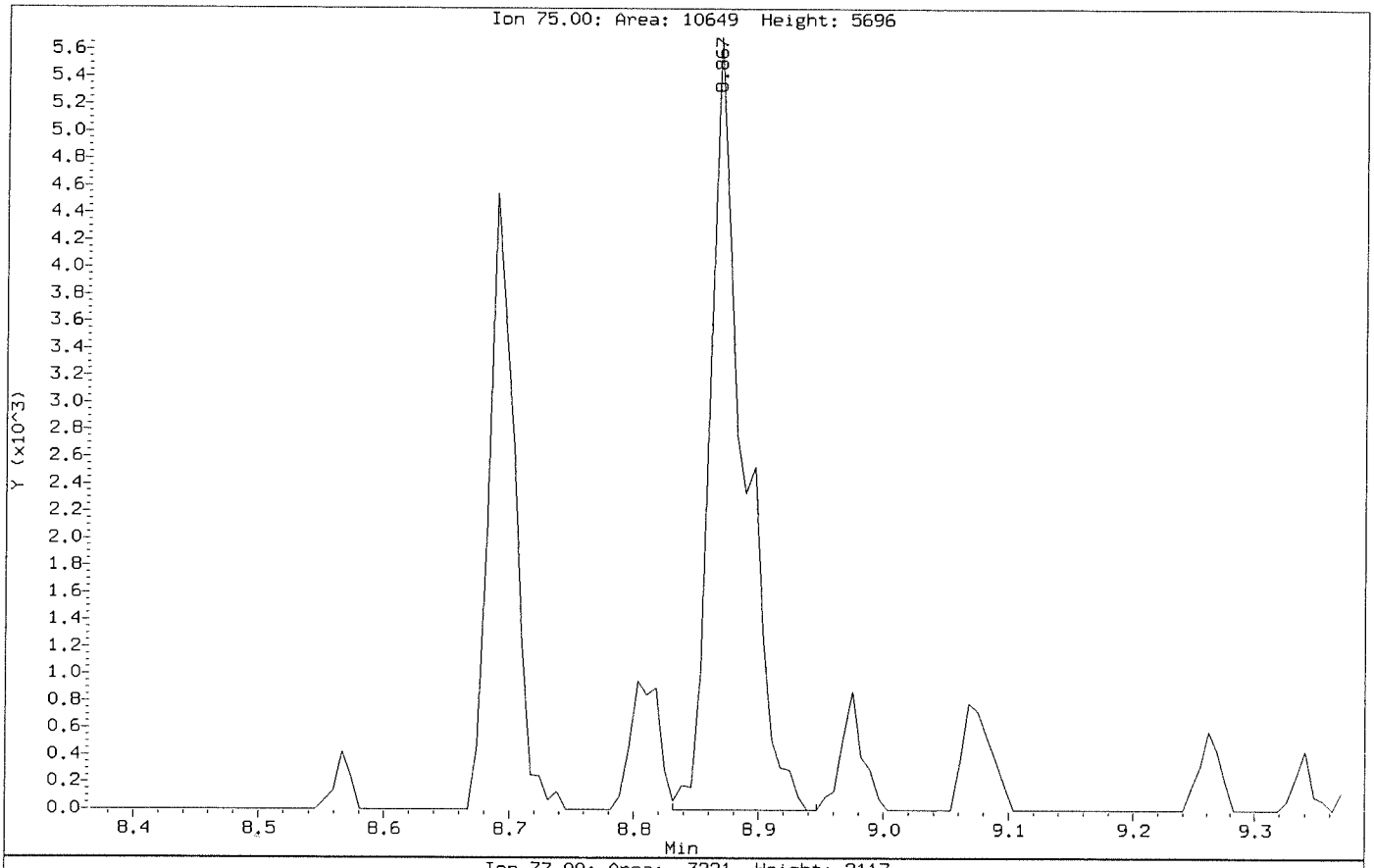


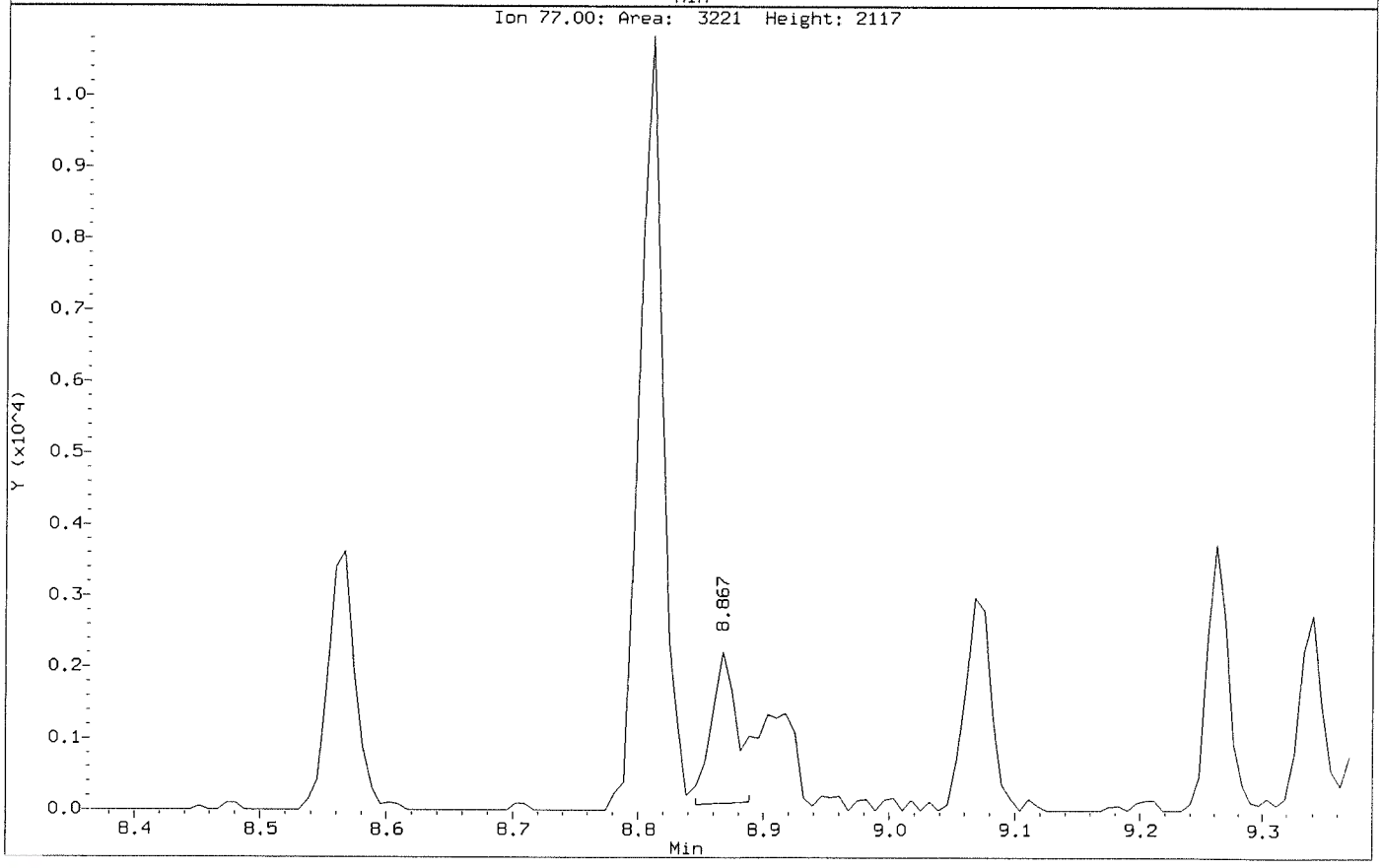
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Date : 03-NOV-2020 13:45
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110306.D
Injection Date: 03-NOV-2020 13:45
Instrument: voa6.i
Client Sample ID: VSTD005

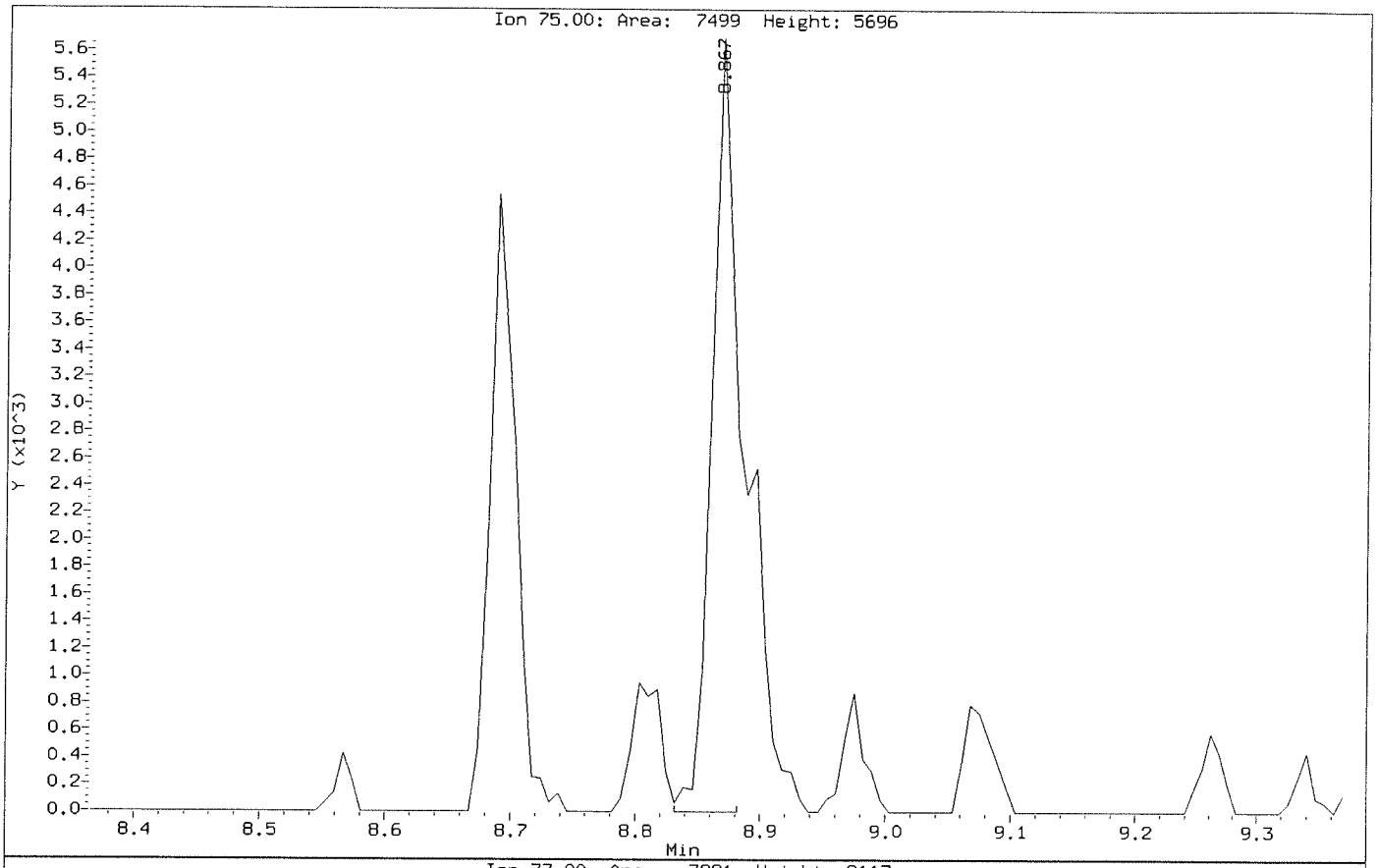
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

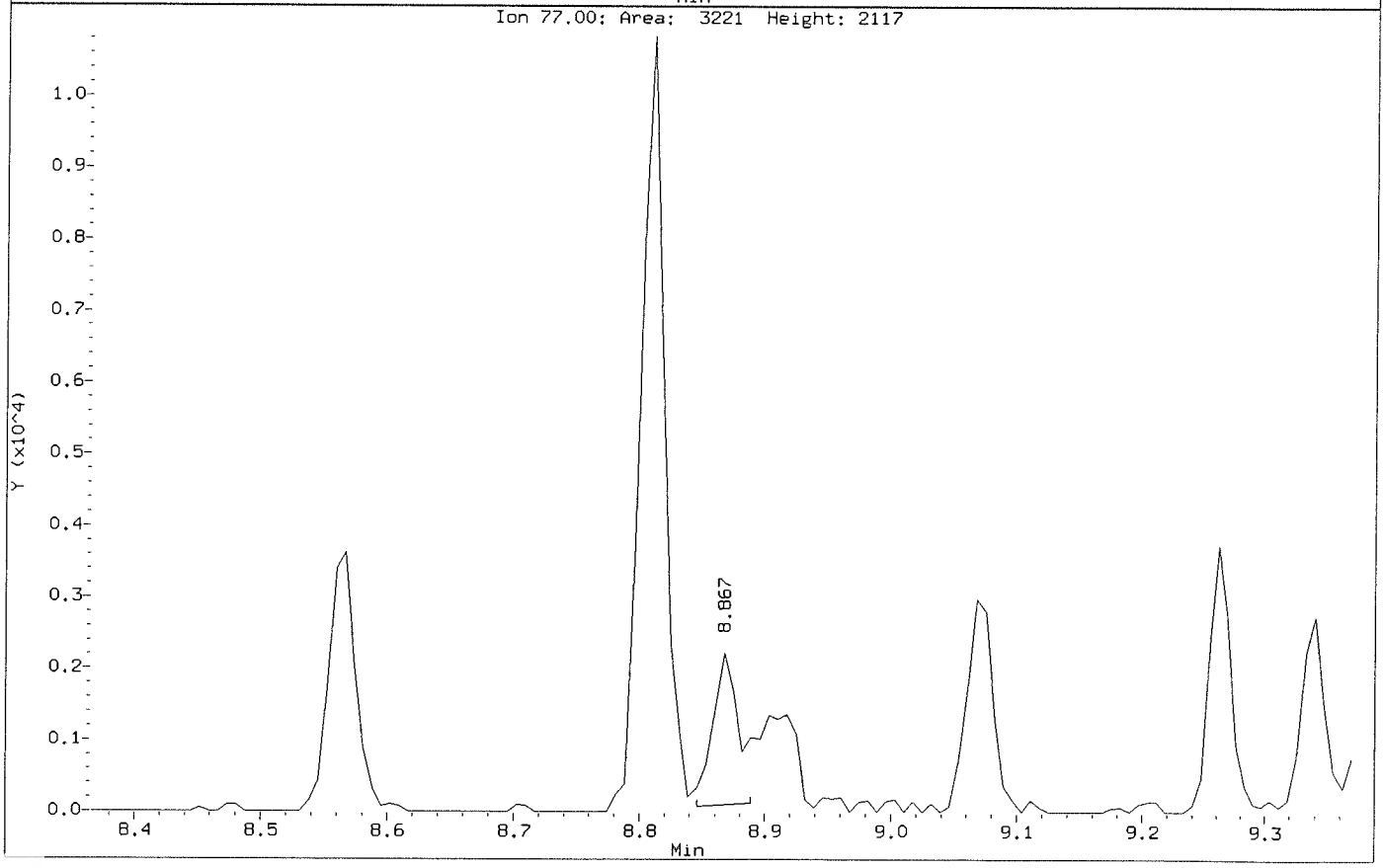




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Client Sample ID: VSTD005

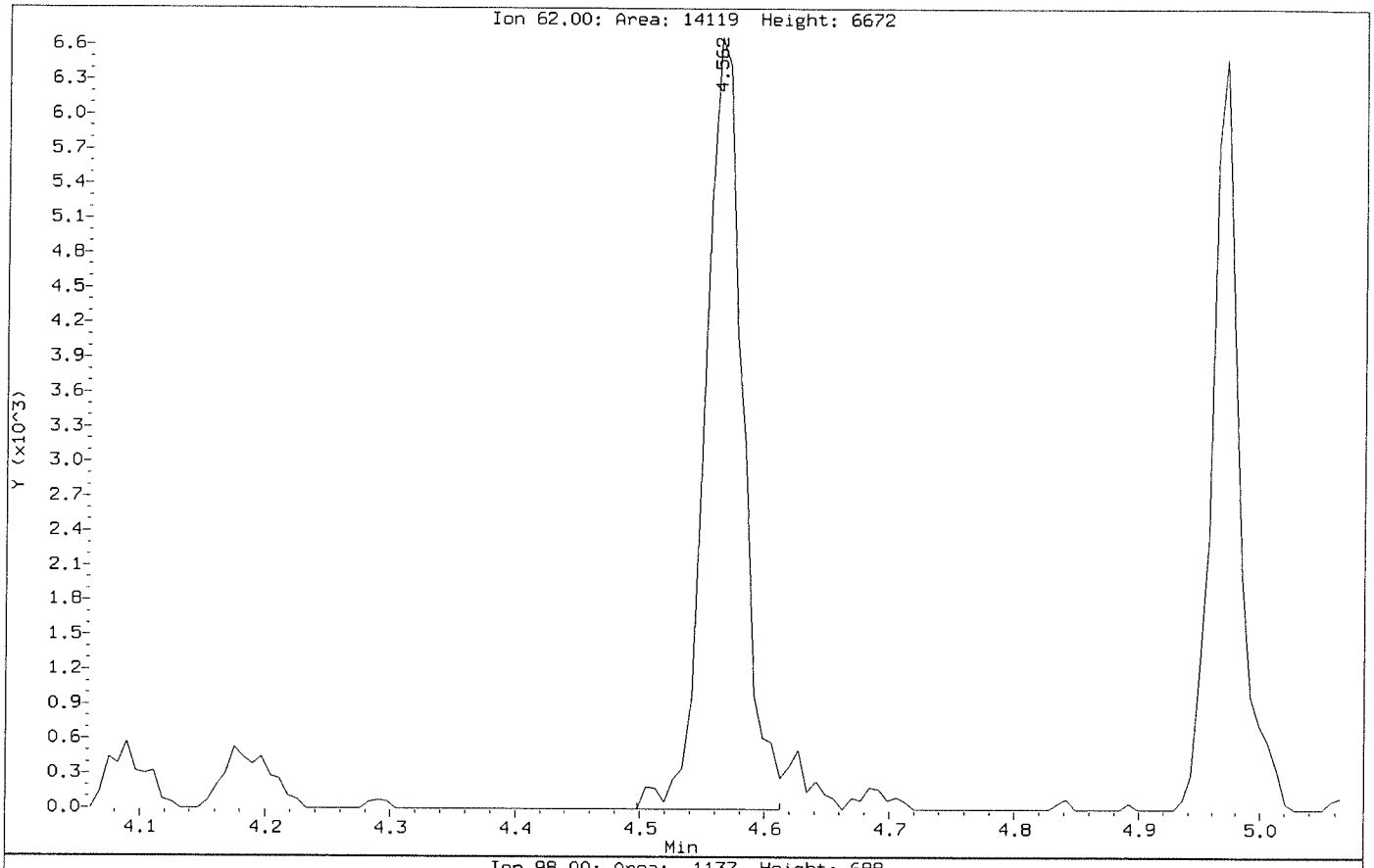
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

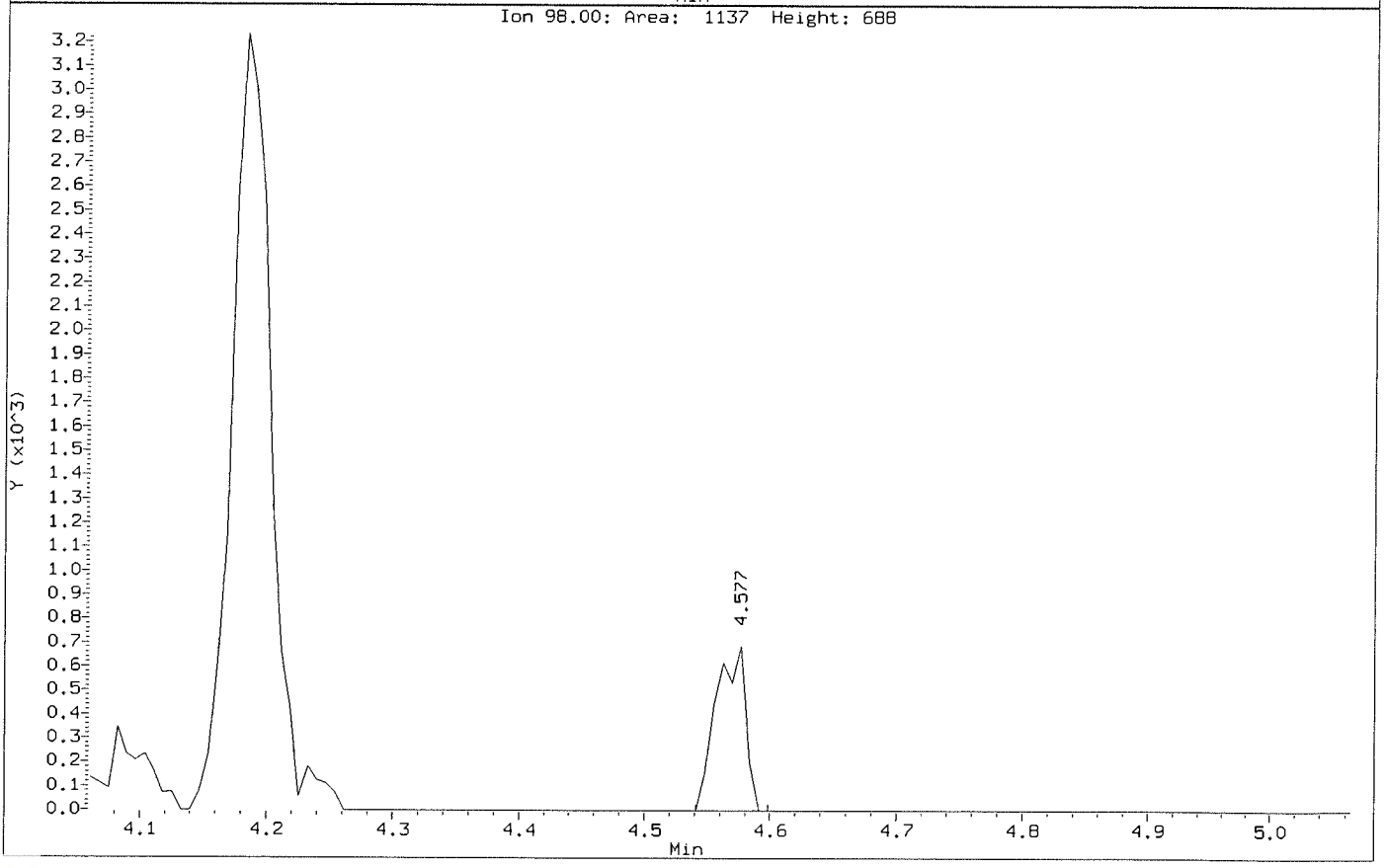




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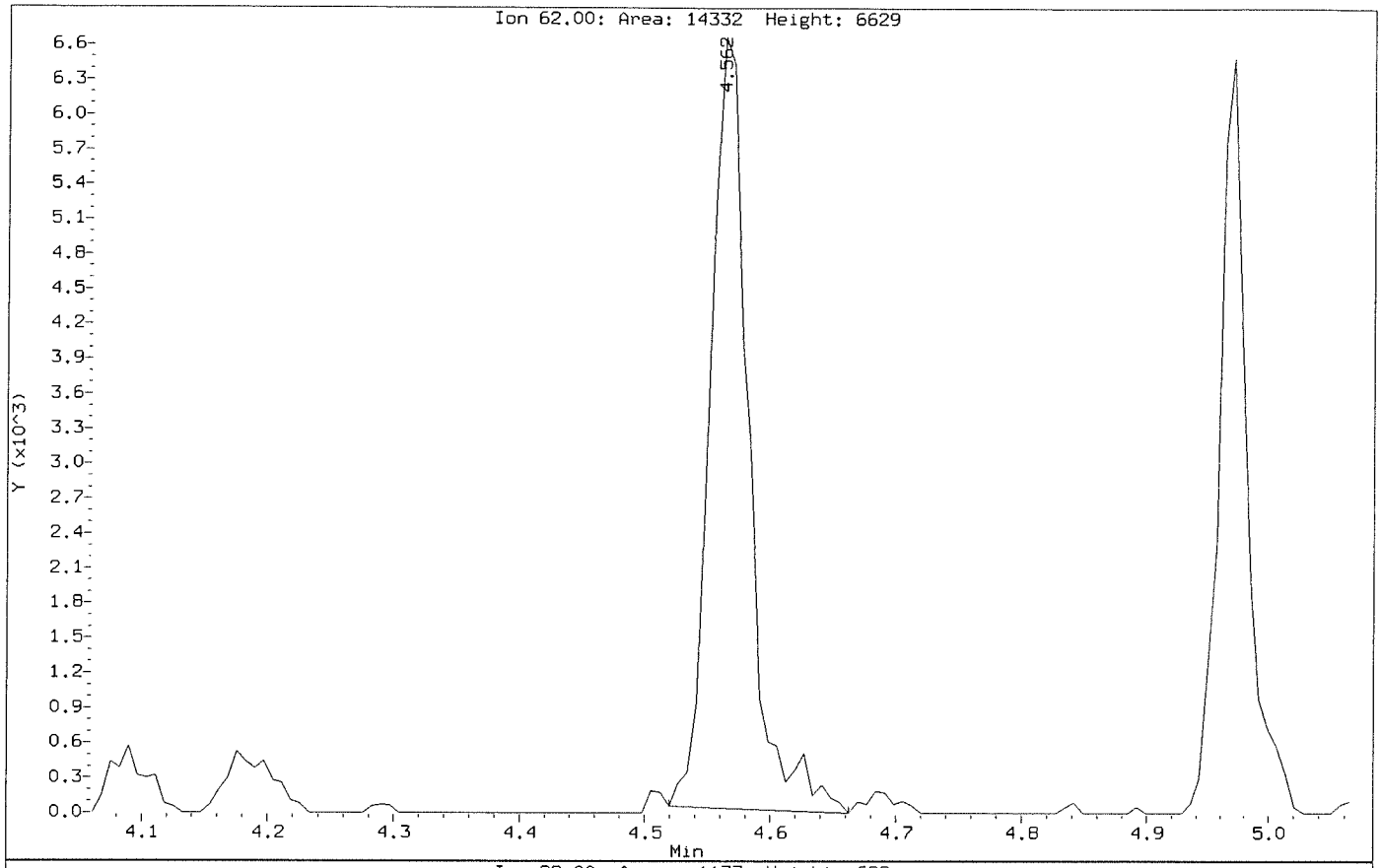
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

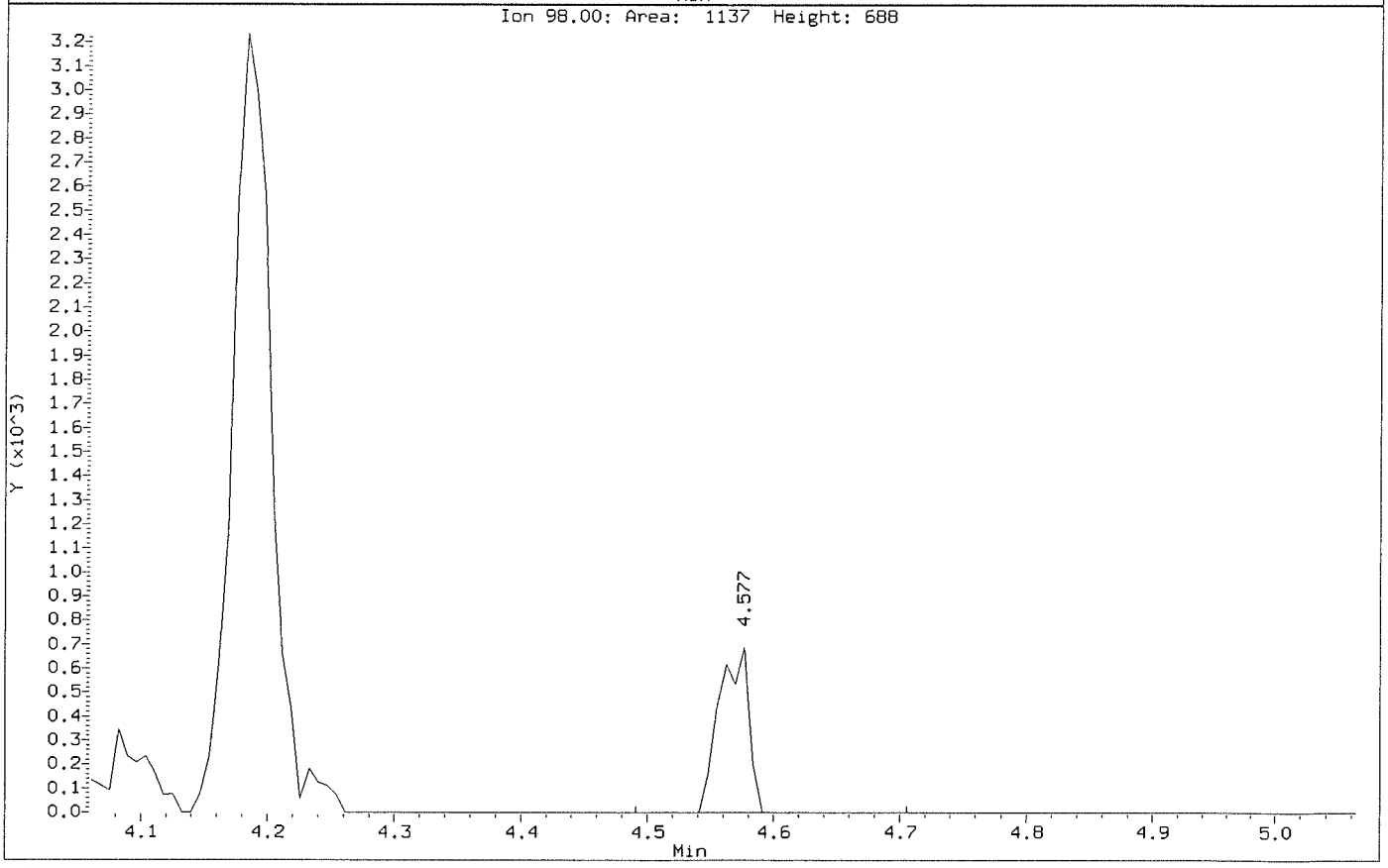




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Client Sample ID: VSTD005

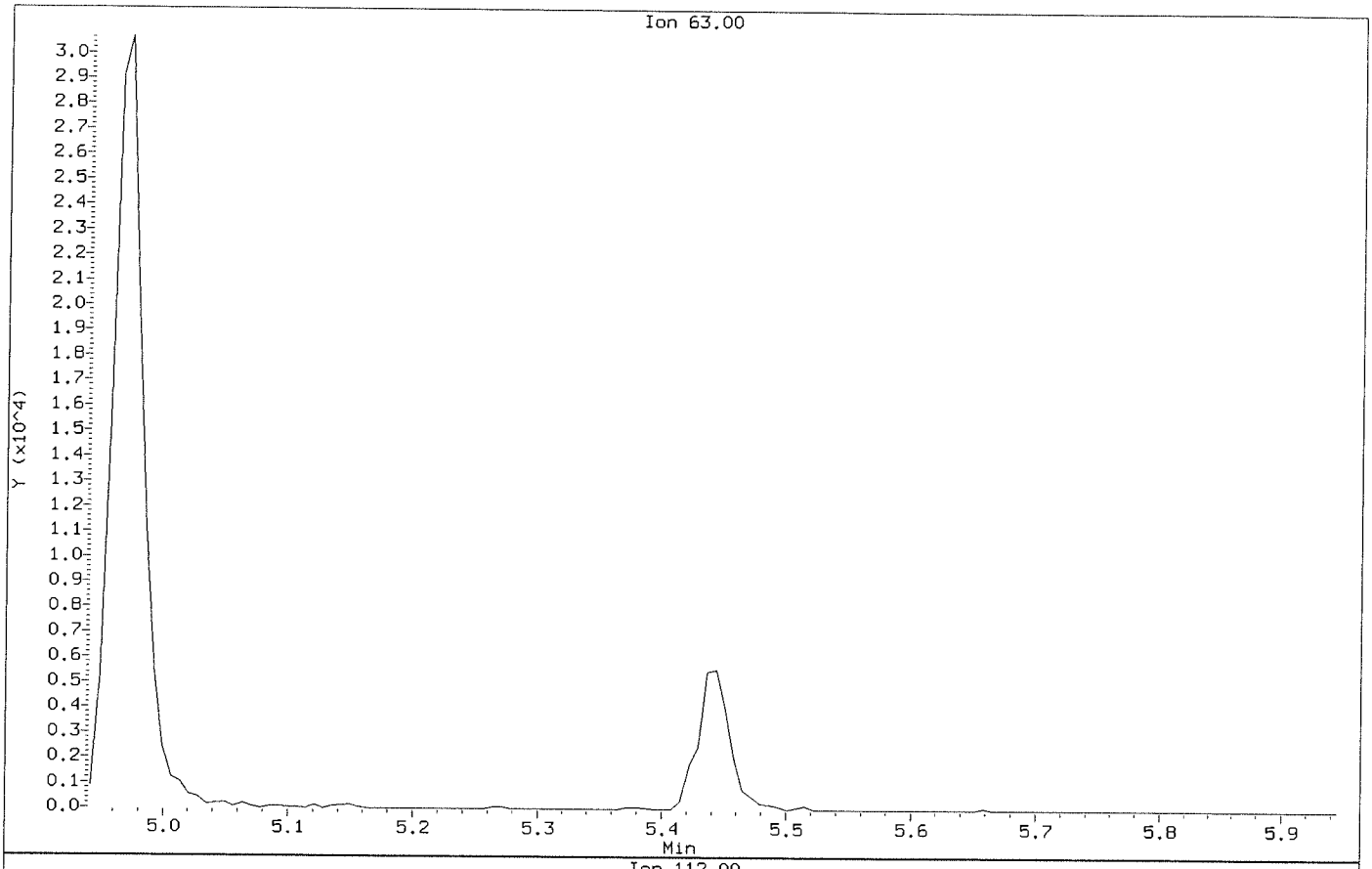
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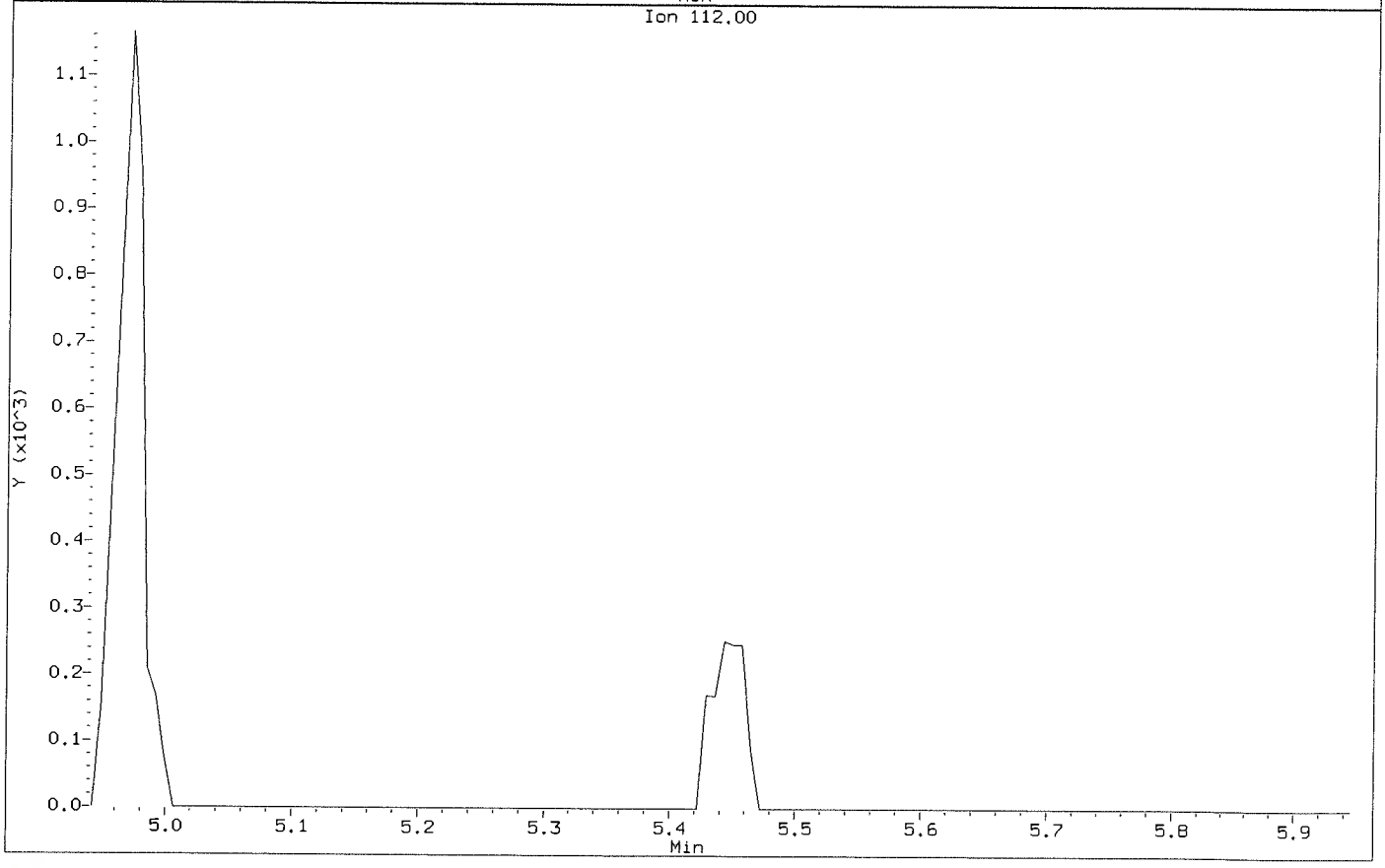




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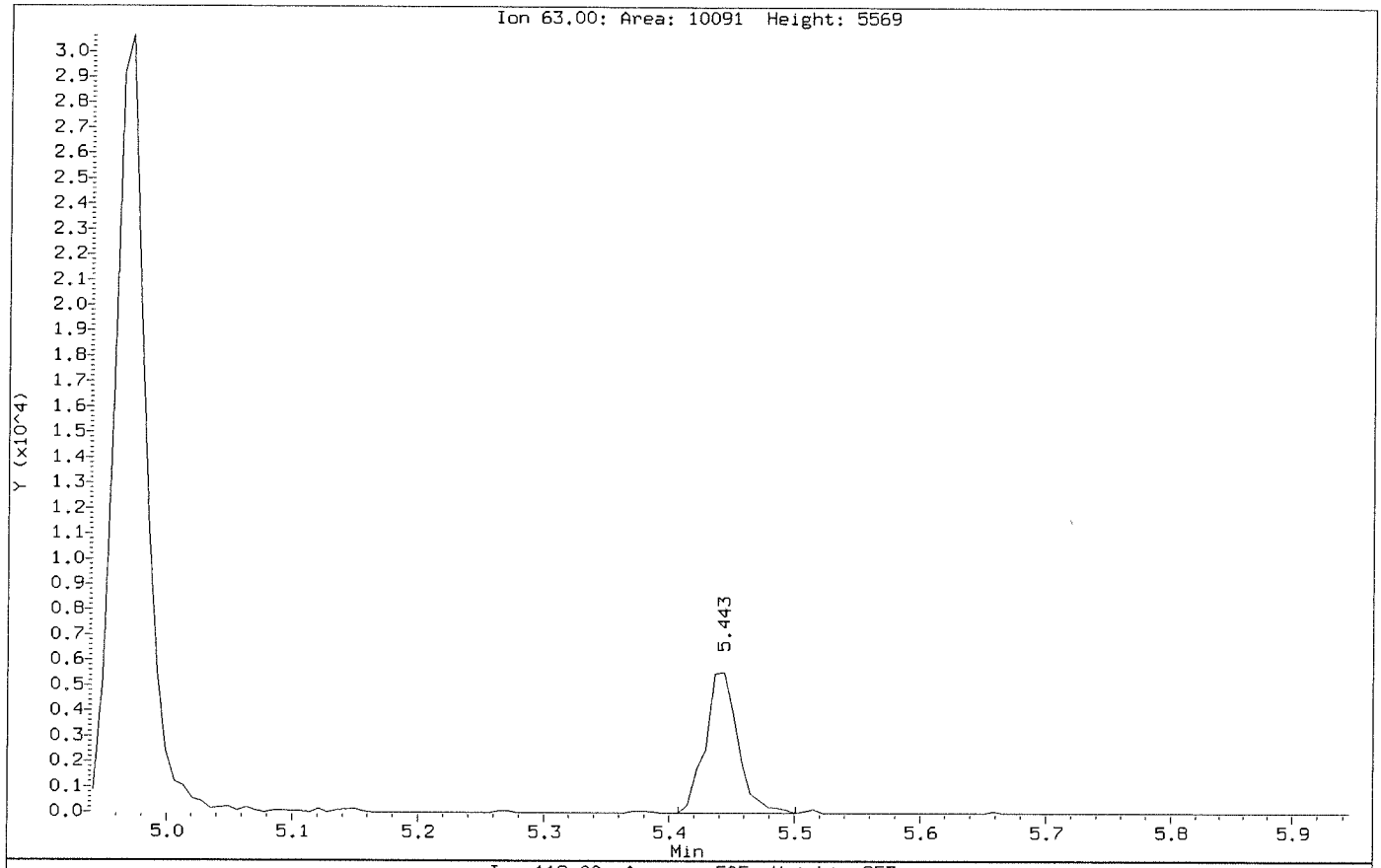
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CAS Number: 78-87-5

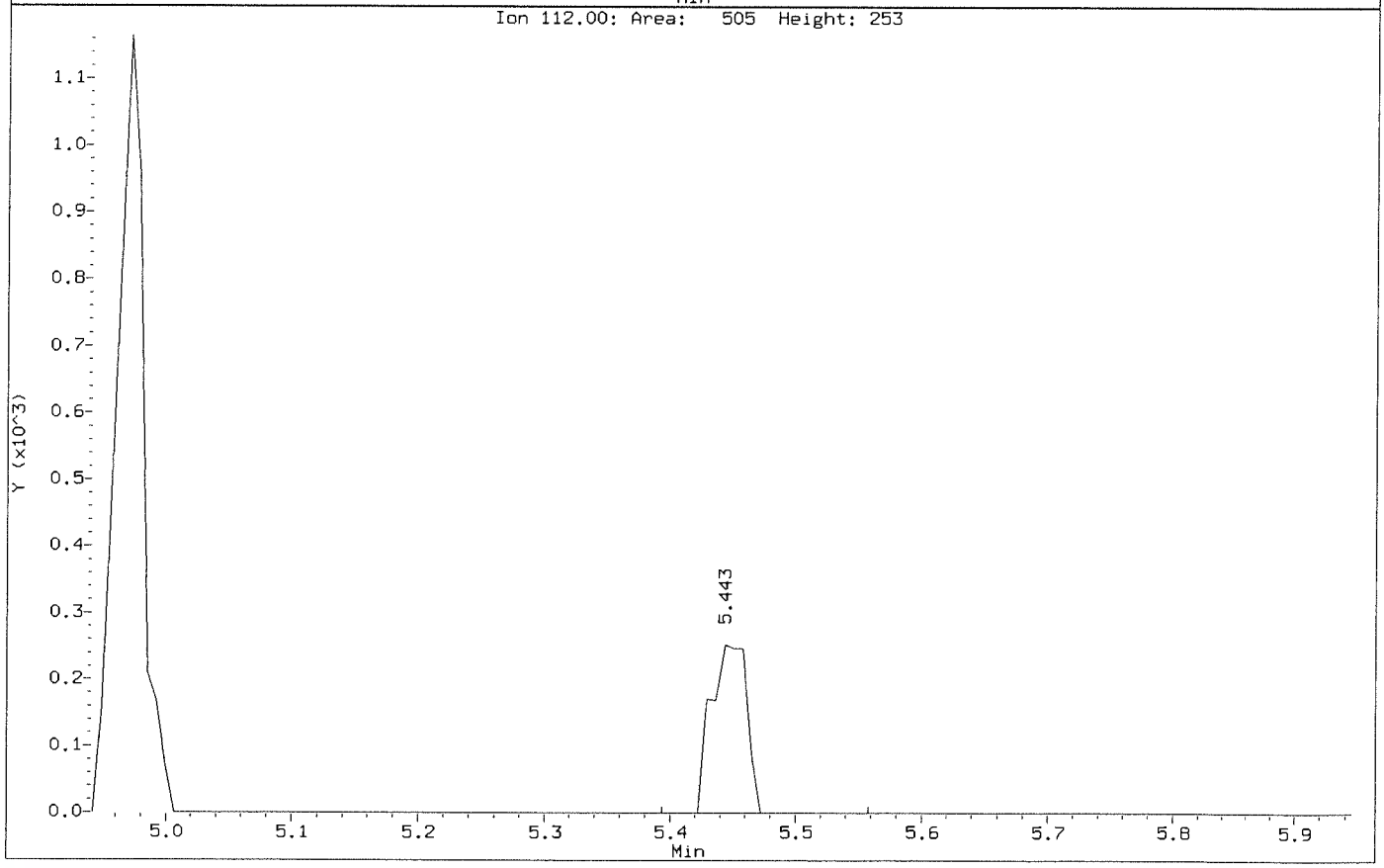




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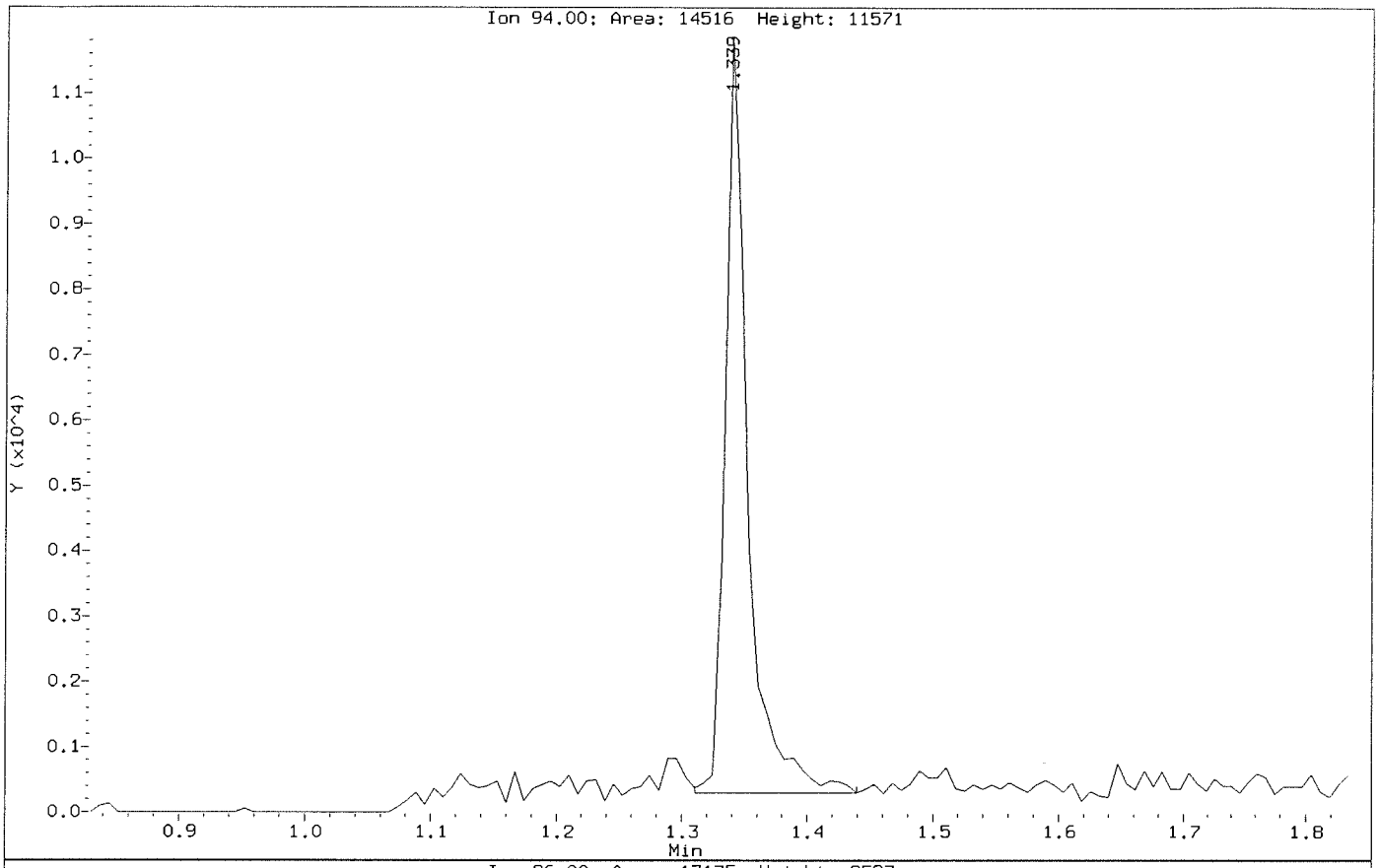
Compound: 1,2-Dichloropropane
CAS Number: 78-87-5

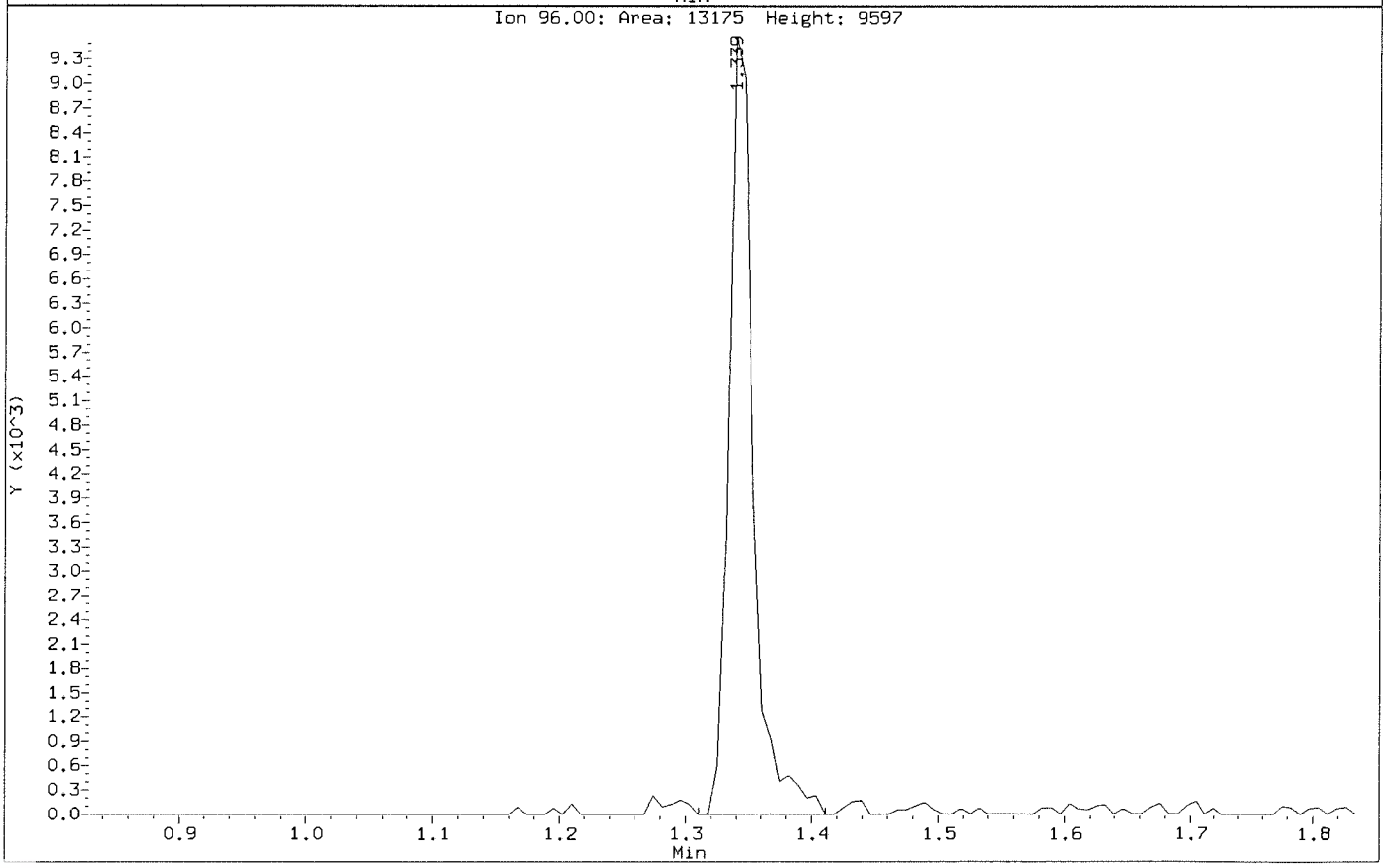




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Instrument: voa6.i
Client Sample ID: VSTD005

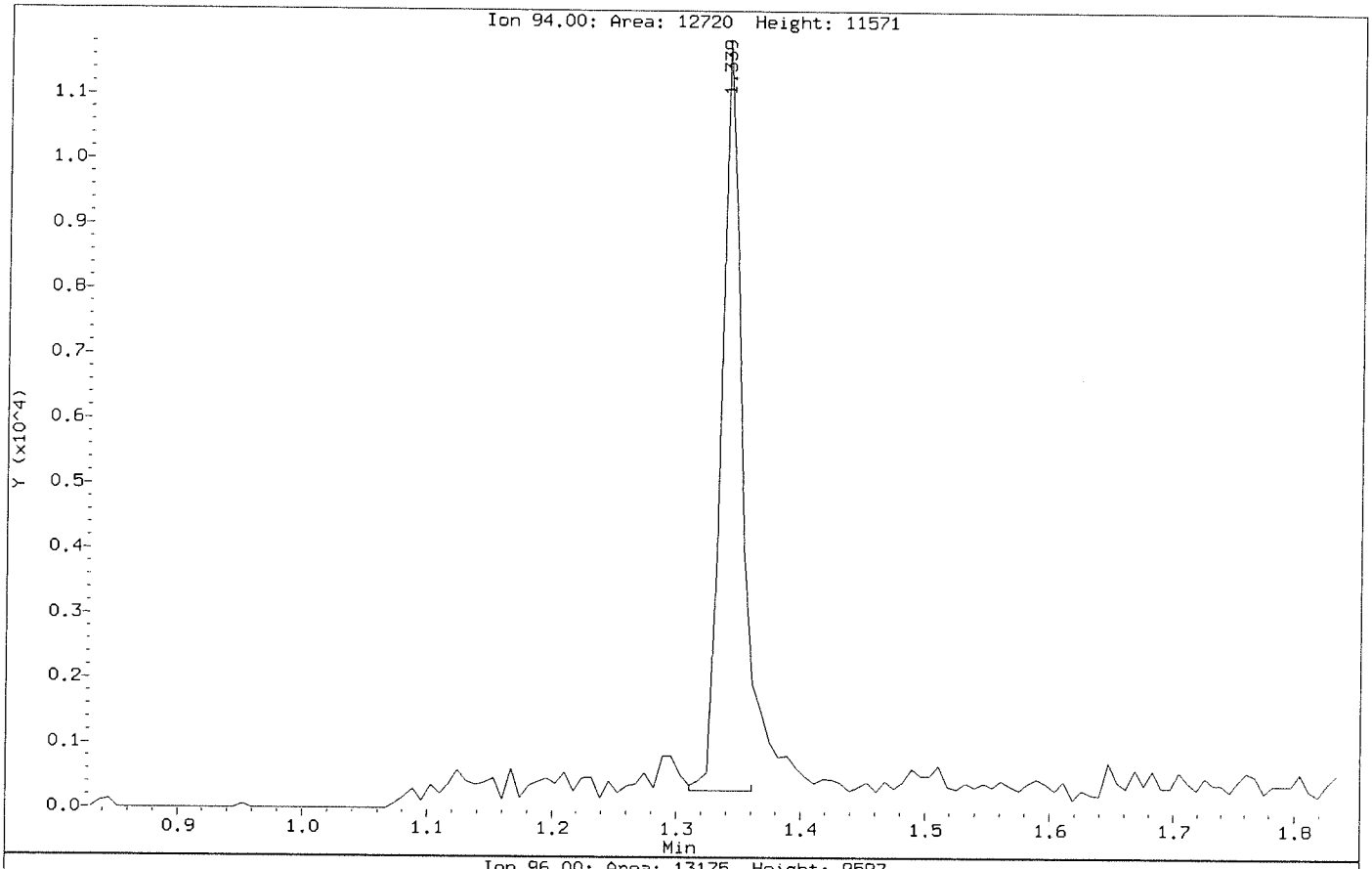
Compound: Bromomethane
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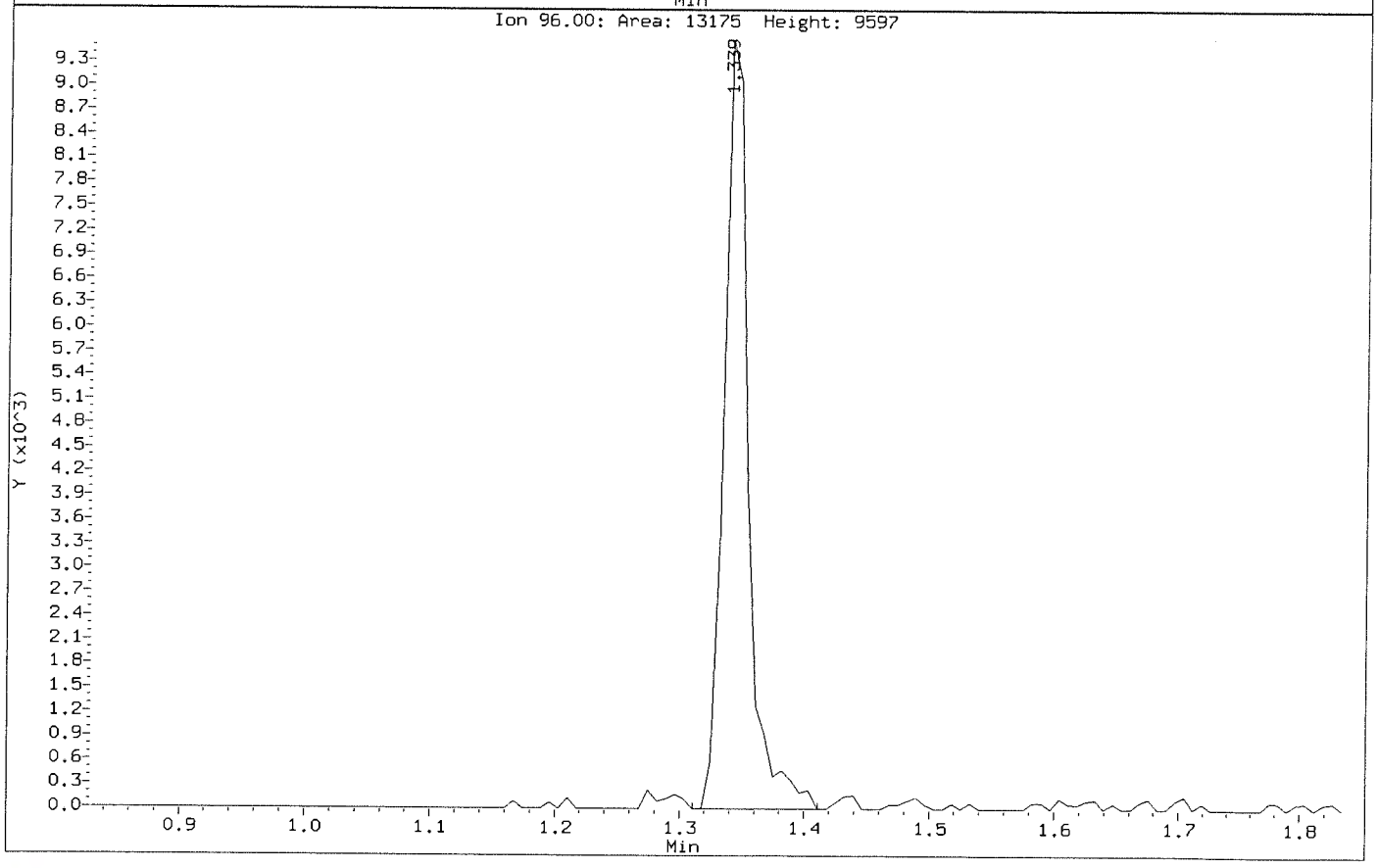




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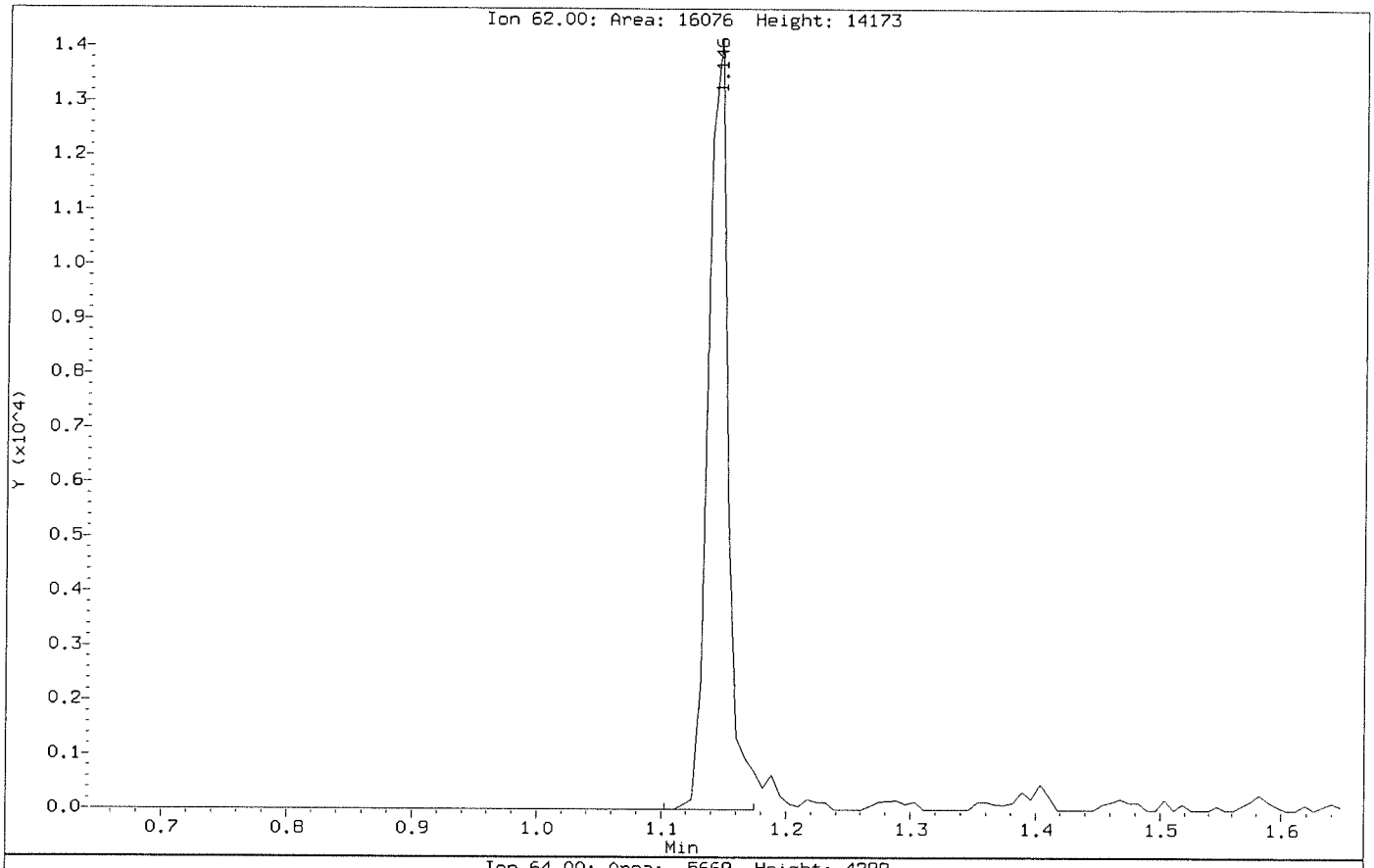
Compound: Bromomethane
CAS Number: 74-83-9

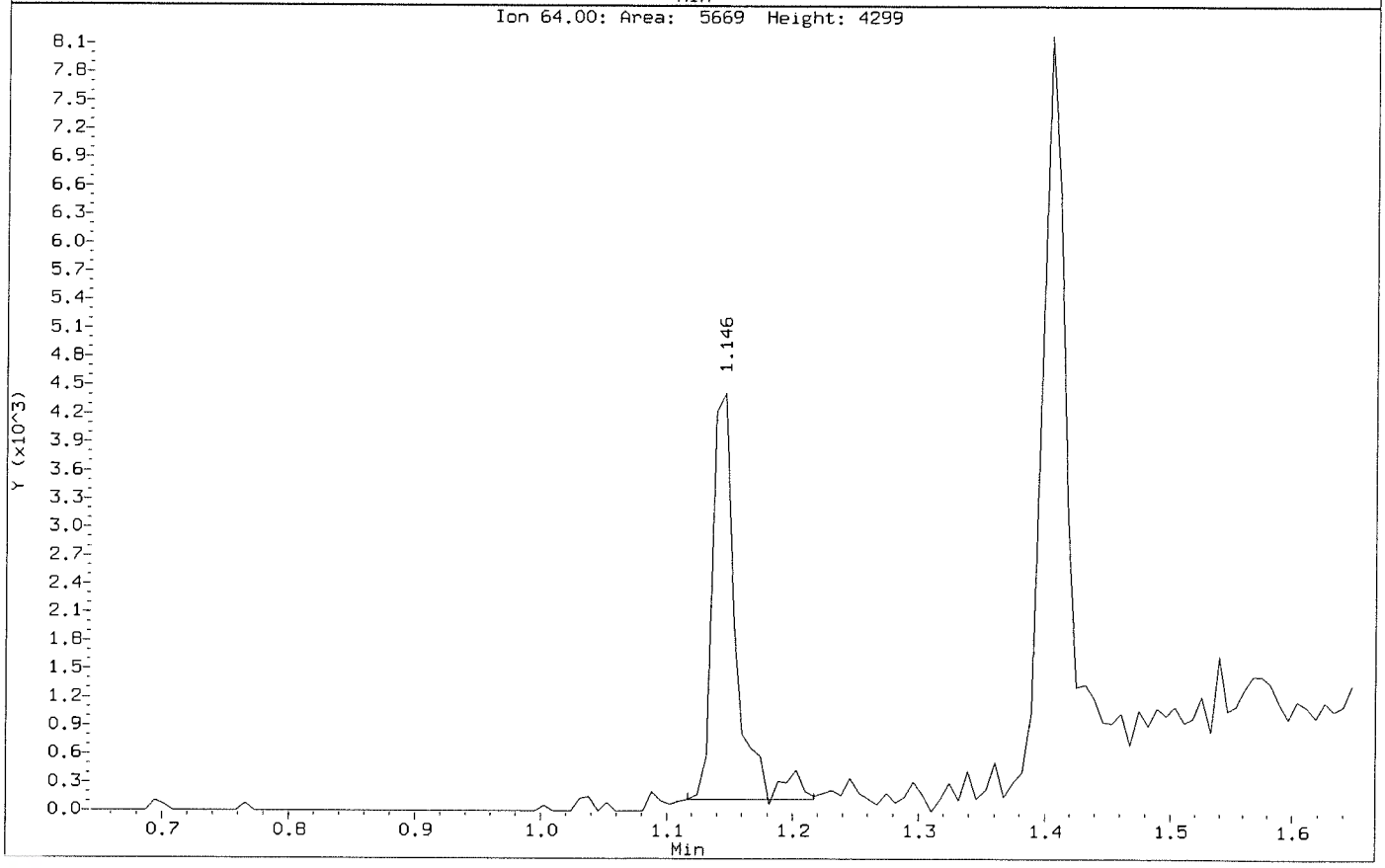




Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110306.D
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Instrument: voa6.i
Client Sample ID: VSTD005

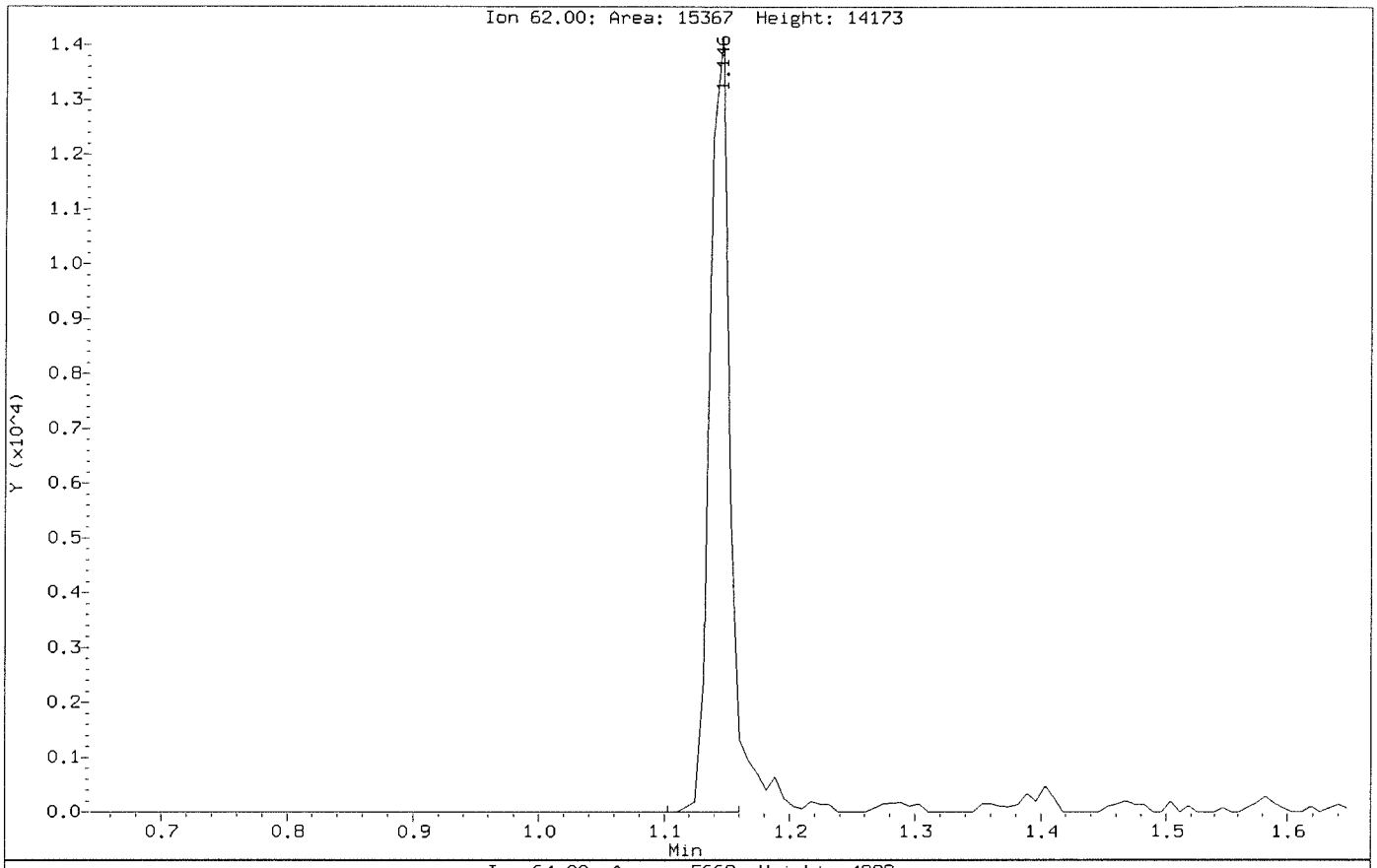
Compound: Vinyl Chloride
CAS Number: 75-01-4

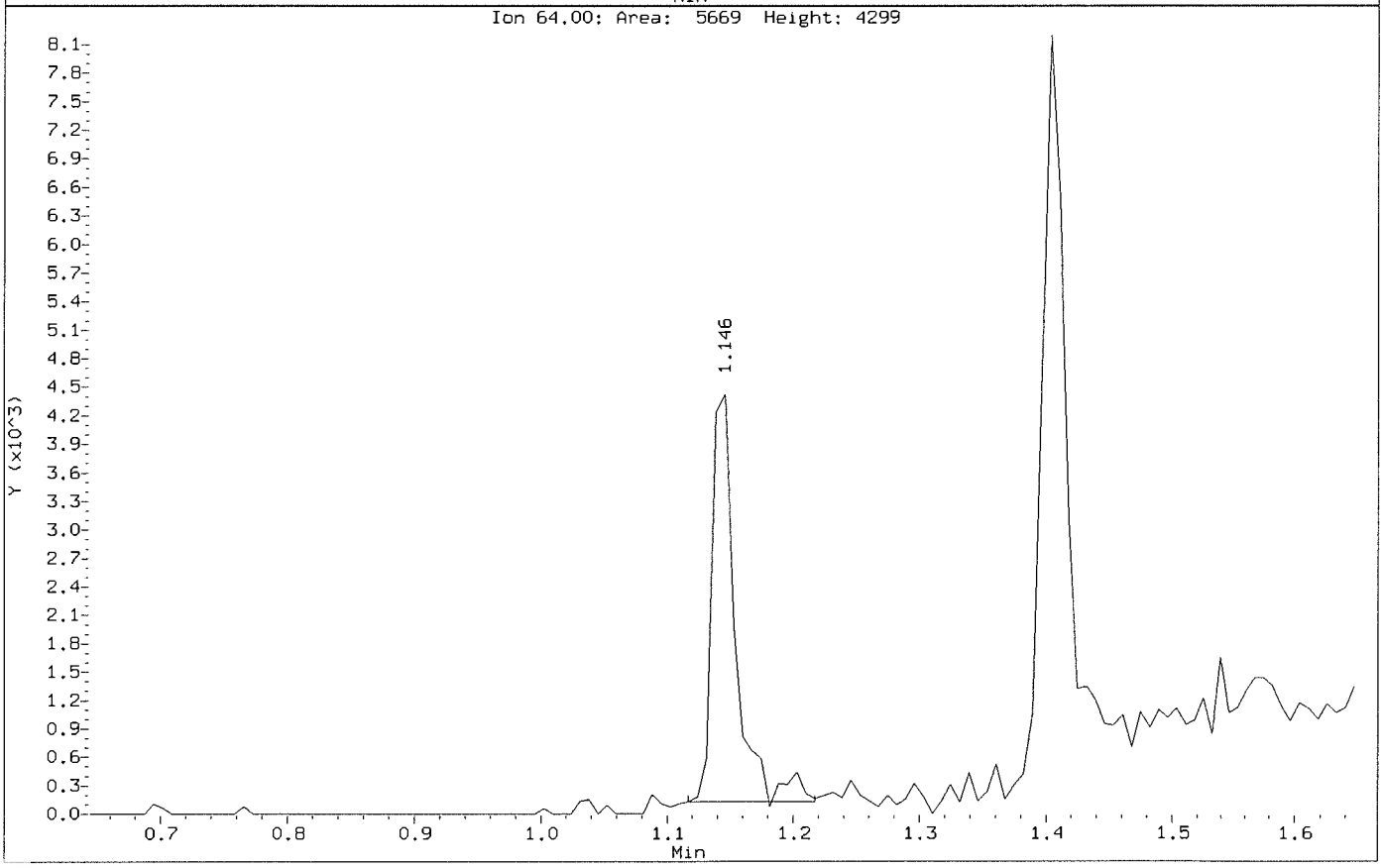




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Injection Date: 03-NOV-2020 13:45
Instrument: voa6.i
Client Sample ID: VSTD005

Compound: Vinyl Chloride
CAS Number: 75-01-4





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110307.D Page 1
Report Date: 07-Nov-2020 12:11

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110307.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 03-NOV-2020 14:06
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 13:45 Cal File: X110306.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

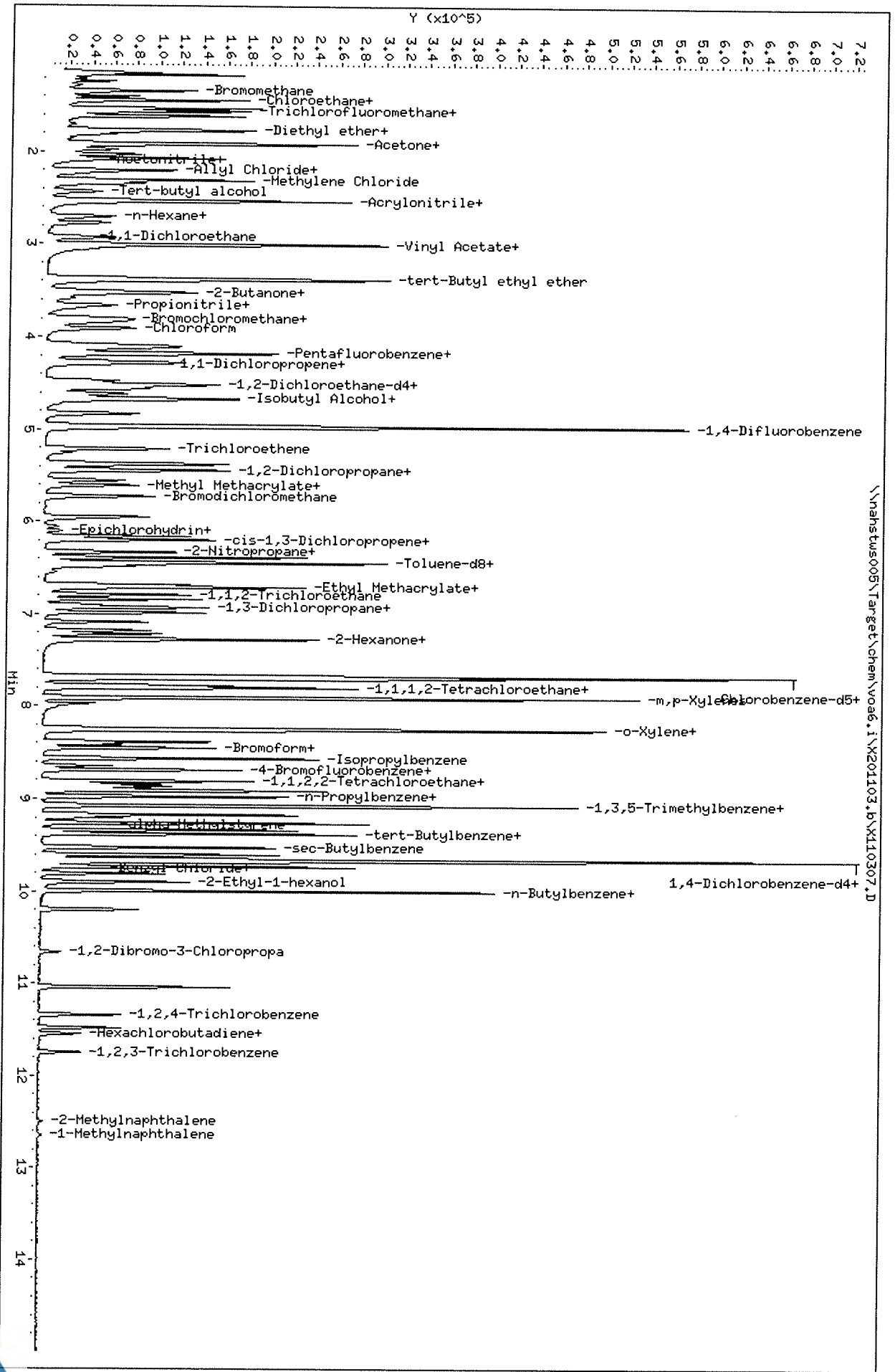
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	144595	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	268568	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	253730	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	113802	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	35558	20.0000	18.26
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	44472	20.0000	19.69
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	120740	20.0000	17.81
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	41523	20.0000	18.99
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	31796	20.0000	17.56
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	51326	20.0000	17.00
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	40864	20.0000	21.42
53 1,1,2-Trichloroethane	83	6.839	6.839	(0.892)	27961	20.0000	17.86
22 1,1-Dichloroethane	63	2.928	2.928	(0.700)	59439	20.0000	17.10
11 1,1-Dichloroethene	96	1.918	1.918	(0.459)	48541	20.0000	17.79
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	40936	20.0000	16.34
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	8500	20.0000	18.57
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	32197	20.0000	20.14 (MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	15476	20.0000	18.09
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	112884	20.0000	17.73
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	2714	20.0000	21.28
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	37219	20.0000	19.56
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	56332	20.0000	17.93

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110307.D Page 2
Report Date: 07-Nov-2020 12:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	52637	20.0000	18.17(M)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	37099	20.0000	18.66
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	108442	20.0000	16.70
83 1,3-Dichlorobenzene	146	9.604	9.604	(0.994)	59583	20.0000	17.86
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	57547	20.0000	18.51
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	63974	20.0000	18.42
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	48643	20.0000	16.25
24 2-Butanone	43	3.587	3.587	(0.858)	24965	40.0000	37.14
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	93782	20.0000	17.54
52 2-Hexanone	43	7.212	7.212	(0.940)	61091	40.0000	38.01
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	116014	20.0000	17.18
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	101444	20.0000	16.50
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	71258	40.0000	36.96
10 Acetone	43	1.976	1.976	(0.473)	43227	40.0000	50.35
37 Benzene	78	4.519	4.519	(0.909)	130565	20.0000	17.40
74 Bromobenzene	156	8.809	8.809	(0.912)	36920	20.0000	18.43
29 Bromochloromethane	128	3.802	3.802	(0.909)	17398	20.0000	17.47
39 Bromodichloromethane	83	5.729	5.729	(1.153)	47793	20.0000	17.32
66 Bromoform	173	8.415	8.415	(1.097)	20267	20.0000	18.22(T)
6 Bromomethane	94	1.338	1.338	(0.320)	44801	20.0000	16.64(M)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	176548	40.0000	34.82
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	39126	20.0000	16.27
59 Chlorobenzene	112	7.699	7.699	(1.004)	95804	20.0000	17.66
7 Chloroethane	64	1.403	1.403	(0.336)	37862	20.0000	16.61
28 Chloroform	83	3.910	3.910	(0.935)	66080	20.0000	17.86
3 Chloromethane	50	1.080	1.080	(0.258)	37225	20.0000	18.73
27 cis-1,2-Dichloroethene	96	3.537	3.537	(0.846)	36891	20.0000	17.39
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	56004	20.0000	18.69
55 Dibromochloromethane	129	7.176	7.176	(0.936)	36071	20.0000	19.23
44 Dibromomethane	93	5.557	5.557	(1.118)	25538	20.0000	18.81
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	31467	20.0000	16.80
61 Ethylbenzene	106	7.799	7.799	(1.017)	44437	20.0000	16.15(H)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	8666	20.0000	15.84
67 Isopropylbenzene	105	8.566	8.566	(1.117)	125533	20.0000	16.77
62 m,p-Xylenes	106	7.907	7.907	(1.031)	115687	40.0000	35.11
17 Methylene Chloride	84	2.305	2.305	(0.551)	34217	20.0000	17.23
87 n-Butylbenzene	91	9.998	9.998	(1.035)	94869	20.0000	16.33
73 n-Propylbenzene	91	8.917	8.917	(0.923)	154045	20.0000	17.00
92 Naphthalene	128	11.546	11.546	(1.195)	22879	20.0000	18.86
63 o-Xylene	106	8.243	8.243	(1.075)	56474	20.0000	17.19
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	115155	20.0000	16.62
64 Styrene	104	8.258	8.258	(1.077)	103951	20.0000	18.87
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	78132	20.0000	16.81
56 Tetrachloroethene	164	6.933	6.933	(0.904)	21904	20.0000	15.68
50 Toluene	91	6.446	6.446	(0.840)	149878	20.0000	16.14
20 trans-1,2-Dichloroethene	96	2.534	2.534	(0.606)	29539	20.0000	16.39
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	50801	20.0000	19.21
38 Trichloroethene	130	5.213	5.213	(1.049)	31185	20.0000	17.42
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	95690	20.0000	17.55
5 Vinyl Chloride	62	1.145	1.145	(0.274)	57375	20.0000	17.95(H)

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

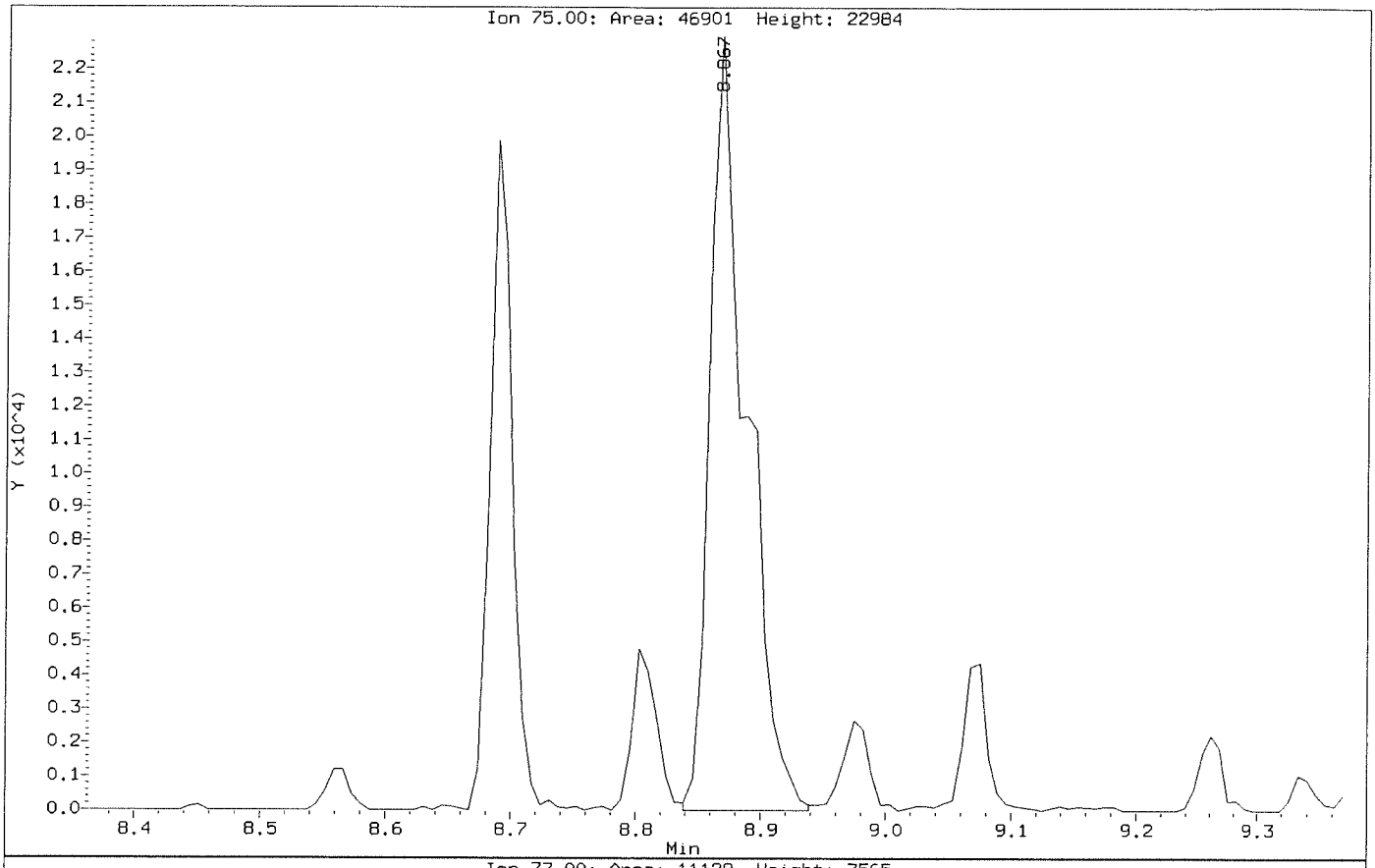


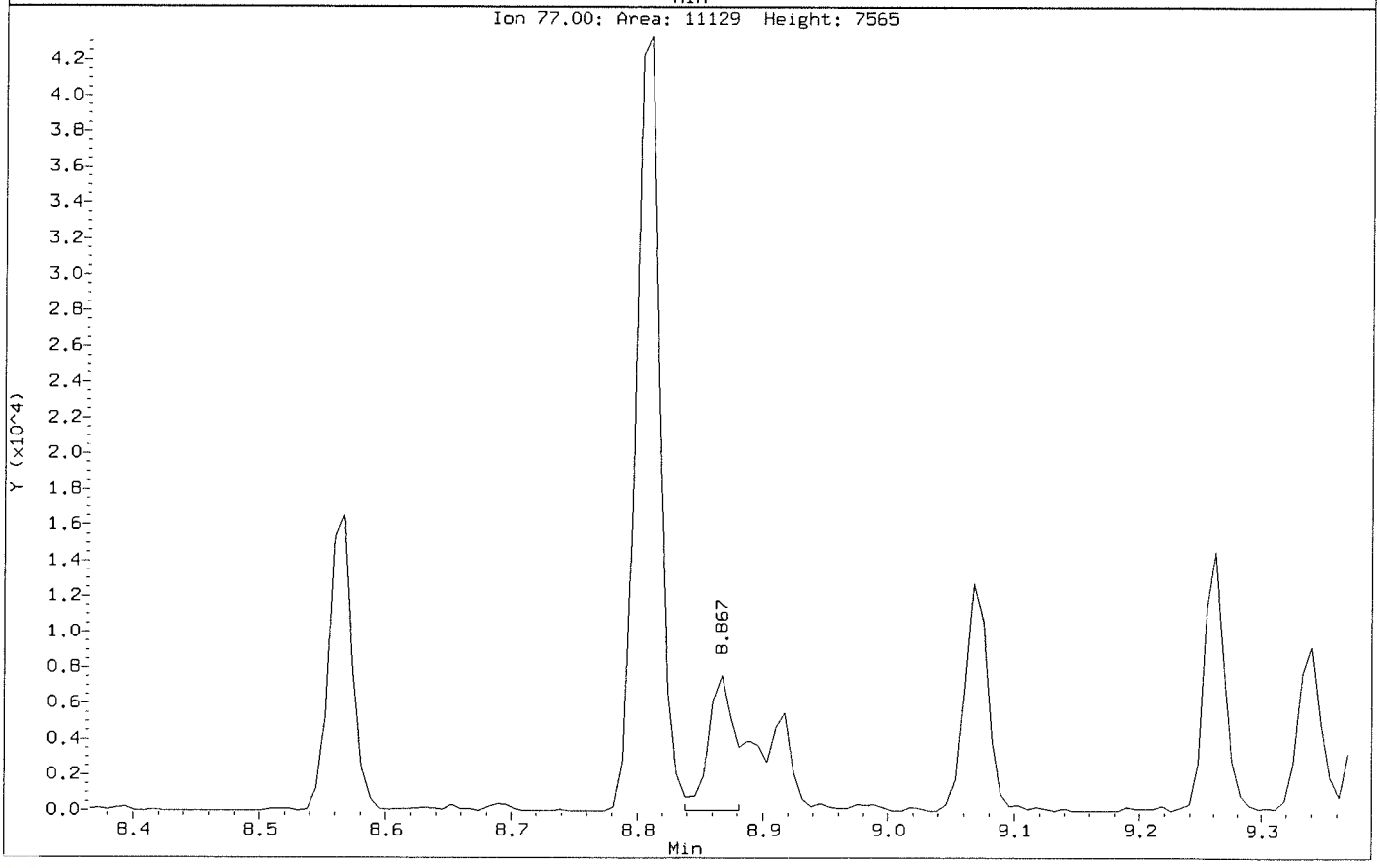
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Date : 03-NOV-2020 14:06
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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110307.D
Injection Date: 03-NOV-2020 14:06
Instrument: voa6.i
Client Sample ID: VSTD020

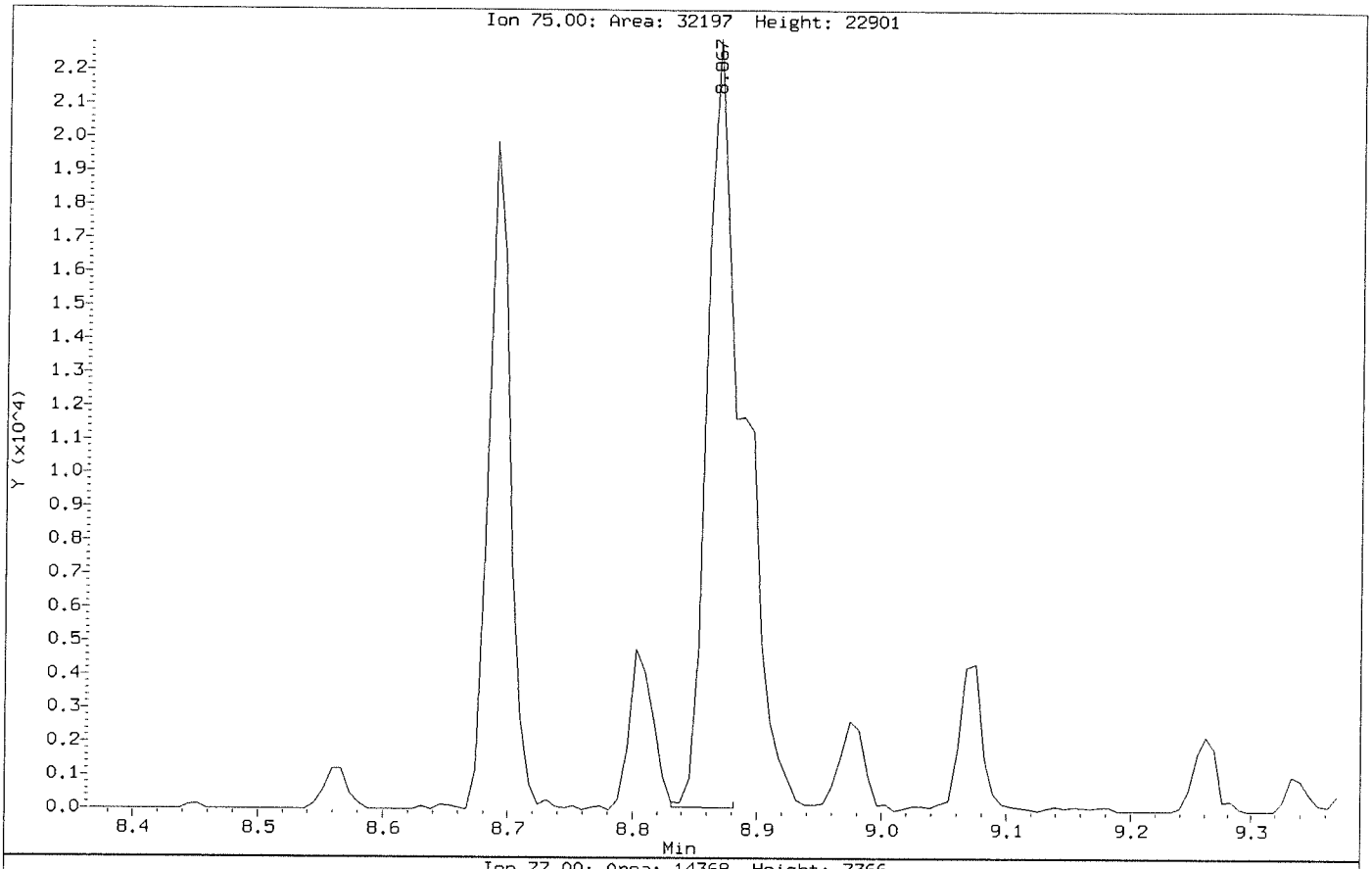
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

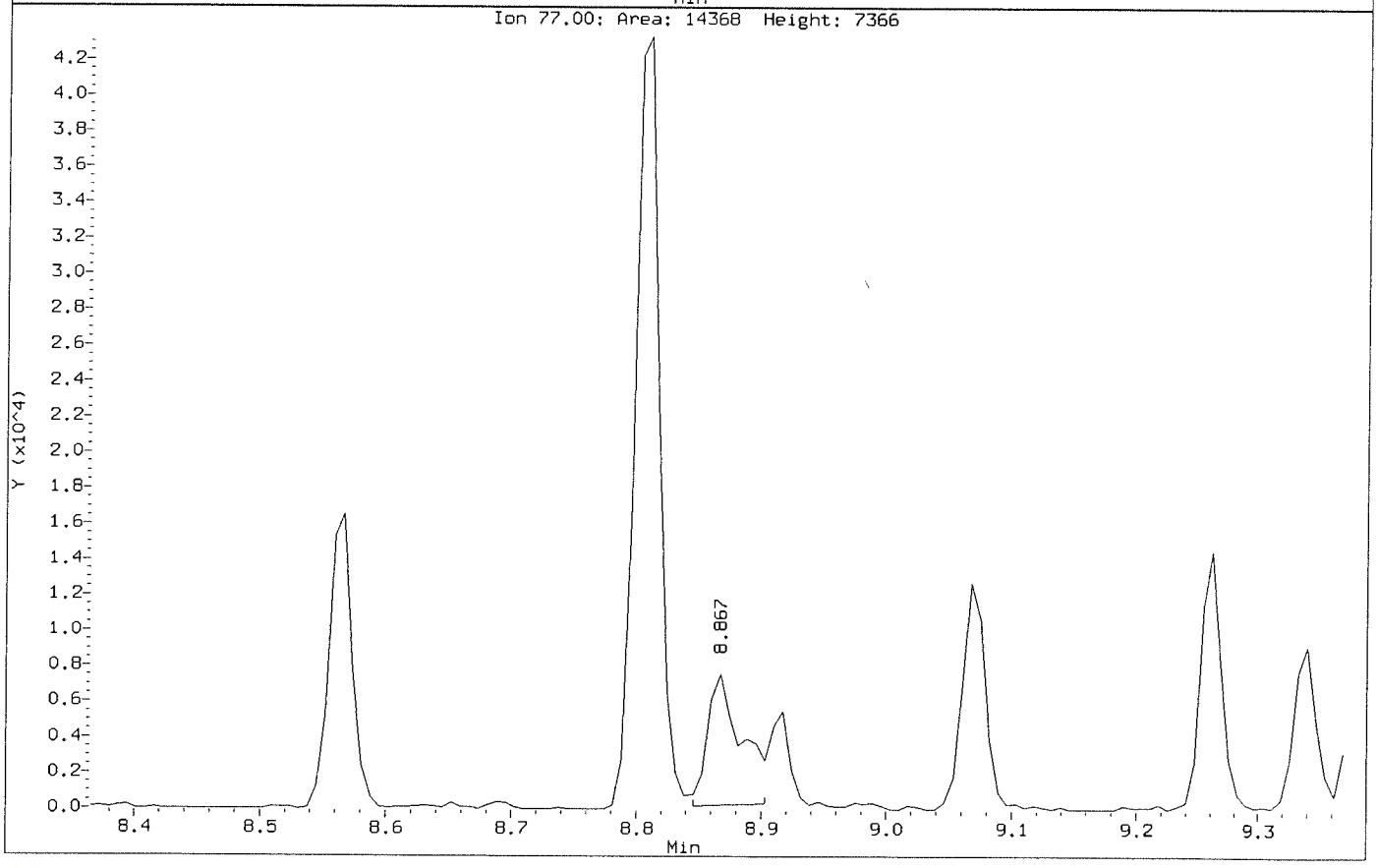




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Instrument: voa6.i
Client Sample ID: VSTD020

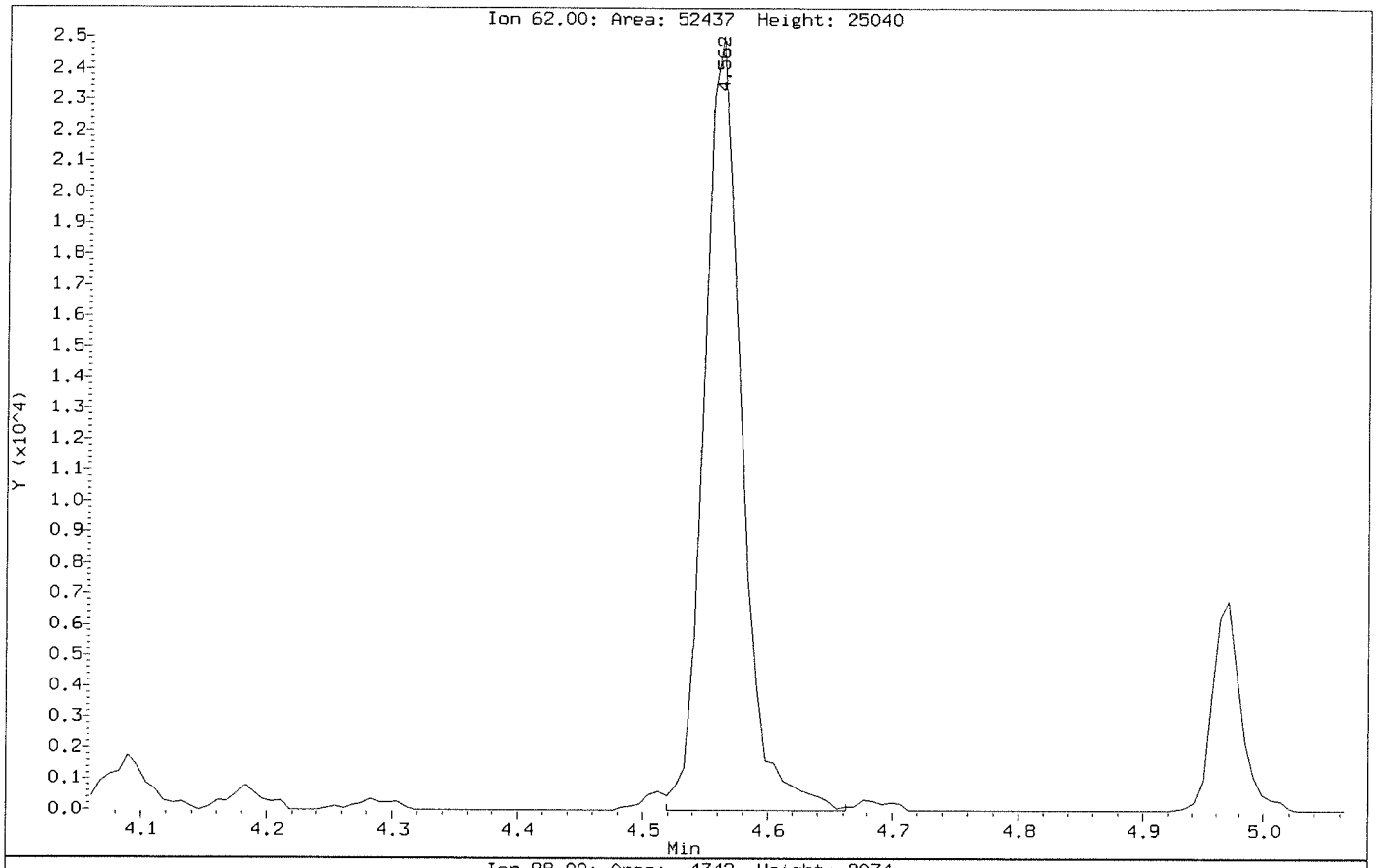
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

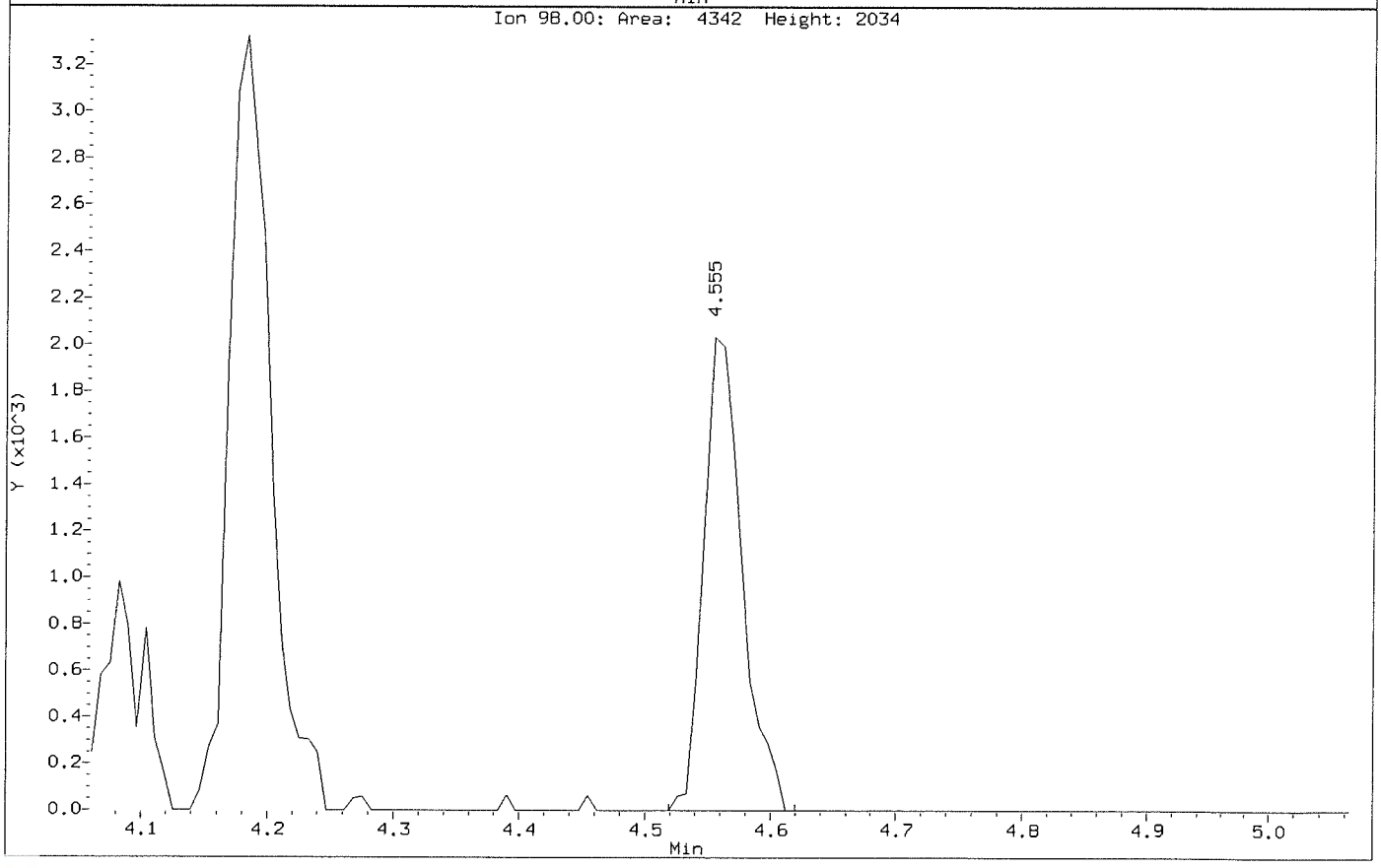




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Instrument: voa6.i
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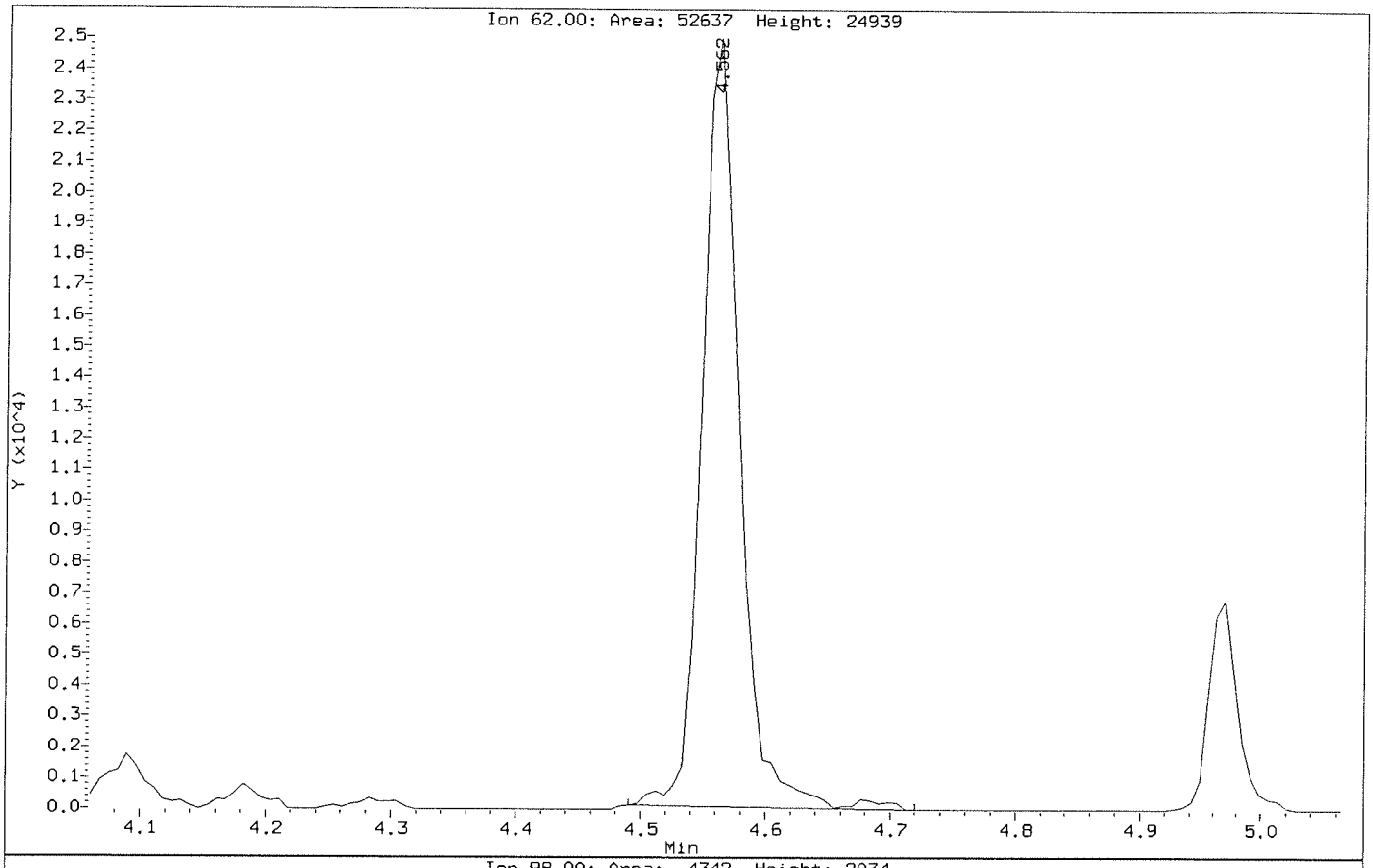
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

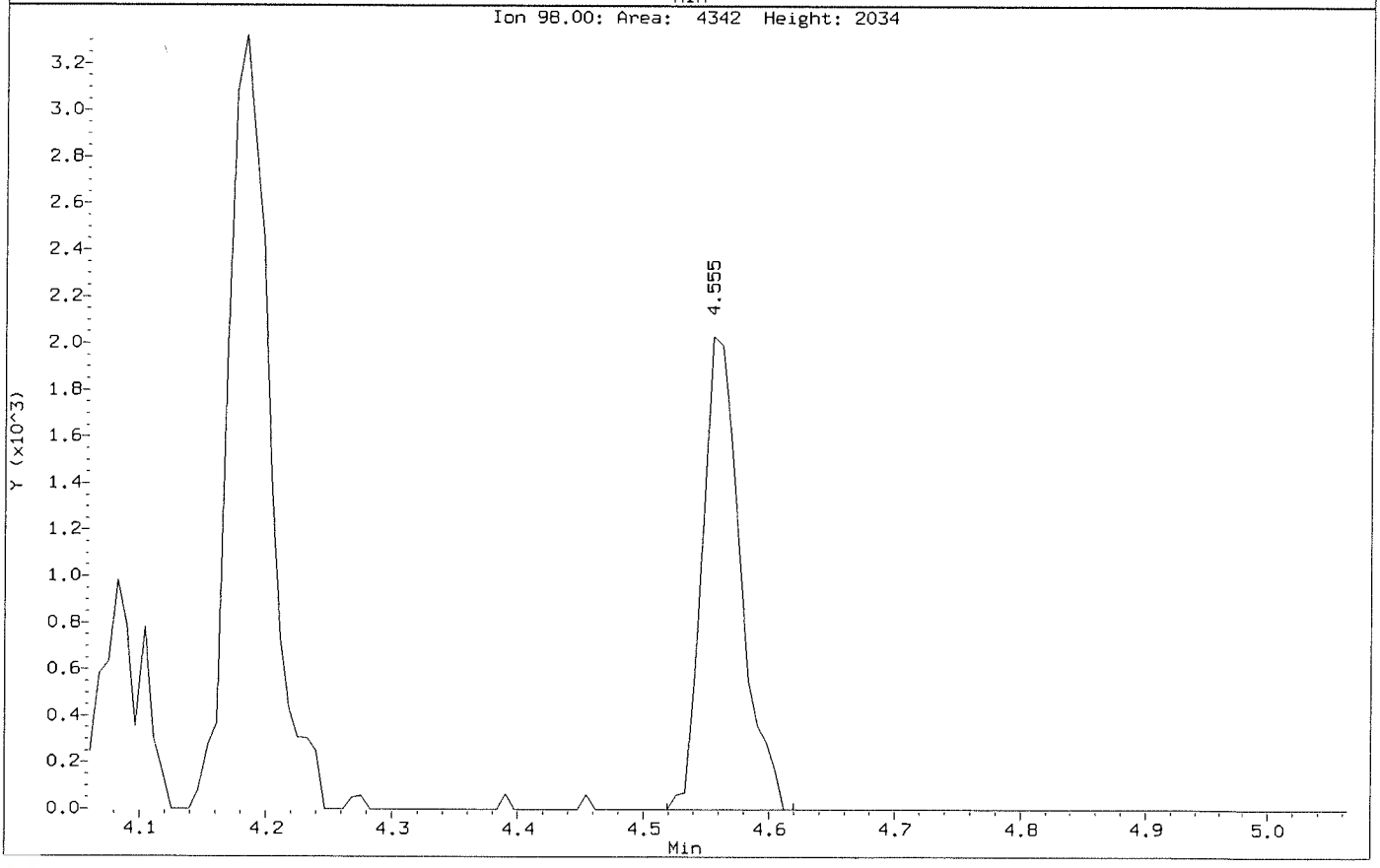




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Instrument: voa6.i
Client Sample ID: VSTD020

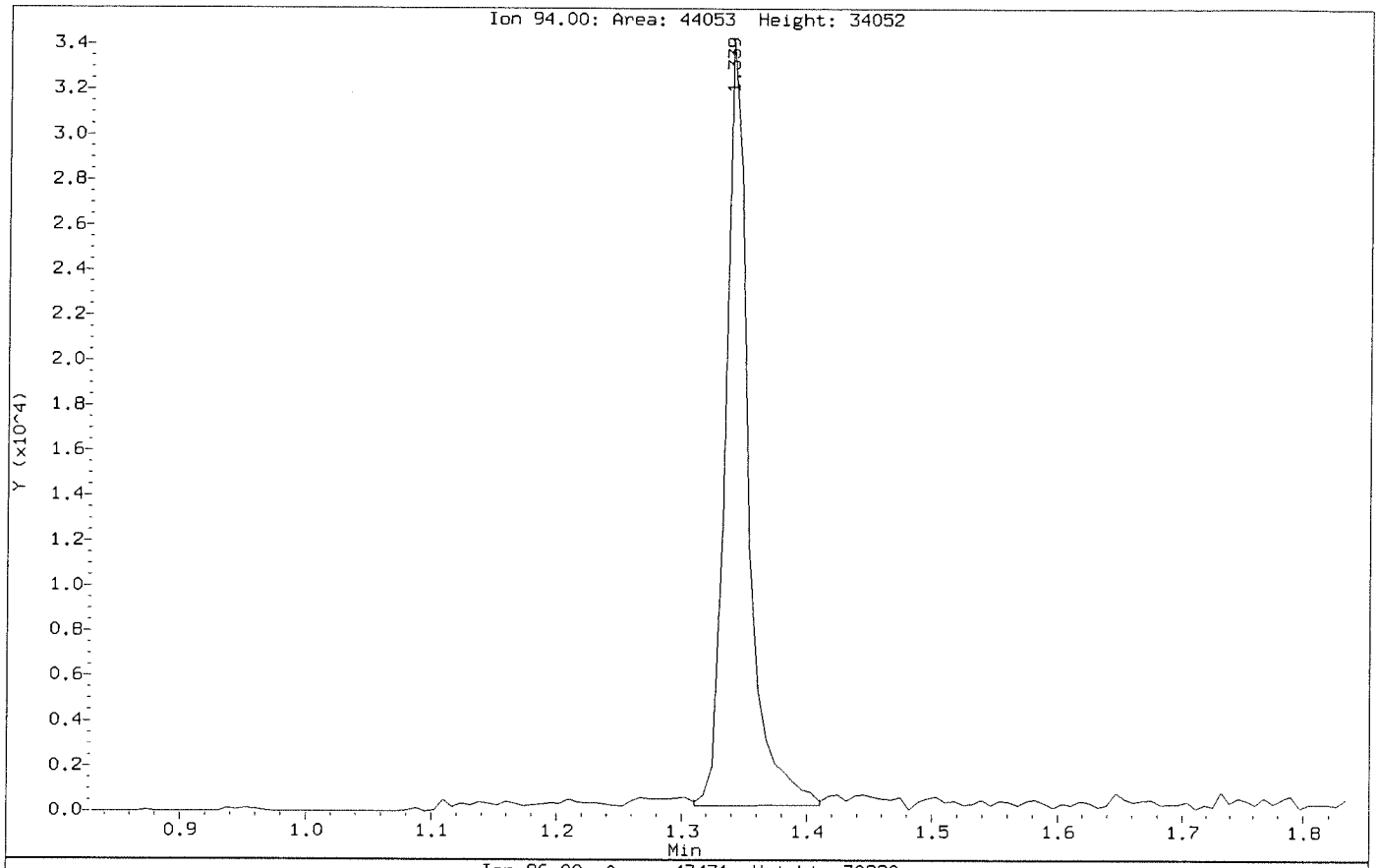
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

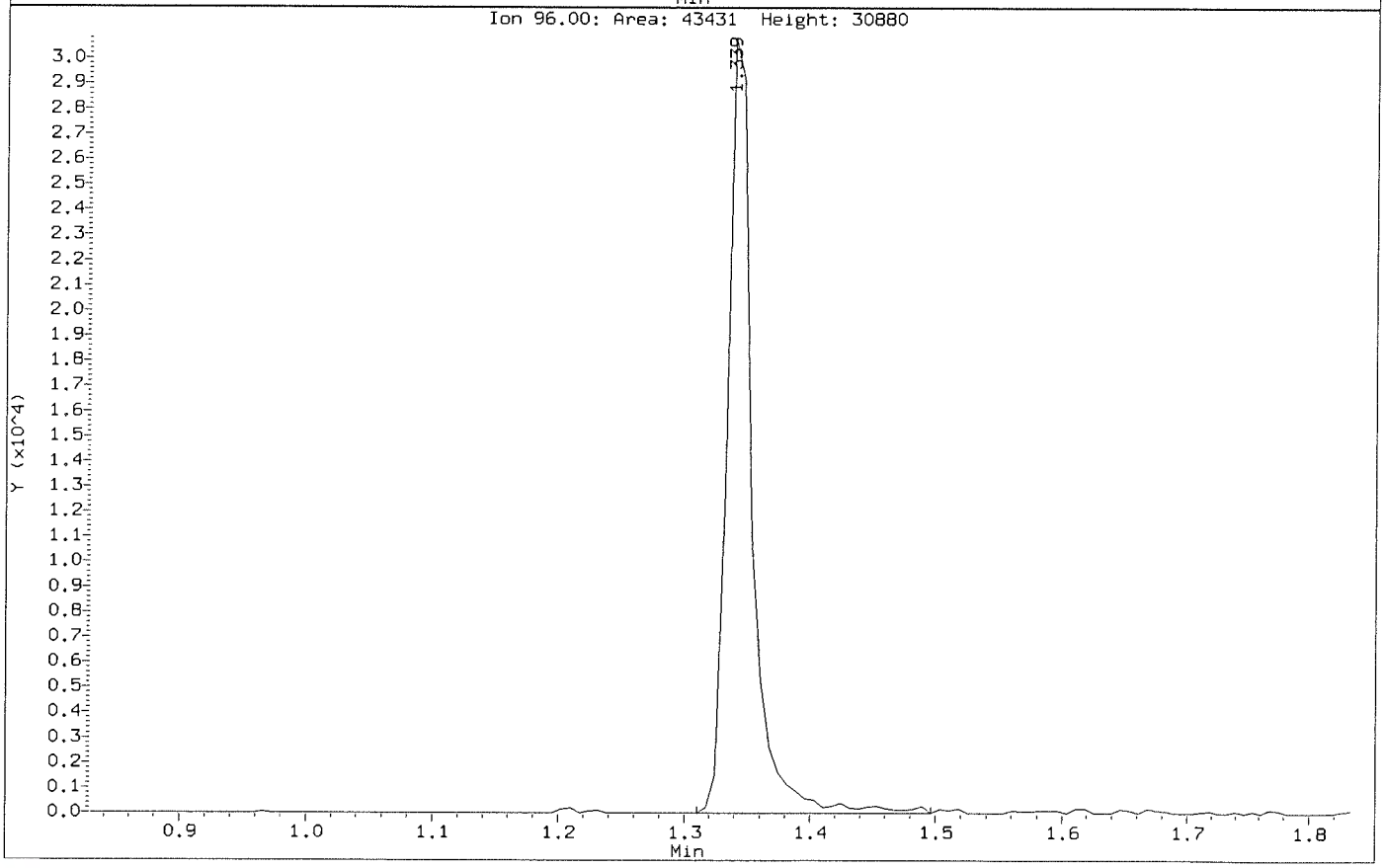




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Instrument: voa6.i
Client Sample ID: VSTD020

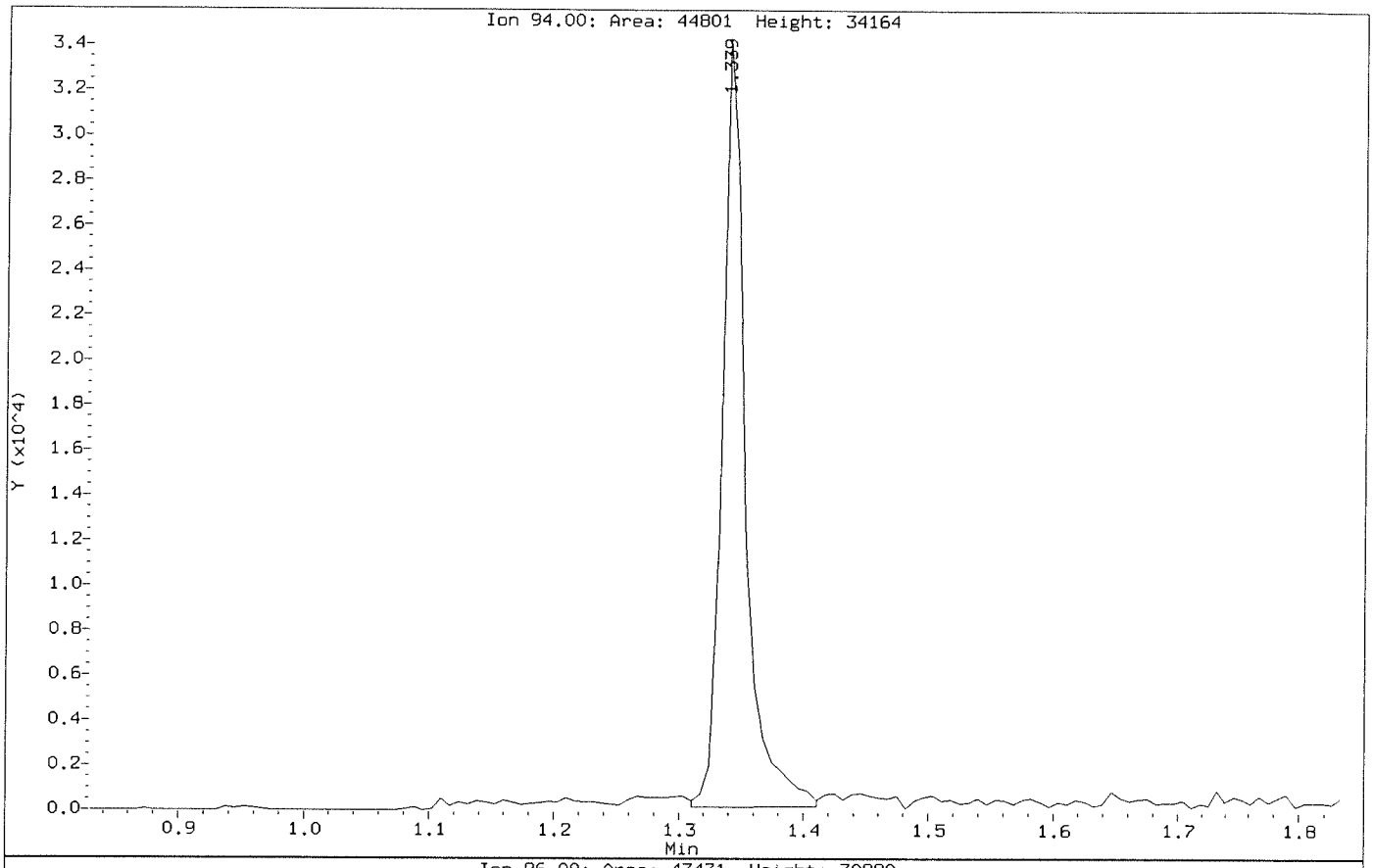
Compound: Bromomethane
CAS Number: 74-83-9

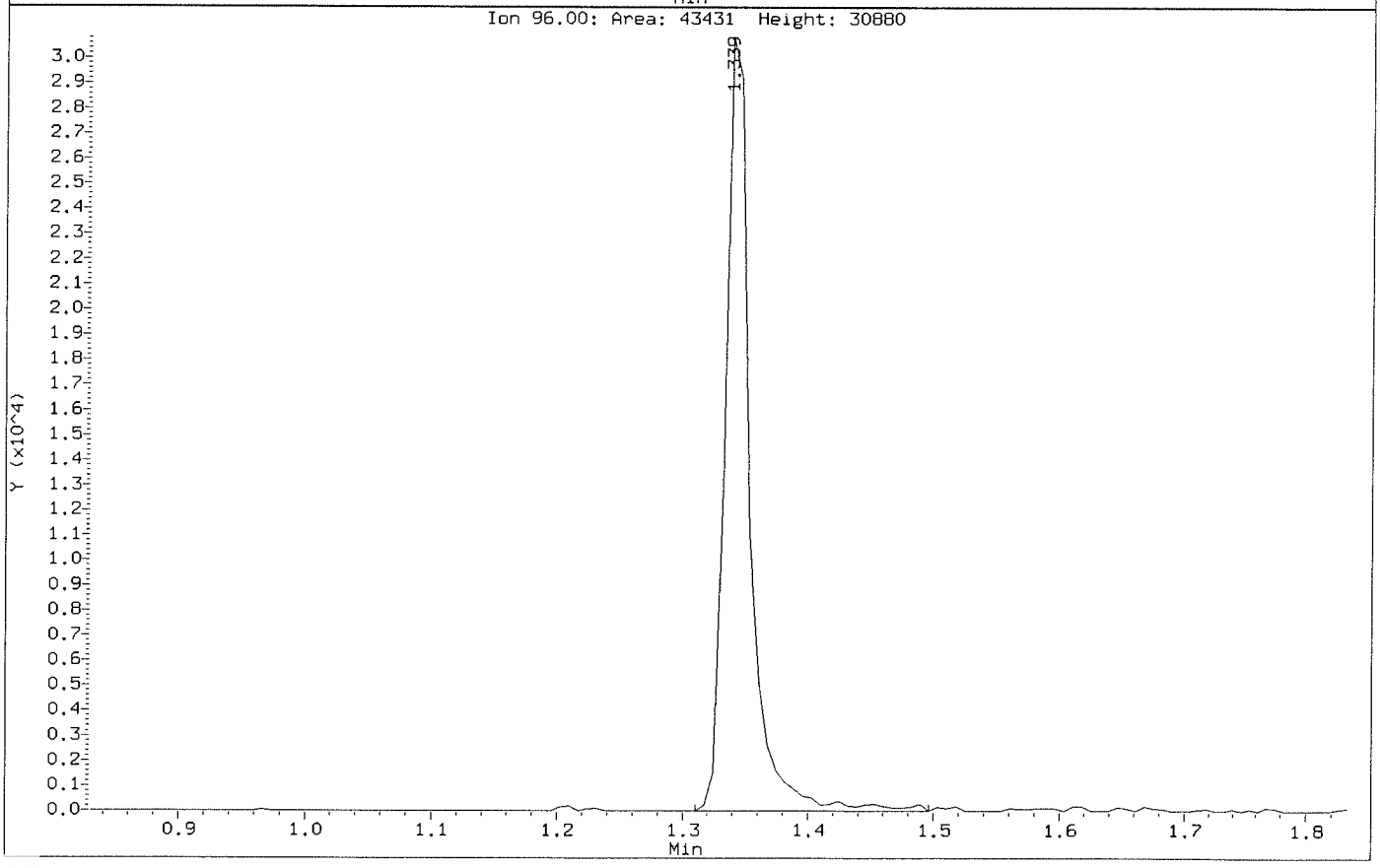




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Injection Date: 03-NOV-2020 14:06
Instrument: voa6.i
Client Sample ID: VSTD020

Compound: Bromomethane
CAS Number: 74-83-9





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110308.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 03-NOV-2020 14:27
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:06 Cal File: X110307.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

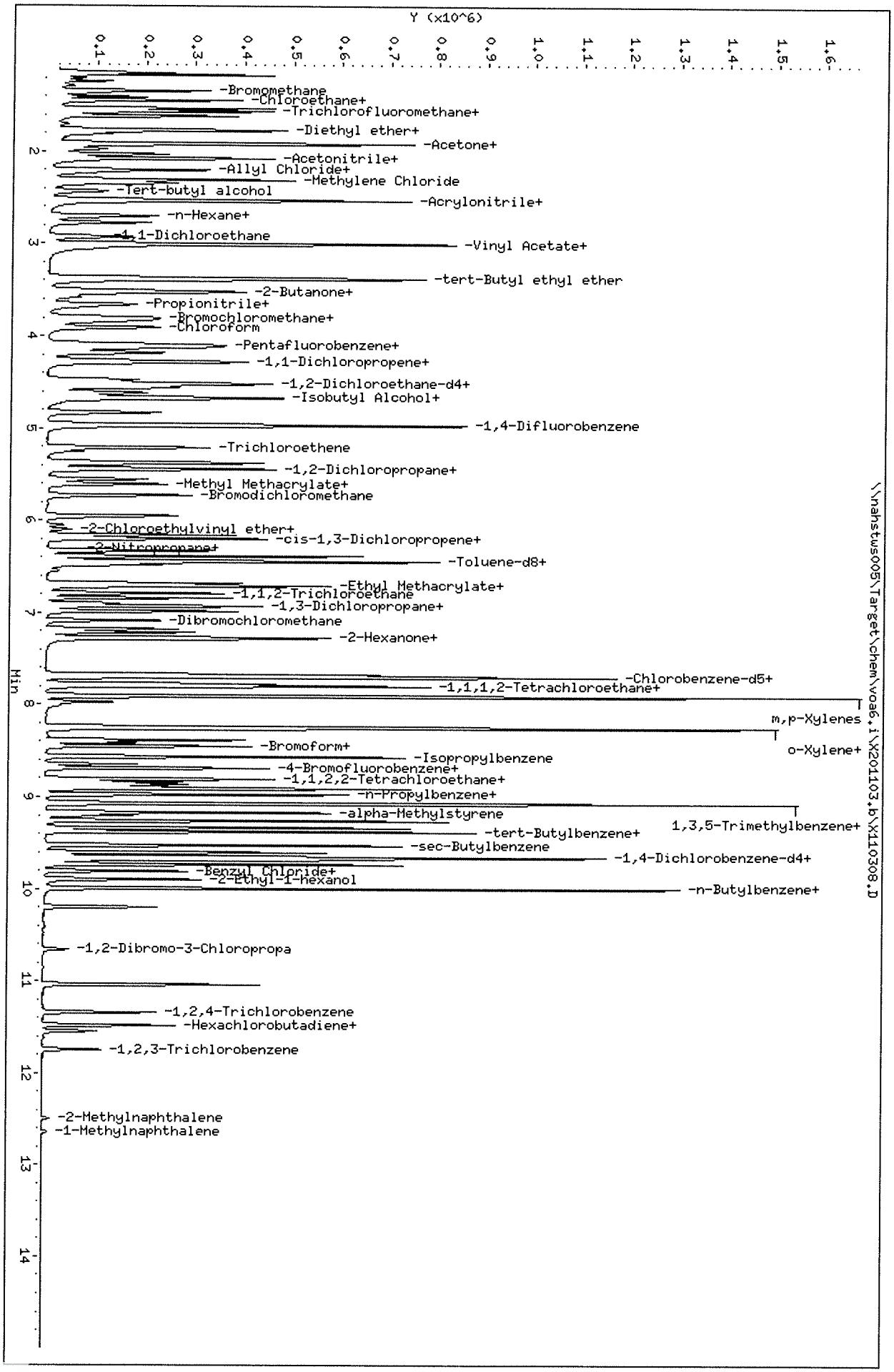
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	155760	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	292364	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	263420	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	124995	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	103962	50.0000	49.56
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	128500	50.0000	51.93
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	337960	50.0000	48.03
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	114211	50.0000	48.87
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	90169	50.0000	47.98
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	153379	50.0000	47.16
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	107818	50.0000	52.29
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	78832	50.0000	48.52
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	166486	50.0000	44.46
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	132708	50.0000	45.15
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	128883	50.0000	47.27
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	26867	50.0000	50.14
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	87173	50.0000	49.66(MH)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	49484	50.0000	49.32
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	332854	50.0000	47.60
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	7134	50.0000	51.41
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	94981	50.0000	48.08
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	162132	50.0000	46.99

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	155709	50.0000	49.39(M)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	100916	50.0000	46.64
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	342306	50.0000	47.99
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	166599	50.0000	45.47
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	158290	50.0000	49.04
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	177241	50.0000	46.46
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	144565	50.0000	44.85
24	2-Butanone	43	3.580	3.580	(0.856)	67284	100.000	92.92
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	258377	50.0000	44.01
52	2-Hexanone	43	7.212	7.212	(0.940)	169392	100.000	95.32
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	343639	50.0000	46.34
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	346256	50.0000	51.28
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	193651	100.000	96.76
10	Acetone	43	1.976	1.976	(0.473)	87016	100.000	101.69
37	Benzene	78	4.519	4.519	(0.909)	384910	50.0000	47.13
74	Bromobenzene	156	8.809	8.809	(0.912)	100247	50.0000	45.57
29	Bromochloromethane	128	3.803	3.803	(0.909)	51820	50.0000	48.30
39	Bromodichloromethane	83	5.729	5.729	(1.153)	146060	50.0000	48.62
66	Bromoform	173	8.416	8.416	(1.097)	56683	50.0000	43.81
6	Bromomethane	94	1.338	1.338	(0.320)	121041	50.0000	41.75
19	Carbon Disulfide	76	2.069	2.069	(0.495)	505351	100.000	92.54
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	125296	50.0000	47.86
59	Chlorobenzene	112	7.692	7.692	(1.003)	254157	50.0000	45.14
7	Chloroethane	64	1.403	1.403	(0.336)	102312	50.0000	41.68
28	Chloroform	83	3.910	3.910	(0.935)	187029	50.0000	46.92
3	Chloromethane	50	1.081	1.081	(0.258)	97255	50.0000	44.19
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	107386	50.0000	47.01
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	163405	50.0000	50.09
55	Dibromochloromethane	129	7.176	7.176	(0.936)	99611	50.0000	51.16
44	Dibromomethane	93	5.557	5.557	(1.118)	73154	50.0000	49.49
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	88848	50.0000	44.04
61	Ethylbenzene	106	7.800	7.800	(1.017)	132902	50.0000	46.53(H)
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	31815	50.0000	47.51
67	Isopropylbenzene	105	8.566	8.566	(1.117)	378050	50.0000	43.67
62	m,p-Xylenes	106	7.907	7.907	(1.031)	342459	100.000	100.11
17	Methylene Chloride	84	2.305	2.305	(0.551)	95886	50.0000	44.83
87	n-Butylbenzene	91	9.999	9.999	(1.035)	336254	50.0000	44.69
73	n-Propylbenzene	91	8.917	8.917	(0.923)	463730	50.0000	46.60
92	Naphthalene	128	11.546	11.546	(1.195)	71142	50.0000	49.48
63	o-Xylene	106	8.244	8.244	(1.075)	164212	50.0000	48.17
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	381699	50.0000	44.83
64	Styrene	104	8.258	8.258	(1.077)	285436	50.0000	49.93
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	255346	50.0000	45.11
56	Tetrachloroethene	164	6.933	6.933	(0.904)	69360	50.0000	47.82
50	Toluene	91	6.446	6.446	(0.840)	407320	50.0000	42.25
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	89593	50.0000	46.16
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	149269	50.0000	51.87
38	Trichloroethene	130	5.214	5.214	(1.049)	94571	50.0000	48.53
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	258435	50.0000	44.02
5	Vinyl Chloride	62	1.145	1.145	(0.274)	157895	50.0000	45.87(H)

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

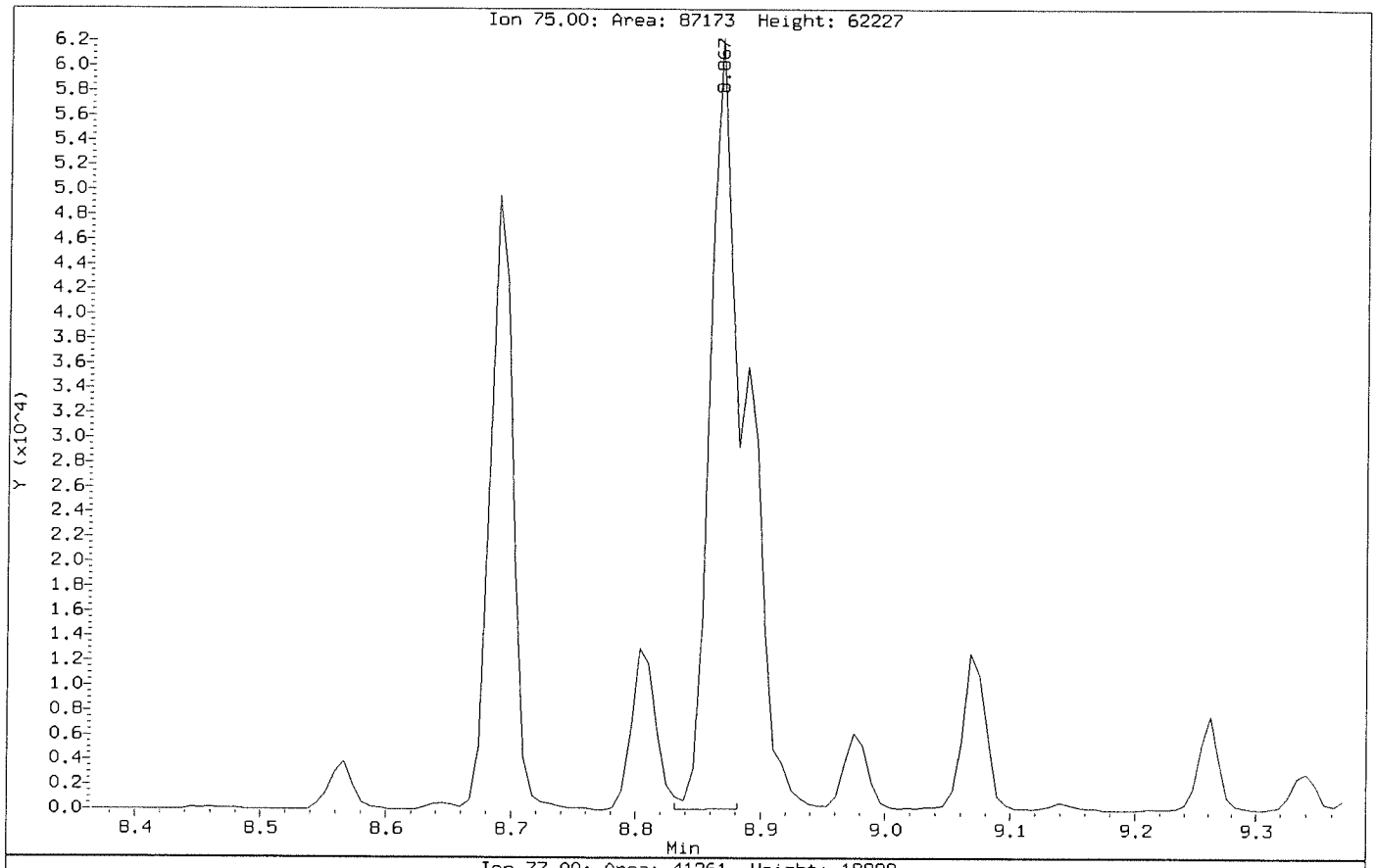


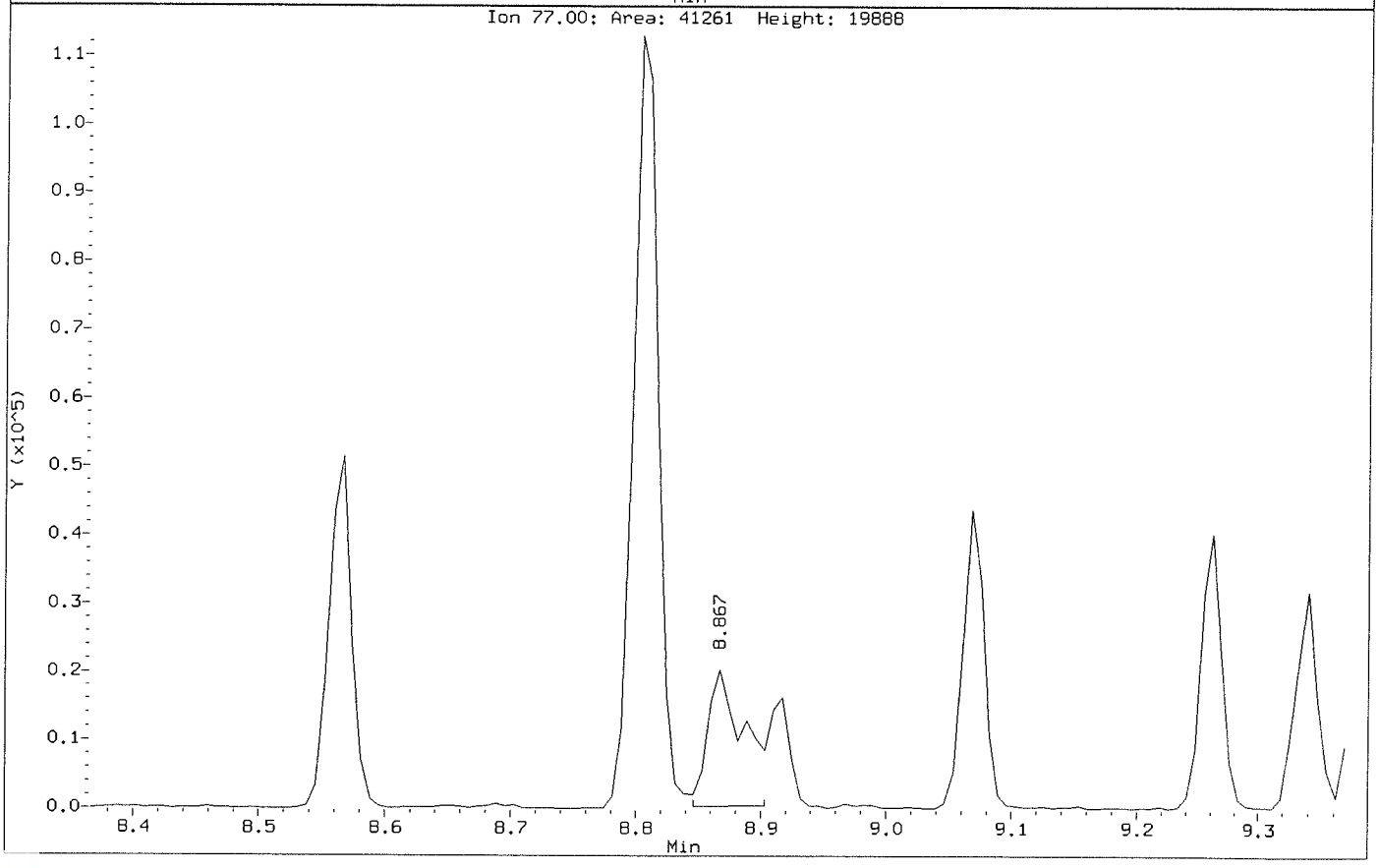
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Date : 03-NOV-2020 14:27
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110308.D
Injection Date: 03-NOV-2020 14:27
Instrument: voa6.i
Client Sample ID: VSTD050

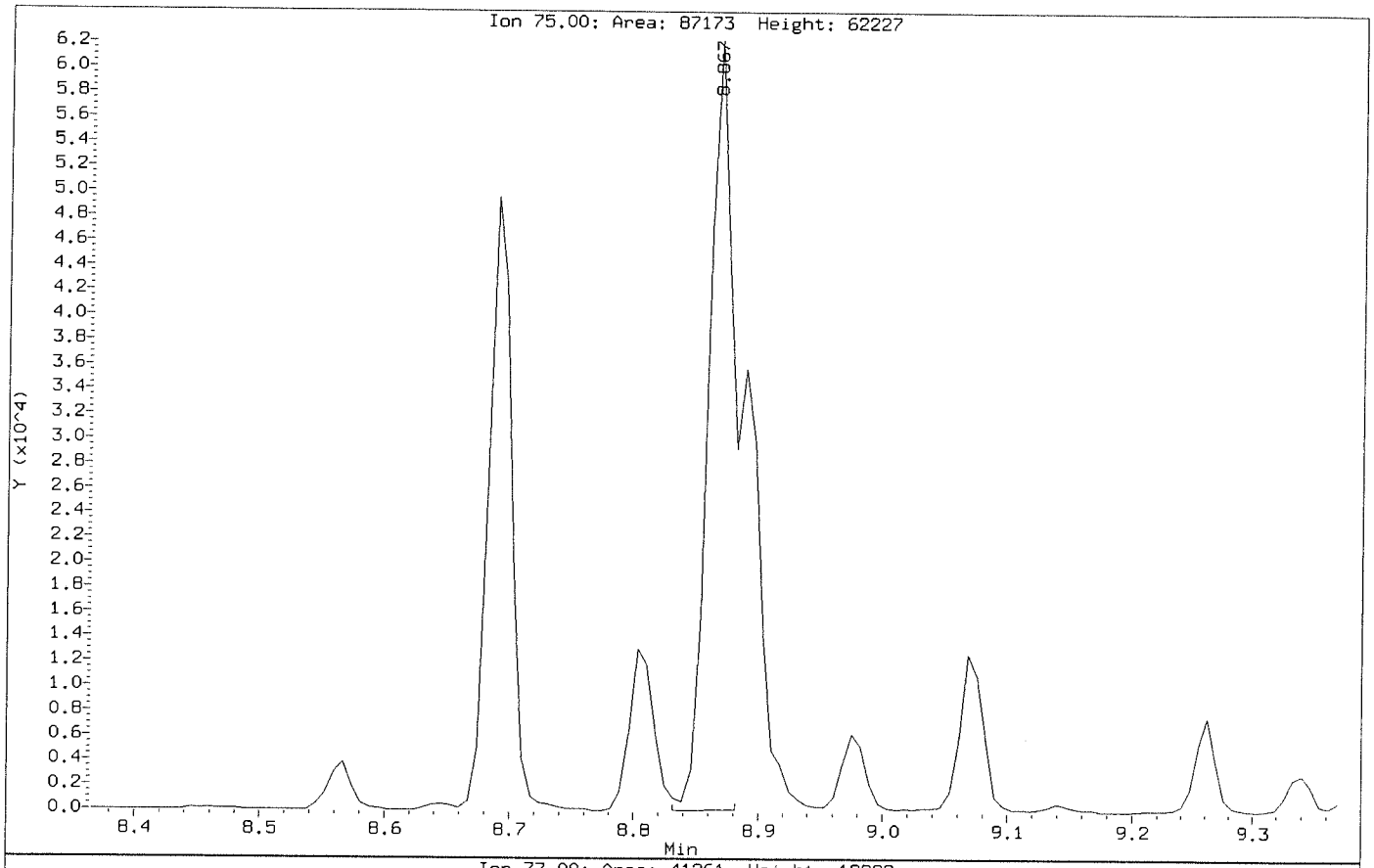
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

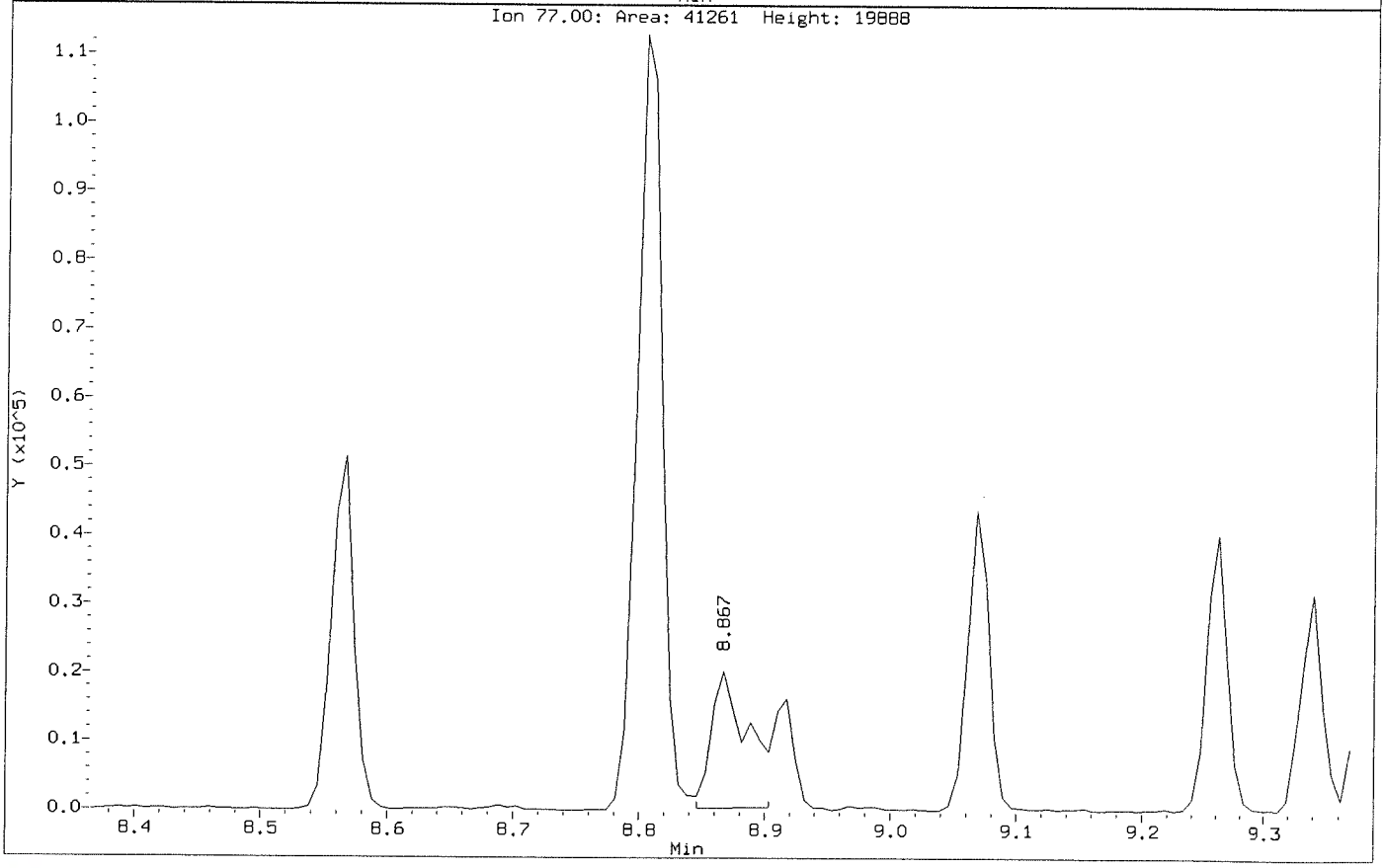




Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110308.D
Injection Date: 03-NOV-2020 14:27
Instrument: voa6.i
Client Sample ID: VSTD050

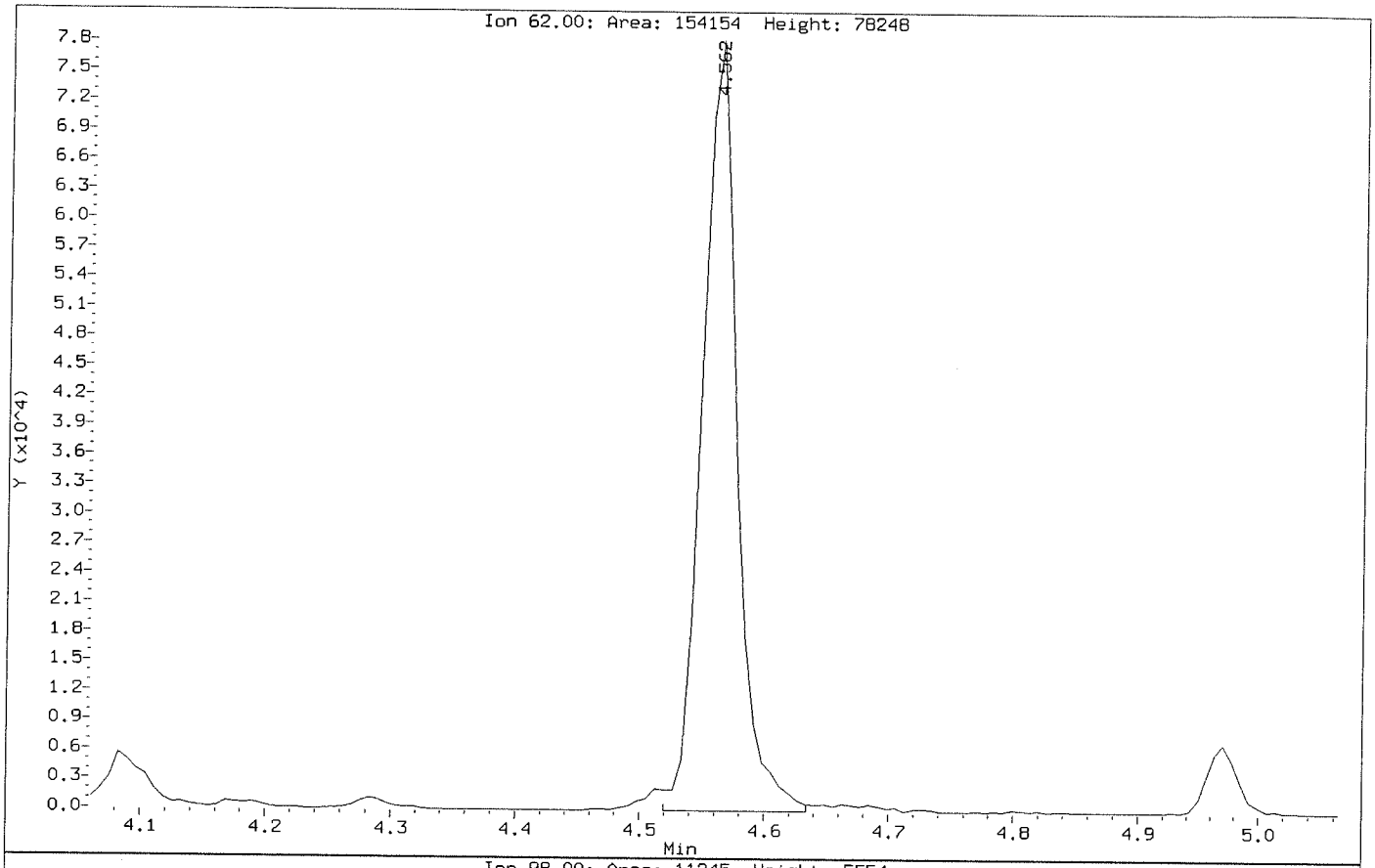
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

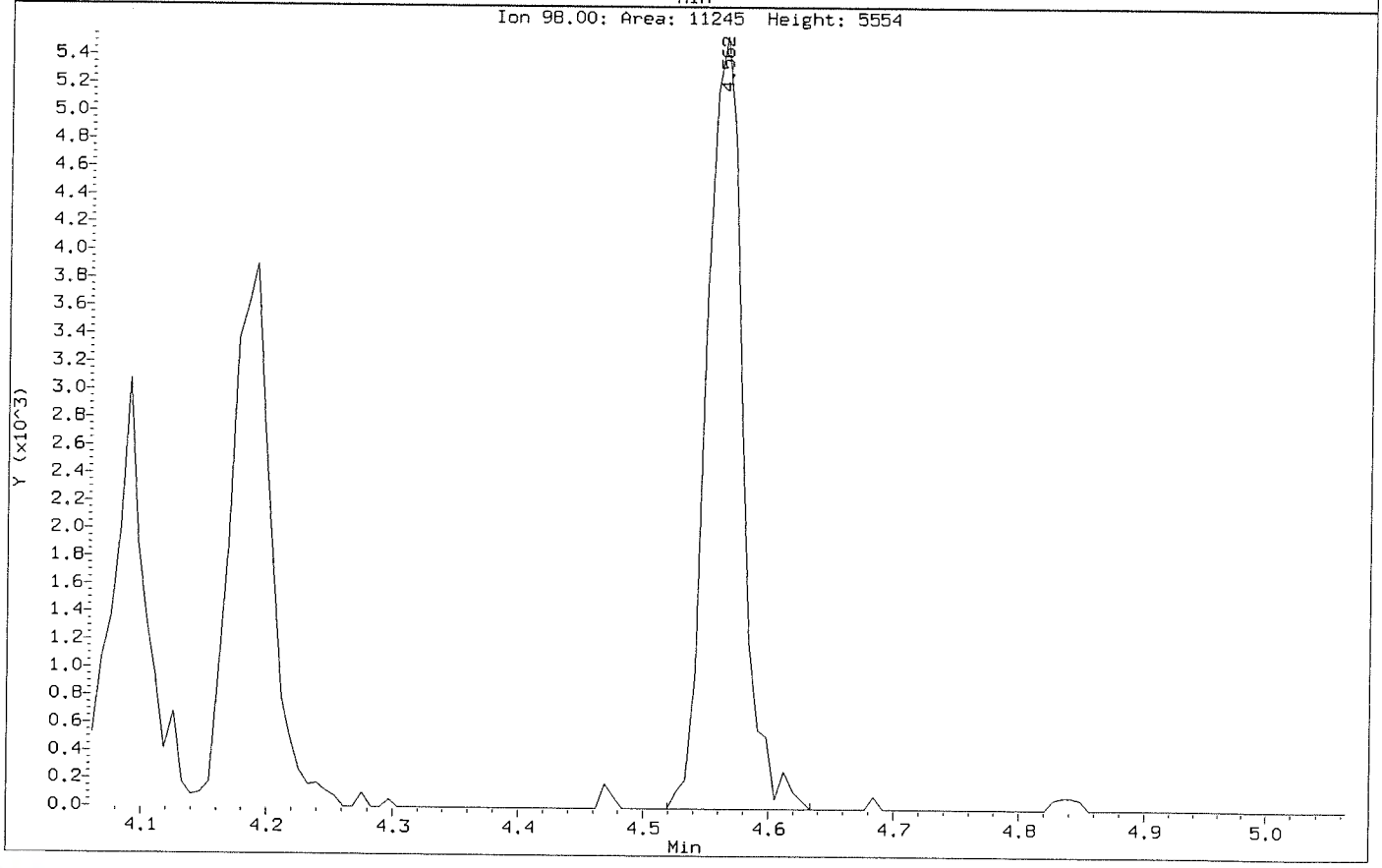




Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110308.D
Injection Date: 03-NOV-2020 14:27
Instrument: voa6.i
Client Sample ID: VSTD050

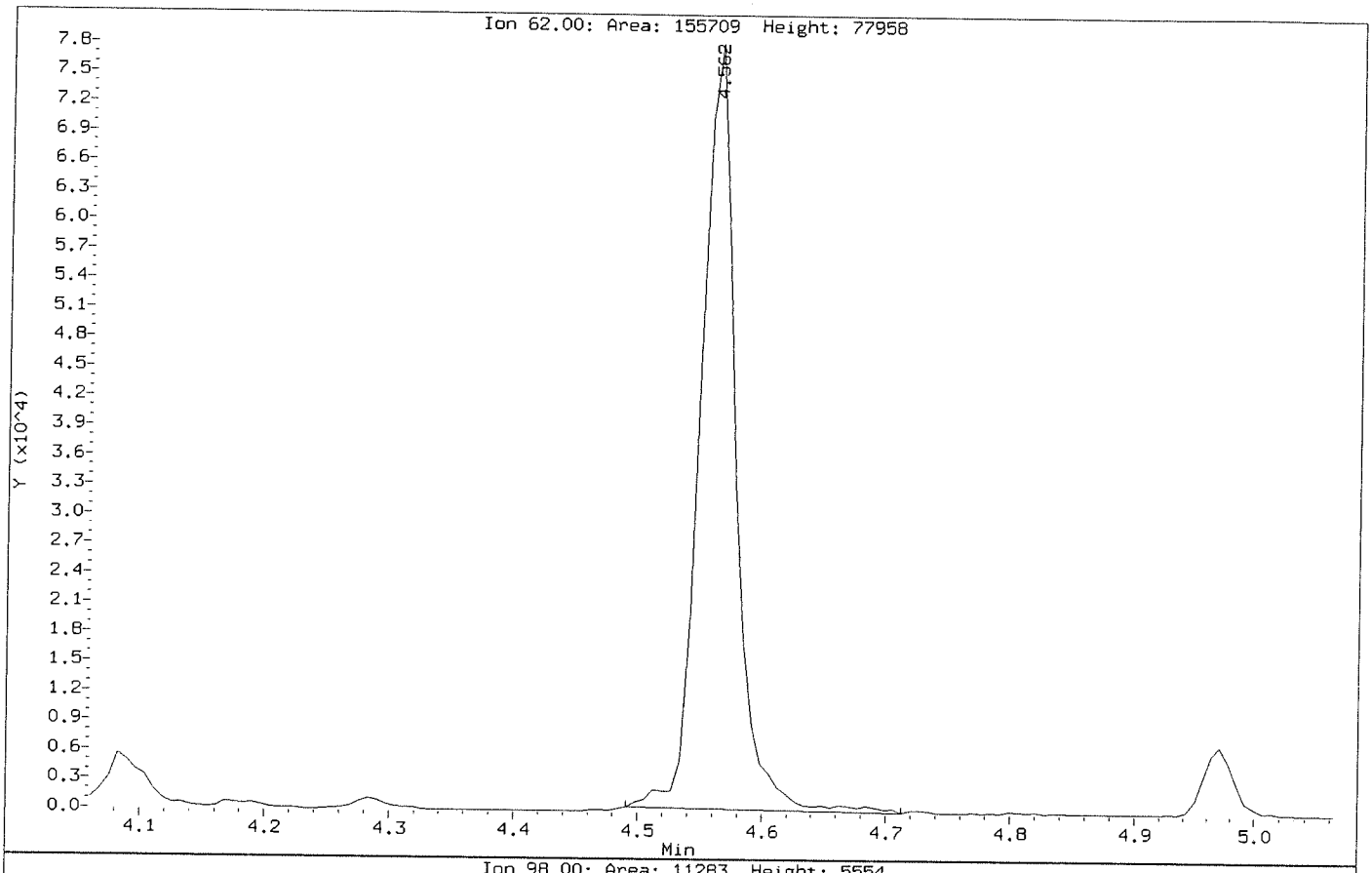
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

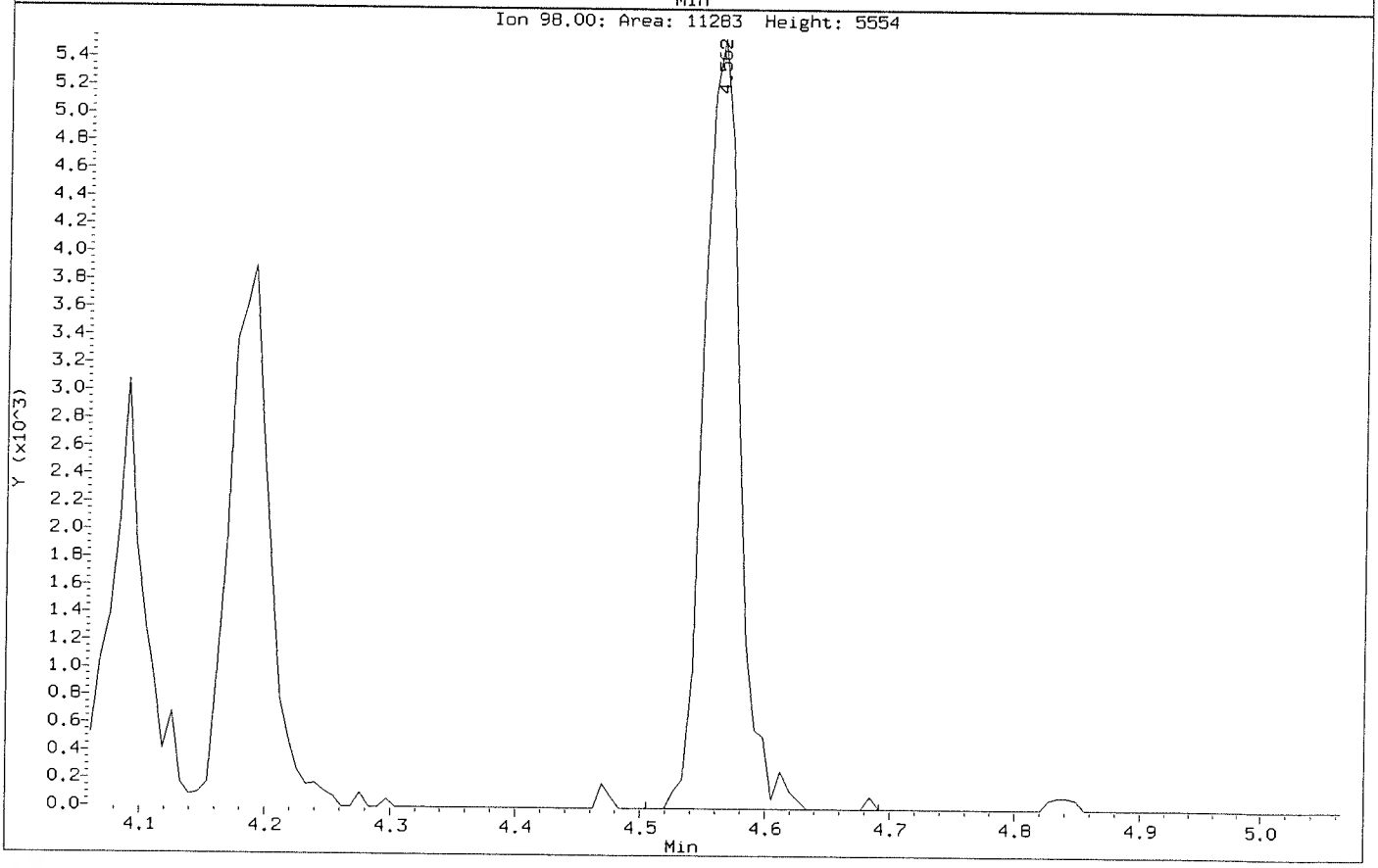




Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110308.D
Injection Date: 03-NOV-2020 14:27
Instrument: voa6.i
Client Sample ID: VSTD050

Compound: 1,2-Dichloroethane
CAS Number: 107-06-2





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110309.D Page 1
Report Date: 07-Nov-2020 12:11

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110309.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 03-NOV-2020 14:48
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:27 Cal File: X110308.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

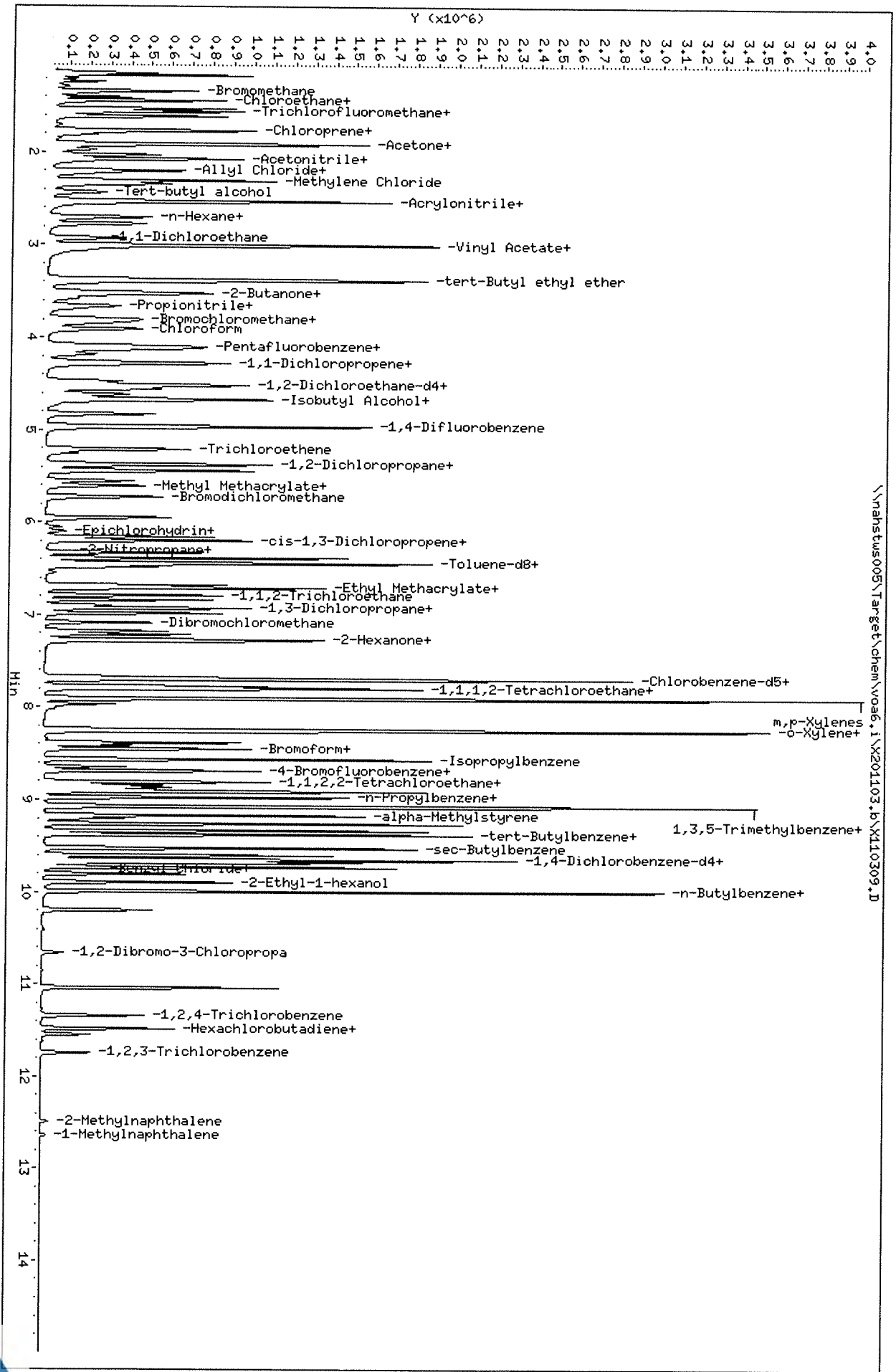
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	154236	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	303407	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	276014	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	137781	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	209542	100.000	100.88
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	253050	100.000	98.38
$	48 Toluene-d8	98	6.388	6.388	(0.833)	766192	100.000	103.92
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	252308	100.000	99.11
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	207092	100.000	105.17
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	328674	100.000	102.05
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	223385	100.000	98.80
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	166608	100.000	97.86
	22 1,1-Dichloroethane	63	2.921	2.921	(0.697)	364051	100.000	98.19
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	268838	100.000	92.38
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	272457	100.000	96.29
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	54420	100.000	90.65
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	190827	100.000	98.63(MH)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	104687	100.000	93.04
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	824431	100.000	106.96
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	14813	100.000	97.15
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	208629	100.000	100.79
	88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	372696	100.000	98.00

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110309.D Page 2
Report Date: 07-Nov-2020 12:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	300213	100.000	91.76(M)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	206622	100.000	92.02
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	817818	100.000	104.03
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	391011	100.000	96.83
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	329308	100.000	97.37
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	412100	100.000	98.00
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	306687	100.000	96.09
24 2-Butanone	43	3.580	3.580	(0.855)	151796	200.000	211.71(A)
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	615192	100.000	95.06
52 2-Hexanone	43	7.212	7.212	(0.940)	370165	200.000	194.78
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	821631	100.000	100.52
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	816889	100.000	109.77
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	417836	200.000	199.26
10 Acetone	43	1.976	1.976	(0.472)	169628	200.000	208.65(A)
37 Benzene	78	4.519	4.519	(0.909)	815390	100.000	96.21
74 Bromobenzene	156	8.809	8.809	(0.912)	225264	100.000	92.91
29 Bromochloromethane	128	3.802	3.802	(0.908)	107517	100.000	101.21
39 Bromodichloromethane	83	5.729	5.729	(1.153)	287648	100.000	92.27
66 Bromoform	173	8.415	8.415	(1.097)	133700	100.000	94.72
6 Bromomethane	94	1.338	1.338	(0.320)	279247	100.000	97.28
19 Carbon Disulfide	76	2.069	2.069	(0.494)	1041315	200.000	192.57
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	269823	100.000	99.32
59 Chlorobenzene	112	7.699	7.699	(1.004)	577522	100.000	97.90
7 Chloroethane	64	1.403	1.403	(0.335)	211420	100.000	86.99
28 Chloroform	83	3.910	3.910	(0.933)	384387	100.000	97.39
3 Chloromethane	50	1.081	1.081	(0.258)	217141	100.000	98.54
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	216761	100.000	95.83
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	334095	100.000	98.70
55 Dibromochloromethane	129	7.176	7.176	(0.936)	215942	100.000	105.86
44 Dibromomethane	93	5.557	5.557	(1.118)	146776	100.000	95.69
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	213064	100.000	106.67
61 Ethylbenzene	106	7.799	7.799	(1.017)	305086	100.000	101.95(H)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	74152	100.000	97.87
67 Isopropylbenzene	105	8.566	8.566	(1.117)	912871	100.000	97.24
62 m,p-Xylenes	106	7.907	7.907	(1.031)	811392	200.000	226.37(A)
17 Methylene Chloride	84	2.305	2.305	(0.550)	202216	100.000	95.49
87 n-Butylbenzene	91	9.998	9.998	(1.035)	808796	100.000	93.27
73 n-Propylbenzene	91	8.917	8.917	(0.923)	1120519	100.000	102.15
92 Naphthalene	128	11.546	11.546	(1.195)	144587	100.000	89.43
63 o-Xylene	106	8.244	8.244	(1.075)	377365	100.000	105.64
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	940164	100.000	96.91
64 Styrene	104	8.258	8.258	(1.077)	686197	100.000	114.56
78 tert-Butylbenzene	119	9.339	9.339	(0.967)	626984	100.000	97.43
56 Tetrachloroethene	164	6.933	6.933	(0.904)	157441	100.000	103.61
50 Toluene	91	6.446	6.446	(0.840)	923135	100.000	91.39
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	197221	100.000	102.63
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	327079	100.000	109.52
38 Trichloroethene	130	5.206	5.206	(1.048)	193089	100.000	95.49
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	541989	100.000	93.23
5 Vinyl Chloride	62	1.145	1.145	(0.273)	335336	100.000	98.39(H)

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.

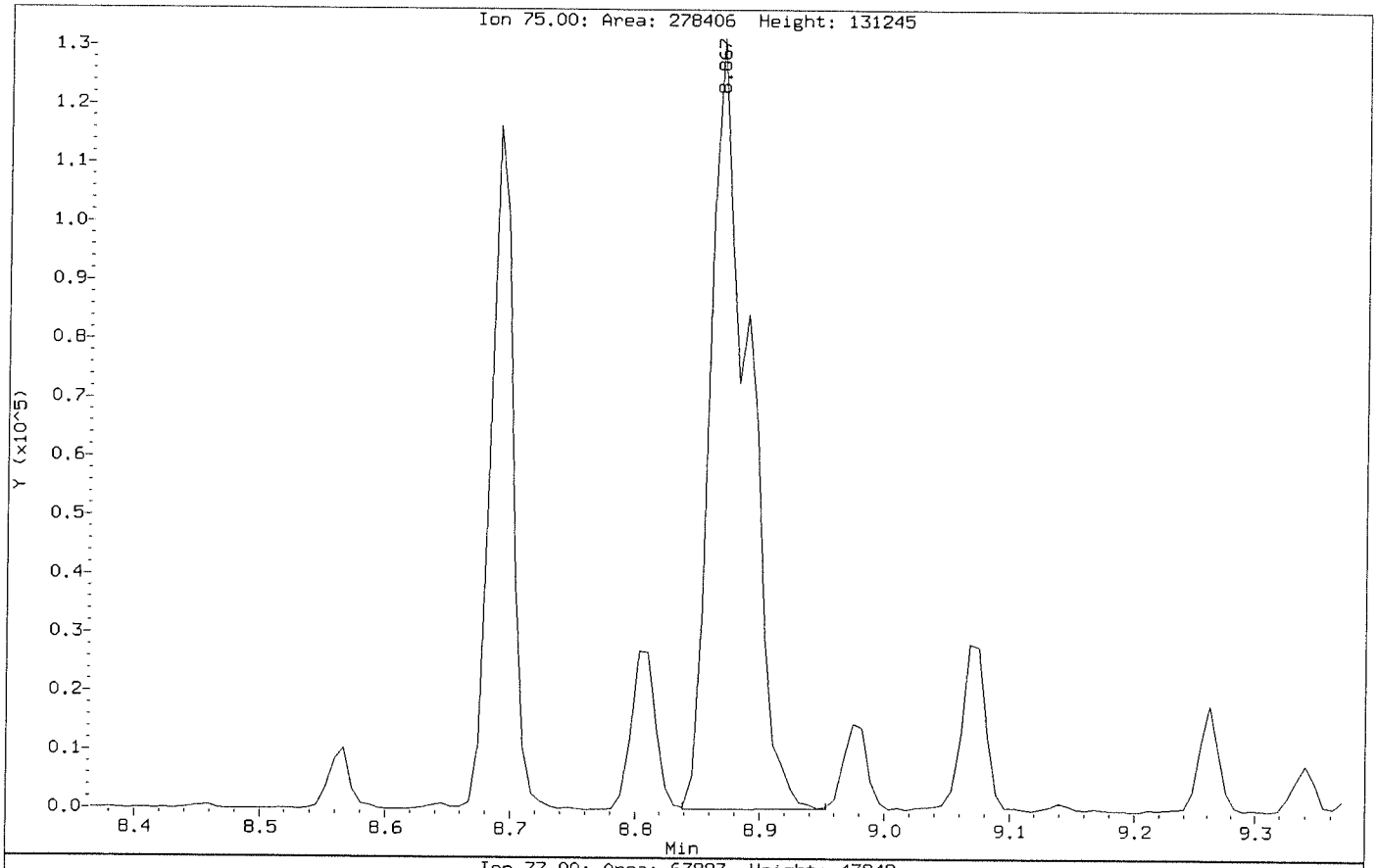


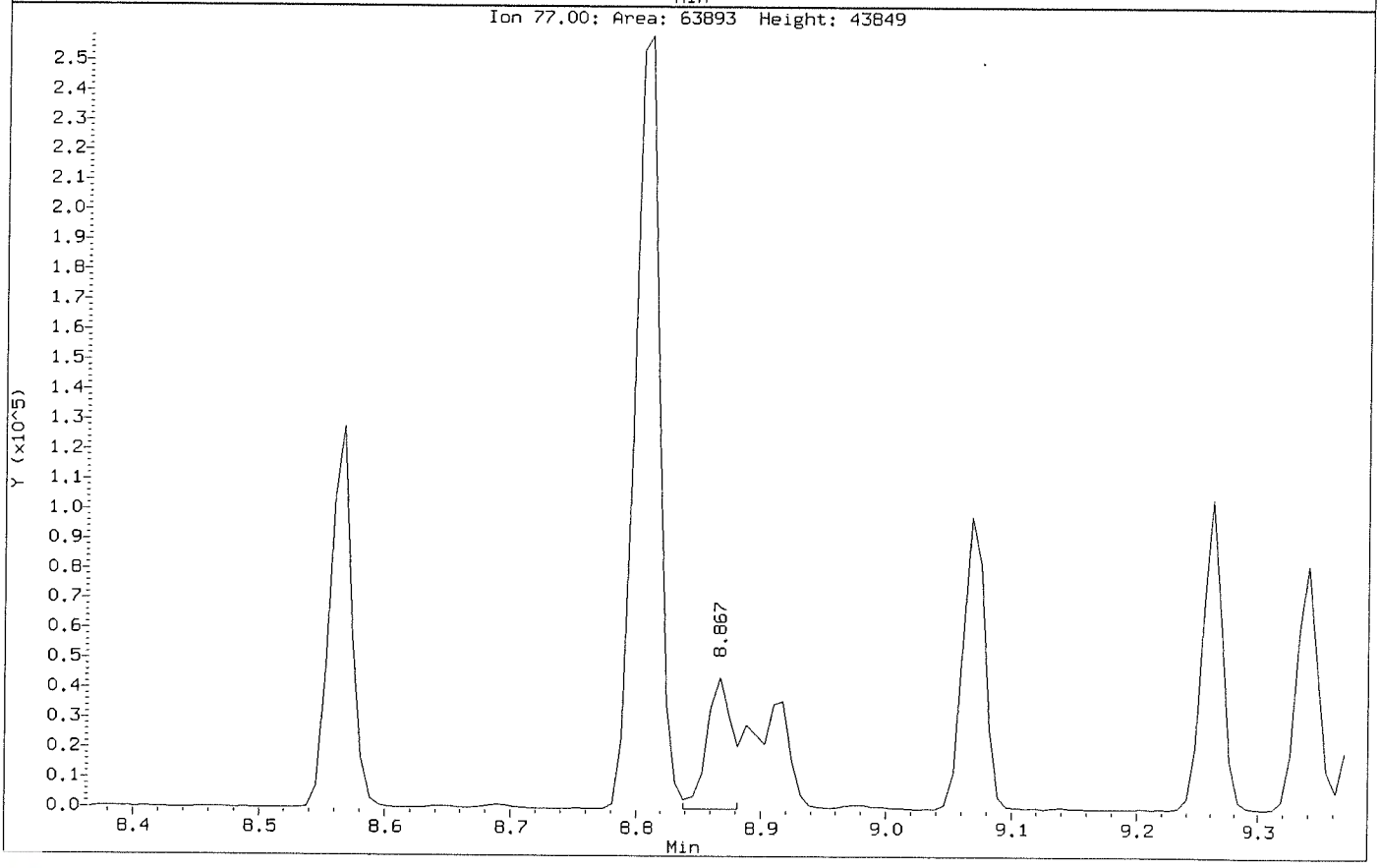
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Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

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Injection Date: 03-NOV-2020 14:48
Instrument: voa6.i
Client Sample ID: VSTD100

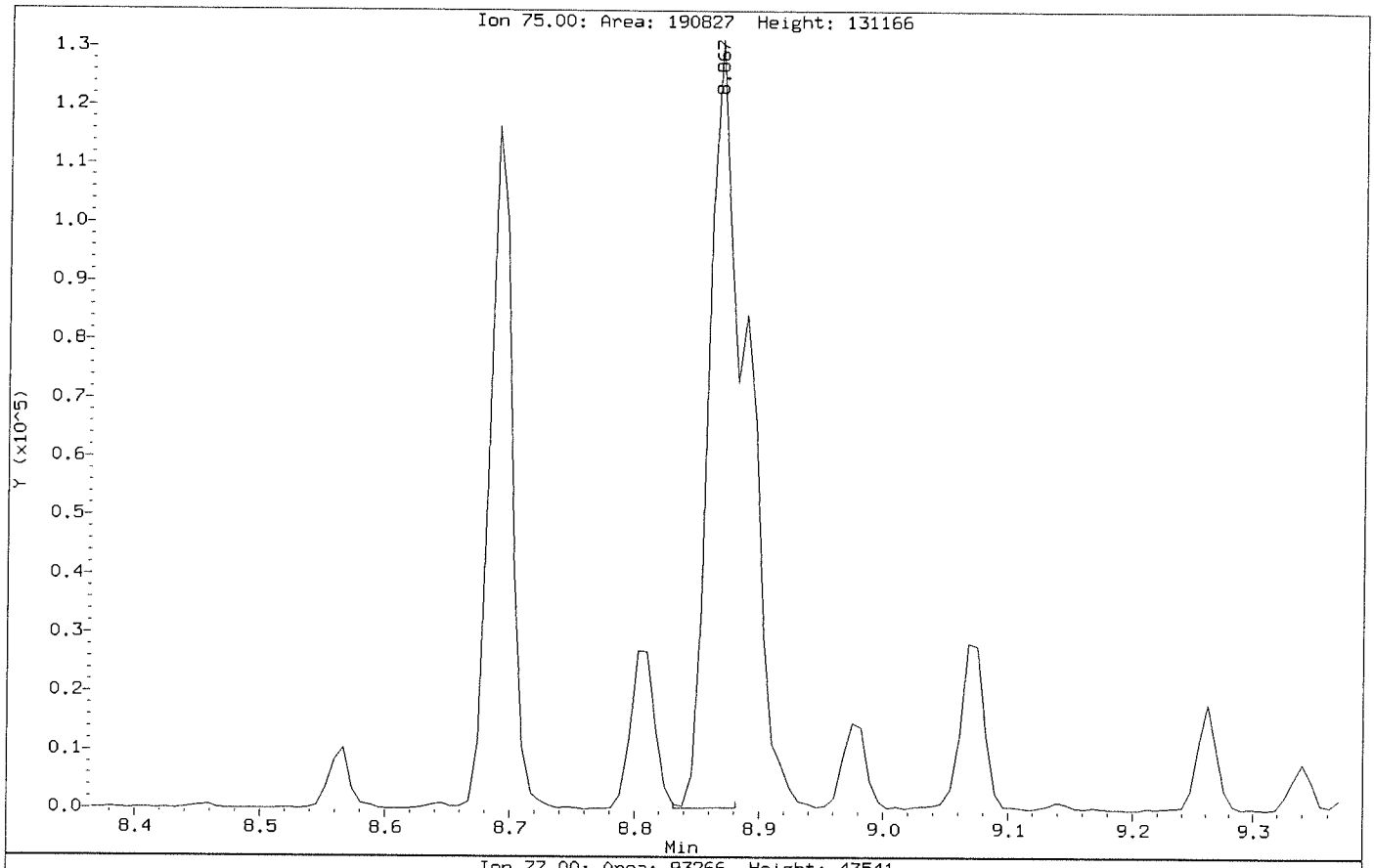
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CAS Number: 96-18-4

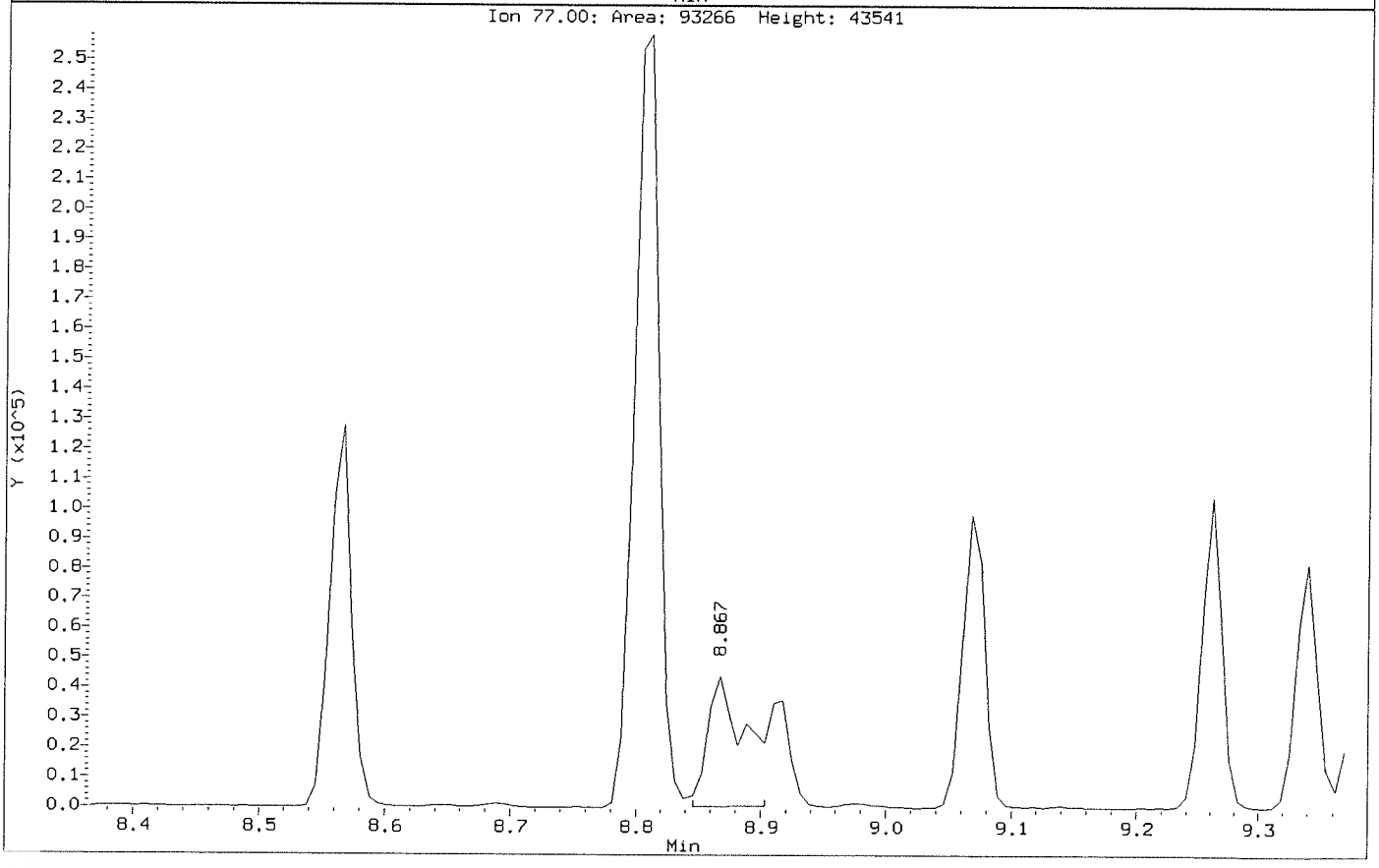




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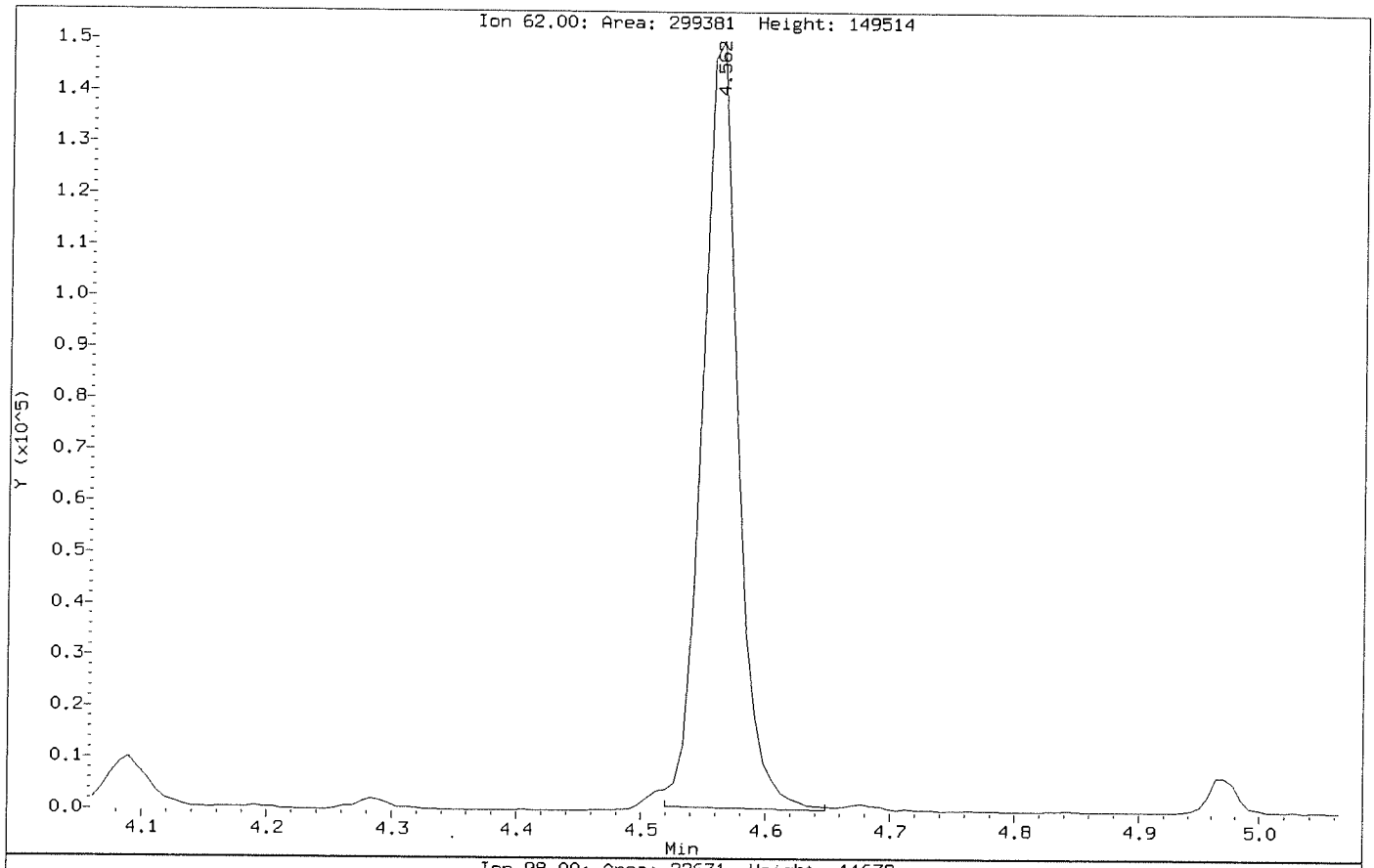
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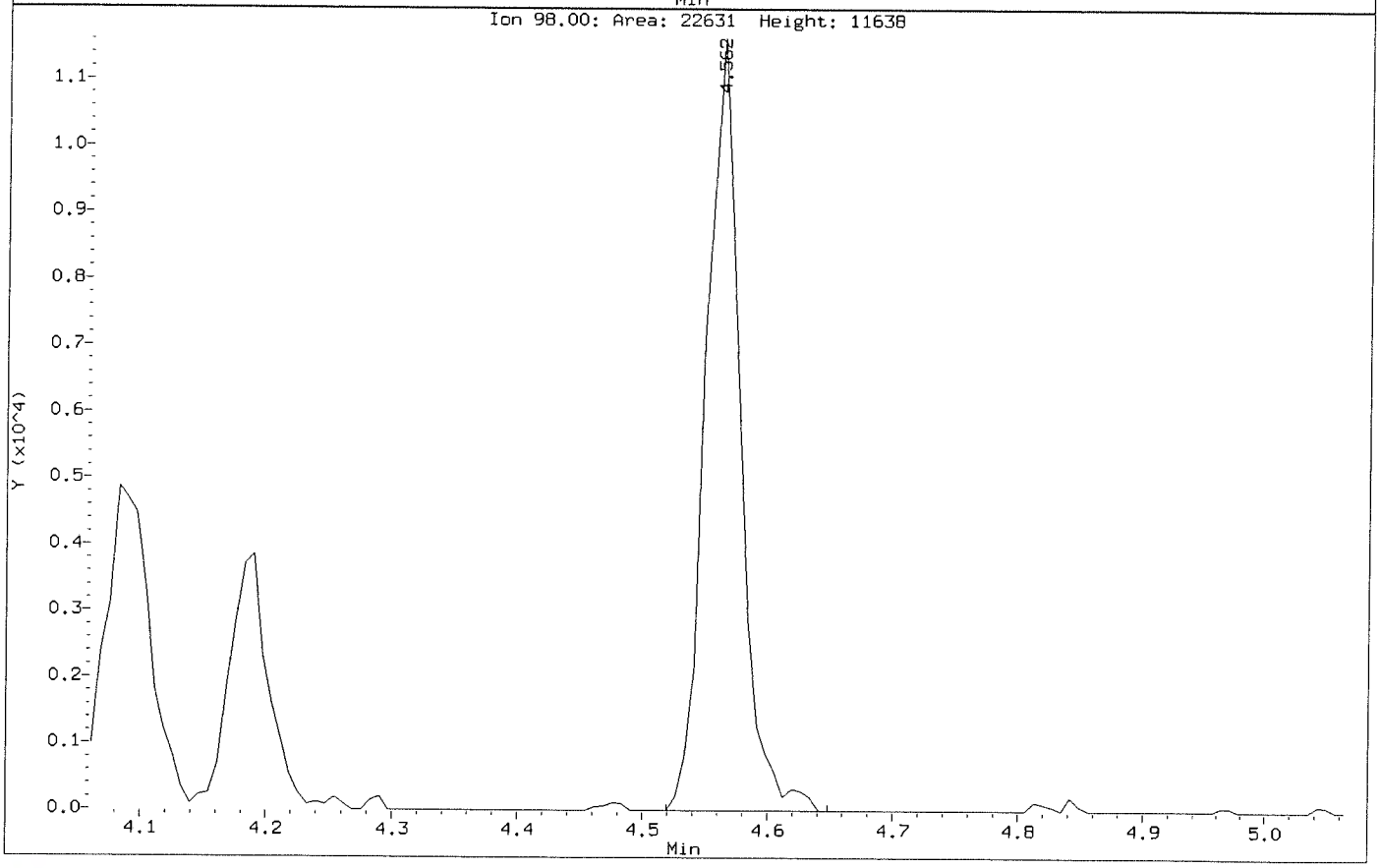




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Instrument: voa6.i
Client Sample ID: VSTD100

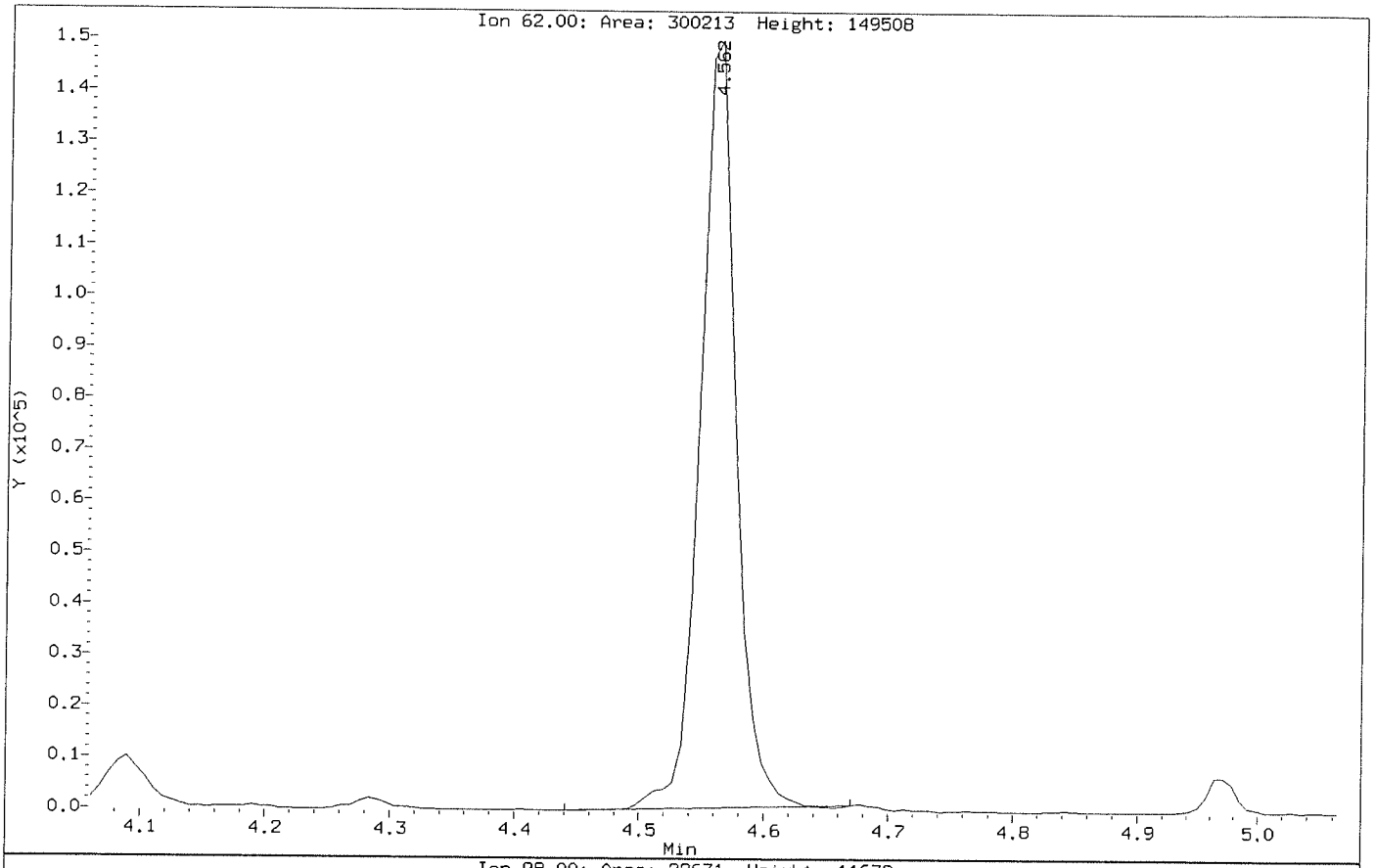
Compound: 1,2-Dichloroethane
CAS Number: 107-06-2

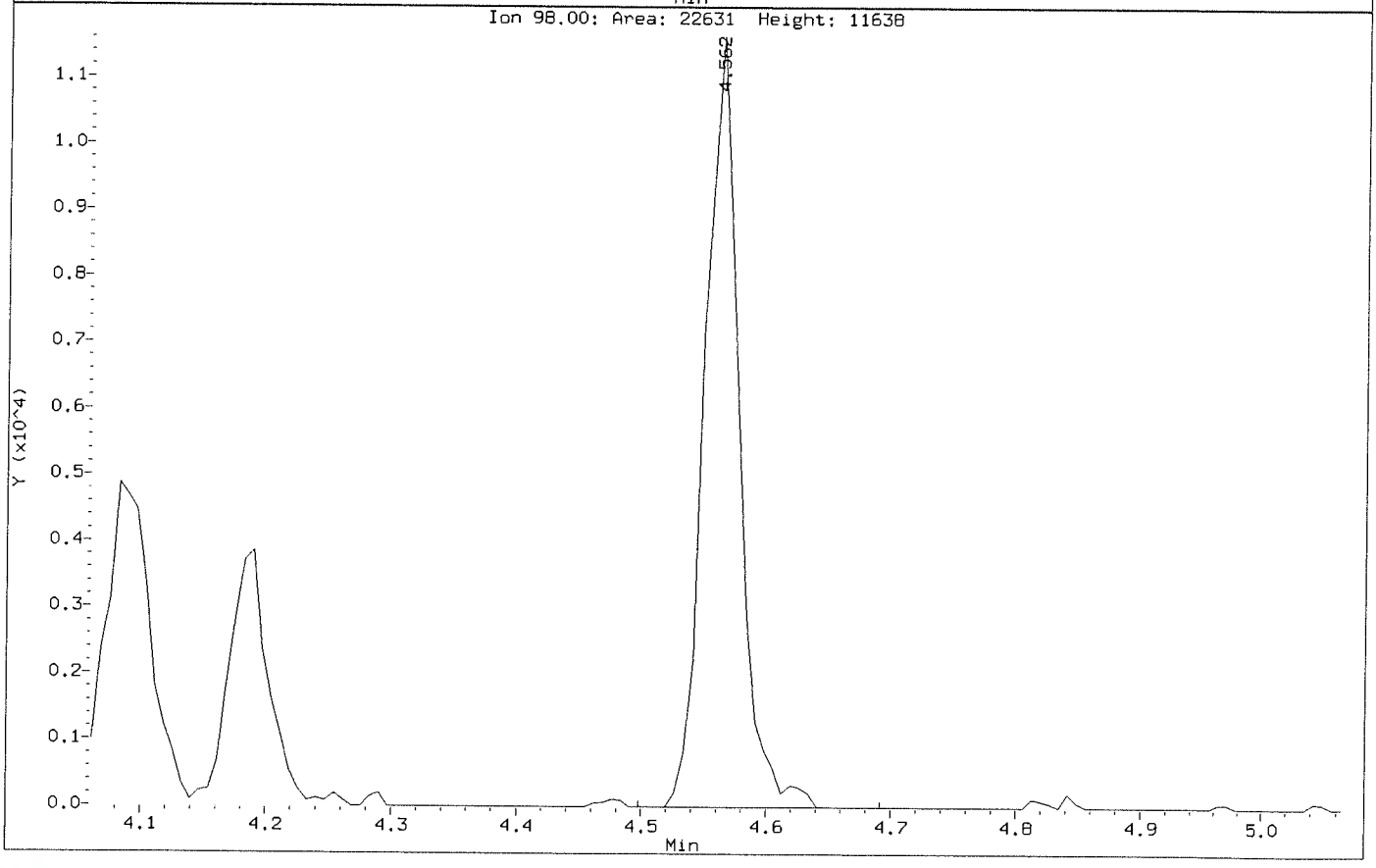




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Injection Date: 03-NOV-2020 14:48
Instrument: voa6.i
Client Sample ID: VSTD100

Compound: 1,2-Dichloroethane
CAS Number: 107-06-2





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110310.D Page 1
Report Date: 07-Nov-2020 12:11

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Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110310.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 03-NOV-2020 15:09
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:48 Cal File: X110309.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

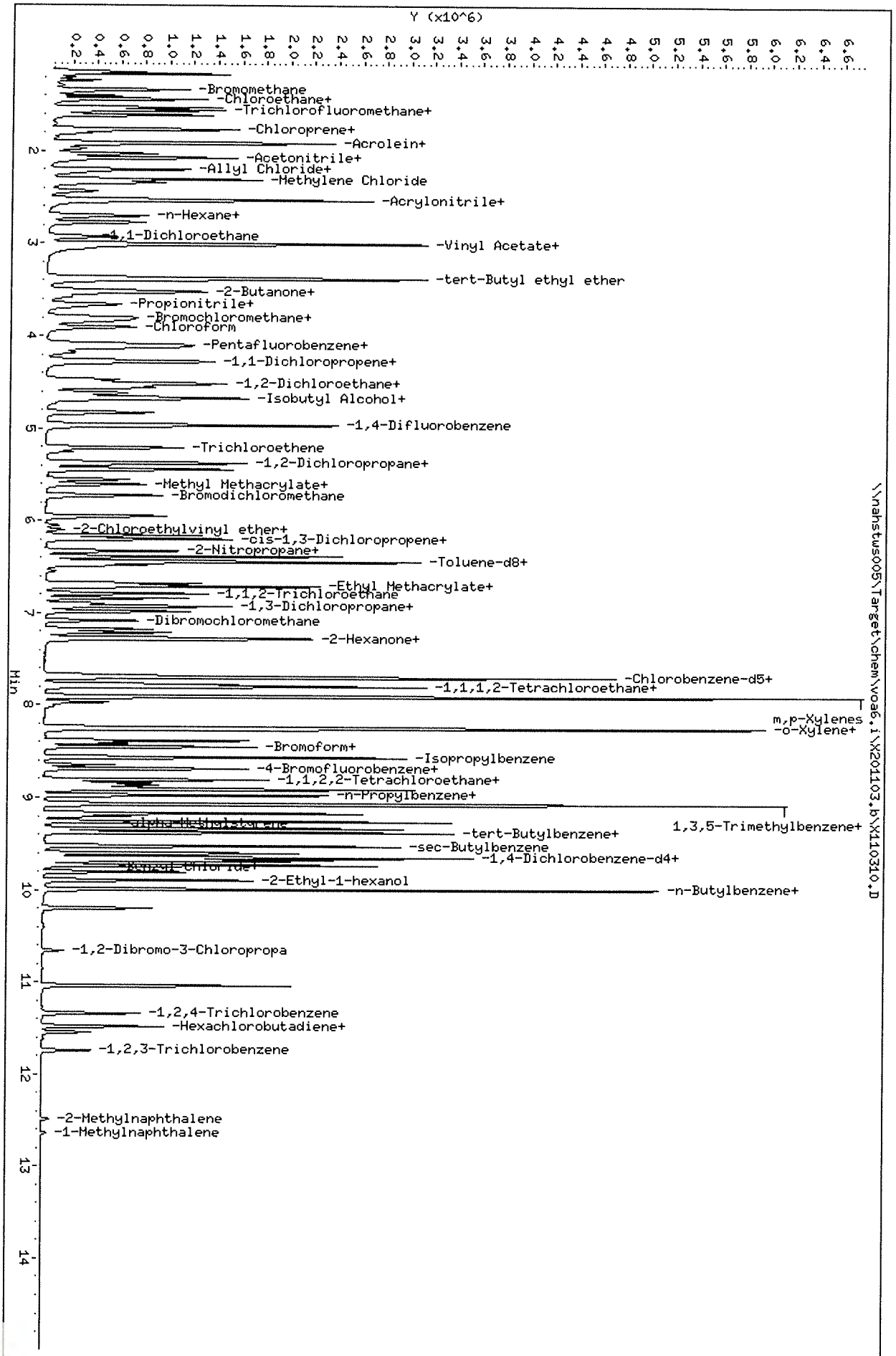
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.189	(1.000)	150132	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	319062	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	282514	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	143769	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	330895	150.000	163.65
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	404360	150.000	150.41
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1195633	150.000	158.44
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	414999	150.000	152.40
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	301933	150.000	149.80
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	518488	150.000	165.39
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	340740	150.000	144.70
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	249826	150.000	143.37
	22 1,1-Dichloroethane	63	2.929	2.929	(0.699)	556629	150.000	154.24
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	416396	150.000	147.00
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	431507	150.000	145.02
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	92101	150.000	145.93
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	272838	150.000	135.15(MH)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	173285	150.000	146.56
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	1314841	150.000	163.48
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	23770	150.000	149.59
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	322600	150.000	152.27
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	619401	150.000	156.09

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110310.D Page 2
Report Date: 07-Nov-2020 12:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	479231	150.000	139.29
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	320056	150.000	135.55
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1383111	150.000	168.61
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	620803	150.000	147.33
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	492173	150.000	142.19
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	636039	150.000	144.96
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	489417	150.000	157.54
24 2-Butanone	43	3.580	3.580	(0.855)	204319	300.000	292.75(A)
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	988749	150.000	146.42
52 2-Hexanone	43	7.212	7.212	(0.940)	562101	300.000	287.18(A)
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	1372134	150.000	160.88
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	1303709	150.000	167.89
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	639972	300.000	298.18(A)
10 Acetone	43	1.976	1.976	(0.472)	230937	300.000	295.31(A)
37 Benzene	78	4.519	4.519	(0.909)	1252502	150.000	140.54
74 Bromobenzene	156	8.809	8.809	(0.912)	362503	150.000	143.29
29 Bromochloromethane	128	3.802	3.802	(0.908)	168011	150.000	162.48
39 Bromodichloromethane	83	5.729	5.729	(1.153)	475050	150.000	144.91
66 Bromoform	173	8.415	8.415	(1.097)	217258	150.000	148.55
6 Bromomethane	94	1.338	1.338	(0.320)	477085	150.000	170.75
19 Carbon Disulfide	76	2.069	2.069	(0.494)	1680223	300.000	319.22(A)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	427361	150.000	149.59
59 Chlorobenzene	112	7.699	7.699	(1.004)	924659	150.000	153.15
7 Chloroethane	64	1.403	1.403	(0.335)	335181	150.000	141.69
28 Chloroform	83	3.910	3.910	(0.933)	584502	150.000	152.15
3 Chloromethane	50	1.081	1.081	(0.258)	339041	150.000	157.54
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	341602	150.000	155.15
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	537727	150.000	151.06
55 Dibromochloromethane	129	7.176	7.176	(0.936)	338578	150.000	162.16
44 Dibromomethane	93	5.557	5.557	(1.118)	234844	150.000	145.60
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	319814	150.000	164.50
61 Ethylbenzene	106	7.799	7.799	(1.017)	492161	150.000	160.68(H)
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	115884	150.000	145.43
67 Isopropylbenzene	105	8.566	8.566	(1.117)	1491458	150.000	153.66
62 m,p-Xylenes	106	7.907	7.907	(1.031)	1345040	300.000	366.62(A)
17 Methylene Chloride	84	2.305	2.305	(0.550)	313960	150.000	152.31
87 n-Butylbenzene	91	9.999	9.999	(1.035)	1360339	150.000	148.14
73 n-Propylbenzene	91	8.917	8.917	(0.923)	1822963	150.000	159.27
92 Naphthalene	128	11.546	11.546	(1.195)	248976	150.000	146.19
63 o-Xylene	106	8.244	8.244	(1.075)	631024	150.000	172.59
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	1526507	150.000	149.33
64 Styrene	104	8.258	8.258	(1.077)	1142057	150.000	186.28
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	1005736	150.000	148.44
56 Tetrachloroethene	164	6.933	6.933	(0.904)	242642	150.000	156.01
50 Toluene	91	6.453	6.453	(0.841)	1511616	150.000	146.20
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	310203	150.000	165.84
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	487450	150.000	155.22
38 Trichloroethene	130	5.206	5.206	(1.048)	305351	150.000	143.61
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	832871	150.000	147.19
5 Vinyl Chloride	62	1.145	1.145	(0.273)	494633	150.000	149.10

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.

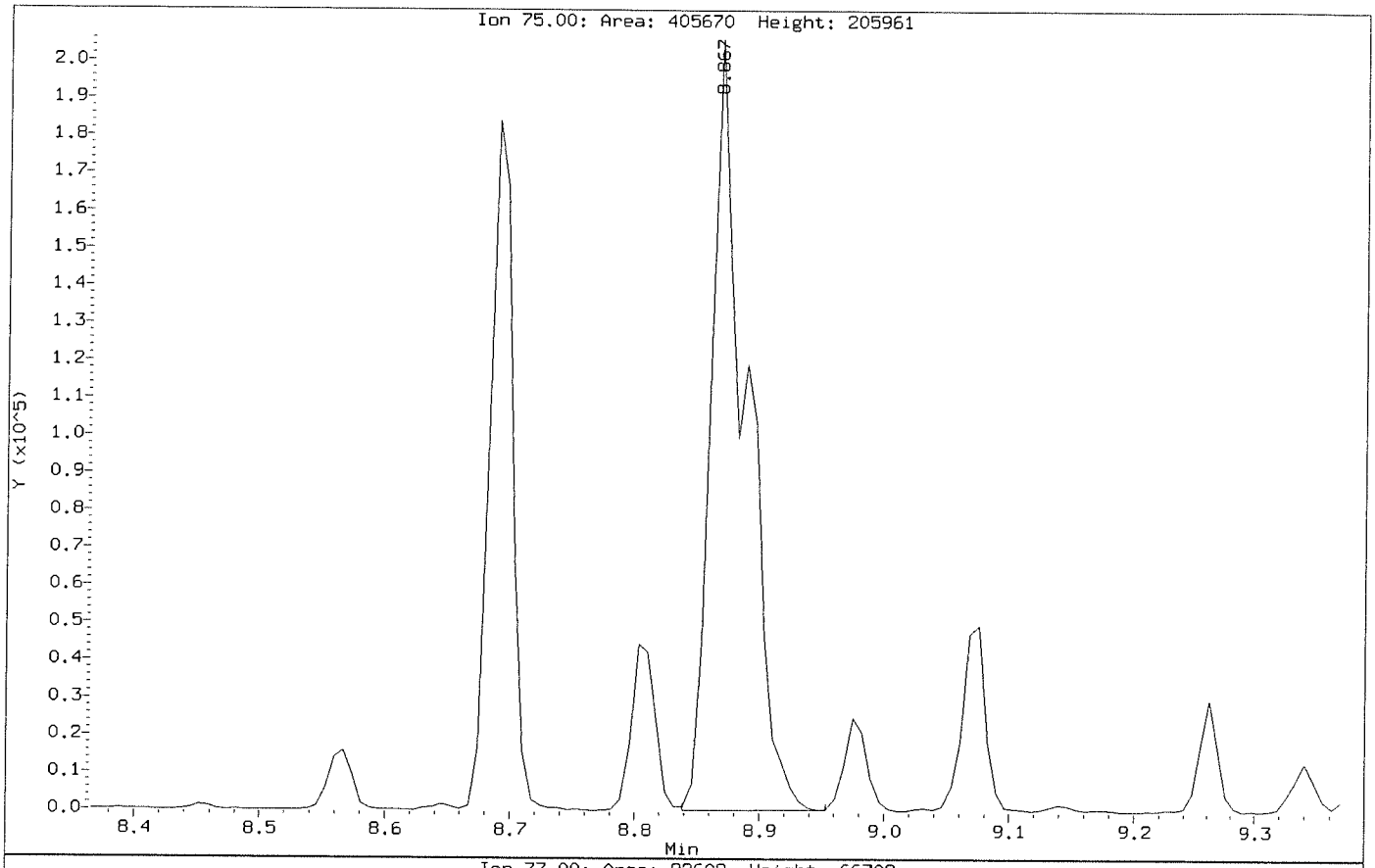


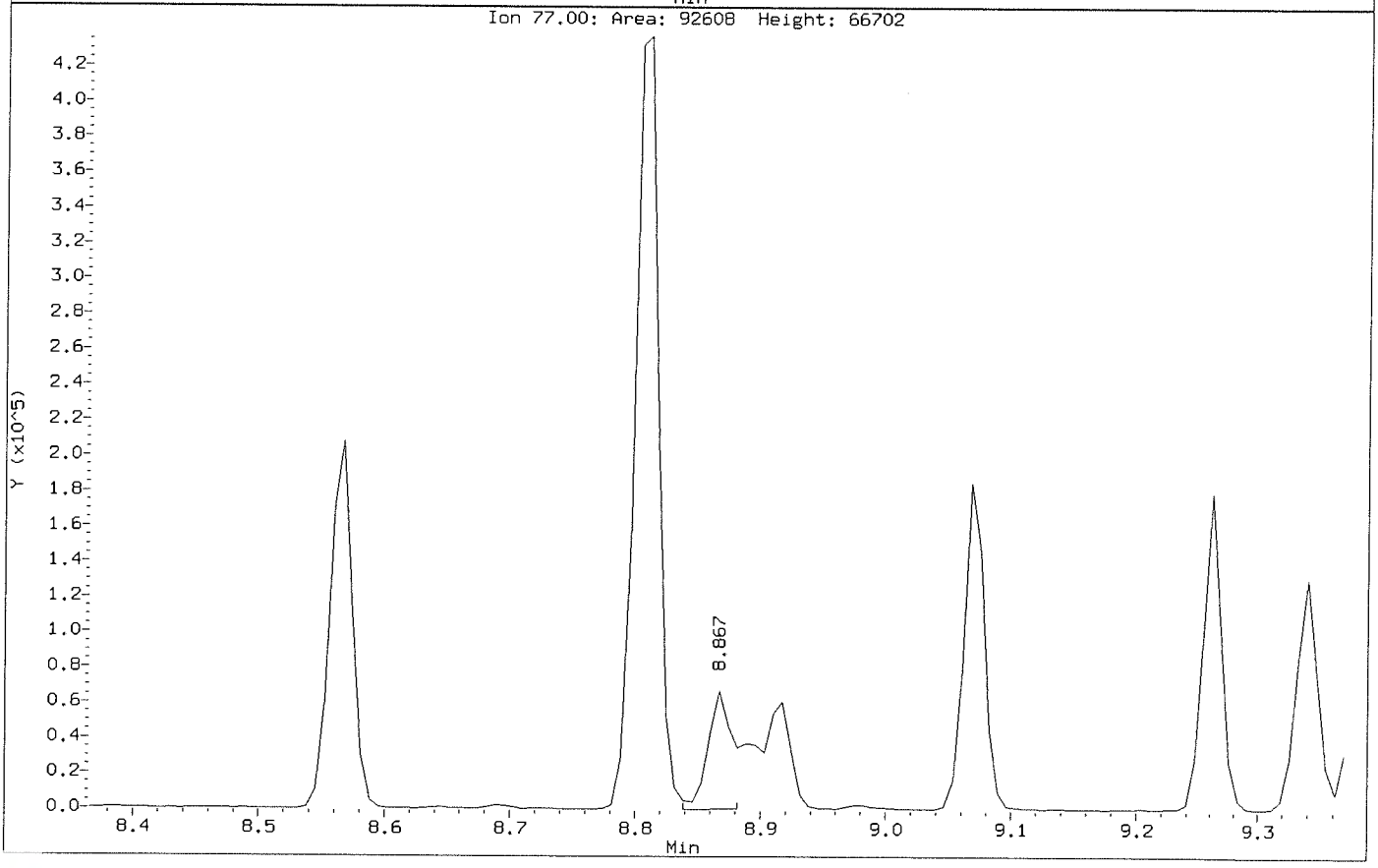
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Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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Instrument: voa6.i
Client Sample ID: VSTD150

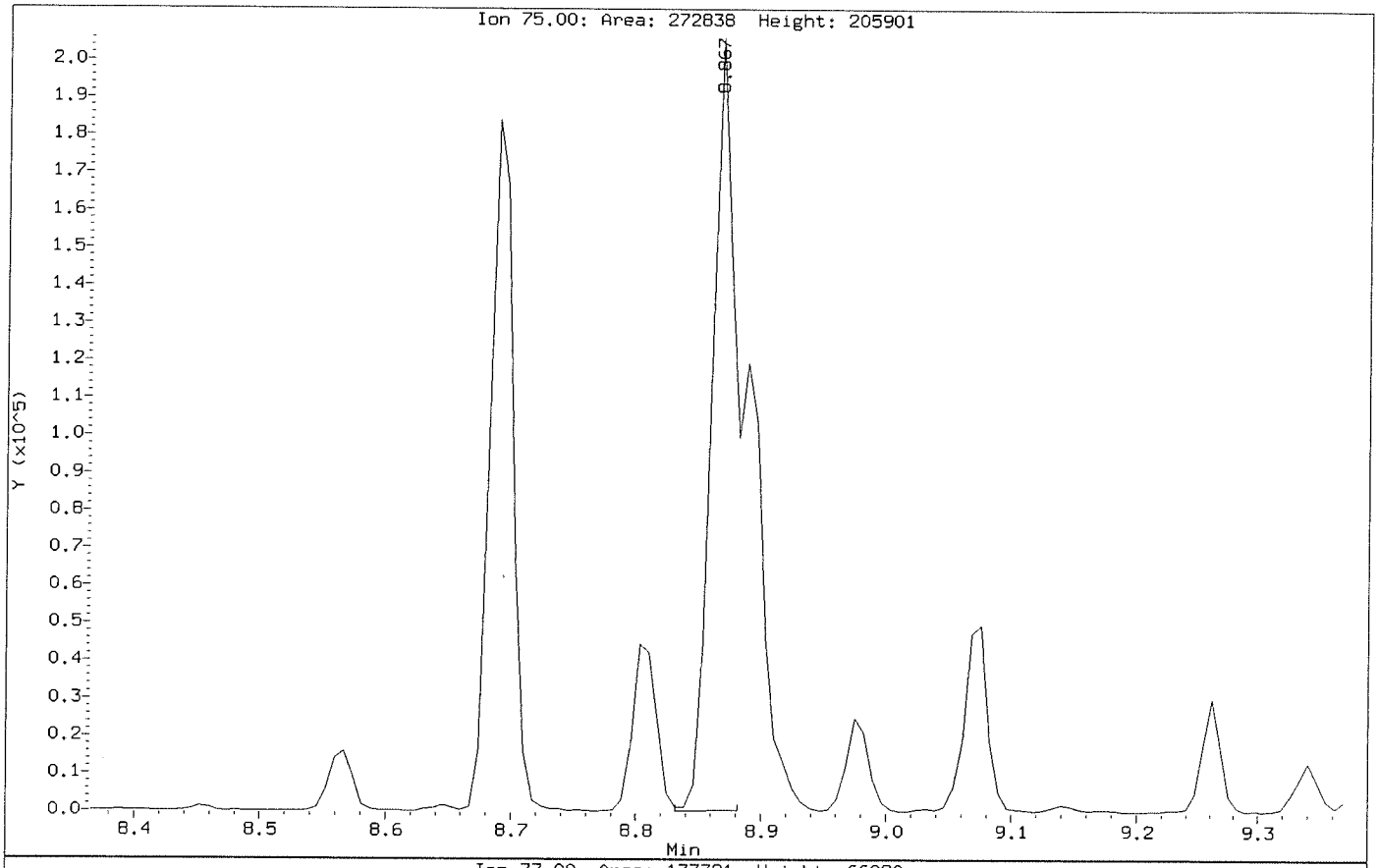
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CAS Number: 96-18-4

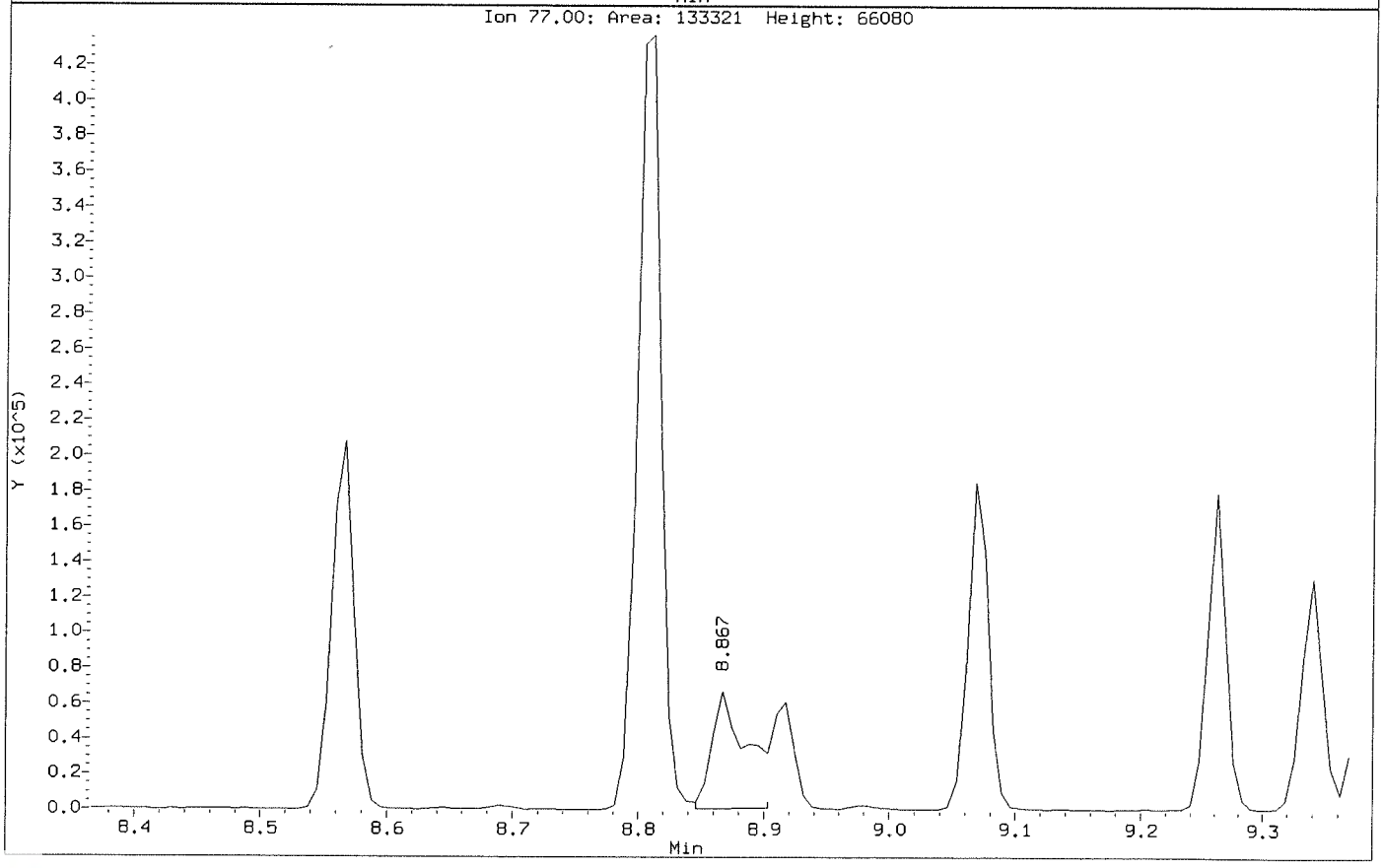




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Injection Date: 03-NOV-2020 15:09
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Client Sample ID: VSTD150

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110311.D Page 1
Report Date: 07-Nov-2020 12:11

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110311.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 03-NOV-2020 15:30
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 15:09 Cal File: X110310.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

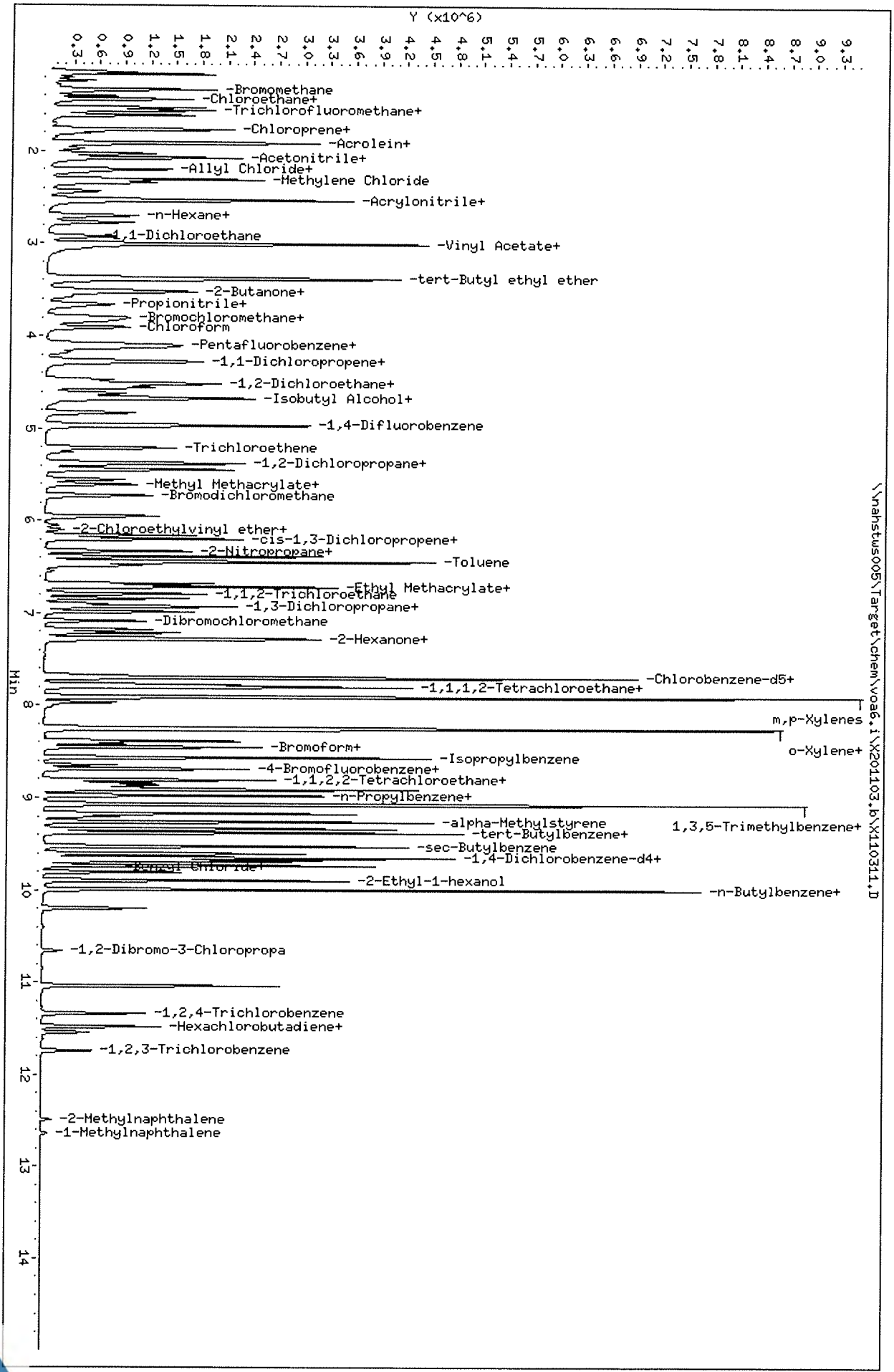
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	153801	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	324078	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	282227	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	147588	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	430753	200.000	207.96(A)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	536735	200.000	183.85
$	48 Toluene-d8	98	6.388	6.388	(0.833)	1620124	200.000	214.91(A)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	565367	200.000	198.95
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	435351	200.000	216.22(A)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	698978	200.000	217.65(A)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	491582	200.000	203.60(A)
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	354012	200.000	203.37(A)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	791619	200.000	214.12(A)
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	570411	200.000	196.57
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	562003	200.000	185.96
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	134528	200.000	206.89(A)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	393201	200.000	189.73(MH)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	250652	200.000	205.79(A)
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	1854516	200.000	224.61(A)
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	32792	200.000	201.15(A)
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	452244	200.000	213.68(A)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	897799	200.000	220.40(A)

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110311.D Page 2
Report Date: 07-Nov-2020 12:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	635677	200.000	181.91
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	440352	200.000	183.61
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1956104	200.000	232.29(A)
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	883985	200.000	204.36(A)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	680537	200.000	196.80
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	899010	200.000	199.60
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	655554	200.000	205.99(A)
24 2-Butanone	43	3.580	3.580	(0.856)	306733	400.000	429.01(A)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	1395914	200.000	201.37(A)
52 2-Hexanone	43	7.212	7.212	(0.940)	809663	400.000	412.44(A)
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	1953690	200.000	223.14(A)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	1839403	200.000	230.74(A)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	903306	400.000	421.30(A)
10 Acetone	43	1.976	1.976	(0.473)	315772	400.000	397.09(A)
37 Benzene	78	4.519	4.519	(0.909)	1684144	200.000	186.04
74 Bromobenzene	156	8.809	8.809	(0.911)	501355	200.000	193.05
29 Bromochloromethane	128	3.795	3.795	(0.908)	231325	200.000	218.38(A)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	636151	200.000	191.05
66 Bromoform	173	8.415	8.415	(1.097)	300900	200.000	204.75(A)
6 Bromomethane	94	1.331	1.331	(0.318)	753213	200.000	263.15(A)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	2350223	400.000	435.86(A)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	579212	200.000	199.61
59 Chlorobenzene	112	7.699	7.699	(1.004)	1336955	200.000	221.66(A)
7 Chloroethane	64	1.403	1.403	(0.336)	478401	200.000	197.41
28 Chloroform	83	3.910	3.910	(0.935)	800151	200.000	203.31(A)
3 Chloromethane	50	1.073	1.073	(0.257)	432608	200.000	196.00
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	464614	200.000	205.99(A)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	709251	200.000	196.17
55 Dibromochloromethane	129	7.176	7.176	(0.936)	460180	200.000	220.62(A)
44 Dibromomethane	93	5.557	5.557	(1.118)	317833	200.000	194.00
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	431478	200.000	216.64(A)
61 Ethylbenzene	106	7.799	7.799	(1.017)	675926	200.000	220.90(AH)
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	168470	200.000	204.98(A)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	2146900	200.000	220.27(A)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	1885210	400.000	514.38(A)
17 Methylene Chloride	84	2.305	2.305	(0.551)	433637	200.000	205.35(A)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	1951034	200.000	205.54(A)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	2540670	200.000	216.23(A)
92 Naphthalene	128	11.546	11.546	(1.194)	363990	200.000	207.28(A)
63 o-Xylene	106	8.244	8.244	(1.075)	890342	200.000	243.77(A)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	2142350	200.000	203.19(A)
64 Styrene	104	8.258	8.258	(1.077)	1649175	200.000	269.28(A)
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	1422110	200.000	203.53(A)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	340454	200.000	219.12(A)
50 Toluene	91	6.446	6.446	(0.840)	2127434	200.000	205.97(A)
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	437555	200.000	228.35(A)
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	688730	200.000	215.92(A)
38 Trichloroethene	130	5.206	5.206	(1.048)	414564	200.000	191.95
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	1151502	200.000	198.65
5 Vinyl Chloride	62	1.145	1.145	(0.274)	681916	200.000	200.66(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.

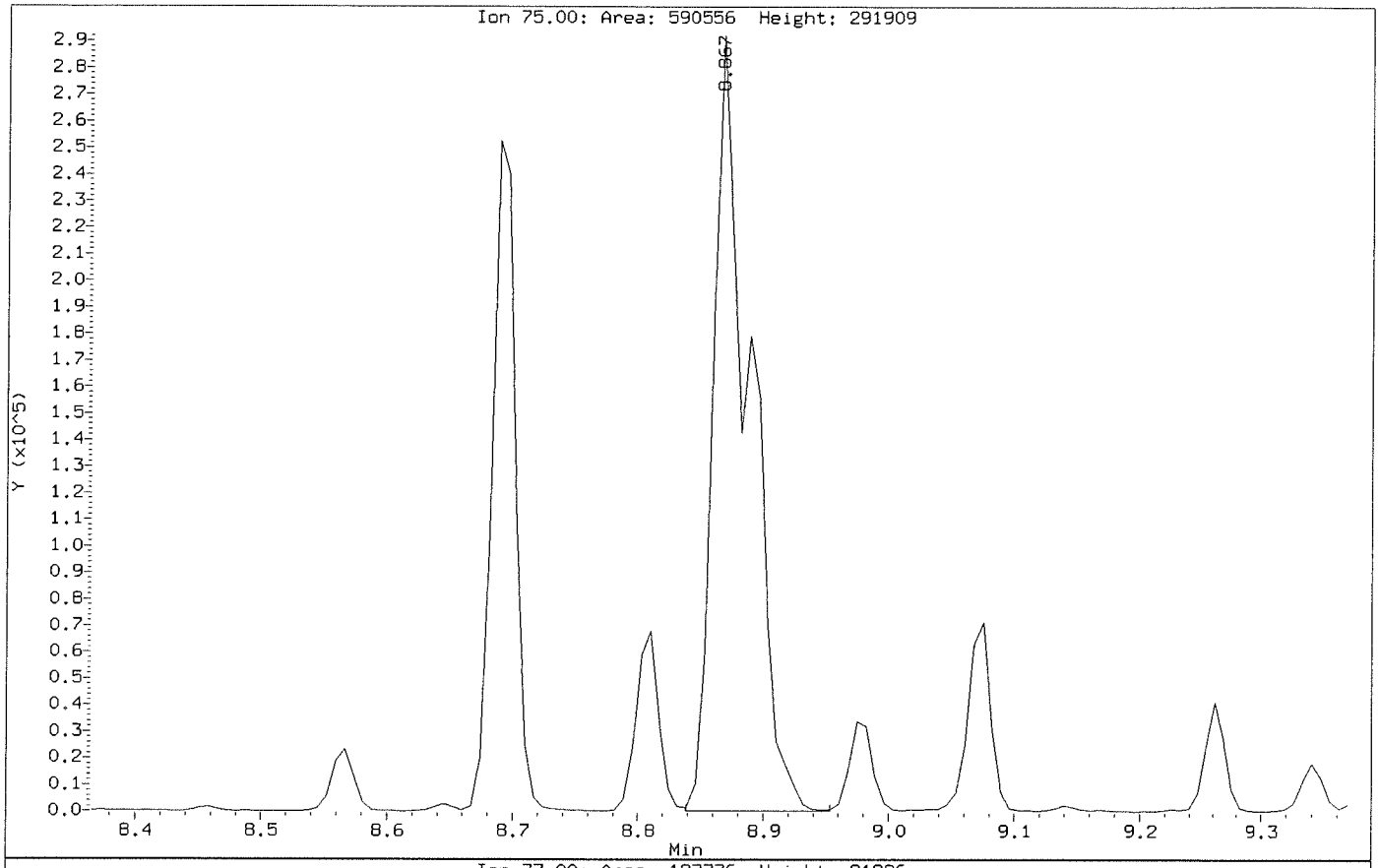


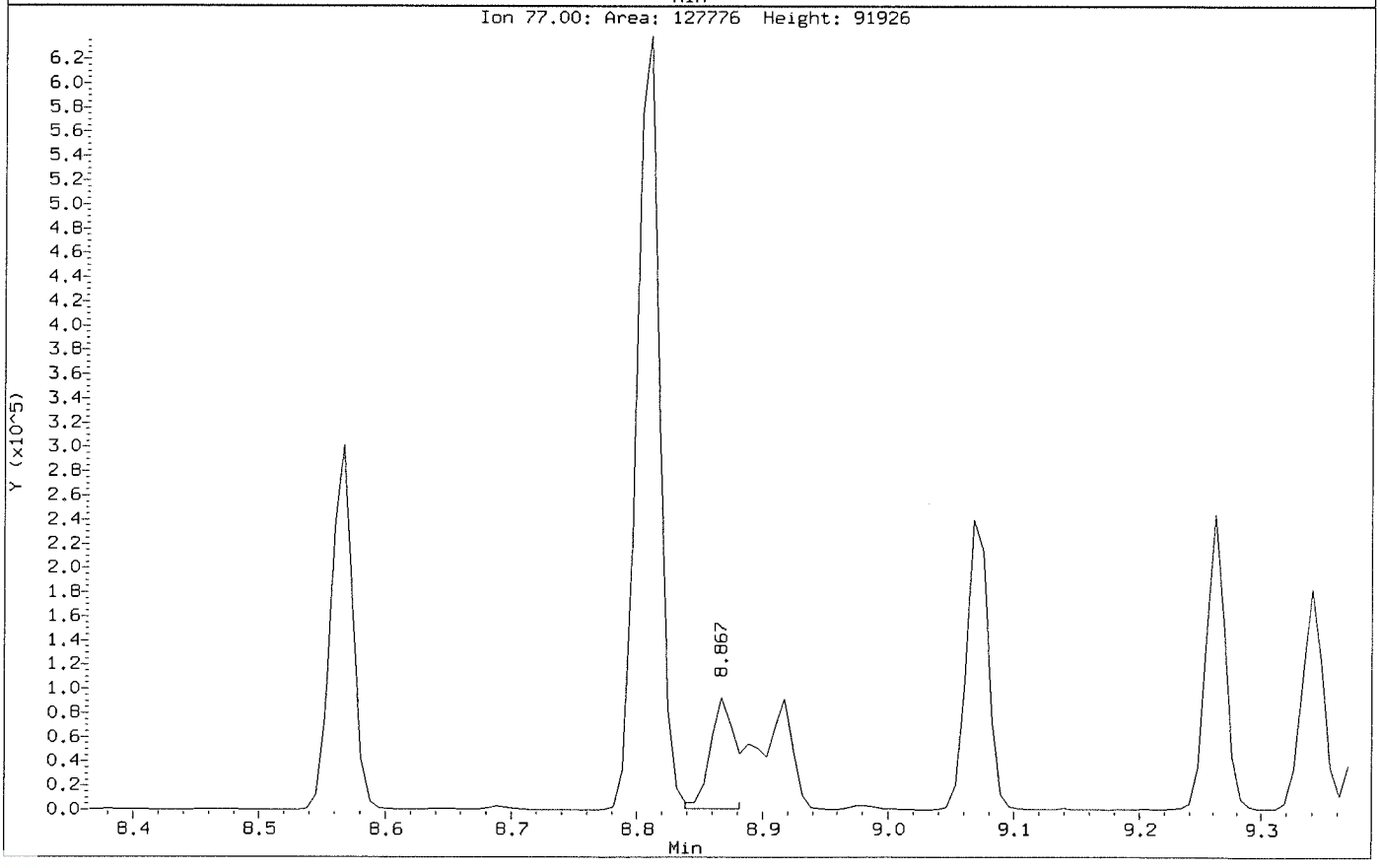
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Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110311.D
Injection Date: 03-NOV-2020 15:30
Instrument: voa6.i
Client Sample ID: VSTD200

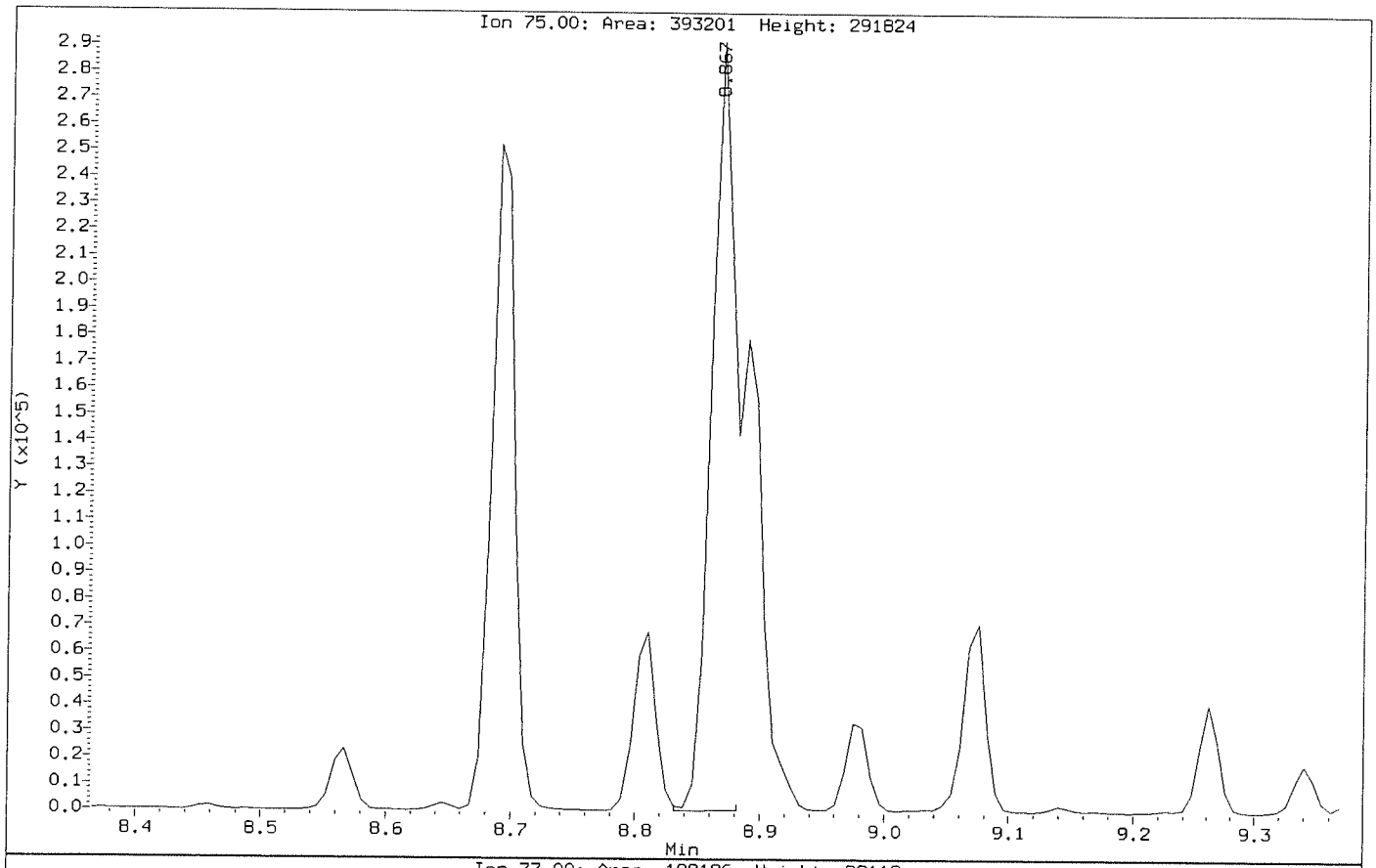
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

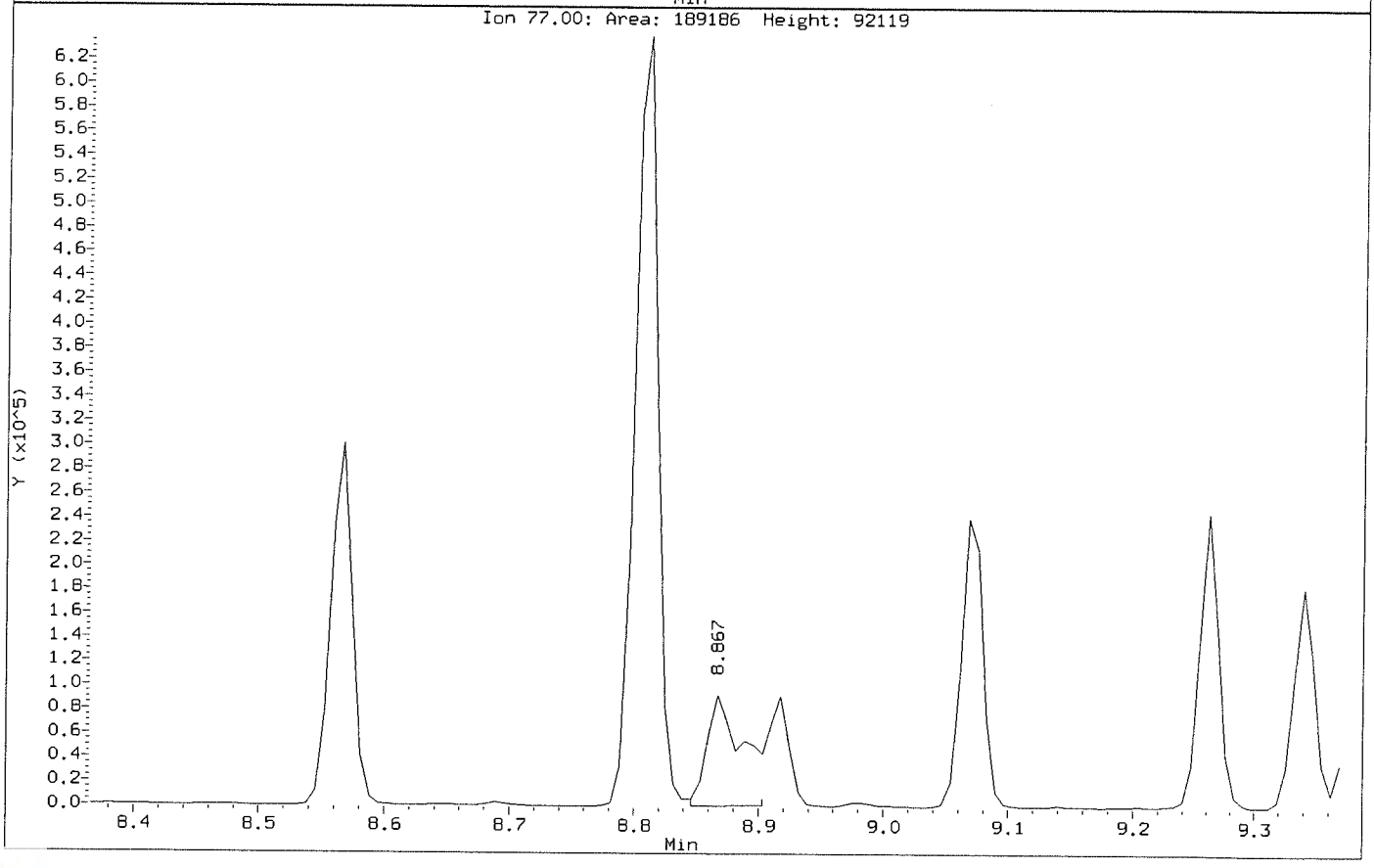




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Injection Date: 03-NOV-2020 15:30
Instrument: voa6.i
Client Sample ID: VSTD200

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110314.D Page 1
Report Date: 07-Nov-2020 12:11

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201103.b\X110314.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 03-NOV-2020 16:33
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\X201103.b\8260W.m
Meth Date : 07-Nov-2020 12:11 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 15:30 Cal File: X110311.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

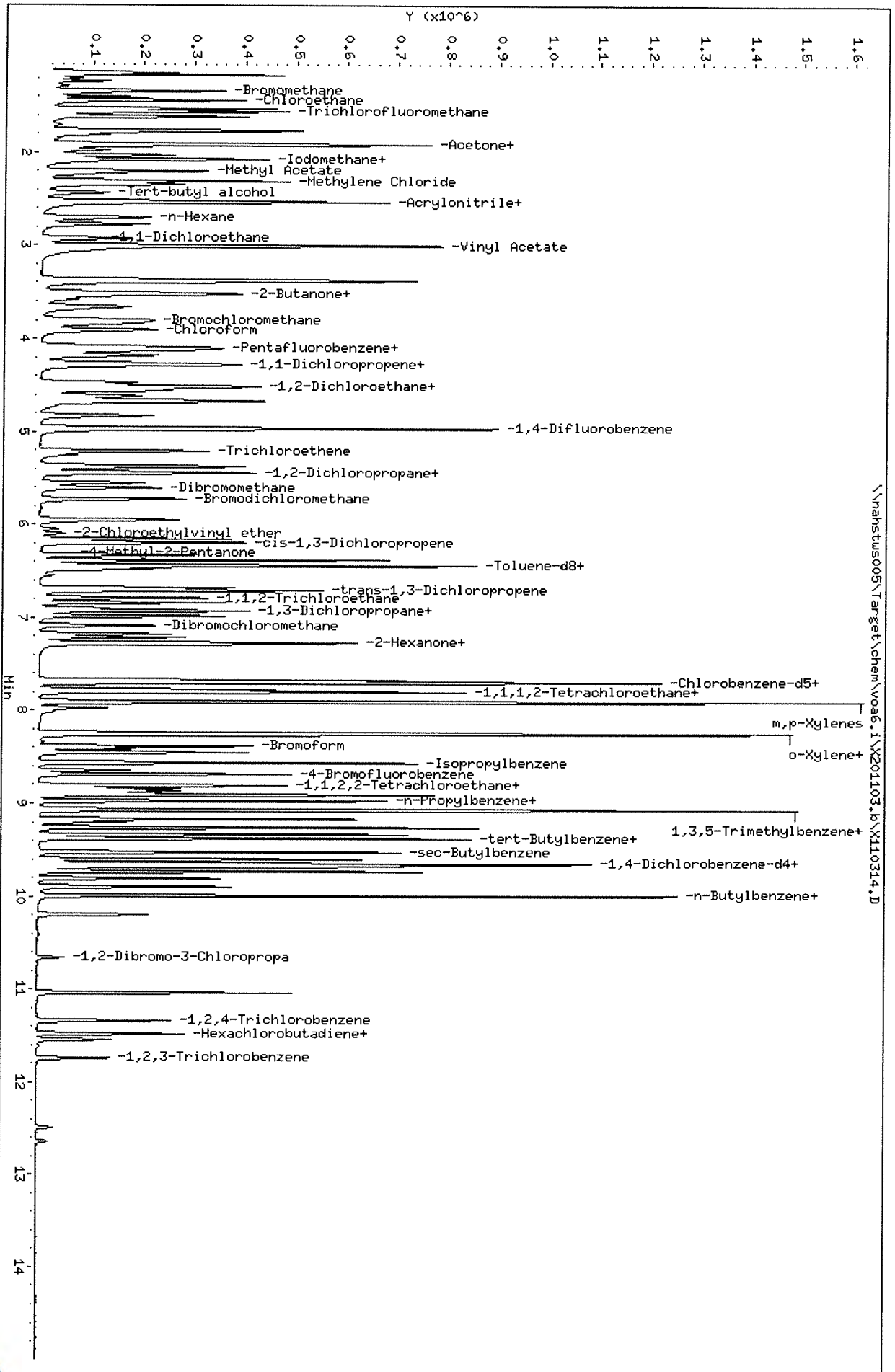
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	154701	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	284123	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	261104	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	123192	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	103020	49.4485	49.44
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	128673	52.3463	52.34
$	48 Toluene-d8	98	6.388	6.388	(0.833)	340698	48.8520	48.85
$	69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	117116	50.4974	50.49
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	87560	47.0058	47.00
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	153859	47.6321	47.63
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.845	(0.915)	99567	48.9587	48.95
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	76458	47.4763	47.47
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	176813	47.5489	47.54
	11 1,1-Dichloroethene	96	1.919	1.911	(0.459)	137684	47.1720	47.17
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	126039	47.5697	47.56
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	31726	59.7255	59.72(M)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	84889	49.0737	49.07(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	55200	55.5932	55.59
	79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.971)	340152	49.3574	49.35
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	7526	55.0628	55.06
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	93628	47.8174	47.81
	88 1,2-Dichlorobenzene	146	9.991	9.999	(1.034)	163807	48.1775	48.17

Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110314.D Page 2
Report Date: 07-Nov-2020 12:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	149514	48.8037	48.80
42	1,2-Dichloropropane	63	5.436	5.443	(1.094)	96091	45.7013	45.70
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	334521	47.5924	47.59
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	171676	47.5497	47.54
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	147318	46.0505	46.05
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	181795	48.3556	48.35
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	153887	48.0748	48.07
24	2-Butanone	43	3.580	3.580	(0.856)	76275	106.062	106.06
76	2-Chlorotoluene	91	8.974	8.981	(0.929)	268722	46.4427	46.44
52	2-Hexanone	43	7.212	7.212	(0.940)	157553	89.6799	89.67
77	4-Chlorotoluene	91	9.075	9.074	(0.939)	341491	46.7282	46.72
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	327925	49.2840	49.28
45	4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	186003	93.7710	93.77
10	Acetone	43	1.976	1.976	(0.473)	100468	119.637	119.63
37	Benzene	78	4.512	4.519	(0.908)	372971	46.9968	46.99
74	Bromobenzene	156	8.809	8.809	(0.912)	98013	45.2158	45.21
29	Bromochloromethane	128	3.803	3.795	(0.909)	51596	48.4265	48.42
39	Bromodichloromethane	83	5.729	5.729	(1.153)	145793	49.9434	49.94
66	Bromoform	173	8.416	8.415	(1.097)	55353	43.2082	43.20
6	Bromomethane	94	1.338	1.331	(0.320)	134679	46.7808	46.78
19	Carbon Disulfide	76	2.069	2.069	(0.495)	500084	92.2039	92.20
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	126484	49.7207	49.72
59	Chlorobenzene	112	7.699	7.699	(1.004)	258238	46.2801	46.28
7	Chloroethane	64	1.403	1.403	(0.336)	109585	44.9568	44.95
28	Chloroform	83	3.910	3.910	(0.935)	185902	46.9630	46.96
3	Chloromethane	50	1.081	1.073	(0.258)	109600	50.0268	50.02
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	108603	47.8702	47.87
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	159724	50.3904	50.39
55	Dibromochloromethane	129	7.176	7.176	(0.936)	96777	50.1517	50.15
44	Dibromomethane	93	5.557	5.557	(1.118)	71493	49.7769	49.77
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	105646	52.7364	52.73
61	Ethylbenzene	106	7.799	7.799	(1.017)	135314	47.8010	47.80
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	34693	52.3265	52.32
67	Isopropylbenzene	105	8.566	8.566	(1.117)	380561	44.3181	44.31
62	m,p-Xylenes	106	7.907	7.907	(1.031)	347106	102.371	102.37
17	Methylene Chloride	84	2.305	2.305	(0.551)	96413	45.3917	45.39
87	n-Butylbenzene	91	9.999	9.999	(1.035)	332776	44.8692	44.86
73	n-Propylbenzene	91	8.917	8.917	(0.923)	471736	48.0993	48.09
92	Naphthalene	128	11.546	11.546	(1.195)	85615	59.9489	59.94(M)
63	o-Xylene	106	8.244	8.244	(1.075)	166386	49.2422	49.24
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	379112	45.1578	45.15
64	Styrene	104	8.258	8.258	(1.077)	291404	51.4307	51.43
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	257934	46.1783	46.17
56	Tetrachloroethene	164	6.933	6.933	(0.904)	65585	45.6276	45.62
50	Toluene	91	6.446	6.446	(0.840)	410858	42.9975	42.99
20	trans-1,2-Dichloroethene	96	2.535	2.527	(0.606)	88244	45.7847	45.78
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	144790	51.7768	51.77
38	Trichloroethene	130	5.206	5.206	(1.048)	94335	49.8231	49.82
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	272524	46.7420	46.74
5	Vinyl Chloride	62	1.145	1.145	(0.274)	169292	49.5266	49.52

QC Flag Legend

M - Compound response manually integrated.

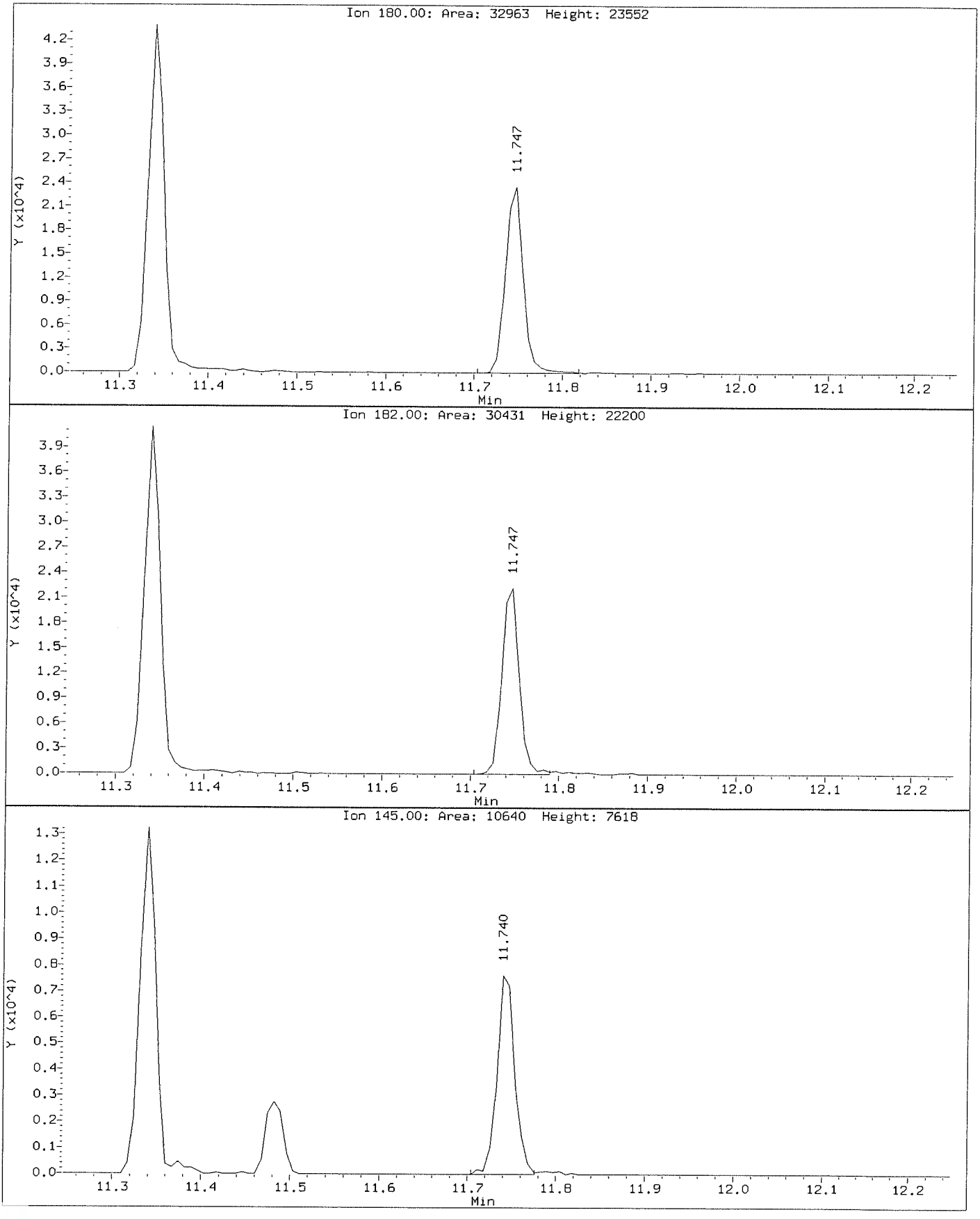


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Date : 03-NOV-2020 16:33
Client ID: ICV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

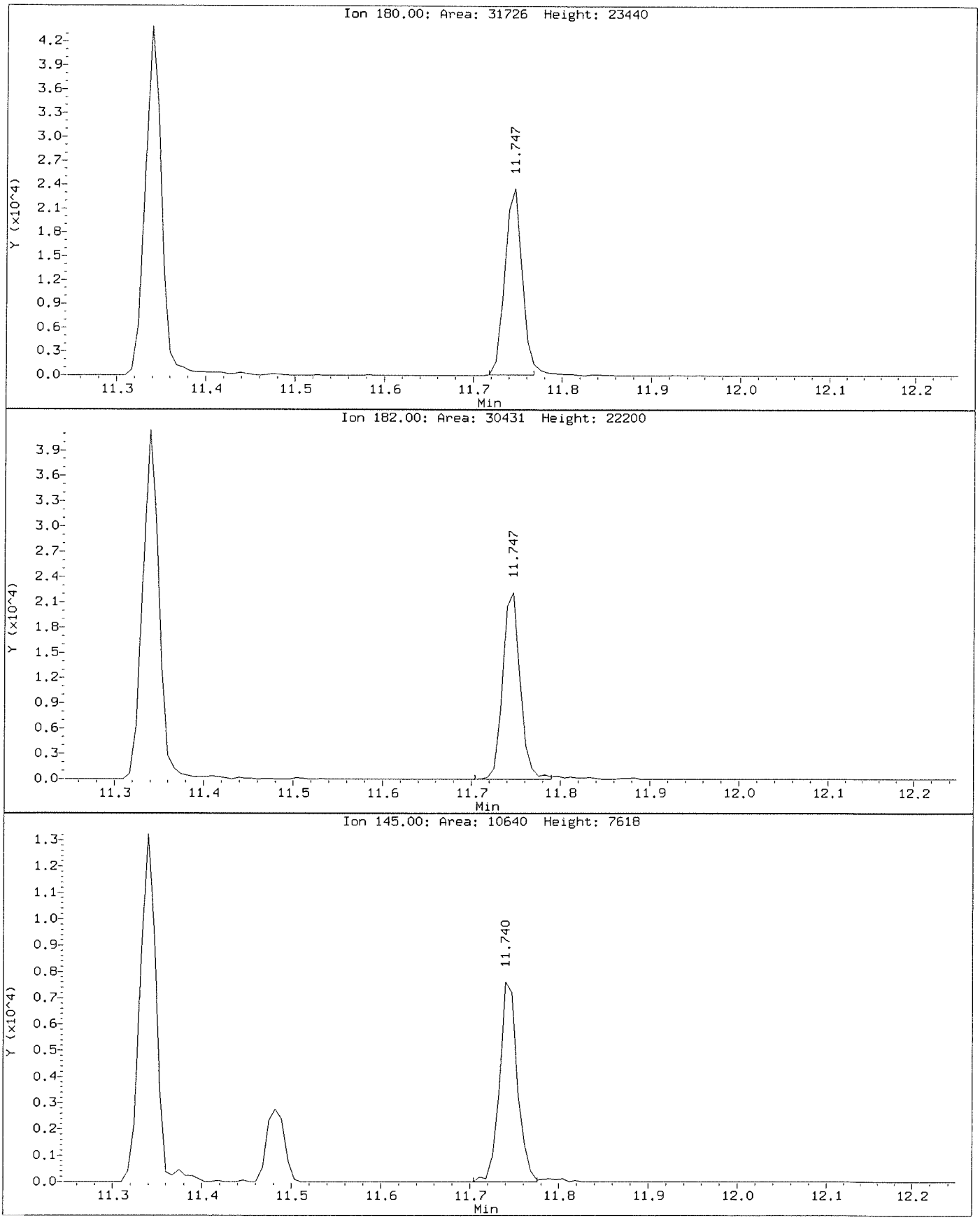
Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110314.D
Injection Date: 03-NOV-2020 16:33
Instrument: voa6.i
Client Sample ID: ICV

Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



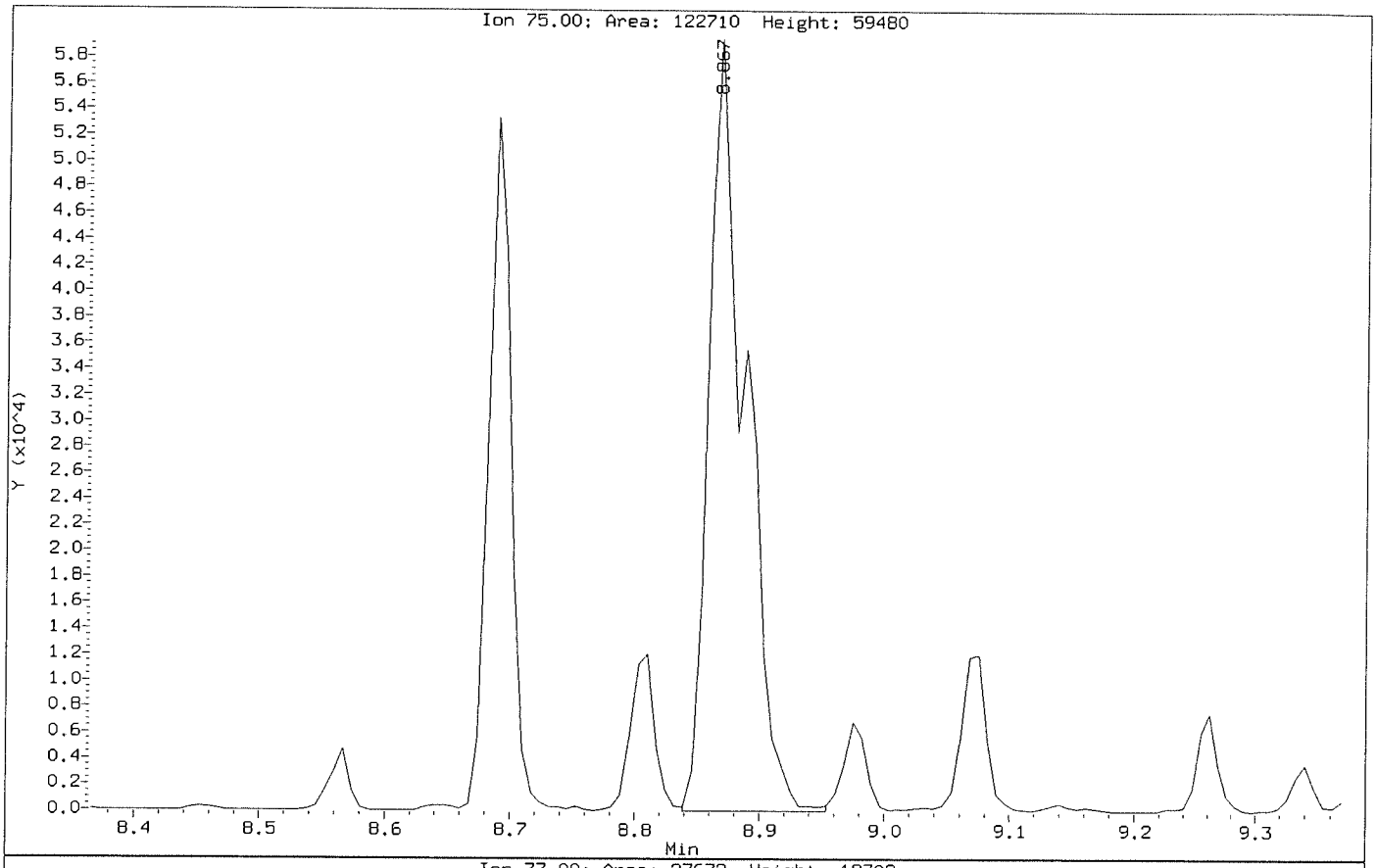
Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110314.D
Injection Date: 03-NOV-2020 16:33
Instrument: voa6.i
Client Sample ID: ICV

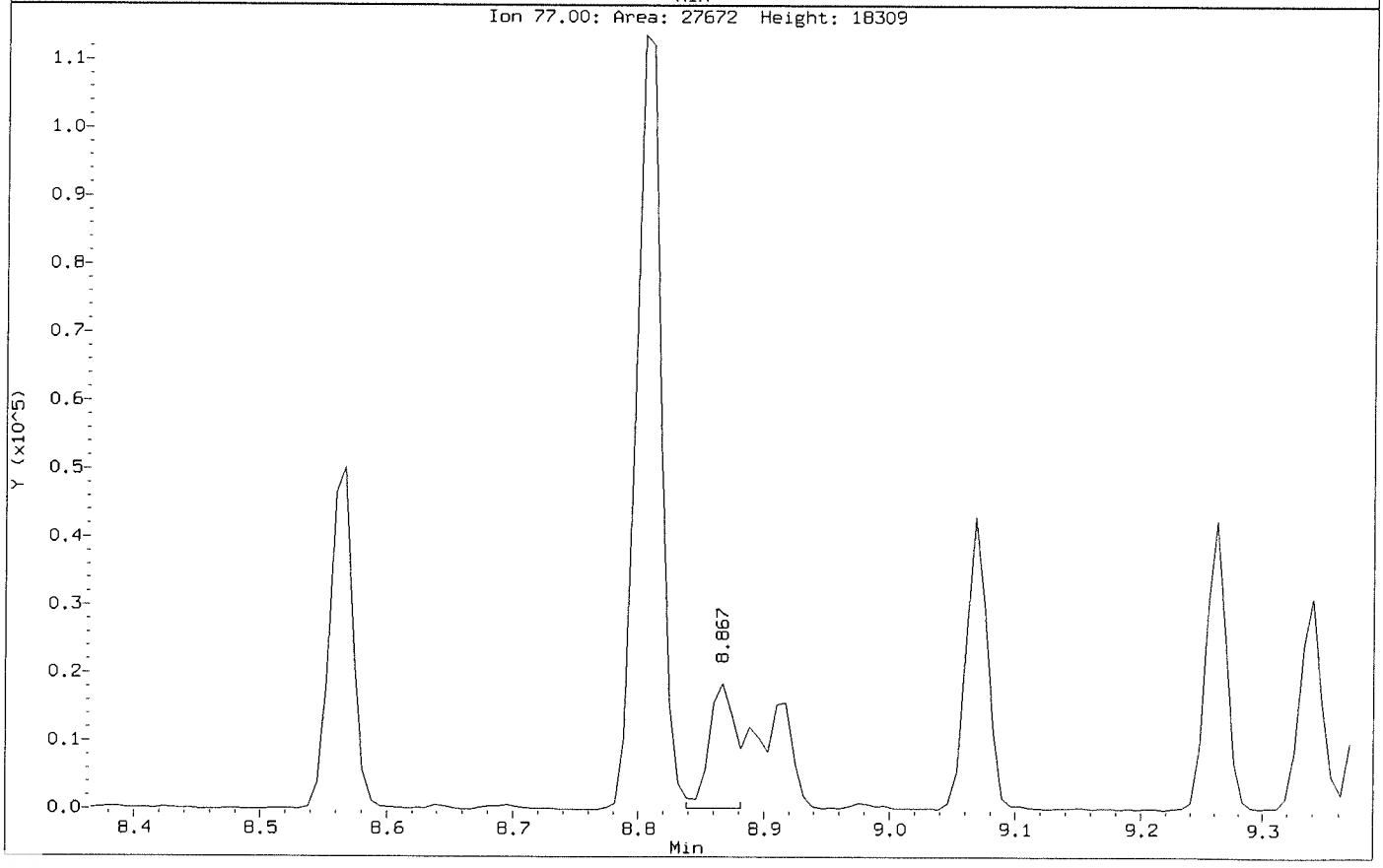
Compound: 1,2,3-Trichlorobenzene
CAS Number: 87-61-6



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110314.D
Injection Date: 03-NOV-2020 16:33
Instrument: voa6.i
Client Sample ID: ICV

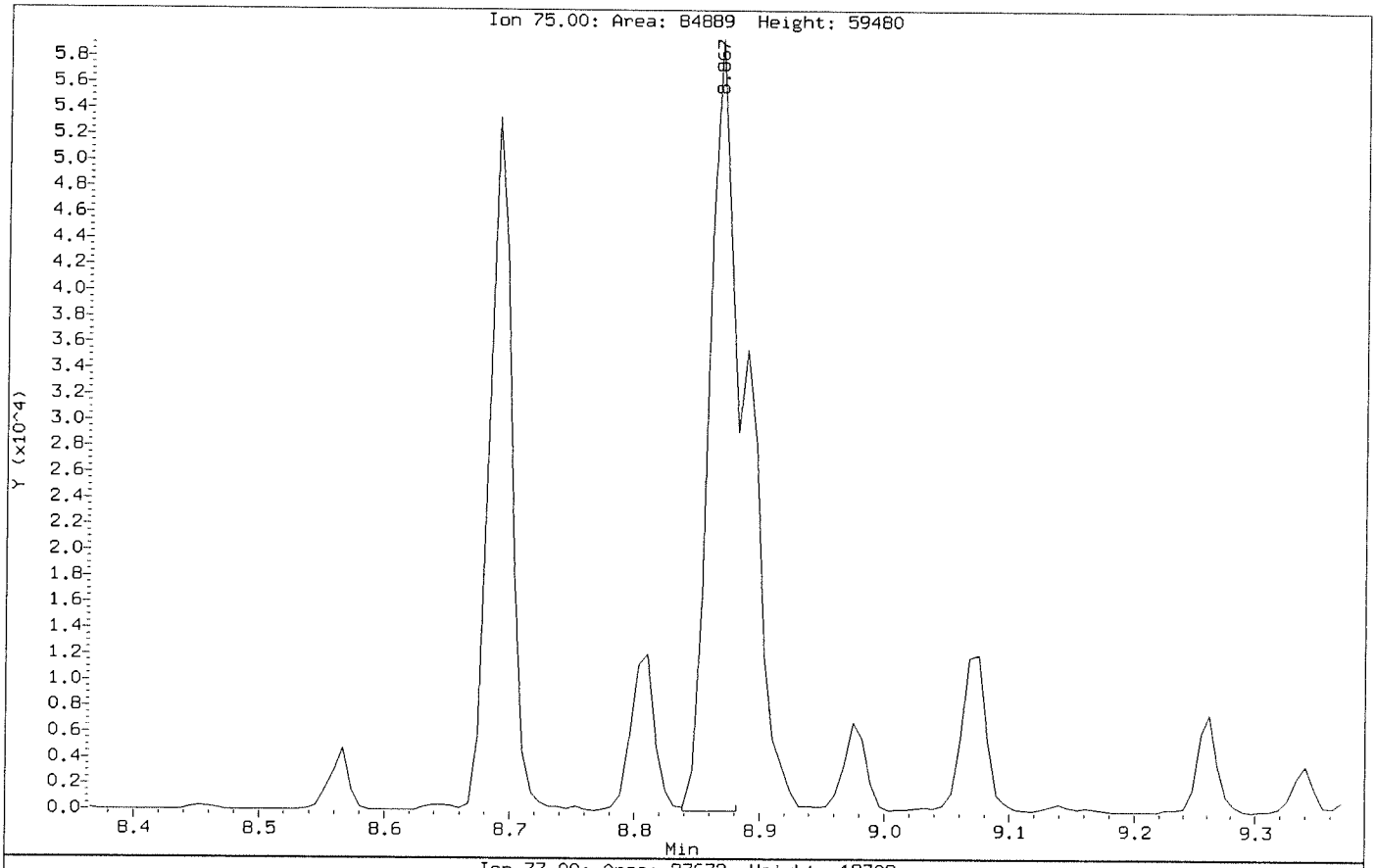
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

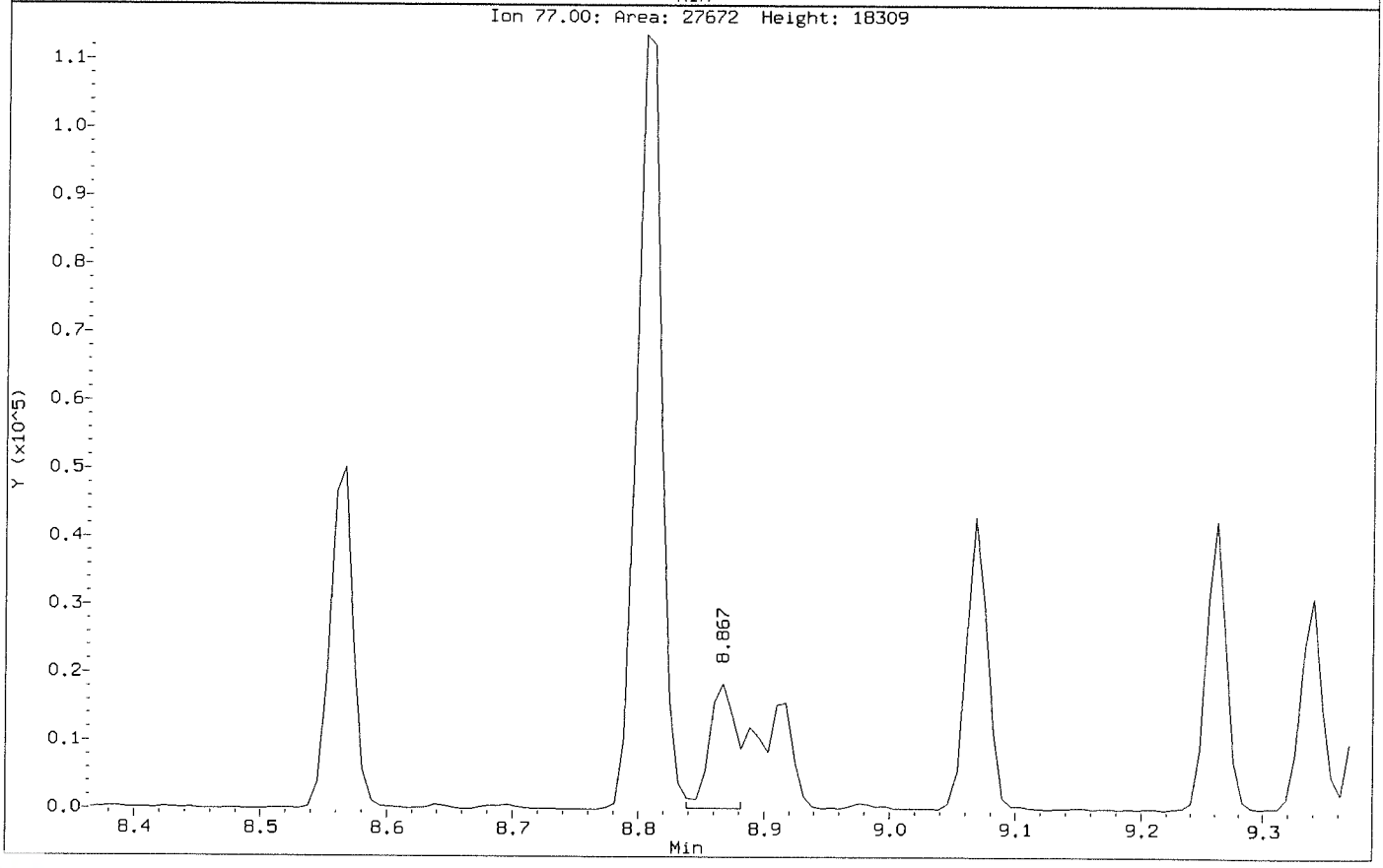




Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110314.D
Injection Date: 03-NOV-2020 16:33
Instrument: voa6.i
Client Sample ID: ICV

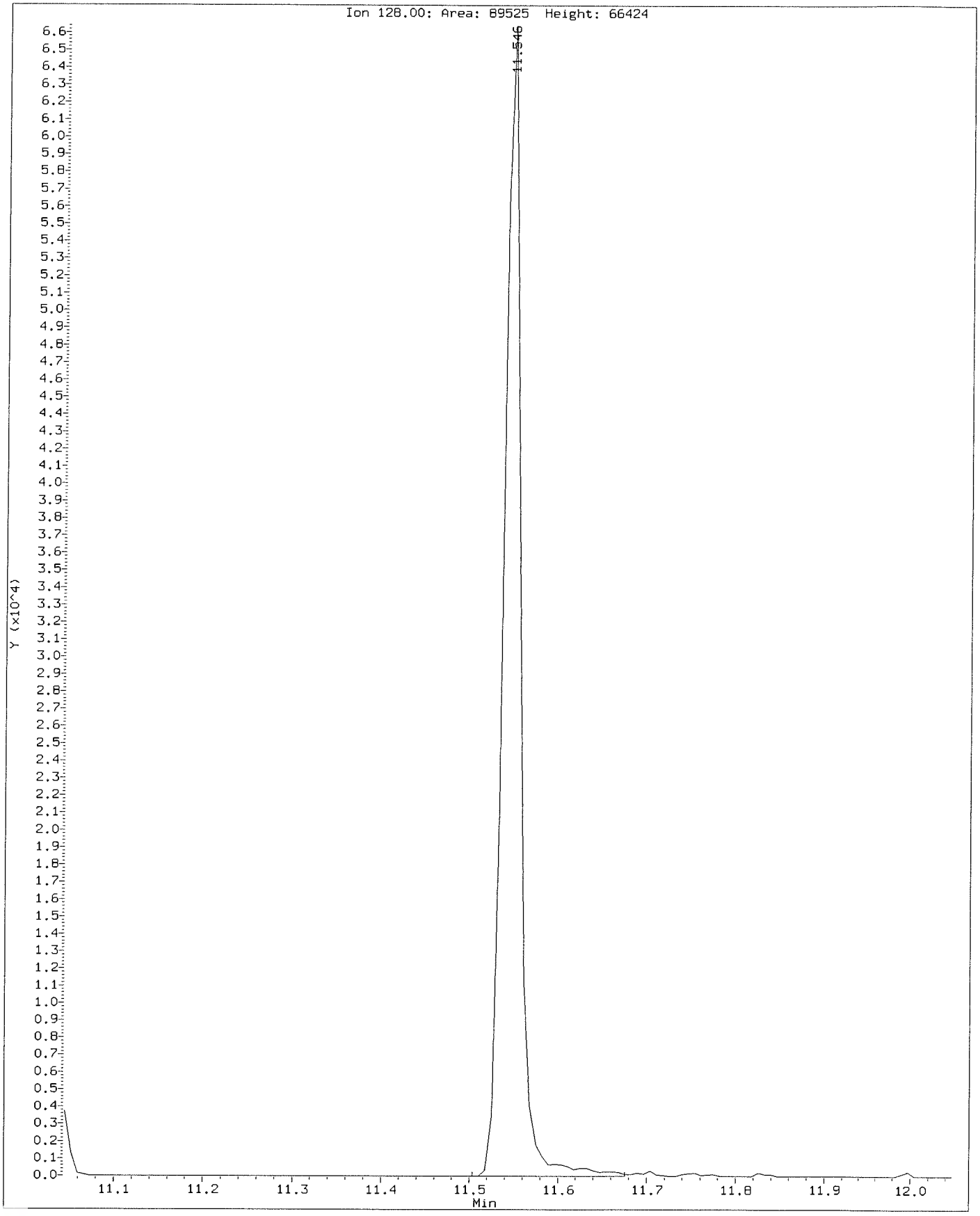
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





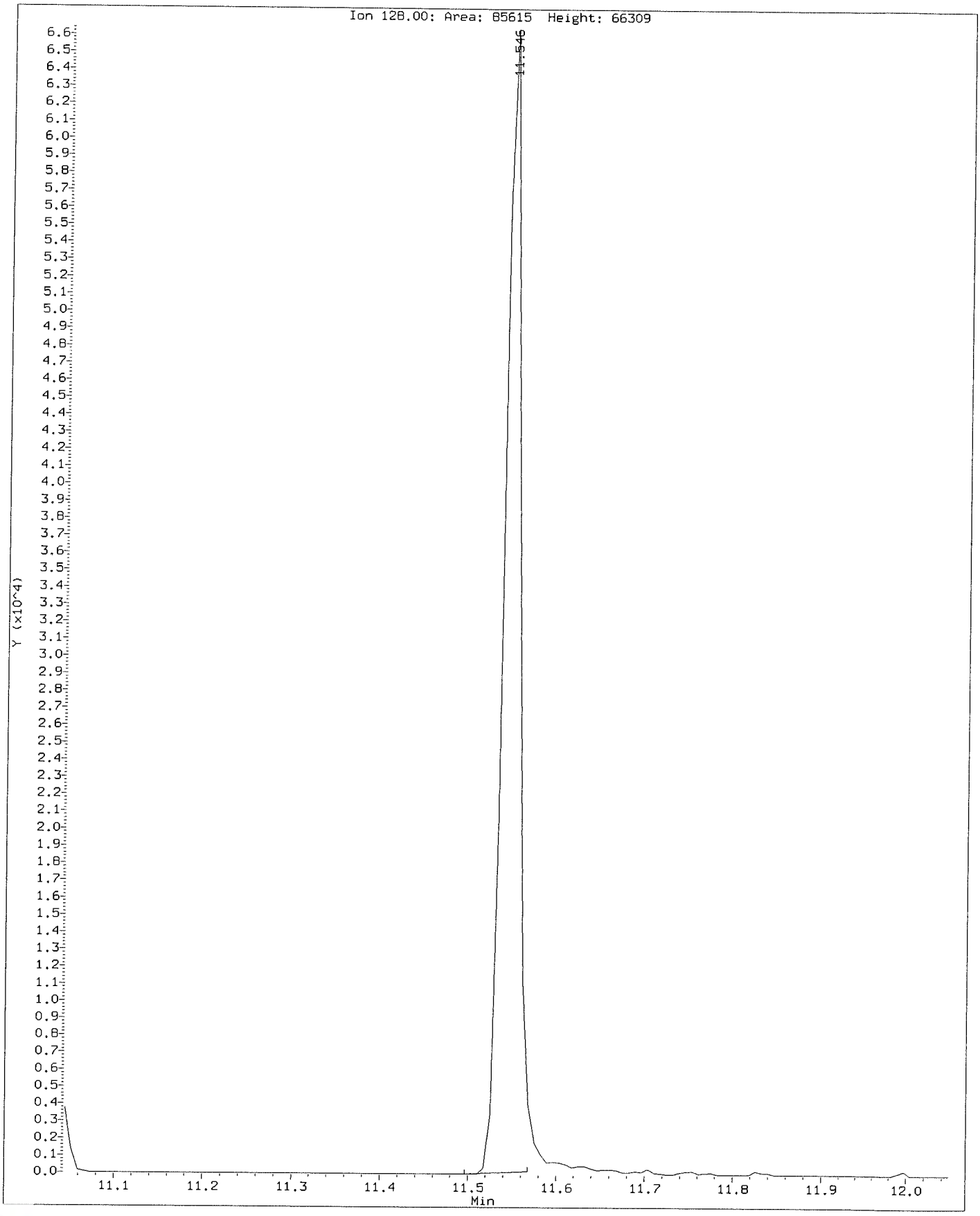
Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\Before\X110314.D
Injection Date: 03-NOV-2020 16:33
Instrument: voa6.i
Client Sample ID: ICV

Compound: Naphthalene
CAS Number: 91-20-3



Data File: \\nahstws005\Target\chem\voa6.i\X201103.b\X110314.D
Injection Date: 03-NOV-2020 16:33
Instrument: voa6.i
Client Sample ID: ICV

Compound: Naphthalene
CAS Number: 91-20-3



MSVOA06 -Logbook

Batch: 42315 **Analyst:** Devak Giga

Date: 11-04-2020 **Reviewer:**

Method: 8260 **Laboratory:** Houston

Comments:

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	11-04-2020 09:32 am	1.00	0.00 mL	0.00 mL	X110401.D	Liquid	Y	NA
2	CCV	CCV	11-04-2020 09:53 am	1.00	5.00 mL	0.00 mL	X110402a.D	Liquid	Y	NA
3	CCV	CCV	11-04-2020 10:14 am	1.00	5.00 mL	0.00 mL	X110403.D	Liquid	Y	NA
4	CCB	SAMP	11-04-2020 10:35 am	1.00	5.00 mL	0.00 mL	X110404.D	Liquid	Y	NA
5	CCB	SAMP	11-04-2020 10:56 am	1.00	5.00 mL	0.00 mL	X110405.D	Liquid	Y	NA
6	VLCSW-201104	LCS	11-04-2020 11:17 am	1.00	5.00 mL	0.00 mL	X110406.D	Liquid	Y	NA
7	BLK	SAMP	11-04-2020 11:38 am	1.00	5.00 mL	0.00 mL	X110407.D	Liquid	Y	NA
8	VBLKW-201104	MBLK	11-04-2020 11:59 am	1.00	5.00 mL	0.00 mL	X110408.D	Liquid	Y	NA
9	HS20101457-02	SAMP	11-04-2020 12:20 pm	1.00	5.00 mL	0.00 mL	X110409.D	Liquid	Y	NA
10	HS20101419-14	SAMP	11-04-2020 12:41 pm	1.00	5.00 mL	0.00 mL	X110410.D	Liquid	Y	NA
11	HS20101419-03	SAMP	11-04-2020 01:02 pm	1.00	5.00 mL	0.00 mL	X110411.D	Liquid	Y	NA
12	HS20101240-07	SAMP	11-04-2020 01:23 pm	1.00	5.00 mL	0.00 mL	X110412.D	Liquid	Y	NA
13	HS20101240-05	SAMP	11-04-2020 01:44 pm	1.00	5.00 mL	0.00 mL	X110413.D	Liquid	Y	NA
14	HS20101240-08	SAMP	11-04-2020 02:06 pm	1.00	5.00 mL	0.00 mL	X110414.D	Liquid	Y	NA
15	HS20101419-01	SAMP	11-04-2020 02:27 pm	10.00	5.00 mL	0.00 mL	X110415.D	Liquid	Y	NA
16	HS20101419-01	SAMP	11-04-2020 02:48 pm	1.00	5.00 mL	0.00 mL	X110416.D	Liquid	Y	NA
17	HS20101419-01MS	MS	11-04-2020 03:09 pm	10.00	5.00 mL	0.00 mL	X110417.D	Liquid	Y	NA
18	HS20101419-01MSD	MSD	11-04-2020 03:30 pm	10.00	5.00 mL	0.00 mL	X110418.D	Liquid	Y	NA
19	HS20101240-08	SAMP	11-04-2020 03:51 pm	25.00	5.00 mL	0.00 mL	X110419.D	Liquid	Y	NA
20	HS20101240-05	SAMP	11-04-2020 04:12 pm	5.00	5.00 mL	0.00 mL	X110420.D	Liquid	Y	NA
21	HS20110121-02	SAMP	11-04-2020 04:33 pm	1.00	5.00 mL	0.00 mL	X110421.D	Liquid	Y	NA
22	HS20110121-01	SAMP	11-04-2020 04:54 pm	1.00	5.00 mL	0.00 mL	X110422.D	Liquid	Y	NA
23	HS20101419-11	SAMP	11-04-2020 05:15 pm	1.00	5.00 mL	0.00 mL	X110423.D	Liquid	Y	NA
24	HS20101419-12	SAMP	11-04-2020 05:36 pm	1.00	5.00 mL	0.00 mL	X110424.D	Liquid	Y	NA
25	HS20101419-13	SAMP	11-04-2020 05:57 pm	1.00	5.00 mL	0.00 mL	X110425.D	Liquid	Y	NA
26	HS20101419-05	SAMP	11-04-2020 06:18 pm	10.00	5.00 mL	0.00 mL	X110426.D	Liquid	Y	NA
27	HS20101419-05	SAMP	11-04-2020 06:39 pm	100.0(	5.00 mL	0.00 mL	X110427.D	Liquid	Y	NA
28	HS20101419-06	SAMP	11-04-2020 07:00 pm	10.00	5.00 mL	0.00 mL	X110428.D	Liquid	Y	NA
29	HS20101419-06	SAMP	11-04-2020 07:22 pm	100.0(	5.00 mL	0.00 mL	X110429.D	Liquid	Y	NA
30	HS20101458-03	SAMP	11-04-2020 07:43 pm	1.00	5.00 mL	0.00 mL	X110430.D	Liquid	Y	NA
31	CCV-END	CCV	11-04-2020 08:04 pm	1.00	5.00 mL	0.00 mL	X110431.D	Liquid	Y	NA
32	BFB	TUNE	11-04-2020 08:24 pm	1.00	0.00 mL	0.00 mL	Y110401.D	Liquid	Y	NA
33	CCV	CCV	11-04-2020 08:45 pm	1.00	5.00 mL	0.00 mL	Y110402a.D	Liquid	Y	NA
34	CCV	CCV	11-04-2020 09:06 pm	1.00	5.00 mL	0.00 mL	Y110403.D	Liquid	Y	NA
35	CCB	SAMP	11-04-2020 09:27 pm	1.00	5.00 mL	0.00 mL	Y110404.D	Liquid	Y	NA
36	VLCSW-201104	LCS	11-04-2020 09:48 pm	1.00	5.00 mL	0.00 mL	Y110405.D	Liquid	Y	NA
37	BLK	SAMP	11-04-2020 10:09 pm	1.00	5.00 mL	0.00 mL	Y110406.D	Liquid	Y	NA
38	VBLKW-201104	MBLK	11-04-2020 10:30 pm	1.00	5.00 mL	0.00 mL	Y110407.D	Liquid	Y	NA
39	HS20110099-01	SAMP	11-04-2020 10:52 pm	1.00	5.00 mL	0.00 mL	Y110408.D	Liquid	Y	NA
40	HS20101491-09	SAMP	11-04-2020 11:13 pm	1.00	5.00 mL	0.00 mL	Y110409.D	Liquid	Y	NA
41	HS20110099-01MS	MS	11-04-2020 11:34 pm	1.00	5.00 mL	0.00 mL	Y110410.D	Liquid	Y	NA

MSVOA06 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	HS20110099-01MSD	MSD	11-04-2020 11:55 pm	1.00	5.00 mL	0.00 mL	Y110411.D	Liquid	Y	NA
43	HS20110103-02	SAMP	11-05-2020 12:16 am	1.00	5.00 mL	0.00 mL	Y110412.D	Liquid	Y	NA
44	MBLK-159216	MBLK	11-05-2020 12:37 am	20.00	5.00 mL	0.00 mL	Y110413.D	Liquid	Y	NA
45	HS20110036-01	SAMP	11-05-2020 12:58 am	20.00	5.00 mL	0.00 mL	Y110414.D	Liquid	Y	NA
46	HS20110086-01	SAMP	11-05-2020 01:19 am	20.00	5.00 mL	0.00 mL	Y110415.D	Liquid	Y	NA
47	HS20110067-01	SAMP	11-05-2020 01:40 am	20.00	5.00 mL	0.00 mL	Y110416.D	Liquid	Y	NA
48	HS20110076-01	SAMP	11-05-2020 02:01 am	100.0(	5.00 mL	0.00 mL	Y110417.D	Liquid	Y	NA
49	HS20110117-02	SAMP	11-05-2020 02:22 am	1.00	5.00 mL	0.00 mL	Y110418.D	Liquid	Y	NA
50	HS20110117-01	SAMP	11-05-2020 02:43 am	1.00	5.00 mL	0.00 mL	Y110419.D	Liquid	Y	NA
51	HS20110098-07	SAMP	11-05-2020 03:04 am	1.00	5.00 mL	0.00 mL	Y110420.D	Liquid	Y	NA
52	HS20110103-03	SAMP	11-05-2020 03:25 am	1.00	5.00 mL	0.00 mL	Y110421.D	Liquid	Y	NA
53	HS20101552-11	SAMP	11-05-2020 03:46 am	1.00	5.00 mL	0.00 mL	Y110422.D	Liquid	Y	NA
54	HS20101552-06	SAMP	11-05-2020 04:07 am	1.00	5.00 mL	0.00 mL	Y110423.D	Liquid	Y	NA
55	HS20101552-07	SAMP	11-05-2020 04:29 am	1.00	5.00 mL	0.00 mL	Y110424.D	Liquid	Y	NA
56	HS20101552-08	SAMP	11-05-2020 04:50 am	1.00	5.00 mL	0.00 mL	Y110425.D	Liquid	Y	NA
57	HS20101552-09	SAMP	11-05-2020 05:11 am	1.00	5.00 mL	0.00 mL	Y110426.D	Liquid	Y	NA
58	HS20101552-10	SAMP	11-05-2020 05:32 am	1.00	5.00 mL	0.00 mL	Y110427.D	Liquid	Y	NA
59	HS20101560-01	SAMP	11-05-2020 05:53 am	1.00	5.00 mL	0.00 mL	Y110428.D	Liquid	Y	NA
60	HS20101560-02	SAMP	11-05-2020 06:14 am	1.00	5.00 mL	0.00 mL	Y110429.D	Liquid	Y	NA
61	HS20101560-03	SAMP	11-05-2020 06:35 am	1.00	5.00 mL	0.00 mL	Y110430.D	Liquid	Y	NA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110121

	CLIENT SAMPLE NO.	SMC1 (DCE)#	SMC2 #	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-201104	105	99	97	101	0
02	VBLKW-201104	86	88	103	95	0
03	HS20101419-01	89	90	96	96	0
04	HS20101419-01	86	88	98	95	0
05	HS20110121-02	85	84	101	90	0
06	HS20110121-01	89	86	98	95	0
07						
08						
09						
10						
11						
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27						
28						

		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-201104

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110121

Lab File ID: X110408 Lab Sample ID: VBLKW-201104

Date Analyzed: 11/04/20 Time Analyzed: 1159

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-201104	VLCSW-201104	X110406	1117
02	HS20101419-0	HS20101419-01M	X110417	1509
03	HS20101419-0	HS20101419-01M	X110418	1530
04	HS20110121-0	HS20110121-02	X110421	1633
05	HS20110121-0	HS20110121-01	X110422	1654
06				
07				
08				
09				
10				
11				
12				
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27				
28				
29				
30				

COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110121

Lab File ID: X110401 BFB Injection Date: 11/04/20

Instrument ID: VOA6 BFB Injection Time: 0932

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	26.3
75	30.0 - 60.0% of mass 95	59.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.9 (1.1)1
174	Greater than 50.0% of mass 95	79.0
175	5.0 - 9.0% of mass 174	6.0 (7.6)1
176	95.0 - 101.0% of mass 174	75.1 (95.1)1
177	5.0 - 9.0% of mass 176	5.3 (7.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X110403	11/04/20	1014
02	VLCSW-201104	VLCSW-201104	X110406	11/04/20	1117
03	VBLKW-201104	VBLKW-201104	X110408	11/04/20	1159
04	HS20101419-0	HS20101419-01M	X110417	11/04/20	1509
05	HS20101419-0	HS20101419-01M	X110418	11/04/20	1530
06	HS20110121-0	HS20110121-02	X110421	11/04/20	1633
07	HS20110121-0	HS20110121-01	X110422	11/04/20	1654
08	CCV-END	CCV-END	X110431	11/04/20	2004
09					
10					
11					
12					
13					
14					
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.: HS20110121

Instrument ID: VOA6 Calibration Date: 11/04/20 Time: 1014

Lab File ID: X110403 Init. Calib. Date(s): 11/03/20 11/03/20

Init. Calib. Times: 1107 1530

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	0.5580000	0.5673236	0.5673236	0.2	-1.67	20.00	AVRG
trans-1,3-Dichloropropene	0.4920000	0.5150426	0.5150426	0.1	-4.68	20.00	AVRG
1,3-Dichlorobenzene	1.4650000	1.4083663	1.4083663	0.6	3.86	20.00	AVRG
2,2-Dichloropropane	1.0340000	1.0196165	1.0196165	0.1	1.39	20.00	AVRG
1,1-Dichloropropene	0.4660000	0.4647247	0.4647247	0.1	0.27	20.00	AVRG
Dibromomethane	0.2530000	0.2566560	0.2566560	0.1	-1.44	20.00	AVRG
1,2-Dibromoethane	0.3750000	0.3715018	0.3715018	0.1	0.93	20.00	AVRG
trans-1,2-Dichloroethene	0.6230000	0.5765989	0.5765989	0.1	7.45	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3560000	0.3572208	0.3572208	0.1	-0.34	20.00	AVRG
1,1,1-Trichloroethane	1.0440000	1.0134622	1.0134622	0.1	2.92	20.00	AVRG
1,1,2,2-Tetrachloroethane	49.951997	50.000000	0.8244290	0.3	0.10	20.00	LINR
1,1,2-Trichloroethane	0.3080000	0.3039144	0.3039144	0.1	1.33	20.00	AVRG
1,1-Dichloroethane	1.2020000	1.1100709	1.1100709	0.2	7.65	20.00	AVRG
1,1-Dichloroethene	0.9430000	0.8875220	0.8875220	0.1	5.88	20.00	AVRG
Trichloroethene	0.3330000	0.3363690	0.3363690	0.2	-1.01	20.00	AVRG
1,2,3-Trichlorobenzene	54.094867	50.000000	0.2325127	0.01	-8.19	20.00	LINR
Trichlorofluoromethane	1.8840000	1.7350909	1.7350909	0.1	7.90	20.00	AVRG
1,2,4-Trichlorobenzene	50.451567	50.000000	0.4052828	0.1	-0.90	20.00	LINR
1,2,4-Trimethylbenzene	2.7970000	2.8423984	2.8423984	0.1	-1.62	20.00	AVRG
Tetrachloroethene	0.2750000	0.2855543	0.2855543	0.2	-3.84	20.00	AVRG
1,2-Dichlorobenzene	1.3800000	1.3489395	1.3489395	0.4	2.25	20.00	AVRG
1,2-Dichloroethane	0.5390000	0.5278287	0.5278287	0.1	2.07	20.00	AVRG
1,2-Dichloropropane	0.3700000	0.3489042	0.3489042	0.1	5.70	20.00	AVRG
1,3,5-Trimethylbenzene	2.8530000	2.8788856	2.8788856	0.1	-0.91	20.00	AVRG
1,3-Dichloropropane	0.6120000	0.6058546	0.6058546	0.1	1.00	20.00	AVRG
1,4-Dichlorobenzene	1.5260000	1.4565893	1.4565893	0.4	4.55	20.00	AVRG
Toluene	1.8300000	1.6025807	1.6025807	0.4	12.43	20.00	AVRG
2-Butanone	0.2320000	0.2424521	0.2424521	0.1	-4.50	20.00	AVRG
2-Chlorotoluene	2.3480000	2.2141361	2.2141361	0.1	5.70	20.00	AVRG
2-Hexanone	97.569336	100.00000	0.3293925	0.1	2.43	20.00	LINR
4-Chlorotoluene	2.9660000	2.8690282	2.8690282	0.1	3.27	20.00	AVRG
tert-Butylbenzene	48.828696	50.000000	2.2207853	0.1	2.34	20.00	LINR
4-Methyl-2-Pentanone	0.3800000	0.3854190	0.3854190	0.1	-1.43	20.00	AVRG
Acetone	115.33304	100.00000	0.3138302	0.1	-15.33	20.00	LINR
Benzene	1.3960000	1.3407602	1.3407602	0.5	3.96	20.00	AVRG
Bromobenzene	0.8800000	0.8110642	0.8110642	0.1	7.83	20.00	AVRG
Bromochloromethane	0.3440000	0.3305796	0.3305796	0.1	3.90	20.00	AVRG
Bromodichloromethane	0.5140000	0.5057325	0.5057325	0.2	1.61	20.00	AVRG
Bromoform	46.791810	50.000000	0.2309440	0.1	6.42	20.00	LINR
Bromomethane	0.9300000	0.8108231	0.8108231	0.1	12.81	20.00	AVRG
Carbon Disulfide	1.7530000	1.6258835	1.6258835	0.1	7.25	20.00	AVRG
Carbon Tetrachloride	0.4480000	0.4531711	0.4531711	0.1	-1.15	20.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2011012

Instrument ID: VOA6 Calibration Date: 11/04/20 Time: 1014

Lab File ID: X110403 Init. Calib. Date(s): 11/03/20 11/03/20

Init. Calib. Times: 1107 1530

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	1.0680000	1.0208493	1.0208493	0.5	4.41	20.00	AVRG
Chloroethane	0.7880000	0.6710207	0.6710207	0.1	14.84	20.00	AVRG
Chloroform	1.2790000	1.1985318	1.1985318	0.2	6.29	20.00	AVRG
Chloromethane	46.562858	50.000000	0.6585320	0.1	6.87	20.00	LINR
cis-1,2-Dichloroethene	0.7330000	0.6844428	0.6844428	0.1	6.62	20.00	AVRG
Dibromochloromethane	0.3700000	0.3929151	0.3929151	0.1	-6.19	20.00	AVRG
Dichlorodifluoromethane	0.6470000	0.6682136	0.6682136	0.1	-3.28	20.00	AVRG
Ethylbenzene	0.5420000	0.5270108	0.5270108	0.1	2.76	20.00	AVRG
Hexachlorobutadiene	53.202869	50.000000	0.2865537	0.1	-6.40	20.00	LINR
Isopropylbenzene	48.324001	50.000000	1.5975125	0.1	3.35	20.00	LINR
m,p-Xylenes	0.6490000	0.7007962	0.7007962	0.1	-7.98	20.00	AVRG
Methylene Chloride	0.6860000	0.6063704	0.6063704	0.1	11.61	20.00	AVRG
n-Butylbenzene	47.649881	50.000000	2.8833073	0.5	4.70	20.00	LINR
n-Propylbenzene	3.9810000	4.0004239	4.0004239	0.1	-0.49	20.00	AVRG
Naphthalene	54.468916	50.000000	0.6290934	0.2	-8.94	20.00	LINR
o-Xylene	0.6470000	0.6631012	0.6631012	0.3	-2.49	20.00	AVRG
sec-Butylbenzene	49.151749	50.000000	3.3664849	0.1	1.70	20.00	LINR
Styrene	1.0850000	1.1590650	1.1590650	0.3	-6.83	20.00	AVRG
Vinyl Chloride	1.1050000	1.0459874	1.0459874	0.1	5.34	20.00	AVRG
1,2,3-Trichloropropane	0.7020000	0.6998404	0.6998404	0.1	0.31	20.00	AVRG
p-Isopropyltoluene	2.7000000	2.8673826	2.8673826	0.1	-6.20	20.00	AVRG
1,2-Dibromo-3-Chloropropane	50.198884	50.000000	5.57e-002	0.05	-0.40	20.00	LINR
1,2-Dichloroethane-d4	50.760662	50.000000	0.8054489	0.1	-1.52	20.00	2RDR
Dibromofluoromethane	0.6730000	0.6385955	0.6385955	0.1	5.11	20.00	AVRG
Toluene-d8	1.3360000	1.2729614	1.2729614	0.1	4.72	20.00	AVRG
4-Bromofluorobenzene	48.071496	50.000000	0.4261652	0.1	3.86	20.00	2RDR

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110121

Instrument ID: VOA6 Calibration Date: 11/04/20 Time: 2004

Lab File ID: X110431 Init. Calib. Date(s): 11/03/20 11/03/20

Init. Calib. Times: 1107 1530

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	0.5580000	0.5391365	0.5391365	0.2	3.38	50.00	AVRG
trans-1,3-Dichloropropene	0.4920000	0.4882815	0.4882815	0.1	0.76	50.00	AVRG
1,3-Dichlorobenzene	1.4650000	1.2883933	1.2883933	0.6	12.06	50.00	AVRG
2,2-Dichloropropane	1.0340000	0.8329135	0.8329135	0.1	19.45	50.00	AVRG
1,1-Dichloropropene	0.4660000	0.4271012	0.4271012	0.1	8.35	50.00	AVRG
Dibromomethane	0.2530000	0.2405567	0.2405567	0.1	4.92	50.00	AVRG
1,2-Dibromoethane	0.3750000	0.3616792	0.3616792	0.1	3.55	50.00	AVRG
trans-1,2-Dichloroethene	0.6230000	0.5857329	0.5857329	0.1	5.98	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3560000	0.3492019	0.3492019	0.1	1.91	50.00	AVRG
1,1,1-Trichloroethane	1.0440000	0.9758234	0.9758234	0.1	6.53	50.00	AVRG
1,1,2,2-Tetrachloroethane	47.421050	50.000000	0.7831438	0.3	5.16	50.00	LINR
1,1,2-Trichloroethane	0.3080000	0.3039706	0.3039706	0.1	1.31	50.00	AVRG
1,1-Dichloroethane	1.2020000	1.0747159	1.0747159	0.2	10.59	50.00	AVRG
1,1-Dichloroethene	0.9430000	0.8262541	0.8262541	0.1	12.38	50.00	AVRG
Trichloroethene	0.3330000	0.3323833	0.3323833	0.2	0.18	50.00	AVRG
1,2,3-Trichlorobenzene	37.745259	50.000000	0.1598623	0.01	24.51	50.00	LINR
Trichlorofluoromethane	1.8840000	1.6066884	1.6066884	0.1	14.72	50.00	AVRG
1,2,4-Trichlorobenzene	40.024956	50.000000	0.3184931	0.1	19.95	50.00	LINR
1,2,4-Trimethylbenzene	2.7970000	2.5622784	2.5622784	0.1	8.39	50.00	AVRG
Tetrachloroethene	0.2750000	0.2520291	0.2520291	0.2	8.35	50.00	AVRG
1,2-Dichlorobenzene	1.3800000	1.2465105	1.2465105	0.4	9.67	50.00	AVRG
1,2-Dichloroethane	0.5390000	0.5046777	0.5046777	0.1	6.37	50.00	AVRG
1,2-Dichloropropane	0.3700000	0.3499142	0.3499142	0.1	5.43	50.00	AVRG
1,3,5-Trimethylbenzene	2.8530000	2.5786297	2.5786297	0.1	9.62	50.00	AVRG
1,3-Dichloropropane	0.6120000	0.5752540	0.5752540	0.1	6.00	50.00	AVRG
1,4-Dichlorobenzene	1.5260000	1.3582971	1.3582971	0.4	10.99	50.00	AVRG
Toluene	1.8300000	1.5670833	1.5670833	0.4	14.37	50.00	AVRG
2-Butanone	0.2320000	0.1970069	0.1970069	0.1	15.08	50.00	AVRG
2-Chlorotoluene	2.3480000	2.0485824	2.0485824	0.1	12.75	50.00	AVRG
2-Hexanone	90.704048	100.00000	0.3052997	0.1	9.30	50.00	LINR
4-Chlorotoluene	2.9660000	2.6623692	2.6623692	0.1	10.24	50.00	AVRG
tert-Butylbenzene	42.301392	50.000000	1.9079363	0.1	15.40	50.00	LINR
4-Methyl-2-Pentanone	0.3800000	0.3574165	0.3574165	0.1	5.94	50.00	AVRG
Acetone	86.633784	100.00000	0.2412342	0.1	13.37	50.00	LINR
Benzene	1.3960000	1.3260016	1.3260016	0.5	5.01	50.00	AVRG
Bromobenzene	0.8800000	0.8063868	0.8063868	0.1	8.36	50.00	AVRG
Bromochloromethane	0.3440000	0.3351357	0.3351357	0.1	2.58	50.00	AVRG
Bromodichloromethane	0.5140000	0.4863865	0.4863865	0.2	5.37	50.00	AVRG
Bromoform	43.007168	50.000000	0.2109333	0.1	13.98	50.00	LINR
Bromomethane	0.9300000	0.7730945	0.7730945	0.1	16.87	50.00	AVRG
Carbon Disulfide	1.7530000	1.6023706	1.6023706	0.1	8.59	50.00	AVRG
Carbon Tetrachloride	0.4480000	0.3924251	0.3924251	0.1	12.40	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.: HS2011012

Instrument ID: VOA6 Calibration Date: 11/04/20 Time: 2004

Lab File ID: X110431 Init. Calib. Date(s): 11/03/20 11/03/20

Init. Calib. Times: 1107 1530

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	1.0680000	0.9486886	0.9486886	0.5	11.17	50.00	AVRG
Chloroethane	0.7880000	1.0647050	1.0647050	0.1	-35.11	50.00	AVRG
Chloroform	1.2790000	1.1827289	1.1827289	0.2	7.53	50.00	AVRG
Chloromethane	47.929130	50.000000	0.6782266	0.1	4.14	50.00	LINR
cis-1,2-Dichloroethene	0.7330000	0.6814405	0.6814405	0.1	7.03	50.00	AVRG
Dibromochloromethane	0.3700000	0.3806205	0.3806205	0.1	-2.87	50.00	AVRG
Dichlorodifluoromethane	0.6470000	0.6196526	0.6196526	0.1	4.23	50.00	AVRG
Ethylbenzene	0.5420000	0.4823795	0.4823795	0.1	11.00	50.00	AVRG
Hexachlorobutadiene	43.119242	50.000000	0.2297574	0.1	13.76	50.00	LINR
Isopropylbenzene	42.148983	50.000000	1.3816972	0.1	15.70	50.00	LINR
m,p-Xylenes	0.6490000	0.6322574	0.6322574	0.1	2.58	50.00	AVRG
Methylene Chloride	0.6860000	0.5967499	0.5967499	0.1	13.01	50.00	AVRG
n-Butylbenzene	40.919936	50.000000	2.4427528	0.5	18.16	50.00	LINR
n-Propylbenzene	3.9810000	3.5447478	3.5447478	0.1	10.96	50.00	AVRG
Naphthalene	37.412290	50.000000	0.4240431	0.2	25.18	50.00	LINR
o-Xylene	0.6470000	0.6086381	0.6086381	0.3	5.93	50.00	AVRG
sec-Butylbenzene	41.116258	50.000000	2.7848820	0.1	17.77	50.00	LINR
Styrene	1.0850000	1.0712250	1.0712250	0.3	1.27	50.00	AVRG
Vinyl Chloride	1.1050000	0.9404126	0.9404126	0.1	14.89	50.00	AVRG
1,2,3-Trichloropropane	0.7020000	0.6850445	0.6850445	0.1	2.42	50.00	AVRG
p-Isopropyltoluene	2.7000000	2.4419405	2.4419405	0.1	9.56	50.00	AVRG
1,2-Dibromo-3-Chloropropane	48.225672	50.000000	5.36e-002	0.05	3.55	50.00	LINR
1,2-Dichloroethane-d4	52.361682	50.000000	0.8320087	0.1	-4.72	50.00	2RDR
Dibromofluoromethane	0.6730000	0.6833949	0.6833949	0.1	-1.54	50.00	AVRG
Toluene-d8	1.3360000	1.3386817	1.3386817	0.1	-0.20	50.00	AVRG
4-Bromofluorobenzene	49.958733	50.000000	0.4435663	0.1	0.08	50.00	2RDR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110121

Lab File ID (Standard): X110403 Date Analyzed: 11/04/20

Instrument ID: VOA6 Time Analyzed: 1014

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	244661	7.67	270997	4.97	120316	9.67
	UPPER LIMIT	489322	8.17	541994	5.47	240632	10.17
	LOWER LIMIT	122331	7.17	135499	4.47	60158	9.17
	CLIENT SAMPLE NO.						
01	VLCSW-201104	242248	7.67	257836	4.97	109702	9.66
02	VBLKW-201104	200946	7.67	224718	4.97	85419	9.67
03	HS20101419-01	213164	7.67	232292	4.97	95718	9.66
04	HS20101419-01	212874	7.67	231899	4.97	90467	9.66
05	HS20110121-02	192846	7.67	216948	4.97	78275	9.67
06	HS20110121-01	201368	7.67	222365	4.97	84736	9.66
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS-HOUSTON Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20110121

Lab File ID (Standard): X110403 Date Analyzed: 11/04/20

Instrument ID: VOA6 Time Analyzed: 1014

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	149976	4.18				
	UPPER LIMIT	299952	4.68				
	LOWER LIMIT	74988	3.68				
	CLIENT SAMPLE NO.						
01	VLCSW-201104	132403	4.18				
02	VBLKW-201104	129383	4.18				
03	HS20101419-01	129585	4.19				
04	HS20101419-01	132756	4.19				
05	HS20110121-02	128199	4.18				
06	HS20110121-01	127849	4.19				
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\X201104.b\X110401.D

Date : 04-NOV-2020 09:32

Client ID: BFB

Instrument: voa6.i

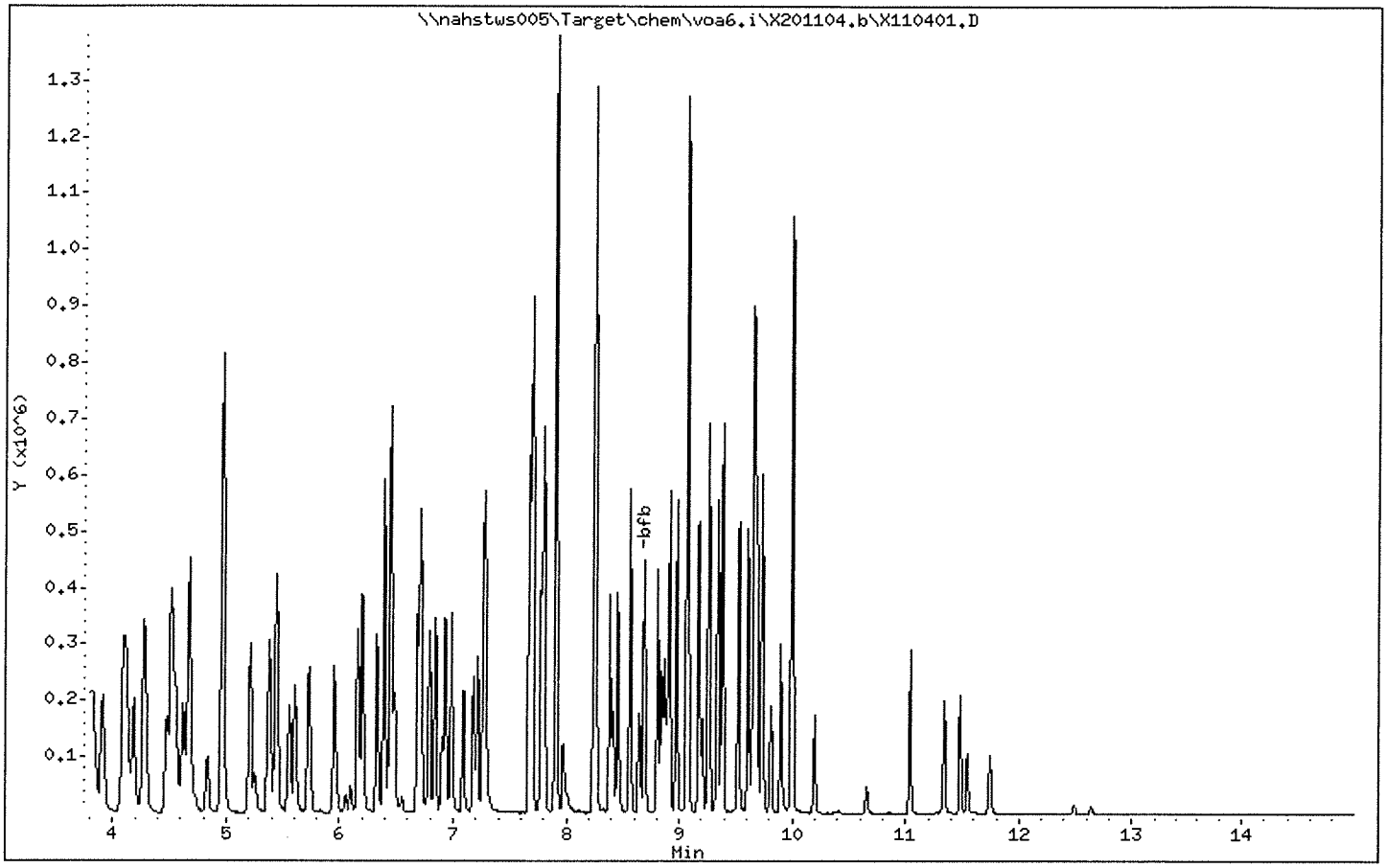
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110401.D

Date : 04-NOV-2020 09:32

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

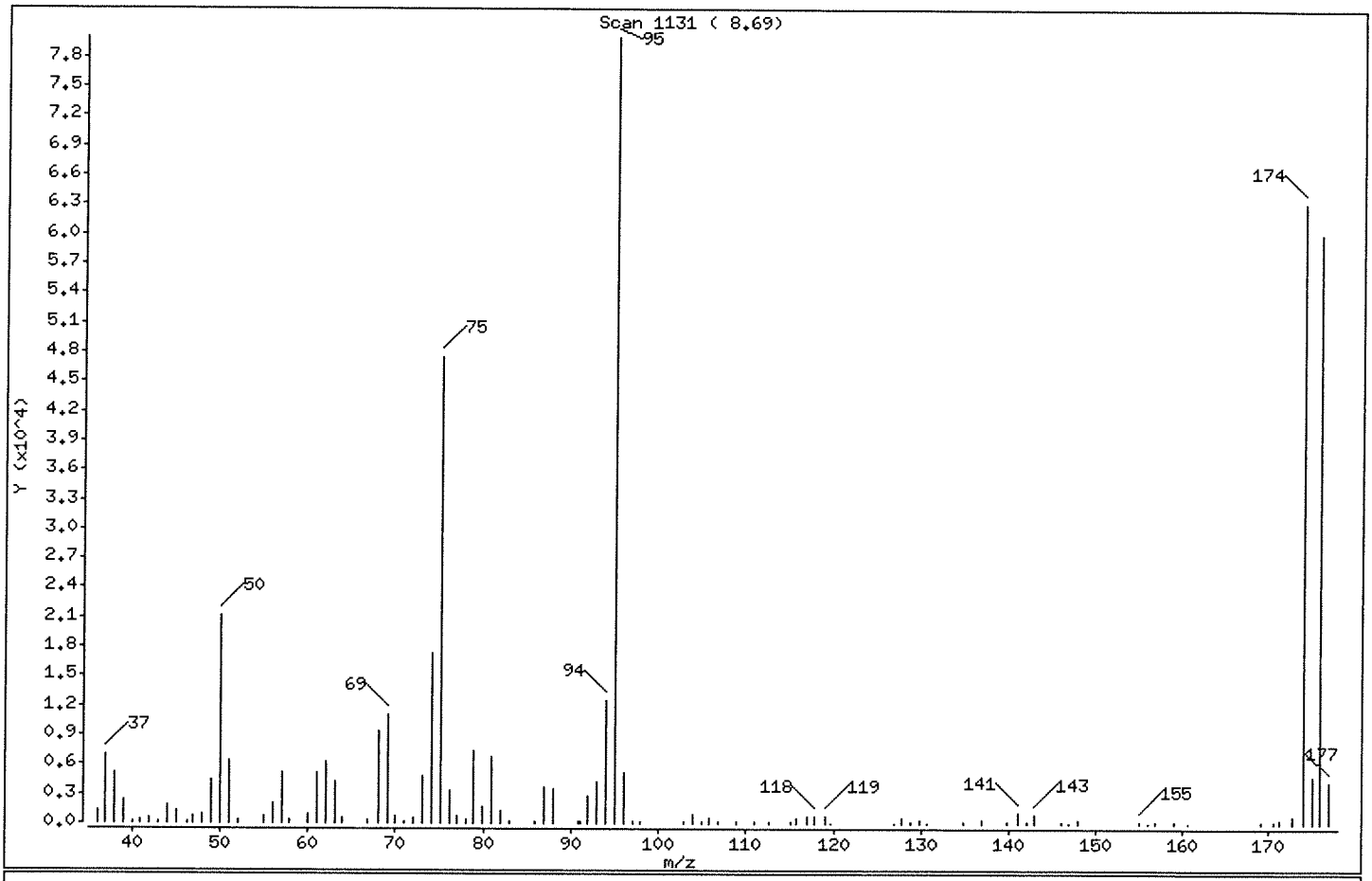
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	26.33
75	30.00 - 60.00% of mass 95	59.36
96	5.00 - 9.00% of mass 95	6.45
173	Less than 2.00% of mass 174	0.90 (1.14)
174	Greater than 50.00% of mass 95	78.99
175	5.00 - 9.00% of mass 174	6.02 (7.62)
176	95.00 - 101.00% of mass 174	75.11 (95.09)
177	5.00 - 9.00% of mass 176	5.32 (7.08)

Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110401.D

Date : 04-NOV-2020 09:32

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X110401.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 96

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	1378	63.90	607	94.00	12475	136.90	339
37.00	6985	66.90	457	95.00	79976	139.70	120
38.00	5085	68.00	9290	96.00	5158	141.00	1136
39.00	2362	69.00	11010	97.00	129	142.00	147
40.10	271	70.00	691	97.90	124	142.80	1010
41.00	313	71.00	184	102.80	96	145.90	156
42.00	568	71.90	520	103.90	937	146.80	85
43.00	254	73.00	4835	104.90	211	147.90	276
44.00	1824	74.00	17256	105.80	539	154.80	203
45.00	1201	75.00	47472	106.80	193	156.00	68
46.20	230	76.10	3234	108.80	94	156.70	131
46.90	722	77.00	666	110.90	169	159.00	99
47.90	830	78.10	363	112.70	201	160.80	58
49.00	4423	78.90	7351	115.10	139	169.10	93
50.00	21056	79.90	1608	115.70	638	170.70	134
51.00	6507	80.90	6822	117.00	688	171.30	428
52.10	449	81.90	1205	117.70	796	172.80	720
54.90	677	82.90	137	119.00	685	173.90	63176
56.00	2086	85.90	208	119.70	84	174.90	4816
57.00	5236	86.90	3616	126.90	56	175.90	60072
57.90	322	87.90	3442	127.80	540	176.90	4256
59.90	898	90.80	211	128.80	173		
61.00	5175	91.10	227	129.90	324		
62.00	6179	91.90	2846	130.70	83		
63.00	4167	92.90	4178	134.80	239		

Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110403.D Page 1
Report Date: 07-Nov-2020 13:29

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201104.b\X110403.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 04-NOV-2020 10:14
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201104.b\8260W.m
Meth Date : 07-Nov-2020 13:29 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:27 Cal File: X110308.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

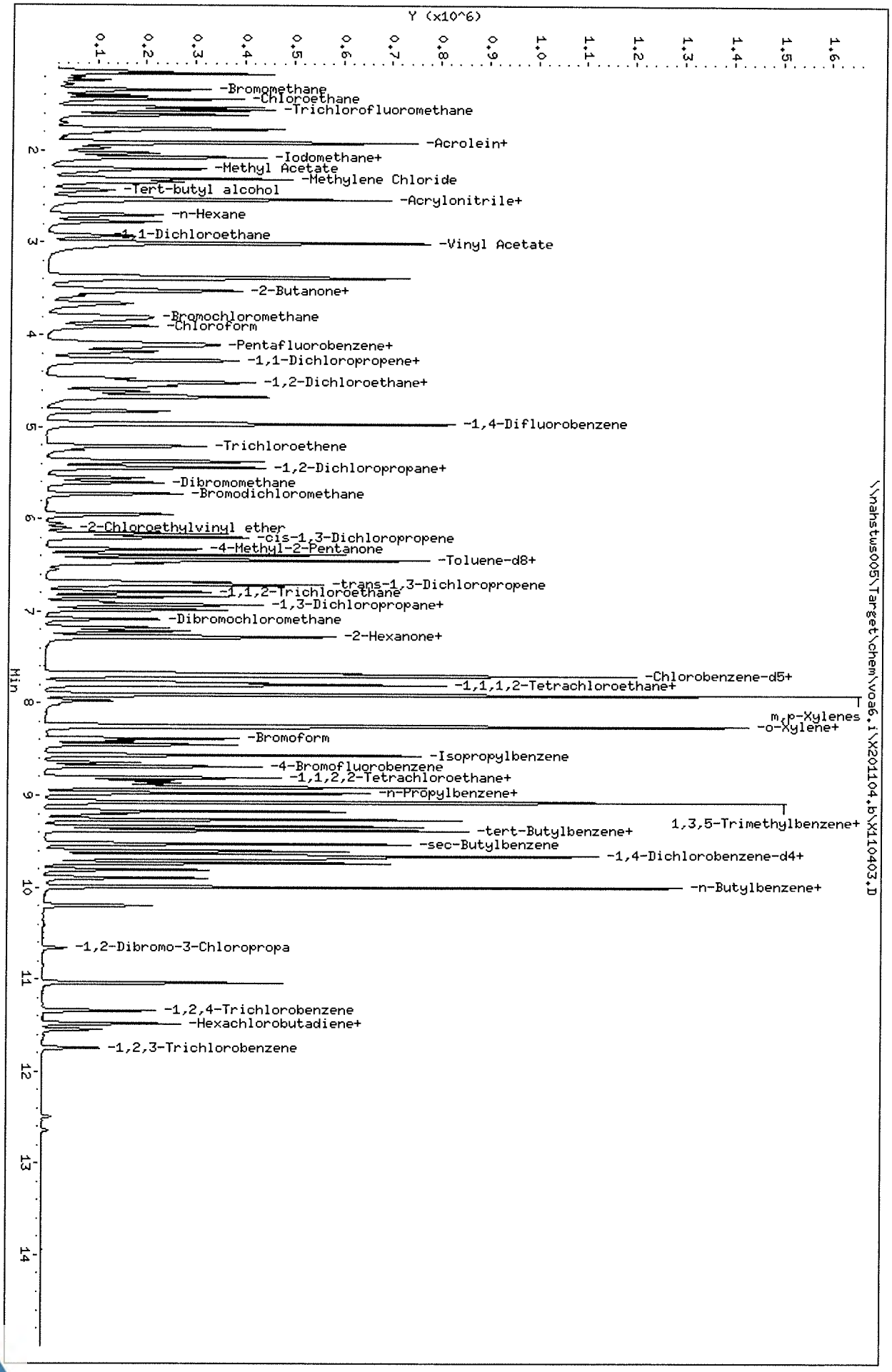
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	149976	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	270997	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	244661	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	120316	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	95774	50.0000	47.41
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	120798	50.0000	50.76
$	48 Toluene-d8	98	6.388	6.388	(0.833)	311444	50.0000	47.65
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	104266	50.0000	48.07
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	87398	50.0000	50.07
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	151995	50.0000	48.53
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	99192	50.0000	49.95
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	74356	50.0000	49.27
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	166484	50.0000	46.18
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	133107	50.0000	47.04
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	125939	50.0000	49.83
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	27975	50.0000	54.09
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	84202	50.0000	49.84(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	48762	50.0000	50.45
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	341986	50.0000	50.80
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	6705	50.0000	50.19
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	90892	50.0000	49.53
	88 1,2-Dichlorobenzene	146	9.991	9.991	(1.033)	162299	50.0000	48.87

Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110403.D Page 2
Report Date: 07-Nov-2020 13:29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	143040	50.0000	48.95
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	94552	50.0000	47.14
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	346376	50.0000	50.45
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	169449	50.0000	48.05
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	148229	50.0000	49.44
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	175251	50.0000	47.72
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	152918	50.0000	49.27
24	2-Butanone	43	3.580	3.580	(0.856)	72724	100.000	104.31
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	266396	50.0000	47.14
52	2-Hexanone	43	7.212	7.212	(0.940)	161179	100.000	97.56
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	345190	50.0000	48.36
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	344992	50.0000	53.08
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	188594	100.000	101.46
10	Acetone	43	1.976	1.976	(0.473)	94134	100.000	115.33
37	Benzene	78	4.519	4.519	(0.909)	363342	50.0000	48.00
74	Bromobenzene	156	8.809	8.809	(0.911)	97584	50.0000	46.09
29	Bromochloromethane	128	3.803	3.803	(0.909)	49579	50.0000	47.99
39	Bromodichloromethane	83	5.729	5.729	(1.153)	137052	50.0000	49.22
66	Bromoform	173	8.416	8.416	(1.097)	56503	50.0000	46.79
6	Bromomethane	94	1.338	1.338	(0.320)	121604	50.0000	43.56
19	Carbon Disulfide	76	2.069	2.069	(0.495)	487687	100.000	92.75
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	122808	50.0000	50.61
59	Chlorobenzene	112	7.699	7.699	(1.004)	249762	50.0000	47.76
7	Chloroethane	64	1.403	1.403	(0.336)	100637	50.0000	42.58
28	Chloroform	83	3.910	3.910	(0.935)	179751	50.0000	46.83
3	Chloromethane	50	1.081	1.081	(0.258)	98764	50.0000	46.56
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	102650	50.0000	46.67
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	153743	50.0000	50.85
55	Dibromochloromethane	129	7.176	7.176	(0.936)	96131	50.0000	53.16
44	Dibromomethane	93	5.557	5.557	(1.118)	69553	50.0000	50.77
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	100216	50.0000	51.60
61	Ethylbenzene	106	7.799	7.799	(1.017)	128939	50.0000	48.61
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	34477	50.0000	53.20
67	Isopropylbenzene	105	8.566	8.566	(1.117)	390849	50.0000	48.32
62	m,p-Xylenes	106	7.907	7.907	(1.031)	342915	100.000	107.93
17	Methylene Chloride	84	2.305	2.305	(0.551)	90941	50.0000	44.16
87	n-Butylbenzene	91	9.999	9.999	(1.034)	346908	50.0000	47.64
73	n-Propylbenzene	91	8.917	8.917	(0.922)	481315	50.0000	50.24
92	Naphthalene	128	11.546	11.546	(1.194)	75690	50.0000	54.46
63	o-Xylene	106	8.244	8.244	(1.075)	162235	50.0000	51.24
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	405042	50.0000	49.15
64	Styrene	104	8.258	8.258	(1.077)	283578	50.0000	53.41
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	267196	50.0000	48.82
56	Tetrachloroethene	164	6.933	6.933	(0.904)	69864	50.0000	51.87
50	Toluene	91	6.446	6.446	(0.840)	392089	50.0000	43.79
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	86476	50.0000	46.28
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	139575	50.0000	52.32
38	Trichloroethene	130	5.214	5.214	(1.049)	91155	50.0000	50.47
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	260222	50.0000	46.03
5	Vinyl Chloride	62	1.145	1.145	(0.274)	156873	50.0000	47.33

QC Flag Legend

M - Compound response manually integrated.

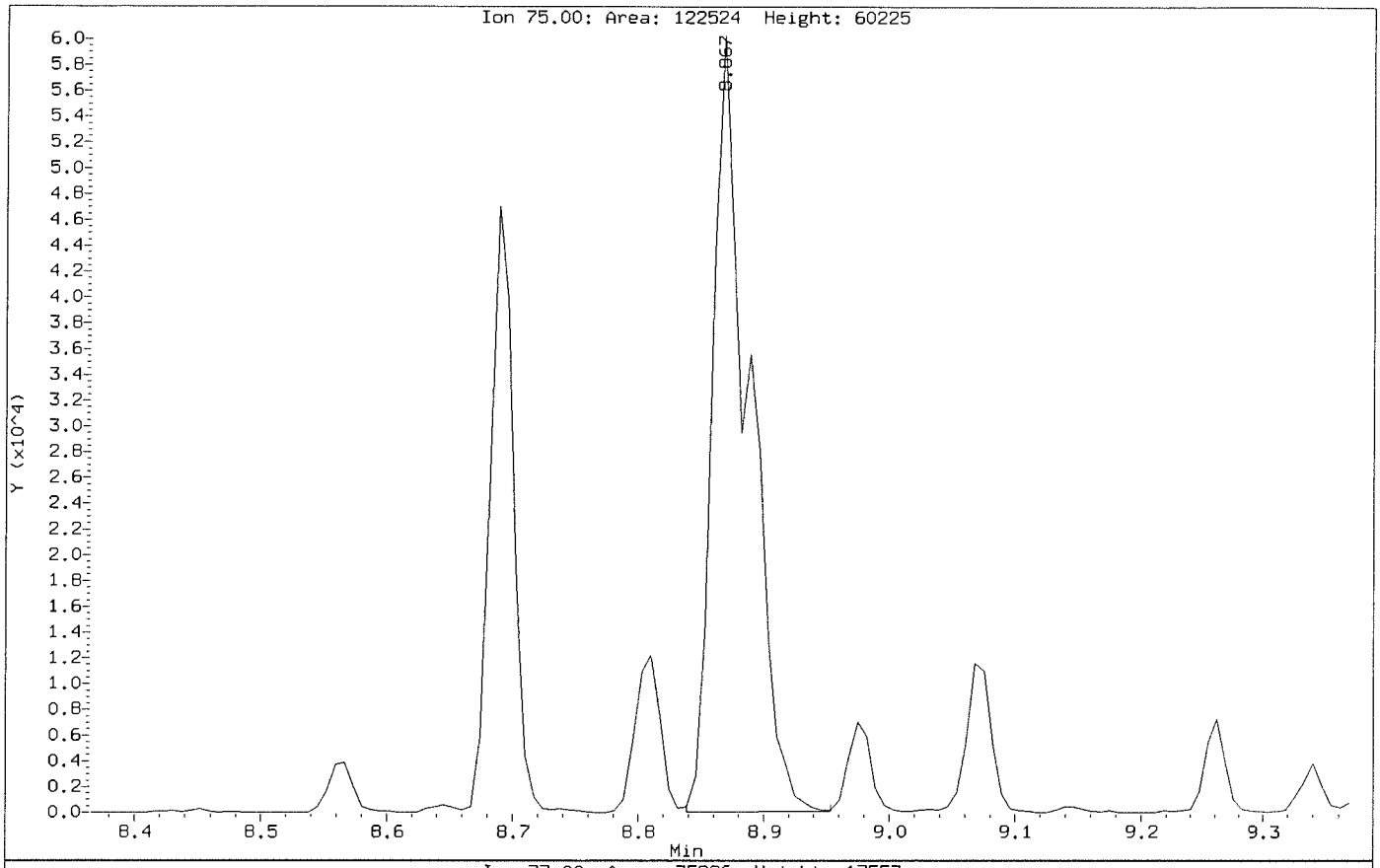


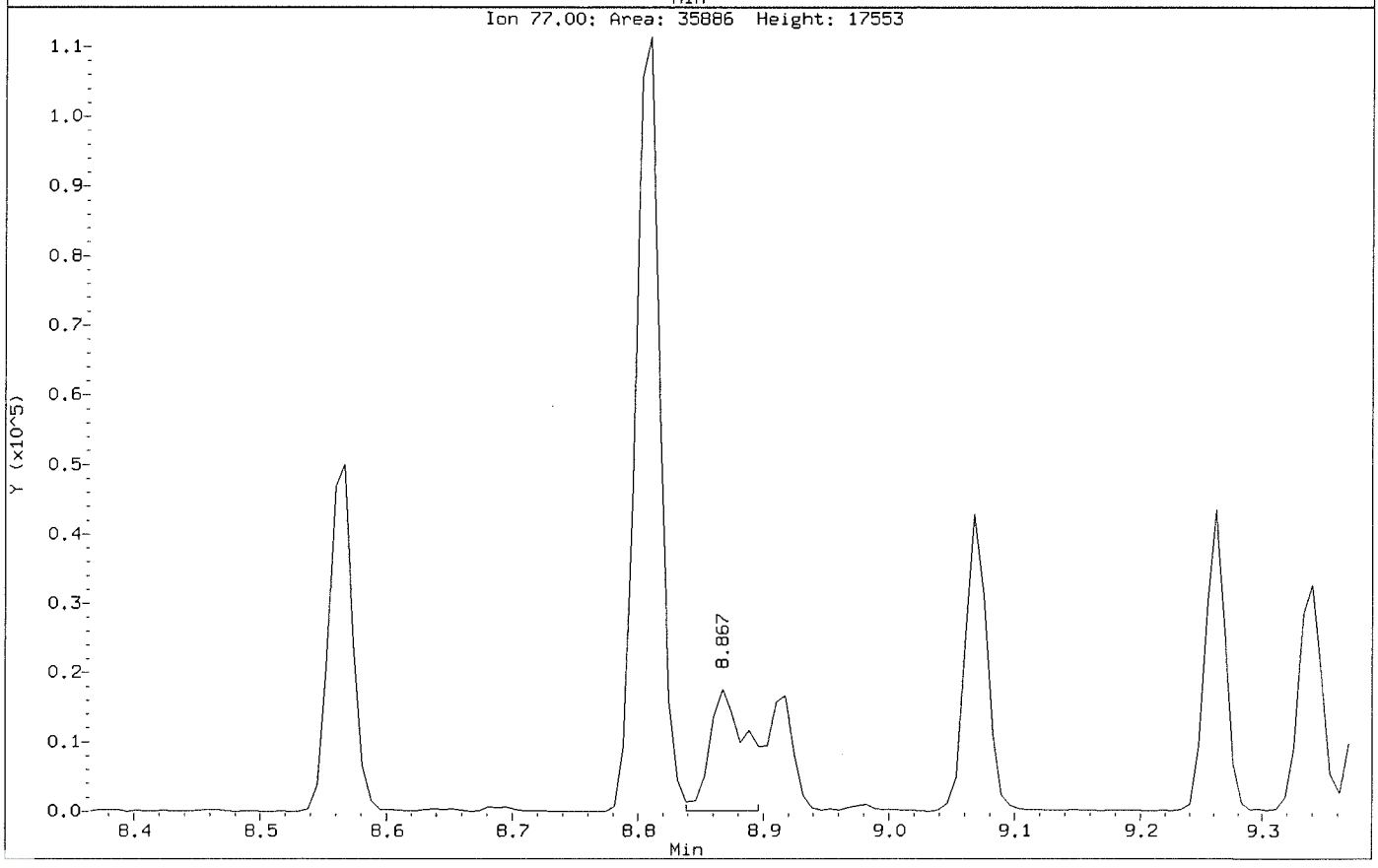
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Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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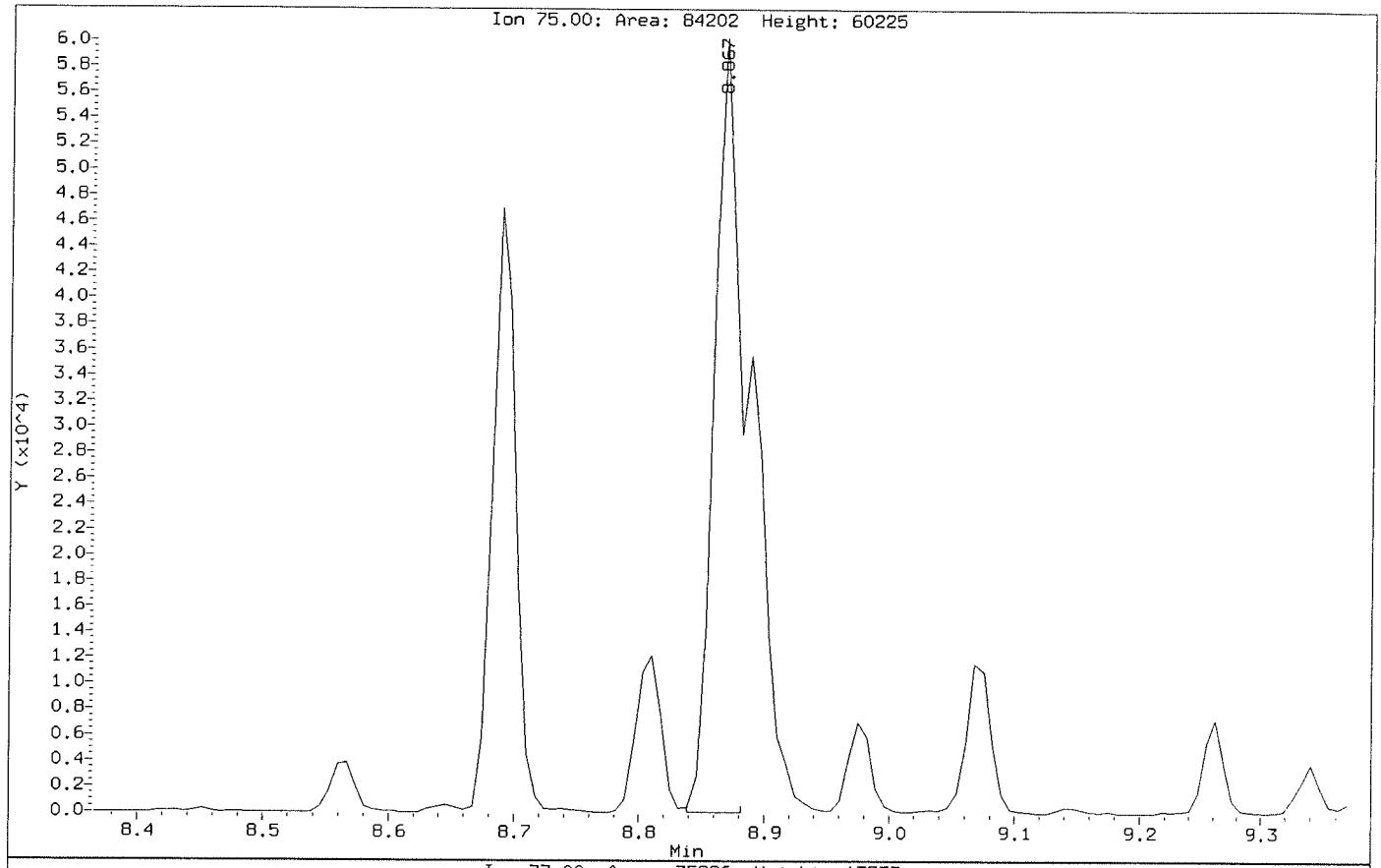
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CAS Number: 96-18-4

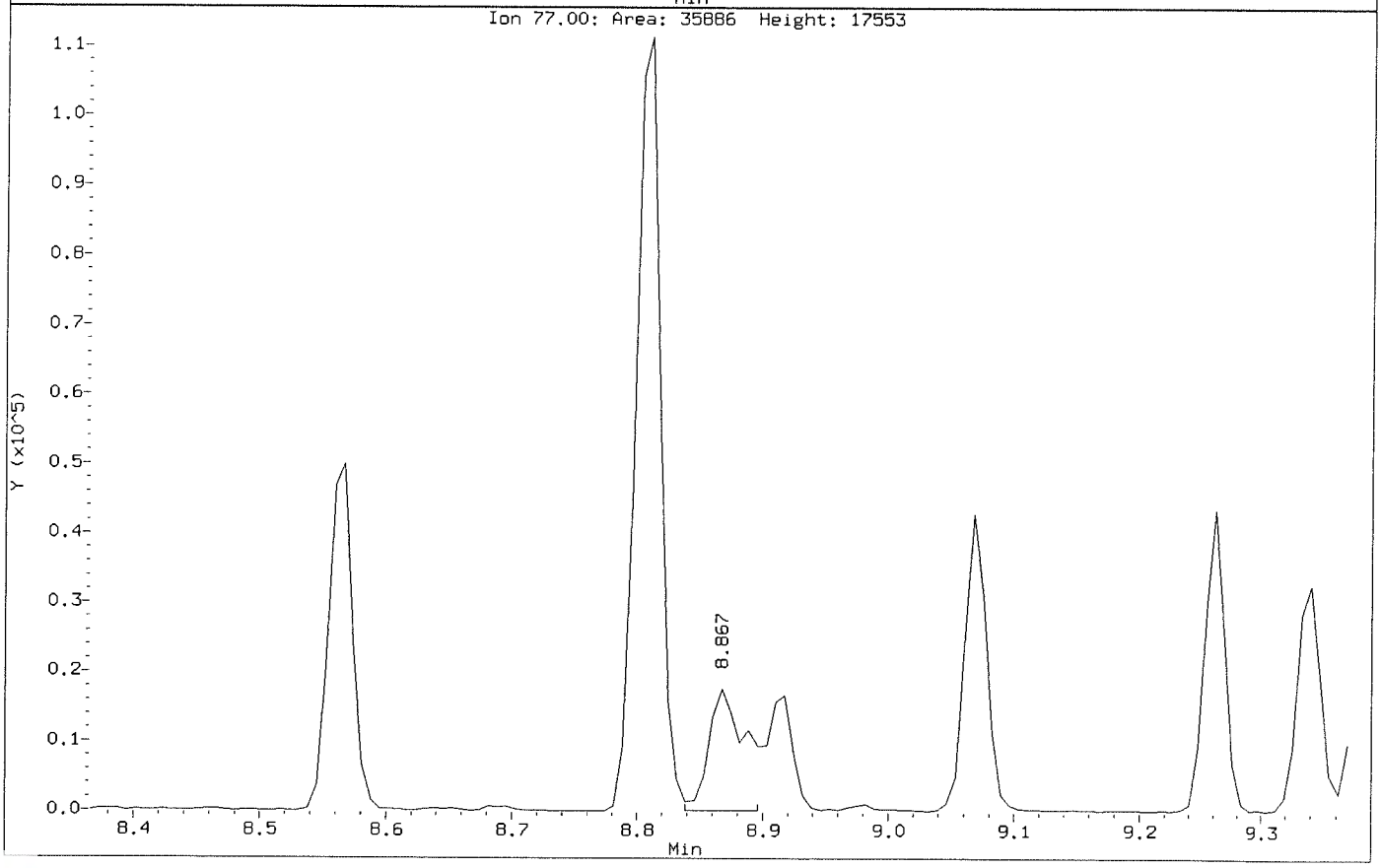




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Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110406.D Page 1
Report Date: 07-Nov-2020 13:29

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201104.b\X110406.D
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Inj Date : 04-NOV-2020 11:17
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-201104;VLCSW-201104;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 07-Nov-2020 13:29 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:27 Cal File: X110308.D
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

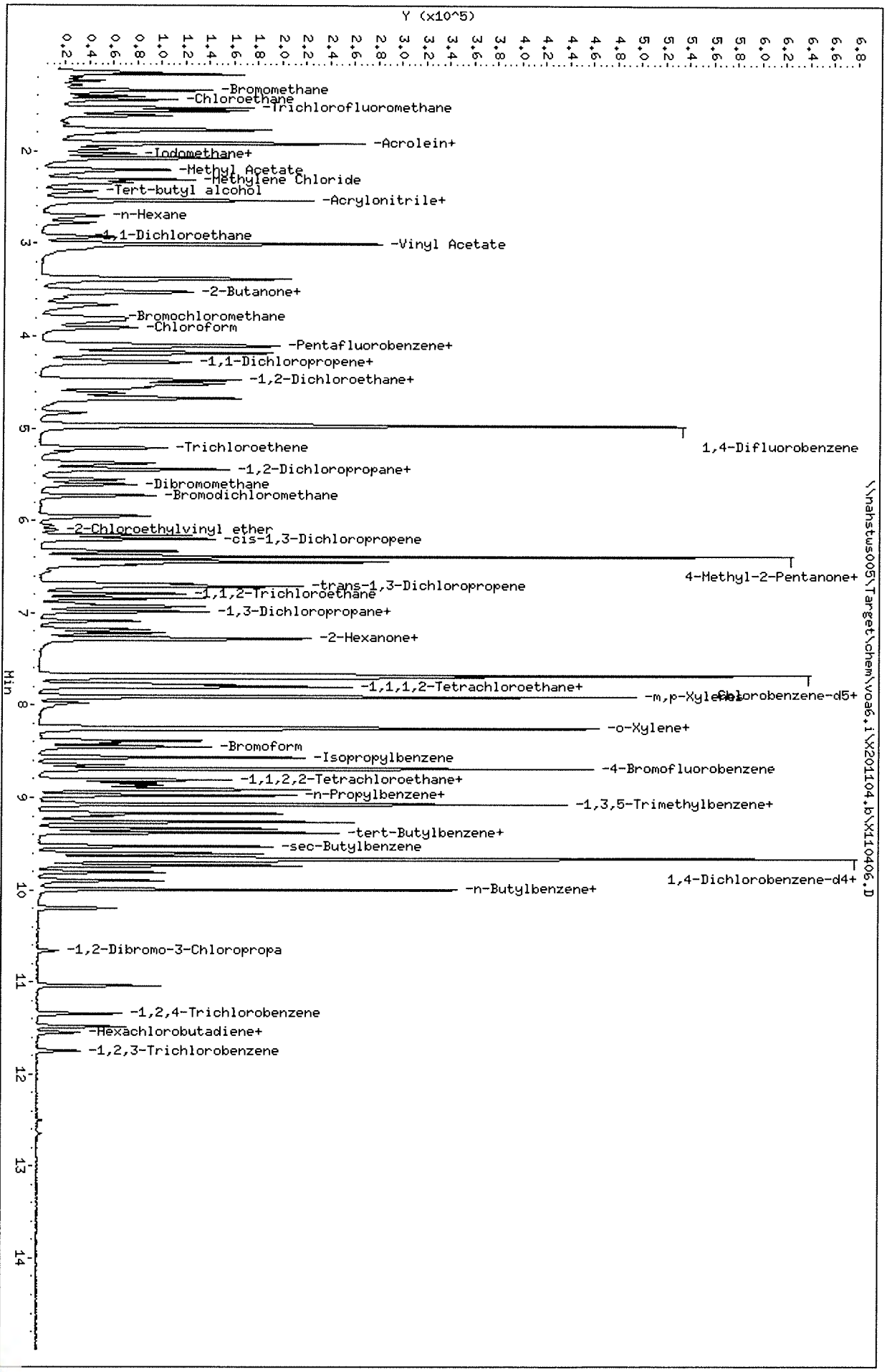
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	132403	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	257836	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	242248	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	109702	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	87976	49.3391	49.33
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	110965	52.7272	52.72
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	313952	48.5210	48.52
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	108776	50.5500	50.55
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	29484	17.0603	17.06
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	47542	17.1969	17.19
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	36761	19.9541	19.95
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	28046	18.7706	18.77
22 1,1-Dichloroethane	63	2.929	2.921	(0.700)	58692	18.4417	18.44
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	48945	19.5932	19.59
32 1,1-Dichloropropene	75	4.282	4.290	(0.862)	40663	16.9117	16.91
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	7310	16.7649	16.76
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	31132	20.2103	20.21(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	15601	18.8472	18.84
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	99132	16.1533	16.15
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	2228	18.0787	18.07
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	34060	18.7490	18.74
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	50709	16.7481	16.74

Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110406.D Page 2
Report Date: 07-Nov-2020 13:29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	49241	17.7117	17.71
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	33065	17.3291	17.32
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	97742	15.6158	15.61
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	55442	17.2443	17.24
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	54602	18.3967	18.39
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	55798	16.6668	16.66
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	48971	17.8752	17.87
24	2-Butanone	43	3.580	3.580	(0.856)	22698	36.8775	36.87
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	86057	16.7020	16.70
52	2-Hexanone	43	7.212	7.212	(0.940)	56752	37.0865	37.08
77	4-Chlorotoluene	91	9.074	9.075	(0.939)	104469	16.0529	16.05
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	93425	15.7675	15.76(M)
45	4-Methyl-2-Pentanone	43	6.331	6.324	(0.825)	65568	35.6282	35.62
10	Acetone	43	1.976	1.976	(0.473)	39691	50.5217	50.52
37	Benzene	78	4.512	4.519	(0.908)	126637	17.5840	17.58
74	Bromobenzene	156	8.809	8.809	(0.912)	32557	16.8662	16.86
29	Bromochloromethane	128	3.795	3.803	(0.908)	18538	20.3294	20.32
39	Bromodichloromethane	83	5.729	5.729	(1.153)	48592	18.3429	18.34
66	Bromoform	173	8.415	8.416	(1.097)	20197	18.8817	18.88
6	Bromomethane	94	1.338	1.338	(0.320)	47339	19.2124	19.21
19	Carbon Disulfide	76	2.069	2.069	(0.495)	172447	37.1499	37.14
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	37755	16.3546	16.35
59	Chlorobenzene	112	7.699	7.699	(1.004)	89603	17.3081	17.30
7	Chloroethane	64	1.403	1.403	(0.336)	37352	17.9041	17.90
28	Chloroform	83	3.910	3.910	(0.935)	63515	18.7475	18.74
3	Chloromethane	50	1.081	1.081	(0.258)	36544	20.0258	20.02
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	34558	17.7978	17.79
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	53567	18.6225	18.62
55	Dibromochloromethane	129	7.176	7.176	(0.936)	33712	18.8300	18.83
44	Dibromomethane	93	5.557	5.557	(1.118)	25659	19.6864	19.68
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	29030	16.9317	16.93
61	Ethylbenzene	106	7.799	7.799	(1.017)	44359	16.8900	16.88
91	Hexachlorobutadiene	225	11.488	11.481	(1.189)	8838	16.6314	16.63
67	Isopropylbenzene	105	8.566	8.566	(1.117)	111082	15.7353	15.73
62	m,p-Xylenes	106	7.907	7.907	(1.031)	105028	33.3866	33.38
17	Methylene Chloride	84	2.305	2.305	(0.551)	32383	17.8137	17.81
87	n-Butylbenzene	91	9.999	9.999	(1.035)	86902	15.7054	15.70
73	n-Propylbenzene	91	8.917	8.917	(0.923)	140405	16.0764	16.07
92	Naphthalene	128	11.546	11.546	(1.195)	24235	20.5157	20.51
63	o-Xylene	106	8.244	8.244	(1.075)	51822	16.5306	16.53
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	104011	15.7394	15.73
64	Styrene	104	8.258	8.258	(1.077)	93289	17.7464	17.74
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	72556	16.2934	16.29
56	Tetrachloroethene	164	6.933	6.933	(0.904)	20538	15.4005	15.40
50	Toluene	91	6.446	6.446	(0.840)	143307	16.1649	16.16(M)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	28853	17.4913	17.49
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	48133	18.9672	18.96
38	Trichloroethene	130	5.214	5.214	(1.049)	31020	18.0535	18.05
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	90755	18.1873	18.18
5	Vinyl Chloride	62	1.145	1.145	(0.274)	54466	18.6176	18.61

QC Flag Legend

M - Compound response manually integrated.

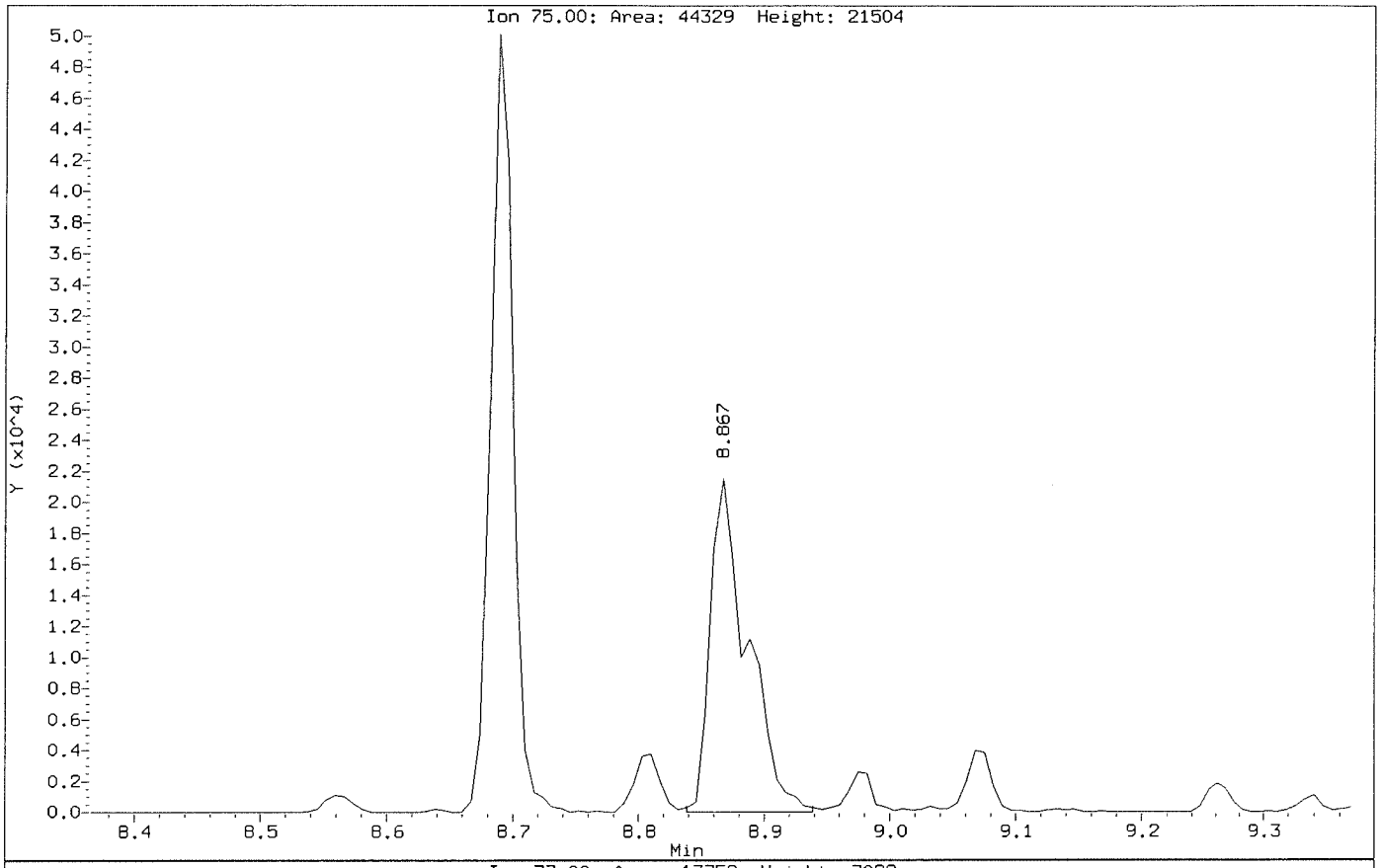


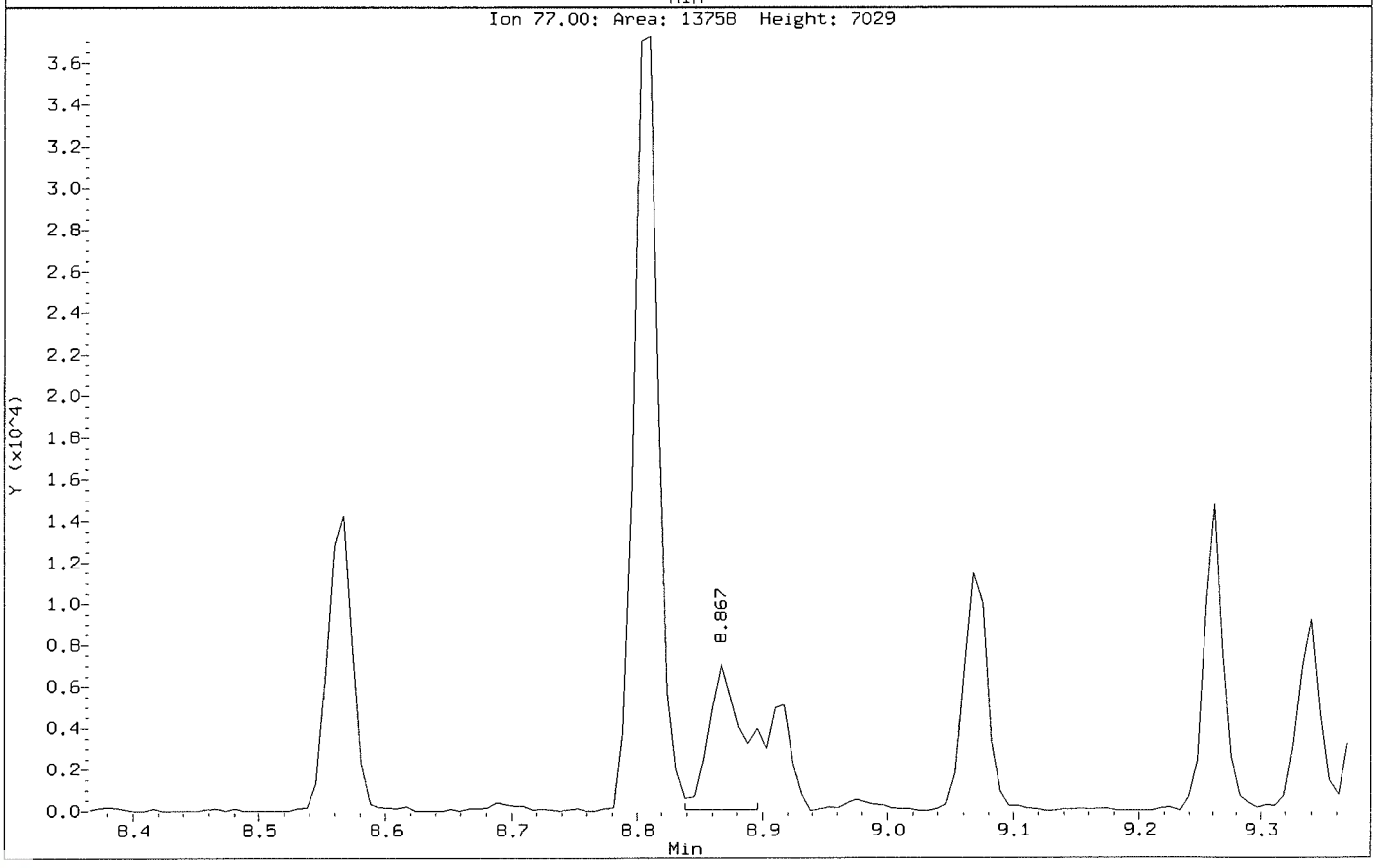
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Instrument: voa6,i
Operator: PC
Column diameter: 0.18

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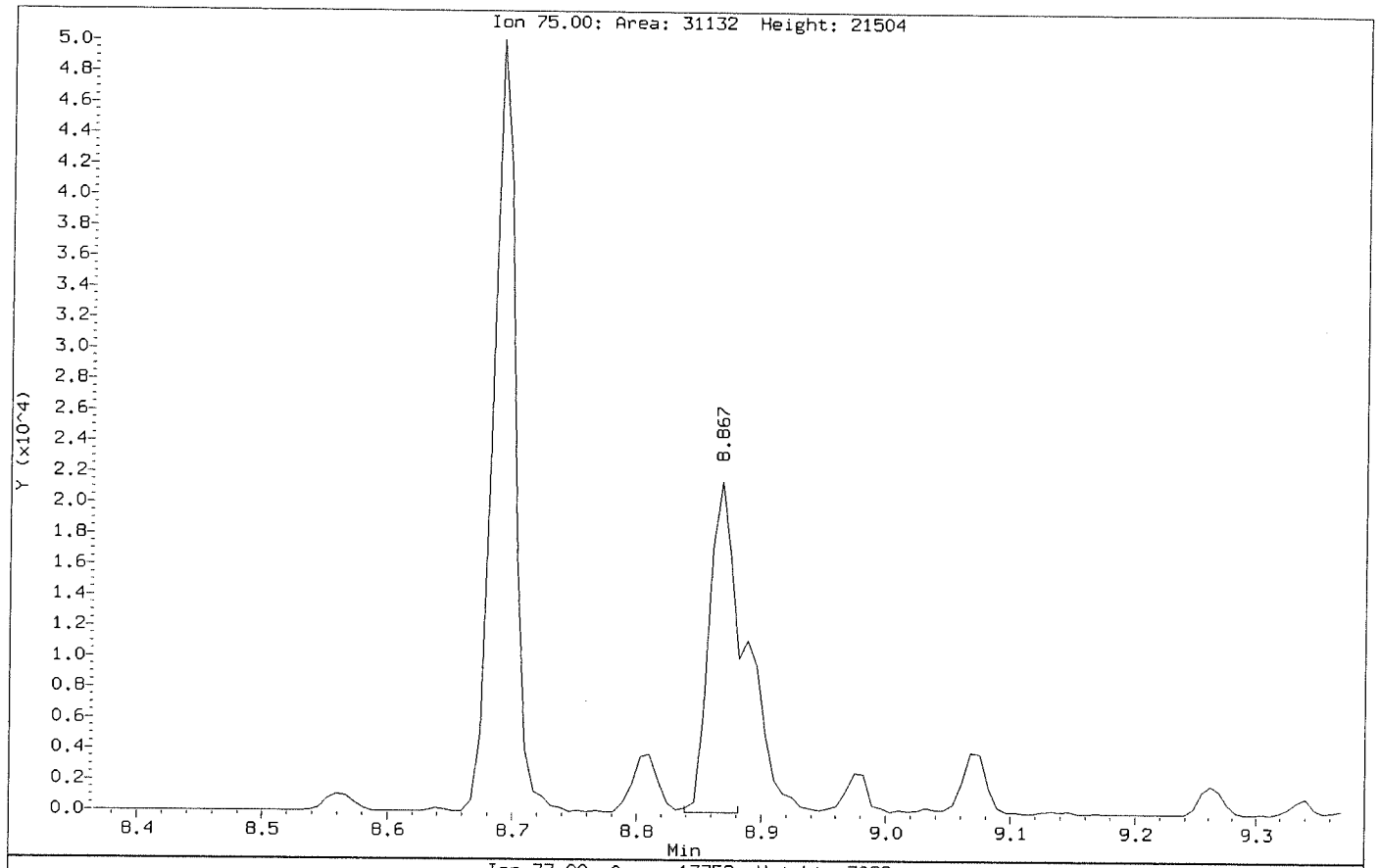
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CAS Number: 96-18-4

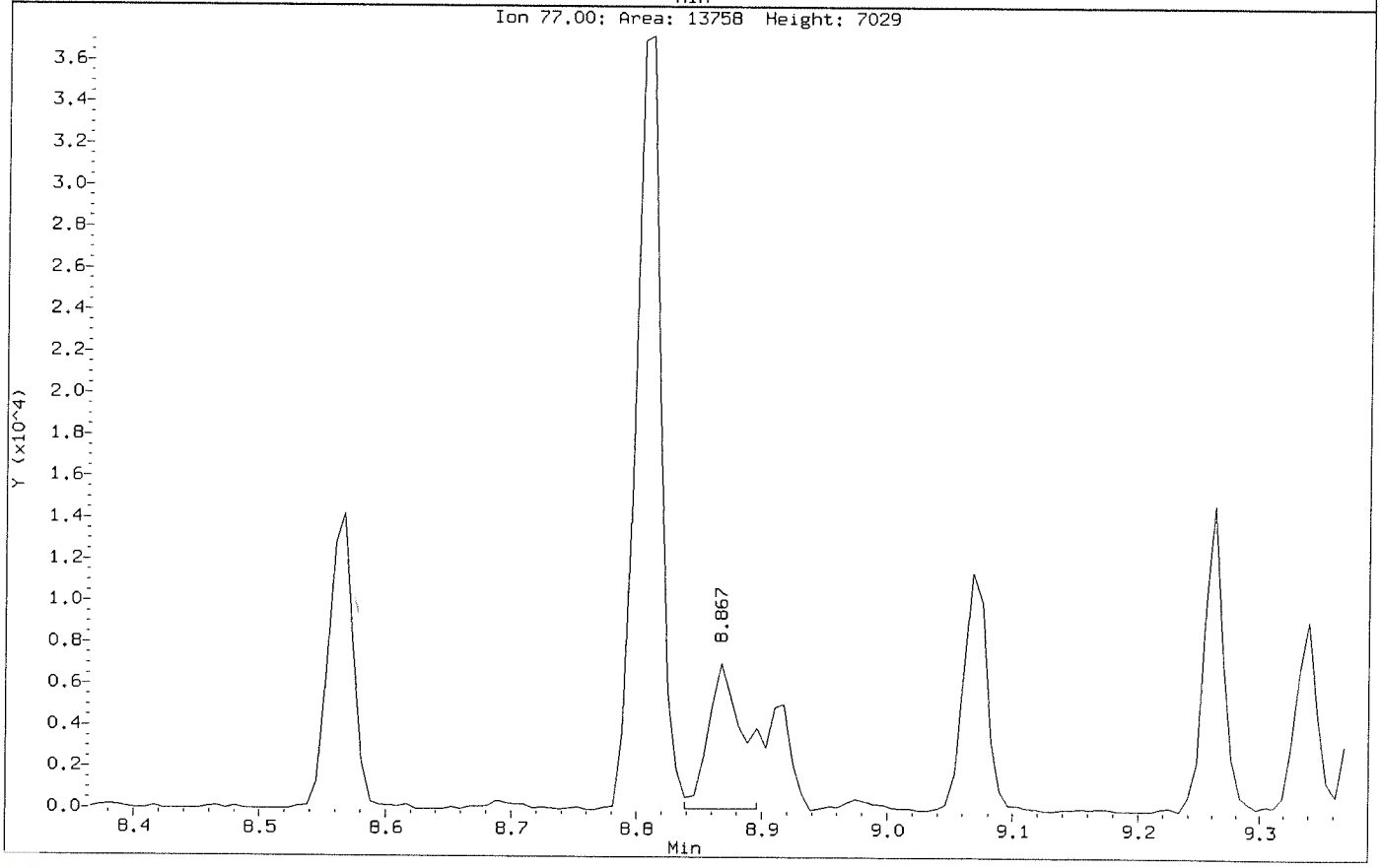




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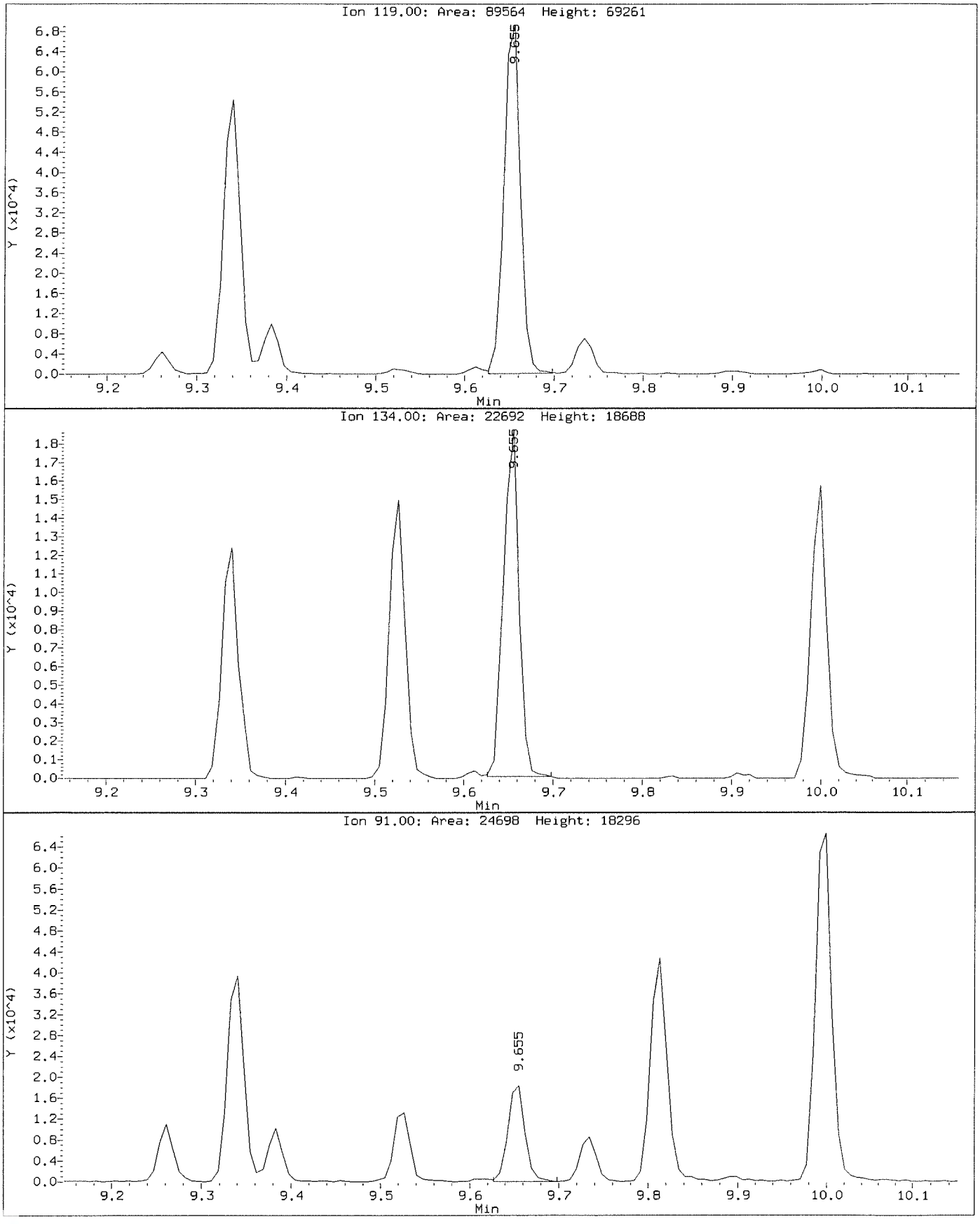
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





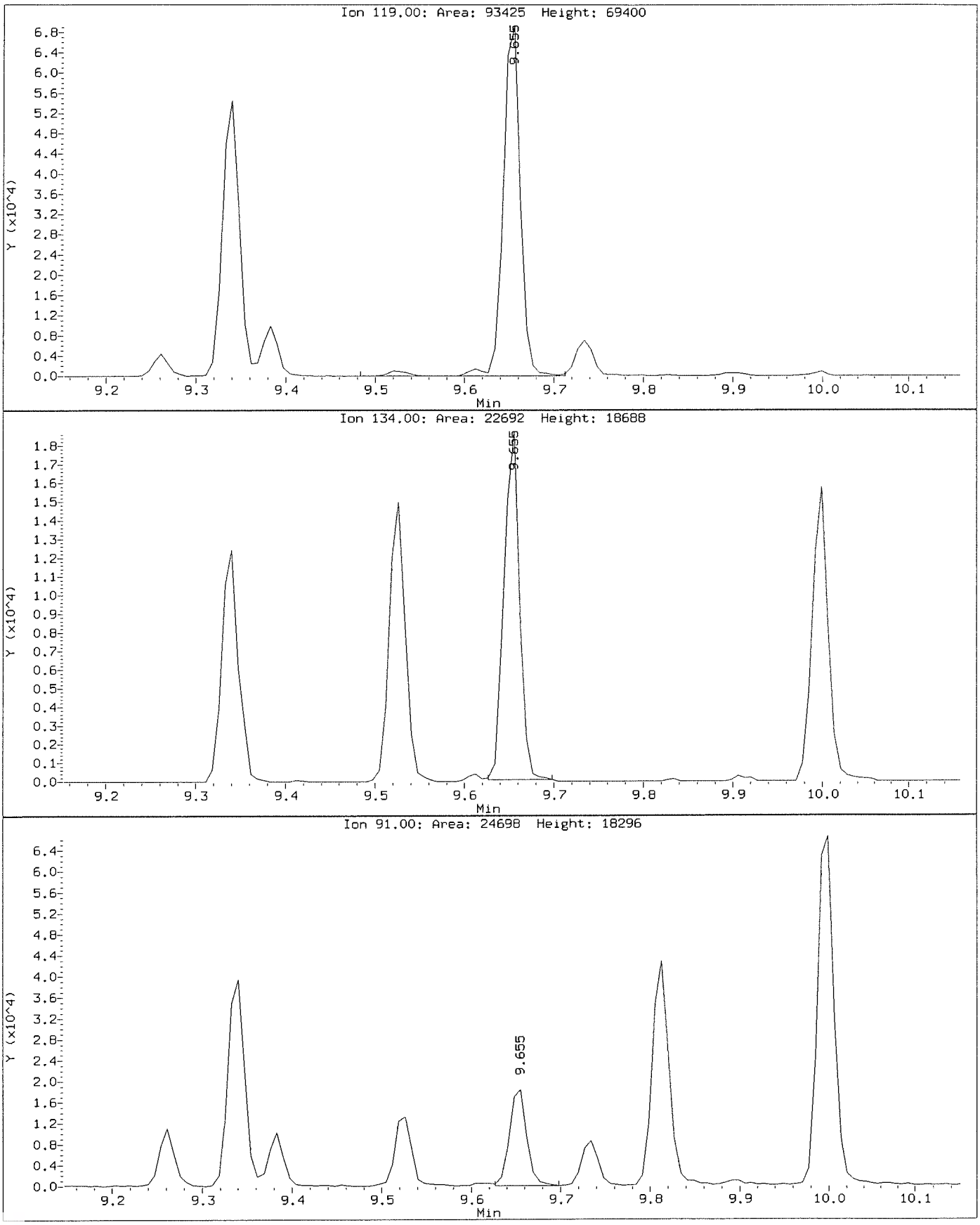
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Injection Date: 04-NOV-2020 11:17
Instrument: voa6.i
Client Sample ID: VLCSW-201104

Compound: p-Isopropyltoluene
CAS Number: 99-87-6



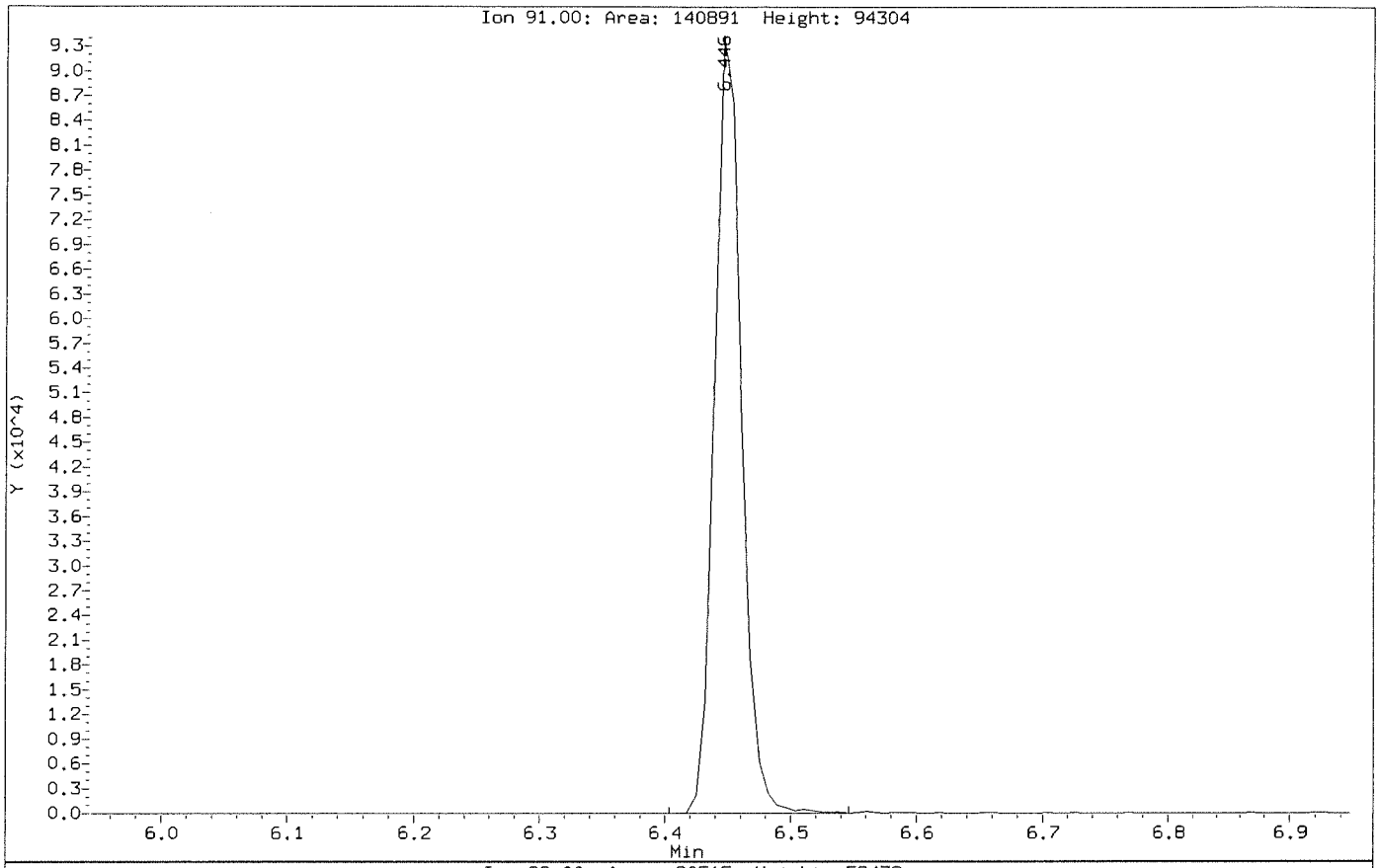
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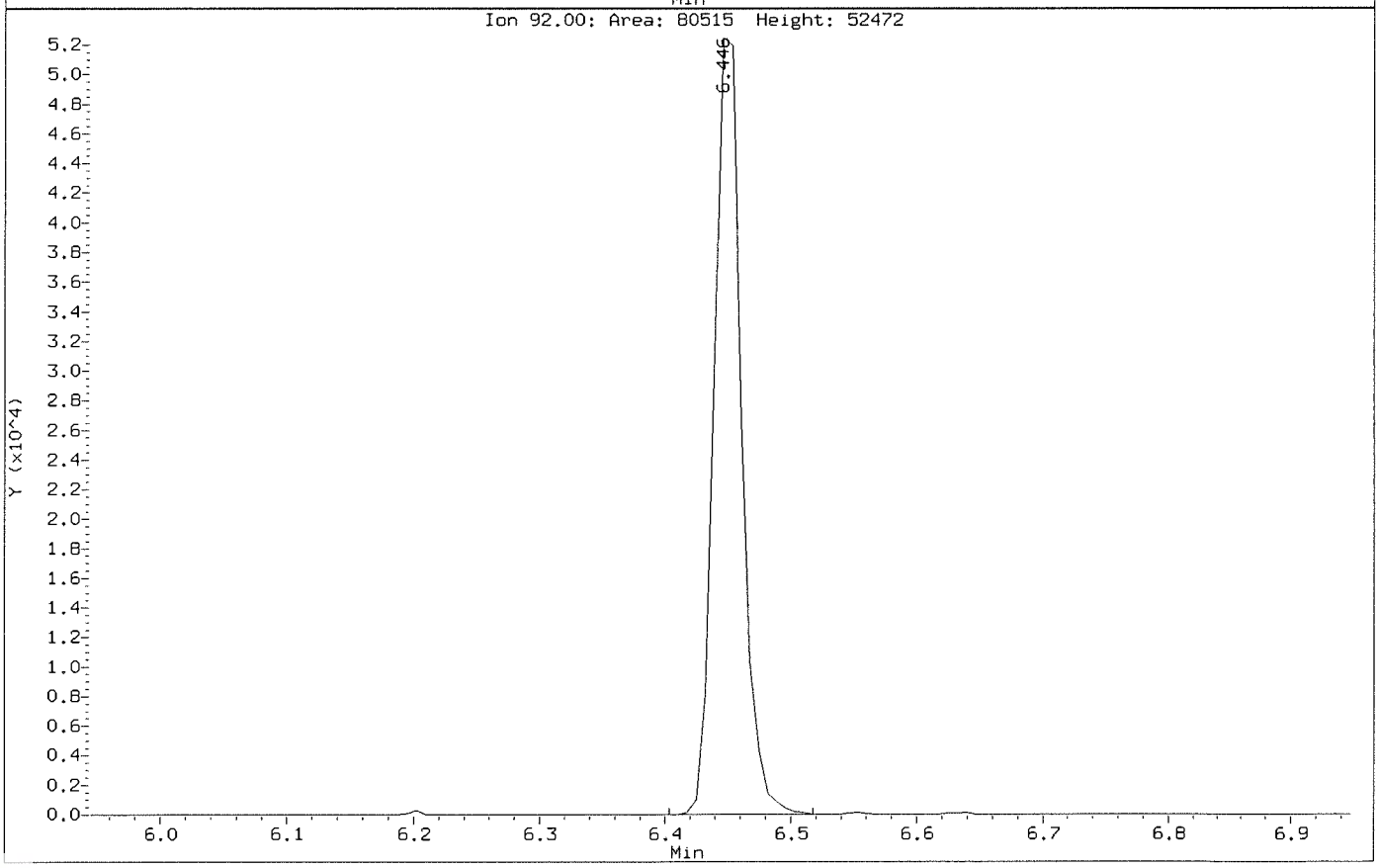
Compound: p-Isopropyltoluene
CAS Number: 99-87-6



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Instrument: voa6.i
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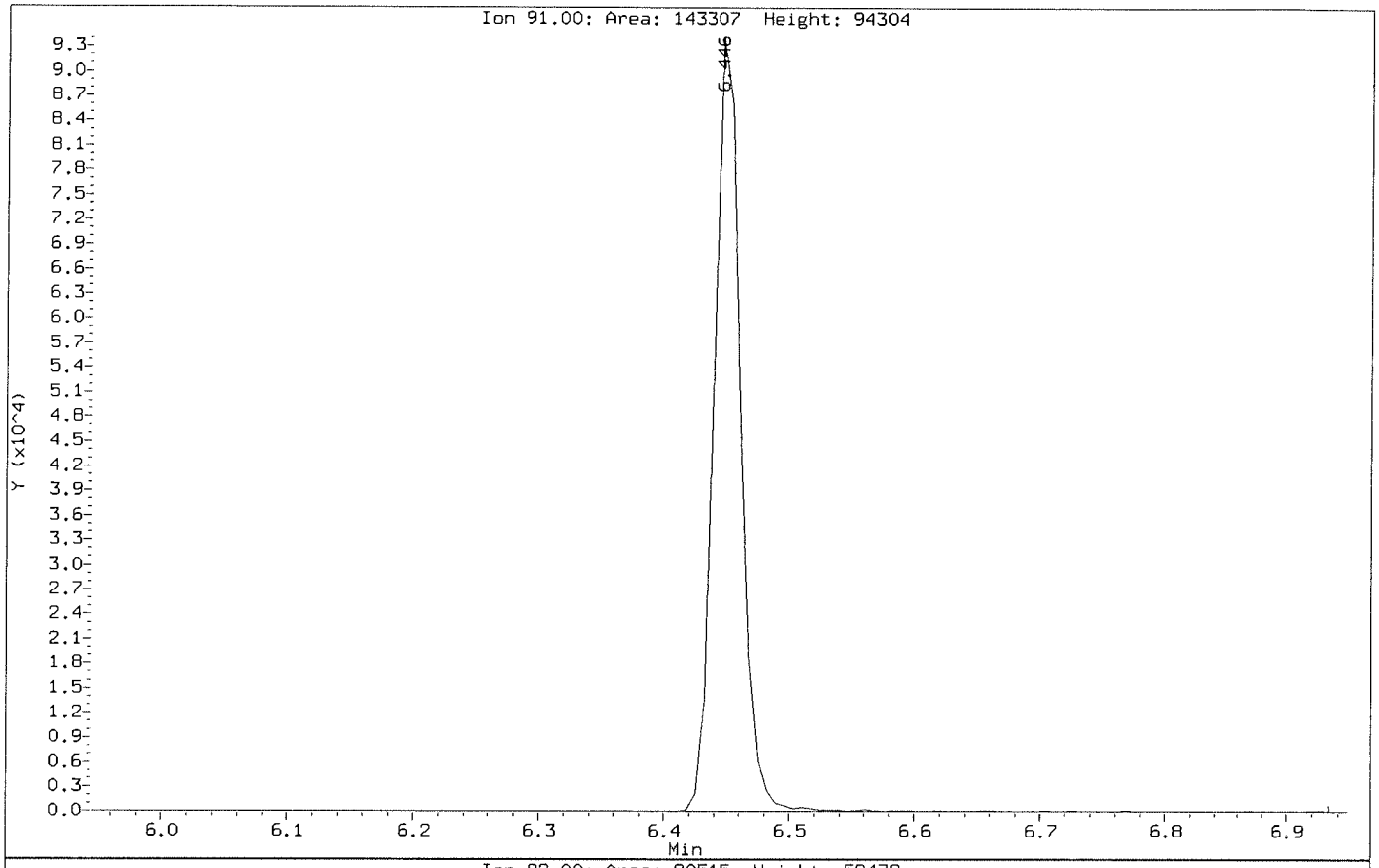
Compound: Toluene
CAS Number: 108-88-3

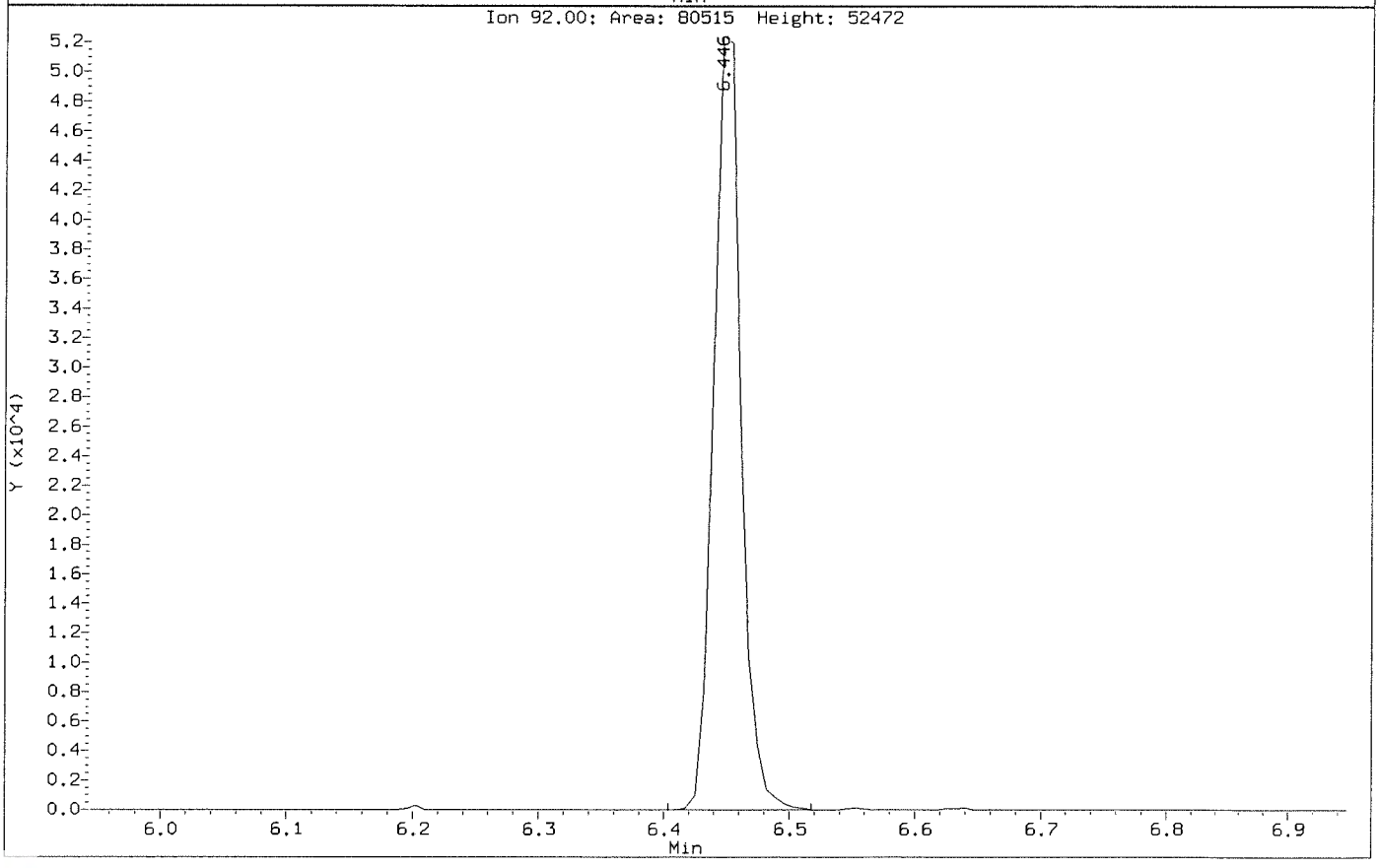




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Injection Date: 04-NOV-2020 11:17
Instrument: voa6.i
Client Sample ID: VLCSW-201104

Compound: Toluene
CAS Number: 108-88-3





ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201104.b\X110408.D
Lab Smp Id: VBLKW-201104 Client Smp ID: VBLKW-201104
Inj Date : 04-NOV-2020 11:59
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-201104;VBLKW-201104;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201104.b\8260W.m
Meth Date : 07-Nov-2020 13:29 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:27 Cal File: X110308.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

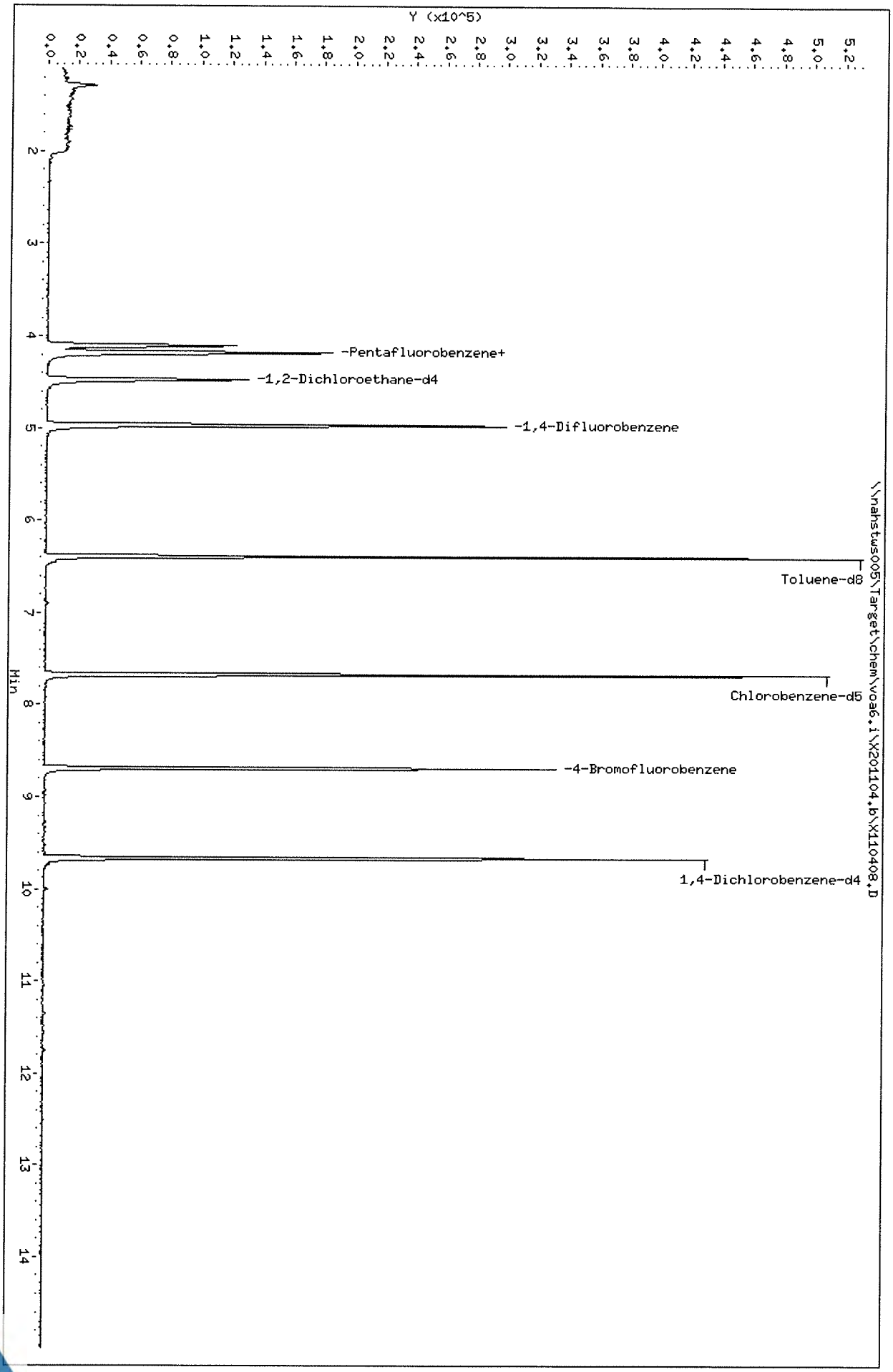
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	129383	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	224718	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	200946	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	85419	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	76376	43.8333	43.83
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	87988	43.1255	43.12
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	276621	51.5386	51.53
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	84707	47.5692	47.56

Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110408.D
Date : 04-NOV-2020 11:59
Client ID: VBLKW-201104
Sample Info: VBLKW-201104;VBLKW-201104;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\X201104.b\X110417.D Page 1
Report Date: 07-Nov-2020 13:29

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201104.b\X110417.D
Lab Smp Id: HS20101419-01MS Client Smp ID: HS20101419-01MS
Inj Date : 04-NOV-2020 15:09
Operator : PC Inst ID: voa6.i
Smp Info : HS20101419-01MS;HS20101419-01MS;3;;MS
Misc Info : HS18090001;WATER;0;10;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201104.b\8260W.m
Meth Date : 07-Nov-2020 13:29 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:27 Cal File: X110308.D
Als bottle: 17 QC Sample: MS
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

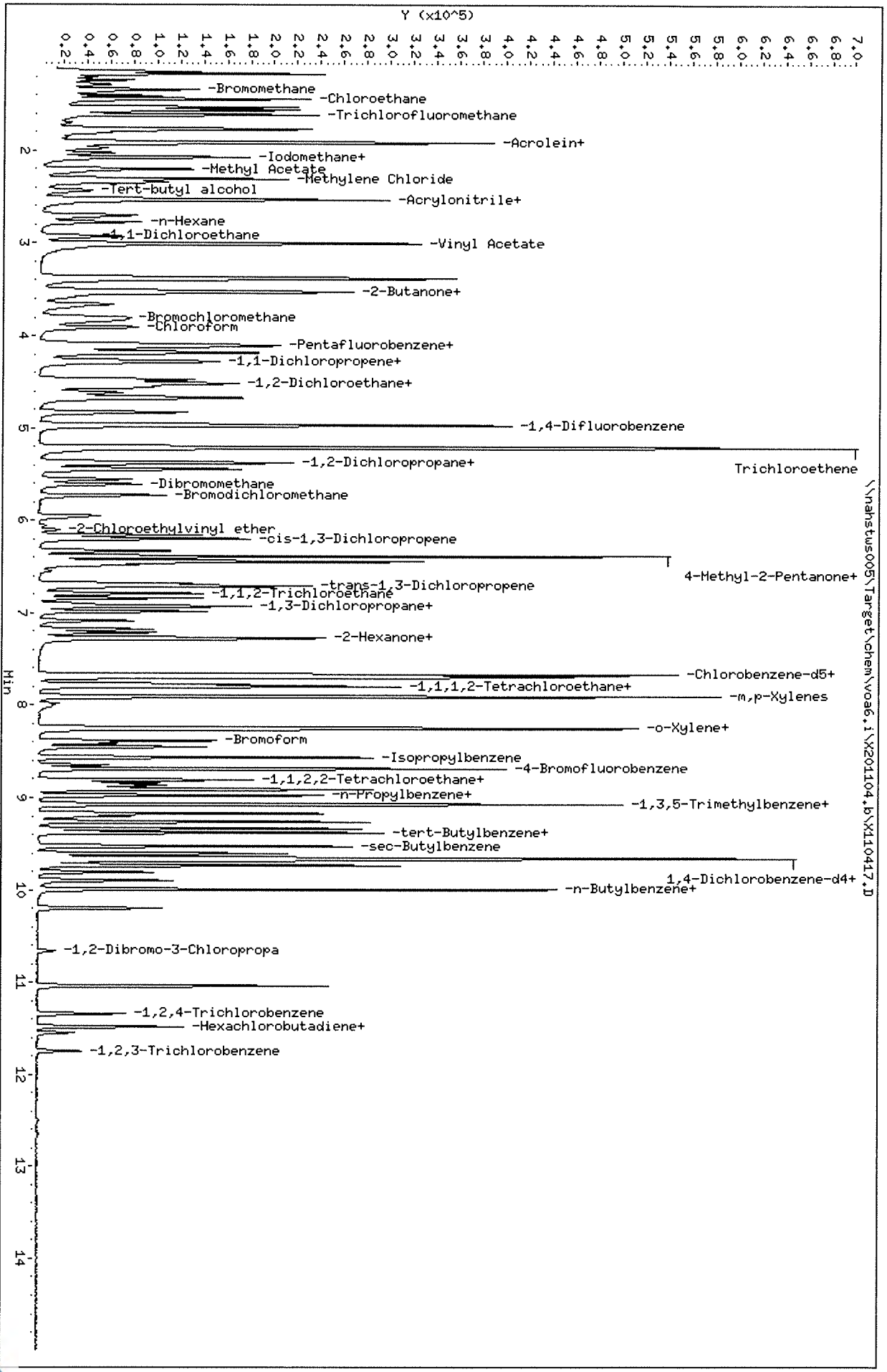
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.182	(1.000)	129585	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	232292	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	213164	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	95718	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.979)	78337	44.8887	44.88
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	90764	44.3740	44.37
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	274636	48.2359	48.23
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	91100	48.2024	48.20
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	32196	21.1713	211.71
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	57440	21.2290	212.29
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	38806	24.2651	242.65
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	27259	20.7331	207.33
22 1,1-Dichloroethane	63	2.929	2.921	(0.699)	67164	21.5626	215.62
11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	62781	25.6784	256.78
32 1,1-Dichloropropene	75	4.282	4.290	(0.862)	49141	22.6852	226.85
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	8991	22.9080	229.08
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	30550	22.7299	227.29(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	15956	21.7888	217.88
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	119327	22.2847	222.84
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.658	(1.104)	2228	20.7696	207.69
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	36316	22.7184	227.18
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	56191	21.2700	212.70

Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110417.D Page 2
Report Date: 07-Nov-2020 13:29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	54891	21.9152	219.15
42	1,2-Dichloropropane	63	5.436	5.443	(1.094)	38506	22.3999	223.99
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	120463	22.0575	220.57
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	62799	22.3862	223.86
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	57915	22.1753	221.75
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	62897	21.5320	215.31
26	2,2-Dichloropropane	77	3.516	3.516	(0.839)	58438	21.7946	217.94
24	2-Butanone	43	3.581	3.580	(0.855)	23635	39.2349	392.34
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	99556	22.1448	221.44
52	2-Hexanone	43	7.212	7.212	(0.940)	59657	43.5822	435.82
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	118531	20.8747	208.74
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	119135	23.0441	230.44
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	67145	41.4631	414.63
10	Acetone	43	1.976	1.976	(0.472)	35737	45.7790	457.79
37	Benzene	78	4.519	4.519	(0.909)	142554	21.9708	219.70
74	Bromobenzene	156	8.810	8.809	(0.912)	37176	22.0728	220.72
29	Bromochloromethane	128	3.803	3.803	(0.908)	19954	22.3581	223.58
39	Bromodichloromethane	83	5.729	5.729	(1.153)	52856	22.1466	221.46
66	Bromoform	173	8.416	8.416	(1.097)	19328	20.2621	202.62
6	Bromomethane	94	1.338	1.338	(0.320)	44869	18.6060	186.05
19	Carbon Disulfide	76	2.069	2.069	(0.494)	199501	43.9127	439.12
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	47786	22.9760	229.76
59	Chlorobenzene	112	7.699	7.699	(1.004)	99080	21.7500	217.50
7	Chloroethane	64	1.403	1.403	(0.335)	42958	21.0391	210.39 (M)
28	Chloroform	83	3.917	3.910	(0.935)	71963	21.7030	217.02
3	Chloromethane	50	1.081	1.081	(0.258)	40059	22.3239	223.23
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	93296	49.0935	490.93
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	57219	22.0795	220.79
55	Dibromochloromethane	129	7.176	7.176	(0.936)	36850	23.3911	233.91
44	Dibromomethane	93	5.558	5.557	(1.118)	26649	22.6943	226.94
2	Dichlorodifluoromethane	85	0.973	0.973	(0.232)	42185	25.1394	251.39
61	Ethylbenzene	106	7.800	7.799	(1.017)	50998	22.0672	220.67
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	14988	30.1282	301.28
67	Isopropylbenzene	105	8.566	8.566	(1.117)	148334	22.5257	225.25
62	m,p-Xylenes	106	7.907	7.907	(1.031)	126519	45.7055	457.05
17	Methylene Chloride	84	2.305	2.305	(0.550)	35403	19.8985	198.98
87	n-Butylbenzene	91	9.999	9.999	(1.035)	122101	23.0909	230.90
73	n-Propylbenzene	91	8.917	8.917	(0.923)	180730	23.7169	237.16
92	Naphthalene	128	11.546	11.546	(1.195)	20549	19.9971	199.97
63	o-Xylene	106	8.244	8.244	(1.075)	58984	21.3823	213.82
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	146225	23.7464	237.46
64	Styrene	104	8.258	8.258	(1.077)	106075	22.9319	229.31
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	95807	23.3775	233.77
56	Tetrachloroethene	164	6.933	6.933	(0.904)	27000	23.0084	230.08
50	Toluene	91	6.446	6.446	(0.840)	161482	20.7003	207.00
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	36525	22.6237	226.23
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	53720	23.4966	234.96
38	Trichloroethene	130	5.207	5.214	(1.048)	187866	121.361	1213.60
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	119920	24.5546	245.54
5	Vinyl Chloride	62	1.145	1.145	(0.273)	79335	27.7080	277.08

QC Flag Legend

M - Compound response manually integrated.

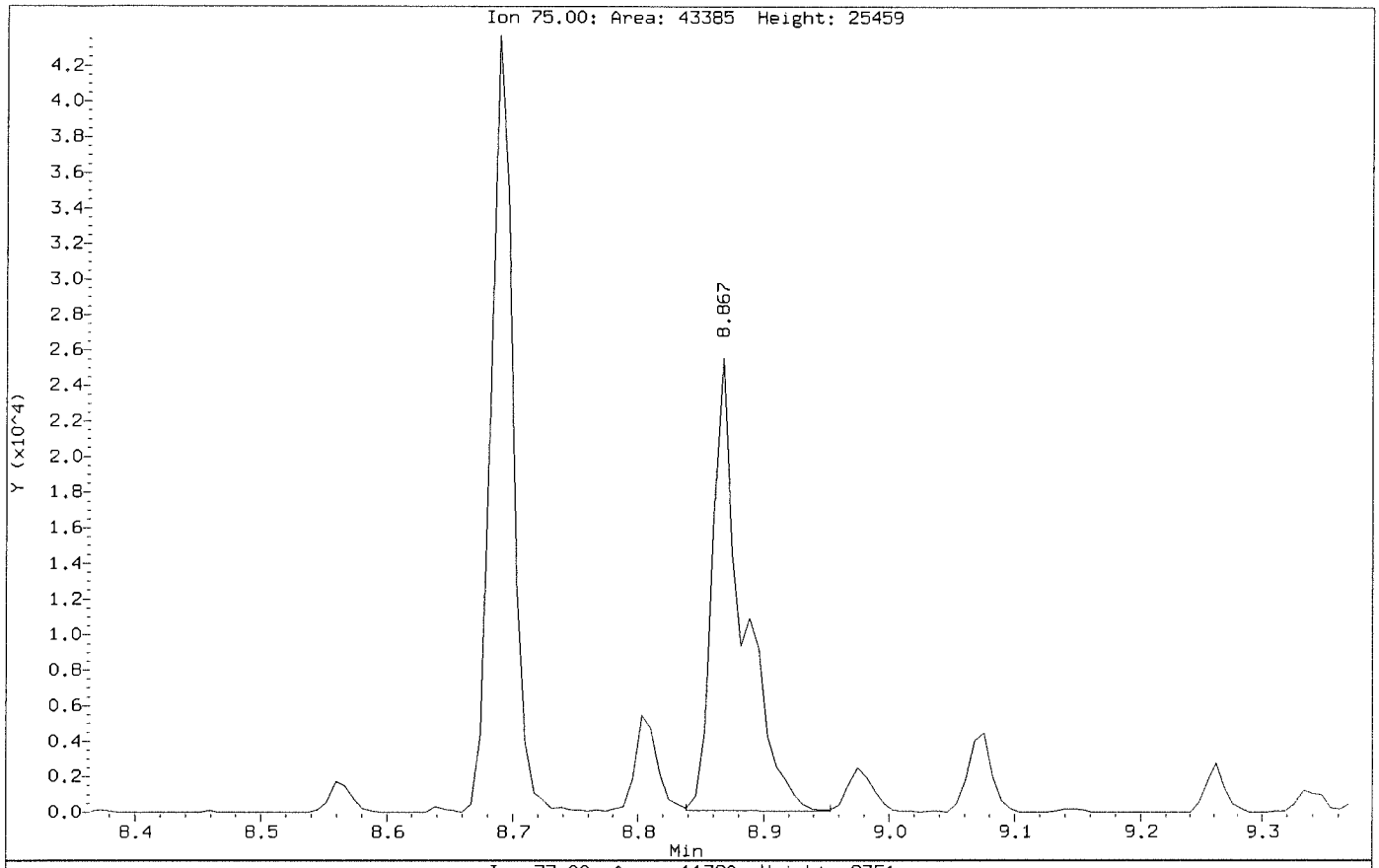


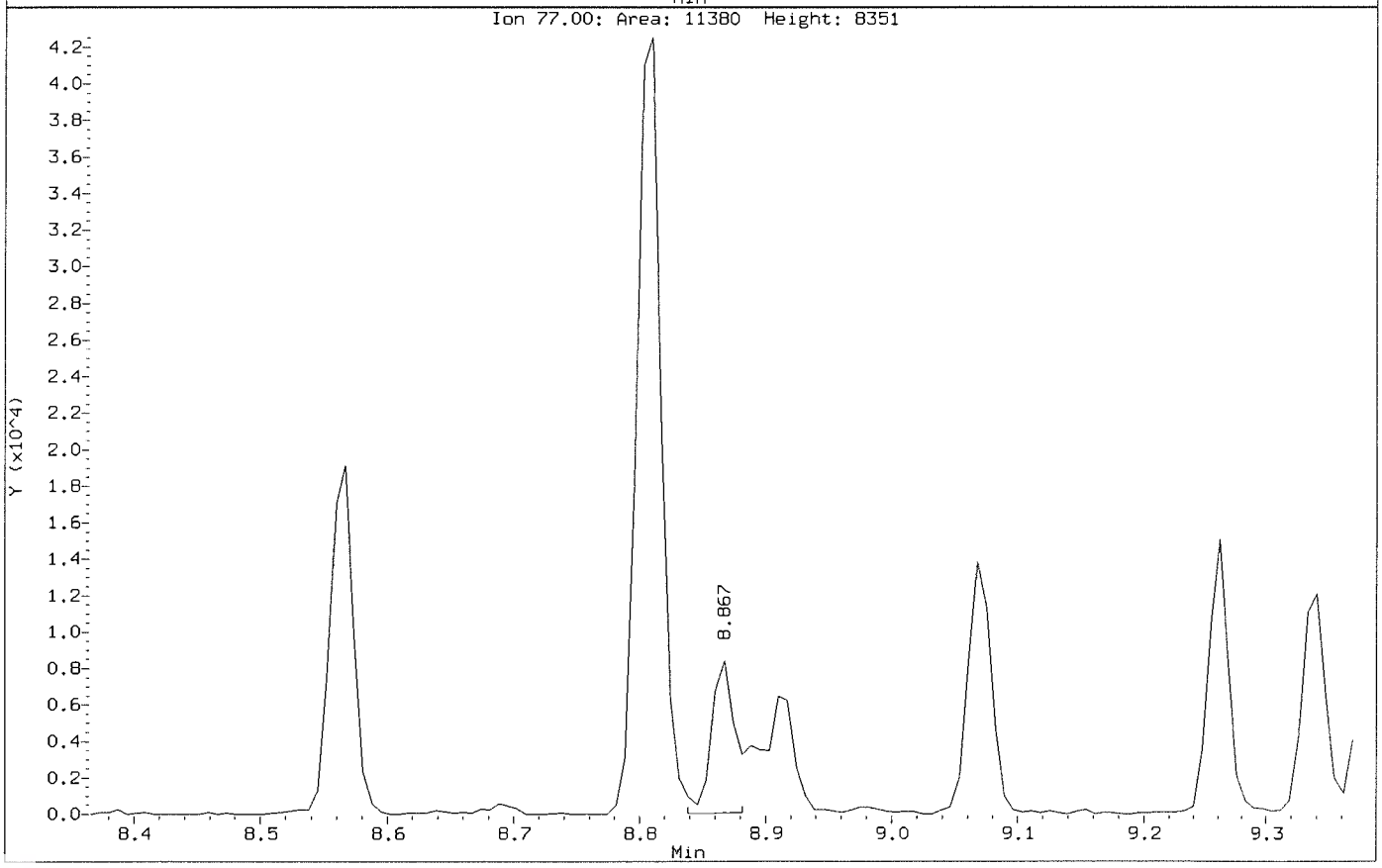
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Sample Info: HS20101419-01MS;HS20101419-01MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\Before\X110417.D
Injection Date: 04-NOV-2020 15:09
Instrument: voa6.i
Client Sample ID: HS20101419-01MS

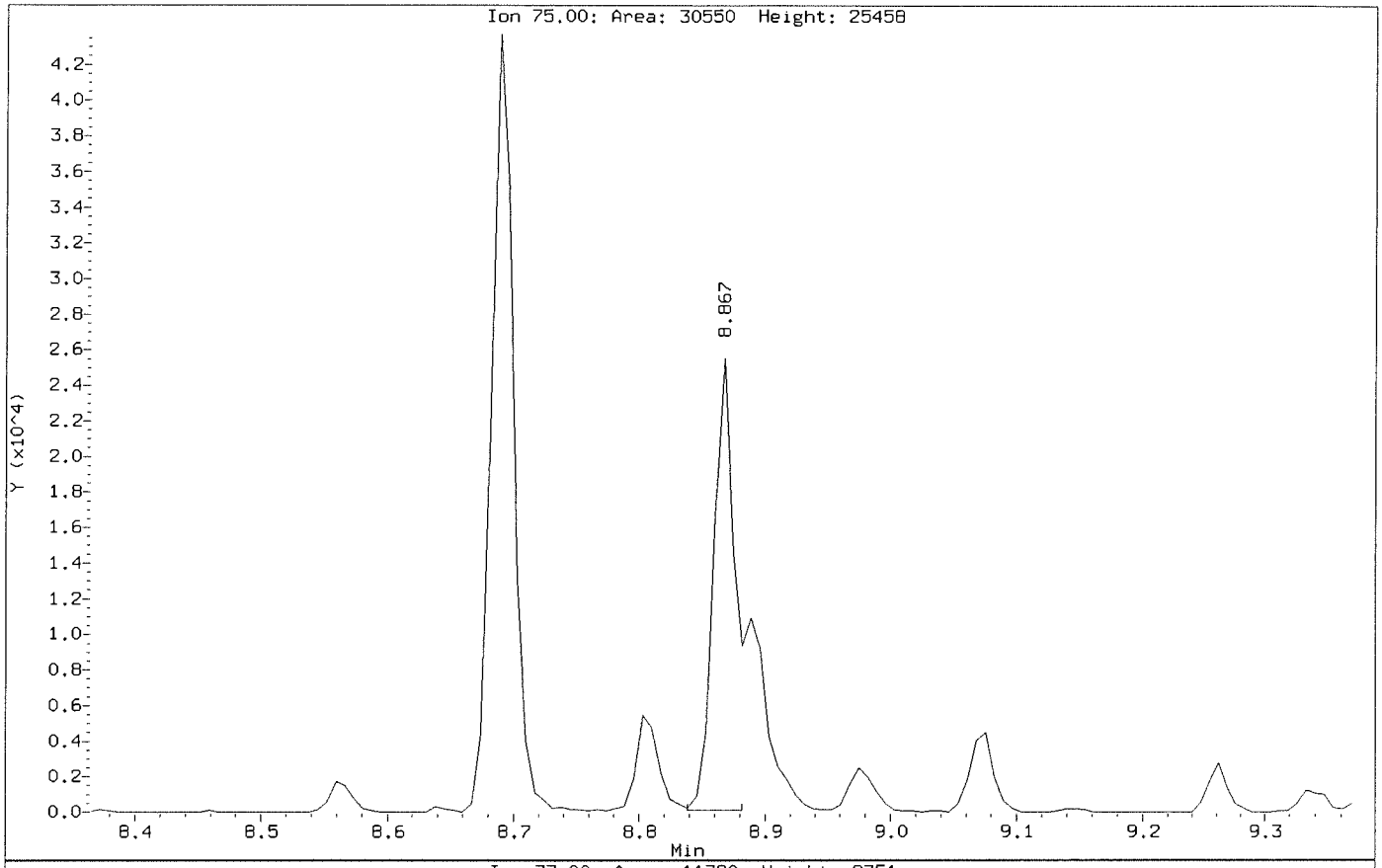
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

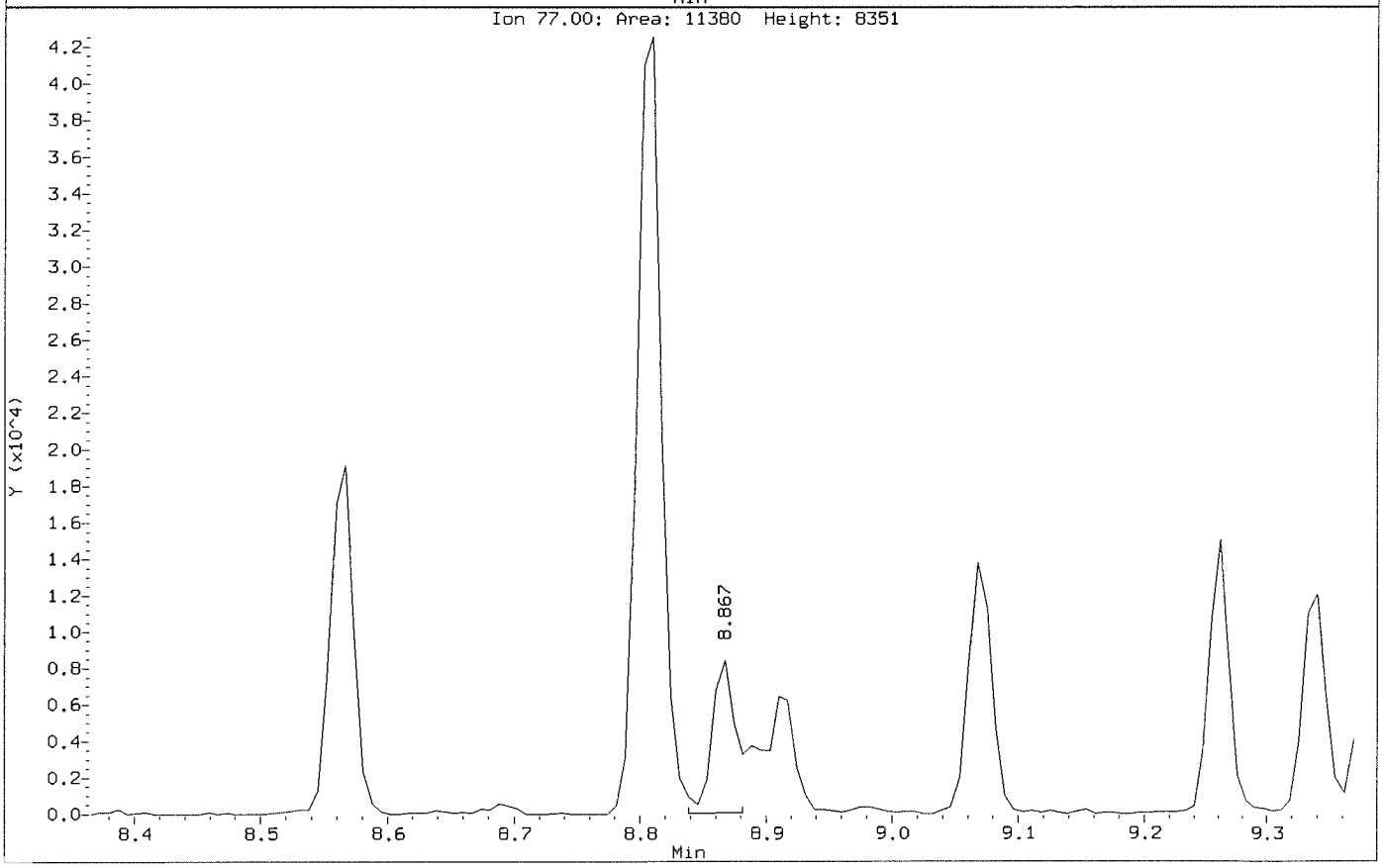




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Injection Date: 04-NOV-2020 15:09
Instrument: voa6.i
Client Sample ID: HS20101419-01MS

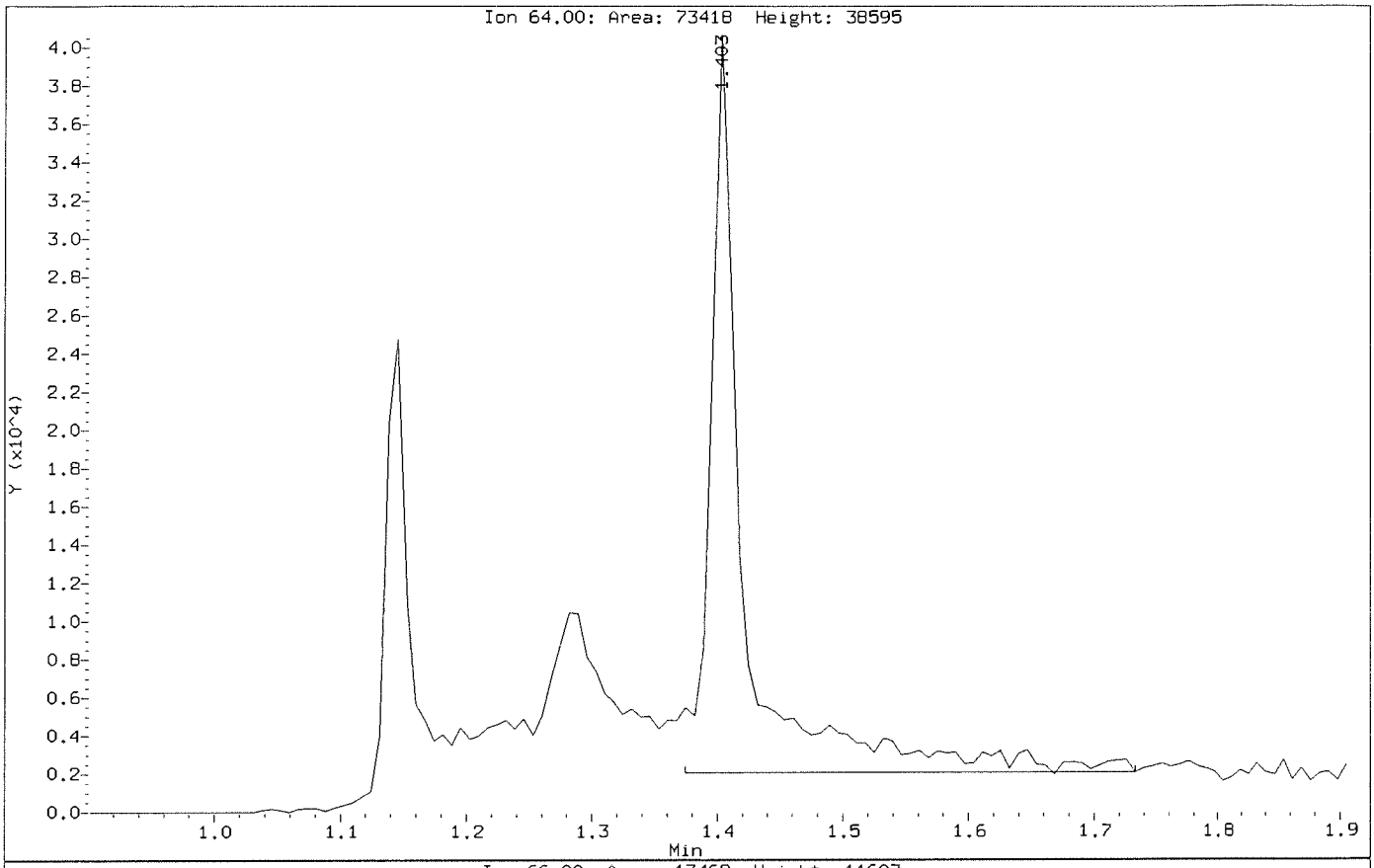
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

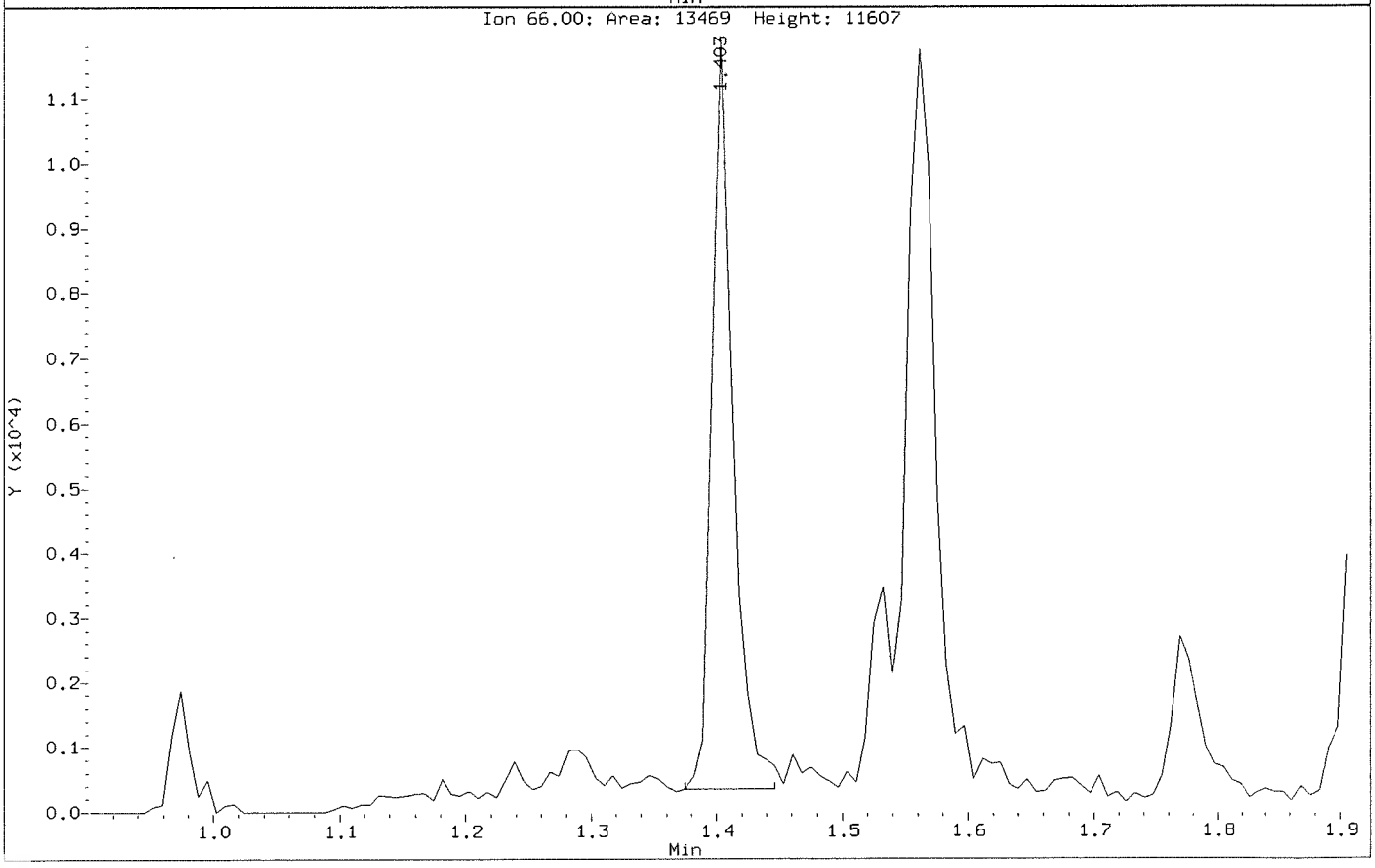




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Injection Date: 04-NOV-2020 15:09
Instrument: voa6.i
Client Sample ID: HS20101419-01MS

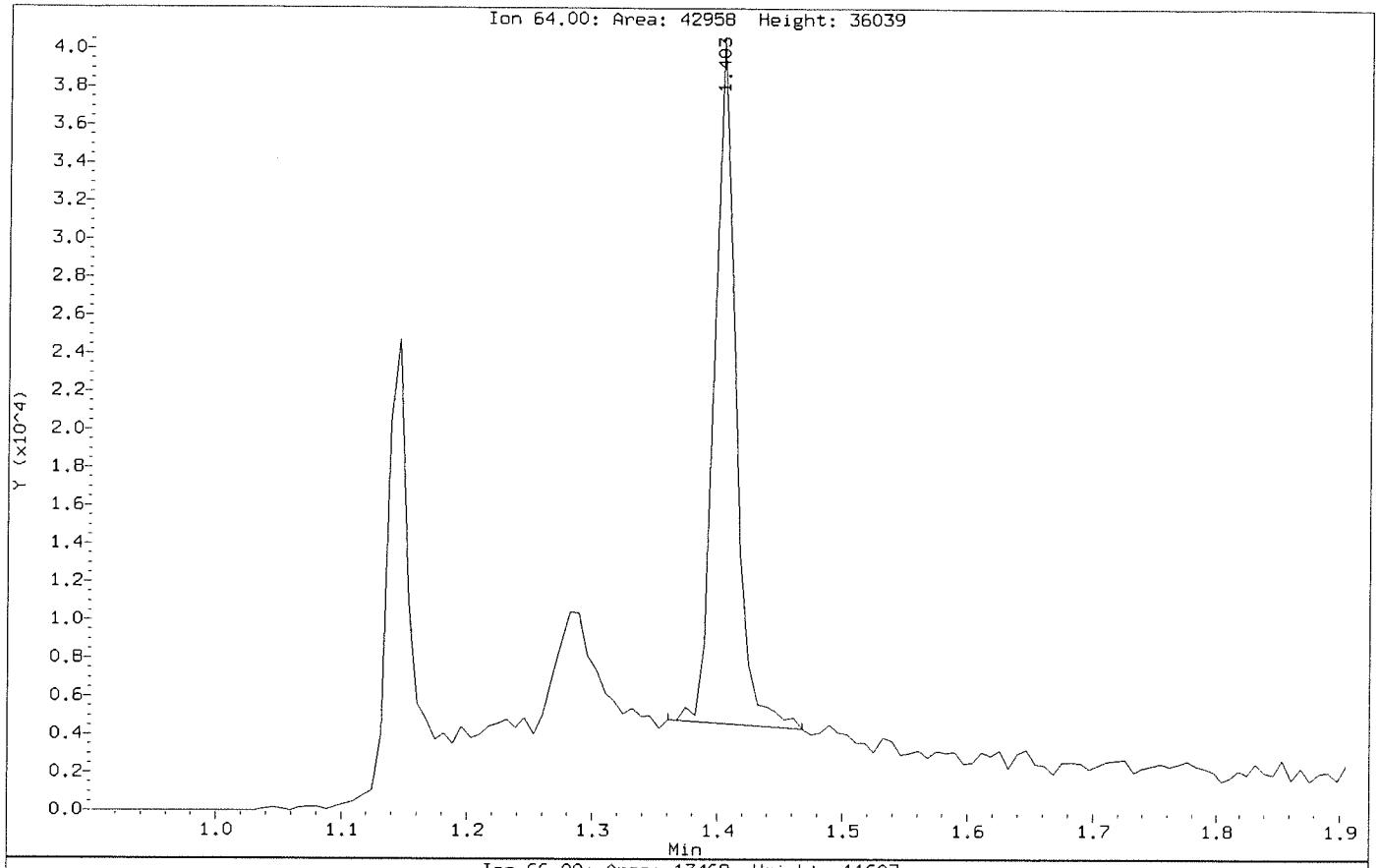
Compound: Chloroethane
CAS Number: 75-00-3

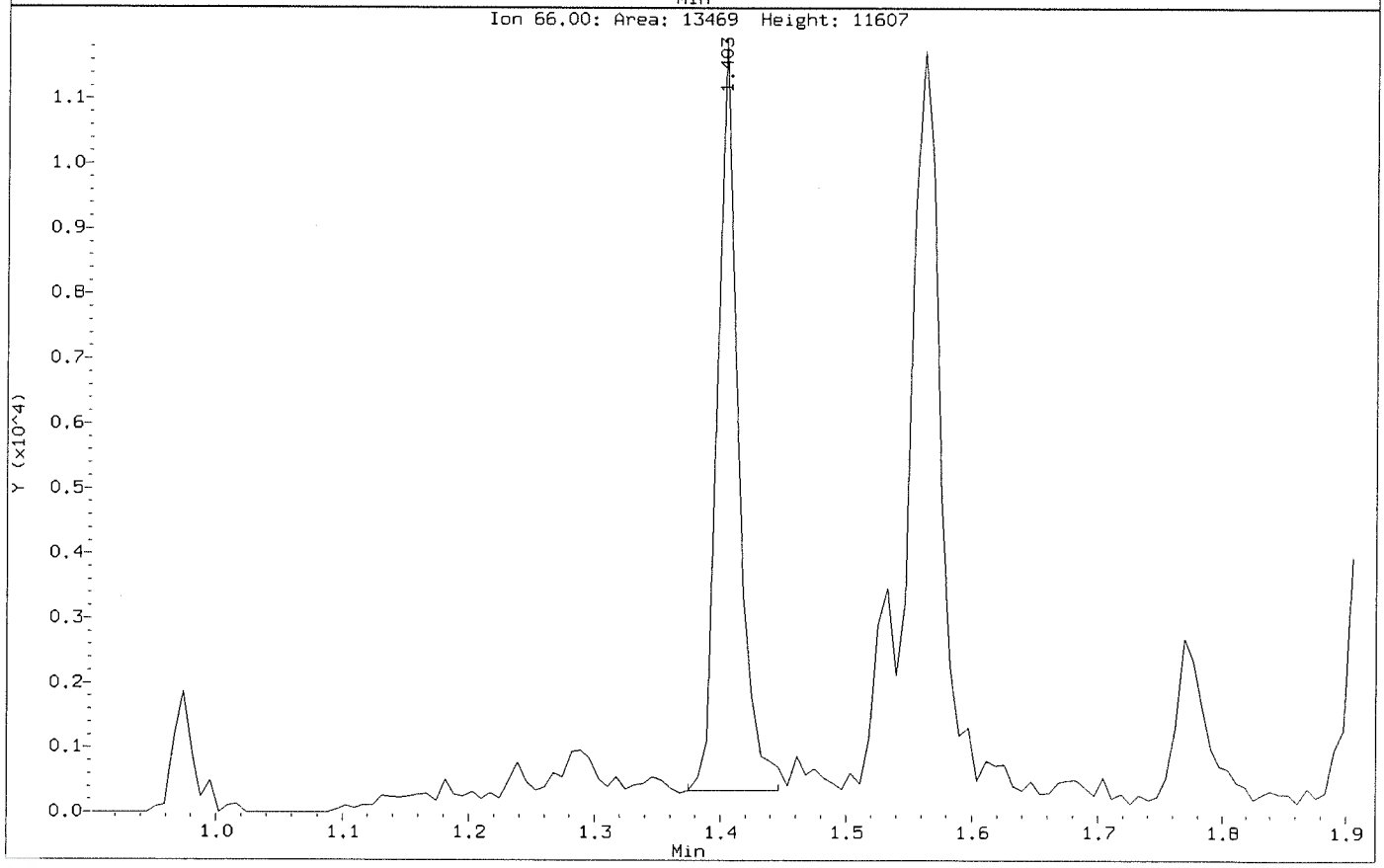




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Injection Date: 04-NOV-2020 15:09
Instrument: voa6.i
Client Sample ID: HS20101419-01MS

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110418.D Page 1
Report Date: 07-Nov-2020 13:29

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201104.b\X110418.D
Lab Smp Id: HS20101419-01MSD Client Smp ID: HS20101419-01MSD
Inj Date : 04-NOV-2020 15:30
Operator : PC Inst ID: voa6.i
Smp Info : HS20101419-01MSD;HS20101419-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;10;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201104.b\8260W.m
Meth Date : 07-Nov-2020 13:29 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:27 Cal File: X110308.D
Als bottle: 17 QC Sample: MSD
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

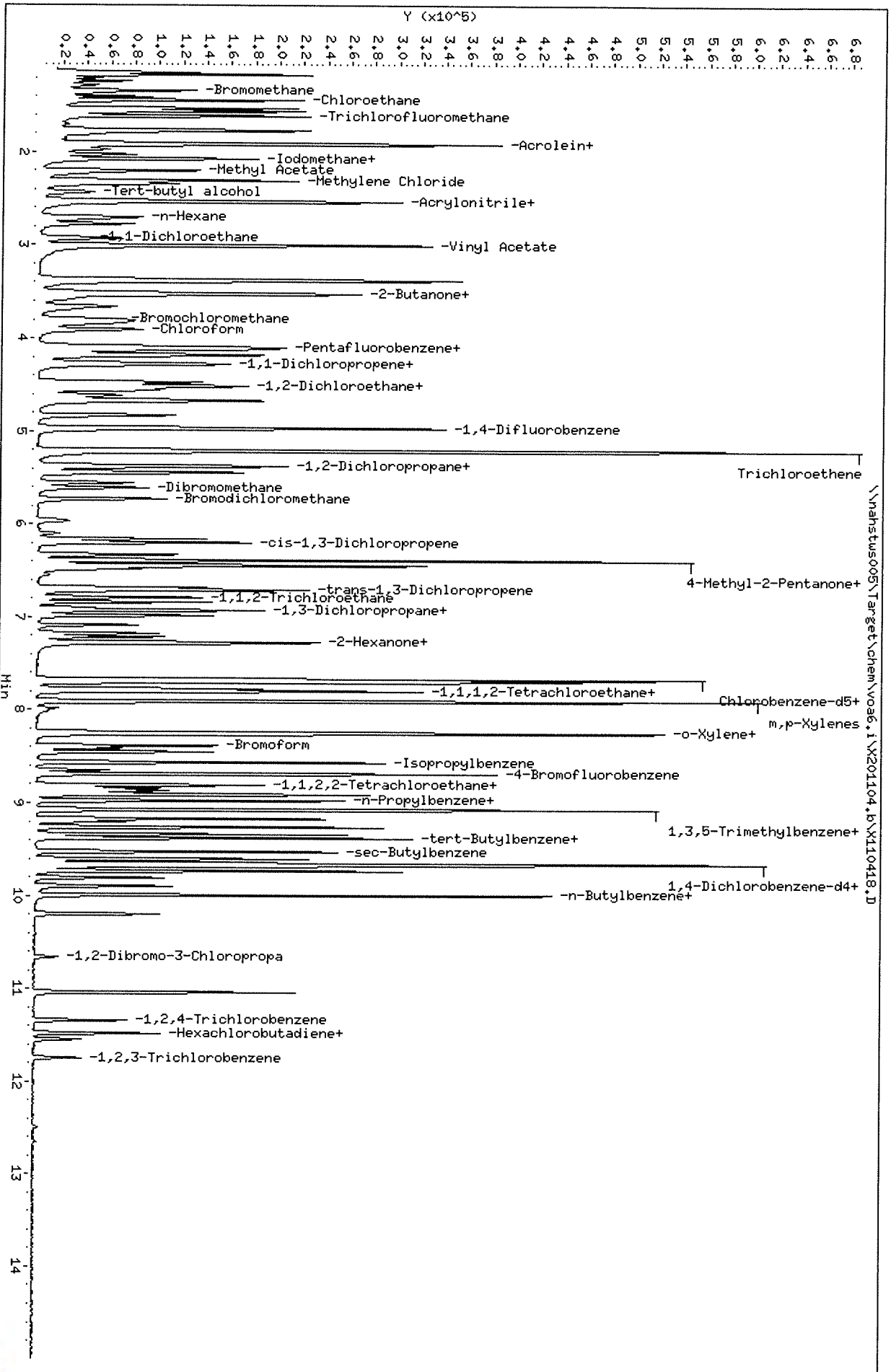
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.189	4.182	(1.000)	132756	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	231899	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	212874	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	90467	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.979)	78326	43.8103	43.81
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	89746	42.8776	42.87
$	48 Toluene-d8	98	6.389	6.388	(0.833)	280175	49.2757	49.27
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	89849	47.6273	47.62
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	32616	21.4767	214.76
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.976)	61459	22.1718	221.71
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	40434	26.8109	268.10
	53 1,1,2-Trichloroethane	83	6.847	6.840	(0.893)	30512	23.2389	232.38
	22 1,1-Dichloroethane	63	2.929	2.921	(0.699)	67190	21.0557	210.55
	11 1,1-Dichloroethene	96	1.919	1.919	(0.458)	60244	24.0521	240.52
	32 1,1-Dichloropropene	75	4.283	4.290	(0.862)	52214	24.1446	241.44
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	8962	24.0628	240.62
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	32357	25.4717	254.71(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	16269	23.3669	233.66
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	124947	24.6887	246.88
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	2863	28.3602	283.60
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	37391	23.4228	234.22
	88 1,2-Dichlorobenzene	146	9.992	9.991	(1.034)	60031	24.0425	240.42

Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110418.D Page 2
Report Date: 07-Nov-2020 13:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	53521	21.4044	214.04
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	38327	22.3336	223.33
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	120063	23.2603	232.60
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	63796	24.0616	240.61
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	59386	22.7695	227.69
84 1,4-Dichlorobenzene	146	9.684	9.683	(1.002)	65561	23.7467	237.46
26 2,2-Dichloropropane	77	3.516	3.516	(0.839)	61543	22.4044	224.04
24 2-Butanone	43	3.581	3.580	(0.855)	23558	38.1730	381.73
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	104301	24.5468	245.46
52 2-Hexanone	43	7.212	7.212	(0.940)	62076	45.2556	452.55
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	121339	22.6096	226.09
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	115501	23.6379	236.37
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	67589	41.7941	417.94
10 Acetone	43	1.976	1.976	(0.472)	33445	41.0643	410.64
37 Benzene	78	4.519	4.519	(0.909)	147077	22.7063	227.06
74 Bromobenzene	156	8.810	8.809	(0.912)	38390	24.1166	241.16
29 Bromochloromethane	128	3.795	3.803	(0.906)	19620	21.4588	214.58
39 Bromodichloromethane	83	5.730	5.729	(1.153)	53933	22.6362	226.36
66 Bromoform	173	8.416	8.416	(1.097)	20046	20.9234	209.23
6 Bromomethane	94	1.339	1.338	(0.320)	43182	17.4787	174.78
19 Carbon Disulfide	76	2.069	2.069	(0.494)	200722	43.1261	431.26
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	49542	23.8607	238.60
59 Chlorobenzene	112	7.699	7.699	(1.004)	101950	22.4106	224.10
7 Chloroethane	64	1.403	1.403	(0.335)	37624	17.9866	179.86(M)
28 Chloroform	83	3.910	3.910	(0.933)	69168	20.3618	203.61
3 Chloromethane	50	1.081	1.081	(0.258)	40368	21.9732	219.73
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.843)	93810	48.1849	481.84
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	59422	22.9685	229.68
55 Dibromochloromethane	129	7.176	7.176	(0.936)	39023	24.8042	248.04
44 Dibromomethane	93	5.558	5.557	(1.118)	27656	23.5918	235.91
2 Dichlorodifluoromethane	85	0.973	0.973	(0.232)	42328	24.6221	246.22
61 Ethylbenzene	106	7.800	7.799	(1.017)	52289	22.6566	226.56
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	12454	26.7689	267.68
67 Isopropylbenzene	105	8.566	8.566	(1.117)	147292	22.4128	224.12
62 m,p-Xylenes	106	7.907	7.907	(1.031)	136163	49.2565	492.56
17 Methylene Chloride	84	2.306	2.305	(0.550)	35438	19.4424	194.42
87 n-Butylbenzene	91	9.999	9.999	(1.035)	114878	23.0023	230.02
73 n-Propylbenzene	91	8.917	8.917	(0.923)	178941	24.8452	248.45
92 Naphthalene	128	11.546	11.546	(1.195)	24581	24.7410	247.41
63 o-Xylene	106	8.244	8.244	(1.075)	63141	22.9204	229.20
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	137239	23.5991	235.99
64 Styrene	104	8.258	8.258	(1.077)	104978	22.7256	227.25
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	95093	24.4250	244.25
56 Tetrachloroethene	164	6.933	6.933	(0.904)	27654	23.5978	235.97
50 Toluene	91	6.446	6.446	(0.840)	168547	21.6353	216.35
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.605)	36653	22.1607	221.60
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	51977	22.7727	227.72
38 Trichloroethene	130	5.207	5.214	(1.048)	183585	118.796	1187.96
8 Trichlorofluoromethane	101	1.561	1.560	(0.373)	120023	23.9887	239.88
5 Vinyl Chloride	62	1.145	1.145	(0.273)	75127	25.6116	256.11

QC Flag Legend

M - Compound response manually integrated.



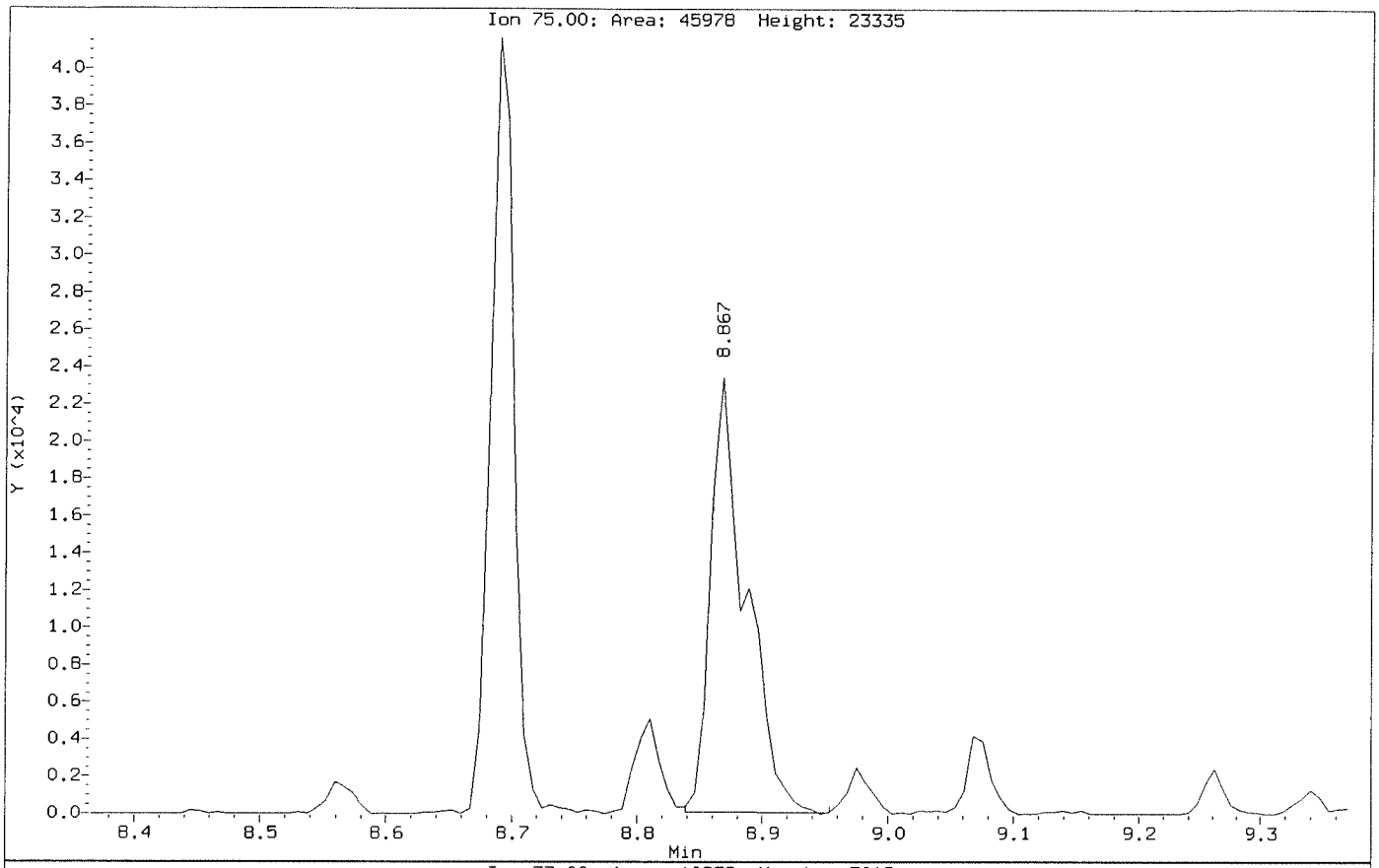
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Sample Info: HS20101419-01MSD;HS20101419-01MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

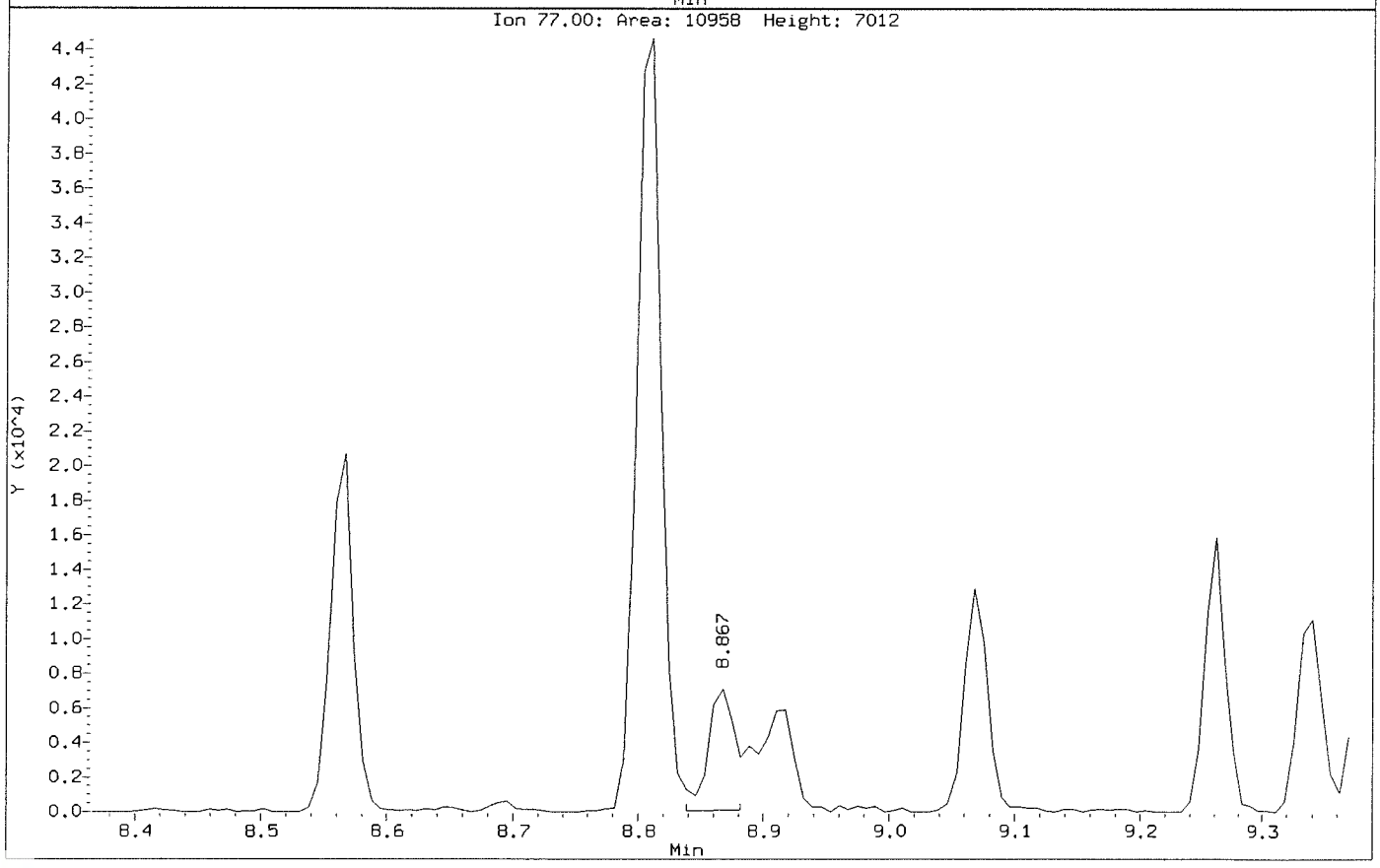
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\Before\X110418.D
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Instrument: voa6.i
Client Sample ID: HS20101419-01MSD

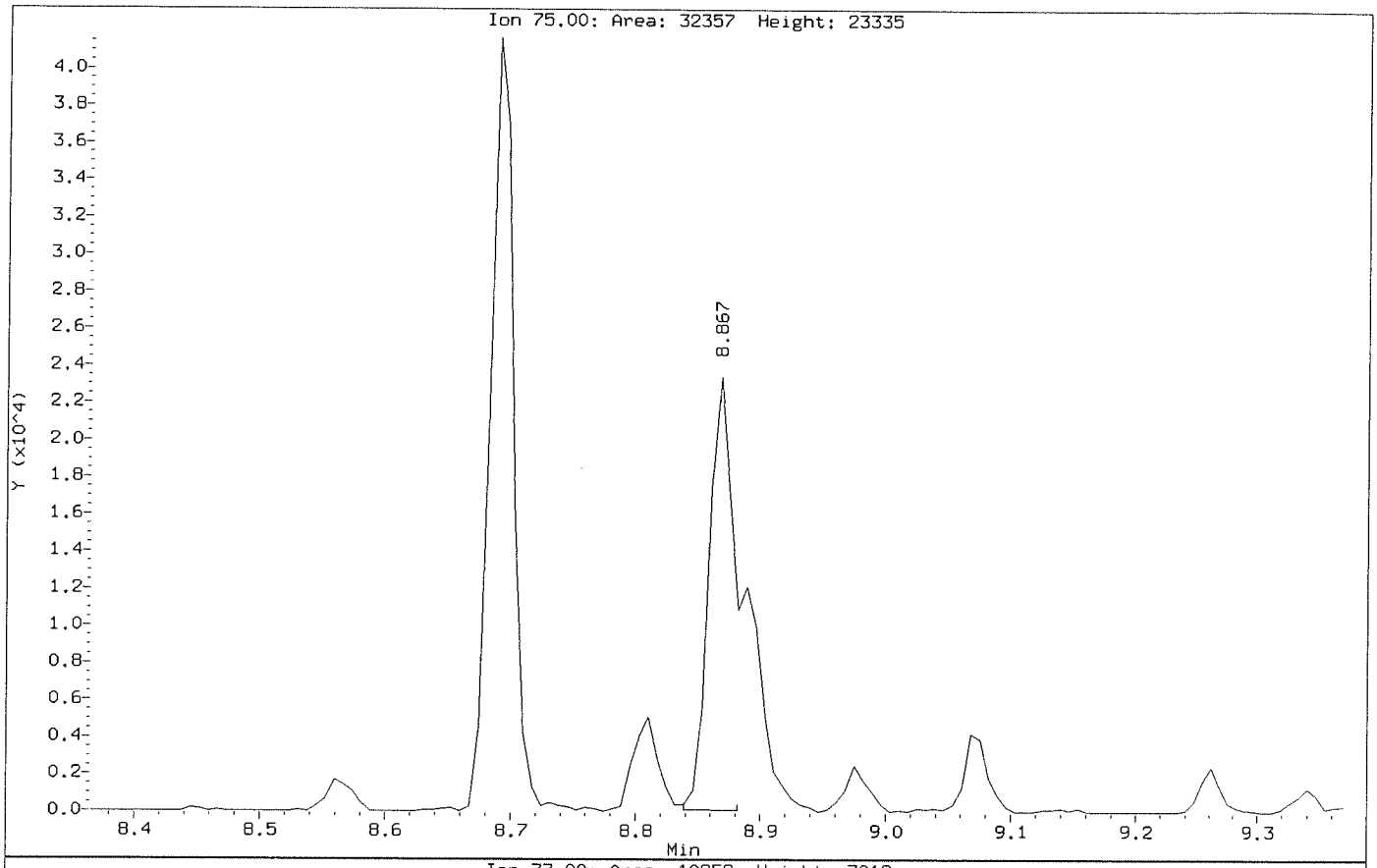
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CAS Number: 96-18-4

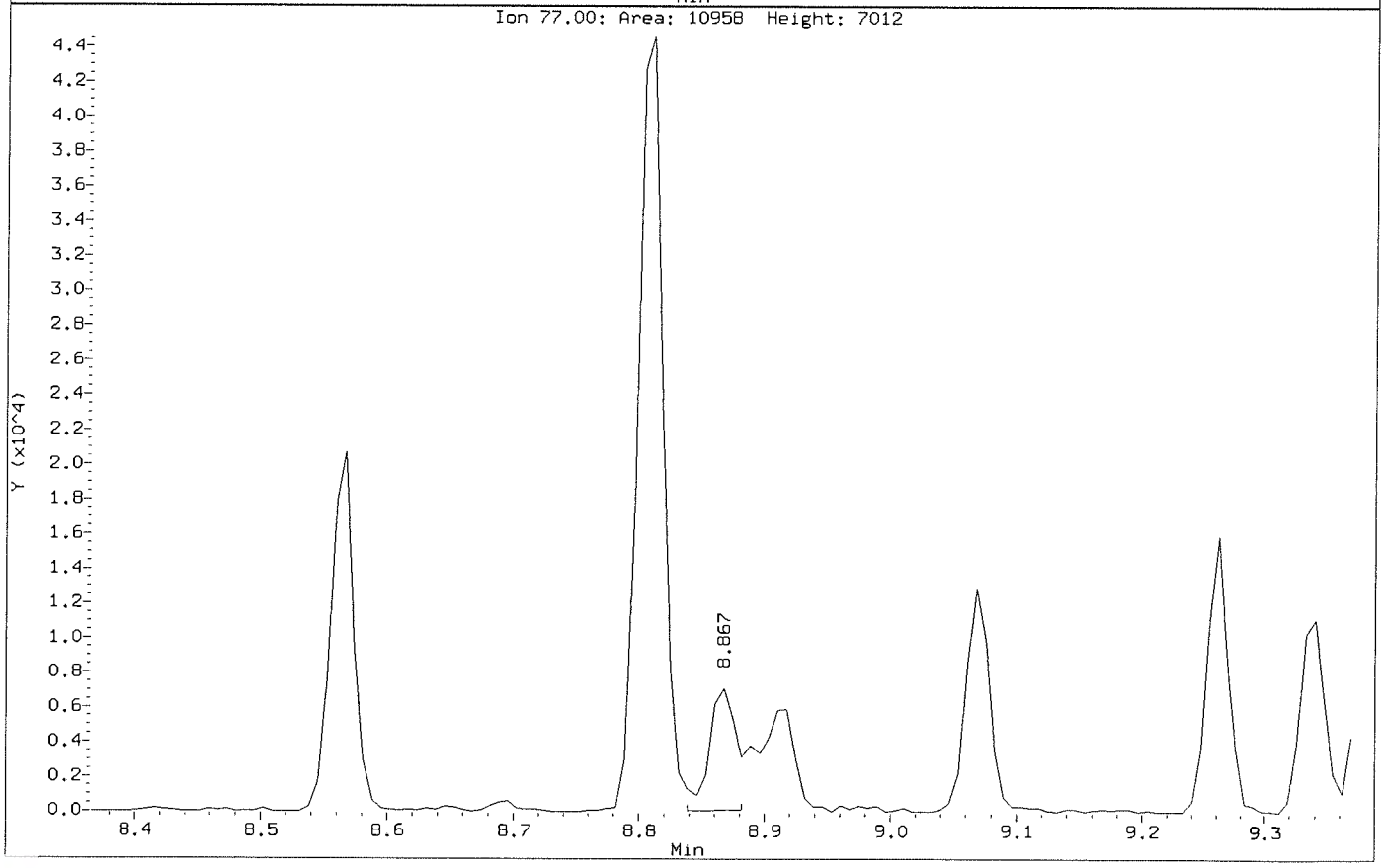




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Instrument: voa6.i
Client Sample ID: HS20101419-01MSD

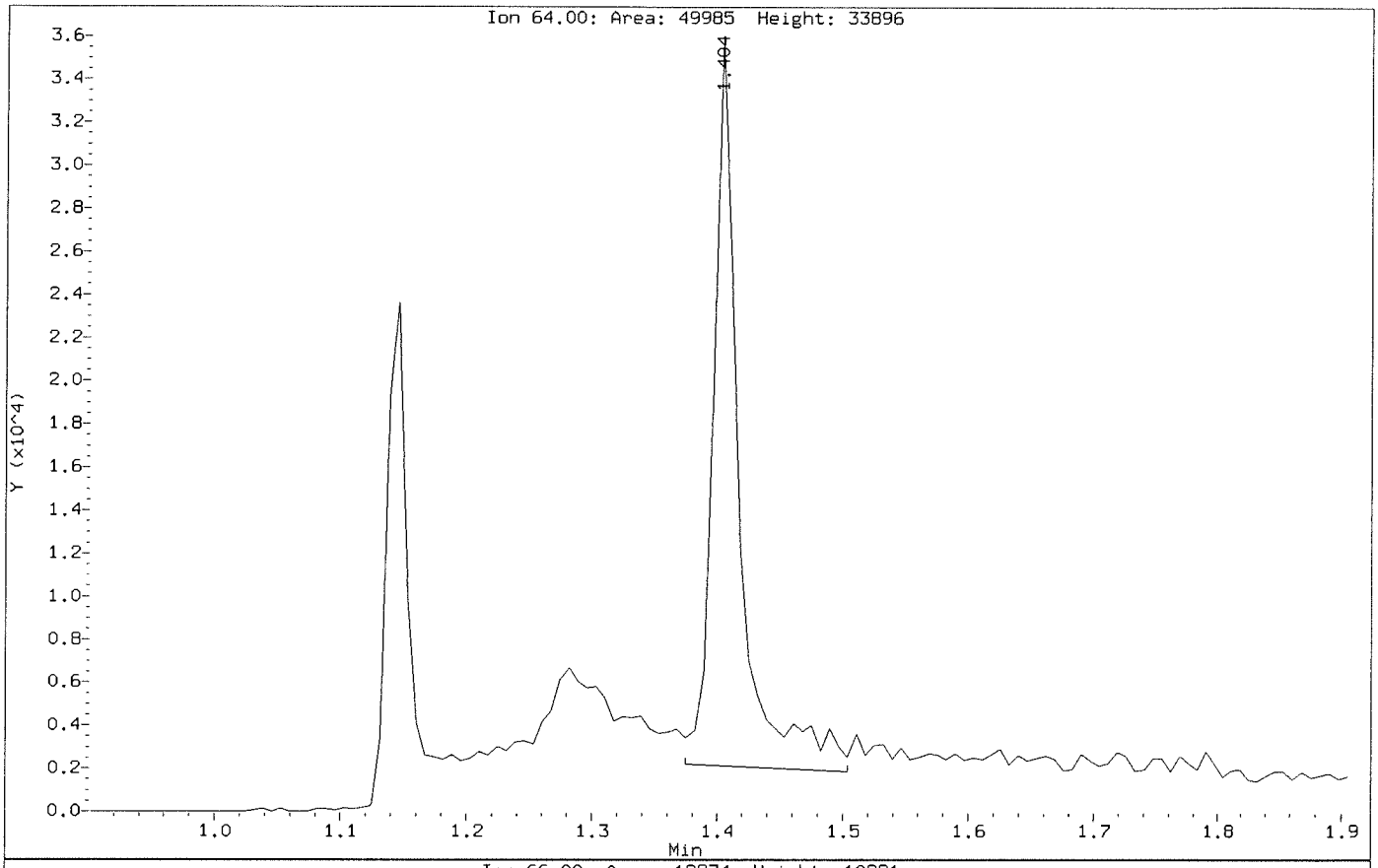
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CAS Number: 96-18-4

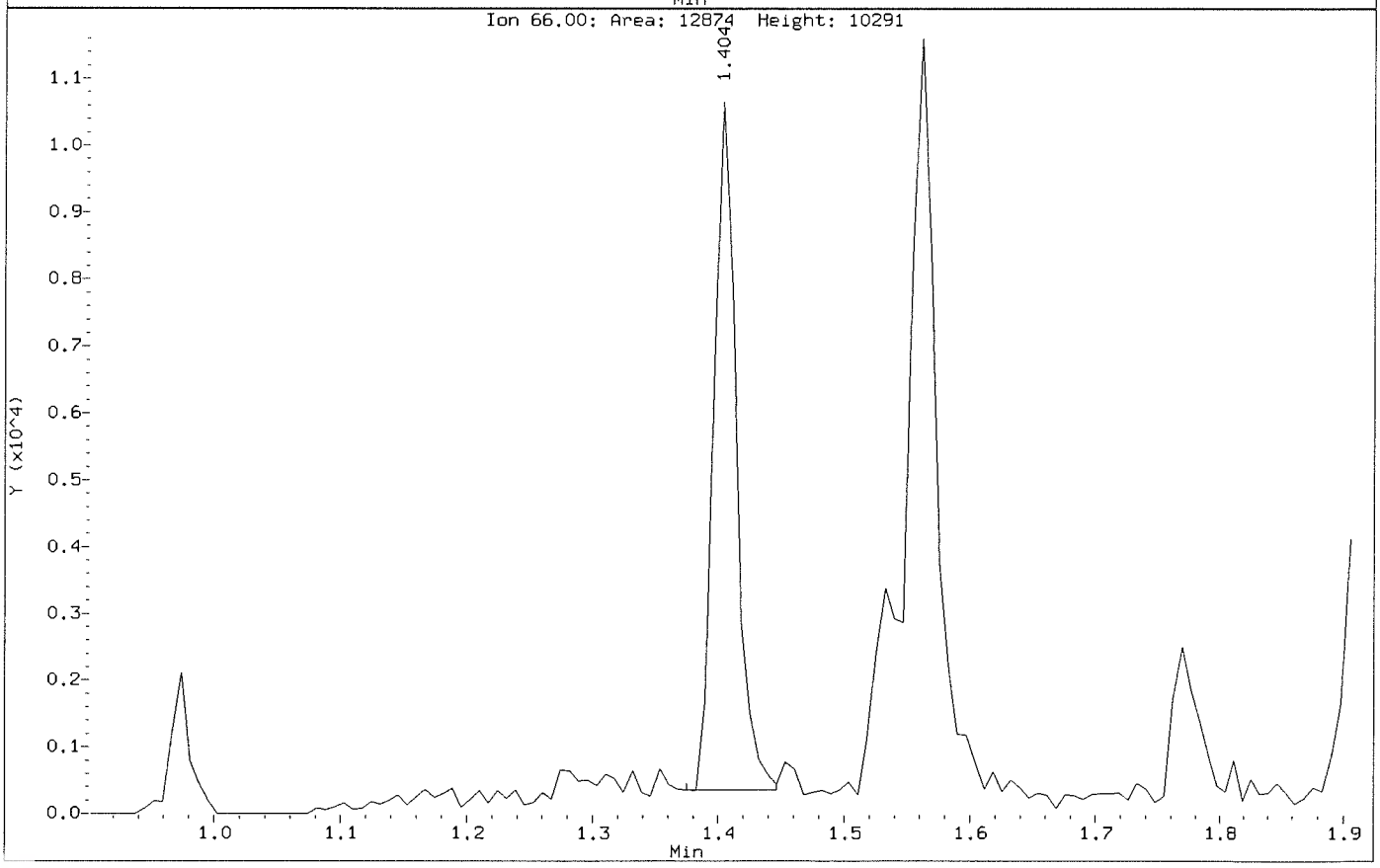




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Client Sample ID: HS20101419-01MSD

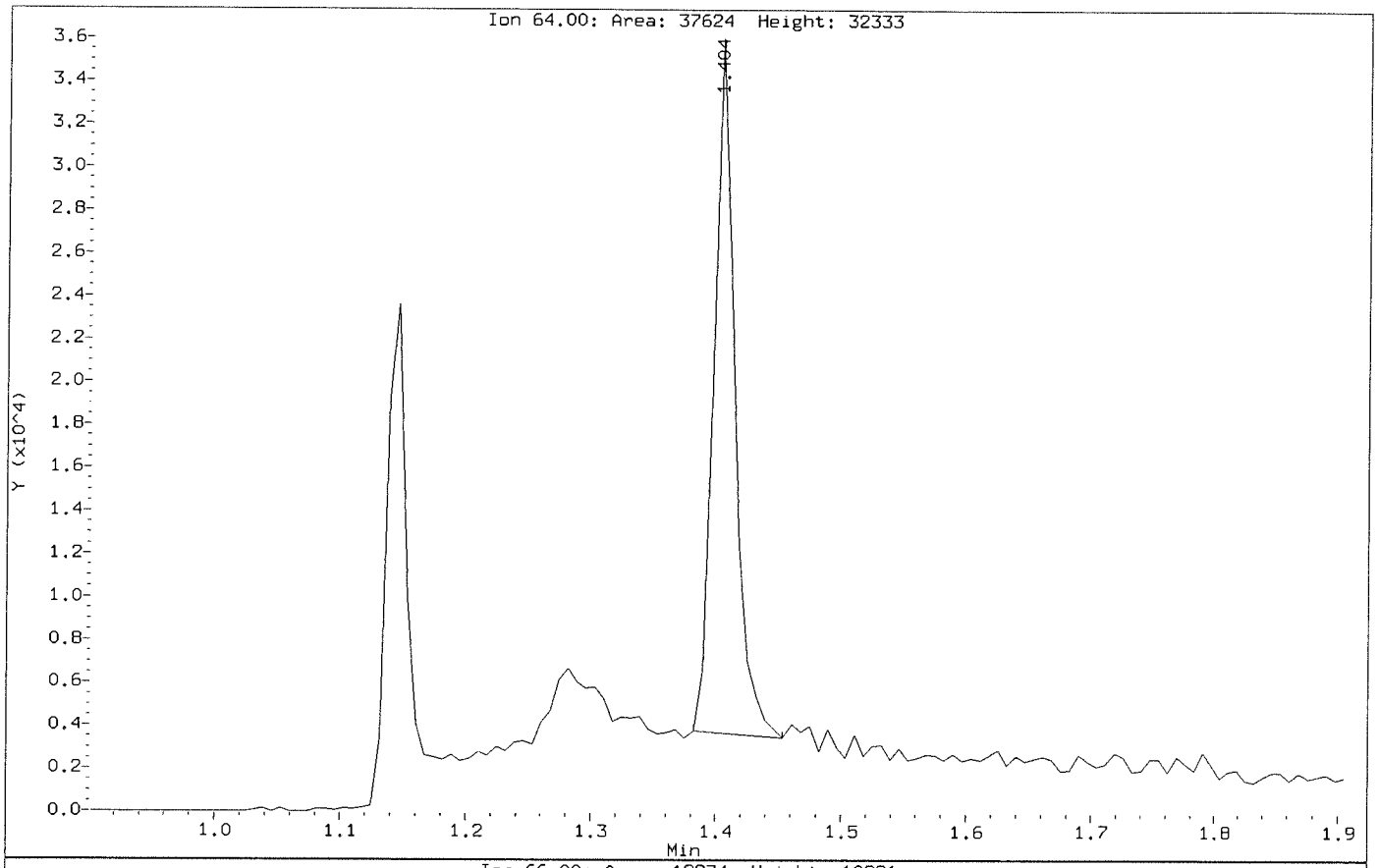
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CAS Number: 75-00-3

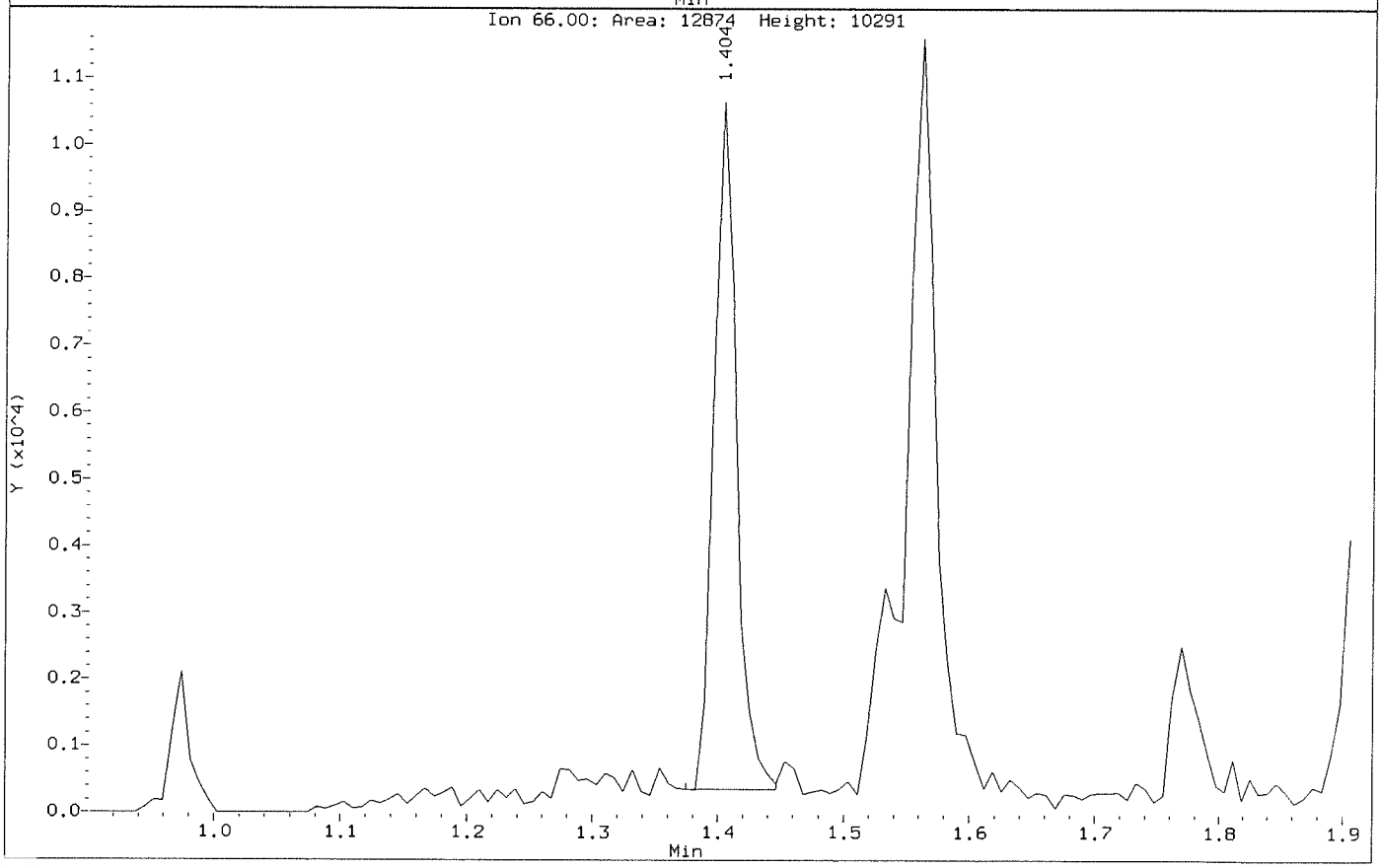




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Injection Date: 04-NOV-2020 15:30
Instrument: voa6.i
Client Sample ID: HS20101419-01MSD

Compound: Chloroethane
CAS Number: 75-00-3





Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110421.D Page 1
Report Date: 07-Nov-2020 13:26

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201104.b\X110421.D
Lab Smp Id: HS20110121-02 Client Smp ID: HS20110121-02
Inj Date : 04-NOV-2020 16:33
Operator : PC Inst ID: voa6.i
Smp Info : HS20110121-02;HS20110121-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201104.b\8260W.m
Meth Date : 07-Nov-2020 13:24 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:27 Cal File: X110308.D
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Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

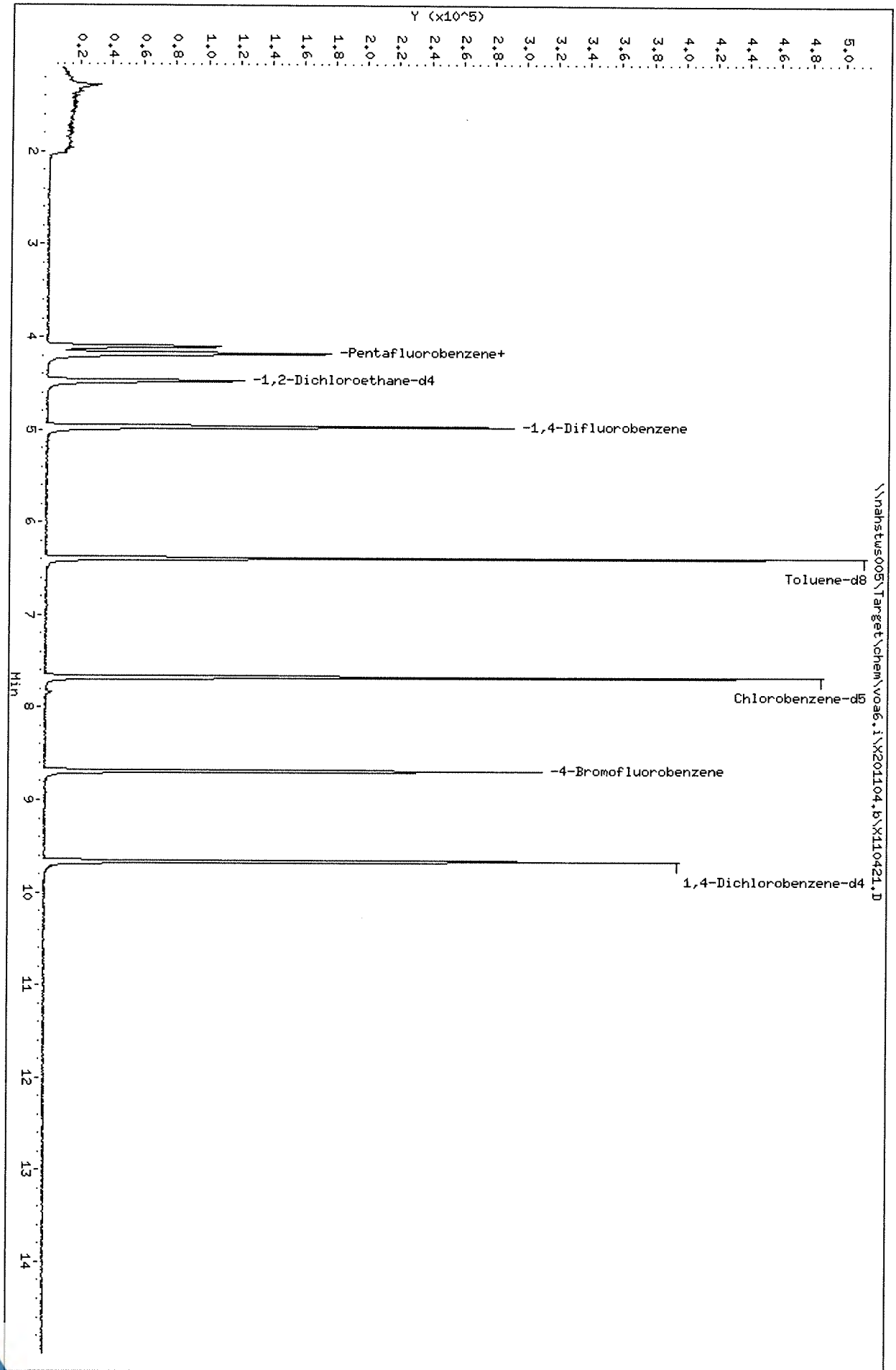
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	128199	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	216948	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	192846	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	78275	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	72204	41.8217	41.82
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	86301	42.7030	42.70
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	259711	50.4204	50.42
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	76494	44.8600	44.85

Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110421.D
Date : 04-NOV-2020 16:33
Client ID: HS20110121-02
Sample Info: HS20110121-02;HS20110121-02;;;
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\X201104.b\X110422.D
Lab Smp Id: HS20110121-01 Client Smp ID: HS20110121-01
Inj Date : 04-NOV-2020 16:54
Operator : PC Inst ID: voa6.i
Smp Info : HS20110121-01;HS20110121-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X201104.b\8260W.m
Meth Date : 07-Nov-2020 13:24 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:27 Cal File: X110308.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

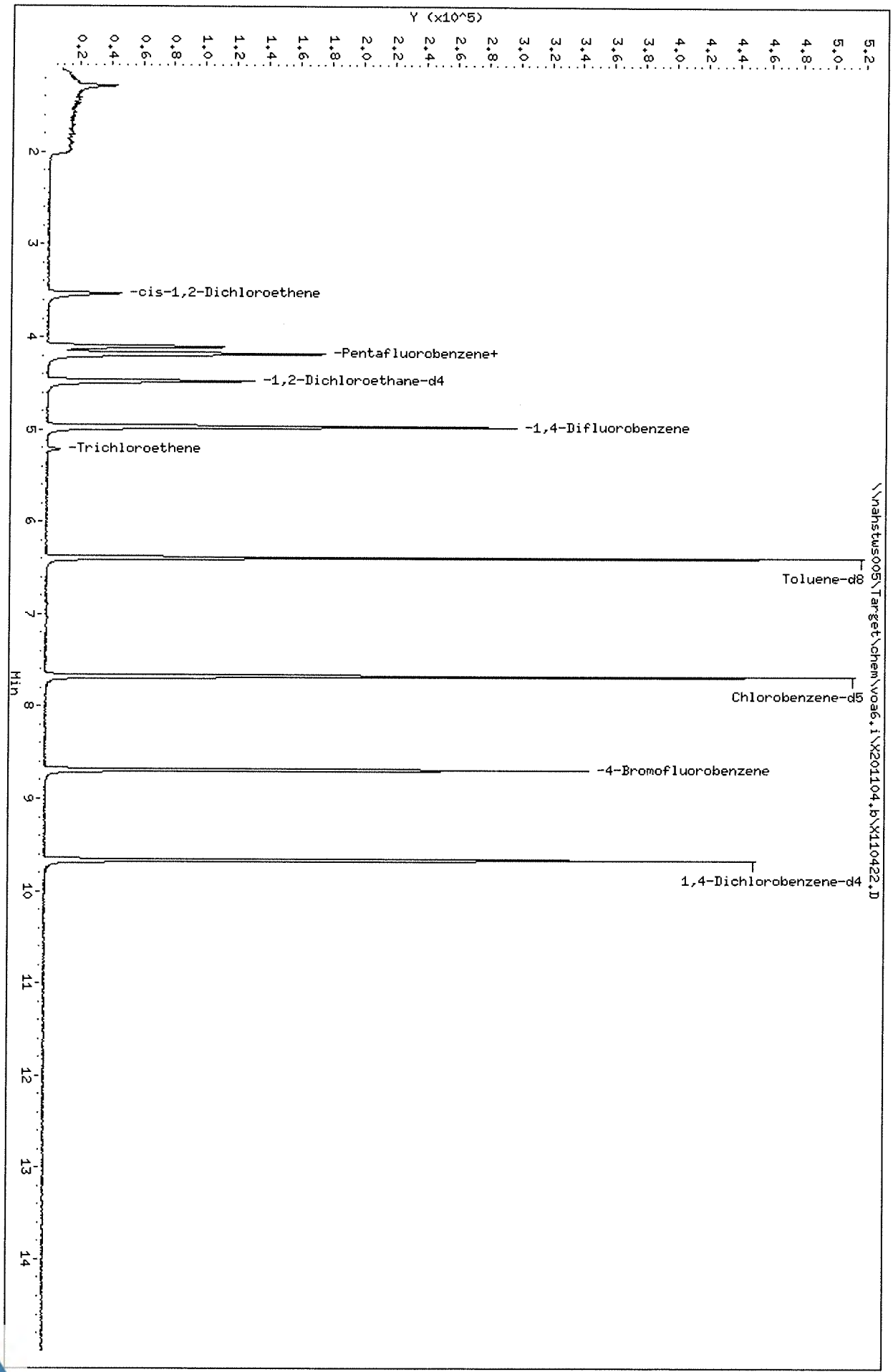
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.189	4.182	(1.000)	127849	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	222365	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	201368	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	84736	50.0000	
$ 30 Dibromofluoromethane	113	4.110	4.103	(0.981)	73988	42.9723	42.97
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.068)	90100	44.6382	44.63
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	263858	49.0576	49.05
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	84904	47.5795	47.57
27 cis-1,2-Dichloroethene	96	3.537	3.530	(0.844)	22180	11.8299	11.82
38 Trichloroethene	130	5.214	5.207	(1.049)	1969	1.32875	1.32(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110422.D
Date : 04-NOV-2020 16:54
Client ID: HS20110121-01
Sample Info: HS20110121-01;HS20110121-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110422.D

Date : 04-NOV-2020 16:54

Client ID: HS20110121-01

Instrument: voa6.i

Sample Info: HS20110121-01;HS20110121-01;;;

Purge Volume: 5.0

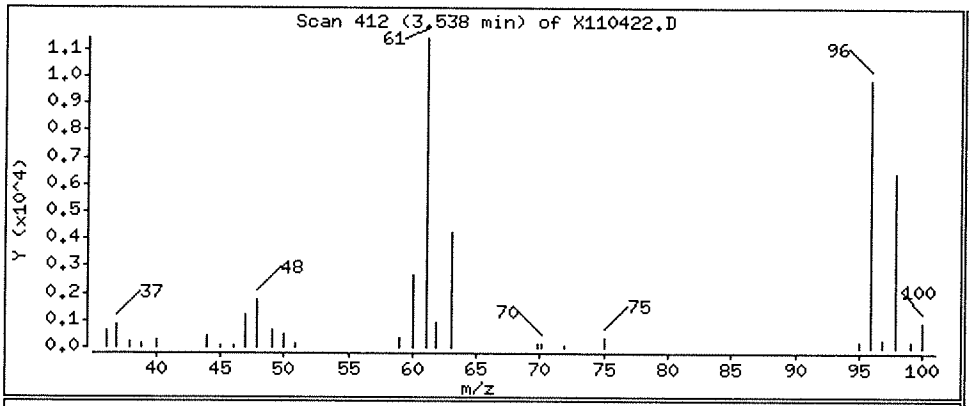
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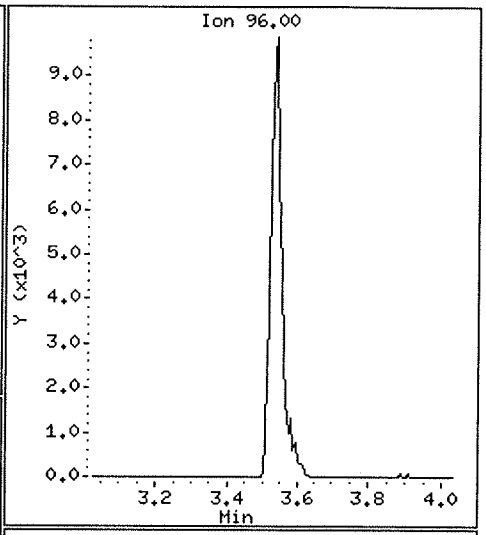
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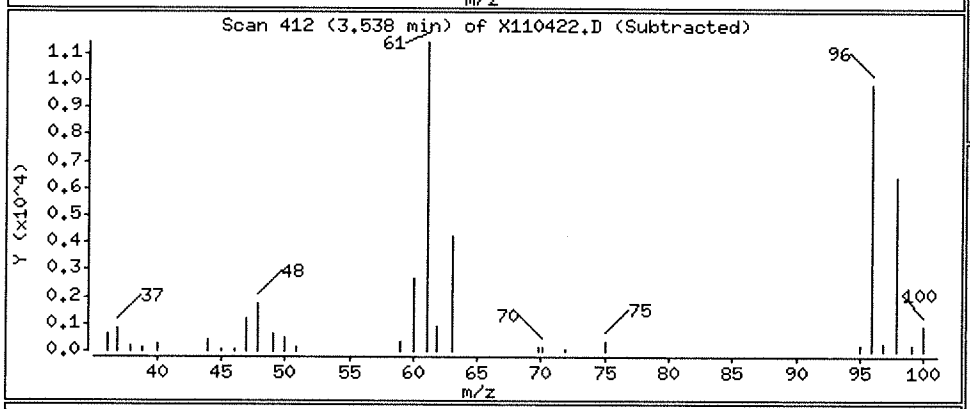
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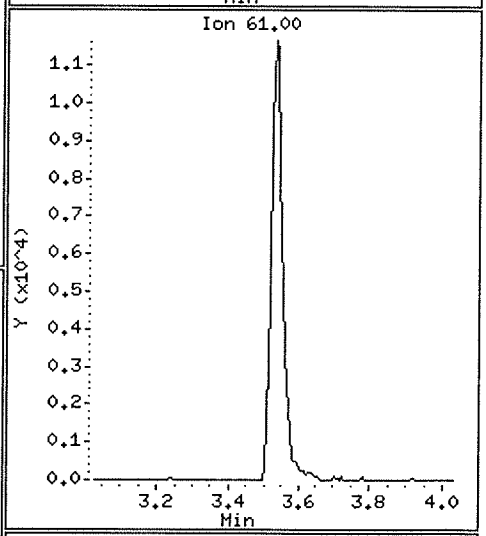
27 cis-1,2-Dichloroethene

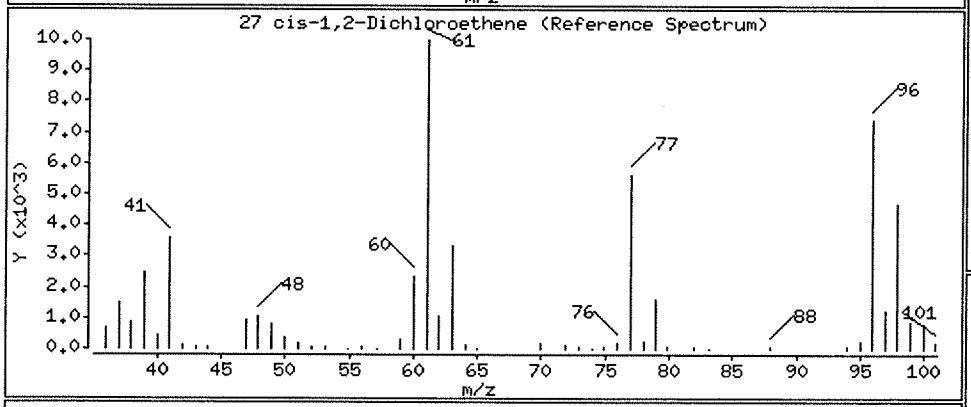
Concentration: 11.82 ug/l

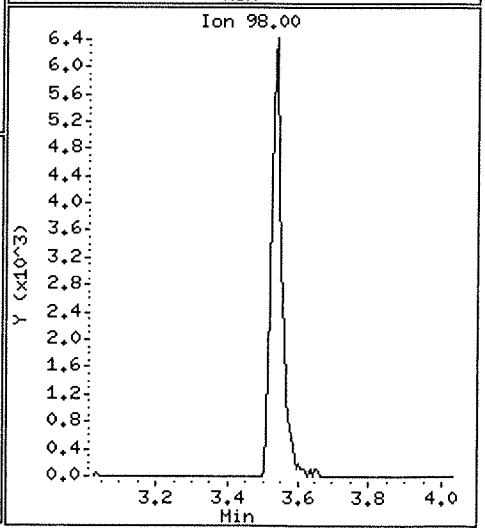


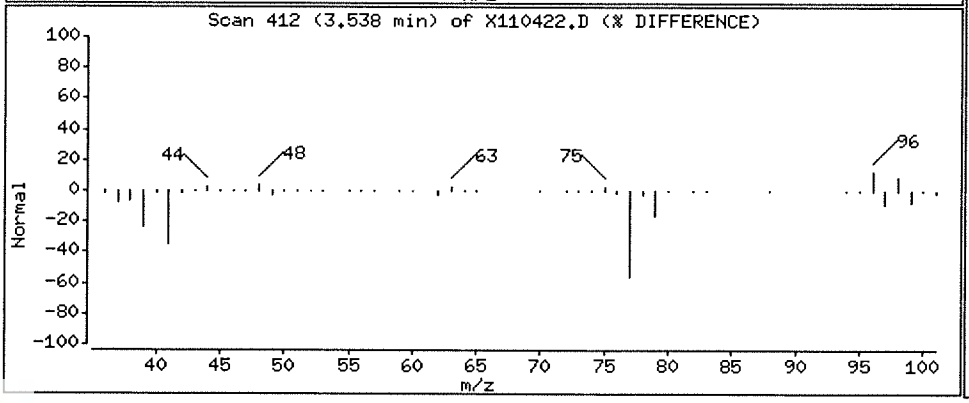












Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110422.D

Date : 04-NOV-2020 16:54

Client ID: HS20110121-01

Instrument: voa6.i

Sample Info: HS20110121-01;HS20110121-01;;;

Purge Volume: 5.0

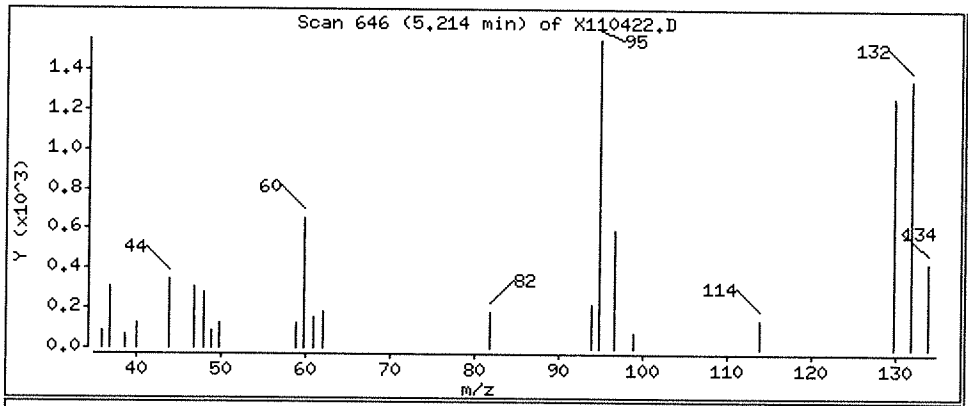
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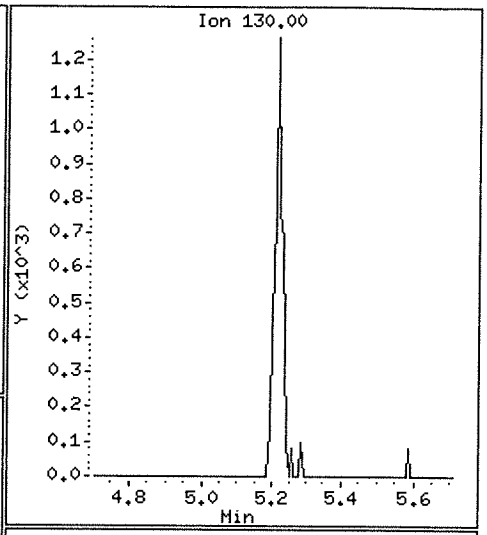
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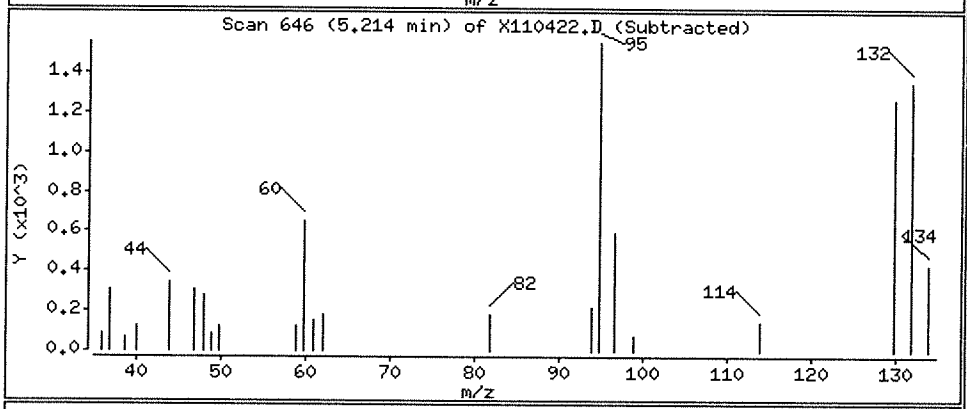
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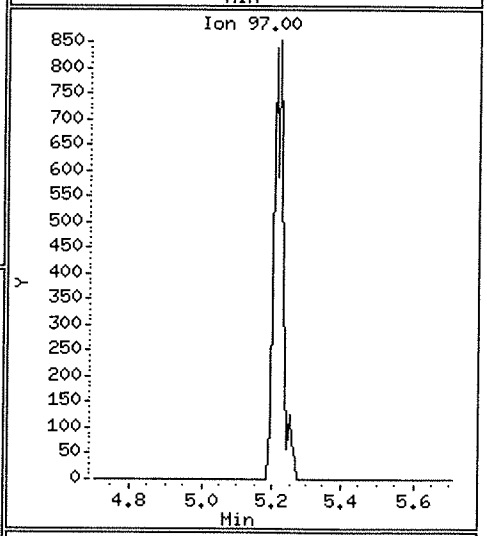
38 Trichloroethene

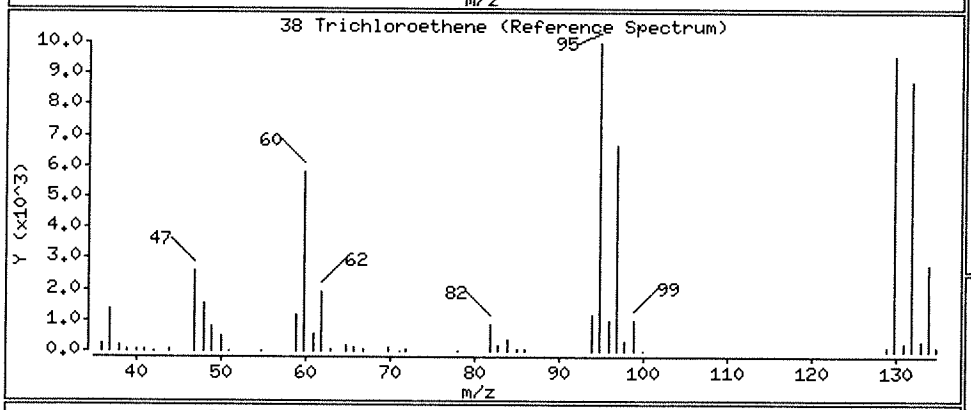
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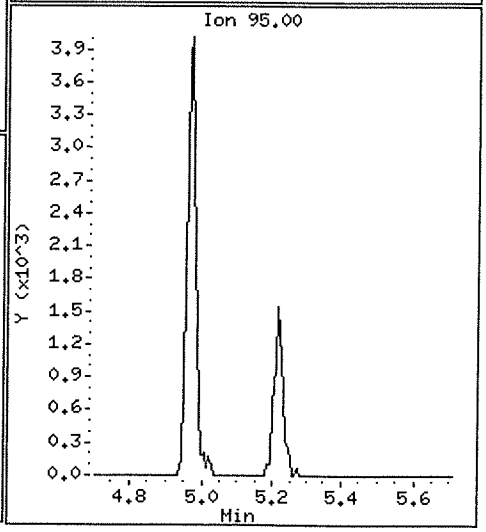


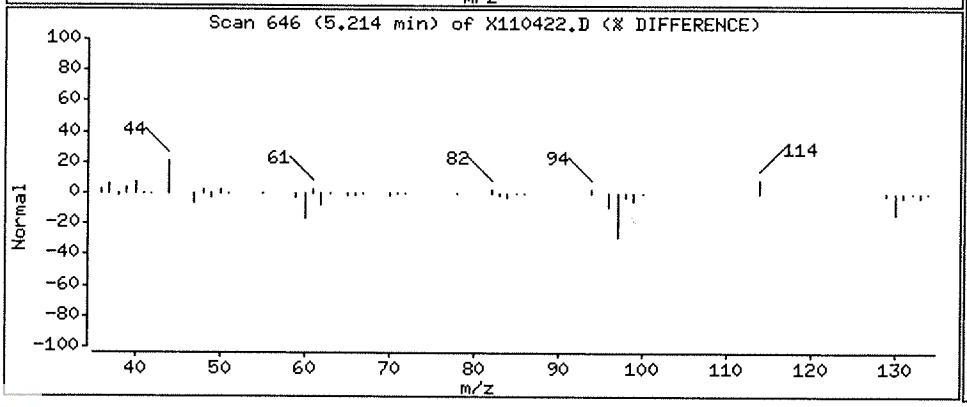












Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110431.D Page 1
Report Date: 07-Nov-2020 13:29

ALS Laboratory Group

Data file : \\nahstws005\Target\chem\voa6.i\X201104.b\X110431.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 04-NOV-2020 20:04
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\X201104.b\8260W.m
Meth Date : 07-Nov-2020 13:29 voa6.i Quant Type: ISTD
Cal Date : 03-NOV-2020 14:27 Cal File: X110308.D
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7056

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

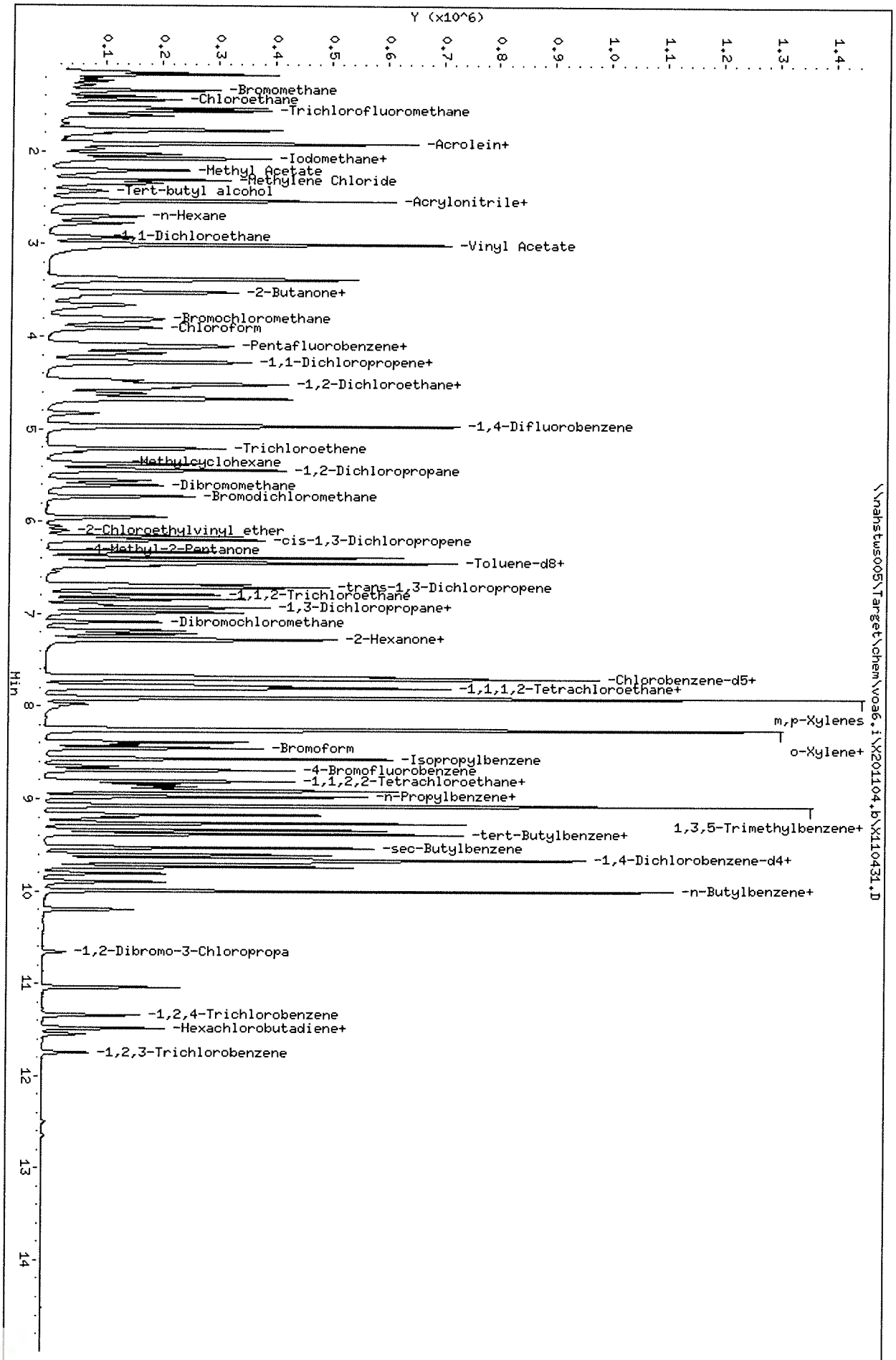
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	138150	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	267014	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	239635	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	114486	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	94411	50.0000	50.74
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	114942	50.0000	52.36
$	48 Toluene-d8	98	6.388	6.388	(0.833)	320795	50.0000	50.11
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	106294	50.0000	49.95
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	83681	50.0000	48.94
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	134810	50.0000	46.73
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	89659	50.0000	47.42
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	72842	50.0000	49.28
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	148472	50.0000	44.71
	11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	114147	50.0000	43.79
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	114042	50.0000	45.79
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	18302	50.0000	37.74
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	78428	50.0000	48.78(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	36463	50.0000	40.02
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	293345	50.0000	45.80
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	6131	50.0000	48.22
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	86671	50.0000	48.22
	88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	142708	50.0000	45.16

Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\X110431.D Page 2
Report Date: 07-Nov-2020 13:29

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	134756	50.0000	46.80
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	93432	50.0000	47.28
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	295217	50.0000	45.19
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	147503	50.0000	43.96
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	137851	50.0000	46.95
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	155506	50.0000	44.50
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	115067	50.0000	40.25
24 2-Butanone	43	3.581	3.581	(0.856)	54433	100.000	84.75
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	234534	50.0000	43.61
52 2-Hexanone	43	7.212	7.212	(0.940)	146321	100.000	90.70
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	304804	50.0000	44.87
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	279568	50.0000	45.21
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	171299	100.000	94.09
10 Acetone	43	1.976	1.976	(0.473)	66653	100.000	86.63
37 Benzene	78	4.519	4.519	(0.909)	354061	50.0000	47.47
74 Bromobenzene	156	8.810	8.810	(0.912)	92320	50.0000	45.82
29 Bromochloromethane	128	3.803	3.803	(0.909)	46299	50.0000	48.66
39 Bromodichloromethane	83	5.729	5.729	(1.153)	129872	50.0000	47.34
66 Bromoform	173	8.416	8.416	(1.097)	50547	50.0000	43.00
6 Bromomethane	94	1.338	1.338	(0.320)	106803	50.0000	41.54
19 Carbon Disulfide	76	2.069	2.069	(0.495)	442735	100.000	91.40
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	104783	50.0000	43.82
59 Chlorobenzene	112	7.699	7.699	(1.004)	227339	50.0000	44.39
7 Chloroethane	64	1.403	1.403	(0.336)	147089	50.0000	67.57
28 Chloroform	83	3.910	3.910	(0.935)	163394	50.0000	46.22
3 Chloromethane	50	1.081	1.081	(0.258)	93697	50.0000	47.92
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	94141	50.0000	46.46
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	143957	50.0000	48.32
55 Dibromochloromethane	129	7.176	7.176	(0.936)	91210	50.0000	51.50
44 Dibromomethane	93	5.558	5.558	(1.118)	64232	50.0000	47.58
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	85605	50.0000	47.85
61 Ethylbenzene	106	7.800	7.800	(1.017)	115595	50.0000	44.49
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	26304	50.0000	43.11
67 Isopropylbenzene	105	8.566	8.566	(1.117)	331103	50.0000	42.14
62 m,p-Xylenes	106	7.907	7.907	(1.031)	303022	100.000	97.37
17 Methylene Chloride	84	2.306	2.306	(0.551)	82441	50.0000	43.46
87 n-Butylbenzene	91	9.991	9.991	(1.034)	279661	50.0000	40.91
73 n-Propylbenzene	91	8.917	8.917	(0.923)	405824	50.0000	44.52
92 Naphthalene	128	11.546	11.546	(1.195)	48547	50.0000	37.41
63 o-Xylene	106	8.244	8.244	(1.075)	145851	50.0000	47.03
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	318830	50.0000	41.11
64 Styrene	104	8.258	8.258	(1.077)	256703	50.0000	49.36
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	218432	50.0000	42.30
56 Tetrachloroethene	164	6.933	6.933	(0.904)	60395	50.0000	45.78
50 Toluene	91	6.446	6.446	(0.840)	375528	50.0000	42.82
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	80919	50.0000	47.01
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	130378	50.0000	49.61
38 Trichloroethene	130	5.207	5.207	(1.048)	88751	50.0000	49.87
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	221964	50.0000	42.63
5 Vinyl Chloride	62	1.145	1.145	(0.274)	129918	50.0000	42.56

QC Flag Legend

M - Compound response manually integrated.

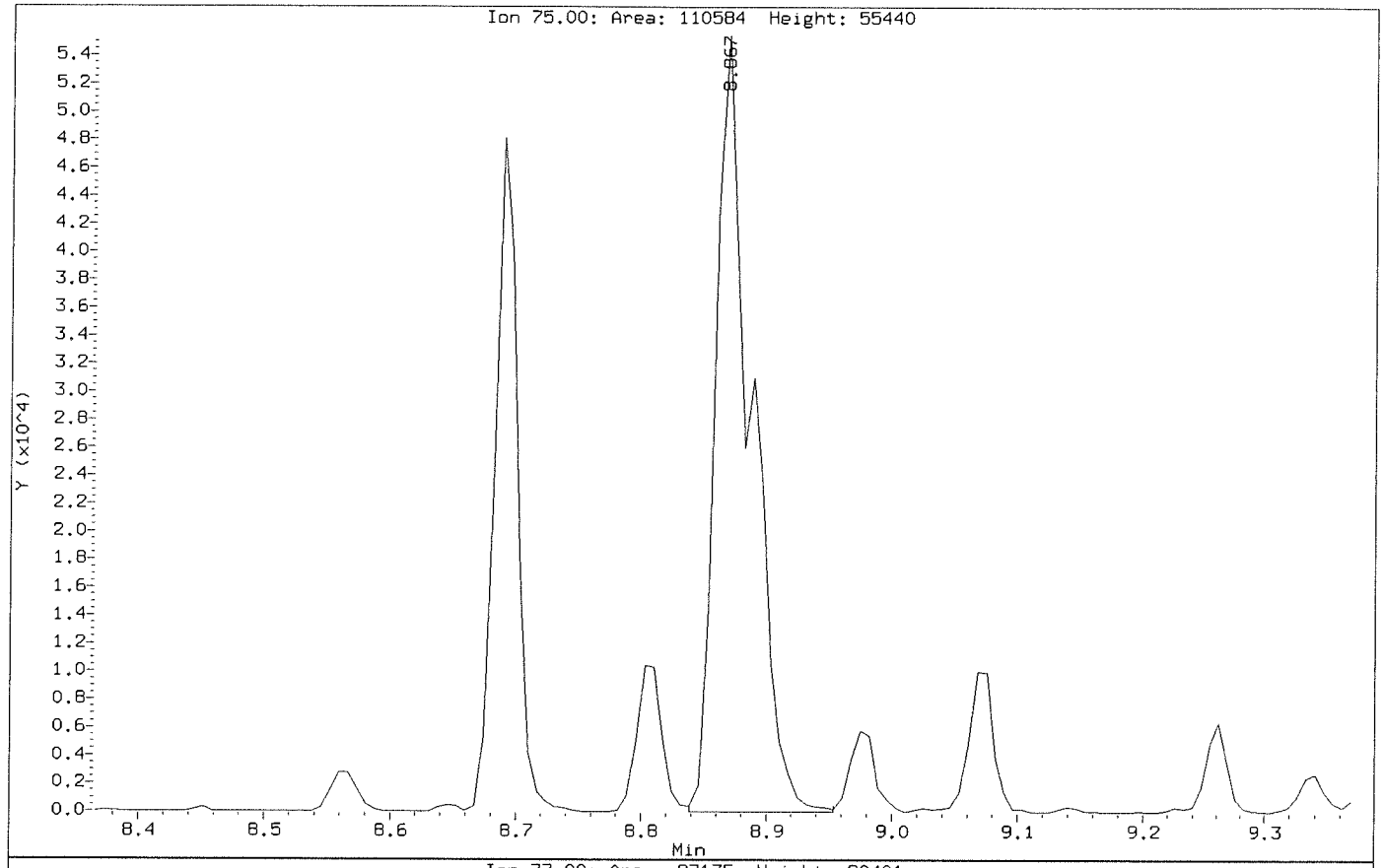


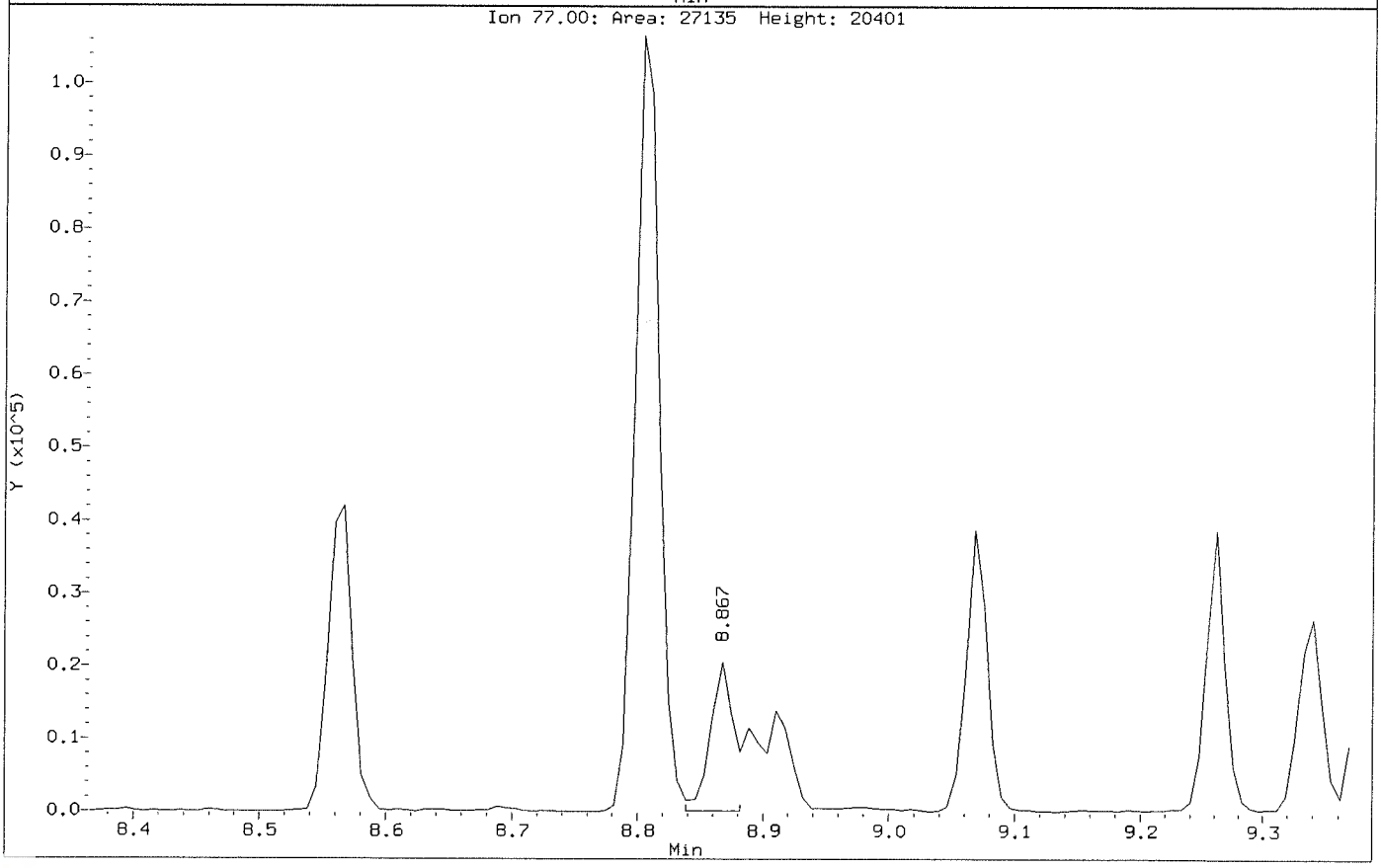
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Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\nahstws005\Target\chem\voa6.i\X201104.b\Before\X110431.D
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Instrument: voa6.i
Client Sample ID: CCV-END

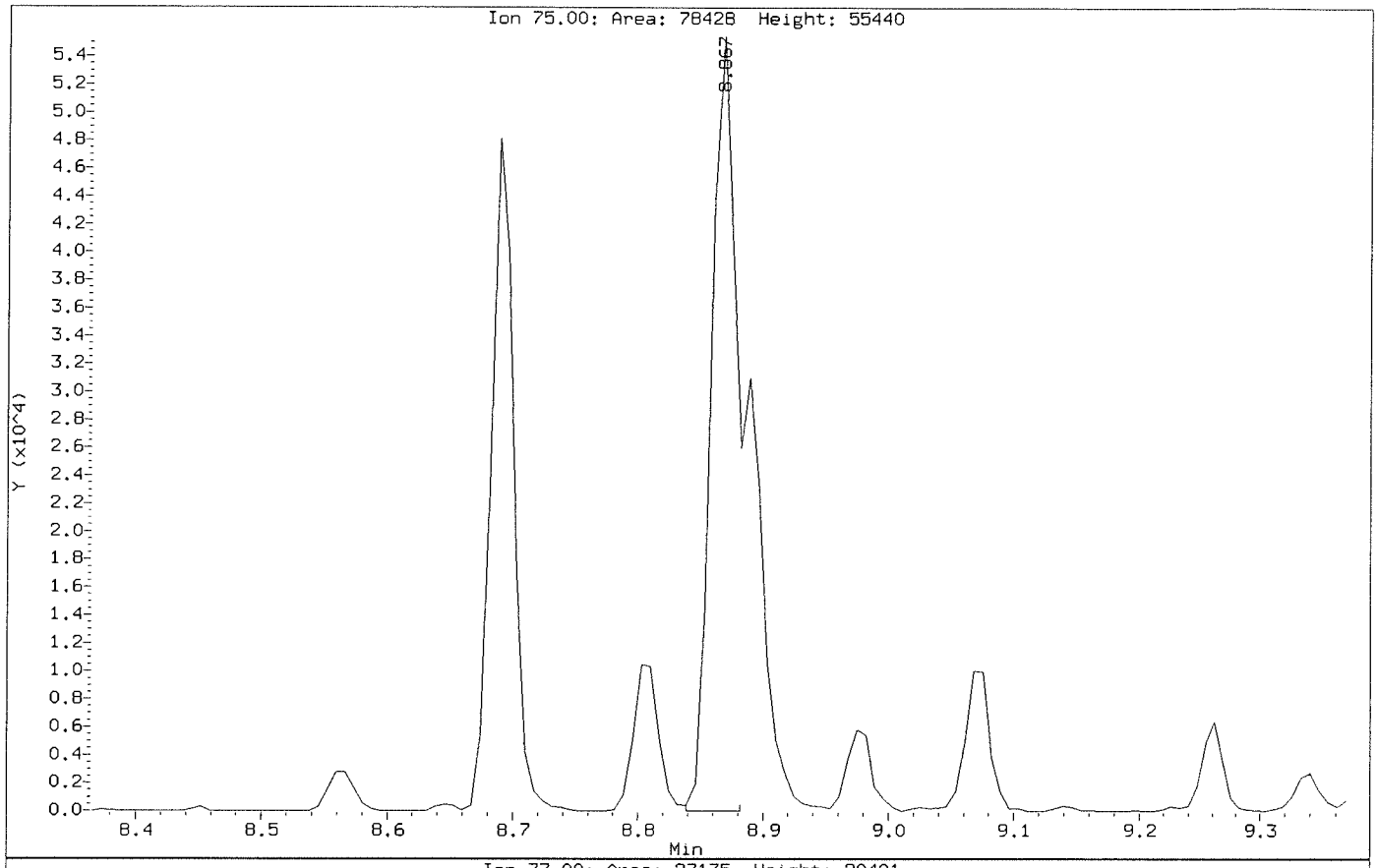
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CAS Number: 96-18-4

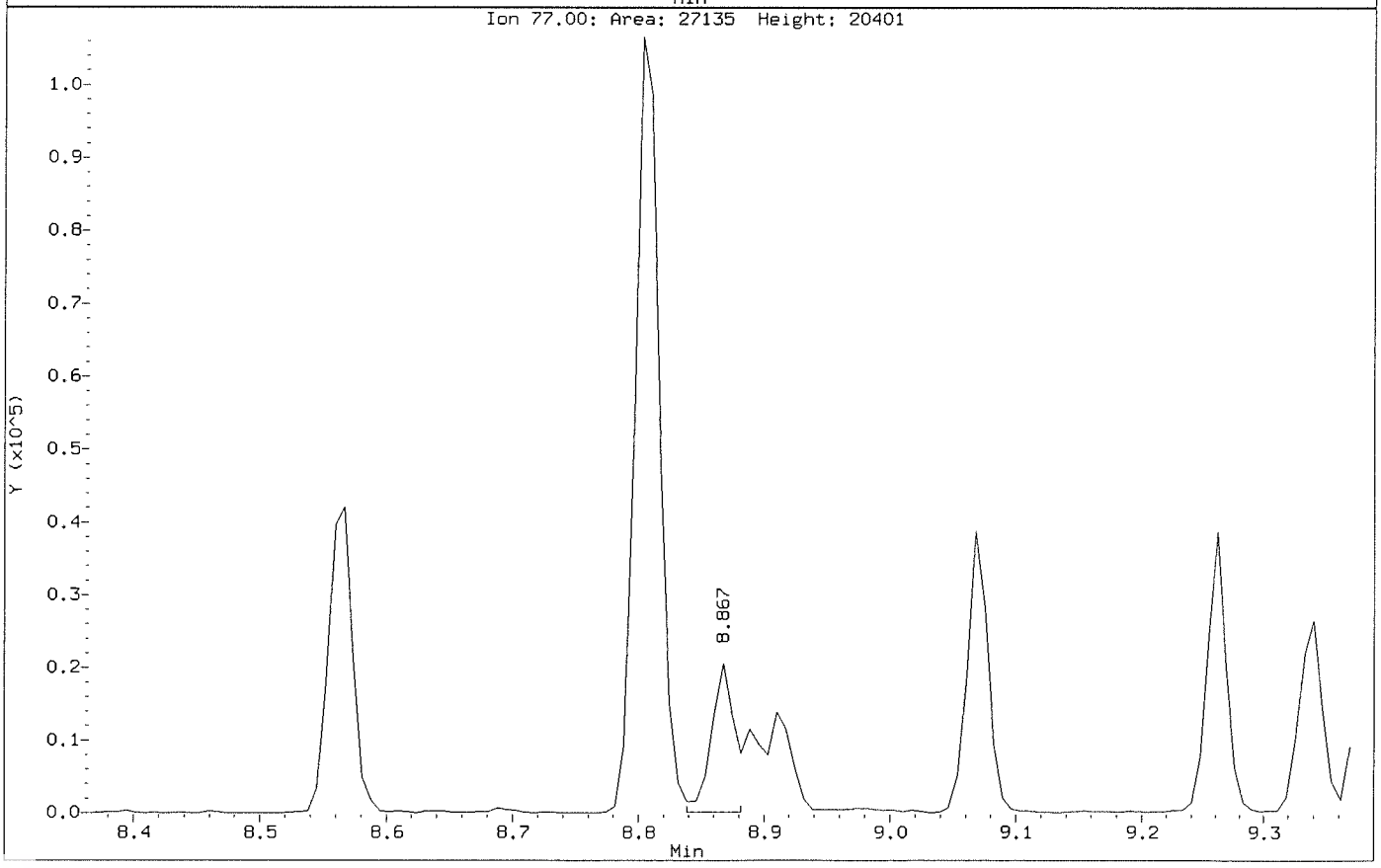




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Instrument: voa6.i
Client Sample ID: CCV-END

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

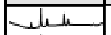
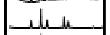
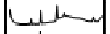
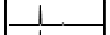
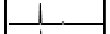
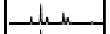




HS20110121 Wet Chem Raw Data (9056_anions_W)

ALS WO# HS20110121

Sequence: 111120
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
	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
	HS20110121-01		Unknown	GD3	1.00		Anions Program 06022020.1	Anions Processing Method	5.0	Finished
	HS20110121-01DF10		Unknown	GD4	10.00		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
	HS20101419-01MSD		Unknown	GD7	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: 111120
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
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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
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Sequence: 111120
Injection #6: STD6

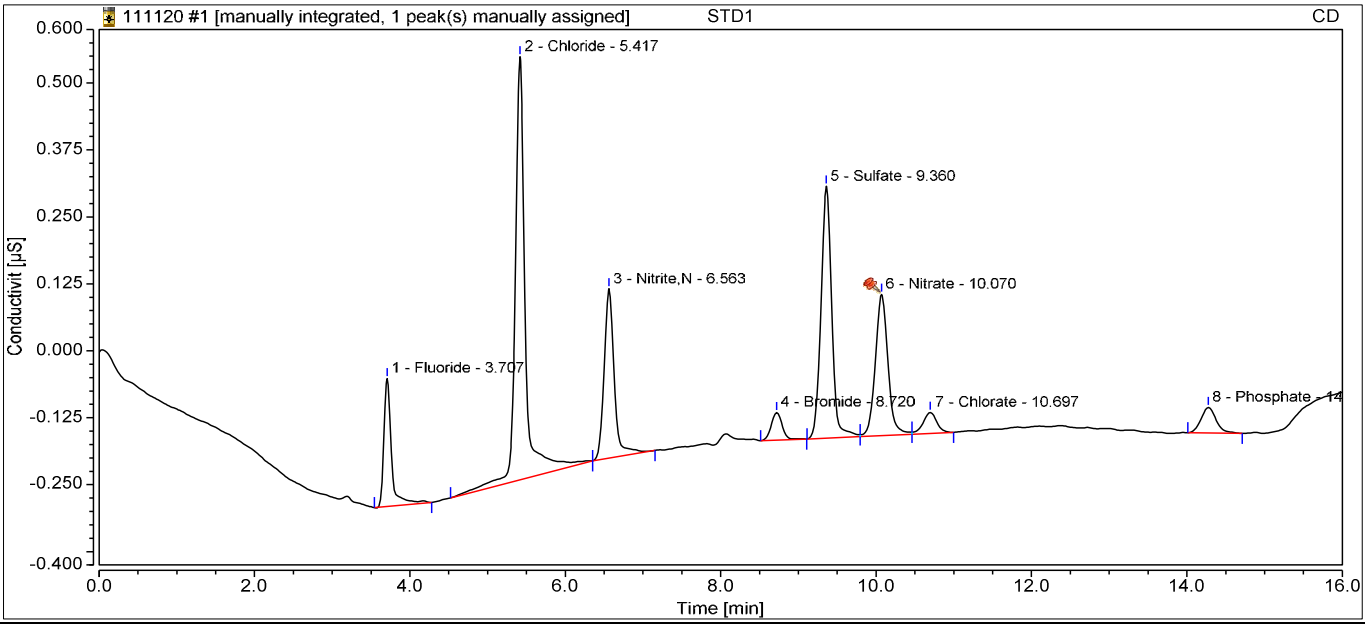
Calibration

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:

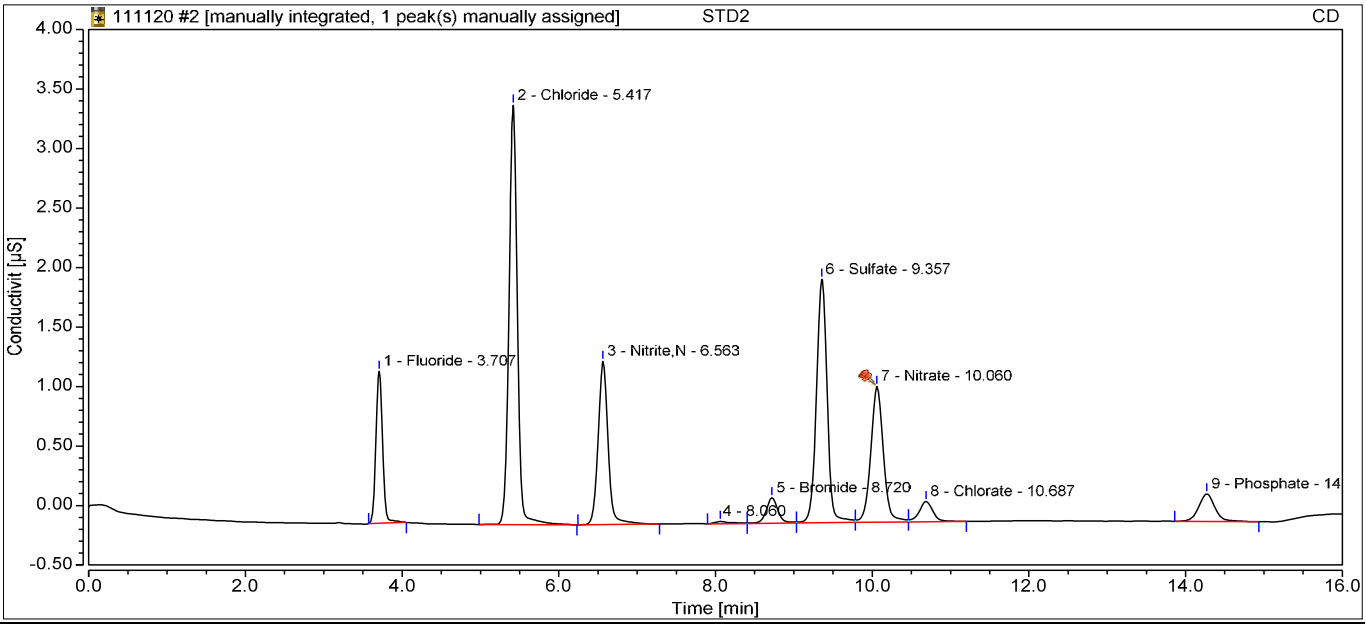


Integration Results

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:



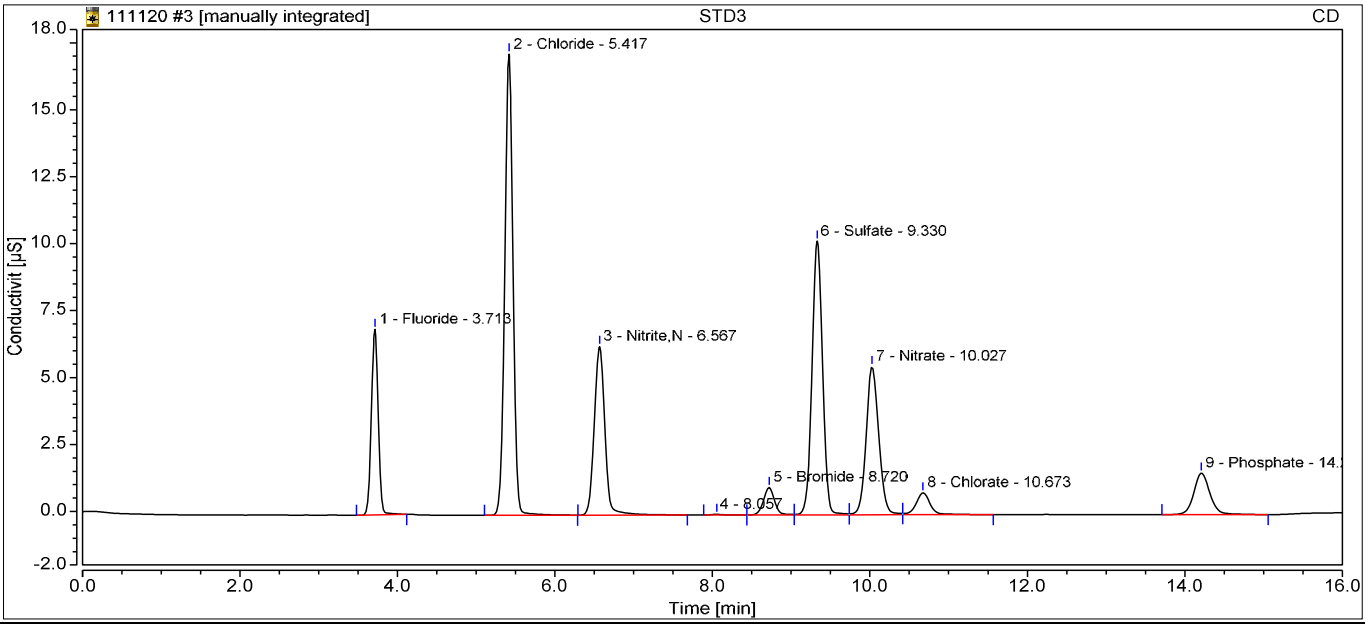
Integration Results

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:



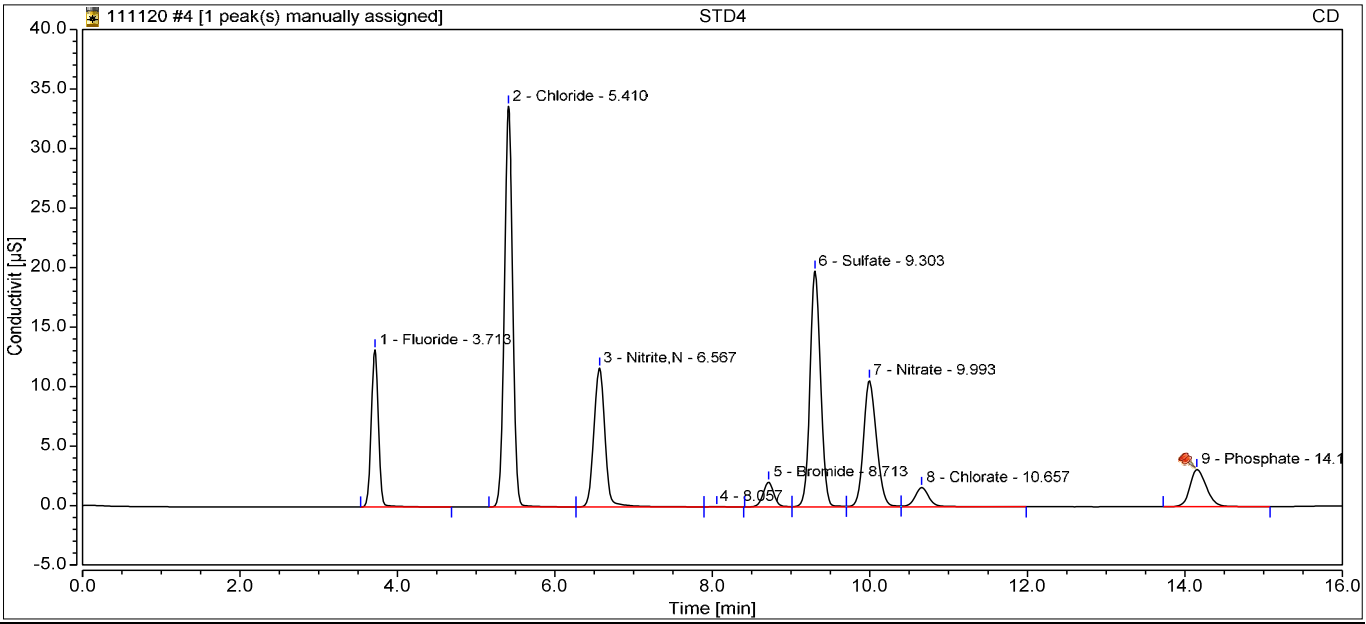
Integration Results

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:



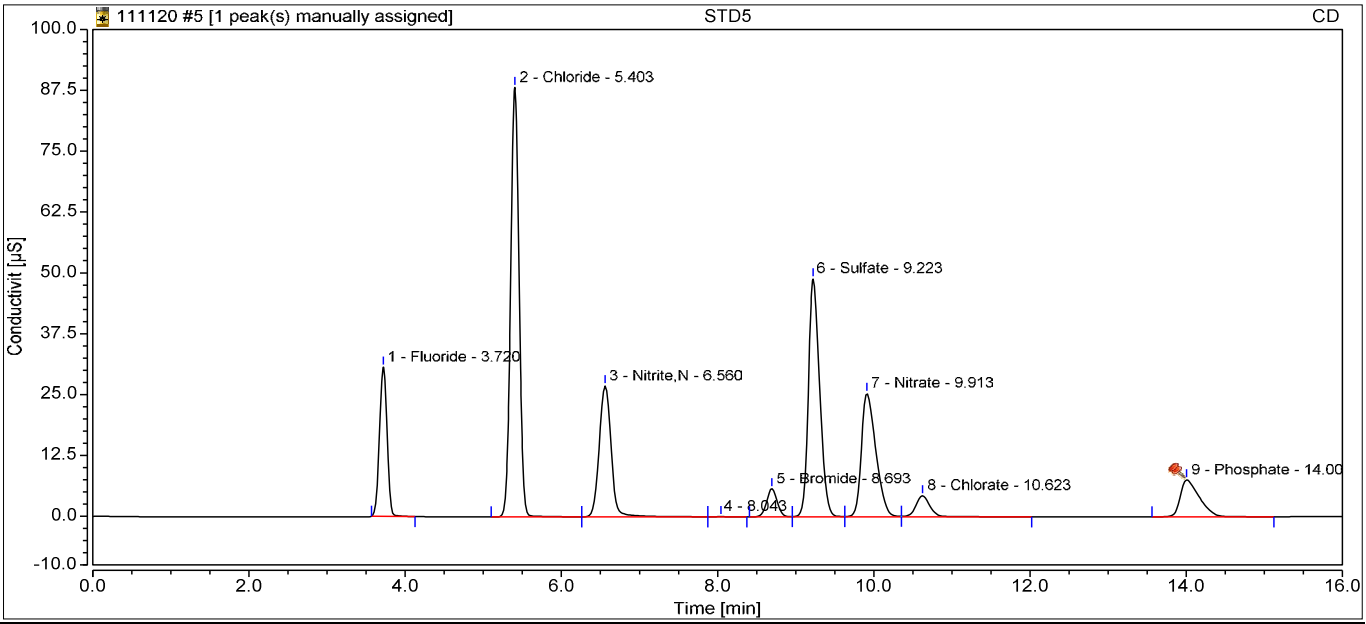
Integration Results

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:



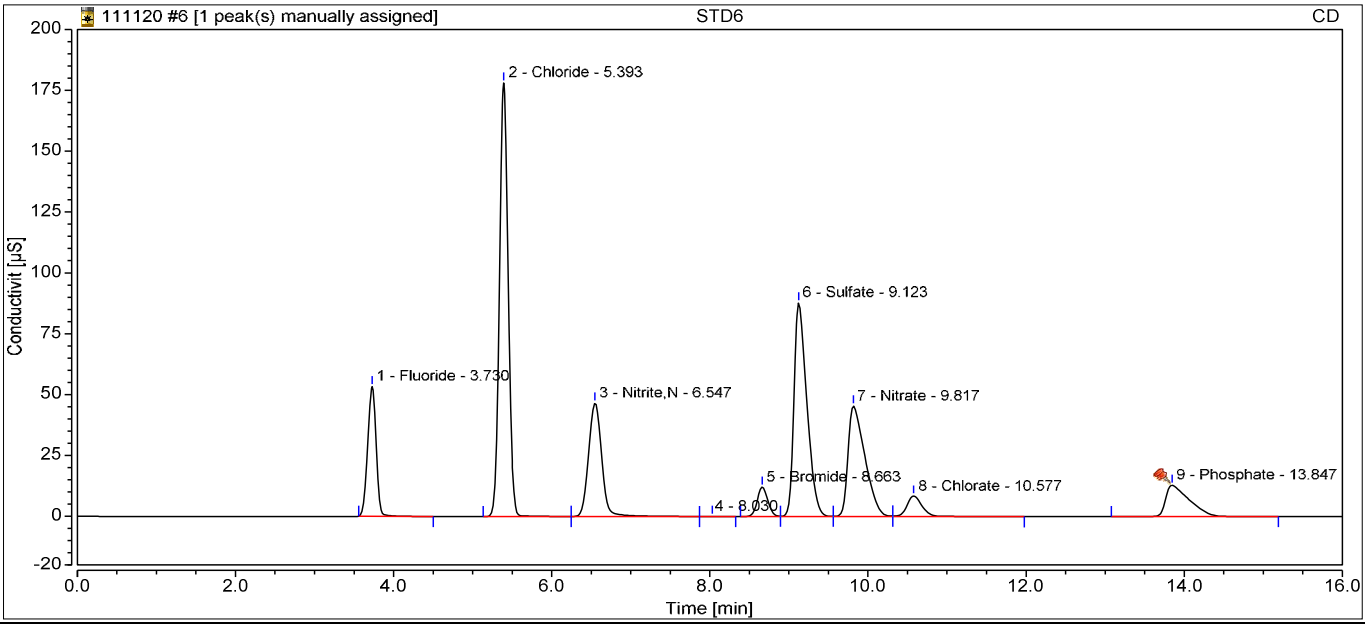
Integration Results

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:



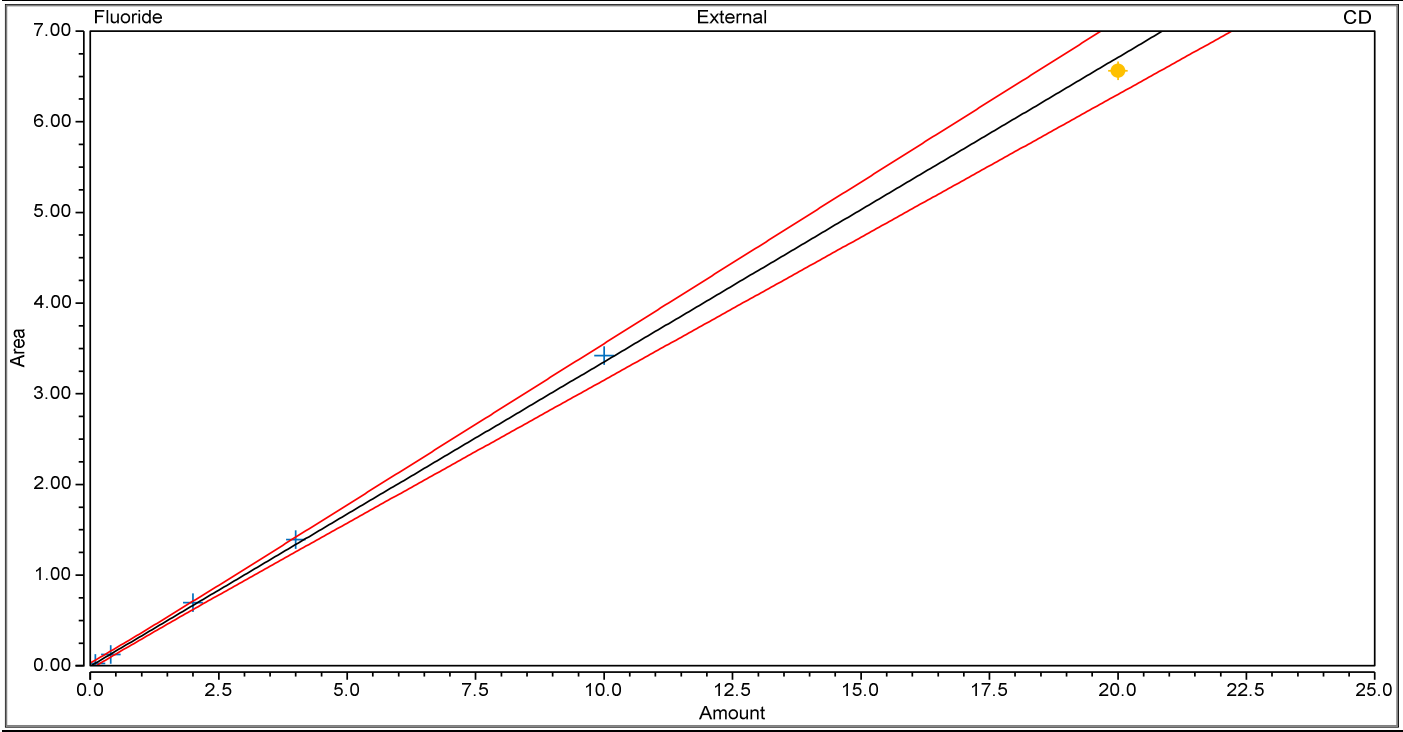
Integration Results

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**



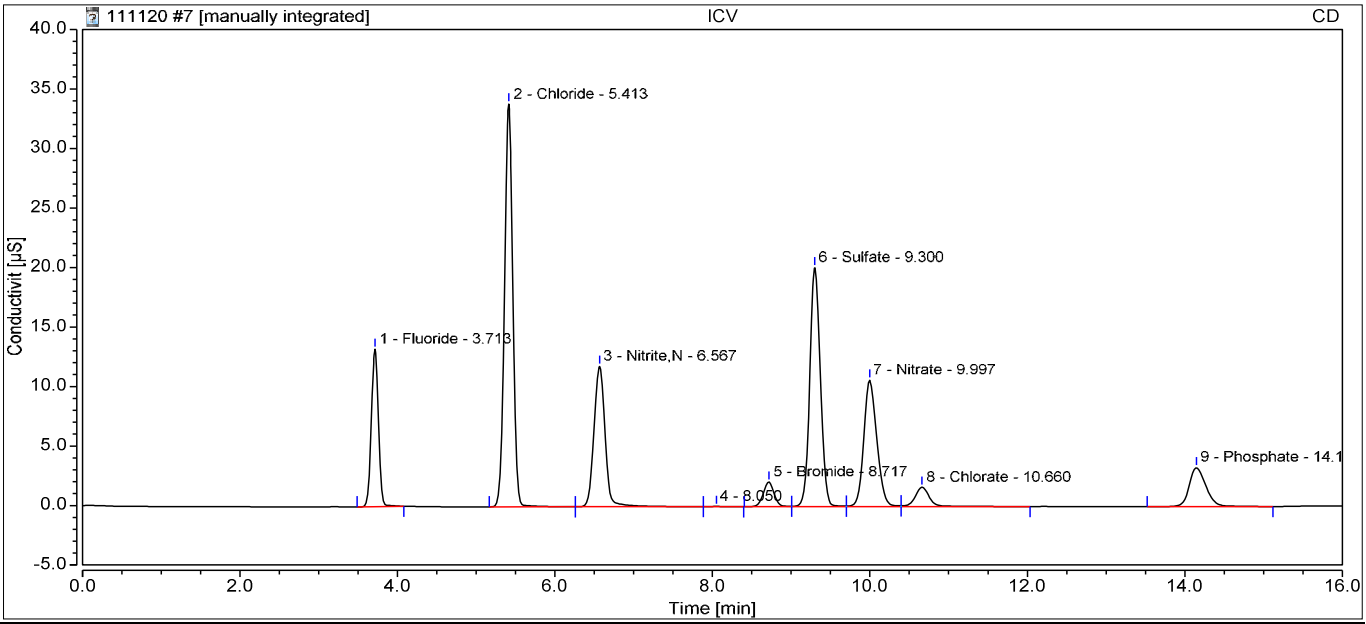
Calibration Results **Fluoride**

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:



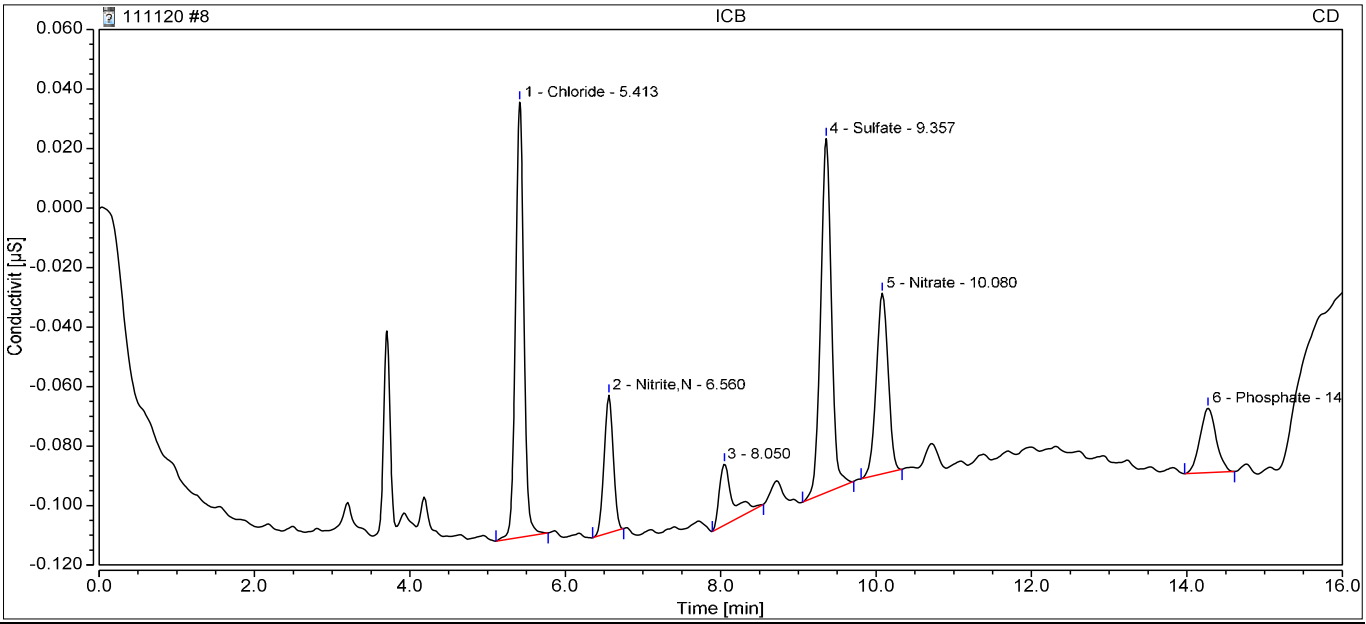
Integration Results

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:



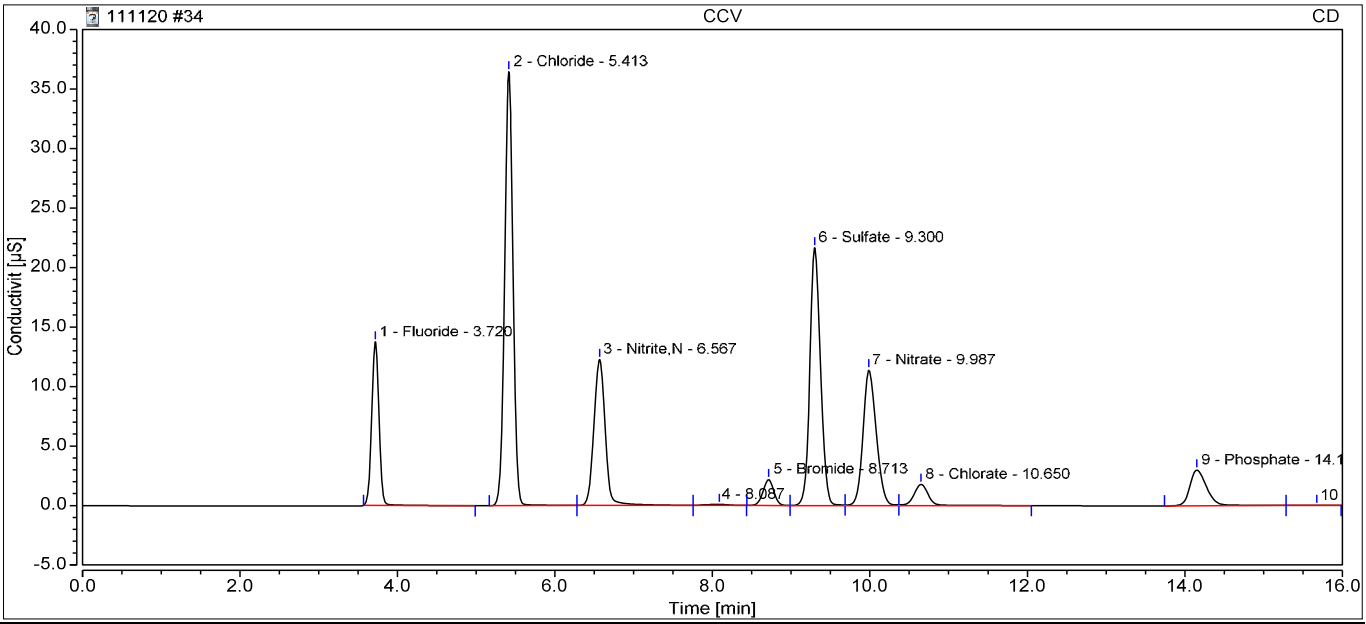
Integration Results

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:



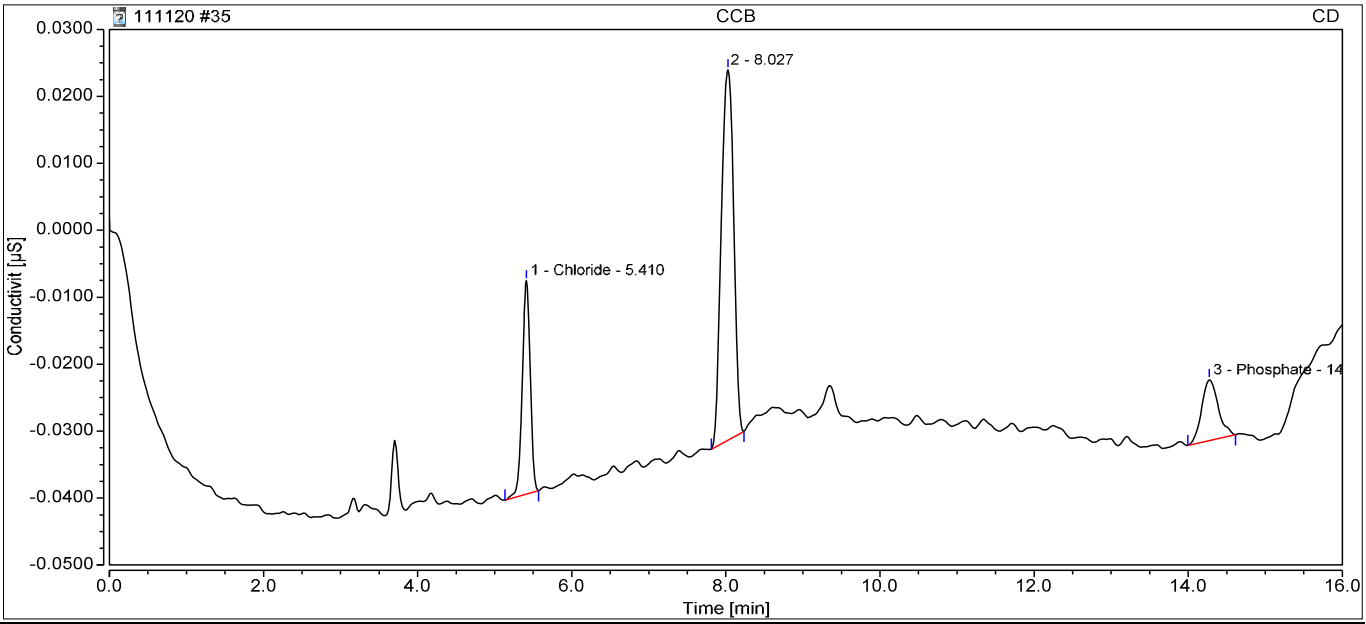
Integration Results

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:



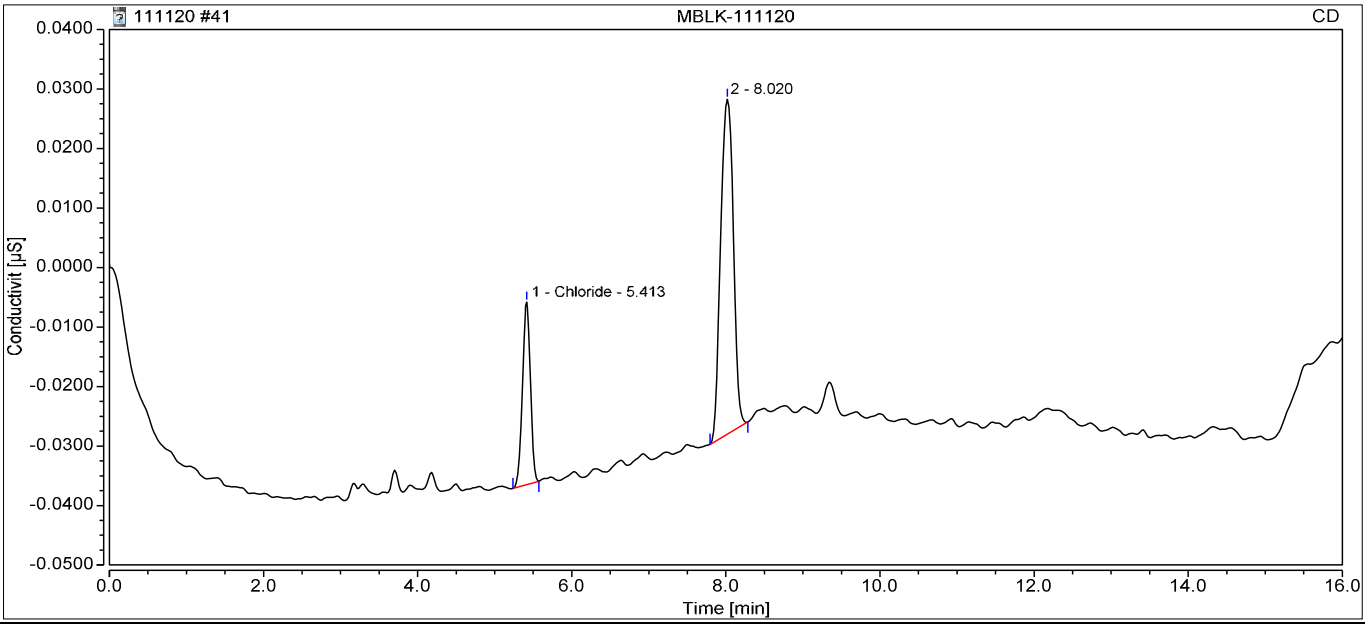
Integration Results

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:



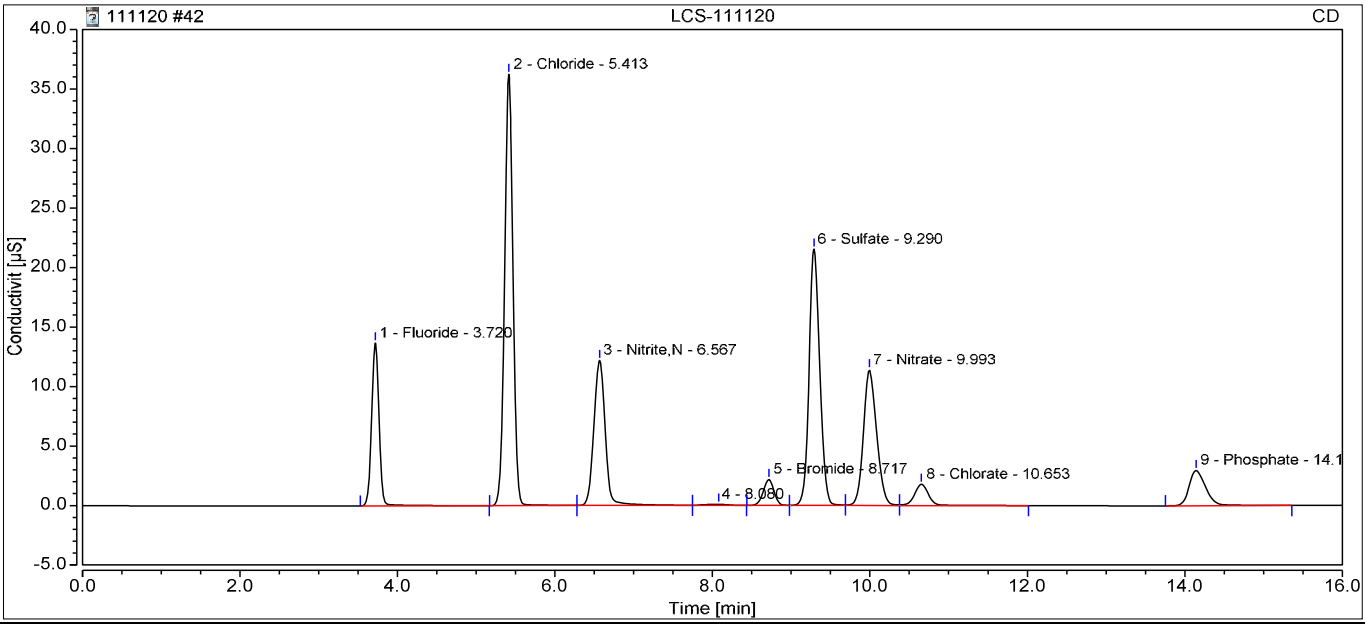
Integration Results

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:



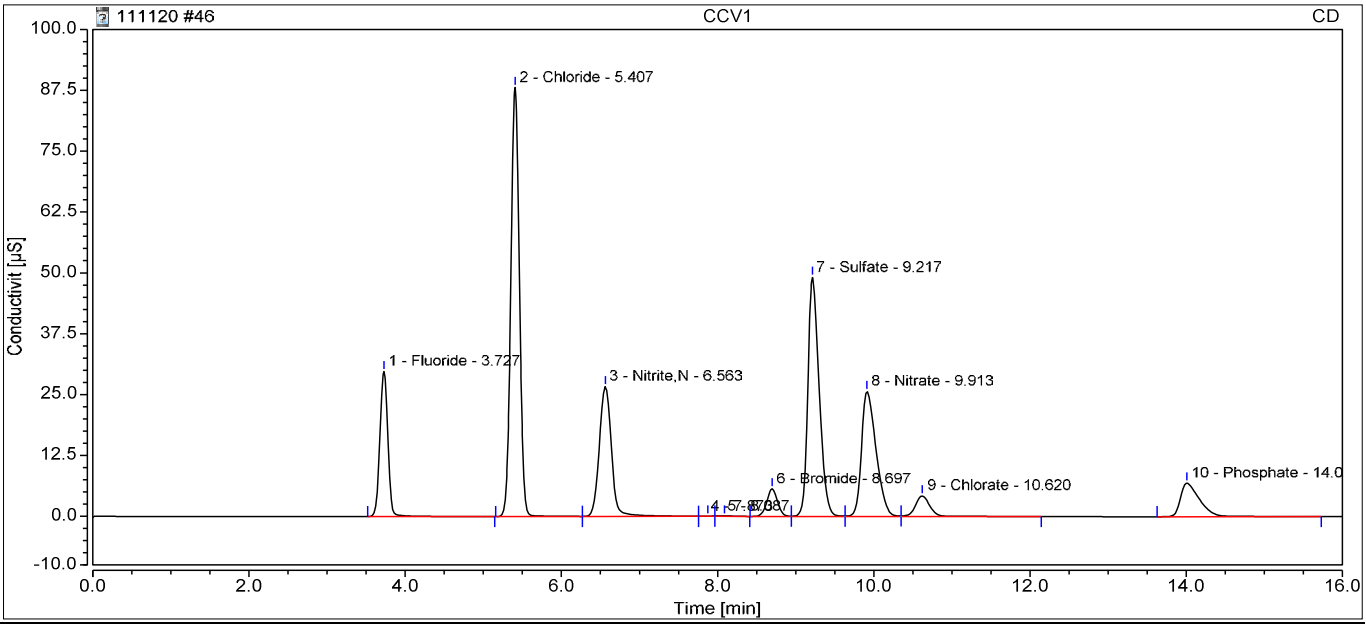
Integration Results

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:



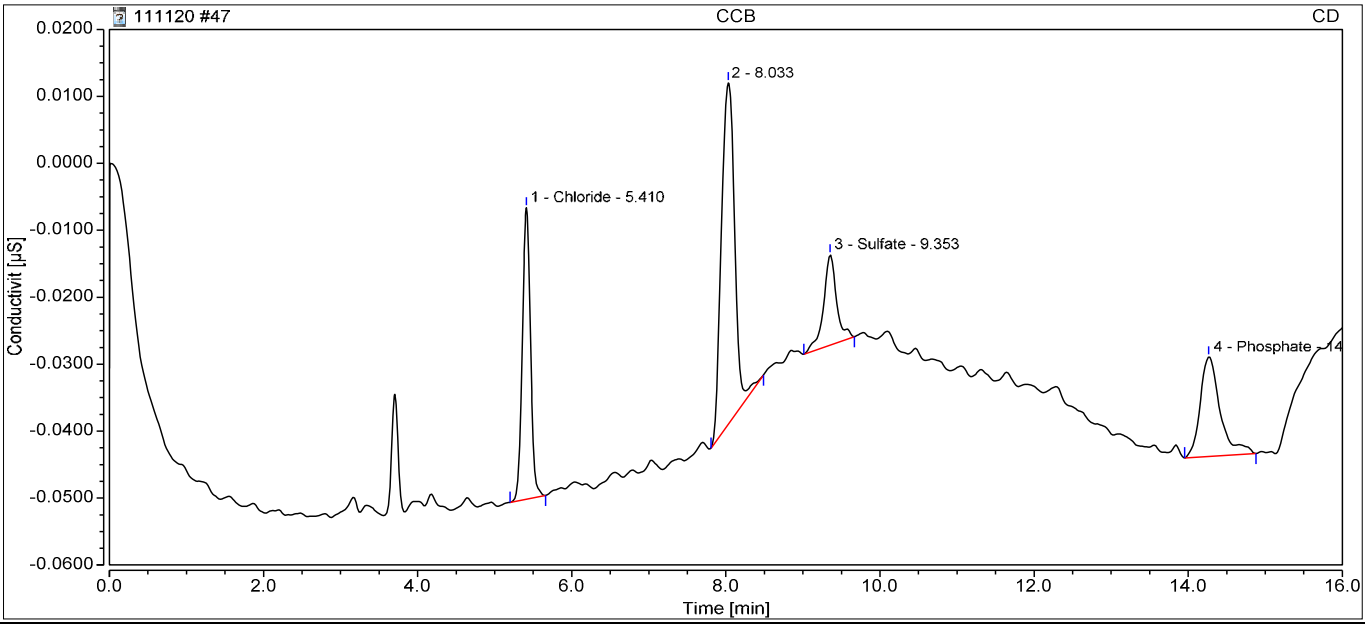
Integration Results

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:



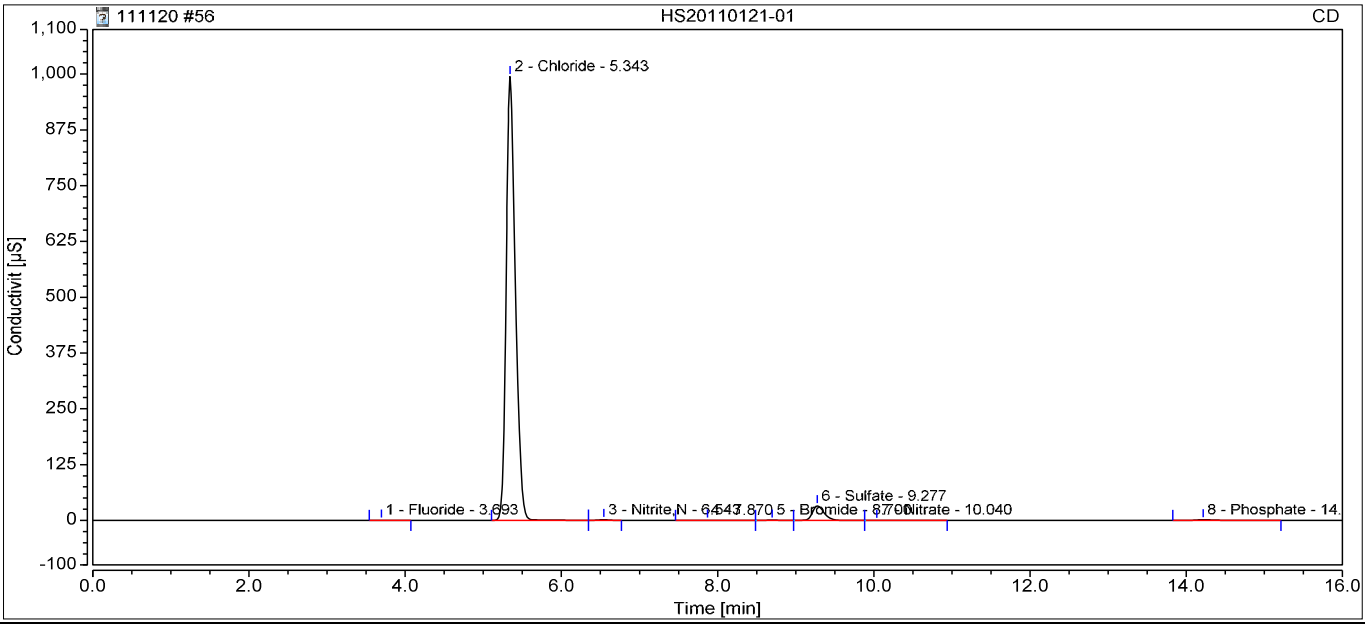
Integration Results

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**	

56 HS20110121-01

Sample Name:	**HS20110121-01**	*Injection Volume:*	**5.00**
Vial Number:	**GD3**	*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 22:54**	*Sample Weight:*	**1.0000**

Run Time:



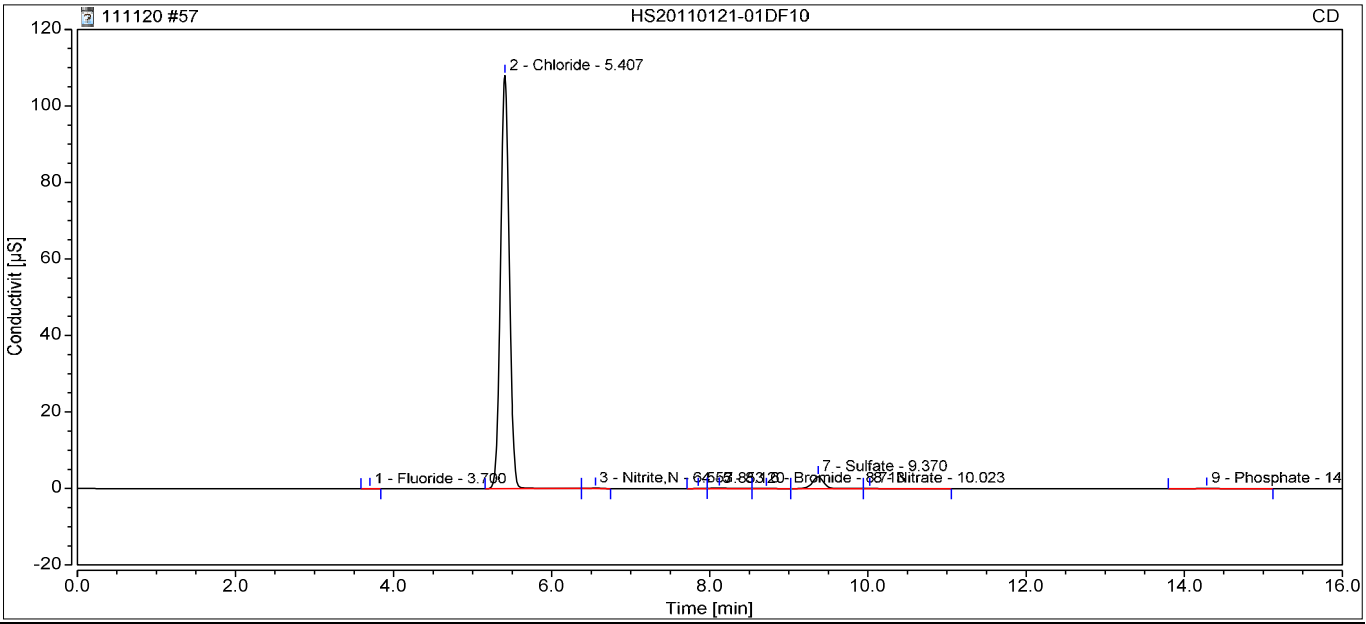
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.69	Fluoride	BMB	0.034	0.1161	0.1161	1.0000
2	5.34	Chloride	BMB	135.590	614.6965	614.6965	1.0000
3	6.54	Nitrite,N	BMB	0.207	0.4320	0.4320	1.0000
5	8.70	Bromide	M	0.104	1.1502	1.1502	1.0000
6	9.28	Sulfate	M	5.587	34.3747	34.3747	1.0000
7	10.04	Nitrate	MB	0.022	0.0590	0.0590	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	14.22	Phosphate	BMB	0.408	1.9819	1.9819	1.0000
Total:			**0.000**	**141.951**		**652.81**	

57 HS20110121-01DF10

Sample Name:	**HS20110121-01DF10**	*Injection Volume:*	**5.00**
Vial Number:	**GD4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 06022020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**11/11/2020 23:12**	*Sample Weight:*	**1.0000**

Run Time:



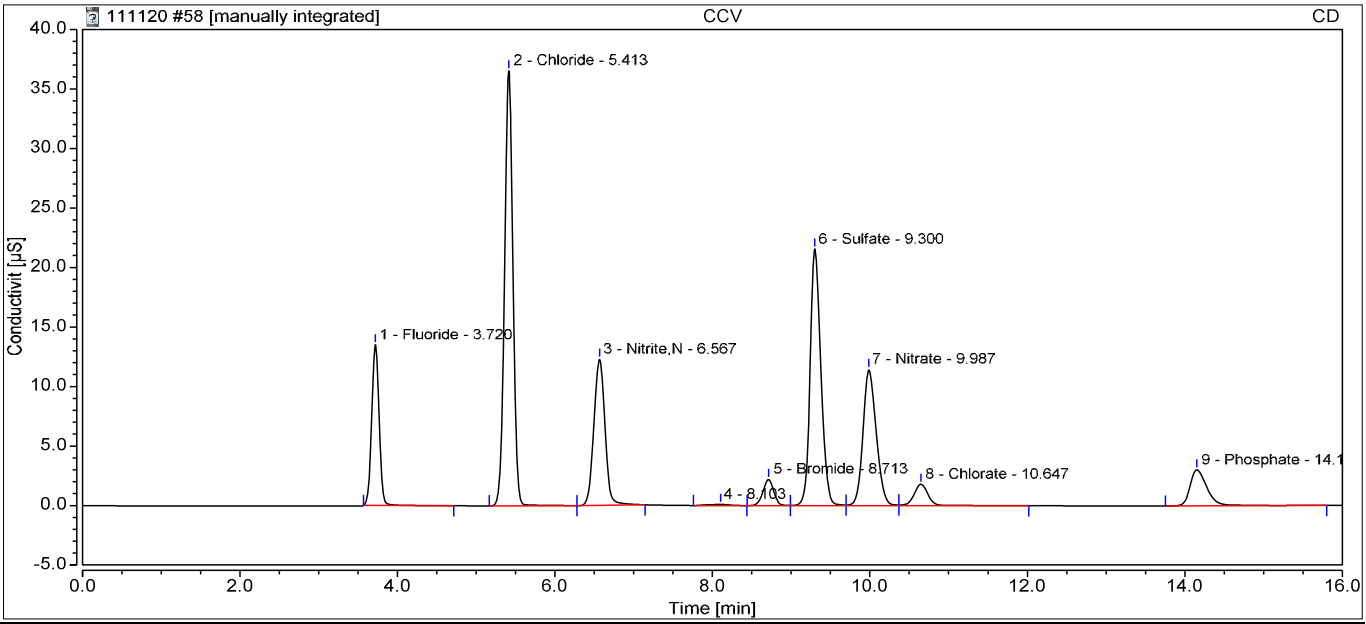
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.70	Fluoride	BMB	0.003	0.0231	0.2312	10.0000
2	5.41	Chloride	BMB	13.674	61.9969	619.9689	10.0000
3	6.55	Nitrite,N	BMB	0.017	0.0215	0.2153	10.0000
6	8.71	Bromide	M	0.018	0.2185	2.1849	10.0000
7	9.37	Sulfate	M	0.525	3.2883	32.8828	10.0000
8	10.02	Nitrate	MB	0.013	0.0432	0.4322	10.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	10.0000
9	14.29	Phosphate	BMB	0.029	0.2164	2.1636	10.0000
Total:			**0.000**	**14.280**		**658.08**	

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:



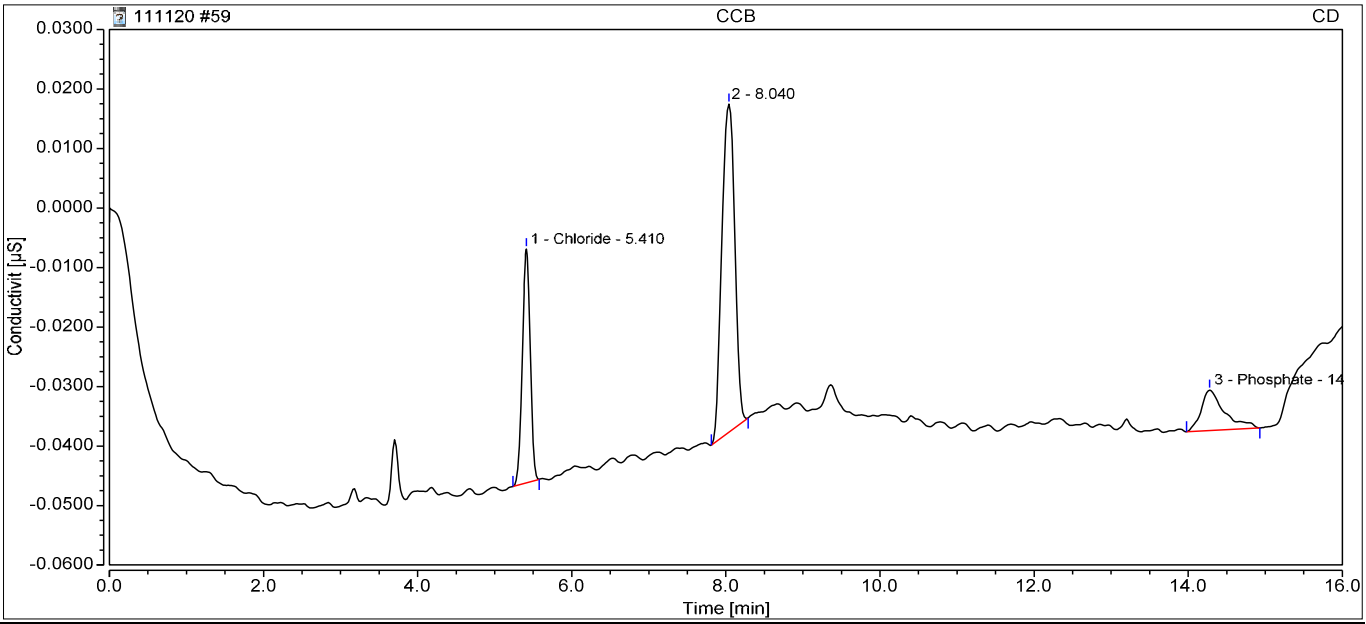
Integration Results

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:



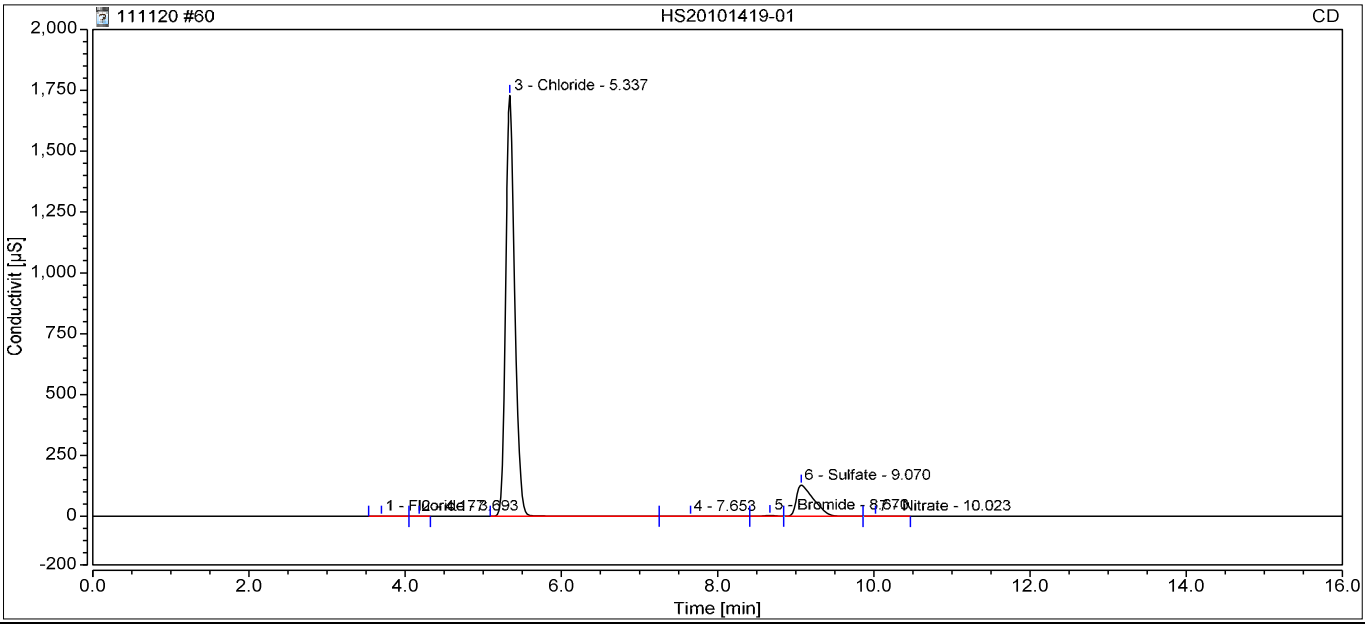
Integration Results

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:



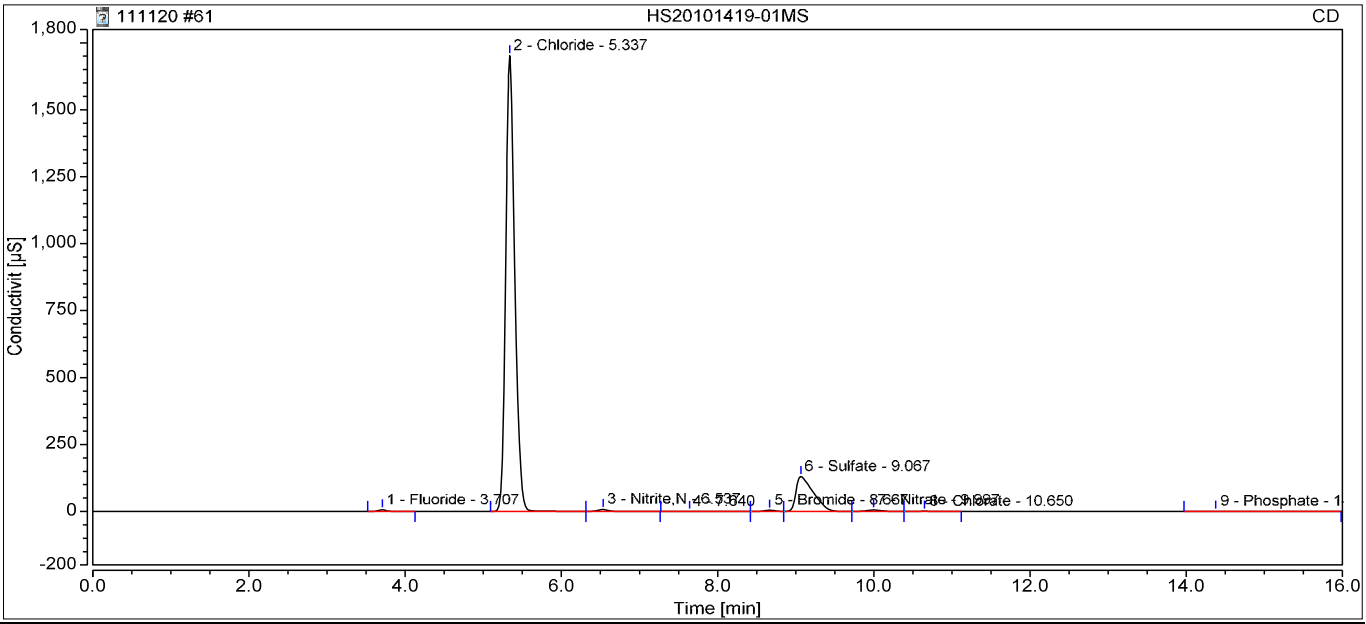
Integration Results

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:



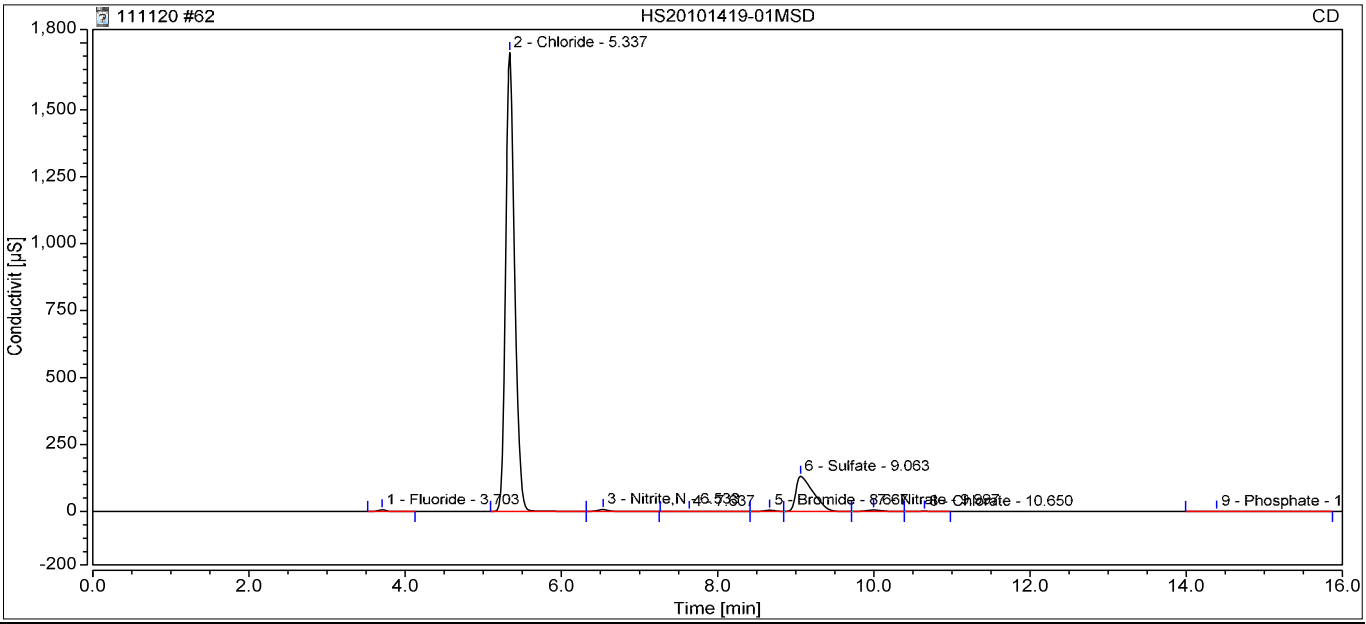
Integration Results

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:



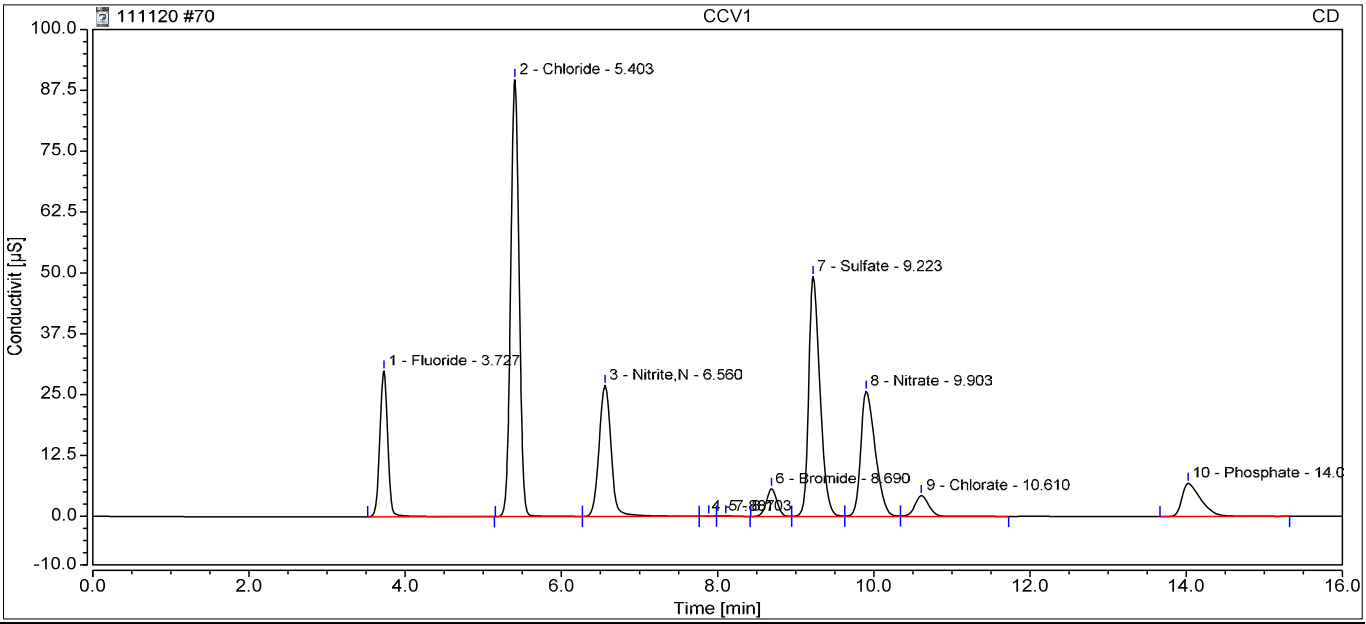
Integration Results

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:



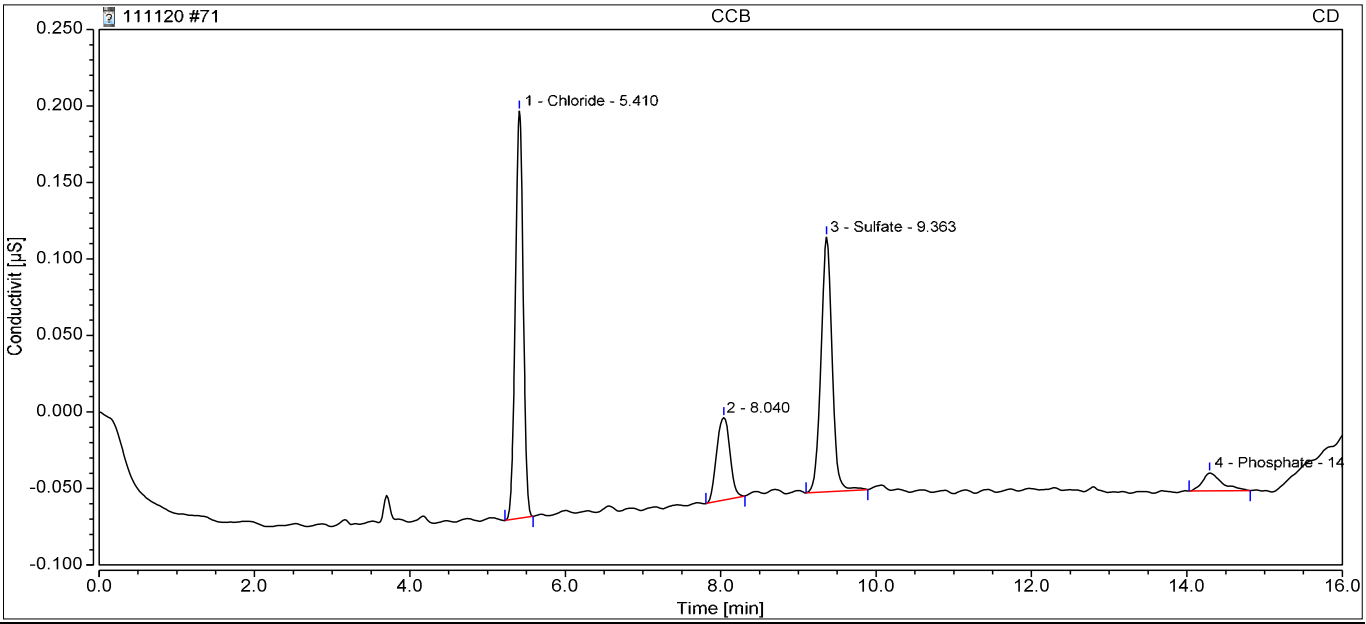
Integration Results

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**	

HS20110505 Cover Page

ALS WO# HS20110505

ALS Environmental
ALS Group USA, Corp
10450 Stancliff Road, Suite 210
Houston, TX 77099
T : +1 281 530 5656
F : +1 281 530 5887
www.alsglobal.com

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- Accuracy and Precision
- Initial Calibration
- Chromatograms

HS20110505 Wet Chemistry Raw Data

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

WorkOrder: HS20110505

Longhorn GW Treatment Plant Monthly Effluent Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

17-Sep-2021

HS20110505 Longhorn GW Treatment Plant Monthly Effluent Samples Final

ALS WO# HS20110505

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

November 25, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20110505**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Effluent Samples**

Dear Marcia Olive,

ALS Environmental received 3 sample(s) on Nov 11, 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: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20110505

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20110505-01	LH18/24-SP650_111020	Water		10-Nov-2020 14:00	11-Nov-2020 10:20	☐
HS20110505-02	LH18/24-SP650_111020_AIX	Water		10-Nov-2020 14:00	11-Nov-2020 10:20	☐
HS20110505-03	Trip Blank	Water		10-Nov-2020 14:00	11-Nov-2020 10:20	☐

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20110505

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 159699

Sample ID: LH18/24-SP650_111020 (HS20110505-01)

• The surrogate recoveries could not be determined due to dilution below the calibration range.

GCMS Volatiles by Method SW8260

Batch ID: R373272

Sample ID: HS20110985-28MS

• MS and MSD are for an unrelated sample

Metals by Method SW6020

Batch ID: 160046

Sample ID: HS20110561-04MSD

• MSD is for an unrelated sample

Sample ID: HS20110561-04PDS

• PDS is for an unrelated sample

WetChemistry by Method SW7196

Batch ID: R372488

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20110505
Sample ID: LH18/24-SP650_111020 Lab ID:HS20110505-01
Collection Date: 10-Nov-2020 14:00 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	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 16:07
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 16:07
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 16:07
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 16:07
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 16:07
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20110505
Sample ID: LH18/24-SP650_111020 Lab ID:HS20110505-01
Collection Date: 10-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
cis-1,2-Dichloroethene	**8.9**		**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 16:07
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 16:07
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 16:07
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 16:07
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Trichloroethene	**0.88**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	23-Nov-2020 16:07
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 16:07
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 16:07
Surr: 1,2-Dichloroethane-d4	*84.7*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 16:07*
Surr: 4-Bromofluorobenzene	*92.4*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 16:07*
Surr: Dibromofluoromethane	*87.7*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 16:07*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 16:07*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 16-Nov-2020		Analyst: ACN
1,4-Dioxane	**3.3**	a	**1.0**	**0**	**1.0**	**ug/L**	100	25-Nov-2020 12:29
Surr: 2-Fluorobiphenyl	*0*	*S*		0	*40-140*	*%REC*	*100*	*25-Nov-2020 12:29*
Surr: 4-Terphenyl-d14	*0*	*S*		0	*40-140*	*%REC*	*100*	*25-Nov-2020 12:29*
Surr: Nitrobenzene-d5	*0*	*S*		0	*40-140*	*%REC*	*100*	*25-Nov-2020 12:29*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 24-Nov-2020		Analyst: JHD
Barium	**0.280**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	25-Nov-2020 12:34
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	25-Nov-2020 12:34
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	25-Nov-2020 12:34
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	25-Nov-2020 12:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20110505

Sample ID: LH18/24-SP650_111020 Lab ID:HS20110505-01

Collection Date: 10-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**						Analyst: KVL
Chromium, Hexavalent	0.0100	U	0.00600	0.0100	0.0100	mg/L	1	11-Nov-2020 13:04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20110505

Sample ID: LH18/24-SP650_111020_AIX Lab ID:HS20110505-02

Collection Date: 10-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: GR
Subcontract Analysis	See Attached		0	0		NA	1	24-Nov-2020 15:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20110505
Sample ID: Trip Blank Lab ID:HS20110505-03
Collection Date: 10-Nov-2020 14:00 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	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 15:46
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	23-Nov-2020 15:46
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	23-Nov-2020 15:46
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 15:46
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Carbon disulfide	2.0	U	0.60	2.0	2.0	UG/L	1	23-Nov-2020 15:46
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Chloroethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20110505

Sample ID: Trip Blank Lab ID:HS20110505-03

Collection Date: 10-Nov-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Dibromochloromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Dichlorodifluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	23-Nov-2020 15:46
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	23-Nov-2020 15:46
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	23-Nov-2020 15:46
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Naphthalene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
sec-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
tert-Butylbenzene	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	23-Nov-2020 15:46
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Trichlorofluoromethane	0.50	U	0.30	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	23-Nov-2020 15:46
Surr: 1,2-Dichloroethane-d4	*84.4*			**0**	*81-118*	*%REC*	*1*	*23-Nov-2020 15:46*
Surr: 4-Bromofluorobenzene	*87.8*			**0**	*85-114*	*%REC*	*1*	*23-Nov-2020 15:46*
Surr: Dibromofluoromethane	*88.7*			**0**	*80-119*	*%REC*	*1*	*23-Nov-2020 15:46*
Surr: Toluene-d8	*104*			**0**	*89-112*	*%REC*	*1*	*23-Nov-2020 15:46*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

Batch ID: 159699 **Start Date:** 16 Nov 2020 09:00 **End Date:** 16 Nov 2020 16:00
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20110505-01		1000 (mL)	1 (mL)	0.001

Batch ID: 160046 **Start Date:** 24 Nov 2020 12:00 **End Date:** 24 Nov 2020 16:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20110505-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 159699 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Water	
HS20110505-01	LH18/24-SP650_111020	10 Nov 2020 14:00		16 Nov 2020 16:14	25 Nov 2020 12:29	100
Batch ID: 160046 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20110505-01	LH18/24-SP650_111020	10 Nov 2020 14:00		24 Nov 2020 16:00	25 Nov 2020 12:34	1
Batch ID: R372488 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Water	
HS20110505-01	LH18/24-SP650_111020	10 Nov 2020 14:00			11 Nov 2020 13:04	1
Batch ID: R373272 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20110505-01	LH18/24-SP650_111020	10 Nov 2020 14:00			23 Nov 2020 16:07	1
HS20110505-03	Trip Blank	10 Nov 2020 14:00			23 Nov 2020 15:46	1
Batch ID: R373325 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20110505-02	LH18/24-SP650_111020_AIX	10 Nov 2020 14:00			24 Nov 2020 15:48	1

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: 160046 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-160046** Units: **mg/L** Analysis Date: **25-Nov-2020 12:16**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851858** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.00250	0.00500								U
Lead	0.00100	0.00500								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U

LCS Sample ID: **LCS-160046** Units: **mg/L** Analysis Date: **25-Nov-2020 12:18**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851859** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.04714	0.00500	0.05	0	94.3	86 - 114				
Lead	0.04638	0.00500	0.05	0	92.8	88 - 115				
Selenium	0.04973	0.00500	0.05	0	99.5	80 - 120				
Silver	0.04742	0.00500	0.05	0	94.8	85 - 116				

MS Sample ID: **HS20110561-04MS** Units: **mg/L** Analysis Date: **25-Nov-2020 12:24**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851862** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.5371	0.00500	0.05	0.4828	108	86 - 114				O
Lead	0.05406	0.00500	0.05	0.000569	107	88 - 115				
Selenium	0.05892	0.00500	0.05	0.002902	112	80 - 120				
Silver	0.05115	0.00500	0.05	0.000021	102	85 - 116				

MSD Sample ID: **HS20110561-04MSD** Units: **mg/L** Analysis Date: **25-Nov-2020 12:26**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851863** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.5071	0.00500	0.05	0.4828	48.5	86 - 114	0.5371	5.74	20	SO
Lead	0.05248	0.00500	0.05	0.000569	104	88 - 115	0.05406	2.96	20	
Selenium	0.05995	0.00500	0.05	0.002902	114	80 - 120	0.05892	1.74	20	
Silver	0.049	0.00500	0.05	0.000021	98.0	85 - 116	0.05115	4.29	20	

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: 160046 (0) **Instrument: ICPMS06** **Method: METALS BY ICPMS BY SW6020A**

PDS Sample ID: **HS20110561-04PDS** Units: **mg/L** Analysis Date: **25-Nov-2020 12:32**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851865** PrepDate: **24-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.5083	0.00500	0.1	0.4828	25.4	80 - 120				SO
Lead	0.086	0.00500	0.1	0.000569	85.4	80 - 120				
Selenium	0.09861	0.00500	0.1	0.002902	95.7	80 - 120				
Silver	0.08023	0.00500	0.1	0.000021	80.2	80 - 120				

SD Sample ID: **HS20110561-04SD** Units: **mg/L** Analysis Date: **25-Nov-2020 12:22**
Client ID: Run ID: **ICPMS06_373381** SeqNo: **5851861** PrepDate: **24-Nov-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	0.4753	0.0250					0.4828	1.56	10	
Lead	0.00500	0.0250					0.000569	0	10	U
Selenium	0.0125	0.0250					0.002902	0	10	U
Silver	0.00250	0.0250					0.000021	0	10	U

The following samples were analyzed in this batch: HS20110505-01

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: 159699 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-159699** Units: **ug/L** Analysis Date: **25-Nov-2020 11:35**
Client ID: Run ID: **SV-6_373403** SeqNo: **5851420** PrepDate: **16-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0	0.010								U
Surr: 2-Fluorobiphenyl	*0.08633*	*0*	*0.08*	*0*	*108*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.1065*	*0*	*0.08*	*0*	*133*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07583*	*0*	*0.08*	*0*	*94.8*	*40 - 140*				

LCS Sample ID: **LCS-159699** Units: **ug/L** Analysis Date: **25-Nov-2020 11:53**
Client ID: Run ID: **SV-6_373403** SeqNo: **5851421** PrepDate: **16-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.054	0.010	0.08	0	67.5	40 - 140				
Surr: 2-Fluorobiphenyl	*0.09382*	*0*	*0.08*	*0*	*117*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.08942*	*0*	*0.08*	*0*	*112*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.07976*	*0*	*0.08*	*0*	*99.7*	*40 - 140*				

LCSD Sample ID: **LCSD-159699** Units: **ug/L** Analysis Date: **25-Nov-2020 12:11**
Client ID: Run ID: **SV-6_373403** SeqNo: **5851422** PrepDate: **16-Nov-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.0595	0.010	0.08	0	74.4	40 - 140	0.054	9.69	20	
Surr: 2-Fluorobiphenyl	*0.1073*	*0*	*0.08*	*0*	*134*	*40 - 140*	*0.09382*	*13.4*	*20*	
Surr: 4-Terphenyl-d14	*0.1073*	*0*	*0.08*	*0*	*134*	*40 - 140*	*0.08942*	*18.2*	*20*	
Surr: Nitrobenzene-d5	*0.08118*	*0*	*0.08*	*0*	*101*	*40 - 140*	*0.07976*	*1.76*	*20*	

The following samples were analyzed in this batch: HS20110505-01

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

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-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
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

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
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	0.50	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	*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*				
Surr: Toluene-d8	*51.72*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

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-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				
Bromomethane	20.55	1.0	20	0	103	53 - 141				

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

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
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*				
Surr: Toluene-d8	*49.17*	*1.0*	*50*	*0*	*98.3*	*89 - 112*				

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

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-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				
Bromomethane	19.39	1.0	20	0	97.0	53 - 141				

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

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
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*				
Surr: Toluene-d8	*51.46*	*1.0*	*50*	*0*	*103*	*89 - 112*				

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

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-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	
Bromomethane	17.82	1.0	20	0	89.1	53 - 141	19.39	8.47	20	

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

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
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*	
Surr: Toluene-d8	*50.43*	*1.0*	*50*	*0*	*101*	*89 - 112*	*51.46*	*2.02*	*20*	

ALS Houston, US Date: 25-Nov-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:	HS20110505

QC BATCH REPORT

Batch ID:	**R373272 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20110505-01 HS20110505-03

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20110505

QC BATCH REPORT

Batch ID: R372488 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-R372488** Units: **mg/L** Analysis Date: **11-Nov-2020 13:00**
Client ID: Run ID: **UV-2450_372488** SeqNo: **5828930** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.0100	0.0100								U

LCS Sample ID: **LCS-R372488** Units: **mg/L** Analysis Date: **11-Nov-2020 13:00**
Client ID: Run ID: **UV-2450_372488** SeqNo: **5828929** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.243	0.0100	0.25	0	97.2	90 - 111				

MS Sample ID: **HS20110505-01MS** Units: **mg/L** Analysis Date: **11-Nov-2020 13:05**
Client ID: **LH18/24-SP650_111020** Run ID: **UV-2450_372488** SeqNo: **5828932** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.245	0.0100	0.25	0	98.0	90 - 111				

MSD Sample ID: **HS20110505-01MSD** Units: **mg/L** Analysis Date: **11-Nov-2020 13:06**
Client ID: **LH18/24-SP650_111020** Run ID: **UV-2450_372488** SeqNo: **5828931** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.246	0.0100	0.25	0	98.4	90 - 111	0.245	0.407	20	

The following samples were analyzed in this batch: HS20110505-01

ALS Houston, US Date: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: **HS20110505**

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: 25-Nov-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20110505

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20110505-01	LH18/24-SP650_111020	Login	11/11/2020 11:58:05 AM	PMG	EXT132
HS20110505-01	LH18/24-SP650_111020	Login	11/11/2020 11:58:05 AM	PMG	WET130
HS20110505-01	LH18/24-SP650_111020	Login	11/11/2020 11:58:05 AM	PMG	MET061
HS20110505-01	LH18/24-SP650_111020	Login	11/11/2020 11:58:05 AM	PMG	VOA107
HS20110505-02	LH18/24-SP650_111020_AIX	Login	11/11/2020 11:58:05 AM	PMG	Sub
HS20110505-03	Trip Blank	Login	11/11/2020 11:58:05 AM	PMG	VOA107

ALS Houston, US Date: 25-Nov-20

Sample Receipt Checklist

Work Order ID: HS20110505 **Date/Time Received:** 11-Nov-2020 10:20

Client Name: Bhate Environmental **Received by:** Jared R. Makan

Completed By:	/S/ Paresh M. Giga	11-Nov-2020 12:05	**Reviewed by:**	/S/ RJ Modashia	11-Nov-2020 15:25
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **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 ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	0.9C U/C	IR25
Cooler(s)/Kit(s):	46545	
Date/Time sample(s) sent to storage:	11/11/2020 12:15	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, TX 77099 (281) 530 - 5656 ATTN: RJ Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT MONTHLY EFFLUENT SAMPLES

Prepared By:
Scott Beesinger

P.O. Number

HS20110505
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Monthly Effluent Sample

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOLATILES	SILVER, SELENIUM, LEAD, BARIUM	HEXAVALENT CHROMIUM	1, 4 - DIOXANE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_111020	Water	11/10/20 / 14:00		3	X					HCL	
LH18/24-SP650_111020	Water	11/10/20 / 14:00		2			X	X		NONE	
LH18/24-SP650_111020_AIX	Water	11/10/20 / 14:00		1					X	NONE	
LH18/24-SP650_111020	Water	11/10/20 / 14:00		1		X				HNO3	
Trip Blank	Water	11/10/20		2	X					HCL	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	11/10/20	14:30	[illegible]	11/11/20	10:30						

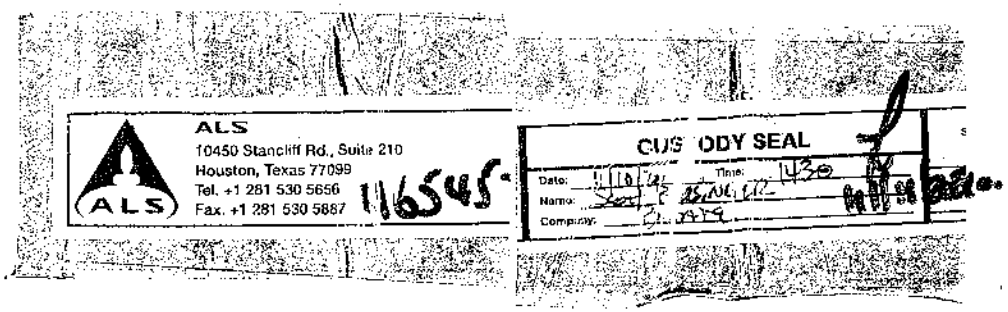
For Lab Use Only

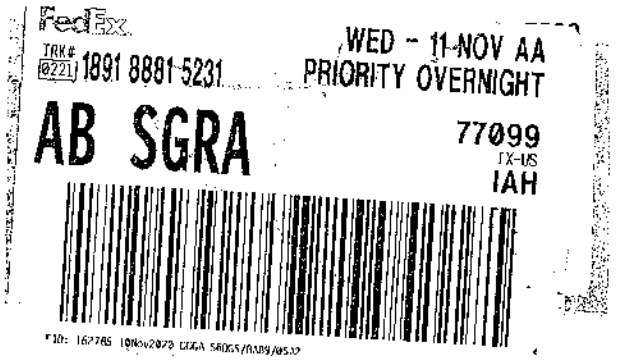
Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

46 545 0 90 P
11/11/2020 #25 #25.
CH-00

(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
116545
CUSTODY SEAL
Date:
Time:
Name:
Company:


FedEx
TRK# 0221 1891 8881 5231
WED - 11 NOV AA
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US
IAH

November 24, 2020 Service Request No:E2001102

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20110505

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory November 11, 2020
For your reference, these analyses have been assigned our service request number **E2001102.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2001102
Project:	HS20110505	**Date Received:**	11/11/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 11/11/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000600: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2001102
Project: HS20110505

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2001102-001	LH18/24-SP650_111020_AIX	11/10/2020	1400

Service Request Summary

Folder #: **E2001102**
Client Name: ALS Environmental - US
Project Name: HS20110505
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/11/20
Internal Due Date: 11/25/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110505
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2001102-001	LH18/24-SP650_111020_AIX	Water	11/10/20 1400	**IV**

Service Request Summary

Folder #: **E2001102**
Client Name: ALS Environmental - US
Project Name: HS20110505
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 11/11/20
Internal Due Date: 11/25/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20110505
EDD: No EDD Specified

1 120 mL-Plastic Bottle Natural WM Unpreserved
Location: EHRMS-WIC 4D
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivoa GCMS	ClO4 DOD/6850	1	level II 11/25,level IV due 12/4

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.

Data Qualifiers

Lab Standard

P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arizona Department of Health Services	AZ0793-2020	5/27/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
California Department of Health Services	2919-2020	4/30/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Michigan Depratment of Environmental Quality	9971-2020	4/30/2021
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Concervation and Natural Resources	TX026932021-1	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	TX008	6/30/2021
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022

ALS

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **15134**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20110505
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20110505-02**	**LH18/24-SP650_111020_AIX**	**Water**	**10 Nov 2020 14:00**
	Provide Level II and Level IV reports in separate pdf			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: J. Mascorro Date/Time: 11/11/20 12:47

Received By: Date/Time: 11/11/20 12:47

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CG

Client/Project ALS-H

Thermometer ID 1251

Date/Time Received: 11/11/20 Initials: CG Date/Time Logged in: 11/11/20 Initials CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client
2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other
3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?
4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other
5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
NA		11/11/20	1247	JM	1.9	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 370006 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/GRIVERA **Prep Method:** Method **Prep Date/Time:** 11/18/20 13:54

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2001101-001	LH18/24-SP140_111020	.01	6850/ClO4 DOD			Water	10mL	
2	E2001102-001	LH18/24-SP650_111020_AIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2001103-001	LH18/24-SP650_111020_AIX	.01	6850/ClO4 DOD			Water	10mL	
4	EQ2000600-01	MB		6850/ClO4 DOD			Liquid	10mL	
5	EQ2000600-02	LCS		6850/ClO4 DOD			Liquid	10mL	
6	EQ2000600-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 213952 Logbook Ref: Sodium Perchlorate Expires On: 07/13/2022

E2001101-001 100.00µL E2001102-001 100.00µL E2001103-001 100.00µL EQ2000600-01 100.00µL EQ2000600-02 100.00µL EQ2000600-03 100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 214035 Logbook Ref: Perchlorate Expires On: 05/23/2021

EQ2000600-02 1.00µL EQ2000600-03 1.00µL

Preparation Steps

Step: Preparation
Started: 11/18/20 13:54
Finished: 11/18/20 15:00
By: GRIVERA
Comments

Comments: _____

Reviewed By: GR Date: 11/18/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001102
Project:	HS20110505	**Date Collected:**	11/10/20 1400
Sample Matrix:	Water	**Date Received:**	11/11/20
Sample Name:	LH18/24-SP650_111020_AIX	**Units:**	µg/L
Lab Code:	E2001102-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**6.67**		0.100	0.0500	0.0250	1	11/18/20	11/24/20 11:26	370006	704787	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001102
Project:	HS20110505	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000600-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	11/18/20	11/24/20 10:11	370006	704787	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20110505
Sample Matrix: Water

Service Request: E2001102
Date Analyzed: 11/24/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 370006

	Lab Control Sample EQ2000600-02			Duplicate Lab Control Sample EQ2000600-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.112	0.100	112	0.103	0.100	103	84 - 119	8	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001102
Project:	HS20110505	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000600-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.112**		0.100	0.0500	0.0250	1	11/18/20	11/24/20 10:19	370006	704787	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2001102
Project:	HS20110505	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000600-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.103**		0.100	0.0500	0.0250	1	11/18/20	11/24/20 11:18	370006	704787	

HS20110505 8260 Raw Data

ALS WO# HS20110505

MSVOA06 -Logbook

Batch: 42731
Date: 11-22-2020
Method: 8260_W
Comments:

Analyst: Devak Giga
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	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 LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20110505

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
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
Trichloroethene	50.00	47.98	96	80-120
1,2,3-Trichlorobenzene	50.00	59.80	120	80-120
Trichlorofluoromethane	50.00	42.95	86	80-120
1,2,4-Trichlorobenzene	50.00	55.38	111	80-120
1,2,4-Trimethylbenzene	50.00	45.30	91	80-120
Tetrachloroethene	50.00	43.54	87	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
Toluene	50.00	45.59	91	80-120
2-Butanone	100.00	92.29	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 LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20110505

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
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
tert-Butylbenzene	50.00	44.82	90	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
n-Propylbenzene	50.00	45.43	91	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 LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20110505

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
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
Styrene	50.00	46.71	93	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

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20110505

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 LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20110505

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1728

LAB FILE ID: RF0.25: Y112202 RF0.5: Y112203 RF1: Y112204
RF2: Y112205 RF5: Y112206

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5
cis-1,3-Dichloropropene		0.763	0.546	0.570	0.603
trans-1,3-Dichloropropene		0.606	0.472	0.486	0.551
1,3-Dichlorobenzene		1.528	1.810	1.458	1.399
2,2-Dichloropropane		1.131	1.107	1.044	1.037
1,1-Dichloropropene		0.529	0.485	0.541	0.487
Dibromomethane		0.294	0.240	0.259	0.264
1,2-Dibromoethane		0.431	0.322	0.377	0.362
trans-1,2-Dichloroethene		0.604	0.584	0.550	0.542
1,1,1,2-Tetrachloroethane		0.462	0.362	0.350	0.362
1,1,1-Trichloroethane		0.719	0.933	0.992	1.029
1,1,2,2-Tetrachloroethane		1.780	1.028	0.852	1.102
1,1,2-Trichloroethane		0.379	0.344	0.334	0.314
1,1-Dichloroethane		1.393	0.933	1.186	1.183
1,1-Dichloroethene		1.143	0.944	0.881	0.968
Trichloroethene		0.378	0.372	0.302	0.351
1,2,3-Trichlorobenzene		0.168	0.194	0.177	0.232
Trichlorofluoromethane		2.158	2.046	1.863	1.765
1,2,4-Trichlorobenzene		0.427	0.476	0.325	0.328
1,2,4-Trimethylbenzene		3.234	2.677	2.681	2.644
Tetrachloroethene		0.368	0.306	0.266	0.297
1,2-Dichlorobenzene		1.463	1.304	1.405	1.382
1,2-Dichloroethane		0.532	0.538	0.526	0.586
1,2-Dichloropropane		0.482	0.423	0.403	0.378
1,3,5-Trimethylbenzene		3.673	2.636	2.748	2.642
1,3-Dichloropropane		0.668	0.550	0.619	0.632
1,4-Dichlorobenzene		1.561	2.259	1.596	1.475
Toluene		1.570	1.581	1.501	1.512
2-Butanone		0.265	0.238	0.184	0.240
2-Chlorotoluene		3.084	2.470	2.398	2.333
2-Hexanone		0.737	0.254	0.197	0.247
4-Chlorotoluene		3.720	2.590	2.704	2.709
tert-Butylbenzene		2.520	2.430	2.105	2.163
4-Methyl-2-Pentanone		1.102	0.359	0.338	0.407
Acetone		1.089	0.705	0.413	0.412
Benzene		1.485	1.377	1.272	1.364
Bromobenzene		0.919	0.748	0.794	0.895
Bromochloromethane		0.340	0.314	0.333	0.384
Bromodichloromethane		0.649	0.453	0.521	0.512
Bromoform		0.300	0.155	0.170	0.206
Bromomethane		1.259	1.190	1.146	1.080
Carbon Disulfide		2.026	1.780	1.799	1.832
Carbon Tetrachloride		0.457	0.432	0.399	0.382
Chlorobenzene		1.164	1.085	0.976	0.994
Chloroethane		0.857	0.653	0.794	0.848

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2011050

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1728

LAB FILE ID: RF0.25: Y112202 RF0.5: Y112203 RF1: Y112204
RF2: Y112205 RF5: Y112206

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5
Chloroform		1.512	1.262	1.284	1.215
Chloromethane		0.950	1.108	0.954	0.945
cis-1,2-Dichloroethene		0.779	0.737	0.727	0.681
Dibromochloromethane		0.343	0.328	0.390	0.379
Dichlorodifluoromethane		0.752	0.818	0.806	0.684
Ethylbenzene		0.603	0.560	0.477	0.502
Hexachlorobutadiene		0.236	0.353	0.317	0.248
Isopropylbenzene		1.883	1.441	1.473	1.469
m,p-Xylenes		0.525	0.581	0.579	0.605
Methylene Chloride		0.846	0.668	0.705	0.587
n-Butylbenzene		3.844	3.763	2.721	2.546
n-Propylbenzene		4.655	4.103	4.027	3.928
Naphthalene		0.633	0.513	0.534	0.561
o-Xylene		0.774	0.635	0.580	0.597
sec-Butylbenzene		4.165	3.767	3.348	3.108
Styrene		1.320	0.991	0.968	0.989
Vinyl Chloride		1.220	1.307	1.222	1.223
1,2,3-Trichloropropane		0.873	0.795	0.661	0.828
p-Isopropyltoluene		4.395	3.517	2.856	2.614
1,2-Dibromo-3-Chloropropane			0.064	0.066	0.051
1,2-Dichloroethane-d4		0.988	0.904	0.789	0.676
Dibromofluoromethane		0.689	0.833	0.590	0.597
Toluene-d8		1.548	1.378	1.293	1.084
4-Bromofluorobenzene		0.625	0.520	0.459	0.363

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2011050

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1728

COMPOUND	CURVE	COEFFICENT A1	%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	AVRG	1.02755973	28.844	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
Trichloroethene	AVRG	0.34781060	6.501	15.000
1,2,3-Trichlorobenzene	AVRG	0.18511873	10.735	15.000
Trichlorofluoromethane	AVRG	1.87898218	8.495	15.000
1,2,4-Trichlorobenzene	AVRG	0.37672776	12.849	15.000
1,2,4-Trimethylbenzene	AVRG	2.82277561	7.173	15.000
Tetrachloroethene	AVRG	0.30827486	10.246	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	AVRG	1.60040566	15.704	15.000
Toluene	AVRG	1.61391693	7.274	15.000
2-Butanone	AVRG	0.23912782	9.709	15.000
2-Chlorotoluene	AVRG	2.44639650	10.165	15.000
2-Hexanone	AVRG	0.30044774	54.845	15.000
4-Chlorotoluene	AVRG	2.99338049	12.708	15.000
tert-Butylbenzene	AVRG	2.31758314	6.698	15.000
4-Methyl-2-Pentanone	AVRG	0.45522960	53.505	15.000
Acetone	AVRG	0.44757141	62.099	15.000
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	AVRG	0.22195463	19.747	15.000
Bromomethane	AVRG	1.06160026	12.303	15.000
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
Chloroethane	AVRG	0.77482377	8.238	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2011050

Instrument ID: VOA6 Calibration Date(s): 11/22/20 11/22/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1543 1728

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2	MAX %RSD OR R^2
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	AVRG	0.77866967	8.918	15.000
Ethylbenzene	AVRG	0.53901151	7.775	15.000
Hexachlorobutadiene	AVRG	0.26959429	15.203	15.000
Isopropylbenzene	AVRG	1.62650005	10.962	15.000
m,p-Xylenes	AVRG	0.66997928	17.576	15.000
Methylene Chloride	AVRG	0.68678566	11.172	15.000
n-Butylbenzene	AVRG	3.06619587	15.960	15.000
n-Propylbenzene	AVRG	4.18264463	6.086	15.000
Naphthalene	AVRG	0.55287727	6.916	15.000
o-Xylene	AVRG	0.67597348	12.537	15.000
sec-Butylbenzene	AVRG	3.49036409	9.766	15.000
Styrene	AVRG	1.15946429	14.955	15.000
Vinyl Chloride	AVRG	1.20297979	4.666	15.000
1,2,3-Trichloropropane	AVRG	0.75417826	10.203	15.000
p-Isopropyltoluene	AVRG	3.08692735	18.293	15.000
1,2-Dibromo-3-Chloropropane	AVRG	6.093e-002	8.981	15.000
1,2-Dichloroethane-d4	AVRG	0.84325677	10.586	15.000
Dibromofluoromethane	AVRG	0.68787090	10.858	15.000
Toluene-d8	AVRG	1.34932510	9.547	15.000
4-Bromofluorobenzene	AVRG	0.47961681	14.563	15.000

FORM VI VOA

MSVOA06 -Logbook

Batch: 42732
Date: 11-23-2020
Method: 8260_W
Comments:

Analyst: Devak Giga
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	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 LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20110505

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 #	SMC3 (TOL) #	OTHER #	TOT OUT
01	VLCSW-201123	97	101	98	94	0
02	VBLK-201123	86	88	103	90	0
03	HS20110505-01	85	88	104	92	0
04	HS20110985-28MS	88	93	103	90	0
05	HS20110985-28MSD	90	92	101	93	0
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		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(0-130)
SMC2	= Dibromofluoromethane	(0-130)
SMC3 (TOL)	= Toluene-d8	(0-130)
OTHER	= 4-Bromofluorobenzene	(0-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLK-201123

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20110505

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	HS20110505-03	HS20110505-03	X112216	1546
03	HS20110505-01	HS20110505-01	X112217	1607
04	HS20110985-28MS	HS20110985-28MS	X112221	1731
05	HS20110985-28MSD	HS20110985-28MSD	X112222	1752
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20110505

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	HS20110505-03	HS20110505-03	X112216	11/23/20	1546
05	HS20110505-01	HS20110505-01	X112217	11/23/20	1607
06	HS20110985-28MS	HS20110985-28MS	X112221	11/23/20	1731
07	HS20110985-28MSD	HS20110985-28MSD	X112222	11/23/20	1752
08	CCV-END	CCV-END	X112230	11/23/20	2041
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FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20110505

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
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
Trichloroethene	0.3480000	0.3397018	0.3397018	0.2	2.38	20.00	AVRG
1,2,3-Trichlorobenzene	58.042707	50.000000	0.2094774	0.01	-16.08	20.00	LINR
Trichlorofluoromethane	1.8790000	1.6789752	1.6789752	0.1	10.64	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
Tetrachloroethene	0.3080000	0.2784382	0.2784382	0.2	9.60	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
Toluene	1.6140000	1.5759343	1.5759343	0.4	2.36	20.00	AVRG
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
tert-Butylbenzene	2.3170000	2.0045344	2.0045344	0.1	13.48	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
Carbon Tetrachloride	0.4310000	0.4072005	0.4072005	0.1	5.52	20.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2011050

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
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
Styrene	1.1590000	1.1080660	1.1080660	0.3	4.39	20.00	AVRG
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
1,2-Dichloroethane-d4	49.040494	50.000000	0.8084809	0.1	1.92	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
4-Bromofluorobenzene	47.193618	50.000000	0.4490327	0.1	5.61	20.00	2RDR

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20110505

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
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
Trichloroethene	0.3480000	0.3486546	0.3486546	0.2	-0.19	50.00	AVRG
1,2,3-Trichlorobenzene	48.371099	50.000000	0.1738321	0.01	3.26	50.00	LINR
Trichlorofluoromethane	1.8790000	1.8617383	1.8617383	0.1	0.92	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
Tetrachloroethene	0.3080000	0.2952197	0.2952197	0.2	4.15	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
Toluene	1.6140000	1.5548880	1.5548880	0.4	3.66	50.00	AVRG
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
tert-Butylbenzene	2.3170000	2.2343889	2.2343889	0.1	3.56	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
Carbon Tetrachloride	0.4310000	0.4216418	0.4216418	0.1	2.17	50.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2011050

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
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
Styrene	1.1590000	1.1466630	1.1466630	0.3	1.06	50.00	AVRG
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
1,2-Dichloroethane-d4	52.243434	50.000000	0.8626837	0.1	-4.49	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
4-Bromofluorobenzene	48.825741	50.000000	0.4648567	0.1	2.35	50.00	2RDR

FORM VII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20110505

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(CBZ) AREA #	IS1(CBZ) RT #	IS2(DFB) AREA #	IS2(DFB) RT #	IS3(DCB) AREA #	IS3(DCB) RT #
	12 HOUR STD	319342	7.67	354140	4.97	151730	9.66
	UPPER LIMIT	638684	8.17	708280	5.47	303460	10.16
	LOWER LIMIT	159671	7.17	177070	4.47	75865	9.16
	CLIENT SAMPLE NO.						
01	VLCSW-201123	318369	7.67	340549	4.97	140119	9.66
02	VBLK-201123	346785	7.67	399701	4.97	146902	9.66
03	HS20110505-03	332066	7.67	379900	4.97	138390	9.66
04	HS20110505-01	333423	7.67	386440	4.97	143107	9.66
05	HS20110985-28MS	336710	7.67	381411	4.97	143303	9.66
06	HS20110985-28MSD	356627	7.67	396279	4.97	161277	9.66
07							
08							
09							
10							
11							
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14							
15							
16							
17							
18							
19							
20							

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20110505

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	HS20110505-03	221581	4.18				
04	HS20110505-01	224817	4.18				
05	HS20110985-28MS	214077	4.18				
06	HS20110985-28MSD	225974	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.

FORM VIII VOA

Data File: \\NAHSTWS005\Target\chem\voa6.i\2020-4\X201123.b\X112201.D

Date : 23-NOV-2020 10:31

Client ID: BFB

Instrument: voa6.i

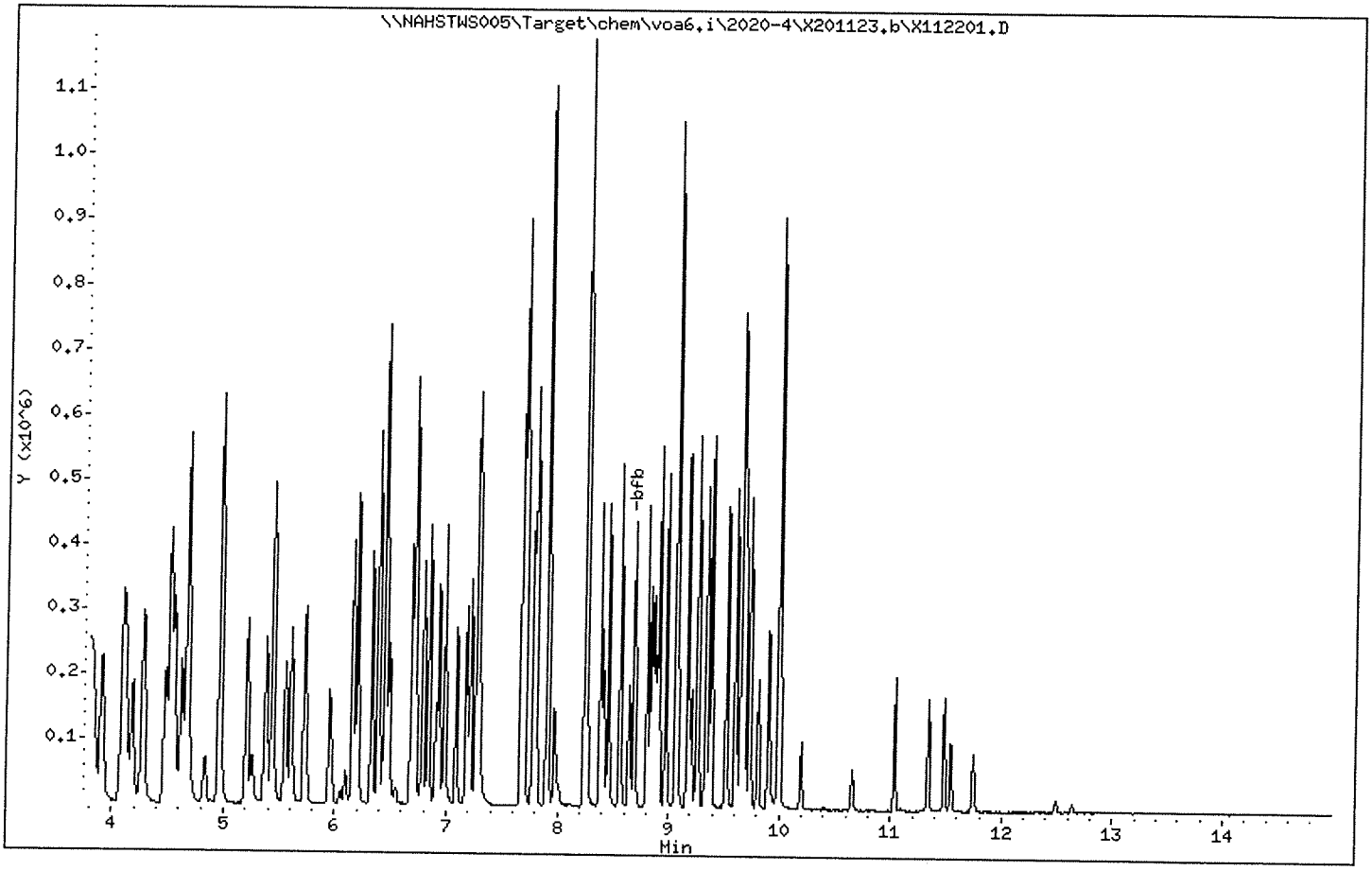
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\2020-4\X201123.b\X112201.D

Date : 23-NOV-2020 10:31

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

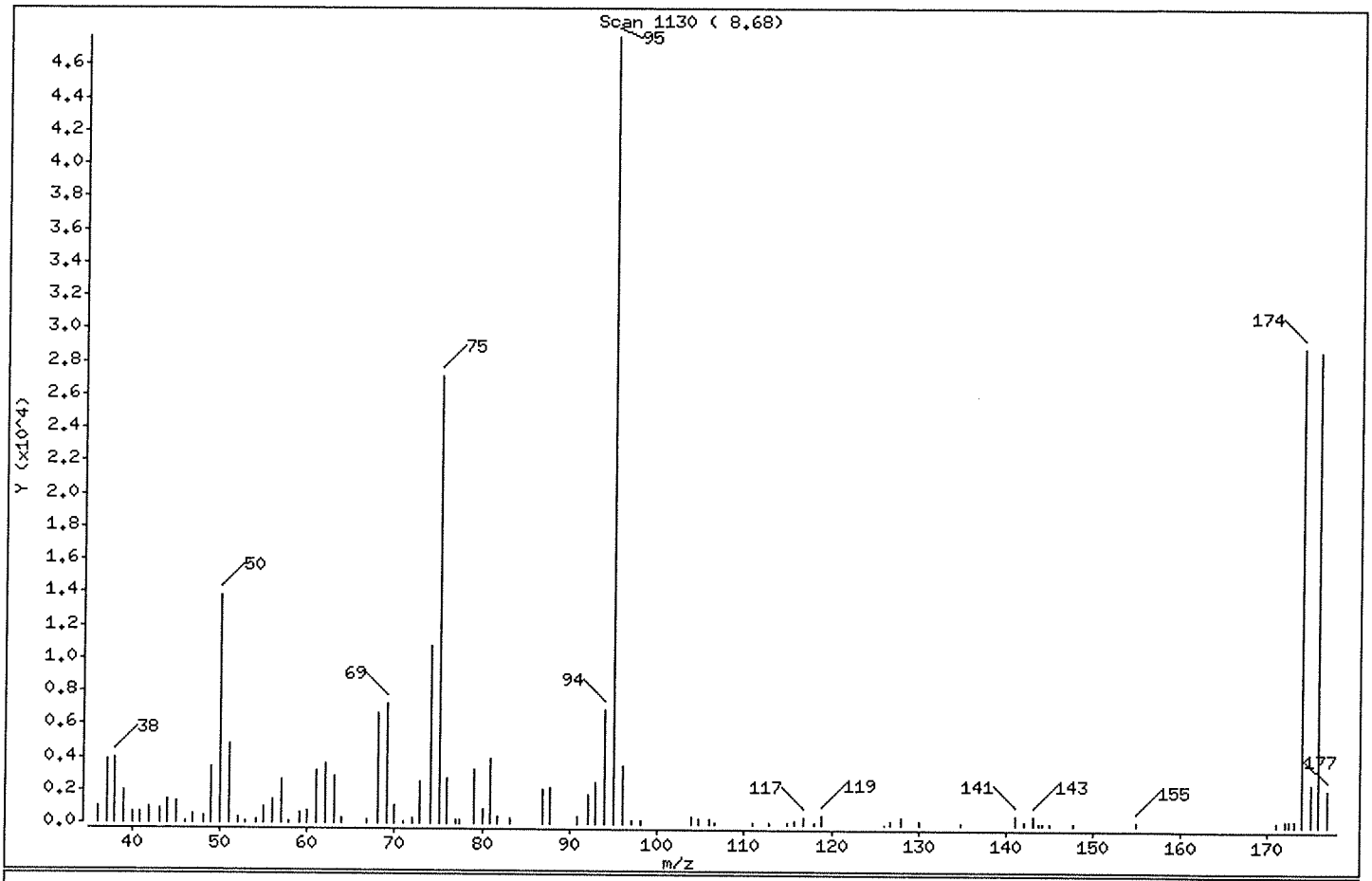
Volume Injected (uL): 2.0

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\2020-4\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: X112202.D
Report Date: 15-Sep-2021 14:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\2020-4\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\2020-4\X201123.b\8260W.m
Meth Date : 15-Sep-2021 14:25 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: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

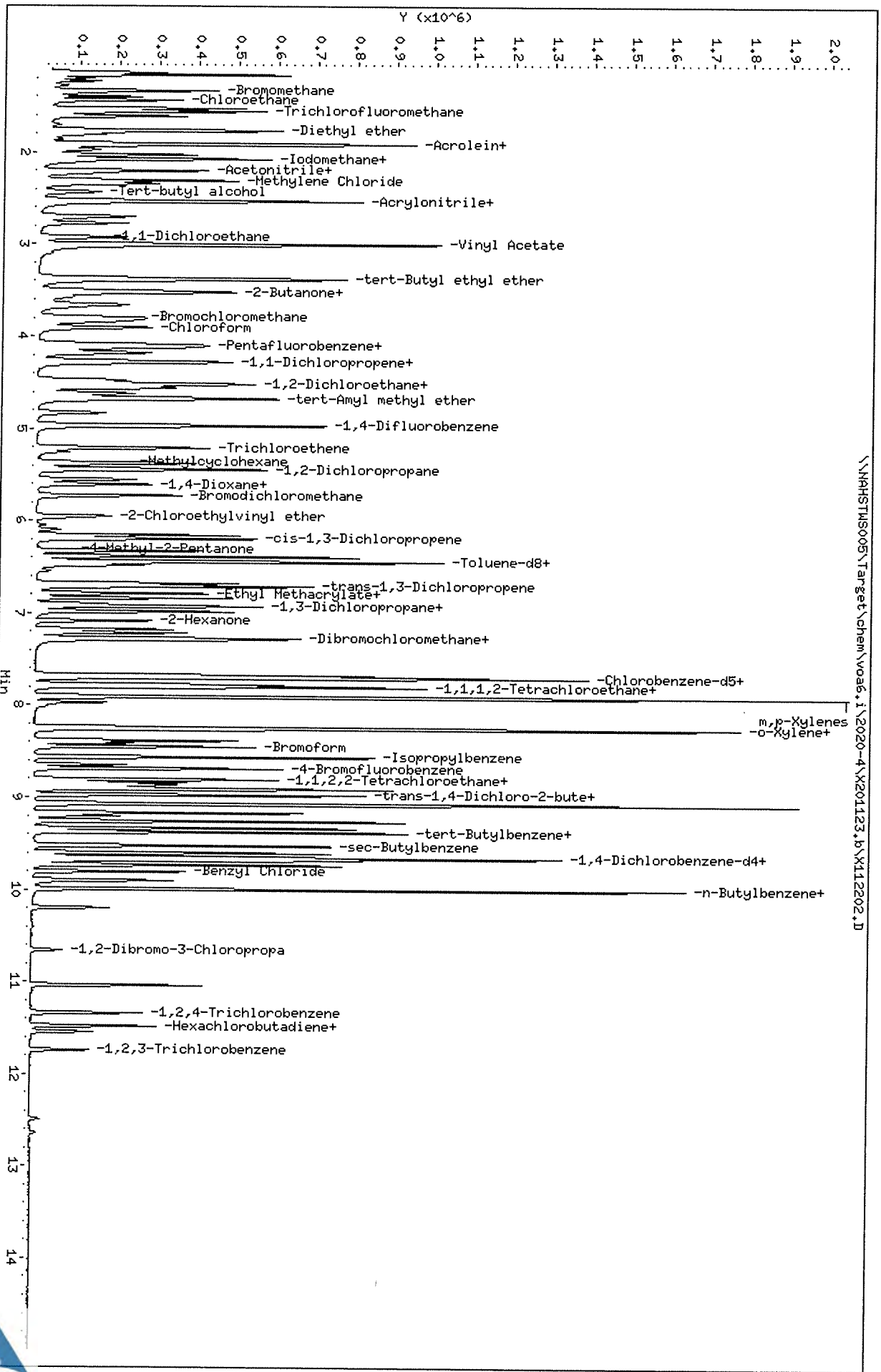
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	193281	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	354140	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	319342	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	151730	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	123394	50.0000	48.82
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	156264	50.0000	49.04
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	423062	50.0000	49.09
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	143395	50.0000	47.19
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
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
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	207770	50.0000	48.38

Data File: X112202.D
Report Date: 15-Sep-2021 14:25

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)	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.

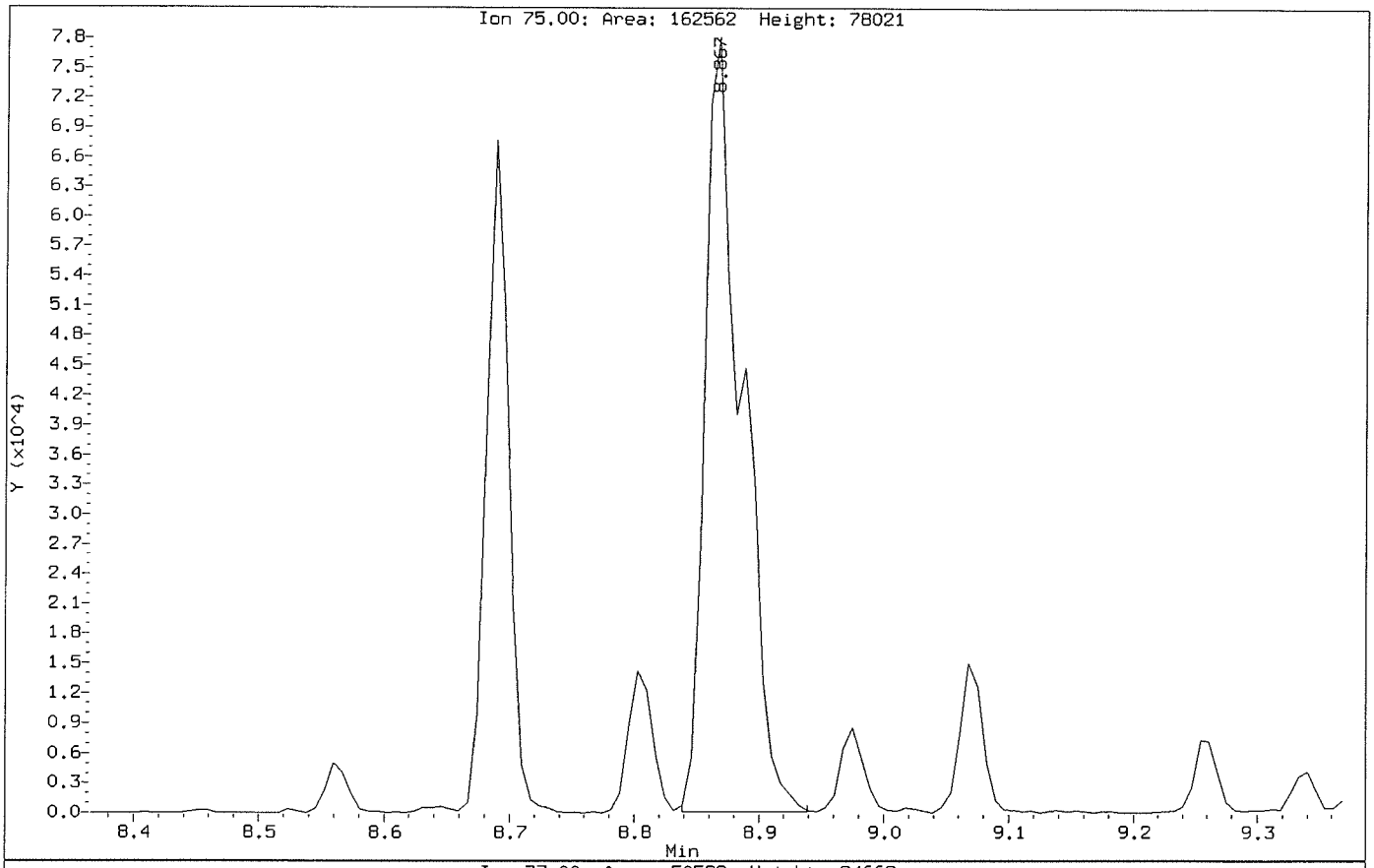


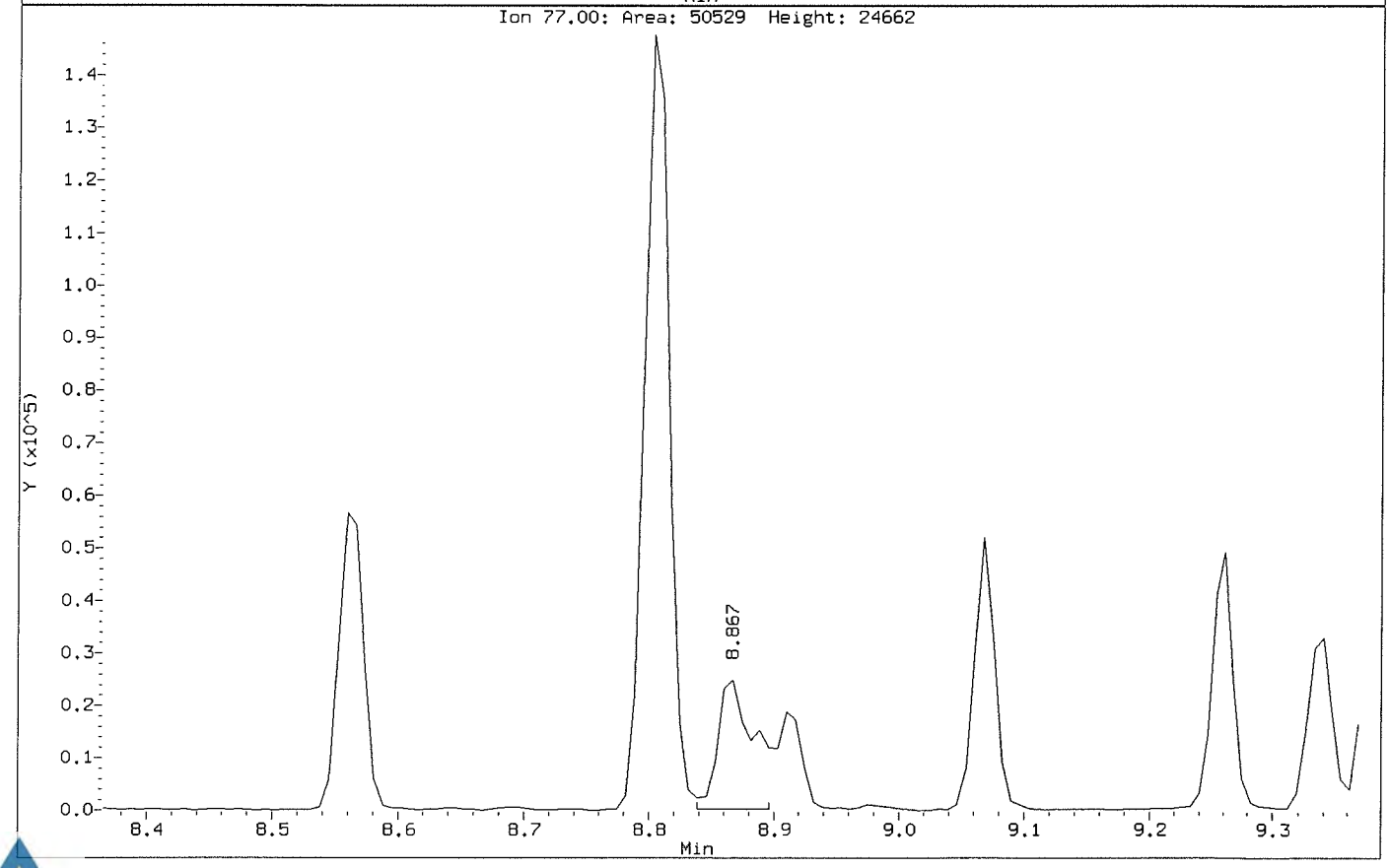
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Date : 23-NOV-2020 10:52
Client ID: CCV
Sample Info: CCV;CCV;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

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Client Sample ID: CCV

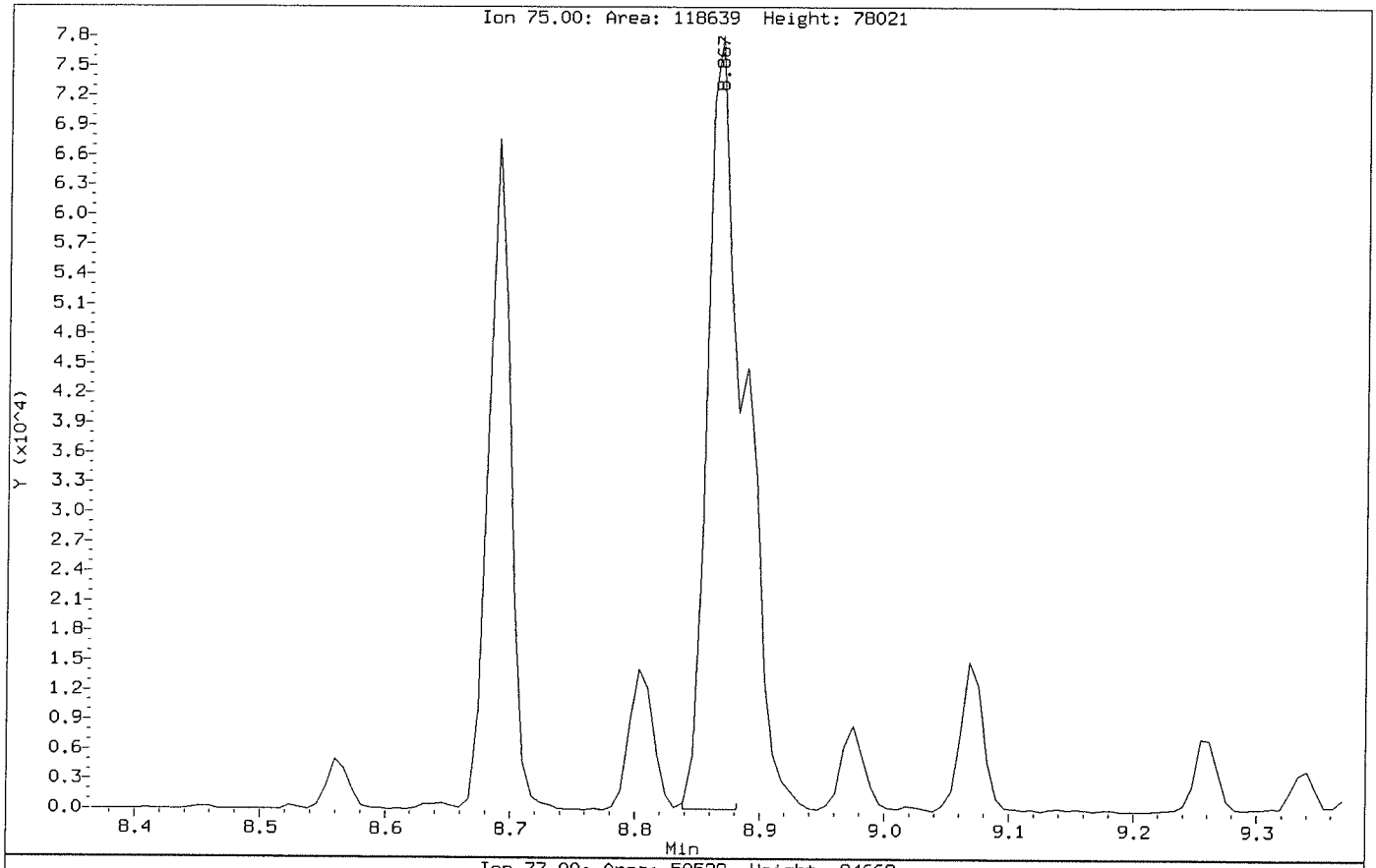
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4

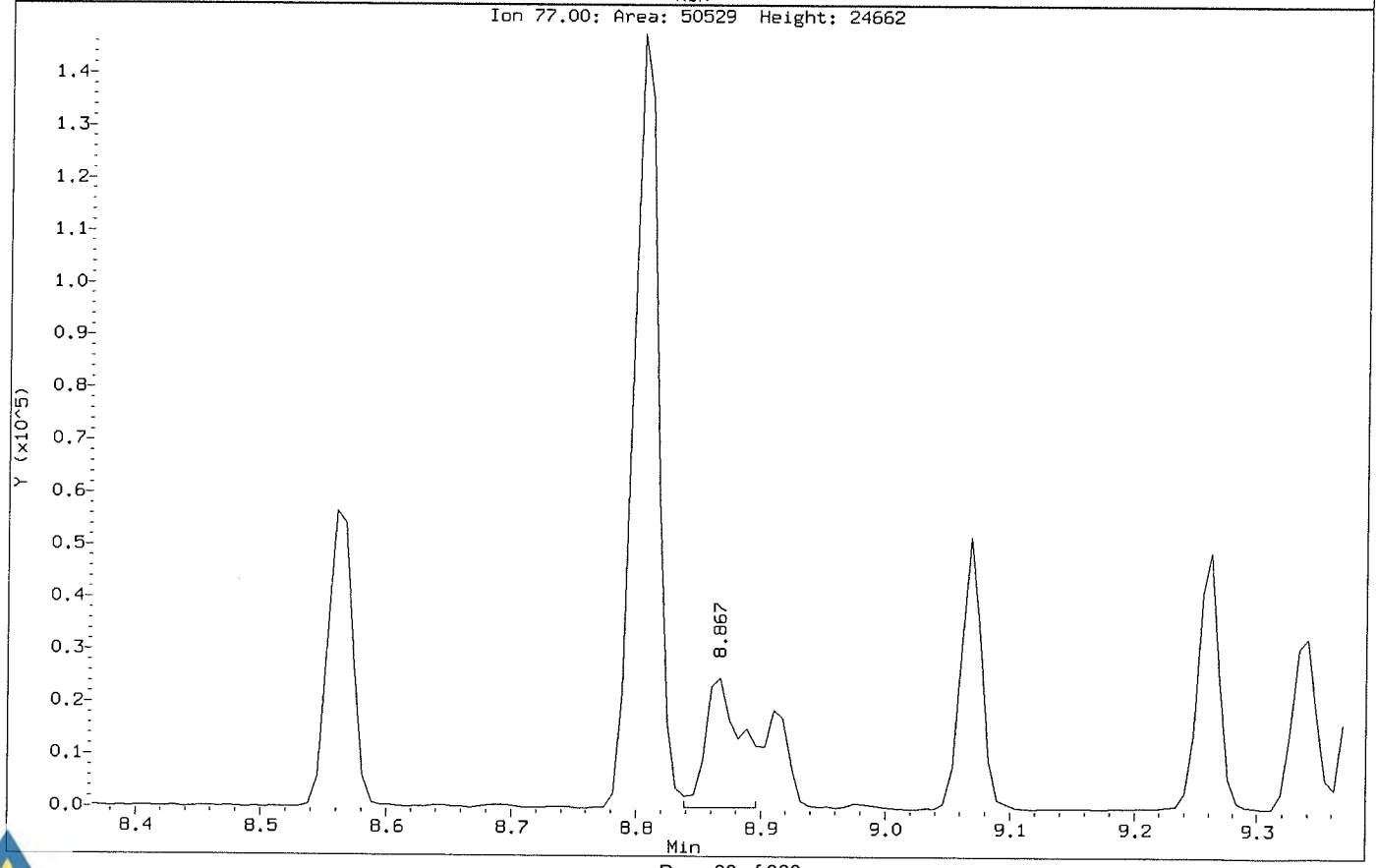




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Injection Date: 23-NOV-2020 10:52
Instrument: voa6.i
Client Sample ID: CCV

Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4





Data File: X112205.D
Report Date: 15-Sep-2021 14:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\2020-4\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\2020-4\X201123.b\8260W.m
Meth Date : 15-Sep-2021 14:25 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: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

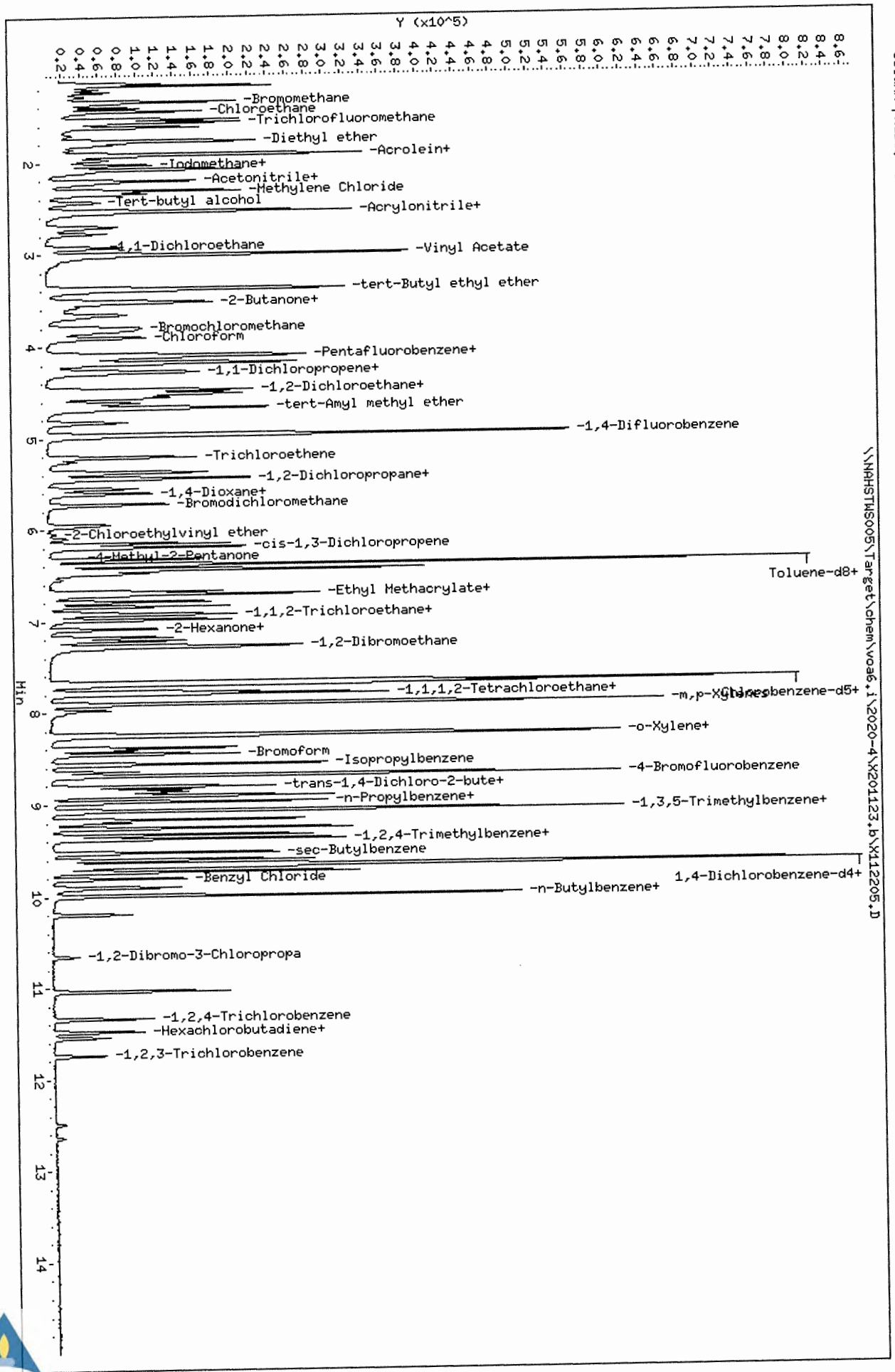
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	182259	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	340549	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	318369	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	140119	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	121065	50.7387	50.73
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	145364	48.3945	48.39
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	422435	49.1680	49.16
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	142918	47.1806	47.18
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
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
88 1,2-Dichlorobenzene	146	9.991	9.991	(1.034)	74170	18.7055	18.70

mpounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.555	(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

Data File: X112205.D
Report Date: 15-Sep-2021 14:25

QC Flag Legend

M - Compound response manually integrated.

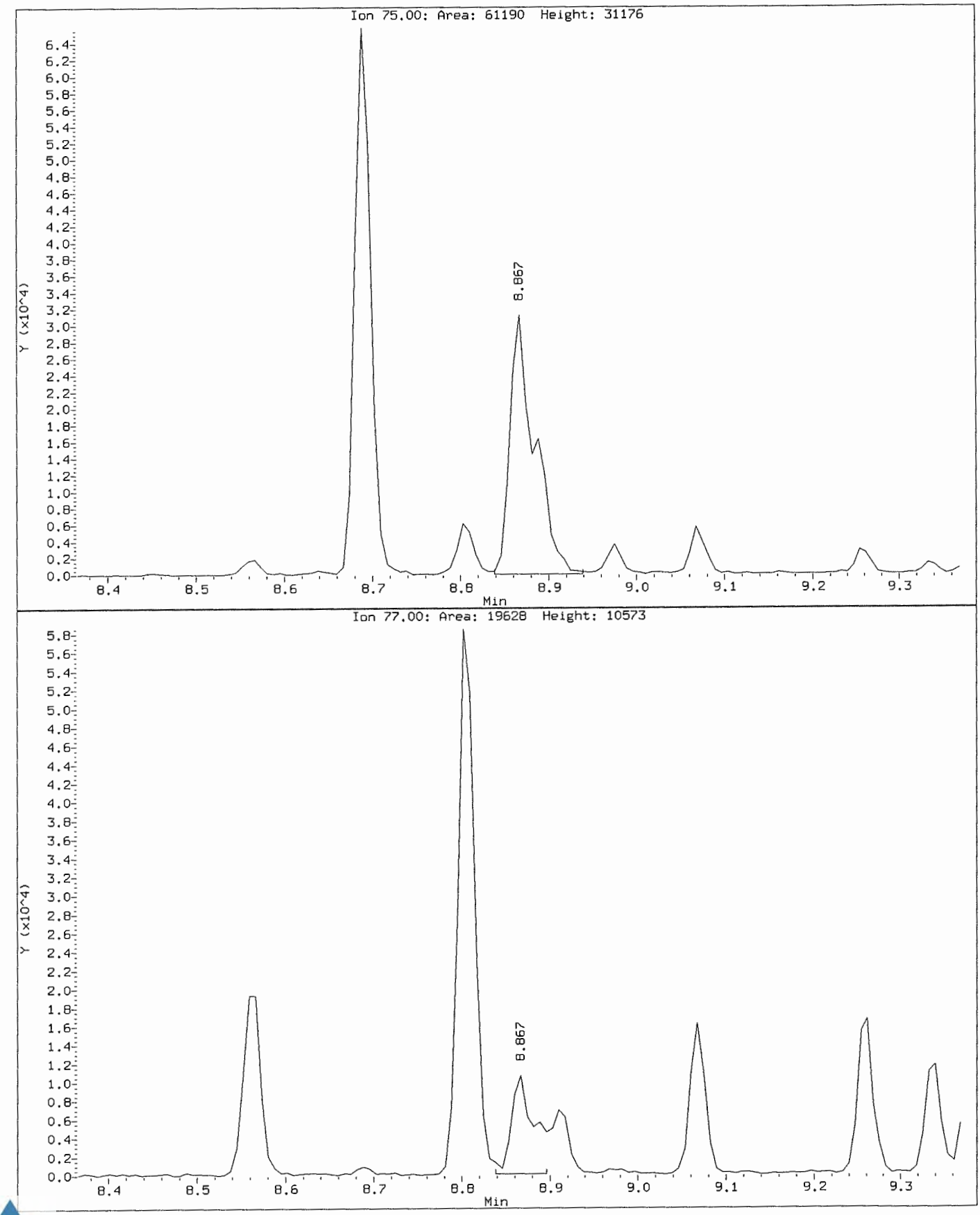


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Sample Info: VLCSW-201123;VLCSW-201123;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

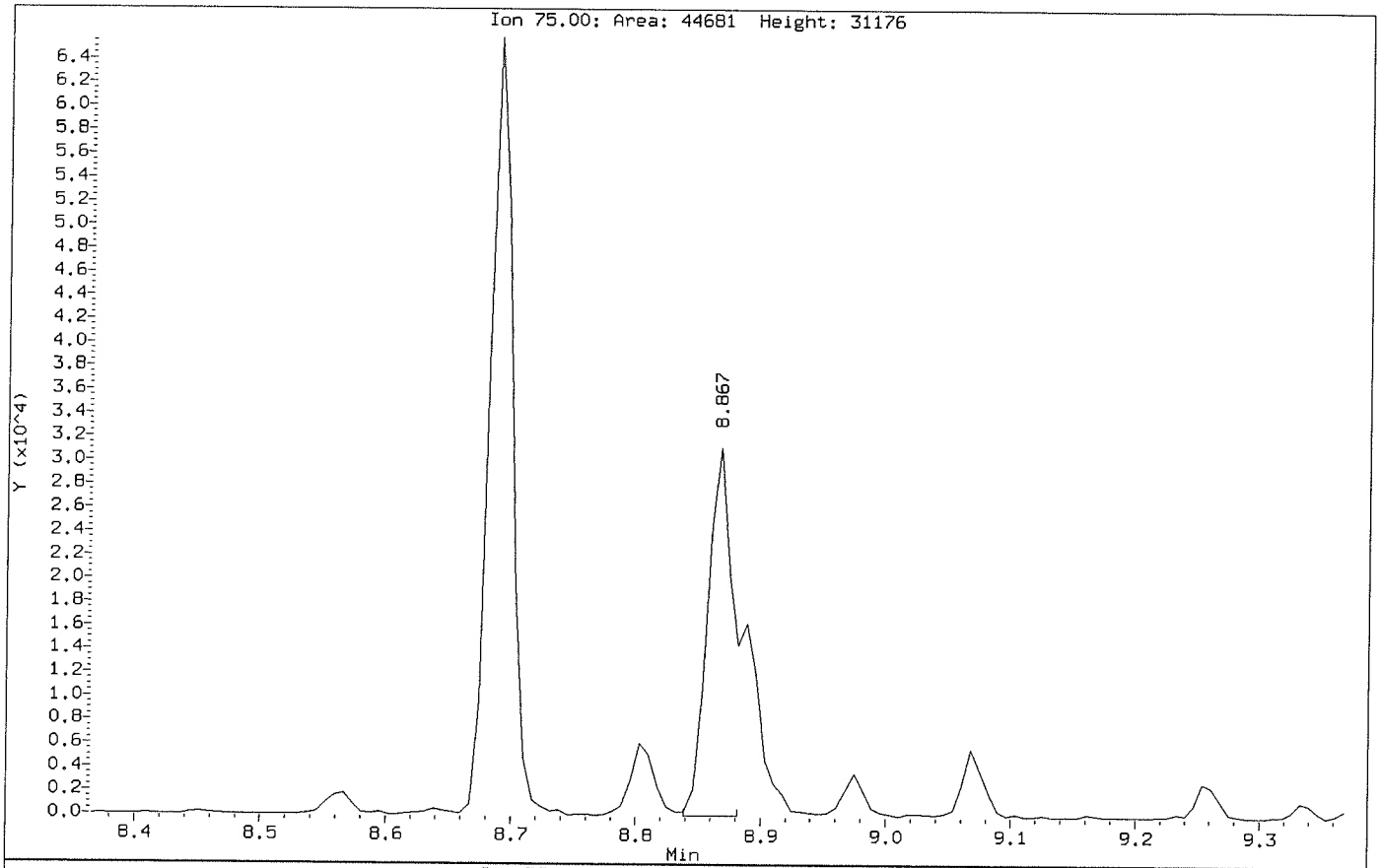
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Client Sample ID: VLCSW-201123

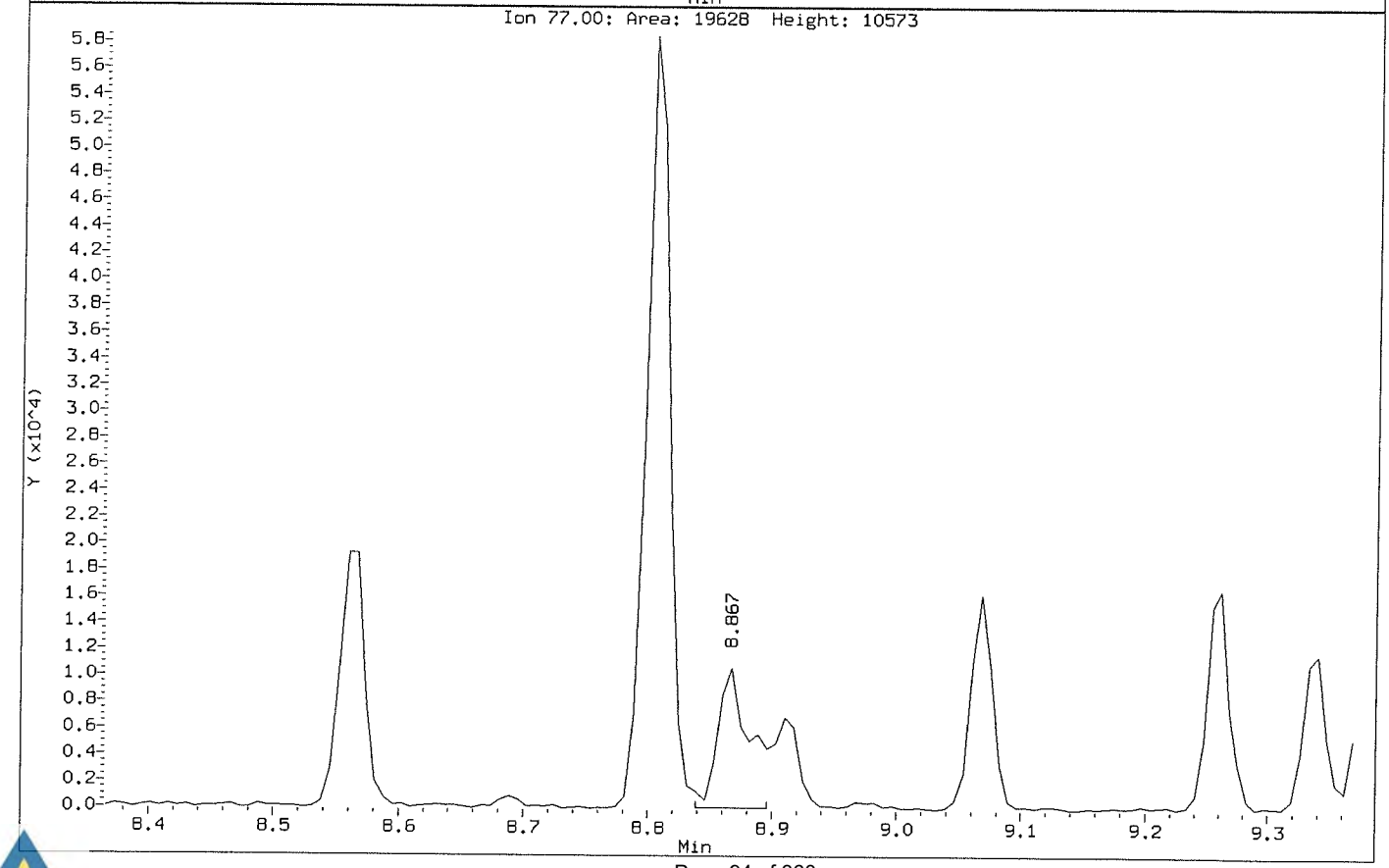
Compound: 1,2,3-Trichloropropane
CAS Number: 96-18-4



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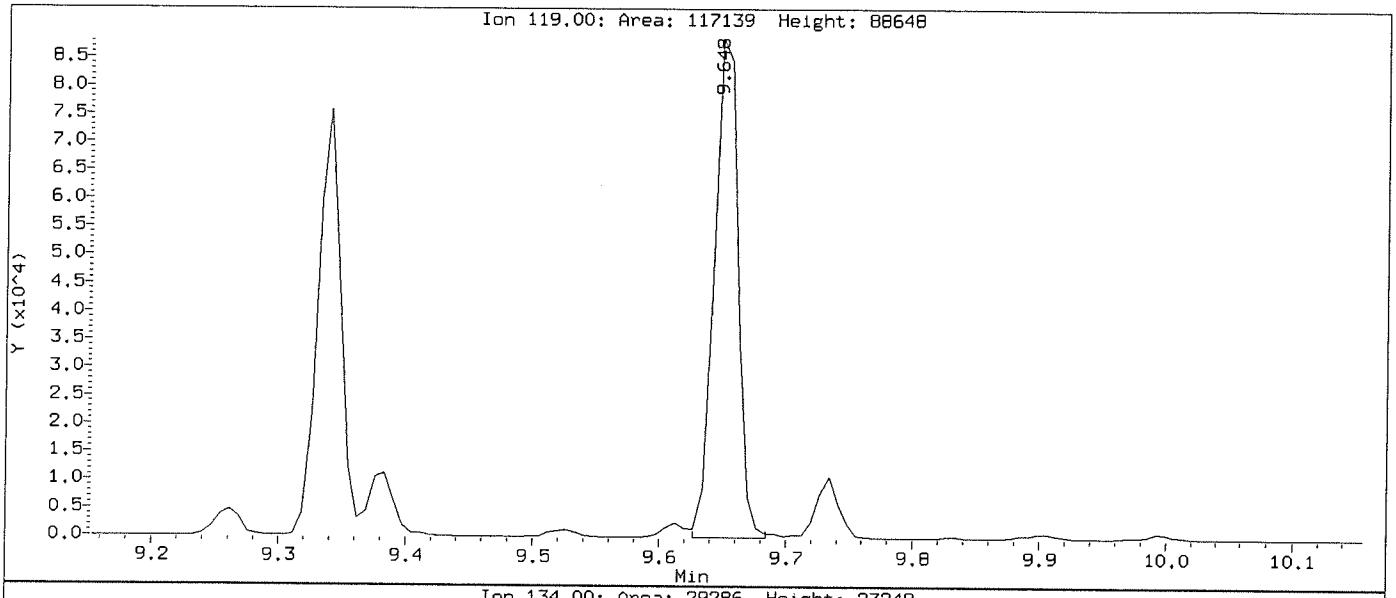
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CAS Number: 96-18-4

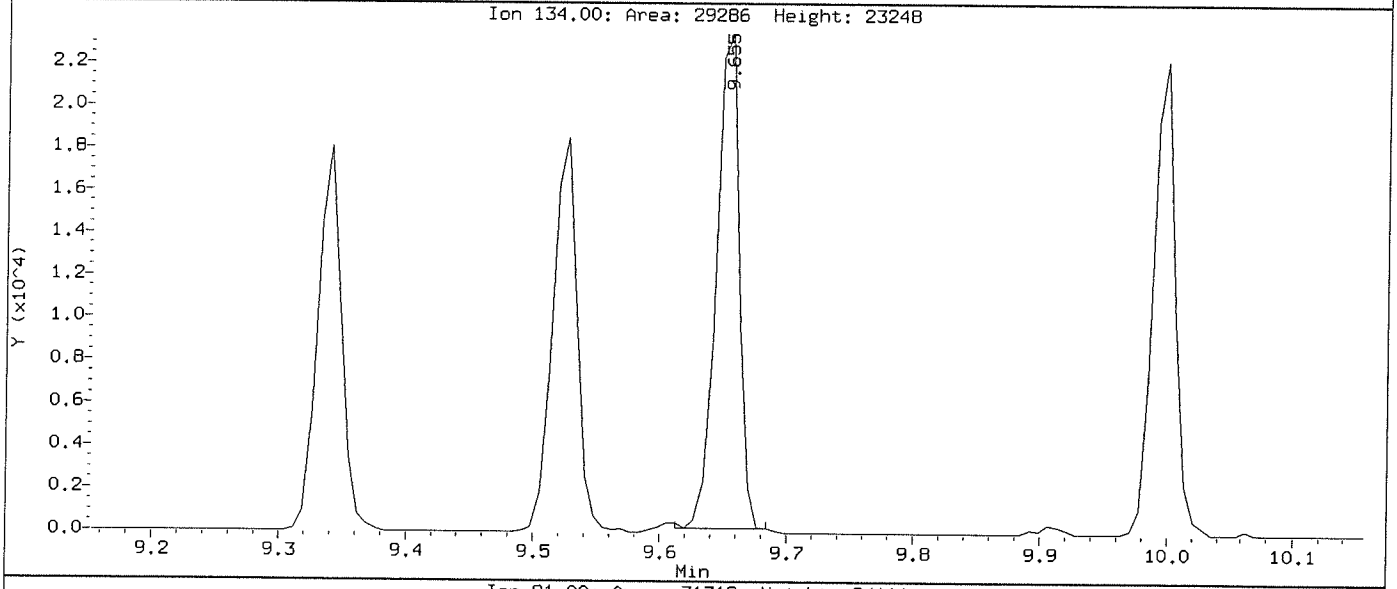


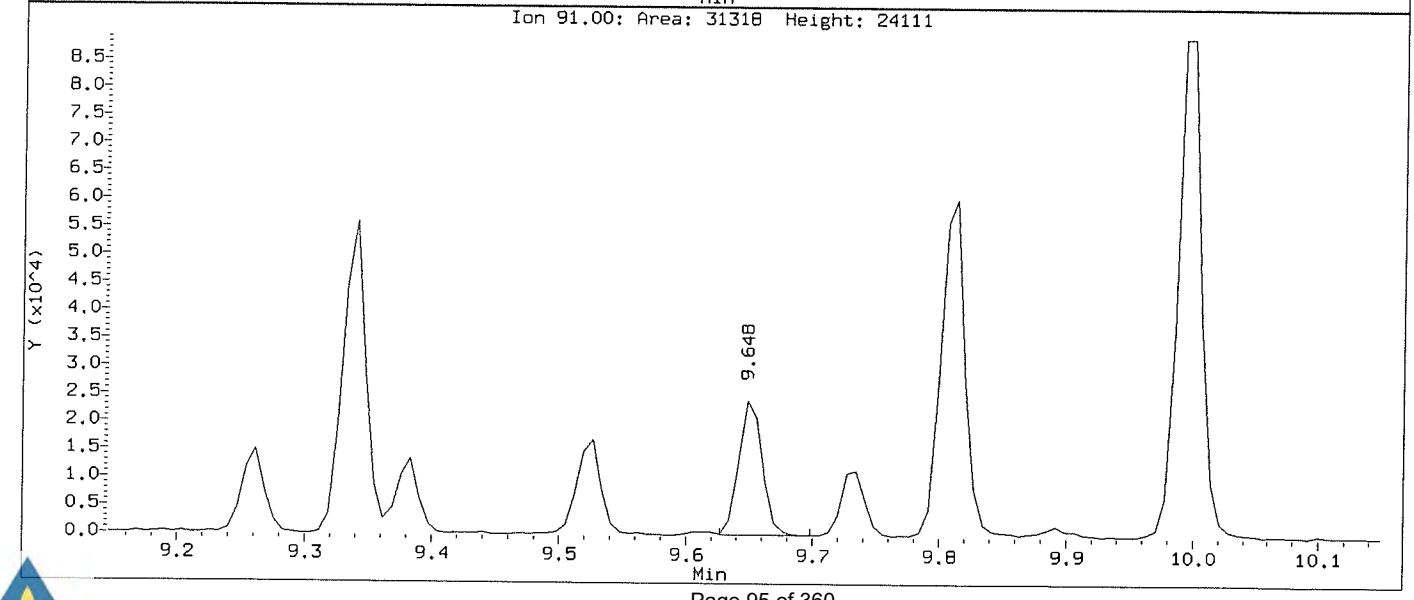


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Instrument: voa6.i
Client Sample ID: VLCSW-201123

Compound: p-Isopropyltoluene
CAS Number: 99-87-6

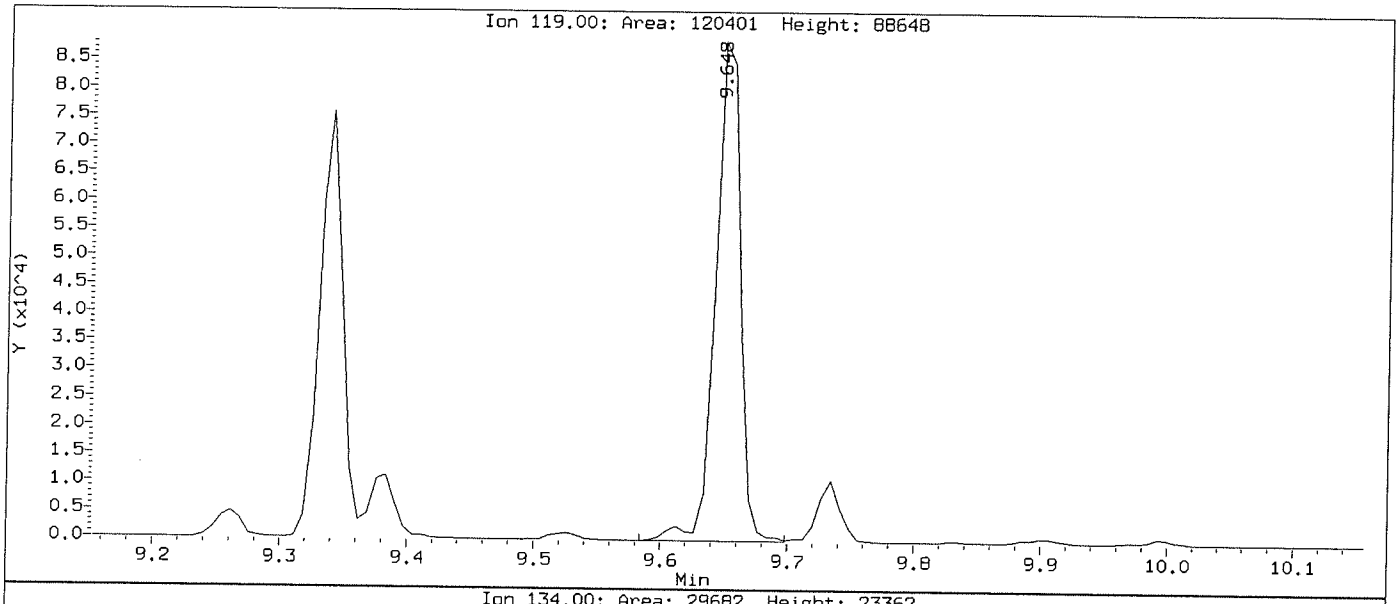


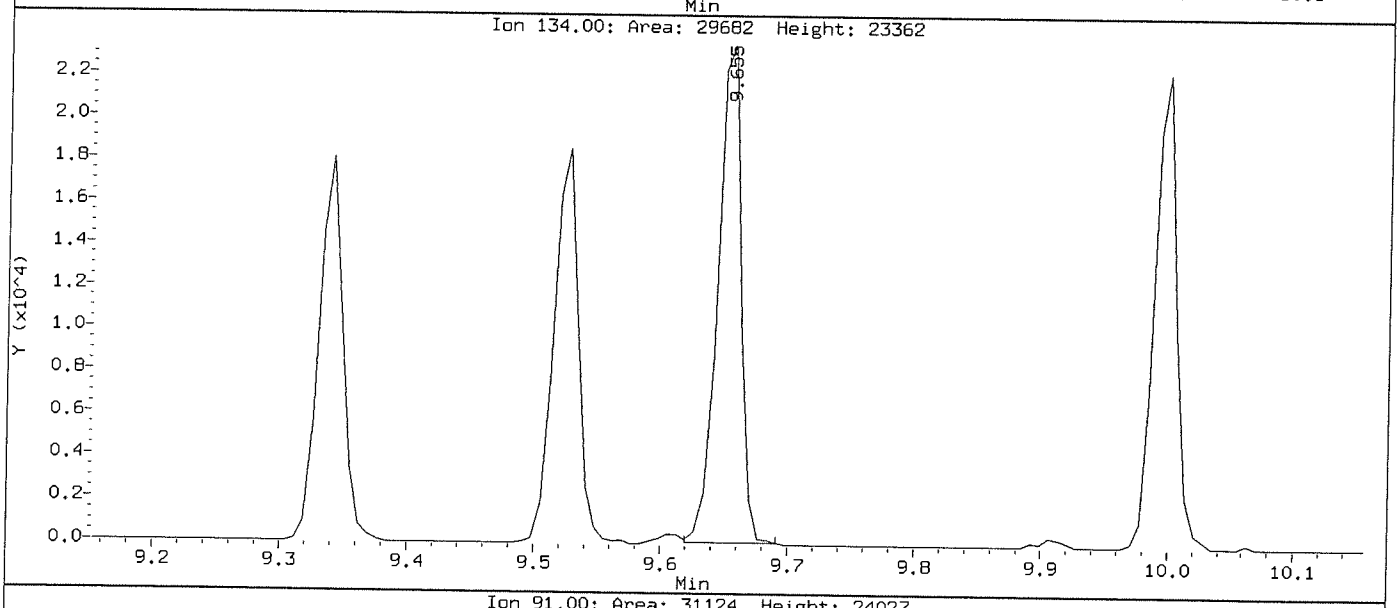


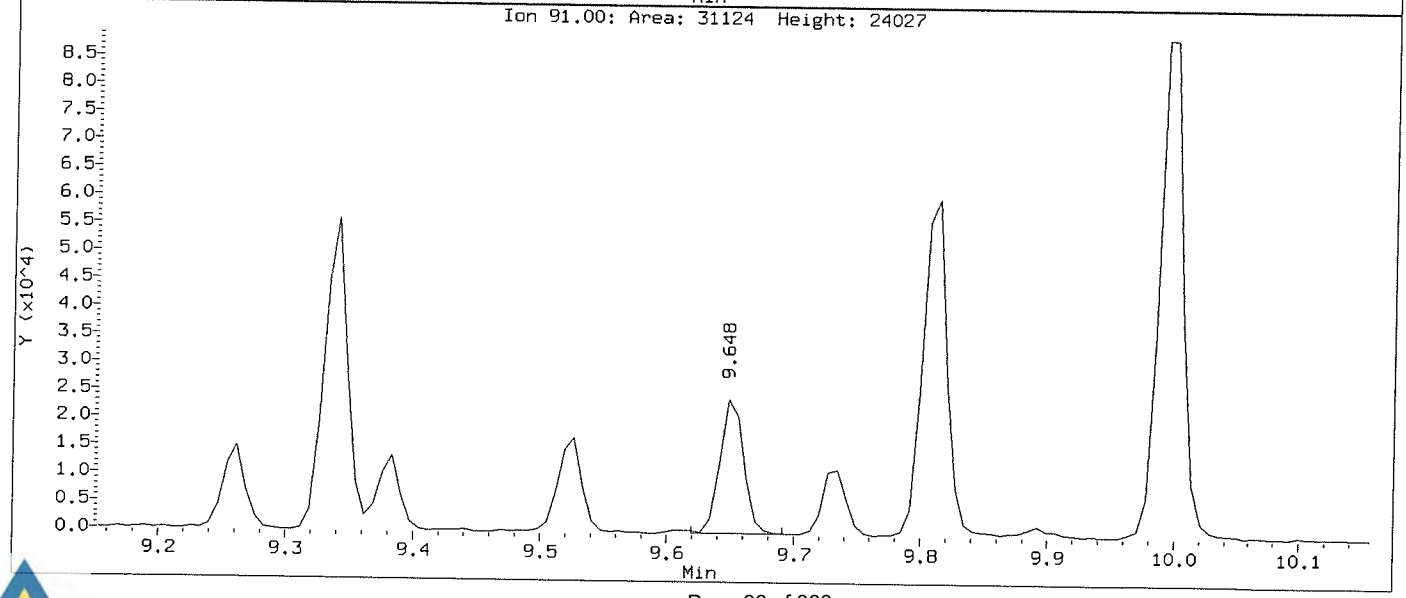


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Instrument: voa6.i
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Compound: p-Isopropyltoluene
CAS Number: 99-87-6

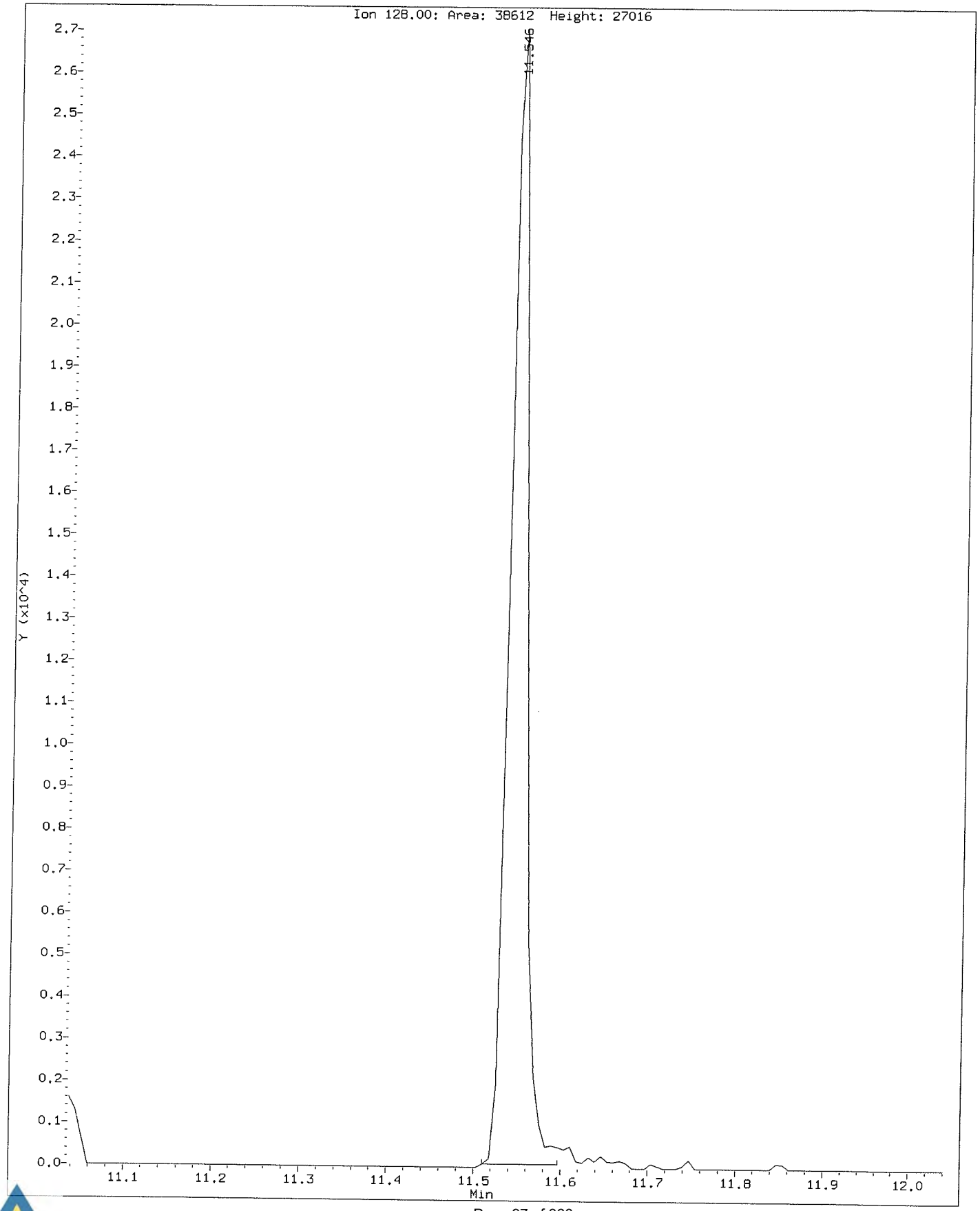






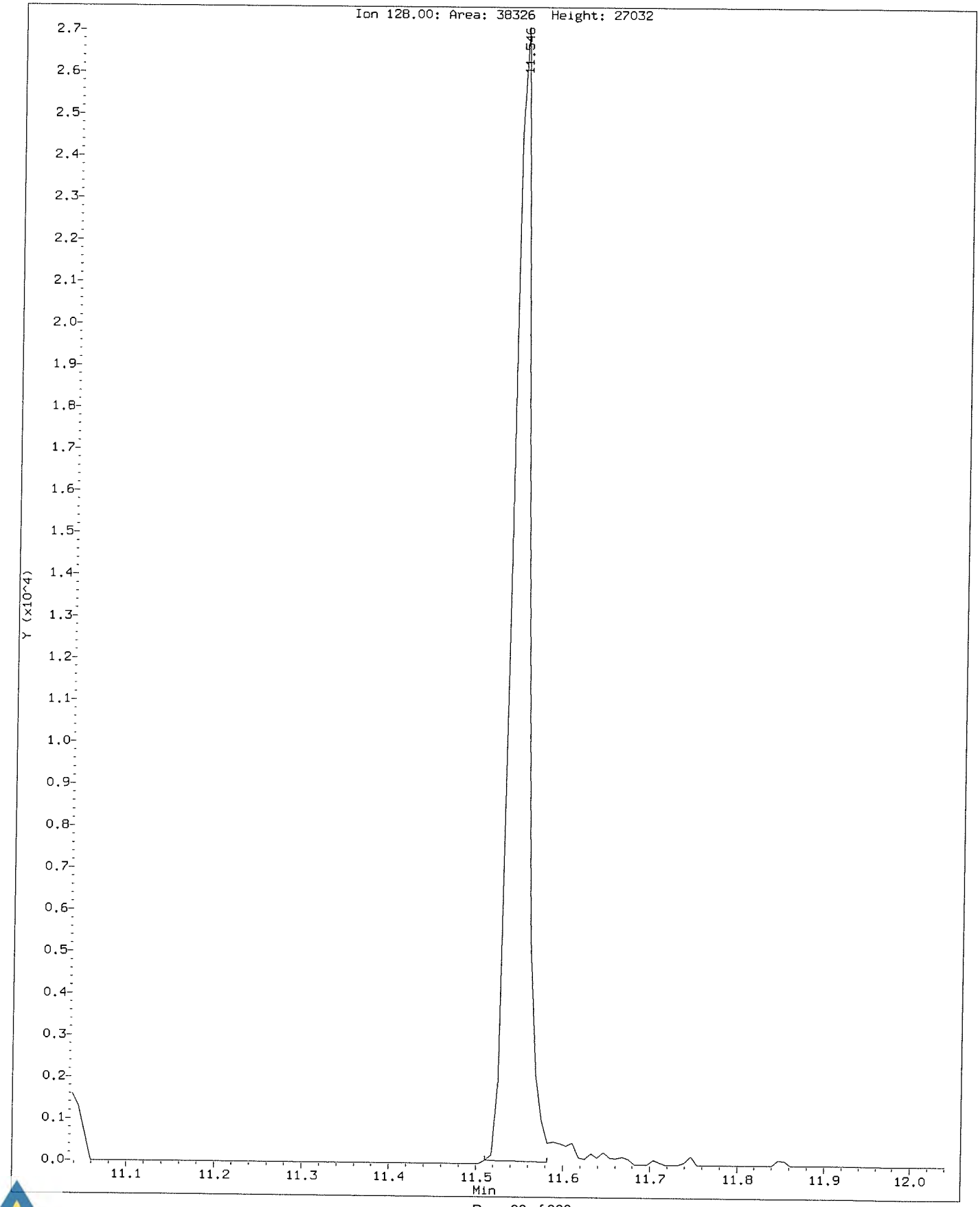
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Instrument: voa6.i
Client Sample ID: VLCSW-201123

Compound: Naphthalene
CAS Number: 91-20-3



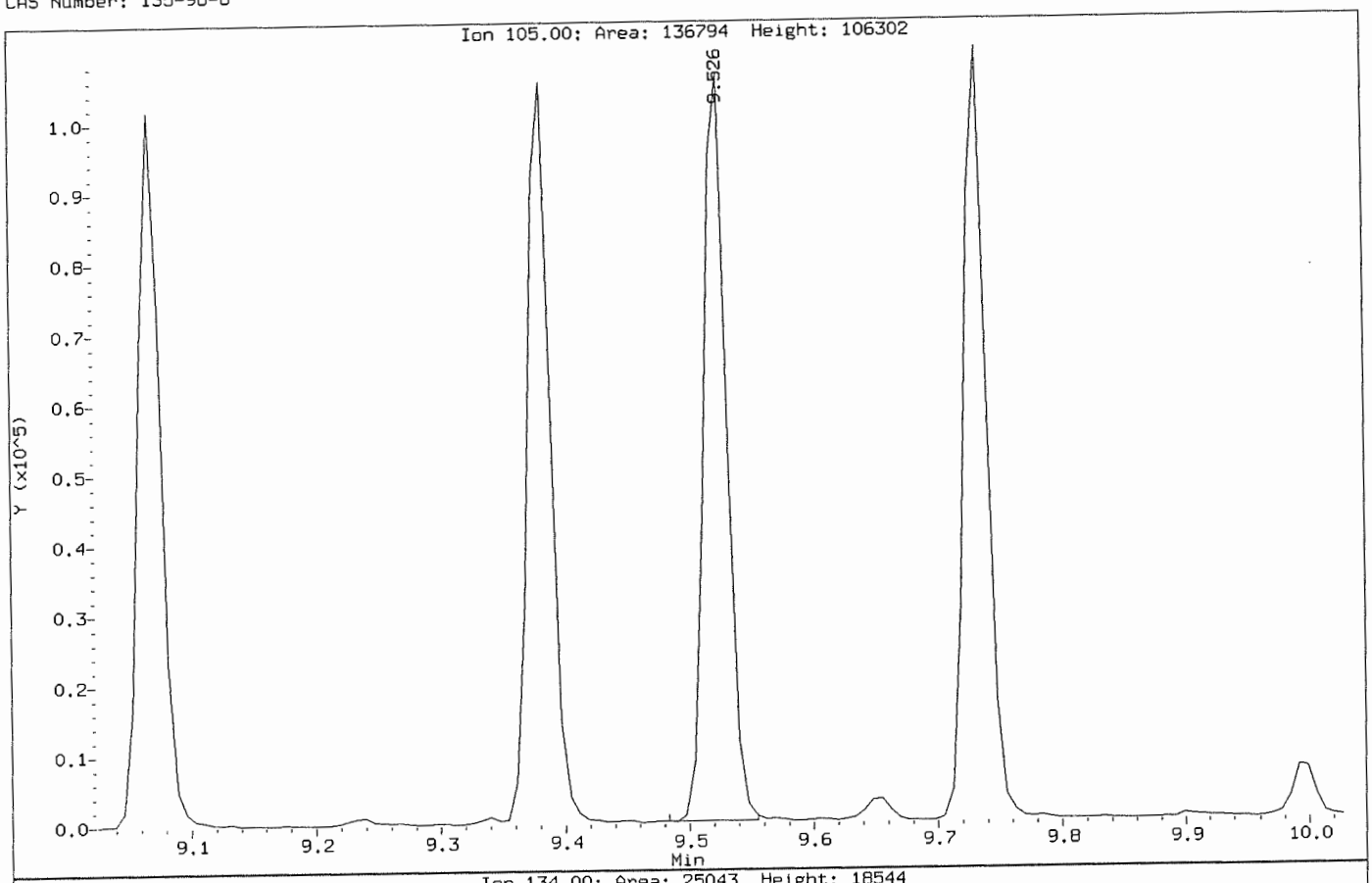
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Client Sample ID: VLCSW-201123

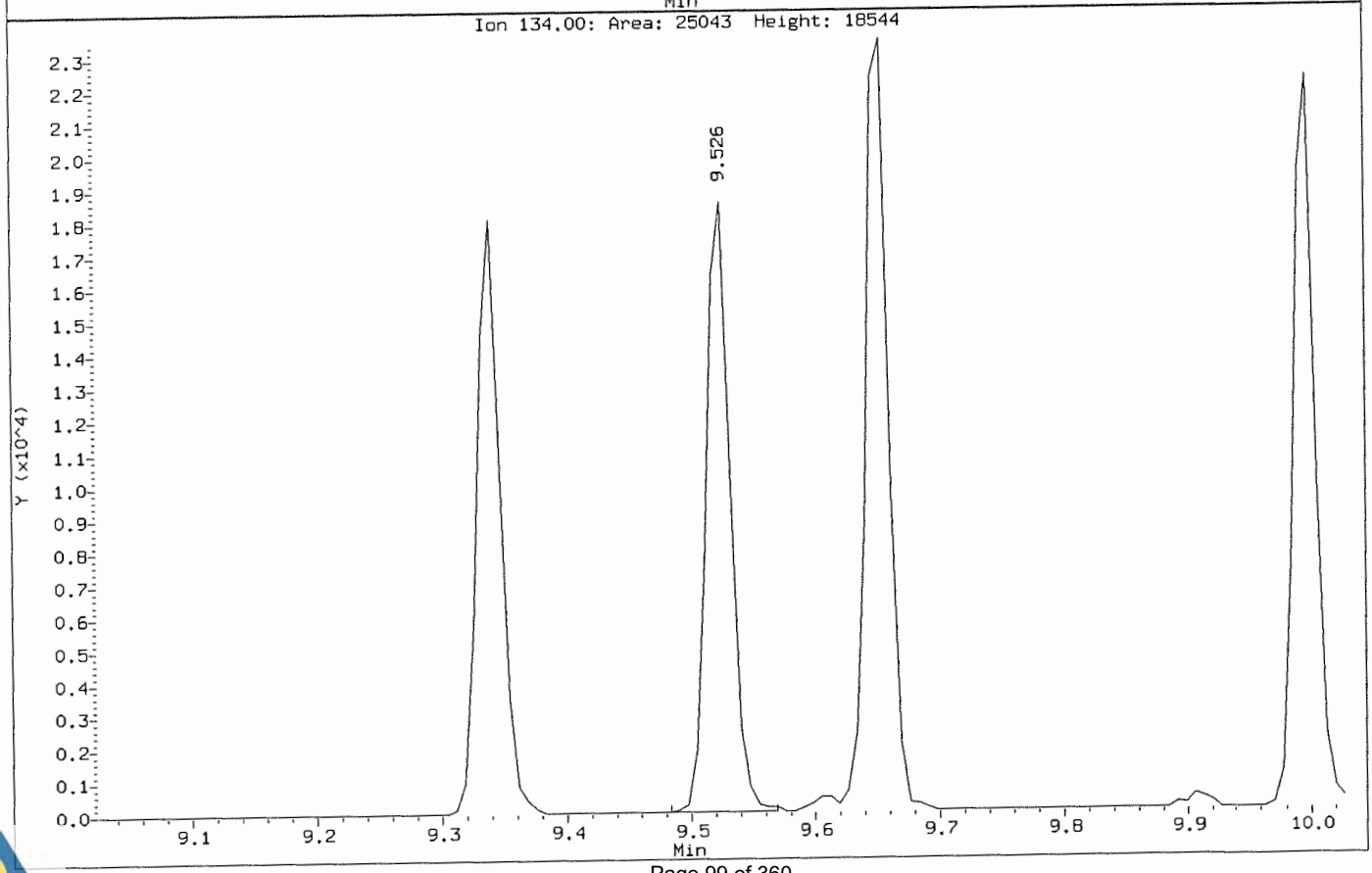
Compound: Naphthalene
CAS Number: 91-20-3



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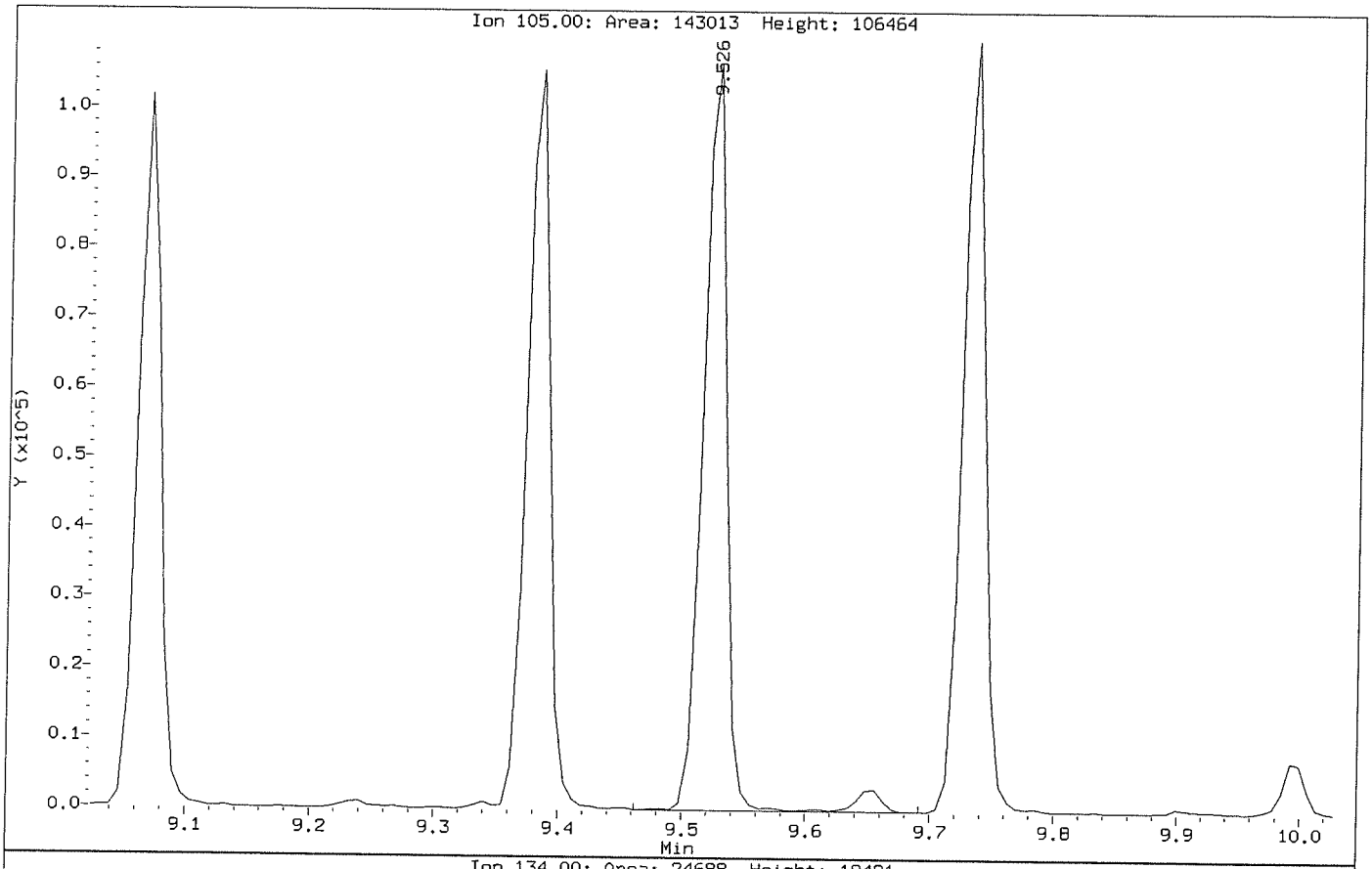
Compound: sec-Butylbenzene
CAS Number: 135-98-8

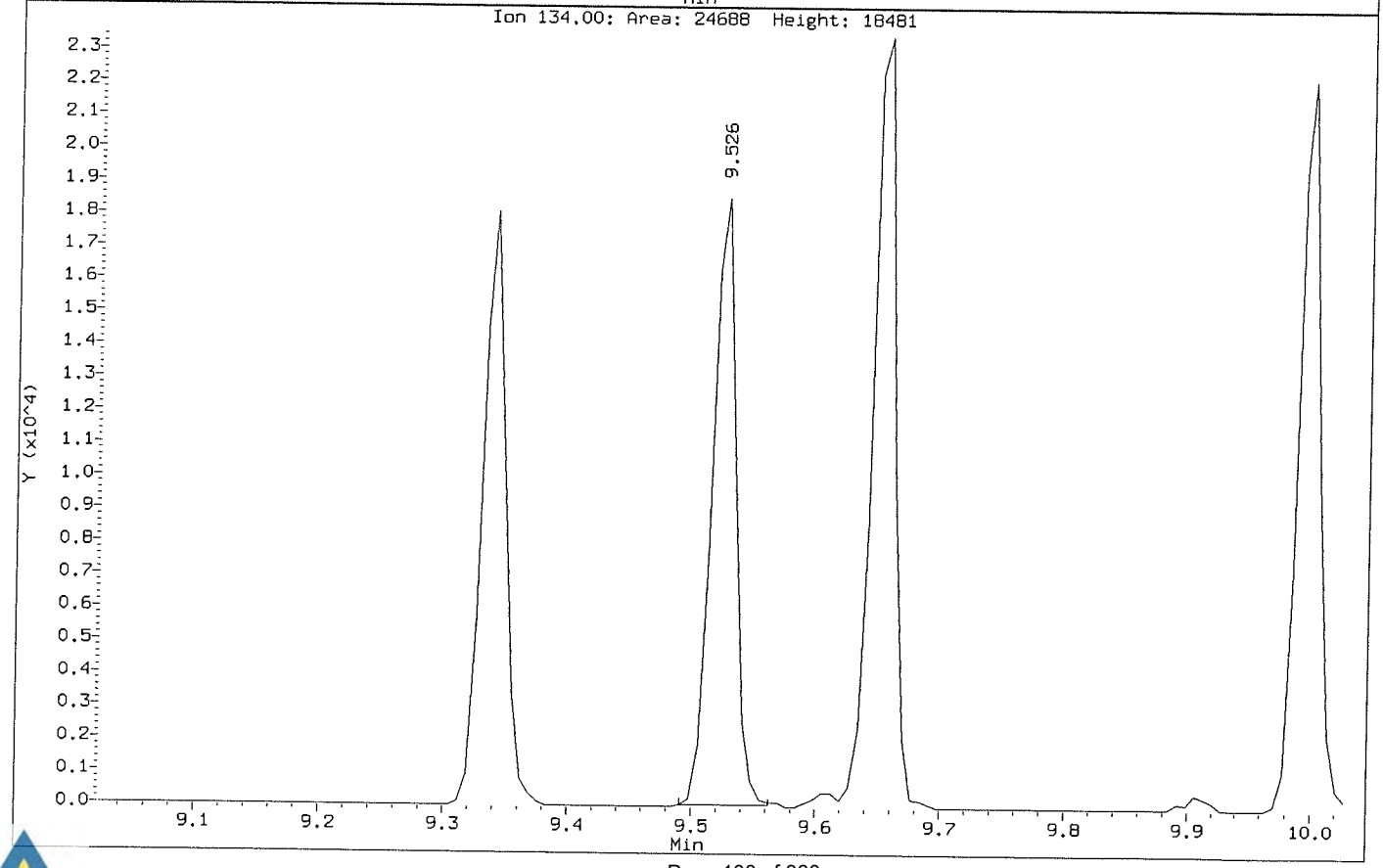




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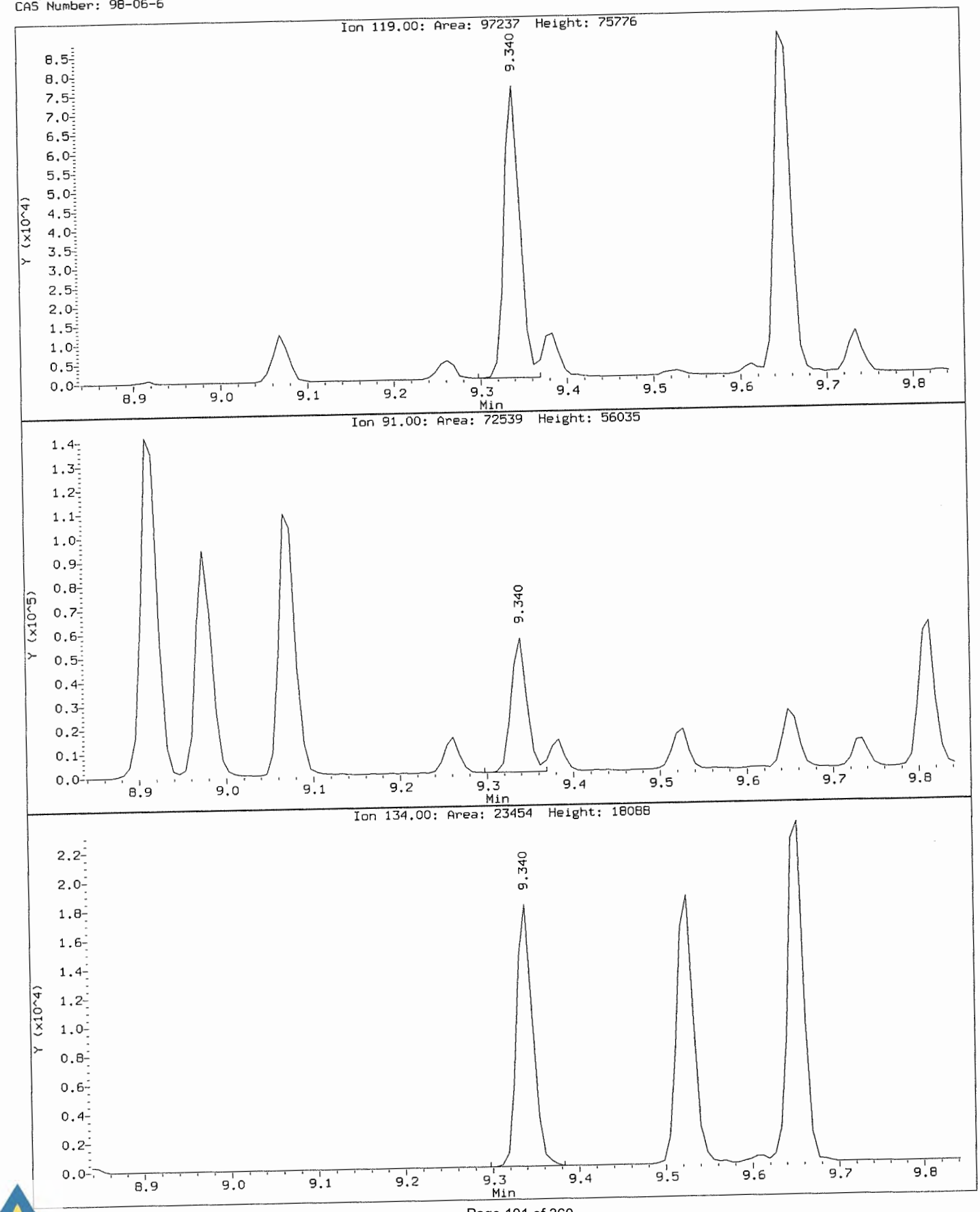
Compound: sec-Butylbenzene
CAS Number: 135-98-8





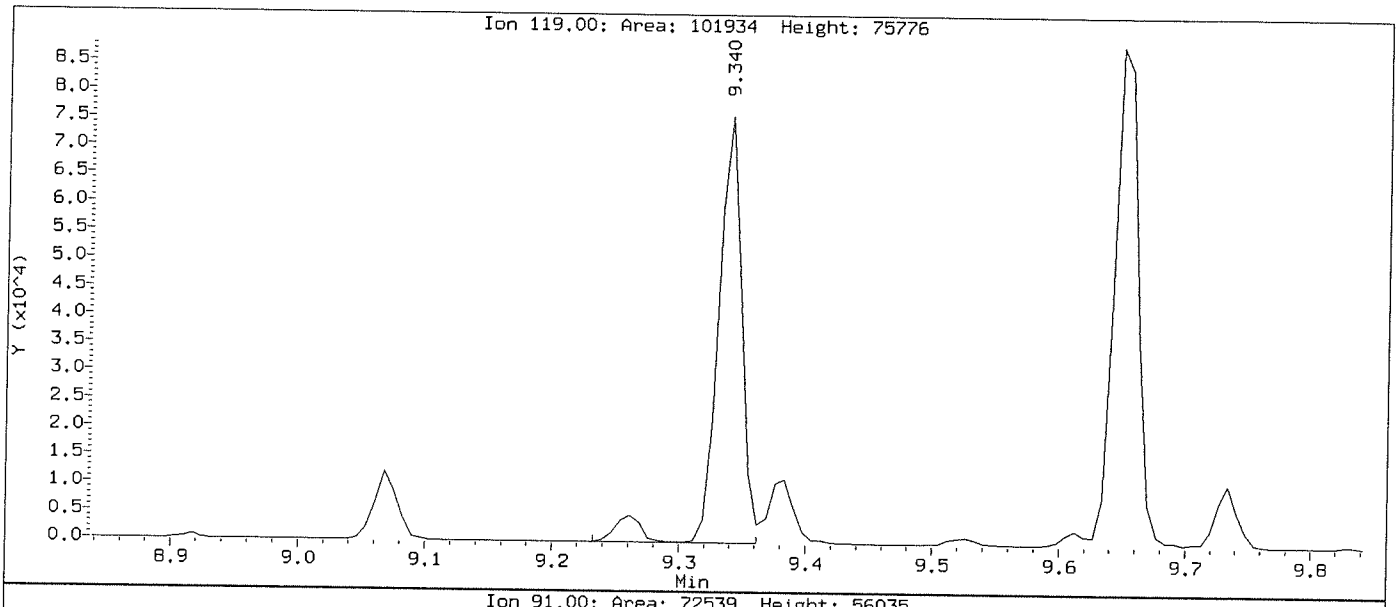
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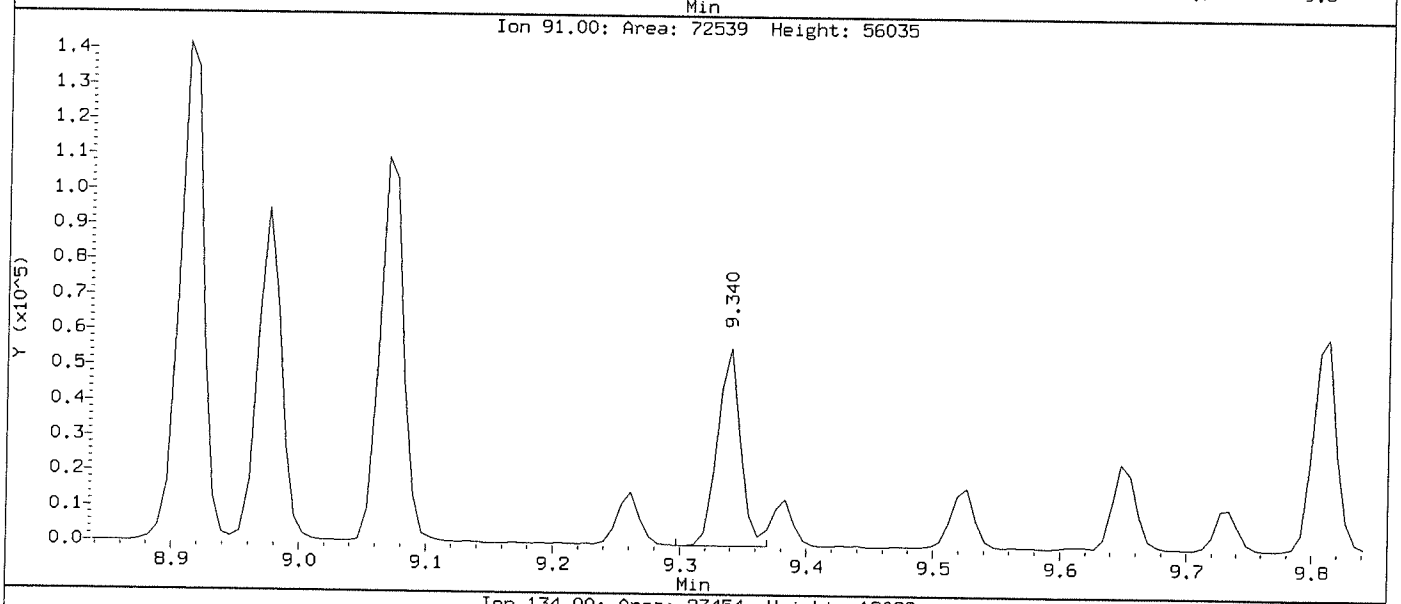
Compound: tert-Butylbenzene
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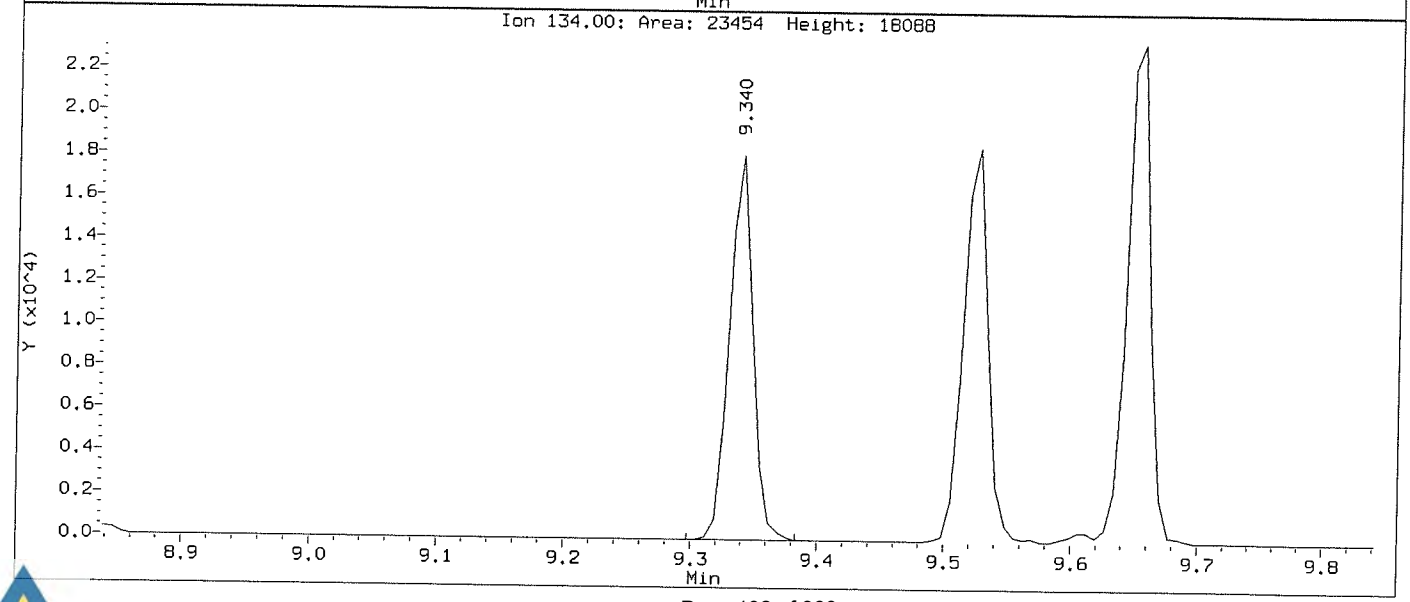


Data File: \\NAHSTWS005\Target\chem\voa6.i\2020-4\X201123.b\X112205.D
Injection Date: 23-NOV-2020 11:55
Instrument: voa6.i
Client Sample ID: VLCSW-201123

Compound: tert-Butylbenzene
CAS Number: 98-06-6







Data File: X112207.D
Report Date: 15-Sep-2021 14:25

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\2020-4\X201123.b\X112207.D
Lab Smp Id: VBLK-201123 Client Smp ID: VBLK-201123
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\2020-4\X201123.b\8260W.m
Meth Date : 15-Sep-2021 14:25 voa6.i 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: bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	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	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	133867	44.1389	44.13
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	163896	42.8700	42.86
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	483980	51.7155	51.71
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	148244	44.9704	44.97

Data File: \\NAHSTWS005\Target\chem\voa6.i\2020-4\X201123.b\X112207.D
Date : 23-NOV-2020 12:37
Client ID: VBLK-201123
Sample Info: VBLK-201123;VBLK-201123;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18

